■ Order form (Example)

PCGS - 6 - 10

Model — Tube I.D. — Stroke

■ Specification

Model	PCGS	
Acting type	Double acting	
Tube I.D. (mm)	6	10
Stroke (mm)	5, 10, 15	5, 10, 15, 20
Port size	M3x0.5	
Medium	Air	
Max. operating perssure	0.7 MPa	
Min. operating perssure	0.15 MPa	
Proof pressure	1 MPa	
Lubrication	Not required	
Ambient temperature	-5~+60° C (No freezing)	
Available speed range	50~400 mm/sec	
Sensor switch(*)	RDGV	

* This product is not applicable for stopper purpose

■ Features

Multi-ports as standard enabling both direction mounting.

Non-rotating accuracy ± 0.1°

Embedding type sensors.

The sensor cable will be in the same direction as the piping tube if vertical type sensor switch (Angle cable) is used.

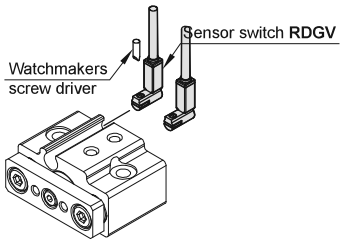
Magnetic as standard

■ Cylinder weight

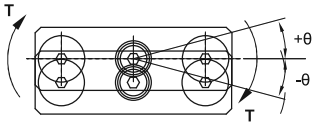
Unit: g

Tube I.D.	Stroke (mm)			
	5	10	15	20
ø6	29	34	39	—
ø10	41	49	57	65

■ Installation of sensor switch



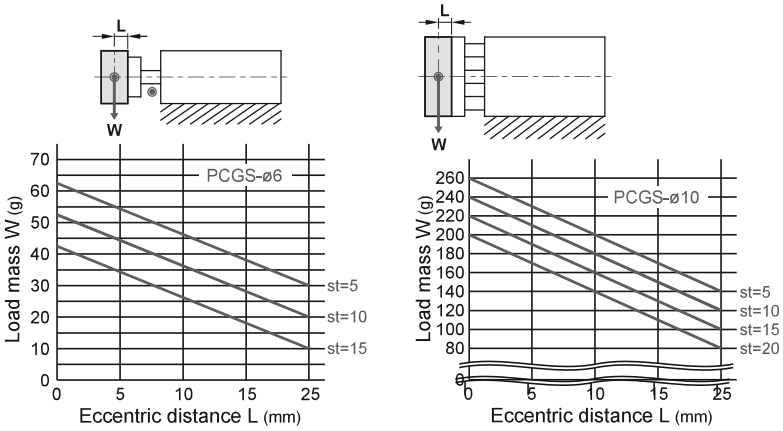
■ Allowable rotational torque & Non-rotating accuracy



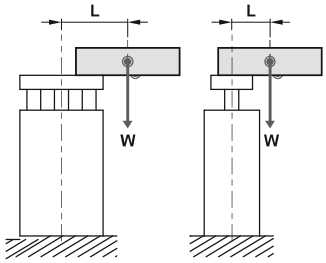
Unit: N.m

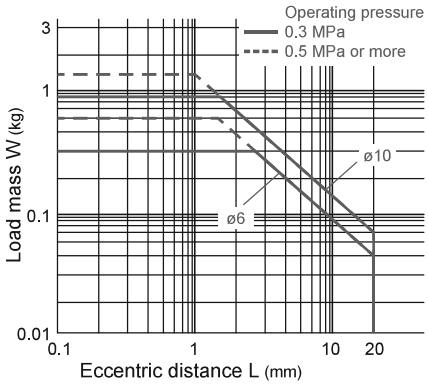
Tube I.D.	Stroke (mm)				Non-rotating accuracy θ
	5	10	15	20	
ø6	0.9	0.7	0.6	—	±0.15°
ø10	4.7	3.9	3.3	2.8	

