VESSEL

GENERAL CATALOGUE

HAND TOOLS | BITS & SOCKETS | ELECTRIC TOOLS | AIR TOOLS | AIR NIPPERS | STATIC SOLUTIONS | GASOLINE ENGINE TOOLS

2020-2021

www.vessel.co.jp

VESSEL provides total supports, from fastening tools to the working environment. The VESSEL policy of "putting a wholehearted effort" into each aspect of high quality, fair pricing, new product development, and customer satisfaction will continue to be passed on.

Spirit of innovation

It is our mission to develop new products which has not existed and to deliver them to the market earlier than others. In order to achieve such goal,
VESSEL Group has specialized factories according to product types.
We seek to establish new technologies under the system making clear the responsibility.
Also we gain inspirations from the market and create new product concepts brimming with originality constantly.

Environmental Measures

In Japan, which is the 2nd highest waste discharge country despite the limited resource, more and more manufactures give importance to designing of products from the environmental point of view.
We conduct corporate activities, not only along with Green Procurement and RoHS (Restriction of Hazardous Substances), but also focusing on longer lifetime products, material reclycling, product designing enabling to easily sort out for reuse, and resource saving.

Safety

When designing products, we take into consideration health ad safety of users and those who are around them.
We conduct various safety assessment tests regarding vibration, sound noise, electric shocks and noise, and so on.
It is very important for us to clarify risks that can be anticipated before an accident occurs, rather than to deal with it after it happens.

Quality and branding

As a professional tool manufacturer, VESSEL CO., INC. has always been responding to difficult requests for higher quality products. The company's 100-year experience is a proof of the reliable quality.

Let us think.

We are always beside customers, marketing more value-added products than they have ever expected.

Design

"Excellent era-leading design, with the high quality that professionals appreciate".
Tools have to be not only good in functionality, but also comfortable in hands and easy to use.
We aspire after the development of pleasant-to-use products, which are suited for all from beginners to professionals.

Taking the challenge for changes

VESSEL CO., INC. will steadfastly continue, endeavoring to progress to a new stage to be distinguished from the rest.
With the objective of making available any tools related to screws and fasteners, we have created
various products to develop the markets. This has let us to produce air screwdrivers.
Nowadays, manufactures are expected to be more customer-oriented to develop new tools together with users, rather than being product-oriented.
VESSEL Co., INC. will continue to take the challenge for changes.
While caring about the existing cutomers with more supports, we will constantly develop new markets, by offering new value-added products.
We keep innovating so that our customers in the world think of VESSEL before anyone else, as their "first Call Company".

VESSEL

VESSEL

GENERAL CATALOGUE

2020-2021

INDEX

Hand Tools	2- 55
Industrial Bits	56- 91
Construction Bits	92-137
Electric Tools	138-157
Air Tools	158-201
Air Nippers	202-235
Static Solutions	236-260
Gasolin Engine Tools	261-262
Riference Index	266-272

HAND TOOLS

Contents

Cushion Grip Screwdrivers ····· 6 - 11

MEGADORA Series ····· 11 - 14

Plastic Grip Screwdrivers ····· 15 - 20

Eco-friendry Screwdriver ····· 21 - 23

Wooden Handle Screwdrivers ····· 24 - 25

Non-Slip Screwdriver ····· 26 - 29

Precision Screwdrivers ····· 30 - 33

Functional Screwdrivers／
Voltage Detection Screwdriver／Impact Driver ··· 34 - 41

Hex Wrenches／TORX Wrench
TORX Screwdriver ····· 42 - 50

For particular job unique tools ····· 51 - 55

About ISO

ISO 9001 : 2008

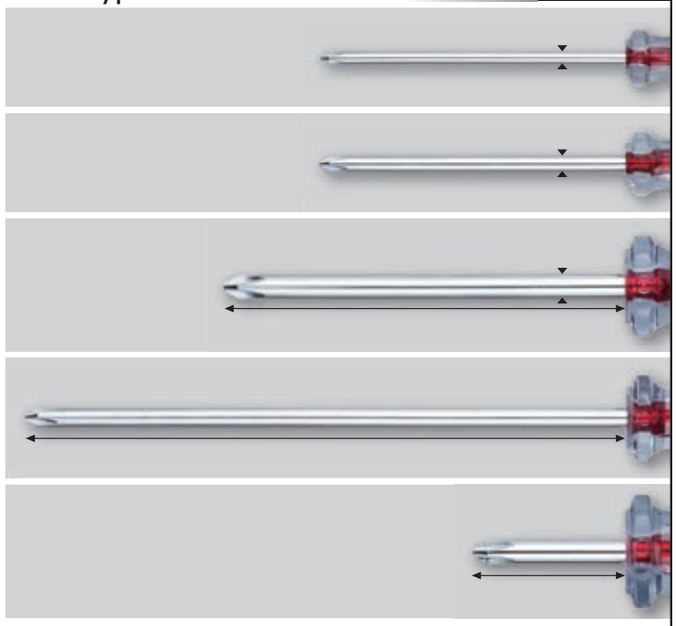
Our screwdriver manufacturing division, VESSEL SHIMANE CO., LTD is certified according to ISO standard, the global standard for quality assurance control.

ISO 14001 : 2004

We obtained ISO 14001 in August 2010. VESSEL will further strive to offer eco-friendly products, aiming at minimizing the environmental burden as a manufacturing group.

HAND TOOLS TECHNICAL

Nominal designation based on shank types



Cr-V. steel
Cr-V Mo steel

Good precision and durability nurtured in assembly lines Chrome vanadium steel that improves the shank strength

Cr (chromium): hardens the tip.
V (vanadium): makes the tip tough.
Mo (molybdenum): improves strength, hardness, and even toughness.

Precision shank
A shank diameter of 3 mm or less

This is for precision small screws whose thread diameter is 1 to 3 mm.

Slim shank
A diameter of 4 mm

This is a long slender shank to avoid interference even in a narrow area.

Standard shank
It has a popular shank diameter and length based on various standards.

Long shank
This is suitable for screw tightening in deep and narrow areas.

Stubby shank
This is a short shank suitable for work in a confined area.

Hexagon bolster
This part allows a spanner, etc. to be applied to retighten a screw or undo a hard-tightened screw.

Magnetized Tip-End
MG

The tip-end is strongly magnetized to capture screws for better work efficiency.

JAWSFIT®

NEW JAWSFIT
Coated specially with high strength metallic granules.
This prevents CAM-OUT (phenomenon peculiar to cross recessed screws).

Black point®
The tip-end with the black oxide finishment is insensitive to the effect of a plating layer thickness and highly precise.

General type
Type in which a shank is held in the handle.
It is electrically safe.

Tang-thru type
A shank is installed through the handle so that the screwdriver can be used for position adjustment or screw-hole correction by tapping the head with a hammer.

CAUTION
Safety icons are printed and indicated for easy identification.
(Displayed in a stepwise manner on a product basis)

Taper shape
Enabling a screwdriver to be easily taken out of a screwdriver holder. It is often used for screwdrivers related to electrical equipment.

Rolling prevention
Having a shape avoiding rolling over, which has also been widely adopted by overseas screwdrivers.

Cushion
An elastomer is integrally formed on the exterior of the grip.
It provides elastic grip, offering large tightening force.

6P

Ergonomics design
The use of design taking into account the shape of the palm and enhancing the operability at the finger tips ensures comfortable screw tightening.

11P
15P
21P

Wood handle
A long seller grip made of air-dried natural wood.
It fits the palm of the hand as the tool is used longer.

24P

Non-slip
VESSEL-developed non-slip surface features fine knurling process, enabling torque to be transmitted firmly even if there is oil on it.

26P

Precision use
Designed to transmit a minute force efficiently.
Intended for precision work

30P

Other functional grips
A ratchet screwdriver allowing screw tightening to be made by mere repetition of wrist movement; an impact screwdriver used to undo a rusted or stuck screw, etc.

34P

RoHS

Environmental Measures

Pb (lead) / Cd (cadmium) / Hg (mercury) / Hexavalent chromium / PBB (polybrominated biphenyl) / PBDE (polybrominated diphenyl ether) / DEHP, BBP, DBP, DIBP (phthalate esters)

The products with this mark in this catalogue are compliant with the RoHS directives (EU) (usage limit of the above 10 substances).

Note: For the updated information on RoHS compliant products, visit our homepage, because some products or sizes are under investigation or are not compliant at the time of publication of this catalogue.

No. 700

Super Cushion Screwdriver

Highly elastic cushion grip.
Fits the palm of the hand. No slipping.
Transmits high torque to the tip.

A D V A N C E D
GEL-FUNCTION
T E C H N O L O G Y

No. 700
Super Cushion Screwdriver

VESSEL Cushion Grip Screwdrivers fit not only screw heads but also your hand. This series assure the efficient torque transmission.

※The above illustration is for reference only.

VESSEL Elastic grip assures reliable tightening. **Cushion Grip Screwdrivers**

No. 700 Super Cushion Screwdriver PAT.

- "Super Cushion" grip fits your hand perfectly.
- Rust-resistant black chrome plating.

MG Cr-V steel

No.700							(mm)	Inner Ctn.	Outer Ctn.	EDP No.
⊖5.5 × 75	5.5	0.8	75	5.5	29	182	6	120	125211
⊖6 ×100	6.0	0.9	100	6.4	32	215	6	120	125212
⊖6 ×150	6.0	0.9	150	6.4	32	265	6	120	125213
⊖8 ×150	8.0	1.1	150	8.0	34	275	6	120	125214
⊕1 × 75	⊕No.1		75	5.5	29	182	6	120	125215
⊕2 ×100	⊕No.2		100	6.4	32	215	6	120	125216
⊕2 ×150	⊕No.2		150	6.4	32	265	6	120	125217
⊕3 ×150	⊕No.3		150	8.0	34	275	6	120	125218

No. 610 Cushion Grip Screwdriver (Thin Shank Type)

- Ideal for screw tightening in precision fields.
- Straight cut slotted tip good even for a use in cramped spaces.
- Highly precise black point tip, not being affected by the thickness of the plating layer.

Cr-V steel

No.610						(mm)	Inner Ctn.	Outer Ctn.	EDP No.
⊖4 × 75	4.0	0.5	75	4.0	20.5	162	12	120	125332
⊖4 ×100	4.0	0.5	100	4.0	20.5	187	12	120	125333
⊖4 ×150	4.0	0.5	150	4.0	20.5	237	12	120	125335
⊖4 ×200	4.0	0.5	200	4.0	20.5	287	12	120	125336
⊕00 × 75	⊕No.00		75	4.0	20.5	162	12	120	125337
⊕0 × 75	⊕No.0		75	4.0	20.5	162	12	120	125339
⊕0 ×100	⊕No.0		100	4.0	20.5	187	12	120	125340
⊕1 × 75	⊕No.1		75	4.0	20.5	162	12	120	125341
⊕1 ×100	⊕No.1		100	4.0	20.5	187	12	120	125342
⊕1 ×150	⊕No.1		150	4.0	20.5	237	12	120	125343

No. 720 Super Cushion Screwdriver (Stubby Type) PAT.

- "Super Cushion" grip fits your hand perfectly.
- Rust-resistant black chrome plating.
- Ideal for working in cramped places.

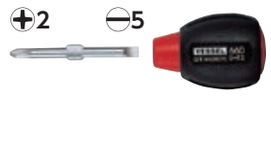
MG Cr-V steel

No.720						(mm)	Inner Ctn.	Outer Ctn.	EDP No.
⊖6 × 15	6.0	0.9	15	6.0	35	68	6	120	125221
⊕1 × 15	⊕No.1		15	6.0	35	68	6	120	125222
⊕2 × 15	⊕No.2		15	6.0	35	68	6	120	125223

No. 660 Cushion Grip Screwdriver (Stubby Type)

- With reversible blade (⊖5, ⊕2).

MG Cr-V steel



Set content		Package size (mm)	Inner Ctn.	Outer Ctn.	EDP No.
Grip	length 53mm dia. 35mm	135×75×35	10	60	133085
Reversible blade	⊖5 / ⊕2 ×60mm 1pc				

No. 730 Super Cushion Tang-Thru Screwdriver PAT.

- "Super Cushion" grip fits your hand perfectly.
- Tang-thru type with a star-shaped end cap for hammering.
- Rust-resistant black chrome plating.

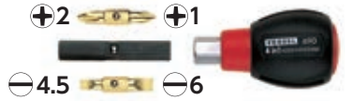
MG Cr-V steel

No.730							(mm)	Inner Ctn.	Outer Ctn.	EDP No.
⊖5.5 × 75	5.5	0.8	75	5.5	29	182	6	120	125231
⊖6 ×100	6.0	0.9	100	6.4	32	215	6	120	125232
⊖6 ×150	6.0	0.9	150	6.4	32	265	6	120	125233
⊖8 ×150	8.0	1.1	150	8.0	34	276	6	60	125234
⊕1 × 75	⊕No.1		75	5.5	29	182	6	120	125235
⊕2 ×100	⊕No.2		100	6.4	32	215	6	120	125236
⊕2 ×150	⊕No.2		150	6.4	32	265	6	120	125237
⊕3 ×150	⊕No.3		150	8.0	34	276	6	60	125238

No. TD-110 Cushion 4-way Stubby Screwdriver

- Handle can store 2 types of double-ended bit with different tip end.

CrV Mo steel
bit



Set content		Package size (mm)	Inner Ctn.	Outer Ctn.	EDP No.
Grip	length 86mm dia. 35mm	135×85×35	10	60	251110
Reversible blade	⊕1 / ⊕2 ×35mm 1pc				
	⊖4.5 / ⊖6 ×35mm 1pc				
Holder	1 pc				

No. 220 Ball-Grip Screwdriver

●Transmits ample tightening force to screw.
●Cushion grip color-coded by ⊕⊖.
●High precision black point tip.

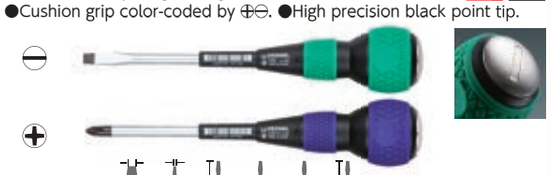
●⊕3 is designed with a slim and long shank, optimal for screws of large terminal blocks.

⊕3

No.220						(mm)	Inner Ctn.	Outer Ctn.	EDP No.
⊖ 5.5× 75	5.5	0.8	75	5.5	32	156	6	60	125351
⊖ 5.5× 100	5.5	0.8	100	5.5	32	181	6	60	125361
⊖ 5.5× 150	5.5	0.8	150	5.5	32	231	6	60	125362
⊖ 6 ×100	6.0	0.9	100	6.4	41	200	6	60	125352
⊖ 6 ×150	6.0	0.9	150	6.4	41	250	6	60	125353
⊖ 6 ×200	6.0	0.9	200	6.4	41	300	6	60	125354
⊖ 6 ×300	6.0	0.9	300	6.4	41	400	6	60	125363
⊖ 8 ×150	8.0	1.1	150	6.4	41	250	6	60	125376
⊕ 1 × 75	⊕No.1		75	5.5	32	156	6	60	125355
⊕ 1 ×100	⊕No.1		100	5.5	32	181	6	60	125371
⊕ 1 ×150	⊕No.1		150	5.5	32	231	6	60	125372
⊕ 2 × 75	⊕No.2		75	5.5	32	156	6	60	125375
⊕ 2 ×100	⊕No.2		100	6.4	41	200	6	60	125356
⊕ 2 ×150	⊕No.2		150	6.4	41	250	6	60	125357
⊕ 2 ×200	⊕No.2		200	6.4	41	300	6	60	125358
⊕ 2 ×300	⊕No.2		300	6.4	41	400	6	60	125359
⊕ 3 ×150	⊕No.3		150	6.4	41	250	6	60	125374

No. 230 Ball-Grip Tang-Thru Screwdriver

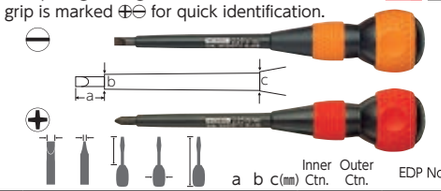
●Large nut for easy hammering.
●Transmits ample tightening force to screw.
●Cushion grip color-coded by ⊕⊖. ●High precision black point tip.



No.230						(mm)	Inner Ctn.	Outer Ctn.	EDP No.
⊖ 5.5× 75	5.5	0.8	75	5.5	32	156	6	60	125311
⊖ 6 ×100	6.0	0.9	100	6.4	41	200	6	60	125314
⊖ 6 ×150	6.0	0.9	150	6.4	41	250	6	60	125315
⊕ 1 × 75	⊕No.1		75	5.5	32	156	6	60	125321
⊕ 2 ×100	⊕No.2		100	6.4	41	200	6	60	125324
⊕ 2 ×150	⊕No.2		150	6.4	41	250	6	60	125325

No. 225 Ball-Grip Screwdriver (With covered shank)

●Resin-covered shank. It prevents electrical short circuit.
●Transmits ample tightening force to screw.
●Cushion grip is marked ⊕⊖ for quick identification.

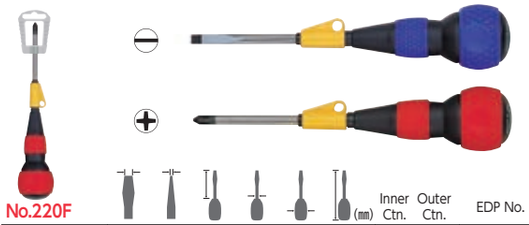


No.225					a	b	c (mm)	Inner Ctn.	Outer Ctn.	EDP No.
⊖ 6× 100	6.0	0.9	100	41	200	14	8	10	6	60	125382
⊖ 6× 150	6.0	0.9	150	41	250	14	8	10	6	60	125383
⊕ 2× 100	⊕No.2		100	41	200	14	8	10	6	60	125389
⊕ 2× 150	⊕No.2		150	41	250	14	8	10	6	60	125390

⚠Electric insulation is not guaranteed. For safety purposes, shut off power before use.
The covered shaft protects against unexpected shorts.
Should it become scratched, damaged or deteriorated, do not use the screwdriver.

No. 220F Free-Turning Ball Grip Screwdriver (Screwdriver only) PAT.

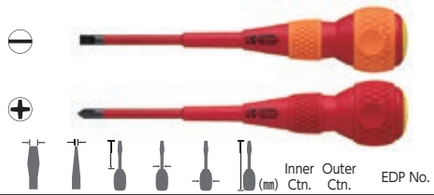
●Free-turning hook enables fast turning.
●Elastomer resin excellently fits the hand.



No.220F						(mm)	Inner Ctn.	Outer Ctn.	EDP No.
⊖ 6 ×100	6.0	0.9	100	6.4	41	200	6	60	125541
⊖ 6 ×150	6.0	0.9	150	6.4	41	250	6	60	125542
⊕ 2 ×100	⊕No.2		100	6.4	41	200	6	60	125543
⊕ 2 ×150	⊕No.2		150	6.4	41	250	6	60	125544

No. 200 Ball-Grip Insulated Screwdriver

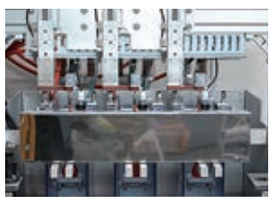
●High precision black point tip (black oxide finish)
●Easy identification of tip type by touching the end cap dent.



No.220						(mm)	Inner Ctn.	Outer Ctn.	EDP No.
⊖ 5.5× 75	5.5	0.8	75	5	32	150	6	60	125841
⊖ 6 ×100	6.0	0.9	100	6	41	189	6	60	125842
⊖ 6 ×150	6.0	0.9	150	6	41	239	6	60	125843
⊕ 1 × 75	⊕No.1		75	5	32	150	6	60	125844
⊕ 2 ×100	⊕No.2		100	6	41	189	6	60	125845
⊕ 2 ×150	⊕No.2		150	6	41	239	6	60	125846
⊕ 3 ×150	⊕No.3		150	6	41	239	6	60	125847

One point

Insulated Screwdrivers Series certified by VDE, International certification authority.

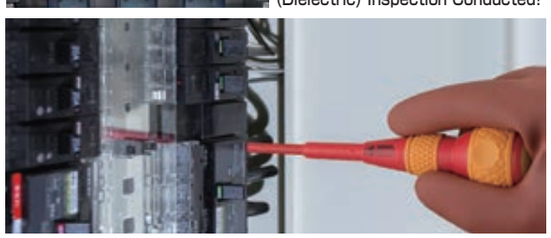


1000V AC, 1500V DC

1000V
IEC60900

VDE is an authorized third-party certification organization.

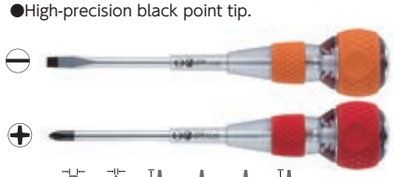
Reliable - 100% Energization (Dielectric) Inspection Conducted!



For prevention of electric shock or short-circuit during electric works for power equipment, telecommunication devices, electric vehicles, solar power stations, and so on.

No. 250 Tang-Thru Screwdriver w/Ceramic Ball (For electric works)

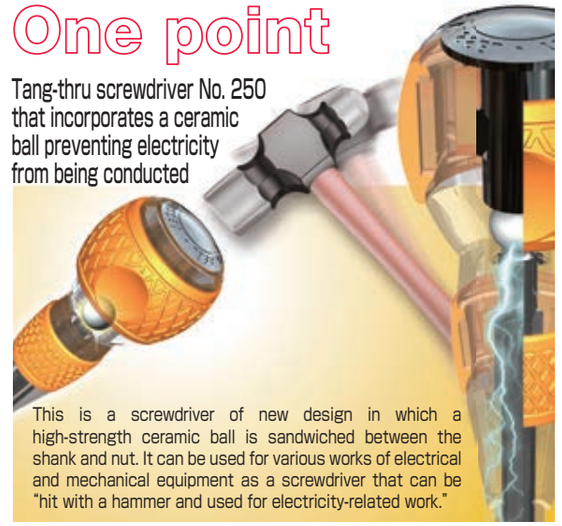
●Incorporates a ceramic ball preventing electricity from being conducted.
●Uses zirconia ceramics having the highest rigidity and wear resistance among ceramics.
●Easy to tap with a hammer on the large nut.
●High-precision black point tip.



No.250						(mm)	Inner Ctn.	Outer Ctn.	EDP No.
⊖ 6 ×100	6.0	0.9	100	6.4	41	200	6	60	112105
⊖ 6 ×150	6.0	0.9	150	6.4	41	250	6	60	112106
⊖ 8 ×150	8.0	1.1	150	6.4	41	250	6	60	112109
⊕ 2 ×100	⊕No.2		100	6.4	41	200	6	60	112107
⊕ 2 ×150	⊕No.2		150	6.4	41	250	6	60	112108
⊕ 3 ×150	⊕No.3		150	6.4	41	250	6	60	112110

One point

Tang-thru screwdriver No. 250 that incorporates a ceramic ball preventing electricity from being conducted



This is a screwdriver of new design in which a high-strength ceramic ball is sandwiched between the shank and nut. It can be used for various works of electrical and mechanical equipment as a screwdriver that can be "hit with a hammer and used for electricity-related work."

⚠Electric insulation is not guaranteed. For safety purposes, shut off power before use.

No. 220W Ball Grip (Bit-replaceable grip)

●Compatibility with a 6.35mm hex drive bit enables to be used as a familiar ball grip screwdriver.

Model No.	Grip size	Package size (mm)	Outer Ctn.	EDP No.
220W	length 100mm, dia.41mm	145×50×43	10	125344

No. 230W Ball Grip (Bit-replaceable Tang-Thru grip)

●Blade interchangeable tang-thru grip. (A/F6.35mm)
●25mm large nut incorporated transmitting well the hammering power.

Model No.	Grip size	Package size (mm)	Inner Ctn.	EDP No.
230W	length 100mm, dia.41mm	145×50×43	10	125326

No. 270BW Cushion Stubby (Bit-replaceable grip)

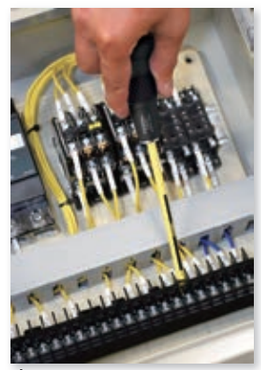
●Stubby type optimal for a narrow area. Compatibility with a 6.35mm hex drive bit for electric screwdrivers.

Model No.	Grip size	Package size (mm)	Outer Ctn.	EDP No.
270BW	length 55.5mm, dia.35mm	100×50×37	10	233074

One point

Bit-replaceable grip

Convenient grip can be used with various sizes of ⬢6.35mm bit for electric screwdrivers.



⚠Shut off power before use for safety purposes when using this product for electric works.

No. B-640TX Cushion Grip TORX Screwdriver

- Optimal for fastening screws in precision fields.
- Non-electrolytic plating, keeping the precise tip quality.
- Cushion grip fitting comfortably in a hand.
- Also good for tamper-proof TORX screws (except T5 and T6).

Cr-V. steel

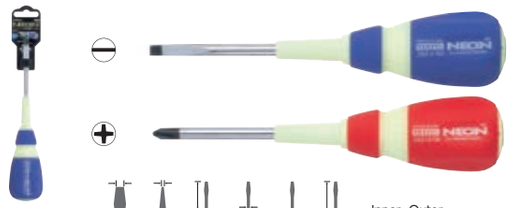
No.B-640TX					(mm)	Inner Ctn.	Outer Ctn.	EDP No.
T5	1.42	40	4.0	20.5	126	6	60	123561
T6	1.69	40	4.0	20.5	126	6	60	123562
T7H	1.97	40	4.0	20.5	126	6	60	123563
T8H	2.30	40	4.0	20.5	126	6	60	123564
T9H	2.48	40	4.0	20.5	126	6	60	123565

TORX® is a registered trademark of Acument TM Intellectual Properties, LLC (USA).
VESSEL has a manufacturing license in Japan and selling same to the world.

No. 265 "NEON" Screwdriver

- Glow-in-the-dark type.
- High precision black point tip.

MG Cr-V. steel

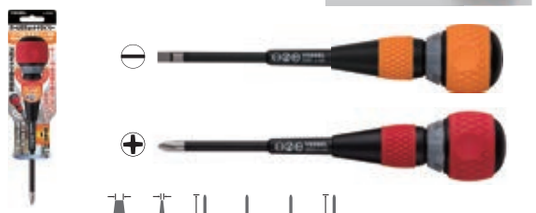


No.265							(mm)	Inner Ctn.	Outer Ctn.	EDP No.
⊖ 6×	100	6.0	0.9	100	6.4	40	185	6	60	125561
⊖ 6×	150	6.0	0.9	150	6.4	40	235	6	60	125562
⊕ 2×	100	⊕No.2		100	6.4	40	185	6	60	125563
⊕ 2×	150	⊕No.2		150	6.4	40	235	6	60	125564

No. 2200 Ball Ratchet Screwdriver

- With 36-teeth gear ratchet to realize comfortable operation with fine tuning.
- Shank cover prevents short circuits. Thin shank is convenient for operating on terminal blocks.
- Shank uses bit materials, fully hardened. Replacement shank is available as option.

MG Cr-V Mo steel



No.2200							(mm)	Inner Ctn.	Outer Ctn.	EDP No.
⊖ 6×	100	6.0	0.8	100	6.0	41	200	6	60	125395
⊖ 6×	150	6.0	0.8	150	6.0	41	250	6	60	125396
⊕ 2×	100	⊕No.2		100	6.0	41	200	6	60	125345
⊕ 2×	150	⊕No.2		150	6.0	41	250	6	60	125346
⊕ 3×	150	⊕No.3		150	6.0	41	250	6	60	125347

⚠ Electric insulation is not guaranteed. For safety purposes, shut off power before use.

No. 2200B Ball Ratchet Screwdriver Replacement Blade

- Shank uses bit materials, fully hardened.
- Replacement blade; can be replaced by pulling out the ball-grip part of No.2200.

MG Cr-V Mo steel

No.2200B							(mm)	Inner Ctn.	Outer Ctn.	EDP No.
⊖ 6×	100	6.0	0.8	100	6.0		158	6	60	125397
⊖ 6×	150	6.0	0.8	150	6.0		208	6	60	125398
⊕ 2×	100	⊕No.2		100	6.0		158	6	60	125348
⊕ 2×	150	⊕No.2		150	6.0		208	6	60	125349
⊕ 3×	150	⊕No.3		150	6.0		208	6	60	125350

No. SC-90 Anti-drop Slim Cord

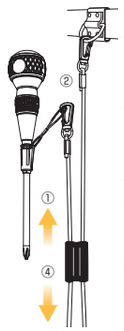
- Cord to prevent screwdrivers from dropping.
- Provided with a sleeve to avoid rings forming, which cause the cord to get caught.

Package content	
Mounted load	500g or less
Length	482 (maximum length 1500) mm
Material	Sleeve: polypropylene
	Rubber band: polypropylene and natural rubber

Inner Ctn.	EDP No.
10	125405

One point

Move the sleeve to straighten the cord!



①First, pull up the sleeve.
②Mount the loop clutches to the electric screwdriver, safety belt, D ring, etc.
③Hold the sleeve and adjust the length so that the cord is straightened.
④Pull down the sleeve.

Our proprietary Tang-thru nut incorporates cam rotation mechanism, which turns the driving tip counter-clockwise by 12 degrees when the handle is hit with a hammer.
IMPACTA leverages impact acceleration to remove stuck screws.

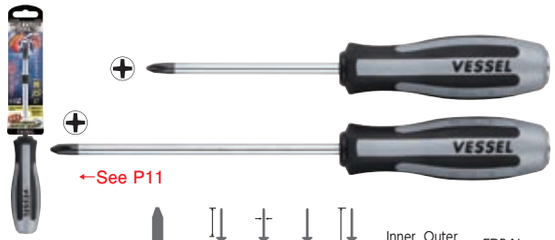
No. 980
MEGADORA IMPACTA

Equipped with a flat-surface grip and cushions on the corners of the hexagonal cross section.
The inner core is a triple-layered construction using recycled resin, designed with practical use of resources.

※The above illustration is for reference only.

No.980 MEGADORA IMPACTA PAT.

- Tang-Thru nut with cam rotation mechanism.
- High precision black point tip.

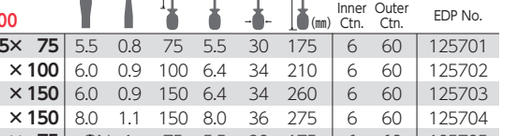


←See P11

No.980							Inner Ctn.	Outer Ctn.	EDP No.
⊕ 2 × 100	⊕No.2	100	6.4	34	213		6	60	125941
⊕ 2 × 150	⊕No.2	150	6.4	34	263		6	60	125942
⊕ 3 × 150	⊕No.3	150	8.0	36	278		6	60	125943

No.900 MEGADORA Standard Screwdriver PAT.

- NEW Philips JAWSFIT tip that firmly grips the screw.
- A knurled shank is useful for fast and slipless turning by fingers and open wide holes on a wood material or a board.



No.900							Inner Ctn.	Outer Ctn.	EDP No.
⊖ 5.5× 75	5.5	0.8	75	5.5	30	175	6	60	125701
⊖ 6 × 100	6.0	0.9	100	6.4	34	210	6	60	125702
⊖ 6 × 150	6.0	0.9	150	6.4	34	260	6	60	125703
⊖ 8 × 150	8.0	1.1	150	8.0	36	275	6	60	125704
⊕ 1 × 75	⊕No.1		75	5.5	30	175	6	60	125705
⊕ 2 × 100	⊕No.2		100	6.4	34	210	6	60	125706
⊕ 2 × 150	⊕No.2		150	6.4	34	260	6	60	125707
⊕ 3 × 150	⊕No.3		150	8.0	36	275	6	60	125708

No.910 MEGADORA Thin Shank Screwdriver

- Precision type with 4 mm or smaller diameter shank.
- Black point tip, unaffected by the plating thickness.

No.910							Inner Ctn.	Outer Ctn.	EDP No.
⊖ 3 × 75	3.0	0.4	75	3.0	21	153	12	120	125746
⊖ 3 × 100	3.0	0.4	100	3.0	21	178	12	120	125747
⊖ 4 × 75	4.0	0.5	75	4.0	21	153	12	120	125748
⊖ 4 × 100	4.0	0.5	100	4.0	21	178	12	120	125749
⊖ 4 × 150	4.0	0.5	150	4.0	21	228	12	120	125750
⊖ 4 × 200	4.0	0.5	200	4.0	21	278	12	120	125751
⊕ 0 × 75	⊕No.0		75	3.0	21	153	12	120	125742
⊕ 0 × 100	⊕No.0		100	3.0	21	178	12	120	125743
⊕ 1 × 75	⊕No.1		75	4.0	21	153	12	120	125744
⊕ 1 × 100	⊕No.1		100	4.0	21	178	12	120	125745

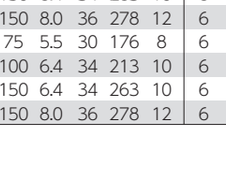
No.900 MEGADORA Standard Screwdriver Extra Long Type PAT.

- Philips JAWSFIT tip that firmly grips the screw.
- Good for a work deep in a space.
  Useful for adjustment of automotive headlight and removal of a hose band.
- Junk (turning) grip minimizes shaking because of the long shank, to ensure stable tightening.

No.900							Inner Ctn.	Outer Ctn.	EDP No.
⊖ 6 × 400	6.0	0.9	400	6.4	34	510	6	60	125709
⊕ 2 × 400	⊕No.2		400	6.4	34	510	6	60	125710

No.920 MEGADORA Stubby Screwdriver

- Philips JAWSFIT tip that firmly grips the screw.
- 25mm-long shank. Ideal for working in cramped places.



No.920							Inner Ctn.	Outer Ctn.	EDP No.
⊖ 6 × 25	6.4	0.9	25	6.4	36	75	6	60	125752
⊕ 1 × 25	⊕No.1		25	6.4	36	75	6	60	125753
⊕ 2 × 25	⊕No.2		25	6.4	36	75	6	60	125754

No.930 MEGADORA Tang-Thru Screwdriver PAT.

- NEW Philips JAWSFIT tip that firmly grips the screw.
- Tang-Thru shank with large end cap.
- With a hexagonal bolster for spanner.

No.930								Inner Ctn.	Outer Ctn.	EDP No.
⊖ 5.5× 75	5.5	0.8	75	5.5	30	175	8	6	60	125711
⊖ 6 × 38	6.0	0.9	38	6.4	34	151	—	6	60	125719
⊖ 6 × 100	6.0	0.9	100	6.4	34	213	10	6	60	125712
⊖ 6 × 150	6.0	0.9	150	6.4	34	263	10	6	60	125713
⊖ 8 × 150	8.0	1.1	150	8.0	36	278	12	6	60	125714
⊕ 1 × 75	⊕No.1		75	5.5	30	176	8	6	60	125715
⊕ 2 × 100	⊕No.2		100	6.4	34	213	10	6	60	125716
⊕ 2 × 150	⊕No.2		150	6.4	34	263	10	6	60	125717
⊕ 3 × 150	⊕No.3		150	8.0	36	278	12	6	60	125718

No.970 MEGADORA Clip Remover PAT.

- One model for both large and small tips.
  Suited for many clips used with automobiles.
- Chrome plating, not causing scratches on a painted metal plate.
- Optimally angled for working in cramped spaces, such as, door trim, wire binding clip, and so on.

No.970						Inner Ctn.	Outer Ctn.	EDP No.
CR × 120	12/7	120	7.0	34	230	6	60	125721

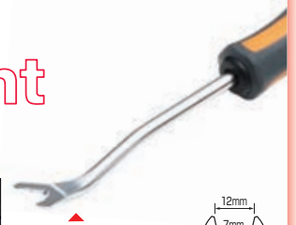
No.970 MEGADORA Chisel-Type Screwdriver PAT.

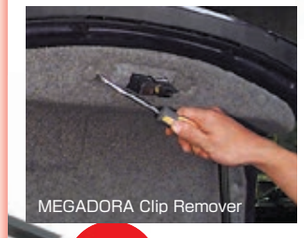
- Special steel for high quality cold chisel used. Hardness: 58HRC
  Abrasion resistant and sharp edge.
- Elastomer-resin made grip absorbs shock when using and alleviate the fatigue on the hand.
- Tang-Thru shank with large end cap.

No.970						Inner Ctn.	Outer Ctn.	EDP No.
7 × 100	7.0	1.5	100	6	34	213	6	60	125722
9.5× 120	9.5	1.7	120	8	36	248	6	60	125732

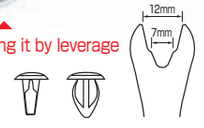
One point

Pull out / Break





Removing it by leverage



One model compatible with 2 popular types of clip in the automobile industry.

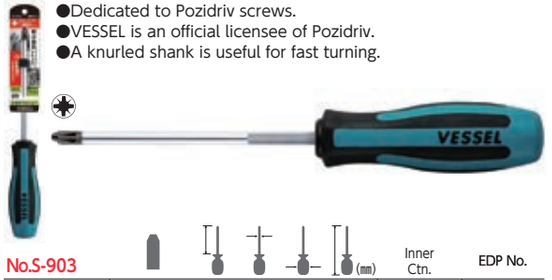
High-grade chisel used.

Sharp edge and anti-abrasion quality. Good for removal of welding on a spot, of burrs, and for various work with tiles and bricks.

MEGADORA Chisel-Type Screwdriver

No.S-903 MEGADORA Pozidriv Screwdriver

- Dedicated to Pozidriv screws.
- VESSEL is an official licensee of Pozidriv.
- A knurled shank is useful for fast turning.



No.S-903							Inner Ctn.	EDP No.
PZ1× 75	PZ No.1	75	5.5	30	175		6	267254
PZ2× 100	PZ No.2	100	6.4	34	210		6	267255
PZ3× 150	PZ No.3	150	8.0	36	275		6	267256

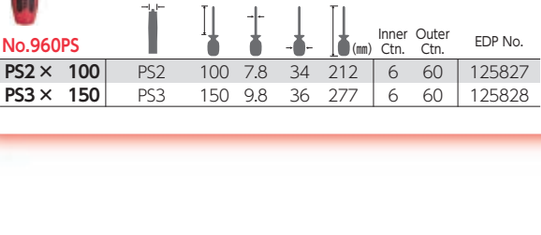
No.960 MEGADORA Insulated Screwdriver NEW

- Insulated Screwdrivers Series certified by VDE (IEC60900), International certification authority.
- Safe and secured double insulation layer.
- Highly precise tip-end (black oxide finish).
- Chrome-vanadium steel, fully hardened. ●Flat Surface Grip.

No.960							Inner Ctn.	Outer Ctn.	EDP No.
	5.0	0.8	75	6.8	30	177	6	60	125824
⊖ 1.0×6×100	6.0	1.0	100	7.8	34	212	6	60	125825
⊖ 1.2×8×150	8.0	1.2	150	9.8	36	277	6	60	125826
⊕ 1× 75	⊕No.1		75	6.8	30	177	6	60	125821
⊕ 2× 100	⊕No.2		100	7.8	34	212	6	60	125822
⊕ 3× 150	⊕No.3		150	9.8	36	277	6	60	125823

No.960PS MEGADORA Insulated Screwdriver NEW

- Insulated Screwdrivers Series certified by VDE (IEC60900), International certification authority.
- Safe and secured double insulation layer.
- Highly precise tip-end (black oxide finish).
- Chrome-vanadium steel, fully hardened. ●Flat Surface Grip.



No.960PS						Inner Ctn.	Outer Ctn.	EDP No.
PS2 × 100	PS2	100	7.8	34	212	6	60	125827
PS3 × 150	PS3	150	9.8	36	277	6	60	125828

One point

For protection against electric shock

Insulated Screwdrivers Series certified by VDE, International certification authority.

1000V AC or less, 1500V DC or less

1000V IEC60900

VDE is an authorized third-party certification organization.

Reliable - 100% Energization (Dielectric) Inspection Conducted!

For prevention of electric shock, short-circuit during electric works for power equipment, and so on.

⚠WARNING!
- STOP IMMEDIATELY using this screwdriver when the yellow shank cover comes out or there is a damage or alike on the product.
- NEVER USE FOR HOT-LINE JOB. RISQUE OF ELECTRICAL SHOCK.

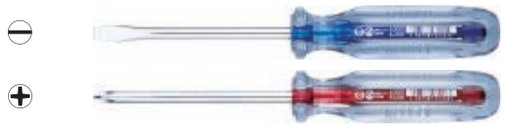
We have created a colorful grip with a crystalline sparkle. We offer an abundant lineup of shank sizes, including those capable of accessing deeply recessed or narrow areas.

No. 6300
"CRYSTALINE" Screwdriver

Uses cellulose acetate resin with good oil and chemical resistance. Uses raw materials such as wood and cotton (literal meaning of cellulose).

No.6300 "CRYSTALINE" Screwdriver PAT.

●Bright quartz "CRYSTALINE" handles. Color coding by ⊕⊖.
●Uses cellulose acetate resin.



No.6300							Inner Ctn.	Outer Ctn.	EDP No.
⊖ 4.5× 50	4.5	0.6	50	5.0	22.0	138	12	240	121201
⊖ 5.5× 75	5.5	0.8	75	5.5	22.0	163	12	240	121202
⊖ 6 ×100	6.0	0.9	100	6.0	26.5	205	12	240	121203
⊖ 8 ×150	8.0	1.1	150	8.0	28.5	263	12	120	121205
⊖ 9 ×200	9.0	1.2	200	9.0	28.5	313	6	60	121206
⊖ 10 ×250	10.0	1.2	250	9.0	28.5	363	6	60	121207
⊖ 10 ×300	10.0	1.2	300	9.0	28.5	413	6	60	121208
⊕ 1 × 75	⊕No.1		75	5.0	22.0	163	12	240	121209
⊕ 2 ×100	⊕No.2		100	6.0	26.5	205	12	240	121210
⊕ 3 ×150	⊕No.3		150	8.0	28.5	263	12	120	121211
⊕ 4 ×200	⊕No.4		200	9.0	28.5	313	6	60	121212

No.6300 "CRYSTALINE" Screwdriver (Long Shank Type) PAT.

●Bright quartz "CRYSTALINE" handle. Marked for ⊕⊖.
●Long shank for fastening in a hard-to-reach space.
●Uses cellulose acetate resin.

No.6300							Inner Ctn.	Outer Ctn.	EDP No.
⊖ 5 ×150	5.0	0.8	150	5.0	22	238	12	120	121213
⊖ 5 ×200	5.0	0.8	200	5.0	22	288	12	120	121214
⊖ 5 ×250	5.0	0.8	250	5.0	22	338	12	120	121215
⊕ 1 ×150	⊕No.1		150	5.0	22	238	12	120	121216
⊕ 1 ×200	⊕No.1		200	5.0	22	288	12	120	121217
⊕ 1 ×250	⊕No.1		250	5.0	22	338	12	120	121218
⊕ 2 ×150	⊕No.2		150	6.0	26.5	255	12	120	121219
⊕ 2 ×200	⊕No.2		200	6.0	26.5	305	12	120	121220
⊕ 2 ×250	⊕No.2		250	6.0	26.5	355	12	120	121221

No.6300E "CRYSTALINE" Screwdriver NEW PAT.

●Bright quartz "CRYSTALINE" handles. Color coding by ⊕⊖.
●Uses cellulose acetate resin.
●Large handle for even better operatability.

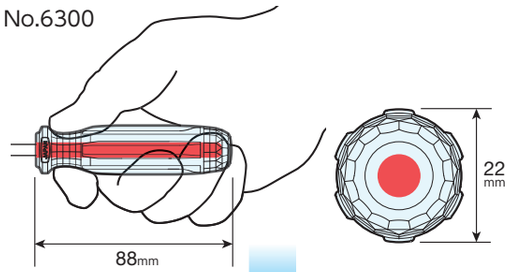
No.6300E							Inner Ctn.	Outer Ctn.	EDP No.
⊖ 5 ×150	5.0	0.8	150	5.0	26.5	255	12	120	121254
⊖ 5 ×200	5.0	0.8	200	5.0	26.5	305	12	120	121255
⊖ 5 ×250	5.0	0.8	250	5.0	26.5	355	12	120	121256
⊕ 1 ×150	⊕No.1		150	5.0	26.5	255	12	120	121257
⊕ 1 ×200	⊕No.1		200	5.0	26.5	305	12	120	121258
⊕ 1 ×250	⊕No.1		250	5.0	26.5	355	12	120	121259

One point

The dia. 26.5 mm handle model newly available for overseas market!

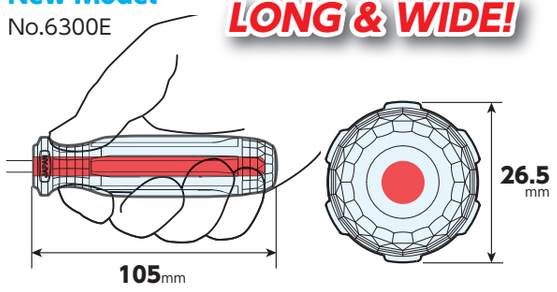
More comfortable to hold and more convenient to tighten screws.
Larger handle than our conventional 22mm model.

Conventional Model
No.6300



New Model
No.6300E

LONG & WIDE!



No.6100 "CRYSTALINE" Screwdriver (Thin Shank Type) PAT.

●Bright quartz "CRYSTALINE" handle. Marked for ⊕⊖.
●Thin shank screwdriver. Ideal for working in cramped spaces. ●Uses cellulose acetate resin.

No.6100							Inner Ctn.	Outer Ctn.	EDP No.
⊖ 4 × 50	4.0	0.45	50	4	16	124.5	12	240	121001
⊖ 4 × 75	4.0	0.45	75	4	16	149.5	12	240	121002
⊖ 4 × 100	4.0	0.45	100	4	16	174.5	12	240	121003
⊖ 4 × 150	4.0	0.45	150	4	16	224.5	12	120	121005
⊖ 4 × 200	4.0	0.45	200	4	16	274.5	12	120	121006
⊕ 0 × 75	⊕No.0		75	4	16	149.5	12	240	121323
⊕ 0 × 100	⊕No.0		100	4	16	174.5	12	240	121009
⊕ 0 × 150	⊕No.0		150	4	16	224.5	12	120	121325
⊕ 0 × 200	⊕No.0		200	4	16	274.5	12	120	121326
⊕ 1 × 75	⊕No.1		75	4	16	149.5	12	240	121008
⊕ 1 × 100	⊕No.1		100	4	16	174.5	12	240	121012
⊕ 1 × 150	⊕No.1		150	4	16	224.5	12	120	121013
⊕ 1 × 200	⊕No.1		200	4	16	274.5	12	120	121014
⊕ 2 × 200	⊕No.2		200	4	16	274.5	12	120	121015
⊕ 2 × 250	⊕No.2		250	4	16	324.5	12	120	121016

No.6200 "CRYSTALINE" Screwdriver (Stubby Type) PAT.

●Bright quartz "CRYSTALINE" handle. Marked for ⊕⊖.
●Ideal for working in cramped spaces.
●Uses cellulose acetate resin.

No.6200							Inner Ctn.	Outer Ctn.	EDP No.
⊖ 6 × 38	6.0	0.9	38	6	30	87.5	12	240	121101
⊕ 1 × 38	⊕No.1		38	6	30	87.5	12	240	121102
⊕ 2 × 38	⊕No.2		38	6	30	87.5	12	240	121103

No.6900 "CRYSTALINE" Screwdriver (Precision Type) PAT.

●Bright quartz "CRYSTALINE" handle. Marked for ⊕⊖.
●For intense precision work.
●Handle butt is recessed to allow pressing with fingertips for fast turning.
●Uses cellulose acetate resin.

No.6900							Inner Ctn.	Outer Ctn.	EDP No.
⊖ 2.5× 50	2.5	0.35	50	3	14	101	24	240	121301
⊖ 2.5× 75	2.5	0.35	75	3	14	126	24	240	121302
⊖ 2.5× 100	2.5	0.35	100	3	14	151	24	240	121303
⊕ 00 × 50	⊕No.00		50	3	14	101	24	240	121327
⊕ 0 × 75	⊕No.0		75	3	14	126	24	240	121304

No.6603 Long Square Shank Screwdriver PAT.

●450mm-long square shank. Fully hardened tough special steel.
●Effective with high strength tightening.
●For fastening screws of sanitary appliances, etc.
●Uses cellulose acetate resin.

No.6603							Outer Ctn.	EDP No.
⊖ 9 × 450	9.0	1.2	450	8	113	28.5	563	6	122231
⊕ 2 × 450	⊕No.2		450	6	113	28.5	563	6	122232
⊕ 3 × 450	⊕No.3		450	8	113	28.5	563	6	122233

One point

An Eco-friendly grip made from plant-based ingredients

Cellulose acetate resin, used in many plastic screwdrivers, is once again in the spotlight as an ecologically friendly plant-based polyester resin.
Cellulose acetate resin is an outstanding material that is resistant to oil, chemicals, and shock.
As the word cellulose implies, the grip is made from wood pulp and cotton.
This resin grip is ecologically friendly with a low environment load, and does not upset the CO2 balance when burned.

No. B-370 Non-Slip Tang-Thru Screwdriver

- Unique Non-Slip finish that prevents slipping even if oil adheres on the grip.
- Tang-thru type with a large nut. Good for heavy duty work.
- The end of the handle has a color ring facilitates to distinguish the tip difference at a glance.

No.B-370							(mm)	Inner Ctn.	Outer Ctn.	EDP No.
⊖ 5.5× 75	5.5	0.8	75	5.5	27.4	183		6	60	267590
⊖ 6 × 100	6.0	0.9	100	6.4	30.7	226		6	60	267591
⊖ 8 × 150	8.0	1.1	150	8.0	36.2	290		6	60	267592
⊕ 1 × 75	⊕No.1		75	5.5	27.4	183		6	60	267593
⊕ 2 × 100	⊕No.2		100	6.4	30.7	226		6	60	267594
⊕ 3 × 150	⊕No.3		150	8.0	36.2	290		6	60	267595

No. 4600 POZIDRIV Screwdriver

- High precision black point tip.
- Good for assembly of European and American furniture and skiing equipment.

No.4600						(mm)	Inner Ctn.	EDP No.
PZ1× 75	PZ No.1	75	5	28	172		6	636011
PZ2× 100	PZ No.2	100	6	31	204		6	636012
PZ3× 150	PZ No.3	150	8	35	265		6	636013

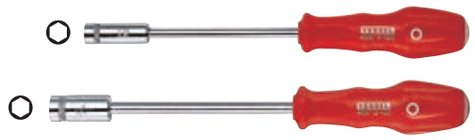
No. 4500 Power Grip Screwdriver

- Plastic handle and tang-thru shank stand up to heavy-duty work.
- Hexagon bolster for strong tightening with a spanner or alike.
- Cellulose acetate resin grip. Ergonomic design.

No.4500								(mm)	Inner Ctn.	Outer Ctn.	EDP No.
⊖ 5.5× 75	5.5	0.8	75	5.8	28.0	172	8		6	240	123401
⊖ 6 × 100	6.0	0.9	100	6.4	31.8	204	10		6	120	123402
⊖ 8 × 150	8.0	1.1	150	8.0	35.6	265	12		6	120	123403
⊖ 9 × 200	9.0	1.2	200	9.0	37.0	320	12		6	60	123404
⊕ 1 × 75	⊕No.1		75	5.8	28.0	172	8		6	240	123405
⊕ 2 × 100	⊕No.2		100	6.4	31.8	204	10		6	120	123406
⊕ 3 × 150	⊕No.3		150	8.0	35.6	265	12		6	120	123407
⊕ 4 × 200	⊕No.4		200	9.0	37.0	320	12		6	60	123408

No. 4100 Power Socket Screwdriver

- For fastening and loosening hexagon bolts and nuts.



No.4100							(mm)	Inner Ctn.	Outer Ctn.	EDP No.
A/F 5 ×115	5	8	18	115	5.0	28.0	212	6	60	123501
A/F 5.5×115	5.5	9	18	115	5.0	28.0	212	6	60	123502
A/F 6 ×115	6	9	18	115	5.5	28.0	212	6	60	123503
A/F 7 ×125	7	10	18	125	5.5	28.0	222	6	60	123504
A/F 8 ×125	8	12	20	125	5.5	31.8	229	6	60	123505
A/F 9 ×125	9	12.7	20	125	6.3	31.8	229	6	60	123506
A/F 10 ×125	10	15	20	125	7.0	35.6	240	6	60	123507
A/F 11 ×125	11	15	20	125	7.0	35.6	240	6	60	123508
A/F 12 ×150	12	17	20	150	8.0	35.6	265	6	60	123509
A/F 13 ×150	13	19	20	150	8.0	35.6	265	6	60	123510

No. 5400TX Power Grip TORX Screwdriver

- Champagne gold plating keeping the precise tip quality.
- Cellulose acetate resin grip. Ergonomic design.
- For working with tamper-proof screws (T5 and T6 excluded).

→See P48 One point

No.5400TX						(mm)	Inner Ctn.	Outer Ctn.	EDP No.
T 5 × 80	1.42	80	2.5	17.0	155		12	60	122854
T 6 × 80	1.69	80	2.5	17.0	155		12	60	122855
T 7H× 80	1.97	80	2.5	17.0	155		12	60	122856
T 8H× 80	2.3	80	3.0	17.0	155		12	60	122857
T 9H× 80	2.48	80	3.0	17.0	155		12	60	122858
T10H× 80	2.72	80	3.0	17.0	155		12	60	122859
T15H× 80	3.26	80	3.5	28.0	177		6	60	122860
T20H× 120	3.84	120	4.0	28.0	217		6	60	122861
T25H× 120	4.4	120	5.0	31.8	224		6	60	122862
T27H× 120	4.96	120	5.0	31.8	224		6	60	122863
T30H× 120	5.49	120	6.0	35.6	235		6	60	122864
T40H× 120	6.6	120	7.0	35.6	235		6	60	122865

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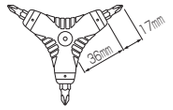
No. B-5400BP Power Grip UltraBall Screwdriver

- Champagne gold plating keeping the precise tip quality.
- Cellulose acetate resin grip. Ergonomic design.
- A knuried shank keeps hands from slipping in fast turning.

No.B-5400BP						(mm)	Outer Ctn.	EDP No.
H 1.5× 80	1.5	80	2.5	17.0	155		30	267565
H 2 × 80	2	80	3.0	17.0	155		30	267566
H 2.5× 80	2.5	80	3.0	17.0	155		30	267567
H 3 × 120	3	120	3.5	28.0	217		30	267568
H 4 × 120	4	120	5.0	31.8	224		30	267569
H 5 × 120	5	120	6.0	35.6	235		30	267570
H 6 × 120	6	120	7.0	35.6	235		30	267571

No. TD-250Y/ 220B/ 240G 3-Point Screwdriver

- 3 sizes in 1 compact handy tool.
- Y-handle fits in the palm of the hand. Delivers powerful fastening strength.

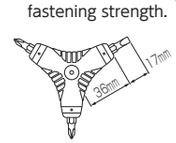


⊕ No. TD-250Y ⬢ No. TD-220B ⬢ No. TD-240G

Model No.	Set content	Package size (mm)	Inner Ctn.	EDP No.
TD-250Y	⊕1 / ⊕2 / ⊕3	120×95×18	10	251211
TD-220B	H2 / H2.5 / H3	120×95×18	10	251221
TD-240G	H4 / H5 / H6	120×95×18	10	251222

No. TD-210 3-Point Cross Screwdriver

- 3 sizes in 1 compact handy tool.
- Y-handle fits in the palm of the hand. Delivers powerful fastening strength.



⊖ ⊕

Set content	Package size (mm)	Inner Ctn.	Outer Ctn.	EDP No.
⊕1 / ⊕2 / ⊖6	135×120×20	10	60	251210

No. TD-6310HX Hex Screwdriver Set

- Bit insertion part ⬢6.35mm. Magnetized.
- Holds securely short bits. Reliable fastening as the bit does not drop easily.
- Grip made of environmental-friendly plant material.
- Provided with a bit belt for storage.

Set content		Package size (mm)	Outer Ctn.	EDP No.
Body	length 213mm dia. 28.5mm	235×100×29	10	247029
Bits	⊖4, ⊖6, ⊕4, ⊕4, ⊕4, H2.5, H3, H4, H5, H6×25.4mm			
Accessories	Bit belt holder			

No. TD-6310TX TORX Screwdriver Set

- Bit insertion part ⬢6.35mm. Magnetized.
- Holds securely short bits. Reliable fastening as the bit does not drop easily.
- Grip made of environmental-friendly plant material.
- Provided with a bit belt for storage.

Set content		Package size (mm)	Outer Ctn.	EDP No.
Body	length 213mm dia. 28.5mm	235×100×29	10	247028
Bits	⊖6, ⊕2, T8H, T10H, T15H, T20H, T25H, T27H, T30H, T40H×25.4mm			
Accessories	Bit belt holder			

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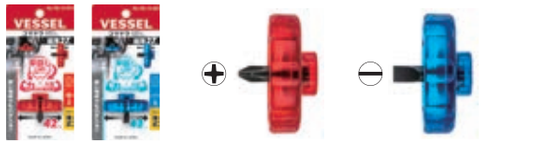
No. TD-13-P2/ -S6 KOMADORA Stubby Screwdriver NEW

- Thinnest grip (27mm)
- Small center knob for quick tightening.
- Large grip (dia.42mm) for efficient torque transmission.



No.TD13				Inner Ctn.	Outer Ctn.	EDP No.
TD13-P2 (⊕2×10)	10	42.0	27	10	120	251141
TD13-S6 (⊖6×10)	10	42.0	27	10	120	251142

No. TD-13W/ -13W5 KOMADORA Stubby Screwdriver NEW

- Thinnest grip (27mm)
- Small center knob for quick tightening.
- Large grip (dia.42mm) for efficient torque transmission.
- Single end 6.35 hex bit is compatible.

No.TD13W			Inner Ctn.	Outer Ctn.	EDP No.
TD13W (⊕2×10)	42.0	27	10	10	251143
TD13W5 (⊖6,⊕1,⊕2,⊕3×10)	42.0	27	10	120	251144

No. TD-410 "FAMIDORA" Reversible Blade Screwdriver

●Ergonomic handle that fits in the palm of the hand.
●Fully hardened shank. Tough tip.

Cr-V. steel

Set content		Package size (mm)	Inner Ctn.	Outer Ctn.	EDP No.
Handle	length 101.5mm dia. 29mm	185×75×31	10	60	251801
Driver blades	⊕2 / ⊖6×150mm				

No. TD-2100 "Dual-Tone" Screwdriver Set

●Set of a handle and interchangeable blades, convenient for repair/ disassembly of electric goods, toys, and equipment instruments.
●Octagonal grip effectively transmitting fastening force; made of polypropylene, oil and chemical resistant.
●Blades have a thin non-electrolytic plating layer and fits screws.
●Magnetized tip catching screws. ●Provided with a handy bag.

MG Cr-V. steel

Set content		Package size (mm)	Inner Ctn.	EDP No.
Handle	length 100mm dia. 30mm	126×64×35	40	247030
Driver blades	⊕1, ⊕2, ⊕4, ⊕6×120mm			

No. TD-912N "FAMIDORA 12" Screwdriver 12-Piece Set

●Ergonomic handle that fits in the palm of the hand.
●Color-coded interchangeable driver blades.
●Provided with a screwdriver stand, which is convenient for storage.

MG Cr-V. steel

Set content		Package size (mm)	Inner Ctn.	Outer Ctn.	EDP No.
Handle	length 100mm dia. 29.5mm	160×150×35	10	60	251800
Driver blades	⊕0, ⊕1, ⊕2, ⊖2.5, ⊖4, ⊖6, Awl, Pin extractor×128mm				

No. TD-800 "FAMIDORA 8" Screwdriver 8-Piece Set

●Ergonomic handle that fits in the palm of the hand.
●Color-coded interchangeable driver blades.
●Provided with a screwdriver stand, which is convenient for storage.

MG Cr-V. steel

Set content		Package size (mm)	Inner Ctn.	Outer Ctn.	EDP No.
Handle	length 100mm dia. 29.5mm	160×150×35	10	60	251800
Driver blades	⊕0, ⊕1, ⊕2, ⊖2.5, ⊖4, ⊖6, Awl, Pin extractor×128mm				

One point

Features of the FAMIDORA series Small handle / Big handle

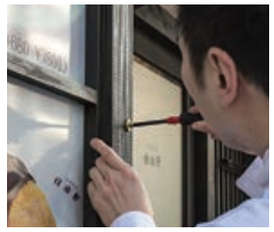
Compact design useful as a standing set in households, offices, stores, etc.

Without big handle, the screwdriver can be used.

In a drawer

In a gap beside a cash register

For mounting hardware


For fastening a sign with screws

No. 550

"SEPADORA" Screwdriver

Environmentally friendly products with low environmental impacts are desired in corporate activities.
All are ecological when held by hand.

HAND TOOLS
BITS & SOCKETS
ELECTRIC TOOLS
AIR TOOLS
STATIC SOLUTIONS
GASOLINE ENGINE TOOLS

No.550 "SEPADORA" Screwdriver PAT.

- Shank and grip are separable. Sort and recycle.
- Wavy octogonal grip fits your palm and transmits driving torque effectively.

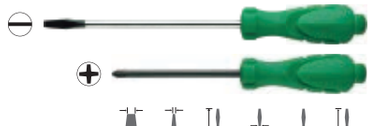
←See P21

No.550							Inner Ctn.	Outer Ctn.	EDP No.
⊖ 5.5 × 75	5.5	0.8	75	5.0	30.0	175	6	120	121601
⊖ 6 ×100	6.0	0.9	100	6.0	33.5	210	6	60	121602
⊖ 8 ×150	8.0	1.1	150	8.0	36.0	275	6	60	121603
⊕ 1 × 75	⊕No.1		75	5.0	30.0	175	6	120	121611
⊕ 2 ×100	⊕No.2		100	6.0	33.5	210	6	60	121612
⊕ 2 ×150	⊕No.2		150	6.0	33.5	260	6	60	121613
⊕ 3 ×150	⊕No.3		150	8.0	36.0	275	6	60	121616

No.590 "SEPADORA" Screwdriver (Precision Type) PAT.

- Shank and grip are separable. Sort and recycle.
- Wavy octogonal grip fits your palm and transmits driving torque effectively.
- Special grip with a clip.
- Thin shank screwdriver. Ideal for screw tightening in precision fields.

※⊕00x50 is with a fully black oxide finish shank.



No.590							Inner Ctn.	Outer Ctn.	EDP No.
⊖ 2.5× 50	2.5	0.35	50	3.0	15.4	99	24	480	121671
⊖ 2.5× 75	2.5	0.35	75	3.0	15.4	124	24	480	121672
⊖ 2.5× 100	2.5	0.35	100	3.0	15.4	149	24	480	121673
⊕ 00 × 50	⊕No.00		50	3.0	15.4	99	24	480	121674
⊕ 0 × 75	⊕No.0		75	3.0	15.4	124	24	480	121675

No.560 "SEPADORA" Screwdriver (Thin Shank Type) PAT.

- Shank and grip are separable. Sort and recycle.
- Wavy octogonal grip fits your palm and transmits driving torque effectively.
- Thin shank screwdriver. Ideal for screw tightening in narrow spaces.

No.560							Inner Ctn.	Outer Ctn.	EDP No.
⊖ 4 × 75	4.0	0.5	75	4.0	19.8	153	12	240	121632
⊖ 4 ×100	4.0	0.5	100	4.0	19.8	178	12	240	121633
⊖ 4 ×150	4.0	0.5	150	4.0	19.8	228	12	240	121634
⊖ 4 ×200	4.0	0.5	200	4.0	19.8	278	12	240	121635
⊕ 0 × 75	⊕No.0		75	4.0	19.8	153	12	240	121642
⊕ 1 ×100	⊕No.1		100	4.0	19.8	178	12	240	121647
⊕ 2 ×150	⊕No.2		150	4.0	19.8	228	12	240	121651

No.570 "SEPADORA" Screwdriver (Stubby Type) PAT.

- Shank and grip are separable. Sort and recycle.
- Wavy octogonal grip fits your palm and transmits driving torque effectively.
- Ideal for working in cramped places.

No.570							Inner Ctn.	Outer Ctn.	EDP No.
⊖ 6 × 25	6.0	0.9	25	6.0	45	50	12	240	121661
⊕ 1 × 25	⊕No.1		25	6.0	45	50	12	240	121662
⊕ 2 × 25	⊕No.2		25	6.0	45	50	12	240	121663

One point

Concave octagonal grip

Dents and projections of the waves fit into your palm to transmit the torque securely.

Black point processing
High precision finish, unaffected by plate thickness

Rust-proof chrome plating

Elastomer grip
The elastomer resin coating on the surface is slip-proof and fits into your palm

Tip shape is shown on the grip end

No.500 ECO VALUE Screwdriver

- Robust looking black hard grip.
- Wavy octogonal grip fits your palm and transmits driving torque effectively.
- Champagne gold plating, keeping the precise tip quality.

No.500							Inner Ctn.	Outer Ctn.	EDP No.
⊖ 5.5 × 75	5.5	0.8	75	5.0	30.0	175	6	120	121751
⊖ 6 ×100	6.0	0.9	100	6.0	33.5	210	6	60	121752
⊖ 8 ×150	8.0	1.1	150	8.0	36.0	275	6	60	121753
⊕ 1 × 75	⊕No.1		75	5.0	30.0	175	6	120	121761
⊕ 2 ×100	⊕No.2		100	6.0	33.5	210	6	60	121762
⊕ 3 ×150	⊕No.3		150	8.0	36.0	275	6	60	121766

※The shank is not separable.

No.510 ECO VALUE Screwdriver

- Robust looking black hard grip.
- Wavy octogonal grip fits your palm and transmits driving torque effectively.
- Thin shank screwdriver. Ideal for screw tightening in narrow spaces.
- Champagne gold plating, keeping the precise tip quality.

No.510							Inner Ctn.	Outer Ctn.	EDP No.
⊖ 4 × 75	4.0	0.45	75	4.0	19.8	153	12	240	121782
⊖ 4 ×100	4.0	0.45	100	4.0	19.8	178	12	240	121783
⊕ 0 × 75	⊕No.0		75	4.0	19.8	153	12	240	121792
⊕ 1 ×100	⊕No.1		100	4.0	19.8	178	12	240	121797

※The shank is not separable.

No.540 ECO VALUE Screwdriver (Precision Type)

- Robust looking black hard grip.
- Wavy octogonal grip fits your palm and transmits driving torque effectively.
- Special grip with a clip.
- Thin shank screwdriver. Ideal for screw tightening in precision fields.
- Champagne gold plating, keeping the precise tip quality.

No.540							Inner Ctn.	Outer Ctn.	EDP No.
⊖ 2.5× 50	2.5	0.35	50	3.0	15.4	99	24	480	121821
⊕ 00 × 50	⊕No.00		50	3.0	15.4	99	24	480	121824
⊕ 0 × 75	⊕No.0		75	3.0	15.4	124	24	480	121825

※The shank is not separable.

No.520 ECO VALUE Screwdriver (Stubby Type)

- Robust looking black hard grip.
- Wavy octogonal grip fits your palm and transmits driving torque effectively.
- Ideal for working in cramped spaces.
- Champagne gold plating, keeping the precise tip quality.

No.520							Inner Ctn.	Outer Ctn.	EDP No.
⊖ 6 × 25	6.0	0.9	25	6.0	45	50	12	240	121811
⊕ 1 × 25	⊕No.1		25	6.0	45	50	12	240	121812
⊕ 2 × 25	⊕No.2		25	6.0	45	50	12	240	121813

※The shank is not separable.

No.460NT-9S ECOSOFT T-bar screwdriver (w/socket bit set)

- The ergonomic grip fits comfortably in your hand. T-shaped handle transmits high torque without applying too much force by your hand.
- Ball-lock type holds a socket assuredly. Hex drive 6.35mm.

Set content	
Body	length 165.5mm dia. 100mm
Socket bits	A/F5, A/F5.5, A/F6, A/F7, A/F8, A/F9, A/F10, A/F12, A/F13 x26.5mm
Accessories	Socket bit holder

Package size (mm)	Inner Ctn.	Outer Ctn.	EDP No.
235×120×30	5	30	121891

※The shank is not separable.

No. 100

Powerful Tang-Thru Screwdriver

Luxurious furniture finish coating on the large handle, which fits more comfortably in your hand the more you use it.
Its better usability compared to plastic handles attracts support from many professional users.

No. 100
Powerful Tang-Thru Screwdriver

Especially large, heavy-duty end cap. An especially large end cap efficiently delivers the shock of the hammer blow.
When tapped with a hammer, and adjusting the force of the tapping to the condition of the material concerned, this screwdriver can be used effectively to loosen stripped or rusted screws.

※The above illustration is for reference only.

No. 100 Powerful Tang-Thru Screwdriver

●Wooden handle and Tang-Thru shank with thick end cap.
●Large and long grip comfortable to hold.
●Black point tip.

No.100							(mm)	Inner Ctn.	Outer Ctn.	EDP No.
⊖ 5.5× 75	5.5	0.8	75	5.8	27.0	182	6	120	111051
⊖ 6 ×100	6.0	0.9	100	6.4	30.5	223	6	120	111052
⊖ 6 ×300	6.0	0.9	300	6.4	30.5	423	6	60	111061
⊖ 8 ×150	8.0	1.1	150	8.0	34.0	294	6	120	111053
⊕ 1 × 75	⊕No.1		75	5.8	27.0	182	6	120	111054
⊕ 2 ×100	⊕No.2		100	6.4	30.5	223	6	120	111055
⊕ 2 ×300	⊕No.2		300	6.4	30.5	423	6	60	111066
⊕ 3 ×150	⊕No.3		150	8.0	34.0	294	6	120	111056

No. 350 Wooden Handle Tang-Thru Screwdriver

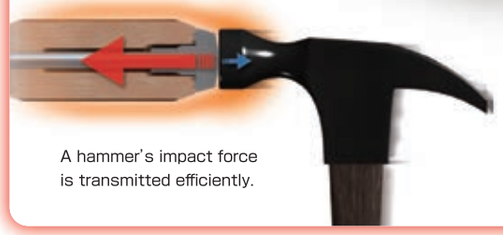
●Widely-used standard wooden handle screwdriver.
●Wooden handle and Tang-Thru shank with large end cap.
●Shot blasting tip.

No.350							(mm)	Inner Ctn.	Outer Ctn.	EDP No.
⊖ 5.5× 75	5.5	0.8	75	5.5	25	178	12	120	111002
⊖ 6 ×100	6.0	0.9	100	6.3	28	218	12	240	111003
⊖ 8 ×150	8.0	1.1	150	8.0	33	283	6	120	111005
⊖ 9 ×200	9.0	1.2	200	9.0	36	355	6	60	111006
⊖ 10 ×300	10.0	1.2	300	9.0	36	455	6	60	111008
⊕ 1 × 75	⊕No.1		75	5.0	25	178	12	120	111010
⊕ 2 ×100	⊕No.2		100	6.3	28	218	12	240	111011
⊕ 3 ×150	⊕No.3		150	8.0	33	283	6	120	111012
⊕ 4 ×200	⊕No.4		200	9.0	36	355	6	60	111013

One point

Furniture-quality grip…

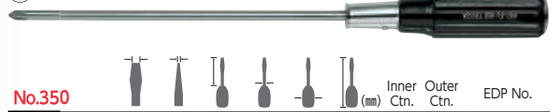
These grips are one size larger than the usual, and have been given a furniture type finish for an especially high-quality feel.
Especially large, heavy-duty end cap.
An especially large end cap efficiently delivers the shock of the hammer blow.
When tapped with a hammer, and adjusting the force of the tapping to the condition of the material concerned, this screwdriver can be used effectively to loosen stripped or rusted screws.



A hammer's impact force is transmitted efficiently.

No. 350 Wooden Handle Tang-Thru Screwdriver (Long Shank Type)

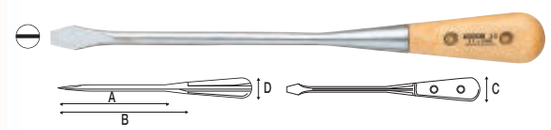
●Wooden handle and Tang-Thru shank.
●Long shank for fastening in a hard-to-reach space.



No.350							(mm)	Inner Ctn.	Outer Ctn.	EDP No.
⊖ 6 ×200	6.0	0.9	200	6.3	28	320		12	120	111018
⊖ 6 ×250	6.0	0.9	250	6.3	28	370		12	120	111019
⊖ 6 ×300	6.0	0.9	300	6.3	28	420		12	120	111020
⊕ 2 ×200	⊕No.2		200	6.3	28	320		12	120	111024
⊕ 2 ×250	⊕No.2		250	6.3	28	370		12	120	111025
⊕ 2 ×300	⊕No.2		300	6.3	28	420		12	120	111026

No. 30 "SPLIT" Handle Screwdriver

●Joined Tang-Thru shank and handle. Super strong type.

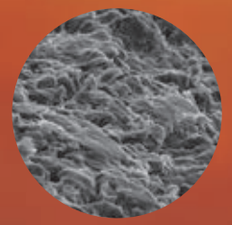


No.30	A	B	C	D	(mm)	Inner Ctn.	Outer Ctn.	EDP No.
⊖ 9.5× 150	9.5	1.2	9.5	145	190	35	29	285	6	120	113101
⊖ 11 × 200	11	1.2	11	195	255	38	32	360	6	120	113102

No. 300

Wood-Compo Screwdriver

Maintenance of cars, motorbikes and machines always involves oils.
Wood-compo screwdriver's coarse wood powder on the grip surface stops the oil flow against the tightening torque, producing an outstanding non-slip grip effect.



A D V A N C E D

NON-SLIP

T E C H N O L O G Y

No. 300
Wood-Compo Screwdriver

The grip part is made by unique mold injection technique for "wood resin" which is a compound of wood powder and plastic.
Wood powder is the main material, realizing texture and feeling to fit comfortably in your hand like those made of natural wood.

※The above illustration is for reference only.

No. 300 Wood-Compo Screwdriver PAT.

- Extraordinary non-slip grip; Secure working efficiency even with oily hands.
- Wood-composite resin, reproducing the natural material texture.
- Rust-resistant black chrome plating shank.

No.300								Inner Ctn.	Outer Ctn.	EDP No.
⊖ 5.5× 75	5.5	0.8	75	5.5	30	182	6	120	120021
⊖ 6× 100	6.0	0.9	100	6.4	32	215	6	120	120022
⊖ 6× 150	6.0	0.9	150	6.4	32	265	6	120	120027
⊖ 8× 150	8.0	1.1	150	8.0	35	275	6	120	120023
⊕ 1× 75	⊕No.1		75	5.5	30	182	6	120	120024
⊕ 2× 100	⊕No.2		100	6.4	32	215	6	120	120025
⊕ 2× 150	⊕No.2		150	6.4	32	265	6	120	120029
⊕ 3× 150	⊕No.3		150	8.0	35	275	6	120	120026

No. B-330 Wood-Compo Tang-Thru Screwdriver PAT.

- Extraordinary non-slip grip; Secure working efficiency even with oily hands.
- Tang-thru type, which can be tapped by a hammer. With star-shaped nut.
- Rust-resistant black chrome plating shank.

No.B-330								Inner Ctn.	Outer Ctn.	EDP No.
⊖ 5.5× 75	5.5	0.8	75	5.5	30	183	6	120	120041
⊖ 6× 100	6.0	0.9	100	6.4	32	217	6	120	120042
⊖ 6× 150	6.0	0.9	150	6.4	32	267	6	60	120043
⊖ 8× 150	8.0	1.1	150	8.0	35	277	6	60	120044
⊕ 1× 75	⊕No.1		75	5.5	30	183	6	120	120045
⊕ 2× 100	⊕No.2		100	6.4	32	217	6	120	120046
⊕ 2× 150	⊕No.2		150	6.4	32	267	6	60	120047
⊕ 3× 150	⊕No.3		150	8.0	35	277	6	60	120048

No. B-300 Wood-Compo S/D (w/hanging card) PAT.

- Extraordinary non-slip grip; Secure working efficiency even with oily hands.
- Wood-composite resin, reproducing the natural material texture.
- Rust-resistant black chrome plating shank.

No.B-300								Inner Ctn.	Outer Ctn.	EDP No.
⊖ 5.5× 75	5.5	0.8	75	5.5	30	183	6	120	120071
⊖ 6× 100	6.0	0.9	100	6.4	32	217	6	120	120072
⊖ 6× 150	6.0	0.9	150	6.4	32	267	6	60	120073
⊖ 8× 150	8.0	1.1	150	8.0	35	277	6	60	120074
⊕ 1× 75	⊕No.1		75	5.5	30	183	6	120	120075
⊕ 2× 100	⊕No.2		100	6.4	32	217	6	120	120076
⊕ 2× 150	⊕No.2		150	6.4	32	267	6	60	120077
⊕ 3× 150	⊕No.3		150	8.0	35	277	6	60	120078

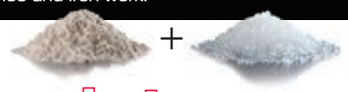
No. 320 Wood-Compo Screwdriver (Stubby Type) PAT.

- Stubby type, which is convenient for tightening screws in cramped spaces.
- Wood-composite resin, reproducing the natural material texture.
- Rust-resistant black chrome plating shank.

No.320								Inner Ctn.	Outer Ctn.	EDP No.
⊖ 6× 15	6.0	0.9	15	6.0	35	68	6	120	120035
⊕ 2× 15	⊕No.2		15	6.0	35	68	6	120	120037

Ultimate Non-Slip Screwdriver even with oily hands

Uses biomass plastic which contains 70% wood powder.
This compound material forms the wood-compo screwdrivers, which is a new product of a category that can be called a "new wooden handled" screwdriver with texture of wood and excellent strength.
At development phase, this product proved to be "non-slip" even in an oily hand.
This feature is most applicable to work that involves oil such as car maintenance and iron work.



One point

No. B-340TX
Wood-Compo TORX Screwdriver PAT.

- Extraordinary non-slip grip; Secures working efficiency even with oily hands. Wood-composite resin, reproducing the natural material texture.
- Non-electrolytic plating, keeping the precise tip quality.
- Also good for tamper-proof TORX screws.

MG Cr-V. steel

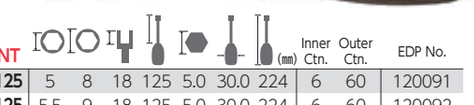
No.B-340TX					(mm)	Inner Ctn.	Outer Ctn.	EDP No.
T10H× 80	2.72	80	5.5	30	188	6	120	120081
T15H× 80	3.26	80	5.5	30	188	6	120	120082
T20H×120	3.84	120	5.5	30	228	6	120	120083
T25H×120	4.40	120	6.4	32	236	6	60	120084
T27H×120	4.96	120	6.4	32	236	6	60	120085
T30H×120	5.49	120	8.0	35	246	6	60	120086
T40H×120	6.60	120	8.0	35	246	6	60	120087

TORX® is a registered trademark of Acument TM Intellectual Properties, LLC (USA). VESSEL has a manufacturing license in Japan and selling same to the world.

No. B-380NT
Wood-Compo Socket Screwdriver PAT.

- Extraordinary non-slip grip; Secures working efficiency even with oily hands. Wood-composite resin, reproducing the natural material texture.
- Black oxide plated socket.
- Rust resistant chrome plating. Hexagonal shank for fastening with a wrench.

Cr-V. steel



No.B-380NT						(mm)	Inner Ctn.	Outer Ctn.	EDP No.
A/F 5 ×125	5	8	18	125	5.0	30.0	224	6	60	120091
A/F 5.5×125	5.5	9	18	125	5.0	30.0	224	6	60	120092
A/F 7 ×125	7	10	18	125	5.0	30.0	224	6	60	120093
A/F 8 ×125	8	12	20	125	5.0	32.0	233	6	60	120094
A/F 10 ×125	10	15	20	125	7.0	32.0	233	6	60	120095
A/F 12 ×150	12	17	20	125	7.0	32.0	233	6	60	120096
A/F 13 ×150	13	19	22	125	7.0	32.0	233	6	60	120097
A/F 14 ×150	14	19	22	125	7.0	32.0	233	6	60	120098

No. B-370 Non-slip Tang-Thru Screwdrivers

- Unique Non-Slip finish that prevents slipping even if oil adheres on the grip.
- Tang-thru type with a large nut. Good for heavy duty work.
- The end of the handle has a color ring facilitates to distinguish the tip difference at a glance.

MG Cr-V. steel

No.B-370						(mm)	Inner Ctn.	Outer Ctn.	EDP No.
⊖5.5× 75	5.5	0.8	75	5.5	27.4	183	6	60	267590
⊖6 ×100	6.0	0.9	100	6.4	30.7	226	6	60	267591
⊖8 ×150	8.0	1.1	150	8.0	36.2	290	6	60	267592
⊕1 × 75	⊕No.1		75	5.5	27.4	183	6	60	267593
⊕2 ×100	⊕No.2		100	6.4	30.7	226	6	60	267594
⊕3 ×150	⊕No.3		150	8.0	36.2	290	6	60	267595

No. HRH
Wood-Compo Ratchet Handle NEW

HRH2-W HRH3-W

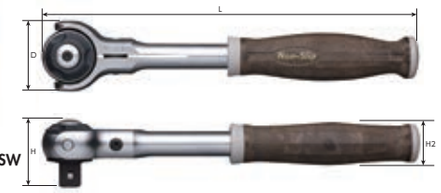
- Wedge type 72-tooth gear ratchet realizes a ultra small and highly durable head.
- Non-slip wood-composite handle 1/4sq.(6.35mm), reproducing the natural material texture.

No.HRH	Designation Insertion	Feed Angle	D	H	H2	L	(mm)	Inner Ctn.	Outer Ctn.	EDP No.
HRH2-W	1/4"sq.(6.35mm)	5°	20	20	30	145		6	60	162004
HRH3-W	3/8"sq.(9.5mm)	5°	25	27	30	180		6	60	162005

No. HRH
Wood-Compo Swivel Ratchet Handle NEW

HRH2-SW HRH3-SW

- Swiveling low-height ratchet head.
- Non-slip grip with constrictions good for use in a deep area.



No.HRH	Designation Insertion	Feed Angle	D	H	H2	L	(mm)	Inner Ctn.	Outer Ctn.	EDP No.
HRH2-SW	1/4"sq.(6.35mm)	5°	32	26.4	19.5	169		6	60	162104
HRH3-SW	3/8"sq.(9.5mm)	5°	32	29.5	19.5	169		6	60	162105

No. HRW2001M-W
Wood-Compo Socket Wrench Set NEW

- Wedge type 72-tooth gear ratchet realizes a ultra small and highly durable head.
- Non-slip wood-composite handle 1/4sq.(6.35mm), reproducing the natural material texture.
- Surface contact sockets, avoiding the damage on the edges of bolts or nuts.

1/4"sq.(6.35mm) 36pcs.

	Set content	EDP No.
HRW2001M-W	Wood-Compo ratchet handle 1/4"sq.(6.35mm) Wood-Compo stubby handle 1/4"sq.(6.35mm) Universal socket adaptor 1/4"sq.(6.35mm) Extension bar Overall length 100mm 1/4"sq.(6.35mm) Bit socket adaptor 1/4"sq.⇔1/4"hex. 1/4"sockets: 4, 4.5, 5, 5.5, 6, 7, 8, 9, 10, 11, 12, 13, 14mm Bits: ⊖4, 6, ⊕1, 2, 3, H1.5, H2, H2.5, H3, H4, H5, T10, T15, T20, T25, T27, T30, T40	162001

Inner Ctn.: 3 sets, Outer Ctn.: 9 sets

No. HRW3002M-W
Wood-Compo Socket Wrench Set NEW

- Wedge type 72-tooth gear ratchet realizes a ultra small and highly durable head.
- Non-slip wood-composite handle 3/8sq.(9.5mm), reproducing the natural material texture.
- Surface contact sockets, avoiding the damage on the edges of bolts or nuts.

3/8"sq.(9.5mm) 16pcs.

	Set content	EDP No.
HRW3002M-W	Wood-Compo ratchet handle 3/8"sq.(9.5mm) Universal socket adaptor 3/8"sq.(9.5mm) Sliding T-shaped handle 3/8"sq.(9.5mm) Extension bar Overall length 150mm 3/8"sq.(9.5mm) Extension bar Overall length 75mm 3/8"sq.(9.5mm) 3/8" sockets: A/F7, 8, 10, 11, 12, 13, 14, 17, 19, 21, 22mm	162002

Inner Ctn.: 3 sets, Outer Ctn.: 9 sets

No. HRW2004M-SW
Wood-Compo Swivel Socket Wrench Set NEW

- The non-slip ratchet handle has the constricted end, which facilitates tightening work in a deep area.
- Low height ratchet swiveling head can be used for quick turning like a screwdriver, by setting the handle vertically to the head.
- Dodecagonal sockets for improved workability.
- Quick spinner to turn quickly sockets, even a small one.

Dodecagonal socket

Quick spinner, turning quickly sockets, even a small one.

1/4"sq.(6.35mm) 21pcs.

	Set content	EDP No.
HRW2004M-SW	Wood-Compo swivel ratchet handle 1/4"sq. (6.35mm) Extension bar Overall length 55mm 1/4"sq. (6.35mm) Extension bar Overall length 150mm 1/4"sq. (6.35mm) Quick spinner 1/4"sq. (6.35mm) Hex key wrench: H2.5, 3, 4, 5, 6, 8mm 1/4"sockets: A/F5, 5.5, 6, 7, 8. 9, 10, 11, 12, 13, 14mm	162102

Inner Ctn.: 3 sets, Outer Ctn.: 9 sets

No. HRW2303M-W
Wood-Compo Socket Wrench Set NEW

- Wedge type 72-tooth gear ratchet realizes a ultra small and highly durable head.
- Non-slip wood-composite handle 1/4sq.(6.35mm) and 3/8sq.(9.5mm), reproducing the natural material texture.
- Surface contact sockets, avoiding the damage on the edges of bolts or nuts.

1/4"sq.(6.35mm)/3/8"sq.(9.5mm) 36pcs.

	Set content	EDP No.
HRW2303M-W	Wood-Compo ratchet handle 3/8"sq. (9.5mm) Wood-Compo spinner handle 1/4"sq. (6.35mm) Universal socket adaptor 3/8"sq. (9.5mm) Extension bar Overall length 150mm 3/8"sq. (9.5mm) Bit socket adaptor 1/4"sq.⇔1/4"hex. 1/4"sockets: A/F4, 4.5, 5, 5.5, 6, 7, 8mm 3/8"sockets: A/F10, 11, 12, 13, 14, 17, 19, 21, 22mm Bits: ⊖4, 6, ⊕1, 2, 3, H3, H4, H5, H6, T10, T15, T20, T25, T30, T40	162003

Inner Ctn.: 3 sets, Outer Ctn.: 9 sets

No. HRW3005M-SW
Wood-Compo Swivel Socket Wrench Set NEW

- The non-slip ratchet handle has the constricted end, which facilitates tightening work in a deep area.
- Low height ratchet swiveling head can be used for quick turning like a screwdriver, by setting the handle vertically to the head.
- Dodecagonal sockets for improved workability.
- Deep hole sockets, also dodecagonal, are included.
- Quick spinner to turn quickly sockets, even a small one.

Dodecagonal socket

Deep hole socket

Depth: A/F 8 .....15mm
A/F 10/12/1430mm

Quick spinner, turning quickly sockets, even a small one.

3/8"sq.(9.5mm) 16pcs.

	Set content	EDP No.
HRW3005M-SW	Wood-Compo swivel ratchet handle 3/8"sq. (9.5mm) Extension bar Overall length 55mm 3/8"sq. (9.5mm) Quick spinner 3/8"sq. (9.5mm) Deep socket 3/8"sq. (9.5mm): H8, 10, 12, 14mm 3/8"sockets: A/F8, 10, 12, 13, 14, 17, 19, 21, 24mm	162103

Inner Ctn.: 3 sets, Outer Ctn.: 9 sets

No. 990

G-grip Screwdriver

This precision screwdriver is perfect for the delicate screw tightening operations of precision work. Our high-precision, tip process conforms to JIS and JCIA standards. The ergonomic grips employed enable a smoother torque transfer.

No. 990
G-grip Screwdriver

Quick-turning screwdriver, taking advantageof the gravity force.
The perfect shape for high-precision work
The weight of the internal steel ball freely rotates the cap in the palm of the hand to provide the optimum grip position.

※The above illustration is for reference only.

No. 990 G-grip Screwdriver PAT.

- The weight of the steel ball keeps the end cap in an optimum position for a grip.
- Black point tip, fitting well screws.
- Slotted tip is cut straight.

StepFlat Cr-V. steel

←See P30

No.990	A	B	(mm)	Inner Ctn.	Outer Ctn.	EDP No.
⊖ 1.8× 50	1.8	0.25	50	2.5	16	21	148	12	240	125901
⊖ 2.5× 75	2.5	0.3	75	2.5	16	21	173	12	240	125902
⊖ 3 ×100	3	0.5	100	3.0	16	21	198	12	240	125903
⊖ 4 ×100	4	0.6	100	4.0	16	21	198	12	240	125904
⊖ 5 ×100	5	0.8	100	5.0	30	38	215	6	60	125905
⊕ 00× 75	⊕No.00	75	2.5	16	21	173	12	240	125911
⊕ 0 ×100	⊕No.0	100	3.0	16	21	198	12	240	125912
⊕ 1 ×100	⊕No.1	100	3.0	30	38	215	6	60	125913
⊕ 2 ×100	⊕No.2	100	5.0	30	38	215	6	60	125914

No. 990TX G-grip TORX Screwdriver PAT.

- The weight of the steel ball keeps the end cap in an optimum position for a grip.
- A special precision spring is welded to the tip by laser, enabling the screwdriver to catch a TORX screw firmly by spring action.

MagicSpring ※T6~T20 Cr-V. steel

→See P48 One point

No.990TX	A	B	(mm)	Inner Ctn.	Outer Ctn.	EDP No.
T3 ×40	1.13	40	2.5	16	21	138	12	240	125921
T5 ×40	1.42	40	2.5	16	21	138	12	240	125923
MagicSpring T6 ×40	1.69	40	2.5	16	21	138	12	240	125924
MagicSpring T8 ×40	2.3	40	2.5	16	21	138	12	240	125926
MagicSpring T9 ×40	2.48	40	4.0	16	21	138	12	240	125927
MagicSpring T10×80	2.72	80	4.0	30	38	195	6	60	125928
MagicSpring T15×80	3.26	80	5.5	30	38	195	6	60	125929
MagicSpring T20×80	3.84	80	5.5	30	38	195	6	60	125930

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No. 9900 Micro Screwdriver

- Equipped with a cap for fast turning on the grip.
- Remarkably highly precise black point tip.

Cr-V. steel

No.9900	(mm)	Inner Ctn.	Outer Ctn.	EDP No.
⊖ 1.8× 50	1.8	0.25	50	2.5	10	145	12	120	125621
⊖ 2.5× 75	2.5	0.35	75	2.5	10	170	12	120	125622
⊖ 3 ×100	3	0.45	100	3	10	195	12	120	125623
⊖ 3 ×150	3	0.45	150	3	10	245	12	120	125624
⊕ 00× 75	⊕No.00	75	2.5	10	170	12	120	125625
⊕ 0 ×100	⊕No.0	100	3	10	195	12	120	125626
⊕ 0 ×150	⊕No.0	150	3	10	245	12	120	125627

No. 9902/9903 3-Piece Micro Screwdriver Set

- 2 types recommended to precision fields.
- Set of frequently used sizes.
- For adjustment and repair of precision device, electric device, glasses, watches, etc.

Cr-V. steel

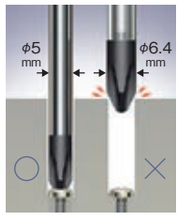
Model No.	Set content	Package size (mm)	Inner Ctn.	Outer Ctn.	EDP No.
9902	No.9900 ⊕00×75, ⊕0×100, ⊖1.8×50	235×70×15	5	30	125636
9903	No.9900 ⊕00×75, ⊖2.5×75, ⊖3×100	235×70×15	5	30	125637

One point

Features of the precision tip

Precisely-finished tip-end good for minuscule screws
No.990 / No.9900

00 / 0



A deep recessed area can also be accessed by the thin shank!
No.990

1 / 2

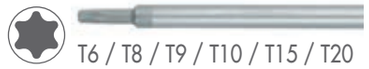
6mm hole, M3 round head screw, and screw head dia. of ϕ5.5 mm

Two-step flat shape, enabling the tip to fit into a screw
No.990

1.8 / 2.5 / 3 / 4 / 5

StepFlat

Catches a TORX screw
A special-shape spring is welded to the tip by laser.
No.990TX



T6 / T8 / T9 / T10 / T15 / T20

MagicSpring

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No. TD-51 Precision Micro Screwdriver

- The main body is made of stainless steel (the end cap is made of resin).
- For assembly, repair, and disassembly of precision devices, cameras, watches, glasses, etc.

No.TD-51					(mm)	Cushion Grip color	Inner Ctn.	Outer Ctn.	EDP No.
⊖ 0.7	0.7	0.15	10	0.7	90	Purple	10	100	251350
⊖ 0.9	0.9	0.2	10	0.9	90	Green	10	100	251351
⊖ 1.2	1.2	0.25	10	1.2	90	Blue	10	100	251352
⊖ 1.8	1.8	0.3	20	1.8	100	Black	10	100	251353
⊖ 2.3	2.3	0.35	22	2.3	102	Purple	10	100	251354
⊖ 3.0	3.0	0.4	26	3.0	106	Red	10	100	251355
⊖ 3.5	3.5	0.5	28	3.5	108	Yellow	10	100	251356
⊕ 0000	⊕No.0000		17	1.4	97	Lemon	10	100	251394
⊕ 000	⊕No.000		20	1.6	100	Yellow green	10	100	251393
⊕ 00	⊕No.00		24	2.4	104	Red	10	100	251357
⊕ 0	⊕No.0		26	3.0	106	Yellow	10	100	251358
⊕ 1	⊕No.1		26	3.0	106	Green	10	100	251359

Package size···160×35×14mm

No. TD-52 Precision Nutdriver

- The main body is made of stainless steel (the end cap is made of resin).
- For assembly, repair, and disassembly of precision devices, spacer, toys, etc.

Adaptable to most of screws used for rimless spectacles

No.TD-52						(mm)	Cushion Grip color	Inner Ctn.	Outer Ctn.	EDP No.
2.2	—	4.0	12	25	3.0	105	Green	10	100	251361
A/F 3.0	3.0	5.0	7	25	3.0	105	Blue	10	100	251362
A/F 4.0	4.0	6.0	9	25	3.0	105	Black	10	100	251363
A/F 4.5	4.5	6.5	10	25	3.0	105	Purple	10	100	251364
A/F 5.0	5.0	7.0	11	25	3.0	105	Red	10	100	251365
A/F 5.5	5.5	8.0	10	25	3.0	105	Yellow	10	100	251366

Package size···160×35×14mm

No. TD-53 Precision Hex Driver

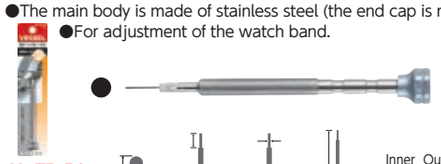
- The main body is made of stainless steel (the end cap is made of resin).
- For assembly, repair, and disassembly of precision devices, toys, etc.

No.TD-53				(mm)	Cushion Grip color	Inner Ctn.	Outer Ctn.	EDP No.
H 0.89	0.89	18	98		Green	10	100	251371
H 1.27	1.27	18	98		Blue	10	100	251372
H 1.5	1.5	18	98		Black	10	100	251373
H 2.0	2.0	24	104		Purple	10	100	251374
H 2.5	2.5	24	104		Yellow	10	100	251375

Package size···160×35×14mm

No. TD-54 Watch Band Pin Punch

- The main body is made of stainless steel (the end cap is made of resin).
- For adjustment of the watch band.



No.TD-54				(mm)	Inner Ctn.	Outer Ctn.	EDP No.
0.7	0.7	10	0.7	90	10	100	251380

Package size···160×35×14mm

No. TD-54 IPR Precision Pentalobe Screwdriver NEW

- The main body is made of stainless steel (the end cap is made of resin).
- For assembly, repair, and disassembly of precision devices.Smartphones,Laptops.

No.TD-54				(mm)	Cushion Grip color	Inner Ctn.	Outer Ctn.	EDP No.
1IPR	0.84	20	100		Red	10	100	251378
4IPR	1.29	20	100		Yellow	10	100	251379

Package size···160×35×14mm

No. TD-59 Precision TORX® Screwdriver NEW

- The main body is made of stainless steel (the end cap is made of resin).
- For assembly, repair, and disassembly of precision devices.Smartphones,Laptops.

No.TD-59				(mm)	Cushion Grip color	Inner Ctn.	Outer Ctn.	EDP No.
T1	0.84	20	100		Green	10	100	251385
T2	0.94	20	100		Blue	10	100	251386
T3	1.12	20	100		Black	10	100	251387
T4	1.3	20	100		Purple	10	100	251388
T5	1.37	20	100		Yellow	10	100	251390

Package size···160×35×14mm

One point

⊕ 0000

The cushion grip is adjustable at useful position.

Speed tightening

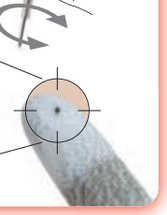
Both cushion grip and knurled section should be used for quick tightening.

Precision tightening

Press the cushion grip firmly and make a rotation.

Perfect! for such micro screws!!

World's smallest screw with M0.5 size according to Us



No. TD-54 3ULR Precision Micro Stix® Screwdriver NEW

- The main body is made of stainless steel (the end cap is made of resin).
- For assembly, repair, and disassembly of Smartphones, Laptops, Video Games, HDD.

No.TD-54 3ULR				(mm)	Cushion Grip color	Inner Ctn.	Outer Ctn.	EDP No.
M	0.5	20	100		Lemon	10	100	251425
00	0.7	20	100		Yellow green	10	100	251424
F	0.9	20	100		Green	10	100	251423
0	1.1	20	100		Blue	10	100	251422
1	1.4	20	100		Black	10	100	251421

Package size···160×35×14mm

No. TD-55/56/56S/56Y Precision Screwdriver Set

- The main body is made of stainless steel (the end cap is made of resin).
- Provided in a portable transparent case.

Model No.	Model Name	Set content	Package size (mm)	Inner Ctn.	EDP No.
TD-55	Precision Screwdriver Set	⊖0.9, ⊖1.2, ⊖1.8, ⊖2.3, ⊖3.0, ⊖3.5	140×86×20	10	251381
TD-56	Precision Screwdriver Set	⊖0.9, ⊖1.2, ⊖1.8, ⊖2.3, ⊕00, ⊕0	140×86×20	10	251382
TD-56S	Precision Screwdriver Set	⊖0.7, ⊖0.9, ⊕0000 ⊕000, ⊕00, ⊕0	140×86×20	10	251389
TD-56Y	Precision Screwdriver Set	3ULR-M, F, 0, 1IPR, T5, ⊕00	140×86×20	10	251401

No. TD-57 Precision Nut Driver Set

- The main body is made of stainless steel (the end cap is made of resin).
- Provided in a portable transparent case.

Model No.	Model Name	Set content	Package size (mm)	Inner Ctn.	EDP No.
TD-57	Precision Nut driver Set	2.2, ○3.0, ○4.0, ○4.5, ○5.0, ○5.5	140×86×20	10	251383

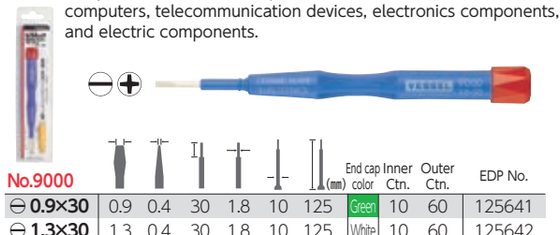
No. TD-58 Precision Hex. Driver Set

- The main body is made of stainless steel (the end cap is made of resin).
- Provided in a portable transparent case.

Model No.	Model Name	Set content	Package size (mm)	Inner Ctn.	EDP No.
TD-58	Precision Hex. driver Set	⬢0.89, ⬢1.27, ⬢1.5, ⬢2.0, ⬢2.5, ⊕00	140×86×20	10	251384

No. 9000 Ceramic Adjuster

- Uses a zirconia ceramics tip, non-inductive magnetic substance.
- Optimum for coil and trimmer adjustments.
- For the adjustment of electronic parts, such as audio instruments, computers, telecommunication devices, electronics components, and electric components.

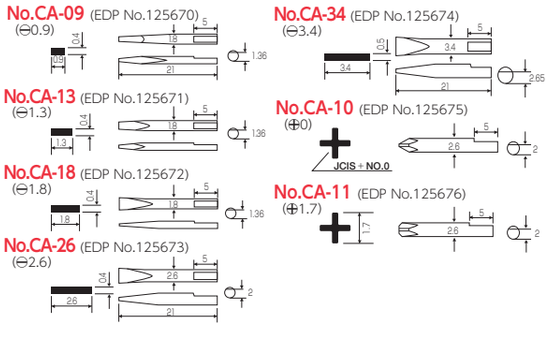


No.9000						(mm)	End cap color	Inner Ctn.	Outer Ctn.	EDP No.
⊖ 0.9×30	0.9	0.4	30	1.8	10	125	Green	10	60	125641
⊖ 1.3×30	1.3	0.4	30	1.8	10	125	White	10	60	125642
⊖ 1.8×30	1.8	0.4	30	1.8	10	125	Yellow	10	60	125643
⊖ 2.6×30	2.6	0.4	30	2.6	10	125	Red	10	60	125644
⊖ 3.4×15	3.4	0.5	15	3.4	10	115	Black	10	60	125645
⊕ 0 ×30	⊕No.0		30	2.6	10	125	Navy blue	10	60	125646
⊕ 1.7×30	⊕Width1.7		30	2.6	10	125	Lilac	10	60	125647

Package size···190×45×14mm

No. CA Replacement Ceramic Blade / Ceramic Blade Adapter

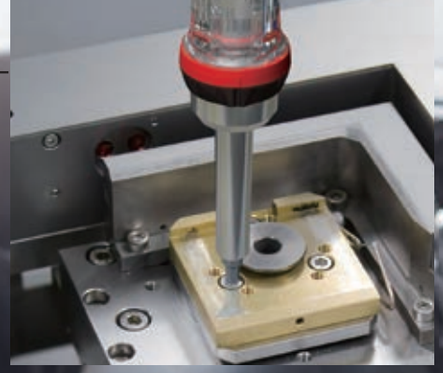
- Blade for automatic adjuster.
- Made of zirconia ceramics, offering high durability.
- For the adjustment of electronic parts, such as audio instruments, computers, telecommunication devices and electronic components.



Inner Ctn.:10pcs

No. TD-6800 Series

Ratchet Screwdriver



This functionally enhanced screwdriver enables screw tightening by simple repeated wrist movements.
Improved gear strength combined with our unique ratchet design makes these screwdrivers suitable for the most strenuous tightening jobs.

Ratchet series optimal for a confined area

	Flexible	Plate Rachet	Screw catcher	Stubby	Driver	Power
At a corner edge	TD-6700FX-4			TD-6700W-23		S-13
In a narrow area	TD-6700FX-4	TD-74/75/76/ 77/78/79 TD-70/71/72	TD-73MC TX-12MC	TD-6700W-23		
In a deep recessed area	TD-6700FX-4				TD-6800 Series	S-12/13
For force-requiring tightening		TD-74/75/76/ 77/78/79		TD-6700W-23	TD-6800 Series	TD-80 S-12/13 TD-81R/81G/81B

No. TD-6804MG
Ratchet Screwdriver
Newly developed 72 gear ratchet realizes smooth rotation. You can work by one hand, without grasping over again.

No. TD-6804MG Ratchet Screwdriver (4-pc bit set)

- Smoothly click feeling realized by rotating angle of 5° and 72 gears. High strength accomplished by 2 nails supporting the ratchet gear. It can be used for final tightening work.
- The handle is made out of oil-resistance cellulose acetate resin.
- Easy to carry around with cassette type bit storage inside the handle.
- Magnetic bits can be replaced with one-touch.
- Bit insertion part ⬢6.35mm.

Cr-V Mo steel Bit · MG

Set content	
Body	length 177㎜ dia. 28.5㎜
Bits	⊕1, ⊕2, ⊕3, ⊖6 ×25.4㎜

Package size (㎜)	Inner Ctn.	Outer Ctn.	EDP No.
235×80×29	5	30	247022

No. TD-6808MG Ratchet Screwdriver (8-pc bit set)

- Smoothly click feeling realized by rotating angle of 5° and 72 gears. High strength accomplished by 2 nails supporting the ratchet gear. It can be used for final tightening work.
- The handle is made out of oil-resistance cellulose acetate resin.
- Easy to carry around with cassette type bit storage inside the handle.
- Stores 8 types of bits including HEX bit. Magnetic bits can be replaced with one-touch.
- Bit insertion part ⬢6.35mm.

Cr-V Mo steel Bit · MG

Set content	
Body	length 177㎜ dia. 28.5㎜
Bits	⊕1, ⊕2, ⊕3, ⊖6, H2.5, H3, H4, H5 ×25.4㎜

Package size (㎜)	Inner Ctn.	Outer Ctn.	EDP No.
235×80×29	5	30	247023

No. TD-6808TX Ratchet Screwdriver TORX (8-pc bit set)

- Smoothly click feeling realized by rotating angle of 5° and 72 gears. High strength accomplished by 2 nails supporting the ratchet gear. It can be used for final tightening work.
- The handle is made out of oil-resistance cellulose acetate resin.
- Easy to carry around with cassette type bit storage inside the handle.
- Stores 8 types of bits including TORX bit. Magnetic bits can be replaced with one-touch.
- Bit insertion part ⬢6.35mm.

Cr-V Mo steel Bit · MG

Set content	
Body	length 177㎜ dia. 28.5㎜
Bits	⊕2, ⊕3, T10H, T15H, T20H, T25H, T30H, T40H ×25.4㎜

Package size (㎜)	Inner Ctn.	Outer Ctn.	EDP No.
235×80×29	5	30	247024

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No. TD-6816MG Ratchet Screwdriver (16-pc bit set)

- Smoothly click feeling realized by rotating angle of 5° and 72 gears. High strength accomplished by 2 nails supporting the ratchet gear. It can be used for final tightening work.
- The handle is made out of oil-resistance cellulose acetate resin.
- Easy to carry around with cassette type bit storage inside the handle.
- 16 types of bits to adapt to various types of work. Magnetic bits can be replaced with one-touch.
- Bit insertion part ⬢6.35mm.

Cr-V Mo steel Bit · MG

Set content	
Body	length 177㎜ dia. 28.5㎜
Bits	⊕1, ⊕2, ⊕3, ⊖6, H2, H2.5, H3, H4, H5, T10H, T15H, T20H, T25H, T27H, T30H, T40H ×25.4㎜

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Package size (㎜)	Inner Ctn.	Outer Ctn.	EDP No.
235×90×29	5	30	247025

No. TD-6700W-23 Ratchet Stubby Screwdriver

- Improves workability in cramped spaces! Stubby type that fits in your hand.
- Smoothly click feeling realized by rotating angle of 5° and 72 gears. High strength accomplished by 2 nails supporting the ratchet gear. It can be used for final tightening work.
- The handle is made out of oil-resistance cellulose acetate resin.
- Ball-lock bits can be replaced with one-touch.
- Bit insertion part ⬢6.35mm.

Cr-V Mo steel Bit · MG

Set content	
Body	length 77㎜ dia. 35㎜
Bits	⊕2 / ⊕3 × 35㎜

Package size (㎜)	Inner Ctn.	Outer Ctn.	EDP No.
135×70×40	10	60	247026

No. TD-6700FX-4 Ratchet Stubby Screwdriver with Flexible Shaft

- Improves workability in cramped spaces! Stubby type that fits in your hand.
- Smoothly click feeling realized by rotating angle of 5° and 72 gears. High strength accomplished by 2 nails supporting the ratchet gear. It can be used for final tightening work.
- The handle is made out of oil-resistance cellulose acetate resin.
- Ball-lock bits can be replaced with one-touch.
- Bit insertion part ⬢6.35mm.

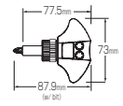
Cr-V Mo steel Bit

Set content	
Body	length 77㎜ dia. 35㎜
Bits	⊕1, ⊕2, ⊖4, ⊖6 × 33㎜
Flexible Shaft (length 165㎜)	

Package size (㎜)	Inner Ctn.	Outer Ctn.	EDP No.
235×80×40	5	30	247027

No. TD-81 Power Ratchet Screwdriver

- Ratchet fine feed enables to fasten with a little wrist movement.
- Ideal ratchet mechanism for sufficient final tightening.
- 2 double-ended bits (different size combination) can be stored within the handle.
- Bit insertion part ⬢6.35mm



Model No.	Color	Bits	Package size (mm)	Inner Ctn.	EDP No.
TD-81R	Red	⊕1/⊖4, ⊕2/⊖6×25.4	115×73×34	10	250081

No. TD-80 T-Bar Ratchet Screwdriver

- Ratchet driving mechanism allows you to tighten a screw without adjusting your grip.
- Bit insertion part ⬢6.35mm

Set content	
Body	T-bar ratchet screwdriver length 78mm dia. 73mm
Bits	⊕1, ⊕2, ⊕3, ⊖4, ⊖6×25.4mm
Accessory	Bit belt holder

Package size (mm)	Outer Ctn.	EDP No.
170×105×28	40	250080

No. 2200 Ball Ratchet Screwdriver

- With 36-teeth gear ratchet to realize comfortable operation with fine tuning.
- Shank cover prevents short circuits. Thin shank is convenient for operating on terminal blocks.
- Shank uses bit materials, fully hardened. Replacement shank is available as option.

No.2200

								Inner Ctn.	Outer Ctn.	EDP No.
⊖6×	100	6.0	0.8	100	6.0	41	200	6	60	125395
⊖6×	150	6.0	0.8	150	6.0	41	250	6	60	125396
⊕2×	100	⊕No.2		100	6.0	41	200	6	60	125345
⊕2×	150	⊕No.2		150	6.0	41	250	6	60	125346
⊕3×	150	⊕No.3		150	6.0	41	250	6	60	125347

⚠ Electric insulation is not guaranteed. For safety purposes, shut off power before use.

No. 2200B Ball Ratchet Screwdriver Replacement Blade

- Shank uses bit materials, fully hardened.
- Replacement blade; can be replaced by pulling out the ball-grip part of No.2200.

No.2200B

							Inner Ctn.	Outer Ctn.	EDP No.
⊖6×	100	6.0	0.8	100	6.0	158	6	60	125397
⊖6×	150	6.0	0.8	150	6.0	208	6	60	125398
⊕2×	100	⊕No.2		100	6.0	158	6	60	125348
⊕2×	150	⊕No.2		150	6.0	208	6	60	125349
⊕3×	150	⊕No.3		150	6.0	208	6	60	125350

One point

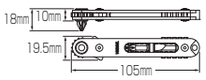
Shanks are detachable from the ratchet part

Ratchet part is also non-conductive

If the ratchet is set in fixed mode, it can be used as screwdriver for electric works with shank cover.
It is most suitable for working on distribution boards.

No. TD-74 Flat-shaped Ratchet Screwdriver (straight type)

- 18mm thin head ratchet screwdriver.
- Magnetized bits (Overall length: 18mm) for cramped space included.
- 2pcs of bit can be stored in the handle. With a hole for hanging.
- High-precision ratchet gear mechanism realizes ideal fastening.



Model No.	Set content	Package size (mm)	Inner Ctn.	EDP No.
TD-74	Flat-shaped Ratchet Screwdriver (Straight type) Bits ⊕1, ⊕2, ⊖6×18mm	160×35×21	10	250074

No. TD-75 Flat-shaped Ratchet Screwdriver (straight type)

- 18mm thin head ratchet screwdriver.
- Magnetized bits (Overall length: 18mm) for cramped space included.
- 2pcs of bit can be stored in the handle. With a hole for hanging.
- High-precision ratchet gear mechanism realizes ideal fastening.

Model No.	Set content	Package size (mm)	Inner Ctn.	EDP No.
TD-75	Flat-shaped Ratchet Screwdriver (Straight type) Bits ⊕1, ⊕2, ⊕2, ⊕3, ⊖4, ⊖6×18mm Bit holder	160×50×21	10	250075

No. TD-76 Flat-shaped Ratchet Screwdriver (straight type)

- 18mm thin head ratchet screwdriver.
- Magnetized bits (Overall length: 18mm) for cramped space included.
- 2pcs of bit can be stored in the handle. With a hole for hanging.
- High-precision ratchet gear mechanism realizes ideal fastening.

Model No.	Set content	Package size (mm)	Inner Ctn.	EDP No.
TD-76	Flat-shaped Ratchet Screwdriver (Straight type) Bits ⊕1, ⊕2, ⊕2, ⊕3, ⊖4, ⊖6, H2.5, H3, H4, H5, H6×18mm Bit holder	160×50×21	10	250076

No. TD-BS 18mm replacement bits

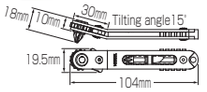
No. TD-BS5

No. TD-BS6

Model No.	Set content	Package size (mm)	Inner Ctn.	EDP No.
TD-BS5	Bits ⊕1, ⊕2, ⊕3, ⊖4, ⊖6×18mm Bit holder	120×40×23	10	251304
TD-BS6	Bits H2.5, H3, H4, H5, H6×18mm Bit holder	120×40×23	10	251305

No. TD-77 Flat-shaped Ratchet Screwdriver (bent-up type)

- 18mm thin head ratchet screwdriver.
- Magnetized bits (Overall length: 18mm) for cramped space included.
- 2pcs of bit can be stored in the handle. With a hole for hanging.
- High-precision ratchet gear mechanism realizes ideal fastening.