■ Allowable lateral load



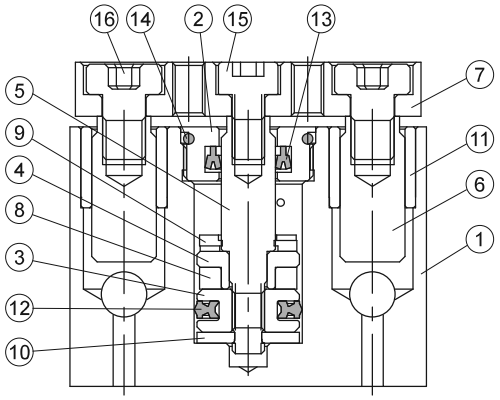
■ Allowable eccentric load





PCGS Inside structure & Parts list ø6, ø10

■ Inside structure & Parts list



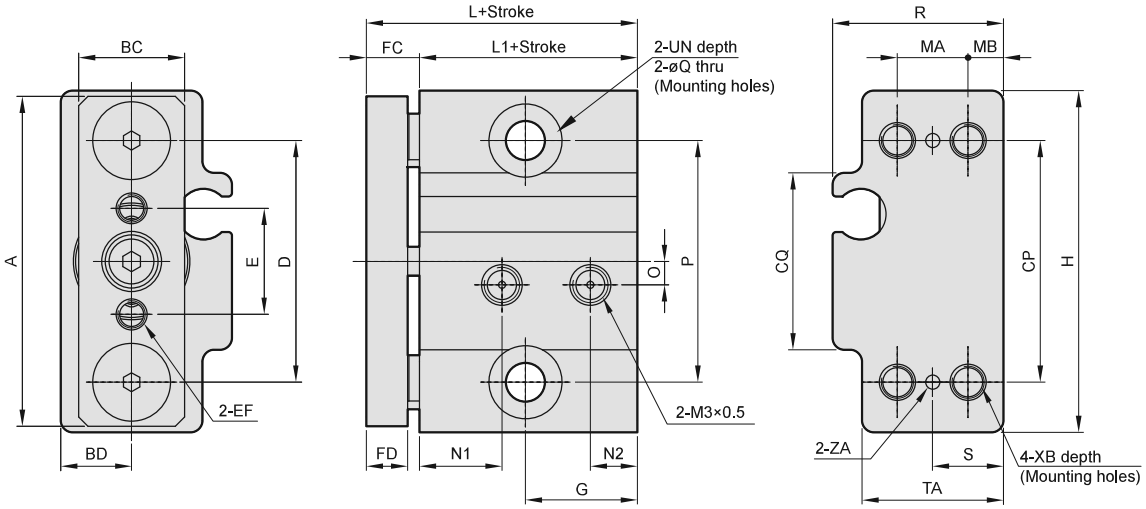
■ Order example of repair kits

Tube I.D.	Repair kits
ø6	PS-PCGS-6
ø10	PS-PCGS-10

■ Material

No.	Part name	Material	Q'y	Repair kits (inclusion)
1	Body	Aluminum alloy	1	
2	Rod cover	Aluminum alloy	1	
3	Piston– H	Aluminum alloy	1	
4	Piston– R	Aluminum alloy	1	
5	Piston rod	Stainless steel	1	
6	Guide rod	Carbon steel	2	
7	Plate	Aluminum alloy	1	
8	Magnet ring	Magnet material	1	
9	Cushion	NBR	1	●
10	Cushion	NBR	1	●
11	Bush	Copper	2	
12	Piston seal	NBR	1	●
13	Rod seal	NBR	1	●
14	O ring	NBR	1	●
15	Screw	Carbon steel	1	
16	Screw	Carbon steel	2	

Dimensions



Code / Tube I.D.	A	BC	BD	CP	CQ	D	E	EF	FC	FD	G	H	L	L1	MA	MB	N1	N2
6	28	9	6	20.5	15	20.5	9	M2.5×0.45 thru	4.5	3.5	9.5	29	23	18.5	6	3	7	4
10	32	10	7.5	23	17.5	23	11	M3×0.5 thru	6	5	8.5	33	25	19	8	3.5	7	4.5

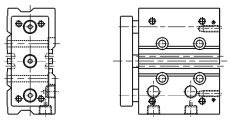
Code / Tube I.D.	O	P	Q	R	S	TA	UN	XB	ZA
6	2	20.5	3.3	14.5	6	12	ø6.2×0.5	M3×0.5×5	ø1.2
10	3	23	4.3	17	7.5	15	ø8×0.5	M4×0.7×5	ø2

PCGS series (ø12 ~ ø63)

Features

Proven track record in manufacturing precision guided cylinders.
Multi-Ports as standard enabling two direction mounting option.
Flush fitting sensors.
Inbuilt high density rubber pad absorbs energy at the end of stroke.
Magnetic as standard

■ Specification

Model	PCGS		
			
Acting type	Double acting		
Tube I.D. (mm)	12,16	20,25,32,40	50,63
Port size	M5×0.8	Rc1/8	Rc1/4
Medium	Air		
Operating perssure range	0.1~1 MPa		
Proof pressure	1.5 MPa		
Ambient temperature	-5~+60° C (No freezing)		
Cushion	With rubber cushion pad		
Available speed range	50~500 mm/sec		
Lubrication	Not required		
Sensor switch	RCE, RCE1, RDEP		

Order form (Example)

PCGS - 03 - 12 - 50 - 20 - G

- PCGS → Model
- 03 → ① Purpose Type of bearing
- 12 → Tube I.D.
- 50 → Stroke
- 20 → Adjust Stroke (for 07, 27 type)
- G → ② Port Thread

① Purpose / Type of bearing

Code	Purpose / Type of bearing
03	Stop / Slide bush
07	Stop / Slide bush / Stroke adjustable
23	Push / Linear bearing (Could attach a table for the use as a lifter)
27	Push / Linear bearing / Stroke adjustable (Could attach a table for the use as a lifter)

① Port Thread

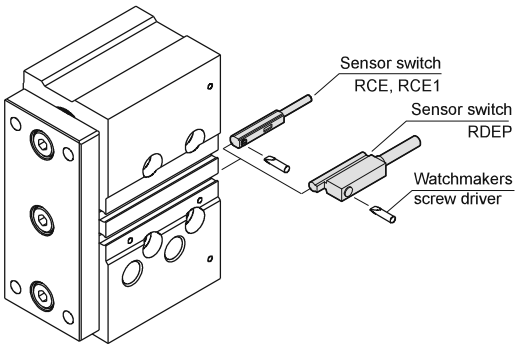
Blank	M5x0.8 (for ø12, ø16)
Blank	Rc thread
G	G thread
NPT	NPT thread (for ø12, ø16)

■ Table for standard stroke

Series variety (Bearing type)	Tube I.D.	Stroke (mm) 10	20	25	30	40	50	75	100	125	150	175	200	250	300	350	400
PCGS-03 PCGS-07 (Slide bush)	ø12	■	■		■	■	■	■	■	■	■	■	■	■			
	ø16	■	■		■	■	■	■	■	■	■	■	■	■			
	ø20		■		■	■	■	■	■	■	■	■	■	■	■	■	■
	ø25		■		■	■	■	■	■	■	■	■	■	■	■	■	■
	ø32*			■			■	■	■	■	■	■	■	■	■	■	■
	ø40			■			■	■	■	■	■	■	■	■	■	■	■
	ø50			■			■	■	■	■	■	■	■	■	■	■	■
	ø63			■			■	■	■	■	■						
PCGS-23 PCGS-27 (Linear bearing)	ø12	■	■		■	■	■	■	■	■	■	■	■	■			
	ø16	■	■		■	■	■	■	■	■	■	■	■	■			
	ø20		■		■	■	■	■	■	■	■	■	■	■	■	■	■
	ø25		■		■	■	■	■	■	■	■	■	■	■	■	■	■
	ø32*			■			■	■	■	■	■	■	■	■	■	■	■
	ø40			■			■	■	■	■	■	■	■	■	■	■	■
	ø50			■			■	■	■	■	■	■	■	■	■	■	■
	ø63			■			■	■	■	■	■						

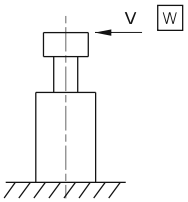
* Tube I.D. ø32: 25mm for the shortest standard stroke.