Model No.	Set content	Package size (mm)	Inner Ctn.	EDP No.
TD-77	Flat-shaped Ratchet Screwdriver (Angled type) Bits ⊕1, ⊕2, ⊖6×18mm	160×35×21	10	250077

No. TD-78 Flat-shaped Ratchet Screwdriver (bent-up type)

- 18mm thin head ratchet screwdriver.
- Magnetized bits (Overall length: 18mm) for cramped space included.
- 2pcs of bit can be stored in the handle. With a hole for hanging.
- High-precision ratchet gear mechanism realizes ideal fastening.

Model No.	Set content	Package size (mm)	Inner Ctn.	EDP No.
TD-78	Flat-shaped Ratchet Screwdriver (Angled type) Bits ⊕1, ⊕2, ⊕2, ⊕3, ⊖4, ⊖6×18mm Bit holder	160×50×21	10	250078

No. TD-79 Flat-shaped Ratchet Screwdriver (bent-up type)

- 18mm thin head ratchet screwdriver.
- Magnetized bits (Overall length: 18mm) for cramped space included.
- 2pcs of bit can be stored in the handle. With a hole for hanging.
- High-precision ratchet gear mechanism realizes ideal fastening.

Model No.	Set content	Package size (mm)	Inner Ctn.	EDP No.
TD-79	Flat-shaped Ratchet Screwdriver (Angled type) Bits ⊕1, ⊕2, ⊕2, ⊕3, ⊖4, ⊖6, H2.5, H3, H4, H5, H6×18mm Bit holder	160×50×21	10	250079

No. TD-70 Flat Plate Ratchet Screwdriver Set

- Thin type useful for assembly or disassembly.
- The speed ring enables you to turn a screw quickly. Removing the speed ring turn the product a 6.35mm hex drive.
- Bit insertion part ⬢6.35mm

Cr-V Mo steel Bit

Set content		Package size (mm)	Inner Ctn.	EDP No.
Body	Plate ratchet screwdriver	190×85×27	40	250070
Bits	⊕1, ⊕2, ⊕3, ⊖4, ⊖6, H2.5, H3, H4, H5, H6×25.4mm			
Accessory	Bit belt holder			

No. TD-73MC Plate Rachet Screw Catcher

- Magnet catches a screw firmly.
- Also provided with hex screw bits for furniture assembly and for bicycles.
- The speed ring enables you to turn a screw quickly. Removing the speed ring turn the product a 6.35mm hex drive.
- Bit insertion part ⬢6.35mm

Screw Holder · Cr-V Mo steel Bit

Set content		Package size (mm)	Inner Ctn.	EDP No.
Body	Plate ratchet screwdriver	190×85×27	40	250073
Bits	⊕1, ⊕2, ⊕3, ⊖4, ⊖6, H 2.5, 3, 4, 5, 6×25.4mm			
Accessory	Magnetic Screw Holder Bit belt holder			

No. TD-71 Flat Plate Ratchet Screwdriver

- Thin type useful for assembly or disassembly.
- The speed ring enables you to turn a screw quickly. Removing the speed ring turn the product a 6.35mm hex drive.
- Bit insertion part ⬢6.35mm

Cr-V Mo steel Bit

Set content		Package size (mm)	Inner Ctn.	EDP No.
Body	Plate ratchet screwdriver	190×85×27	40	250071
Bit	⊕2×25.4mm			

No. TX-12MC Plate Rachet/Magnetic Screw Catcher (TORX)

- Magnet catches a screw firmly.
- Also provided with Torx bits popular in the maintenance. Also used for tamper-proof torx screws.
- The speed ring enables you to turn a screw quickly. Removing the speed ring turn the product a 6.35mm hex drive.
- Bit insertion part ⬢6.35mm

Screw Holder · Cr-V Mo steel Bit

→See P48 One point

Set content		Package size (mm)	Inner Ctn.	EDP No.
Body	Plate ratchet screwdriver	190×85×27	10	252022
Bits	T8H, T10H, T15H, T20H, T25H, T27H, T30H, T40H, ⊕2, ⊖6×25.4mm			
Accessory	Magnetic Screw Holder Bit belt holder			

No. TD-72 Flat Plate Ratchet Screwdriver Set

- Thin type useful for assembly or disassembly.
- The speed ring enables you to turn a screw quickly. Removing the speed ring turn the product a 6.35mm hex drive.
- Bit insertion part ⬢6.35mm

Cr-V Mo steel Bit · Cr-V. steel Socket

Set content		Package size (mm)	Inner Ctn.	EDP No.
Body	Plate ratchet screwdriver	190×85×27	40	250072
Bit	⊕2×25.4mm			
Sockets	A/F 5.5, 7, 8, 10×26mm			
Accessory	Socket holder			

No. TX-11 Plate Ratchet TORX Set

- Storage holder included. For working with tamper-proof screws.
- The speed ring enables you to turn a screw quickly.
- Thin ratchet handle for working in cramped places. Ball locking system.
- Can be used with 6.35 mm across flats short bits and 6.35 mm square hole sockets.

Cr-V Mo steel Bit

Set content		Package size (mm)	Inner Ctn.	EDP No.
Body	Plate ratchet screwdriver	190×85×27	10	252021
Bits	T8H, T10H, T15H, T20H, T25H, T27H, T30H, T40H, ⊕2, ⊖6×25.4mm			
Accessory	Magnetic Screw Holder Bit belt holder			

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No. TD-BS Replacement Bit Set

No. TD-BS1 ⊕⊖ · No. TD-BS2 ⬢ · No. TD-BS3 ✱ →See P48 One point

Cr-V Mo steel Bit

Applicable models
TD-70/TD-71/TD-72/TD-73MC/TD-80/TD-150/TD-160/S-12/S-13
TX-10/TX-11/TX-12MC/830MG-4/840/840L

No. TD-BS4 ○

Applicable models
TD-70/TD-71/TD-72
TD-170
TX-11/TD-73MC
TX-12MC

Cr-V. steel Socket

Model No.	Set content	Package size (mm)	Inner Ctn.	EDP No.
TD-BS1	⊕1, ⊕2, ⊕3, ⊖4, ⊖6 ×25.4mm Bit belt holder	120×45×23	10	251300
TD-BS2	H 2.5, 3, 4, 5, 6 ×25.4mm Bit belt holder	120×45×23	10	251301
TD-BS3	T10H, T15H, T20H, T25H, T30H ×25.4mm Bit belt holder	120×45×23	10	251302
TD-BS4	A/F 5.5, 7, 8, 10 Socket holder	120×45×23	10	251303

TORX® is a registered trademark of Acument TM Intellectual Properties, LLC (USA). VESSEL has a manufacturing license in Japan and selling same to the world.

No. TD-64 "PETADORA" Z-shaped Offset Screwdriver

- S-shaped type good for strong tightening in cramped spaces.
- Special plating to keep precision at the tip.

Cr-V. steel

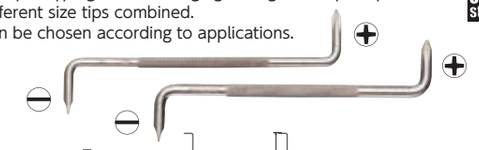
No.TD-64						Inner Ctn.	Outer Ctn.	EDP No.
⊕2/⊖6	6	0.9	/ ⊕No.2	18	6	129 (mm)	10	100	250122
⊕1/⊕2	⊕No.1		/ ⊕No.2	16.5	5	126 (mm)	10	100	250121

Package size…160×35×12mm

No. 25 Offset Screwdriver

- S-shaped type good for strong tightening in cramped spaces.
- Different size tips combined. Can be chosen according to applications.

Cr-V. steel



No.25				Inner Ctn.	EDP No.
⊕1/⊖5	25	5	125 (mm)	12	143005
⊕2/⊖6	26	6	125	12	143006
⊕3/⊖8	33	8	150	12	143007

Package size…160×35×12mm

No. 251526 2-Piece Offset Screwdriver Set

Model No.	Set content	Package size (mm)	Inner Ctn.	EDP No.
251526	No.25 ⊖6/⊕2, ⊖5/⊕1	210×70×10	20	243011

No. TD-61 "PETADORA" L-shaped Offset Screwdriver

- Special plating to keep precision at the tip.
- L-shaped type good for working in cramped spaces.

No.TD-61						Cushon Grip color	Inner Ctn.	Outer Ctn.	EDP No.
⊖6	6	0.9	18	6	117 (mm)	Blue	10	100	250105
⊕1	⊕No.1		16.5	5	105	Green	10	100	250101
⊕2	⊕No.2		18	6	117	Red	10	100	250102

Package size…160×35×14mm

No. TD-63 "PETADORA" L-shaped Offset Screwdriver

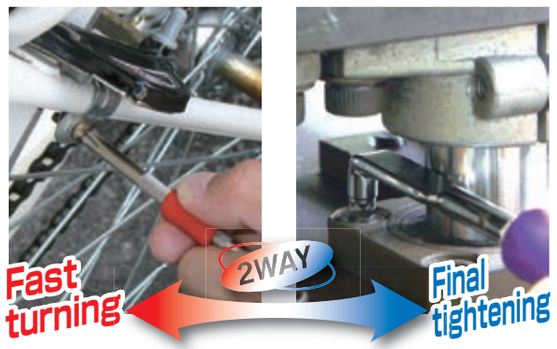
- Special plating to keep precision at the tip.
- L-shaped type good for working in cramped spaces.

No.TD-63					Cushon Grip color	Inner Ctn.	Outer Ctn.	EDP No.
H 2.5	2.5	16.5	5	105 (mm)	Orange	10	100	250112
H 3	3	16.5	5	105	Purple	10	100	250113
H 4	4	16.5	5	105	Black	10	100	250114
H 5	5	18	6	117	Blue	10	100	250115

Package size…160×35×14mm

One point

Speedy fast-turning, firm tightening



This one product can be used from fast-turning to tightening!

An evolution of offset screwdriver with all the required functions for tightening screws.

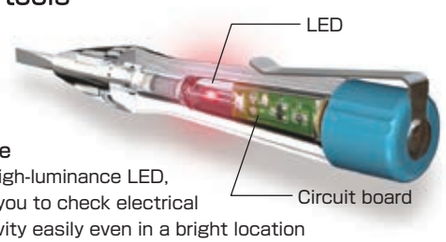
No. 83L LED Voltage Detection Screwdriver

- For conduction/ continuity test in general household.
- Long-life LED lights brightly. Batteries can be replaced.
- Handy pencil-type screwdriver.

Voltage detection range	⊖ (mm)	Package size (mm)	Inner Ctn.	EDP No.
100 to 250V AC	4.0 0.45 20 17.5 130	185×70×16	10	125106

One point

Conductivity check of electrical wiring tools



LED type
Uses a high-luminance LED, allowing you to check electrical conductivity easily even in a bright location
Batteries are consumables and need to be replaced.

Conductivity check / polarity discrimination

A conductivity check of electrical wiring or receptacle and polarity discrimination of AC hot-line and ground sides

Continuity test

Continuity check of a wiring circuit
Make sure that no power is applied to the circuit before checking continuity.

No. TD-1300L 6-Piece Voltage Detection Screwdriver Set

- Neon tube integrated into the grip end. When contacting the current-carrying point, the neon tube lights and continuity test can be conducted.
- Resin chuck enables to replace the blades. Lightweight resin grip, with a transparent end-cap at the grip edge.
- Frequently used 6 types of blade in a pack.
- Provided in a handy transparent vinyl carrying and storage pouch.
- Low voltage type(100 to 250V AC)

Cr-V. steel

No.TD-1300L

Voltage detection range	Reversible blade content (mm) ⊖	⊕	Awl	Pin extractor	Inner Ctn.	EDP No.
100 to 250V AC	⊖4×125 ⊖6×125	⊕1×125 ⊕2×125	125	125	10	247021
	Handle length 126.4mm dia. 26.5mm					

※Package size…185×105×31mm

No. TD-1300B 5-Piece Voltage Detection Screwdriver Set

- Neon tube integrated into the grip end. When contacting the current-carrying point, the neon tube lights and continuity test can be conducted.
- Resin chuck enables to replace the blades. Lightweight resin grip, with a transparent end-cap at the grip edge.
- A small diameter type socket suitable for small screws included in replacement blade set.
- Handy vinyl carrying and storage pouch
- Low voltage type (100 to 250V AC)

Cr-V. steel Except Socket

No.TD-1300B

Voltage detection range	Reversible blade content (mm) ⊖	⊕	Socket	Inner Ctn.	EDP No.
100 to 250V AC	⊖4×125	⊕1×125 ⊕2×125	A/F5 ×125 A/F5.5×125	10	247031
	Handle length 126.4mm dia. 26.5mm				

※Package size…185×105×31mm

No. 240001 Impact Driver

- One-touch switching of the rotation direction.
- Soft non-slip resin handle, comfortable to grip. Designed for less shock on hands.
- For heavy-duty use.
- If the bit adapter is detached, a 12.7 mm socket can be attached.
- Bit insertion part ⬢8mm

Set content		Package size (mm)	Outer Ctn.	EDP No.
Bits	⊕2×36, ⊕2×80, ⊕3×36, ⊕3×80, ⊕4×36, ⊖10×36	220×73×80	5	246051
Body	length 176mm dia. 37.5mm			

No. 250001 Impact Driver

- Effective for very tight fastening and loosening rusted screws.
- Suited for automobile maintenance, and assembly and disassembly of machinery and equipment.
- For heavy-duty use.
- If the bit adapter is detached, a 12.7 mm socket can be attached.
- Bit insertion part ⬢8mm

Set content		Package size (mm)	Outer Ctn.	EDP No.
Bits	⊖10, ⊕2, ⊕3, ⊕4×36	325×80×38	5	246001
Body	length 166mm dia. 32mm			

No. 260002 Impact Uni Driver

- Thin handle. Can be used as normal screwdriver.
- Long shank bit. Ideal for hard-to-reach cramped spaces.
- Bit insertion part ⬢6.35mm

Set content		Package size (mm)	Outer Ctn.	EDP No.
Bits	⊖5, ⊖6, ⊖7, ⊕1, ⊕2, ⊕3×125	225×110×33	5	246016
Body	length 132.5mm dia. 26mm			

No. C50 Impact Driver Bit

Model No.	Set content	Applicable models	Package size (mm)	Inner Ctn.	EDP No.
C502125	⊕2×125	260002	170×42	10	486212
C503125	⊕3×125	260002	170×42	10	486213
C506125	⊖6×125	260002	170×42	10	486216

≫For 10-Piece Set, please refer to page 83.
Mounting quantity: 1

No. C51 Impact Driver Bit

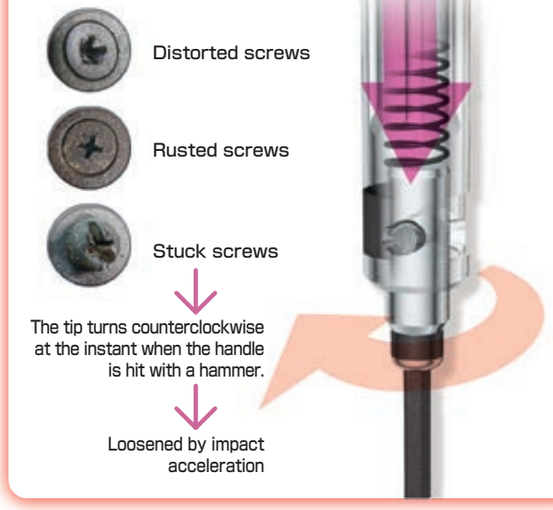
Model No.	Set content	Applicable models	Package size (mm)	Inner Ctn.	EDP No.
C512036	⊕2×36	250001, 240001	170×42	10	486201
C513036	⊕3×36	250001, 240001	170×42	10	486202
C518036	⊖8×36	250001, 240001	170×42	10	486203

≫For 10-Piece Set, please refer to page 83.
Mounting quantity: 1

One point

Removal of a rusted or stuck screw

Hitting the handle with a hammer causes the impact to be converted into rotational force.



No. 8209BP

"BALL POINT" L-wrenches

Inclining the wrench moves the driving points toward the entry of the hexagon screw head recess. Even if the neck place of the ball point is thick, the wrench can be inclined up to 38°, the maximum tilting angle.

Magnetized tip can retain a hexagon screw head bolt.

Constricted neck design with hexagonal shape enables to retain a hexagon screw head bolt firmly. Easy to replace bolts located in a deep place.

Resistant to twist and breaking Extra Superalloy

Made in Japan (except 8300HX-S)

With our new L-Wrench technology and design you will be able to perform the final tightening of your work even with the ball point shape.

One point TORX Wrench Series

Quick tightening at tilted angle.

Max Tilting Angle 25° (Designed value)

Ball-shaped TORX wrench. Can tighten screws quickly at a tilted angle. Ideal for a work in a cramped space such as automotive maintenance.

Can be used with tamper-proof screws.

Tamper-proof TORX screw has a protrusion in the center of the screw recess, and a standard TORX screwdriver cannot tighten or loosen such screw.
*Screws with a protrusion different from the standard TORX cannot be handled.

TORX® Tip-end processing based on TORX standards. Corresponds to various screws.

No. 8209BP
"BALL POINT" Wrench Stubby 9-PC Set

L-shape angle 95° for easy handling.
The arm length is half of the standard arm size.

No. 8200BP-S Ball Point Wrench Stubby (Short Type) NEW

- New ball shape with the maximum tilted angle of 38° (design value in our company).
- Stubby ideal for cramped spaces
- L-shape angle 95° for easy handling. The arm length is half of the standard arm size.

No.8200BP-S

(mm)			Package Size (mm)	Inner Ctn.	EDP No.
1.5	4	52	160×45×5	10	143887
2	5	58	160×45×5	10	143888
2.5	6	60	160×45×5	10	143889
3	8	65	160×45×5	10	143890
4	9	72	200×60×8	10	143891
5	11	80	200×60×8	10	143892
6	13	90	200×60×8	10	143893
8	16	100	235×75×14	5	143894
10	19	112	235×75×14	5	143895

No. 8200BP Ball Point Wrench Stubby NEW

- New ball shape with the maximum tilted angle of 38° (design value in our company).
- Stubby ideal for cramped spaces
- L-shape angle 95° for easy handling. The arm length is half of the standard arm size.

No.8200BP

(mm)			Package Size (mm)	Inner Ctn.	EDP No.
1.5	4	79	160×45×5	10	143897
2	5	86	160×45×5	10	143898
2.5	6	94	200×60×8	10	143899
3	8	101	200×60×8	10	143900
4	9	110	200×60×8	10	143901
5	11	120	200×60×8	10	143902
6	13	133	200×60×8	10	143903
8	16	154	235×75×14	5	143904
10	19	172	235×75×14	5	143905

No. 8200BP-L Ball Point Wrench Stubby (Long Type) NEW

- New ball shape with the maximum tilted angle of 38° (design value in our company).
- Stubby ideal for cramped spaces
- L-shape angle 95° for easy handling. The arm length is half of the standard arm size.

No.8200BP-L

(mm)			Package Size (mm)	Inner Ctn.	EDP No.
1.5	4	79	160×45×5	10	143907
2	5	95	200×60×8	10	143908
2.5	6	110	200×60×8	10	143909
3	8	126	200×60×8	10	143910
4	9	142	200×60×8	10	143911
5	11	160	235×75×14	5	143912
6	13	180	235×75×14	5	143913
8	16	200	280×65×14	5	143914
10	19	224	350×75×14	5	143915

No. 8209BP-S Ball Point Wrench Stubby (Short Type) 9PC Set NEW

- New ball shape with the maximum tilted angle of 38° (design value in our company).
- Stubby ideal for cramped spaces
- L-shape angle 95° for easy handling. The arm length is half of the standard arm size.
- Provided with a convenient portable holder. This is openable facilitating to pick a necessary size.

No.8209BP-S

Set content		Package size (mm)	Inner Ctn.	EDP No.
8209BP-S	H 1.5, 2, 2.5, 3, 4, 5, 6, 8, 10 mm	200×105×27	5	143896
Accessory	Holder			

No. 8209BP Ball Point Wrench Stubby 9PC Set NEW

- New ball shape with the maximum tilted angle of 38° (design value in our company).
- Stubby ideal for cramped spaces
- L-shape angle 95° for easy handling. The arm length is half of the standard arm size.
- Provided with a convenient portable holder. This is openable facilitating to pick a necessary size.

No.8209BP

Set content		Package size (mm)	Inner Ctn.	EDP No.
8209BP	H 1.5, 2, 2.5, 3, 4, 5, 6, 8, 10 mm	245×105×27	5	143906
Accessory	Holder			

No. 8209BP-L Ball Point Wrench Stubby (Long Type) 9PC Set NEW

- New ball shape with the maximum tilted angle of 38° (design value in our company).
- Stubby ideal for cramped spaces
- L-shape angle 95° for easy handling. The arm length is half of the standard arm size.
- Provided with a convenient portable holder. This is openable facilitating to pick a necessary size.

No.8209BP-L

Set content		Package size (mm)	Inner Ctn.	EDP No.
8209BP-L	H 1.5, 2, 2.5, 3, 4, 5, 6, 8, 10 mm	295×105×27	10	143916
Accessory	Holder			

No. 8300BP Ball Point Wrench NEW

- New ball shape with the maximum tilted angle of 38° (design value in our company).

No.8300BP

(mm)			Package Size (mm)	Inner Ctn.	EDP No.
1.5	16	79	160×45×5	10	143917
2	17	86	160×45×5	10	143918
2.5	18	94	200×60×8	10	143919
3	20	101	200×60×8	10	143920
4	25	110	200×60×8	10	143921
5	28	120	200×60×8	10	143922
6	32	133	200×60×8	10	143923
8	36	154	235×75×14	5	143924
10	40	172	235×75×14	5	143925

No. 8309BP Ball Point Wrench 9PC Set NEW

- New ball shape with the maximum tilted angle of 38° (design value in our company).
- Provided with a convenient portable holder. This is openable facilitating to pick a necessary size.

No.8309BP

Set content		Package size (mm)	Inner Ctn.	EDP No.
8309BP	H 1.5, 2, 2.5, 3, 4, 5, 6, 8, 10 mm	245×105×27	5	143926
Accessory	Holder			

No. 8300BP-L Ball Point Wrench (Long Type) NEW

- New ball shape with the maximum tilted angle of 38° (design value in our company).
- Ball point can reach deep spaces. Also, it is possible to apply force on the arm end.

No.8300BP-L

(mm)			Package Size (mm)	Inner Ctn.	EDP No.
1.5	16	79	160×45×5	10	143927
2	17	95	200×60×8	10	143928
2.5	18	110	200×60×8	10	143929
3	20	126	200×60×8	10	143930
4	25	142	200×60×8	10	143931
5	28	160	235×75×14	5	143932
6	32	180	235×75×14	5	143933
8	36	200	280×65×14	5	143934
10	40	224	350×75×14	5	143935
12	45	250	No Card	-	143936
14	55	280	No Card	-	143937
17	60	320	No Card	-	143938
19	70	360	No Card	-	143939

No. 8309BP-L Ball Point Wrench (Long Type) 9PC Set NEW

- New ball shape with the maximum tilted angle of 38° (design value in our company).
- Ball point can reach deep spaces. Also, it is possible to apply force on the arm end.
- Provided with a convenient portable holder. This is openable facilitating to pick a necessary size.

No.8309BP-L

Set content		Package size (mm)	Inner Ctn.	EDP No.
8309BP-L	H 1.5, 2, 2.5, 3, 4, 5, 6, 8, 10 mm	295×105×27	10	143940
Accessory	Holder			

No. 8300BP-XL Ball Point Wrench (Extra Long Type) NEW

- New ball shape with the maximum tilted angle of 38° (design value in our company).
- Ball point can reach deep spaces. Also, it is possible to apply force on the arm end.

No.8300BP-XL

(mm)			Package Size (mm)	Inner Ctn.	EDP No.
1.5	16	91	160×45×5	10	143951
2	17	109	200×60×8	10	143952
2.5	18	132	200×60×8	10	143953
3	20	151	200×60×8	10	143954
4	25	170	235×75×14	5	143955
5	28	200	280×65×14	5	143956
6	32	225	280×65×14	5	143957
8	36	260	350×75×14	5	143958
10	40	291	350×75×14	5	143959

No. 8309BP-XL Ball Point Wrench (Extra Long Type) 9PC Set NEW

- New ball shape with the maximum tilted angle of 38° (design value in our company).
- Ball point can reach deep spaces. Also, it is possible to apply force on the arm end.
- Provided with a convenient portable holder. This is openable facilitating to pick a necessary size.

No.8309BP-XL

Set content		Package size (mm)	Inner Ctn.	EDP No.
8309BP-XL	H 1.5, 2, 2.5, 3, 4, 5, 6, 8, 10 mm	350×105×27	10	143960
Accessory	Holder			

No. 8300BP-LIN Ball Point Wrench (Long Type) (Inch) NEW

- New ball shape with the maximum tilted angle of 38° (design value in our company).
- Ball point can reach deep spaces. Also, it is possible to apply force on the arm end.

No.8300BP-LIN

(mm)			Package Size (mm)	Inner Ctn.	EDP No.
1/16	15	79	160×45×5	10	143941
5/64	17	93	200×60×8	10	143942
3/32	18	108	200×60×8	10	143943
1/8	20	127	200×60×8	10	143944
5/32	25	140	200×60×8	10	143945
3/16	28	158	235×75×14	5	143946
1/4	32	178	235×75×14	5	143947
5/16	36	198	280×65×14	5	143948
3/8	40	222	350×75×14	5	143949

No. 8309BP-LIN Ball Point Wrench (Long Type) (Inch) 9PC Set NEW

- New ball shape with the maximum tilted angle of 38° (design value in our company).
- Ball point can reach deep spaces. Also, it is possible to apply force on the arm end.
- Provided with a convenient portable holder. This is openable facilitating to pick a necessary size.

No.8309BP-LIN

Set content		Package size (mm)	Inner Ctn.	EDP No.
8309BP-LIN	A/F 1/16, 5/64, 3/32, 1/8, 5/32, 3/16, 1/4, 5/16,3/8 inch	295×105×20	10	143950
Accessory	Holder			

No. 8500BTX Ball End TORX Wrench NEW

- Can tighten screws quickly at a tilted angle. Ideal for a work in a cramped space such as automotive maintenance.

No.8500BTX

(mm)			Package Size (mm)	Inner Ctn.	EDP No.
T8	16	80	160×45×5	10	143961
T9	16	80	160×45×5	10	143962
T10	17	90	160×45×5	10	143963
T15	18	100	200×60×8	10	143964
T20	19	112	200×60×8	10	143965
T25	20	126	200×60×8	10	143966
T27	25	140	200×60×8	10	143967
T30	28	160	235×75×14	5	143968
T40	32	180	235×75×14	5	143969

No. 8509BTX Ball End TORX Wrench 9PC Set NEW

- Can tighten screws quickly at a tilted angle. Ideal for a work in a cramped space such as automotive maintenance.
- Provided with a convenient portable holder. This is openable facilitating to pick a necessary size.

No.8509BTX

Set content		Package size (mm)	Inner Ctn.	EDP No.
8509BTX	Size T8, T9, T10, T15, T20, T25, T27, T30, T40 mm	245×105×27	5	143970
Accessory	Holder			

No. 8500TXH Tamper-proof TORX Wrench NEW

- Can be used with tamper-proof screws. Automotive, Motorcycle, Telecommunication devices, PC, etc.

No.8500TXH

(mm)			Package Size (mm)	Inner Ctn.	EDP No.
T8H	16	80	160×45×5	10	143971
T9H	16	80	160×45×5	10	143972
T10H	17	90	160×45×5	10	143973
T15H	18	100	200×60×8	10	143974
T20H	19	112	200×60×8	10	143975
T25H	20	126	200×60×8	10	143976
T27H	25	140	200×60×8	10	143977
T30H	28	160	235×75×14	5	143978
T40H	32	180	235×75×14	5	143979

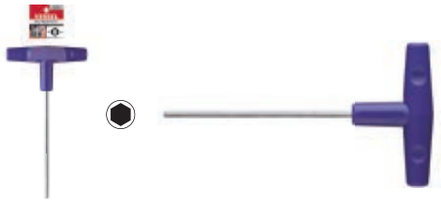
No. 8509TXH Tamper-proof TORX Wrench 9PC Set NEW

- Can be used with tamper-proof screws. Automotive, Motorcycle, Telecommunication devices, PC, etc.
- Provided with a convenient portable holder. This is openable facilitating to pick a necessary size.

No.8509TXH

Set content		Package size (mm)	Inner Ctn.	EDP No.
8509TXH	Size T8H,T9H,T10H,T15H,T20H, T25H,T27H,T30H,T40H mm	245×105×27	5	143980
Accessory	Holder			

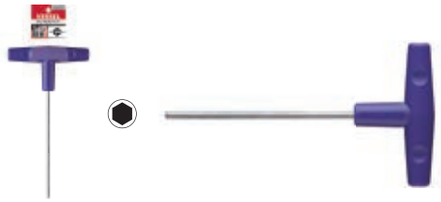
No. TW-H T-Handle Screwdriver NEW



No.TW-H

				(mm)	Inner Ctn.	EDP No.
3	125	70	163		6	144361
4	140	70	178		6	144362
5	150	80	200		6	144363
6	155	120	223		-	144364
8	175	160	251		-	144365
10	200	160	276		-	144366

No. TW-HIN T-Handle Screwdriver (Inch) NEW



No.TW-HIN

				(mm)	Inner Ctn.	EDP No.
1/8	125	70	163		6	144367
5/32	140	70	178		6	144368
3/16	150	80	200		6	144369
1/4	155	120	223		-	144370
5/16	175	160	251		-	144371
3/8	200	160	276		-	144372

No. FW-H Flag Handle Screwdriver NEW

No.TW-H

				(mm)	Inner Ctn.	EDP No.
1.5	40	20	74		10	144373
2	40	20	74		10	144374
2.5	40	20	74		10	144375

No. FW-HIN Flag Handle Screwdriver (Inch) NEW

No.FW-HIN

				(mm)	Inner Ctn.	EDP No.
1/16	40	20	74		10	144376
5/64	40	20	74		10	144377
3/32	40	20	74		10	144378

No. 8300HX-S Hex Wrench (Short Type) NEW

No.8300HX-S

			(mm)	Inner Ctn.	EDP No.
1.5	12.5	52.5		10	144060
2	12	58		10	144061
2.5	15	60		10	144062
3	20	65		10	144063
4	25	72		10	144064
5	28	80		10	144065
6	32	90		10	144066
8	36	100		5	144067
10	40	112		5	144068

No. 8900BP "RAINBALL" L-wrenches PAT.

- Easy to find in a toolbox. Color-coded by size. Coating is peel-proofed by manganese phosphate under coating.
- New ball shape. Set the driving part so that it contacts near the entry point of the hexagonal hole, with the maximum tilted angle of 38° (design value in our company). The cross-sectionalarea of the neck of the ball is enlarged to improve the strength.
- High precision black point tip, unaffected by metal plating.
- Cross-section is "Ultra-Hex", which has the 3-point and 3-surface contact geometry to reduce deforming of screw holes.

No.8900BP

				(mm) Package size (mm)	Inner Ctn.	EDP No.
H 1.5	1.5	13.5	67.5	160×45× 5	10	144341
H 2	2	15.5	72	160×45× 5	10	144342
H 2.5	2.5	17.5	81	160×45× 5	10	144343
H 3	3	19	90.5	160×45× 5	10	144344
H 4	4	24	98.5	200×60× 8	10	144345
H 5	5	27	118.5	200×60× 8	10	144346
H 6	6	31	138	200×60× 8	10	144347
H 8	8	35	158	235×75×14	5	144348
H 10	10	39	178.5	235×75×14	5	144349

※Colors inside the table cells indicate the body color.

No. 8906BP "RAINBALL" L-wrenches 6PC Set PAT.

- Easy to find in a toolbox. Color-coded by size.
- New ball shape with the maximum tilted angle of 38° (design value in our company). The cross-sectional area of the neck of the ball is enlarged to improve the strength.
- Provided with a convenient portable holder.

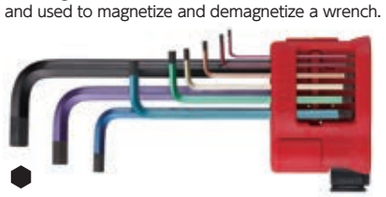
Set content	
8900BP	H 1.5, 2, 2.5, 3, 4, 5 mm
Accessory	Holder

Package size (mm)	Inner Ctn.	EDP No.
200×80×13	5	144352

No. 8909BP "RAINBALL" L-wrenches 9PC Set PAT.

- Provided with a holder that opens like a fan and utilized as a stand, together with a magnetizer.
  Can be fixed onto level metal parts of machine tools, automated machinery, surface plates, etc. by the magnetic force of the magnetizer mounted to the lower part of the holder.
- The magnetizer can be taken out from the holder and used to magnetize and demagnetize a wrench.

Magnetizer



Set content	
8900BP	H 1.5, 2, 2.5, 3, 4, 5, 6, 8, 10 mm
Accessory	Magnetizer/Holder

Package size (mm)	Inner Ctn.	EDP No.
245×105×27	5	144351

No. 8409BP "ULTRABALL" L-wrenches 9PC Set PAT.

- New ball shape with the maximum tilted angle of 38° (design value in our company).
  The cross-sectional area of the neck of the ball is enlarged to improve the strength.
- Cross-section is "Ultra-Hex", which has the 3-point and 3-surface contact geometry to reduce deforming of screw holes.
- Provided with a convenient portable holder.
  This is openable facilitating to pick a necessary size.

Set content	
8400BP	H 1.5, 2, 2.5, 3, 4, 5, 6, 8, 10 mm
Accessory	Holder

Package size (mm)	Inner Ctn.	EDP No.
245×105×27	5	144353

One point

No.8409BP

Ultra Ball

Unique ball configuration allowing the tip to incline 38° maximum facilitates tightening or loosening of screws!

Open-folded holder is convenient for carrying the hex wrenches.

Ultra Hex

Highly durable but no damage on screw surface!
3-point and 3-face contact hexagonal shape maximizes fastening effectiveness.

No. 8500TX TORX Key Wrench

- Special plating to keep precision at the tip.
- Knurled shank for fast turning.
- Precision tips based on TORX spec.

Cr-V. steel

No.8500TX					Package size (mm)	Inner Ctn.	EDP No.
T6	1.68	2.5	15	52	110×45×5	10	144301
T7	1.97	2.5	15	56	110×45×5	10	144302
T8	2.3	3	17	59	110×45×5	10	144303
T9	2.48	3	17	63	110×45×5	10	144304
T10	2.72	3	17	67	110×45×5	10	144305
T15	3.26	3.5	19	72	110×45×5	10	144306
T20	3.84	4	21	77	110×45×5	10	144307
T25	4.4	5	23	83	145×55×8	10	144308
T27	4.96	5	23	90	145×55×8	10	144309
T30	5.49	6	25	98	145×55×8	10	144310
T40	6.6	7	27	107	145×55×8	10	144311

No. 8507TX TORX 7-Piece Key Set

- Special plating to keep precision at the tip.
- Knurled shank for fast turning.
- Precision tips based on TORX spec.

Cr-V. steel

Set content	
8500TX	T10, T15, T20, T25, T27, T30, T40
Accessory	Vinyl package

Package size (mm)	Inner Ctn.	EDP No.
135×65×17	10	144315

No. 5400TX Power Grip TORX Screwdriver

- Champagne gold plating keeping the precise tip quality.
- Cellulose acetate resin grip. Ergonomic design.
- For working with tamper-proof screws (T5 and T6 excluded).

Cr-V. steel

No.5400TX						Inner Ctn.	Outer Ctn.	EDP No.
T 5 × 80	1.42	80	2.5	17.0	155	12	60	122854
T 6 × 80	1.69	80	2.5	17.0	155	12	60	122855
T 7H× 80	1.97	80	2.5	17.0	155	12	60	122856
T 8H× 80	2.3	80	3.0	17.0	155	12	60	122857
T 9H× 80	2.48	80	3.0	17.0	155	12	60	122858
T10H× 80	2.72	80	3.0	17.0	155	12	60	122859
T15H× 80	3.26	80	3.5	28.0	177	6	60	122860
T20H× 120	3.84	120	4.0	28.0	217	6	60	122861
T25H× 120	4.4	120	5.0	31.8	224	6	60	122862
T27H× 120	4.96	120	5.0	31.8	224	6	60	122863
T30H× 120	5.49	120	6.0	35.6	235	6	60	122864
T40H× 120	6.6	120	7.0	35.6	235	6	60	122865

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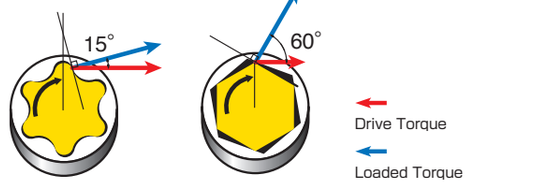
One point

Features of TORX tool

TORX®

Bacic TORX consists of 6 ear-lobular shaped curves.
Compared to hexagonal shape driver, TORX has higher drive effectiveness and transfers torque smmothly and acculately while eliminating "CAM-OUT".



TORX
TORX transfers max torque due to small driving angle.

Hex
Meanwhile, Hex square drive need max upload torque to transfer for large diving angle to other directions.

TAMPER-PROOF TORX SYSTEM

Added function of "Never Touch Screw" a post in the middle of the recess for maximum security eliminates regular TORX drive or any other flat screwdrivers for safety .
Tamper proof screws are mostly used at communication equipment and computers so as not to abuse the screwing/unscrewing due to its design and control of function Keep off unscrewing unless otherwise maintenance serving practiced.

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No. TX-12MC Plate Rachet/Magnetic Screw Catcher (TORX)

- Magnet catches a screw firmly.
- Also provided with Torx bits popular in the maintenance. Also used for tamper-proof torx screws.
- The speed ring enables you to turn a screw quickly. Removing the speed ring turn the product a 6.35mm hex drive.
- Bit insertion part ⬢6.35mm

MG Screw Holder · Cr-V Mo steel Bit

←See P48 One point

Set content	
Body	Plate ratchet screwdriver
Bits	T8H, T10H, T15H, T20H, T25H, T27H, T30H, T40H, ⊕2, ⊖6×25.4mm
Accessory	Magnetic Screw Holder Bit belt holder

Package size (mm)	Inner Ctn.	EDP No.
190×85×27	10	252022

No. TX-11 Plate Ratchet TORX Set

- Storage holder included. For working with tamper-proof screws.
- The speed ring enables you to turn a screw quickly.
- Thin ratchet handle for working in cramped places. Ball locking system.
- Can be used with 6.35 mm across flats short bits and 6.35 mm square hole sockets.

Cr-V Mo steel Bit

Set content	
Body	Plate ratchet screwdriver
Bits	T8H, T10H, T15H, T20H, T25H, T27H, T30H, T40H, ⊕2, ⊖6×25.4mm
Accessory	Magnetic Screw Holder Bit belt holder

Package size (mm)	Inner Ctn.	EDP No.
190×85×27	10	252021

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No. B-340TX Wood-Compo TORX Screwdriver PAT.

- Extraordinary non-slip grip; Secures working efficiency even with oily hands. Wood-composite resin, reproducing the natural material texture.
- Non-electrolytic plating, keeping the precise tip quality.
- Also good for tamper-proof TORX screws.

MG Cr-V. steel

No.B-340TX						Inner Ctn.	Outer Ctn.	EDP No.
T10H× 80	2.72	80	5.5	30	188	6	120	120081
T15H× 80	3.26	80	5.5	30	188	6	120	120082
T20H×120	3.84	120	5.5	30	228	6	120	120083
T25H×120	4.40	120	6.4	32	236	6	60	120084
T27H×120	4.96	120	6.4	32	236	6	60	120085
T30H×120	5.49	120	8.0	35	246	6	60	120086
T40H×120	6.60	120	8.0	35	246	6	60	120087

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No. B-640TX Cushion Grip TORX Screwdriver

- Optimal for fastening screws in precision fields.
- Non-electrolytic plating, keeping the precise tip quality.
- Cushion grip fitting comfortably in a hand.
- Also good for tamper-proof TORX screws (except T5 and T6).

Cr-V. steel

No.B-640TX						Inner Ctn.	Outer Ctn.	EDP No.
T5	1.42	40	4.0	20.5	126	6	60	123561
T6	1.69	40	4.0	20.5	126	6	60	123562
T7H	1.97	40	4.0	20.5	126	6	60	123563
T8H	2.30	40	4.0	20.5	126	6	60	123564
T9H	2.48	40	4.0	20.5	126	6	60	123565

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No. TD-6310TX TORX Screwdriver Set

- Bit insertion part ⬢6.35mm. Magnetized.
- Holds securely short bits. Reliable fastening as the bit does not drop easily.
- Grip made of environmental-friendly plant material.
- Provided with a bit belt for storage.

MG Cr-V. Steel

Set content	
Body	length 213mm dia. 28.5mm
Bits	⊖6, ⊕2, T8H, T10H, T15H, T20H, T25H, T27H, T30H, T40H ×25.4mm
Accessories	Bit belt holder

Package size (mm)	Outer Ctn.	EDP No.
235×100×29	10	247028

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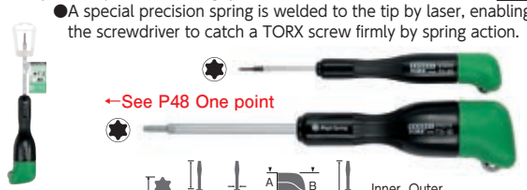
No. 990TX G-grip TORX Screwdriver PAT.

- The weight of the steel ball keeps the end cap in an optimum position for a grip.
- A special precision spring is welded to the tip by laser, enabling the screwdriver to catch a TORX screw firmly by spring action.

MagicSpring ※T6~T20 Cr-V steel



←See P48 One point

No.990TX

	A	B	(mm)	Inner Ctn.	Outer Ctn.	EDP No.
T3 ×40	1.13	40	2.5	16	21	138	12	240	125921
T5 ×40	1.42	40	2.5	16	21	138	12	240	125923
MagicSpring T6 ×40	1.69	40	2.5	16	21	138	12	240	125924
MagicSpring T8 ×40	2.3	40	2.5	16	21	138	12	240	125926
MagicSpring T9 ×40	2.48	40	4.0	16	21	138	12	240	125927
MagicSpring T10×80	2.72	80	4.0	30	38	195	6	60	125928
MagicSpring T15×80	3.26	80	5.5	30	38	195	6	60	125929
MagicSpring T20×80	3.84	80	5.5	30	38	195	6	60	125930

No. TD-6816MG Ratchet Screwdriver (16-pc bit set)

- Smoothly click feeling realized by rotating angle of 5° and 72 gears. High strength accomplished by 2 nails supporting the ratchet gear. It can be used for final tightening work.
- The handle is made out of oil-resistance cellulose acetate resin.
- Easy to carry around with cassette type bit storage inside the handle.
- 16 types of bits to adapt to various types of work. Magnetic bits can be replaced with one-touch.
- Bit insertion part ●6.35mm.

Cr-V Mo steel Bit / MG

Set content	
Body	length 177mm dia. 28.5mm
Bits	⊕1, ⊕2, ⊕3, ⊖6, H2, H2.5, H3, H4, H5, T10H, T15H, T20H, T25H, T27H, T30H, T40H ×25.4mm

Package size (mm)	Inner Ctn.	Outer Ctn.	EDP No.
235×90×29	5	30	247025

No. TD-6808TX Ratchet Screwdriver TORX (8-pc bit set)

- Smoothly click feeling realized by rotating angle of 5° and 72 gears. High strength accomplished by 2 nails supporting the ratchet gear. It can be used for final tightening work.
- The handle is made out of oil-resistance cellulose acetate resin.
- Easy to carry around with cassette type bit storage inside the handle.
- Stores 8 types of bits including TORX bit. Magnetic bits can be replaced with one-touch.
- Bit insertion part ●6.35mm.

Cr-V Mo steel Bit / MG

Set content	
Body	length 177mm dia. 28.5mm
Bits	⊕2, ⊕3, T10H, T15H, T20H, T25H, T30H, T40H ×25.4mm

Package size (mm)	Inner Ctn.	Outer Ctn.	EDP No.
235×80×29	5	30	247024

No. TD-BS3 Replacement Bit Set

Applicable models
TD-70/TD-71/TD-72/TD-73MC/TD-80/TD-150/TD-160/S-12/S-13
TX-10/TX-11/TX-12MC/830MG-4/840/840L

Model No.	Set content	Package size (mm)	Inner Ctn.	EDP No.
TD-BS3	T10H, T15H, T20H, T25H, T30H ×25.4mm Bit belt holder	120×45×23	10	251302

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TORX is also available for bits.

Industrial Bits Type A

No.V TORX Bit ····· P66
No.V TORX Bit (Tamper-Proof) ····· P67

No.V5 TORX Bit ····· P68

Industrial Bits Type B

No.N TORX Bit ····· P71, P84
No.N TORX Bit (Tamper-Proof) ····· P71, P84

No.J TORX Bit ····· P75
No.J TORX Bit (Tamper-Proof) ····· P74

No.A5 TORX Bit ····· P76

Precision Bits

No.DS73 Shockless Bit ····· P81

No.D71 TORX Bit ····· P82

No.D73 TORX Bit ····· P83

No.D76 TORX Bit ····· P84

Short Bits

No.A4 TORX Bit ····· P90

Construction Bits

No.SMVT TORX Bit (Tamper-Proof) ····· P108

"PROKON" series

No.SS16T Recessed "SAKISUBO" TORX Bit ····· P124

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No. 3200VA-1
VA cable stripper

The 3200VA-1 is a solution for stripping strenuous cables such as VA cables which becomes soft and elongates during the summer or as eco-friendly PE cables, which hardness duriung winter months.

No. 3200VA-1

VA cable stripper

The depth of cut by blades can be adjusted by 5 levels to support the different hardness of coating for different wire manufacturers. Designed to hold the wire coating so that the core line is always at the center, to prevent jamming.

No. 3200VA-1 VA cable stripper PAT.

- Even for eco-friendly PE cables, clear stripping can be perfectly achieved with light force.
- Corresponds to various sheath hardness according to cable manufacturers. Can adjust cutting depth in 5 steps.
- Precision blades by the metal injection offer excellent cutting quality.
- Designed to hold wire sheath so that the core conductor is always located at the center, preventing the blades from cutting into the conductor.

←See P51

Model No.	Overall length (mm)	Weight (g)	Wire size	Outer Ctn.	EDP No.
3200VA-1	180	370	PVC cables (VVF/ VA cables) PE cables (EM-EEF/ Eco cables) φ1.6mm duplex/φ2.0mm duplex φ1.6mm triplex/φ2.0mm triplex	5	141016

Package size…250×115×63mm

No. WB-013 For 3200VA-1 Replacement Blade

Model No.	Applicable wire stripper	Package size (mm)	Inner Ctn.	EDP No.
WB-013	3200VA-1	120×45×3	10	141084

No. 3700KS/KM Cable Stripper

3700KS

- Easy to strip the wire sheath simply by turning the stripper aroung the cable.
- Easy-handling non-slip pad on retaining hardware.
- Enables to adjust the cutting depth with a dial on the bottom.
- Light-weight and compact portable model.

Model No.	Overall length (mm)	Weight (g)	Strip Capacity	Inner Ctn.	EDP No.
3700KS	130	78	Seath φ4~16mm	10	014641
3700KM	130	78	Seath φ8~28mm	10	014658

Contents: Replacement blade 1piece (stored inside)

Package size…185×75×32mm

One point

Easy to strip the wire sheath simply by turning the stripper aroung the cable.

No. 3000 Wire Stripper

- Nimbly and cleanly strips off sheathing in a single operation.
- Can be used with wiring for TV, radio, home appliances, electrical work, automotive circuits, telephones, etc.
- With a strip gauge.

Model No.	Overall length (mm)	Weight (g)	Wire diameter and nominal sectional area	Handle color	Outer Ctn.	EDP No.
3000A	170	350	For solid wire 0.5/1.2/1.6/2.0mm	Green	20	141001
3000B	170	350	For solid wire 1.0/1.6/2.0/2.6/3.2mm	Red	20	141002
3000C	170	350	For stranded wire 0.9/1.25/2.0/3.5/5.5mm²	Black	20	141000

Package size…220×75×13mm

Wire Stripper Cardbord product

Model No.	Wire diameter and nominal sectional area	Package size (mm)	Outer Ctn.	EDP No.
300001	For solid wire 0.5/1.2/1.6/2.0mm	250×110×38	5	241001
300002	For solid wire 1.0/1.6/2.0/2.6/3.2mm	250×110×38	5	241002
300005	For stranded wire 0.9/1.25/2.0/3.5/5.5mm²	250×110×38	5	241005

Wire Stripper Blade

Model No.	Applicable wire stripper	Wire diameter and nominal sectional area	Package size (mm)	Inner Ctn.	EDP No.
WB-001	3000A, 300001	For solid wire	95×30×15	5	141071
WB-002	3000B, 300002	For solid wire	95×30×15	5	141072
WB-003	3000C, 300005	For stranded wire	95×30×15	5	141073

One point

Features of wire strippers

3200VA-1

Wire strippers dedicated for VA cables and eco-friendly PE cables (VVF/EM-EEF)

For solid wire 1.6mm×2/3duplex/triplex
For solid wire 2.0mm×2/3duplex/triplex

3000

For stripping of various wires and cords including IV and VSF

Solid wires: 0.5mm to 3.2mm
Stranded wire: 0.9mm² to 5.5mm²

3500E-1/3500E-2/3500E-3/3500E-4

For cutting and stripping of various electronic wires represented by KV

For solid wire 0.25mm~2.0mm
For stranded wire 0.05mm²~3.3mm²

3700KS/3700KM

For stripping various cable sheaths such as cabtyre cable.

Sheath outer dia. 4mm~16mm (3700KS)
8mm~28mm (3700KM)

No. 3500E-1/-2 Wire Stripper

- Lightweight (100g), compact handy type.
- Diamond finely polished blade for precision stripping.
- AWG-mm-mm² conversion table on the grip.

Model No.	Overall length (mm)	Weight (g)	Color	Inner Ctn.	Outer Ctn.	EDP No.
3500E-1	155	100	Red	5	30	141036
3500E-2	155	100	Yellow	5	30	141037

Package size…220×75×13mm

3500E-1	AWG	12	14	16	18	20	22	24
	Solid wire (mm)	2.0	1.6	1.3	1.0	0.8	0.65	0.5
	Stranded wire (mm²)	3.3	2.0	1.3	0.8	0.5	0.3	0.2
3500E-2	AWG	18	20	22	24	26	28	30
	Solid wire (mm)	1.0	0.8	0.65	0.5	0.4	0.3	0.25
	Stranded wire (mm²)	0.8	0.5	0.3	0.2	0.13	0.08	0.05

No. 3500E-3/-4 Wire Stripper

- True circle shape. No damage on wires.
- Different colors adopted for instant awareness of holding position.
- Thread cutters for small screws or bolts.
- Anti-drop cord can be attached.
- AWG-mm-mm2 conversion table on the cushion grip.

Model No.	Overall length (mm)	Weight (g)	Color	Inner Ctn.	Outer Ctn.	EDP No.
3500E-3	163	107	Red / Black	5	30	141013
3500E-4	163	107	Yellow / Black	5	30	141014

Cardboard size: 220x75x13mm

3500E-3	AWG	12	14	16	18	20	22	24
	Solid wire (mm)	2.0	1.6	1.3	1.0	0.8	0.65	0.5
	Stranded wire (mm²)	3.3	2.0	1.3	0.8	0.5	0.3	0.2
3500E-4	AWG	18	20	22	24	26	28	30
	Solid wire (mm)	1.0	0.8	0.65	0.5	0.4	0.3	0.25
	Stranded wire (mm²)	0.8	0.5	0.3	0.2	0.13	0.08	0.05

* Some Teflon wires are not suitable.

One point

No. DB-200 Bucket for Electricians

- Convenient for collecting wire scraps and carrying tools and instruments.
- Belt length can be adjusted.
- Elliptical shape to fit comfortably.

Size with header (mm)	Outer Ctn.	EDP No.
H280 × W200 × D125	1	141034

No. 76-10 Gel Grip Hammer (Plastic Head)

- Gel resin grip drastically absorbs the shocks by hammer blows to your palm. Alleviates the strain on your wrist.
- Slip resistance grip design of elastomer resin.
- Excellent balance between both heads, ensuring firm feeling of hammering.
- Hammer heads are screwed on and replaced easily. Replacement head is available as option.

Model No.	Size	Length	Head Diameter	Head Length (mm)	Weight (g)	Inner Ctn.	Outer Ctn.	EDP No.
76-10	1	315	32	120	430	6	60	142082

Replacement Head for No.76 (Plastic Head)

Model No.	Set content	Package size (mm)	Inner Ctn.	Outer Ctn.	EDP No.
076110 Card Product	1Lb×2pcs	170×60×35	-	5	242024
76-10H Boxed	1Lb	130×155×35	20	400	142131

※Apply hammer Gel Grip Hammer No.76-10 No.77-10
Plastic Head Hammer No.70-1

No. 77-10 Gel Grip Hammer (Rubber/Plastic Head)

- Gel resin grip drastically absorbs the shocks by hammer blows to your palm. Alleviates the strain on your wrist.
- Slip resistance grip design of elastomer resin.
- Excellent balance between both heads, ensuring firm feeling of hammering.
- Hammer heads are screwed on and replaced easily. Replacement head is available as option.
- The hammer heads are screwed on and replaced easily. Rubber head is available as option. Rubber head is of light gray color, which does not cause color staining to the object.

Model No.	Size	Length	Head Diameter	Head Length (mm)	Weight (g)	Inner Ctn.	Outer Ctn.	EDP No.
77-10	1	315	32	120	430	6	60	142091

Replacement Head for No.77 (Rubber Head)

Model No.	Set content	Package size (mm)	Inner Ctn.	Outer Ctn.	EDP No.
077110 Card Product	1Lb×2pcs	170×60×35	-	5	242021
77-10H Boxed	1Lb	130×155×35	20	400	142121

※Apply hammer Gel Grip Hammer No.77-10
Cannot be used for plastic hammer No.70-1.

No. 70 Plastic Head Hammer

- Soft durable plastic head. Does not damage workpieces.
- Replacement head ia available as option in a box.
- Replacement head of 1/2, 1 and 1 1/2 sizes is also available in 2-pc pre-carded package.

Size	Length	Head Diameter	Head Length (mm)	Inner Ctn.	Outer Ctn.	EDP No.
1/4	280	19.5	66.5	6	60	142001
1/2	280	25	82	6	60	142002
1	295	31.3	108	6	60	142003
1 1/2	325	37.6	125.5	6	36	142004
2	350	45.4	139	6	24	142005

Handles are not separately sold.

Replacement head for No.70

Model No.	Set content	Package size (mm)	Inner Ctn.	Outer Ctn.	EDP No.
Head 70×1/4	1/4	85×102×20	20	–	142011
Head 70×1/2	1/2	110×132×27	20	400	142012
Head 70×1	1	130×155×35	20	400	142013
Head 70×1 1/2	1 1/2	80×185×42	10	400	142014
Head 70×2	2	100×225×48	10	400	142015

Replacement head for No.70 Cardbord Products

Model No.	Set content	Package size (mm)	Outer Ctn.	EDP No.
070105	1/2×2pcs	170×60×26	5	242012
070110	1×2pcs	170×60×35	5	242013
070115	1 1/2×2pcst	210×75×41	5	242014

⚠WARNING concerning Hammers
- Strike target directly. Do not hit at an angle, etc.
- Do not strike anywhere but the target area.

One point

GEL resin grip

Built-in gel cushions the shock to the palm

Cushions the shock to the palm of hammering blows.
Alleviates the strain on your wrist.

Slip-resistant grip design

By gel, the contact surface with the palm increases.
Non-slip grip with projected parts.

No. RG-95 Ratchet Rivet Gun

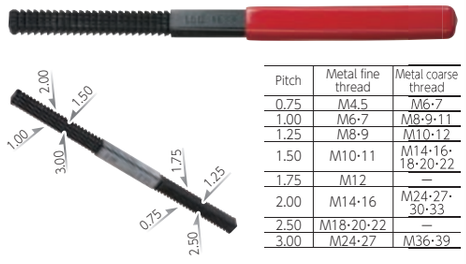
- Can calk blind rivets easily with one hand.
- Easily calks 4.8 mm steel rivets that were difficult to use with existing manual riveters.

Set content	
Body	overall length 230mm weight 570g
Accessories	Nose piece 2.4, 3.2, 4.0, 4.8mm
	Nose piece wrench A/F10mm

Package size (mm)	Outer Ctn.	EDP No.
350×140×30	5	621310

No. 8 Thread File

- Quickly restores threads of tooling machines, automobiles, etc.
- 1 tool can be used with 8 different thread pitches.



Pitch	Metal fine thread	Metal coarse thread
0.75	M4.5	M6·7
1.00	M6·7	M8·9·11
1.25	M8·9	M10·12
1.50	M10·11	M14·16·18·20·22
1.75	M12	–
2.00	M14·16	M24·27·30·33
2.50	M18·20·22	–
3.00	M24·27	M36·39

Set content	
Pitch (mm)	0.75 / 1.00 / 1.25 / 1.50 1.75 / 2.00 / 2.50 / 3.00

Package size (mm)	Outer Ctn.	EDP No.
270×75×12	10	621111

No. 5700WP Water Faucet Screwdriver

- Large sized tip enables stable fastening work as it fits well.

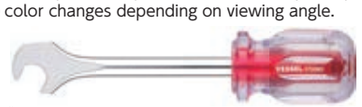
Cr-V steel

(mm)						Package size (mm)	Inner Ctn.	EDP No.
18	1.6	85	8	30	134.5	182×40×30	6	121572

No. 5700BD Car Battery Screwdriver

- Special coin-shaped drive tip with A/F 10mm hexagonal opening.
- Handle color changes depending on viewing angle.

Cr-V steel



(mm)							Package size (mm)	Inner Ctn.	EDP No.
18	10	1.6	85	8	28.5	133	182×40×30	6	121571

No. ZW-3/ZW-4 Thread Thru Stud Wrench

- Works with continuous thread studs, cut bolts and hanger bolts.
- Can be used 2 ways: Straight for tightening, or bent for fast turning.
- Can be used from halfway point with long hanger bolts.
- Lightweight, compact and easy to carry.

					Weight (mm) (g)	Package size (mm)	Inner Ctn.	EDP No.
ZW-3	Thread part. 3/8	32	20	140	224	195×64×27	10	621320
ZW-4	Thread part. 1/2	32	20	140	222	195×64×27	10	621321

One point

Features of special tools

Ratchet Rivet Gun
Allows you to caulk blind rivets easily with one hand

Thread File
For restoring of screw threads
One file can be used for eight different thread pitches.

Thread Thru Stud Wrench
Dedicated for installing a full-thread bolt
It can be bent to turn a bolt quickly.

Water Faucet Screwdriver
Used for tightening and loosening of a water shut-off valve, flow-regulating valve, or check valve

Car Battery Screwdriver
It is a combination of a spanner with width across flats of 10mm for car battery removal and a coin-shaped drive tip.

Industrial Bits

BITS & SOCKETS

Contents

Type A Industrial Bits ····· 61 - 68

Type B Industrial Bits ····· 69 - 78

Precision Bits ····· 79 - 85

Bit Holders, etc ····· 86 - 91

About ISO

ISO 9001 : 2008

Our screwdriver manufacturing division, VESSEL SHIMANE CO., LTD is certified according to ISO standard, the global standard for quality assurance control.

ISO 14001 : 2004

We obtained ISO 14001 in August 2010. VESSEL will further strive to offer eco-friendly products, aiming at minimizing the environmental burden as a manufacturing group.

Industrial bits Technical

BITS & SOCKETS TECHNICAL

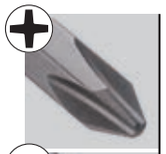
RoHS

Environmental measures

Pb (lead) / Cd (cadmium) / Hg (mercury) / Hexavalent chromium / PBB (polybrominated biphenyl) / PBDE (polybrominated diphenyl ether) / DEHP, BBP, DBP, DIBP (phthalate esters)

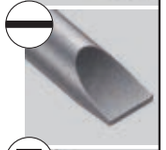
The products with this mark in this catalogue are compliant with the RoHS directives (EU) (usage limit of the above 10 substances).

Note: For the updated information on RoHS compliant products, visit our homepage, because some products or sizes are under investigation or are not compliant at the time of publication of this catalogue.



For cross recessed screws

Most commonly used in the market
JIS B4633.
Devised by PHILLIPS SCREW COMPANY.



For slotted head screws

Especially used for small screws for watches, glasses and precision equipment.
Also used for cross recessed slotted screws JIS B4609.

For square screws

Mainly used for quake-resistant hardware.
Also good for sash doors and log houses.

For hexagonal socket screws

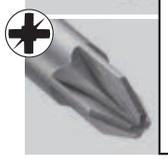
Used for metal products assembly, mold tools, machines, precision equipment and motorcycles, etc.

For TORX screws

Used for hard disk, automobiles and cutting tools.
VESSEL manufactures tools for TORX and TORX PLUS under the licensing agreement with Acument Intellectual Properties, LLC.

For POZIDRIV screws

Favored in Europe and used for OA devices, computers, housing materials, automobiles and airplanes.
VESSEL manufactures POZIDRIV tools under the licensing agreement with European Ind. Serv. Ltd. in UK.



For SUPADRIV screws

Favored in UK, Where this shape was devised, and used for OA devices, computers, housing materials, automobiles and airplanes. VESSEL manufactures SUPADRIV tools under the licensing agreement with European Ind. Serv. Ltd. in UK.

For hexagonal bolts and nuts

Sockets widely used for metal product assembly, automobiles, machines, houses and construction related fields

MG

Magnetized bits

These bits can capture screws with a strong magnetic force enhancing work efficiency.

Sockets with a press-fitted shank

The socket and the shank are separately heat-treated at different harnesses, realizing a high torsional strength nearly two times greater than that of integrated type sockets.

Insertion part

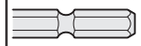
For compact electric screw drivers

82P

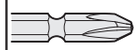
81P
83P

84P

For electric or air screwdrivers

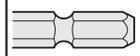


71P
85P

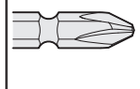


71P

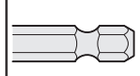
For air or electric impact screwdrivers



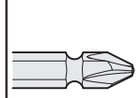
65P
~68P
86P



63P
~65P

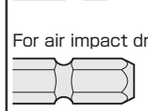


73P
~78P
86P
~88P

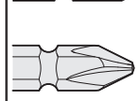


72P
73P

For air impact drivers



68P



68P

Carefully selected materials

With our long experience and research in manufacturing, we developed our own materials with balanced hardness (less wearing) and toughness (hard to chip).
Properties of the elements contained in the materials are improved to an optimal level through a heat treatment process.

C···Carbon	The more carbon is contained, the greater hardening penetration becomes. When the carbon content is 0.6 % or more, abrasion resistance increases, although hardening penetration remains the same.
Ni···Nickel	The addition of small amount of nickel increases steel's shock resistance and toughness. When added in a large amount, it becomes weak and breaks easily.
Cr···Chrome	Hardenability increases. Oxidation resistance increases. Toughness is improved.
Mo···Molybdenum	Hardenability increases. Significant decrease in toughness can be prevented.

TORSION

Torsion part

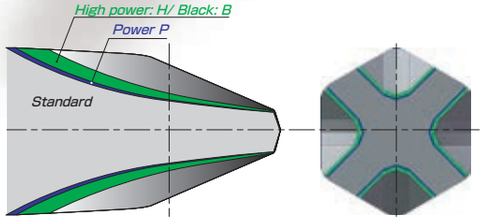
Torsion part absorbs the impact caused when the screw head is fully seated by an impact driver, preventing tip breakage.

ϕ3.5×20mm

For soft joint such as wood screws fastening.
Suitable when fastened material is soft.

ϕ3.7×14mm

For hard joint such as drill fastening.
Suitable when fastened material is hard.

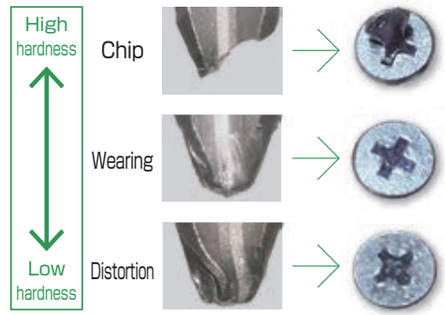


Name	Mark	Cross-section area of the tip	Purpose	Fitting to screws
Standard	—	Small	Wide range of works	Strongly Recommended
Power	P	Medium	For high impact	Very Good
High Power	H	Large	For widely cross recessed screws (pan head screws.)	Good
Black	B			

Hardness (Heat processing classifications)

Chip, wearing and deformation, which directly affect the life of bits and sockets, can be controlled by choosing different hardnesses (heat processing classification)

Hardness (Heat processing classifications)	Examples of use for screws	Industrial use
X Possible highest hardness	Precision small screws, automated machine fitting, collated screws	Precision device assembly, light electrical automated screw tightening, collated screws for housing
H High hardness	Wood screws, small screws, tapping screws, self-drilling screws	Light electric assembly, communication acoustic device assembly, civil engineering and construction work
G Standard hardness	Tapping screws, small screws	Automobile and machine assembly, sash frame assembly
ES Low hardness	Self-drilling screws, tapping screws, small screws	Rigid joint, sheet metal assembly, heavy work



If you do not find any bits or sockets suitable for your work in our product line-up, we also offer made-to-order products according to your specifications.

- **Need a longer bit. Is it OK to connect two bits by welding?**
- **Bit does not catch screws well.** Center run-out of the screw driver is the cause?
- **Want to use bits for a long time.** Supplies expense is too much?
- **Want to stabilize the screw tightening torque as much as possible.**
- **Want to use bits in narrow spaces.** Parts are getting in the way of bits.
- **Want to reduce the breakage of the bit tips.** Having hard time in removing the broken piece of the bit tip from the screw head.
- **Annoyed by stuck screws.** Screw fastening machine often stops.
- **Rust and oil of bits cause problems.**
- **Want to prevent screw stripping.** It spoils precious workpieces.
- **Want to introduce special screws.** Tamper-proof screws are under consideration.
- **Want to reduce the number of interruptions in production line due to bit changes,** etc.

Best practice

Ideal fitting and improved bit tip life with tailored bits

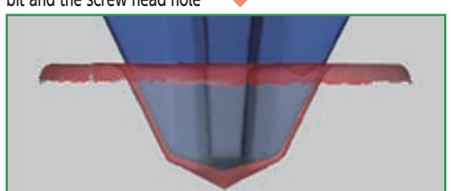
Analyze the fitting between the tip of the bit currently used and the screw head by using a 3D measurement device.

Fitting between the screw head and a user's bit

The parts close to the red marked parts are not completely attached to the screw head hole.
A wide gap between the bit and the screw head hole

Analyze the fitting between the tip of the tailored bit and the screw head hole by using a 3D measurement device

Fitting between the tailored bit and the screw head hole



The entire tip of the bit is attached to the screw head hole.
The tip is inserted deep into the screw head hole.

Result

The life of bits increased three times and the frequency of screw strip decreased.

*Analyses using 3D measurement devices are conducted as needed.
They are not conducted every time made-to-order bits and socket are manufactured.

Flow of arrangement and process of made-to-order bits and sockets production

Points to be checked when arranging made-to-order bits and sockets production

- ☐ Screw samples
- ☐ Screw tightening condition: resin products, Sheet metal (t=mm) tapping, Machine screw M○×○mm, Wood screw ○mm×○mm, Whether or not screw locking glue is used
- ☐ Company name, product number, output torque and structure of screw tightening tool you use
- ☐ What you need: tailored bits, promote tip strength (wearing, breakage), better fitting, etc.

↓

Production of made-to-order bit for testing

- ☐ Delivery deadline: within 25 work days (target)
- ☐ Number of screws: we accept orders for 10 or more pieces.

↓

Completion of test pieces

- ☐ Fitting check with screws used and 3D measurement devices

↓

Production line evaluation

- ☐ Running cost
- ☐ Durability
- ☐ Others (screw strip, cam out, etc.)

↓

Determination of bit specifications

Double End Bit Type A

The Type A entry is designed to VESSEL's special insertion dimensions, developed when we first started manufacturing air drivers.
The majority of electric drivers on the market can be used with our ubiquitous Type A bits.

No. A14

Double End Bit

High precision bit tips…
Our mission is to design and manufacture optimal bits for many kinds of screws.
For such purpose, we take proactively into consideration licensing agreements for various screw types.
Also we supply bits that that correspond to the continual changes in the screw recess design, by having technological exchanges with the screw punch manufacturers.

※This is for illustrative purpose.

Applicable models

Please check the model No. of your drivers before determining which bit(s) to choose.

Shape	Model No.	Page	Applicable models: Air Screwdriver	Applicable models: Electric Screwdriver
H 6.35 mm	A14	63P 64P	VESSEL GT-H4R·H4PR·H4.5·H5R·H5P·PH4·PH5·S4.5DR·PLR·PLZ·PLP·PLHⅡ·S6MLR·S6HS·S6.5D·P4.5D·P4.5DR·P5LS·P6EXD·P6LSⅢ·P6HS·P6.5D·S4TR·S4TS·S4TG·S5TR·S5TB·S5TG·S5TS·S4.5XD·P4.5XD·PLXD·P60XD·P6LXD·S6LXD·S60XD·PLIXD·P5XD Hitachi Koki WH 12AB2·12H2 NPK ND-○○○Y NPW-○○○Y SD-4 Fuji Kuki FLT series D-10·D-20 FPT series D-10 FL series D-10 FPW series D-10 FW series D-10·D-20·D-60·D-70·D-80 Makita AD604·AD605H Yokota YLa60B·70B·80B YLT50B·60B·70B·60BL·70BL Y-40SB·41B·46B YX-80B·180B·180SB·280B·380B·500B·180SB·280SB·380SB·500SB YBX-50B YD-400SCB·4.5LBZ·6WBZK·600SBZ·40PBZ·4.5PBZK·600PBZ·650PBZ·65PTBZ·65PBZ·670B·670B-F·670B-R·670B-RF Yutani D-6SPAL·5WPEA·6WSPEA·6WSHPEA·600SHEA·604A·8WPE·6SSAEL·6WSHSA DH-6PL·4.5PEA·6PLE·4.5SA·6SELA HPW-4D·6D·6αD·8αD·4SD·6SD·6αSD ETC-10HD·15HD·5HSD·10HSD MAX AT-ID6P1·HF-ID7P1	VESSEL VE-5000·5000P·6000·6000P Toshiba CI-144VBKS Hitachi Koki WH 7DL·9DM2·10DL·10DAL·14DSL2·14DBAL2·14DDL·14DDL2·18DBAL2·18DDL·18DDL2·14DBEL·18DBEL·14DKL·18DKL·10DCL·14DCL·12H2·12AB2·12VE WM 10DBL·14DBL·18DBL WP 14DSL·12VA DB 3DL2 FWH 7DL·10DAL·10DFL·14DGL·14DSAL·12DC2·12VD·10DCL FDB 3DL2·10DFL W 4SA2·5SA·8V (Old model) WH 6DC·9DM·12DM·12DAF2·12DM2·12DMR·12DK·12DMR2·14DMRL·14DBL·14DBAL·18DBDL·8DYA (No.2 only available)·14DH·14DM·14DML·14DMR·14DSL·18DL·12VA·12VB·12VC3·12VC2·12VC·12VD WP 10A·12DM W 4SA·5VC·5VD·5VE·6VC·6VH·6VJ·6M·6MV·6MV2 ●The models in blue letters are the screwdrivers for light steel substrates and boards. It is recommended to use a 45mm long bit. Makita TD 0220·021D·061D·090D·110D·135D·134D·146D·134DX2·146DX2·134DSHX·160D·170D·138D·149D·136D·137D·146D·147D·148D TL 060D·061D TP 140D·131D·141D TS 131D·141D 6955·6963SPK DF 010D·030D·031D Panasonic EZ 75A7·75A1·7544·7207·6506·7545·7521·7520·7548·6507·7410·7411·7420·6220 Ryobi BD-361 BID-1100·180·1810·1228·1229·1250·1260·1415·1416·1417·1418·143·1440·145·1805·1806 CID-1100 ID-140 Tonichi AUR5N MAX PJ-ID144·SD101 Yokota YBX-50B
	M-A16	66P		
	D81			
	V	66P 67P		
H 6.35 mm	A20	67P		
	A20-5			
	SB	68P		
	MA20			
	MA20S			
	HA	86P		
	HAM			
	HD-71 × 45	87P		
H 6.35 mm	D830082 D831045 D831075 D832075 D832100 D832150	108P		Panasonic EZ 6220·6225·7410·7411 Ryobi D-500
H 8 mm	A15	68P	VESSEL GT-P8D·P10SⅡ·P80XD	Hitachi Koki WH 14DA Panasonic EZ6680
H 8 mm	A19	68P		
	V5			

H 6.35 mm

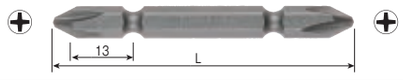
No. A14 Double End Bit

●If one end breaks, the other end can be used.
●A wide variety of bits according to different heat treatment.

Size Tip×Overall Length (mm)		Heat treatment classification	Inner Ctn.	Outer Ctn.	EDP No.
⊕1×	45	H	10	100	413029
	65	H	10	100	413031
	65	G	10	100	413032
	110	H	10	100	413231
	110	G	10	100	413232
⊕2×	45	X	10	100	413039
	45	H	10	100	413041
	45	G	10	100	413040
	65	X	10	100	413047
	65	H	10	100	413042
	65	G	10	100	413043
	65	E	10	100	413045
	110	X	10	100	413262
	110	H	10	100	413241
	110	G	10	100	413242
	110	E	10	100	413243
	150	X	10	100	413263
	150	H	10	100	413245
	150	G	10	100	413246
	150	E	10	100	413247
	200	X	10	150	413264
	200	H	10	150	413249
	200	G	10	150	413248
	200	E	10	150	413250
	300	G	10	100	413255
⊕3×	45	H	10	100	413051
	45	E	10	100	413050
	65	X	10	100	413054
	65	H	10	100	413052
	65	E	10	100	413053
	110	H	10	100	413252
	110	E	10	100	413251

No. A14P Double End Bit (Power tip)

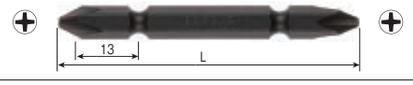
●If one end breaks, the other end can be used.
●Well balanced combination between tip precision and strength.



Size Tip×Overall Length (mm)		Heat treatment classification	Inner Ctn.	Outer Ctn.	EDP No.
⊕2×	65	H	10	100	415331
	110	H	10	100	415333
	150	H	10	100	415334

No. A14H TAPPING Bit (High power tip)

●If one end breaks, the other end can be used. ●Reinforced tip for tapping work.



Size Tip×Overall Length (mm)		Heat treatment classification	Inner Ctn.	Outer Ctn.	EDP No.
⊕2×	65	H	10	100	413351
	110	H	10	100	413355
	150	H	10	100	413359

No. M-A14 Double End Bit (Magnetized)

●If one end breaks, the other end can be used.
●Strongly magnetized.

Size Tip×Overall Length (mm)		Heat treatment classification	Inner Ctn.	Outer Ctn.	EDP No.
⊕1×	45	H	10	100	413401
	65	H	10	100	413402
	110	H	10	100	413407
⊕2×	45	H	10	100	413403
	45	G	10	100	413404
	65	H	10	100	413405
	65	G	10	100	413406
	110	H	10	100	413408
	110	G	10	100	413411
	150	H	10	100	413409

No. A14B TAPPING Bit (Black tip)

●If one end breaks, the other end can be used.
●Reinforced tip for tapping work.

Size Tip×Overall Length (mm)		Heat treatment classification	Inner Ctn.	Outer Ctn.	EDP No.
⊕2×	50	S	10	100	413141
	75	S	10	100	413142
	100	S	10	100	413341
	150	S	10	100	413342

No. AZ14 GIZA Bit PAT.

●If one end breaks, the other end can be used.
●Jagged tip prevents cam-out.

Size Tip×Overall Length (mm)		Heat treatment classification	Inner Ctn.	Outer Ctn.	EDP No.
⊕2×	65	H	10	100	413360
	110	H	10	100	413361

No. AS14 SLENDER Bit

●If one end breaks, the other end can be used.
●Tapered tip allows for easy view.

Size Tip×Overall Length (mm)		Heat treatment classification	Inner Ctn.	Outer Ctn.	EDP No.
⊕1×	65	H	10	100	413367
⊕2×	45	H	10	100	413366
	65	H	10	100	413364
	110	H	10	100	413365

H 6.35 mm

No. A14 Square Double End Bit

●If one end breaks, the other end can be used.
●Specially-shaped tip prevents the bit from getting stuck.

	Size Tip×Overall Length (mm)	Heat treatment classification	Inner Ctn.	Outer Ctn.	EDP No.
	SQ 1× 65	H	10	100	413380
	SQ 2× 65	H	10	100	413381
	110	H	10	100	413383
★	150	H	10	100	413385
	SQ 3× 65	H	10	100	413382
	110	H	10	100	413384
	150	H	10	100	413386

No. A14R Square Double End Bit

●If one end breaks, the other end can be used.
●With a ring attached preventing the bit from getting stuck.

	Size Tip×Overall Length (mm)	Heat treatment classification	Inner Ctn.	Outer Ctn.	EDP No.
★	SQ 1× 65	H	10	100	413387
★	SQ 2× 65	H	10	100	413388
★	110	H	10	100	413389
★	150	H	10	100	413390
	SQ 3× 65	H	10	100	413391
★	110	H	10	100	413392
★	150	H	10	100	413393

No. A14 SUPADRIV Bit

●SUPADRIV systems are patented and registered as the trademark of EIS corp. in U.K.
●VESSEL has a manufacturing license in Japan and selling same to the world.

Size Tip×Overall Length (mm)	Heat treatment classification	Inner Ctn.	Outer Ctn.	EDP No.
SDV1× 65	H	10	100	636101
SDV2× 45	H	10	100	636105
65	H	10	100	636106
SDV3× 65	H	10	100	636111

H 6.35 mm

No. AL14 ALFA Bit

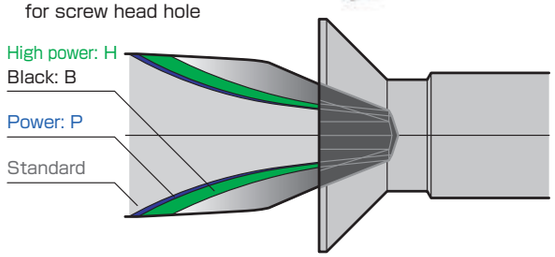
●If one end breaks, the other end can be used.
●Modest torsion effect created by tempering treatment on the ball grooves.

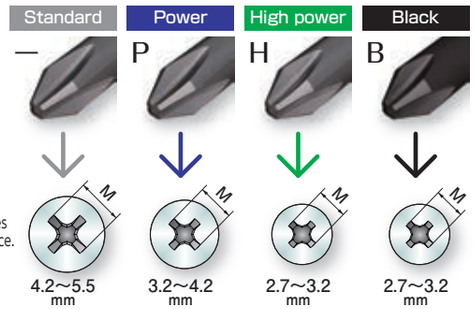
Size Tip×Overall Length (mm)	Heat treatment classification	Inner Ctn.	Outer Ctn.	EDP No.
⊕ 2× 65	H	10	100	413369
110	H	10	100	413370

One point

Bit selection I

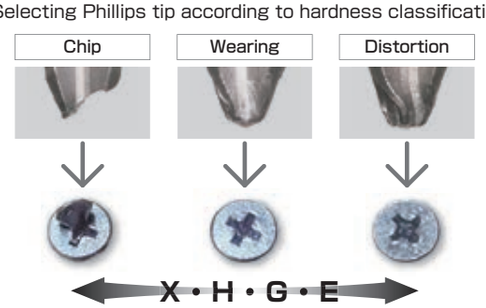
●Selecting Phillips tip suitable for screw head hole





*** M dimension** : the size of a cross recess on a screw head viewed from directly above

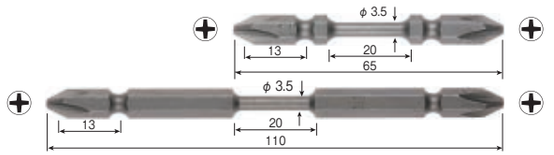
●Selecting Phillips tip according to hardness classification



H 6.35 mm

No. AT14 TORSION Bit

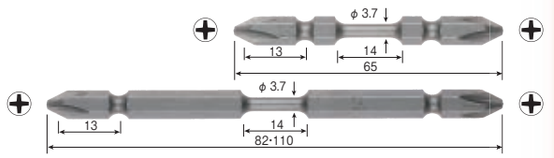
●If one end breaks, the other end can be used.
●For soft joint such as wood screws.



Size Tip×φ×Overall Length (mm)	Heat treatment classification	Inner Ctn.	Outer Ctn.	EDP No.
⊕ 2×3.5× 65	H	10	100	413143
110	H	10	100	413144

No. AT14P TORSION Bit (Power tip)

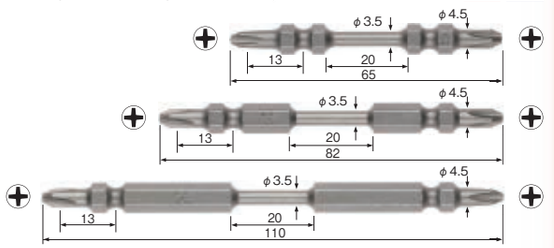
●If one end breaks, the other end can be used.
●For hard joint such as drill screws.



Size Tip×φ×Overall Length (mm)	Heat treatment classification	Inner Ctn.	Outer Ctn.	EDP No.
⊕ 2×3.7× 65	X	10	100	415361
82	X	10	100	415362
110	X	10	100	415363

No. ST14 SLENDER TORSION Bit PAT.

●If one end breaks, the other end can be used.
●Thin tip allows for easy view. For soft joint such as wood screws.

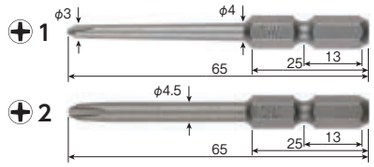


Size Tip×φ×Overall Length (mm)	Heat treatment classification	Inner Ctn.	Outer Ctn.	EDP No.
⊕ 1×3.5× 65	H	10	100	413374
⊕ 2×3.5× 65	H	10	100	413375
82	H	10	100	413377
110	H	10	100	413376

H 6.35 mm

No. A16 Recessed Bit

●Recessed type. Thin shank allows for use in narrow spaces.

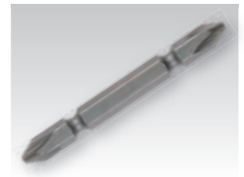


Size Tip×φ×Overall Length (mm)	Heat treatment classification	Inner Ctn.	Outer Ctn.	EDP No.
⊕ 1×3 × 65	H	10	100	415061
⊕ 2×4.5× 65	H	10	100	415066

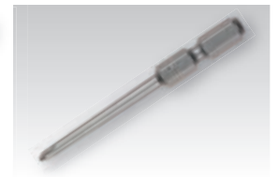
One point

Bit selection II

●Selection according to bit shapes

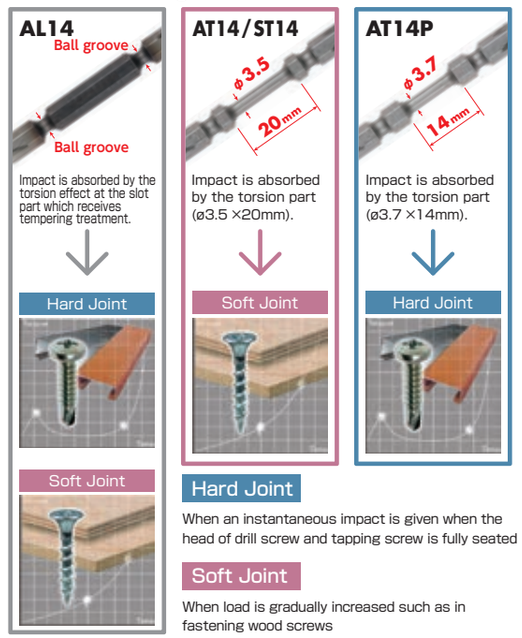


Double End Bit
If one end breaks, the other end can be used.



Recessed Bit / Bit
Thin shank improves workability in narrow spaces.

●Selection according to torsion effect



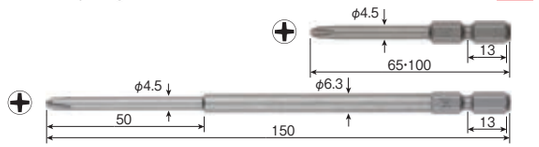
Hard Joint
When an instantaneous impact is given when the head of drill screw and tapping screw is fully seated

Soft Joint
When load is gradually increased such as in fastening wood screws

H 6.35 mm

No. M-A16 Recessed Bit (Magnetized)

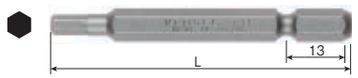
●Recessed type. Thin shank allows for use in narrow spaces.
●Powerfully magnetized.



Size Tip×ϕ×Overall Length (mm)	Heat treatment classification	Inner Ctn.	Outer Ctn.	EDP No.
⊕ 2×4.5× 65	H	10	100	415311
100	H	10	100	415312
150	H	10	100	415313

No. A16 Hex Bit

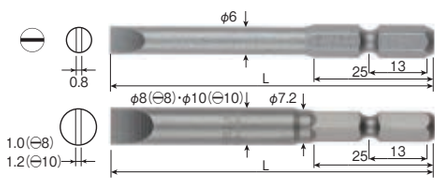
●For assembly work focusing on workability.



Size Tip×Overall Length (mm)	Heat treatment classification	Inner Ctn.	Outer Ctn.	EDP No.
H 2× 65	H	10	100	481090
110	H	10	100	481100
2.5× 65	H	10	100	481091
110	H	10	100	481101
3× 65	H	10	100	481092
110	H	10	100	481102
4× 65	H	10	100	481093
110	H	10	100	481103
5× 65	G	10	100	481094
110	G	10	100	481104
6× 65	G	10	100	481096
110	G	10	100	481105

No. A16 Recessed Bit

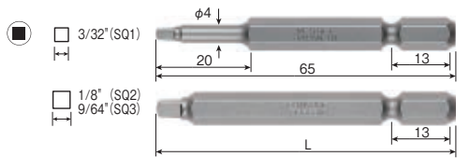
●For assembly work focusing on workability.



Size Tip×Overall Length (mm)	Heat treatment classification	Inner Ctn.	Outer Ctn.	EDP No.
⊖ 6 × 45	G	10	100	415071
70	G	10	100	415072
⊖ 8 × 45	G	10	300	415171
70	G	10	250	415172
⊖ 10× 52	G	10	200	415271
70	G	10	200	415272

No. A16 Square Bit

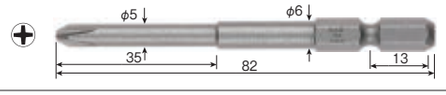
●For assembly work focusing on workability.



Size Tip×Overall Length (mm)	Heat treatment classification	Inner Ctn.	Outer Ctn.	EDP No.
★ SQ 1×4× 65	H	10	100	481001
★ SQ 2× 65	H	10	100	481002
★ 110	H	10	100	481005
★ 150	H	10	100	481008
★ SQ 3× 65	H	10	100	481003
★ 110	H	10	100	481006
★ 150	H	10	100	481009

No. D81 Recessed Bit

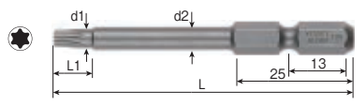
●Recessed type. Thin shank allows for use in narrow spaces.



Size Tip×Overall Length (mm)	Heat treatment classification	Inner Ctn.	Outer Ctn.	EDP No.
⊕ 2 × 82	X	10	100	482040
82	H	10	100	482041
82	E	10	100	482042

No. V TORX Bit

●For TORX screws used in the automotive industry.



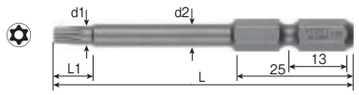
Size Tip×Overall Length (mm)	mm	d1	L1	d2	(mm)	Inner Ctn.	EDP No.
T6 × 65	1.65	1.95	6.5	4.0		10	634997
110	1.65	1.95	6.5	4.0		10	634998
T8 × 65	2.3	2.60	7.0	4.5		10	634999
110	2.3	2.60	7.0	4.5		10	635000
T10× 65	2.72	3.02	7.5	4.5		10	635120
110	2.72	3.02	7.5	4.5		10	635121
T15× 65	3.26	3.56	7.5	4.5		10	635125
110	3.26	3.56	7.5	4.5		10	635126
T20× 65	3.84	4.14	7.5	5.0		10	635130
110	3.84	4.14	7.5	5.0		10	635131
T25× 65	4.4	4.70	8.0	5.0		10	635135
110	4.4	4.70	8.0	5.0		10	635136
T27× 65	4.96	5.26	8.0	5.5		10	635140
110	4.96	5.26	8.0	5.5		10	635141
T30× 65	5.49	5.79	8.5	6.0		10	635145
110	5.49	5.79	8.5	6.0		10	635146
T40× 65	6.6	H6.35	—	H6.35		10	635150
110	6.6	H6.35	—	H6.35		10	635151

TORX is a registered trademark of Acument TM Intellectual Properties, LLC (USA).
VESSEL has a manufacturing license in Japan and selling same to the world.

H 6.35 mm

No. V TORX Bit (Tamper-Proof)

●For TORX screws used in the automotive industry.
●With a round hole for tamper-proof.



Size Tip×Overall Length (mm)	mm	d1	L1	d2	(mm)	Inner Ctn.	EDP No.
T8H × 65	2.3	2.60	7.0	4.5		10	635032
110	2.3	2.60	7.0	4.5		10	635033
T10H× 65	2.72	3.02	7.5	4.5		10	635001
110	2.72	3.02	7.5	4.5		10	635002
T15H× 65	3.26	3.56	7.5	4.5		10	635005
110	3.26	3.56	7.5	4.5		10	635006
T20H× 65	3.84	4.14	7.5	5.0		10	635010
110	3.84	4.14	7.5	5.0		10	635011
T25H× 65	4.4	4.70	8.0	5.0		10	635015
110	4.4	4.70	8.0	5.0		10	635016
T27H× 65	4.96	5.26	8.0	5.5		10	635020
110	4.96	5.26	8.0	5.5		10	635021
T30H× 65	5.49	5.79	8.5	6.0		10	635025
110	5.49	5.79	8.5	6.0		10	635026
T40H× 65	6.6	H6.35	—	H6.35		10	635030
110	6.6	H6.35	—	H6.35		10	635031

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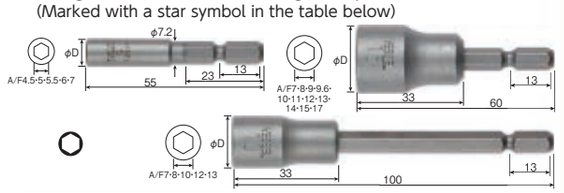
VESSEL has a manufacturing license in Japan and selling same to the world.

No. A20 Socket Bit

●Socket bit for assembly.
●Strong resistance to shank breakage with press-fit method.
(Marked with a star symbol in the table below)



Size Tip×Overall Length (mm)		ϕD	Hole depth	(mm)	Inner Ctn.	Outer Ctn.	EDP No.
A/F 4.5× 55		7.5	20		10	250	416080
5 × 55		8.5	20		10	250	416081
5.5× 55		9	20		10	250	416082
100		9	25		10	250	416281
6 × 55		10	20		10	200	416083
100		10	25		10	200	416282
7×11× 55		11	20		10	200	416084
100		11	25		10	150	416280
7 × 60	☆	13.5	22		10	200	416095
100	☆	13.5	25		10	150	416283
8 × 60	☆	13.5	22		10	200	416085
100	☆	13.5	22		10	150	416284
9 × 60	☆	15	22		10	150	416086
9.6× 60	☆	15	22		10	150	416087
10 × 60	☆	16	22		10	150	416088
100	☆	16	22		10	100	416286
11 × 60	☆	17	22		10	150	416089
12 × 60	☆	18	22		10	100	416090
100	☆	18	22		10	100	416287
13 × 60	☆	19	22		10	100	416091
100	☆	19	22		10	50	416288
14 × 60	☆	20	22		10	100	416092
15 × 60	☆	21	22		10	50	416093
17 × 60	☆	23	22		10	50	416094

☆···Press-fit type

No. A20-5 Socket Bit

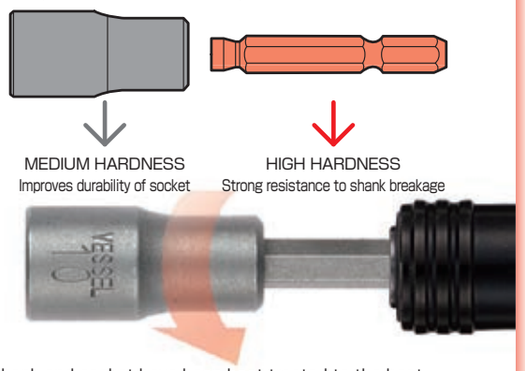
●Short type socket bit to use in narrow spaces, such as on the periphery of automobile engines.

Size Tip×Overall Length (mm)	ϕD	Drilling holes depth	(mm)	Inner Ctn.	Outer Ctn.	EDP No.
A/F 10× 50	16	10		10	150	416396

One point

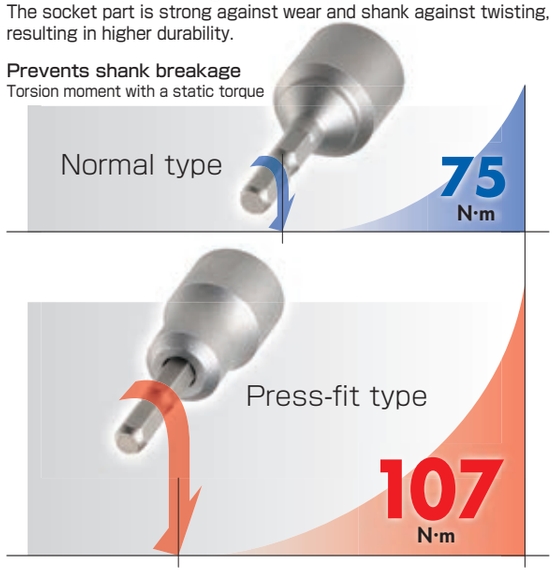
Features of press-fit type sockets

(Press-fit type: marked with a star symbol in the table of each model)



The shank and socket have been heat-treated to the best hardness and press-fit together.
The socket part is strong against wear and shank against twisting, resulting in higher durability.

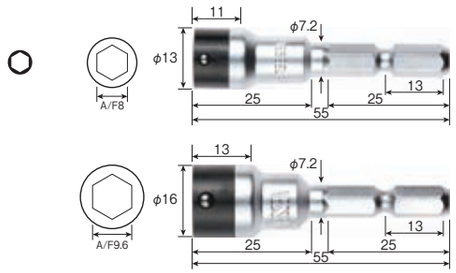
Prevents shank breakage
Torsion moment with a static torque



H 6.35 mm

No. SB Nut Setter (Ball Lock)

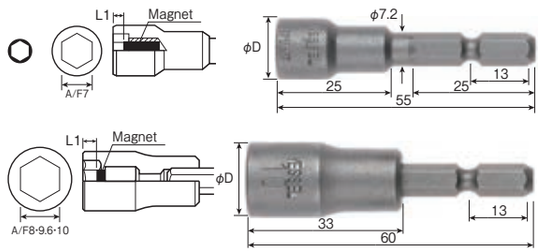
- Socket bit for Hex screws.
- Ball-lock type for minimum cutting particles.



Size Tip×Overall Length (mm)	Inner Ctn.	Outer Ctn.	EDP No.
A/F 5/16"(8mm) × 55(For screw dia. 5mm)	5	50	482531
A/F 3/8"(9.6mm) × 55(For screw dia. 6mm)	5	50	482532

No. MA20 Socket Bit (Press-Fit Magnet)

- Socket bit for Hex screws.
- Holds the screw with a strong magnet, to prevent the screws from dropping.



Size Tip×Overall Length (mm)		ϕD	L1	Inner Ctn.	Outer Ctn.	EDP No.
A/F 7 × 55(For screw dia. of 4mm)		13	2.5	10	200	482510
A/F 8 × 60(For screw dia. of 5mm)	☆	13.5	3.17	10	150	482511
A/F 9.6× 60(For screw dia. of 6mm)	☆	15	3.96	10	150	482512
A/F 10 × 60(For screw dia. of 6mm)	☆	16	3.96	10	150	482513

☆Press-fit type.

No. MA20S Socket Bit (Side Magnet)

- Socket bit for Hex screws.
- Holds the screw with side magnet, to prevent the screws from dropping.

Size Tip×Overall Length (mm)		ϕD	Drilling holes depth	Inner Ctn.	Outer Ctn.	EDP No.
A/F 5/16"(8mm)× 55		13	20	10	100	482401
A/F 3/8"(9.6mm)× 55		16	20	10	100	482402
A/F 10mm × 55		16	20	10	100	482403

H 8 mm

No. A15 Double End Bit

- If one end breaks, the other end can be used.
- High strength with 8mm hexagonal shank.

Size Tip×Overall Length (mm)		Heat treatment classification	Inner Ctn.	Outer Ctn.	EDP No.
⊕2×	65	G	10	250	414041
	110	G	10	150	414042
⊕3×	65	E	10	250	414051
	110	E	10	150	414052

H 8 mm

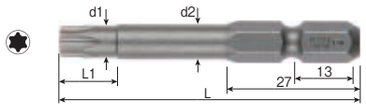
No. A19 Hex Bit

- For assembly work focusing on workability.
- High strength with 8mm hexagonal shank.

Size Tip×Overall Length (mm)		Heat treatment classification	Inner Ctn.	Outer Ctn.	EDP No.
H 5×	65	G	10	250	481191
6×	65	G	10	250	481192
	130	G	10	100	481196
8×	65	G	10	250	481193
	130	G	10	100	481197
10×	65	S	10	200	481194
	130	S	10	100	481198

No. V5 TORX Bit

- For TORX screws used in the automotive industry.
- High strength with 8mm hexagonal shank.



Size Tip×Overall Length (mm)	mm	d1	L1	d2	(mm)	Inner Ctn.	EDP No.
T25× 65	4.4	4.70	10.0	6.0		10	635215
110	4.4	4.70	10.0	6.0		10	635216
T27× 65	4.96	5.26	11.5	6.5		10	635220
110	4.96	5.26	11.5	6.5		10	635221
T30× 65	5.49	5.79	11.5	6.5		10	635225
110	5.49	5.79	11.5	6.5		10	635226
T40× 65	6.6	6.90	11.5	7.5		10	635230
110	6.6	6.90	11.5	7.5		10	635231
T45× 65	7.77	8.0	—	8.0		10	635235
110	7.77	8.0	—	8.0		10	635236
T50× 65	8.79	H8	—	H8		10	635240
110	8.79	H8	—	H8		10	635241

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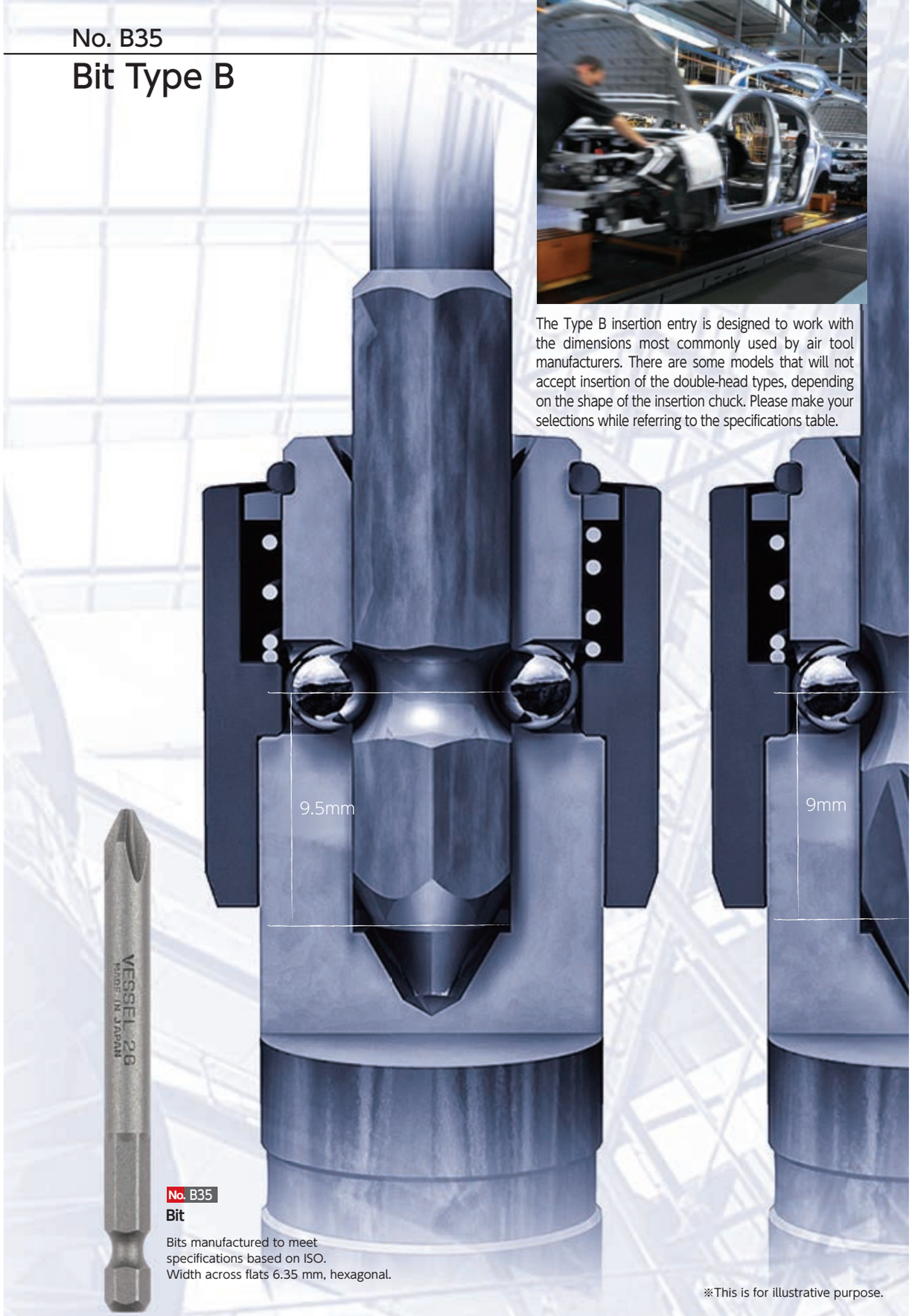
The Type B insertion entry is designed to work with the dimensions most commonly used by air tool manufacturers. There are some models that will not accept insertion of the double-head types, depending on the shape of the insertion chuck. Please make your selections while referring to the specifications table.



No. B35
Bit

Bits manufactured to meet specifications based on ISO.
Width across flats 6.35 mm, hexagonal.

※This is for illustrative purpose.

Applicable models

Please check the model No. of your drivers before determining which bit(s) to choose.

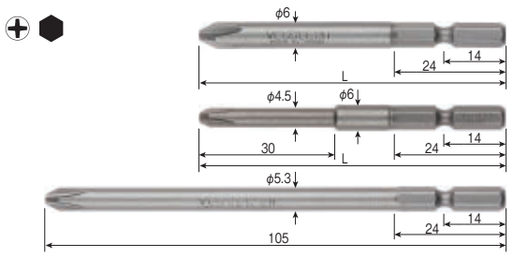
Shape	Model No.	Page	Applicable models: Air Screwdriver	Applicable models: Electric Screwdriver
H 5 mm	B36	71P	VESSEL GT-S5TFR·S5TFB·S5TFG·S4TFR·S4TFS·S4TFG Uryu US-40·3.5A·4·4PB/ US-LT○○A/AL series Yokota YD-3·4·400SC	VESSEL VE-4000·4000P·4500·4500P
H 5 mm	B34	71P	VESSEL GT-S4TFR·S4TFS·S4TFG·S5TFR·S5TFB·5TFG Uryu US-40·3.5A·4·4PB (Except B44 Socket Bit Overall Length 70mm) US-LT○○A/AL series Yokota YD-3·4·400SC	VESSEL VE-4000·4000P·4500·4500P Hios PG-7000, BLG-5000BC1/-15/-20/-HT BLG-5000/-15/-20/HT, BL-5000/-15/-20·5020·7000/-20 CL-4000·6000·6500·7000 SS-4000·6500·7000, α-4500·5000·6500 CD-4000·5000·6000·7000 VB-1510/-18·1820·3012·2008·3020 VZ-1510·1812·1820·3012·3007 Delvo DLV ○○○○-EJN/-DJN/-DJE DLV 7(8)120-SPC·7(8)130-SPC·7(8)140-SPC·7(8)241-SPC·7(8)231-SPC DLV 30LL(P)-SPC·30SL(P)-SPC·30HL(P)-SPC Hitachi Koki WT 3G/3GP·4G/4GP·5G/5GP Kanon 3K-120L·180L·180LF·120P·180P·180PF 9K-130P·140P·130PF·131L·131LF·131P·131PF 5KD-200·300 Panasonic FE-A310S·A310MH·A310L·A111L·A111MH·A111M·A710AXN·A710MHN
H 5 mm	N	71P		
H 5 mm	B44	71P		
H 6.35 mm	B43	72P	Uryu UX·U·UW·ALPHA·UL·UEP·UAT·UA·UDP all driver type US-350W·450WB·5·50·5PB·○○W/PW·LT○○B/BL/PB NPK ND-○○○X, NPW-○○○X Fuji Kuki FLT series D-1·D-2 FPT series D-1, FL series D-1, FPW series D-1 FW series D-1·D-2·D-6·D-7·D-8, FD series D-4·D-5 Yutani D-6SPBL·5WPEB·6WSPEB·6WSHPEB·600SHEB·604B·8WPE·6SSBEL·6WSHSB DH-6PL·4.5PEB·6PLE·4.5SB·6SELB HPW-4D·6D·6αD·8αD·4SD·6SD·6αSD Yokota TKa60A·70A·80A YEX-120A·150A·501A·100SA·120SA·150SA·300SA·500SA YLa60A·70A·80A YLT50A·60A·70A·60AL·70AL Y-40SA·41A·46A YX-80A·180A·280A·380A·500A·280A·380A·500A·180SA·280SA·380SA·500SA·280CA·500CA YBX-50A YD-400SCA·500SCA·5PHCA·3A·4A·4.5SZ·5A·4.5LAZ·6WAZK·600SZ·40PZ·4.5PZK·600PZ·650PZ·65PTZ·65PZ·670A·670A-F·670A-R·670A-RF Atlas-Copco LUM·LUF·LUD·TWIST·COMBI series	Yokota YBX-50A Tonichi AUR5N·U (Except U1000CN)·UR·DU ●Following Tool models are applicable only for the single end bits. Hios PG-7000 BLG-4000BC1·5000BC1/-15/-20/-HT BLG-4000·5000/-15/-20/HT BL-3000·5000/-15/-20·5020·7000/-20 CL-4000·6000·6500·7000·9000 SS-4000·6500·7000 α-4500·5000·6500 CD-4000·5000·6000·7000 VB-1510/-18·1820·3012·4504·2008·3020 VBH-1820·3012 VZ-1510·1812·1820·3012·3007·4504·4506 VZH-1820·3012 Delvo DLV ○○○○-EKN/-DKN/-DKE DLV 8150-SPC·7(8)251-SPC DLV 45LL(P)-SPC·45SL(P)-SPC·70LL(P)-SPC Uryu UDBP-AF·TA·A Kanon 9K-150P
H 6.35 mm	M-B43	72P		
H 6.35 mm	B43P	72P		
H 6.35 mm	B43H	72P		
H 6.35 mm	B43B	72P		
H 6.35 mm	BT43	73P		
H 6.35 mm	BT43P	73P		
H 6.35 mm	B35	73P ~76P		
H 6.35 mm	J	74, 75P		
H 6.35 mm	IP	75P		
H 6.35 mm	X5000	76P		
H 6.35 mm	B45	77P		
H 6.35 mm	MB45	77P		
H 6.35 mm	MB45S	78P		
H 6.35 mm	MB45D	78P		
H 6.35 mm	HB	86P		
H 6.35 mm	HBM	86P		
H 6.35 mm	DBHM	87P		
H 6.35 mm	MMBC	88P		
H 6.35 mm	B39	76P	VESSEL GT- H4RC·H5RC·S6CD·PLRC Uryu US-3.5ACB·4CA·5CA·LT30B-○○C·LT40B-○○C Yutani D-6WHCL Yokota YD-600L YX-280CA·500CA	Kanon (Old model) CN 60LTDK~N 10LTDK(N6~N100LTDK) CN 60STDK~N 10STDK(N6~N100STDK) CN 100~CN 500DPSK(N10~N50DPSK) CN 100~CN 500DPSK-L(N10~N50DPSK(Ⅱ)) CN 15/CN 30LTDK-H(N1.5/N3LTDK-H) DTDK-CN 500EXL(DTDK-N5EXL)

Manual type Torque Screwdriver

H 5 mm

No. B34 Bit

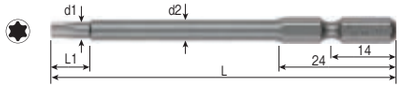
●For assembly work focusing on workability.
●Hexagonal shape with the width across flats of 5㎜ is also suited for electric drivers.



Size Tip×Overall Length (㎜)	Heat treatment classification	Inner Ctn.	Outer Ctn.	EDP No.
⊕1× 70	H	10	100	422031
100	H	10	100	422032
150	H	10	100	422033
⊕1×4 × 70	H	10	100	422048
⊕1×4×30×70	H	10	100	446335
⊕1×5.3× 105	H	10	100	422034
★ 120	X	10	100	422040
120	H	10	100	422035
⊕2× 70	H	10	100	422041
100	H	10	100	422042
120	H	10	100	422045
150	H	10	100	422043
200	H	10	100	422044
⊕2×3×30×75	H	10	100	446340
⊕2×4.5× 70	H	10	100	422049
⊕2×5.3× 105	H	10	100	422046
120	H	10	100	422047
H 2 × 70	H	10	100	422071
H 2.5× 70	H	10	100	422072
H 3 × 70	H	10	100	422073
H 4 × 70	H	10	100	422074
H 5 × 70	H	10	100	422075

No. N TORX Bit

●For TORX screws popular in the automotive industry.



Size Tip×Overall Length (㎜)	㎜	d1	L1	d2	(㎜)	Inner Ctn.	EDP No.
T5 × 75	1.37	1.67	6.5	4.0		10	635498
100	1.37	1.67	6.5	4.0		10	635499
T6 × 75	1.65	1.95	6.5	4.0		10	635500
100	1.65	1.95	6.5	4.0		10	635501
T8 × 75	2.3	2.60	7.0	4.5		10	635505
100	2.3	2.60	7.0	4.5		10	635506
T10× 75	2.72	3.02	7.5	4.5		10	635510
100	2.72	3.02	7.5	4.5		10	635511
T15× 75	3.26	3.56	7.5	4.5		10	635515
100	3.26	3.56	7.5	4.5		10	635516
T20× 75	3.84	4.14	7.5	5.0		10	635520
100	3.84	4.14	7.5	5.0		10	635521
T25× 75	4.4	4.70	8.0	5.0		10	635525
100	4.4	4.70	8.0	5.0		10	635526
T27× 75	4.96	5.26	8.0	5.5		10	635530
100	4.96	5.26	8.0	5.5		10	635531

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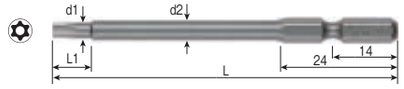
VESSEL has a manufacturing license in Japan and selling same to the world.

No. N TORX Bit (Tamper-Proof)

●For TORX screws popular in the automotive industry.
●With a round hole for tamper-proof.



Size Tip×Overall Length (㎜)	㎜	d1	L1	d2	(㎜)	Inner Ctn.	EDP No.
T10H× 75	2.72	3.02	7.5	4.5		10	635551
100	2.72	3.02	7.5	4.5		10	635552
T15H× 75	3.26	3.56	7.5	4.5		10	635553
100	3.26	3.56	7.5	4.5		10	635554
T20H× 75	3.84	4.14	7.5	5.0		10	635555
100	3.84	4.14	7.5	5.0		10	635556
T25H× 75	4.4	4.70	8.0	5.0		10	635557
100	4.4	4.70	8.0	5.0		10	635558

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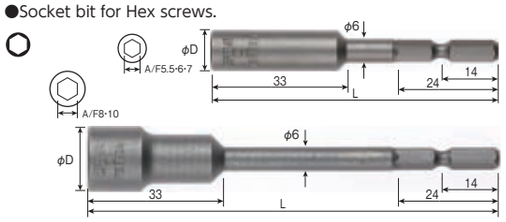
No. B44 Socket Bit

●Socket bit for Hex screws.



Size Tip×Overall Length (㎜)	ϕD	Drilling holes depth	(㎜)	Inner Ctn.	Outer Ctn.	EDP No.
A/F 5.5× 70	9	25		10	250	422371
100	9	25		10	250	422381
6× 70	10	25		10	200	422372
100	10	25		10	200	422382
7× 70	11	25		10	200	422373
100	11	25		10	150	422383
8× 70	13	25		10	200	422374
100	13	25		10	150	422384
10×100	16	25		10	100	422385

H 5 mm

No. B36 Double End Bit

●If one end breaks, the other end can be used.
●For assembly work focusing on workability.

Size Tip×Overall Length (㎜)	Heat treatment classification	Inner Ctn.	Outer Ctn.	EDP No.
⊕1× 70	H	10	100	423031
100	H	10	100	423032
⊕2× 70	H	10	100	423041
100	H	10	100	423042
150	H	10	100	423043
200	H	10	100	423044

H 6.35 mm

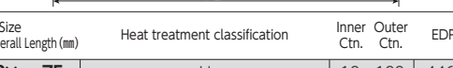
No. B43 Double End Bit

●If one end breaks, the other end can be used.
●For assembly work focusing on workability.

Size Tip×Overall Length (mm)	Heat treatment classification	Inner Ctn.	Outer Ctn.	EDP No.
⊕1× 75	H	10	100	425032
⊕2× 50	X	10	100	425036
50	H	10	100	425037
50	E	10	100	425038
75	X	10	100	425039
75	H	10	100	425040
75	G	10	100	425041
75	E	10	100	425042
100	X	10	100	425046
100	H	10	100	425047
100	G	10	100	425043
100	E	10	100	425044
150	X	10	100	425048
150	H	10	100	425049
150	G	10	100	425045
200	G	10	100	425050
300	H	10	100	446373
⊕3× 75	H	10	100	425054
75	E	10	100	425055
100	H	10	100	425057
100	E	10	100	425058
150	H	10	100	446375

No. M-B43 Double End Bit (Magnetized)

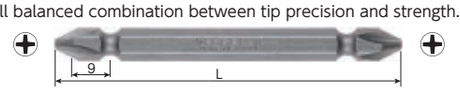
●If one end breaks, the other end can be used.
●For assembly work focusing on workability.



Size Tip×Overall Length (mm)	Heat treatment classification	Inner Ctn.	Outer Ctn.	EDP No.
⊕2× 75	H	10	100	446669
100	H	10	100	446672
150	H	10	100	446673

No. B43P Double End Bit (Power tip)

●If one end breaks, the other end can be used.
●Well balanced combination between tip precision and strength.



Size Tip×Overall Length (mm)	Heat treatment classification	Inner Ctn.	Outer Ctn.	EDP No.
⊕2× 75	H	10	100	425171
100	H	10	100	425172

No. B43H TAPPING Bit (High power tip)

●If one end breaks, the other end can be used.
●Reinforced tip for tapping work.

Size Tip×Overall Length (mm)	Heat treatment classification	Inner Ctn.	Outer Ctn.	EDP No.
⊕2× 75	H	10	100	425151
100	H	10	100	425153
150	H	10	100	425155

No. B43B TAPPING Bit (Black tip)

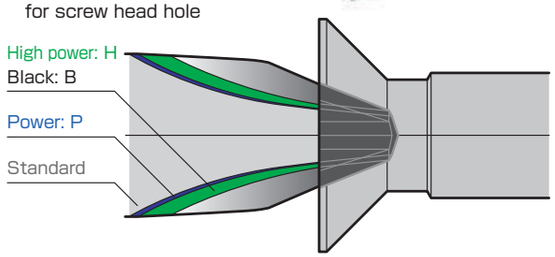
●If one end breaks, the other end can be used.
●Reinforced tip for tapping work.

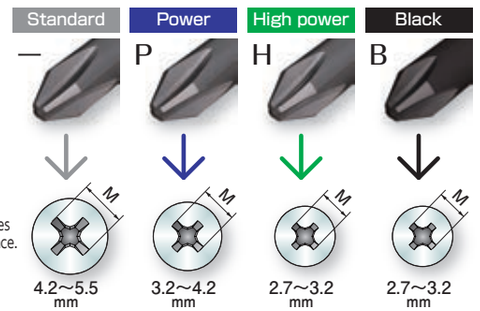
Size Tip×Overall Length (mm)	Heat treatment classification	Inner Ctn.	Outer Ctn.	EDP No.
⊕2× 50	S	10	100	425141
75	S	10	100	425142
100	S	10	100	425143
150	S	10	100	425144

One point

Bit selection I

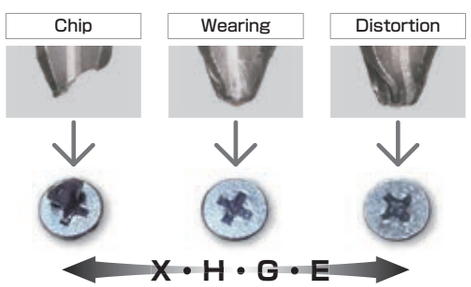
●Selecting Phillips tip suitable for screw head hole





*** M dimension** : the size of a cross recess on a screw head viewed from directly above

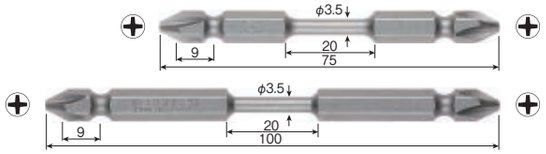
●Selecting Phillips tip according to hardness classification



H 6.35 mm

No. BT43 TORSION Bit

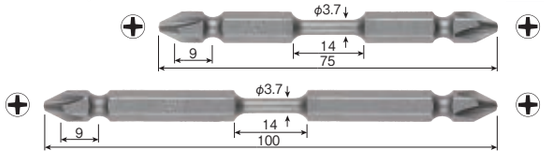
●If one end breaks, the other end can be used.
●For soft joint such as wood screws.



Size Tip×ϕ×Overall Length (mm)	Heat treatment classification	Inner Ctn.	Outer Ctn.	EDP No.
⊕2×3.5× 75	H	10	100	425161
100	H	10	100	425162

No. BT43P TORSION Bit (Power tip)

●If one end breaks, the other end can be used.
●For hard joint such as drill screws.

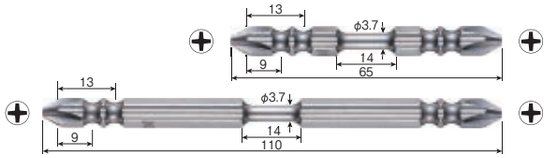


Size Tip×ϕ×Overall Length (mm)	Heat treatment classification	Inner Ctn.	Outer Ctn.	EDP No.
⊕2×3.7× 75	X	10	100	425201
100	X	10	100	425202

H 6.35 mm

No. RS SUPER TORSION bit

●If one end breaks, the other end can be used.
●Compatible with both A and B type chucks.
●For hard joint such as drill screws.



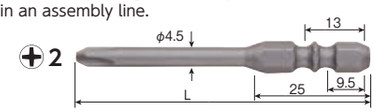
Model No.	Contents	Heat treatment classification	Package size (mm)	EDP No.
RS10P2065F	⊕2×ϕ3.7× 65 10pcs.	H	143×87×7	486948
RS10P2082F	⊕2×ϕ3.7× 82 10pcs.	H	143×87×7	486949
RS10P2110F	⊕2×ϕ3.7×110 10pcs.	H	162×87×7	486950

InnerCtn.: 10 sets

H 6.35 mm

No. M-AB16 Recessed Bit (Magnetized)

●Compatible with both A and B type chucks.
●Useful when using multiple fastening tools with different drive types in an assembly line.

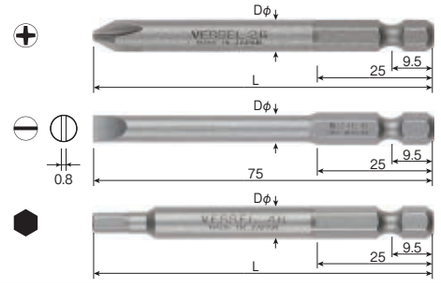


Size Tip×ϕ×Overall Length (mm)	Heat treatment classification	Inner Ctn.	Outer Ctn.	EDP No.
⊕2×4.5× 65	H	10	100	415301
100	H	10	100	415302
150	H	10	100	415303

H 6.35 mm

No. B35 Bit

●For assembly work focusing on workability.
●International standards compatible H 6.35mm(1/4")



	Size Tip×Overall Length	Heat treatment classification (mm)	ϕD	Inner Ctn.	Outer Ctn.	EDP No.
	⊕1 × 50	H	7.0	10	100	424032
★	75	X	7.0	10	100	424034
	75	H	7.0	10	100	424035
	⊕1 ×4.5×100	H	4.5	10	100	424036
	⊕2 × 50	X	7.0	10	100	424061
	50	G	7.0	10	100	424040
	75	X	7.0	10	100	424062
	75	H	7.0	10	100	424047
	75	G	7.0	10	100	424041
	75	E	7.0	10	100	424042
	100	H	7.0	10	100	424048
	100	G	7.0	10	100	424043
	100	E	7.0	10	100	424044
	150	H	7.0	10	100	424049
	150	G	7.0	10	100	424045
	150	E	7.0	10	100	424046
	⊕2 ×4.5×100	H	4.5	10	100	424038
	⊕3 75	H	7.0	10	100	424050
	75	E	7.0	10	100	424051
	100	H	7.0	10	100	424052
	100	E	7.0	10	100	424053
	150	G	7.0	10	100	424054
	⊖6 × 75	E	6.0	10	100	424075
	⊖6.35×0.97t× 49 (1524)	H	6.35	10	100	487245
	⊖7.9 ×1.17t× 49 (1526)	H	7.92	10	100	487255
★	⊖6.99×1.07t× 76 (1565)	H	6.99	10	100	446464
	H 2 × 75	H	7.0	10	100	424080
	100	H	7.0	10	100	424081
	H2.5 × 75	H	7.0	10	100	424082
	100	H	7.0	10	100	424083
	150	H	7.0	10	100	424093
	H 3 × 75	H	7.0	10	100	424084
	100	H	7.0	10	100	424085
	150	H	7.0	10	100	424094
	H 4 × 49 (21204)	H	4.6	10	100	487282
	75	H	7.0	10	100	424086
	100	H	7.0	10	100	424087
	150	H	7.0	10	100	424095
	H 5 × 49 (21205)	H	5.8	10	100	487283
	75	G	7.0	10	100	424088
	100	G	7.0	10	100	424089
	150	G	7.0	10	100	424096
	H 6 × 49 (21206)	H	—	10	100	487284
	75	G	7.0	10	100	424090
	100	G	7.0	10	100	424091
	150	G	7.0	10	100	424097
★	H 7 × 70 (1336/70)	G	7.0	10	100	489295
★	H 8 × 70 (1337/70)	G	7.0	10	100	489296
	H 9 × 70 (1339/70)	G	7.0	10	100	489298

H 6.35 mm

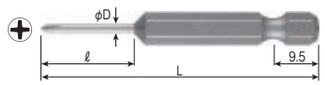
No. B35 Bit

●For assembly work focusing on workability.
●International standards compatible H 6.35mm(1/4")

Model No.	Heat treatment classification	Tip	φD	ℓ	L	Inner Ctn. (㎜)	Outer Ctn.	EDP No.
1092	H	⊕2	6.35	50	152	10	100	487208

No. B35 Bit

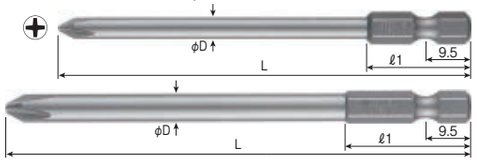
●For assembly work focusing on workability.
●International standards compatible H 6.35mm(1/4")



Model No.	Heat treatment classification (㎜)	Tip	φD	ℓ	L	Inner Ctn. (㎜)	Outer Ctn.	EDP No.
⊕ 00×1.2×20×60	H	⊕00	1.2	20	60	10	100	446126
⊕ 00×2×40×100	H	⊕00	2.0	40	100	10	100	446141
⊕ 0×1.4×30×60	H	⊕0	1.4	30	60	10	100	446145
★ ⊕ 0×1.4×30×100	H	⊕0	1.4	30	100	10	100	446147
⊕ 0×2×20×60	H	⊕0	2.0	20	60	10	100	446153
⊕ 0×2×30×100	H	⊕0	2.0	30	100	10	100	446157

No. B35 Bit

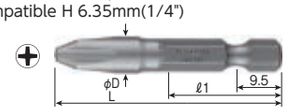
●For assembly work focusing on workability.
●International standards compatible H 6.35mm(1/4")



Model No.	Heat treatment classification (㎜)	Tip	φD	ℓ1	L	Inner Ctn. (㎜)	Outer Ctn.	EDP No.
10600	H	⊕00	1.58	21	49	10	100	446423
1060	H	⊕0	3.17	21	49	10	100	487195
1081	H	⊕1	4.76	21	89	10	100	487202
★ 4301/150	H	⊕1	4.5	27	150	10	100	489672
4302/51	H	⊕2	6.0	27	51	10	100	489229
4302/100	H	⊕2	6.0	27	100	10	100	489255
4302/127	H	⊕2	6.0	27	127	10	100	446435
4302/150	H	⊕2	6.0	27	150	10	100	489673
4302/200	H	⊕2	6.0	27	200	10	100	446439
1062	H	⊕2	6.35	21	49	10	100	487205
1072	H	⊕2	6.35	21	70	10	100	487206
1082	H	⊕2	6.35	21	89	10	100	487207

No. B35 Bit

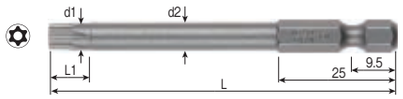
●For assembly work focusing on workability.
●International standards compatible H 6.35mm(1/4")



Model No.	Heat treatment classification (㎜)	Tip	φD	ℓ1	L	Inner Ctn. (㎜)	Outer Ctn.	EDP No.
1063	H	⊕3	8.0	25	49	10	100	487210
1073	H	⊕3	8.0	25	70	10	100	487211
1083	H	⊕3	8.0	25	89	10	100	487212
★ 4303/100	H	⊕3	8.0	25	100	10	100	489256

No. J TORX Bit (Tamper-Proof)

●For TORX screws used in the automotive industry.
●With a round hole for tamper-proof.



Model No.	㎜	d1	L1	d2 (㎜)	Inner Ctn.	EDP No.
T6H × 75	1.65	1.95	6.5	4.0	10	635283
100	1.65	1.95	6.5	4.0	10	635284
T8H × 75	2.3	2.60	7.0	4.5	10	635285
100	2.3	2.60	7.0	4.5	10	635286
T10H× 49 (T10610H)	2.72	3.02	7.5	3.96	10	446533
70 (T10710H)	2.72	3.02	7.5	3.96	10	446544
75	2.72	3.02	7.5	4.5	10	635251
100	2.72	3.02	7.5	4.5	10	635252
T15H× 75	3.26	3.56	7.5	4.5	10	635255
100	3.26	3.56	7.5	4.5	10	635256
T20H× 49 (T10620H)	3.84	4.14	7.5	4.37	10	446535
70 (T10720H)	3.84	4.14	7.5	4.37	10	446546
75	3.84	4.14	7.5	5.0	10	635261
100	3.84	4.14	7.5	5.0	10	635262
T25H× 75	4.4	4.70	8.0	5.0	10	635265
100	4.4	4.70	8.0	5.0	10	635266
T27H× 75	4.96	5.26	8.0	5.5	10	635271
100	4.96	5.26	8.0	5.5	10	635272
T30H× 75	5.49	5.79	8.5	6.0	10	635275
100	5.49	5.79	8.5	6.0	10	635276
T40H× 75	6.6	—	—	7.0	10	635281
100	6.6	—	—	7.0	10	635282

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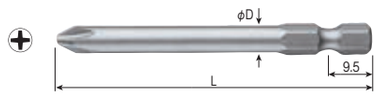
VESSEL has a manufacturing license in Japan and selling same to the world.

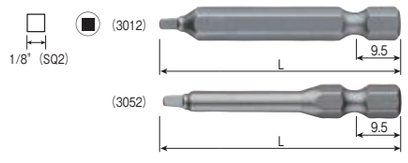
No. B35 Bit

●For assembly work focusing on workability.
●International standards compatible H 6.35mm(1/4")



Model No.	(㎜)	φD	Inner Ctn.	EDP No.
⊕ 1×3/16"×100(41081)		4.76	10	446428
⊕ 2×3/16"×100(42081)		4.76	10	446429

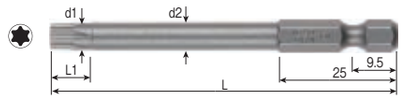
No. B35 Square Bit



Model No.	Heat treatment classification	Inner Ctn.	EDP No.
SQ2 ×49 (3012)	H	10	487292
SQ2 ×90 (3052)	H	10	487307

No. J TORX Bit

●For TORX screws used in the automotive industry.



Model No.	(㎜)	㎜	d1	L1	d2 (㎜)	Inner Ctn.	EDP No.
T5 × 49 (T10605)		1.37	1.67	6.5	3.18	10	446486
70 (T10705)		1.37	1.67	6.5	3.18	10	447355
89 (T10805)		1.37	1.67	6.5	3.18	10	447356
T6 × 75		1.65	1.95	6.5	4.0	10	635300
100		1.65	1.95	6.5	4.0	10	635301
152 (T10906)		1.65	1.95	6.5	3.18	10	447317
T7 × 70 (T10707)		1.97	2.27	6.5	3.18	10	446499
75		1.97	2.27	6.5	4.0	10	635303
90 (T10807)		1.97	2.27	6.5	3.18	10	446509
152 (T10907)		1.97	2.27	6.5	3.18	10	446519
T8 × 49 (T10608)		2.3	2.6	7.0	3.18	10	446489
70 (T10708)		2.3	2.6	7.0	3.18	10	446500
75		2.3	2.6	7.0	4.5	10	635305
90 (T10808)		2.3	2.6	7.0	3.18	10	446510
100		2.3	2.6	7.0	4.5	10	635306
152 (T10908)		2.3	2.6	7.0	3.18	10	446520
T9 × 70 (T10709)		2.5	2.78	7.0	3.18	10	446501
90 (T10809)		2.5	2.78	7.0	3.18	10	446511
152 (T10909)		2.5	2.78	7.0	3.18	10	446521
T10× 49 (T10610)		2.72	3.02	7.5	3.96	10	446491
70 (T10710)		2.72	3.02	7.5	3.96	10	446502
75		2.72	3.02	7.5	4.5	10	635310
100		2.72	3.02	7.5	4.5	10	635311
152 (T10910)		2.72	3.02	7.5	3.96	10	446522
T15× 49 (T10615)		3.26	3.56	7.5	3.96	10	446492
70 (T10715)		3.26	3.56	7.5	3.96	10	446503
75		3.26	3.56	7.5	4.5	10	635315
90 (T10815)		3.26	3.56	7.5	3.96	10	446513
100		3.26	3.56	7.5	4.5	10	635316
152 (T10915)		3.26	3.56	7.5	3.96	10	446523
T20× 49 (T10620)		3.84	4.14	4.75	4.37	10	446493
70 (T10720)		3.84	4.14	4.75	4.37	10	446504
75		3.84	4.14	7.5	5.0	10	635320
100		3.84	4.14	7.5	5.0	10	635321
152 (T10920)		3.84	4.14	7.5	4.37	10	446524
T25× 70 (T10725)		4.4	4.7	8.0	5.0	10	446505
75		4.4	4.7	8.0	5.0	10	635325
100		4.4	4.7	8.0	5.0	10	635326
152 (T10925)		4.4	4.7	8.0	4.75	10	446525
T27× 75		4.96	5.26	8.0	5.5	10	635330
100		4.96	5.26	8.0	5.5	10	635331
152 (T10927)		4.96	5.26	8.0	6.35	10	446526
T30× 70 (T10730)		5.49	5.79	8.5	6.35	10	446507
75		5.49	5.79	8.5	6.0	10	635335
90 (T10830)		5.49	5.79	8.5	6.35	10	446517
100		5.49	5.79	8.5	6.0	10	635336
152 (T10930)		5.49	5.79	8.5	6.35	10	446527
T40× 49 (T10640)		6.6	—	—	7.0	10	446497
70 (T10740)		6.6	—	—	8.0	10	446508
75		6.6	—	—	8.0	10	635340
90 (T10840)		6.6	—	—	8.0	10	446518
100		6.6	—	—	7.0	10	635341
152 (T10940)		6.6	—	—	8.0	10	446528
T45× 75		7.77	—	—	8.0	10	635345
100		7.77	—	—	8.0	10	635346

TORX is a registered trademark of Acument TM Intellectual Properties, LLC (USA).
VESSEL has a manufacturing license in Japan and selling same to the world.

No. IP TORX Plus Bit

●For TORX Plus screws used for various assembly lines.

Model No.	Tip	㎜	Overall Length (㎜)	Inner Ctn.	EDP No.
IP10906	6IP	1.64	152	10	447251
IP10907	7IP	1.99	152	10	447252
IP10908	8IP	2.31	152	10	447253
IP10609	9IP	2.5	49	10	447229
IP10709	9IP	2.5	70	10	447236
IP10809	9IP	2.5	90	10	447243
IP10909	9IP	2.5	152	10	447226
IP10810	10IP	2.74	90	10	447244
IP10910	10IP	2.74	152	10	447254
IP10615	15IP	3.27	49	10	447230
IP10715	15IP	3.27	70	10	447237
IP10815	15IP	3.27	90	10	447245
IP10915	15IP	3.27	152	10	447255
IP10620	20IP	3.86	49	10	447231
IP10720	20IP	3.86	70	10	447238
IP10820	20IP	3.86	90	10	447246
IP10920	20IP	3.86	152	10	447256
IP10625	25IP	4.43	49	10	447232
IP10725	25IP	4.43	70	10	447239
IP10825	25IP	4.43	90	10	447247
IP10925	25IP	4.43	152	10	447257
IP10630	30IP	5.52	49	10	447234
IP10730	30IP	5.52	70	10	447241
IP10830	30IP	5.52	90	10	447249
IP10930	30IP	5.52	152	10	447259
IP10640	40IP	6.65	49	10	447235
IP10740	40IP	6.65	70	10	447242
IP10840	40IP	6.65	90	10	447250
IP10940	40IP	6.65	152	10	447260

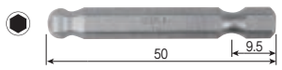
No. B35 SUPADRIV Bit

●For SUPADRIV screws. ●Special tip shape prevents cam-out.

Model No. (㎜)	Heat treatment classification	Inner Ctn.	Outer Ctn.	EDP No.
SDV1× 75	H	10	100	636121
SDV2× 75	H	10	100	636122
100	H	10	100	636123
SDV3× 75	H	10	100	636130

No. 1733/50, 1735/50 BALL POINT Bit

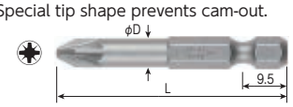
●For hexagon socket head cap bolts and screws.



Model No.	(㎜)	φD	Tip	(㎜)	Inner Ctn.	EDP No.
★ BP3× 50 (1733/50)		4	3		10	446579
★ BP5× 50 (1735/50)		6	5		10	446581

No. B35 POZIDRIV Bit

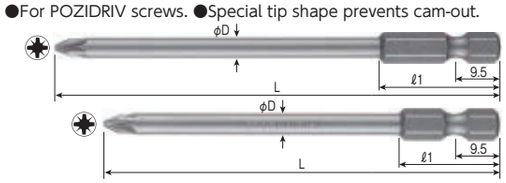
●For POZIDRIV screws. ●Special tip shape prevents cam-out.



Model No.	Heat treatment classification	Tip	φD	ℓ	L (mm)	Inner Ctn.	Outer Ctn.	EDP No.
★ PZ0 × 2 × 60	H	PZ0	2.0	20	60	10	100	447301
★ PZ0 × 3 × 60	H	PZ0	3.0	20	60	10	100	447303
PZ1 × 50	H	PZ1	4.8	—	50	10	100	424101
PZ2 × 50	H	PZ2	6.3	—	50	10	100	424102
PZ3 × 50	H	PZ3	8.0	—	50	10	100	424103

No. B35 POZIDRIV Bit

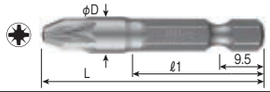
●For POZIDRIV screws. ●Special tip shape prevents cam-out.



Model No.	Heat treatment classification (mm)	Tip	φD	ℓ1	L (mm)	Inner Ctn.	Outer Ctn.	EDP No.
★ 1071PZ	H	PZ1	4.76	21	70	10	100	487216
★ 1081PZ	H	PZ1	4.76	21	89	10	100	487217
★ 4301/100PZ	H	PZ1	4.5	27	100	10	100	489257
★ 4302/100PZ	H	PZ2	6.0	27	100	10	100	489258
★ 4302/127PZ	H	PZ2	6.0	27	127	10	100	446445
★ 4302/150PZ	H	PZ2	6.0	27	150	10	100	489674
★ 4302/200PZ	H	PZ2	6.0	27	200	10	100	446449
★ 1062PZ	H	PZ2	6.35	21	49	10	100	487220
1062PZ	X	PZ2	6.35	21	49	10	100	487523
★ 1082PZ	H	PZ2	6.35	21	89	10	100	487222

No. B35 POZIDRIV Bit

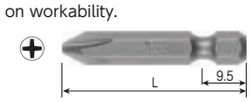
●For POZIDRIV screws. ●Special tip shape prevents cam-out.



Model No.	Heat treatment classification (mm)	Tip	φD	ℓ1	L (mm)	Inner Ctn.	Outer Ctn.	EDP No.
★ 1063PZ	H	PZ3	8.0	29	49	10	100	487225
★ 4304/51PZ	H	PZ4	8.0	29	51	10	100	489234

No. B39 Bit

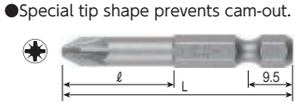
●For assembly work focusing on workability.



Model No.	Heat treatment classification	Inner Ctn.	Outer Ctn.	EDP No.
⊕ 1× 23	H	10	100	424131
⊕ 2× 23	H	10	100	424141
40	H	10	100	424143
100	H	10	100	424147
★ ⊕2×4.8×25×150(1092-2)	H	10	–	487209
★ ⊕3×6.3×25× 50(1063-2)	H	10	–	487214

No. B39 POZIDRIV Bit

●For POZIDRIV screws. ●Special tip shape prevents cam-out.



Model No.	Heat treatment classification	Inner Ctn.	EDP No.
★ PZ2×4.8×25×150(1092PZ-2)	H	10	487224

No. B39 3-Flute Fastening Bit

●For fastening screws used in aircraft, special vehicles, etc.

Size Tip×Overall Length (mm)	Heat treatment classification	Inner Ctn.	Outer Ctn.	EDP No.
TW1×40	H	10	100	424201
TW2×40	H	10	100	424202
TW3×40	H	10	100	424203
TW4×40	H	10	100	424204
TW5×40	H	10	100	424205

No. X50 Adapters

●Hex socket adaptors.

Model code	SQ	Overall Length (mm)	Inner Ctn.	EDP No.
X5001	1/4"	35	10	487380
X5003	1/4"	75	10	487382
X5004	1/4"	100	10	487383
X5005	1/4"	150	10	487384
X5012	3/8"	50	10	487391
X5013	3/8"	75	10	487392
X5014	3/8"	100	10	487393
X5015	3/8"	150	10	487394

H 8 mm

No. A5 TORX Bit

●For TORX screws used in the automotive industry.

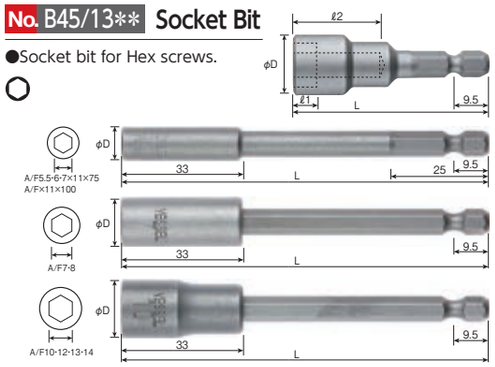
Size Tip	mm	Overall Length (mm)	Inner Ctn.	EDP No.
T30	5.49	32	10	635427
T40	6.6	32	10	635428
T45	7.77	32	10	635429
T50	8.79	32	10	635430

TORX is a registered trademark of Acument TM Intellectual Properties, LLC (USA).
VESSEL has a manufacturing license in Japan and selling same to the world.

H 6.35 mm

No. B45/13** Socket Bit

●Socket bit for Hex screws.

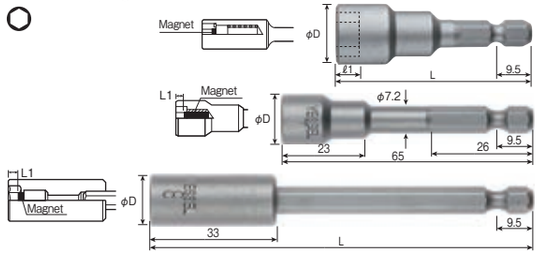


Model No. (mm)	A/F	φD	ℓ1	ℓ2	OAL (mm)	Inner Ctn.	EDP No.
1304/50	4	8	3	15	50	10	489301
1304/75	4	8	3	25	75	10	489314
1304/100	4	8	3	25	100	10	489327
1345/50	4.5	8	3	15	50	10	489302
1345/75	4.5	8	3	25	75	10	489315
1345/100	4.5	8	3	25	100	10	489328
1305/50	5	8.5	3.5	15	50	10	489303
1305/75	5	8.5	3.5	25	75	10	489316
1305/100	5	8.5	3.5	25	100	10	489329
1305/150	5	8.5	3.5	25	150	10	446602
1355/50	5.5	9	3.5	15	50	10	489304
A/F5.5×75	5.5	9	3.5	25	75	10	424281
A/F5.5×100	5.5	9	3.5	25	100	10	424380
A/F5.5×150	☆ 5.5	9	3.5	25	150	10	424265
1306/50	6	10	4	15	50	10	489305
A/F6×75	☆ 6	10	4	25	75	10	424282
A/F6×100	6	10	4	25	100	10	424381
A/F6×150	☆ 6	10	4	25	150	10	424266
1307/50	7	13	5	15	50	10	489306
A/F7×11×75	7	11	4.5	25	75	10	424279
A/F7×11×100	7	11	4.5	25	100	10	424280
A/F7×75	☆ 7	13.5	5.5	22	75	10	424283
A/F7×100	☆ 7	13.5	5.5	22	100	10	424382
A/F7×150	☆ 7	13.5	5.5	22	150	10	424267
1308/50	8	13	5	15	50	10	489307
A/F8×75	☆ 8	13.5	6.5	22	75	10	424284
A/F8×100	☆ 8	13.5	6.5	22	100	10	424383
A/F8×150	☆ 8	13.5	6.5	22	150	10	424483
1309/50	9	14	5.5	15	50	10	489308
A/F9X75	☆ 9	15	6.5	22	75	10	424268
A/F9×100	☆ 9	15	6.5	22	100	10	424269
1310/50	10	16	6.5	15	50	10	489309
A/F10×75	☆ 10	16	6.5	22	75	10	424286
A/F10×100	☆ 10	16	6.5	22	100	10	424384
A/F10×150	☆ 10	16	6.5	22	150	10	424484
1311/50	11	17	7	15	50	10	489310
A/F11×75	☆ 11	17	7	22	75	10	424270
A/F11×100	☆ 11	17	7	22	100	10	424271
1312/50	12	19	7.5	15	50	10	489311
A/F12×75	☆ 12	18	8	22	75	10	424287
A/F12×100	☆ 12	18	8	22	100	10	424385
A/F12×150	☆ 12	18	8	22	150	10	424272
1313/50	13	19	8	15	50	10	489312
A/F13×75	☆ 13	19	8	22	75	10	424288
A/F13×100	☆ 13	19	8	22	100	10	424386
A/F13×150	☆ 13	19	8	22	150	10	424273
1314/50	14	20	8	15	50	10	489313
A/F14×75	☆ 14	20	8	22	75	10	424289
A/F14×100	☆ 14	20	8	22	75	10	424387

☆…Adopts a patented axial press-fit shank technique

No. MB45/13**M Socket Bit (Press-Fit Magnet)

●Socket bit for Hex screws.
●Holds the screw with a strong magnet, to prevent the screws from dropping.

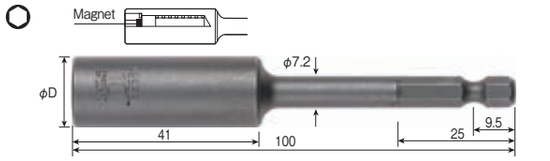


Model No. (mm)	A/F	φD	ℓ1	OAL (mm)	Inner Ctn.	EDP No.
1305/50M	5	8.5	3.5	50	10	489340
1305/75M	5	8.5	3.5	75	10	489351
1305/100M	5	8.5	3.5	100	10	489362
1305/150M	5	8.5	3.5	150	10	446619
1355/50M	5.5	9	3.5	50	10	489341
1355/75M	5.5	9	3.5	75	10	489352
1355/100M	5.5	9	3.5	100	10	489363
1355/150M	5.5	9	3.5	150	10	446620
1306/50M	6	10	4	50	10	489342
1306/75M	6	10	4	75	10	489353
1306/100M	6	10	4	100	10	489364
1306/150M	6	10	4	150	10	446621
1307/50M	7	13	4.5	50	10	489343
A/F7×65	7	13	2.5	65	10	482520
1307/75M	7	13	4.5	75	10	489354
1307/100M	7	13	4.5	100	10	489365
1307/150M	7	13	5	150	10	446622
1308/50M	8	13	5	50	10	489344
A/F8×65	☆ 8	13.5	3.17	65	10	482521
A/F8×75	☆ 8	13.5	3.17	75	10	482523
A/F8×100	☆ 8	13.5	3.17	100	10	482524
A/F8×150	☆ 8	13.5	3.17	150	10	424274
1309/50M	9	14	5.5	50	10	489345
1309/75M	9	14	5.5	75	10	489356
1309/100M	9	14	5.5	100	10	489367
A/F3/8×65	☆ 9.6	15	3.96	65	10	482522
1310/50M	10	16	6.5	50	10	489346
A/F10×75	☆ 10	16	3.96	75	10	482525
A/F10×100	☆ 10	16	3.96	100	10	482526
A/F10×150	☆ 10	16	3.96	150	10	424275
1311/50M	11	17	7	50	10	489347
1311/75M	11	17	7	75	10	489358
1311/100M	11	17	7	100	10	489369
1312/50M	12	19	7.5	50	10	489348
A/F12×75	☆ 12	18	5.5	75	10	424276
A/F12×100	☆ 12	18	5.5	100	10	424277
A/F12×150	☆ 12	18	5.5	150	10	424278
1313/50M	13	19	8	50	10	489349
1313/75M	13	19	8	75	10	489360
1313/100M	13	19	8	100	10	489371
1313/150M	13	19	8	150	10	446626
1314/50M	14	20	8	50	10	489350
1314/75M	14	20	8	75	10	489361
1314/100M	14	20	8	100	10	489372

☆…Adopts a patented axial press-fit shank technique

No. MB45D Socket Bit (Sliding Magnet)

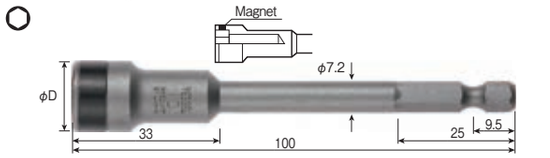
●Socket bit for Hex screw.
●Holds the screw with sliding magnet, to prevent the screws from dropping.



Model No.	(mm)	ϕD	Hole depth	(mm)	Inner Ctn.	Outer Ctn.	EDP No.
A/F	8×100	13	36	10	100		482516
A/F	10×100	16	36	10	100		482517

No. MB45S Socket Bit (Side Magnet)

●Socket bit for Hex screw.
●Holds the screw with side magnet, to prevent the screws from dropping.

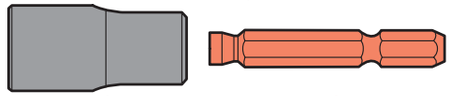


Model No.	(mm)	ϕD	Hole depth	(mm)	Inner Ctn.	Outer Ctn.	EDP No.
A/F	8×100	13	25	10	100		482406
A/F	10×100	16	25	10	100		482407

One point

Features of press-fit type sockets

(Press-fit type: marked with a star symbol in the table of each model)



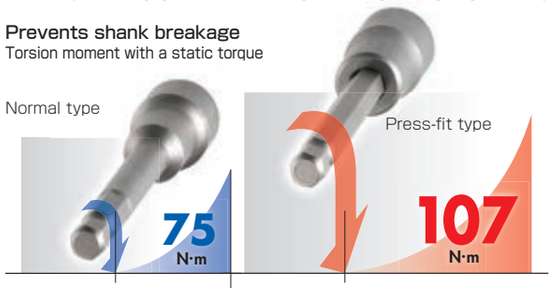
MEDIUM HARDNESS
Improves durability of socket

HIGH HARDNESS
Strong resistance to shank breakage

The shank and socket have been heat-treated to the best hardness and press-fit together.
The socket part is strong against wear and shank against twisting, resulting in higher durability.

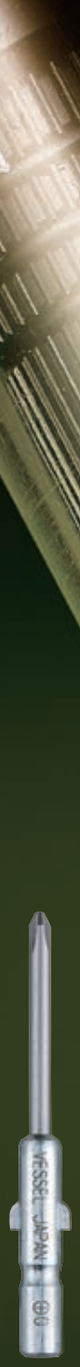
Prevents shank breakage

Torsion moment with a static torque



No. DS73
Shockless Bit

High Precision Bit Tips
Bits with 4mm and 5mm shafts for use with a wide variety of small, electric drivers.
Our strong, durable bits undergo actual work tests, damage tests, and repeated fatigue tests before delivery to the market.
In our quest for ever-greater reliability, we employ torque analysis and screw-engagement checks that result in ultra high precision bit tips.



No. DS73

Shockless Bit

Combination of special alloy steel + zinc die cast.
Less variation in inrush torque at seating, therefore tightening becomes consistent.
Moreover, the tip durability is improved significantly.

Applicable models

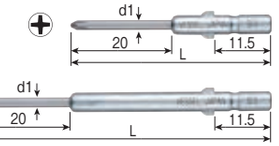
Please check the model No. of your drivers before determining which bit(s) to choose.

Shape	Model NO.	Page	Applicable models (Electric S/D (Precision type))
H 5 mm	B34	84P	VESSEL VE-4000・4000P・4500・4500P Hios PG-7000 BLG-5000BC1/-15/-20/-HT BLG-5000/-15/-20/HT BL-5000/-15/-20・5020・7000/-20 CL-4000・6000・6500・7000 SS-4000・6500・7000 α-4500・5000・6500 CD-4000・5000・6000・7000 VB-1510/-18・1820・3012・2008・3020 VZ-1510・1812・1820・3012・3007 Delvo DLV ○○○○-EJN/-DJN/-DJE DLV 7(8)120-SPC・7(8)130-SPC・7(8)140-SPC・7(8)241-SPC・7(8)231-SPC DLV 30LL(P)-SPC・30SL(P)-SPC・30HL(P)-SPC Hitachi Koki WT 3G/3GP・4G/4GP・5G/5GP Kanon 3K-120L・180L・180LF・120P・180P・180PF, 9K-130P・140P・130PF・131L・131LF・131P・131PF, 5KD-200・300 Panasonic FE-A310S・A310MH・A310L・A111L・A111MH・A111M・A710AXN・A710MHN
	N	85P	
	B44	85P	
ϕ 4 mm	D71	82P	Delvo DLV ○○○○-BMN/-CMN/-EMN/-SB DLV 5820・5820H・5840 DLV 7410A-SPC・7410HA-SPC・7420A-SPC・7321-SPC・7331-SPC・7020-SPC・7030-SPC・7031-SPC・8020-SPC・8030-SPC・8031-SPC
	D72		
ϕ 4 mm	DS73	81P	VESSEL VE-1500・1500EPA・2000・2000EPA・3000 Hios PG-3000・5000 BLG-4000BC1・5000BC1/-15/-20 BLG-4000・5000/-15/-20 BL-2000・3000・5000/-15/-20 CL-2000・3000・4000 SS-2000・3000・4000 α-4500・5000 CD-4000・5000 VB-1510/-18 VZ-1510 Kanon 3K-110L・110P 2KD-100・200・300
	D73	83P	
ϕ 5 mm	D76	84P	Hios CL-6000・6500・7000 SS-6500・7000 α-6500 CD-6000・7000

ϕ 4 mm

No. DS73 Shockless Bit PAT.

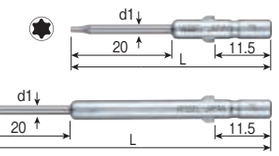
- Combination of special alloy steel and zinc die cast; Stable fastening torque and improved durability.
- Bit tip high-precision-machined to thread standards.



Model No.	(mm)	d1 (mm)	Inner Ctn.	Outer Ctn.	EDP No.
⊕00×1.5×40		1.5	10	100	483801
60		1.5	10	100	483802
⊕0 ×1.5×40		1.5	10	100	483809
60		1.5	10	100	483810
⊕0 ×1.7×40		1.7	10	100	483811
60		1.7	10	100	483812
⊕0 ×2.0×40		2.0	10	100	483813
60		2.0	10	100	483814

No. DS73 Shockless Bit PAT.

- Combination of special alloy steel and zinc die cast; Stable fastening torque and improved durability.
- Bit tip high-precision-machined to thread standards.



Model No.	(mm)	mm	d1 (mm)	Inner Ctn.	Outer Ctn.	EDP No.
T5 ×2.0× 40			1.37 2.0	10	100	483901
60			1.37 2.0	10	100	483902
T6 ×2.0× 40			1.65 2.0	10	100	483903
60			1.65 2.0	10	100	483904

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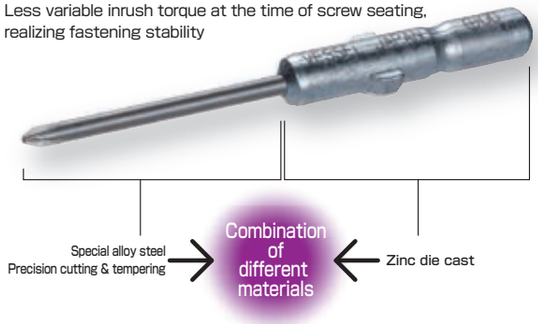
One point

Advantage of Shockless Bit

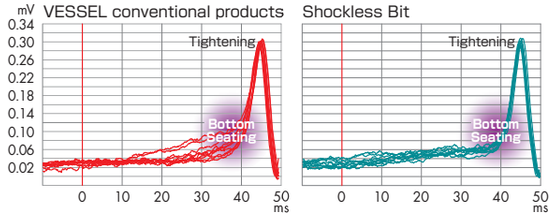
Shockless Bit have cushioning characteristics to absorb the impact occurred when a screw is fully seated.
Less variable inrush torque at the time of screw seating, realizing fastening stability



●Stable tightening torque

The combination of alloy steel and zinc creates a shockless effect and stabilizes the tightening torque.

【Measurement of tightening waveform】
The load during screw tightening is indicated as a waveform



●Break-resistant with improved durability

The shockless effect of the alloy steel and zinc combination greatly improves the durability of the tool tip.

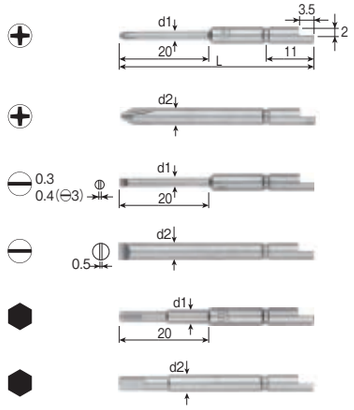
【Driving durability test】
Number of tools which do not break when continuously screwed in by a screw tightening robot.

Cushion effect of combination of several materials enables the impact on the tip-end to be absorbed and makes the bit durable. This also leads to less damage on screw or workpieces as Shockless Bit is not merely hard but cushiony.

ϕ4 mm

No. D71 Bit

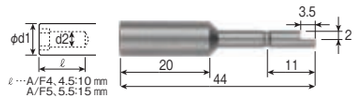
- With crescentic shank shape in cross section; for fastening precision small screws.
- Bit tip high-precision-machined to thread standards.



Model No.	(mm)	d1	d2	(mm)	Inner Ctn.	Outer Ctn.	EDP No.
⊕00×1.5×	44	1.5	—		10	100	482901
	64	1.5	—		10	100	482902
★ ⊕00×2 ×	64 (EPH204)	2.0	2.0		10	—	446293
★ ⊕00×2.5×	44 (EPH205)	2.5	2.0		10	—	446294
⊕0 ×2 ×	44	2.0	—		10	100	482911
	64	2.0	—		10	100	482912
⊕0 ×2.5×	44	2.5	—		10	100	482913
	64	2.5	—		10	100	482914
⊕1 ×3 ×	44	3.0	—		10	100	482921
	64	3.0	—		10	100	482922
⊕1 ×4 ×	44	—	4.0		10	100	482923
	64	—	4.0		10	100	482924
⊕2 ×4 ×	44	—	4.0		10	100	482931
	64	—	4.0		10	100	482932
⊖2 ×0.3×	44	2.0	—		10	200	482941
⊖2.5×0.3×	44	2.5	—		10	200	482942
⊖3 ×0.4×	44	3.0	—		10	200	482943
⊖4 ×0.5×	44	—	4.0		10	200	482944
H 1.5×2 ×	44	2.0	—		10	200	482951
H 2 ×3 ×	44	3.0	—		10	200	482952
H 2.5×3 ×	44	3.0	—		10	200	482953
H 3 ×4 ×	44	—	4.0		10	200	482954

No. D72 Socket Bit

- With crescentic shank shape in cross section; for fastening precision small screws.
- Bit tip high-precision-machined to thread standards.

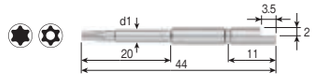


Model No.	(mm)	d1	d2	(mm)	Inner Ctn.	Outer Ctn.	EDP No.
A/F 4 ×	44	7	3		10	100	482961
A/F 4.5×	44	7	3		10	100	482962
A/F 5 ×	44	8	4		10	100	482963
A/F 5.5×	44	8	4		10	100	482964

ϕ4 mm

No. D71 TORX Bit

- With crescentic shank shape in cross section; for fastening small screws for such as computers, HDDs.
- Bit tip high-precision-machined to thread standards.



Model No.	(mm)	mm	d1	(mm)	Inner Ctn.	Outer Ctn.	EDP No.
T1 ×	44	0.84	1.5		10	100	635601
T2 ×	44	0.94	1.5		10	100	635602
T3 ×	44	1.12	1.7		10	100	635603
T4 ×	44	1.3	1.8		10	100	635604
T5 ×	44	1.37	2.0		10	100	635605
T6 ×	44	1.65	2.5		10	100	635606
T7 ×	44	1.97	2.5		10	100	635607
T8 ×	44	2.3	3.0		10	100	635608
T8H ×	44 (ETX254)	2.3	4		10	200	446323
T9 ×	44	2.48	3.0		10	100	635609
T10 ×	44	2.72	3.0		10	100	635610
T15H ×	44 (ETX259)	3.26	4		10	200	446328

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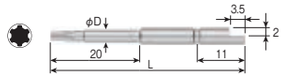
No. D71 TORX Plus Bits

- The earlobe-shaped protrusions on the tip-end provide longer lifetime because they are designed to have the largest fitting area between the bit (which is designed to have large cross-sectional area) and the screw head recess, so as to disperse the stress while tightening.

TORX PLUS

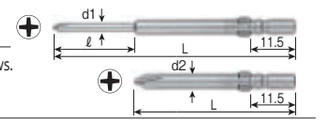


Model No.	(mm)	IP	ϕD	ℓ	L	(mm)	Inner Ctn.	EDP No.
2IP ×	44	2IP	1.5	20	44		10	447428
2IP ×	64	2IP	1.5	20	64		10	447412
3IP ×	44	3IP	1.7	20	44		10	447429
3IP ×	64	3IP	1.7	20	64		10	447413

ϕ4 mm

No. D73 Bit

- For fastening precision small screws.
- Bit tip high-precision-machined to thread standards.



Model No.	(mm)	Tip	ℓ	d1	d2	L	(mm)	Inner Ctn.	Outer Ctn.	EDP No.
⊕00×1.2×20×40		00	20	1.2	—	40		10	100	446001
⊕00×1.5×40		00	20	1.5	—	40		10	100	445981*(483001)
⊕00×1.5×60		00	20	1.5	—	60		10	100	445982*(483002)
⊕00×1.5×80		00	20	1.5	—	80		10	100	483003
⊕00×1.7×20×40		00	20	1.7	—	40		10	100	446004
⊕00×2×40		00	20	2	—	40		10	100	445983*(483005)
⊕00×2×60		00	20	2	—	60		10	100	445984*(483006)
⊕0×1.2×20×40		0	20	1.2	—	40		10	100	483007
⊕0×1.4×20×40		0	20	1.4	—	40		10	100	446016
⊕0×1.4×20×60		0	20	1.4	—	60		10	100	446017
⊕0×1.4×20×80		0	20	1.4	—	80		10	100	483008
⊕0×1.5×20×40		0	20	1.5	—	40		10	100	446022
⊕0×1.5×20×60		0	20	1.5	—	60		10	100	446076
⊕0×1.7×40		0	20	1.7	—	40		10	100	483010
⊕0×1.7×60		0	20	1.7	—	60		10	100	445986*(483011)
⊕0×1.7×80		0	20	1.7	—	80		10	100	483012
⊕0×1.8×60		0	20	1.8	—	60		10	100	483013
⊕0×2×20×40		0	20	2	—	40		10	100	446025
⊕0×2×20×60		0	20	2	—	60		10	100	446026
⊕0×2×30×60		0	30	2	—	60		10	100	446029
⊕0×2×20×80		0	20	2	—	80		10	100	446027
⊕0×2×20×100		0	20	2	—	100		10	100	446028
⊕0×2×120		0	20	2	—	120		10	100	483014
⊕0×2.5×40		0	20	2.5	—	40		10	100	483015
⊕0×2.5×60		0	20	2.5	—	60		10	100	483016
⊕0×2.5×20×80		0	20	2.5	—	80		10	100	446033
⊕0×2.5×20×100		0	20	2.5	—	100		10	100	446034
⊕0×2.5×120		0	20	2.5	—	120		10	100	483017
⊕1×2.5×20×40		1	20	2.5	—	40		10	100	446048
⊕1×3×40		1	20	3	—	40		10	100	483021
⊕1×3×20×60		1	20	3	—	60		10	100	446053
⊕1×3×20×80		1	20	3	—	80		10	100	446054
⊕1×3×20×100		1	20	3	—	100		10	100	446055
⊕1×3×20×120		1	20	3	—	120		10	100	483376
⊕1×4×40		1	—	—	4	40		10	100	483025
⊕1×4×60		1	—	—	4	60		10	100	446059
⊕1×4×80		1	—	—	4	80		10	100	483026
⊕1×4×100		1	—	—	4	100		10	100	483027
⊕1×4×120		1	—	—	4	120		10	100	483028
⊕1×4×150		1	—	—	4	150		10	100	483029
⊕1×4×180		1	—	—	4	180		10	100	483030
⊕1×4×200		1	—	—	4	200		10	100	483032
⊕2×4×40		2	—	—	4	40		10	100	483031
⊕2×4×60		2	—	—	4	60		10	100	446070
⊕2×4×80		2	—	—	4	80		10	100	446071
⊕2×4×100		2	—	—	4	100		10	100	446072
⊕2×4×120		2	—	—	4	120		10	100	446073
⊕2×4×150		2	—	—	4	150		10	100	483033

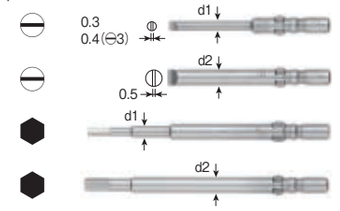
EDP number with mark * will be shifted to the other number in parenthesis.

Socket Bit

Model No.	(mm)	Size	ϕD	L	(mm)	Inner Ctn.	Outer Ctn.	EDP No.
A/F2.3×40		A/F 2.3	6	40		10	100	483921
A/F2.5×40		A/F 2.5	6	40		10	100	483922
A/F3×40		A/F 3	6	40		10	100	483923
A/F4×60		A/F 4	7	60		10	100	483924
A/F4.5×60		A/F 4.5	7	60		10	100	483925
A/F5×60		A/F 5	8	60		10	100	483926
A/F5.5×60		A/F 5.5	8	60		10	100	483927

No. D73 Bit

- For fastening precision small screws.
- Bit tip high-precision-machined to thread standards.



Model No.	(mm)	d1	d2	(mm)	Inner Ctn.	Outer Ctn.	EDP No.
⊖2 ×0.3	×40	2.0	—		10	100	483041
⊖2.5×0.3	×40	2.5	—		10	100	483042
⊖3 ×0.4	×40	3.0	—		10	100	483043
⊖4 ×0.5	×40	—	4.0		10	100	483044
H 1.5×2	×60	2.0	—		10	100	483051
H 2 ×3	×60	3.0	—		10	100	483052
H 2.5×3	×60	3.0	—		10	100	483053
H 3 ×4	×60	—	4.0		10	100	483054

ϕ4 mm

No. D73 TORX Bit

- For fastening small screws for HDDs, etc.
- Bit tip high-precision-machined to thread standards.

Model No.	(mm)	mm	d1	(mm)	Inner Ctn.	Outer Ctn.	EDP No.
T1 ×	40	0.84	1.5		10	100	635621
T2 ×	40	0.94	1.5		10	100	635622
T3 ×	40	1.12	1.7		10	100	635623
T4 ×	40	1.3	1.8		10	100	635624
T5 ×	40	1.37	2.0		10	100	635625
T5 × 2×20×40		1.37	2.0		10	100	446107
	60	1.37	2.0		10	100	446108
	60	1.37	2.0		10	100	635695
T6 ×	40	1.65	2.5		10	100	635626
T6 × 2×20×40		1.65	2.0		10	100	446109
	60	1.65	2.0		10	100	446110
	60	1.65	2.0		10	100	635696
T7 ×	40	1.97	2.5		10	100	635627
T7 ×2×20×60		1.97	2.0		10	100	446113
T8 ×	40	2.3	3.0		10	100	635628
T9 ×	40	2.48	3.0		10	100	635629
T10×	40	2.72	3.0		10	100	635630
T10H × 4 ×	60	2.72	4.0		10	100	446119

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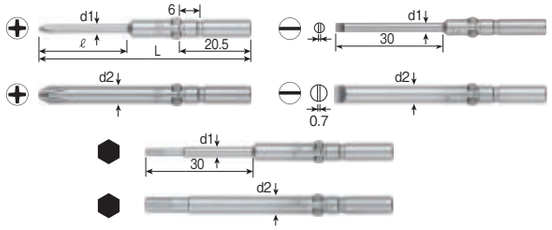
φ 5 mm

No. D76 Bit

●For fastening various small screws and tapping screws for sheet metals.
●Bit tip high-precision-machined to thread standards.



Model No.	Tip	ℓ	d1	d2	L (mm)	Inner Ctn.	Outer Ctn.	EDP No.
⊕00×2×60	00	20	2	—	60	10	100	446241*(483105)
⊕0×2×60	0	25	2	—	60	10	100	483106
⊕0×2.5×60	0	25	2.5	—	60	10	100	483115
⊕0×2.5×80	0	25	2.5	—	80	10	100	483116
⊕0×2.5×100	0	25	2.5	—	100	10	100	483117
⊕0×2.5×150	0	25	2.5	—	150	10	100	483118
⊕1×3×15×40	1	15	3	—	40	10	100	483119
⊕1×3×60	1	30	3	—	60	10	100	483121
⊕1×3×30×80	1	30	3	—	80	10	100	446267
⊕1×3×30×100	1	30	3	—	100	10	100	483122
⊕1×3×30×120	1	30	3	—	120	10	100	483123
⊕1×5×40	1	—	—	5	40	10	100	483124
⊕1×5×60	1	—	—	5	60	10	100	483125
⊕1×5×80	1	—	—	5	80	10	100	483126
⊕1×5×100	1	—	—	5	100	10	100	446271*(483127)
⊕1×5×120	1	—	—	5	120	10	100	483128
⊕1×5×150	1	—	—	5	150	10	100	483129
⊕1×5×180	1	—	—	5	180	10	100	483130
⊕1×5×200	1	—	—	5	200	10	100	483132
⊕1×5×250	1	—	—	5	250	10	100	483133
⊕1×5×300	1	—	—	5	300	10	100	483134
⊕2×5×40	2	—	—	5	40	10	100	483135
⊕2×5×60	2	—	—	5	60	10	100	483131
⊕2×5×80	2	—	—	5	80	10	100	446279
⊕2×5×100	2	—	—	5	100	10	100	446280
⊕2×5×120	2	—	—	5	120	10	100	446281
⊕2×5×150	2	—	—	5	150	10	100	446282
⊕2×5×180	2	—	—	5	180	10	100	483136
⊕2×5×200	2	—	—	5	200	10	100	483137
⊕2×5×250	2	—	—	5	250	10	100	483138
⊕2×5×300	2	—	—	5	300	10	100	483139
⊕2×5×400	2	—	—	5	400	10	100	483140
⊖3×0.4×60	⊖3×0.4t	30	3	—	60	10	100	483141
⊖4×0.6×60	⊖4×0.6t	30	4	—	60	10	100	483142
⊖5×0.7×60	⊖5×0.7t	—	—	5	60	10	100	483143
H2×3×70	H2	30	3	—	70	10	100	483151
H2.5×3×70	H2.5	30	3	—	70	10	100	483152
H3×4×70	H3	30	4	—	70	10	100	483153
H4×5×70	H4	—	—	5	70	10	100	483154

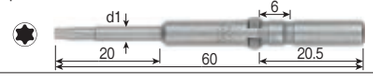
EDP number with mark * will be shifted to the other number in parenthesis.

Socket Bit

Model No. (mm)	Size	φD	L (mm)	Inner Ctn.	Outer Ctn.	EDP No.
A/F4×60	A/F 4	7	60	10	100	483941
A/F4.5×60	A/F 4.5	7	60	10	100	483942
A/F5×60	A/F 5	8	60	10	100	483943
A/F5.5×60	A/F 5.5	8	60	10	100	483944

No. D76 TORX Bit

●For fastening small screws for HDDs, etc.
●Bit tip high-precision-machined to thread standards.



Model No. (mm)	mm	d1	Inner Ctn.	Outer Ctn.	EDP No.
T5 × 60	1.37	2.0	10	100	635651
T6 × 60	1.65	2.5	10	100	635652
T7 × 60	1.97	2.5	10	100	635653
T8 × 60	2.3	3.0	10	100	635654
T9 × 60	2.48	3.0	10	100	635655
T10× 60	2.72	3.0	10	100	635656
T15× 60	3.26	4.0	10	100	635657
T20× 60	3.84	—	10	100	635658
T25× 60	4.4	—	10	100	635659

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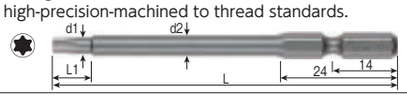
H 5 mm

No. N TORX Bit

●For fastening small screws for HDDs, etc.
●Bit tip high-precision-machined to thread standards.

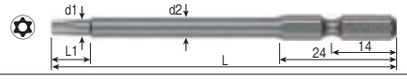


Model No. (mm)	mm	d1	L1	d2	(mm)	Inner Ctn.	EDP No.
T5 × 75	1.37	1.67	6.5	4.0		10	635498
100	1.37	1.67	6.5	4.0		10	635499
T6 × 75	1.65	1.95	6.5	4.0		10	635500
100	1.65	1.95	6.5	4.0		10	635501
T8 × 75	2.3	2.60	7.0	4.5		10	635505
100	2.3	2.60	7.0	4.5		10	635506
T10× 75	2.72	3.02	7.5	4.5		10	635510
100	2.72	3.02	7.5	4.5		10	635511
T15× 75	3.26	3.56	7.5	4.5		10	635515
100	3.26	3.56	7.5	4.5		10	635516
T20× 75	3.84	4.14	7.5	5.0		10	635520
100	3.84	4.14	7.5	5.0		10	635521
T25× 75	4.4	4.70	8.0	5.0		10	635525
100	4.4	4.70	8.0	5.0		10	635526
T27× 75	4.96	5.26	8.0	5.5		10	635530
100	4.96	5.26	8.0	5.5		10	635531

TORX is a registered trademark of Acument TM Intellectual Properties, LLC (USA).
VESSEL has a manufacturing license in Japan and selling same to the world.

No. N TORX Bit (Tamper-Proof)

●For fastening small screws for HDDs, etc.
●Bit tip high-precision-machined to thread standards.
●With a round hole for tamper-proof.



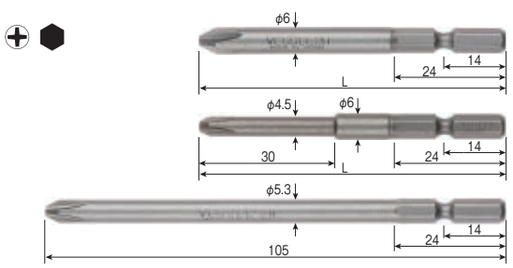
Model No. (mm)	mm	d1	L1	d2	(mm)	Inner Ctn.	EDP No.
T10H× 75	2.72	3.02	7.5	4.5		10	635551
100	2.72	3.02	7.5	4.5		10	635552
T15H× 75	3.26	3.56	7.5	4.5		10	635553
100	3.26	3.56	7.5	4.5		10	635554
T20H× 75	3.84	4.14	7.5	5.0		10	635555
100	3.84	4.14	7.5	5.0		10	635556
T25H× 75	4.4	4.70	8.0	5.0		10	635557
100	4.4	4.70	8.0	5.0		10	635558

TORX is a registered trademark of Acument TM Intellectual Properties, LLC (USA).
VESSEL has a manufacturing license in Japan and selling same to the world.

H 5 mm

No. B34 Bit

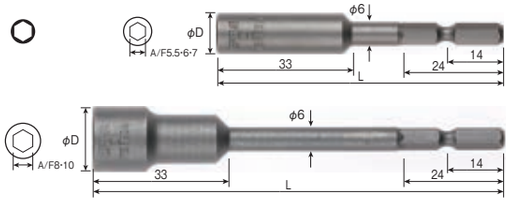
●For fastening various small screws and tapping screws for sheet metals.
●Bit tip high-precision-machined to thread standards.



Size Tip×Overall Length (mm)	Heat treatment classification	Inner Ctn.	Outer Ctn.	EDP No.
⊕1× 70	H	10	100	422031
100	H	10	100	422032
150	H	10	100	422033
⊕1×4 × 70	H	10	100	422048
⊕1×4×30×70	H	10	10	446335
⊕1×5.3× 105	H	10	100	422034
★ 120	X	10	100	422040
120	H	10	100	422035
⊕2× 70	H	10	100	422041
100	H	10	100	422042
120	H	10	100	422045
150	H	10	100	422043
200	H	10	100	422044
⊕2×3×30×75	H	10	100	446340
⊕2×4.5× 70	H	10	100	422049
⊕2×5.3× 105	H	10	100	422046
120	H	10	100	422047
H 2 × 70	H	10	100	422071
H 2.5× 70	H	10	100	422072
H 3 × 70	H	10	100	422073
H 4 × 70	H	10	100	422074
H 5 × 70	H	10	100	422075

No. B44 Socket bit

●For fastening screws for electric appliances and hex head tapping screws.

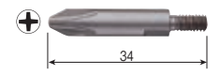


Size Tip×Overall Length (mm)	φD	Hole depth	Inner Ctn.	Outer Ctn.	EDP No.
A/F 5.5× 70	9	25	10	250	422371
100	9	25	10	250	422381
6× 70	10	25	10	200	422372
100	10	25	10	200	422382
7× 70	11	25	10	200	422373
100	11	25	10	150	422383
8× 70	13	25	10	200	422374
100	13	25	10	150	422384
10×100	16	25	10	100	422385

M4/M5/M6

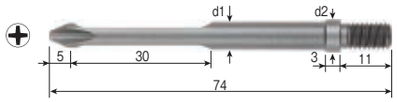
Other bits for screw fastening robots than the following can be custom-made.
Please contact VESSEL with detailed infomation, listed in the right "One point" column.

No. 3491/34,3492/34 Screw Shank Driver Bit



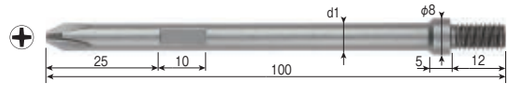
Model No.	Size Tip×Overall Length (mm)	M	Inner Ctn.	Outer Ctn.	EDP No.
3491/34	⊕1× 34 -M4	M4	10	100	489656
3492/34	⊕2× 34 -M4	M4	10	100	489657

No. D61 Bits for screw fastening robots (Semi-standardized items)



Model No. (mm)	d1	d2	Inner Ctn.	Outer Ctn.	EDP No.
⊕ 2×74-M5 P0.8	5.0	6.0	10	100	483301
⊕ 2×74-M6 P1.0	6.0	7.0	10	100	483302

No. D62 Bits for screw fastening robots (Semi-standardized items)



Model No. (mm)	d1	d2	Inner Ctn.	Outer Ctn.	EDP No.
⊕ 2×100-M6 P1.0	6.0	—	10	100	483303

One point

Custom-Made Bits

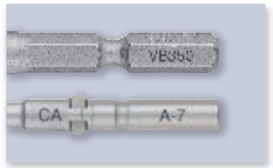
If you cannot find an appropriate bit among our standard line-up, VESSEL can also produce specially designed bits for your application.

Bits for automated assembly lines

High-precision processing is required for bits to be installed in automatic assembly machines, which operate in micro-level accuracy. VESSEL has technology and know-how for such precision bits as one of the biggest bit manufacturers in the world.

Order-made bit database

All the previous orders are recorded and organized by computer system.



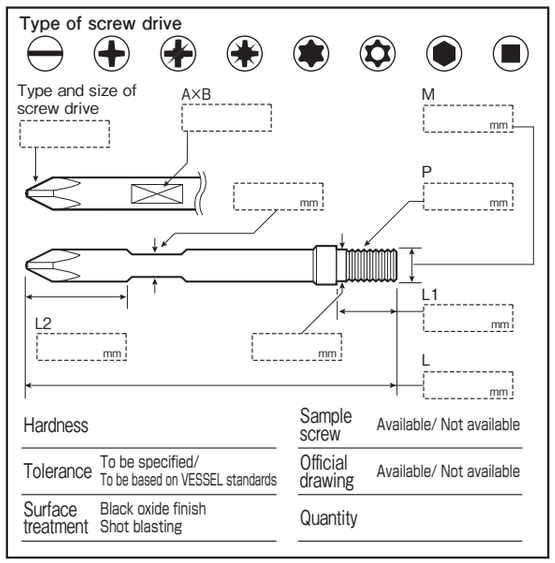
Laser marking

Necessary information can be directly laser-marked on bits, which brings further efficiency to your inventory management.

Innovative material and surface treatment

We choose most suitable materials and surface treatment methods for each different application, for example, high-endurance bits made of corrosion-resistant stainless steel and high-speed steel, etc.

●How to request for customized bits for automated machinery



●Outline for made-to-order bit

Arrangement: We receive a minimum order of 10 pieces including test samples. Since the more the number of bits ordered, the less the unit cost becomes, we recommend you to make a bulk purchase for production.

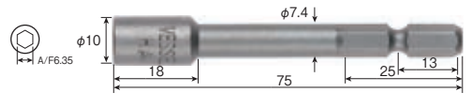
Delivery deadline: Normally, we ship products within 21 work days after receiving your order. Regarding bits for Torx and automatic machine (screw thread cutting), we try to ship products within 25 work days after receiving your order.

*For some types of bits, more time may be needed to machine specific dies and jigs.
*For delivery deadline, we will inform you each time.

H 6.35 mm

No. HA Bit Holder

●Holds a bit with C-pin.
●Cutting chips do not attach to the bit.



Size Tip×Overall Length (mm)		Inner Ctn.	Outer Ctn.	EDP No.
A/F6.35× 75	—	10	100	482410

No. HAM Bit Holder

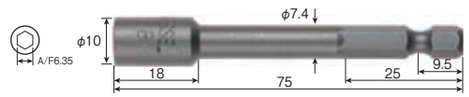
●Holds the bit with a strong magnetic force.

Size Tip×Overall Length (mm)		Inner Ctn.	Outer Ctn.	EDP No.
A/F6.35× 75	—	10	100	482415

H 6.35 mm

No. HB Bit Holder

●Holds a bit with C-pin.
●Cutting chips do not attach to the bit.



Size Tip×Overall Length (mm)		Inner Ctn.	Outer Ctn.	EDP No.
A/F6.35× 75	—	10	100	482420

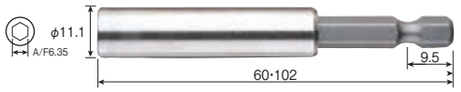
No. HBM Bit Holder

●Holds the bit with a strong magnetic force.

Size Tip×Overall Length (mm)		Inner Ctn.	Outer Ctn.	EDP No.
A/F6.35× 75	—	10	100	482425

No. DBH-01 Bit Holder

●Holds a bit with C-pin.



Size Tip×Overall Length		Inner Ctn.	EDP No.
A/F6.35×60	—	10	482431
★ A/F6.35×102(BH44)	—	10	487366

No. BH423M Bit Holder

Size Tip×Overall Length		Inner Ctn.	EDP No.
A/F6.35×75	—	10	487370

No. DBHM-01 Double Bit Holder

●Popular bit holders.

Size Tip×Overall Length		Inner Ctn.	EDP No.
A/F6.35×60	—	10	482433

No. DBH-02 Bit Holder

●Popular bit holders.

Size Tip×Overall Length		Inner Ctn.	EDP No.
A/F6.45×62	—	10	482432

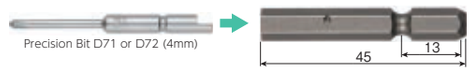
No. DBHM-02 Double Bit Holder

●Popular bit holders.

Size Tip×Overall Length		Inner Ctn.	EDP No.
A/F6.45×62	—	10	482434

No. HD-71×45 Bit Holder

●By attaching a crescentic shank shape precision bit, it can be used with compact electric screwdrivers.



Size Overall Length (mm)		Inner Ctn.	Outer Ctn.	EDP No.
45	—	10	100	482429

※Bit is not included.

One point

Precision bits can be installed to electric screwdrivers.

D71／D72(4mm) bits can be inserted.

No. HD-71×45

No. MMBC-J Magnet Screw Catcher

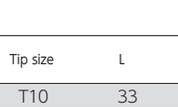
●Micro magnet screw catchers.

Size Tip×Overall Length (mm)	Tip size	L	Inner Ctn.	EDP No.
T10× 49	T10	49	10	447111
70	T10	70	10	447112
T15× 49	T15	49	10	447115
70	T15	70	10	447116
T20× 49	T20	49	10	447113
75	T20	75	10	447101
150	T20	150	10	447109
T25× 49	T25	49	10	447117
70	T25	70	10	447118

H 6.35 mm

No. MMBC Magnet Screw Catcher

●Micro magnet screw catchers.



Size Tip×Overall Length (mm)	Tip size	L	Inner Ctn.	EDP No.
T10× 33	T10	33	10	447104
T15× 33	T15	33	10	447102
T20× 33	T20	33	10	447103
T25× 33	T25	33	10	447110
PH1× 33	PH1	33	10	447105
PH2× 33	PH2	33	10	447106
PZ1× 33	PZ1	33	10	447107
PZ2× 33	PZ2	33	10	447108

Replacement Bits For MMBC Series

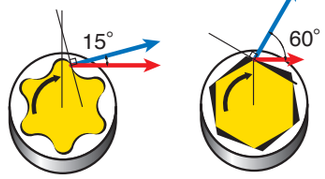
Size Tip×Overall Length (mm)		Inner Ctn.	EDP No.
PH1× 33	bit only, for MMBC	10	447333
PH2× 33	bit only, for MMBC	10	447334
PZ1× 33	bit only, for MMBC	10	447335
PZ2× 33	bit only, for MMBC	10	447336
T10× 33	bit only, for MMBC	10	447329
T10× 49	bit only, for MMBC-J	10	447337
T10× 70	bit only, for MMBC-J	10	447338
T15× 33	bit only, for MMBC	10	447330
T15× 49	bit only, for MMBC-J	10	447361
T15× 70	bit only, for MMBC-J	10	447362
T20× 33	bit only, for MMBC	10	447331
T20× 49	bit only, for MMBC-J	10	447339
T20× 75	bit only, for MMBC-J	10	447340
T20×150	bit only, for MMBC-J	10	447341
T25× 33	bit only, for MMBC	10	447332

One point

Features of TORX Bits

TORX®

TORX has 6-lobe shaped curves. Compared to hexagonal shape driver , TORX has higher drive effectiveness and transfers torque smmothly and acculately while eliminating "CAM-OUT".



TORX
TORX transfers max torque due to small driving angle.

Hex
Meanwhile, Hex square drive need max upload torque to transfer for large diving angle to other directions.

TAMPER-PROOF TORX SYSTEM

Added function of "Never Touch Screw" a post in the middle of the recess for maximum security eliminates regular TORX drive or any other flat screwdrivers for safety . Tamper proof screws are mostly used at communication equipment and computers so as not to abuse the screwing/unscrewing due to its design and control of function Keep off unscrewing unless otherwise maintenance serving practiced.

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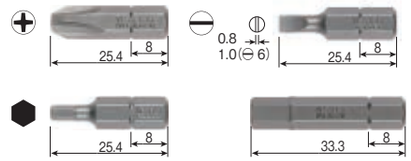
VESSEL has a manufacturing license in Japan and selling same to the world.

H 6.35 mm

No. B33 Short Bit (For Bit Holder)

●Can be used by attaching to a bit holder.

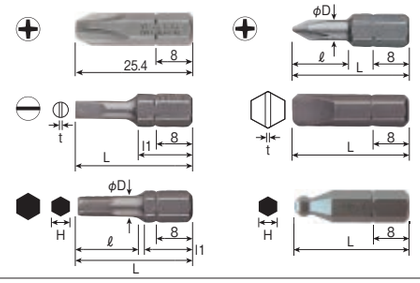


Model No. (mm)	Heat treatment classification	Tip	L	Inner Ctn.	Outer Ctn.	EDP No.
⊕1 × 25.4	H	⊕1	25.4	10	100	421231
⊕2 × 25.4	H	⊕2	25.4	10	100	421241
⊕3 × 25.4	G	⊕3	25.4	10	100	421242
⊖4 × 25.4	H	⊖4	25.4	10	100	421251
⊖6 × 25.4	H	⊖6	25.4	10	100	421252
H2 × 25.4	H	H2	25.4	10	100	421260
H2.5×25.4	H	H2.5	25.4	10	100	421261
H3 × 25.4	H	H3	25.4	10	100	421262
H4 × 33.3	H	H4	33.3	10	100	421263
H5 × 33.3	H	H5	33.3	10	100	421264
H6 × 33.3	H	H6	33.3	10	100	421265

Model No.	Contents	Set content	Inner Ctn.	Outer Ctn.	EDP No.
B33 Driver Bit Set	1 for each	⊕1, ⊕2, ⊕3, ⊖4, ⊖6×25.4 with holder	1	10	421270
B33 Hex. Bit Set	1 for each	H 2, 2.5, 3×25.4 H 4, 5, 6×33.3 with holder	1	10	421271

No. B33 Short Bit (For Bit Holder)

●Can be used by attaching to a bit holder.



Model No. (mm)	Heat treatment classification	Tip	φD	ℓ	l1	L (mm)	Outer Ctn.	EDP No.
★ 1001	H	⊕1	—	—	—	25.4	10	487105
★ 3002R/25	H	⊕2	6	12	—	25	10	489003
★ 1002	H	⊕2	—	—	—	25.4	10	487106
1002X	X	⊕2	—	—	—	25.4	10	487502
5603/25	H	⊖3 × 0.5t	—	—	11	25	10	489061
5635/25	H	⊖3.5 × 0.55t	—	—	11	25	10	489678
★ 1501	H	⊖4.76 × 0.86t	—	—	—	25.4	10	487120
★ 1502	H	⊖5.56 × 1.02t	—	—	—	25.4	10	487121
★ 1503	H	⊖6.35 × 1.07t	—	—	—	25.4	10	487122
★ 1504	H	⊖7.14 × 1.17t	—	—	—	25.4	10	487123
★ 1505	H	⊖8 × 1.27t	—	—	—	25.4	10	487124
30325/25	H	H2.5	3	4.5	11	25	10	489052
★ 21005	H	H5	—	12.7	18	33.3	10	487143
3034/25	H	H4	4.75	6	11	25	10	489054
3036/25	H	H6	—	8	—	25	10	489056
3038/25	H	H8	—	10	—	25	10	489057
★ 3760/25	H	BP H6	—	—	—	25	10	446407

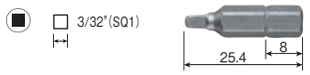
No. B33 3-Flute Bit (For Bit Holder)

●Can be used by attaching to a bit holder.

Model No. (mm)	Heat treatment classification	Tip	L (mm)	Inner Ctn.	EDP No.
★ 4002	H	TW2	25.4	10	446412
★ 4004	H	TW4	25.4	10	446415

No. B33 Square Bits (For Bit Holder)

●Can be used by attaching to a bit holder.

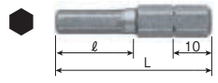


Size Tip×Overall Length (mm)	Heat treatment classification	Inner Ctn.	EDP No.
SQ1×25.4 (3001)	H	10	487150

H 8 mm

No. B33 Hex Bit (For Bit Holder)

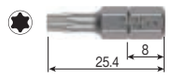
●Can be used by attaching to a bit holder.



Model No. (mm)	Heat treatment classification	Tip	ℓ	L (mm)	Inner Ctn.	EDP No.
3048/34	H	H8	16	34	10	489105
3050/34	H	H10	16	34	10	489106

No. A4 TORX Bit

●Can be used by attaching to a bit holder.



Size Tip No.	mm	Overall Length (mm)	Inner Ctn.	EDP No.
T6	1.65	25.4	10	635400
T8	2.3	25.4	10	635401
T10	2.72	25.4	10	635402
T15	3.26	25.4	10	635403
T20	3.84	25.4	10	635404
T25	4.4	25.4	10	635405
T27	4.96	25.4	10	635406
T30	5.49	25.4	10	635407
T40	6.6	25.4	10	635408

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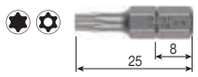
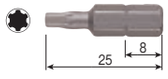


Model No.	Size	mm	Overall Length (mm)	Inner Ctn.	EDP No.
T3/25	T3	1.12	25	10	489154
T5/25	T5	1.37	25	10	489155
T7/25	T7	1.99	25	10	489157
T27/25	T27	4.96	25	10	489164
★ **TF08/25**	T8H	2.31	25	10	446392
★ **TF09/25**	T9H	2.5	25	10	446393
★ **TF15/25**	T15H	3.26	25	10	489168
★ **TF25/25**	T25H	4.43	25	10	489170
TF27/25	T27H	4.96	25	10	489171
TF30/25	T30H	5.49	25	10	489172

TORX is a registered trademark of Acument TM Intellectual Properties, LLC (USA).
VESSEL has a manufacturing license in Japan and selling same to the world.

No. IP TORX Plus Bit

●Can be used by attaching to a bit holder.

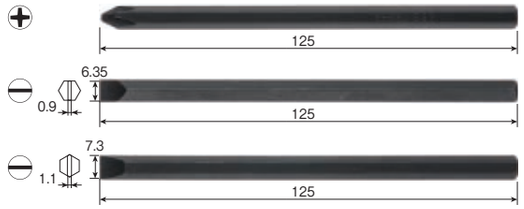


Size Tip No.	mm	Overall Length (mm)	Inner Ctn.	EDP No.
15IP	3.26	25	10	447204
20IP	3.84	25	10	447205
25IP	4.4	25	10	447206
30IP	5.49	25	10	447207
40IP	6.6	25	10	447208

TORX is a registered trademark of Acument TM Intellectual Properties, LLC (USA).
VESSEL has a manufacturing license in Japan and selling same to the world.

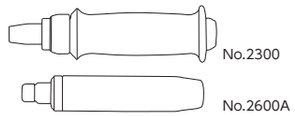
H **6.35** mm

No. C50 Impact Driver Bit



Size Tip×Overall Length (mm)	Heat treatment classification	Inner Ctn.	EDP No.
⊕ **1× 125**	G	10	431301
⊕ **2× 125**	G	10	431302
⊕ **3× 125**	G	10	431303
⊖ **5× 125**	G	10	431311
⊖ **6× 125**	G	10	431312
⊖ **7× 125**	G	10	431313

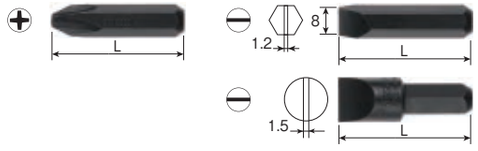
Applicable models: No.2300, No.2600A, No.230001, No.260002



Model No.	Contents	Set content	Inner Ctn.	EDP No.
2300• 2600A Bit Set	1 for each	C50 ⊕1, ⊕2, ⊕3, ⊖5, ⊖6, ⊖7×125mm	1	431701

H **8** mm

No. C51 Impact Driver Bit



Size Tip×Overall Length (mm)	Heat treatment classification	Inner Ctn.	Outer Ctn.	EDP No.
⊕ **2× 36**	G	10	250	431041
80	G	10	250	431042
⊕ **3× 36**	E	10	250	431051
80	E	10	250	431052
⊕ **4× 36**	E	10	250	431061
⊖ **8× 36**	E	10	250	431171
80	E	10	250	431172
⊖**10× 36**	E	10	250	431271
80	E	10	200	431272
⊖**12× 36**	E	10	200	431273

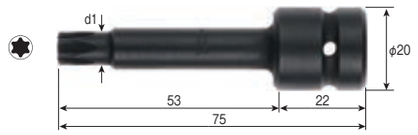
Applicable models: No.2500, No.240001, No.250001

Model No.	Contents	Set content	Inner Ctn.	Outer Ctn.	EDP No.
2500 Bit Set	1 for each	C51 ⊕2, ⊕3, ⊕4, ⊖10×36mm	1	50	431801

■ 9.5 mm Attachment for Impact Driver

No. S6 TORX Socket

●SQ9.5mm TORX sockets for impact wrenches



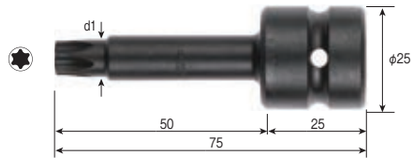
Size Tip×Overall Length (mm)		mm	d1	(mm)		EDP No.
T30× 75	▲	5.49	5.79		—	635681
T40× 75	▲	6.6	6.9		—	635682
T45× 75	▲	7.77	8.0		—	635683
T50× 75	▲	8.79	10.0		—	635684

▲For the date of delivery, consult Vessel.
TORX is a registered trademark of Acument TM Intellectual Properties, LLC (USA).
VESSEL has a manufacturing license in Japan and selling same to the world.

■ 12.7 mm Attachment for Impact Driver

No. S8 TORX Socket

●SQ12.7mm TORX sockets for impact wrenches.



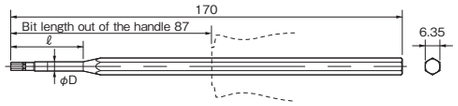
Size Tip×Overall Length (mm)		mm	d1	(mm)		EDP No.
T40× 75	▲	6.6	6.9		—	635691
T45× 75	▲	7.77	8.0		—	635692
T50× 75	▲	8.79	9.09		—	635693

▲For the date of delivery, consult Vessel.
TORX is a registered trademark of Acument TM Intellectual Properties, LLC (USA).
VESSEL has a manufacturing license in Japan and selling same to the world.

No. BTX Blades for Torque Screwdrivers

●Blades for TORX screws.
●Adopted for replacement of chips of machine tools that has been going up in speed.

Cr-V Mo steel



Model No.	Tip	mm	ℓ (mm)	φD (mm)	Outer Ctn.	EDP No.
BTX06	T6	1.69	30	3.5	10	173206
BTX07	T7	1.97	30	3.5	10	173207
BTX08	T8	2.3	30	3.5	10	173208
BTX10	T10	2.72	30	3.5	10	173210
BTX15	T15	3.26	32	4.5	10	173215
BTX20	T20	3.84	34	5	10	173220

No. B_IP Blades for Torque Screwdrivers

●Blades for TORX PLUS screws.
●Adopted for replacement of chips of machine tools that has been going up in speed.

TORX PLUS Cr-V Mo steel

Model No.	Tip	mm	ℓ (mm)	φD (mm)	Outer Ctn.	EDP No.
B06IP	6IP	1.69	30	3.5	10	173106
B07IP	7IP	1.97	30	3.5	10	173107
B08IP	8IP	2.29	30	3.5	10	173108
B09IP	9IP	2.48	30	3.5	10	173109
B10IP	10IP	2.72	30	3.5	10	173110
B15IP	15IP	3.25	30	4.5	10	173111

No. BPH Blades for Torque Screwdrivers

●Blades for Phillips screws.
●Optimal for tightening control of various terminal blocks.

Cr-V Mo steel

Model No.	Tip	ℓ (mm)	φD (mm)	Outer Ctn.	EDP No.
BPH01	⊕1	35	5	10	173301
BPH02	⊕2	35	6	10	173302
BPH03	⊕3	—	—	10	173303

No. BHX Blades for Torque Screwdrivers

●Blades for hexagonal socket head bolts and set screw.
●Optimum for assembly of machines or automatic equipment.

Cr-V Mo steel

Model No.	Tip	mm	ℓ (mm)	φD (mm)	Outer Ctn.	EDP No.
BHX15	H1.5	1.5	29.5	3	10	173321
BHX20	H2	2	29.5	3	10	173322
BHX25	H2.5	2.5	29.5	3	10	173323
BHX30	H3	3	32	4	10	173324
BHX40	H4	4	34	5	10	173325
BHX50	H5	5	36	6	10	173326

Construction Bits

BITS & SOCKETS

Contents

Construction Bits ····· 96 -112

Construction Sockets ····· 113 -121

PROKON series ····· 122 -129

Black Laser Series ····· 130 -131

Drill Bits / Drill Chucks ····· 132 -137

About ISO

ISO 9001 : 2008

Our screwdriver manufacturing division, VESSEL SHIMANE CO., LTD is certified according to ISO standard, the global standard for quality assurance control.

ISO 14001 : 2004

We obtained ISO 14001 in August 2010. VESSEL will further strive to offer eco-friendly products, aiming at minimizing the environmental burden as a manufacturing group.

Ideal Bits for construction & facilities

BITS & SOCKETS TECHNICAL

Environmental Measures

RoHS

Pb (lead) / Cd (cadmium) / Hg (mercury) / Hexavalent chromium / PBB (polybrominated biphenyl) / PBDE (polybrominated diphenyl ether) / DEHP, BBP, DBP, DIBP (phthalate esters)

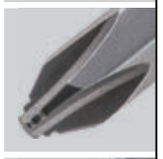
The products with this mark in this catalogue are compliant with the RoHS directives (EU) (usage limit of the above 10 substances).

Note: For the updated information on RoHS compliant products, visit our homepage, because some products or sizes are under investigation or are not compliant at the time of publication of this catalogue.

Rib PAT.

Magnum bit is an unconventional bit with reinforced ribs on its tip. Combining with optimal torsion part, it has realized excellent torque transmission and high durability.
With high strength, this bit shows superb durability for various works.

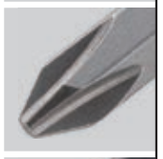
102P
131P



GIZA

The jagged tip of our GIZA BIT prevents cam-out of cross-head screws. Just as the bit starts to cam-out, the jagged edges bite into the internal wall of the recess of the screw.

105P



EXTRA HARD

Our EXTRA HARD BITS have been hardened to a maximum hardness of 62 HRC. They are ideal for relatively hard screws such as stainless steel screws and board screws.

105P

TAPPING

Our TAPPING BITS are designed with thick wings and short flutes for extra strength, making them ideal for heavy-duty work such as driving sash screws of greater than 4mm in diameter.

105P

SLENDER

The tips of our SLENDER BIT series have been worked to a fine point, making it easy to see the heads of the screws. These bits are designed for soft joint work such as wood screws and resin tapping screws.

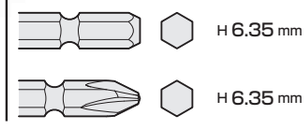
103P
104P

JAWS PAT.

Our JAWS BITS are perfect for working wood screws. From start to finish, these bits bite into the screw holes, allowing for increased work efficiency without fallen screws.

105P

Drive



Ultra Hex

Special hexagonal cross section composed of the flat surfaces and the waved surfaces The waved surfaces fit to the inner surface of chuck improving driving efficiency. In the meantime, the flat surfaces prevent shank from getting stuck in the chuck reducing damage to chuck.

102P
103P

Cushion ring

By minimizing the gap between chuck and bit, rattling and vibration are reduced.

103P

Plastic spring

Bits come out automatically with the help of spring when the sleeve of chuck is pulled, allowing users to pull out a bit with one hand.
Useful to change heated bit

102P

Tapered shape (SAKISUBO BITS)

The constricted part of the bit reduces the vibration caused when the thread starts to enter the material and screw passes through wood grain, preventing cam out and allowing efficient works.

111P
123P
~125P
127P
131P

Carefully selected materials

With our long experience and research in manufacturing, we developed our own materials with hardness (less wearing) and toughness (hard to chip). Properties of the elements contained in the materials have been improved to an optimal level through a heat treatment process.

C…Carbon
The more carbon is contained, the greater hardening penetration becomes. When the carbon content is 0.6 % or more, abrasion resistance increases, although hardening penetration remains the same.

Ni…Nickel
The addition of small amount of nickel increases steel's shock resistance and toughness. When added in a large amount, it becomes weak and breaks easily.

Cr…Chrome
Hardenability increases. Oxidation resistance increases. Toughness is improved.

Mo…Molybdenum
Hardenability increases. Significant decrease in toughness can be prevented.

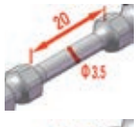
Magnetized bits

These bits can capture screws with a strong magnetic force enhancing work efficiency.

Torsion part

Torsion part absorbs the impact caused when the screw head is fully seated by an impact driver, preventing tip breakage.

102P
~104P
111P
123P
~125P
127P
131P



ϕ3.5×20mm

For soft joint such as fastening wood screws Suitable when fastened material is soft

ϕ3.7×14mm

For hard joint such as drill fastening Suitable when fastened material is hard

No. GS

"GOSAI" Bits

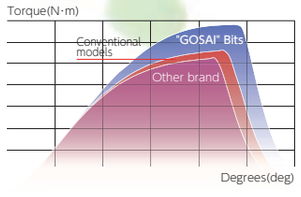
"Extra Superalloy" is VESSEL's new and unique steel material for bits. This is very endurable and ductile, determining reputation of VESSEL bits.
Resistant to twist and breaking.

Extra Superalloy*

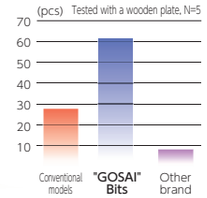
*Adopted to the items and sizes optimizing the material characteristics.

●The max hardness is HRC62. Resistant to breaking and twisting, and also transmitting the torque properly and assuredly, for reliable screw tightening.

Comparison test with twisting tester

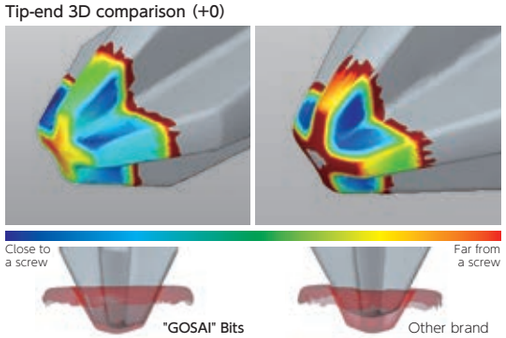


Screw Tightening Test



●Precise tip-end machining. High quality fitting.
As the tip-end is not plated or painted, the cross shaped tip-end can fit various screws.

Tip-end 3D comparison (+0)



※The illustrations are for reference only.

No. GS14

Double End "GOSAI" bits

●Different colors applied to each size.
●Endurable and ductile.

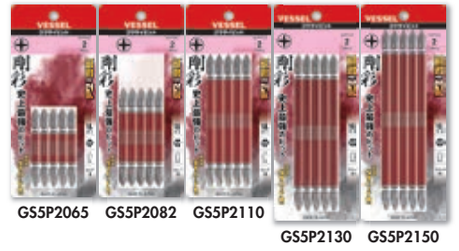
No. GS14 Double End "GOSAI" bits NEW

●Different colors applied to each size.
●Endurable and ductile.

Model No.	Set Content		Package Size (mm)	EDP No.
GS141035	⊕1× 35	1pc.	160×35×8	485501
GS141065	⊕1× 65	2pcs.	160×35×8	485502
GS141110	⊕1×110	2pcs.	160×35×8	485503
GS142035	⊕2× 35	1pc.	160×35×8	485504
GS142045	⊕2× 45	1pc.	160×35×8	485505
GS142065	⊕2× 65	2pcs.	160×35×8	485506
GS142082	⊕2× 82	2pcs.	160×35×8	485507
GS142110	⊕2×110	2pcs.	160×35×8	485508
GS142130	⊕2×130	2pcs.	180×35×8	485509
GS142150	⊕2×150	2pcs.	180×35×8	485510
GS142200	⊕2×200	1pc.	340×35×8	485511
GS142300	⊕2×300	1pc.	340×35×8	485512
GS142500	⊕2×500	1pc.	540×35×8	485513
GS143035	⊕3× 35	1pc.	160×35×8	485514
GS143065	⊕3× 65	2pcs.	160×35×8	485515
GS143110	⊕3×110	2pcs.	160×35×8	485516
GS143150	⊕3×150	2pcs.	180×35×8	485517
GS144065	⊕4× 65	1pc.	135×35×8	485519

※Colors inside the table indicate the bit color. Inner Ctn.: 10 sets

No. GS5P Double End "GOSAI" Bit 5-pc set NEW



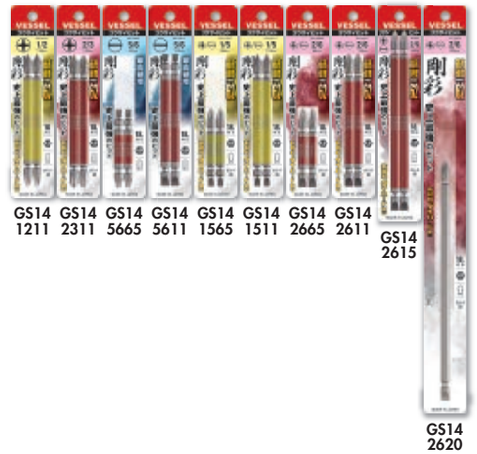
Model No.	Set Content		Package Size (mm)	EDP No.
GS5P2065	⊕2× 65	5pcs.	160×70×8	485552
GS5P2082	⊕2× 82	5pcs.	160×70×8	485553
GS5P2110	⊕2×110	5pcs.	160×70×8	485554
GS5P2130	⊕2×130	5pcs.	180×70×8	485555
GS5P2150	⊕2×150	5pcs.	180×70×8	485556

※Colors inside the table indicate the bit color. Inner Ctn.: 10 sets

No. GS14 Double End Combi "GOSAI" Bit NEW

●2 different sizes are combined into one bit.

Except ⊖5, ⊖6

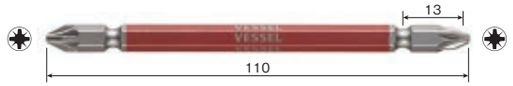


Model No.	Set Content		Package Size (mm)	EDP No.
GS141211	⊕1/⊕2×110	2pcs.	160×35×8	485520
GS142311	⊕2/⊕3×110	2pcs.	160×35×8	485518
GS145665	⊖5/⊖6× 65	2pcs.	160×35×8	485550
GS145611	⊖5/⊖6×110	2pcs.	160×35×8	485551
GS141565	⊕1/⊖5× 65	2pcs.	160×35×8	485521
GS141511	⊕1/⊖5×110	2pcs.	160×35×8	485522
GS142665	⊕2/⊖6× 65	2pcs.	160×35×8	485523
GS142611	⊕2/⊖6×110	2pcs.	160×35×8	485524
GS142615	⊕2/⊖6×150	2pcs.	180×35×8	485525
GS142620	⊕2/⊖6×200	1pc.	340×35×8	485526

※Colors inside the table indicate the bit color. Inner Ctn.: 10 sets

No. GSPZ Double End POSIDRIV "GOSAI" Bit NEW

●For POSIDRIV screws.
●Special tip shape prevents cam-out.



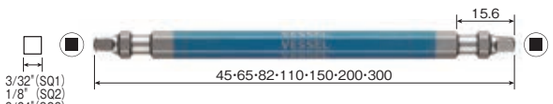
GSPZ 1110 GSPZ 2110 GSPZ 3110

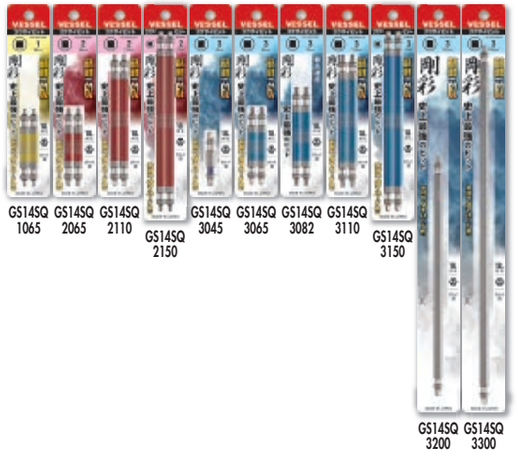
Model No.	Content		Package Size (mm)	EDP No.
GSPZ1110	PZ1×110	1pc.	160×35×8	485564
GSPZ2110	PZ2×110	1pc.	160×35×8	485565
GSPZ3110	PZ3×110	1pc.	160×35×8	485566

※Colors inside the table indicate the bit color. Inner Ctn.: 10 sets

No. GS14SQ Double End Square "GOSAI" Bit NEW

●For square head screws, popular for sash and/or quake-proof hardware.





GS14SQ 1065 GS14SQ 2065 GS14SQ 2110 GS14SQ 2150 GS14SQ 3045 GS14SQ 3065 GS14SQ 3082 GS14SQ 3110 GS14SQ 3150 GS14SQ 3200 GS14SQ 3300

Model No.	Set Content		Package Size (mm)	EDP No.
GS14SQ1065	SQ1× 65	2pcs.	160×35×8	485623
GS14SQ2065	SQ2× 65	2pcs.	160×35×8	485624
GS14SQ2110	SQ2×110	2pcs.	160×35×8	485625
GS14SQ2150	SQ2×150	2pcs.	180×35×8	485626
GS14SQ3045	SQ3× 45	1pc.	160×35×8	485627
GS14SQ3065	SQ3× 65	2pcs.	160×35×8	485628
GS14SQ3082	SQ3× 82	2pcs.	160×35×8	485629
GS14SQ3110	SQ3×110	2pcs.	160×35×8	485630
GS14SQ3150	SQ3×150	2pcs.	180×35×8	485631
GS14SQ3200	SQ3×200	1pc.	340×35×8	485632
GS14SQ3300	SQ3×300	1pc.	340×35×8	485633

※Colors inside the table indicate the bit color. Inner Ctn.: 10 sets

No. GS5P Double End Square "GOSAI" Bit, 5-pc set NEW

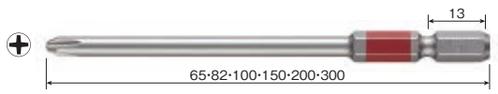
GS5P-42 GS5P-44

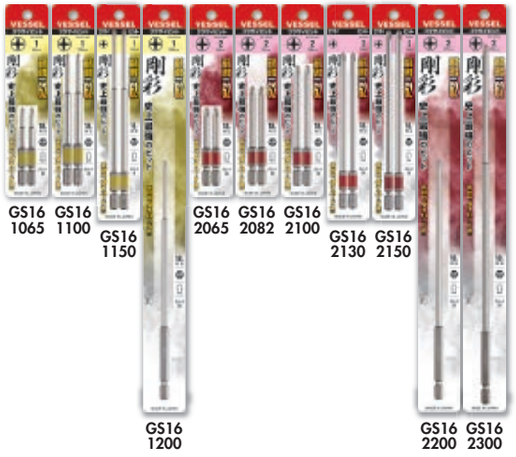
Model No.	Set Content		Package Size (mm)	EDP No.
GS5P-42	SQ3× 65	5pcs.	160×70×8	485634
GS5P-44	SQ3×110	5pcs.	160×70×8	485635

※Colors inside the table indicate the bit color. Inner Ctn.: 10 sets

No. GS16 Thin Shank "GOSAI" Bit NEW

●Thin shank model, good for use in a cramped space.





GS16 1065 GS16 1100 GS16 1150 GS16 1200 GS16 2065 GS16 2082 GS16 2100 GS16 2130 GS16 2150 GS16 2200 GS16 2300

Model No.	Set Content		Package Size (mm)	EDP No.
GS161065	⊕1 × 65	2pcs.	160×35×8	485532
GS161100	⊕1 ×100	2pcs.	160×35×8	485533
GS161150	⊕1 ×150	2pcs.	180×35×8	485534
GS161200	⊕1 ×200	1pc.	340×35×8	485535
GS162065	⊕2 × 65	2pcs.	160×35×8	485536
GS162082	⊕2 × 82	2pcs.	160×35×8	485537
GS162100	⊕2 ×100	2pcs.	160×35×8	485538
GS162130	⊕2 ×130	2pcs.	180×35×8	485539
GS162150	⊕2 ×150	2pcs.	180×35×8	485540
GS162200	⊕2 ×200	1pc.	340×35×8	485541
GS162300	⊕2 ×300	1pc.	340×35×8	485542

※Colors inside the table indicate the bit color. Inner Ctn.: 10 sets

No. GS16 Precision Type "GOSAI" Bit NEW

GS16 00065 GS16 00100 GS16 0065 GS16 0082 GS16 0100

Model No.	Set Content		Package Size (mm)	EDP No.
GS1600065	⊕00× 65	2pcs.	160×35×8	485527
GS1600100	⊕00×100	2pcs.	160×35×8	485528
GS160065	⊕0 × 65	2pcs.	160×35×8	485529
GS160082	⊕0 × 82	2pcs.	160×35×8	485530
GS160100	⊕0 ×100	2pcs.	160×35×8	485531

※Colors inside the table indicate the bit color. Inner Ctn.: 10 sets

No. GS16PL Slotted "GOSAI" Bit NEW

●For slotted screws.

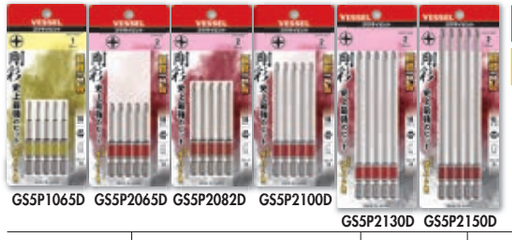
Except ⊖8

GS16 PL18 GS16 PL25 GS16 PL30 GS16 PL40 GS16 PL50 GS16 PL60 GS16 PL80

Model No.	Set Content		Package Size (mm)	EDP No.
GS16PL18	⊖1.8× 65	2pcs.	135×35× 8	485543
GS16PL25	⊖2.5× 65	2pcs.	135×35× 8	485544
GS16PL30	⊖3 × 65	2pcs.	135×35× 8	485545
GS16PL40	⊖4 × 65	2pcs.	135×35× 8	485546
GS16PL50	⊖5 × 65	2pcs.	135×35× 8	485547
GS16PL60	⊖6 × 65	2pcs.	135×35× 8	485548
GS16PL80	⊖8 × 65	1pc.	135×35×15	485549

※Colors inside the table indicate the bit color. Inner Ctn.: 10 sets

No. GS5P Thin Shank "GOSAI" Bit, 5-pc set NEW



GS5P1065D GS5P2065D GS5P2082D GS5P2100D GS5P2130D GS5P2150D

Model No.	Set Content		Package Size (mm)	EDP No.
GS5P1065D	⊕1× 65	5pcs.	160×70×8	485636
GS5P2065D	⊕2× 65	5pcs.	160×70×8	485557
GS5P2082D	⊕2× 82	5pcs.	160×70×8	485637
GS5P2100D	⊕2×100	5pcs.	160×70×8	485558
GS5P2130D	⊕2×130	5pcs.	180×70×8	485559
GS5P2150D	⊕2×150	5pcs.	180×70×8	485560

※Colors inside the table indicate the bit color. Inner Ctn.: 10 sets

No. GS5P Assorted "GOSAI" Bit, 5-pc set NEW

GS5P-01 GS5P-02 GS5P-03

Except GS5P-03 ⊖3,⊖4

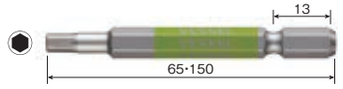
Model No.	Set Content		Package Size (mm)	EDP No.
GS5P-01	Double End ⊕2/⊖6× 65	1pc.	160×70×8	485563
	Double End ⊕2 ×110	1pc.		
	Double End ⊕3 × 65	1pc.		
	Thin Shank ⊕1 × 65	1pc.		
	Thin Shank ⊕2 ×100	1pc.		
GS5P-02	Double End ⊕1 × 65	1pc.	160×70×8	485562
	Double End ⊕2 × 65	1pc.		
	Double End ⊕2 ×110	2pcs.		
	Double End ⊕3 × 65	1pc.		
GS5P-03	Thin Shank ⊕00 × 65	1pc.	160×70×8	485561
	Thin Shank ⊕0 × 65	1pc.		
	Thin Shank ⊕1 × 65	1pc.		
	Thin Shank ⊖3 × 65	1pc.		
	Thin Shank ⊖4 × 65	1pc.		

※Colors inside the table indicate the bit color. Inner Ctn.: 10 sets

No. GSH HEX "GOSAI" Bit NEW

●For hexagon socket head cap bolts and screws.

Except H8 and larger sizes



GSH 015S GSH 020S GSH 025S GSH 030S GSH 040S GSH 050S GSH 060S GSH 080S GSH 100S GSH 120S GSH 140S GSH 170S

Model No.	Content		Package Size (mm)	EDP No.
GSH015S	H 1.5×65	1pc.	135×35× 8	485567
GSH020S	H 2 ×65	1pc.	135×35× 8	485568
GSH025S	H 2.5×65	1pc.	135×35× 8	485569
GSH030S	H 3 ×65	1pc.	135×35× 8	485570
GSH040S	H 4 ×65	1pc.	135×35× 8	485571
GSH050S	H 5 ×65	1pc.	135×35× 8	485572
GSH060S	H 6 ×65	1pc.	135×35× 8	485573
GSH080S	H 8 ×65	1pc.	135×35×10	485574
GSH100S	H 10 ×65	1pc.	135×35×22	485575
GSH120S	H 12 ×65	1pc.	135×35×22	485576
GSH140S	H 14 ×65	1pc.	135×35×22	485577
GSH170S	H 17 ×65	1pc.	135×35×22	485578

※Colors inside the table indicate the bit color. Inner Ctn.: 10 sets
(GSH100S, GSH120S, GSH140S, GSH170S - Inner Ctn.: 5 sets)

No. GSH HEX "GOSAI" Bit, Long type NEW

GSH 020L GSH 025L GSH 030L GSH 040L GSH 050L GSH 060L GSH 080L

MG Extra Superalloy Except H8

Model No.	Content	Package Size (mm)	EDP No.
GSH020L	H 2 ×150 1pc.	180×35× 8	485580
GSH025L	H 2.5×150 1pc.	180×35× 8	485581
GSH030L	H 3 ×150 1pc.	180×35× 8	485582
GSH040L	H 4 ×150 1pc.	180×35× 8	485583
GSH050L	H 5 ×150 1pc.	180×35× 8	485584
GSH060L	H 6 ×150 1pc.	180×35× 8	485585
GSH080L	H 8 ×150 1pc.	180×35×15	485586

※Colors inside the table indicate the bit color. Inner Ctn.: 10 sets

No. GS5P Assorted HEX "GOSAI" Bit, 5-pc set NEW

GS5P-31

GS5P-32

MG Extra Superalloy

Model No.	Set Content	Package Size (mm)	EDP No.
GS5P-31	H 2.5× 65 1pc. H 3 × 65 1pc. H 4 × 65 1pc. H 5 × 65 1pc. H 6 × 65 1pc.	160×70×8	485579
GS5P-32	H 2.5×150 1pc. H 3 ×150 1pc. H 4 ×150 1pc. H 5 ×150 1pc. H 6 ×150 1pc.	180×70×8	485587

※Colors inside the table indicate the bit color. Inner Ctn.: 10 sets

No. GSVT TORX "GOSAI" Bit NEW

- For TORX screws.
- TORX bits manufactured by the TORX official licensee.
- Tamper-proof type (except T4 and T5).

MG Except T4, T5

GSVT 04S GSVT 05S GSVT 06SH GSVT 08SH GSVT 10SH GSVT 15SH GSVT 20SH GSVT 25SH GSVT 27SH GSVT 30SH GSVT 40SH

Model No.	Content	Package Size (mm)	EDP No.
GSVT04S	T4 × 65 1pc.	135×35×8	485603
GSVT05S	T5 × 65 1pc.	135×35×8	485604
GSVT06SH	T6H × 65 1pc.	135×35×8	485605
GSVT08SH	T8H × 65 1pc.	135×35×8	485606
GSVT10SH	T10H× 65 1pc.	135×35×8	485607
GSVT15SH	T15H× 65 1pc.	135×35×8	485608
GSVT20SH	T20H× 65 1pc.	135×35×8	485609
GSVT25SH	T25H× 65 1pc.	135×35×8	485610
GSVT27SH	T27H× 65 1pc.	135×35×8	485611
GSVT30SH	T30H× 65 1pc.	135×35×8	485612
GSVT40SH	T40H× 65 1pc.	135×35×8	485613

※Colors inside the table indicate the bit color. Inner Ctn.: 10 sets

No. GSVT TORX "GOSAI" Bit. Long type NEW

MG

GSVT 10LH GSVT 15LH GSVT 20LH GSVT 25LH GSVT 27LH GSVT 30LH GSVT 40LH

Model No.	Content	Package Size (mm)	EDP No.
GSVT10LH	T10H×150 1pc.	180×35×8	485615
GSVT15LH	T15H×150 1pc.	180×35×8	485616
GSVT20LH	T20H×150 1pc.	180×35×8	485617
GSVT25LH	T25H×150 1pc.	180×35×8	485618
GSVT27LH	T27H×150 1pc.	180×35×8	485619
GSVT30LH	T30H×150 1pc.	180×35×8	485620
GSVT40LH	T40H×150 1pc.	180×35×8	485621

※Colors inside the table indicate the bit color. Inner Ctn.: 10 sets

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No. GS5P Assorted TORX "GOSAI" Bit, 5-pc set NEW

GS5P-33

GS5P-34

MG

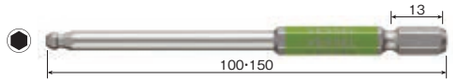
Model No.	Set Content	Package Size (mm)	EDP No.
GS5P-33	T10H× 65 1pc. T15H× 65 1pc. T20H× 65 1pc. T25H× 65 1pc. T30H× 65 1pc.	160×70×8	485614
GS5P-34	T10H×150 1pc. T15H×150 1pc. T20H×150 1pc. T25H×150 1pc. T30H×150 1pc.	180×70×8	485622

※Colors inside the table indicate the bit color. Inner Ctn.: 10 sets

No. GSBP Ball Point "GOSAI" Bit NEW

- For hexagon socket head cap bolts and screws.
- Ball point tip-end, tilting 26°, optimal for use in a cramped space.

MG Except H10 Extra Superalloy Except H8, H10



GSBP 020S GSBP 025S GSBP 030S GSBP 040S GSBP 050S GSBP 060S GSBP 080S GSBP 100S

Model No.	Content	Package Size (mm)	EDP No.
GSBP020S	H 2 ×100 1pc.	160×35× 8	485588
GSBP025S	H 2.5×100 1pc.	160×35× 8	485589
GSBP030S	H 3 ×100 1pc.	160×35× 8	485590
GSBP040S	H 4 ×100 1pc.	160×35× 8	485591
GSBP050S	H 5 ×100 1pc.	160×35× 8	485592
GSBP060S	H 6 ×100 1pc.	160×35× 8	485593
GSBP080S	H 8 ×100 1pc.	160×35×15	485594
GSBP100S	H 10 ×100 1pc.	160×35×22	485595

※Colors inside the table indicate the bit color. Inner Ctn.: 10 sets

No. GSBP Ball Point "GOSAI" Bit, Long type NEW

GSBP 030L GSBP 040L GSBP 050L GSBP 060L GSBP 080L

MG Extra Superalloy Except H8

Model No.	Content	Package Size (mm)	EDP No.
GSBP030L	H 3 ×150 1pc.	180×35× 8	485597
GSBP040L	H 4 ×150 1pc.	180×35× 8	485598
GSBP050L	H 5 ×150 1pc.	180×35× 8	485599
GSBP060L	H 6 ×150 1pc.	180×35× 8	485600
GSBP080L	H 8 ×150 1pc.	180×35×15	485601

※Colors inside the table indicate the bit color. Inner Ctn.: 10 sets

No. GS5P Assorted Ball Point "GOSAI" Bit, 5-pc set NEW

GS5P-35

GS5P-36

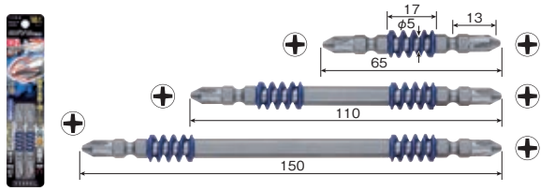
MG Extra Superalloy Except H8

Model No.	Set Content	Package Size (mm)	EDP No.
GS5P-35	H 3 ×100 1pc. H 4 ×100 1pc. H 5 ×100 1pc. H 6 ×100 1pc. H 8 ×100 1pc.	160×70×15	485596
GS5P-36	H 3 ×150 1pc. H 4 ×150 1pc. H 5 ×150 1pc. H 6 ×150 1pc. H 8 ×150 1pc.	180×70×15	485602

※Colors inside the table indicate the bit color. Inner Ctn.: 10 sets

No. MX14 Double End MAGNUM bit 2-Piece Set PAT.