■ Installation of sensor switch



■Capacity graph

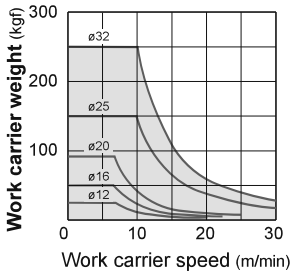
Capacity for the use as a stopper



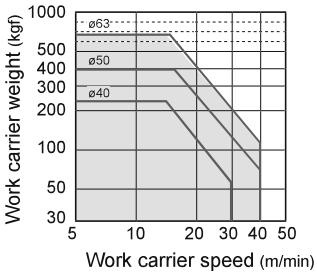
Linear bearing type is not available as a stopper.

■Stop capacity

PCGS–03/07 ...30st ø12~ø32

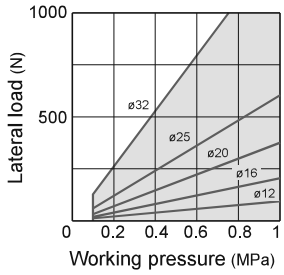


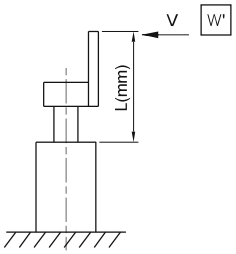
PCGS–03/07 ...25st ø40~ø63



■Normal lateral load

PCGS–03/07 ...30st





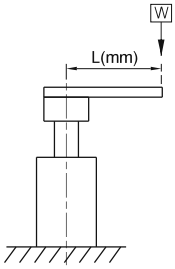
$$W = W' \times \frac{L}{l}$$

For the use of attaching a plate to the link bar, choose a bore size referring to the formula below.

W : The maximum weight of the work carrier in the above graph for the stopper's capacity.

Coefficients for conversion

Tube I.D.	l
ø12	40
ø16	42
ø20	42
ø25	42
ø32	44
ø40	72
ø50	78
ø63	78



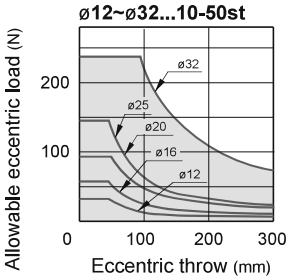
Capacity for the use as a lifter

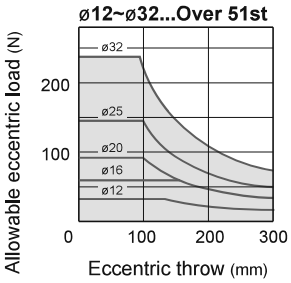
Allowable eccentricity load for the use as a lifter (at supply pressure 0.5 MPa)

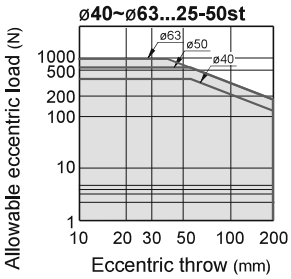
Show the dynamic allowable value at L(mm) eccentricity from the center of the guide rod.