●Long life with ribbed tip and torsion.
●Plastic spring facilitates bit replacement.



Model No.	Contents	Heat treatment classification	Card size (mm)	EDP No.
MX142065	⊕2×φ5× 65 2pcs.	H	160×35×8	485031
MX142110	⊕2×φ5×110 2pcs.	H	160×35×8	485033
MX142150	⊕2×φ5×150 2pcs.	H	210×35×8	485034

Inner Ctn.: 10 sets

No. MX5P Double End MAGNUM bit 5-Piece Set PAT.

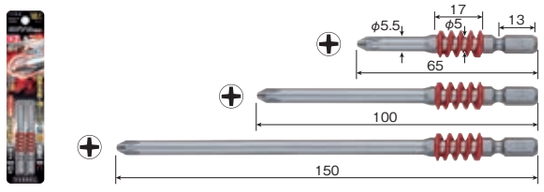
MX5P2065 MX5P2110

Model No.	Contents	Heat treatment classification	Card size (mm)	EDP No.
MX5P2065	⊕2×φ5× 65 5pcs.	H	160×70×8	485051
MX5P2110	⊕2×φ5×110 5pcs.	H	160×70×8	485052

Inner Ctn.: 10 sets

No. MX16 Recessed MAGNUM bit 2-Piece Set PAT.

●Long life with ribbed tip and torsion.
●Plastic spring facilitates bit replacement.



Model No.	Contents	Heat treatment classification	Card size (mm)	EDP No.
MX162065	⊕2×φ5× 65 2pcs.	H	160×35×8	485035
MX162100	⊕2×φ5×100 2pcs.	H	160×35×8	485037
MX162150	⊕2×φ5×150 2pcs.	H	210×35×8	485038

Inner Ctn.: 10 sets

No. MX5P Recessed MAGNUM bit 5-Piece Set PAT.

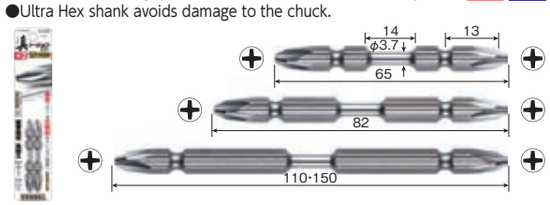
MX5P2065D MX5P2100D

Model No.	Contents	Heat treatment classification	Card size (mm)	EDP No.
MX5P2065D	⊕2×φ5× 65 5pcs.	H	160×70×8	485053
MX5P2100D	⊕2×φ5×100 5pcs.	H	160×70×8	485054

Inner Ctn.: 10 sets

No. RT "SUPER TORSION BIT" 2-Piece Set PAT.

●Tapered tip allows for easy view of small screw head.
●Combination of strong tip-end and torsion which is suitable for heavy works.
●Ultra Hex shank avoids damage to the chuck.



Model No.	Contents	Heat treatment classification	Card size (mm)	EDP No.
RT142065	⊕2×φ3.7× 65 2pcs.	X	160×35×8	484461
RT142082	⊕2×φ3.7× 82 2pcs.	X	160×35×8	484462
RT142110	⊕2×φ3.7×110 2pcs.	X	160×35×8	484463
RT142150	⊕2×φ3.7×150 2pcs.	X	210×35×8	484464

Inner Ctn.: 10 sets

No. RT5P "SUPER TORSION BIT" 5-Piece Set PAT.

RT5P2065 RT5P2082 RT5P2110

Model No.	Contents	Heat treatment classification	Card size (mm)	EDP No.
RT5P2065	⊕2×φ3.7× 65 5pcs.	X	160×70×8	484471
RT5P2082	⊕2×φ3.7× 82 5pcs.	X	160×70×8	484472
RT5P2110	⊕2×φ3.7×110 5pcs.	X	160×70×8	484473

Inner Ctn.: 10 sets

No. RT10P "SUPER TORSION BIT" 10-Piece Set PAT.

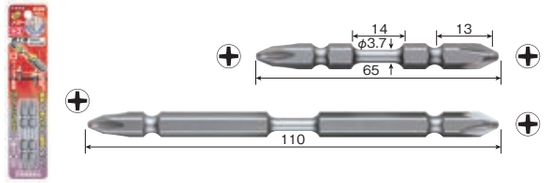
RT10P2065F RT10P2082F RT10P2110F

Model No.	Contents	Heat treatment classification	Card size (mm)	EDP No.
RT10P2065F	⊕2×φ3.7× 65 10pcs.	X	143×87×7	413441
RT10P2082F	⊕2×φ3.7× 82 10pcs.	X	143×87×7	413442
RT10P2110F	⊕2×φ3.7×110 10pcs.	X	162×87×7	413443

Inner Ctn.: 10 sets

No. MT MEGA TORSION BIT 2-Piece Set PAT.

●Jaws Fit tip fits screw head hole.
●Torsion design suitable for heavy works.



Model No.	Contents	Heat treatment classification	Card size (mm)	EDP No.
MT142065	⊕2×φ3.7× 65 2pcs.	X	160×35×8	484435
MT142110	⊕2×φ3.7×110 2pcs.	X	160×35×8	484437

Inner Ctn.: 10 sets

No. MT5P MEGA TORSION BIT 5-Piece Set PAT.

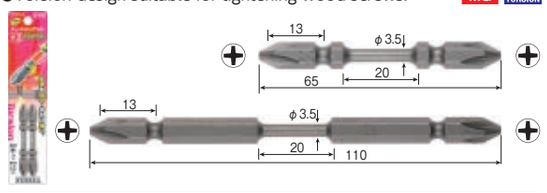
MT5P2065 MT5P2110

Model No.	Contents	Heat treatment classification	Card size (mm)	EDP No.
MT5P2065	⊕2×φ3.7× 65 5pcs.	X	160×70×8	484440
MT5P2110	⊕2×φ3.7×110 5pcs.	X	160×70×8	484442

Inner Ctn.: 10 sets

No. AT TORSION BIT 2-Piece Set

●Absorbs efficiently the impact caused when screws are fully seated.
●Torsion design suitable for tightening wood screws.



Model No.	Contents	Heat treatment classification	Card size (mm)	EDP No.
AT142065	⊕2×φ3.5× 65 2pcs.	H	160×35×8	486113
AT142110	⊕2×φ3.5×110 2pcs.	H	160×35×8	486114

Inner Ctn.: 10 sets

No. BW TORSION BIT 5-Piece Set

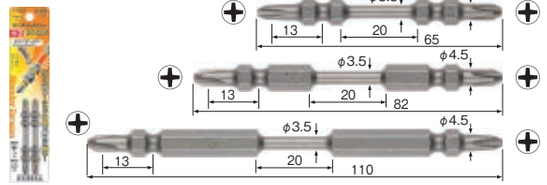
BW-163 BW-165

Model No.	Contents	Heat treatment classification	Card size (mm)	EDP No.
BW-163	⊕2×φ3.5× 65 5pcs.	H	140×70×23	486306
BW-165	⊕2×φ3.5× 65 3pcs. ⊕2×φ3.5×110 2pcs.	H H	140×70×23	486308

Provided with one bit holder. Outer Ctn.: 10 sets

No. ST SLENDER TORSION BIT 2-Piece Set PAT.

●Absorbs efficiently the impact caused when screws are fully seated.
●Tapered finished tip fits to slim screws.
●Torsion design suitable for tightening wood screws.



Model No.	Contents	Heat treatment classification	Card size (mm)	EDP No.
ST141065	⊕1×φ3.5× 65 2pcs.	H	160×35×8	484400
ST142065	⊕2×φ3.5× 65 2pcs.	H	160×35×8	484401
ST142082	⊕2×φ3.5× 82 2pcs.	H	160×35×8	484403
ST142110	⊕2×φ3.5×110 2pcs.	H	160×35×8	484402

Inner Ctn.: 10 sets

No. BW SLENDER TORSION BIT 5-Piece Set PAT.

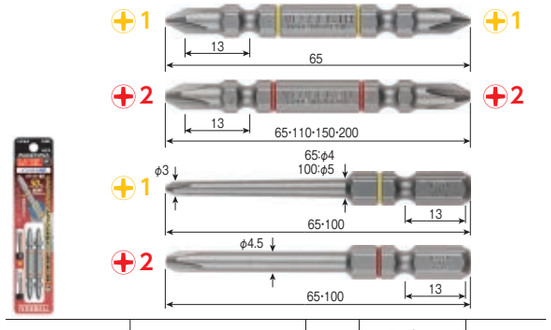
BW-301 BW-302 BW-303 BW-305

Model No.	Contents	Heat treatment classification	Card size (mm)	EDP No.
BW-301	⊕2×φ3.5× 65 5pcs.	H	140×70×23	486691
BW-302	⊕2×φ3.5×110 5pcs.	H	140×70×23	486692
BW-303	⊕2×φ3.5× 65 3pcs. ⊕2×φ3.5×110 2pcs.	H	140×70×23	486693
BW-305	⊕2×φ3.5× 82 5pcs.	H	140×70×23	486694

Provided with one bit holder. Outer Ctn.: 10 sets

No. AC CUSHION BIT 2-Piece Set PAT.

●Cushion ring is attached to reduce vibration.
●UltraHex shank avoids damage to the chuck.



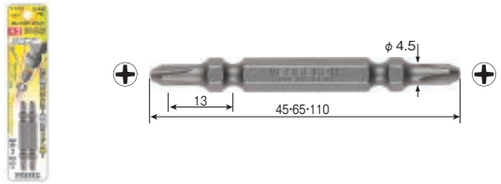
Model No.	Contents	Heat treatment classification	Card size (mm)	EDP No.
AC141065	⊕1× 65 2pcs.	H	160×35×8	484376
AC142065	⊕2× 65 2pcs.	H	160×35×8	484378
AC142110	⊕2×110 2pcs.	H	160×35×8	484379
AC142150	⊕2×150 2pcs.	H	210×35×8	484380
AC142200	⊕2×200 2pcs.	H	260×35×8	484381
AC161065	⊕1×φ4 × 65 2pcs.	H	160×35×8	484386
AC161100	⊕1×φ5 ×100 2pcs.	H	160×35×8	484387
AC162065	⊕2×φ4.5× 65 2pcs.	H	160×35×8	484388
AC162100	⊕2×φ4.5×100 2pcs.	H	160×35×8	484389

※Colors inside the table cells indicate the ring color.

Inner Ctn.: 10 sets

No. AS SLENDER BIT 2-Piece Set

●Tapered finished tip fits to slim screws.
●For soft joint such as wood screws and resin tapping screws.



Model No.	Contents	Heat treatment classification	Card size (mm)	EDP No.
AS141065	⊕1× 65 2pcs.	H	160×35×8	486187
AS142045	⊕2× 45 2pcs.	H	160×35×8	486186
AS142065	⊕2× 65 2pcs.	H	160×35×8	486184
AS142110	⊕2×110 2pcs.	H	160×35×8	486185

Inner Ctn.: 10 sets

No. BW SLENDER BIT 5-Piece Set

BW-180 BW-181 BW-182

Model No.	Contents	Heat treatment classification	Card size (mm)	EDP No.
BW-180	⊕2× 65 5pcs.	H	140×70×23	486650
BW-181	⊕2×110 5pcs.	H	140×70×23	486651
BW-182	⊕2× 65 3pcs. ⊕2×110 2pcs.	H	140×70×23	486652

Provided with one bit holder. Outer Ctn.: 10 sets

No. AS5P SLENDER BIT 5-Piece Set

AS5P1065F AS5P2065F AS5P2110F

Model No.	Contents	Heat treatment classification	Card size (mm)	EDP No.
AS5P1065F	⊕1× 65 5pcs.	H	135×50×7	485441
AS5P2065F	⊕2× 65 5pcs.	H	135×50×7	485442
AS5P2110F	⊕2×110 5pcs.	H	160×50×7	485443

Inner Ctn.: 10 sets

No. AS20P SLENDER BIT 20-Piece Set

AS20P2065F AS20P2110F

Model No.	Contents	Heat treatment classification	Card size (mm)	EDP No.
AS20P2065F	⊕2× 65 20pcs.	H	143×87×14	484481
AS20P2110F	⊕2×110 20pcs.	H	162×87×14	484482

Inner Ctn.: 5 sets

One point

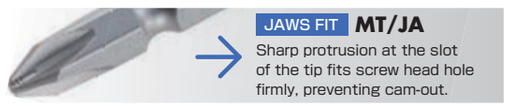
Bit Selection

●Different tip-end for various application.

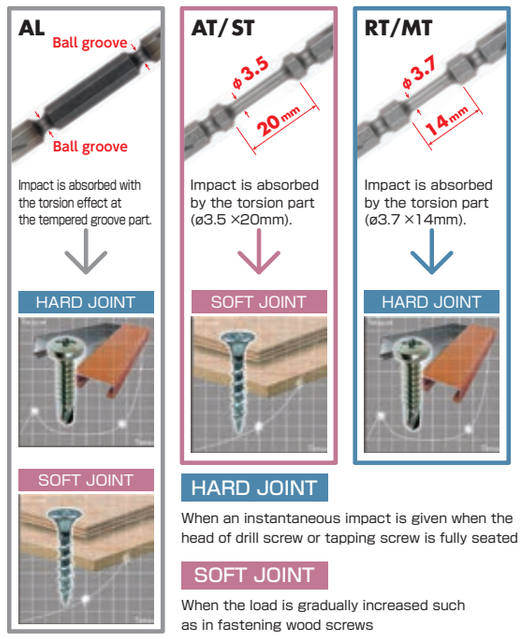
STANDARD **AT/AX/AL**
Good for most screws in the market with different depths of screw head hole.

SLENDER **ST/AS**
Tapered tip allows for easy view of small screw head, so that the bit tip fits a screw head hole quickly.

GIZA **AZ**
Jagged tip prevents cam-out, a typical problem to cross recessed screws.


JAWS FIT **MT/JA**
Sharp protrusion at the slot of the tip fits screw head hole firmly, preventing cam-out.

●Selection according to torsion effect

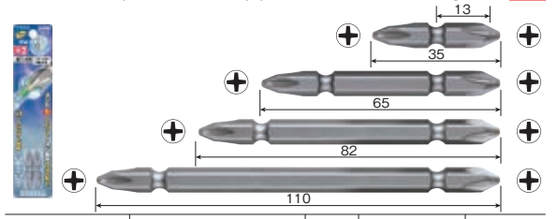


HARD JOINT
When an instantaneous impact is given when the head of drill screw or tapping screw is fully seated

SOFT JOINT
When the load is gradually increased such as in fastening wood screws

No. JA JAWS BIT 2-Piece Set PAT.

●Jaws Fit tip fits screw head hole.
●Reliable work possible as this tip prevents screws from falling over.



Model No.	Contents	Heat treatment classification	Card size (mm)	EDP No.
JA142035	⊕2× 35 2pcs.	H	160×35×8	484450
JA142065	⊕2× 65 2pcs.	H	160×35×8	484451
JA142082	⊕2× 82 2pcs.	H	160×35×8	484452
JA142110	⊕2×110 2pcs.	H	160×35×8	484453

Inner Ctn.: 10 sets

No. JA5P JAWS BIT 5-Piece Set PAT.

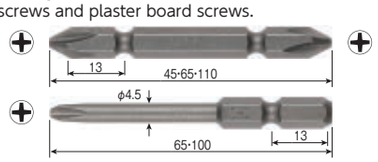
JA5P2065 JA5P2082 JA5P2110

Model No.	Contents	Heat treatment classification	Card size (mm)	EDP No.
JA5P2065	⊕2× 65 5pcs.	H	160×70×8	484456
JA5P2082	⊕2× 82 5pcs.	H	160×70×8	484457
JA5P2110	⊕2×110 5pcs.	H	160×70×8	484458

Inner Ctn.: 10 sets

No. AX EXTRA HARD BIT 2-Piece Set

●The highest hardness of 62HRC, suited for stainless screws and plaster board screws.



Model No.	Contents	Heat treatment classification	Card size (mm)	EDP No.
AX142045	⊕2× 45 2pcs.	X	160×35×8	486192
AX142065	⊕2× 65 2pcs.	X	160×35×8	486193
AX142110	⊕2×110 2pcs.	X	160×35×8	486194
AX162065	⊕2×ϕ4.5× 65 2pcs.	X	160×35×8	486195
AX162100	⊕2×ϕ4.5×100 2pcs.	X	160×35×8	486196

Inner Ctn.: 10 sets

No. BW EXTRA HARD BIT 5-Piece Set

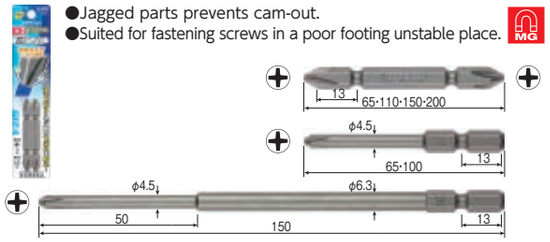
BW-36 BW-37 BW-38 BW-39

Model No.	Contents	Heat treatment classification	Card size (mm)	EDP No.
BW-36	⊕2× 65 5pcs.	X	140×70×23	486596
BW-37	⊕2×110 5pcs.	X	140×70×23	486597
BW-38	⊕2×ϕ4.5× 65 5pcs.	X	140×70×23	486598
BW-39	⊕2×ϕ4.5×100 5pcs.	X	140×70×23	486599

Provided with one bit holder. Outer Ctn.: 10 sets

No. AZ GIZA BIT 2-Piece Set

●Jagged parts prevents cam-out.
●Suited for fastening screws in a poor footing unstable place.

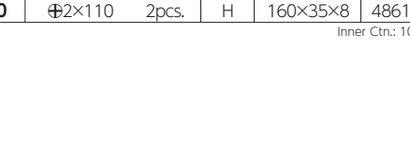


Model No.	Contents	Heat treatment classification	Card size (mm)	EDP No.
AZ142065	⊕2× 65 2pcs.	H	160×35×8	486177
AZ142110	⊕2×110 2pcs.	H	160×35×8	486178
AZ142150	⊕2×150 2pcs.	H	210×35×8	486179
AZ142200	⊕2×200 2pcs.	H	260×35×8	486180
AZ162065	⊕2×ϕ4.5× 65 2pcs.	H	160×35×8	486181
AZ162100	⊕2×ϕ4.5×100 2pcs.	H	160×35×8	486182
AZ162150	⊕2×ϕ4.5×ϕ6.3×150 2pcs.	H	210×35×8	486183

Inner Ctn.: 10 sets

No. A14H TAPPING BIT 2-Piece Set

●Increased thickness of the cross blade recommended to heavy works.
●Suited for screws for sash frames with a thread size of about 4mm.

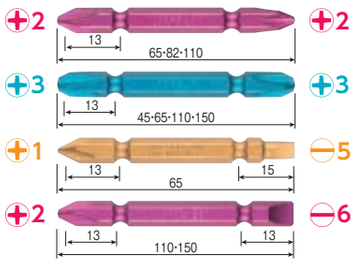


Model No.	Contents	Heat treatment classification	Card size (mm)	EDP No.
A14H2065	⊕2× 65 2pcs.	H	160×35×8	486190
A14H2110	⊕2×110 2pcs.	H	160×35×8	486191

Inner Ctn.: 10 sets

No. IR14 IRO BIT (Color-coded Bit) 2-Piece Set

●Bits colored according to size.
●Excellent rust proof performance.



Model No.	Contents	Heat treatment classification	Card size (mm)	EDP No.
IR142065	⊕2× 65 2pcs.	H	160×35×8	485104
IR142082	⊕2× 82 2pcs.	H	160×35×8	485107
IR142110	⊕2×110 2pcs.	H	160×35×8	485105
IR143045	⊕3× 45 2pcs.	H	160×35×8	485110
IR143065	⊕3× 65 2pcs.	H	160×35×8	485111
IR143110	⊕3×110 2pcs.	H	160×35×8	485112
IR143150	⊕3×150 2pcs.	H	210×35×8	485113
IR141565	⊕1/⊖5× 65 2pcs.	H	160×35×8	485120
IR142611	⊕2/⊖6×110 2pcs.	H	160×35×8	485122
IR142615	⊕2/⊖6×150 2pcs.	H	210×35×8	485123

※Colors inside the table cells indicate the bit color. Inner Ctn.: 10 sets

No. IR5P IRO BIT (Color-coded Bit) 5-Piece Set

IR5P2065F

IR5P2110F

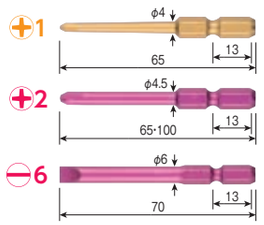
IR5P3065F

Model No.	Contents	Heat treatment classification	Card size (mm)	EDP No.
IR5P2065F	⊕2× 65 5pcs.	H	135×50×7	485167
IR5P2110F	⊕2×110 5pcs.	H	160×50×7	485168
IR5P3065F	⊕3× 65 5pcs.	H	135×50×7	485169

※Colors inside the table cells indicate the bit color. Inner Ctn.: 10 sets

No. IR16 Recessed IRO Bit (Color-coded Bit) 2-Pieces Set

●Bits colored according to size.
●Excellent rust proof performance.



Model No.	Contents	Heat treatment classification	Card size (mm)	EDP No.
IR161065	⊕1×ϕ4 × 65 2pcs.	H	160×35×8	485132
IR162065	⊕2×ϕ4.5× 65 2pcs.	H	160×35×8	485134
IR162100	⊕2×ϕ4.5×100 2pcs.	H	160×35×8	485136
IR166070	⊖6×ϕ6 × 70 2pcs.	H	160×35×8	485131

※Colors inside the table cells indicate the bit color. Inner Ctn.: 10 sets

No. IR5P Recessed IRO Bit (Color-coded Bit) 5-Pieces Set

IR5P2100DF

Model No.	Contents	Heat treatment classification	Card size (mm)	EDP No.
IR5P2100DF	⊕2×ϕ4.5×100 5pcs.	H	160×50×7	485171

※Colors inside the table cells indicate the bit color. Inner Ctn.: 10 sets

No. IR5P IRO BIT (Color-coded Bit) 5-Piece Set

●Bits colored according to size.
●Excellent rust proof performance.

IR5P01

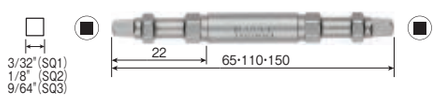
IR5P02

Model No.	Contents	Heat treatment classification	Card size (mm)	EDP No.
IR5P01	⊕1×ϕ4.0×65, ⊕2×ϕ4.5×100, ⊕2/⊖6×65, ⊕2×110, ⊕3×65	H	160×70×8	485165
IR5P02	⊕1×65, ⊕2×65 ⊕3×65, ⊕2×110(2pcs.)	H	160×70×8	485166

Inner Ctn.: 10 sets

No. A14SQ SQUARE DOUBLE END BIT 2-Piece Set

●Bit for square screws mostly used for sash frames and quake resistant hardware.

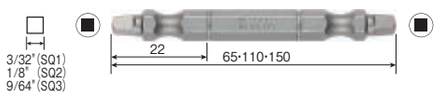


Model No.	Contents	Heat treatment classification	Card size (mm)	EDP No.
A14SQ1065	SQ 1× 65 2pcs.	H	160×35×8	486219
A14SQ2065	SQ 2× 65 2pcs.	H	160×35×8	486208
A14SQ2110	SQ 2×110 2pcs.	H	160×35×8	486210
A14SQ2150	SQ 2×150 2pcs.	H	210×35×8	486220
A14SQ3065	SQ 3× 65 2pcs.	H	160×35×8	486209
A14SQ3110	SQ 3×110 2pcs.	H	160×35×8	486211
A14SQ3150	SQ 3×150 2pcs.	H	210×35×8	486221

Inner Ctn.: 10 sets

No. A14RSQ SQUARE DOUBLE END BIT 2-Piece Set

●Bit for square screws mostly used for sash frames and quake resistant hardware.



Model No.	Contents	Heat treatment classification	Card size (mm)	EDP No.
A14RSQ1065	SQ 1× 65 2pcs.	H	160×35×8	486222
A14RSQ2110	SQ 2×110 2pcs.	H	160×35×8	486224
A14RSQ2150	SQ 2×150 2pcs.	H	210×35×8	486225
A14RSQ3065	SQ 3× 65 2pcs.	H	160×35×8	486226
A14RSQ3110	SQ 3×110 2pcs.	H	160×35×8	486227

Inner Ctn.: 10 sets

No. BW SQUARE DOUBLE END BIT 5-Piece Set

BW-401

BW-403

BW-407

Model No.	Contents	Heat treatment classification	Card size (mm)	EDP No.
BW-401	SQ 2× 65 5pcs.	H	140×70×23	486850
BW-403	SQ 2×110 5pcs.	H	140×70×23	486852
BW-407	SQ 2× 65 1pc. SQ 3× 65 2pcs. SQ 2×110 1pc. SQ 3×110 1pc.	H H H H	140×70×23	486856

Provided with one bit holder. Outer Ctn.: 10 sets

No. SM16H Hex Bit

●For hexagon socket head bolts or set screws commonly used for machines and facilities, cars and motorcycles.

Model No.	Contents	Card size (mm)	EDP No.
SM16H020	H 2 ×65 1pc.	135×35×8	486671
SM16H025	H 2.5× 65 1pc.	135×35×8	486672
SM16H030	H 3 ×65 1pc.	135×35×8	486673
SM16H040	H 4 ×65 1pc.	135×35×8	486674
SM16H050	H 5 ×65 1pc.	135×35×8	486675
SM16H060	H 6 ×65 1pc.	135×35×8	486676
SM16H080	H 8 ×65 1pc.	135×35×8	486677

Inner Ctn.: 10 sets

No. BW Hex Bit 5-Piece Set

BW-31

Model No.	Contents	Card size (mm)	EDP No.
BW-31	H2.5, 3, 4, 5, 6×65 1 for each	140×70×23	486591

Provided with one bit holder. Outer Ctn.: 10 sets

No. SMVT TORX Bit (Tamper-Proof)

●For TORX screws used in the automobile industry.
●With a round hole for tamper-proof.

Model No.	Contents	Card size (mm)	EDP No.
SMVT08H	T 8H× 65 1pc.	135×35×8	486681
SMVT10H	T10H× 65 1pc.	135×35×8	486682
SMVT15H	T15H× 65 1pc.	135×35×8	486683
SMVT20H	T20H× 65 1pc.	135×35×8	486684
SMVT25H	T25H× 65 1pc.	135×35×8	486685
SMVT27H	T27H× 65 1pc.	135×35×8	486686
SMVT30H	T30H× 65 1pc.	135×35×8	486687
SMVT40H	T40H× 65 1pc.	135×35×8	486688

Inner Ctn.: 10 sets

TORX is a registered trademark of Acument TM Intellectual Properties, LLC (USA).
VESSEL has a manufacturing license in Japan and selling same to the world.

No. SM16BP Ball Point Bit

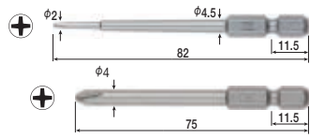
●For bolts with holes or set screws commonly used for machines and facilities, cars and motorcycles.

Model No.	Contents	Card size (mm)	EDP No.
SM16BP40	H 4 × 82 1pc.	160×35×8	486696
SM16BP50	H 5 × 82 1pc.	160×35×8	486697
SM16BP60	H 6 × 82 1pc.	160×35×8	486698

Inner Ctn.: 10 sets

No. D83 Bit 2-Piece Set

●Stepped shape useful for fastening screws in narrow spaces.

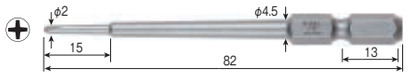


Model No.	Contents	Card size (mm)	EDP No.
D830082	⊕0×φ2 ×φ4.5× 82 2pcs.	160×35×8	486287
D831075	⊕1×φ4 × 75 2pcs.	160×35×8	486283

Inner Ctn.: 10 sets

No. M16 Bit for small precision screws 2-Piece Set

●Stepped shape useful for fastening screws in narrow spaces.



Model No.	Contents	Card size (mm)	EDP No.
M160082	⊕0×φ2×φ4.5× 82 2pcs.	160×35×8	486158

Inner Ctn.: 10 sets

No. GM14 Double End Gold Color Bit (Magnetic) 2-Piece Set

●If one end breaks, the other end can be used.
●Gold finish that stands out in the site.

Model No.	Contents	Heat treatment classification	Card size (mm)	EDP No.
GM141065	⊕1× 65 2pcs.	H	135×35×8	486421
GM141110	⊕1×110 2pcs.	H	160×35×8	486422
GM142045	⊕2× 45 2pcs.	H	135×35×8	486423
GM142065	⊕2× 65 2pcs.	H	135×35×8	486424
GM142110	⊕2×110 2pcs.	H	160×35×8	486425
GM143065	⊕3× 65 2pcs.	H	135×35×8	486428
GM142150	⊕2×150 2pcs.	H	210×35×8	486426
GM142200	⊕2×200 2pcs.	H	260×35×8	486569
GM143110	⊕3×110 2pcs.	H	160×35×8	486429

Inner Ctn.: 10 sets

No. GM14 Double End Gold Color Bit (Magnetic) 1-Piece

Model No.	Contents	Heat treatment classification	Card size (mm)	EDP No.
GM142300	⊕2×300 1pc.	H	340×35×17	486570
GM142500	⊕2×500 1pc.	H	540×35×17	486571

Silver finish, For the S hanger. Inner Ctn.: 10 sets

No. GM14 ⊕⊖Double End Gold Color Bit 2-Piece Set

●1 bit for ⊕/⊖ types.
●Gold finish that stands out in the site.

Model No.	Contents	Heat treatment classification	Card size (mm)	EDP No.
GM141565	⊕1/⊖5 × 65 2pcs.	H	135×35×8	486441
GM142665	⊕2/⊖6 × 65 2pcs.	H	135×35×8	486442

Inner Ctn.: 10 sets

No. BW Gold Color Bit 5-Piece Set

●Gold finish that stands out in the site.

BW-52

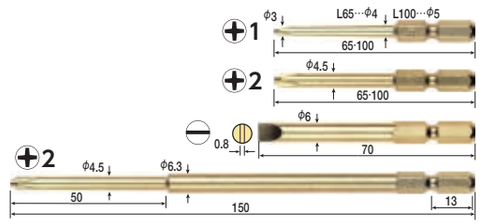
BW-53

Model No.	Contents	Card size (mm)	EDP No.
BW-52	Double End Gold Color Bit ⊕2× 65 5pcs.	95×70×23	486622
BW-53	Double End Gold Color Bit ⊕2×110 5pcs.	140×70×23	486623

Provided with one bit holder. Outer Ctn.: 10 sets

No. GM16 Step Gold Color Bit 2-Piece Set

●Recessed type. Thin shank allows for use in narrow spaces.



Model No.	Contents	Heat treatment classification	Card size (mm)	EDP No.
GM166070	⊖6×φ6 × 70 2pcs.	G	160×35×8	486454
GM161065	⊕1×φ4 × 65 2pcs.	H	135×35×8	486455
GM161100	⊕1×φ5 ×100 2pcs.	H	160×35×8	486459
GM162065	⊕2×φ4.5× 65 2pcs.	H	135×35×8	486456
GM162100	⊕2×φ4.5×100 2pcs.	H	160×35×8	486457
GM162150	⊕2×φ4.5×φ6.3×150 2pcs.	H	210×35×8	486458

Inner Ctn.: 10 sets

No. BW Gold Color Bit 10-Piece Set

●Excellent rust proof performance.

BW-11

BW-12

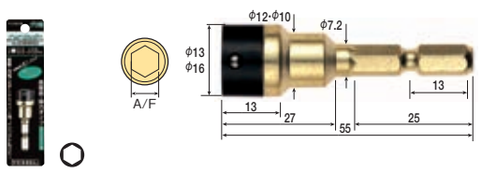
BW-13

BW-15

Model No.	Contents	Card size (mm)	EDP No.
BW-11	Double End Gold Color Bit ⊕2× 45 10pcs.	120×85×23	486311
BW-12	Double End Gold Color Bit ⊕2× 65 10pcs.	120×85×23	486312
BW-13	Double End Gold Color Bit ⊕2×110 10pcs.	150×100×23	486313
BW-15	Double End Gold Color Bit ⊕1×65, ⊕2×110, ⊕3×65 1 for each ⊕2×45, ⊕2×65 2 for each ⊕⊖Double End Gold Color Bit ⊕2/⊖6×65 1pc. Step Gold Color Bit ⊕1×100, ⊕2×100 2 for each	150×100×23	486315

Provided with one bit holder. Outer Ctn.: 10 sets

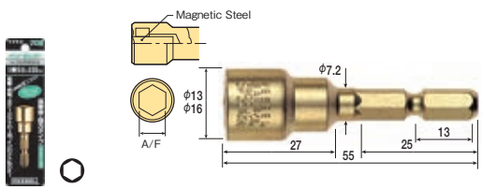
No. GSB Gold Color Nut Setter (Locked with ball)



Model No.	Contents	Card size (mm)	EDP No.
GSB8055	A/F 5/16"×55(for 5mm) 1pc.	135×35	486511
GSB9655	A/F 3/8"×55(for 6mm) 1pc.	135×35	486512

Inner Ctn.: 5 sets

No. GSAM Gold Color Nut Setter (Magnetic)



Model No.	Contents	Card size (mm)	EDP No.
GSAM8055	A/F 5/16"×55(for 5mm) 1pc.	135×35	486501
GSAM9655	A/F 3/8"×55(for 6mm) 1pc.	135×35	486502

Inner Ctn.: 5 sets

No. GMA Gold Bits (in zip pack)

- Packed in a bag with a zipper for easy storage.
- Gold finish that stands out in the site.

Model No.	Contents	Heat treatment classification	Package size (mm)	EDP No.
GMA14 ⊕2× 45H	GM14 ⊕2× 45 10pcs.	H	145×80×7	410150
GMA14 ⊕2× 65H	GM14 ⊕2× 65 10pcs.	H	145×80×7	410153
GMA14 ⊕2×110H	GM14 ⊕2×110 10pcs.	H	190×80×7	410156
GMA16 ⊕1×φ3 × 65H	GM16 ⊕1×φ3 × 65 10pcs.	H	145×80×7	418303
GMA16 ⊕1×φ3 ×100H	GM16 ⊕1×φ3 ×100 10pcs.	H	190×80×7	418306
GMA16 ⊕2×φ4.5× 65H	GM16 ⊕2×φ4.5× 65 10pcs.	H	145×80×7	418313
GMA16 ⊕2×φ4.5×100H	GM16 ⊕2×φ4.5×100 10pcs.	H	190×80×7	418316

Inner Ctn.: 10 sets

No. BW-70 Socket Bit Belt

Model No.	Contents	Card size (mm)	EDP No.
BW-70	A/F 8×60 A/F 10×60 A/F 12×60 A/F 13×60 A/F 14×60 1 for each	140×80×23	486705

Provided with one bit holder. Outer Ctn.: 5 sets

No. SB Nut Setter (For power tools)

Model No.	Contents	Card size (mm)	EDP No.
SB A/F 5/16"×55	A/F 5/16"×55(for 5mm) 5pcs.	127×87×15	482531
SB A/F 3/8"×55	A/F 3/8"×55(for 6mm) 5pcs.	127×87×15	482532

Outer Ctn.: 10 sets

No. D80 Cordless Screwdriver Bit

Model No.	Contents	Card size (mm)	EDP No.
D80	⊕1, ⊕2, ⊖6.3×50 1 for each	125×55×8	482301

Inner Ctn.: 1 set, Outer Ctn.: 50 sets

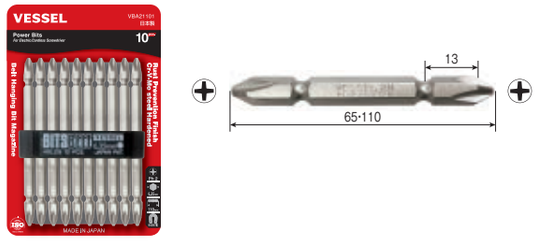
No. BB Bit Belt Holder

Model No.	Contents	Package size (mm)	EDP No.
BB-5	Bit Belt Holder for 5pcs.	158×78×28	486579
BB-10	Bit Belt Holder for 10pcs.	118×98×38	486580

Outer Ctn.: 10 sets

No. VBA Double End Power Bit (w/Bit Belt)

- Holder included for hanging from the waist belt.
- Anti-rust surface treatment.
- Popular 2 sizes available.

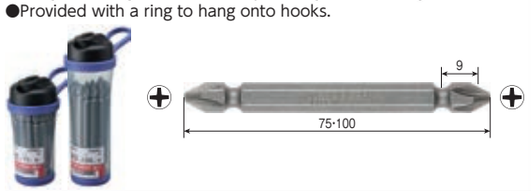


Model No.	Contents	Card size (mm)	EDP No.
VBA20651	Non-electrolytic plated bit ⊕2× 65mm10pcs.	50×100	484056
VBA21101	Non-electrolytic plated bit ⊕2×110mm10pcs.	85×120	484057

with one piece of holder case Inner Ctn.: 10 sets

No. BMG43 Bit Mag Bottle 20-pc Set Double End Bits (B-type) PAT.

- Basic bits which are long popular in assembly factories.
- Optimal for hard joint parts such as tapping and machine screws.
- Integrated magnetizer in the cap to magnetize/demagnetize bits. Bottle
- Provided with a ring to hang onto hooks.



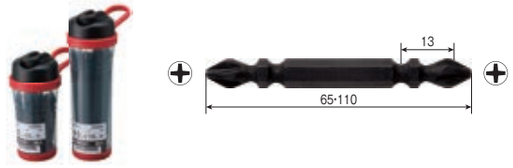
Model No.	Contents	Heat treatment classification	Bottle size (mm)	EDP No.
BMG43 ⊕2×100H	⊕2×100 20pcs.	H	53×100×153	415282

Inner Ctn.: 5 sets

No. SMG14 Bit Mag Bottle 20-pc Set SAKISUBO Double End Bits PAT.

- Tip is easy to see, and the torsion effect of the constricted part produces great durability.
- Used for soft joints such as wood screw work.
- Integrated magnetizer in the cap to magnetize/demagnetize bits.
- Provided with a ring to hang onto hooks.

Bottle



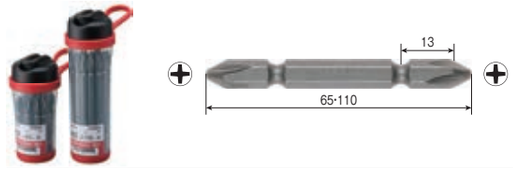
Model No.	Contents	Heat treatment classification	Bottle size (mm)	EDP No.
SMG14 ⊕2× 65H	⊕2× 65 20pcs.	H	53×100×111	415283
SMG14 ⊕2×110H	⊕2×110 20pcs.	H	53×100×153	415284

Inner Ctn.: 5 sets

No. AMG14 Bit Mag Bottle 20-pc Set Double End Bits (A-type) PAT.

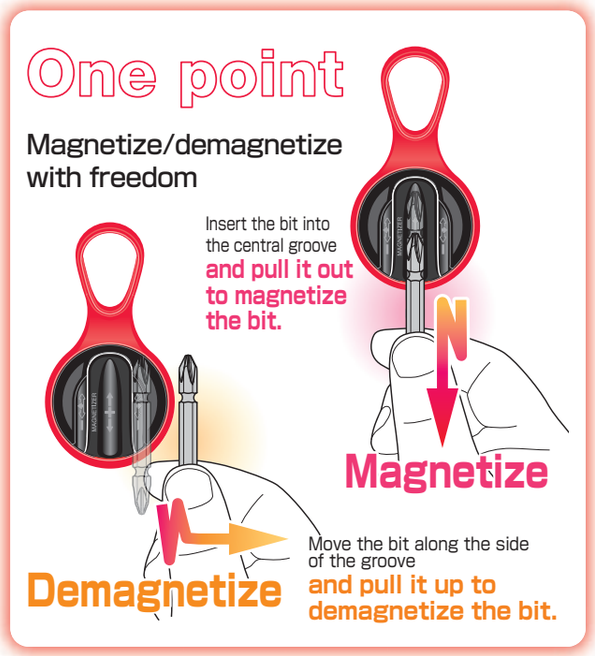
- Basic bits which are long popular in assembly factories.
- Optimal for hard joint parts such as tapping and machine screws.
- Integrated magnetizer in the cap to magnetize/demagnetize bits.
- Provided with a ring to hang onto hooks.

Bottle



Model No.	Contents	Heat treatment classification	Bottle size (mm)	EDP No.
AMG14 ⊕2× 65H	⊕2× 65 20pcs.	H	53×100×111	415285
AMG14 ⊕2×110H	⊕2×110 20pcs.	H	53×100×153	415286

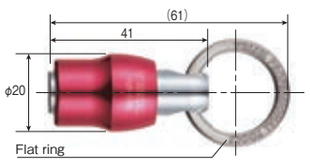
Inner Ctn.: 5 sets



No. QB-10 Quick Catcher

- Bit can be replaced with just one hand.
- Smooth surface finish and pull-up type sleeve prevent tools from dropping.
- Strong ball chuck enables to mount a tool up to 500g.
- Flat ring with large diameter is easy to mount on carabiners, etc.

QB-10R QB-10B QB-10Y



Model No.	Contents	Card size (mm)	EDP No.
QB-10R	Quick Catcher (Red) 1pc.	135×50×22	486921
QB-10B	Quick Catcher (Blue) 1pc.	135×50×22	486922
QB-10Y	Quick Catcher (Yellow) 1pc.	135×50×22	486923

Inner Ctn.: 10 sets Outer Ctn.: 10 sets

No. QB-K3C Quick Catcher 3-Piece Set

- Bit can be replaced with just one hand.
- Smooth surface finish and pull-up type sleeve prevent tools from dropping.
- Strong ball chuck enables to mount a tool up to 500g.
- Provided with a carabiner to hang onto your belt, etc.

Model No.	Contents	Card size (mm)	EDP No.
QB-K3C	Quick catcher (Red・Blue・Yellow)、Carabiner (Black) 1 for each	135×50×50	486924

Inner Ctn.: 10 sets Outer Ctn.: 100 sets

No. QB-KBAD Quick Catcher with Key Adapter

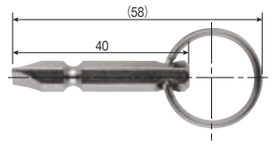
- Bit can be replaced with just one hand.
- Smooth surface finish and pull-up type sleeve prevent tools from dropping.
- Strong ball chuck enables to mount a tool up to 500g.
- Provided with a carabiner to hang onto your belt, etc.

Model No.	Contents	Card size (mm)	EDP No.
QB-KBAD	Quick catcher (Black)、Key adapter、Carabiner (Black) 1 for each	135×50×31	486925

Inner Ctn.: 10 sets Outer Ctn.: 100 sets

No. QB-AD Key Adapter

- Key adapter for Quick Catcher QB series.
- A flat blade for prizing, which can also be used to open paint can lids.
- Flat ring with large diameter is easy to mount on carabiners, etc.



Model No.	Contents	Card size (mm)	EDP No.
QB-AD	Key adapter 1pc.	135×50×9	486926

Inner Ctn.: 10 sets Outer Ctn.: 100 sets

One point

Insert/withdraw with just one hand

Pinch sleeve up to withdraw.

Insert, and automatically locks

No. SL

GO-TAN Semi-Long socket

Medium length socket characterized by carefully polished mirror finish.
Smooth streamlined design fits comfortably in your hand.
Light-weight Deep Hole Sockets are good especially for installation and/or roof work of solarpanels, which are expanding.

A D V A N C E D

PRESS-FIT

T E C H N O L O G Y

Improved strength against shank breakage, press fit type

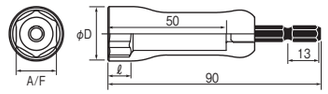
No. SL

"GO-TAN" Semi-long Socket

The most versatile medium length socket
Plane contact type hex socket
Streamlined mirror finish body fits your hand and has an excellent rust-proof performance.

No. SL "GO-TAN" (Hard Forged) Semi-long Socket

- The most versatile medium length socket.
- Streamlined mirror finish (chrome plating) and excellent rust-proof sockets.
- Plane contact type hex socket.



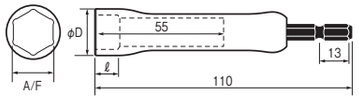
←See P100

Model No.	A/F	φD	ℓ	Overall Length (mm)	Card size (mm)	EDP No.
SL200790	7	11	6.5	90	143×35	486741
SL200890	8	14	6.5	90	143×35	486731
SL200990	9	15	6.5	90	143×35	486742
SL201090	10	16	6.5	90	143×35	486732
SL201190	11	17	7	90	143×35	486743
SL201290	12	18	7.5	90	143×35	486733
SL201390	13	19	8	90	143×35	486734
SL201490	14	20	8	90	143×35	486735
SL201590	15	21	8	90	143×35	486744
SL201790	17	23	9	90	143×35	486736
SL201990	19	25	10	90	143×35	486737
SL202190	21	28	11	90	143×35	486738
SL202290	22	29	12	90	143×35	486739
SL202490	24	32	13	90	143×35	486740

※The colors of the A/F column in the table indicate the seal colors. Inner Ctn.: 5 sets Outer Ctn.: 100 sets

No. TA "GO-TAN" (Hard Forged) Mirror Socket PAT.

- With a shank press-fit into the socket with resin, suppressing the concentration of stress on the shank part when impact is applied.
- Streamlined mirror finish (chrome plating) and excellent rust-proof sockets.
- Plane contact type hex socket.

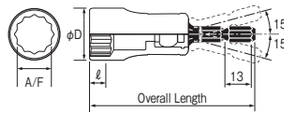


Model No.	A/F	φD	ℓ	Overall Length (mm)	Card size (mm)	EDP No.
TA200811	8	14	6.5	110	165×35	485008
TA201011	10	16	6.5	110	165×35	485010
TA201211	12	18	7.5	110	165×35	485012
TA201311	13	19	8	110	165×35	485013
TA201411	14	20	8	110	165×35	485014
TA201711	17	23	9	110	165×35	485017
TA201911	19	25	10	110	165×35	485019
TA202111	21	28	11	110	165×35	485021
TA202211	22	29	13	110	165×35	485022
TA202411	24	32	13	110	165×35	485024

※The colors of the A/F column in the table indicate the seal colors. Inner Ctn.: 5 sets Outer Ctn.: 100 sets

No. WSA "GO-TAN" (Hard Forged) Tilt Short Socket

- Pull the shank for tilting use. Push the shank toward the socket to fix.
- Recommended to the work more in a cramped space than at a sharp corner of a space.
- Tilting angle 15°assures superior torque transmission. The socket does not wobble and does not damage nuts.



Model No.	A/F	φD	ℓ	Overall Length (mm)	Card size (mm)	EDP No.
WSA2008	8	13	6.5	75	130×35	486751
WSA2010	10	16	6.5	75	130×35	486752
WSA2012	12	18	7.5	75	130×35	486753
WSA2013	13	19	8	75	130×35	486754
WSA2014	14	20	8	75	130×35	486755
WSA2017	17	23	9	75	130×35	486756
WSA2019	19	25	10	75	130×35	486757
WSA2021	21	28	11	80	140×35	486758
WSA2024	24	32	13	85	145×35	486759

※The colors of the A/F column in the table indicate the seal colors. Inner Ctn.: 5 sets Outer Ctn.: 100 sets

No. WSA209PS "GO-TAN" (Hard Forged) Tilt Short Socket 9-Piece Set

- Pull the shank for tilting use. Push the shank toward the socket to fix.
- Recommended to the work more in a cramped space than at a sharp corner of a space.
- Tilting angle 15°assures superior torque transmission. The socket does not wobble and does not damage nuts.

Model No.	Set Contents	Case size (mm)	EDP No.
WSA209PS	"GO-TAN" (Hard Forged) Tilt Short Socket 1 for each A/F8, 10, 12, 13, 14, 17, 19, 21, 24	227×105×38	486760

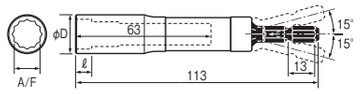
No. SL209PS "GO-TAN" (Hard Forged) Semi-long Socket 9-Piece Set

- Combination of the most versatile medium length sockets.
- Streamlined mirror finish (chrome plating) and excellent rust-proof sockets.
- Plane contact type hex socket.

Model No.	Set Contents	Case size (mm)	EDP No.
SL209PS	"GO-TAN" (Hard Forged) Semi-long Socket 1 for each A/F8, 10, 12, 13, 14, 17, 19, 21, 24	227×105×38	486745

No. WA Tilt Socket PAT.

- Ususlly can be used as deep length socket, but at a corner can be used as a tilting socket.
- Plane contact type dodecagonal socket allows for easy fitting to bolts and nuts, improving working performance.

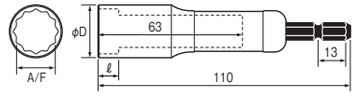


Model No.	A/F	φD	ℓ	Overall Length (mm)	Card size (mm)	EDP No.
WA201011	10	16	6.5	113	165×35	486361
WA201211	12	18	7.5	113	165×35	486362
WA201311	13	19	8	113	165×35	486363
WA201411	14	20	8	113	165×35	486364
WA201711	17	23	9	113	165×35	486365
WA201911	19	25	10	113	165×35	486366
WA202111	21	28	11	113	165×35	486367
WA202211	22	29	13	113	165×35	486368
WA202411	24	32	13	113	165×35	486369

※The colors of the A/F column in the table indicate the seal colors. Inner Ctn.: 5 sets Outer Ctn.: 100 sets

No. LA Deep Hole Socket

- Deep hole socket suitable for nut tightening work.
- Plane contact type dodecagonal socket allows for easy fitting to bolts and nuts, improving working performance.



Model No.	A/F	φD	ℓ	Overall Length (mm)	Card size (mm)	EDP No.
LA200811	8	14	6.5	110	165×35	486140
LA201011	10	16	6.5	110	165×35	486141
LA201211	12	18	7.5	110	165×35	486142
LA201311	13	19	8	110	165×35	486143
LA201411	14	20	8	110	165×35	486144
LA201711	17	23	9	110	165×35	486145
LA201911	19	25	10	110	165×35	486146
LA202111	21	28	11	110	165×35	486147
LA202211	22	29	13	110	165×35	486148
LA202411	24	32	13	110	165×35	486149

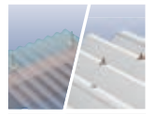
※The colors of the A/F column in the table indicate the seal colors. Inner Ctn.: 5 sets Outer Ctn.: 100 sets (LA202411 is supplied only by inner ctn.)

One point

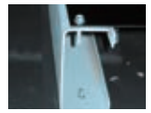
Various applications of socket bits

For assembly and disassembly of electric appliances, hex tapping screws, and bolt and nut tightening → 5.5 mm

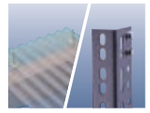
For mounting casters and adjust bolts, and pipe saddles to ALC, etc. → 7 mm



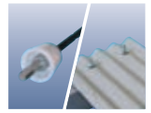
For corrugated panels (hook bolts), folded plate roof materials, and drill screws to be used between roof frames, etc. → 8 mm



For mounting fixtures to C-shape steel (drill screws, etc.) → 9.6 mm

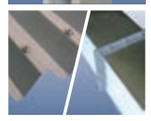


For corrugated panels (hook bolts), steel furniture assembly, lag screws, etc. → 10 mm



For corrugated slate panels (hook bolts), form work equipment (plastic cones), etc. → 12 mm

For mounting members to cavity walls (hanger bolts for cavity walls), lag screws, facility, piping work, etc. → 13 mm

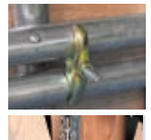


For placing folded plate roof (roof bolts), duct mounting, facility, piping work, etc. → 14 mm

For scaffolding work (clamps), cable rack assembly, lag screws, etc. → 17 mm

For strap bolts, lag screws, etc. → 19 mm

For form tie nuts, strap bolts, lag screws, etc. → 21 mm

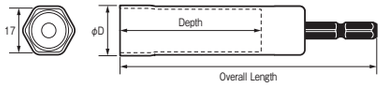


Useful when concrete is attached to a form tie nut → 22 mm

For hole-down joint metals (bolt with washer, anchor bolt), etc. → 24 mm

No. KAR20 Strut Channel Socket

- Very thin hexagonal socket, preventing its head from being obstructed by the strut channel frame.
- Special hexagonal shape in consideration of less damage on each edge of the nut.
- Deep hole in the box assuring to tighten long head screws, too.

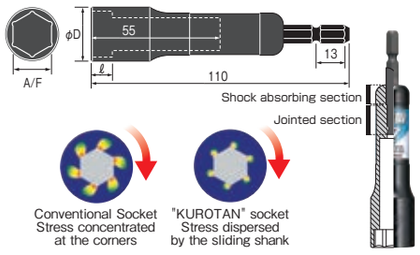


Model No.	A/F	φD	Depth	Overall Length (mm)	Card size (mm)	EDP No.
KAR201710	17	19.9	55	100	155×35×21	357489
KAR201715	17	19.9	105	150	205×35×21	357496

Inner Ctn.: 5 sets

No. HA "KUROTAN" Socket PAT.

- Professional's preferred all black finish.
- Improved durability as unique shank structure disperses the impact.
- Plane contact type hex socket.

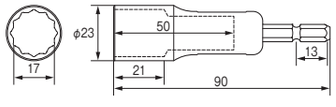


Model No.	A/F	φD	ℓ	Overall Length (mm)	Card size (mm)	EDP No.
HA201911	19	25	10	110	160×35	486117
HA202111	21	28	11	110	160×35	486118

※The colors of the A/F column in the table indicate the seal colors. Inner Ctn.: 5 sets Outer Ctn.: 100 sets

No. LAS Scaffolding Worker's Socket

- Socket for scaffolding corresponding to clamps.
- Plane contact type dodecagonal socket allows for easy fitting to bolts and nuts, improving workability.

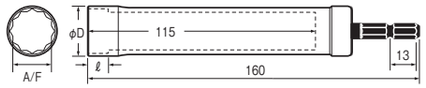


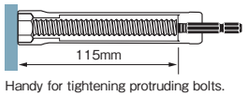
Model No.	A/F	Outer Diameter φ	ℓ	Overall Length (mm)	Card size (mm)	EDP No.
LAS20179	17	23	21	90	146×35	486150

※The colors of the A/F column in the table indicate the seal colors. Inner Ctn.: 5 sets Outer Ctn.: 100 sets

No. XA Drop-ceiling Socket

- Suited for tightening nuts when the projecting part is long.
- Useful for mounting duct and tightening hanging bolts.
- Plane contact type dodecagonal socket.





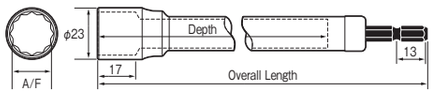
Handy for tightening protruding bolts.

Model No.	A/F	φD	ℓ	Overall Length (mm)	Card size (mm)	EDP No.
XA201715	17	23	9	160	217×35	486132
XA201915	19	25	10	160	217×35	486133
XA202115	21	28	11	160	217×35	486134
XA202415	24	32	13	160	217×35	486131

※The colors of the A/F column in the table indicate the seal colors. Inner Ctn.: 5 sets Outer Ctn.: 50 sets

No. KA Drop-ceiling Socket

- Super long size socket with a deep hole.
- The diameter of the deep hole part is designed to be as small as the size of the thread, realizing light weight and making overhead position work easier.
- Plane contact type dodecagonal socket.

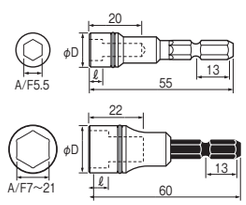


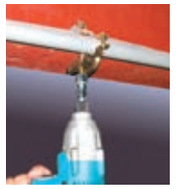
Model No.	A/F	Outer Diameter φ	Depth	Overall Length (mm)	Card size (mm)	EDP No.
KA201730	17	23	255	300	355×35	484421
KA201750	17	23	455	500	555×35	484422
KA201770	17	23	655	700	755×35	484423

※The colors of the A/F column in the table indicate the seal colors. Inner Ctn.: 5 sets

No. SA "GO-TAN" Socket

- Basic sockets.
- Plane contact type hexagonal socket allowing for excellent durability.





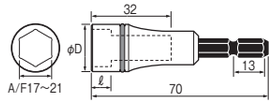
Axial Press-fitting is strong against twisting

Model No.	A/F	φD	ℓ	Overall Length (mm)	Card size (mm)	EDP No.
SA205555	5.5	10	3.5	55	110×35	486230
SA200755	7	13	5	60	115×35	486231
SA200860	8	13.5	6.5	60	115×35	486232
SA209660	9.6	16	6.5	60	115×35	486233
SA201060	10	16	6.5	60	115×35	486234
SA201260	12	18	8	60	115×35	486235
SA201360	13	19	8	60	115×35	486236
SA201460	14	20	8	60	115×35	486237
SA201760	17	23	9	60	115×35	486238

※The colors of the A/F column in the table indicate the seal colors. Inner Ctn.: 5 sets Outer Ctn.: 100 sets

No. SA "GO-TAN" Semi-Long Type

- Basic sockets.
- Plane contact type hexagonal socket allowing for excellent durability.

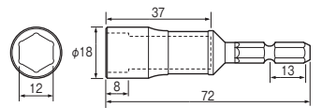


Model No.	A/F	φD	ℓ	Overall Length (mm)	Card size (mm)	EDP No.
SA201770	17	23	9	70	125×35	486243
SA201970	19	25	10	70	125×35	486239
SA202170	21	28	11	70	125×35	486240

※The colors of the A/F column in the table indicate the seal colors. Inner Ctn.: 5 sets Outer Ctn.: 100 sets

No. A201275 Socket for Plastic Cone

- For attaching and removing plastic cones.
- The shank can be hit with a hammer to remove concrete rubble.

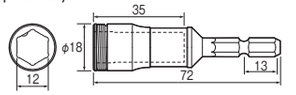


Model No.	A/F	φD	Overall Length (mm)	Card size (mm)	EDP No.
A201275	12	18	72	120×35	486241

※The colors of the A/F column in the table indicate the seal colors. Inner Ctn.: 5 sets Outer Ctn.: 100 sets

No. A201275C Plastic Cone Catcher

- A spring and a ball hold a plastic cone firmly, preventing plastic cone from coming out unexpectedly.

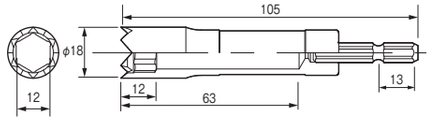


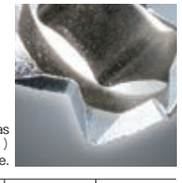
Model No.	A/F	Outer Diameter φ	Overall Length (mm)	Card size (mm)	EDP No.
A201275C	12	18	72	130×35	486265

※The colors of the A/F column in the table indicate the seal colors. Inner Ctn.: 5 sets Outer Ctn.: 100 sets

No. A201210B Rubble-removing Socket for Plastic Cones (Carbide Chip)

- For attaching and removing plastic cones while removing concrete rubbles.
- Excellent abrasion-resistance with the highly hard cutting edge.





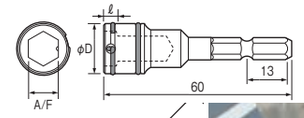
The hardness of the tip has been increased (HRC51) for higher wear-resistance.

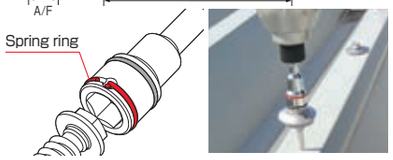
Model No.	A/F	Outer Diameter φ	Overall Length (mm)	Card size (mm)	EDP No.
A201210B	12	18	105	160×35	486264

※The colors of the A/F column in the table indicate the seal colors. Inner Ctn.: 5 sets

No. SAR Ring Nut Setter

- Ring spring holds the screw head firmly.
- It does not use magnets, not attracting chips.



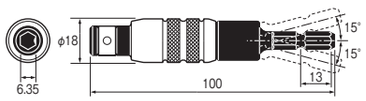


Model No.	A/F	φD	ℓ	Overall Length (mm)	Card size (mm)	EDP No.
SAR0860	8	13	3	60	115×35	486245
SAR9660	9.6	16	4	60	115×35	486246
SAR1060	10	16	5	60	115×35	486247

※The colors of the A/F column in the table indicate the seal colors. Inner Ctn.: 5 sets Outer Ctn.: 100 sets

No. WBJ Tilt Bit Holder PAT.

- Thanks to a hand-turned grip, users can work in a stable posture.
- Installing hall-down hardware and angle brackets.

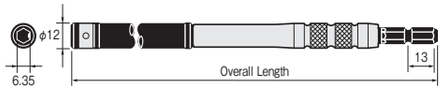


Model No.	Bit mounting angle (mm)	Outer Diameter φ	Overall Length (mm)	Card size (mm)	EDP No.
WBJ100	6.35	18	100	160×35	486357

Inner Ctn.: 5 sets Outer Ctn.: 100 sets

No. EXJ Long Bit Holder

- Insert 6.35mm hexagon bit, and transform it to a long type.
- Hand-turned grip enables to use in a stable posture.
- For tightening screws in high places or when nearby obstructions make work difficult.



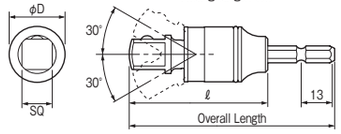
Model No.	Bit mounting angle (mm)	Outer Diameter φ	Overall Length (mm)	Card size (mm)	EDP No.
EXJ150	6.35	12	150	205×35	486350
EXJ300	6.35	12	300	355×35	486351

Inner Ctn.: 5 sets Outer Ctn.: 100 sets

No. A20USQ Universal Socket Adapter

- Universal adaptor used with a hand held socket.
- Most standard 9.5mm and 12.7mm socket types are available.
- Suited for bolt and nut tightening works in narrow spaces.

Tilting angle 30°

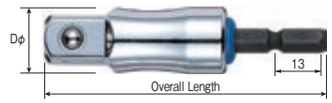


Model No.	Square drive size A/F	φD	ℓ	Overall Length (mm)	Card size (mm)	EDP No.
A20USQ3	3/8" (9.5mm)	20	49	77	133×35	486268
A20USQ4	1/2" (12.7mm)	23	56	84	140×35	486269

※The colors of the A/F column in the table indicate the seal colors. Inner Ctn.: 5 sets Outer Ctn.: 100 sets

No. TA20BSQ "GO-TAN" (Hard Forged) Mirror Socket Adapter

- Remarkably improved durability by protecting the shank with a shock absorbing resin.
- 4 times superior durability than a press-fit type.
- Adapter for electric screwdrivers, with which commercially available sockets can be used.



Model No.	Square drive size A/F	φD	Overall Length (mm)	Card size (mm)	EDP No.
TA20BSQ3	9.5	16	72	130×35	486492
TA20BSQ4	12.7	18	77	135×35	486493
TA20BSQ3L	9.5	16	110	170×35	486494
TA20BSQ4L	12.7	18	115	175×35	486495

Inner Ctn.: 5 sets Outer Ctn.: 100 sets

No. TA20WSQ "GO-TAN" (Hard Forged) Tilt Socket Adapter

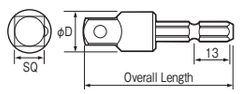
- Remarkably improved durability by protecting the shank with a shock absorbing resin.
- 4 times superior durability than a press-fit type.
- Adapter for electric screwdrivers, with which commercially available sockets can be used.

Model No.	Square drive size A/F	φD	Overall Length (mm)	Card size (mm)	EDP No.
TA20WSQ3	9.5	16	72	130×35	486496
TA20WSQ4	12.7	18	77	135×35	486497
TA20WSQ3L	9.5	16	110	170×35	486498
TA20WSQ4L	12.7	18	115	175×35	486499

Inner Ctn.: 5 sets Outer Ctn.: 100 sets

No. A20BSQ Socket Adapter

- Use your own sockets.
- Available in 3 sizes for different types of socket chucks.
- Superior durability by press-fitting (3/8", 1/2" only).

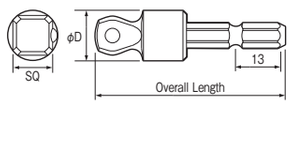


Model No.	Square drive size A/F	φD	Overall Length (mm)	Card size (mm)	EDP No.
A20BSQ2	1/4" (6.35mm)	8	45	105×35	486352
A20BSQ3	3/8" (9.5mm)	14	54	112×35	486353
A20BSQ4	1/2" (12.7mm)	16	59	117×35	486354

Inner Ctn.: 5 sets Outer Ctn.: 100 sets

No. A20WSQ Tilt Socket Adapter PAT.

- Use your own sockets.
- When pulled it swings, and when pushed it is locked.
- Superior durability by press-fitting.

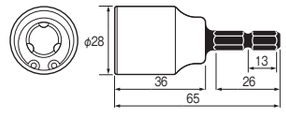


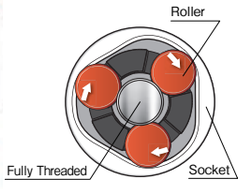
Model No.	Square drive size A/F	φD	Overall Length (mm)	Card size (mm)	EDP No.
A20WSQ3	3/8" (9.5mm)	14	56	114×35	486355
A20WSQ4	1/2" (12.7mm)	16	60	117×35	486356

Inner Ctn.: 5 sets Outer Ctn.: 100 sets

No. A20ZW Fully Threaded Socket

- 3 rollers hold screw firmly.
- Indispensable for a work with hanging bolts and light gauge steel framing construction.



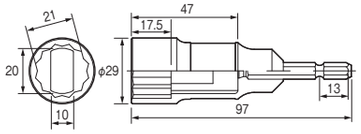


Model No.	Screw size	Outer Diameter φ	Overall Length (mm)	Card size (mm)	EDP No.
A20ZW30	w3/8	28	66	124×38×28	486359
A20ZW40	w1/2	28	66	124×38×28	486360

※The colors of the Screw size column in the table indicate the seal colors. Inner Ctn.: 5 sets Outer Ctn.: 100 sets

No. A202110F Form Tie Socket (For Ivy Form Ties)

- Removes the ivy form tie and nut at the same time.
- Plane contact type dodecagonal socket.

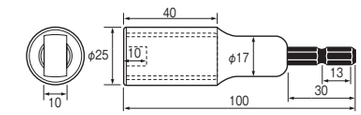


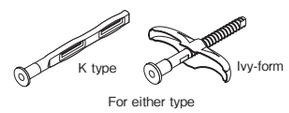
Model No.	A/F	Outer Diameter φ	Overall Length (mm)	Card size (mm)	EDP No.
A202110F	21	29	97	160×35	486267

※The colors of the A/F column in the table indicate the seal colors. Inner Ctn.: 5 sets

No. GA20F101 Form Tie Socket

- Suited for both K type form tie and Ivy form tie.
- Socket exclusively for form ties.



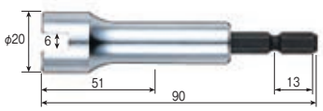


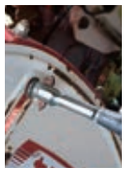
Model No.	A/F	Outer Diameter φ	Overall Length (mm)	Card size (mm)	EDP No.
GA20F101	10	25	100	160×35	486491

Inner Ctn.: 5 sets

No. A20CH13 Thumbscrew Socket

- To fasten either wing screws or hexagonal nuts (Wing screw size: M4/5/6, Hexagonal nut: A/F13mm).
- Can fasten many wing screws during a short time, mounting this product to an electric impact driver. May be recommended to installation of electric fences or PVC greenhouses.
- A/F13mm type may be recommended to replacement of bush cutters.
- Can be used with a commercially available driver handle.



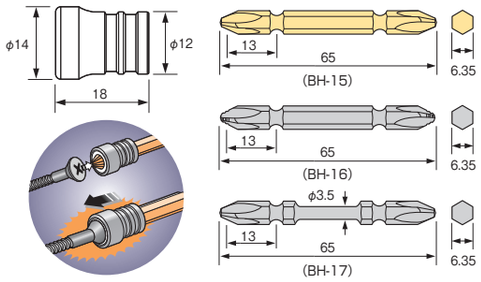


Model No.	A/F	φD	Overall Length (mm)	Card size (mm)	EDP No.
A20CH13	13	20	90	140×35	486244

Inner Ctn.: 5 sets Outer Ctn.: 100 sets

No. BH Magnetic Screw Catcher

- When a screw approaches the bit, the magnet sleeve moves automatically to catch the screw.
- Suited for building work such as floor panels, joist, interior finish, 2×4, etc.



Automatically catches screws

BH-15 BH-16 BH-17

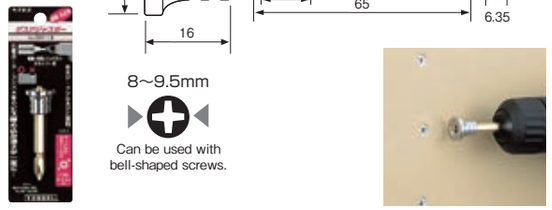
Model No.	Contents	Card size (mm)	EDP No.
BH-15	Magnetic Screw Catch 1pc. Double End Gold Color Bit ⊕2×65 1pc.	135×45	486331
BH-16	Magnetic Screw Catch 1pc. "GIZA" bit ⊕2×65 1pc.	135×45	486332
BH-17	Magnetic Screw Catch 1pc. Torsion bit ⊕2×65 1pc.	135×45	486333

Inner Ctn.: 10 sets

No. BH-13 Screw Adjuster PAT.

- Provided with screw stopper.
- Keeps the level of screw head constant in continuous work, causing no damage to the plaster board.

Bit



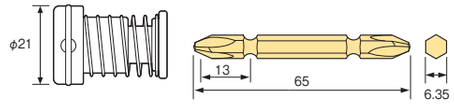
Model No.	Contents	Card size (mm)	EDP No.
BH-13	Screw Adjuster 1pc. Double End Gold Color Bit ⊕2×65 1pc.	135×45	486329

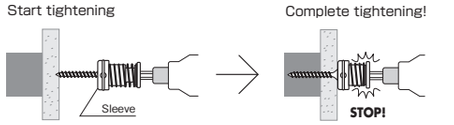
Outer Ctn.: 10 sets

No. BH-11 Screw Catch and Adjuster PAT.

- Catches long screws even without magnetic force.
- Screw stopper function keeps the level of screw head constant, causing no damage to the plaster board.

Bit





8~9.5mm
Can be used with
bell-shaped screws.

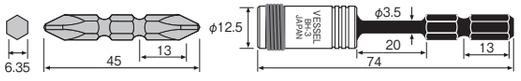
Model No.	Contents	Card size (mm)	EDP No.
BH-11	Screw Catch and Adjuster 1pc. Double End Gold Color Bit ⊕2×65 1pc.	135×45	486324

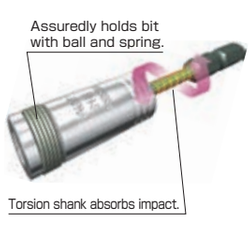
Outer Ctn.: 10 sets

No. BH-14 Torsion Bit Holder

- Bit holder with a torsion part.
- Can be used by mounting a double-ended bit.
- Prevents screw stripping and bit breakage.

Bit



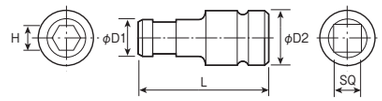


Model No.	Contents	Card size (mm)	EDP No.
BH-14	Torsion Bit Holder 1pc. High Hardness Bit ⊕2×45 1pc.	160×45	486330

Inner Ctn.: 10 sets

■ 9.5 / 12.7 mm For Impact Adapter

No. A30 Socket Anvil

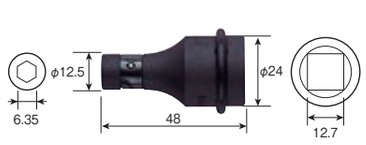


Model No.	(SQ)×A/F(H) (mm)	Dimensions D1	D2	L (mm)	Applicable to	EDP No.
A30	9.5×6.35	13	20	45	A14·A16	479201
	9.5×8.0	16	20	47.5	A15·A19	479202
	12.7×6.35	13	25	49	A14·A16	479401
	12.7×8.0	16	25	51	A15·A19	479402

■ 12.7 mm For Impact Adapter

No. BH-30 Socket Anvil

- Bit holder with a torsion part.
- Can be used by mounting a double-ended bit.
- Prevents screw stripping and bit breakage.

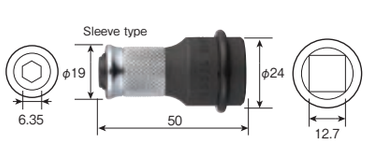


Model No.	(SQ)×A/F(H) (mm)	Card size (mm)	EDP No.
BH-30	12.7×6.35	135×60	486336

Inner Ctn.: 5 sets

No. BHC-30 Socket Anvil (sleeve type)

- Adaptor used with air/electric impact wrench.
- 6.35mm hexagon bits can be mounted at one-touch.

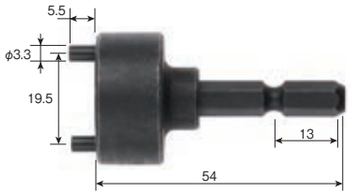


Model No.	(SQ)×A/F(H) (mm)	Card size (mm)	EDP No.
BHC-30	12.7×6.35	135×60	486582

Inner Ctn.: 5 sets

No. A202050P Pin Wrench for Disk Nut

- Can be used with an electric impact driver to remove firmly tightened disk nuts easily.
- For the disk grinder with the wheel diameter of 100mm.



Model No.	Pitch of nut holes	Pin diameter φ (mm)	Card size (mm)	EDP No.
A202050P	19.5	3.3	107×35	486581

Inner Ctn.: 5 sets

One point

For simple loosening of disk nuts...

An opposite side 6.35mm pin wrench with hexagonal shaft for disk nuts that can be attached to an impact driver. Disk nuts which cannot be removed by the drill wrench that came with the impact driver can be easily loosened and removed with this unit.

No. SST

SAKISUBO Torsion Bit

"PROKON" is a series of tools manufactured with a professional spirit for professionals. This solves various kinds of problems in construction, electric, and utility works. "PROKON" is all that craftspeople could ask!

No. SST

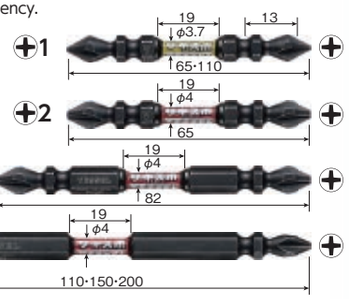
SAKISUBO Torsion Bit

Highly durable tapered bit combined with torsion effect.
Cushion effect at the constricted part prevents cam-out, improving work efficiency. Magnetized.

※This is for illustrative purpose.

No. SST SAKISUBO Torsion Bit 2-Piece Set PAT.

- Highly durable tapered bit combined with torsion effect.
- Cushion effect at the constricted part prevents cam-out, improving working efficiency.



Model No.	Contents	Card size (mm)	EDP No.
SST141065	⊕1×φ3.7× 65 2pcs.	160×35×8	485321
SST141110	⊕1×φ3.7×110 2pcs.	160×35×8	485335
SST142065	⊕2×φ4 × 65 2pcs.	160×35×8	485322
SST142082	⊕2×φ4 × 82 2pcs.	160×35×8	485323
SST142110	⊕2×φ4 ×110 2pcs.	160×35×8	485324
SST142150	⊕2×φ4 ×150 2pcs.	210×35×8	485325
SST142200	⊕2×φ4 ×200 2pcs.	260×35×8	485326

Inner Ctn.: 10 sets

No. SST5P SAKISUBO Torsion Bit 5-Piece Set PAT.

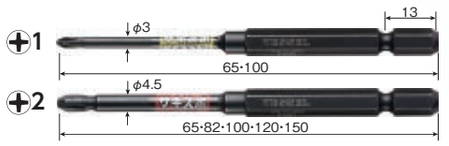
SST5P2065 SST5P2082 SST5P2110

Model No.	Contents	Card size (mm)	EDP No.
SST5P2065	⊕2×φ4 × 65 5pcs.	160×70×8	485444
SST5P2082	⊕2×φ4 × 82 5pcs.	160×70×8	485445
SST5P2110	⊕2×φ4 ×110 5pcs.	160×70×8	485446

Inner Ctn.: 10 sets

No. SS16 Recessed SAKISUBO Bit 2 Piece Set PAT.

- Thin shank type ideal for working in narrow places.
- Cushion effect at the constricted part prevents cam-out that may occur at the time of passing wood grains in the wooden work.



Model No.	Contents	Card size (mm)	EDP No.
SS161065	⊕1×φ3 ×65 2pcs.	160×35×8	485336
SS161100	⊕1×φ3 ×100 2pcs.	160×35×8	485327
SS162065	⊕2×φ4.5×65 2pcs.	160×35×8	485337
SS162082	⊕2×φ4.5×82 2pcs.	160×35×8	485338
SS162100	⊕2×φ4.5×100 2pcs.	160×35×8	485328
SS162120	⊕2×φ4.5×120 2pcs.	210×35×8	485339
SS162150	⊕2×φ4.5×150 2pcs.	210×35×8	485340

Inner Ctn.: 10 sets

No. NMCS Recessed SAKISUBO Bit With Bit Magnetizer/Demagnetizer PAT.

- Magnetic screw catcher with two built-in neodymium magnets holds screws securely.
- Combined with recessed bit, ideal for continuous screw tightening in confined places and on the dry walls.

Model No.	Contents	Card size (mm)	EDP No.
NMCS16210	Recessed SAKISUBO Bit ⊕2×φ4.5×100 1pc. Bit Magnetizer/Demagnetizer 1pc.	160×35×17	349958
NMCS16215	Recessed SAKISUBO Bit ⊕2×φ4.5×150 1pc. Bit Magnetizer/Demagnetizer 1pc.	210×35×17	349965

Inner Ctn.: 10 sets

One point

Strong magnet catches screws.
Bit Magnetizer / Demagnetizer

Attaching the NMC-2P to a bit make its retaining strength about 20 times more than normal magnetized bits. The bit with the NMC-2P can assuredly catch even a long screw.

Approx. **20** times stronger **0.318kgf**

No. SS16H Recessed "SAKISUBO" Hex Bit PAT.

- For hex hole bolts and screws.
- Long type useful for hard-to-reach places.

Model No.	Contents		Card size (mm)	EDP No.
SS16H2010	H2.0 × 100	1pc.	160×35×8	485329
SS16H2510	H2.5 × 100	1pc.	160×35×8	485330
SS16H3010	H3.0 × 100	1pc.	160×35×8	485331
SS16H4010	H4.0 × 100	1pc.	160×35×8	485332
SS16H5010	H5.0 × 100	1pc.	160×35×8	485333
SS16H6010	H6.0 × 100	1pc.	160×35×8	485334

Inner Ctn.: 10 sets

No. BW Recessed "SAKISUBO" Hex Bit 5-Piece Set PAT.

Model No.	Contents	Card size (mm)	EDP No.
BW-32	Recessed "SAKISUBO" Hex Bit A/F2.5, 3.0, 4.0, 5.0, 6.0 × 100 1 for each Bit Magnetizer/Demagnetizer 1pc.	160×70×23	486592

Inner Ctn.: 10 sets

No. SS16T Recessed "SAKISUBO" TORX Bit PAT.

- Specialized for Torx screws.
- Manufactured under license by Torx, this bit is compatible with any Torx screws.

Model No.	Contents		Card size (mm)	EDP No.
SS16T1010	T10 × 100	1pc.	160×35×8	485347
SS16T1510	T15 × 100	1pc.	160×35×8	485348
SS16T2010	T20 × 100	1pc.	160×35×8	485349
SS16T2510	T25 × 100	1pc.	160×35×8	485350
SS16T3010	T30 × 100	1pc.	160×35×8	485351

Inner Ctn.: 10 sets

No. BW Recessed "SAKISUBO" TORX Bit 5-Piece Set PAT.

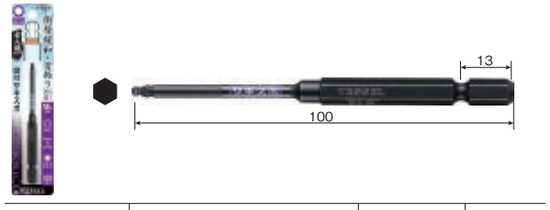
Model No.	Contents	Card size (mm)	EDP No.
BW-33	Recessed "SAKISUBO" TORX Bit T10, 15, 20, 25, 30 × 100 1 for each Bit Magnetizer/Demagnetizer 1pc.	160×70×23	486593

Inner Ctn.: 10 sets

TORX is a registered trademark of Acument TM Intellectual Properties, LLC (USA).
VESSEL has a manufacturing license in Japan and selling same to the world.

No. SS16BP Recessed "SAKISUBO" Ball Point Bit PAT.

- For hex hole bolt and screw.
- Ball point tip with an inclination angle of 30°. Suited for working in cramped places of high-density packaging.



Model No.	Contents		Card size (mm)	EDP No.
SS16BP2010	H2.0 × 100	1pc.	160×35×8	485341
SS16BP2510	H2.5 × 100	1pc.	160×35×8	485342
SS16BP3010	H3.0 × 100	1pc.	160×35×8	485343
SS16BP4010	H4.0 × 100	1pc.	160×35×8	485344
SS16BP5010	H5.0 × 100	1pc.	160×35×8	485345
SS16BP6010	H6.0 × 100	1pc.	160×35×8	485346

Inner Ctn.: 10 sets

No. NMC-2P Bit Magnetizer/Demagnetizer NEW

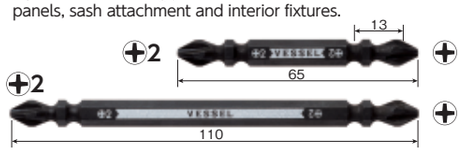
- Magnetic screw catcher with two built-in neodymium magnets holds screws securely.
- Combined with bit, ideal for continuous screw tightening in cramped places and on the dry walls.

Model No.	Contents	Card size (mm)	EDP No.
NMC-2P	Bit Magnetizer/Demagnetizer 2pcs.	120×44×17	486575

Inner Ctn.: 10 sets

No. S14 Double End "SAKISUBO" Bit 2-Piece Set

- The constricted part acts as a cushion, absorbing the shock from power impact tools, and improves durability.
- Optimal for fastening joists, staircase construction, concrete panels, sash attachment and interior fixtures.



Model No.	Contents		Card size (mm)	EDP No.
S142065	+2× 65	2pcs.	160×35×8	485447
S142082	+2× 82	2pcs.	160×35×8	485448
S142110	+2×110	2pcs.	160×35×8	485449
S142150	+2×150	2pcs.	210×35×8	485450

Inner Ctn.: 10 sets

No. S5P Double End "SAKISUBO" Bit 5-Piece Set

- Tapered tip prevents cam-out.
- Excellent durability.

Model No.	Contents		Package size (mm)	EDP No.
S5P2065F	+2× 65	5pcs.	135×50×7	485435
S5P2110F	+2×110	5pcs.	160×50×7	485436

Inner Ctn.: 10 sets

No. NMCS3P "SAKISUBO" Bit with Bit Magnetizer/Demagnetizer (packed in a plastic bag) 3-Piece Set

- A set of SAKISUBO bits with convenient NMC-2P Bit Magnetizer/Demagnetizer.
- More affordable by omitting printing mark from the bit.
- Both 3-piece and 8-piece sets come with 1 × NMC-2P Bit Magnetizer/Demagnetizer.

NMCS3P 2065F NMCS3P 2082F NMCS3P2110F

NMCS8P2065F NMCS8P2082F NMCS8P2110F

Model No.	Contents	Package size (mm)	EDP No.
NMCS3P2065F	SAKISUBO Bit +2× 65 3pcs. Bit Magnetizer/Demagnetizer 1pc.	130×50×16	485359
NMCS3P2082F	SAKISUBO Bit +2× 82 3pcs. Bit Magnetizer/Demagnetizer 1pc.	130×50×16	485360
NMCS3P2110F	SAKISUBO Bit +2×110 3pcs. Bit Magnetizer/Demagnetizer 1pc.	160×50×16	485361

Inner Ctn.: 10 sets

No. NMCS8P "SAKISUBO" Bit with Bit Magnetizer/Demagnetizer (packed in a plastic bag) 8-Piece Set

Model No.	Contents	Package size (mm)	EDP No.
NMCS8P2065F	SAKISUBO Bit +2× 65 8pcs. Bit Magnetizer/Demagnetizer 1pc.	143×87×16	485362
NMCS8P2082F	SAKISUBO Bit +2× 82 8pcs. Bit Magnetizer/Demagnetizer 1pc.	143×87×16	485363
NMCS8P2110F	SAKISUBO Bit +2×110 8pcs. Bit Magnetizer/Demagnetizer 1pc.	162×87×16	485364

Inner Ctn.: 10 sets

No. M-S14 "SAKISUBO" Bit (packed in a plastic bag) 10-Piece Set

M-S14 +2×110H

- For soft joint applications such as fastening elastic items (coarse threads, wood screw, resin tap etc). Can be used with general standard screws.
- Suppresses backlash of bits on a wood grain and secure a smooth fastening.

Model No.	Contents	Heat treatment classification	Package size (mm)	EDP No.
M-S14+2× 65H	+2× 65 10pcs.	H	86×133×8	415441
M-S14+2× 82H	+2× 82 10pcs.	H	86×162×8	415442
M-S14+2×110H	+2×110 10pcs.	H	86×162×8	415443
M-S14+2×150H	+2×150 10pcs.	H	86×202×8	415444

Outer Ctn.: 10 sets

No. M-S14H "SAKISUBO" Bit (packed in a plastic bag) 10-Piece Set

M-S14H +2×110H

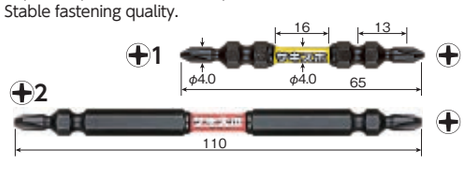
- For hard joint applications such as tapping or self-tapping screws. Optimal for low head screws such as thin washers or screws whose head hole accuracy is not good.
- Thick tip improves durability. Fits pan head screws like tapping or drill screws.
- Black finish appealing to professionals. Rust-resistant.

Model No.	Contents	Heat treatment classification	Package size (mm)	EDP No.
M-S14H+2× 65H	+2× 65 10pcs.	H	86×133×8	415445
M-S14H+2× 82H	+2× 82 10pcs.	H	86×162×8	415446
M-S14H+2×110H	+2×110 10pcs.	H	86×162×8	415447
M-S14H+2×150H	+2×150 10pcs.	H	86×202×8	415448

Outer Ctn.: 10 sets

No. SDT "SAKISUBO" Slender Torsion Bit 2-Piece Set

- Tapered tip allows for easy view of screw head and improves working efficiency.
- High hardness and ductile new material developed. Shock resistant in spite of the tapered tip. Can be used with a drilling screw.
- Torsion part absorbs a big impact of the impact driver. Remarkably improved durability.
- Tapered tip absorbs a low impact when the screw is seated. Stable fastening quality.



Model No.	Contents		Card size (mm)	EDP No.
SDT141065	+1× 65	2pcs.	160×35×8	485403
SDT141110	+1×110	2pcs.	160×35×8	485404
SDT142065	+2× 65	2pcs.	160×35×8	485395
SDT142082	+2× 82	2pcs.	160×35×8	485396
SDT142110	+2×110	2pcs.	160×35×8	485397
SDT142150	+2×150	2pcs.	210×35×8	485405

Inner Ctn.: 10 sets

No. SDT5P "SAKISUBO" Slender Torsion Bit 5-Piece Set

Model No.	Contents		Card size (mm)	EDP No.
SDT5P2065	+2× 65	5pcs.	160×70×8	485398
SDT5P2082	+2× 82	5pcs.	160×70×8	485399
SDT5P2110	+2×110	5pcs.	160×70×8	485400

Inner Ctn.: 10 sets

No. PS "Plus-Minus" Bit for Terminal Screws

- For Phillips /slotted screws.
- With a tube preventing short circuit.

Model No.	Contents	Card size (mm)	EDP No.
PS161110	PS1×φ4 ×φ4.5×110 1pc.	160×35×8	485411
PS162110	PS2×φ5.5×φ6 ×110 1pc.	160×35×8	485412
PS162150	PS2×φ5.5×φ6 ×150 1pc.	210×35×8	485413

Inner Ctn.: 10 sets

No. KDB "KADOGIWA" Corner Bit for Brace

- For fastening seismic hardware.
- Can be tilted up to 6° at the tip section. Ideal for working at corners.
- For fastening hall-down hardware and brace hardware.

Model No.	Contents	Card size (mm)	EDP No.
KDB-SQ3	SQ 3×100 1pc.	160×50×13	485421

Inner Ctn.: 10 sets

No. KDB Replacement Corner Bit

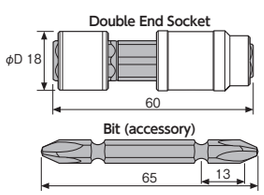
- Exclusively for the KDB-SQ3.

Model No.	Contents	Card size (mm)	EDP No.
KDB-SQ3K	SQ 3× 35 1pc.	135×35×8	485422

Inner Ctn.: 10 sets

No. BH-40/41 Double-End Socket NEW

- 1 socket compatible with multiple drill screws.
- Multi-function socket also usable as an adapter for bit extension.



Model No.	Bit (accessory)	Socket Size (A/F)	OAL	φD (mm)	EDP No.
BH-40	⊕2×65	8/9.6	60	18	486761
BH-41	⊕2×65	8/10	60	18	486762

*Metalworking drill: up to dia.6mm
*Woodworking drill: up to dia.12mm
* Socket bit cannot be linked.
Card size: 160mm x 50mm, Inner Ctn: 5 sets, Outer Ctn: 50 sets

No. A20ZB "BARITORI" Full Tread Deburring Bit

- Burrs of thread studs (made of iron) can be removed by electrical impact tools.
- Optimal for edge surface finish of hanging bolts and anchor bolts.

Model No.	Applicable	Card size (mm)	EDP No.
A20ZB55	Full Tread (iron) M8, 3/8, M10, M12	160×35×20	485431

Inner Ctn.: 5 sets

One point PROKON series

"Plus-Minus" Bit for Terminal Screws

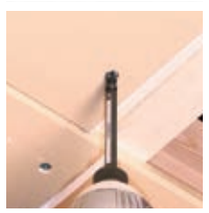
For Phillips/slotted screws that are widely used.
For fastening terminal screws on distribution board, fitting hardware to hold electric wire, plumbing, and air conditioner installation.

"KADOGIWA" Corner Bit for Bracing

Can be tilted up to 6° at the tip section. Can fasten screws easily in narrow places like corners using impact driver. For fastening hold down hardware, brace hardware and various seismic hardware.

"BARITORI" Full Tread Burring Bit

Easy to use with impact driver.
Excellent durability.
Must for fitting hanging bolts and installing air conditioning equipment.
Ideal for treating edge face of anchor bolt.

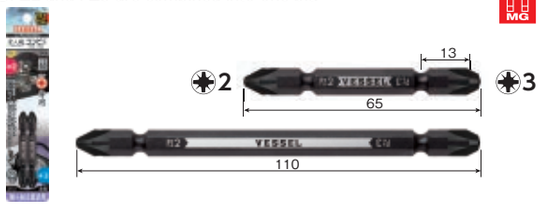


Double End "SAKISUBO" Bit

Improved durability with cushion effect at constricted part.
For working with joist, stairs, composite panels, sash frame, interior finishing, etc.

No. PZ Double End Combi Bit 2-Piece Set

- PZ2 and PZ3 are combined into one bit.

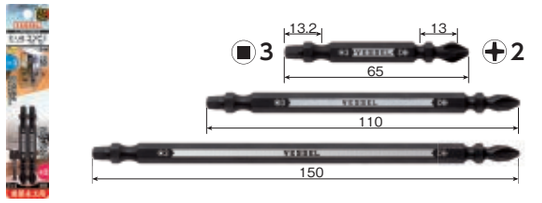


Model No.	Contents	Card size (mm)	EDP No.
PZ142365	PZ2/ PZ3×65 2pcs.	160×35×8	485401
PZ142311	PZ2/ PZ3×110 2pcs.	160×35×8	485402

Inner Ctn.: 10 sets

No. PQ Double End Combi Bit 2-Piece Set

- SQ3 and ⊕2 are combined into one bit.
- Tapered tip of ⊕2 prevents cam-out. Long life.



Model No.	Contents	Card size (mm)	EDP No.
PQ142365	⊕2 / SQ3× 65 2pcs.	160×35× 8	485406
PQ142311	⊕2 / SQ3×110 2pcs.	160×35× 8	485407
PQ142315S	⊕2 / SQ3×150 1pc.	190×35×17	485408

Inner Ctn.: 10 sets

No. 220W-123 Combi Plus Screwdriver

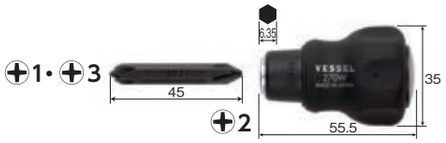
- Three sizes are combined into one bit. Can be used for most of Phillips screws commonly used.

Model No.	Contents	Card size (mm)	EDP No.
220W-123	●Bit Interchangeable Ball-Grip ●Bit ⊕1・⊕3 / ⊕2×110mm	160×70×43	233073

Inner Ctn.: 10 sets

No. 270BW-123 Combi Plus Stubby Screwdriver

- Stubby type suited for working in cramped places.
- Three sizes are combined into one bit. Can be used for most of Phillips screws commonly used.



Model No.	Contents	Card size (mm)	EDP No.
270BW-123	●Bit Interchangeable Cushion Subby Grip ●Bit ⊕1・⊕3 / ⊕2×45mm	160×55×37	233076

Inner Ctn.: 10 sets

No. 220W-62 Ball-Grip Interchangeable Screwdriver

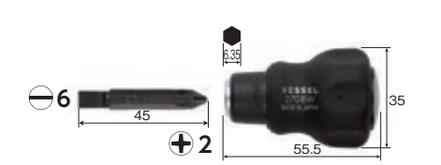
- Slotted tip used for quick connection terminal such as outlet and frequently-used ⊕2 are combined into one bit.

Model No.	Contents	Card size (mm)	EDP No.
220W-62	●Bit Interchangeable Ball-Grip ●Bit ⊖6 / ⊕2×110mm	160×70×43	233071

Inner Ctn.: 10 sets

No. 270BW-62 Cushion Stubby Interchangeable Screwdriver

- Stubby type suited for working in cramped places.
- Slotted tip used for quick connection terminal such as outlet and frequently-used ⊕2 are combined into one bit.



Model No.	Contents	Card size (mm)	EDP No.
270BW-62	●Bit Interchangeable Cushion Subby Grip ●Bit ⊖6 / ⊕2×110mm	160×70×43	233075

Inner Ctn.: 10 sets

No. 220W-3 Ball-Grip Interchangeable Screwdriver Set

●Convenient set with ⊕1, ⊕3, slotted tip used for quick connection terminal such as outlet, frequently-used ⊕2, and Pozidrive Pz2 and Pz3 widely used for imported furniture assembly and snowboard bindings.

Model No.	Contents	Card size (mm)	EDP No.
220W-3	●Bit Interchangeable Ball-Grip ●Bit ⊕1 / ⊕3, ⊖6/ ⊕2, PZ2 / PZ3 ×110mm	153×93×41	233072

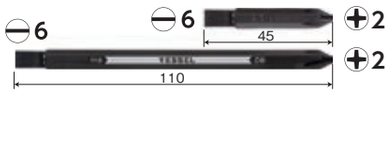
Inner Ctn.: 10 sets

No. PD Dedicated Replacement Combi Bit

●Slotted tip used for quick connection terminal such as outlet and frequently-used ⊕2 are combined into one bit.

PD142645

PD142611



Model No.	Contents	Card size (mm)	EDP No.
PD142645	⊖6 / ⊕2× 45mm 1pc.	135×35×8	485416
PD142611	⊖6 / ⊕2×110mm 1pc.	160×35×8	485414

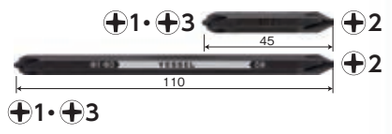
Inner Ctn.: 10 sets

No. PD Dedicated Replacement Combi Plus Bit

●Three sizes are combined into one bit.

PD1412345

PD1412311



Model No.	Contents	Card size (mm)	EDP No.
PD1412345	⊕1・⊕3 / ⊕2× 45mm 1pc.	135×35×8	485415
PD1412311	⊕1・⊕3 / ⊕2×110mm 1pc.	160×35×8	485417

Inner Ctn.: 10 sets

PD1412311 / PD142611 Application Models 220W / 220W-3 / 220W-62 / 220W-123
PD1412345 / PD142645 Application Models 270BW / 270BW-62 / 270BW-123

No. 220W Bit Interchangeable Ball-Grip

●Can be used as a normal ball-grip driver by inserting a bit for electric driver (6.35 mm hex bit).
●Black grip gives a robust impression.

Model No.	Contents	Card size (mm)	EDP No.
220W	Bit Interchangeable Ball-Grip	145×50×43	125344

Inner Ctn.: 10 sets

No. 270BW Bit Interchangeable Cushion Sutbby Grip

●Stubby type suited for working in confined places. Can be used with bits for electric driver (6.35 mm hex bit).
●Black grip gives a robust impression.

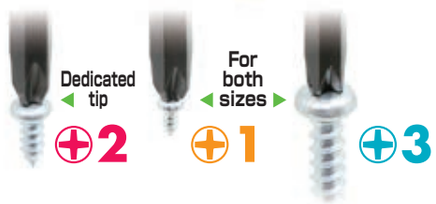
Model No.	Contents	Card size (mm)	EDP No.
270BW	Bit Interchangeable Cushion Sutbby Grip	100×50×37	233074

Inner Ctn.: 10 sets

One point

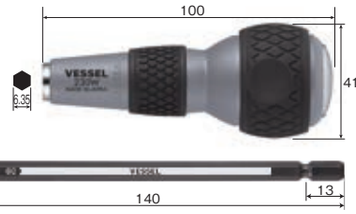
Combi PLUS

One bit for 3-size tip-end!
One side is dedicated to frequently-used ⊕2 and another for both ⊕1 and ⊕3.



No. 230W-2 Ball Grip (Bit-replaceable Tang-Thru Screwdriver)

●Blade interchangeable tang-thru grip.
●25mm large nut incorporated transmitting well the hammering power.
●Blades can be used with electric screwdrivers.

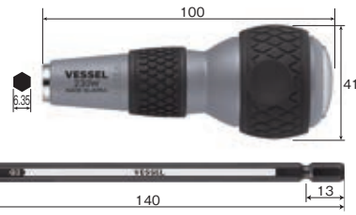


Model No.	Set Contents	Card size (mm)	EDP No.
230W-2	●Ball Grip (Bit-replaceable Tang-Thru grip) ●Bit ⊕2×140mm 1 for each	160×70×43	125327

Inner Ctn.: 10 sets

No. 230W-3 Ball Grip (Bit-replaceable Tang-Thru Screwdriver)

●Blade interchangeable tang-thru grip.
●25mm large nut incorporated transmitting well the hammering power.
●Blades can be used with electric screwdrivers.

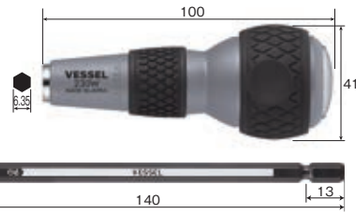


Model No.	Set Contents	Card size (mm)	EDP No.
230W-3	●Ball Grip (Bit-replaceable Tang-Thru grip) ●Bit ⊕3×140mm 1 for each	160×70×43	125328

Inner Ctn.: 10 sets

No. 230W-6 Ball Grip (Bit-replaceable Tang-Thru Screwdriver)

●Blade interchangeable tang-thru grip.
●25mm large nut incorporated transmitting well the hammering power.
●Blades can be used with electric screwdrivers.

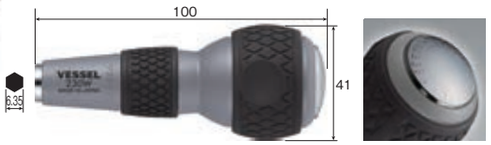


Model No.	Set Contents	Card size (mm)	EDP No.
230W-6	●Ball Grip (Bit-replaceable Tang-Thru grip) ●Bit ⊖6×140mm 1 for each	160×70×43	125329

Inner Ctn.: 10 sets

No. 230W Ball Grip (Bit-replaceable Tang-Thru grip)

●Blade interchangeable tang-thru grip. (A/F6.35mm)
●25mm large nut incorporated transmitting well the hammering power.



Model No.	Grip size	Package size (mm)	Inner Ctn.	EDP No.
230W	length 100mm, dia.41mm	145×50×43	10	125326

No. PD162140 / PD163140 / PD166140 Replacement Bit

●Interchangeable blade for the 230W (ball grip tang-thru grip). A/F6.35mm.
●Blades can be used with electric screwdrivers.

PD162140 PD163140 PD166140

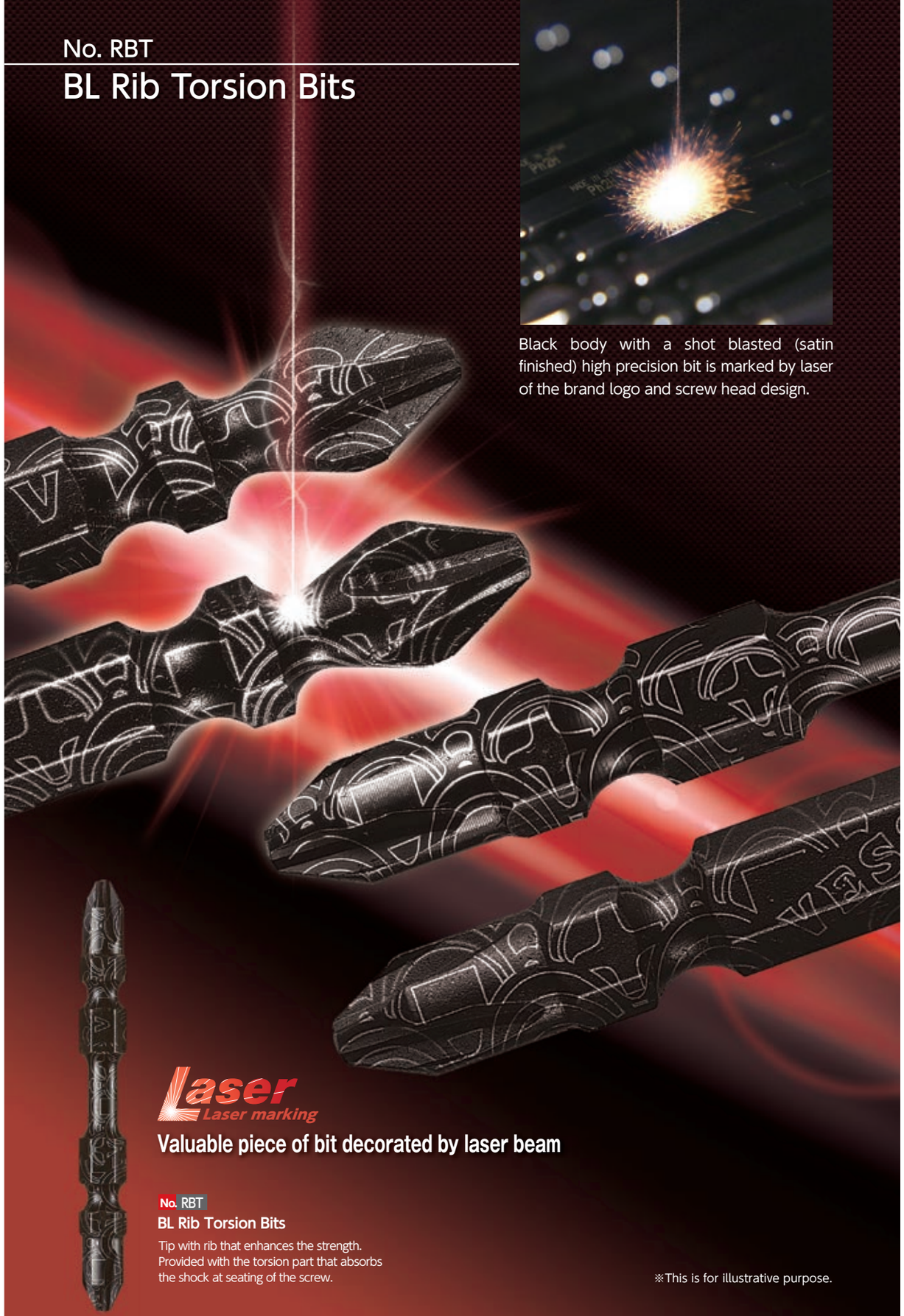
Model No.	Contents	Card size (mm)	EDP No.
PD162140	⊕2 × 140mm 1pc	175×35×8	485418
PD163140	⊕3 × 140mm 1pc	175×35×8	485419
PD166140	⊖6 × 140mm 1pc	175×35×8	485420

Inner Ctn.: 5 sets

No. RBT

BL Rib Torsion Bits

Black body with a shot blasted (satin finished) high precision bit is marked by laser of the brand logo and screw head design.



Laser
Laser marking

Valuable piece of bit decorated by laser beam

No. RBT

BL Rib Torsion Bits

Tip with rib that enhances the strength.
Provided with the torsion part that absorbs the shock at seating of the screw.

※This is for illustrative purpose.

No. S3P BL SAKISUBO Bit 3-Piece Set

- SAKISUBO bits whose constricted part acts as a cushion, absorbing the shock from power impact tools.
- Optimal for fastening joists, staircase construction, concrete panels, sash attachment and interior fixtures.

Model No.	Contents	Card size (mm)	EDP No.
S3P2065-BL	⊕2× 65 3pcs.	160×43×8	485371
S3P2082-BL	⊕2× 82 3pcs.	160×43×8	485372
S3P2110-BL	⊕2×110 3pcs.	160×43×8	485373

Inner Ctn.: 10 sets

No. S5P BL SAKISUBO Bit 5-Piece Set

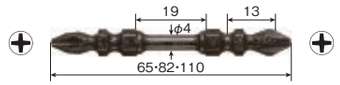
- Bits in a clip holder with magnetizer.

Model No.	Contents	Card size (mm)	EDP No.
S5P2065-BL	⊕2× 65 5pcs.	160×75×23	485383
S5P2082-BL	⊕2× 82 5pcs.	160×75×23	485384
S5P2110-BL	⊕2×110 5pcs.	160×75×23	485385

Inner Ctn.: 5 sets

No. SST3P BL SAKISUBO Torsion Bit 3-Piece Set PAT.

- SAKISUBO shape, in which the constricted part acts as a cushion, absorbing the shock from power impact tools.
- Torsion effect that absorbs the shock generated at the time of seating of the screw.
- Optimal for fastening joists, staircase construction, concrete panels, sash attachment and interior fixtures.



Model No.	Contents	Card size (mm)	EDP No.
SST3P2065-BL	⊕2× 65 3pcs.	160×43×8	485377
SST3P2082-BL	⊕2× 82 3pcs.	160×43×8	485378
SST3P2110-BL	⊕2×110 3pcs.	160×43×8	485379

Inner Ctn.: 10 sets

No. SST5P BL SAKISUBO Torsion Bit 5-Piece Set PAT.

- Bits in a clip holder with magnetizer.

Model No.	Contents	Card size (mm)	EDP No.
SST5P2065-BL	⊕2× 65 5pcs.	160×75×23	485389
SST5P2082-BL	⊕2× 82 5pcs.	160×75×23	485390
SST5P2110-BL	⊕2×110 5pcs.	160×75×23	485391

Inner Ctn.: 5 sets

No. RB3P BL Rib Bit 3-Piece Set

- Tip with rib that enhances the strength.
- Optimal for iron and steel work.

Model No.	Contents	Card size (mm)	EDP No.
RB3P2065-BL	⊕2× 65 3pcs.	160×43×8	485374
RB3P2082-BL	⊕2× 82 3pcs.	160×43×8	485375
RB3P2110-BL	⊕2×110 3pcs.	160×43×8	485376

Inner Ctn.: 10 sets

No. RB5P BL Rib Bit 5-Piece Set

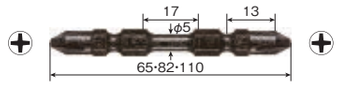
- Bits in a clip holder with magnetizer.

Model No.	Contents	Card size (mm)	EDP No.
RB5P2065-BL	⊕2× 65 5pcs.	160×75×23	485386
RB5P2082-BL	⊕2× 82 5pcs.	160×75×23	485387
RB5P2110-BL	⊕2×110 5pcs.	160×75×23	485388

Inner Ctn.: 5 sets

No. RBT3P BL Rib Torsion Bit 3-Piece Set

- Tip with rib that enhances the strength.
- Torsion effect that absorbs the shock generated at the time of seating of the screw.
- Optimal for iron and steel work.



Model No.	Contents	Card size (mm)	EDP No.
RBT3P2065-BL	⊕2× 65 3pcs.	160×43×8	485380
RBT3P2082-BL	⊕2× 82 3pcs.	160×43×8	485381
RBT3P2110-BL	⊕2×110 3pcs.	160×43×8	485382

Inner Ctn.: 10 sets

No. RBT5P BL Rib Torsion Bit 5-Piece Set

- Bits in a clip holder with magnetizer.

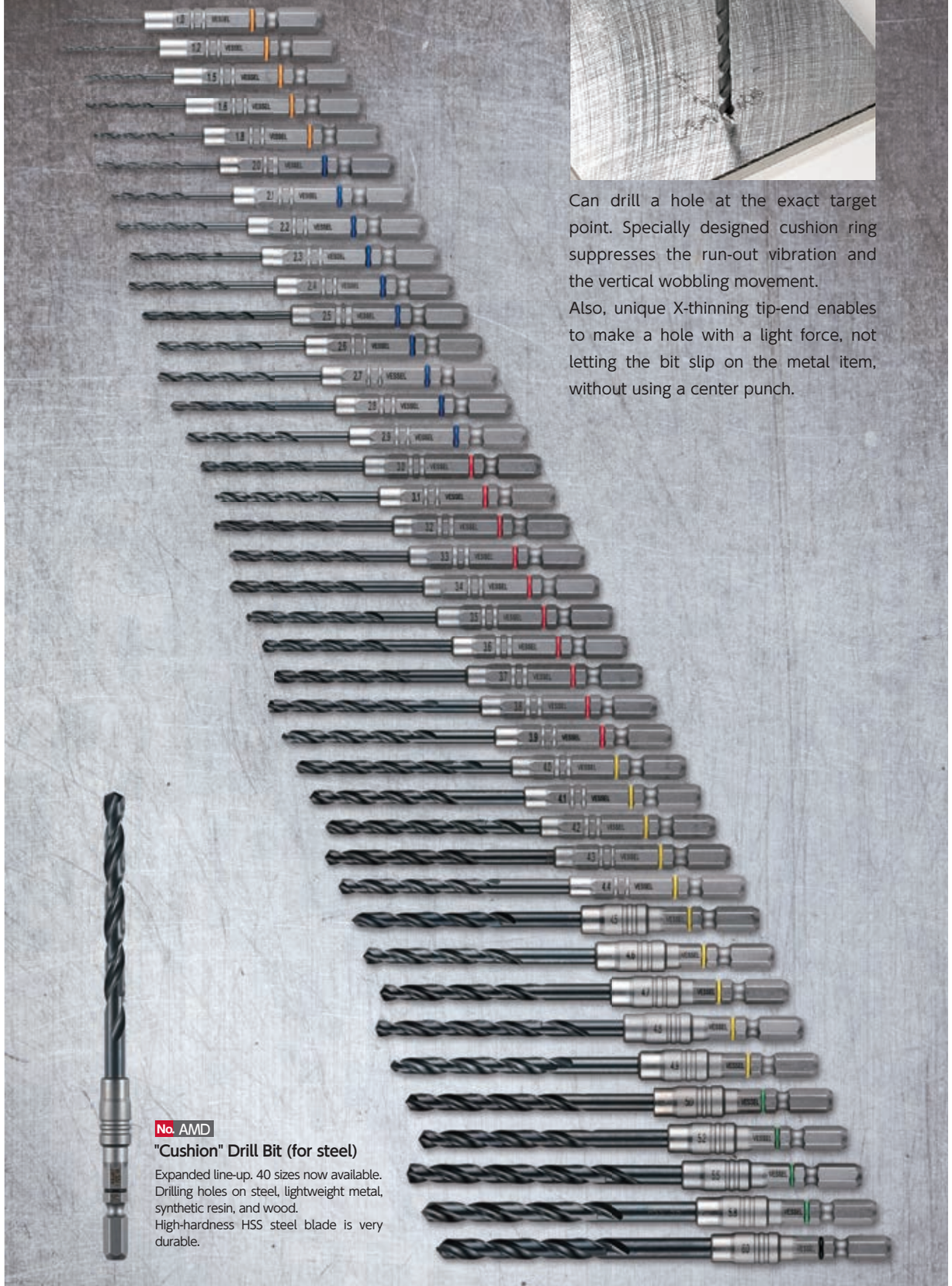
Model No.	Contents	Card size (mm)	EDP No.
RBT5P2065-BL	⊕2× 65 5pcs.	160×75×23	485392
RBT5P2082-BL	⊕2× 82 5pcs.	160×75×23	485393
RBT5P2110-BL	⊕2×110 5pcs.	160×75×23	485394

Inner Ctn.: 5 sets

No. AMD

"Cushion" Drill Bit (for steel)

Can drill a hole at the exact target point. Specially designed cushion ring suppresses the run-out vibration and the vertical wobbling movement.
Also, unique X-thinning tip-end enables to make a hole with a light force, not letting the bit slip on the metal item, without using a center punch.



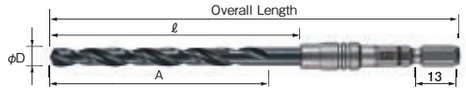
No. AMD

"Cushion" Drill Bit (for steel)

Expanded line-up. 40 sizes now available.
Drilling holes on steel, lightweight metal, synthetic resin, and wood.
High-hardness HSS steel blade is very durable.

No. AMD "Cushion" Drill Bit (for steel) PAT.

- Expanded line-up. 40 sizes now available.
- Drilling holes on steel, lightweight metal, synthetic resin, and wood.
- High-hardness HSS steel blade is very durable.



X-shape (cross) thinning process enables high-speed drilling and remarkable fitting.

Can drill a hole with a light force even without using a center punch.

Model No.	ϕD	ℓ	A	Overall Length (mm)	X-shape (cross) thinning	EDP No.
AMD-1.0	1.0	22	12	72	—	461111
AMD-1.2	1.2	26	16	76	—	461112
AMD-1.5	1.5	24	18	74	—	461113
AMD-1.6	1.6	26	20	76	—	461114
AMD-1.8	1.8	29	22	79	—	461115
AMD-2.0	2.0	32	24	82	—	461001
AMD-2.1	2.1	32	24	82	—	461116
AMD-2.2	2.2	36	27	86	—	461117
AMD-2.3	2.3	36	27	86	—	461118
AMD-2.4	2.4	40	30	90	—	461119
AMD-2.5	2.5	40	30	90	—	461002
AMD-2.6	2.6	40	30	90	—	461120
AMD-2.7	2.7	44	33	94	—	461121
AMD-2.8	2.8	44	33	94	—	461003
AMD-2.9	2.9	44	33	94	—	461122
AMD-3.0	3.0	44	33	94	●	461004
AMD-3.1	3.1	44	36	94	●	461123
AMD-3.2	3.2	48	36	98	●	461005
AMD-3.3	3.3	48	36	98	●	461006
AMD-3.4	3.4	53	39	103	●	461017
AMD-3.5	3.5	53	39	103	●	461007
AMD-3.6	3.6	53	39	103	●	461018
AMD-3.7	3.7	53	39	103	●	461008
AMD-3.8	3.8	58	43	108	●	461009
AMD-3.9	3.9	58	43	108	●	461124
AMD-4.0	4.0	58	43	108	●	461010
AMD-4.1	4.1	58	43	108	●	461125
AMD-4.2	4.2	58	43	108	●	461011
AMD-4.3	4.3	63	47	113	●	461019
AMD-4.4	4.4	63	47	113	●	461126
AMD-4.5	4.5	63	47	114	●	461012
AMD-4.6	4.6	64	47	114	●	461127
AMD-4.7	4.7	64	47	114	●	461128
AMD-4.8	4.8	69	52	120	●	461013
AMD-4.9	4.9	70	52	120	●	461129
AMD-5.0	5.0	69	52	120	●	461014
AMD-5.2	5.2	69	52	120	●	461020
AMD-5.5	5.5	76	57	127	●	461015
AMD-5.8	5.8	77	57	127	●	461130
AMD-6.0	6.0	76	57	127	●	461016

※Colors inside the table cells indicate the ring color.
Mounting quantity : 1 Card size : 165×35×8mm
Inner Ctn.: 10 sets, Outer Ctn.: 200 sets

No. AMD3S "Cushion" Drill Bit (for steel) 3-Piece Set PAT.

- Drilling holes on steel, lightweight metal, synthetic resin, and wood.
- High-hardness HSS steel blade is very durable.

Model No.	Contents	Card size (mm)	EDP No.
AMD3S-1	2.0 / 2.5 / 3.0mm 1pc ea	165×45×10	461101
AMD3S-2	3.0 / 3.5 / 4.0mm 1pc ea	165×45×10	461102
AMD3S-3.5	3.5mm 3 pcs	165×45×10	461103
AMD3S-2.0	2.0mm 3pcs	165×45×10	461089
AMD3S-2.5	2.5mm 3pcs	165×45×10	461090
AMD3S-2.8	2.8mm 3pcs	165×45×10	461091
AMD3S-3.0	3.0mm 3pcs	165×45×10	461092
AMD3S-3.2	3.2mm 3pcs	165×45×10	461093
AMD3S-3.3	3.3mm 3pcs	165×45×10	461094
AMD3S-3.8	3.8mm 3pcs	165×45×10	461095
AMD3S-4.0	4.0mm 3pcs	165×45×10	461096
AMD3S-4.2	4.2mm 3pcs	165×45×10	461097
AMD3S-4.5	4.5mm 3pcs	165×45×10	461098
AMD3S-5.0	5.0mm 3pcs	165×45×10	461099
AMD3S-6.0	6.0mm 3pcs	165×45×10	461100

Inner Ctn.: 10 sets

No. AMD6P "Cushion" Drill Bit (for steel) 6-Piece Set

Model No.	Contents	Card size (mm)	EDP No.
AMD6P-3.5	3.5mm 6 pcs	165×55×7	461104

Inner Ctn.: 10 sets

No. AMD7S "Cushion" Drill Bit (for steel) 7-Piece Set

- Drilling holes on steel, lightweight metal, synthetic resin, and wood.
- High-hardness HSS steel blade is very durable.

Model No.	Contents	Card size (mm)	EDP No.
AMD7S	ϕD 2.8,3.0,3.5,4.2, 4.5,5.0,6.0mm (1 each)	175×65×10	461105

Inner Ctn.: 10 sets

No. AMD14S "Cushion" Drill Bit (for steel) 14-Piece Set

Model No.	Contents	Card size (mm)	EDP No.
AMD14S	ϕD 1.5,2.0,2.5,2.8,3.0,3.2,3.5,4.0, 4.5,5.0,5.5,6.0,6.5,7.0mm (1 each)	155×108×38	461106

Inner Ctn.: 10 sets

No. KMD "KESSAKU" Drill Bit (for steel)

- "Irregular spiral shape" adopted. Spiral angle is moderate toward the shank side. Chips are exhausted smoothly, resulting in a high speed drilling.
- X-shape (cross) thinning process helps the tip fit the object and drill a hole without punching.
- Tip-end angle is as acute as 118°. Can drill a hole with a light force.
- Sharp edge lasts as high hardness HSS steel is adopted.

Model No.	ϕD (mm)	A (mm)	Overall Length (mm)	Card size (mm)	Inner Ctn.	Outer Ctn.	EDP No.
KMD-6.5	6.5	63	107	165×35×11	10	200	461141
KMD-7.0	7.0	65	109	165×35×11	10	200	461142
KMD-7.5	7.5	66	110	165×35×11	10	200	461143
KMD-8.0	8.0	67	111	165×35×11	10	200	461144
KMD-8.5	8.5	70	114	165×35×11	10	200	461145
KMD-9.0	9.0	73	117	165×35×11	10	200	461146
KMD-9.5	9.5	74	118	165×35×15	5	100	461147
KMD-10.0	10.0	76	120	165×35×15	5	100	461148
KMD-10.5	10.5	78	122	165×35×15	5	100	461149
KMD-11.0	11.0	81	125	165×35×15	5	100	461150
KMD-11.5	11.5	82	126	165×35×15	5	100	461151
KMD-12.0	12.0	83	127	165×35×15	5	100	461152
KMD-12.5	12.5	83	128	165×35×15	5	100	461153
KMD-13.0	13.0	85	130	165×35×15	5	100	461154

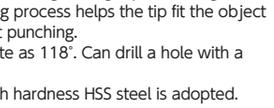
Mounting quantity : 1

One point

Drill a large bore hole with "KESSAKU" drill bit.

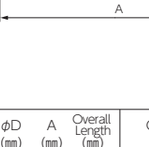
Irregular spiral shape

While making a hole, high speed revolution of power tool may cause the machined chips to block the drilled hole and, in consequence, the product cannot be drilled through. In order to let out the chips sequentially, the tip-end of the drill adopts an irregular spiral shape in its design. The spiral angle turns to be more moderate in the drive side. This design enables to make the drilling work quicker by exhausting the machined chips efficiently.



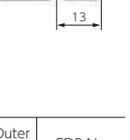
X-shape thinning

Improved bite.
No punch (a marking to determine the center of the machined object so that the drill tip-end does not move) us required.



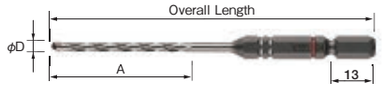
118°Tip-end

Cutting quality emphasis. Drill a hole just by pushing lightly toward the drilled object.



No. ACD "Cushion" Drill Bit (for concrete) PAT.

- Drilling holes on mortar, block, brick, ALC, plaster boards, etc. and also drilling pilot holes for screw anchor insertion and plugless screws.



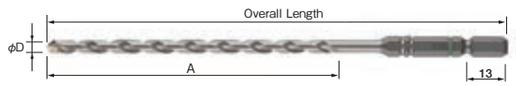
Carbide Chip
+
Asymmetry shape

This asymmetry shaped tip reduces the cutting resistance, making it possible to drill at a relatively low torque.

Model No.	ϕD	A	Overall Length (mm)	Card size (mm)	EDP No.
ACD-3.0	3.0	45	102	165×35×8	462001
ACD-3.2	3.2	45	102	165×35×8	462002
ACD-3.4	3.4	45	102	165×35×8	462003
ACD-3.5	3.5	45	102	165×35×8	462004
ACD-3.8	3.8	50	107	165×35×8	462005
ACD-4.0	4.0	50	107	165×35×8	462006
ACD-4.3	4.3	50	107	165×35×8	462007
ACD-4.5	4.5	50	107	165×35×8	462008
ACD-4.8	4.8	50	107	165×35×8	462009
ACD-5.0	5.0	50	107	165×35×8	462010
ACD-5.3	5.3	65	122	165×35×8	462015
ACD-5.5	5.5	65	122	165×35×8	462011
ACD-6.0	6.0	65	122	165×35×8	462012
ACD-6.4	6.4	65	122	165×35×8	462013
ACD-6.5	6.5	65	122	165×35×8	462014

※Colors inside the table cells indicate the ring color. Mounting quantity : 1 Inner Ctn.: 10 sets, Outer Ctn.: 200 sets

No. ACD "Cushion" Drill Bit (for concrete) Long Type PAT.



Model No.	ϕD	A	Overall Length (mm)	Card size (mm)	EDP No.
ACD-3.4L	3.4	95	152	200×35×8	462029
ACD-3.5L	3.5	95	152	200×35×8	462030
ACD-4.3L	4.3	100	157	200×35×8	462031
ACD-4.8L	4.8	100	157	200×35×8	462032
ACD-5.0L	5.0	100	157	200×35×8	462033
ACD-6.4L	6.4	115	172	200×35×8	462034

※Colors inside the table cells indicate the ring color. Mounting quantity : 1 Inner Ctn.: 10 sets, Outer Ctn.: 200 sets

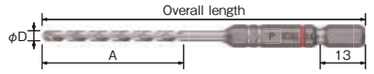
No. ACD3S "Cushion" Drill Bit (for concrete) 3-Piece Set PAT.

Model No.	Contents	Card size (mm)	EDP No.
ACD3S-3.4	3.4mm 3 pcs	165×50×8	462101
ACD3S-3.5	3.5mm 3 pcs	165×50×8	462102
ACD3S-4.3	4.3mm 3 pcs	165×50×8	462103

※Colors inside the table cells indicate the ring color. Inner Ctn.: 10 sets

No. APD "Cushion" Drill Bit for Porcelain Tiles NEW

- Slipless quick drilling.
- Special carbide chip for porcelain tiles is attached at the bit tip with heat-resistant solder.
- Cushion ring prevents backlash, enabling to drill at the right point.



Model No.	ϕD	A	Overall Length (mm)	Card size (mm)	EDP No.
APD-3.0	3.0	45	102	165×35×8	464001
APD-3.2	3.2	45	102	165×35×8	464002
APD-3.4	3.4	45	102	165×35×8	464003
APD-3.5	3.5	45	102	165×35×8	464004
APD-3.8	3.8	50	107	165×35×8	464005
APD-4.0	4.0	50	107	165×35×8	464006
APD-4.3	4.3	50	107	165×35×8	464007
APD-4.5	4.5	50	107	165×35×8	464008
APD-4.8	4.8	50	107	165×35×8	464009
APD-5.0	5.0	50	107	165×35×8	464010
APD-5.3	5.3	65	122	165×35×8	464011
APD-5.5	5.5	65	122	165×35×8	464012
APD-6.0	6.0	65	122	165×35×8	464013
APD-6.4	6.4	65	122	165×35×8	464014
APD-6.5	6.5	65	122	165×35×8	464015

※Colors inside the table cells indicate the ring color. Mounting quantity : 1 Inner Ctn.: 10 sets, Outer Ctn.: 200 sets

No. APD3S "Cushion" Drill Bit for Porcelain Tiles 3-Piece Set

- Slipless quick drilling.
- Special carbide chip for porcelain tiles is attached at the bit tip with heat-resistant solder.
- Cushion ring prevents backlash, enabling to drill at the right point.

Model No.	Contents	Card size (mm)	EDP No.
APD3S-3.4	3.4mm 3 pcs	165×50×8	464016
APD3S-3.5	3.5mm 3 pcs	165×50×8	464017
APD3S-4.3	4.3mm 3 pcs	165×50×8	464018
APD3S-6.0	6.0mm 3 pcs	165×50×8	464019

※Colors inside the table cells indicate the ring color. Inner Ctn.: 10 sets

One point

Outstanding durability and machining speed

Special tip-end design, with drilling capability on porcelain tiles taken into consideration, enables to drill quickly.

Carbide chip is soldered at the tip-end. Asymmetric tip-end reduces the machining resistance, resulting in a quick drilling with a low torque even on a hard and slippery porcelain tile.

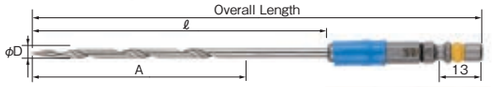
Specially designed asymmetric tip-end with a carbide chip. Very recommended for drilling on porcelain tiles.

Heat resistant solder makes the bit highly endurable even without using water when drilling.

Endurable soldering material is chosen for attachment of the carbide chip to the tip-end of the bit, and thus water is not always required. However, using the APD drill bit with water at its tip-end can improve the lifetime.

No. ATD "Cushion" Drill Bit for Awl PAT.

- Drilling holes on steel, wood, bamboo, plaster, and resin boards. Also drilling a pilot hole on other brittle materials.
- Durable straight shank can drill a hole on hard wood.

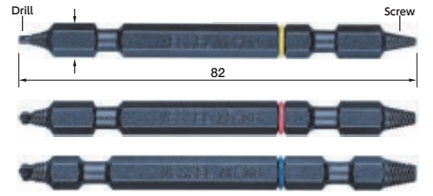


Model No.	ϕD	ℓ	A	Overall Length (mm)	Card size (mm)	EDP No.
ATD-4	3.0	93	62	143	200×35×8	463001
ATD-5	4.0	103	76	153	200×35×8	463002
ATD-6	5.0	113	80	163	200×35×8	463003

※Colors inside the table cells indicate the ring color. Mounting quantity : 1 Inner Ctn.: 10 sets, Outer Ctn.: 200 sets

No. NEJ Damaged Screw Remover

- Easy to remove stripped or damaged screws with an electric screwdriver (at low speed mode).
- No need to change the rotation; drilling on a damaged screw and removing it can be conducted by rotating counterclockwise.
- O-ring helps distinguish the sizes. Also good to check the drill or thread side.



Model No.	Compatible Screw	Overall Length	Tip dia. Drill	Tip dia. Screw	H (mm)	EDP No.
NEJ-1	M3～M4	82	1.8	1.7	6.35	485424
NEJ-2	M5～M6	82	2.7	2.6	6.35	485425
NEJ-3	M6～M8	82	3.7	3.6	6.35	485426

※Colors inside the table cells indicate the ring color. Card size:135×50×8mm Inner Ctn.: 10 sets Outer Ctn.: 200 sets

No. NEJ-123 Damaged Screw Remover 3-Piece Set

Model No.	Contents	EDP No.
NEJ-123	NEJ-1 / NEJ-2 / NEJ-3 1 for each	485428

Card size:135×63×8mm Inner Ctn.: 10 sets Outer Ctn.: 200 sets

One point

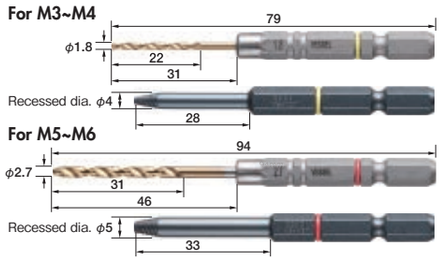
How easy to remove damaged screws!!

No need to change the rotation direction of the power tool. Always use counterclockwise.

※Not suitable for hardened or reverse screws.

No. NEJ Damaged Screw Remover Bit "Slim Type" NEW

- Slim tip-end suitable for use in a cramped space.
- Titanium coated cobalt high-speed steel drill can be used with a stainless steel screw.
- Make a pilot hole on the damaged screw head with the drill bit and remove it with the thread tip-end bit.



Model No.	Set contents	EDP No.
NEJ-4	Drill bit (1.8mm), Thread tapered bit (ϕ4)	485429
NEJ-5	Drill bit (2.7mm), Thread tapered bit (ϕ5)	485430

※Colors inside the table cells indicate the ring color. Card size:160×35×8㎜ Inner Ctn.: 10 sets Outer Ctn.: 100 sets

No. NEJ-45 Damaged Screw Remover Bit "Slim Type" Set

Model No.	Set contents	EDP No.
NEJ-45	Drill bit (1.8mm), Thread tapered bit (ϕ4) Drill bit (2.7mm), Thread tapered bit (ϕ5)	485423

Card size:160×50×12㎜ Inner Ctn.: 10 sets Outer Ctn.: 50 sets

One point

Solution for removal of stripped screws.

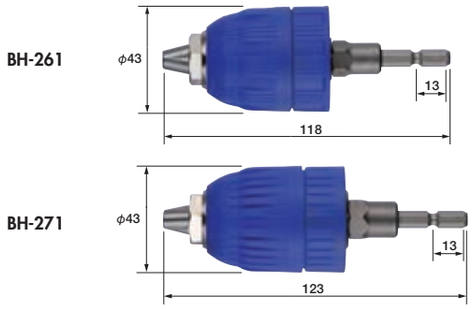
No. BH-9 Cap Drill Chuck

Model No.	Tip grip range	Overall Length (㎜)	Card size (㎜)	EDP No.
BH-9	Dia.:1.5~6.5	77.5	140×50×29	485301

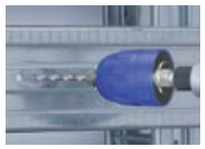
※Colors inside the table cells indicate the cap color. Mounting quantity : 1 Inner Ctn.: 10 sets

No. BH Drill Chuck Keyless Type (For power tools)

- For Air tools, Electric tools.



BH-261 BH-271

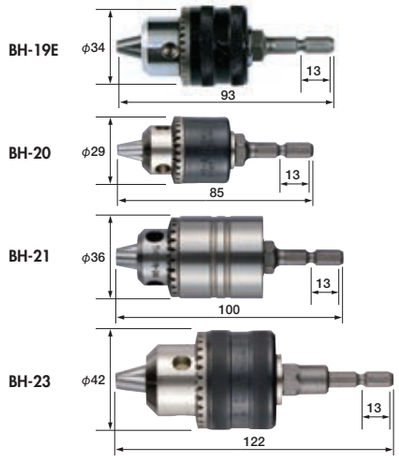


Model No.	Contents	Tip grip range (㎜)	Card size (㎜)	EDP No.
BH-261	Drill Chuck (Keyless)	Dia.:0.5~10	140×80×45	486344
BH-271	Drill Chuck (Keyless)	Dia.:1.5~13	140×80×45	486343

Inner Ctn.: 5 sets

No. BH Drill Chuck Key Type

- For Air tools, Electric tools.
- Excellent holding performance. High precision.
- High durability shaft unit.
- Key type: Attach and detach tools with the included key.
- Hybrid type: Works with or without a key.



BH-19E BH-20 BH-21 BH-23

Model No.	Contents	Tip grip range (㎜)	Card size (㎜)	EDP No.
BH-19E	Drill Chuck (Keyed) · Key	Dia.:1.0~10	140×80×37	485311
BH-20	Drill Chuck (Keyed) · Key	Dia.:0.8~6.5	140×80×31	486337
BH-21	Drill Chuck (Hybrid) · Key	Dia.:1.5~10	140×80×38	486338
BH-23	Drill Chuck (Keyed) · Key	Dia.:1.5~13	140×80×44	486340

For the BH-25 applicable models, see the D83 type on page 58 Inner Ctn.: 5 sets

No. BH Spare Shaft for Drill Chucks

Model No.	Contents	Screw size	Card size (㎜)	EDP No.
BH-24	Spare shank · Reversing screw	3/8-24UNF	135×35×17	486341
BH-29	Spare shank · Reversing screw	1/2-20UNF	135×35×17	486349

Inner Ctn.: 5 sets

No. BH-28 Drill Chuck SDS Puls type

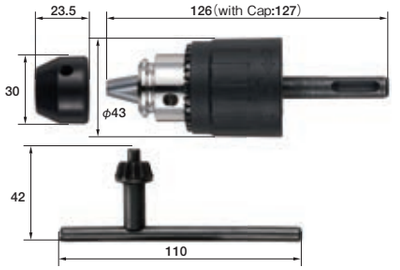
- For rotary hammer and hammer drills.

Model No.	Contents	Tip grip range (㎜)	Card size (㎜)	EDP No.
BH-28	Drill Chuck (Keyless)	Dia.:1.5~13	185×100×45	486348

Inner Ctn.: 5 sets

No. BH-22H Drill Chuck SDS Puls type

- For rotary hammer and hammer drills.



Model No.	Contents	Tip grip range (㎜)	Card size (㎜)	EDP No.
BH-22H	Drill Chuck (Keyed) · Key	Dia.:2.5~13	185×100×45	485312

Inner Ctn.: 5 sets

No. BH-22HC Dust-proof cap

- For BH-22H.

Model No.	Contents	Box size (㎜)	EDP No.
BH-22HC	Dust-proof cap / 5pcs.	58×56×174	485313

Inner Ctn.: 5 sets

Electric Screwdrivers

ELECTRIC TOOLS

Contents

Electric Screwdrivers ····· 142 - 148

DC Type Controller／Power Adapter ····· 148

Screw Counter／Screw Feeder／
Torque Meter ····· 149 - 150

Pistol Grip／Color Sleeves／Extension Cord
Corner Angle Attachment ····· 151

Tool Arms ····· 152 - 157

Electric Screwdrivers Technical

ELECTRIC TOOLS TECHNICAL

Anti-static model suitable for use in the ESD protected area (EPA).

Conductive resin is used for the body, switch lever, and sleeve, so screws can be tightened safely even in areas where static electricity is a concern.
Resistance Value10^5～$10^{10}\Omega$
※VE-1500EPA、VE-2000EPA

16-step, 5scale: VE-1500, 2000
16-step, 8scale: VE-3000, 4000(P), 4500(P), 5000(P), 6000P
24-step, 5scale: VE-1500(EPA), 2000(EPA)

Accurate and secure torque adjustment

As the torque adjustment pitch is fine, precise adjustments are possible.
A tamper-proof sleeve is enclosed as a standard accessory which can avoid the inappropriate torque setting.

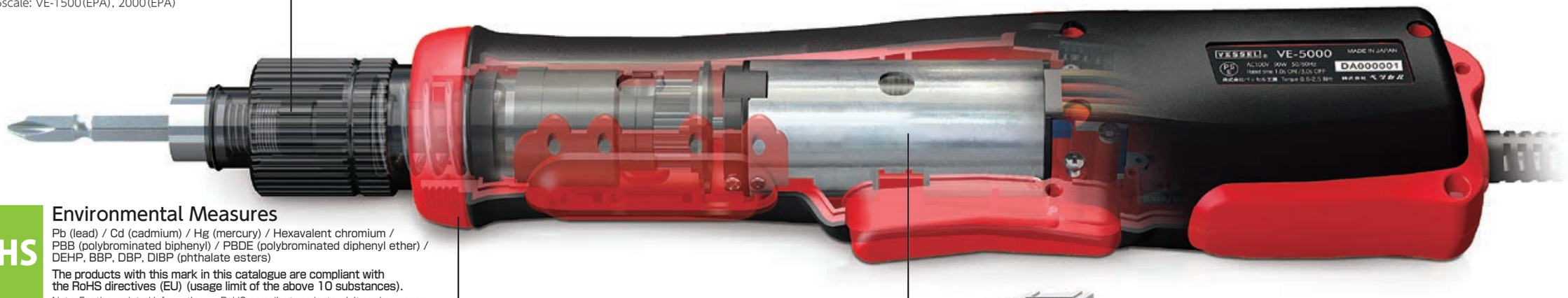
Tamper-proof sleeve is enclosed as an accessory.

Easy installation and wiring applicable to various working sites

The newly designed controller(DC type)has a rounded back surface for easy installation onto the cell block's pipe. The AC type is plugged into a 100VAC outlet, and does not require a controller.

External controller capable of HI or LOW selection

Easy cord connection (DC type)



RoHS Environmental Measures

Pb (lead) / Cd (cadmium) / Hg (mercury) / Hexavalent chromium / PBB (polybrominated biphenyl) / PBDE (polybrominated diphenyl ether) / DEHP, BBP, DBP, DIBP (phthalate esters)

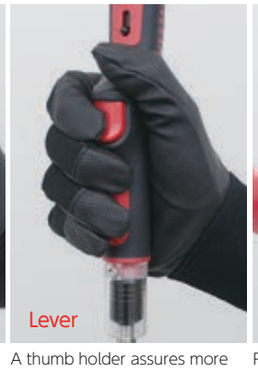
The products with this mark in this catalogue are compliant with the RoHS directives (EU) (usage limit of the above 10 substances).

Note: For the updated information on RoHS compliant products, visit our homepage, because some products or sizes are under investigation or are not compliant at the time of publication of this catalogue.

Easy-to-use, anti-fatigue ergonomic design

The ergonomically designed handle has a shape that fingers naturally fit at the lever position when the handle is gripped, a soft gel pad that absorbs vibration, and a non-slip surface finish, etc.

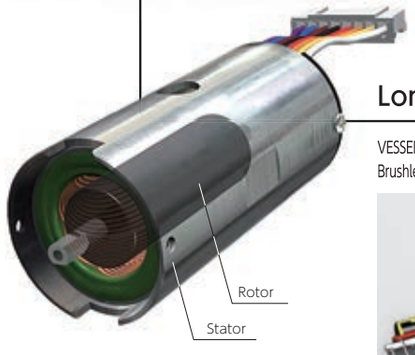
Lever method for vertical driving.



A thumb holder assures more stable operation.
(VE-1500, 1500EPA, 2000, 2000EPA)

Push method for horizontal driving

GEL pad on the grip assures a firm hold and absorbs vibration for comfortable operation.



Brushed motors require replacement of brushes at regular intervals because the brushes wear out. Brushless motors is free from maintenance because the motor rotation is controlled by an inverter to suppress the abrasion. Also brushless motors feature low annoying sounds and low electrical noises.

Long-life, low-fault design Maintenance free

VESSEL electric screwdrivers incorporates a long life brushless motor; no need for replacement for 3 years in normal operating conditions. Brushless motors are not with a carbon brush which requires a regular replacement. In addition, a durable magnet switch is adopted.

Rigid gear clutch

High-strength cord is fixed firmly onto the main body to prevent breakage by on/off and pulling (except VE-1500 and 2000).

Magnetic switch (non-contact) is used to reduce wear and damage.

No. VE-4000

Electric Screwdrivers

The ergonomic design that reduces the burden on the worker during consecutive assembly and/or fastening work.
Easy installation and wiring. Accurate torque adjustment. Maintenance-free concept for long and constant use.
The VE series is an electric screwdriver for professional use that powerfully supports the production lines.

No. VE-4000
Electric Screwdrivers
High performance, slot-less and brush-less motor is used in the heart of an electric screwdriver. Improves not only the tightening accuracy but also the efficiency and the ease of maintenance, toenhance the performance of production sites.

Screwdriver Model Selection Table

Model		Output torque range (0 1.0 2.0 3.0 4.0 N·m)	Model: Applicable screws	Model: Small screws	Model
VE-1500	VE-1500, VE-1500EPA	0.01~0.15	M1.0~1.7	1.0~1.5mm	DC Type / Conductive DC
VE-2000	VE-2000, VE-2000EPA	0.06~0.34	M1.0~2.3	1.0~2.0mm	DC Type / Conductive DC
VE-3000	VE-3000	0.15~1.0	M2.0~3.0	1.0~2.0mm	DC Type
VE-4000	VE-4000, 4000P	0.3~1.5	M2.5~4.0	1.6~2.6mm	DC Type
	VE-4000AC, 4000PAC				AC Type
VE-4500	VE-4500, 4500P (-HS4)	0.4~1.8	M3.0~4.0	2.3~3.0mm	DC Type
	VE-4500AC, 4500PAC				AC Type
VE-5000	VE-5000, 5000P (-DL5)	0.6~2.5	M3.0~4.0	2.6~3.5mm	AC Type
	VE-5000SOP, 5000PSOP				(SOP: Signal output)
	VE-5000R, 5000PR				(R: 1200min⁻¹)
	VE-5000RSOP, 5000PRSOP				(SOP: Signal output)
	VE-5000S, 5000PS				(R:2000min⁻¹)
	VE-5000SSOP, 5000PSSOP				(SOP: Signal output)
VE-6000	VE-6000, 6000P (-DL5)	1.6~4.5	M4.0~5.0	≦4mm	AC Type
	VE-6000SOP, 6000PSOP				(SOP: Signal output)
	VE-6000R, 6000PR				(R: 1200min⁻¹)
	VE-6000RSOP, 6000PRSOP				(SOP: Signal output)

No. VE-1500

Lever type | DC Type | 16-step×5scales

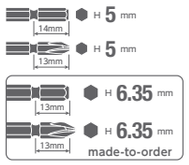
No. VE-2000

Lever type | DC Type | 16-step×5scales

No. VE-3000

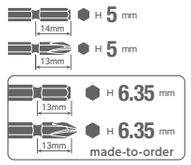
Lever type | DC Type | 16-step×8scales

No. VE-4000



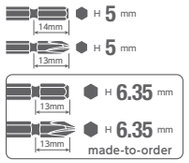
Lever type | DC Type | High-speed revolution | 16-step×8scales

No. VE-4000P



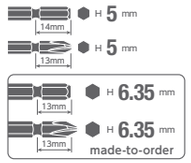
Push type | DC Type | High-speed revolution | 16-step×8scales

No. VE-4500



Lever type | DC Type | 16-step×8scales

No. VE-4500P



Push type | DC Type | 16-step×8scales

●Slot-less/brush-less motor is used. Tightening accuracy, efficiency and maintainability are improved.
●Easy-to-use ergonomic design. Shock absorbing gel pad enables a firm grip.
●Prevents mis-operation of adjustment by a tamper-proof sleeve. ●Power cable(2m) integrated type without a connector on the main body.
●VE-1500/2000 have connectors, and only the main body can be removed. Power cable length is 2m.

Model No.	Output torque range (N·m)	Applicable screws: Small screw	Applicable screws: Tapping (mm)	No-load rotation speed (min⁻¹)	Rating	External dimensions(mm)	Weight (g)	Enclosed bits	Controller	EDP No.
VE-1500	0.01~0.15	M1.0~1.7	1.0~1.5	HI 1000/LO 700	12VDC 15W	200	190	D73 ⊕0×1.4×40…1/ ⊕0×1.7×40…1	VCT-20	550001
VE-2000	0.06~0.34	M1.0~2.3	1.0~2.0	HI 1000/LO 700	12VDC 15W	200	190	D73 ⊕0×1.4×40…1/ ⊕0×1.7×40…1	VCT-20	550002
VE-3000	0.15~1.0	M2.0~3.0	1.6~2.6	HI 1000/LO 700	32VDC 25W	222	430	D73 ⊕0×1.7×40…1/ ⊕1× 3×40…1	VCT-30	550003
VE-3000U									—	550103
VE-4000	0.3~1.5	M2.5~4.0	1.6~2.6	HI 2000/No LO setting	32VDC 55W	250	700	B36 ⊕1×70…1/ ⊕2×70…1	VCT-45	550004
VE-4000U									—	550104
VE-4000P	0.3~1.5	M2.5~4.0	1.6~2.6	HI 2000/No LO setting	32VDC 55W	250	700	B36 ⊕1×70…1/ ⊕2×70…1	VCT-45	550005
VE-4000PU									—	550105
VE-4500	0.4~1.8	M3.0~4.0	2.3~3.0	HI 1000/LO 700	32VDC 55W	250	710	B36 ⊕1×70…1/ ⊕2×70…1	VCT-45	550006
VE-4500U									—	550106
VE-4500P	0.4~1.8	M3.0~4.0	2.3~3.0	HI 1000/LO 700	32VDC 55W	250	710	B36 ⊕1×70…1/ ⊕2×70…1	VCT-45	550007
VE-4500PU									—	550107

※Common accessories for products with controllers: 1 tamper-proof sleeve, 2 set screws (M3×3), 1 hexagonal wrench (H1.5), 1 AC cable (1.8 m), 1 3P2P conversion adapter, user manual Material: PC+elastomer
※Common accessories for products without controllers: 1 tamper-proof sleeve, 2 set screws (M3 × 3), 1 hexagonal wrench (H1.5), user manual Material: PC + elastomer

No. VE-4000AC

14mm H 5 mm
13mm H 5 mm

Lever type | AC Type | PSE | 16-step×8scales

No. VE-4000PAC

14mm H 5 mm
13mm H 5 mm

Push type | AC Type | PSE | 16-step×8scales

No. VE-4500AC

14mm H 5 mm
13mm H 5 mm

Lever type | AC Type | PSE | 16-step×8scales

No. VE-4500PAC

14mm H 5 mm
13mm H 5 mm

Push type | AC Type | PSE | 16-step×8scales

No. VE-5000

13mm H 6.35 mm
13mm H 6.35 mm

Lever type | AC Type | PSE | 16-step×8scales

No. VE-5000P

13mm H 6.35 mm
13mm H 6.35 mm

Push type | AC Type | PSE | 16-step×8scales

No. VE-6000

13mm H 6.35 mm
13mm H 6.35 mm

Lever type | AC Type | PSE | 16-step×8scales

No. VE-6000P

13mm H 6.35 mm
13mm H 6.35 mm

Push type | AC Type | PSE | 16-step×8scales

●Slot-less/brush-less motor is used. Tightening accuracy, efficiency and maintainability are improved.
●Easy-to-use ergonomic design. Shock absorbing gel pad enables a firm grip.
●Prevents mis-operation of adjustment by tamper-proof sleeve.
●Power cable(2.5m) integrated type without a connector on the main body.

The AC type is a 100VAC input that requires no controller.

Model No.	Output torque range (N·m)	Applicable screws Small screw	Tapping (mm)	No-load rotation speed (min⁻¹)	Rating	External dimensions(mm)	Weight (g)	Enclosed bits	EDP No.
VE-4000AC	0.3~1.5	M2.5~4.0	1.6~2.6	2000	100VAC 50/60Hz 40W	250	840	B36 ⊕1×70…1	550014
VE-4000PAC								B36 ⊕2×70…1	550015
VE-4500AC	0.4~1.8	M2.5~4.0	2.3~3.0	1000	100VAC 50/60Hz 40W	250	845	B36 ⊕1×70…1	550012
VE-4500PAC								B36 ⊕2×70…1	550013
VE-5000	0.6~2.5	M3.0~4.0	2.6~3.5	1000	100VAC 50/60Hz 90W	290	1100	M-A14 ⊕2×65H…2	550008
VE-5000P									550009
VE-6000	1.6~4.5	M4.0~5.0	≦4	1000	100VAC 50/60Hz 120W	290	1100	M-A14 ⊕2×65H…2	550011
VE-6000P									550010

※Common accessories: 1 suspension ring (Except VE-4000, VE-4000P, VE-4500, VE-4500P), 1 tamper-proof sleeve, 2 set screws (M3×3), 1 hexagonal wrench (H1.5), 1 3P2P conversion adapter, user manual Material: PC + elastomer

No. VE-4500-HS4 NEW

11.5mm ϕ4 mm

Lever type | DC Type | 16-step×8scales

No. VE-4500P-HS4 NEW

11.5mm ϕ4 mm

Push type | DC Type | 16-step×8scales

No. VE-5000-DL5 NEW

14mm H 5 mm
13mm H 5 mm

Lever type | AC Type | 16-step×8scales

No. VE-5000P-DL5 NEW

14mm H 5 mm
13mm H 5 mm

Push type | AC Type | 16-step×8scales

No. VE-6000-DL5 NEW

14mm H 5 mm
13mm H 5 mm

Lever type | AC Type | 16-step×8scales

No. VE-6000P-DL5 NEW

14mm H 5 mm
13mm H 5 mm

Push type | AC Type | 16-step×8scales

●Slot-less/brush-less motor is used. Tightening accuracy, efficiency and maintainability are improved.
●Easy-to-use ergonomic design. Shock absorbing gel pad enables a firm grip.
●Prevents mis-operation of adjustment by a tamper-proof sleeve.
●Power cable(2.5m) integrated type without a connector on the main body.

The AC type is a 100VAC input that requires no controller.

Model No.	Output torque range (N·m)	Applicable screws Small screw	Tapping (mm)	No-load rotation speed (min⁻¹)	Rating	External dimensions(mm)	Weight (g)	Enclosed bits	EDP No.
VE-4500-HS4	0.4~1.8	M3.0~4.0	2.3~3.0	Hi 2000 Lo 700	32VDC 55W	250	710	B73 ⊕1×40…1	550020
VE-4500P-HS4								B73 ⊕2×40…1	550021
VE-5000-DL5	0.6~2.5	M3.0~4.0	2.6~3.5	1000	100VAC 50/60Hz 90W	290	1100	B36 ⊕2×70…2	550022
VE-5000P-DL5									550023
VE-6000-DL5	1.6~4.5	M4.0~5.0	≦4	1000	100VAC 50/60Hz 120W	290	1100	B36 ⊕2×70…2	550024
VE-6000P-DL5									550025

※Common accessories: main body (with power cord)×1, tamper-proof sleeve×2, set screws (M3×3)×1, hexagonal wrench (H1.5), 3P2P conversion adapter, usermanual, Material: PC + elastomer
VE-4500(P)HS4: Power cable(2m), Controller VCT-45×1, Enclosed AC cable (1.8 m)×1 VE-5000(P)DL5, VE-600(P)DL5: suspension ring×1

No. VE-5000R NEW

13mm H 6.35 mm
13mm H 6.35 mm

Lever type | AC Type | PSE | 16-step×8scales

No. VE-5000PR NEW

13mm H 6.35 mm
13mm H 6.35 mm

Push type | AC Type | PSE | 16-step×8scales

No. VE-6000R NEW

13mm H 6.35 mm
13mm H 6.35 mm

Lever type | AC Type | PSE | 16-step×8scales

No. VE-6000PR NEW

13mm H 6.35 mm
13mm H 6.35 mm

Push type | AC Type | PSE | 16-step×8scales

●Slot-less/brush-less motor is used. Tightening accuracy, efficiency and maintainability are improved.
●Easy-to-use ergonomic design. Shock absorbing gel pad enables a firm grip. ●Prevents mis-operation of adjustment by a tamper-proof sleeve.
●Power cable(2.5m) integrated type without a connector on the main body.
●No-load rotation speed : 1200min⁻¹(High speed type)

The AC type is a 100VAC input that requires no controller.

Model No.	Output torque range (N·m)	Applicable screws Small screw	Tapping (mm)	No-load rotation speed (min⁻¹)	Rating	External dimensions(mm)	Weight (g)	Enclosed bits	EDP No.
VE-5000R	0.6~2.5	M3.0~4.0	2.6~3.5	1200	100VAC 50/60Hz 120W	290	1100	M-A14 ⊕2×65H…2	550028
VE-5000PR									550029
VE-6000R	1.6~4.5	M4.0~5.0	≦4	1200	100VAC 50/60Hz 135W	290	1100	M-A14 ⊕2×65H…2	550030
VE-6000PR									550031

main body (with power cord)×1, suspension ring 1 tamper-proof sleeve×2, set screws (M3×3)×1, hexagonal wrench (H1.5)×1, 3P2P conversion adapter, usermanual, Materials : PC + elastomer

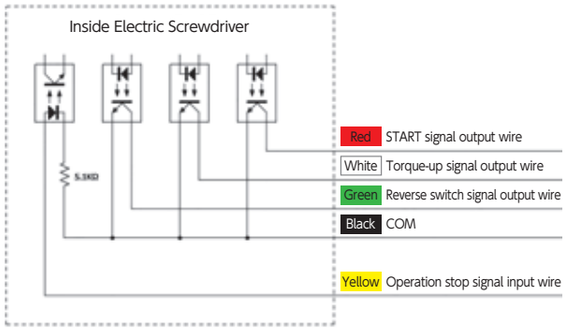
One point

Equipped with 3 output signal wires and 1 input signal wire, enabling to be controlled by PLC.

START | Torque-up | Reverse Switch | STOP

Input/Output Circuit Diagram

Inside Electric Screwdriver



Detail of Cables

Output signal cables

Color of lead wire	Function
Red	START signal output
White	Torque-up signal output
Green	Reverse switch signal output
Black	COM

Input signal cables

Color of lead wire	Function
Yellow	Operation stop signal input

No. VE-5000SOP

A/F 6.35 mm (13mm) Lever type | AC Type | PSE | 16-step×8scales | Output signal

No. VE-5000PSOP

A/F 6.35 mm (13mm) Push type | AC Type | PSE | 16-step×8scales | Output signal

No. VE-6000SOP

A/F 6.35 mm (13mm) Lever type | AC Type | PSE | 16-step×8scales | Output signal

No. VE-6000PSOP

A/F 6.35 mm (13mm) Push type | AC Type | PSE | 16-step×8scales | Output signal

- Slot-less/brush-less motor is used. Tightening accuracy, efficiency and maintainability are improved.
- Easy-to-use ergonomic design. Shock absorbing gel pad enables a firm grip.
- Prevents mis-operation of adjustment by a tamper-proof sleeve.
- Power cable(2.5m) integrated type without a connector on the main body.
- Equipped with 3 output signal wires and 1 input signal wire, enabling to be controlled by PLC.

The AC type is a 100VAC input that requires no controller.

Model No.	Output torque range (N·m)	Applicable screws Small screw	Tapping (mm)	No-load rotation speed (min⁻¹)	Rating	External dimensions(mm)	Weight (g)	Enclosed bits	EDP No.
VE-5000SOP	0.6~2.5	M3.0~4.0	2.6~3.5	1000	100VAC 50/60Hz 90W	290	1100	M-A14 ⊕2×65H···2	550016
VE-5000PSOP									550018
VE-6000SOP	1.6~4.5	M4.0~5.0	≦4	1000	100VAC 50/60Hz 120W	290	1100	M-A14 ⊕2×65H···2	550017
VE-6000PSOP									550019

main body (with power cord)×1, suspension ring 1 tamper-proof sleeve×2, set screws (M3×3)×1, hexagonal wrench (H1.5)×1, 3P2P conversion adapter, usermanual, Materials : PC + elastomer

No. VE-5000RSOP NEW

A/F 6.35 mm (13mm) Lever type | AC Type | PSE | 16-step×8scales | Output signal

No. VE-5000PRSOP NEW

A/F 6.35 mm (13mm) Push type | AC Type | PSE | 16-step×8scales | Output signal

No. VE-6000RSOP NEW

A/F 6.35 mm (13mm) Lever type | AC Type | PSE | 16-step×8scales | Output signal

No. VE-6000PRSOP NEW

A/F 6.35 mm (13mm) Push type | AC Type | PSE | 16-step×8scales | Output signal

- Slot-less/brush-less motor is used. Tightening accuracy, efficiency and maintainability are improved.
- Easy-to-use ergonomic design. Shock absorbing gel pad enables a firm grip.
- Prevents mis-operation of adjustment by a tamper-proof sleeve.
- Power cable(2.5m) integrated type without a connector on the main body.
- No-load rotation speed : 1200min⁻¹(High speed type)

The AC type is a 100VAC input that requires no controller.

Model No.	Output torque range (N·m)	Applicable screws Small screw	Tapping (mm)	No-load rotation speed (min⁻¹)	Rating	External dimensions(mm)	Weight (g)	Enclosed bits	EDP No.
VE-5000RSOP	0.6~2.5	M3.0~4.0	2.6~3.5	1200	100VAC 50/60Hz 120W	290	1100	M-A14 ⊕2×65H···2	550032
VE-5000PRSOP									550033
VE-6000RSOP	1.6~4.5	M4.0~5.0	≦4	1200	100VAC 50/60Hz 135W	290	1100	M-A14 ⊕2×65H···2	550034
VE-6000PRSOP									550035

main body (with power cord)×1, suspension ring 1 tamper-proof sleeve×2, set screws (M3×3)×1, hexagonal wrench (H1.5)×1, 3P2P conversion adapter, usermanual, Materials : PC + elastomer

No. VE-5000S NEW

A/F 6.35 mm (13mm) Lever type | AC Type | PSE | 16-step×8scales

No. VE-5000PS NEW

A/F 6.35 mm (13mm) Push type | AC Type | PSE | 16-step×8scales

No. VE-5000SSOP NEW

A/F 6.35 mm (13mm) Lever type | AC Type | PSE | 16-step×8scales

No. VE-5000PSSOP NEW

A/F 6.35 mm (13mm) Push type | AC Type | PSE | 16-step×8scales

- Slot-less/brush-less motor is used. Tightening accuracy, efficiency and maintainability are improved.
- Easy-to-use ergonomic design. Shock absorbing gel pad enables a firm grip.
- Prevents mis-operation of adjustment by a tamper-proof sleeve.
- Power cable(2.5m) integrated type without a connector on the main body.
- No-load rotation speed : 2000min⁻¹(High speed type)

The AC type is a 100VAC input that requires no controller.

Model No.	Output torque range (N·m)	Applicable screws Small screw	Tapping (mm)	No-load rotation speed (min⁻¹)	Rating	External dimensions(mm)	Weight (g)	Enclosed bits	EDP No.
VE-5000S	0.6~2.5	M3.0~4.0	2.6~3.5	2000	100VAC 50/60Hz 150W	290	1100	M-A14 ⊕2×65H···2	550036
VE-5000PS									550037
VE-5000SSOP									550038
VE-5000PSSOP									550039

main body (with power cord)×1, suspension ring 1 tamper-proof sleeve×2, set screws (M3×3)×1, hexagonal wrench (H1.5)×1, 3P2P conversion adapter, usermanual, Materials : PC + elastomer

No. VE-1500EPA

11.5mm ϕ4mm | Lever type | DC Type | 24-step×5scales

No. VE-2000EPA

11.5mm ϕ4mm | Lever type | DC Type | 24-step×5scales

One point

Conductive resin body

●Anti-static resin is used for the body, switch lever and sleeve. Prevents static electricity from damaging the assembled items. Resistance:10^5 to $10^{10}\Omega$ or smaller

No.VE-1500EPA
No.VE-2000EPA

●Slot-less/brush-less motor is used. Tightening accuracy, efficiency and maintainability are improved. ●Easy-to-use ergonomic design. Shock absorbing gel pad enables a firm grip. ●Prevents mis-operation of adjustment by tamper-proof sleeve. ●Power cable(2m) integrated type without a connector on the main body.

Model No.	Output torque range (N·m)	Applicable screws Small screw	Tapping (mm)	No-load rotation speed (min⁻¹)	Rating	External dimensions(mm)	Weight (g)	Enclosed bits	Controller	EDP No.
VE-1500EPA	0.01～0.15	M1.0～1.7	1.0～1.5	HI: 1000/ LO: 700	12VDC 15W	200	190	D73 ⊕0×1.4×40…1/ ⊕0×1.7×40…1	VCT-20	550201
VE-1500EPAU									—	550108
VE-2000EPA	0.06～0.34	M1.0～2.3	1.0～2.0	HI: 1000/ LO: 700	12VDC 15W	200	190	D73 ⊕0×1.4×40…1/ ⊕0×1.7×40…1	VCT-20	550202
VE-2000EPAU									—	550109

※Common accessories for products with controllers: 1 suspension ring, 1 tamper-proof sleeve, 2 set screws (M3×3), 1 hexagonal wrench (H1.5), 1 AC cable (1.8 m), 1 3P2P conversion adapter, 1 3P/6P conversion cord, user manual Material: Conductive PC + conductive elastomer
※Common accessories for products without controllers: 1 suspension ring, 1 tamper-proof sleeve, 2 set screws (M3 × 3), 1 hexagonal wrench (H1.5), 1 3P/6P conversion cord, user manual Material: Conductive PC + conductive elastomer

No. VCT-20/ 30/ 45 DC Type Controller

PSE

VCT-20 VCT-30 VCT-45

●Rear surface is cut in round shape, so that it is easily mounted on the pipe of the cell bench. ●HI (high speed) and LO (low speed) can be switched by flicking the switch.

Model No.	Rating	Secondary power	Dimensions(mm)	Weight(g)	Compatible models	Package contents	EDP No.
VCT-20	100～240VAC 50/60Hz 31～42VA	HI: 12VDC/ LO: 9VDC 1.0A	72×170×40	230	VE-1500,1500EPA,2000,2000EPA	AC cable(1.8m)…1, 3P2P conversion adapter…1	550301
VCT-30	100～240VAC 50/60Hz 63～79VA	HI: 32VDC/ LO: 24VDC 1.0A	72×170×40	300	VE-3000	AC cable(1.8m)…1, 3P2P conversion adapter…1	550302
VCT-45	100～240VAC 50/60Hz 62～78VA	HI: 32VDC/ LO: 24VDC 0.9A	82×200×55	510	VE-4000,4000P,4500,4500P	AC cable(1.8m)…1, 3P2P conversion adapter…1	550303

No. AD24-SC2 Power Adapter NEW

●I/P : 100～240VAC, O/P : 24VDC

Model No.	Dimensions(mm)	Weight(g)	Compatible models	EDP No.
AD24-SC2	70×50×30	110	VSC-02	551073

No. VSC-01 Screw Counter

●Connected between the electric screwdriver VE series and the power source, to notify tightening completion, insufficient tightening and wrong screws by alarm sound and light.
●Convenient slow start function and final tightening function available.
●Compact and lightweight, can be mounted anywhere.

Channel	5 channels
Count number	0～99
Count method	Count up/count down (selective)
Automatic reset time	0.0～9.9seconds
Slow start setting time	0.0～9.9seconds
Speed during slow start	10 30、35、40、45、50、60、65、70、80、85% (steps)
Screw tightening time	(upper limit time) 0.01～9.90seconds
	(lower limit time) 0.01～9.90seconds
Connector	Dedicated connector (open collector 7 contacts)

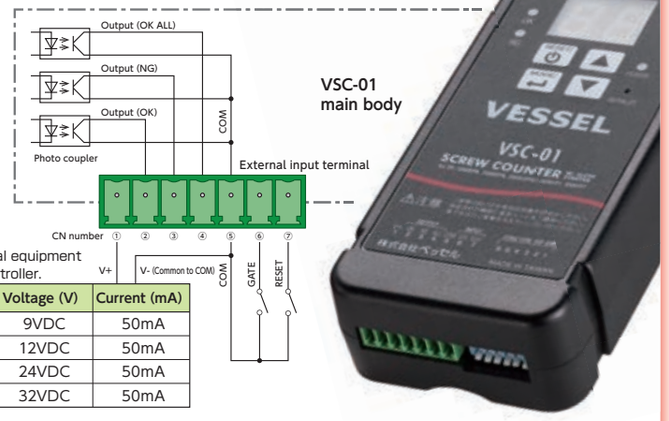
Model No.	Compatible Controller	Output	Dimensions(mm)	Weight(g)	Compatible models	EDP No.
VSC-01	VCT-20	HI:12VDC、LO: 9 VDC	150×65×32	180	VE-1500EPA, VE-2000EPA	551002
	VCT-30	HI:32VDC、LO:24VDC			VE-3000	
	VCT-45	HI:32VDC、LO:24VDC			VE-4000, VE-4000P, VE-4500, VE-4500P	

One point

Data

Input and output signals from the external input/output terminal.

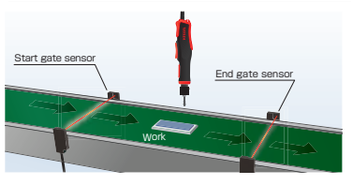
●Combined with PLC or sensors, it can control processes.



Power source capacity for external equipment varies depending on the used controller.

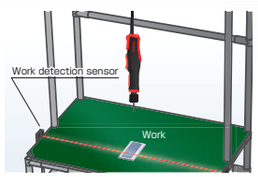
Used controller and output	Voltage (V)	Current (mA)
VCT20, Low	9VDC	50mA
VCT-20, High	12VDC	50mA
VCT-30 / 45, Low	24VDC	50mA
VCT-30 / 45, High	32VDC	50mA

Interlocked with sensor



Interlocked with gate sensor

①Passes the start gate sensor. Screw tightening work can be started.
②Start the screw tightening work. Tighten the specified number of screws.
③Screw tightening work is completed. Screw tightening work completion signal is sent out.
④Passes the end gate sensor. You can move onto the next work.



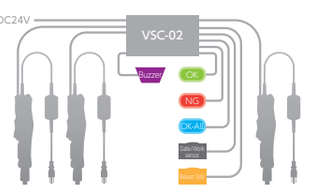
Interlocked with work detection sensor

①Work detection sensor detects the existence of work. Screw tightening work can be started.
②Start the screw tightening work. Tighten the specified number of screws.
③Screw tightening work is completed. Screw tightening work completion signal is sent out, and you can move onto the next work.

No. VSC-02 Screw Counter NEW

●Max.16 sequences x 64 channels
●Max.32 channels registration (tightening time per screwdriver in use)
●Count function from 0 to 99 screws to be tightened.
●24-contact terminal (VE screwdriver x 3 pcs + Power + External connection)
●24V DC input 300mA

※To be used with the SOP screwdrivers (lever or push type)



Model	VSC-02
Input	24VDC 300mA (Option: AC adapter AD24-SC2)
Display	LCD 16 characters x 2 lines (5x8 dot)
Signal input/ output terminal	Input 2 terminals (TLP785) Output 3 terminals (TLP627) Line output (Output impedance 1kΩ)
Number of VE series that can be connected	3 pcs
Number of sequences that can be preset	16 sequences x 64 channels each
Number of channels that can be preset	32 channels
Number of counts that can be preset	1 to 99 pcs
Count method	Count-up, Count-down (can be switched)
Auto-reset time	0.00 to 9.99 sec.
Screw tightening time (upper limit time)	0.01 to 9.99 sec.
Screw tightening time (lower limit time)	0.00 to 9.99 sec.
Dimensions	64 x 122 x 37 mm (excluding protrusions)
Weight	340g
Operating temperature/humidity	Options: AD24-SC2 (AC adapter, Input 100-240VAC, Output 24VDC)
Accessories	Instruction manual
Applicable models	VE-5000SOP,5000PSOP,6000SOP,6000PSOP
EDP No.	551003

● Options: AD24-SC2 (AC adapter, Input 100-240V AC, Output 24V DC)

No. VSF-5 Screw Feeder

- Supports various screws from M1 to M5.
- Lightweight and compact, the small footprint only takes up 126 × 182 mm area.
- All required replacement parts are attached for changing supplied screws.
- By the sensor, it operates the drum rotation and vibration only when required. When in standby, the operation is stopped temporarily so it is quiet.
- Adaptable to screws such as counter sank screws, pan head screws, truss head screws, screws with washers.

Adjustable with enclosed rail
The rail width can be adjusted, so there's no need to manage several rails.

Adjustment tool enclosed in set
The adjustment tool required to change the screw size is enclosed so adjustments can be made.

Model No.	Compatible Screw	Screw	Thread Length	Screw capacity	Rating	Dimensions(㎜)	Weight(kg)	EDP No.
VSF-5	Regular screws Tapping screws	M1~M5	20mm	200cc	15VDC 0.7A	126×182×147	2.2	551001

※Working temperature/humidity: 0~40℃ 10~95%RH(with no dew condensation) Installation place: Limited to indoors ※Accessories: AC adapter 1, Spare parts set 1

AC adapter

Model	AD15-VSF
Applicable standards	PSE
Rated input voltage	100~240VAC 50/60Hz 0.8A
Rated output voltage	15VDC 1.5A
Cord length (m)	Cord approx. 1.8
Weight (g)	136

Accessories

Stopper	For M1.0 to 2.0···1 pc., for M2.3 to 5.0···1 pc.
Rail width adjustment plate (㎜)	Front 70 x 90 x t0.8, t1.0, t1.2, t1.5, t2.0···1 plate each
	Rear 20 x 10 x t0.2···2 plates, 20 x 10 x t0.5···10 plates
L-shape hexagon wrench	H2.0 ㎜ x 108 ㎜
Grounding wire	
Instruction manual	

No. VTM-8 / 10 / 100 Torque Meter

Measurement bits

H5㎜ bits	H6㎜ bits
D73 H5×50	D73 H6×50
D76 H5×50	D76 H6×50
B34 H5×50	B34 H6×50
A16 H5×50	A16 H6×50

VTM-8

VTM-10

VTM-100

- Torque accuracy within ±0.5% enables accurate torque measurement.
- Light and compact design, the main body is approximately 1kg. Rechargeable and convenient to carry around.
- Capable of measuring both tightening and loosening directions. ●Automatic power off (power turns OFF after 10minutes of non-operation).

Model No.	Measurement range(N·m)	Precision	Unit measurement	Socket Outlet(㎜)	Dimensions(㎜)	Weight(kg)	Power supply	Compatible models	EDP No.
VTM-8	0.002~0.8	±0.5%(±3 digits below 499 digits)	cN·m /mN·m	20×20, SQ9.5	160x125x55	1.0	Nickel-cadmium battery 1.2V x 5 cells (700 mAh)	VE-1500(EPA), 2000(EPA)	551011
VTM-10	0.01~1.0	±0.5%(±1 digits below 199 digits)	N·m /cN·m	20×20, SQ9.5	160x125x55	1.0		VE-1500 (EPA), 2000(EPA), 3000	551012
VTM-100	0.1~10.0	±0.5%(±1 digits below 199 digits)	N·m /cN·m	20×20, SQ9.5	160x125x55	1.0		VE-4000 (P), 4500(P), 5000(P), 6000(P)	551013

※One digit refers to the minimum value of the last digit that can be displayed regardless of the decimal point position.(VTM-8:3digit=0.003N·m/3mN·m , VTM-10:1digit=0.01N·m/1cN·m , VTM-100:1digit=0.1N·m/10cN·m)
※Accessories: AC adapter 1, Torque adapter, Measurement bits set, Test Results, Proof of Calibration, Traceability System Diagram, Instruction manual
※Charging/usage time: Charging approx. 3 hours/max. 12 hours of use Battery life: 300 or more charges (varies according to the usage state)

AC adapter

Applicable standards	PSE
Rated input voltage	100~240VAC 50/60Hz 0.3A
Rated output voltage	12VDC 0.5A
Cord length (m)	1.5
Weight (g)	70

Torque Adapter	Compatible models	Usage range	Compatible bits	EDP No.
VJ-3	VTM-8	0.25 N·m or less	H5	551021
	VTM-10	0.25 N·m or less	H5	
VJ-10	VTM-10	0.3~1.0 N·m	H5	551022
VJ-10K	VTM-100	0.3~1.0 N·m	H6	551023
VJ-50	VTM-100	0.5~5.0 N·m	H6	551024

One point

Measurement data management

Can store 800 measurement data in the body.
Also can manage the data by exporting to a personal computer through USB cable.

Two measurement mode types

Either the Peak Hold measurement mode suitable for measuring electric screwdrivers, or the Peak Down Hold measurement mode suitable for manual tools can be selected.

For measurement of electric screwdrivers and torque drivers

Peak Hold mode
The max torque which is being measured is always displayed.

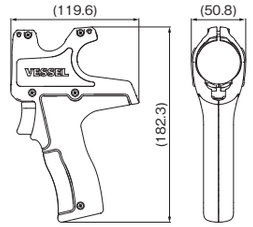
For measurement of torque wrenches

Peak Down Hold mode
The value when the load torque value peaks then starts to drop is displayed. No influence by the torque excessively imposed.

No. VPG-L Pistol Grip

- By mounting it on a straight type to transform into a pistol type, the efficiency of working against a vertical surface is improved.
- There are two holes to hang, to change the barycenter according to the type of work.
- Easy-to-grip trigger prevents fatigue even if working for a long time.

Suspension ring mounting hole
Using the suspension holes provided at two places on the piston grip and one place on the Dendora body can change the installation angle.



Model No.	VPG-L
Dimensions (㎜)	119.5×50.8×182.3
Weight (g)	113
Material	Polycarbonate
Accessories	Housing upper cover × 1, Housing lower cover × 1 Trigger × 1, Link × 1, Spring × 1, M3 pan-head screw × 5
Compatible models	VE-5000、5000P、6000、6000P
Optionally compatible models	VE-1500 (EPA)、2000 (EPA)、3000、4000 (P)、4500 (P)
EDP No.	551038

The piston grip is available as an option for all models other than the VE-5000 (P) and VE-6000P. Contact VESSEL for more information.

No. VE-EC2 Extension Cord (2m)

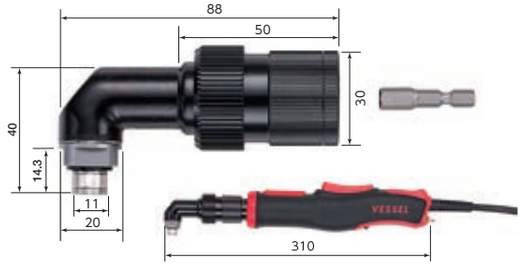
Compatible models	VE-3000, 4000, 4000P, 4500, 4500P VE-1500EPA, 2000EPA VSC-01, VCT-20※, VCT-30, VCT-45
Weight (g)	120g
EDP No.	551036

※The 3P/6P conversion cord is required to connect to the VCT-20.

No. VCA-M Corner Angle Attachment (for VE-4000, 4500 series) NEW

- Head Height: 40mm, Radius Dimension: 10mm
  - Ideal for a cramped space.
  Adjustable head position (360° rotatable, 12-direction setting)
- VESSEL's bit B39 and B35 series can be used.

※(Lever type only) (Not applicable to Push type)



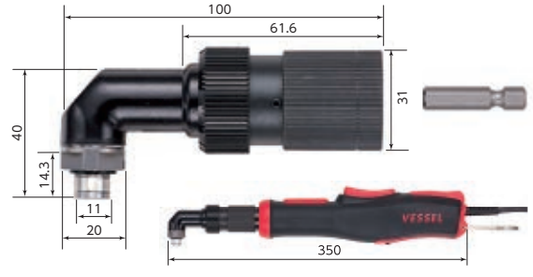
Model	Weight	Material	EDP No.
VCA-M	168 g	Steel	550026

※Accessories: Instruction Manual, Adapter Bit, C-ring, L Wrench 1.5mm

No. VCA-L Corner Angle Attachment (for VE-5000, 6000 series) NEW

- Head Height: 40mm, Radius Dimension: 10mm
  - Ideal for a cramped space.
  Adjustable head position (360° rotatable, 12-direction setting)
- VESSEL's bit B39 and B35 series can be used.

※(Lever type only) (Not applicable to Push type)



Model	Weight	Material	EDP No.
VCA-L	219 g	Steel	550027

※Accessories: Instruction Manual, Adapter Bit, C-ring, L Wrench 1.5mm

No. VCS Color Sleeves

- Tamper-proof color sleeves for the VE series electric screwdrivers.
- Allocating the same color helps identify the different torque of the VE screwdrivers used in the assembly line.

PINK

RED

GREEN

BLUE

YELLOW

Model No.	Size	Compatible models	EDP No.
VCS-SSP	SS	VE-1500 VE-2000	551053
VCS-SSR			551045
VCS-SSG			551057
VCS-SSB			551049
VCS-SSY			551061
VCS-SP	S	VE-3000	551054
VCS-SR			551046
VCS-SG			551058
VCS-SB			551050
VCS-SY			551062
VCS-MP	M	VE-4000 VE-4000P VE-4500 VE-4500P	551055
VCS-MR			551047
VCS-MG			551059
VCS-MB			551051
VCS-MY			551063
VCS-LP	L	VE-5000 VE-5000P VE-6000 VE-6000P	551056
VCS-LR			551048
VCS-LG			551060
VCS-LB			551052
VCS-LY			551064

No. HFAC-3-1DR

Hand Free Arm

Tool arm series, usable like your hand and arm. Absorbs impact during screw tightening and alleviates waist fatigue. More accurate screw tightening as the tool arm guides your hand and arm vertically or horizontally. Working environment improvement in the production line or at a working bench.

VESSEL Tool Arms are chosen for

1) Reduction of rotational load
It reduces the reaction of the electric screwdriver to the hand holding it.

2) Reduction of weight load
It reduces the feeling of fatigue in your hand and arm, caused by the weight of the electric screwdriver.

3) Improvement of vertical stability
It allows screws to go in straight, which reduces failures in screw tightening.

4) Improvement of tightening accuracy
It ensures consistent fastening quality with less irregularity.

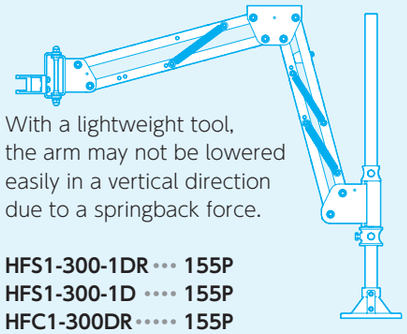
No. HFAC-3-1DR
Hand Free Arm
Improved tightening accuracy as this machine assures vertical movement. Optimal for the work in a limited space or with small assembly parts. The swiveling tool holder enables to operate the power tool smoothly even if it is required to move around.

Arm Types

1) Double-link arm

(with two arms connected by a linked structure)

Advantages :
- Highly flexible with a wide range of arm movement.
- Stable tightening accuracy with horizontal movement of the electric screwdriver.
- Balancing effect for weight load reduction.



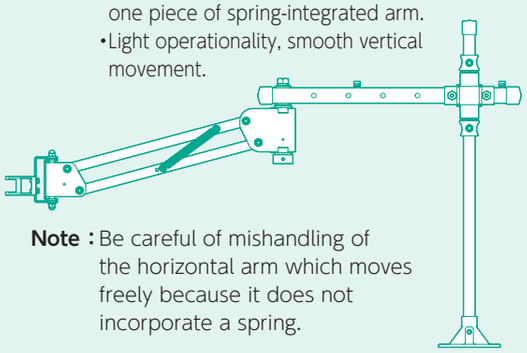
Note : With a lightweight tool, the arm may not be lowered easily in a vertical direction due to a springback force.

Model :
HFS1-300-1DR ••• 155P
HFS1-300-1D •••• 155P
HFC1-300DR••••• 155P
HFKCC-3-1DR•••• 156P

3) Single-link arm

(combination of horizontal arm and spring-integrated arm)

Advantages :
- Suitable for use in a narrow space or on a small worktable than the double-link arm type.
- Simple movement as this type consists of only one piece of spring-integrated arm.
- Light operationality, smooth vertical movement.



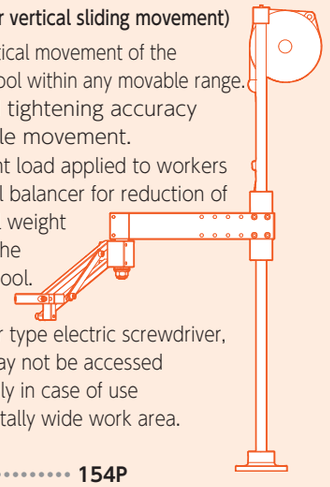
Note : Be careful of mishandling of the horizontal arm which moves freely because it does not incorporate a spring.

Model : HFAC-3-1DR ••••• 156P

2) Linear arm with tool balancer

(with bearing bushing for vertical sliding movement)

Advantages :
- Allows vertical movement of the mounted tool within any movable range.
- Improved tightening accuracy with stable movement.
- Less weight load applied to workers with a tool balancer for reduction of the overall weight including the mounted tool.



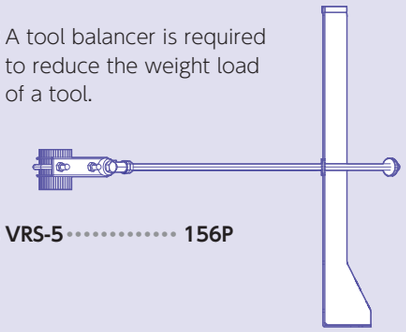
Note : With a lever type electric screwdriver, the lever may not be accessed appropriately in case of use in a horizontally wide work area.

Model : VAB-5 •••••••••••• 154P

4) Simplified stand arm

Advantages :
- Effective to reduce the rotational load of the electric screwdriver.
- Low cost due to simple structure design.
- Can be moved freely in all directions.

Note : A tool balancer is required to reduce the weight load of a tool.



Model : VRS-5 •••••••••••• 156P

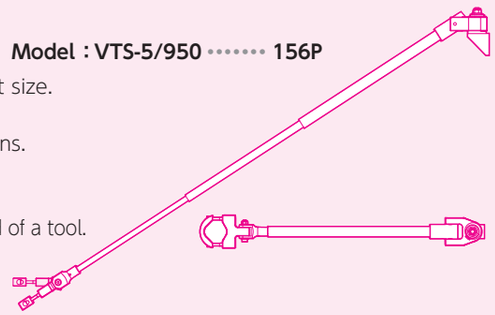
5) Telescopic arm

(with carbon pipes that extend and contract)

Model : VTS-5/950 ••••••• 156P

Advantages :
- Usable on a narrow workbench due to compact size.
- Made of a strong lightweight carbon fiber.
- Can be moved freely without load in all directions.
- Installable in ceilings and walls.

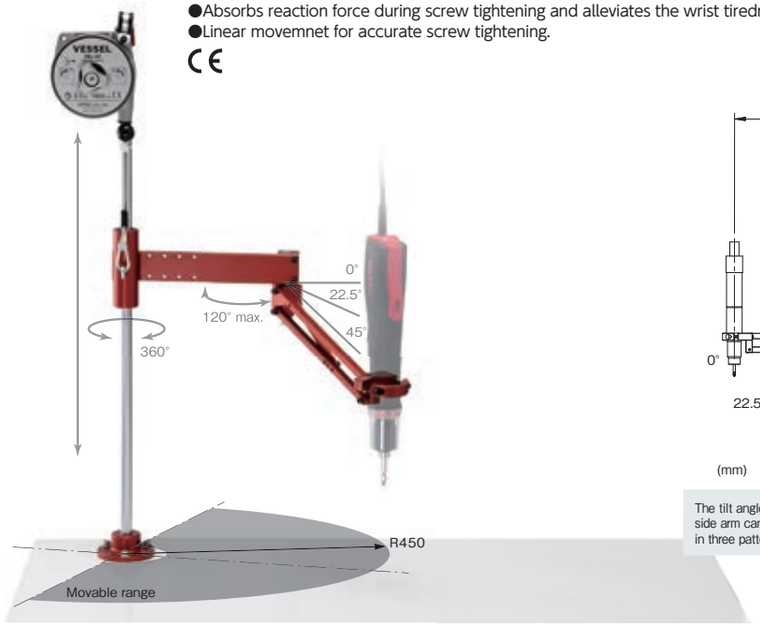
Note :
- A tool balancer is required to reduce the weight load of a tool.
- With a lever type electric screwdriver, the lever may not be accessed appropriately in case of use in a horizontally wide work area.

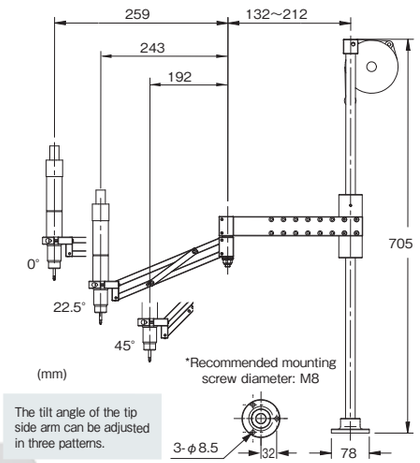


No. VAB-5 Vertical Arm NEW

●Absorbs reaction force during screw tightening and alleviates the wrist tiredness.
●Linear movemnet for accurate screw tightening.

CE





The tilt angle of the tip side arm can be adjusted in three patterns.

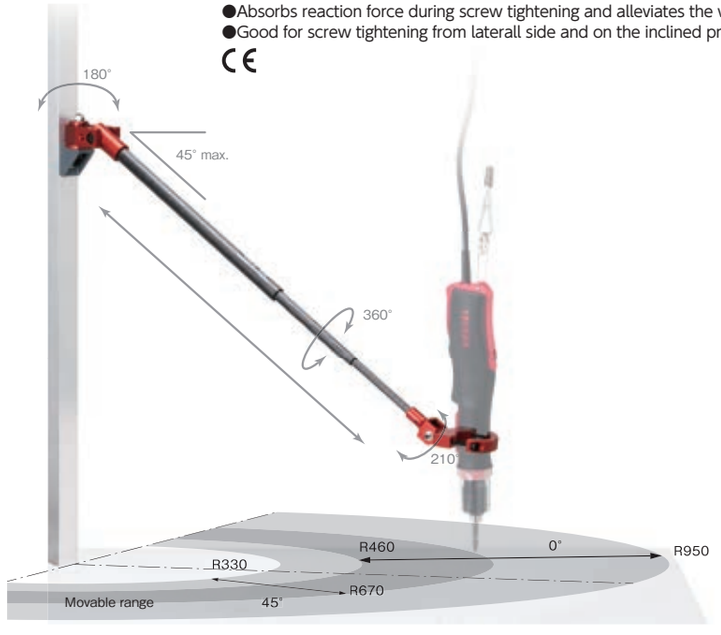
Model No.	Max. Reaction Force (N·m)	Maximum load (kg)	Installed Tool O/D (Φmm)	Height (mm)	Movable Radius (mm)	Weight (kg)	EDP No.
VAB-5	5	1.2	25~42	705	to R450 (When the arm angle is 22.5 degrees)	3.1 (Accessories included)	551082

Applicable:VE series (Electric Screwdriver) All models Contents:Tool balancer (VBL-30)

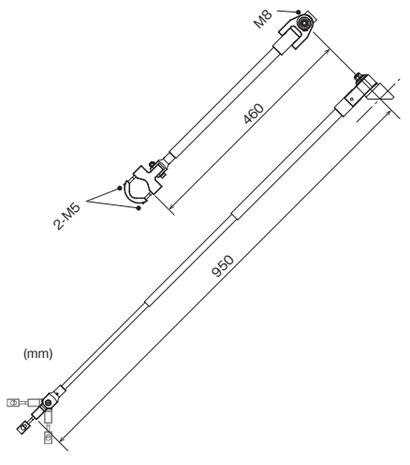
No. VTS-5/950 Sliding Arm NEW

●Absorbs reaction force during screw tightening and alleviates the wrist tiredness.
●Good for screw tightening from laterall side and on the inclined product.

CE



*Recommended mounting screw diameter: M8



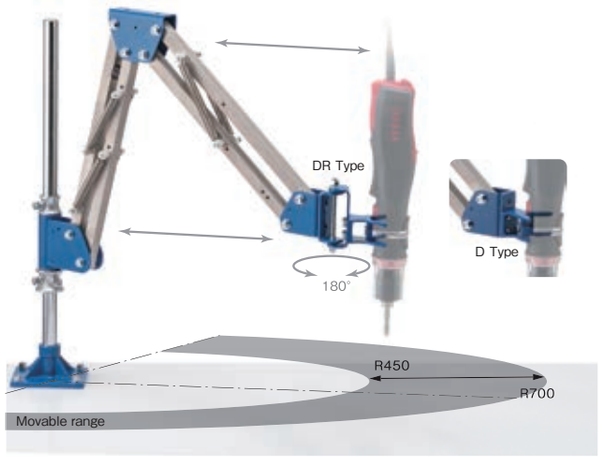
Model No.	Max. Reaction Force (N·m)	Maximum load (kg)	Installed Tool O/D (Φmm)	Arm Length (mm)	Movable Radius (mm)	Weight (kg)	EDP No.
VTS-5/950	5	1.2	25~42	460~950	R330 to 670 (When the arm angle is 45 degrees)	0.53 (Accessories included)	551083

Applicable:VE series (Electric Screwdriver) All models Contents:Universal adapter (already installed)

No. HFS1-300-1D/R Hand Free Arm NEW

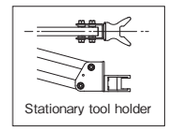
●Accurate screw tightening by stable vertical and/or horizontal movement.
●Tool attachement section which rotates facilitates tool operation in the application where the tool needs to be moved back and forth, up and down.
*D type : Absorbs reaction force during tapping screw tightening and alleviates the wrist tiredness.

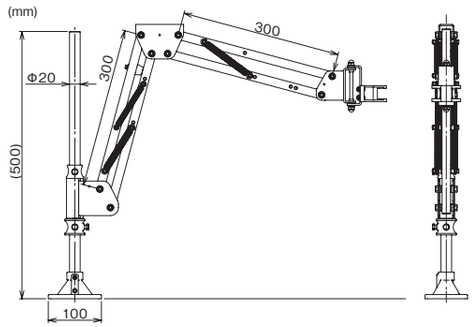
D-type only



No.HFS1-300-1DR

No.HFS1-300-1D



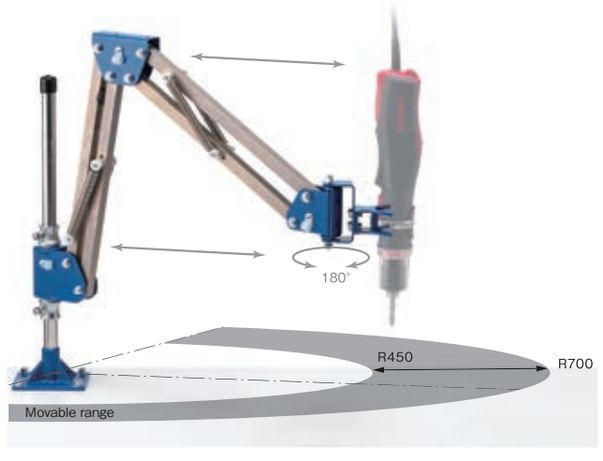


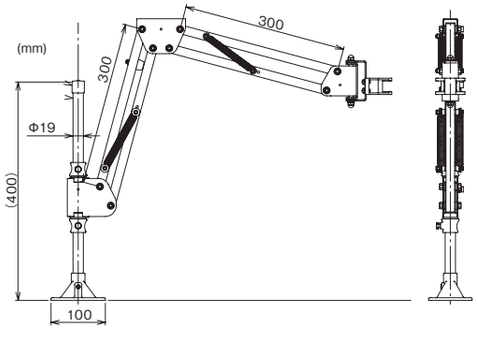
Model No.	Max. Reaction Force (N·m)	Allowable load (kg)	Installed Tool O/D (Φmm)	Arm Length (mm)	Movable Radius (mm)	Weight (kg)	EDP No.
HFS1-300-1DR	5.2	0.8~1.2	35~45	300+300	R450~700	4.1 (Accessories not included)	552053
HFS1-300-1D	5.2	0.8~1.2	35~45	300+300	R450~700	4.1 (Accessories not included)	552054

Applicable:VE-3000, VE-4000(P, AC, PAC), VE-4500(P, AC, PAC), VE-5000(P, SOP, PSOP), VE-6000(P, SOP, PSOP) Contents:Replacement kit, Rubber sheet, Hose band

No. HFC1-300DR Hand Free Arm NEW

●Absorbs reaction force during screw tightening and alleviates the wrist tiredness.
●Tool attachement section which rotates facilitates tool operation in the application where the tool needs to be moved back and forth, up and down.
●Light-weight and cost-saving type.



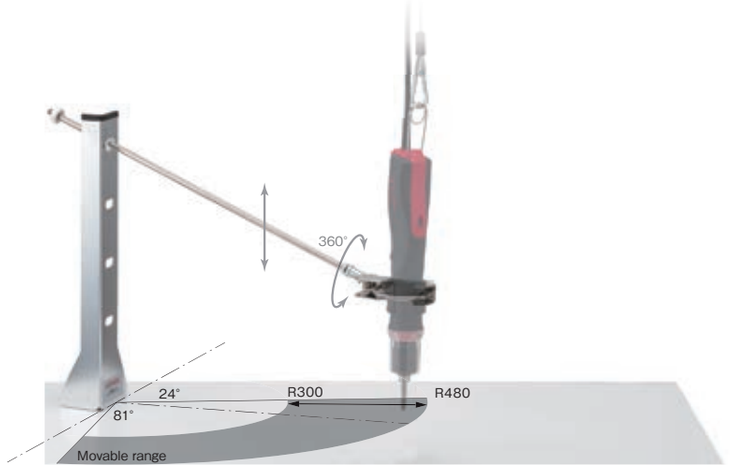


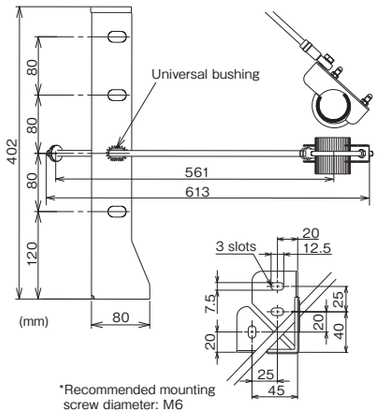
Model No.	Max. Reaction Force (N·m)	Allowable load (kg)	Installed Tool O/D (Φmm)	Arm Length (mm)	Movable Radius (mm)	Weight (kg)	EDP No.
HFC1-300DR	4.5	0.8~1.2	35~45	300+300	R450~700	2.7 (Accessories not included)	552051

Applicable:VE-3000, VE-4000(P, AC, PAC), VE-4500(P, AC, PAC), VE-5000(P, SOP, PSOP), VE-6000(P, SOP, PSOP) Contents:Replacement kit, Rubber sheet, Hose band

No. VRS-5 Reaction Control Arm NEW

- This stand absorbs impact caused during screw tightening and reduces the operation load. Enables to tighten screws assuredly.
- Also enables to tighten screws horizontally located.



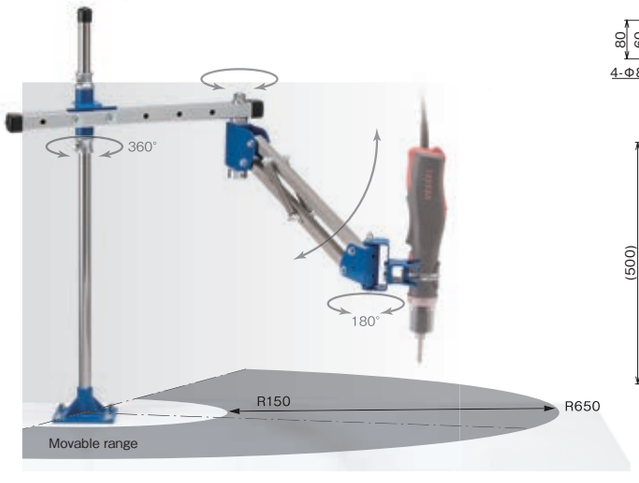


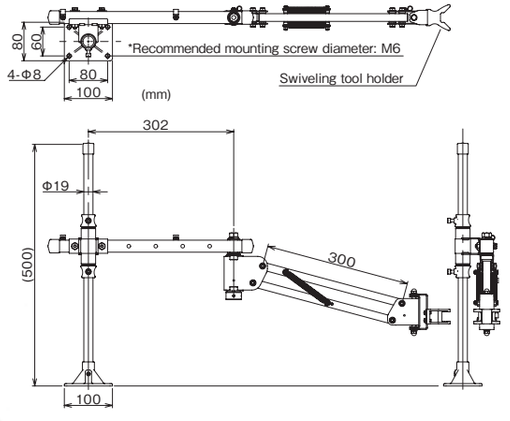
Model No.	Max. Reaction Force (N·m)	Maximum load (kg)	Installed Tool O/D (Φmm)	Shaft Length (mm)	Movable Radius (mm)	Weight (kg)	EDP No.
VRS-5	4.5	1.1	40	561	R300~480	0.85	551081

Applicable: VE-6000 (P, SOP, PSOP), VE-5000 (P, SOP, PSOP) Contents: Free Bush (1 spare), Rubber cover bush

No. HFAC-3-1DR Hand Free Arm NEW

- Accurate screw tightening with the arm tool keeping the vertical positioning of the screwdriver.
- Good for a work in a cramped space or with a small product.
- Tool attachment part which rotates, enables to handle the electric screwdriver freely in an application which requires to move it here and there.



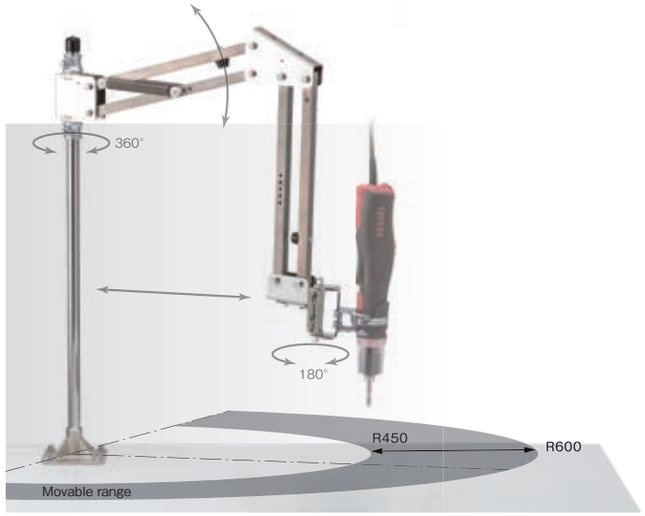


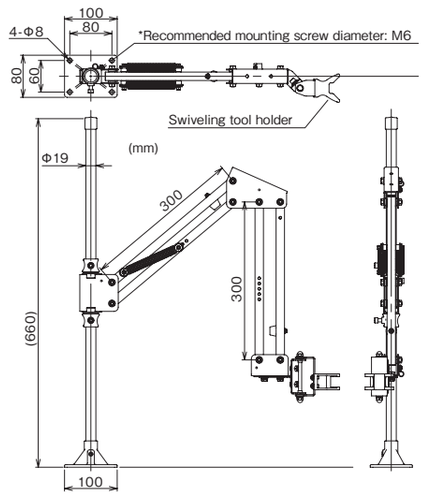
Model No.	Max. Reaction Force (N·m)	Applicable electric screwdrivers Weight (kg)	Tool O/D (Φmm)	Arm Length (mm)	Movable Radius (mm)	Weight (kg)	EDP No.
HFAC-3-1DR	4.5	0.6~1.0	35~45	302+300	R150~650	3.1 (Accessories not included)	552055

Applicable: VE-3000, VE-4000 (P, AC, PAC), VE-4500 (P, AC, PAC), VE-5000 (P, SOP, PSOP), VE-6000 (P, SOP, PSOP) Contents: Replacement kit, Rubber sheet, Hose band

No. HFKCC-3-1DR Hand Free Arm NEW

- Accurate screw tightening with the arm tool keeping the vertical positioning of the screwdriver.
- Plated parts incorporated make optimal for the electric device industry in which the paint separation should not occur.
- Tool attachment part which rotates, enables to handle the screwdriver freely even in a wide moving range application.





Model No.	Max. Reaction Force (N·m)	Applicable electric screwdrivers Weight (kg)	Tool O/D (Φmm)	Arm Length (mm)	Movable Radius (mm)	Weight (kg)	EDP No.
HFKCC-3-1DR	4.5	0.6~1.0	35~45	300+300	R450~600	2.9 (Accessories not included)	552056

Applicable: VE-3000, VE-4000 (P, AC, PAC), VE-4500 (P, AC, PAC), VE-5000 (P, SOP, PSOP), VE-6000 (P, SOP, PSOP) Contents: Replacement kit, Rubber sheet, Hose band

AIR TOOLS

Contents

Air Screwdrivers ..... 162 - 171

Air Impact Wrenches ..... 172 - 184

Power Scalers ..... 185 - 186

Air Sanders/Air Grinders ..... 187 - 192

Air Saws/Air Drills ..... 193 - 196

Air Dusters ..... 197 - 201

AIR TOOLS TECHNICAL

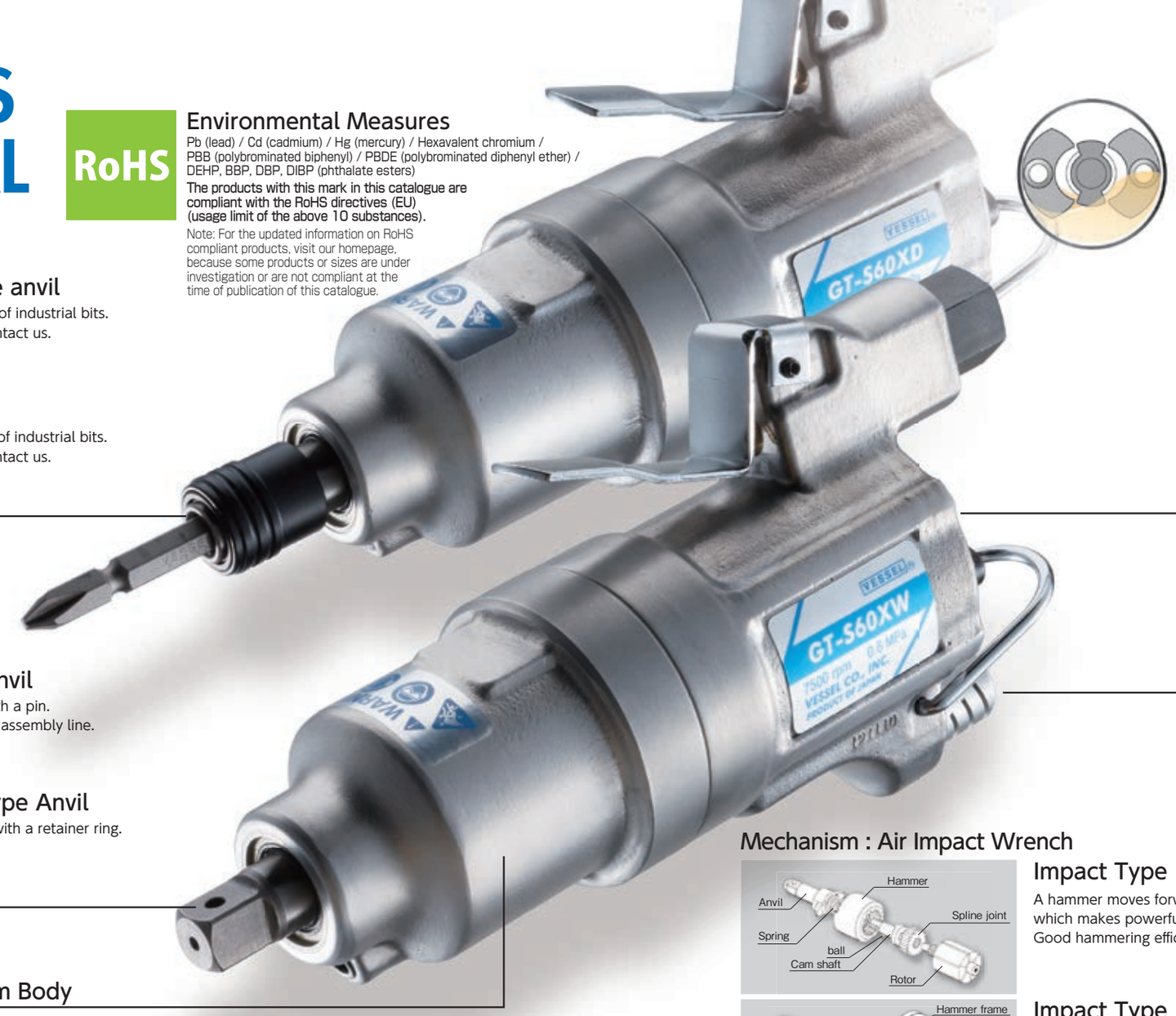
RoHS

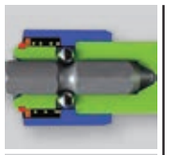
Environmental Measures

Pb (lead) / Cd (cadmium) / Hg (mercury) / Hexavalent chromium / PBB (polybrominated biphenyl) / PBDE (polybrominated diphenyl ether) / DEHP, BBP, DBP, DIBP (phthalate esters)

The products with this mark in this catalogue are compliant with the RoHS directives (EU) (usage limit of the above 10 substances).

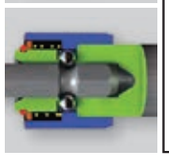
Note: For the updated information on RoHS compliant products, visit our homepage, because some products or sizes are under investigation or are not compliant at the time of publication of this catalogue.





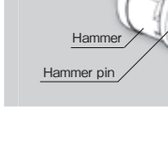
Standard A type anvil

Can be used with A type of industrial bits.
For more information, contact us.



Option

Can be used with B type of industrial bits.
For more information, contact us.



Pin-lock Type Anvil

Insert socket and lock with a pin.
Mainly used for industrial assembly line.

Retainer Ring Type Anvil

Pin type anvil combined with a retainer ring.

Tough Aluminum Body

Oil Xtra Series

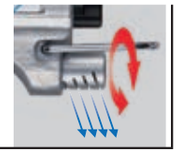
The impact mechanism is fulled with lubricating oil. In addition to changing the impact noise to a sofer, smoother sound, the oil prevents part damage due to friction.

Adjust Dial (Dual-purpose switch)

Consolidated control part combining air flow control switch and forward reverse control switch.

Adjust Dial

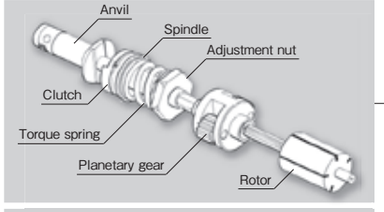
Exclusive adjust dial suited for work requiring frequent flow control.



Silencer

Built-in filter reduces exhaust sound.

Mechanism : Air Screwdriver

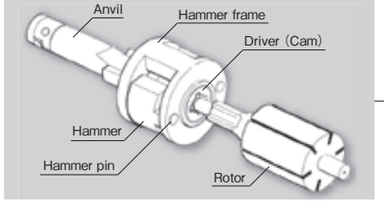


Clutch Type / Gear Type Air Screwdriver

The speed of air motor rotation is reduced by planetary gears so as to raise the rotation torque. Smooth and stable tightening can be performed via engagement of the clutch.

Torque Control Type : When the tightening toque reaches to the specified level, the air supply is cut off by the movement of cam-shaft, and operation is suspended.

166P
170P 171P



Impact type Air Screwdriver

The hammer which is rotated by the rotor makes use of the impact of the striking the anvil, and a construction is obtained which generates a powerful tightening force.

Torque Control Type : As the bolt or nut is tightened, its resistance value increases, and the percussion part and rotary part are greatly inverted. This angle of inversion is caught by the clutch, transmitted to the stop valve, and the air is cut off.

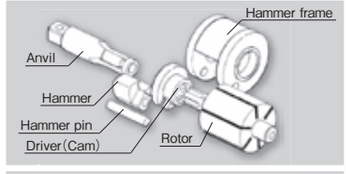
167P ~169P
171P

Mechanism : Air Impact Wrench

Impact Type Innovative "V" Hammer

A hammer moves forward and backward by rotating and hit the anvil, which makes powerful and speedy tightening.
Good hammering efficiency, and compact and light-weight type.

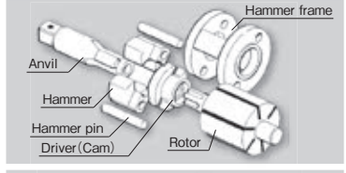
174P 175P



Impact Type Single Hammer

A construction whereby 1 rotation of the rotor causes the hammer to inflict 1 blow on the anvil.
Due to this 1 rotation/1 percussion system, a strong tightening is obtainable.

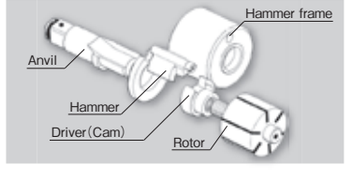
178P ~180P



Impact Type Double Hammer

A construction whereby 1 rotation of the rotor causes the hammer to inflict 2 blows on the anvil.
Due to this 1 rotation/2 percussions system, a stable tightening is obtainable.

181P ~183P



Pinless Impact Type Pinless Hammer

Rotation force of air motor is transmitted to the driver (cum) to rotate the hammer to hit the anvil, the impact of which enhances impact efficiency, allowing for firm screw tightening. Introduced pinless hammer which is small but outputs a great torque force.

176P 177P

No. GT-P5XD

Air Screwdrivers Oil Xtra Series

A wide variety of air screwdrivers for high efficiency work.
We have developed products such as “Oil Extra” series which is filled with oil in the impact part unit, as well as air tube exhaust models, aiming at reducing noise and vibration.

No. GT-P5XD

Air Screwdrivers

The impact mechanism is filled with lubricating oil.
In addition to changing the impact noise to a softer, smoother sound, the oil prevents part damage due to friction.

Applicable Models ※Only for referential purposes.

Small screw	Philips	Applicable Models
M2	**0** (Old **JIS 1**)	S4TFG, S4TG
M2.3	**0** (Old **JIS 1**)	S4TFG, S4TFS, S4TG, S4TS
M2.5	**1**	S4TFG, S4TFS, S4TG, S4TS, S5TFG, S5TG
M2.6	**0** (Old **JIS 1**)	H4RC, S4TFS, S4TS, S5TFG, S5TG
M3	**1** (Old **JIS 2**)	H4R, H4PR, PH4, H4RC, S4TFS, S4TS, S4TR, S5TFG, S5TFB, S5TG, S5TB
M3.5	**2**	H4R, H4PR, PH4, H4RC, H5RC, S4TR, S5TFB, S5TB
M4	**2**	H4R, H4PR, PH4, H5R, H5P, PH5, H5RC, S4.5DR, P4.5DR, PLR, PLP, PLZ, PLRC, P5LS, S4TR, S5TFB, S5TFR, S5TB, S5TR, PLXD, S4.5XD, P4.5XD, PLIXD, P5XD
M4.5	**2**	H5R, H5P, PH5, H5RC, S4.5DR, P4.5DR, PLR, PLP, PLZ, PLRC, P5LS, S5TFR, S5TR, S5TS, PLXD, S4.5XD, P4.5XD, PLIXD, P5XD
M5	**2**	H5R, H5P, PH5, S4.5DR, P4.5DR, PLR, PLP, PLZ, PLRC, P5LS, P6LSⅢ, P6HS, PLHⅡ, P60XD, S6MLR, S6HS, S6CD, S5TFR, S5TR, S5TS, PLXD, S4.5XD, P4.5XD, P6EXD, S6LXD, P6LXD, S60XD, PLIXD, P5XD
M6	**3**	P6LSⅢ, P6HS, PLHⅡ, S6MLR, S6HS, S5TS, S6.5D, P6.5D, S6CD, P6EXD, S6LXD, P6LXD, P60XD, S60XD
M8	**4** (Old **JIS 3**)	S6.5D, P6.5D, P8D, P10SⅡ, P60XD, S60XD, P80XD
M10	**4**	P8D, P10SⅡ, P80XD

Wood screw	Philips	Applicable Models
1.8	**–**	H4R, H4PR, PH4
2.1	**1**	H4R, H4PR, PH4
2.4	**1**	H4R, H4PR, PH4
2.7	**1**	H5R, H5P, PH5, S4.5DR, P4.5DR, PLR, PLP, PLZ, P5LS, S4.5XD, P4.5XD
3.1	**2**	H5R, H5P, PH5, S4.5DR, P4.5DR, PLR, PLP, PLZ, P5LS, S4.5XD, P4.5XD
3.5	**2**	H5R, H5P, PH5, S4.5DR, P4.5DR, PLR, PLP, PLZ, P5LS, P6LSⅢ, P6HS, PLHⅡ, S6MLR, S6HS, S6CD, PLXD, S4.5XD, P4.5XD, P6EXD, S6LXD, P6LXD, P60XD, S60XD, PLIXD, P5XD
3.8	**2**	PLHⅡ, P6LSⅢ, S6MLR, S6HS, P6HS, S6CD, S6.5D, P6.5D, PLXD, P6EXD, S6LXD, P6LXD, P60XD, S60XD, PLIXD, P5XD
4.1	**2**	PLHⅡ, P6LSⅢ, S6MLR, S6HS, P6HS, S6CD, S6.5D, P6.5D, P6EXD, S6LXD, P6LXD, P60XD, S60XD
4.5	**2**	S6.5D, P6.5D, P6EXD, P60XD, P8D, P10SⅡ, S60XD, P80XD
4.8	**2**	P8D, P10SⅡ, P6EXD, P80XD
5.1	**3**	P8D, P10SⅡ, P80XD
5.5	**3**	P8D, P10SⅡ, P80XD
5.8	**3**	P8D, P10SⅡ, P80XD
6.2	**3**	P8D, P10SⅡ, P80XD

Tapping screw	Philips	Applicable Models
3.5	**2**	H5R, H5P, PH5, S4.5DR, P4.5DR, PLR, PLP, PLZ, P5LS, S4.5XD, P4.5XD
4	**2**	H5R, H5P, PH5, S4.5DR, P4.5DR, PLR, PLP, PLZ, P5LS, P6LSⅢ, P6HS, PLHⅡ, S6MLR, S6HS, S6.5D, P6.5D, S6CD, PLXD, PLIXD, P5XD, S4.5XD, P4.5XD, P6EXD, S6LXD, P6LXD, P60XD, S60XD
4.2	**2**	P6LSⅢ, P6HS, PLHⅡ, S6MLR, S6HS, S6.5D, P6.5D, S6CD, PLXD, PLIXD, P5XD, P6EXD, S6LXD, P6LXD, P60XD, S60XD
4.5	**2**	P6LSⅢ, P6HS, PLHⅡ, S6MLR, S6HS, S6.5D, P6.5D, S6CD, P6EXD, S6LXD, P6LXD, P60XD, S60XD
4.8	**2**	P6.5D, P60XD, S60XD
5	**2**	P6.5D, P8D, P10SⅡ, P60XD, S60XD, P80XD
5.5	**3**	P8D, P10SⅡ, P80XD
6	**3**	P8D, P10SⅡ, P80XD

Hexagonal recess bolt Hexagonal head bolt	H (mm)	H (mm)	Applicable Models
M2.5	**2.0**	**5.0**	H4RC
M3	**2.5**	**5.5**	H4R, H4PR, PH4, H4RC
M3.5	**–**	**6.0**	H4R, H4PR, PH4, H4RC, H5RC
M4	**3.0**	**7.0**	H4R, H4PR, PH4, H5R, H5P, PH5, H5RC, S4.5DR, P4.5DR, PLR, PLP, PLZ, P5LS, PLRC, PLXD, S4.5XD, P4.5XD, PLIXD, P5XD
M5	**4.0**	**8.0**	H5R, H5P, PH5, S4.5DR, P4.5DR, PLR, PLP, PLZ, P5LS, P6LSⅢ, P6HS, PLHⅡ, S6MLR, S6HS, S6CD, PLRC, PLXD, S4.5XD, P4.5XD, P6EXD, S6LXD, P6LXD, P60XD, S60XD, PLIXD, P5XD
M6	**5.0**	**10.0**	P6LSⅢ, P6HS, PLHⅡ, S6MLR, S6HS, S6.5D, P6.5D, S6CD, P6EXD, S6LXD, P6LXD, P60XD, S60XD
M7	**–**	**11.0**	S6.5D, P6.5D, P60XD, S60XD
M8	**6.0**	**13.0** (Small bolt **12.0**)	S6.5D, P6.5D, P8D, P10SⅡ, P60XD, S60XD, P80XD
M10	**8.0**	**16.0** (Old **JIS 17.0** Small bolt **14.0**)	P8D, P10SⅡ, P80XD

Standard screw **4~5mm** Compact, lightweight and high revolution motor. For recycle plant, small sash frame, etc. Oil Xtra Series

←See P161

No. GT-S4.5XD

6.35 Bit sleeve retainer

Noise reducer

No. GT-P4.5XD

6.35 Bit sleeve retainer

Noise reducer/Rear exhaust

No. GT-PLXD

6.35 Bit sleeve retainer

3 Adjust dial

Noise reducer

No. GT-P5XD

6.35 Bit sleeve retainer

Noise reducer/Rear exhaust

No. GT-PLIXD

6.35 Bit sleeve retainer

3 Adjust dial

Noise reducer

Suppress noise with air tube

See P165 One point→

Standard screw **5~6mm** Stable tightening performance with high power. For sash frame for building, exterior, home building, etc.

No. GT-S6LXD

6.35 Bit sleeve retainer

3 Adjust dial

Noise reducer

No. GT-P6LXD

6.35 Bit sleeve retainer

Noise reducer/Rear exhaust

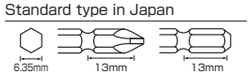
Model No.	Capacity (㎜) Standard Screw	Tapping Screw	Wood Screw	Bolt	No Load Speed (rpm)	Air Consumption (㎥/min)	Hose Coupling	Overall Length (㎜)	Weight (g)	Accessories Bit	Plug	EDP No.
GT-S4.5XD	4.0~5.0	3.5~4.0	2.7~3.5	4.0~5.0	14,500	0.2	G 1/4	188	585	A14 ⊕2×65G	BPN-2F	311085
GT-P4.5XD	4.0~5.0	3.5~4.0	2.7~3.5	4.0~5.0	14,000	0.2	Rc 1/4	170	735	A14 ⊕2×65G	BPB-2	311089
GT-PLXD	4.0~5.0	3.8~4.2	3.3~3.8	4.0~5.0	11,000	0.35	G 1/4	198.5	670	A14 ⊕2×65G	BPN-2F	311113
GT-P5XD	4.0~5.0	3.5~4.0	3.3~3.8	4.0~5.0	11,000	0.33	Rc 1/4	172	790	A14 ⊕2×65G	BPB-2	311100
GT-PLIXD	4.0~5.0	3.8~4.2	3.3~3.8	4.0~5.0	7,300	0.29	G 1/4	198	740	A14 ⊕2×65G	BPN-2F Tube fitting PL8-02	311114
GT-S6LXD	5.0~6.0	4.0~4.5	3.6~4.1	5.0~6.0	12,000	0.4	G 1/4	212	815	A14 ⊕2×65G	BPN-2F	311115
GT-P6LXD	5.0~6.0	4.0~4.5	3.6~4.1	5.0~6.0	12,500	0.45	Rc 1/4	184	876	A14 ⊕2×65G	BPB-2	311116

·Air pressure: 0.6MPa ·Air hose diameter: 6.35mm ·Overall length and Weight: Accessories not included.
·Capacity is listed as instant reference and depends on operation conditions.
·w/Rotary parts oil (VG-10), Impact parts oil (VG-32)

Bit installation anvil application

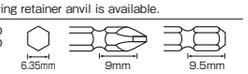
Unless otherwise mentioned, following type is a standard.

Standard type in Japan



※Option: Following retainer anvil is available.

S4.5XD S6LXD
P4.5XD P6LXD
PLXD P5XD



Standard screw **6~8mm** Powerful torque force. For installing parts, fastening concrete screw, etc. Oil Xtra Series

No. GT-P60XD

6.35 Bit sleeve retainer

3 Adjust dial

Noise reducer/Rear exhaust

No. GT-S60XD

6.35 Bit sleeve retainer

3 Adjust dial

Noise reducer/Rear exhaust

Standard screw **8~10mm** Powerful torque force. For installing parts, fastening concrete screw, etc.

No. GT-P80XD

8 Bit sleeve retainer

4 Adjust dial

Noise reducer/Rear exhaust

Standard screw **5~6mm** High power models for construction.

No. GT-P6EXD

6.35 Bit sleeve retainer

3 Adjust dial

Noise reducer/Rear exhaust

Does not damage work piece with protector.

One point

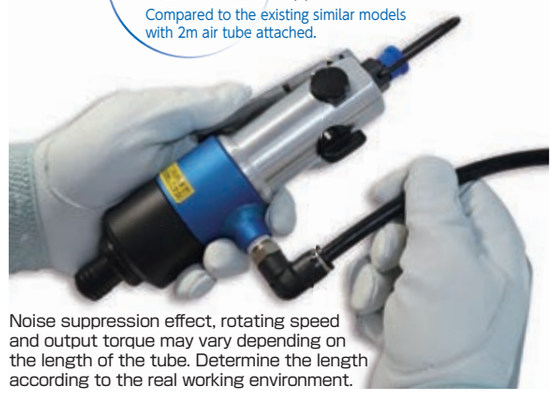
Suppress noise with air tube

Exhaust noise is reduced by mounting existing ø8 air tube.

No.GT-PLIXD

-8dB ※No-load noise Approx.**78**dB

Compared to the existing similar models with 2m air tube attached.



Noise suppression effect, rotating speed and output torque may vary depending on the length of the tube. Determine the length according to the real working environment.

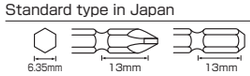
Model No.	Capacity (㎜) Standard Screw	Tapping Screw	Wood Screw	Bolt	No Load Speed (rpm)	Air Consumption (㎥/min)	Hose Coupling	Overall Length (㎜)	Weight (g)	Accessories Bit	Plug	L-wrench	EDP No.
GT-P60XD	6.0~8.0	4.0~5.0	3.8~4.5	6.0~8.0	7,500	0.38	Rc 1/4	176	1,130	A14 ⊕2×65E/⊕3×65E	BPB-2	–	324021
GT-S60XD	6.0~8.0	4.0~5.0	3.8~4.5	6.0~8.0	7,500	0.38	Rc 1/4	198	1,030	A14 ⊕2×65E/⊕3×65E	BPB-2	–	324023
GT-P80XD	8.0~10.0	5.0~6.0	4.5~6.2	8.0~10.0	7,000	0.4	Rc 1/4	172	1,520	A15 ⊕2×65G/⊕3×65E	BPB-2	H4	324050
GT-P6EXD	5.0~6.0	4.0~4.5	3.6~4.8	5.0~6.0	9,300	0.55	Rc 1/4	155	1,085	A14 ⊕2 ×65G	BPB-2	–	311150

·Air pressure: 0.6MPa ·Air hose diameter: 6.35mm ·Overall length and Weight: Accessories not included.
·Capacity is listed as instant reference and depends on operation conditions.
·w/Rotary parts oil (VG-10), Impact parts oil (VG-32)

Bit installation anvil application

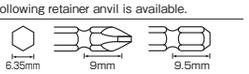
Unless otherwise mentioned, following type is a standard.

Standard type in Japan

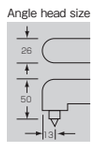


※Option: Following retainer anvil is available.

S60XD
P60XD
P6EXD



Standard screw **2.6~3.5mm** Speed-reduction type air driver.

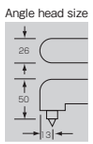


No. GT-H4RC

6.35 Ball spring retainer

Noise reducer

Standard screw **3.5~4.5mm** Speed-reduction type air screwdriver.



No. GT-H5RC

6.35 Ball spring retainer

Standard screw **3~4mm** Compact, lightweight and silent gear speed-reduction mechanism.

No. GT-H4R

6.35 Ball spring retainer

Lever push starting/Noise reducer

No. GT-H4PR

6.35 Ball spring retainer

Push starting/Noise reducer

Standard screw **4~5mm** Stable tightening performance with high power. For installing electrical parts.

No. GT-H5R

6.35 Ball spring retainer

Lever push starting

No. GT-H5P

6.35 Ball spring retainer

Push starting/Noise reducer

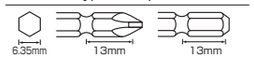
Model No.	Capacity (mm) Standard Screw	Tapping Screw	Wood Screw	Bolt	No Load Speed (rpm)	Air Consumption (m³/min)	Hose Coupling	Overall Length (mm)	Weight (g)	Accessories Bit	Plug	EDP No.
GT-H4R	3~4	—	1.8~2.4	3~4	1,500	0.2	G 1/4	190	590	A14 ⊕2×65G	BPN-2F	311036
GT-H4PR	3~4	—	1.8~2.4	3~4	1,500	0.19	G 1/4	213	610	A14 ⊕2×65G	BPN-2F	311046
GT-H4RC	2.6~3.5	—	—	2.6~3.5	1,500	0.2	G 1/4	216	735	B39 ⊕2×23H	BPN-2F	311034
GT-H5R	4~5	3.5~4	2.7~3.5	4~5	1,500	0.25	G 1/4	225	880	A14 ⊕2×65G	BPN-2F	311066
GT-H5P	4~5	3.5~4	2.7~3.5	4~5	1,500	0.25	G 1/4	235	880	A14 ⊕2×65G	BPN-2F	311065
GT-H5RC	3.5~4.5	—	—	3.5~4.5	1,500	0.25	G 1/4	248	1,047	B39 ⊕2×23H	BPN-2F	311064

·Air pressure: 0.6MPa ·Air hose diameter: 6.35mm ·Overall length: Accessories and hanger parts not included. ·Weight: Accessories not included.
·Capacity is listed as instant reference and depends on operation conditions.

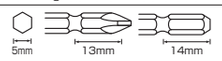
Bit installation anvil application

Unless otherwise mentioned, following type is a standard.

Standard type in Japan



※Option: Following retainer anvil is available.



Standard screw **4~5mm** Compact and lightweight. Basic models for assembly plant.

No. GT-S4.5DR

6.35 Bit sleeve retainer

Noise reducer

No. GT-P4.5DR

6.35 Bit sleeve retainer

Noise reducer/Rear exhaust

No. GT-PLR

6.35 Ball spring retainer

3 Adjust dial

No. GT-P5LS

6.35 Bit sleeve retainer

Noise reducer/Rear exhaust

No. GT-PLP

6.35 Ball spring retainer

Push starting/Noise reducer

No. GT-PLZ

6.35 Bit sleeve retainer

3 Adjust dial

Noise reducer

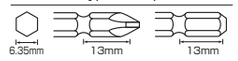
Model No.	Capacity (mm) Standard Screw	Tapping Screw	Wood Screw	Bolt	No Load Speed (rpm)	Air Consumption (m³/min)	Hose Coupling	Overall Length (mm)	Weight (g)	Accessories Bit	Plug	EDP No.
GT-S4.5DR	4.0~5.0	3.5~4.0	2.7~3.5	4.0~5.0	14,000	0.2	G 1/4	180	585	A14 ⊕2×65G	BPN-2F	311084
GT-P4.5DR	4.0~5.0	3.5~4.0	2.7~3.5	4.0~5.0	14,000	0.2	Rc 1/4	160	715	A14 ⊕2×65G	BPB-2	311088
GT-PLR	4.0~5.0	3.5~4.0	2.7~3.5	4.0~5.0	9,000	0.2	G 1/4	187	830	A14 ⊕2×65G	BPN-2F	311097
GT-P5LS	4.0~5.0	3.5~4.0	2.7~3.5	4.0~5.0	9,000	0.2	Rc 1/4	165	980	A14 ⊕2×65G	BPB-2 Air regulator	311099
GT-PLP	4.0~5.0	3.5~4.0	2.7~3.5	4.0~5.0	9,000	0.2	G 1/4	197	750	A14 ⊕2×65G	BPN-2F	311095
GT-PLZ	4.0~5.0	3.5~4.0	2.7~3.5	4.0~5.0	9,000	0.2	G 1/4	205	950	A14 ⊕2×65G	BPN-2F	311111

·Air pressure: 0.6MPa ·Air hose diameter: 6.35mm ·Overall length: Accessories and hanger parts not included. ·Weight: Accessories not included.
·Capacity is listed as instant reference and depends on operation conditions.

Bit installation anvil application

Unless otherwise mentioned, following type is a standard.

Standard type in Japan



※Option: Following retainer anvil is available.

Standard screw **5~6mm** Compact and lightweight. Basic models for assembly plant.

No. GT-PLHII

6.35 Bit sleeve retainer (Pull type)

3 Adjust dial

OP Anvil (Bit sleeve retainer, push type)

No. GT-P6LSIII

6.35 Bit sleeve retainer (Pull type)

Noise reducer/Rear exhaust

OP Anvil (Bit sleeve retainer, push type)
Rubber grip

Rubber grip type available as option.

No. GT-S6HS

6.35 Bit sleeve retainer

3 Adjust dial

No. GT-P6HS

6.35 Bit sleeve retainer

Noise reducer/Rear exhaust

No. GT-S6MLR

6.35 Bit sleeve retainer (Pull type)

3 Adjust dial

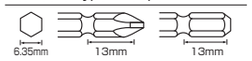
Model No.	Capacity (mm) Standard Screw	Tapping Screw	Wood Screw	Bolt	No Load Speed (rpm)	Air Consumption (m³/min)	Hose Coupling	Overall Length (mm)	Weight (g)	Accessories Bit	Plug		EDP No.
GT-PLHII	5.0~6.0	4.0~4.5	3.6~4.1	5.0~6.0	8,500	0.3	Rc 1/4	213	925	A14 ⊕2×65G	BPB-2		311094
GT-P6LSIII	5.0~6.0	4.0~4.5	3.6~4.1	5.0~6.0	9,000	0.3	Rc 1/4	177	955	A14 ⊕2×65G	BPB-2		311098
GT-S6HS	5.0~6.0	4.0~4.5	3.6~4.1	5.0~6.0	10,000	0.3	G 1/4	220	1,100	A14 ⊕2×65G	BPN-2F		311107
GT-P6HS	5.0~6.0	4.0~4.5	3.6~4.1	5.0~6.0	10,000	0.3	Rc 1/4	180	1,170	A14 ⊕2×65G	BPB-2	Air regulator	311131
GT-S6MLR	5.0~6.0	4.0~4.5	3.6~4.1	5.0~6.0	8,500	0.25	G 1/4	215	1,120	A14 ⊕2×65G	BPN-2F		311106

·Air pressure: 0.6MPa ·Air hose diameter: 6.35mm ·Overall length: Accessories and hanger parts not included. ·Weight: Accessories not included.
·Capacity is listed as instant reference and depends on operation conditions.

Bit installation anvil application

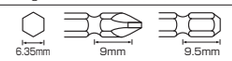
Unless otherwise mentioned, following type is a standard.

Standard type in Japan



※Option: Following retainer anvil is available.

PLHII P6LSIII

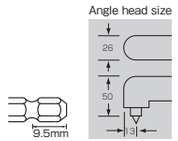


Standard screw **4~5mm** Angle impact screwdriver.

No. GT-PLRC

6.35 Ball spring retainer

3 Adjust dial

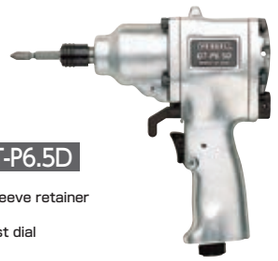


Standard screw **6~8mm** Powerful torque force. Excellent durability.

No. GT-S6.5D

6.35 Bit sleeve retainer

4 Adjust dial



No. GT-P6.5D

6.35 Bit sleeve retainer

3 Adjust dial

Standard screw **8~10mm** High power models. For installing various parts.

No. GT-P8D

8 Bit sleeve retainer

3 Adjust dial

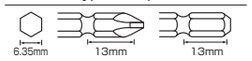
Model No.	Capacity (mm) Standard Screw	Tapping Screw	Wood Screw	Bolt	No Load Speed (rpm)	Air Consumption (m³/min)	Hose Coupling	Overall Length (mm)	Weight (g)	Accessories Bit	Plug	L-wrench	EDP No.
GT-PLRC	4.0~5.0	—	—	4.0~5.0	9,000	0.2	G 1/4	228	1,100	B39 ⊕2×23H	BPN-2F	—	311112
GT-S6.5D	6.0~8.0	4.0~4.5	3.8~4.5	6.0~8.0	7,500	0.35	Rc 1/4	217	1,300	A14 ⊕2×65E/⊕3×65E	BPB-2	H4	324040
GT-P6.5D	6.0~8.0	4.0~5.0	3.8~4.5	6.0~8.0	8,500	0.38	Rc 1/4	152	1,450	A14 ⊕2×65E/⊕3×65E	BPB-2	H4	324041
GT-P8D	8.0~10.0	5.0~6.0	4.5~6.2	8.0~10.0	7,500	0.4	Rc 1/4	172	1,930	A15 ⊕2×65G/⊕3×65E	BPB-2	H4	324046

·Air pressure: 0.6MPa ·Air hose diameter: 6.35mm ·Overall length and Weight: Accessories and hanger parts not included.
·Capacity is listed as instant reference and depends on operation conditions.

Bit installation anvil application

Unless otherwise mentioned, following type is a standard.

Standard type in Japan



Torque Control Air Screwdriver, Reduced Type

Standard screw 2~2.5mm Air is automatically shut out when torque reaches a set value.

No. GT-S4TFG

5 Ball spring retainer

Push startup type/Noise reducer/Rear exhaust
OP Torque Spring

No. GT-S4TG

6.35 Ball spring retainer

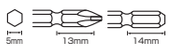
Adjust dial type

Push startup type/Noise reducer/Rear exhaust
OP Torque Spring Hose Coupling(1/8")

Standard screw 2.2~3mm Air is automatically shut out when torque reaches a set value.

No. GT-S4TFS

5 Ball spring retainer



Push startup type/Noise reducer/Rear exhaust
OP Torque Spring

No. GT-S4TS

6.35 Ball spring retainer

Adjust dial type

Push startup type/Noise reducer/Rear exhaust
OP Torque Spring Hose Coupling(1/8")

Standard screw 3~4mm Air is automatically shut out when torque reaches a set value.

No. GT-S4TR

6.35 Ball spring retainer

Adjust dial type

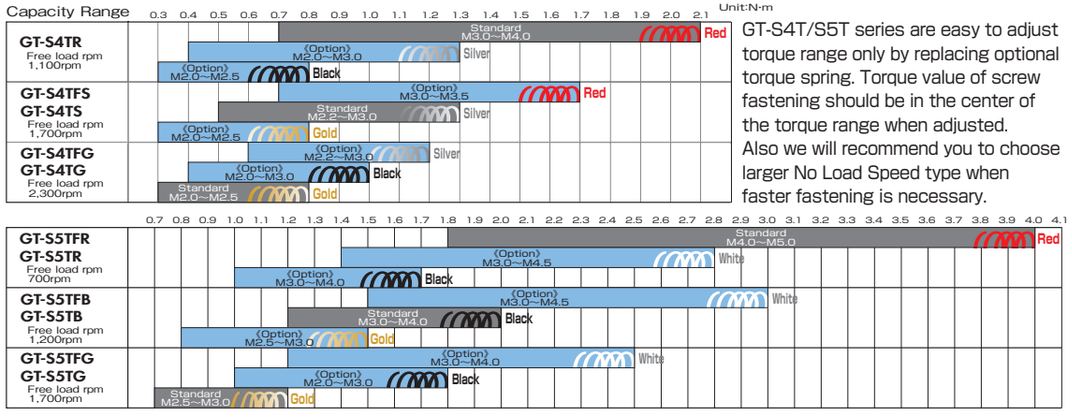
Push startup type/Noise reducer/Rear exhaust
OP Torque Spring Hose Coupling(1/8")

Model No.	Capacity Standard Screw(mm)	Torque Range (N·m)	No Load Speed (rpm)	Air Consumption (m³/min)	Hose Coupling	Overall Length (mm)	Weight (g)	Accessories Bit	Accessories Plug	EDP No.
GT-S4TFG	2.0~2.5	0.3~0.8	2,300	0.28	Rc 1/8	215	565	B36 ⊕2×70H	—	311206
GT-S4TFS	2.2~3.0	0.5~1.3	1,700	0.28	Rc 1/8	215	555	B36 ⊕2×70H	—	311205
GT-S4TG	2.0~2.5	0.3~0.8	2,300	0.28	Rc 1/4	215	650	A14 ⊕2×65G	BPB-2	311203
GT-S4TS	2.2~3.0	0.5~1.3	1,700	0.28	Rc 1/4	215	640	A14 ⊕2×65G	BPB-2	311202
GT-S4TR	3.0~4.0	0.7~2.1	1,100	0.28	Rc 1/4	215	650	A14 ⊕2×65G	BPB-2	311201

·Air pressure: 0.6MPa ·Air hose diameter: 6.35mm ·Overall length: Accessories and hanger parts not included. ·Weight: Accessories not included.
·Capacity is listed as instant reference and depends on operation conditions.

One point

Torque Spring Change

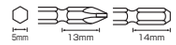


GT-S4T/S5T series are easy to adjust torque range only by replacing optional torque spring. Torque value of screw fastening should be in the center of the torque range when adjusted. Also we will recommend you to choose larger No Load Speed type when faster fastening is necessary.

Standard screw 2.5~3mm Air is automatically shut out when torque reaches a set value.

No. GT-S5TFG

5 Ball spring retainer



Push startup type/Noise reducer/Rear exhaust
OP Torque Spring

No. GT-S5TG

6.35 Ball spring retainer

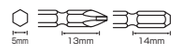
Adjust dial type

Push startup type/Noise reducer/Rear exhaust
OP Torque Spring

Standard screw 3~4mm Air is automatically shut out when torque reaches a set value.

No. GT-S5TFB

5 Ball spring retainer



Push startup type/Noise reducer/Rear exhaust
OP Torque Spring

No. GT-S5TB

6.35 Ball spring retainer

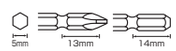
Adjust dial type

Push startup type/Noise reducer/Rear exhaust
OP Torque Spring

Standard screw 4~5mm Air is automatically shut out when torque reaches a set value.

No. GT-S5TFR

5 Ball spring retainer



Push startup type/Noise reducer/Rear exhaust
OP Torque Spring

No. GT-S5TR

6.35 Ball spring retainer

Adjust dial type

Push startup type/Noise reducer/Rear exhaust
OP Torque Spring

Torque Control Air Screwdriver, Impact Type

Standard screw 4.5~6mm Combination between impact and torque control systems gives an excellent workability.

No. GT-S5TS

6.35 Bit sleeve retainer (Pull type)

Adjust dial type

Model No.	Capacity Standard Screw(mm)	Torque Range (N·m)	No Load Speed (rpm)	Air Consumption (m³/min)	Hose Coupling	Overall Length (mm)	Weight (g)	Accessories Bit	Accessories Plug	Accessories L-wrench	EDP No.
GT-S5TFG	2.5~3.0	0.7~1.2	1,700	0.35	Rc 1/8	243	860	B36 ⊕2×70H	—	—	311215
GT-S5TG	2.5~3.0	0.7~1.2	1,700	0.35	Rc 1/4	260	920	A14 ⊕2×65G	BPB-2	—	311212
GT-S5TFB	3.0~4.0	1.2~2.0	1,200	0.35	Rc 1/8	243	830	B36 ⊕2×70H	—	—	311214
GT-S5TB	3.0~4.0	1.2~2.0	1,200	0.35	Rc 1/4	260	910	A14 ⊕2×65G	BPB-2	—	311211
GT-S5TFR	4.0~5.0	1.8~4.0	700	0.35	Rc 1/8	243	850	B36 ⊕2×70H	—	—	311213
GT-S5TR	4.0~5.0	1.8~4.0	700	0.35	Rc 1/4	260	930	A14 ⊕2×65G	BPB-2	—	311210
GT-S5TS	4.5~6.0	3.9~9.8	6,500	0.25	Rc 1/4	292	1,310	A14 ⊕2×65G	BPB-2	H3	324002

·Air pressure: 0.6MPa ·Air hose diameter: 6.35mm ·Overall length: Accessories and hanger parts not included. ·Weight: Accessories not included.
·Capacity is listed as instant reference and depends on operation conditions.

Bit installation anvil application

Unless otherwise mentioned, following type is a standard.

Standard type in Japan

※Option: Following retainer anvil is available.

No. GT-C1400

Corner type impact wrench

Compact and lightweight, these impact wrenches have been designed to achieve the best possible balance in the hand, ensuring a secure hold for optimum nut/bolt work.

No. GT-C1400

Corner type impact wrench

Unique mechanism pursuing high hammering efficiency (PAT.P.)
Transverse-mounted hammer part transmitting hammering forces directly to the anvil, it gives high power with its compact body.

Air Impact Wrenches Model Selection Chart

※Fastening torque is based on JIS B1083. (Metric coarse screw, friction coefficient μ: 0.15) The following selection chart is for referential purposes only.

JISB1051 Strength Category

	3.6		4.6		4.8		5.6		5.8		6.8		8.8		10.9		12.9	
Screw diameter	Torque (N・m)	Applicabl Models	Torque (N・m)	Applicabl Models	Torque (N・m)	Applicabl Models	Torque (N・m)	Applicabl Models	Torque (N・m)	Applicabl Models	Torque (N・m)	Applicabl Models	Torque (N・m)	Applicabl Models	Torque (N・m)	Applicabl Models	Torque (N・m)	Applicabl Models
M8	8.7	800	11.0	800	15.6	800	13.7	800 1000	19.2	800 1000	22.0	800 1000	29.3	1000	43.0	1000 1400	50.4	1000 1400
M10	17.1	800 1000	21.6	1000	30.6	1000	27.0	1000	37.8	1000 1400	43.2	1000 1400	57.6	1000 1400	84.7	1000 1400	99.1	1400 1600
M12	29.4	1000 1400	37.2	1000 1400	52.7	1400 1600	46.5	1400 1600	65.1	1400 1600	74.4	1400 1600	99.1	1400 1600	145.6	1600 2000	170.4	1600 2000
M14	46.9	1400	59.3	1400 1600	84.0	1600 2000	74.1	1400 1600	103.8	1400 1600	118.6	1600	158.1	1600 2000	232.2	2000	271.7	2000
M16	73.0	1600	92.2	1600	130.6	1600 2000	115.3	1600 2000	161.4	1600 2000	184.4	1600 2000	245.9	2000 2500	361.2	2000 2500	422.7	2000 2500
M18	100.8	1600 2000	127.3	1600 2000	180.4	2000	159.2	2000	222.8	2000	254.7	2000 2500	350.2	2000 2500	498.8	2500	583.6	2500
M20	142.7	2000	180.3	2000	255.4	2000	225.4	2000	315.5	2000 2500	360.6	2000 2500	495.9	2500	706.2	2500	826.4	2500 3800
M22	196.6	2000	284.4	2500	351.9	2500	310.5	2500	434.7	2500	496.7	2500 3800	683.0	2500 3800	972.8	3800	1138.4	3800 4200 4800
M24	245.9	3800	310.7	3800	440.1	3800	388.3	3800	543.7	3800	621.3	3800	854.3	3800	1216.8	3800 4200 4800	1423.9	3800 4200 4800
M27	365.0	3800	461.0	3800	653.1	3800	576.2	3800	806.7	3800	922.0	3800	1267.7	3800 4200	1805.6	S55R	2112.9	S55R
M30	494.6	3800	624.8	3800	885.2	3800	781.0	3800	1093.4	3800 4200 4800	1249.6	3800 4200 4800	1718.2	4200 4800 S55R	2447.2	S55R	2863.7	
M33	666.7	3800	842.1	3800	1193.0	3800	1052.6	3800	1473.7	4200 4800	1684.2	S55R	2315.8	S55R	3298.2		3859.6	
M36	862.5	3800	1089.5	4200 4800	1543.4	4200 4800 S55R	1767.8	4200 4800	1906.6	S55R	2178.9	S55R	2996.0		4267.1		4993.4	
M39	1119.6	4200 4800	1414.2	4200 4800	2003.5	S55R	1767.8	S55R	2474.9		2828.5		3889.2		5539.1		6482.0	
M42	1385.0	4200 4800	1749.4	S55R	2478.3	S55R	2186.8	S55R	3061.5		3498.8		4810.9		6851.9		8018.2	
M45	1733.0	S55R	2189.0	S55R	3101.1		2736.3		3830.8		4378.0		6019.8		8573.6		10033.0	
M48	2092.1	S55R	2642.6		3743.7		3303.3		4624.6		5285.3		7267.3		10350.3		12112.1	
M52	2692.9	S55R	3401.6		4818.9		4252.0		5953.8		6803.2		9354.4		13322.9		15590.6	

800 : **GT-P6Ⅱ / S650 / S65W / P65W / S70WK / P60XW / S60XW**
1000 : **GT-P8Ⅱ / P80W / P80XW / C900**
1400 : **GT-1400P / P12 / C1400**
1600 : **GT-1600VPX / 1600VPH(L) / 1600VP(L) / P14J (L) / 1600P(L) / P14W / 1600JP**
2000 : **GT-2000PF / P18J(L) / 2000P(L) / S20RW / 1700BX**
2500 : **GT-2500LF / 2500PF / S220W**
3800 : **GT-3900VL / 3900VP/ 3900V / 3800LX / S32RW**
4200 : **GT-4200PF / 4200L / 4200**
4800 : **GT-4800VL**
S55R : **GT-S55R**

Machine Bolt Dia. **16mm** Compact, lightweight and high power with V shape hammer system.

No. GT-1600VPX

12.7 Retainer ring
4 Adjust dial
Rear exhaust

No. GT-1600VP

12.7 Retainer ring
4 Adjust dial
Rear exhaust

No. GT-1600VPL

12.7 Retainer ring
4 Adjust dial
Rear exhaust

No. GT-1600VPH

12.7 Retainer ring
4 Adjust dial
Rear exhaust Oil-less type

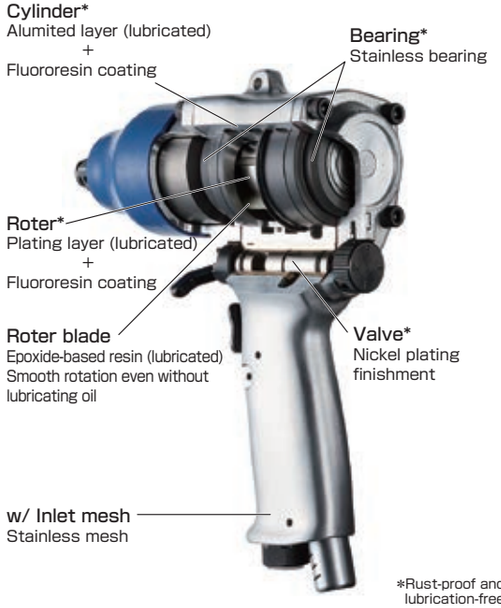
No. GT-1600VPHL

12.7 Retainer ring
4 Adjust dial
Rear exhaust Oil-less type

One point

GT-1600VPH/GT-1600VPHL Oilless mechanism

Completely oil-less model with rust-proofing and lubrication treatment on the air passage. Maintenance-free and environmental-friendly impact wrench, not causing oil mist.



*Rust-proof and lubrication-free

Model No.	Capacity Ordinary Bolt Dia. (mm)	Torque Range (N·m)	Max. Torque (N·m)	No Load Speed (rpm)	Air Consumption (m³/min)	Hose Coupling	Air Hose Inner Dia. (mm)	Overall Length (mm)	Weight (kg)	Accessories		EDP No.
										Plug	L-wrench	
GT-1600VPX	16	49~294.2	360.0	8,200	0.4	Rc 1/4	6.35	169	1.48	BPB-2	H4	336013
GT-1600VP	16	49~304.0	366.7	8,500	0.4	Rc 1/4	6.35	171	1.91	BPB-2	H4	336010
GT-1600VPL	16	49~304.0	366.7	8,500	0.4	Rc 1/4	6.35	199	1.95	BPB-2	H4	336016
GT-1600VPH	16	49~284.3	352.0	8,200	0.4	Rc 1/4	6.35	174.5	1.75	BPB-2	H4	336012
GT-1600VPHL	16	49~284.3	352.0	8,200	0.4	Rc 1/4	6.35	202.5	1.8	BPB-2	H4	336017

·Air pressure: 0.6MPa ·Overall length and Weight: Accessories not included. ·Capacity is listed as instant reference and depends on operation conditions.

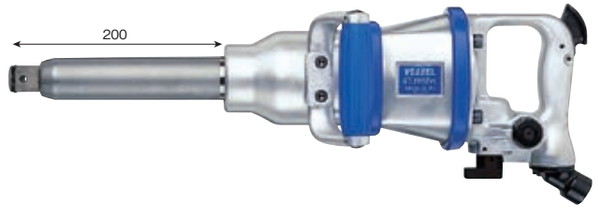
Machine Bolt Dia. **39mm** Compact, lightweight and high power with V shape hammer system.

No. GT-3900VP

25.4 Retainer ring
4 Adjust dial
Rear exhaust

No. GT-3900VL

25.4 Retainer ring
4 Adjust dial



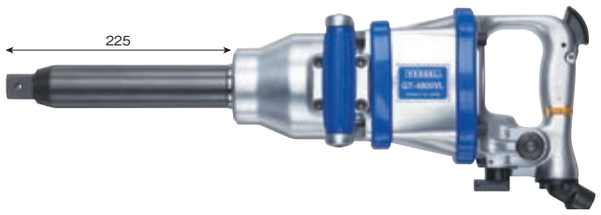
No. GT-3900V

25.4 Retainer ring
4 Adjust dial

Machine Bolt Dia. **48mm** Compact, lightweight and high power with V shape hammer system.

No. GT-4800VL

25.4 Pin-lock
4 Adjust dial



Model No.	Capacity Ordinary Bolt Dia. (mm)	Torque Range (N·m)	Max. Torque (N·m)	No Load Speed (rpm)	Air Consumption (m³/min)	Hose Coupling	Air Hose Inner Dia. (mm)	Overall Length (mm)	Weight (kg)	Accessories		EDP No.
										Plug	L-wrench	
GT-3900VP	39	490~1716	2013.4	4,200	0.7	Rc 3/8	12.7	268	7.95	BPB-3	H5,H6	336118
GT-3900VL	39	490~1716	2094.9	4,200	0.7	Rc 1/2	12.7	524	8.95	BPB-4	H5,H6	336117
GT-3900V	39	490~1716	2094.9	4,200	0.7	Rc 1/2	12.7	358.6	8.2	BPB-4	H5,H6	336113
GT-4800VL	48	343~2010	2542.1	3,200	1.0	Rc 1/2	12.7	559	12.8	1/2"×1/2" (hose nipple)	H6	336121

·Air pressure: 0.6MPa ·Overall length and Weight: Accessories not included. ·Capacity is listed as instant reference and depends on operation conditions.

Machine Bolt Dia. 20mm Models with the best balance between strength and lightness.

No. GT-2000PF

19 Retainer ring

④ Adjust dial

Rear exhaust/Noise reducer

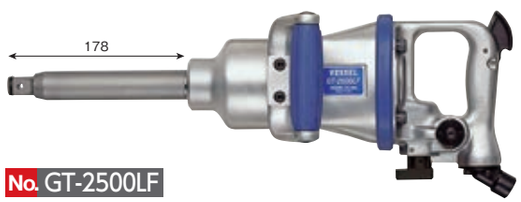
Machine Bolt Dia. 25mm Models with the best balance between strength and lightness.

No. GT-2500PF

19 Retainer ring

④ Adjust dial

Rear exhaust/Noise reducer

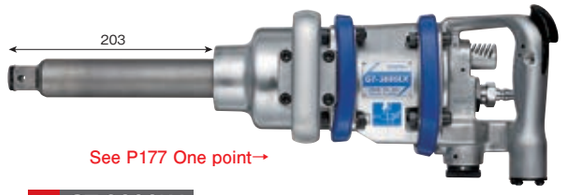


No. GT-2500LF

19 Retainer ring

④ Adjust dial

Machine Bolt Dia. 39mm Models with the best balance between strength and lightness.



See P177 One point→

No. GT-3800LX PAT.

25.4 Retainer ring

③ Adjust dial

Rear exhaust/
Noise reducer

OP
Short anvil
50

OP
Inner lever model available as option.

No. GT-3800PX

25.4 Retainer ring

Rear exhaust/Noise reducer

Model No.	Capacity Ordinary Bolt Dia. (mm)	Torque Range (N·m)	Max. Torque (N·m)	No Load Speed (rpm)	Air Consumption (m³/min)	Hose Coupling	Air Hose Inner Dia. (mm)	Overall Length (mm)	Weight (kg)	Accessories		EDP No.
										Plug	L-wrench	
GT-2000PF	20	98~460.9	542.7	5,500	0.43	Rc 1/4	9.5	210	3.5	BPB-2	H5	331298
GT-2500PF	25	147~961	1187.7	3,200	0.6	Rc 3/8	9.5	242	6.2	BPB-3	H5	335326
GT-2500LF	25	245~961	1315.2	4,400	0.7	Rc 3/8	9.5	478	7.3	BPB-3	H5,H6	335321
GT-3800LX	39	490~1607	2082.3	4,100	0.7	Rc 1/2	12.7	520	9.8	BPB-4	H5	335373
GT-3800PX	39	490~1607	2063.0	4,100	0.7	Rc 1/2	12.7	270	8.9	BPB-4	H5	335389

·Air pressure: 0.6MPa ·Overall length and Weight: Accessories not included. ·Capacity is listed as instant reference and depends on operation conditions.

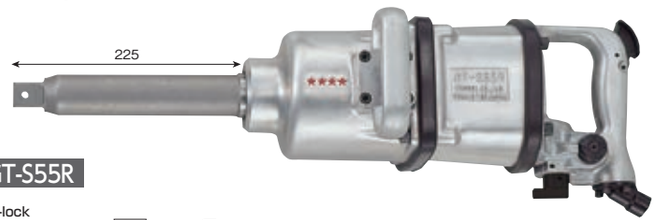
Machine Bolt Dia. 42mm Models with the best balance between strength and lightness.

No. GT-4200PF

25.4 Pin-lock

④ Adjust dial

Machine Bolt Dia. 52mm Models with the best balance between strength and lightness.



No. GT-S55R

25.4 Pin-lock

④ Adjust dial

Noise reducer

QP
Short anvil
50

Model No.	Capacity Ordinary Bolt Dia. (mm)	Torque Range (N·m)	Max. Torque (N·m)	No Load Speed (rpm)	Air Consumption (m³/min)	Hose Coupling	Air Hose Inner Dia. (mm)	Overall Length (mm)	Weight (kg)	Accessories		EDP No.
										Plug	L-wrench	
GT-4200PF	42	343~1863	2250	2,500	1.0	Rc 3/8	12.7	297	11.5	BPB-3	H6	335388
GT-S55R	52	343~2450	3000	2,800	1.2	Rc 1/2	12.7	610	17.0	1/2"×1/2" (hose nipple)	H6	335391

·Air pressure: 0.6MPa ·Overall length and Weight: Accessories not included. ·Capacity is listed as instant reference and depends on operation conditions.

One point

Grip shape specialized for working with tires

Designed so that the center of gravity comes to the center of the whole body with the socket and air hose attached.
Very recommended to large tire shops replacing many tires a day.

No.GT-3800LX

Machine Bolt Dia. **6~8mm** For strong tightening work. Excellent durability.

No. GT-S650
9.5 Retainer ring
④ Adjust dial

No. GT-P6Ⅱ
9.5 Retainer ring
③ Adjust dial

Machine Bolt Dia. **8~10mm** For strong tightening work. Excellent durability.

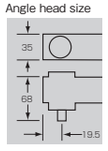
No. GT-P8Ⅱ
12.7 Retainer ring
③ Adjust dial

Machine Bolt Dia. **10mm** Corner type impact wrench.

No. GT-C900 **PAT.P.**
9.5 Retainer ring
④ Adjust dial

Machine Bolt Dia. **6~8mm** Corner type impact wrench.

Angle head size



No. GT-S600C
9.5 Pin-lock
④ Adjust dial

Machine Bolt Dia. **14mm** Corner type impact wrench.

No. GT-C1400 **PAT.P.**
12.7 Retainer ring
④ Adjust dial

←See P172

Model No.	Capacity Ordinary Bolt Dia. (mm)	Torque Range (N·m)	Max. Torque (N·m)	No Load Speed (rpm)	Air Consumption (m³/min)	Hose Coupling	Air Hose Inner Dia. (mm)	Overall Length (mm)	Weight (kg)	Accessories		EDP No.
										Plug	L-wrench	
GT-S650	6~8	49~121.6	140.5	7,500	0.35	Rc 1/4	6.35	210	1.3	BPB-2	H4	331221
GT-P6Ⅱ	6~8	49~121.6	140.5	8,500	0.38	Rc 1/4	6.35	146	1.43	BPB-2	H4	331234
GT-P8Ⅱ	8~10	49~259.8	295.3	7,500	0.4	Rc 1/4	6.35	166	1.89	BPB-2	H4	331244
GT-C900	10	49~100	131.7	7,000	0.25	Rc 1/4	6.35	257	1.9	BPB-2	H3,H4	331228
GT-S600C	6~8	25~47	51.5	7,300	0.35	Rc 1/4	6.35	255	1.87	BPB-2	H4	331226
GT-C1400	14	49~220	241.8	4,500	0.3	Rc 1/4	6.35	277	2.8	BPB-2	H4,H5	331227

·Air pressure: 0.6MPa ·Overall length and Weight: Accessories not included. ·Capacity is listed as instant reference and depends on operation conditions.

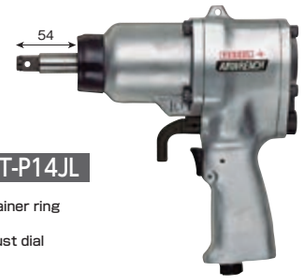
Machine Bolt Dia. **14mm** For strong tightening work. Excellent durability.

No. GT-P12
12.7 Retainer ring
④ Adjust dial

No. GT-1400P
12.7 Retainer ring
④ Adjust dial

Machine Bolt Dia. **16mm** For strong tightening work. Excellent durability. Long anvil model also available.

No. GT-P14J
12.7 Retainer ring
④ Adjust dial



No. GT-P14JL
12.7 Retainer ring
④ Adjust dial

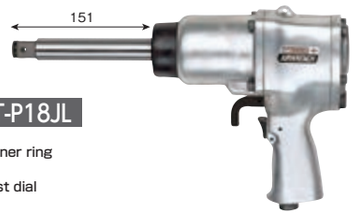
No. GT-1600P
12.7 Retainer ring
④ Adjust dial

Model No.	Capacity Ordinary Bolt Dia. (mm)	Torque Range (N·m)	Max. Torque (N·m)	No Load Speed (rpm)	Air Consumption (m³/min)	Hose Coupling	Air Hose Inner Dia. (mm)	Overall Length (mm)	Weight (kg)	Accessories		EDP No.
										Plug	L-wrench	
GT-P12	12~14	49~294.1	344.9	7,500	0.4	Rc 1/4	6.35	185	2.3	BPB-2	H4	331262
GT-1400P	12~14	49~294.1	344.9	7,000	0.35	Rc 1/4	6.35	182	2.25	BPB-2	H4	331265
GT-P14J	14~16	75~323.6	409.6	6,500	0.42	Rc 1/4	6.35	197	2.95	BPB-2	H5	331272
GT-P14JL	14~16	75~323.6	365.0	6,500	0.42	Rc 1/4	6.35	226	3.0	BPB-2	H5	331276
GT-1600P	14~16	75~308.9	362.3	6,700	0.36	Rc 1/4	6.35	196	2.7	BPB-2	H5	331275

·Air pressure: 0.6MPa ·Overall length and Weight: Accessories not included. ·Capacity is listed as instant reference and depends on operation conditions.

Machine Bolt Dia. **20mm** For strong tightening work. Excellent durability. Long anvil model also available.

No. GT-P18J
19 Retainer ring
④ Adjust dial



No. GT-P18JL
19 Retainer ring
④ Adjust dial

No. GT-2000P
19 Retainer ring
④ Adjust dial

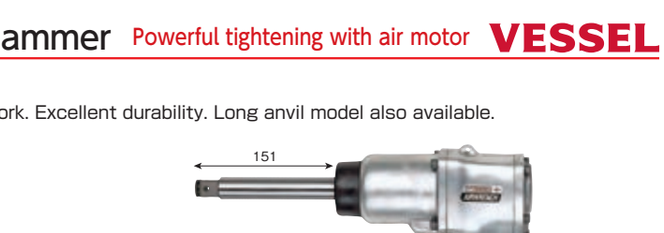
No. GT-2000PL
19 Retainer ring
④ Adjust dial

Machine Bolt Dia. **33mm** For strong tightening work.

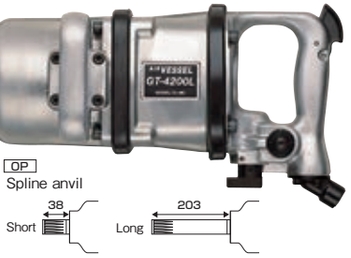
No. GT-P32J
25.4 Pin-lock
④ Adjust dial

Machine Bolt Dia. **42mm** For strong tightening work.

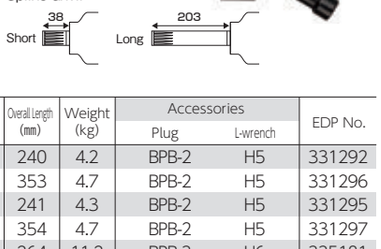
No. GT-4200P
25.4 Pin-lock
④ Adjust dial



No. GT-4200L OP Spline anvil
25.4 Pin-lock
④ Adjust dial



No. GT-4200 OP Spline anvil
25.4 Pin-lock
④ Adjust dial



Model No.	Capacity Ordinary Bolt Dia. (mm)	Torque Range (N·m)	Max. Torque (N·m)	No Load Speed (rpm)	Air Consumption (m³/min)	Hose Coupling	Air Hose Inner Dia. (mm)	Overall Length (mm)	Weight (kg)	Accessories		EDP No.
										Plug	L-wrench	
GT-P18J	16~20	98~470.7	556.5	5,000	0.52	Rc 1/4	9.5	240	4.2	BPB-2	H5	331292
GT-P18JL	16~20	98~441.3	471.4	5,000	0.52	Rc 1/4	9.5	353	4.7	BPB-2	H5	331296
GT-2000P	16~20	98~470.7	556.5	5,000	0.45	Rc 1/4	9.5	241	4.3	BPB-2	H5	331295
GT-2000PL	16~20	98~441.3	471.4	5,000	0.45	Rc 1/4	9.5	354	4.7	BPB-2	H5	331297
GT-P32J	33	343~1569	1906.9	3,700	0.8	Rc 3/8	12.7	264	11.2	BPB-3	H6	335181
GT-4200P	27~42	490~1863	2250	2,500	1.0	Rc 3/8	12.7	315	14.2	BPB-3	H6	331335
GT-4200L	27~42	490~1863	2250	3,200	1.0	Rc 1/2	12.7	593	15.9	BPB-4	H6	335378
GT-4200	27~42	490~1863	2267	3,200	1.0	Rc 1/2	12.7	403	14.9	BPB-4	H6	335377

·Air pressure: 0.6MPa ·Overall length and Weight: Accessories not included. ·Capacity is listed as instant reference and depends on operation conditions.

Machine Bolt Dia. **6~8mm** Low noise and low vibration. High power and high durability. Oil Xtra Series

No. GT-S60XW
9.5 Pin-lock
③ Adjust dial
Noise reducer/Rear exhaust
OP Retainer ring Anvil
↓ See One point

No. GT-P60XW
9.5 Pin-lock
③ Adjust dial
Noise reducer/Rear exhaust
OP Retainer ring Anvil
↓ See One point

Machine Bolt Dia. **8~10mm** Low noise and low vibration. High power and high durability.

No. GT-P80XW
12.7 Pin-lock
④ Adjust dial
Noise reducer/Rear exhaust
OP Retainer ring Anvil

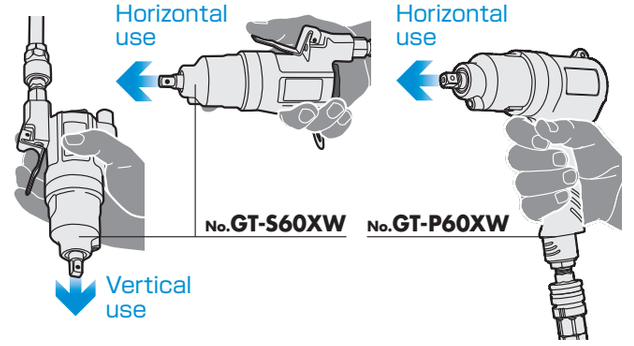
Model No.	Capacity Ordinary Bolt Dia. (mm)	Torque Range (N·m)	Max. Torque (N·m)	No Load Speed (rpm)	Air Consumption (m³/min)	Hose Coupling	Air Hose Inner Dia. (mm)	Overall Length (mm)	Weight (kg)	Accessories			EDP No.
										Socket	Plug	L-wrench	
GT-S60XW	6~8	49~116.8	135.0	7,500	0.38	Rc 1/4	6.35	192	1.0	—	BPB-2	—	324022
GT-P60XW	6~8	49~116.8	135.0	7,500	0.38	Rc 1/4	6.35	169.4	1.1	—	BPB-2	—	324020
GT-P80XW	8~10	49~229.7	242.9	7,000	0.4	Rc 1/4	6.35	163.5	1.48	—	BPB-2	H4	324049

·Air pressure: 0.6MPa ·Overall length and Weight: Accessories not included. ·Capacity is listed as instant reference and depends on operation conditions.

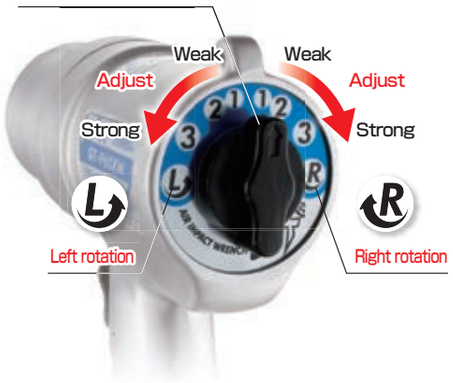
One point

GT-S60XW / GT-P60XW Quest for easy-to-use tools

Flexible ways to hold. Comfortable grip and balanced body improve workability.



Adjuster and switch to change right/left rotation



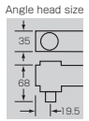
Machine Bolt Dia. **6~8mm** Corner type impact wrench.

No. GT-S60CW

9.5 Pin-lock

④ Adjust dial

Angle head size



Machine Bolt Dia. **6~8mm** For powerful constant fastening. Excellent durability.

No. GT-S65W

9.5 Pin-lock

④ Adjust dial

No. GT-P65W

9.5 Pin-lock

③ Adjust dial

No. GT-S70WK

9.5 Pin-lock

④ Adjust dial

Noise reducer/Rear exhaust

Machine Bolt Dia. **8~10mm** For powerful constant fastening.

No. GT-P80W

12.7 Pin-lock

③ Adjust dial

Machine Bolt Dia. **12~16mm** For powerful constant fastening.

No. GT-P14W

12.7 Pin-lock

④ Adjust dial

Model No.	Capacity Ordinary Bolt Dia. (mm)	Torque Range (N·m)	Max. Torque (N·m)	No Load Speed (rpm)	Air Consumption (m³/min)	Hose Coupling	Air Hose Inner Dia. (mm)	Overall Length (mm)	Weight (kg)	Accessories			EDP No.
										Socket	Plug	L-wrench	
GT-P65W	6~8	49~121.6	140.5	8,500	0.38	Rc 1/4	6.35	146	1.43	A/F10	BPB-2	H4	324038
GT-S65W	6~8	49~121.6	140.5	7,500	0.35	Rc 1/4	6.35	210	1.3	A/F10	BPB-2	H4	324008
GT-S70WK	6~8	85~176.5	193.5	7,000	0.39	Rc 1/4	6.35	231	1.3	—	BPB-2	H4	324017
GT-S60CW	6~8	25~47	51.5	7,300	0.35	Rc 1/4	6.35	255	1.87	A/F10	BPB-2	H4	324011
GT-P80W	8~10	49~259.8	295.3	7,500	0.4	Rc 1/4	6.35	164	1.89	A/F14	BPB-2	H4	324048
GT-P14W	12~16	49~421.6	505.0	6,400	0.47	Rc 1/4	9.5	200	3.2	A/F22	BPB-2	H5	324073

·Air pressure: 0.6MPa ·Overall length and Weight: Accessories not included. ·Capacity is listed as instant reference and depends on operation conditions.

Air Impact Wrenches Double Hammer

Machine Bolt Dia. **20mm** For powerful constant fastening.

No. GT-S20RW

19 Pin-lock

④ Adjust dial

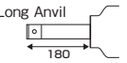
Machine Bolt Dia. **33mm** For powerful constant fastening.

No. GT-S32RW

25.4 Pin-lock

④ Adjust dial

OP Long Anvil



Model No.	Capacity Ordinary Bolt Dia. (mm)	Torque Range (N·m)	Max. Torque (N·m)	No Load Speed (rpm)	Air Consumption (m³/min)	Hose Coupling	Air Hose Inner Dia. (mm)	Overall Length (mm)	Weight (kg)	Accessories		EDP No.
										Plug	L-wrench	
GT-S20RW	20	75~610	928	4,800	0.9	Rc 3/8	9.5	300	5.4	BPB-3	H5	324101
GT-S32RW	33	343~1,569	1801.2	3,600	1.0	Rc 1/2	12.7	380	12.2	BPB-4	H5,H6	324088

·Air pressure: 0.6MPa ·Overall length and Weight: Accessories not included. ·Capacity is listed as instant reference and depends on operation conditions.

Air Impact Wrenches Twin Hammer

Machine Bolt Dia. **16mm** Well balanced, less shock from the impact.

No. GT-1600JP

12.7 Retainer ring

③ Adjust dial

Rear exhaust

Machine Bolt Dia. **20mm** Well balanced, less shock from the impact.

No. GT-1700BX

12.7 Retainer ring

④ Adjust dial

Rear exhaust

Oil lubricating mechanism
Oil protects the hammer unit and reduces irritating noises, preventing parts from being burned.

Model No.	Capacity Ordinary Bolt Dia. (mm)	Torque Range (N·m)	Max. Torque (N·m)	No Load Speed (rpm)	Air Consumption (m³/min)	Hose Coupling	Air Hose Inner Dia. (mm)	Overall Length (mm)	Weight (kg)	Accessories		EDP No.
										Plug	L-wrench	
GT-1600JP	16	50~220	280	10,000	0.6	Rc1/4	6.35	109	1.4	BPB-2	—	336014
GT-1700BX	20	Right rotation 49~450 Left rotation 75~500	Right rotation 480 Left rotation 540	Right rotation 7,000 Left rotation 8,000	0.9	Rc1/4	6.35	192	2.2	—	—	331286

·Air pressure: 0.6MPa ·Overall length and Weight: Accessories not included. ·Capacity is listed as instant reference and depends on operation conditions.

Air Ratchet Wrenches

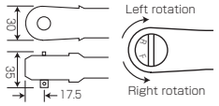
Machine Bolt Dia. **10mm** This ratchet tightening system makes it possible to fine-tune the wrenching torque.

Mini type

The exhaust cover is 360-degree rotatable.

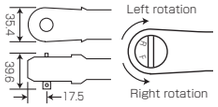
No. GT-R10M

9.5 Ball-lock



No. GT-R10

9.5 Ball-lock



Model No.	Capacity Ordinary Bolt Dia. (mm)	No Load Speed (rpm)	Air Consumption (m³/min)	Hose Coupling	Air Hose Inner Dia. (mm)	Overall Length (mm)	Weight (kg)	Accessories Plug	EDP No.
GT-R10M	10	250	0.3	Rc 1/4	6.35	170	500	BPB-2	339003
GT-R10	10	160	0.4	Rc 1/4	6.35	297	1,090	BPB-2	339001

·Air pressure: 0.6MPa ·Overall length and Weight: Accessories not included.

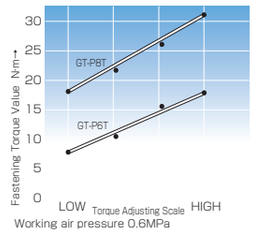
Air Impact Wrenches, Torque Control Type

Machine Bolt Dia. **6~8mm** Automatic suspensions by torque set-up

No. GT-P6T

9.5 Pin-lock

Adjust dial



Working air pressure 0.6MPa

※The above is an actual measurement value by our specified torque tester.
It depends upon screw, bolts, nuts, or material differences.

Machine Bolt Dia. **8~10mm** Automatic suspensions by torque set-up

No. GT-P8T

12.7 Pin-lock

Adjust dial

Model No.	Capacity Ordinary Bolt Dia. (mm)	Torque Range (N·m)	No Load Speed (rpm)	Air Consumption (m³/min)	Hose Coupling	Air Hose Inner Dia. (mm)	Overall Length (mm)	Weight (kg)	Accessories Plug	Accessories L-wrench	EDP No.
GT-P6T	6~8	7.8~17.6	3,000	0.27	Rc 1/4	6.35	246	1.5	BPB-2	H3,H4	324003
GT-P8T	8~10	17.6~31.4	2,500	0.31	Rc 1/4	6.35	266	2.2	BPB-2	H3,H4	324005

·Air pressure: 0.6MPa ·Overall length and Weight: Accessories not included. ·Capacity is listed as instant reference and depends on operation conditions.

No. GT-HPS160

Power Scaler

The barycenter is at the front side, alleviating the strain on your wrist. Effortless operation is possible by just pressing the needles on welding spatters, slugs, etc. The impact does not catch your hand so the needles do not spread out as much, making it easier to work.

No. GT-HPS160

Power Scaler

Even in places set deep at the back where the pistol types cannot reach, it can be handled smoothly.

Power Scaler

- The barycenter is at the front side, alleviating the strain on your wrist. Downward-facing work on a welding bench is easy and effortless.
- With a new shape similar to the straight type, it can be handled smoothly even in places set deep at a place where the pistol types cannot reach.
- Needles do not spread as much, enabling to aim at the welding spatters and to perform a precise work.
- Easy to replace needles without any tools.
- The hose rotates 360°, making it easier to handle. Equipped with a filter to prevent dust coming in from the air inlet.
- Convenient for removing spatters or slugs, peeling off coating and removing rust.

Needle ϕ2mm

No. GT-HPS160

- Needle φ2mm×180mm ····· 29pcs.
- Accessories ·Hose set ····· 1set
  ·Hydraulic oil for hammer unit 1pc. (VG-10・White)
  ·Replacement needles····· 29pcs. (φ2mm×180mm)

Needle ϕ3mm

No. GT-HPS200

- Needle φ3mm×180mm ····· 12pcs.
- Accessories ·Hose set ····· 1set
  ·Hydraulic oil for hammer unit 1pc. (VG-10・White)
  ·Replacement needles····· 12pcs. (φ3mm×180mm)

Model No.	Piston diameter (㎜)	Needle stroke (㎜)	Number of impacts (min⁻¹)	Air Consumption (㎥/min)	Inlet bushing	Appropriate Air Pressure (MPa)	Air hose inner diameter (㎜)	Overall Length (㎜)	Weight (kg)	EDP No.
GT-HPS160	16	18	4000	0.22	Rc 1/4	0.6	6.35	380	1.47	310650
GT-HPS200	20	20	3700	0.26	Rc 1/4	0.6	6.35	400	1.9	310651

※Overall length and weight : Accessories included

Needles for Power Scalers

No. HPSN-215

No. HPSN-218

No. HPSN-318

For GT-HPS160 (100pieces)

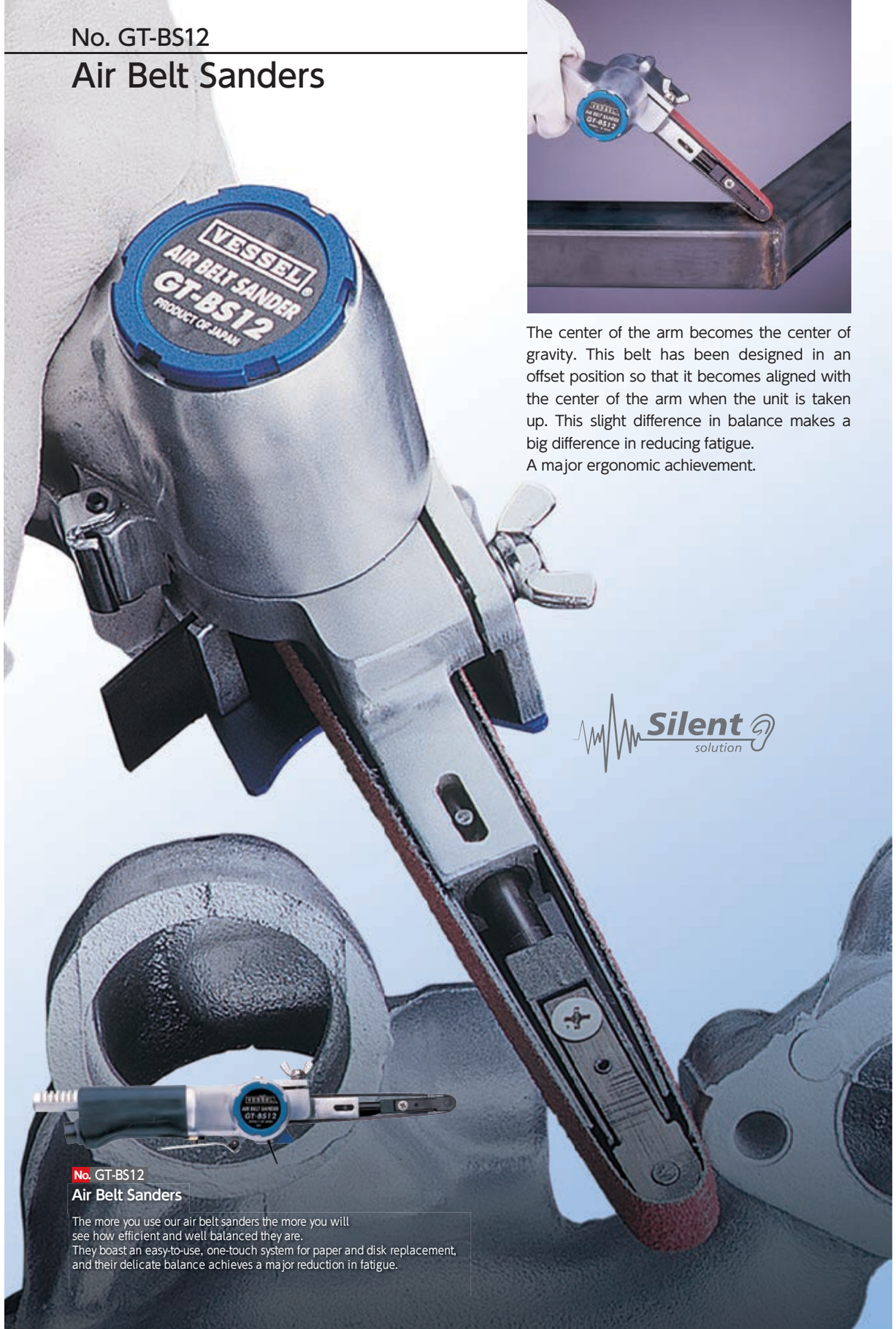
Model No.	Contents		EDP No.
HPSN-215	Φ2mm×150mm	100pcs.	350151
HPSN-218	Φ2mm×180mm	100pcs.	350150

For GT-HPS200 (50pieces)

Model No.	Contents		EDP No.
HPSN-318	Φ3mm x180mm	50pcs.	350152

Air Belt Sanders

The center of the arm becomes the center of gravity. This belt has been designed in an offset position so that it becomes aligned with the center of the arm when the unit is taken up. This slight difference in balance makes a big difference in reducing fatigue.
A major ergonomic achievement.



No. GT-BS12

Air Belt Sanders

The more you use our air belt sanders the more you will see how efficient and well balanced they are.
They boast an easy-to-use, one-touch system for paper and disk replacement, and their delicate balance achieves a major reduction in fatigue.

Air Belt Sanders

Belt Width **12mm/10mm** Compact and lightweight.

No. GT-BS12 **PAT.**

With noise reducer

Accessories
Sand belt #60…2pcs.
#80…1pc.

Belt Width **20mm** Roller head can be chosen.

No. GT-BS20 **PAT.**

Aluminum roller head

With noise reducer

Aluminum
For heavy-duty sanding.

Accessories
Sand belt #60…2pcs.
#80…1pc.

OP
Bar grip
(Auxiliary handle)

Belt Width **30mm** Roller head can be chosen.

No. GT-BS30 **PAT.**

Aluminum roller head

With noise reducer

Aluminum
For heavy-duty sanding.

No. GT-BS30W **PAT.**

Urethane roller head

With noise reducer

Urethane
For undulated and curved surfaces.

Accessories
Bar grip(Auxiliary handle)… 1pc.
Sand belt #60… 2pcs.
#80… 1pc.

Model No.	Applicable Belt Size	Belt Circumferential Speed (m/min)	Working Air Pressure (MPa)	No Load Speed (rpm)	Air Consumption (㎥/min)	Hose Coupling	Overall Length (㎜)	Weight (g)	Accessories		EDP No.
									Plug	L-wrench	
GT-BS12	12mm/10mm×330mm	1,100	0.6	17,000	0.52	Rc 1/4	311	840	BPB-2	H1.5	310621
GT-BS20	20mm×520mm	2,600	0.6	16,500	0.6	Rc 1/4	398	1,300	BPB-2	H2	310622
GT-BS30	30mm×540mm	2,040	0.6	13,000	0.72	Rc 1/4	374	1,930	BPB-2	H2.5	310624
GT-BS30W											310625

·Total length: When mounted with belt.

Air Disk Sanders

Disk Dia. **50mm** Low speed of 5000 rpm & High torque.

Sand belt #60…2pcs.
#80…1pc.

No. GT-DS50A

With noise reducer

Accessories
Flap wheel #60…1 pc.
Fiber wheel #600…1 pc.
Pitatto holder…1 pc.
Pitatto disk paper #60…3 pcs.

OP
Disk bolt

Collet chuck(φ3mm、φ1/4"、φ1/8")

Disk Dia. **100mm** Low speed of 5000 rpm & High torque.

No. GT-DS50B

With noise reducer

Accessories
Protective cover
Disk nut
Pin wrench

Model No.	Disk Dia. (㎜)	No Load Speed (rpm)	Air Consumption (㎥/min)	Hose Coupling	Air Hose Inner Dia. (㎜)	Overall Length (㎜)	Weight (g)	Tip Tool Installation Part	Accessories		EDP No.
									Plug	Spanner	
GT-DS50A	50	5,000	0.65	Rc 1/4	6.35	211	935	Collet chuck φ6㎜	BPB-2	H11,H15	310635
GT-DS50B	100	5,000	0.65	Rc 1/4	6.35	211	1,150	M10 Disk nut	BPB-2	Pin spanner,H15	310636

·Air pressure: 0.6MPa

Endless belts for air belt sander

No. CB12 **Ceramic Endless Belt (for GT-BS12)**

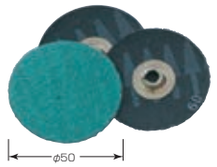
Model No.	Size	Grit No.	Quantity	EDP No.
CB12-60	12mm×330mm	#60	50	350061
CB12-80	12mm×330mm	#80	50	350062
CB12-120	12mm×330mm	#120	50	350064

No. ZB20 **Zirconia Endless Belt (for GT-BS12)**

Model No.	Size	Grit No.	Quantity	EDP No.
ZB20-40	20mm×520mm	#40	20	350067
ZB20-60	20mm×520mm	#60	20	350068
ZB20-80	20mm×520mm	#80	20	350069

Air Disk Sander Wheel (For DS50A) See P190 One point→

No. PD-P60 **Pitatto Disk Paper**

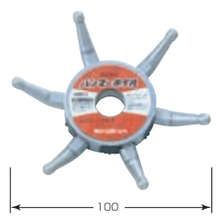


No. PD-P6 **Pitatto Holder**

Model No.	Grit No.	Max. Circumferential Speed (rpm)	Material	Use	Quantity	EDP No.
PD-P60	Z60	20,000	Zirconia	Thin pressed plate deburring, surfacing, etc.	50	350111
PD-P6	—	—	Rubber (Pad)	For Pitatto disk paper	1	350116

Wheels to Remove Rust / Stains (For DS50B) See P190 One point→

No. HMW10 **Hammer Wheel**



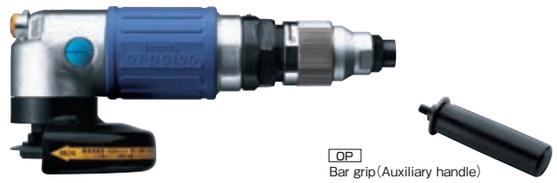
Model No.	Max. Circumferential Speed (rpm)	Material	Use	Quantity	EDP No.
HMW10	5,000	SUS	Slag and spatter removal after welding, etc.	1	350121

Disk Dia. **50mm** Handy & powerful grinder pursuing safety and usability.

No. GT-DG50

Disk Dia. **100mm** Handy & powerful grinder pursuing safety and usability.

No. GT-DG100



OP Bar grip(Auxiliary handle)

Model No.	Grindstone Size Outer Dia.×Thickness×Hole Dia. (mm)	Max Operating Circumferential Speed(m/s)	No Load Speed (rpm)	Air Consumption (m³/min)	Hose Coupling	Overall Length (mm)	Height (mm)	Weight (g)	Accessories		EDP No.
									Plug	L-wrench	
GT-DG50	50×4×9.5	39.2	15,000	0.57	Rc 1/4	164	70	800	BPB-2	H6	310639
GT-DG100	100×6×15	70.6	13,500	0.7	Rc 1/4	205	92	1,390	BPB-2	H6	310630

·Air pressure: 0.6MPa ·Air hose diameter: 6.35mm

One point

Application	Wheel	Tools
●For removing burr from thin metal sheet press, cutter mark, burr from aluminum casting, wood work, etc.	Pitatto Holder + Pitatto Disk Paper	No.PD-P6 / No.PD-P60 → **No.GT-DS50A**
●For removing slag and spatter after welding, rust on steel members, burr on foundry pieces, shells on ship bottom, etc.	Hammer Wheel	**No.HMW10** → **No.GT-DS50B**

Collet chuck **φ3mm** High rotation speed and minimum core deviation, realizing an effortless and smooth grinding performance

No. GT-MG75S

75,000 rpm

No. GT-MG75SAR

Soft Grip

75,000 rpm

OP Collet chuck(φ2.35mm,φ1/8")

No. GT-MG55SR

Ergo Grip

55,000 rpm

No. GT-MG55SAR

Soft Grip

55,000 rpm

OP Collet chuck(φ2.35mm,φ1/8")

No. GT-MG55S

55,000 rpm

No. GT-MG35-12CC

Soft Grip

35,000 rpm

OP Collet chuck(φ2.35mm,φ1/8")

OP Corner attachment
No.GT-MG25-12CF(Smooth grinding / polishing at 25,000 rpm)
No.GT-MG25-12CC(Precision grinding at 25,000 rpm)

No. GT-MG35-12CR

35,000 rpm

Collet chuck **φ6mm** High rotation speed and minimum core deviation, realizing an effortless and smooth grinding performance

No. GT-MG25S

25,000 rpm

OP Collet chuck(φ3mm,φ1/4",φ1/8")

No. GT-MG35SAR

Soft Grip

35,000 rpm

OP Collet chuck(φ3mm,φ1/4",φ1/8")

Model No.	No Load Speed (rpm)	Air Consumption (m³/min)	Hose Coupling	Air Hose Inner Dia.(mm)	Overall Length (mm)	Frame Dia. (mm)	Weight (g)	Collet Chuck (φmm)	Accessories			EDP No.
									Chuck handle	Spanner	Oil	
GT-MG75S	75,000	0.16	Rc 1/4	6.35	170	18.5	190	3	●	H9	●	310725
GT-MG75SAR	75,000	0.16	Rc 1/4	6.35	156	20.9	180	3	—	H5,H9	●	310726
GT-MG55SR	55,000	0.16	Rc 1/4	6.35	180	20.5	220	3	●	H9	●	310750
GT-MG55SAR	55,000	0.245	Rc 1/4	6.35	178	24.4	260	3	—	H5,H9	●	310773
GT-MG55S	55,000	0.16	Rc 1/4	6.35	165	17.5	180	3	●	H9	●	310705
GT-MG35-12CC	35,000	0.20	Rc 1/4	6.35	183	24.5	305	3	—	H5,H9	●	310774
GT-MG35-12CR	35,000	0.16	Rc 1/4	6.35	151	20.0	160	3	—	H5,H9	●	310748
GT-MG25S	25,000	0.175	Rc 1/4	6.35	198	30.0	600	6	—	H11,H13	●	310765
GT-MG35SAR	35,000	0.285	Rc 1/4	6.35	182	29.4	435	6	—	H11,H13	●	310772

·Working air pressure: 0.6MPa ·Overall length: Accessories and exhaust hose parts not included. ·Weight: Accessories not included.
·In the main body, a 1.5m air intake hose, exhaust hose and a hose joint are attached. ·With regard to GT-MG55S, MG55SR, MG75S and a 2.35 mm collet chuck is also prepared.
OP Can be replaced by user. OP Should be replaced at our factory.

No. GT-MG25-12CF

Soft Grip 25,000 rpm

OP Corner attachment
No.GT-MG35-12CC (Precision grinding at 35,000 rpm) (EDP No.310774)
No.GT-MG25-12CC (Precision grinding at 25,000 rpm) (EDP No.310783)

No. GT-MG25-9CF

Soft Grip 25,000 rpm

OP Corner attachment
No.GT-MG25-9CC (Precision grinding at 25,000 rpm) (EDP No.310782)
No.GT-MG35-9CC (Precision grinding at 35,000 rpm) (EDP No.310781)

No. GT-MG25-12CR

25,000 rpm

No. GT-MG25-9CR

25,000 rpm

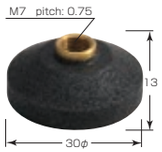
Model No.	No Load Speed (rpm)	Air Consumption (m³/min)	Hose Coupling	Air Hose Inner Dia. (mm)	Overall Length (mm)	Frame Dia. (mm)	Weight (g)	Tip tool attachment size	Accessories	EDP No.
GT-MG25-12CF	25,000	0.25	Rc 1/4	6.35	181	24.5	315	M7	·Chuck handle ·Oil ·Rubber holder ·PO-ring (#60·100·150·240 3pcs. each #400·600 1pc. each) ·Lap ring (#600 1pc.) ·Headcup (#80 1pc.)	310776
GT-MG25-9CF	25,000	0.25	Rc 1/4	6.35	173	24.5	310	M7		310775
GT-MG25-12CR	25,000	0.16	Rc 1/4	6.35	160	20.0	200	M7		310762
GT-MG25-9CR	25,000	0.16	Rc 1/4	6.35	143	20.0	200	M7		310761

·Working air pressure: 0.6MPa ·Overall length: Accessories and exhaust hose parts not included. ·Weight···Accessories not included. ·In the main body, a 1.5m air intake hose, exhaust hose and a hose joint are attached.
OP Should be replaced at our factory.

Tip Tools for Smooth Surface Grinding and Polishing

To meet work objectives from the removal of cutter marks when manufacturing metal molding, to the finishing of mirror surfaces

No. HC-80 Headcup



Model No.	Grit #	Inner Ctn.	EDP No.
HC-80	80	10	622205

No. RH-30 Rubber Holder

Model No.	Inner Ctn.	EDP No.
RH-30	10	622305

No. PR PO-Ring

Model No.	Grit #	Inner Ctn.	EDP No.
PR-60	60	100	622005
PR-100	100	100	622007
PR-150	150	100	622009
PR-240	240	100	622011
PR-400	400	100	622013
PR-600	600	100	622015

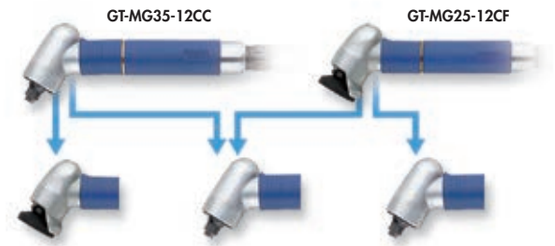
No. LP Lap Ring

Model No.	Grit #	Inner Ctn.	EDP No.
LP-320	320	30	622105

One point

Corner Attachment Replacement Heads

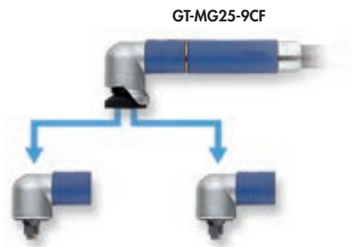
A selection of corner attachments with differing head shapes and gear ratios is available.
VESSEL will replace the micro grinder heads in accordance with your needs.



GT-MG25-12CF
●No Load Speed 25,000rpm
●Tip tool attachment size: M7

GT-MG25-12CC
●No Load Speed 25,000rpm
●Collet chuck: φ3mm I.D.

GT-MG35-12CC
●No Load Speed 35,000rpm
●Collet chuck: φ3mm I.D.



GT-MG25-9CC
●No Load Speed 25,000rpm
●Collet chuck: φ3mm I.D.

GT-MG35-9CC
●No Load Speed 35,000rpm
●Collet chuck: φ3mm I.D.

No. GT-ASC5

Air Scraper

Featuring superior speed, operating efficiency, and durability, our air grinders are designed for cutting sheet, plate, and board material, these air scrapers are available in 2 models, with emphasis on high speed and strength.
The movement amplitude is both exact and strong, and as air scrapers these units have become the focus of attention in the recycling industry.

No. GT-ASC5
Air Scraper
Speedy cutting performance with an excellent amplitude balance. User-friendly ergonomic design.

Cutting Capacity Metal Sheet **4mm** Compact and lightweight.

Easy recovery by the restart button in case of unexpected stop.

No. GT-AS10 **PAT.**

Noise reducer

Accessories
Blade : 32-tooth thick blade ASB-32H···1pc.
24-tooth thick blade ASB-24H···1pc.

Cutting Capacity Metal Sheet **1.6mm** Compact and lightweight.

No. GT-AS100 **PAT.**

Accessories
Blade : 32-tooth standard blade ASB-32···2pcs.

Model No.	Cutting Capacity	Working Air Pressure (MPa)	Stroke Speed (c.p.m.)	Air Consumption (㎥/min)	Stroke (㎜)	Hose Coupling	Overall Length (㎜)	Weight (g)	Accessories		EDP No.
									Plug	L-wrench	
GT-AS10	Metal sheet···4㎜	0.6	5,000	0.28	10	Rc 1/4	195.5	870	BPB-2	H3	336131
GT-AS100	Metal sheet···1.6㎜	0.6	10,000	0.34	10	Rc 1/4	170	570	BPB-2	H2,H4	310640

Cutting capacity: GT-AS10: When used with a No.ABS-32H blade GT-AS100: When used with a No.ASB-32 blade Overall Length and Weight: Accessories not included.

Air Saw Blades (For GT-AS10/AS100)

〈For steel〉

〈Scraper〉

Model No.	Specifications	Use	Quantity	EDP No.
ASB-32	For steel Cobalt mix, standard blade, 32 teeth	Cutting steel	10	350054
ASB-32H	For steel Cobalt mix, super thick blade, 32 teeth	Cutting plain and stainless steel sheet	10	350052
ASB-24H	For steel Cobalt mix, super thick blade, 24 teeth	Cutting aluminum, soft steel and resin	10	350053
ASC-25-5	Scraper 25 mm wide blade	Scraping, peeling, etc.	1	350143

Easy recovery by the restart button in case of unexpected stop.

No. GT-ASC5

Noise reducer

※Scraper sold separately

↓ See One point

Model No.	Working Air Pressure (MPa)	Stroke Speed (c.p.m.)	Air Consumption (㎥/min)	Stroke (㎜)	Hose Coupling	Overall Length (㎜)	Weight (g)	Accessories		EDP No.
								Plug	L-wrench	
GT-ASC5	0.6	7,000	0.28	5	Rc 1/4	195.5	810	BPB-2	H3	336132

Scraper (For GT-ASC5)

No. ASC-25-8

No. ASC-50-8

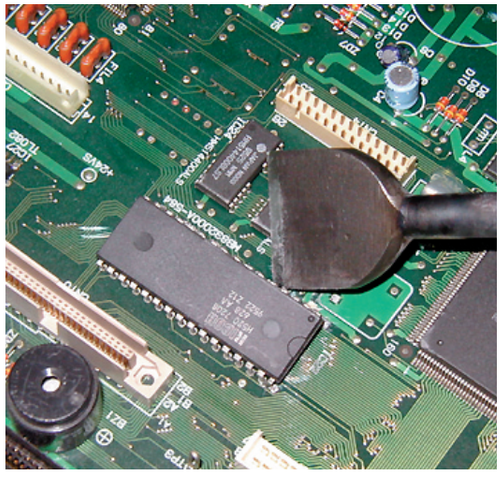
Model No.	Blade Width (㎜)	Axis Dia. ϕ (㎜)	Use	EDP No.
ASC-25-8	25	8	for IC chip	350141
ASC-50-8	50	8	for IC chip, wall	350142

One point

Ideal for recycling of automotive and PC

Air Scraper
No.GT-ASC5

Use to detatch IC chips from circuit boards when recycling PCs, faxes, copiers.



Drill Hole φ6mm Compact and lightweight. Equipped with adjust-valve and silencer, which offer comfort to operators

No. GT-D60-30

Noise reducer/Rear exhaust

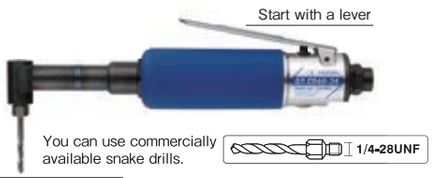
No. GT-D60-45

Drill Hole φ6mm Suitable for drilling holes on curved surfaces and/or hard-to-work-on places.

No. GT-CD60-34

Air Corner Drill

Rear exhaust



No. GT-CD60-34L

Drill Hole φ8mm Compact, lightweight, and noise reducer equipped, for comfort to the workplace.

No. GT-D80-20

Noise reducer/Rear exhaust

No. GT-D80-20K

Noise reducer/Rear exhaust

Key-less chuck type,
which does not need a chuck handle

Drill Hole φ10mm Compact, lightweight, and noise reducer equipped, for comfort to the workplace.

No. GT-D100-15

Noise reducer/Rear exhaust

No. GT-D100-15K

Noise reducer/Rear exhaust

Key-less chuck type,
which does not need a chuck handle

Model No.	Steel Plate Drilling Capacity φ (mm)	No Load Speed (rpm)	Air Consumption (m³/min)	Hose Coupling	Air Hose Inner Dia. (mm)	Overall Length (mm)	Weight (g)	Chuck Size (mm)	Accessories Plug		EDP No.
GT-D60-30	6	3,000	0.52	Rc 1/4	6.35	188	880	6.0	BPB-2	Chuck handle	310603
GT-D60-45	6	4,500	0.56	Rc 1/4	6.35	188	890	6.0	BPB-2	Chuck handle	310611
GT-CD60-34	6	3,400	0.42	Rc 1/4	6.35	250	820	6.0	BPB-2	Lock handle, Offset wrench	336141
GT-CD60-34L	6	3,400	0.42	Rc 1/4	6.35	251	840	6.0	BPB-2	Lock handle, Offset wrench	336142
GT-D80-20	8	2,000	0.35	Rc 1/4	6.35	165	940	8.0	BPB-2	Chuck handle	310604
GT-D80-20K	8	2,000	0.35	Rc 1/4	6.35	171	960	8.0	BPB-2	–	310605
GT-D100-15	10	1,500	0.54	Rc 1/4	6.35	189	1,280	10.0	BPB-2	Chuck handle	310606
GT-D100-15K	10	1,500	0.54	Rc 1/4	6.35	195	1,300	10.0	BPB-2	–	310607

·Working air pressure: 0.6MPa ·Overall length and Weight: Accessories not included.

Air Dusters

2 types are available to meet a variety of needs.
A perfect amalgamation of materials with ergonomic design has made easy-to-use products for all applications of blowing and drying work.

No. AD-4 N

Air Dusters

VESSEL's air dusters boast aluminum die-cast bodies that are light and strong, a wide selection of replaceable nozzles such as extra-long nozzles, flexible nozzles, nozzles with flanges, and a protector to prevent loosening of the handle lever.

Standard Nozzle **AD-4 N** Standard Type.

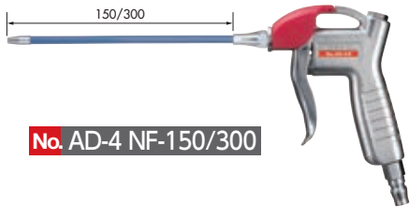
Flow Volume Adjustment Nozzle **AD-4 J** Can control air flow.

High Vorume Nozzle **AD-4 M** Booster nozzle with a higher spraying pressure.
→See 199P One point

Brushing Nozzle **AD-4 B** Powerfully sweeps out particles with a sturdy brush.
→See 199P One point

Long Nozzle **AD-4 N** For working in deep and distant places.

Flexible Nozzle **AD-4 NF** Bendable nozzle.



Model No.	Nozzle Type	Nozzle Inner Dia. (㎜)	Air Consumption (㎥/min)	Overall Length (㎜)	Weight (g)	Air Hose Connection	Outer Ctn.	Card/ Box Size (㎜)	EDP No.
AD-4 N	Standard Nozzle	2	0.18	125	235	Coupling	20	in paper box 110×173	141180
AD-4 N-PB	Standard Nozzle	2	0.18	125	235	Coupling	10	185×160	141181
AD-4 N-PT	Standard Nozzle	2	0.18	125	235	1/4 Hose	10	185×160	141182
AD-4 J	Flow Adjustment Nozzle	2	0.15	130	240	Coupling	20	in paper box 110×173	141183
AD-4 J-PB	Flow Adjustment Nozzle	2	0.15	130	240	Coupling	10	185×160	141184
AD-4 J-PT	Flow Adjustment Nozzle	2	0.15	130	240	1/4 Hose	10	185×160	141185
AD-4 M	High Volume Nozzle	2×1pc.,0.8×4pcs.	0.24	125	228	Coupling	20	in paper box 110×173	141187
AD-4 B	Brushing Nozzle	2	0.18	170	248	Coupling	10	in paper box 115×220	141186
AD-4 N-150	Long Nozzle	2.5	0.18	275	248	Coupling	10	in paper box 140×300	141188
AD-4 N-200	Long Nozzle	2.5	0.18	325	253	Coupling	10	in paper box 140×450	141189
AD-4 N-300	Long Nozzle	2.5	0.18	425	260	Coupling	10	in paper box 140×450	141190
AD-4 NF-150	Flexible Nozzle ※	2.3	0.18	275	260	Coupling	10	in paper box 140×300	141191
AD-4 NF-300	Flexible Nozzle ※	2.3	0.18	425	274	Coupling	10	in paper box 140×450	141193

·Power source: compressed air ·Working air pressure: 0.5MPa ·Max. working pressure: 0.7MPa ·Working temperature range: 0-60℃ (32-140℉) ·Working air hose I.D.: ϕ4mm and more
·Overall length and weight: Air coupler included. ※It can be bent freely due to the built-in copper tube.(Do not bend it at a steep angle.)

Box package

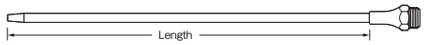
Also compatible with hanging type

Slide package

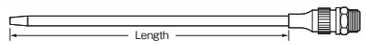
Interchangeable Nozzles (for AD-4) /Brushes (for AD-4 B)

Inlet: G1/8

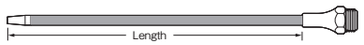
Long Nozzle



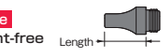
Air Flow Volume Adjustment Long Nozzle



Flexible Nozzle
Bendable shaft



Plastic Nozzle
Safe and dent-free



Long Nozzle

Model No.	Innner Dia.	Outer Dia.	Length (㎜)	Inner Ctn.	EDP No.
LN-150	2.5	5	150	10	141133
LN-200	2.5	5	200	10	141134
LN-300	2.5	5	300	10	141135
LN-500	2.5	5	500	10	141136
Air Flow Volume Adjustment Long Nozzle					
LJ-150	2.5	5	150	10	141137
LJ-200	2.5	5	200	10	141138
LJ-300	2.5	5	300	10	141139
LJ-500	2.5	5	500	10	141140

Flexible Nozzle Shaft

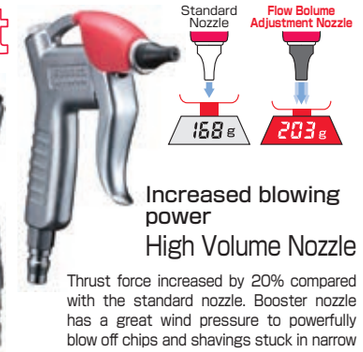
Model No.	Innner Dia.	Outer Dia.	Length (㎜)	Inner Ctn.	EDP No.
LF-150	2.3	7	150	10	141143
LF-200	2.3	7	200	10	141144
LF-300	2.3	7	300	10	141145

Plastic Nozzle

SP-0	2.0	7.5	21	1	141132

One point

Powerful brushing performance with a sturdy brush
Brushing Nozzle
Securely brush off oil-soaked chips and shavings which cannot be blown off by air.



Increased blowing power
High Volume Nozzle
Thrust force increased by 20% compared with the standard nozzle. Booster nozzle has a great wind pressure to powerfully blow off chips and shavings stuck in narrow gaps in chuck claws and cutter trench.

Standard Nozzle **AD-2** To blow off machined chips, moisture, and oil

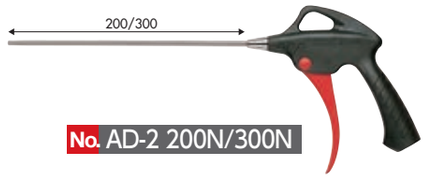
No. AD-2 0N

No. AD-2 0N-PB

Long Nozzle **AD-2 100N/ 200N/ 300N** To blow off machined chips, moisture, and oil

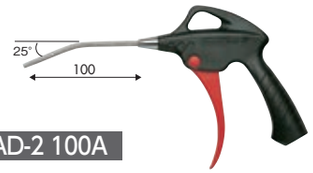
No. AD-2 100N

No. AD-2 100N-PB



No. AD-2 200N/300N

25°Long Nozzle **AD-2 100A** 25°bending tip to improve workability

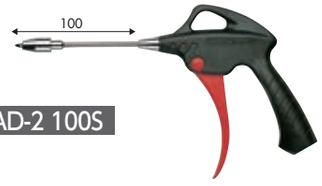


No. AD-2 100A

Safety Bypass Nozzle **AD-2 0S** To blow off safely and quietly in a wide area

No. AD-2 0S

Safety Bypass Long Nozzle **AD-2 100S** To blow off safely and quietly in a wide area



No. AD-2 100S

Large finger throttle lever for less fatigue to control the air volume. The ergonomically designed handle enables outstanding operability.
Dust removal and drying of sheet metal, coated materials, automotive parts, molds, metal working., etc.

Model No.	Nozzle Type	Nozzle		Air Consumption (㎥/min)	Overall Length (㎜)	Weight (g)	Outer Ctn.	Card/ Box Size (㎜)	EDP No.
		Length	Inner Dia.(㎜)						
AD-2 0N	Standard Nozzle	-	2.1	0.135	145	122	10	152×231	141111
AD-2 0N-PB	Standard Nozzle(with plug)	-	2.1	0.135	155	146	10	152×231	141151
AD-2 100N	Long Nozzle	100	2.1	0.135	242	131	10	182×231	141112
AD-2 100N-PB	Long Nozzle(with plug)	100	2.1	0.135	252	157	10	182×231	141152
AD-2 200N	Long Nozzle	200	2.1	0.135	342	141	1	in paper box 140×445	141113
AD-2 300N	Long Nozzle	300	2.1	0.135	442	150	1	in paper box 140×455	141114
AD-2 100A	25° Long Nozzle	100	2.1	0.135	242	131	10	182×231	141115
AD-2 0S	Safety Bypass nozzle	-	2.1	0.105	155.5	131	10	152×231	141121
AD-2 100S	Safety Bypass long nozzle	100	2.1	0.105	239.5	151	10	182×231	141122

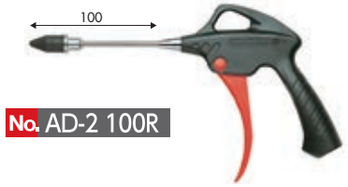
·Power source: compressed air ·Max. working pressure: 0.97MPa ·Working temperature range: 0-60°C(32-140°F) ·Air inlet screw diameter: Rc 1/4 ※Nozzle can not be replaced.
·Working air hose I.D.: ϕ4mm and more ·Air pressure when air consumption is measured: 0.49MPa ·Pre-packed(200N, 300N in paper box)

Rubber Nozzle **AD-2 0R** Dust blow off, not making scratches on a part

Nozzle with soft rubber tip.

No. AD-2 0R

Rubber Long Nozzle **AD-2 100R** Dust blow off, not making scratches on a part



No. AD-2 100R

High Volume Nozzle **AD-2 0M** When more air volume is required in spite of low air pressure

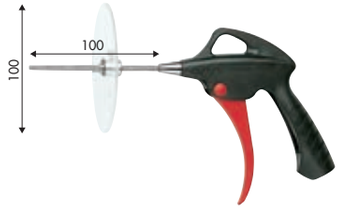
Air flow booster type.
Venturi nozzle emits air to wider area.
2.5 times more emission than AD-2 0N type.

No. AD-2 0M

Chip Shield Long Nozzle **AD-2 100P** Plastic plate prevents dust and particles from blowing back and scattering

Ideal for blowing out dust from a narrow hole or deep place.

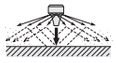
No. AD-2 100P



Blister package

Air Screen Nozzle **AD-2 0C** Air curtain prevents dust and particles from blowing back and scattering

Air curtain shuts out the spreading of oil, moisture and cutting dust.



No. AD-2 0C

Box package

Large finger throttle lever for less fatigue to control the air volume. The ergonomically designed handle enables outstanding operability.
Dust removal and drying of sheet metal, coated materials, automotive parts, molds, metal working.

Model No.	Nozzle Shape	Nozzle		Air Consumption (㎥/min)	Overall Length (㎜)	Weight (g)	Outer Ctn.	Card/ Box Size (㎜)	EDP No.
		Length	Inner Dia.(㎜)						
AD-2 0R	Rubber Nozzle	-	2.1	0.115	155.5	123	10	152×231	141116
AD-2 100R	Rubber Long Nozzle	100	2.1	0.115	227	147	10	182×231	141117
AD-2 0M	High Volume Nozzle	-	10	0.185	160	126	10	152×231	141118
AD-2 100P	Chip Shield Long Nozzle	100	2.1	0.135	242	157	10	182×231	141120
AD-2 0C	Air Screen Nozzle	-	2.8	0.26	145	127	10	152×231	141119

·Power source: compressed air ·Max. working pressure: 0.97MPa ·Working temperature range: 0-60°C(32-140°F) ·Air inlet screw diameter: Rc 1/4 ※Nozzle can not be replaced.
·Working air hose I.D.: ϕ4mm and more ·Air pressure when air consumption is measured: 0.49MPa ·Pre-packed

AIR NIPPER

Contents

Sliding Air Nippers Horizontal-type ···· 208 - 210
Sliding Air Nippers Horizontal-type blades ····· 211 - 212

Sliding Air Nippers Vertical-type ····· 213
Sliding Air Nippers Vertical-type blades ····· 213 - 215

Thrust-Cut Air Nippers ····· 216
Thrust-Cut Air Nipper blades ····· 216

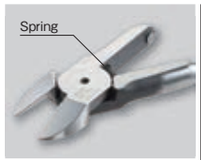
Heat Air Nippers ····· 217 - 221

Air Nippers ····· 222 - 225
Air Nipper blades ····· 226 - 230

Air Scissors ····· 231

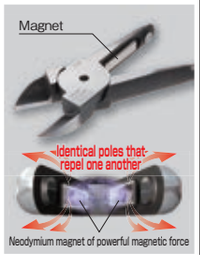
Custom-made blades ····· 235

AIR NIPPER TECHNICAL



Standard blades

Blades open and close by a spring repulsion.



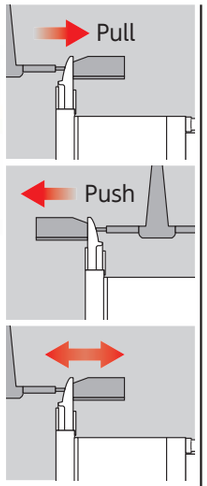
NM blades

Special blade without spring for 24-hour operation; blades open and close by a magnet repulsion.

Tough aluminum body

Slide-off air nippers

The main unit of the nipper slides and the blade comes into intimate contact with a gate, enabling to cut it without resin residue.



Pull/Push

A wide selection of models can support various applications. Possible to fix the highly precise positioning against the gate as there is less rattling or deflection.

209P

Double action type

Slide mechanism not using a spring ensures smooth action. It is free from concerns about spring wear or metal fatigue, resulting in high durability.

210P

Square type

Provided with threaded holes on the 5 faces of the main unit. Suitable for incorporating into a machine or equipment.

223P

Round type

Possible to adjust freely the mounting angle by a stand (option). Suitable for installation on a robotic arm or chuck plate.

224P

Extra Pressure Booster

Installing this unit on either square or round air nipper enables a pressure to be boosted. Ideal for applications where the radical pressure cannot be attained because of installation space or air pressure.

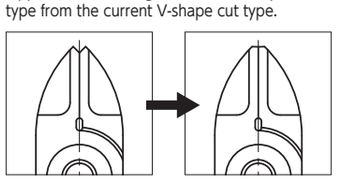
224P

Air nippers

Model No. **NY10** Blade shape **A J**

- **AJ** : Straight blades for plastic ——— **RAJ** : Straight blades for plastic reverse bevel
- **AJL** : Straight long blades for plastic
- **AJT** : Thin, straight blades for plastic
- **AE** : Nipping blades for plastic
- **AJY** : Thin, straight blades for plastic
- **AD** : Lift blades for plastic
- **AH** : Crank blades for plastic ——— **RAH** : Crank blades for plastic reverse bevel
- **AJB** : Straight blades for plastic, a brazed carbide chip
- **AJV** : V shaped straight blades for plastic
- **AJH** : Straight blades for plastic, a brazed high-speed steel chip
- **BJ** : Straight thin blades for metal ——— **RBJ** : Straight thin blades for metal reverse bevel

*The standard blades for the NT, NY, and NW nippers will be changed to the flat-shaped cut type from the current V-shape cut type.



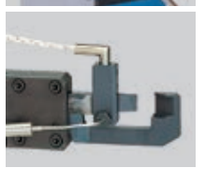
The current V-shape cut type. The flat-shaped cut type

For more precise gate-cutting:

Heat air nippers

These nippers perform cutting by applying heat to the blade edges.
They are good for cutting acrylic lens.

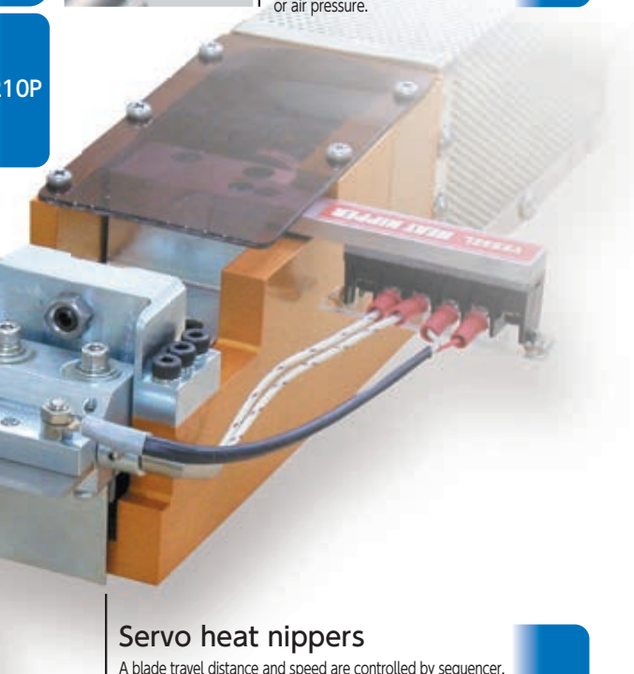
219P



Heat air nippers Thrust-cut type

Cutting by the application of heat; thrust-cutting type ensuring a clean, unblemished cut surface constantly.

219P



Air-hydro nippers Thrust-cut type

An air-hydro cylinder of air + oil provides low speeds and high power.
These nippers are suitable for precision cutting in which gate projecting allowance is strict.

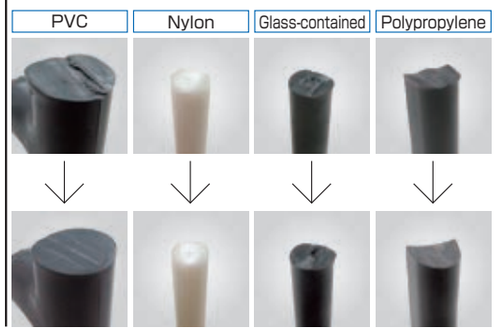
218P

Servo heat nippers

A blade travel distance and speed are controlled by sequencer. An electrically operated servo-motor enables them to achieve delicate feed and cutting.
Wide blades are also suitable for cutting light guide plates.

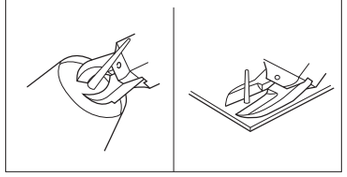
220P
221P

Differences in the cut surfaces when using heat nippers



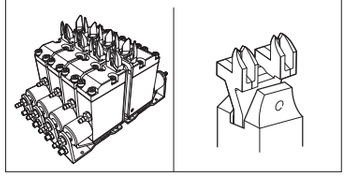
Applications

Cutting direct gate molded components



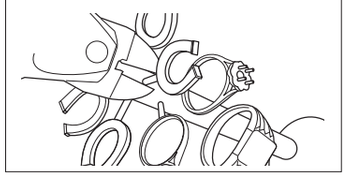
Cuts large diameter sprues such as garment cases, helmets, pipe joint parts, trash cans, planters. Superb durability in long term use.

Gate cut for multiple impression molded components



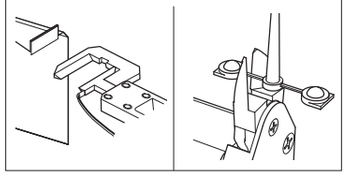
Compact, lightweight body and with a large selection of blade items, easy mounting on chuck board and standby jig. Achieves efficient cuts matching cycle time.

Taking products from a jewelry tree



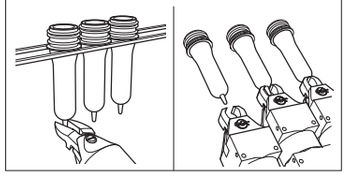
Cutting of precious metals for rings, necklaces etc. Superb durability and increased efficiency with powerful nipper blades.

Gate cutting for lenses, LGP, and transparent products



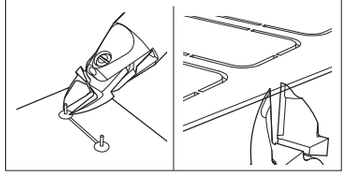
Various heated nippers prevent cracks and whitening, the decisive factor is the heating temperature of the blades and cutting speed. Supports demands for improved flexibility and high precision cutting.

Pre-form cutting for food and drug cases



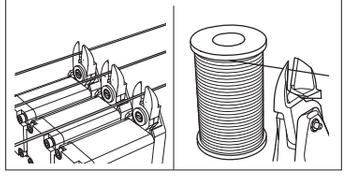
Improved efficiency in pre-forming, nippers attached to flat finish pre-form molding machine. Cut precision is linked to product quality.

Cutting electronic components and around boards



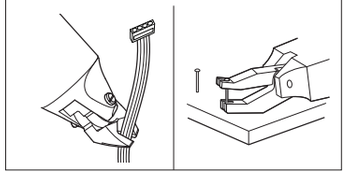
Optimal handy nippers for cutting lead lines after soldering to significantly reduce wrist strain. Substrate is attached to the desktop robot···.

Wire cutting with coil winding machine



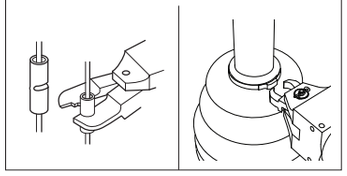
Attach to the nipper unit of automatic coil winding machine for power transformers, fan motors and ignition. Cutting thick diameter wires that cannot be torn off.

Hand tools for dismantling in recycling plants



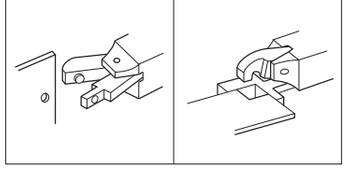
Cuts a variety of wires, copper tubing and steel bands in recycling plants such as PCs and OA equipment, pachinko machines, TVs, and refrigerators. washing machines, etc.
Nippers for the purpose of pulling out the pachinko machine pins.

Crimping task for solderless terminals



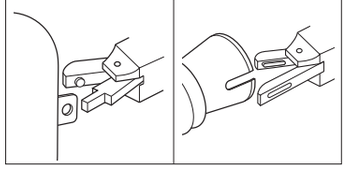
For crimping terminals with various wiring harnesses such as for switchboards, electrical products and lighting equipment. Less strain on fingers and wrists.
Increased work efficiency for stop rings for auto parts.

Die cutter for aluminum products and plastic components



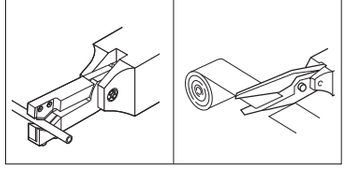
By support for separate blades, allows punching and form cutting of aluminum sash and thin plates.

Punching of blow molded products, punching slotted holes



Punching blow molded products, punching slotted holes, for containers that cannot be punched and automobile ducts, etc.

Other applications



Micro-edge air scissors that can cut various hard-to-cut fibers, carbon, aramid fibers, and soft plastic sheets.
Nippers for cutting belt loops of jeans, peeling recycled golf balls, cutting edges with textile machinery, etc.

Selection method for air nipper

Check materials — What is the "cutting target (workpiece)"?

- Metal wire
  - Steel wire
  - Copper wire
  - Piano wire (not heat processed/HV320 or below), precious metals etc.
- Molded plastic
  - Soft plastic (polyvinyl chloride, polyethylene)
  - Hard plastic (acrylic, polycarbonate, ABS, etc.)
- Other applications
  - Check materials, applications and work. (Bending, caulking, punching, robotic hand, and scissors.)

Check dimensions — How big is the "size of the cut portion"?

- Metal
  - Angle (mm×mm) [select model by cross-section area]
  - Round (Φ mm)
- Plastic
  - Angle (mm×mm) [select model by cross-section area]
- Other applications
  - Check materials, applications and work.

Usage — What is the "state/environment of the work"?

Used mounted on automated machinery and robots.
Used for manual work.
Used mounted on a jig. And so forth

Select model — Choose a model suitable for the purpose.

Choose based on "usage and cut dimensions" for the main unit, and "material and dimensions/shape" for the blades.
Refer to "product specifications" for the main unit/blade characteristics/usage, respectively. Also when selecting the machine, refer to "capability selection chart".
The shape/material of the workpiece may not be compatible with standard products.

Guidance for capability selection

Note: Reference value when a standard blade is mounted.
Values vary depending on the blade shapes and types of cut objects.

Types	Cutting material							Applicable models	Air pressure (MPa)
	Copper wire	Steel wire (Non-heat treated)	Piano wire (HV320 or below)	Soft plastic		Hard plastic	Solderless terminals		
				Dia.	Cross-section				
N・NS・NR	1.0mm	0.5mm	0.2mm	2.0mm	3.1mm²			NS2,N3,NS3,NR3	0.4~0.5
	1.0	0.5	0.3	2.0	3.1			N5,NS5,NR5	0.4~0.5
	1.6	1.0	0.5	3.0	7.0	2.0mm		N7,NS7,NR7	0.4~0.5
	1.8	1.2	0.5	4.0	12.5	2.6		N10,NS10L,NR10L	0.5~0.6
	2.3	1.7	0.6	4.5	15.8	4.0		N12	0.5~0.6
	2.6	2.0	1.0	7.0	38.4	5.0		N20,NS20,NR20	0.5~0.6
	3.3	2.8	1.2	10.0	78.5	6.5	1.25/2.0	N30,NS30,NR30	0.5~0.6
	5.5	4.5	2.0	12.0	113.0	6.5		N50,NR50	0.5~0.6
With pressure booster	2.6	1.6		5.0	19.6	4.0	1.25/2.0	P-10L	
	3.0	2.2		8.0	50.2	6.0	2.0/5.5	P-20	
	4.8	4.0		13.0	132.6	7.0	~0.8	P-30	
	6.5	5.5						P-50	
NY				2.0	3.1	1.3		NY03	0.4~0.5
	1.6	1.0		3.0	7.0	2.0		NF05,NY05	0.4~0.5
				3.5	9.6	2.3		NF10,NY10	0.4~0.5
				4.0	12.5	2.6		NF15,NY15	0.4~0.5
				5.0	19.6	3.4		NY25	0.5~0.6
NT				1.5	1.7	1.0		NT03	0.4~0.5
				2.5	4.9	1.5		NT05	0.4~0.5
				3.5	9.6	2.3		NT10	0.4~0.5
				5.0	19.6	3.4		NT20	0.4~0.5
	AS, HS, BJ type		BBB	AP, PF, AJ type			ACD type		

No. GT-NY25

Sliding Air Nippers

These are high-class air nippers that can be mounted on gate cutting equipment and standby jigs for accurate, speedy cutting of resin products. VESSEL has a wide selection of items to meet a variety of needs not only for around-the-clock operations but also for the highly precise cutting accuracy.

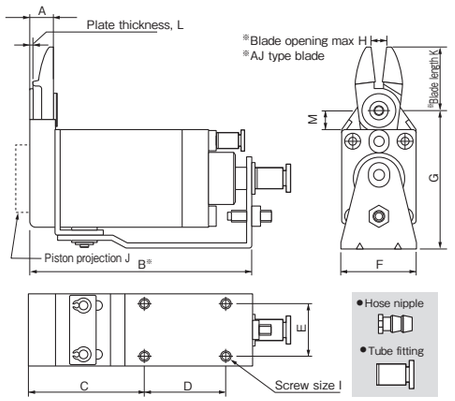
No. GT-NY25

Sliding Air Nippers Horizontal-Type

The horizontal slide enables space to be utilized effectively.
The low profile of the nipper body allows objects to be removed from the machine without obstructing the operations of the chuck plate.

No. GT-NY05/10/15/25 Sliding Air Nippers Horizontal-Type

●The horizontal slide enables space to be utilized effectively.
●The low profile of the nipper body allows objects to be removed from the machine without obstructing the operations of the chuck plate.



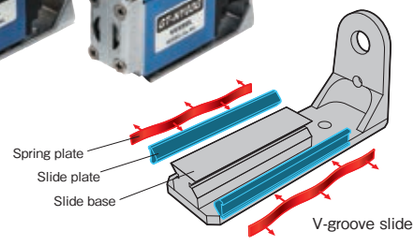
Reference

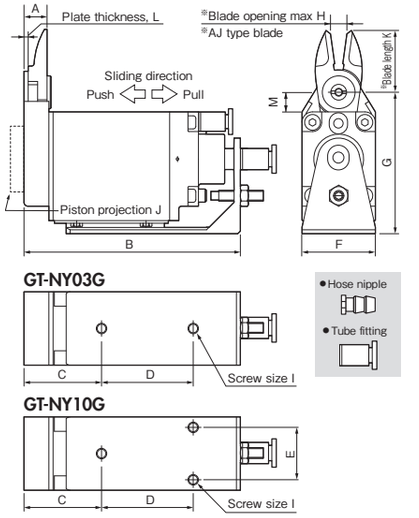
Capacity φ(mm) Soft Plastic	Capacity φ(mm) Hard Plastic	Capacity φ(mm) Copper	Capacity φ(mm) Steel	Model No.	Size (mm) A	B	C	D	E	F	G	H	I	J	K	L	M	Air Consumption (cm³/str.)	Weight (g)	Slide Distance (mm)	Hose Port	EDP No.
3.0	2.0	1.6	1.0	GT-NY05	8.6	75.9	40.9	25	15	23	47.6	4	M4	3	22	1.6	8.5	48	155	Pull 0~3	W/hose nipple Hose I.D. φ2.5mm	360646
3.0	2.0	1.6	1.0	GT-NY05R														48	155	Push 0~3		360647
3.0	2.0	1.6	1.0	GT-NY05-4														48	155	Pull 0~3	W/tube fitting Hose I.D. φ2.5×O.D. φ4mm	360648
3.0	2.0	1.6	1.0	GT-NY05R-4														48	155	Push 0~3		360649
3.5	2.3			GT-NY10	8.8	82.1	42.1	30	20	28	51.6	6	M4	5	24	1.6	7.5	68	210	Pull 0~3	W/hose nipple Hose I.D. φ2.5mm	360652
3.5	2.3			GT-NY10R														68	210	Push 0~3		360656
3.5	2.3			GT-NY10-4														68	210	Pull 0~3	W/tube fitting Hose I.D. φ2.5×O.D. φ4mm	360660
3.5	2.3			GT-NY10R-4														68	210	Push 0~3		360664
4.0	2.6			GT-NY15	10.2	93	48	35	25	33	58	8	M4	5	27	2	7.5	136	319	Pull 0~3	W/hose nipple Hose I.D. φ2.5mm	360672
4.0	2.6			GT-NY15R														136	319	Push 0~3		360673
4.0	2.6			GT-NY15-4														136	319	Pull 0~3	W/tube fitting Hose I.D. φ2.5×O.D. φ4mm	360674
4.0	2.6			GT-NY15R-4														136	319	Push 0~3		360675
5.0	3.4			GT-NY25	12.5	108.5	54.5	40	30	42	69	9	M5	2	31	2.5	10.5	184	580	Pull 0~5	W/hose nipple Hose I.D. φ4mm	360680
5.0	3.4			GT-NY25R														184	580	Push 0~5		360681
5.0	3.4			GT-NY25-6														184	580	Pull 0~5	W/tube fitting Hose I.D. φ4×O.D. φ6mm	360682
5.0	3.4			GT-NY25R-6														184	580	Push 0~5		360683

※Capacity indication shows the reference value when a standard blade is mounted. Values vary depending on the blade shapes and type of cut objects.
※K (blade projection) and H (maximum blade opening) indicate the dimensions when a standard blade (AJ type) is mounted. ※Air Pressure…0.4~0.5MPa (NY25 type: 0.5~0.6)
※B refers to the distance from the cut position for PUSH style models, and the distance from the start position for PULL style models.

No. GT-NY03G/10G Sliding Air Nippers Horizontal-Type

●V-groove slide base ensures constant, stable positioning.
●The unit is not subject to inclined loads, and has achieved high precision gate cutting performance.





Reference

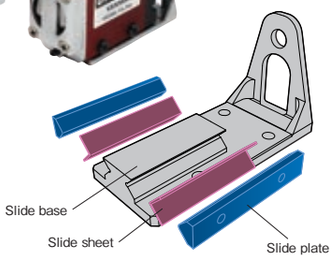
Capacity φ(mm) Soft Plastic	Capacity φ(mm) Hard Plastic	Model No.	Size (mm) A	B	C	D	E	F	G	H	I	J	K	L	M	Air Consumption (cm³/str.)	Weight (g)	Slide Distance (mm)	Hose Port	EDP No.
2.0	1.3	GT-NY03G	8.6	74.5	29.5	30	-	19	46.5	3	M4	0	21	1.6	7.5	37	160	Pull 0~3	W/hose nipple Hose I.D. φ2.5mm	360741
2.0	1.3	GT-NY03GR														37	160	Push 0~3		360742
2.0	1.3	GT-NY03G-4														37	160	Pull 0~3	W/tube fitting Hose I.D. φ2.5×O.D. φ4mm	360743
2.0	1.3	GT-NY03GR-4														37	160	Push 0~3		360744
3.5	2.3	GT-NY10G	8.8	82.6	29.6	35	20	28	54	6	M4	5	24	1.6	7.5	68	275	Pull 0~3	W/hose nipple Hose I.D. φ2.5mm	360753
3.5	2.3	GT-NY10GR														68	275	Push 0~3		360754
3.5	2.3	GT-NY10G-4														68	275	Pull 0~3	W/tube fitting Hose I.D. φ2.5×O.D. φ4mm	360755
3.5	2.3	GT-NY10GR-4														68	275	Push 0~3		360756

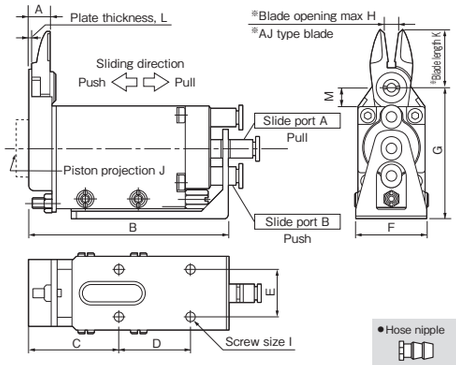
※Capacity indication shows the reference value when a standard blade is mounted. Values vary depending on the blade shapes and type of cut objects. ※K (blade projection) and H (maximum blade opening) indicate the dimensions when a standard blade (AJ type) is mounted. ※Air Pressure…0.4~0.5MPa

※Blades are optional. Note that a forward or a backward-facing blades are respectively available.

No. GT-NY10S/25S Double Action Sliding Air Nippers

●The springless slide construction of the main unit ensures smooth movement.
●V-groove slide base has been employed for high precision positioning.





●Hose nipple
●Tube fitting

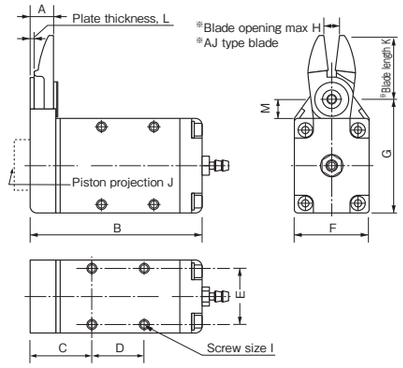
Reference

Capacity φ(mm) Soft Plastic	Capacity φ(mm) Hard Plastic	Model No.	Size (mm) A	B	C	D	E	F	G	H	I	J	K	L	M	Air Consumption (cm³/str.)	Weight (g)	Slide Distance (mm)	Hose Port	EDP No.
3.5	2.3	**GT-NY10S**	8.8	84.5	38	30	20	32	55	6	M4	5	24	1.6	7.5	68	300	0~3.5	W/tube fitting Hose I.D. φ2.5×O.D. φ4mm	360731
5.0	3.4	**GT-NY25S**	12.5	106.5	47	40	30	47	72	9	M5	2	31	2.5	10.5	184	695	0~5.0	W/tube fitting Hose I.D. φ4×O.D. φ6mm	360732

※Capacity indication shows the reference value when a standard blade is mounted. Values vary depending on the blade shapes and type of cut objects.
※K (blade projection) and H (maximum blade opening) indicate the dimensions when a standard blade (AJ type) is mounted.
※Air Pressure…NY10S: 0.4~0.5MPa / NY25S: 0.5~0.6MPa

No. GT-NF05/10/15 Type-F Air Nippers

●These compact, lightweight nippers have been designed for easy mounting inside equipment and to enable secure mounting under high-density mounting conditions.



Reference

Capacity φ(mm) Soft Plastic	Hard Plastic	Copper	Steel	Model No.	Size (mm) A	B	C	D	E	F	G	H	I	J	K	L	M	Air Consumption (cm³/str.)	Weight (g)	Hose Port	EDP No.
3.0	2.0	1.6	1.0	**GT-NF05**	8.6	59.9	21.9	17	18	23	39.5	4	M3	3	22	1.6	8.4	43	101	W/hose nipple Hose I.D. φ2.5×φ4mm	360606
3.5	2.3	1.7	1.1	**GT-NF10**	8.8	65.1	23.1	20	22	28	43.5	6	M3.5	5	24	1.6	7.4	63	143		360607
4.0	2.6	1.8	1.2	**GT-NF15**	10.2	73	25	25	26	33	48.5	8	M4	5	27	2	7.4	128	219		360608

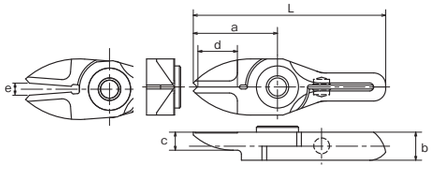
※Capacity indication shows the reference value when a standard blade is mounted. Values vary depending on the blade shapes and type of cut objects.
※K (blade projection) and H (maximum blade opening) indicate the dimensions when a standard blade (AJ type) is mounted. Mounting screw for NF10 (M3.5) is regarded as spare part.
※Air Pressure…0.4~0.5MPa

※Blades are optional. Note that a forward or a backward-facing blades are respectively available.

No. AJ/RAJ/AJB Straight blades for plastic

Plastic

AJ/This is a set of vertical blades with an unbeveled cutting edge. This can cut a gate of molded objects vertically and straight.
RAJ/This is a reverse bevel of AJ type.
AJB/This has a brazed carbide chip used for cutting hard plastic or plastic containing glass fiber.



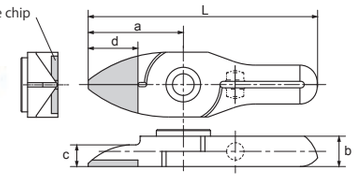
Model No.	Size (mm) a	b	c	d: Effective Length	e: Blade opening	L	Weight (g)	Material	Applicable models	EDP No.
NY03AJ	21	7	4.5	10.5	3	48	17	Special alloy steel	GT-NY03G(-4)	360591
NY03RAJ	21	7	4.5	10.5	3	48	17	Special alloy steel	GT-NY03GR(-4)	360594
NY05AJ	22	7	5	10.5	4	53	22	Special alloy steel	GT-NY05(-4) / NF05	360551
NY05RAJ	22	7	5	10.5	4	53	22	Special alloy steel	GT-NY05R(-4) / NF05	360556
NY05AJB	22	7	5	10.5	4	53	22	w/Carbide chip	GT-NY05(-4) / NF05	360553
NY10AJ	24	7.2	5	12	6	57	28	Special alloy steel	GT-NY10(-4) / NY10G(-4) / NF10 / NY10S	360561
NY10RAJ	24	7.2	5	12	6	57	28	Special alloy steel	GT-NY10R(-4) / NY10GR(-4) / NF10 / NY10S	360566
NY10AJB	24	7.2	5	12	6	57	28	w/Carbide chip	GT-NY10(-4) / NY10G(-4) / NF10 / NY10S	360563
NY15AJ	27	8.2	5.5	13	8	65	41	Special alloy steel	GT-NY15(-4) / NF15	360571
NY15RAJ	27	8.2	5.5	13	8	65	41	Special alloy steel	GT-NY15R(-4) / NF15	360576
NY15AJB	27	8.2	5.5	13	8	65	41	w/Carbide chip	GT-NY15(-4) / NF15	360573
NY25AJ	31	10	6	16	9	77	65	Special alloy steel	GT-NY25(-6) / NY25S	360583
NY25RAJ	31	10	6	16	9	77	65	Special alloy steel	GT-NY25R(-6) / NY25S	360587
NY25AJB	31	10	6	16	9	77	65	w/Carbide chip	GT-NY25(-6) / NY25S	360585

>> For guidance on cutting capability, see P264 of the technical material.
※Subject to change in the blade tip specifications (NY25 types remain same). See P204.

No. RAJB Straight blades for plastic (with carbide chip)

Plastic

AJB/This is a straight blade with carbide chip brazed at the cutting edge. Can place it along the gate at the right angle. Good for hard plastics or glass fiber containing plastics.



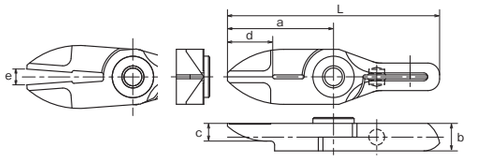
Model No.	Size (mm) a	b	c	d: Effective Length	e: Blade opening	L	Weight (g)	Material	Applicable models	EDP No.
NY05RAJB	22	7	5	10.5	4	53	32	w/Carbide chip	GT-NY05R(-4) / NF05	360579
NY10RAJB	24	7.2	5	12	6	57	38	w/Carbide chip	GT-NY10R(-4) / NY10GR(-4) / NF10 / NY10S / NF10	360580
NY15RAJB	27	8.2	5.5	13	8	65	48	w/Carbide chip	GT-NY15R(-4) / NF15	360581
NY25RAJB	31	10	6	16	9	77	78	w/Carbide chip	GT-NY25R(-6) / NY25S	360582

>> For guidance on cutting capability, see P264 of the technical material.

No. AJL Straight long blades for plastic

Plastic

AJL/This is a long type set of straight blades. This is useful when there is distance between the nipper and the gate cut portion of the molded object.



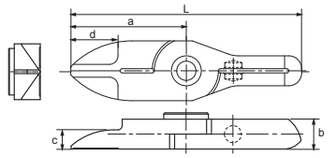
Model No.	Size (mm) a	b	c	d: Effective Length	e: Blade opening	L	Weight (g)	Material	Applicable models	EDP No.
NY03AJL	27	7	4.5	10.5	4	54	21	Special alloy steel	GT-NY03G(-4)	360592
NY05AJL	31	7	5	10.5	5.5	62	29	Special alloy steel	GT-NY05(-4) / NF05	360552
NY10AJL	33	7.2	5	12	8	66	37	Special alloy steel	GT-NY10(-4) / NY10G(-4) / NF10 / NY10S	360562
NY15AJL	38	8.2	5.5	13	11	76	50	Special alloy steel	GT-NY15(-4) / NF15	360572
NY25AJL	46	10	6	16	13	92	88	Special alloy steel	GT-NY25(-6) / NY25S	360584

>> For guidance on cutting capability, see P264 of the technical material.
※Subject to change in the blade tip specifications (all models except NY03 type remain same). See P204.

No. RAJL Straight long blades for plastic

Plastic

AJL/This is a long type set of straight blades. This is useful when there is a distance between the nipper and the gate cutting point ofthe molded products.



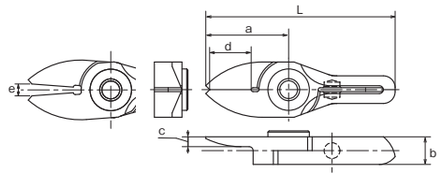
Model No.	Size (mm) a	b	c	d: Effective Length	e: Blade opening	L	Weight (g)	Material	Applicable models	EDP No.
NY03RAJL	27	7	4.5	10.5	4	54	35	Special alloy steel	GT-NY03GR(-4)	360595
NY05RAJL	31	7	5	10.5	5.5	62	36	Special alloy steel	GT-NY05R(-4) / NF05	360596
NY10RAJL	33	7.2	5	12	8	66	44	Special alloy steel	GT-NY10R(-4) / NY10GR(-4) / NF10 / NY10S / NF10	360597
NY15RAJL	38	8.2	5.5	13	11	76	58	Special alloy steel	GT-NY15R(-4) / NF15	360598
NY25RAJL	46	10	6	16	13	92	95	Special alloy steel	GT-NY25R(-6) / NY25S	360599

>> For guidance on cutting capability, see P264 of the technical material.

No. AJT Thin, straight blades for plastic

Plastic

AJ/This is a set of straight blades with a thin cutting edge. It can cleanly trim cross sections without remnants.



Model No.	Size (mm) a	b	c	d: Effective Length	e: Blade opening	L	Weight (g)	Material	Applicable models	EDP No.
NY03AJT	21	7	2.5	10.5	3	48	17	Special alloy steel	GT-NY03G(-4)	360593
NY05AJT	22	7	3	10.5	4	53	21	Special alloy steel	GT-NY05(-4) / NF05	360554
NY10AJT	24	7.2	3	12	6	57	26	Special alloy steel	GT-NY10(-4) / NY10G(-4) / NF10 / NY10S	360564
NY15AJT	27	8.2	3.5	13	8	65	38	Special alloy steel	GT-NY15(-4) / NF15	360574

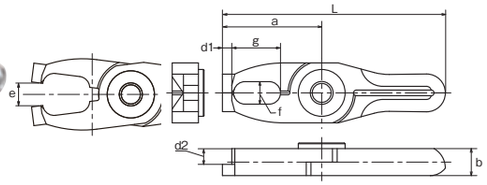
>> For guidance on cutting capability, see P264 of the technical material.

※Subject to change in the blade tip specifications. See P204.

No. AD Lift blades for plastic

Plastic

AD/This is used for batch processing of the three-dimensional gate such as ride gate.



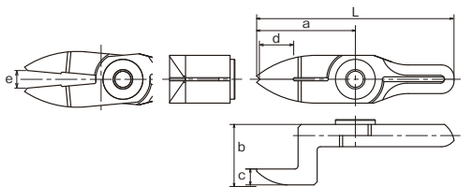
Model No.	Size (mm) a	b	f×g	d1 (mm)	d2 (mm)	e: Blade opening (mm)	L (mm)	Weight (g)	Material	Applicable models	EDP No.
NY10AD	26.5	7.2	6×13	2.5	4.2	6	59.5	31	Special alloy steel	GT-NY10(-4) / NY10G(-4) / NF10 / NY10S	360568
NY15AD	30	8.2	7×14	3	4.7	8	68	45	Special alloy steel	GT-NY15(-4) / NF15	360578
NY25AD	35	10	8×17	4	6	9	81	75	Special alloy steel	GT-NY25(-6) / NY25S	360589

>> For guidance on cutting capability, see P264 of the technical material.

No. AH/RAH Crank blades for plastic

Plastic

AH/This is a set of crank shaped blade for plastic. It is effective when there are obstructions or the gate is narrow.
RAH/This is a reverse bevel of AH type used when installing the main units face-to-face.



Model No.	Size (mm) a	b	c	d: Effective Length	e: Blade opening	L	Weight (g)	Material	Applicable models	EDP No.
NY05AH	31	19	5	10.5	5.5	62	37	Special alloy steel	GT-NY05(-4) / NF05	360555
NY05RAH	30	12	5	10.5	5	61	31	Special alloy steel	GT-NY05R(-4) / NF05	360557
NY10AH	33	20	5	12	8	66	43	Special alloy steel	GT-NY10(-4) / NY10G(-4) / NF10 / NY10S	360565
NY10RAH	32	12.2	5	12	7	65	36	Special alloy steel	GT-NY10R(-4) / NY10GR(-4) / NF10 / NY10S	360567
NY15AH	38	21.5	5.5	13	11	76	63	Special alloy steel	GT-NY15(-4) / NF15	360575
NY15RAH	35	13.2	5.5	13	9	73	52	Special alloy steel	GT-NY15R(-4) / NF15	360577
NY25AH	46	24	6	17	13	92	110	Special alloy steel	GT-NY25(-6) / NY25S	360586
NY25RAH	42	16	6	16	12	88	89	Special alloy steel	GT-NY25R(-6) / NY25S	360588

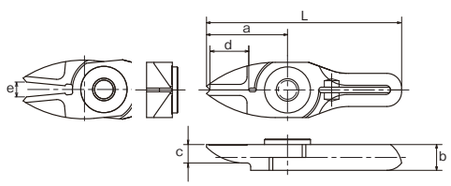
>> For guidance on cutting capability, see P264 of the technical material.

※Subject to change in the blade tip specifications (NY25 types remain same). See P204.

No. BJ/RBJ Straight blades for metals

Metal

BJ/This is a set of vertical blades with an unbeveled cutting edge for metal.
RBJ/This is a reverse bevel of BJ type.



Model No.	Size (mm) a	b	c	d: Effective Length	e: Blade opening	L	Weight (g)	Material	Applicable models	EDP No.
NY05BJ	22	7	5	10.5	4	53	22	Special alloy steel	GT-NY05(-4) / NF05	360558
NY05RBJ	22	7	5	10.5	4	53	22	Special alloy steel	GT-NY05R(-4) / NF05	360559

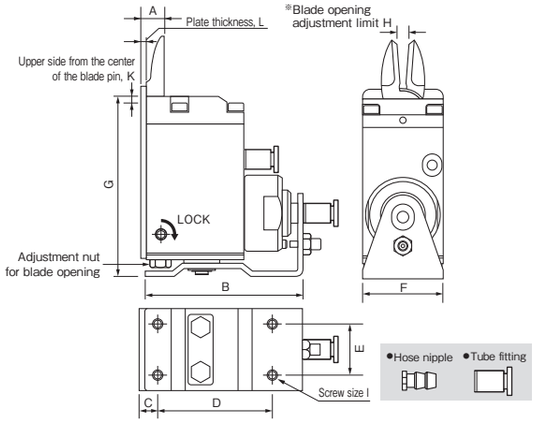
>> For guidance on cutting capability, see P264 of the technical material.

※Subject to change in the blade tip specifications. See P204.

※Blades are optional. Note that a forward or a backward-facing blades are respectively available.

No. GT-NT03/05/10/20 Sliding Air Nippers Vertical-type

- Blade opening is adjustable, and fine adjustments are easy to make after mounting the nippers, ensuring clean, unblemished cut surfaces.
- Blade can be installed either with the cutting edge outside or inside.



Reference

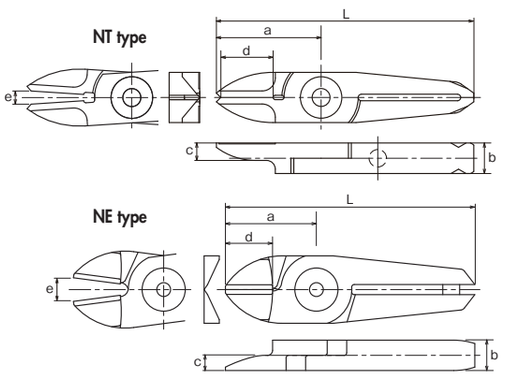
Capacity φ(mm) Soft Plastic	Hard Plastic	Model No.	Size (mm) A	B	C	D	E	F	G	H	I	J	K	Air Consumption (cm³/str.)	Weight (g)	Slide Distance (mm)	Hose Port	EDP No.
1.5	1.0	**GT-NT03**	9	62	7	43	14	19	68.1	1.5~3	M3	2	5	27	178	Pull 0~3	W/hose nipple Hose I.D φ2.5mm	360601
1.5	1.0	**GT-NT03R**												27	178	Push 0~3		360611
1.5	1.0	**GT-NT03-4**												27	178	Pull 0~3	W/tube fitting Hose I.D φ2.5×O.D. φ4mm	360621
1.5	1.0	**GT-NT03R-4**												27	178	Push 0~3		360631
2.5	1.5	**GT-NT05**	9	64	7	45	20	32	71.1	3~6	M4	2	5	47	325	Pull 0~3	W/hose nipple Hose I.D φ2.5mm	360602
2.5	1.5	**GT-NT05R**												47	325	Push 0~3		360612
2.5	1.5	**GT-NT05-4**												47	325	Pull 0~3	W/tube fitting Hose I.D φ2.5×O.D. φ4mm	360622
2.5	1.5	**GT-NT05R-4**												47	325	Push 0~3		360632
3.5	2.3	**GT-NT10**	11	73	8	53	24	38	88.1	4~7	M4	2	5	82	515	Pull 0~3	W/hose nipple Hose I.D φ2.5mm	360603
3.5	2.3	**GT-NT10R**												82	515	Push 0~3		360613
3.5	2.3	**GT-NT10-6**												82	515	Pull 0~3	W/tube fitting Hose I.D φ4×O.D. φ6mm	360623
3.5	2.3	**GT-NT10R-6**												82	515	Push 0~3		360633
5.0	3.4	**GT-NT20**	14	103	10	80	28	44	102.1	4.5~9	M5	2	6	203	930	Pull 0~8	W/hose nipple Hose I.D φ4mm	360604
5.0	3.4	**GT-NT20R**												203	930	Push 0~8		360614
5.0	3.4	**GT-NT20-6**												203	930	Pull 0~8	W/tube fitting Hose I.D φ4×O.D. φ6mm	360624
5.0	3.4	**GT-NT20R-6**												203	930	Push 0~8		360634

※Capacity indication shows the reference value when a standard blade is mounted. Values vary depending on the blade shapes and type of cut objects.
※Blade opening adjustment limit (H) is the dimension adjusted for standard blade (AJ type). ※Air Pressure···0.4~0.5MPa (NT20 type: 0.5~0.6)

No. AJ/AJH/AJB Straight blades for plastic

Plastic

AJ/This is a set of vertical blades with an unbeveled cutting edge. This can cut a gate of molded objects vertically and straight.
AJH/This has a brazed high-speed steel chip suitable for cutting hard plastic.
AJB/This has a brazed carbide chip used for cutting hard plastic or plastic containing glass fiber. Improved durability.



Model No.	Size (mm) a	b	c	d: Effective Length	e: Blade opening	L	Weight (g)	Material	Applicable models	EDP No.
NT03AJ	24	7	4	11	3	59	20	Special alloy steel	GT-NT03 type	360511
NT05AJ	29	7	5	15	6	65	30	Special alloy steel	GT-NT05 type	360512
NT05AJH	29	7	5	15	6	65	30	High Speed Steel		360534
NT05AJB	29	7	5	15	6	65	30	w/Carbide chip		360515
NE5AJ	24	7	3.5	12	6	60	35	Special alloy steel		360184
NT10AJ	35	9	6	17	7	82	62	Special alloy steel	GT-NT10 type	360513
NT10AJH	35	9	6	17	7	82	76	High Speed Steel		360539
NT10AJB	35	9	6	17	7	82	76	w/Carbide chip		360518
NE10AJ	27	9	4.5	12	7	74	70	Special alloy steel		360185
NT20AJ	40	12	6	20	9	97	120	Special alloy steel	GT-NT20 type	360514
NT20AJH	40	12	6	20	9	97	120	High Speed Steel		360544
NT20AJB	40	12	6	20	9	97	120	w/Carbide chip		360543

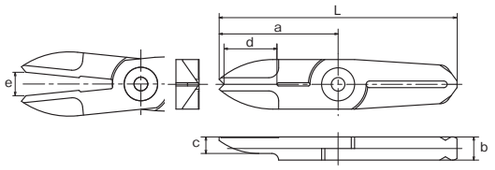
>> For guidance on cutting capability, see P264 of the technical material.

※Subject to change in the blade tip specifications (NE types remain same). See P204.

No. AJL Straight long blades for plastic

Plastic

AJL/This is a long type set of straight blades. This is useful when there is distance between the nipper and the gate cut portion of the molded object.



Model No.	Size (mm) a	b	c	d: Effective Length	e: Blade opening	L	Weight (g)	Material	Applicable models	EDP No.
NT05AJL	36	7	5	15	7	72	39	Special alloy steel	GT-NT05 type	360516
NT10AJL	47	9	6	17	9	94	62	Special alloy steel	GT-NT10 type	360520
NT20AJL	57	12	6	20	12	114	156	Special alloy steel	GT-NT20 type	360541

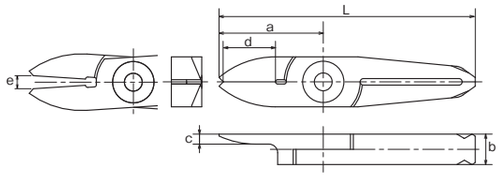
>> For guidance on cutting capability, see P264 of the technical material.

※Subject to change in the blade tip specifications. See P204.

No. AJT Thin, straight blades for plastic

Plastic

AJT/This is a set of straight blades with a thin cutting edge. It can cleanly trim cross sections without remnants.



Model No.	Size (mm) a	b	c	d: Effective Length	e: Blade opening	L	Weight (g)	Material	Applicable models	EDP No.
NT03AJT	24	7	2.3	11	3	59	19	Special alloy steel	GT-NT03 type	360526
NT05AJT	29	7	3	15	6	65	29	Special alloy steel	GT-NT05 type	360531
NT10AJT	35	9	4	17	7	82	65	Special alloy steel	GT-NT10 type	360536

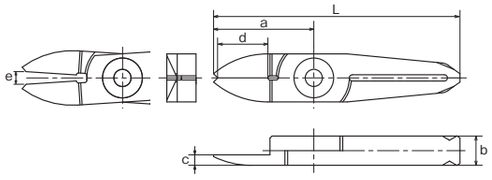
>> For guidance on cutting capability, see P264 of the technical material.

Subject to change in the blade tip specifications. See P204.

No. AJY Thin, straight blades for plastic (approaching to a gate)

Plastic

AJY/This is effective when the width between the opposing gates is too short and the blade cannot go in due to its thickness.



Model No.	Size (mm) a	b	c	d: Effective Length	e: Blade opening	L	Weight (g)	Material	Applicable models	EDP No.
NT03AJY	24	7	2.5	11	3	59	19	Special alloy steel	GT-NT03 type	360527
NT05AJY	29	7	3	15	6	65	29	Special alloy steel	GT-NT05 type	360532
NT10AJY	35	9	4	17	7	72	82	Special alloy steel	GT-NT10 type	360537

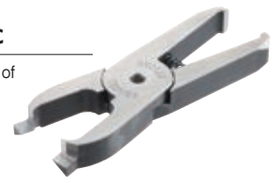
>> For guidance on cutting capability, see P264 of the technical material.

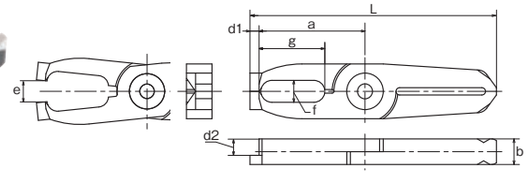
Subject to change in the blade tip specifications. See P204.

No. AD Lift blades for plastic

Plastic

AD/This is used for batch processing of the three-dimensional gate such as ride gate.





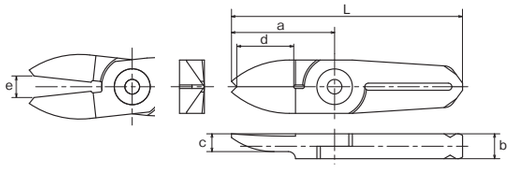
Model No.	Size (mm) a	b	f×g	Effective Length (mm) d1	d2	e: Blade opening (mm)	L (mm)	Weight (g)	Material	Applicable models	EDP No.
NT05AD	31.5	7	6×18	2.5	4.5	6	67.5	37	Special alloy steel	GT-NT05 type	360533
NT10AD	39	9	8×21.5	4	5	7	86	65	Special alloy steel	GT-NT10 type	360538
NT20AD	46	12	9×24.5	6	7	9	103	141	Special alloy steel	GT-NT20 type	360542

>> For guidance on cutting capability, see P264 of the technical material.

No. AJV V shaped straight blades for plastic

Plastic 5°

AJV/This is suitable for gate processing when the cross section is curved or the cut end must not be left.



Model No.	Size (mm) a	b	c	d: Effective Length	e: Blade opening	L	Weight (g)	Material	Applicable models	EDP No.
NT05AJV	29	7	5	15	6	65	29	Special alloy steel	GT-NT05 type	360535
NT10AJV	35	9	6	17	7	82	63	Special alloy steel	GT-NT10 type	360540

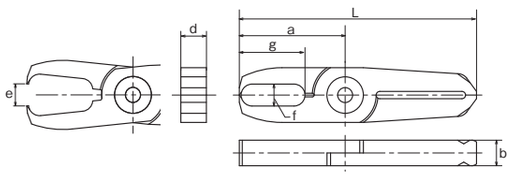
>> For guidance on cutting capability, see P264 of the technical material.

Subject to change in the blade tip specifications. See P204.

No. AE Nipping blades for plastic

Plastic

AE/Used for processing plastic gates such as ride gates and discard gates.



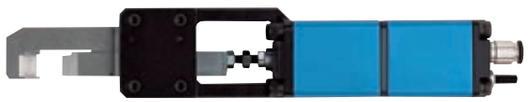
Model No.	Size (mm) a	b	f×g	d: Effective Length	e: Blade opening	L	Weight (g)	Material	Applicable models	EDP No.
NT05AE	29	7	6×18	7	6	65	36	Special alloy steel	GT-NT05 type	360517
NT10AE	35	9	8×21.5	9	7	82	75	Special alloy steel	GT-NT10 type	360519

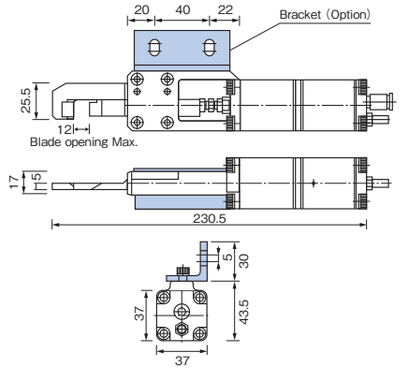
>> For guidance on cutting capability, see P264 of the technical material.

※Blades are optional. Note that a forward or a backward-facing blades are respectively available.

No. GT-NK10 Thrust-Cut Air Nipper

●This nipper can cut film-shaped gates in conjunction with a foot switch or high precision travers machine.
●Can cut from the thin end, preventing wrinkles around the cut edge.





Reference

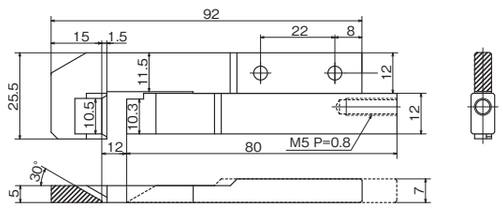
Capacity φ(㎜) ABS Plastic	Model No.	Air Consumption (ℓ/str.)	Air Pressure (MPa)	Weight (g)	Applied Pressure (N)	Spec. & Size of the Hose Port	EDP No.
5	**GT-NK10**	110	0.4～0.5	800	735	Hose I.D. φ2.5×O.D. φ4㎜	360641 (w/NK10AJ)

·Hose Coupling: I.D. φ4×O.D. φ6㎜ ·Piston stroke…Max.12㎜

No. NK10AJ Thrust-Cut Air Nipper blades

Plastic

This is a dedicated set of blades for GT-NK10. Suitable for processing of film gates attached to robot hands.



Model No.	Size (㎜)	Shape	Overall Length (㎜)	Weight (g)	Material	Applicable models	EDP No.
NK10AJ	See Drawing	For plastic (Knife type)	95	96	Special alloy steel	GT-NK10	—

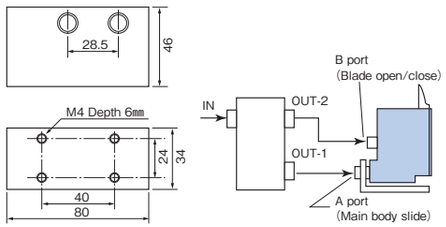
>> For guidance on cutting capability, see P264 of the technical material.

Related product

No. GT-TC-02 Timing Controller

●Enables to adjust the sliding (nippers) and cutting timing, by installing this controller between the compressor and the air nippers.
(Approximately 0.5 seconds to 1.5 seconds)

Adjusting Screw (0.5～1.5 sec.)



●Working air pressure…0.6MPa
●Size…Height 46 × Length 80 × thickness 34(㎜)
●Weight…275g
●With tube joint: I.D. φ4×O.D. φ6㎜

Three-port solenoid valve (compressor side) ➡ Timing controller ➡ Slide air nipper

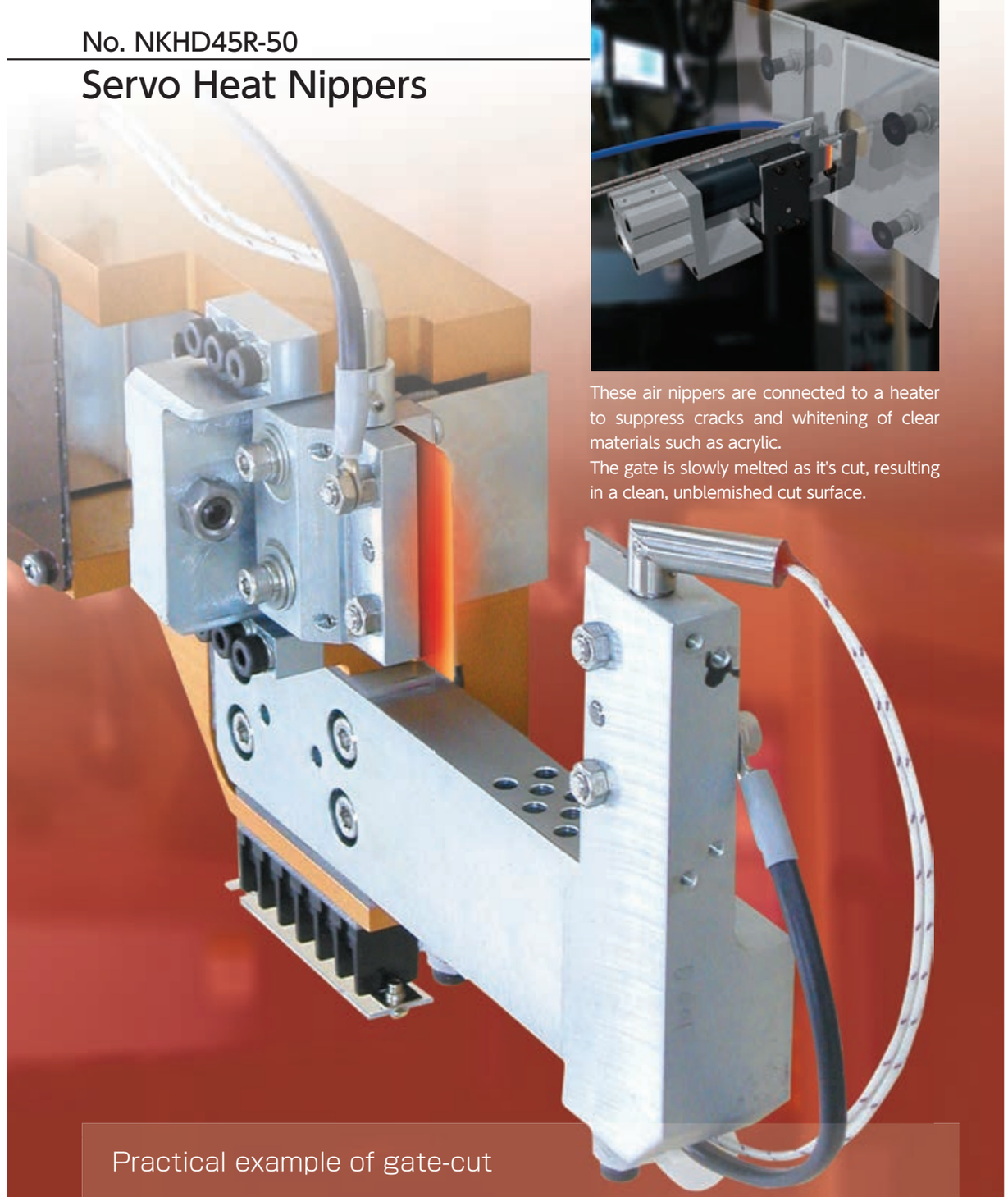
■Connectable nippers (Reference)

GT-	NY05	NY10	NY15	NY25	NT03	NT05	NT10	NT20	NB20	NB30	NB20LW	NB30LW	EDP No.
Connectable unit numbers	4	3	1	1	6	4	2	1	2	1	2	1	360640

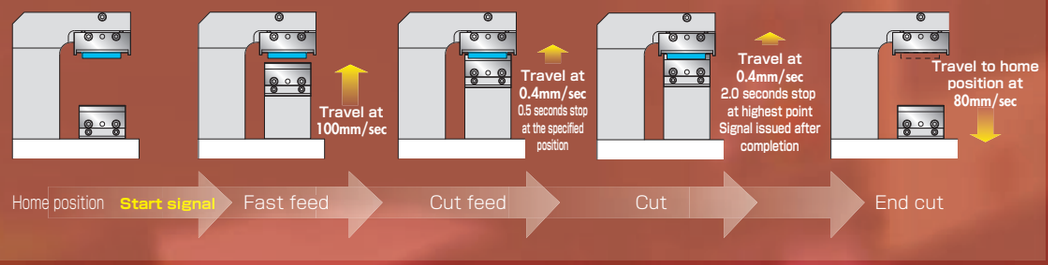
※Blades are optional. Note that a forward or a backward-facing blades are respectively available.

Servo Heat Nippers

These air nippers are connected to a heater to suppress cracks and whitening of clear materials such as acrylic.
The gate is slowly melted as it's cut, resulting in a clean, unblemished cut surface.



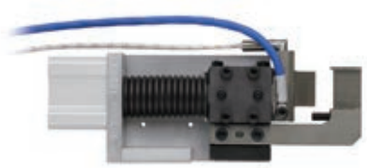
Practical example of gate-cut



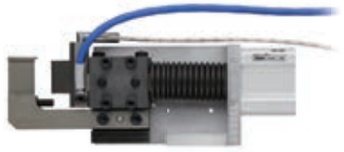
No. NKH20XL-25/NKH20XR-25

Air-Hydro Heat Nipper (thrust cut type) NEW

- Highly durable PTFE Plating blades; melted resin does not adhere to them.
- Improved durability of blades with high-speed chip brazed.
- Easier blade replacement than conventional models; take out the blade unit and exchange with the new one.

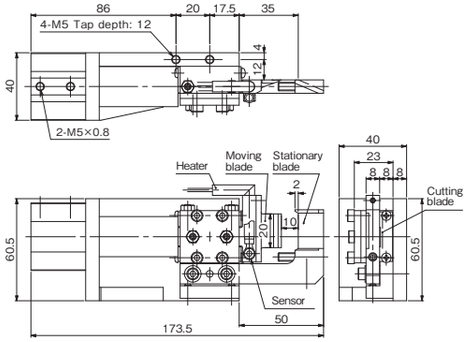


NKH20XL-25

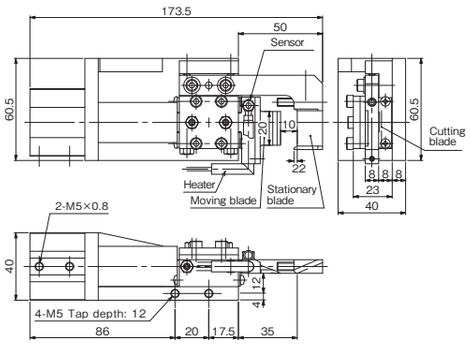


NKH20XR-25

NKH20XL-25



NKH20XR-25



- Requires separately sold Hydro Controller.
- Custom-made blade lengths and cylinder capacities available.

Model No.	Cutting Capacity width × thickness (mm) Acril	Blade Edge Temp. (MAX ℃)	Air Consumption (ℓ/min.)	Piston Stroke (mm)	Weight (g)	EDP No.
NKH20XL-25/ NKH20XR-25	10×1.5	180	60	10	690	—

- Working air hose inner diameter: 4 mm - Air Pressure: 0.6MPa
※The above weight is the product only. The weight of heater and sensor is not included.
※A heater for 200V AC, 220V AC, and 240V AC respectively can be made-to-order.
※The following specifications can be made on request: change in blade length; replacement of cylinder for improvement in performance; additional KINECHEK which does not require a hydro converter (oil).
- Accessory heater: HTL-28.5-6.25-300L-80W1H(80W/100V AC) Recommended operating temperature 140℃, Cord length 300mm, Weight 13g
- Accessory temperature sensor: SNO-300L-H(K thermocouple), Recommended operating temperature 140℃, Cord length 300mm, Weight 7g

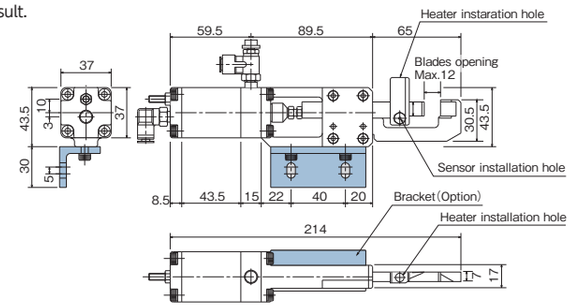
■Blades Specifications

Material	Blade Shape	Blade Opening (mm)	Cutting blade effective (mm)	Weight (g)
Special alloy steel	Knife type (resin)	10	20	125

Option Parts
- Hydro-converter (Recommended: KOGANEI AHC 32×50)
  Working fluid: Petroleum hydraulic fluid or turbine oil with antifoaming agent additive (VG22~100)
- Temperature controller (DTC-001)

No. GT-NKH10 Heat Air Nippers

- Speed control of cutting speed and heater temperature allows for various cutting surface solutions and meets demands for high precision cutting result.



Model No.	Cutting Capacity width × thickness (mm) Acril	Blade Edge Temp. (MAX ℃)	Cutting Cycle (sec./cut)	Air Consumption (ℓ/min.)	Piston Stroke (mm)	Weight (g)	EDP No.
GT-NKH10	7×1.5	200	4~5	73	12	715	360643 (w/NKH10AJ) 360644 (w/NKH10RAJ)

- Included heater
- Included temperature sensor
- Air Pressure: 0.5~0.6MPa

■Blades Specifications

Model No.	Material	Blade Shape	Blade Opening (mm)	Cutting blade effective (mm)	Weight (g)	EDP No.
NKH10AJ NKH10RAJ	Special alloy steel	Knife type (resin)	12	10	137	360548 360549

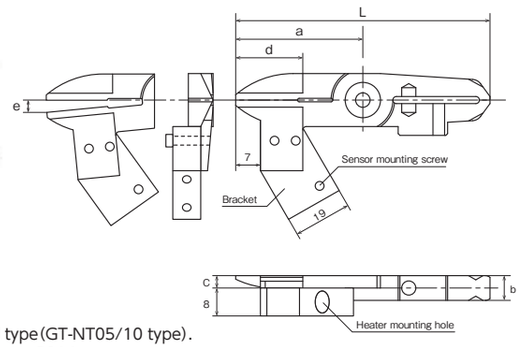
Option Parts - Temperature controller (DTC-001)

No. NTH05AJ/10AJ Heat Air Nipper Blade

Plastic

- One blade is fixed in position, facilitating easy gate alignment. In addition, a slide function presses the product into position.

Example of blade mounting



- Use these blades in combination with the Sliding Air Nippers vertical type (GT-NT05/10 type).
- For the main unit dimensions, see the Sliding Air Nippers vertical type on P214.

Model No.	Size (mm) a	b	c	d: Effective Length	e: Blade opening	L	Weight (g)	Cutting Capacity ϕ (mm) Acrylic	Set temperature (MAX. ℃)	Material	Applicable models	EDP No.
NTH05AJ	36	7	3.5	15	3.5	72	40	2.5	200	Special alloy steel	GT-NT05(-4)/GT-NT05R(-4)	360546
NTH10AJ	47	9	4.7	17	4.5	94	88	3.5	200	Special alloy steel	GT-NT10(-6)/GT-NT10R(-6)	360547

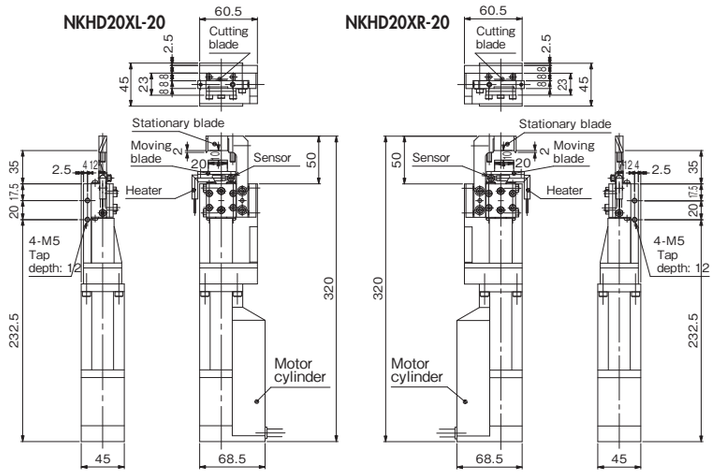
The above information on weight does not include heater or sensor.

The following parts are not provided; purchase them separately.
- Special heater (80 W/120 V, cord length: 300 mm), temperature sensor (type-K thermocouple, cord length: 1,000 mm), speed controller, and bracket (for heater mounting)

Option Parts - Temperature controller (DTC-001)

No. NKHD20XL-20/NKHD20XR-20 Servo Heat Nipper (With Motor Cylinder) Compact type NEW

- Blade travel distance and speed can be easily programmed.
- Servo motor ensures delicate blade feeding and quiet gate cutting.
- Improved durability of blades with high speed chip brazed.
- Easier blade replacement than conventional models; take out the blade unit and exchange with the new one.



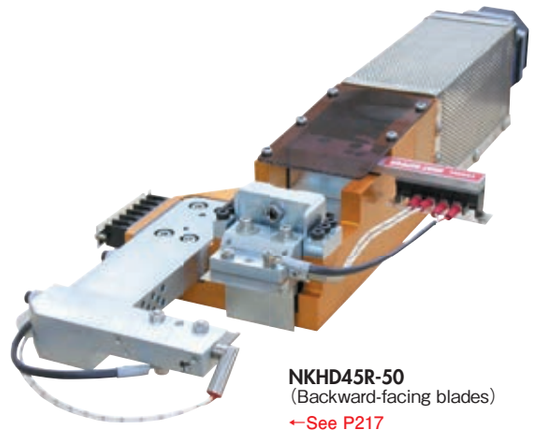
Model No.	Cutting Capacity width × thickness φ (mm) Acril	Blade Edge Temp. (MAX ℃)	Blade Opening (mm)	Cutting Blade Effective (mm)	Max. Thrust (N)	Max. Speed (mm/s)	Positioning Points (pts)	Power Supply Voltage	Current consumption power	Weight (kg)	EDP No.
NKHD20XL-20 NKHD20XR-20	10×1.5	180	10	20	100	400	16	24VDC±10%	2.0A	1.57	—

※The above weight is the product only. The weight of heater and sensor is not included. ※A heater for 200V AC, 220V AC, and 240V AC respectively can be made-to-order.
※The following specifications can be made on request: change in blade length; replacement of cylinder for improvement in performance; additional KINECHEK which does not require a hydro converter (oil).
·Accessory heater: HTL-28.5-6.25-300L-80W1H(80W/100V AC) Recommended operating temperature 140℃, Cord length 300mm, Weight 13g
·Accessory temperature sensor: SNO-300L-H(K thermocouple), Recommended operating temperature 140℃, Cord length 300mm, Weight 7g

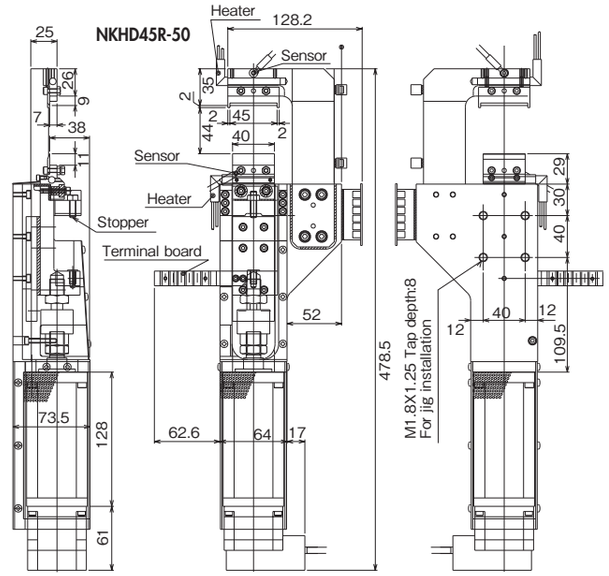
Option Parts ·Temp. controller(DTC-001) ·Power supply ·Heater code ·Parallel cable ·ADP cable ·Controller(CTC-33) ·Power cord ·Sensor cord
For the options noted above, contact us because required items or the numbers of them may change depending on the installation method, use details, etc. of servo heat nippers.

No. NKHD45R-50 Servo Heat Nippers (With Motor Cylinder)

- Blade travel distance and speed can be easily programmed.
- Servo motor control enables delicate blade feeding and quiet gate cutting performance.



NKHD45R-50
(Backward-facing blades)
←See P217



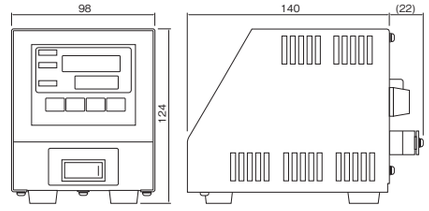
Model No.	Cutting Capacity width × thickness φ (mm) Acril	Blade Edge Temp. (MAX ℃)	Blade Opening (mm)	Cutting Blade Effective (mm)	Max. Thrust (N)	Max. Speed (mm/s)	Positioning Points (pts)	Power Supply Voltage	Current Consumption Power	Current Consumption Control circuit	Weight (kg)	EDP No.
NKHD45R-50	24×1.2	180	46	40	500	100	16	24VDC±10%	3.0A	0.2A	5	—

※A heater for 200V AC, 220V AC, and 240V AC respectively can be made-to-order.
·Accessory heater: Recommended operating temperature140℃
·Accessory temperature sensor: Recommended operating temperature 140℃

Option Parts ·Temp. controller (DTC-001) ·Power supply ·Heater code ·Parallel cable ·ADP cable ·Controller (CTC-33) ·Power cord ·Sensor cord
For the options noted above, contact us because required items or the numbers of them may change depending on the installation method, use details, etc. of servo heat nippers.

No. DTC-001 Benchtop Temperature Controller

- The heating element can be connected directly to the main unit, a useful feature that saves labor during wiring installation.
- Compact construction enables the unit to be easily carried, allowing for changing the work site at any time.



Please inform us of the model No. of the heat nipper when placing an order.

Model No.	Temperature range Thermocouple K (℃)	Power supply (VAC)	Power consumption (with 100 VAC input)	Operating ambient temperature/humidity (℃)／(%)	Protection fuse	Weight (g)	EDP No.
DTC-001	0～200	100～240	Approx. 3W (Approx. 5VA) (With no load)	0～40 RH35～85% (No condensing)	One 15A fuse is incorporated.	900	—

※Please ensure the input voltage in prior to operation as it is directly connected to the heater.
※Two types of heaters are available for 100V and 240V.

Option Parts · Power supply cable : Model No. DTC-001-□-□
□: Cable for connection to the terminal block is necessary to be included.
□:(N/A) Cable not necessary.
A: 2m power cable w/Japanese type plug (A-type)
C: 2m power cable w/European type plug (C-type)
□:(N/A) Cable not necessary.

No. GT-NR20

Air Nippers For Cutting and Crimping

Various models are available;
Square type for automation cutting equipment;
Round trype, together with a dedicated stand,
for resin or direct gate-cutting,;
Lever type for manual operation...

No. GT-NR20

Air Nipper Round-Type without Lever

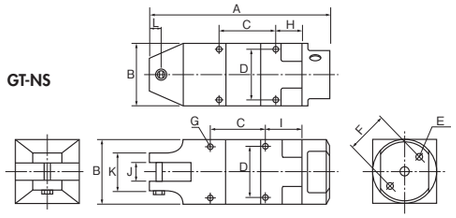
A tough body for hard jobs. The parts machined at high precision enable smooth cutting jobs to be accomplished.
With convenient scales facilitating the installation position adjustment.

No. GT-NS3/5/7/10L/20/30 Square Air Nippers

●VESSEL provides a generous selection of blades for gate-cutting of resin molded products and various wire cutting in a welding automatic machine and wire winding machine.

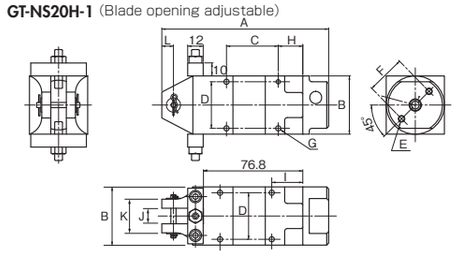
・The position of air intake port is 180-degree rotatable.
・Two air intake ports are provided, so they can be switched depending on the mounting place.

GT-NS



Made-to-order

GT-NS20H-1 (Blade opening adjustable)



Reference

Capacity φ(mm) Soft Plastic	Hard Plastic	Copper	Steel	Model No.	Size (mm) A	B	C	D	E	F	G	H	I	J	K	L	Air Consumption (cm³/str.)	Air Pressure (MPa)	Weight (g)	Hose coupling	EDP No.
2.0		1.0	0.5	**GT-NS3**	110	23	40	19	M3 Depth8	17	M3 Depth3.5	19	24	7	23	7	45	0.4~0.5	95		360012
2.0		1.0	0.5	**GT-NS5**	94	30	30	24	M4 Depth10	20	M3 Depth5	14	19	7	23	7	64	0.4~0.5	135		360013
3.0	2.0	1.6	1.0	**GT-NS7**	113	36	30	28	M4 Depth10	24	M4 Depth5.5	18	23	9	23	7	116	0.4~0.5	215		360014
4.0	2.6	1.8	1.2	**GT-NS10L**	113	36	30	28	M4 Depth10	24	M4 Depth5.5	18	23	12	26	7	116	0.5~0.6	215	Rc 1/8	360009
7.0	5.0	2.6	2.0	**GT-NS20**	129	45	40	36	M5 Depth12	30	M4 Depth7	19	24	12	26	9	230	0.5~0.6	370		360010
10.0	6.5	3.3	2.8	**GT-NS30**	170	56	60	46	M6 Depth12	40	M5 Depth10	20	30	17	36	15	584	0.5~0.6	685		360011
7.0	5.0	2.6	2.0	**GT-NS20H-1**	129	45	40	36	M5 Depth12	30	M4 Depth7	19	24	12	26	9	230	0.5~0.6	455		—

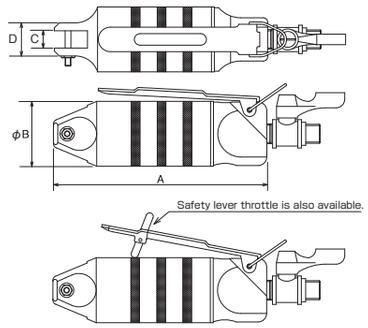
※The capacity in the above table is given for reference, when mounting a standard type of blade. The capacity depends on the blade shape and the material of the object to cut.
・Air hose inner dia. : 5mm ・Overall length and Weight: Accessories not included.

・Check the dimensions of the VESSEL nippers and blades when installing them in an automation machine (outer diameter of the frame, screw diameter, distance between installation screws, and others)
・The GT-NS50 is available as made-to-order. Please consult us for more detail.

No. GT-N3/5/7/10/12/20/30/50 Hand Held Air Nippers

●VESSEL's made-to-order blades provide solutions for a virtually unlimited range of needs, leading to safer and more efficient working conditions, and less fatigue for the operator.

・N20, N30 and N50 have the air cock.



Reference

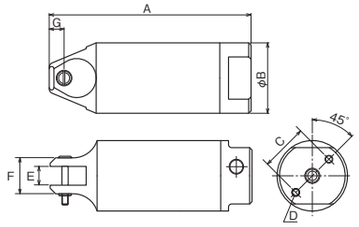
Capacity φ(mm) Soft Plastic	Hard Plastic	Copper	Steel	Model No.	Size (mm) A	B	C	D	Air Consumption (cm³/str.)	Air Pressure (MPa)	Weight (g)	Body	Hose coupling	EDP No.
2.0		1.0	0.5	**GT-N3**	112	23	7	14	45	0.4~0.5	95	Rc 1/8		360002
2.0		1.0	0.5	**GT-N5**	103	30	7	17	64	0.4~0.5	135	Rc 1/8		360003
3.0	2.0	1.6	1.0	**GT-N7**	123	34	9	17	116	0.4~0.5	180	Rc 1/4		360004
4.0	2.6	1.8	1.2	**GT-N10**	132	34	9	17	116	0.4~0.5	185	Rc 1/4		360005
4.5	4.0	2.3	1.7	**GT-N12**	142	36	12	20	116	0.5~0.6	210	Rc 1/4		360006
7.0	5.0	2.6	2.0	**GT-N20**	148	45	12	23	230	0.5~0.6	375	Rc 1/4		360007
10.0	6.5	3.3	2.8	**GT-N30**	185	56	17	30	584	0.5~0.6	625	Rc 1/4		360008
		5.5	4.5	**GT-N50**	237	75	25.2	43	1,170	0.5~0.6	1,220	Rc 1/4		360001

※The capacity in the above table is given for reference, when mounting a standard type of blade. The capacity depends on the blade shape and the material of the object to cut.
・Hose coupling: Rc1/4 ・Air hose inner dia. : 5mm ・Overall length: Accessories, Hunger not included. ・Weight: Accessories not included.

※Blades are optional.

No. GT-NR3/5/7/10L/20/30/50 Air Nipper Round-Type without Lever

●The position of air intake port is 180-degree rotatable.
●Two air intake ports are provided, so they can be switched depending on the mounting place.



Reference

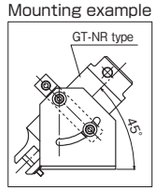
Capacity φ(mm) Soft Plastic	Hard Plastic	Copper	Steel	Model No.	Size (mm) A	B	C	D	E	F	G	Air Consumption (cm³/str.)	Air Pressure (MPa)	Weight (g)	Hose coupling	EDP No.
2.0		1.0	0.5	GT-NR3	110	23	17	M3 Depth8	7	14	7	45	0.4~0.5	70		360015
2.0		1.0	0.5	GT-NR5	94	30	20	M4 Depth10	7	17	7	64	0.4~0.5	110		360016
3.0	2.0	1.6	1.0	GT-NR7	113	34	22	M4 Depth10	9	17	7	116	0.4~0.5	150	Rc 1/8	360017
4.0	2.6	1.8	1.2	GT-NR10L	113	36	24	M4 Depth10	12	20	7	116	0.5~0.6	215		360018
7.0	5.0	2.6	2.0	GT-NR20	129	45	30	M5 Depth12	12	23	9.5	230	0.5~0.6	280		360019
10.0	6.5	3.3	2.8	GT-NR30	165	56	40	M6 Depth12	17	30	10.5	584	0.5~0.6	505		360020
12.0	6.5	5.5	4.5	GT-NR50	222	75	50	M8 Depth12	25.2	43	15	1,170	0.5~0.6	1,190	Rc 1/4	360024

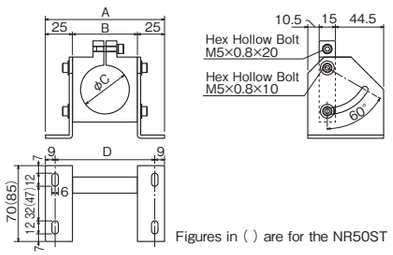
※The capacity in the above table is given for reference, when mounting a standard type of blade. The capacity depends on the blade shape and the material of the object to cut.
·Air hose inner dia.: 5mm ·Overall length and Weight: Accessories not included.
※Before mounting on dedicatid/automatic machines, check the following product dimensions. (Flame O.D., screw dia. (screw to screw) dimensions, etc.)
※Capacity (φ) is for reference purpose only. It varies depending on products.

No. NR10LST/20ST/30ST/50ST Stand for GT-NR

●Fixing hardware for sprue cutting of direct gates or mounting to an automatic machine.
●Mounted angle can be adjusted (0 to 60°).

Mounting example





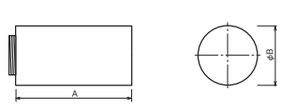
Figures in ( ) are for the NR50ST

Model No.	Size (mm) A	B	C	D	Weight (g)	EDP No.
NR10LST	102	52	36	84	335	360057
NR20ST	110	60	45	92	385	360058
NR30ST	130	80	56	112	535	360059
NR50ST	150	100	75	132	835	—

No. P-10L/20/30/50 Extra Pressure Boosters

●This unit is to be used in case the originally required pressure is not obtainable by the limit of space and air pressure.

P-20



Reference

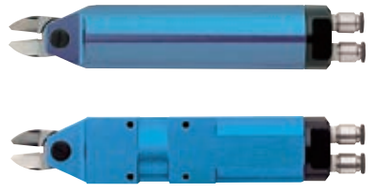
Capacity φ(mm) Soft Plastic	Hard Plastic	Copper	Steel	Applicable models	Model No.	Size(mm) A	B	Air Consumption (cm³/str.)	Air Pressure (MPa)	Weight (g)	EDP No.
5.0	4.0	2.6	1.6	NS10L, NR10L, N12	P-10L	71	36	223	Up to 0.5MPa	115	360051
8.0	6.0	3.0	2.2	N20, NS20, NR20	P-20	87	45	508	Up to 0.5MPa	215	360052
13.0	7.0	4.8	4.0	N30, NS30, NR30	P-30	92	56	956	Up to 0.5MPa	330	360053
		6.5	5.5	N50, NR50	P-50	133	75	2,670	Up to 0.5MPa	840	360054

※The capacity in the above table is given for reference, when mounting a standard type of blade. The capacity depends on the blade shape and the material of the object to cut.
·Above figures of overall length and the weight are defined for the extra booster specs only. And these figures in the installation.

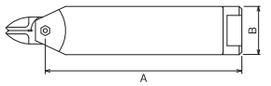
※Blades are optional.

No. GT-NWR10/20/30 GT-NWS1/10/20/30 Double Action Air Nippers

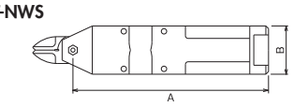
●Blade opening and closing is driven by air piston.
●Having no spring mechanism in the main unit facilitates maintenance.



GT-NWR



GT-NWS



Model No.	Capacity φ(mm) Copper	Steel	ABS Plastic	Air Consumption (cm³/str.)	Applied Pressure (N)	Air Pressure (MPa)	Size(mm) A	B	Weight (g)	EDP No.
Double Action Air Scissors (Round Type without Lever)										
GT-NWR10	1.8	1.2	4.0	116	588	0.4~0.5	146	φ36	280	360710
GT-NWR20	2.6	2.0	6.5	230	1,372	0.5~0.6	165	φ45	523	360711
GT-NWR30	3.3	2.8	9.5	584	2,744	0.5~0.6	216	φ56	980	360712
Double Action Air Scissors (Square Type)										
GT-NWS1	1.0	0.5	2.0	45	294	0.4~0.5	95	23×20	116	360702
GT-NWS10	1.8	1.2	4.0	116	588	0.4~0.5	146	36×36	356	360706
GT-NWS20	2.6	2.0	6.5	230	1,372	0.5~0.6	165	45×45	610	360707
NEW GT-NWS30	3.3	2.8	9.5	584	2,744	0.5~0.6	230.5	56×56	1,115	360708

No. GT-NB20/30/20LW/30LW Sliding Air Nippers Bracket-Type

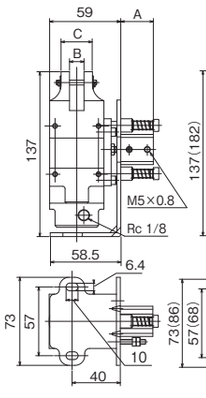
●VESSEL has achieved smooth and continuous slide movement even for large diameter gate cuts, which produces a large shock at each cut.

GT-NB20LW-10TM
Slide Mechanism Accurate Model

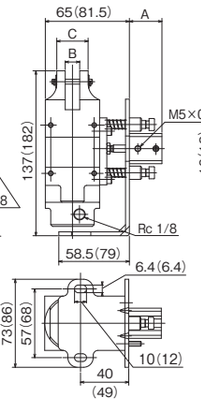
GT-NB20

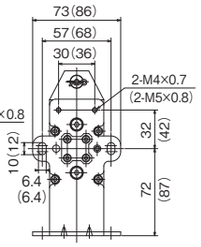
Model No.	Dimensions(mm) A	B	C	Slide Direction/ Distance (mm)	Weight (g)	EDP No.
GT-NB20(5-OSHI)	22	12	26	Push 0~ 5	755	360073
GT-NB20(5-HIKU)	22	12	26	Pull 0~ 5	755	360071
GT-NB20(10-OSHI)	27	12	26	Push 0~10	755	360074
GT-NB20(10-HIKU)	27	12	26	Pull 0~10	755	360072
GT-NB30(10-HIKU)	28.5	17	36	Pull 0~10	1,420	360076
GT-NB20LW-10TM	28.5	12	26	Pull 0~10	795	360069
GT-NB30LW-10TM	29.5	17	36	Pull 0~10	1,315	360077
GT-NB20LW-10SM	28.5	12	26	Push 0~10	795	360068
GT-NB30LW-10SM	29.5	17	36	Push 0~10	1,325	360078

OSHI type



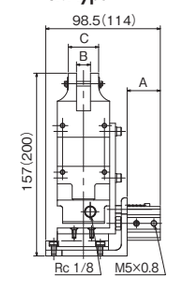
HIKU type



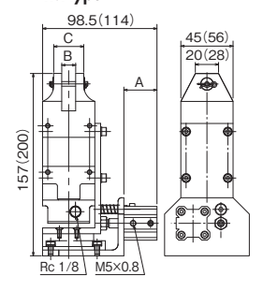


Figures in ( ) are for the NB30.
Unit : mm

SM type



TM type

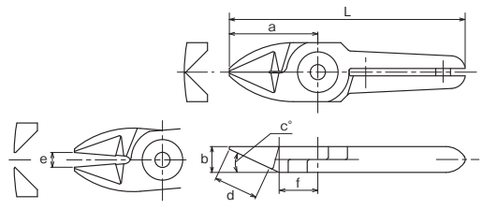


Figures in ( ) are for the NB30LW.
Unit : mm

No. AS/HS Standard

Metal

AS/Standard type. Basic set of blades used for cutting copper wire and steel wire.
HS/Improved durability with brazed high-speed steel.



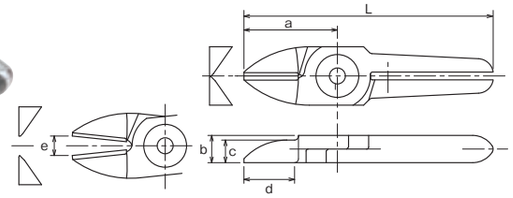
Model No.	Size (mm) a	b	c (°)	d: Effective Length	e: Blade opening	f	L	Weight (g)	Material	Applicable models	EDP No.
N3AS	24	7	25	12	4	10.5	64	35	Special alloy steel	GT-NS3 / N3 / NR3	360102
N3HS	24	7	25	12	4	10.5	64	35	w/High speed steel chip	GT-NS3 / N3 / NR3	360101
N5AS	24	7	25	12	4	10.5	64	40	Special alloy steel	GT-NS5 / N5 / NR5	360112
N5HS	24	7	25	12	4	10.5	64	40	w/High speed steel chip	GT-NS5 / N5 / NR5	360111
N7AS	27	9	30	13.5	4	12.5	81	80	Special alloy steel	GT-NS7 / N7 / NR7	360122
N7HS	27	9	30	13.5	4	12.5	81	80	w/High speed steel chip	GT-NS7 / N7 / NR7	360121
N10AS	27	9	30	13.5	5	12.5	91	85	Special alloy steel	GT-N10	360132
N10HS	27	9	30	13.5	5	12.5	91	85	w/High speed steel chip	GT-N10	360131
N10LAS	35	12	30	20	5	15	89	120	Special alloy steel	GT-NS10L / NR10L	360181
N12AS	35	12	30	20	5	15	105	135	Special alloy steel	GT-N12	360142
N12HS	35	12	30	20	5	15	105	135	w/High speed steel chip	GT-N12	360141
N20AS	35	12	30	20	9	15	95	140	Special alloy steel	GT-NS20 / N20 / NR20 / NB20	360151
N30AS	43	17	30	25	9	18	127	370	Special alloy steel	GT-NS30 / N30 / NR30 / NB30	360161

>> For guidance on cutting capability, see P264 of the technical material.

No. BJ Straight blades for metals

Metal

BJ/This is a set of vertical blades with an unbeveled cutting edge for metal.



Model No.	Size (mm) a	b	c	d: Effective Length	e: Blade opening	L	Weight (g)	Material	Applicable models	EDP No.
NW1BJ	20	5	3	10.5	3.5	50	16	Special alloy steel	GT-NWR1 / NWS1	360450
N3BJ	24	7	5.8	13	5	64	35	Special alloy steel	GT-NS3 / N3 / NR3	360106
N5BJ	24	7	5.8	13	4	64	40	Special alloy steel	GT-NS5 / N5 / NR5	360119
N7BJ	27	9	7.5	13	5	81	75	Special alloy steel	GT-NS7 / N7 / NR7	360128
NW10BJ*	30	9	6	14	5	85	76	Special alloy steel	GT-NWR10 / NWS10	360453
NW20BJ*	40	12	6	21.5	8	100	142	Special alloy steel	GT-NWR20 / NWS20	360459
NW30BJ*	55	17	8	29.5	11	140	367	Special alloy steel	GT-NWR30	360460

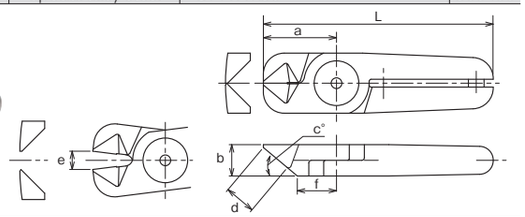
*Subject to change in the blade tip specifications (NW types only). See P204.

>> For guidance on cutting capability, see P264 of the technical material.

No. AG Powerful cutting blades

Metal

AG/This is a set of blades with increased strength with a shorter cutting edge than the standard type. More welding pressure is created because it cuts at the base of the blades.



Model No.	Size (mm) a	b	c (°)	d: Effective Length	e: Blade opening	f	L	Weight (g)	Material	Applicable models	EDP No.
N20AG	28	12	40	12	7	15	88	135	Special alloy steel	GT-NS20 / N20 / NR20 / NB20	360159
N20HS	26	12	40	10	7	13.5	86	135	w/High speed steel chip	GT-NS20 / N20 / NR20 / NB20	360157

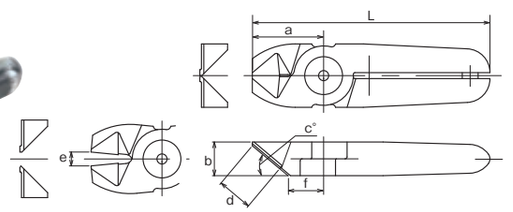
>> For guidance on cutting capability, see P264 of the technical material.

No. BBB Powerful cutting blades with carbide chip

Metal
N30BBB
N50BBB

BBB/With carbide chip suitable for cutting hard wires such as high steel wire and piano wire.

Carbide chip
Recommended to the applications where more durable blade than the special alloy steel is required (i.e. when cutting piano wires)



Model No.	Size (mm) a	b	c (°)	d: Effective Length	e: Blade opening	f	L	Weight (g)	Material	Applicable models	EDP No.
N30BBB	36	17	40	18	7	18	120	365	w/Carbide chip	GT-NS30 / N30 / NR30 / NB30	360172
N50BBB	46	25	35	19	9	24	166	955	w/Carbide chip	GT-N50 / NR50	360177

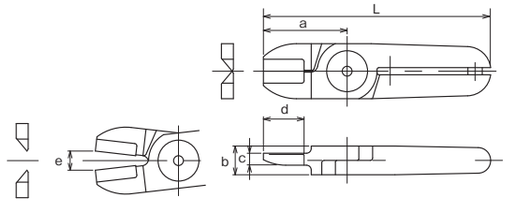
>> For guidance on cutting capability, see P264 of the technical material.

Air nipper standard blades for metal

No. BFB/AS Clipper blades with carbide chip

Metal
N50AS

BFB/With carbide chip, suitable for cutting metal wire and thin pipe.
AS/Standard clipper type blades.



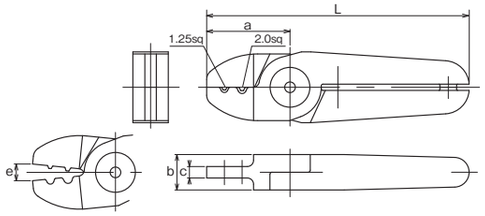
Model No.	Size (mm) a	b	c	d: Effective Length	e: Blade opening	L	Weight (g)	Material	Applicable models	EDP No.
N20BFB	35	12	5	17	8	95	150	w/Carbide chip	GT-NS20 / N20 / NR20 / NB20	360156
N50AS	60	25	10	30	11	180	950	Special alloy steel	GT-N50 / NR50	360175

>> For guidance on cutting capability, see P264 of the technical material.

No. ACD Crimp edge for solderless terminals

Metal

ACD/This is a set of blades for crimping solderless terminals.
(Bare terminal 1.25sq/2.0sq)



Model No.	Size (mm) a	b	c	e: Blade opening	L	Weight (g)	Material	Applicable models	EDP No.
N30ACD	40	17	5.5	8	126	335	Special alloy steel	GT-NS30 / N30 / NR30 / NB30	360171

>> For guidance on cutting capability, see P264 of the technical material.

Air nipper standard blades for plastic

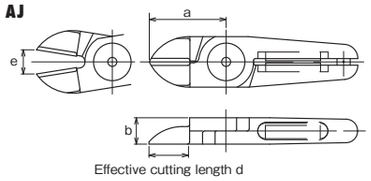
No. NM NM Blades

PAT.

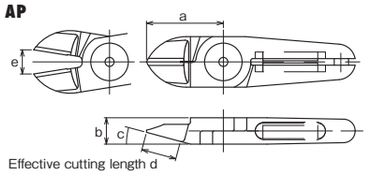
NM blades eliminate troubles caused by spring breakage.
Can be mounted on the VESSEL current air nippers.
Periodic replacement of spring is no more necessary as the magnet works semi-permanently.

- Ideal for around-the-clock operations
- Semi-permanent magnetic force
- Compatible with our standard nipper bodies

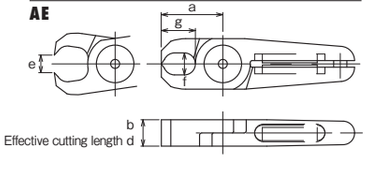
Thin, straight type / For plastic parts
AJ



For plastic parts
AP



Nipping type / For plastic parts
AE

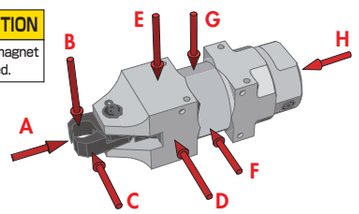


Model No.	Size (mm) a	b	c (°)	d	e	f×g	Weight (g)	Applicable models	EDP No.
NM20AJ	35	12	-	18	11	-	116	GT-NS20 / N20 / NR20 / NB20	360246
NM20AP	35	12	15	16	11	-	124	GT-NS20 / N20 / NR20 / NB20	360247
NM20AE	28	12	-	12	8	10×15.5	129	GT-NS20 / N20 / NR20 / NB20	360248
NM30AJ	52	17	-	28	11	-	360	GT-NS30 / N30 / NR30 / NB30	360261
NM30AP	66	17	15	38	16	-	380	GT-NS30 / N30 / NR30 / NB30	360262
NM30AE	45	17	-	17	12	13×28	358	GT-NS30 / N30 / NR30 / NB30	360263

>> For guidance on cutting capability, see P264 of the technical material.

※Customization also available upon request.

⚠ CAUTION
Powerful magnet is used.



Result of magnetic force measurement

If a magnetic sensor for operation check is installed nearby, please confirm the magnetic force level in the following diagram.

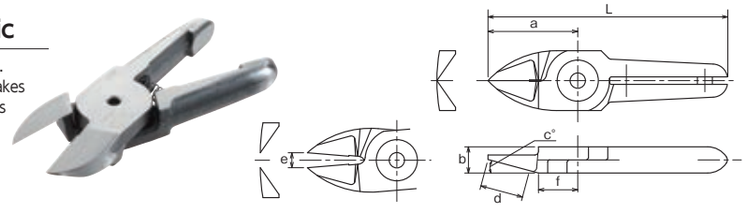
品番No.	A	B	C	D	E	F	G	H	EDP No.
NM20AE	85	10	10	5	32	5	2	0	360248
NM30AE	34	8	8	6	42	15	30	3	360263

Measurement unit: Gauss
Measurement device: Gaussmeter GM-1200 manufactured by DENSHIJIKI INDUSTRY Co., Ltd.

No. AP Standard blades for plastic

Plastic

AP/Standard set of blades used to cut plastic. A wide curve shape on the cutting surface makes this blade suitable for the gate cutting process in which the cut end must not be left.



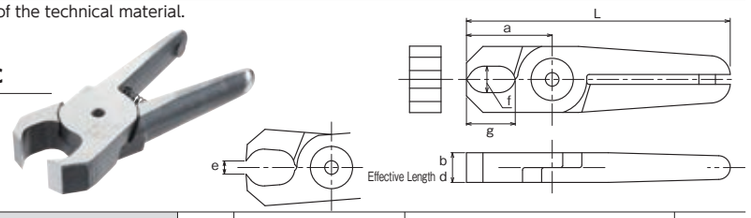
Model No.	Size (mm) a	b	c (°)	d: Effective Length	e: Blade opening	f	L	Weight (g)	Material	Applicable models	EDP No.
N3AP	24	7	15	11.5	4	10.5	64	35	Special alloy steel	GT-NS3 / N3 / NR3	360104
N5AP	24	7	15	11.5	4	10.5	64	40	Special alloy steel	GT-NS5 / N5 / NR5	360114
N7AP	27	9	30	11.5	4	14.5	81	80	Special alloy steel	GT-NS7 / N7 / NR7	360124
N10AP	27	9	30	11.5	5	14.5	91	85	Special alloy steel	GT-N10	360134
N10LAP	35	12	15	16	5	15	89	120	Special alloy steel	GT-NS10L / NR10L	360182
N12AP	35	12	15	16	5	15	105	135	Special alloy steel	GT-N12	360144
N20AP	35	12	15	16	11	15	95	125	Special alloy steel	GT-NS20 / N20 / NR20 / NB20	360155
N30AP	66	17	15	38	16	24	150	380	Special alloy steel	GT-NS30 / N30 / NR30 / NB30	360165

>> For guidance on cutting capability, see P264 of the technical material.

No. AE Nipping blades for plastic

Plastic

AE/Used for plastic gates such as ride gates and discard gates.



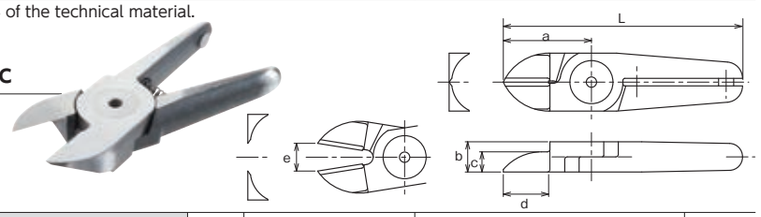
Model No.	Size (mm) a	b	f×g	d: Effective Length	e: Blade opening	L	Weight (g)	Material	Applicable models	EDP No.
N3AE	20	7	6x11	7	3.5	60	35	Special alloy steel	GT-NS3 / N3 / NR3	360108
N5AE	20	7	6x6.6	7	3.5	60	40	Special alloy steel	GT-NS5 / N5 / NR5	360118
N7AE	26	9	8x14.8	9	4	80	85	Special alloy steel	GT-NS7 / N7 / NR7	360126
N20AE	28	12	10x15.5	12	8	88	135	Special alloy steel	GT-NS20 / N20 / NR20 / NB20	360158
N30AE	45	17	13x28	17	12	129	395	Special alloy steel	GT-NS30 / N30 / NR30 / NB30	360166

>> For guidance on cutting capability, see P264 of the technical material.

No. AJ Straight blades for plastic

Plastic

AJ/Vertical blades with an unbeveled cutting edge for plastic. You can apply it at a right angle to the gate.



Model No.	Size (mm) a	b	c	d: Effective Length	e: Blade opening	L	Weight (g)	Material	Applicable models	EDP No.
NW10AJ*	30	9	6	14	5	85	76	Special alloy steel	GT-NWR10 / NWS10	360454
N20AJ	35	12	8	18	11	95	125	Special alloy steel	GT-NS20 / N20 / NR20 / NB20	360152
N20AJB	35	12	8	18	11	95	125	w/Carbide chip	GT-NS20 / N20 / NR20 / NB20	360381
NW20AJ*	40	12	6	21.5	8	100	142	Special alloy steel	GT-NWR20 / NWS20	360457
N30AJ	52	17	8	28	14.5	136	370	Special alloy steel	GT-NS30 / N30 / NR30 / NB30	360169
NW30AJ*	55	17	8	29.5	11	140	368	Special alloy steel	GT-NWR30	360461

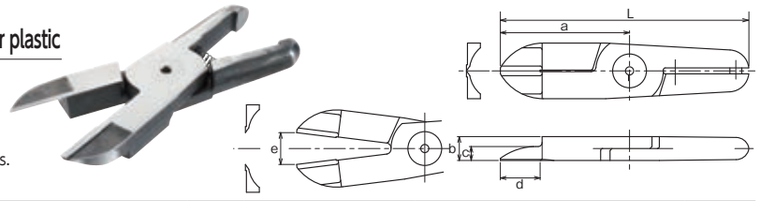
*Subject to change in the blade tip specifications (NW types only). See P204.

>> For guidance on cutting capability, see P264 of the technical material.

No. AJL/Quasi-standard products Straight long blades for plastic

Plastic

AJL/Long type straight blades.
Suitable when there is distance between the nippers and the gate cut portion of the workpiece.
N30AJL163 is useful for cutting wide gates.



Model No.	Size (mm) a	b	c	d: Effective Length	e: Blade opening	L	Weight (g)	Material	Applicable models	EDP No.
※N10LAJ141	61	12	7	34	10	115	165	Special alloy steel	GT-NS10L / NR10L	360369
N20AJL	65	12	7	20	16	125	230	Special alloy steel	GT-NS20 / N20 / NR20 / NB20	360150
※N20AB39	61	12	7	36	14	121	185	Special alloy steel	GT-NS20 / N20 / NR20 / NB20	360376
※N30AJ163	65	17	7	41	17.5	149	355	Special alloy steel	GT-NS30 / N30 / NR30 / NB30	360389
N30AJL	75	17	8	25	19	159	470	Special alloy steel	GT-NS30 / N30 / NR30 / NB30	360170

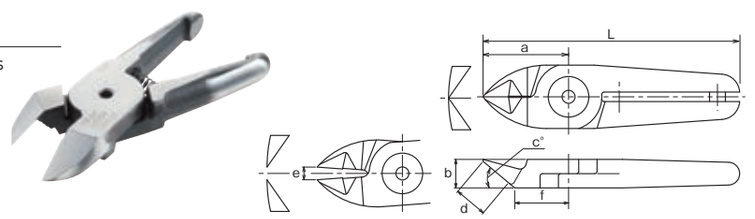
>> For guidance on cutting capability, see P264 of the technical material.

Blade with a mark ※ is a quasi-standard.

No. PF Flat blades for plastic

Plastic

PF/A set of blades for cutting plastic gates with cutting end flat. A wide curve shape on the cutting surface makes this blade suitable for the gate cutting process in which the cut end must not be left.



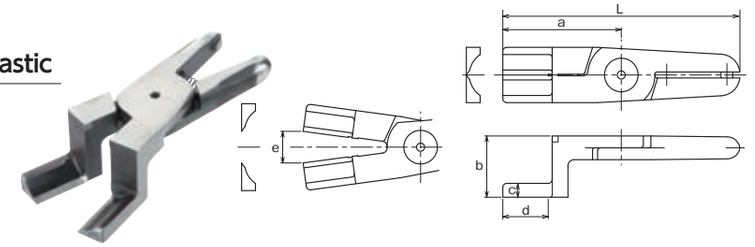
Model No.	Size (mm) a	b	c (°)	d: Effective Length	e: Blade opening	f	L	Weight (g)	Material	Applicable models	EDP No.
N7PF	27	9	40	10.5	4	17	81	80	Special alloy steel	GT-NS7 / N7 / NR7	360127
N10LPF	35	12	40	13.5	5	21	89	120	Special alloy steel	GT-NS10L / NR10L	360183
N20PF	35	12	40	13.5	11	21	95	130	Special alloy steel	GT-NS20 / N20 / NR20 / NB20	360160
N30PF	58	17	30	25	15	33	142	390	Special alloy steel	GT-NS30 / N30 / NR30 / NB30	360167

>> For guidance on cutting capability, see P264 of the technical material.

No. Quasi-standard products Crank blades for plastic

Plastic

AH/Crank shaped blade for plastic.
It is effective when there are obstructions or the gate is narrow.



Model No.	Size (mm) a	b	c	d: Effective Length	e: Blade opening	L	Weight (g)	Material	Applicable models	EDP No.
N20AH	60	31	7	23	16	120	240	Special alloy steel	GT-NS20 / N20 / NR20 / NB20	360149

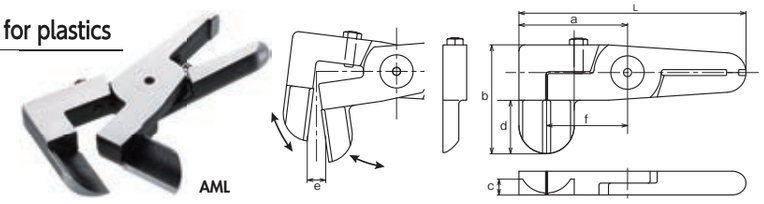
>> For guidance on cutting capability, see P264 of the technical material.

No. Quasi-standard products Laterally facing blades for plastics

Plastic

AML AMR

AML/AMR This is a set of blades for plastic where the cutting area is bent 90 degrees. It is useful when it is hard for the nipper to get into, for example, in cramped spaces.



AML

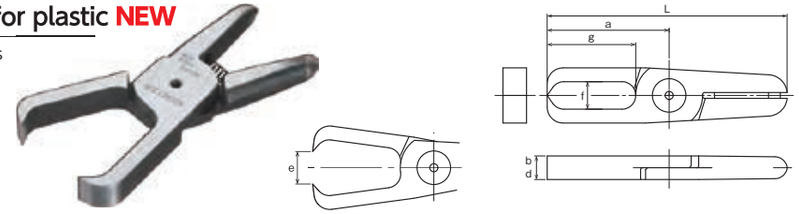
Model No.	Size (mm) a	b	c	d: Effective Length	e: Blade opening	f	L	Weight (g)	Material	Applicable models	EDP No.
N20AML1498	55	55	8	26	9.5	41	115	270	Special alloy steel	GT-NS20 / N20 / NR20 / NB20	360384
N20AMR1499	55	55	8	26	9.5	41	115	270	Special alloy steel	GT-NS20 / N20 / NR20 / NB20	360385
NEW N30AML1435	55	68	10	35	13	39	139	520	Special alloy steel	GT-NS30 / N30 / NR30 / NB30	360370
NEW N30AMR1395	55	68	10	35	13	39	139	520	Special alloy steel	GT-NS30 / N30 / NR30 / NB30	360371

>> For guidance on cutting capability, see P264 of the technical material.

No. Quasi-standard products Nipping blades for plastic NEW

Plastic

AE/Used for plastic gates such as ride gates and discard gates.



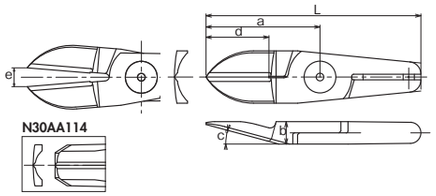
Model No.	Size (mm) a	b	f×g	d: Effective Length	e: Blade opening	L	Weight (g)	Material	Applicable models	EDP No.
N20AE1205	62	12	14×45	12	16.5	122	202	Special alloy steel	GT-NS20 / N20 / NR20 / NB20	360378
N30AE2125	70	17	16×53	17	19.5	154	385	Special alloy steel	GT-NS30 / N30 / NR30	360173

>> For guidance on cutting capability, see P264 of the technical material.

No. Quasi-standard products R blades for plastic

Plastic

A large R is provided in the cross section for gate processing where the cut end must not be left. An angled blades can be selected in accordance with the installation angle of the main unit.



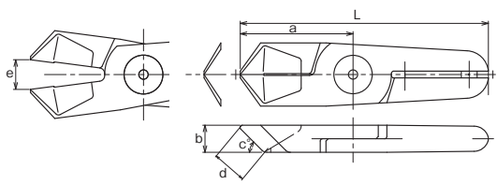
Model No.	Size (mm) a	b	c (°)	d: Effective Length	e: Blade opening	L	Weight (g)	Material	Applicable models	EDP No.
N10LAB152	61	12	15	35	10	115	165	Special alloy steel	GT-NS10 / NR10L	360367
N20AA27	45	12	23	25	12	105	145	Special alloy steel	GT-NS20 / N20 / NR20 / NB20	360373
N20AA239	52.3	12	40	27	14	112.3	195	Special alloy steel	GT-NS20 / N20 / NR20 / NB20	360372
N20AB360	61	12	15	35	16	121	185	Special alloy steel	GT-NS20 / N20 / NR20 / NB20	360375
N30AA114	76.3	17	30	50	20	160.3	385	Special alloy steel	GT-NS30 / N30 / NR30 / NB30	360386

>> For guidance on cutting capability, see P264 of the technical material.

No. Quasi-standard products Nipping blades for plastic

Plastic

AE/Used for plastic gates such as ride gates and discard gates.



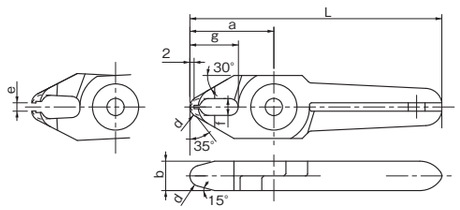
Model No.	Size (mm) a	b	c (°)	d: Effective Length	e: Blade opening	L	Weight (g)	Material	Applicable models	EDP No.
N20AE19A	50	12	45	13	13	110	200	Special alloy steel	GT-NS20 / N20 / NR20 / NB20	360382
N30AE53	65	17	65	18.5	16	149	440	Special alloy steel	GT-NS30 / N30 / NR30 / NB30	360388

>> For guidance on cutting capability, see P264 of the technical material.

No. Quasi-standard products Nipping blade for pin gates

Plastic

Suitable for cutting a pin gate at its bottom that is located in a hollow space.



Model No.	Size (mm) a	b	d	f×g	e: Blade opening	L	Weight (g)	Material	Applicable models	EDP No.
N3AE406	20	7	R2.5	4×11.5	3.5	60*	34	Special alloy steel	NS3H-1* / N3 / NS3 / NR3	360174

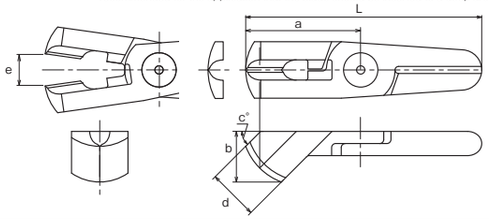
>> For guidance on cutting capability, see P264 of the technical material.

* Custom-made nipper model GT-NS3H-1 (the blade opening is adjustable) is recommended for the application that the blade should be inserted to a deep area.

No. Quasi-standard products Nipping blades for sprue cut

Plastic

Perfect spherical set of blades optimal for cutting sprue.
The blades can be inserted securely to narrow spaces that have ribs around them and the finish isvery clean.



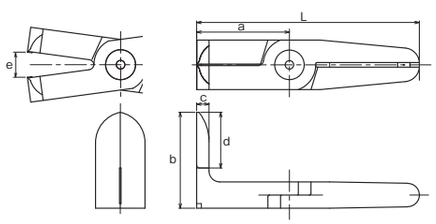
Model No.	Size (mm) a	b	c	d: Effective Length	e: Blade opening	L	Weight (g)	Material	Applicable models	EDP No.
N20AK249	57	25	45	25	14	117	240	Special alloy steel	GT-NS20 / N20 / NR20	360383

>> For guidance on cutting capability, see P264 of the technical material.

No. Quasi-standard products L blades for sprue cut

Plastic

This is an angled long type straight set of blades with a 90-degree angle.
Ideal for direct gate cut.



Model No.	Size (mm) a	b	c	d: Effective Length	e: Blade opening	L	Weight (g)	Material	Applicable models	EDP No.
N30AL525	60	62	8	36	16	144	520	Special alloy steel	GT-NS30 / N30 / NR30 / NB30	360390

>> For guidance on cutting capability, see P264 of the technical material.

No. GT-H12K/H30/H120K/HS30 Air Scissors

●Two types of blades, standard and micro-edge, are available.

GT-H12K Small lightweight type with one fixed blade (Made-to-order)

GT-H120K With one fixed blade

GT-H30 Round-Type Double movable blades

GT-HS30 Square-Type Double movable blades

Model No.	Capacity (max) (mm)	Air Consumption (cm³/str.)	Applied Pressure (MPa)	Overall Length (with Blade) (mm)	Weight (with Blade) (g)	EDP No.
GT-H30	Kevlar t=1	584	0.3	280	1,030	360211
GT-H12K	Kevlar t=0.3	116	0.2	186.2	290	360201
GT-H120K	Band steel 15X0.5t	116	0.5~0.6	211	340	360202
GT-HS30	Kevlar t=1	584	0.3	260	970	360212

・Hose coupling: R1/4 (Body Rc1/8) ・Air hose inner dia.: 5 mm ・Overall length/Weight: Accessories not included.
・Total length and weight of the GT-HS30 and HS30 are given with the H30ME blade mounted.

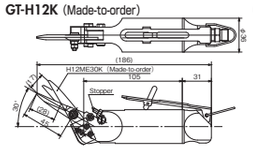
※Blades are optional.

Blades specifications

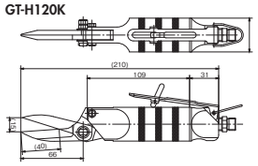
Model No.	Applicable Nippers	Blade Shape	Blade Aperture (mm)	Effective Blade Cutting Length (mm)	Weight (g)	EDP No.
H30ME	H30, HS30	Scissors type Serrated micro edge	26	50	280	360311
H30MEL			34	67	285	360312
H12ME30K	H12K		17	28	56	360301
H120SK	H120K	Scissors type	15	38	115	360302

Serrated micro edge

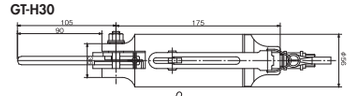
GT-H12K (Made-to-order)



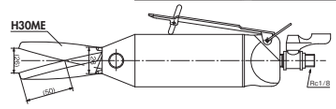
GT-H120K



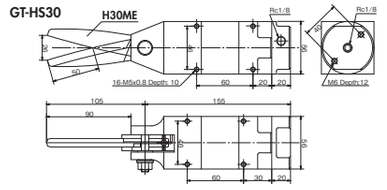
GT-H30



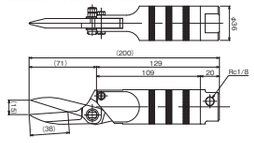
H30ME



GT-HS30 H30ME



GT-HR120K (Made-to-order)



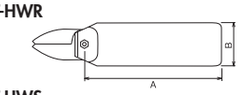
No. GT-HWR1/10 GT-HWS1/10 Double Action Air Scissors

●Blade opening and closing is driven by air piston.
●Having no spring mechanism in the main unit facilitates maintenance.

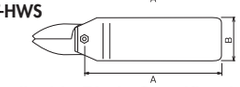
Model No.	Capacity φ (mm) Copper	Capacity φ (mm) Steel	Air Consumption (cm³/str.)	Applied Pressure (N)	Air Pressure (MPa)	A (mm)	B (mm)	Weight (g)	EDP No.
Double Action Air Scissors (Round Type without Lever)									
GT-HWR1	1.0	0.5	45	294	0.4~0.5	95	20	84	360701
GT-HWR10	1.8	1.2	116	588	0.4~0.5	146	36	295	360714
Double Action Air Scissors (Square Type)									
GT-HWS1	1.0	0.5	45	294	0.4~0.5	95	23×20	116	360700
GT-HWS10	1.8	1.2	116	588	0.4~0.5	146	36	356	360713

※Blades are optional.

GT-HWR

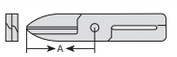


GT-HWS



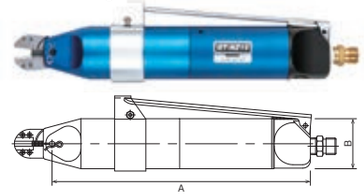
Applicable Blade Specifications

Model No.	Blade Opening (mm)	Cutting brade effective (mm)	A (mm)	Weight (g)	EDP No.
For GT-HWR1/HWS1					
HW1J	3.0	17	25	16	360452
For GT-HWS10					
HW10J	5.0	28	40	76	360462



No. GT-NZ15/20 Air Nipper for Orchid Support Stick NEW

●Equipped with a cutting position stopper for prevention of mistakes in cutoff.
●Blade is with a urethane cover to hold the stick that was cut, not to let cut pieces from being scattered.

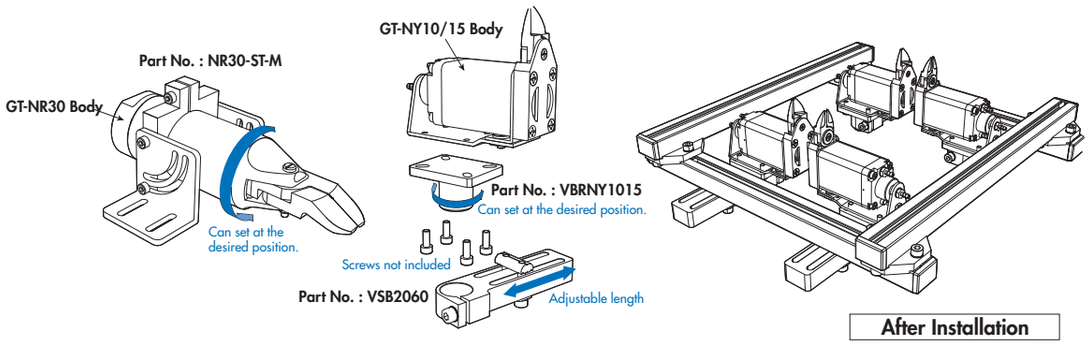


Model No.	Capacity Annealing Wire	Capacity Vinyl Stick (Pipe)	Air Consumption (cm³/str.)	Applied Pressure (N)	Air Pressure (MPa)	A (mm)	B (mm)	Weight (g)	EDP No.
GT-NZ15(NZ15AJ)	#10(Thin)	φ4.2~6	250	1177	0.65	213.5	40	455	—
GT-NZ15(NZ20AJ)	#8(Thick)	φ4.2~6	250	1177	0.65	213.5	40	465	360758

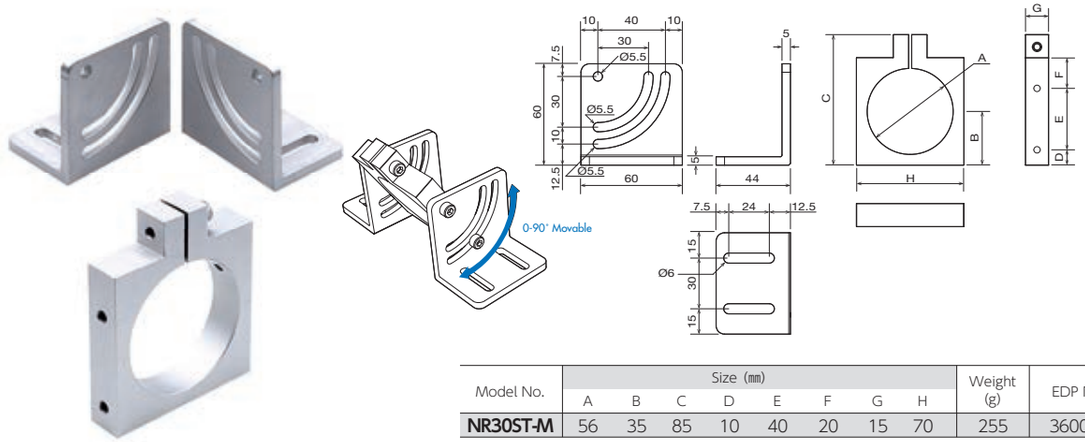
Note: The GT-NZ15/20 are designed for orchid support sticks available in Japan. This may not meet requirements in the overseas market. We don't have custom-made models for these nippers.

Applicable Blade Specifications

Model No.	Blade Opening (mm)	Cutting brade effective (mm)	A (mm)	Weight (g)	EDP No.
NZ15AJ	7.2	15	30	132	360504
NZ20AJ	7.5	15	31	142	360505

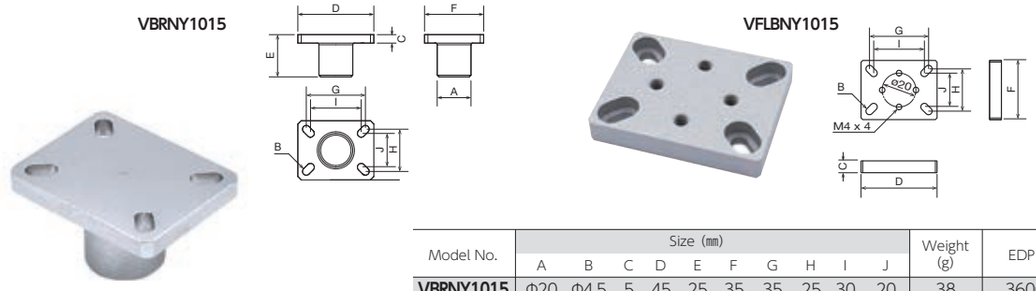


No. NR30ST-M Stand for the GT-NR30



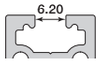
Model No.	Size (mm)								Weight (g)	EDP No.
	A	B	C	D	E	F	G	H		
NR30ST-M	56	35	85	10	40	20	15	70	255	360048

No. VBRNY1015/VFLBNY1015 Mounting/Flat Bracket for the GT-NY10/15

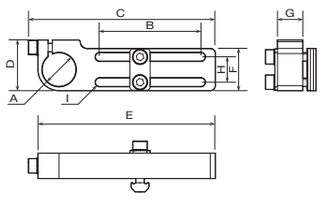


Model No.	Size (mm)										Weight (g)	EDP No.
	A	B	C	D	E	F	G	H	I	J		
VBRNY1015	Φ20	Φ4.5	5	45	25	35	35	25	30	20	38	360063
VFLBNY1015	-	Φ4.5	7	45	-	35	35	25	30	20	25	

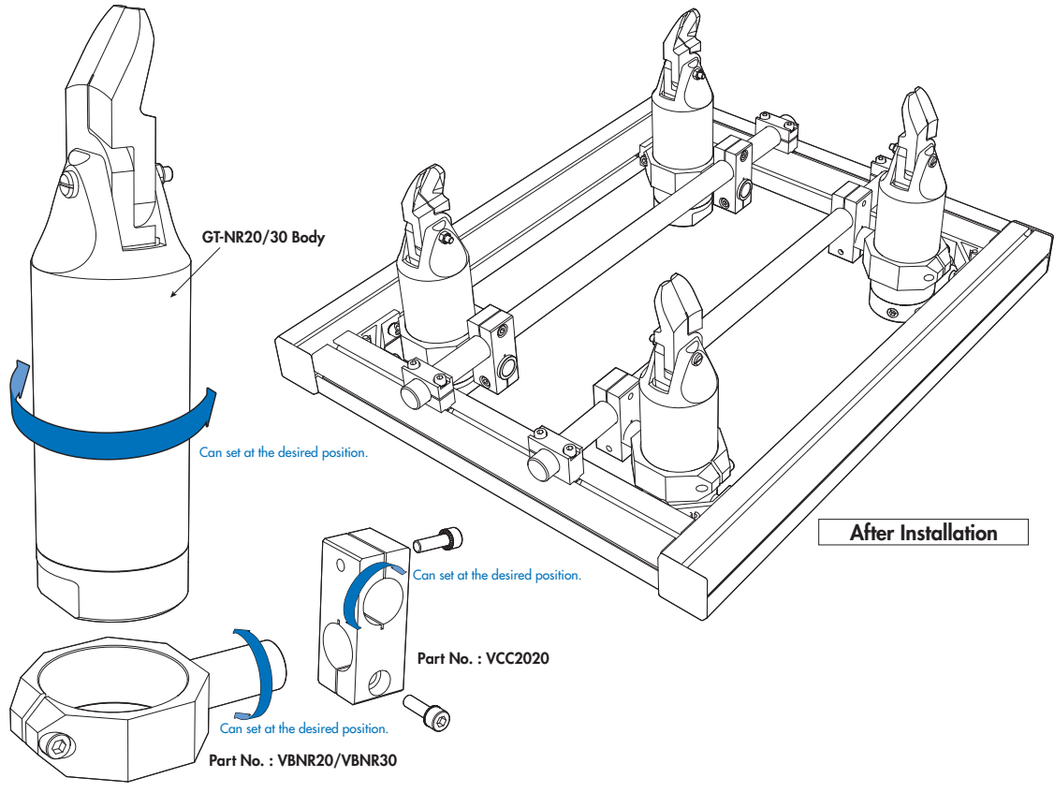
No. VSB2060 Slide Base



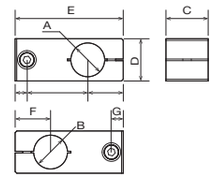
T-NUT of our product is for profile of below type. Please obtain proper T-NUT from profile supplier when our T-Nut does not fit your profile.



Model No.	Size (mm)									Weight (g)	EDP No.
	A	B	C	D	E	F	G	H	I		
VSB2060	Φ20	60	110.6	30	105	25	15	15	Φ5.2	111	360047

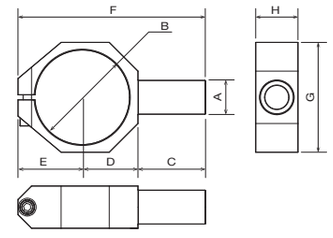


No. VCC2020 Cross Connector

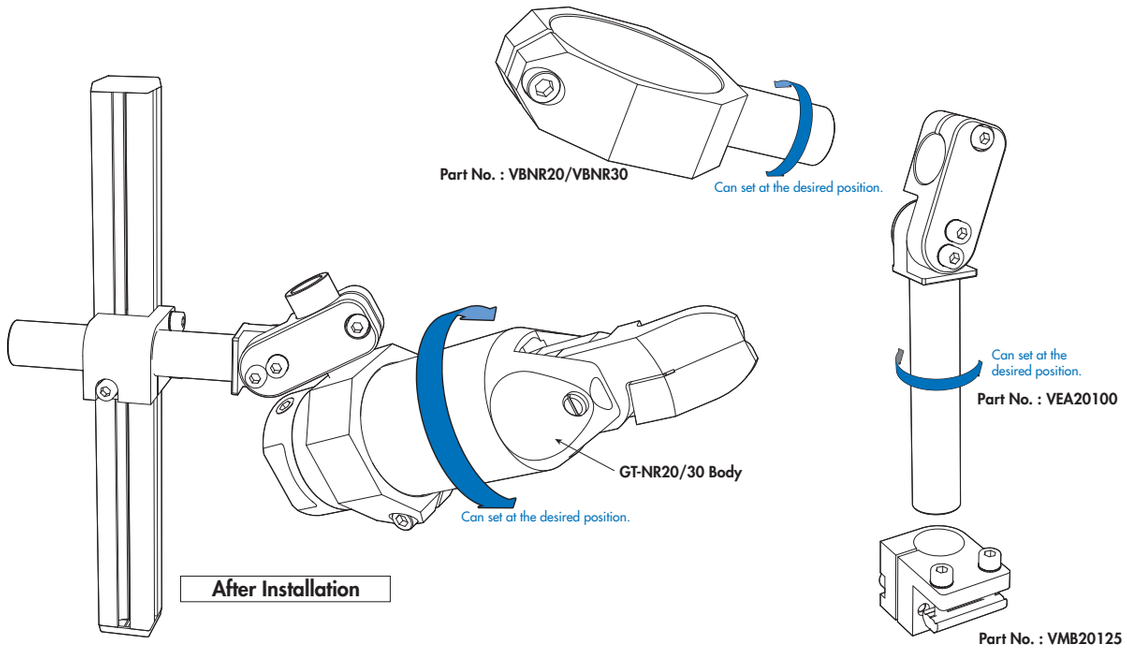


Model No.	Size (mm)							Weight (g)	EDP No.
	A	B	C	D	E	F	G		
VCC2020	Φ20	Φ20	25	25	64	21	65	68	360050

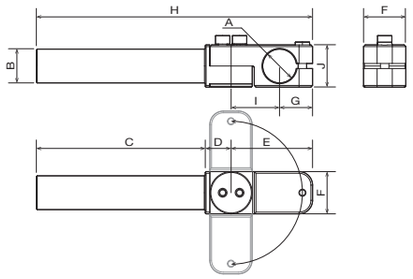
No. VBNR20/VBNR30 Bracket for the GT-NR20/30



Model No.	Size (mm)								Weight (g)	EDP No.
	A	B	C	D	E	F	G	H		
VBNR20	Φ20	Φ45	35	28	31.5	94.5	53	20	65	360060
VBNR30	Φ20	Φ56	40	33	38	111	65	25	110	360061

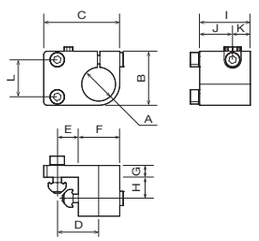


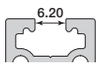
No. VEA20100 Elbow Arm



Model No.	Size (mm)										Weight (g)	EDP No.
	A	B	C	D	E	F	G	H	I	J		
VEA2010	Φ20	Φ20	100	15.3	48.2	25	19.5	163.5	28.7	25	115	360062

No. VMB20125 Mounting Braket



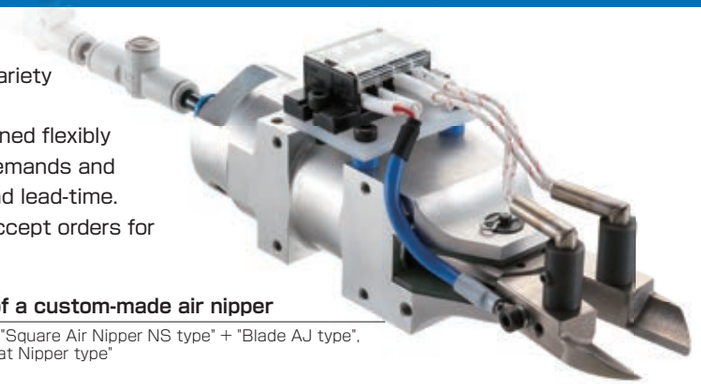


T-NUT of our product is for profile of below type.
Please obtain proper T-NUT from profile supplier when our T-Nut does not fit your profile.

Model No.	Size (mm)												Weight (g)	EDP No.
	A	B	C	D	E	F	G	H	I	J	K	L		
VMB20125	Φ20	32	45	24.5	12.5	24.5	7	12.5	30	19.5	10.5	22	70	360049

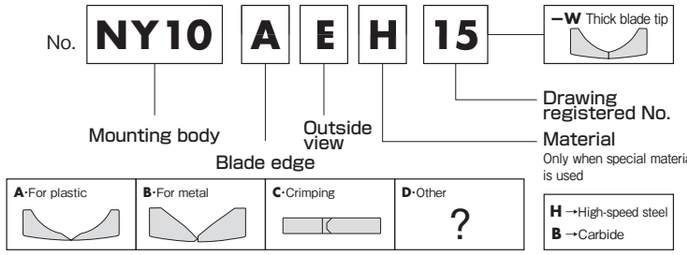
We design your custom-made blades, even from 1 piece!

VESSEL provides solutions of customized blades for a wide variety of applications.
Custom-made blades are designed flexibly according to a wide range of demands and offered at the minimum cost and lead-time.
See the examples below. We accept orders for small quantity as well.



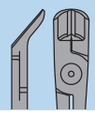
An example of a custom-made air nipper
A combination of "Square Air Nipper NS type" + "Blade AJ type", modified to a "Heat Nipper type"

Ref: What the model code stands for

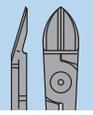


Type for blades

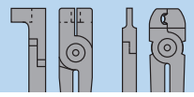
A Angled



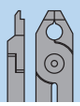
B Angled



C Crimping

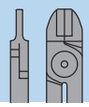


D Mounted gate

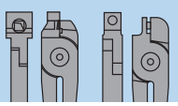


E Disposable gate treatment

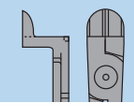
F Power cutting



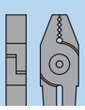
G Punching



H Crankshaft

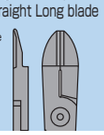


I Pilers type

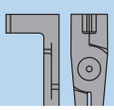


J(JL) Long blade for plastic Straight Long blade

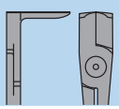
For product which are vertically long and to which a nipper does not reach with an ordinary blade.



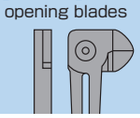
K L-shaped (disposable gate treatment)



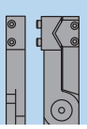
L L-shaped



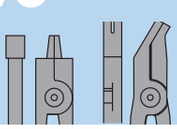
M/XL/XR Side opening blades



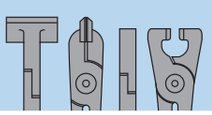
TN Tube cutting



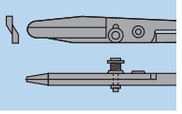
VO Nail pulling



DI Bending

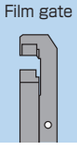


VHA Scissors



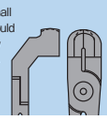
Cutting of stranded wire

Film gate



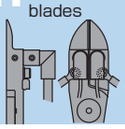
Direct gate
Sprue is equal to a gate.

AHE Pin gate treatment
···Treatment of small gates which should be automatically cut at de-gating.



AHW Double blades

NH Double heating blades



STATIC SOLUTIONS

Reliable performance even in a severe environment.

Contents

Fan Type ····· 240 - 241

Gun Type / Nozzle Type ····· 242 - 244

Stat Buster ····· 245

Bar Type ····· 246 - 249

Ion Parts Cleaner ····· 251 - 253

EPA Systems ····· 254 - 258

Conductive Rubber Mat ····· 255

Electrostatic Field Meter / Surface Resistance Checker ···· 256

EPA Floor Sheet ····· 257 - 258

Clean Walker ····· 259 - 260

STATIC SOLUTIONS TECHNICAL

Butterfly louvers for dispersing ions toward different directions; straight or wide.

Fan type (electrostatic neutralization)

F-6R

Being compact, it is suitable for incorporation into a system.
The F-6 with a clip can be clipped onto pipe of a cell production area and used for static elimination of part shelves or nearby working areas.

241P

F120R/S

This is the popular model of bench-top type, supporting a wide range of applications, from assembling into a unit, to at-hand work.
The air flow direction through the louvers can be switched.

241P

CF300-E

This type supports static elimination from wide areas. It adopts a cross-flow fan.
It can be installed in an area close to a conveyor or transfer system to remove static electricity from charged objects.

241P

Operation lamp enabling the status to be seen at a glance

LED light that makes dust visible.

Gun type (dust removal)

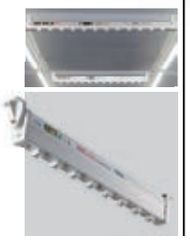
A hand-held static eliminator intended primarily for dust removal.
It adopts a piezoelectric transformer that is lightweight, compact, and high safety.

243P

Nozzle type (Electrostatic neutralization and dust removal)

This type enables a pinpoint elimination of static electricity and dust from charged objects.
It is suitable for installation in equipment or for transfer equipment, including transfer apparatus such as vibratory bowl feeders.

244P



Bar type (Electrostatic neutralization, air assist ··· dust removal)

This is a bar-type electrostatic eliminator provided with diverse width sizes.
It adopts the AC pulse system, allowing you to select an optimal model according to the distance to a charged article.

247P ~249P

AC pulse
A pulse AC system that generates positive and negative ions alternatively from individual electrodes. It creates icons in maximum periodic widths of respective positive and negative electrodes; the amount of ions is large, enabling quick electrostatic elimination to be achieved.

Ion parts cleaner (Electrostatic neutralization, dust removal)

This is a new method of cleaning parts known as ion cleaning.
It is capable of performing ion air-based static elimination and dust collection + dust absorption simultaneously.

252P 253P

Environmental measures

RoHS

Pb (lead) / Cd (cadmium) / Hg (mercury) / Hexavalent chromium / PBB (polybrominated biphenyl) / PBDE (polybrominated diphenyl ether) / DEHP, BBP, DBP, DIBP (phthalate esters)
The products with this mark in this catalogue are compliant with the RoHS directives (EU) (usage limit of the above 10 substances).

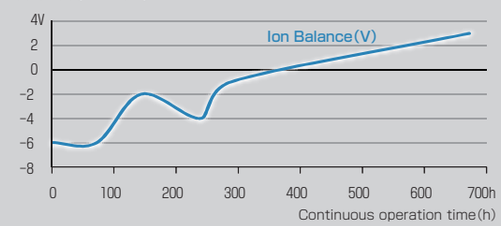
Note: For the updated information on RoHS compliant products, visit our homepage, because some products or sizes are under investigation or are not compliant at the time of publication of this catalogue.

Ion creation method

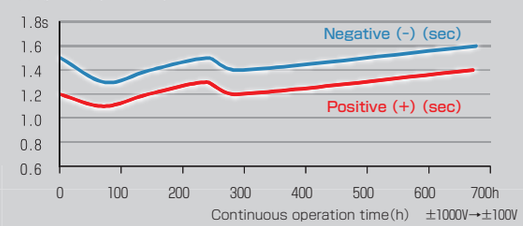
AC high frequency

Electrostatic eliminators adopting a high-frequency transformer of 20 kHz to 70 kHz have the features of stable ion balance.

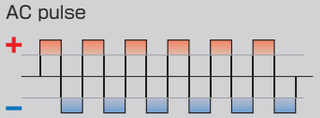
Ion balance(F-120R)



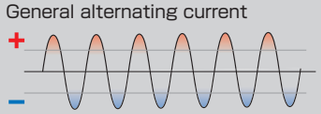
Decay Time(F-120R)



AC pulse



General alternating current



Cautions : Performance varies depending on various conditions such as temperature, humidity, and atmospheric pressure.
These pieces of data are our measured values for reference and do not imply the guarantee of the same product performance.

No. F120R-E

Ionizing Fan

This type adopts a piezoelectric transformer that is safe and superior in ion generation. In addition, VESSEL's specific capacitive coupling method in which a discharge needle is sandwiched with resin and stainless disc, enables unmatched good ion balance.

Convenient functions such as extrenal output terminals, butterfly louver capable of switching the airflow directions, either straight or wide area.

No. F120R-E

Ionizing Fan

Cell production in which compactness and easiness to install at setup are important;
Integlated In-line process that outputs alarms while maintaining ion balance;
VESSEL fan-type ionizers can remove static electricity in an efficient way.

No. F-6R Ionizing Mini Fan

Ionizing method:Piezoelectric high-frequency AC corona discharge Applied voltage:3.5kVAC

- ●Compact and lightweight body ●Fan speed can be adjusted in two steps.
- ●Provided with a clip suitable for mounting(F6RCL-E)
- ●Provided with a general-purpose stand(F6RST-E)

CE

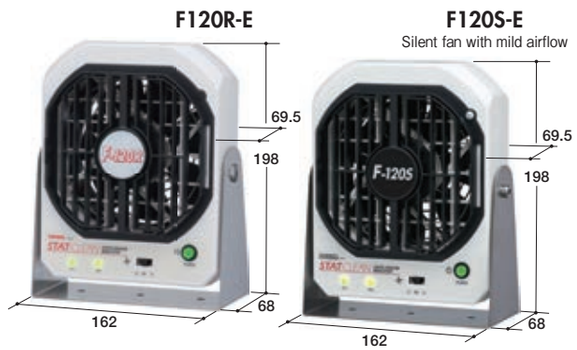
Model No.	Power supply	Current consumption (mA)typ.	Dacay time	Ion balance	Noise level (dBA)	Fan speed (max) (m³/min)	Weight (g)	EDP No.
F6RCL-E	24VDC±5%	210	within 3 sec	within ±10V	53	0.78	514	621632
F6RST-E	24VDC±5%	210	within 3 sec	within ±10V	53	0.78	460	621631

(Decay time and ion balance: 150㎜ from the front of a device and max. fan speed,
Noise: 1m from the front of a device and max. air speed, Weight: including clip/stand)
·Accessories: AC adapter AD24-ITF6E(100 to 240V AC), AC input cable(1.8m)

No. F120R/S Ionizing Fan

Ionizing method : Piezoelectric high-frequency AC corona discharge Applied voltage:10kVAC(p-p)

- ●Newly developped piezoelectric transformer makes the slim and compact model.
- ●Butterfly louvers for changing the airflow directions.
- ●Fan speed can be adjusted in three steps.
- ●Improvement in maintenance by easy-replaceable electrode needle unit.
- ●Equipped with terminals for alarm signal output, convenient for incorporation into equipment.
- ●F120S-E is a silent type with mild airflow.



Model No.	Power supply	Current consumption (mA)max.	Dacay time	Ion balance	Noise level (dBA)	Fan speed (max) (m³/min)	Weight (g)	EDP No.
F120R-E	24VDC±5%	700	within 1.5 sec	within ±10V	55	3.66	900	621650
F120S-E	24VDC±5%	500	within 2.5 sec	within ±10V	51	2.21	900	621646

(Decay time and ion balance: 300㎜ from the front of a device and max. fan speed
Noise: 1m from the front of a device and max. air speed)
·Accessories: AC adapter AD24-ITE(100 to 240V AC) AC cable(1.8m)
·Option: Filter set F-120FS, Filter F-12EF

No. CF300-E Cross-flow Ionizing Fan

Ionizing method:Piezoelectric high-frequency AC corona discharge Applied voltage:9.2kVAC(p-p)

- ●Superior ionizing performance accomplished with the cross flow fan that sends out ions evenly and widely on the wind and the front cover design that takes the ion flow into consideration. Volume operation allows the non-step adjustment of airflow.
- ●Slide-type cleaning brush is mounted on the front cover to perform maintenance of needle electrodes at any time. On the bottom surface of the main body, a rough filter is used, which is easy to clean and replace.
- ●Monitoring functions of fan motor rotation monitoring function and high voltage output
- ●Shut-down function.

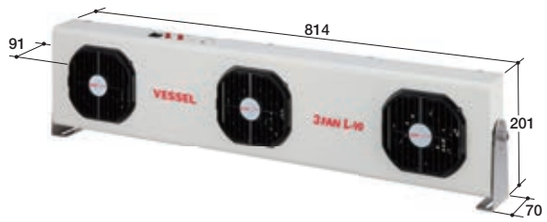
Model No.	Power supply	Current consumption (mA)max.	Dacay time	Ion balance	Noise level (dBA)	Fan speed (max) (m³/min)	Weight (g)	EDP No.
CF300-E	24VDC ±10%	500	within 1.5 sec	within ±10V	48	2.5	2.9	621657

(Decay time and ion balance: 300㎜ from the front of a device and max. fan speed,
Noise: 1m from the front of a device and max. air speed)
·Accessories: AC adapter AD24-ITE(100 to 240V AC) AC cable(1.8m) Cleaning brush

No. L-90-E Overhead Ionizing Triple-Fan

Ionizing method:Piezoelectric high-frequency AC corona discharge Applied voltage:9.5kVAC(p-p)

- ●Butterfly louver for changing the angle of wind direction from the front cover. Each front cover can be set for a desired direction - high speed spot elimination and/or wide area elimination respectively, corresponding to various applications.
- ●Unique capacitive-coupled needle electrodes maintain superior ion balance and long term performance.
- ●Lightweight design.
- ●Front cover can be removed by one-touch operation. Easy maintenance.



Model No.	Power supply	Current consumption (A)max.	Dacay time	Ion balance	Noise level (dBA)	Fan speed (max) (m³/min)	Weight (g)	EDP No.
L-90-E	24VDC±5%	3.0	within 1.5 sec	within ±10V	75.4	7.1	4.7	621628

(Decay time and ion balance: 300㎜ from the front of a device and max. fan speed,
Noise: 1m from the front of a device and max. air speed)
·Accessories: AC adapter AD24-IT37E(100 to 240V AC) AC cable(1.8m)

No. G-9

Pneu-Power Ion Gun

No More Power Cable!
Innovative ionizing gun working only with compressed air!
Air turbine rotates the motor, and this generates the power for ion generation.
Can start using the product only by connecting air hose as it does not require AC adapter or high voltage wiring.

No. G-9
Pneu-Power Ion Gun

- Power supply from external equipment is not required.
- Motor Cartridge (Replaceable) converts compressed air to the power. Rotor blades in the center generates power while rotating and supplies it to the high voltage power unit.

No. G-9 Pneu-Power Ion Gun NEW

Ionizing method:AC corona discharge Applied voltage:AC8kV p-p(±5%)/32kHz(Typ.)

- Innovative ionizing gun working only with a compressed air.
- Motor cartridge (replaceable) converts compressed air to the power. Rotor blades in the center of the motor generate power while rotating and supply it to the high voltage power unit.

CE

Model No.	Applied Voltage/ Frequency	Dacay time	Ion balance	Noise level (dBA)	Air flow (ℓ/min)	Weight (g)	EDP No.
G-9	8kVAC p-p(±5%)/32kHz(Typ.)	within 1sec	within ±30V	83.1	200	470	621670

(Decay time and ion balance: 150㎜ from the front of a device and max. fan speed)
(Noise: 0.6m from the front of a device and max. air speed)
·Option: Silent Nozzle N-2WN, Urethane Tube Plug G-9UTP

No. G2-E Ionizing Gun

Ionizing method:Piezoelectric high-frequency AC corona discharge Applied voltage:2kVAV

- Compact and lightweight.
- Ergonomically designed grip that fits your hand.
- Equipped with a green LED light facilitating visual check of dust, and with operating status and alarm lamps.
- Interchangeable nozzles for various applications (option)
- Needle electrode can be easily replaced with a dedicated tool.

CE

Model No.	Power supply	Current consumption (mA)typ.	Dacay time	Ion balance	Noise level (dBA)	Air flow (ℓ/min)	Weight (g)	EDP No.
G2-E	24VDC±5%	100	within 0.8sec	within ±10V	94	153	260	621659

(Decay time and ion balance: 300㎜ from the front of a device, at 0.3MPa, and when equipped with the standard nozzle)
(Noise: 1m from the front of a device and at 0.3MPa, Air flow: At 0.3MPa)
·Accessories: AC adapter AD24-ITCE(100 to 240V AC), AC cable(1.8m), Standard Nozzle N-1SN

No. G7R-E Ionizing Gun

Ionizing method:Piezoelectric high-frequency AC corona discharge Applied voltage:2kVAV

- Compact and lightweight. ●Ergonomically designed grip that fits your hand.
- Equipped with a bright LED light facilitating visual check of dust, and also with operating status and alarm lamps.
- Interchangeable nozzles for various applications (option)
- Needle electrode can be easily replaced with a dedicated tool.

CE

Model No.	Power supply	Current consumption (mA)typ.	Dacay time	Ion balance	Noise level (dBA)	Air flow (ℓ/min)	Weight (g)	EDP No.
G7R-E	24VDC±5%	85	within 1sec	within ±10V	92	200	200	621621

(Decay time and ion balance: 150㎜ from the front of a device, at 0.3MPa, and when equipped with the standard nozzle)
(Noise: 1m from the front of a device and at 0.3MPa, Air flow: At 0.3MPa)
·Air supply pressure: 0.1MPa to 0.6MPa, Air supply hose diameter Φ6×Φ4㎜
·Accessories: AC adapter AD24-ITC-E(100 to 240V AC), AC cable(1.8m), Standard Nozzle G-7SN
·Option: Joint Connection Needle G-7THN, Needle Electrode GN-H, Needle Electrode Replacement Screwdriver G-7DR, Straight Silent Nozzle BB-ZSN, Silent Nozzle N-2WN,Tube-Fitting Nozzle N-2TN, Brushe(60㎜ bristles) G-7B, Soft Burush(60㎜ bristles) G-7SB, Speed Controller G-7SC, Microfilter G-7F, Relay Cable(5m)G-7EC5, Relay Cable(10m) G-7EC10

One point

Pipe arrangement and wiring can be changed depending on the work

No. N-1 Super Slim Ionizing Nozzle

Ionizing method:Piezoelectric high-frequency AC corona discharge Applied voltage:5kVAC

- ●Compact design permitting placement anywhere and in any direction. Newly developed high-voltage transformer and control circuit enables unprecedented ease of use to be realized.
- ●Screw type nozzle is removed easily, making both nozzle replacement and cleaning of the needle electrode easy.
- ●Equipped with six-pole terminals enabling an abnormally high-voltage signal to emit or 24 V DC power to be daisy-chained.
- ●Blue lamp lights up during normal operations. When there occurs errors in high voltage, a red lamp flashes.

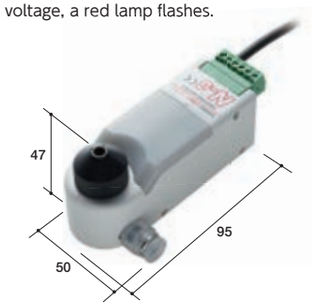
Model No.	Power supply	Current consumption (mA)typ.	Dacay time	Ion balance	Noise level (dBA)	Air flow (ℓ/min)	Weight (g)	EDP No.
N-1	24VDC±5%	58	within 1sec	within ±10V	96	219	80	621639

(Decay time and ion balance: 150㎜ from the front of a device, at 0.3MPa, and when equipped with the standard nozzle)
(Noise: at a measurement distance of 1m and 0.3MPa, Air flow: when equipped with the standard nozzle and at 0.3MPa)
·Accessories: Standard nozzle N-1SN
·Options: Tube-fittig Nozzle N-2TN, Silent Straight Nozzle BB-ZSN, Silent Wide Nozzle N-2WN, Speed Controller G-7SC, Micro-Filter G-7F,Needle Replacement Screwdriver G-7DR, Needle Electrode GN-H

No. N-3 Pinpoint Ionizing Nozzle

Ionizing method:Piezoelectric high-frequency AC corona discharge Applied voltage:5.6kVAC

- ●Compact and lightweight. Equipped with screw holes for a mounting to a system.
- ●Offers various nozzles as options that can be used in a variety of applications
- ●Screw type nozzle is removed easily, making both nozzle replacement and cleaning of the needle electrode easy.
- ●Automatically stops in the event of high voltage. Equipped with alarm output terminals.
- ●Equipped with six-pole terminals enabling an abnormally high-voltage signal to emit or 24 V DC power to be daisy-chained.
- ●Green lamp lights up during normal operations. When there occurs errors in high voltage, a red lamp flashes.



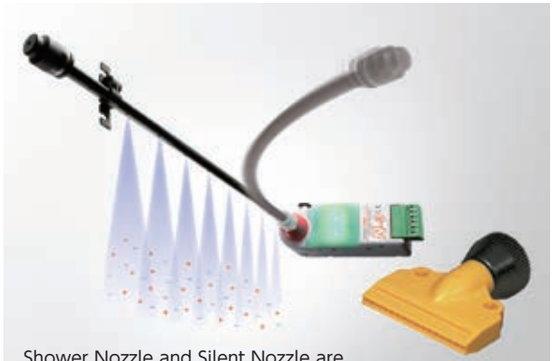
CE

Model No.	Power supply	Current consumption (mA)max.	Dacay time	Ion balance	Noise level (dBA)	Air flow (ℓ/min)	Weight (g)	EDP No.
N-3	24VDC±5%	90	within 1sec	within ±10V	99.4	210	104	621654

(Decay time and ion balance: 150㎜ from the front of a device, at 0.3MPa, and when equipped with the standard nozzle)
(Noise: At a measurement distance of 1m and 0.3MPa, Air flow: When equipped with the standard nozzle and at 0.3MPa)
·Air supply pressure 0.1MPa to 0.6MPa, Air supply hose diameter Φ6×Φ4㎜
·Accessories: Standard Nozzle N-1SN
·Option: Tube-Fitting Nozzle N-2TN, Shower Tube N-2C6B, Straight Silent Nozzle BB-ZSN, Silent Nozzle N-2WN, Speed Controller G-7SC, Microfilter G-7F, Electrode Needle Replacement Screwdriver G-7DR, Electrode Needle GN-H

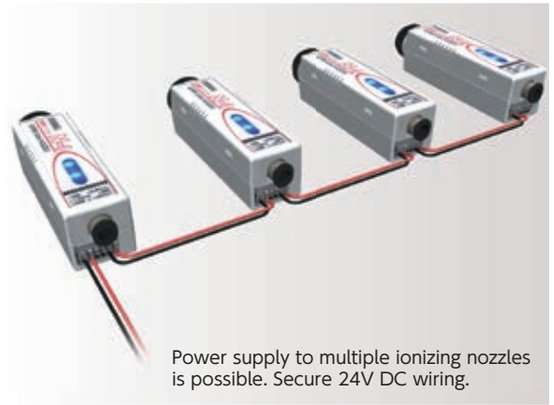
One point

Interchangeable nozzles for various applications (option)



Shower Nozzle and Silent Nozzle are available as options.

Daisy-chain wiring. High voltage cables stay inside the product.



Power supply to multiple ionizing nozzles is possible. Secure 24V DC wiring.

No. HPG-1S-E High Power Ionizing Gun Unit NEW

Ionizing method : AC corona discharge Applied voltage : 3.5kVAC (50/60Hz)

- ●Titanium electrode needle (discharge electrode)
- ●Silicon shielded cable for high voltage. (3m)
- ●The body of the air gun is robust aluminum die-cast.
- ●The air gun is equipped with an easy-handling lever.
- ●Ion Balance Circuit (High Voltage Power Supply Unit GP-1 4kV)
- ●Safety circuit/Anomaly detection circuit (High Voltage Power Supply Unit GP-1 4kV)

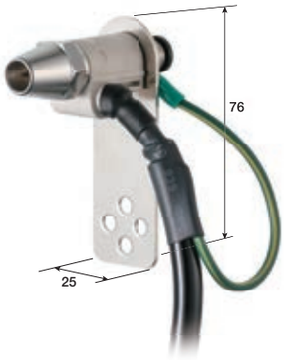
Model No.	Dacay time	Ion balance	Noise level (dBA)	Air flow (ℓ/min)	Weight (g)	EDP No.
HPG-1S-E	within 0.5sec	Adjustable on the GP-1 4kV	95	100	550	623045

(Decay time and ion balance: 150㎜ from the front of a device, at 0.3MPa)
·Air supply pressure 0.1MPa to 0.6MPa, Air supply hose diameter Φ6×Φ4㎜
·Contents: High Power Ionizing Gun No.HPG-1 including high voltage cable (3m) and high voltage connector.
High Voltage Power Supply No.GP-1 4kV, Power Adapter No.AD24-GPE

No. HPN-1 High Power Ionizing Nozzle (Shielded cable included) NEW

Ionizing method : AC corona discharge Applied voltage : 3.5kVAC (50/60Hz)

- ●Less-wearing titan electrode needle enhances the ionizing performance for a long time and with stability.
- ●Replaceable.
- ●A high voltage shielded cable, less affected by the electrical noises.



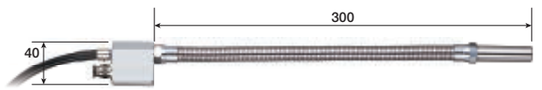
Model No.	Dacay time	Ion balance	Noise level (dBA)	Air flow (ℓ/min)	Weight (g)	EDP No.
HPN-1	within 0.5sec	Adjustable on the GP-1 4kV	95	100	350	623043

(Decay time and ion balance: 150㎜ from the front of a device, at 0.3MPa)
·Air supply pressure 0.1MPa to 0.6MPa, Air supply hose diameter Φ6×Φ4㎜
·Contents: Including high voltage cable (3m), mounting hardware, and high voltage connector.
·Applicable:GP-1 4kV
·Relevant: High Voltage Power Supply No.GP-1 4kV, Power Adapter No.AD24-GPE

No. HPF-1 High Power Ionizing Flexible Nozzle NEW

Ionizing method : AC corona discharge Applied voltage : 3.5kVAC (50/60Hz)

- ●300mm flexible tube useful to point the nozzle for effective neutralization.
- ●Pin-point static electricity removal even in a place difficult for installation.
- ●Powerful removal of dust and static electricity with compressed air.



Model No.	Dacay time	Ion balance	Noise level (dBA)	Air flow (ℓ/min)	Weight (g)	EDP No.
HPF-1	within 1sec	Adjustable on the GP-1 4kV	86	110	690	623048

(Decay time: 150㎜ from the front of a device, Air volume 30L/min)
(Noise level and Fan speed (max) : at 0.3MPa)
·Air supply pressure 0.1MPa to 0.4MPa, Air supply hose diameter Φ6×Φ4㎜
·Contents:Including high voltage cable (3m) and high voltage connector.
·Applicable:GP-1 4kV
·Relevant:High Voltage Power Supply No.GP-1 4kV, Power Adapter No.AD24-GPE

No. GP-1 4kV High Voltage Power Supply Unit NEW

Output voltage : 4kVAC (50/60Hz)

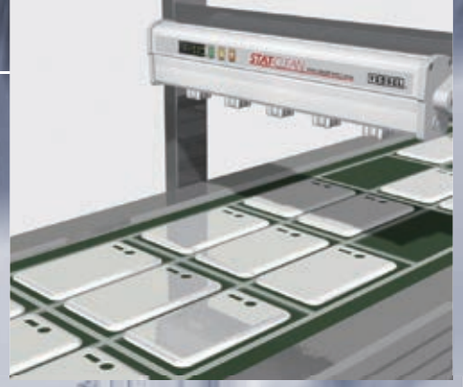
- ●Detects high voltage by an anomaly detection circuit.
- ●Can adjust ion balance with adjusting volumes.

Model No.	Power supply	Size (㎜)	Weight (g)	EDP No.
GP-1 4kV	24VDC±10%	233.5×114.2×102.8	4500	623044

·Applicable:HPN-1, HPG-1, HPF-1, SL-series
·Relevant: Power Adapter No.AD24-GPE

No. C-40

AC Pulse Ionizing Clean Bar



Aerodynamic body design of the thin cross sectional area enables quick static electricity elimination to be achieved without causing changes in air flow in a clean room or above in a clean bench. Being capable of setting frequency in 10 levels as well as being equipped with auto ion balance mode in which ion balance is automatically adjusted according to the polarity of a charged object, these ionizers can make adjustments according to the installation distance or the amount of charge.

No. C-40

AC Pulse Ionizing Clean Bar

Bar-type ionizers best suited to mounting to a variety of equipment Air purge construction enables super-fast static electricity removal to be accomplished. With a line-up of abundant sizes, they respond to various applications.

Frequency setting

Installation place	Location	mm	Frequency, Hz
Film/conveyor	Close distance	50~300	20~50
Clean bench	Intermediate distance	600~750	8~10
Clean room ceiling	Long distance	900~1500	0.1~5

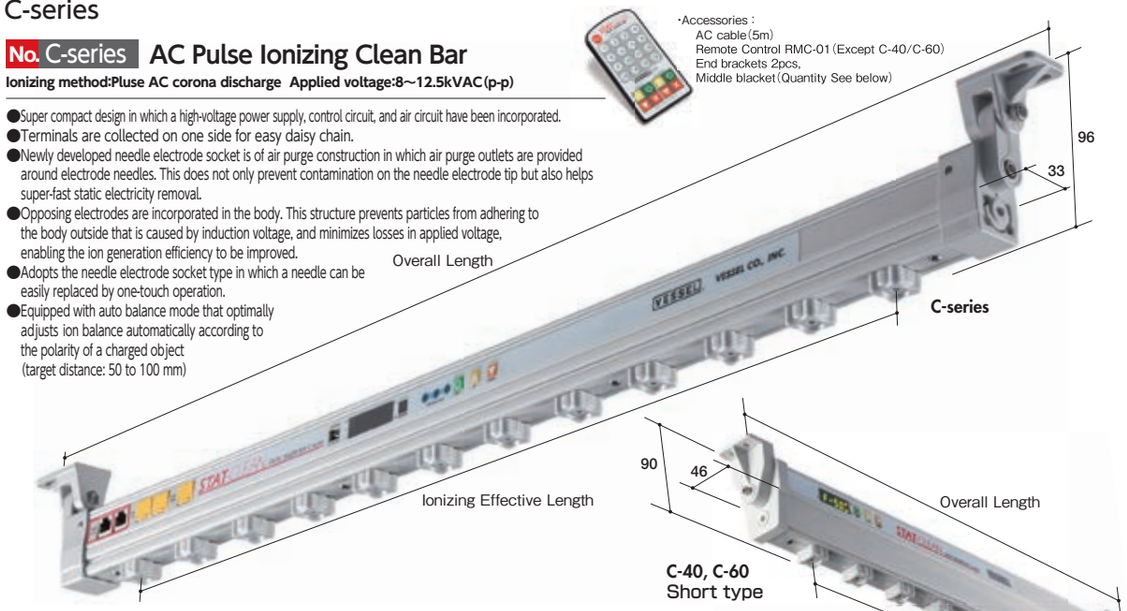
C-series

No. C-series AC Pulse Ionizing Clean Bar

Ionizing method:Pluse AC corona discharge Applied voltage:8~12.5kVAC(p-p)

- Super compact design in which a high-voltage power supply, control circuit, and air circuit have been incorporated.
- Terminals are collected on one side for easy daisy chain.
- Newly developed needle electrode socket is of air purge construction in which air purge outlets are provided around electrode needles. This does not only prevent contamination on the needle electrode tip but also helps super-fast static electricity removal.
- Opposing electrodes are incorporated in the body. This structure prevents particles from adhering to the body outside that is caused by induction voltage, and minimizes losses in applied voltage, enabling the ion generation efficiency to be improved.
- Adopts the needle electrode socket type in which a needle can be easily replaced by one-touch operation.
- Equipped with auto balance mode that optimally adjusts ion balance automatically according to the polarity of a charged object (target distance: 50 to 100 mm)

·Accessories :
AC cable(5m)
Remote Control RMC-01 (Except C-40/C-60)
End brackets 2pcs,
Middle blacket(Quantity See below)



Model No.	Overall length (mm)	Discharge needle useful length (mm)	Middle blacket (pcs)	Electrode needles (pcs)	Weight (kg)	EDP No.
C-90	877	660	0	12	0.9	621851
C-100	1078	900	1	16	1	621852
C-120	1318	1140	1	20	1.2	621853
C-150	1558	1380	1	24	1.4	621854
C-170	1798	1620	2	28	1.6	621855
C-200	2038	1860	2	32	1.8	621856
C-220	2278	2100	2	36	2.3	621859
C-250	2518	2340	3	40	2.6	621860
C-270	2758	2580	3	44	2.8	621861
C-300	2998	2820	3	48	3.1	621862

Power supply	Current consumption (mA) max.	Decay time ※	Frequency	Pulse ratio	Voltage level
24VDC±5%	600	within 0.8sec	10steps (0.1~50Hz)	+: 40~70% −: 60~30%	±10steps each

※Decay time :30Hz 10.5kVp-p 300㎜ directly below at 0.3MPa
·Air supply pressure: 0 to 0.3MPa, Air supply hose diameter Φ8×Φ6㎜(Air supply port: PT1/8)
·Accessories: Remote controller, Power cable (10m), End blackets (included with device), Middle brackets (included with device) (except C-90)
·Option: AC Adapter AD24-ITE, AD24-IT19E, Power Supply cable (5m)CT-5

No. C-40/C-60 AC Pulse Ionizing Clean Bar

Ionizing method:Pluse AC corona discharge Applied voltage:8~12.5kVAC(p-p)

- Short type optimal for installation on a conveyor or in equipment.
- Consolidated terminals on the back side. Power can be supplied by daisy chain wiring.

Model No.	Overall length (mm)	Discharge needle useful length (mm)	Electrode needles (pcs)	Weight (kg)	EDP No.
C-40	422	240	5	0.78	621857
C-60	602	420	8	1.08	621858

Power supply	Current consumption (mA) max.	Decay time ※	Frequency	Pulse ratio	Voltage level
24VDC±5%	600	within 0.8sec	10steps (0.1~50Hz)	+: 40~70% −: 60~30%	±10steps each

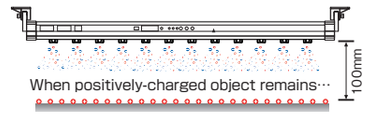
※Decay time :30Hz 10.5kVp-p 300㎜ directly below at 0.3MPa
·Air supply pressure: 0 to 0.3MPa, Air supply hose diameter Φ8×Φ6㎜(Air supply port: PT1/8)
·Accessories: Power cable (10m) ,End blackets (included with device) ,Interface cable (10m)
·Option: AC Adapter AD24-ITE, AD24-IT19E, Power Supply cable (5m)CT-5

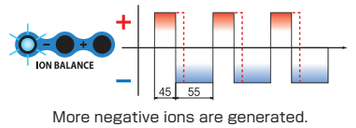
One point

AC Pulse Auto Balance Mode

The C series are equipped with a mode to optimally adjust the ion balance automatically according to the polarity of the charged object. (Target distance: 50 to 100 mm)

※C-series

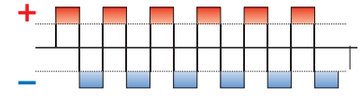




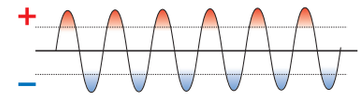
More negative ions are generated.

AC pulse method

Generating alternately positive ions and negative ions from each electrode. Since ions are generated at the maximum width of each positive and negative electrode cycle, the ion volume is high and static electricity can be removed quickly.



Typical alternating current



No. SL-series Ionizing Bar NEW

Ionizing method : AC high voltage applied type Applied voltage : 4kVAC

- Compact & slim body designed.
- Detachable discharge needle & high-voltage cable.
- Changing an angle after the installation is available by the bracket.
- High-voltage power supply(No.GP-1) as an option makes it possible to control the removal of electricity precisely.

Discharge needles can be cleaned and replaced while the ionizing bar remains installed.

SL-30

Power suppiy	Ion Balance	Decey Time	Operating range (mm)	Air flow (ℓ/min)
High Voltage Power Supply Unit No.GP-1 4kV(Option)	Adjustable on the GT-1 4kV	1 second or less	50~2000	135

・Air pressure…0.3MPa ・Decay time : Distance 300mm
Accessory : Grounding wire
Options : Connecting cable GP-EC25、GP-EC5、SJ-EC2.5、SJ-EC5、Needle electrode unit SJ-00HR

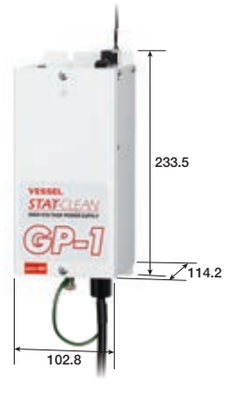
Model No.	Overall length (mm)	Discharge needle useful length (mm)	Electrode needles (pcs)	Weight (g)	EDP No.
SL-20	211	138	3	200	621877
SL-30	371	298	7	300	621878
SL-50	531	458	11	700	621879
SL-80	851	778	19	900	621880
SL-120	1,171	1,098	27	1,100	621881
SL-150	1,491	1,418	35	2,000	621882
SL-180	1,811	1,738	43	2,200	621883

Ion balance: within 50V, Dacay time: within 1.0sec., Airflow: 135ℓ/min
Relevant : High Voltage Power Supply No.GP-1 4kV, Power Adapter No.AD24-GPE
Connecting cable (2.5m) No.GP-EC25, Connecting cable (5m) No.GP-EC5
Needle electrode unit No.SL-00HR, Branch box No.SH-SP2

No. GP-1 4kV High Voltage Power Supply Unit NEW

Output voltage : 4kVAC (50/60Hz)

- Detects high voltage by an anomaly detection circuit.
- Can adjust ion balance with adjusting volumes.



Model No.	Power supply	Size (mm)	Weight (g)	EDP No.
GP-1 4kV	24VDC±10%	233.5×114.2×102.8	4500	623044

・Applicable:HPN-1, HPG-1, HPF-1, SL-series
・Relevant: Power Adapter No.AD24-GPE

No. SH-G3 Power supply units

Ionizing method : Pluse AC corona discharge Applied voltage: 5kVAC p-p

- Equipped with two sockets for connecting the SL ionizing bars. They can be installed and wired easily.
- With the ion balance adjustment function (pulse ratio).
- Equipped with a safety circuit that shuts down the output if overcurrent or high-voltage error occurs.
- Lightest-weight body in the industry: 1.5kg.

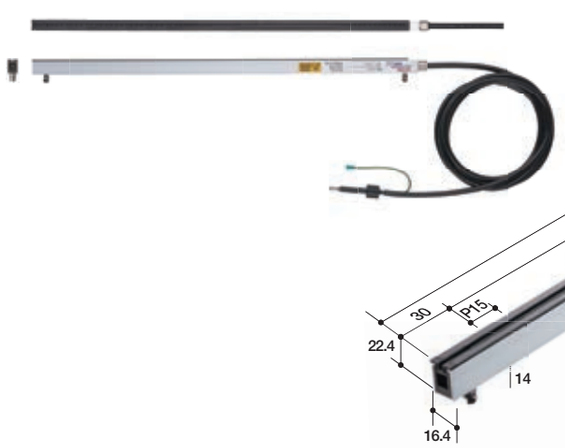
Model No.	Input power supply	Power comsumption (W)	Frequency (Hz)	Plus ratio	Weight (kg)	EDP No.
SH-G3	100~240V AC (50/60Hz)	10	30	+: 40~70% −: 60~30%	1.5	621555

Accessories: AC Power cable 1.8m(for 100VAC and input) 2cables

No. HPB-series High Power Ionizing Bar NEW

Ionizing method : AC corona discharge Applied voltage : AC3.5kV (50/60Hz)

- Super slim model, optimum for installation in a cramped space of equipment.
- Titanium needle electrode, with less electric corrosion wear.
- Ion balance adjustment, Anomaly detection, Automatic stop, and Alarm output can be set with the high voltage power unit No. GP-1 4kV (option).
- Air Assist Bar is also available as option.



Power suppiy	Ion Balance	Decey Time	Operating range (mm)	Air flow (ℓ/min)
High Voltage Power Supply Unit No.GP-1 4kV(Option)	Adjustable on the GT-1 4kV	1 second or less	50~2000	135

・Air pressure…0.3MPa ・Decay time : Distance 300mm
Accessory : Grounding wire
Options : Connecting cable GP-EC25、GP-EC5、SJ-EC2.5、SJ-EC5、Needle electrode unit SJ-00HR

Model No.	Overall length (mm)	Discharge needle useful length (mm)	Electrode needles (pcs)	Weight (g)	EDP No.
HPB-300	300	240	17	501	623316
HPB-600	600	540	37	662	623336
HPB-810	810	750	51	774	623350
HPB-1005	1,005	945	64	879	623363
HPB-1200	1,200	1,140	77	988	623376
HPB-1500	1,500	1,440	97	1,148	623396
HPB-1800	1,800	1,740	117	1,309	623416

Contents: High voltage cable (3m) (already mounted), Mounting bolt M5 (already mounted)
Applicable: GP-1 4kV
Relevant : High Voltage Power Supply No.GP-1 4kV, Power Adapter No.AD24-GPE

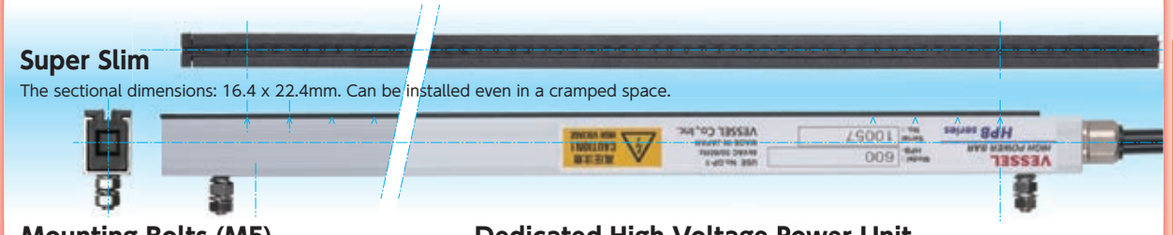
One point For highly charged or fast moving products

Titanium discharge needles

A titanium needle is more wear-resistant and have a longer lifetime than a regular stainless steel.
The needles are located every 15mm on the bar, allowing to generate many ions effectively. This design is suitable for a high speed application.

Super Slim

The sectional dimensions: 16.4 x 22.4mm. Can be installed even in a cramped space.



Mounting Bolts (M5)

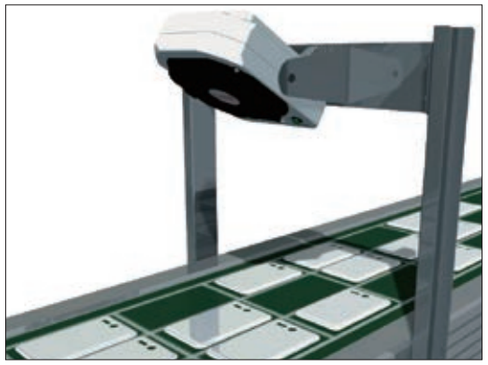
2 pieces (standard accessory, included).
1 more every time the total length exceeds 1 m.

Dedicated High Voltage Power Unit

Use No. GP-1 4kV.

High Voltage Shielded Cable

As the high voltage cable is shielded,
there is no need for further ground.

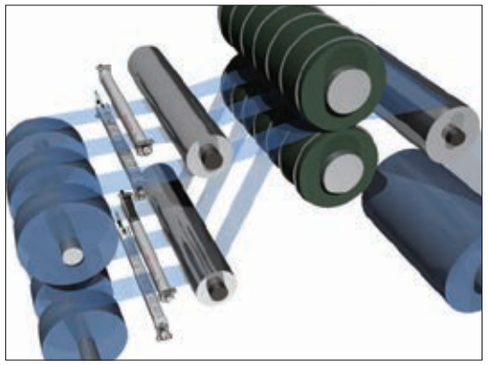


Dust prevention on molded parts

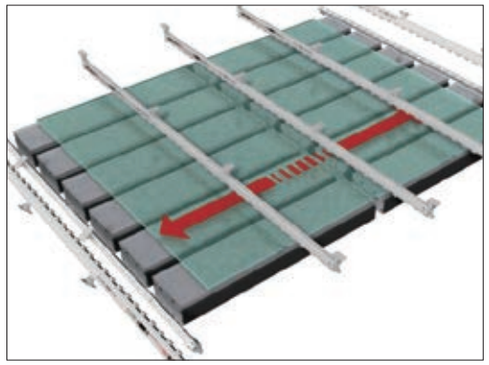
Cell production table

Static electricity removal in a bottle

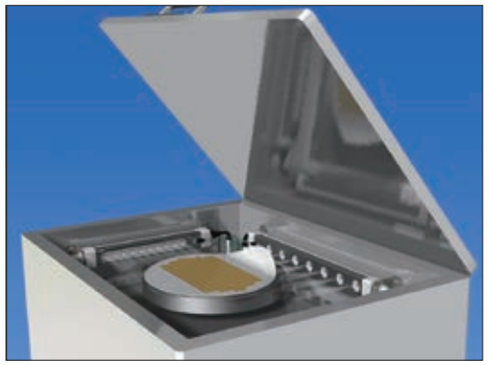
Vibratory bowl feeder (joint nozzle + shower tube)



Film unwinding and widing



Glass substrate transfer



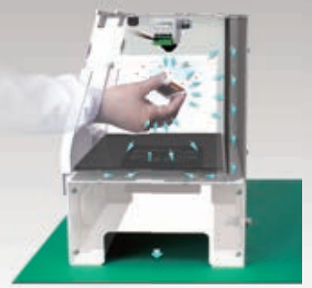
Production of the water film

Filling pills or capsules into a package

No. IPC-A4

Ion Parts Cleaner

With the Ion parts cleaner applying a unique dust capturing method with an adhesive gel sheet, an installation space for a dust collector or a dust is no longer needed. This gel sheet can be repeatedly used after cleaning off dust.
We provide A4 and A3 sizes on the assumption of cell production work. This allows efficient dust removal work to be done according to line design.



Static electricity elimination and dust removal in a hood. Dust adhered by static electricity is neutralized in the ionized hood and then removed by powerful automatic air blow.

No. IPC-A4

Ion Parts Cleaner

Ion parts cleaners playing an important role in line design of cell production. Assembled parts and devices can be cleaned on the spot and flowed to the next process, enabling line design to be smart.

No. IPC-A4 Ion Parts Cleaner

Ionizing method : Piezoelectric high-frequency AC corona discharge Applied voltage: 5.6kVAC(p-p)

- Compact bench-top type of 314 mm wide and 253 mm deep
- Eliminates static electricity and removes dust with air controlled by an infrared sensor.
- Time to stop ion blow after sensing a workpiece by a sensor is settable. (1, 3, 5, 10, or 30 sec)
- Adhesive gel collects blown-off dust assuredly.
- Dust on the adhesive gel mat can be washed off with water and the gel mat can be used repeatedly.
- Dust collector is not required; This reduces power consumption significantly and, in the end, the total running cost. Moreover, pulse blow also cuts the amount of air usage.
- In the pulse mode, air is blown intermittently, exerting force of blowing off dust by vibration. It allows low- and high-speed pulses to be selected according to workpiece.
- Incorporates an air regulator.

Model No.	Power supply	Power consumption (W)	Current consumption (mA)	Dust collection airflow (㎥/min)	Airflow (ℓ/min)	Weight (kg)	EDP No.
IPC-A4	24VDC±5%	17	700	3.5	147	6	621610

(Noize: 0.3MPa Airflow: 0.3MPa)
Operating fluid: Clean dry air (0.1 to 0.5MPa), Air supply hose diameter Φ8㎜
Accessories: AC Adapter AD24-IT19(100~240VAC)(AD24-IT19E is available on request.), AC power cable 1.8m, Adhesive gel sheet/plate(attached on the product) (2pcs.)

No. IPC-A3 Ion Parts Cleaner

Ionizing method : Piezoelectric high-frequency AC corona discharge Applied voltage: 5.6kVAC(p-p)

- Equipped with two ionzing nozzles N-1, blowing air downward from the top side of the hood
- Eliminates static electricity and removes dust with air controlled by an infrared sensor.
- Time to stop ion blow after sensing a workpiece by a sensor is settable. (1, 3, 5, 10, or 30 sec)
- Adhesive gel collects blown-off dust assuredly.
- Dust on the adhesive gel mat can be washed off with water and the gel mat can be used repeatedly.
- Dust collector is not required; This reduces power consumption significantly and, in the end, the total running cost. Moreover, pulse blow also cuts the amount of air usage.
- In the pulse mode, air is blown intermittently, exerting force of blowing off dust by vibration. It allows low- and high-speed pulses to be selected according to workpiece.
- Incorporates an air regulator.

Model No.	Power supply	Power consumption (W)	Current consumption (mA)	Dust collection airflow (㎥/min)	Airflow (ℓ/min)	Weight (kg)	EDP No.
IPC-A3	24VDC±5%	22	900	1.13	270	9.5	621612

(Noize: 0.3MPa airflow: 0.3MPa)
Operating fluid: Clean dry air (0.1 to 0.7MPa), Air supply hose diameter Φ10㎜
Accessories: AC Adapter AD24-IT19(100~240VAC)(AD24-IT19E is available on request.), AC power cable 1.8m, Adhesive gel sheet/plate(attached on the product) (2pcs.), Duct flange(For Φ75㎜),Paper pack filter(6pcs.)

One point

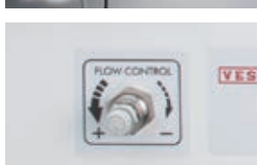
Features of IPC-A4 and -A3

Dust capturing gel sheet for IPC-A4 and -A3

Dust capturing using self-adhesive urethane gel
Adhesiveness is restored by cleaning such as washing in water.

Paper-pack filter for IPC-A3

A paper-pack filter can be attached to the exhaust port in the back of the cleaner (Standard specifications). Replacement of a flange enables the cleaner to be connected to an exhaust duct of ϕ75 mm.



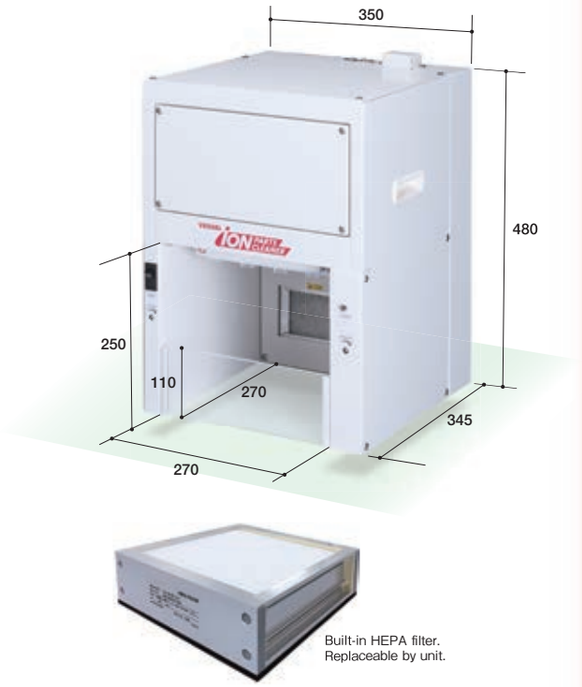
Air regulator equipped

The ion parts cleaners incorporate an air regulator, allowing you to adjust the flow rate of ion air.

No. IPC-250CR Ion Parts Cleaner NEW

Ionizing method : DC Corona discharge Applied voltage : +6kV、-3~-7kV

- Cleaned air blow with HEPA filter.
- DC ionizer incorporated, creating an ionized space.
- Adjustable air blow volume.
- No exhausted air by the air circulation system



Model No.	Power supply	Power consumption (W)	Current consumption (A)	Air flow (㎥/min)	Max wind speed (m/s)	Noise level (dBA)	Weight (kg)	EDP No.
IPC-250CR	DC24V±5%	108	4.5	1.5	25	74	22	623201

(Air flow,Wind speed: No internal filter clogging, output value of the blower)
(Noise: Max air flow, No internal filter clogging, output value of the blower)
Accessory: Caution label sticker / Instruction manual

Replacement parts

Pre-filter	IPC-250CRPF
HEPA filter	IPC-250CRHF
Needle electrode	SDJ-05RH

Option

Power adapter	AD24-150-PD4
EDP	806146
I/P	100V to 240 V AC, 50/60 Hz
O/P	24V DC 5A

One point

New concept of Ion Cleaning!

Built-in HEPA filter.
Replaceable by unit.

Air cleanliness (HEPA filters) <99.9% or more>

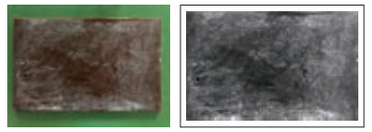
Particle	0.3μm	0.5μm	5μm	Total
Primary side	16,165,100	4,884,000	0	21,049,100
Secondary side	420	0	0	420

●Measured on April 13, 2018
Airflow: Max
Tested particle: PAO (Polyalphaolefin mist)
Particulate measured with KC-01DI (primary side, after air passing through the blower) and KC-03B (secondary side, after passing through the HEPA filter)

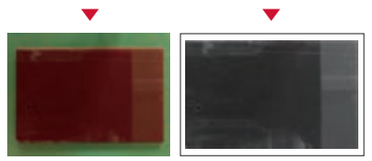
Dust removal test

Sample: Bakelite plate (150×90 mm, 3 mm thick)
Pseudo-contaminant: cotton linter
Static elimination time: 3 seconds (inclined at 45° with respect to the air outlet)

Before dust removal
charging voltage:
+1.25kV



After dust removal
charging voltage:
0kV

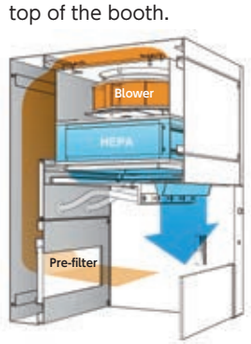


The white reflective cotton linters have been effectively removed.

●Measured on April 11, 2018 with Electrostatic Field Meter Eye-02, at Max Wind Speed at 26℃ (temperature) and 45%RH (humidity)

Air circulation type, with no exhausted air.

・The air is vacuumed up from the pre-filter at the back of the booth passing through the inside blower and is filtered by the HEPA filter, then is blown back from the top of the booth.

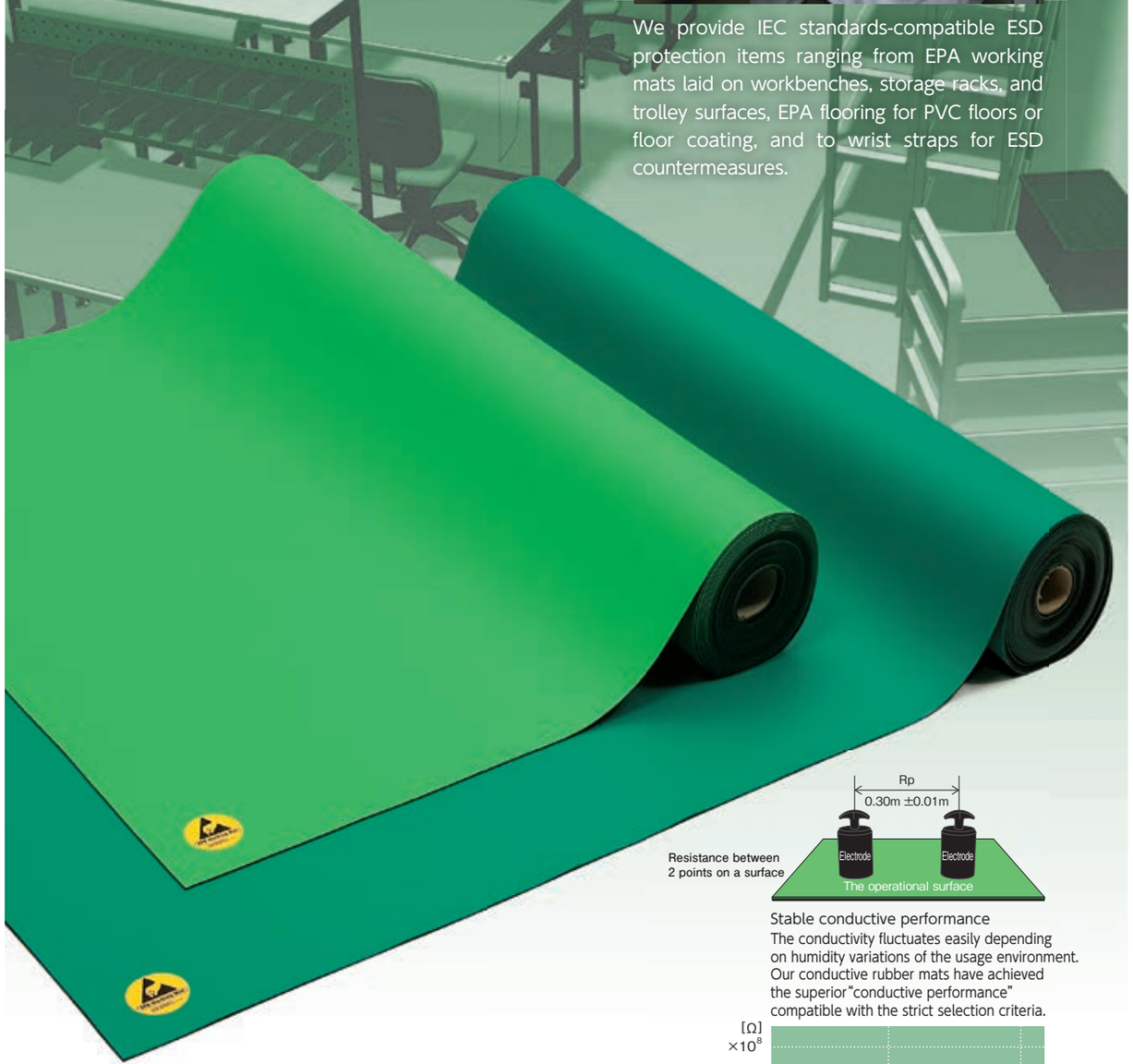


The generated ions are downflowed with the wide air blow.

No. LG-100/ SG-100

Conductive Rubber Mat

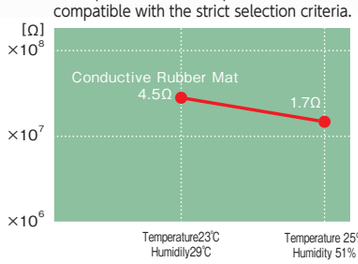
We provide IEC standards-compatible ESD protection items ranging from EPA working mats laid on workbenches, storage racks, and trolley surfaces, EPA flooring for PVC floors or floor coating, and to wrist straps for ESD countermeasures.



Resistance between 2 points on a surface

Stable conductive performance

The conductivity fluctuates easily depending on humidity variations of the usage environment. Our conductive rubber mats have achieved the superior "conductive performance" compatible with the strict selection criteria.



No. LG-100/ SG-100

Conductive Rubber Mat

Special mats through our unique and strict conductivity standards within 10^7
They maintain stable conductivity even if humidity and temperature change.
Available in two colors: light green and green.
A wide choice of accessories such as mat connecting gel and ground taps is also available.

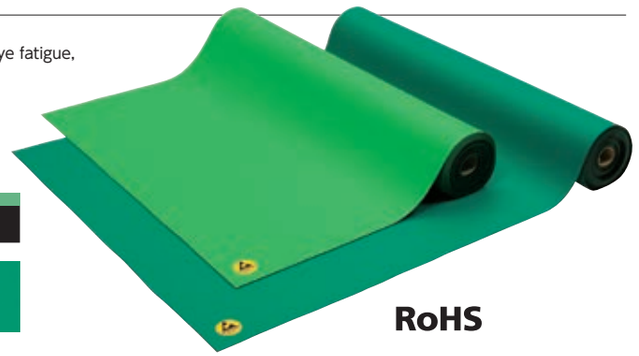
EPA Working Mat

Conductivity $10^6 \leqq R \leqq 10^7 \Omega$

No. LG-100/SG-100 Conductive Rubber Mat

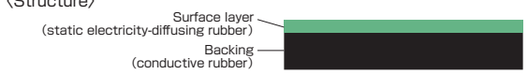
Designed for workbenches that require anti-static measures, such as in the semi-conductors industry, electronic components assembly, and others.
Heat-resistant, ideal for soldering work

- Uniform and consistent conductive performance.
- Matte surface finish, reducing reflections and helping prevent eye fatigue, for the aim at the satisfactory working performance.
- Soft surface that resists bending. (Hardness A type 64)



RoHS

〈Structure〉



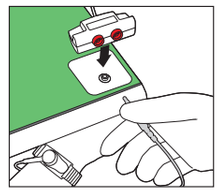
LG-100 Light green　SG-100 Green

Model No.	Color	Size (Length×Width×Thickness)	Weight	EDP No.
LG-100	Light green	10.0m×1.0m×2.0mm	27kg/roll	621464
SG-100	Green	10.0m×1.0m×2.0mm	27kg/roll	621461

Please contact VESSEL for availability of other colors.
※Resistance value may vary depending on the conditions of the measurement environment such as the temperature and humidity.

No. EPS-GT2 Ground Tap

- Provides ground connection points for anti-static wrist straps and conductive rubber mats.
- Attach the tap to the surface, the latteral or the back side of a workbench when using.



Model No.	Graunding cord (m)	Resistance value	Contents (quantity)	EDP No.
EPS-GT2	Approx. 3.0 (with round jack)	Approx. 1MΩ between device and grounding cord (round jack)	20	621402

Material: Core/ABS plastic　Conection hardweare /Stainless steel

No. EPC-18 Ground Cord

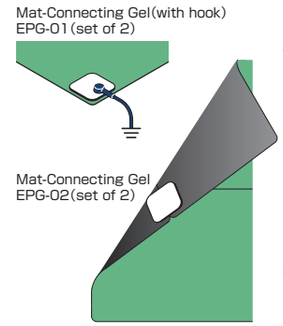
- Designed to connect to a mat-connecting gel (includes a hook) or grounding tap.

Model No.	Resisutance value	Length (m)	Contents (quantity)	EDP No.
EPC-18	1MΩ	Max. length of 1.8m (when contracted 0.5m)	20	621393

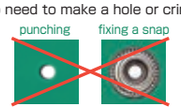
Accessory: 1 alligator clip

No. EPG-01/EPG-02 Mat-connecting gel

- Made from medical-grade conductive gel.
- No need for grommet; easy to ground and connect multiple mats.



No need to make a hole or crimp

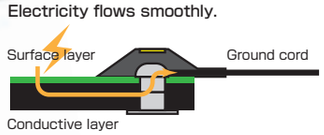


Model No.	Product name	Size (mm)	Contents (quantity)	EDP No.
EPG-01	Mat-connecting gel with hook (set of 2)	50×50	20	621481
EPG-02	Mat-connecting gel (set of 2)	50×50	20	621482

No. EPS-GK ESD Mat Gound Kit

- Grounding kit for a conductive rubber mat
- Snap, base plate, and screw are made from rust-resistant stainless steel
- Reusable when replacing mats because there is no adhesive part

Electricity flows smoothly.



RoHS

* Usable mat thickness:
The enclosed screw is for 2mm thickness mat. When using this kit with a mat of 3mm thickness or more, procure separately a small countersunk head screw M4.

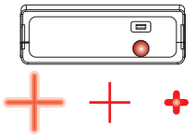
Model No.	Graunding cord (m)	Resistance value	Contents (quantity)	EDP No.
EPS-GK	Approx. 2.4 (with round jack)	Approx. 1MΩ between device and grounding cord (round jack)	10	621484

Material: Snap, Base plate, Screw, Single-use punch /SUS
Cord sheath /PU　Snap cover /PVC　Round terminal/ Brass

No. Eye-02 Electrostatic Field Meter

- A hand-held measuring instrument enabling you to measure an invisible electrostatic charge condition or ion balance of the ionizer easily.
- Maximum value (peak value) / pause can be displayed.
- LED cross mark as an index for correct measurement distance.
- Equipped with a female thread for camera screws; using with a tripod or jig enables measurements in stable state. Also provided with a plate for ion balance measurements.
- LCD has backlight and provides a bright, easy-to-see display in low light.
- Provided with a soft housing carrying case.
- Compatible with ISO 9000 traceability. A calibration table and certificate can be issued.

Measurement of charged potential



Ion balance measurement

Model No.	Measurement range: Static charge voltage measuring	Measurement range: Ion Balance voltage measuring	Measuring distance
Eye-02	±0～±1.50kV (LO range) ±1.0～±22.0kV (HI range)	0～±220V	25mm±0.5mm between charged object and the Eye-02

Power source	Weight	EDP No.
9V DC (006 battery 1pce.)	170g: without Ion Balance plate 30g: Ion Balance plate	621603

Accessories: Ion Balance Plate×1, Ground Cord w/alligator clip×1, Carrying Case×1, Strap×1

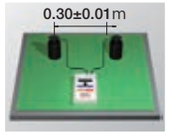
No. SRC-01 Surface Resistance Checker

- Surface resistance checker that facilitates the surface resistance measurement of floor, mat, desk and chair.
- Press and hold the measurement button switch, and the measurement value appears on the display. Automatic power off function is available.
- Voltage can be switched to measure a broad range of resistance values.
- Can measure temperature/humidity at the same time as the surface resistance value.
- Supplied with proves to measure "point-to-point resistance", "resistance to ground" and "volume resistance".
- Comes with a carrying case useful to carry all necessary items for measurement.

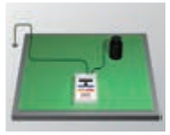
Accessories:
- Probe (outer diameter: about Φ66mm, about 2.3 kg): 2
- Curled cord for a body grounding (banana plugs at both ends): 1
- Curled cord for measurement for the point-to-point resistance and resistance to ground (banana plug/mono plug): 2
- Crocodile clip: 1
- Large crocodile clip: 1
- Stainless plate (185mm×100mm): 1
- Carrying case: 1
- 9V battery (006P type: manganese dry battery): 1
- Manuals

With a carrying case

Useful to carry all necessary items for measurement



Resistance between 2 points on a surface.


Resistance between a ground and a connecting point by a probe on a surface

Surface resistivity

Volume resistance

Model No.	Measurement standard	Measurement range	Applied voltage
SRC-01	IEC61340-4-1 JIS-C2170	10^3～10^{12}Ω (Ω/sq)	10V (R<1.0×10^6 Ω or Ω/sq) 100V (R≧1.0×10^6 Ω or Ω/sq)

Power source	Weight	EDP No.
9V battery (006P type)	Main body: Approx. 340g (including battery) Total weight: Approx. 6.2kg (including carrying case)	621604

※The enclosed battery is a sample and may be out of use before the estimated number of use. Replace with a new one in this case.
※Calibration certificate can be issued as option (payable).

No. EPS-05 Wrist Strap NEW

- Complies with RoHS controlling 10 substances
- Anti-static product, complying with JIS C 61340-4-6: 2016
- Contractile band with rubber woven, adjustable to the wrist
- Fine size adjustment with a buckle
- Safety in design; no conduction on the outer side of the band as conductive thread rubbers are woven on the inner side

RoHS

Model No.	Resisutance value (Ω)	Length (m)	Contents (quantity)	EDP No.
EPS-05	1M	Max. length of 2.5 (when contracted 0.72)	10	621471

No. EPS-05C Wrist Strap Cord NEW

- Ground cord with 1M ohm current-limiting resistor
- Each product supplied in anti-static bag.

Model No.	Resisutance value (Ω)	Length (m)	Contents (quantity)	EDP No.
EPS-05C	1M	Max. length of 2.5 (when contracted 0.72)	10	621472

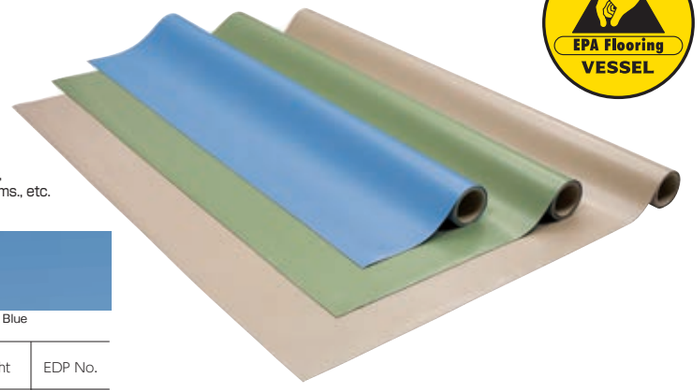
EPA Floor Sheet

No. CD(R)-134/CD(R)-138/CD(R)-602 Conductive Vinyl Floor Sheet CD-leum/CD-leum R Conductivity 10^6～10^7Ω

Vinyl floor sheet with uniform and consistent anti-static performance. Optimal for locations where static electricity is especially harmful, such as semi-conductor plants and clean rooms.

- Uniform and consistent conductive performance.
- Using a dedicated welding rod, the floor can be laid seamlessly.
- Dust-resistant surface facilitates cleaning and maintenance.
- High level of chemical resistance to acids, alkaline substances, disinfectants, etc.

·Optimal for clean rooms in semi-conductor plants, electronics plants, assembly plants, and pharmaceutical plants, or hospitals, sterile rooms., etc.

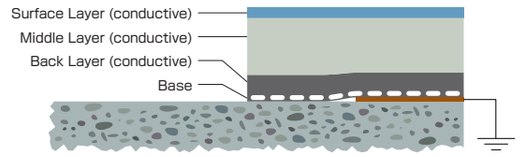


CD(R)-134 Beige | CD(R)-138 Green | CD(R)-602 Blue

Model No.	Color	Size (Length×Width×Thickness)	Weight	EDP No.
CD-134	Beige	9.0m×1.82m×2.0mm	3.1kg/㎡ 51kg/roll	621492
CDR-134				621503
CD-138	Green			621493
CDR-138				621504
CD-602	Blue			621491
CDR-602				621505

Optional: earth plate/welding rod. If you would like to have colors other than the above, please contact us.
※Resistance value may vary depending on the conditions of the measurement environment such as the temperature and humidity.

〈Structure〉

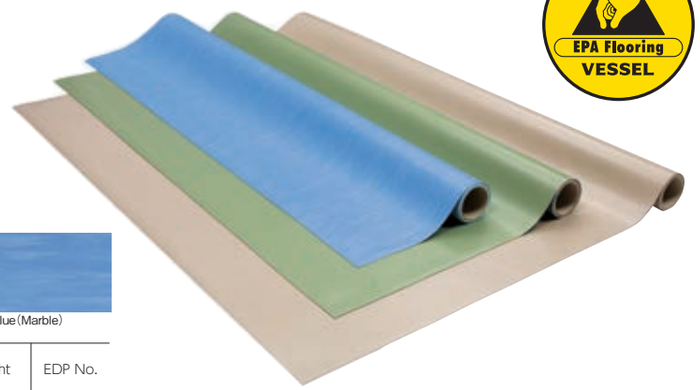


No. LS(R)-134/LS(R)-138/LS-5602 Anti-Static Vinyl Floor Sheet Lonstack/Lonstack R Conductivity 10^8Ω

Vinyl floor sheet with uniform and consistent anti-static performance. This prevents static electricity from being generated, resulting in prevention of adhesion of dust and device malfunction.

- Uniform and consistent conductive performance.
- Using a dedicated welding wand, the floor can be laid seamlessly.
- Dust-resistant surface facilitates cleaning and maintenance.
- High level of chemical resistance to acids, alkaline substances, disinfectants, etc.

·Optimal for electronics assembly plants, computer rooms, computer rooms of banks, etc.

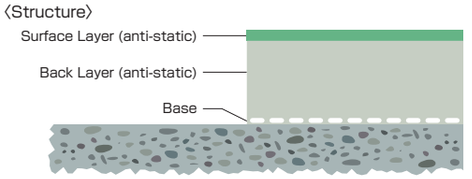


LS(R)-134 Beige | LS(R)-138 Green | LS-5602 Blue (Marble)

Model No.	Color	Size (Length×Width×Thickness)	Weight	EDP No.
LS-134	Beige	9.0m×1.82m×2.0mm	3.2kg/㎡ 52kg/roll	621495
LSR-134				621501
LS-138	Green			621496
LSR-138				621502
LS-5602	Blue (Marble)			621494

Optional: earth plate/welding wand. If you would like to have colors other than the above, please contact us.
※Resistance value may vary depending on the conditions of the measurement environment such as the temperature and humidity.

〈Structure〉



List of EPA Flooring Properties

※All data given in the following table are test values, not value of standard.

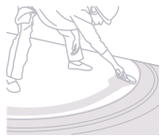
Item		CD-leum	Lonstack	Standard	[Standard value]
Indentation (mm)	23℃	0.73	0.70	JIS A5705	(0.3 or larger)
	45℃	1.18	0.96		(1.5 or smaller)
Remaining dent size (mm)		0.32	0.20	JIS A5705	(25 or smaller)
Dimensional stability after exposure to heat (%)	Vertical	-1.04	-0.70	JIS A5705	(2.0 or smaller)
	Horizontal	0.30	0.20		
Abrasion resistance (mm)		0.02	0.04	Weight 1.0kg, rotate 1000times	
Hardness	(A type)	83	80	ASTM D2240 value at 15seconds, 20℃	
	(D type)	34	34		
Stain properties	Solution containing sodium hydroxide 2%	Gloss slightly changes.	Gloss changes.	JIS A1454, drop 2ml of reagent, leave for 24 hours [There must be no significant color or luster change and swelling]	
	Hydrochloric acid 5%	No change	No change		
	Cement paste	No change	No change		

Construction [Please note that the construction should be performed by an authorized local constructor. Please consult us for more detail, before order.]

Investigation and analyses

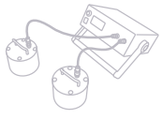
Investigate the current floor conditions (material, cracks, smoothness, surface strength, area and earth connected terminal) and make an estimate.
(To the basic price per square meter, expenses for extra work such as crack repair are added).

Construction



EPA flooring contractor performs the construction. (Please finish removal of equipment and cure application before construction starts)

Inspection



Within certain period after installation ends, the point-to-point resistance value and resistance value to ground are measured, and a floor installation completion certificate is issued.

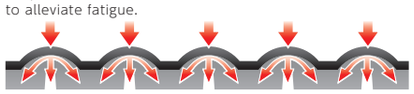
Conductivity R≦1.0×10⁹Ω

No. AF-45 Conductive Anti-Fatigue Mat

- Same characteristics as the AF-90.
- Space-saving 600x477mm good for one person.
- Inclined marginal area prevents workers from stumbling or falling.

Fall Prevention
The inclined marginal area prevents workers from stumbling or falling. (AF-45 only)

Air pockets on the back surface distributes the load, to alleviate fatigue.



RoHS

Model No.	Color	Size (mm) (Length×Width×Thickness)	Resistance value	Weight (kg)	EDP No.
AF-45	Gray	600×447×15	R ≦ 1.0×10⁹ Ω	2.0	621489

※Ground cord is not included.

Conductivity R≦1.0×10⁹Ω

No. AF-90 Conductive Anti-Fatigue Mat

- Conductive mat for fatigue alleviation from long standing work.
- Non-slip mat with embossments on the surface.
- Air pockets on the reverse side for spreading the body weight to alleviate fatigue.
- Light gray mat for easy detection of dirt, which may cause the conductive failure.
- 900㎜×600㎜ convenient size for the working stand for cell production.

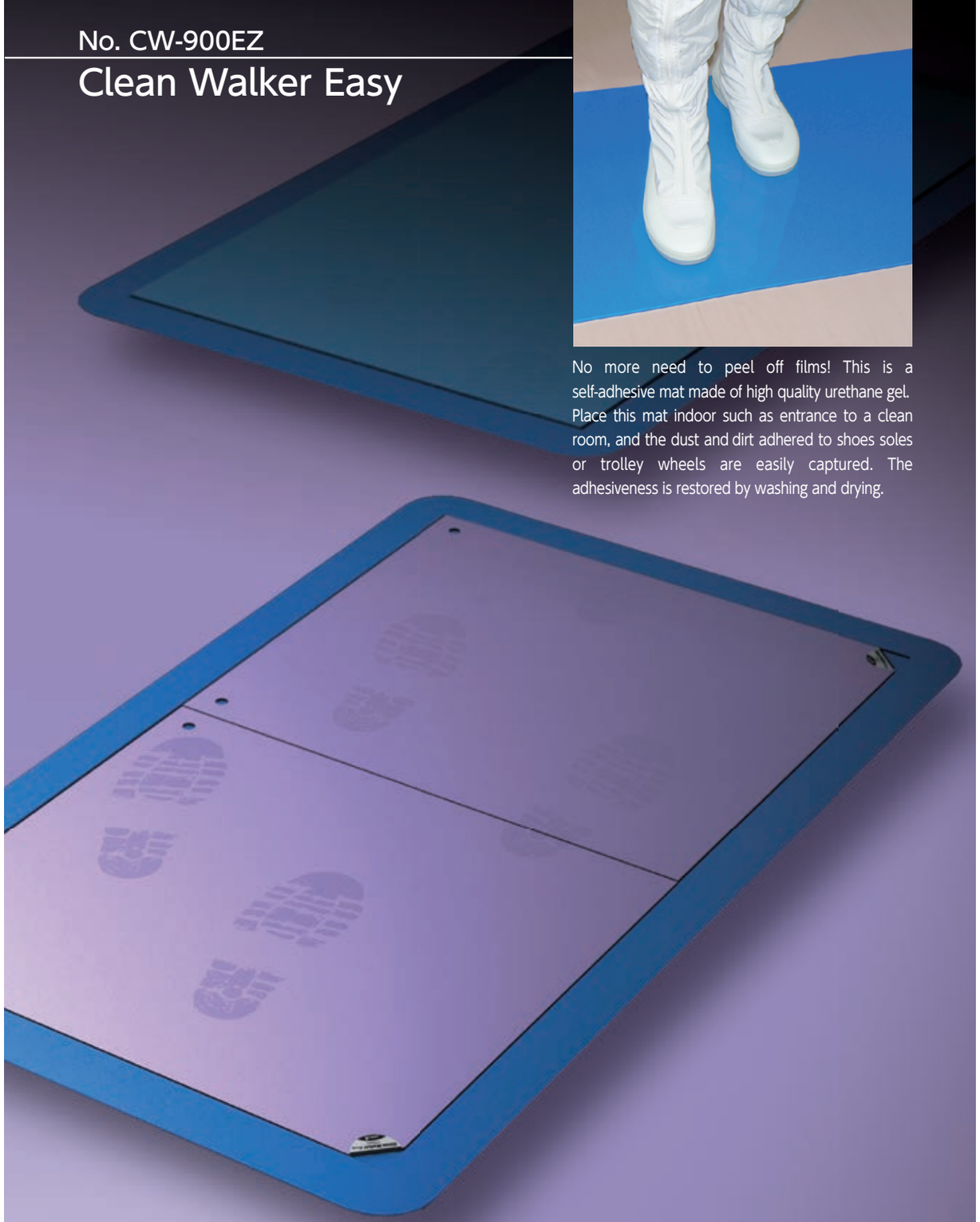
RoHS

Model No.	Color	Size (mm) (Length×Width×Thickness)	Resistance value	Weight (kg)	EDP No.
AF-90	Gray	900×600×15	R ≦ 1.0×10⁹ Ω	4.2	621488

※Ground cord is not included.

No. CW-900EZ
Clean Walker Easy

No more need to peel off films! This is a self-adhesive mat made of high quality urethane gel. Place this mat indoor such as entrance to a clean room, and the dust and dirt adhered to shoes soles or trolley wheels are easily captured. The adhesiveness is restored by washing and drying.



No. CW-900EZ

Clean Walker Easy

This product is a sticky mat that utilizes the self-adherence property of urethane gel.
It flexibly changes its shape against dents and projections of shoe soles and wheels of carts, collecting grit and dust well.
Dirt can be removed by washing with water.

No. CW-900B Clean Walker

**For indoor use only (for example, entrance to a clean room).
Urethane gel adheres to shoe soles and catches dusts.**

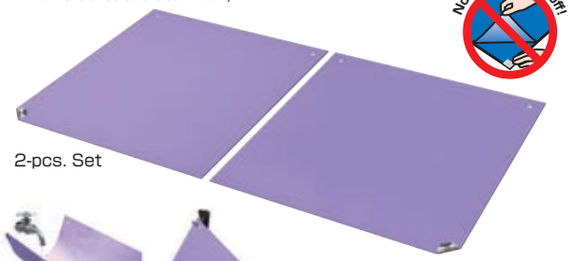
- High elasticity mat of 5 mm thick. Catches dust on shoes soles.
- Dust adhered on the CW-900B can be easily taken off by wiping with a damp cloth.
- Reversible (both sides can be used); running costs can be reduced.
- Indoor use only (most recommended to use at an entrance to a clean room)

If the surface gets contaminated, simply wipe it with a damp cloth.

No. CW-900EZ Clean Walker Easy

For dust removal from shoes soles in cleanrooms, entrance to air shower booth, or in a factory. Also good for cleaning of trolley wheels.

- Non-woven textiles are sandwiched by the urethan gel layers. A 3mm thickness, providing high strength and resistant to tears under the pressure of trolleys. It can be stuck together like floor tiles.
- 2pcs of 450×500mm; Easy to take the mats off the floor and to clean with water.
- Provided with hook holes: hang and leave the mat dry, and the mat restores the adhesiveness.
- Indoor use only (most recommended to use at an entrance to a clean room)

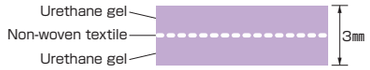


2-pcs. Set

Take the mat out of the floor and wash it with water

Hang from hook holes to dry off

〈Structure〉



RoHS

Model No.	Color	Conductivity	Size (mm) (Length×Width×Thickness)	Weight (kg)	EDP No.
CW-900B	Blue	Insulator	500×900×5	2.4	621485

RoHS

Model No.	Color	Conductivity	Size (mm) (Length×Width×Thickness)	Weight (kg)	EDP No.
CW-900EZ	Light purple	Insulator	500×450×3	1.6 (2pcs.)	621486

One point

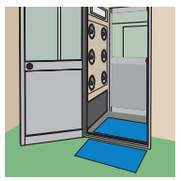
Clean Walker

It is an adhesive mat that applies the self-adhesive properties of urethane gel. It deforms flexibly along with the unevenness of shoes soles or trolley wheels; dust is reliably captured.
Dust and contamination can be washed off with water.

Applications

Ideal for removing dust off shoes soles or cleaning trolley wheels indoor

CW-900B



Air shower booths

Inside the plant

CW-900EZ

Entrance to clean rooms

For cleaning trolley wheels

GASOLINE ENGINE SERIES

Outstanding balance characteristics
VESSSEL's gasoline engine tools are provided with features to achieve an optimum balance, such as an ergonomically esigned body with impact-absorbing grip and a perfectly adjusted hammering mechanism to reduce the backlash to the user's wrists.

No. GT-3500GE Gasoline Engine Impact Wrench

	Type	Two Stroke, Forced, Air Cooled, Single Cylinder
Engine	Displacement	46.5cc, ϕ43 × 32㎜ (Inner bore size × stroke)
	Fuel Tank Capacity	1 liter
	Fuel Mixture Ratio	25:1 (gasoline:2 cycle oil)
	Revolution (idling)	2700 rpm ±250
	Revolution (loaded, impact)	7120 rpm
	Revolution (non loaded, max)	9880 rpm
Ignition	Type Spark Plug Type	Electronic NGK BPMR6A
Carburetor	Type	Diaphragm
Impact	Square Driver Size	25.4㎜ (1")
	Fastening Torque Range	1700 N.m (Full Throttle:1255 ft.lbf) 950 N.m (Half Throttle:701 ft.lbf)
	Free Speed	1200 rpm
Capacity	Bolt Diameter	32㎜ (1 1/4")
Size	W × L × H	330 × 700 × 390 (㎜)
Weight	Without fuel	19.50kg (42.99 lbs)
EDP No.		338510

No. GT-3500GD Impact Wrench in "Yellow Guppy" Carry Case

Size	W450 × L920 × H430 (㎜)
Weight	25.50kg
EDP No.	338516

※Carry Case alone can be purchased as "3500GD (EDP No.350033)."

"Yellow Guppy" Carry Case

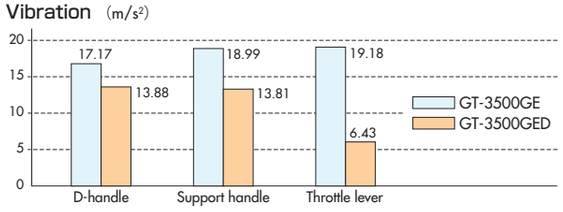
Size	W450 × L920 × H430 (㎜)
Weight	6kg (13.23 lbs) (Case only)
Model	GT-3500GE、GT-3500GED
EDP No.	350033

No. GT-3500GED Gasoline Engine Impact Wrench with Damper Unit

Size	W390 × L680 × H346 (㎜)
Weight	21.3kg (46.96 lbs)
EDP No.	338509

※For more details, refer to the specification table of basic GT-3500 unit above.

Vibration (m/s²)



Driver, Bit and Screw Cross-Reference

	JIS B 1101 JIS B 1135 ■Slotted (Reference)		JIS B1111 JIS B1122 JIS B1112 JIS B1124 JCIS 10-70 ■Philips ■Pozidriv ■Supadriv				JIS B 1176 JIS B 1177 ■Hex ■Ball point		JIS B 1180 JIS B 1181 JIS B 1123 ■Socket			JIS B 1107 JIS B 1128 JIS B 1136 JASO F116-89 ■TORX (Reference)				
	Small screw ㎜	Wood screw ㎜	Small screw ㎜	Tapping screw ㎜	Wood screw ㎜	Drill screw ㎜	Hexagon recess bolt ㎜	Hexagon recess locking screw ㎜	Hexagon head bolt ㎜	Hexagon nut ㎜	Hexagon head tapping screw ㎜		Small screw ㎜	Tapping screw ㎜	TORX recess bolt ㎜	TORX recess locking screw ㎜
e 1.8	1(※) 1.2(※)	—							○ H4	2	2	—	✱ T1	0.84	1	1	—	1.6 1.8
e 2.5	1.6	1.6 1.8					● H1.5	1.6 2	3	○ H4.5(※)	—	2.2(※)	—	✱ T2	0.94	1.2	1.2	—	2
e 3	2	1.8 2.1								○ H5	2.5	2.5	2.9	✱ T3	1.12	1.4	1.4	—	2.2
e 4	2.2(※) 2.5	2.4					● H2	2.5	4	○ H5.5	3	3	3.5	✱ T4	1.3	1.6 1.7	1.6 1.7	—	—
e 4.5	2.5(※) 3	2.7								○ H6	3.5	3.5	—	✱ T5	1.37	2	2	—	2.5
e 5	3 (3.5)	3.1 3.5					● H2.5	3	5	○ H7	4	4	4.2	✱ T6	1.65	2	2	2	3
e 5.5	(3.5)	3.5 3.8								○ H8	5	5	4.8 5.5	✱ T7	1.97	—	—	—	3.5
e 6	(3.5) 4	3.8 4.1					● H3	4	6	○ H10	6 w 1/4 (※)	6 w 1/4 (※)	6.3	✱ T8	2.3	2.5	2.5	2.5	4
e 7	4	4.5 4.8								○ H11(※)	7(※)	7(※)	—	✱ T9	2.48	—	—	—	4.5
e 8	4.5(※) 5	5.1 5.5					● H4	5	8	○ H12(※・S)	8(※・S) w 5/16 (※・S)	8(※・S) w 5/16 (※・S)	—	✱ T10	2.72	3	2.9 3 3.5	3	5
e 9	6 8(※)	5.8 6.2 6.8								○ H13	8	8	8	✱ T15	3.26	(3.5)	3.5	—	—
e 10	6 8(※)	7.5 8					● H5	6	10	○ H14(※)	10(※・S) w 5/16 (※) w 3/8 (※・S)	10(※・S) w 5/16 (※) w 3/8 (※・S)	—	✱ T20	3.84	4	4 4.2 4.5	4	6
			No.0	PZ No.0 SDV	1.4 1.6 1.7 2 2.3 2.6	2.2(ST)	1.8	—		○ H16	10	10	9.5	✱ T25	4.4	5	4.8 5 5.5	5	7
			No.1	PZ No.1 SDV	2 (2.2) (2.3) 2.5 2.6 3(※・T)	2 2.5 3(※・T) 2.9(ST)	2.1 2.4 2.7	2.9(ST)	● H6	8	12	○ H17(※)	10(※) 12(※・S) w 3/8 (※) w 7/16 (※・S)	10(※) 12(※・S) w 3/8 (※) w 7/16 (※・S)	—	✱ T27	4.96	—	—	4.5 5	8
			No.2	PZ No.2 SDV	3 (3.5) 4 (4.5) 5	3 3.5 4 4.5 5 3.5(ST) 4.2(ST) 4.8(ST)	3.1 3.5 3.8 4.1 4.5 4.8	5 3.5(ST) 4.2(ST) 4.8(ST)		○ H18	12	12	—	✱ T30	5.49	6	6 6.3	6	—
			No.3	PZ No.3 SDV	6 8	6 8 5.5(ST) 6.3(ST)	5.1 5.5 5.8 6.2 6.8	6 5.5(ST) 6.3(ST)	● H8	10	16	○ H19(※)	12(※) 14(※・S) w 7/16 (※) w 1/2 (※・S)	12(※) 14(※・S) w 7/16 (※) w 1/2 (※・S)	—	✱ T40	6.6	8	8	8	10
			No.4	PZ No.4 SDV	10 12	8(ST) 9.5(ST)	7.5 8 9.5	—	● H10	12	20	○ H21	14 w 1/2 (※)	14 w 1/2 (※)	—	✱ T45	7.77	8	—	8	12
												○ H22(※)	14(※)	14(※)	—						
									● H12	14	24	○ H24	16 18(※・S)	16 18(※・S)	—	✱ T50	8.79	10	10	10	14

(※)marked figures are in accordance with old JIS standards. (※・T)Refer to No. 1 for Truss screws. (ST)marked figures are in accordance with JIS standards. W: Refer to the old JIS standards for Whitworth screws.
(※・S)marked figures are in accordance with old JIS standards for small bolts/nuts.

VESSEL

Guideline for Air Nipper Cutting Capability

For air nipper blades, the cutting capability changes depending on the shape and types of articles to be cut. Use the values in the following table as reference.

Slide-off air nipper blade

For Horizontal-Type
(Normal･Reversed)

Model No.		Capacity Φ			
Body No.	Shape	Soft palastic	Hard Plastic	Copper	Steel
NY03	AJ	2.0	1.3		
NY03	AJL	1.6	1.1		
NY03	AJT	2.0	1.3		
NY03	RAJ	2.0	1.3		
NY05	BJ		2.0	1.6	1.0
NY05	AJ	3.0	2.0		
NY05	AJL	2.8	1.6		
NY05	AJB	3.0	2.0		
NY05	AJT	3.0	2.0		
NY05	AH	3.0	2.0		
NY05	RBJ		2.0	1.6	1.0
NY05	RAJ	3.0	2.0		
NY05	RAH	3.0	2.0		
NY10	AJ	3.5	2.3		
NY10	AJL	3.2	2.1		
NY10	AD	2.3	1.6		
NY10	AJB	3.5	2.3		
NY10	AJT	3.5	2.3		
NY10	AH	3.5	2.3		
NY10	RAJ	3.5	2.3		
NY10	RAH	3.5	2.3		
NY15	AJ	4.0	2.6		
NY15	AJL	3.7	2.3		
NY15	AD	2.6	2.2		
NY15	AJB	4.0	2.6		
NY15	AJT	4.0	2.6		
NY15	AH	4.0	2.6		
NY15	RAJ	4.0	2.6		
NY15	RAH	4.0	2.6		
NY25	AJ	5.0	3.4		
NY25	AJL	4.7	3.0		
NY25	AD	3.3	2.0		
NY25	AJB	5.0	3.4		
NY25	AH	5.0	3.4		
NY25	RAJ	5.0	3.4		
NY25	RAH	5.0	3.4		

For Vertical-Type
(Normal and Reversed combined)

Model No.		Capacity Φ			
Body No.	Shape	Soft palastic	Hard Plastic	Copper	Steel
NT03	AJ	1.5	1.0		
NT03	AJT	1.5	1.0		
NT03	AJY	1.5	1.0		
NE5	AJ	2.5	1.5		
NT05	AJ	2.5	1.5		
NT05	AJL	2.0	1.3		
NT05	AJB	2.5	1.5		
NT05	AJT	2.5	1.5		
NT05	AJY	2.5	1.5		
NT05	AD	2.5	1.2		
NT05	AJH	2.5	1.5		
NT05	AJV	2.5	1.5		
NT05	AE	2.5	1.3		
NE10	AJ	3.5	2.3		
NT10	AJ	3.5	2.3		
NT10	AJL	3.0	2.0		
NT10	AJB	3.5	2.3		
NT10	AJT	3.5	2.3		
NT10	AJY	3.5	2.3		
NT10	AD	3.5	2.1		
NT10	AJH	3.5	2.3		
NT10	AJV	3.5	2.3		
NT10	AE	3.5	2.1		
NT20	AJ	5.0	3.4		
NT20	AJL	4.5	3.2		
NT20	AD	5.0	2.0		
NT20	AJB	5.0	3.4		
NT20	AJH	5.0	3.4		

Air nipper blade

Model No.		Capacity Φ				
Body No.	Shape	Soft palastic	Hard Plastic	Copper	Steel	Piano Wire
N3	AS			1.0	0.5	
N3	HS			1.0	0.5	
N3	AP	2.0				
N3	AE	2.0				
N3	BJ			1.0	0.5	
N5	AS			1.0	0.5	
N5	HS			1.0	0.5	
N5	AP	2.0				
N5	AE	2.0				
N5	BJ			1.0	0.5	
N7	AS			1.6	1.0	
N7	HS			1.6	1.0	
N7	AP	3.0	2.0			
N7	PF	3.0	2.0			
N7	AE	3.0	2.0			
N7	BJ			1.6	1.0	
N10	AS			1.8	1.2	
N10	HS			1.8	1.2	
N10	AP	4.0	2.6			
N10L	AS			1.8	1.2	
N10L	AP	4.0	2.6			
N10L	PF	4.0	2.6			
N12	AS			2.3	1.7	
N12	HS			2.3	1.7	
N12	AP	4.5	4.0			
N20	AS			2.6	2.0	
N20	HS			2.6	2.0	
N20	AG			2.6	2.0	
N20	AP	7.0	5.0			
N20	AJ	7.0	5.0			
N20	AJL	6.0	4.0			
N20	AJB		5.0			
N20	PF	7.0	5.0			
N20	AE	7.0	5.0			
N20	BFB			2.6	2.0	1.2
N30	AS			3.3	2.8	
N30	BBB			3.3	2.8	1.2
N30	AP	10.0	6.5			
N30	AJ	10.0	6.5			
N30	AJL	8.0	5.0			
N30	PF	10.0	6.5			
N30	AE	10.0	6.5			
N30	ACD	(Bare terminal $^{1.25sq}_{2.0sq}$)				
N50	AS			5.5	4.5	
N50	BBB			5.5	4.5	2.0

NM blade

NM20	AJ	7.0	5.0			
NM20	AP	7.0	5.0			
NM20	AE	7.0	5.0			
NM30	AJ	10.0	6.5			
NM30	AP	10.0	6.5			
NM30	AE	10.0	6.5			

For Double Action Air NIpper

NW1	BJ			1.0	0.5	
NW10	AJ		4.0			
NW10	BJ			1.8	1.2	
NW20	AJ		6.5			
NW20	BJ			2.6	2.0	
NW30	AJ		9.5			
NW30	BJ			3.3	2.8	

Quasi-standard blade

Model No.		Capacity Φ	
Body No.	Shape	Soft palastic	Hard Plastic
N10	LAB152	3.5	2
N10	LAJ141	3.5	2
N20	AH	6.0	
N20	AML1498	10×1.5	8×1
N20	AMR1499	10×1.5	8×1
N20	AB360	6.5	4.5
N20	AA239	6.5	4.5
N20	AB39	6.5	4.5
N20	AE19	6	4
N20	AA27	6.5	4.5
N20	AK249	5.5	3.5
N20	AE1205	5.5	3.5
N30	AA114	8	5
N30	AE53	7	4.5
N30	AL525	7	4.5
N30	AJ163	8	5
N30	AML1435	15×2	10×1.5
N30	AMR1395	15×2	10×1.5

･Steel wire is non-heat treated.
･Piano wire=HV320 or below. The unit of cutting capability of N20AML and N20AMR is(t).

Safety Instructions

Read the instruction manual and observe the safety precautions and warnings.

Hand Tools

- Do not use any tool if cracked, chipped, worn, deformed or otherwise not in perfect working order.
- Do not use on live current. Use a driver that fits the screw size.
- Do not use drivers as a substitute for chisels, bars or levers.
- Wear protective goggles when working.

Bits & Sockets

- Do not use any tool if cracked, chipped, worn, deformed or otherwise not in perfect working order.
- Do not use on live current. Use bits and sockets of the required size for the target screws, bolts and nuts.
- Never drive power tools idly with bits or sockets attached.
- Shut off power before mounting or replacing bits.
- Wear protective goggles when working.

Electric Tools

- Do not touch the power plug with wet hands. It incurs the risk of electric shock.
- This equipment should not be used in a combustible or flammable environment.
- This equipment should not be used in a wet or humid environment or in the presence of solvents or oil, due to the danger of electric shock.
- Shut off power before mounting or replacing bits.
- Wear protective goggles when working.

Air Tools

- Do not use any tool if cracked, chipped, worn, deformed or otherwise not in perfect working order.
- Do not use on live current. Use bits and sockets of the required size for the target screws, bolts and nuts.
- Air tools can cause vibration.
- Wear ear protection when working.
- Wear protective goggles when working.

Static Solutions

- This equipment should not be disassembled. Conduct maintenance inspections at regular intervals.
- This equipment should not be used in a combustible or flammable environment.
- This equipment should not be used in a wet or humid environment or in the presence of solvents or oil, due to the danger of electric shock.
- The equipment should only be used with a power supply that conforms to specifications.
- Do not peer into the air output duct.

Gasoline Enjine Tools

- In case any crack, chip, or deformation is observed, stop using the unit immediately.
- Do not use the unit or fill fuel in presence of flame or spark.
- Make sure to use two cycle oil with gasoline at mixture ratio of 1:25.
- The unit emit vibration, heat and exhaust fumes.
- Always wear eye, head and ear protectors when using this tool.

Model No.	Post page
070105	54
070110	54
070115	54
076110	54
077110	54
100	25
13**	77
13**M	77
1733/50	75
1735/50	75
200	8
21005	89
220	8
2200	10•36
2200B	10•36
220F	8
220W	9•128
220W-123	127
220W-3	128
220W-62	127
225	8
230	8
230W	9•129
230W-2	129
230W-3	129
230W-6	129
240001	41
25	39
250	9
250001	41
251526	39
260002	41
265	10
270BW	9•128
270BW-123	127
270BW-62	127
30	25
300	27
3000	52
300001	52
300002	52
300005	52
3002R/25	89
320	27
3200VA-1	52
3491/34	85
3492/34	85
350	25
3500E-1	53
3500E-2	53
3500E-3	53
3500E-4	53
3700KS/KM	52
4100	18
4500	18
4600	18
460NT-9S	23
500	23
510	23
520	23
540	23
5400TX	18•48
550	22
560	22
570	22
5700BD	55
5700WP	55
590	22
610	7
6100	17
6200	17
6300	16
6300E	16
660	7
6603	17
6900	17
70	54
700	7
720	7
730	7
76-10	54
76-10H	54
77-10	54
77-10H	54
8	55
8200BP	43
8200BP-L	43
8200BP-S	43
8209BP	43
8209BP-L	43
8209BP-S	43
8300BP	44
8300BP-L	44
8300BP-LIN	45
8300BP-XL	44
8300HX-S	46
8309BP	44
8309BP-L	44
8309BP-LIN	45
8309BP-XL	44
83L	40
8409BP	47
8500BTX	45
8500TX	48
8500TXH	45
8507TX	48
8509BTX	45
8509TXH	45
8900BP	47
8906BP	47
8909BP	47
900	12
9000	33
910	12
920	12
930	12
960	14
960PS	14
970	13
980	12
990	31
9900	31
9902	31
9903	31
990TX	31•50

A

Model No.	Post page
A14	63
A14 SDV	64
A14 SQ	64
A14B	63
A14H	63•105
A14P	63
A14R	64
A14RSQ	107
A14SQ	107
A15	68
A16	65•66
A16 Hex	66
A16 SQ	66
A19	68
A20	67
A20-5	67
A201210B	117
A201275	117
A201275C	117
A202050P	121
A202110F	119
A20BSQ	119
A20CH13	119
A20USQ	118
A20WSQ	119
A20ZB55	126
A20ZW	119
A30	121
A4	90
A5	76
AC	103
ACD	134
ACD3S	134
AD-2 0C	201
AD-2 0M	201
AD-2 0N	200
AD-2 0N-PB	200
AD-2 0R	201
AD-2 0S	200
AD-2 100A	200
AD-2 100N	200
AD-2 100N-PB	200
AD-2 100P	201
AD-2 100R	201
AD-2 100S	200
AD-2 200N	200
AD-2 300N	200
AD-4 B	198
AD-4 J	198
AD-4 J-PB	198
AD-4 J-PT	198
AD-4 M	198
AD-4 N	198
AD-4 N-150	198
AD-4 N-200	198
AD-4 N-300	198
AD-4 N-PB	198
AD-4 N-PT	198
AD-4 NF-150	198
AD-4 NF-300	198
AD24-SC2	148
AF-45	258
AF-90	258
AL14	64
AMD	133
AMD14S	133
AMD3S	133
AMD6P	133
AMD7S	133
AMG14	111
APD	135
APD3S	135
AS	104
AS14	63
AS20P2065F	104
AS20P2110F	104
AS5P1065F	104
AS5P2065F	104
AS5P2110F	104
ASB-24H	194
ASB-32	194
ASB-32H	194
ASC-25-5	194
ASC-25-8	195
ASC-50-8	195
AT14	65
AT142065	103
AT142110	103
AT14P	65
ATD	135
AX	105
AZ	105
AZ14	63

B

Model No.	Post page
B_IP	91
B-300	27
B-330	27
B-340TX	28•49
B-370	18•28
B-380NT	28
B-5400BP	18
B-640TX	10•49
B33	89
B33 Hex	89
B33 SQ	89
B34	71•85
B35	73•74
B35 PZ	76
B35 SDV	75
B35 SQ	74
B36	71
B39	76
B39 PZ	76
B39 TW	76
B43	72
B43B	72
B43H	72
B43P	72
B44	71•85
B45	77
BB	111
BH-11	120
BH-13	120
BH-14	120
BH-15	120
BH-16	120
BH-17	120
BH-19E	137
BH-20	137
BH-21	137
BH-22H	137
BH-22HC	137
BH-23	137
BH-24	137
BH-261	136
BH-271	136
BH-28	137
BH-29	137
BH-30	121
BH-40	126
BH-41	126
BH-9	136
BH423M	87
BHC-30	121
BHX	91
BMG43	111
BPH	91
BT43	73
BT43P	73
BTX	91
BW-11	109
BW-12	109
BW-13	109
BW-15	109
BW-163	103
BW-165	103
BW-180	104
BW-181	104
BW-182	104
BW-301	103
BW-302	103
BW-303	103
BW-305	103
BW-31	108
BW-32	124
BW-33	124
BW-36	105
BW-37	105
BW-38	105
BW-39	105
BW-401	107
BW-403	107
BW-407	107
BW-52	109
BW-53	109
BW-70	110

C

Model No.	Post page
C-40	247
C-60	247
C-series	247
C50	90
C502125	41
C503125	41
C506125	41
C51	90
C512036	41
C513036	41
C518036	41
CA	33
CB12	189
CD-134(R)	257
CD-138(R)	257
CD-602(R)	257
CF300-E	241
CW-900B	260
CW-900EZ	260

D

Model No.	Post page
D61	85
D62	85
D71	82
D72	82
D73	83
D76	84
D80	110
D81	66
D83	108
DB-200	54
DBH-01	87
DBH-02	87
DBHM-01	87
DBHM-02	87
DS73	81
DTC-001	221

E

Model No.	Post page
EPC-18	255

Model No.	Post page
EPG-01	255
EPG-02	255
EPS-05	256
EPS-05C	256
EPS-GK	255
EPS-GT2	255
EXJ	118
Eye-02	256

F

Model No.	Post page
F120R-E	241
F120S-E	241
F6RCL-E	241
F6RST-E	241
FW-H	46
FW-HIN	46

G

Model No.	Post page
G-9	243
G2-E	243
G7R-E	243
GA20F101	119
GM14	109
GM16	109
GMA14	110
GMA16	110
GP-1 4kV	245•248
GS14	97
GS14SQ	98
GS16	98•99
GS16PL	99
GS5P-01	99
GS5P-02	99
GS5P-03	99
GS5P-31	100
GS5P-32	100
GS5P-33	101
GS5P-34	101
GS5P-35	101
GS5P-36	101
GS5P-42	98
GS5P-44	98
GS5P1065D	99
GS5P2065	97
GS5P2065D	99
GS5P2082	97
GS5P2082D	99
GS5P2100D	99
GS5P2110	97
GS5P2130	97
GS5P2130D	99
GS5P2150	97
GS5P2150D	99
GSAM	110
GSB	110
GSBP	101
GSH	99•100
GSPZ	98
GSVT	100
GT-1400P	179
GT-1600JP	183
GT-1600P	179
GT-1600VP	174
GT-1600VPH	174
GT-1600VPHL	174
GT-1600VPL	174
GT-1600VPX	174
GT-1700BX	183
GT-2000P	180
GT-2000PF	176
GT-2000PL	180
GT-20LW-10SM	225
GT-20LW-10TM	225
GT-2500LF	176
GT-2500PF	176
GT-30LW-10SM	225
GT-30LW-10TM	225
GT-3500GD	262
GT-3500GE	262
GT-3500GED	262
GT-3800LX	176
GT-3800PX	176
GT-3900V	175
GT-3900VL	175
GT-3900VP	175
GT-4200	180
GT-4200L	180
GT-4200P	180
GT-4200PF	177
GT-4800VL	175
GT-AS10	194
GT-AS100	194
GT-ASC5	195
GT-BS12	188
GT-BS20	188
GT-BS30	188
GT-BS30W	188
GT-C1400	178
GT-C900	178
GT-CD60-34	196
GT-CD60-34L	196
GT-D100-15	196
GT-D100-15K	196
GT-D60-30	196
GT-D60-45	196
GT-D80-20	196
GT-D80-20K	196
GT-DG100	190
GT-DG50	190
GT-DS50A	188
GT-DS50B	188
GT-H120K	231
GT-H12K	231
GT-H30	231
GT-H4PR	166
GT-H4R	166
GT-H4RC	166
GT-H5P	166
GT-H5R	166
GT-H5RC	166
GT-HPS160	186
GT-HPS200	186
GT-HS30	231
GT-HWR1	231
GT-HWR10	231
GT-HWS1	231
GT-HWS10	231
GT-MG25-12CF	192
GT-MG25-12CR	192
GT-MG25-9CF	192
GT-MG25-9CR	192
GT-MG25S	191
GT-MG35-12CC	191
GT-MG35-12CR	191
GT-MG35SAR	191
GT-MG55S	191
GT-MG55SAR	191
GT-MG55SR	191
GT-MG75S	191
GT-MG75SAR	191
GT-N10	223
GT-N12	223
GT-N20	223
GT-N3	223
GT-N30	223
GT-N5	223
GT-N50	223
GT-N7	223
GT-NB20 (10-HIKI)	225
GT-NB20 (10-OSHI)	225
GT-NB20 (5-HIKI)	225
GT-NB20 (5-OSHI)	225
GT-NB30 (10-HIKI)	225
GT-NF05	210
GT-NF10	210
GT-NF15	210
GT-NK10	216
GT-NKH10	219
GT-NR10L	224
GT-NR20	224
GT-NR3	224
GT-NR30	224
GT-NR5	224
GT-NR50	224
GT-NR7	224
GT-NS10L	223
GT-NS20	223
GT-NS20H-1	223
GT-NS3	223
GT-NS30	223
GT-NS5	223
GT-NS7	223
GT-NT03	213
GT-NT03-4	213
GT-NT03R	213
GT-NT03R-4	213
GT-NT05	213
GT-NT05-4	213
GT-NT05R	213
GT-NT05R-4	213
GT-NT10	213
GT-NT10-6	213
GT-NT10R	213
GT-NT10R-4	213
GT-NT20	213
GT-NT20-6	213
GT-NT20R	213
GT-NT20R-6	213
GT-NWR10	225
GT-NWR20	225
GT-NWR30	225
GT-NWS1	225
GT-NWS10	225
GT-NWS20	225
GT-NWS30	225
GT-NY03G	209
GT-NY03G-4	209
GT-NY03GR	209
GT-NY03GR-4	209
GT-NY05	209
GT-NY05-4	209
GT-NY05R	209
GT-NY05R-4	209
GT-NY10	209
GT-NY10-4	209
GT-NY10R	209
GT-NY10R-4	209
GT-NY10G	209
GT-NY10G-4	209
GT-NY10GR	209
GT-NY10GR-4	209
GT-NY10S	210
GT-NY15	209
GT-NY15-4	209
GT-NY15R	209
GT-NY15R-4	209
GT-NY25	209
GT-NY25-6	209
GT-NY25R	209
GT-NY25R-6	209
GT-NY25S	210
GT-NZ15 (NZ15AJ)	231
GT-NZ15 (NZ20AJ)	231
GT-P12	179
GT-P14J	179
GT-P14JL	179
GT-P14W	182
GT-P18J	180
GT-P18JL	180
GT-P32J	180
GT-P4.5DR	167
GT-P4.5XD	164
GT-P5LS	167
GT-P5XD	164
GT-P6.5D	169
GT-P60XD	165
GT-P60XW	181
GT-P65W	182
GT-P6EXD	165
GT-P6HS	168
GT-P6Ⅱ	178
GT-P6LSⅢ	168
GT-P6LXD	164
GT-P6T	184
GT-P80W	182
GT-P80XD	165
GT-P80XW	181
GT-P8D	169
GT-P8Ⅱ	178
GT-P8T	184
GT-PLHⅡ	168
GT-PLIXD	164
GT-PLP	167
GT-PLR	167
GT-PLRC	169
GT-PLXD	164
GT-PLZ	167
GT-R10	184
GT-R10M	184
GT-S20RW	183
GT-S32RW	183
GT-S4.5DR	167
GT-S4.5XD	164
GT-S4TFG	170
GT-S4TFS	170
GT-S4TG	170
GT-S4TR	170
GT-S4TS	170
GT-S55R	177
GT-S5TB	171
GT-S5TFB	171
GT-S5TFG	171
GT-S5TFR	171
GT-S5TG	171
GT-S5TR	171
GT-S5TS	171
GT-S6.5D	169
GT-S600C	178
GT-S60CW	182
GT-S60XD	165
GT-S60XW	181
GT-S650	178
GT-S65W	182
GT-S6HS	168
GT-S6LXD	164
GT-S6MLR	168
GT-S70WK	182
GT-TC-02	216

H

Model No.	Post page
H120SK	231
H12ME30K	231
H30ME	231
H30MEL	231
HA	86•116
HAM	86
HB	86
HBM	86
HC-80	192
HD-71×45	87
HFAC-3-1DR	156
HFC1-300DR	155
HFKCC-3-1DR	157
HFS1-300-1D	155
HFS1-300-1DR	155
HMW10	189
HPB-series	249
HPF-1	245
HPG-1S-E	245
HPN-1	245
HPSN-215	186
HPSN-218	186
HPSN-318	186
HRH	28
HRW2001M-W	28
HRW2004M-SW	29
HRW2303M-W	29
HRW3002M-W	29
HRW3005M-SW	29
HW10J	231
HW1J	231

I

Model No.	Post page
IP	75•90
IPC-250CR	253
IPC-A3	252
IPC-A4	252
IR14	106
IR16	106
IR5P01	106
IR5P02	106
IR5P2065F	106
IR5P2100DF	106
IR5P2110F	106
IR5P3065F	106

J

Model No.	Post page
J	74•75
JA	105
JA5P2065	105
JA5P2082	105
JA5P2110	105

K

Model No.	Post page
KA	116
KAR20	116

Model No.	Post page
KDB-SQ3	126
KDB-SQ3K	126
KMD	134

L

Model No.	Post page
L-90-E	241
LA	115
LAS	116
LF-150	199
LF-200	199
LF-300	199
LG-100	255
LJ-150	199
LJ-200	199
LJ-300	199
LJ-500	199
LN-150	199
LN-200	199
LN-300	199
LN-500	199
LP	192
LS-134(R)	257
LS-138(R)	257
LS-5602	257

M

Model No.	Post page
M-A14	63
M-A16	66
M-AB16	73
M-B43	72
M-S14	125
M-S14H	125
M16	108
M16SQ	107
MA20	68
MA20S	68
MB45	77
MB45D	78
MB45S	78
MMBC	88
MMBC-J	88
MT	103
MT5P2065	103
MT5P2110	103
MX14	102
MX16	102
MX5P2065	102
MX5P2065D	102
MX5P2100D	102
MX5P2110	102

N

Model No.	Post page
N	71•84
N-1	244
N-3	244
N10AP	228
N10AS	226
N10HS	226
N10LAB152	230
N10LAJ141	228
N10LAP	228
N10LAS	226
N10LPF	229
N12AP	228
N12AS	226
N12HS	226
N20AA239	230
N20AA27	230
N20AB360	230
N20AB39	228
N20AE	228
N20AE1205	229
N20AE19A	230
N20AE2125	229
N20AG	226
N20AH	229
N20AJ	228
N20AJB	228
N20AJL	228
N20AK249	230
N20AML1498	229
N20AMR1499	229
N20AP	228
N20AS	226
N20BFB	227
N20HS	226
N20PF	229
N30AA114	230
N30ACD	227
N30AE	228
N30AE53	230
N30AJ	228
N30AJ163	228
N30AJL	228
N30AL525	230
N30AML1435	229
N30AMR1395	229
N30AP	228
N30AS	226
N30BBB	226
N30PF	229
N3AE	228
N3AE406	230
N3AP	228
N3AS	226
N3BJ	226
N3HS	226
N50AS	227
N50BBB	226
N5AE	228
N5AP	228
N5AS	226
N5BJ	226
N5HS	226
N7AE	228
N7AP	228
N7AS	226
N7BJ	226
N7HS	226
N7PF	229
NE10AJ	213
NE5AJ	213
NEJ-1/2/3	135
NEJ-123	135
NEJ-4/5	136
NEJ-45	136
NK10AJ	216
NKH10AJ	219
NKH10RAJ	219
NKH20XL-25	218
NKH20XR-25	218
NKHD20XL-20	220
NKHD20XR-20	220
NKHD45R-50	221
NM20AE	227
NM20AJ	227
NM20AP	227
NM30AE	227
NM30AJ	227
NM30AP	227
NMC-2P	124
NMCS	123
NMCS3P2065F	125
NMCS3P2082F	125
NMCS3P2110F	125
NMCS8P2065F	125
NMCS8P2082F	125
NMCS8P2110F	125
NR10LST	224
NR20ST	224
NR30ST	224
NR30ST-M	232
NR50ST	224
NT03AJ	213
NT03AJT	214
NT03AJY	214
NT05AD	214
NT05AE	215
NT05AJ	213
NT05AJB	213
NT05AJH	213
NT05AJL	214
NT05AJT	214
NT05AJV	215
NT05AJY	214
NT10AD	214
NT10AE	215
NT10AJ	213
NT10AJB	213
NT10AJH	213
NT10AJL	214
NT10AJT	214
NT10AJV	215
NT10AJY	214
NT10AJ	214
NT10AJ	214
NT10AJ	212
NT20AD	214
NT20AJ	213
NT20AJB	213
NT20AJH	213
NT20AJL	214
NTH05AJ	219
NTH10AJ	219
NW10AJ	228
NW10BJ	226
NW1BJ	226
NW20AJ	228
NW20BJ	226
NW30AJ	228
NW30BJ	226
NY03AJ	211
NY03AJL	211
NY03AJT	212
NY03RAJ	211
NY03RAJL	211
NY05AH	212
NY05AJ	211
NY05AJB	211
NY05AJL	211
NY05AJT	212
NY05BJ	212
NY05RAH	212
NY05RAJ	211
NY05RAJB	211
NY05RAJL	211
NY05RBJ	212
NY10AD	212
NY10AH	212
NY10AJ	211
NY10AJB	211
NY10AJL	211
NY10AJT	212
NY10RAH	212
NY10RAJ	211
NY10RAJB	211
NY10RAJL	211
NY15AD	212
NY15AH	212
NY15AJ	211
NY15AJB	211
NY15AJL	211
NY15AJT	212
NY15RAH	212
NY15RAJ	211
NY15RAJB	211
NY15RAJL	211
NY25AD	212
NY25AH	212
NY25AJ	211
NY25AJB	211
NY25AJL	211
NY25RAH	212
NY25RAJ	211
NY25RAJB	211
NY25RAJL	211
NZ15AJ	231
NZ20AJ	231

P

Model No.	Post page
P-10L	224
P-20	224
P-30	224
P-50	224
PD-P6	189
PD-P60	189
PD142311	128
PD142345	128
PD142611	128
PD142645	128
PD162140	129
PD163140	129
PD166140	129
PQ	127
PR	192
PS	126
PZ	127

Q

Model No.	Post page
QB-10B	112
QB-10R	112
QB-10Y	112
QB-AD	112
QB-K3C	112
QB-KBAD	112

R

Model No.	Post page
RB3P2065-BL	131
RB3P2082-BL	131
RB3P2110-BL	131
RB5P2065-BL	131
RB5P2082-BL	131
RB5P2110-BL	131
RBT3P2065-BL	131
RBT3P2082-BL	131
RBT3P2110-BL	131
RBT5P2065-BL	131
RBT5P2082-BL	131
RBT5P2110-BL	131
RG-95	55
RH-30	192
RS	73
RT	102
RT10P2065F	102
RT10P2082F	102
RT10P2110F	102
RT5P2065	102
RT5P2082	102
RT5P2110	102

S

Model No.	Post page
S-903	13
S14	125
S3P2065-BL	131
S3P2082-BL	131
S3P2110-BL	131
S5P2065-BL	131
S5P2065F	125
S5P2082-BL	131
S5P2110-BL	131
S5P2110F	125
S6	91
S8	91
SA	117
SAR	118
SB	68•110
SC-90	10
SDT	125
SDT5P2065	125
SDT5P2082	125
SDT5P2110	125
SG-100	255
SH-G3	248
SL	114
SL-series	248
SL209PS	114
SM16BP	108
SM16H	108
SMG14	111
SMVT	108
SP-0	199
SRC-01	256
SS16	123
SS16BP	124
SS16H	124
SS16T	124
SST	123
SST3P2065-BL	131
SST3P2082-BL	131
SST3P2110-BL	131
SST5P2065	123
SST5P2065-BL	131
SST5P2082	123
SST5P2082-BL	131
SST5P2110	123
SST5P2110-BL	131
ST	103
ST14	65

T

Model No.	Post page
TA	114
TA20BSQ	118
TA20WSQ	118
TD-110	7
TD-13-P2	19
TD-13-S6	19
TD-1300B	40

VESSEL Reference Index

HAND TOOLS BITS & SOCKETS ELECTRIC TOOLS AIR TOOLS STATIC SOLUTIONS GASOLINE ENGINE TOOLS

Model No.	Post page
TD-1300L	40
TD-13W	19
TD-13W5	19
TD-210	19
TD-2100	20
TD-220B	19
TD-240G	19
TD-250Y	19
TD-410	20
TD-51	32
TD-52	32
TD-53	32
TD-54	32
TD-54 3ULR	33
TD-54 IPR	32
TD-55	33
TD-56	33
TD-56S	33
TD-56Y	33
TD-57	33
TD-58	33
TD-59	32
TD-61	39
TD-63	39
TD-6310HX	19
TD-6310TX	19•49
TD-64	39
TD-6700FX-4	35
TD-6700W-23	35
TD-6804MG	35
TD-6808MG	35
TD-6808TX	35•50
TD-6816MG	35•50
TD-70	38
TD-71	38
TD-72	38
TD-73MC	38
TD-74	37
TD-75	37
TD-76	37
TD-77	37
TD-78	37
TD-79	37
TD-80	36
TD-800	20
TD-81	36
TD-912N	20
TD-BS	37•39
TD-BS3	50
TW-H	46
TW-HIN	46
TX-11	38•49
TX-12MC	38•49

V

Model No.	Post page
V	66•67
V5	68
VAB-5	154
VBA	111
VBNR20	233
VBNR30	233
VBRNY1015	232
VCA-L	151
VCA-M	151
VCC2020	233
VCS	151
VCT-20	148
VCT-30	148
VCT-45	148
VE-1500	143
VE-1500EPA	148
VE-1500EPAU	148
VE-2000	143
VE-2000EPA	148
VE-2000EPAU	148
VE-3000	143
VE-3000U	143
VE-4000	143
VE-4000AC	144
VE-4000P	143
VE-4000PAC	144
VE-4000PU	143
VE-4000U	143
VE-4500	143
VE-4500-HS4	145
VE-4500AC	144
VE-4500P	143
VE-4500P-HS4	145
VE-4500PAC	144
VE-4500PU	143
VE-4500U	143
VE-5000	144
VE-5000-DL5	145
VE-5000P	144
VE-5000P-DL5	145
VE-5000PR	145
VE-5000PRSOP	147
VE-5000PS	147
VE-5000PSOP	146
VE-5000PSSOP	147
VE-5000R	145
VE-5000RSOP	147
VE-5000S	147
VE-5000SOP	146
VE-5000SSOP	147
VE-6000	144
VE-6000-DL5	145
VE-6000P	144
VE-6000P-DL5	145
VE-6000PR	145
VE-6000PRSOP	147
VE-6000PSOP	146
VE-6000R	145
VE-6000RSOP	147
VE-6000SOP	146
VE-EC2	151
VEA20100	234
VFLBNY1015	232
VJ-10	150
VJ-10K	150
VJ-3	150
VJ-50	150
VMB20125	234
VPG-L	151
VRS-5	156
VSB2060	232
VSC-01	149
VSC-02	149
VSF-5	150
VTM-10	150
VTM-100	150
VTM-8	150
VTS-5/950	154

W

Model No.	Post page
WA	115
WB-001	52
WB-002	52
WB-003	52
WB-013	52
WBJ	118
WSA	114
WSA209PS	114

X

Model No.	Post page
X50	76
XA	116

Z

Model No.	Post page
ZB20	189
ZW-3	55
ZW-4	55

VESSEL

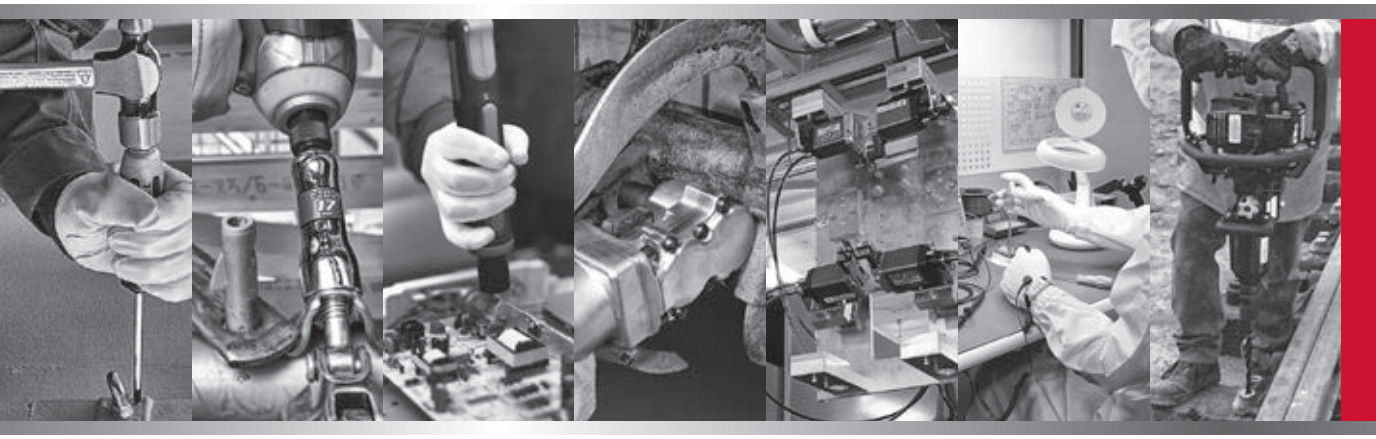
Founded in 1916

ves･sel [vesl]

Where the name "Vessel" comes from

A vessel means a large ship. When the company was founded in 19 16, we chose it though English name was uncommon in Japanese market then. The name expressed our pioneering spirit with which we wanted t o find new overseas markets. That spirit continues today.

A vessel also has a meaning of a high pressure tank that stores a large amount of energy, at its saturation moment right before the energy peaked to burst.



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Product dimensions include some manufacturing tolerances.

Specify model No. and size when ordering, i.e., （No. 350 - 6× 100 ）

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