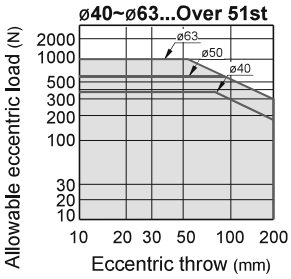
■Slide bush

PCGS–03/07



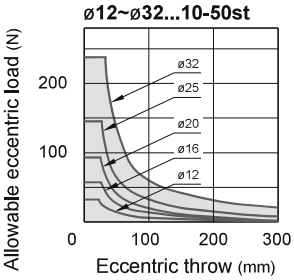


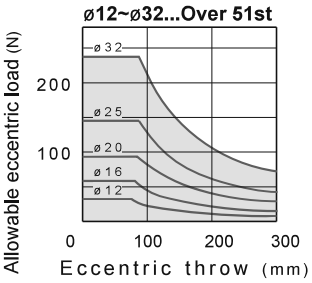


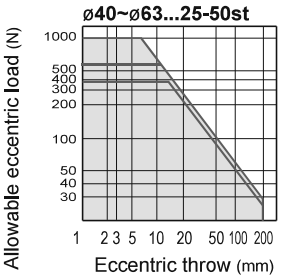


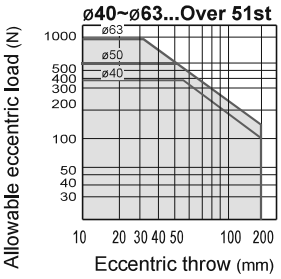
■Linear bearing

PCGS–23/27

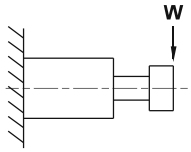








■ Capacity table Allowable lateral load

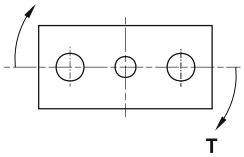


Shows the dynamic allowable value, when actuating the cylinder with lateral load W at the guide rods' top (vertical load against the guide rods).

Unit: N

Tube I.D.	Bearing type	Stroke (mm)															
		10	20	25	30	40	50	75	100	125	150	175	200	250	300	350	400
ø12	Slide bush	31	24	—	19	16	13	37	31	15	13	12	10	9	—	—	—
	Linear bearing	23	17	—	14	34	30	23	19	12	11	9	8	6	—	—	—
ø16	Slide bush	50	39	—	32	27	24	54	45	27	24	21	19	16	—	—	—
	Linear bearing	36	29	—	24	59	52	40	33	20	17	15	13	10	—	—	—
ø20	Slide bush	—	51	—	44	39	35	54	46	74	66	59	54	28	24	21	19
	Linear bearing	—	43	—	36	98	87	69	57	46	40	36	32	32	27	23	20
ø25	Slide bush	—	68	—	59	52	46	72	61	98	88	79	72	53	46	41	37
	Linear bearing	—	67	—	56	148	132	105	87	70	62	55	50	42	36	30	27
ø32	Slide bush	—	—	165	—	—	129	106	90	138	123	111	101	88	77	68	61
	Linear bearing	—	—	104	—	—	74	165	138	114	100	90	81	66	56	48	42
ø40	Slide bush	—	—	203	—	—	164	182	159	142	127	190	174	150	132	118	106
	Linear bearing	—	—	113	—	—	78	129	106	130	114	106	95	78	67	58	50
ø50	Slide bush	—	—	296	—	—	245	273	241	216	195	190	174	150	132	118	106
	Linear bearing	—	—	120	—	—	83	178	148	148	129	106	95	78	67	58	50
ø63	Slide bush	—	—	296	—	—	245	273	241	216	195	—	—	—	—	—	—
	Linear bearing	—	—	117	—	—	81	176	145	145	126	—	—	—	—	—	—

■ Allowable rotating torque

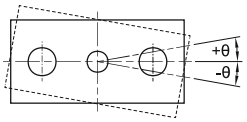


Shows the dynamic allowable value, when actuating the cylinder with a rotating torque T at the guide rods' top.

Unit: N.m

Tube I.D.	Bearing type	Stroke (mm)															
		10	20	25	30	40	50	75	100	125	150	175	200	250	300	350	400
ø12	Slide bush	0.64	0.48	—	0.39	0.32	0.28	0.75	0.63	0.15	0.13	0.12	0.11	0.09	—	—	—
	Linear bearing	0.47	0.35	—	0.29	0.71	0.62	0.40	0.38	0.13	0.11	0.09	0.08	0.07	—	—	—
ø16	Slide bush	1.14	0.90	—	0.74	0.63	0.55	1.23	1.04	0.31	0.27	0.24	0.22	0.18	—	—	—
	Linear bearing	0.84	0.66	—	0.54	1.35	1.19	0.93	1.76	0.23	0.19	0.17	0.15	0.12	—	—	—
ø20	Slide bush	—	1.14	—	1.21	1.07	0.95	1.49	1.25	2.03	1.81	1.63	1.48	0.37	0.32	0.29	0.26
	Linear bearing	—	1.19	—	0.99	2.69	2.40	1.89	1.56	1.26	1.10	0.98	0.88	0.43	0.36	0.31	0.27
ø25	Slide bush	—	2.19	—	1.88	1.65	1.47	2.31	1.94	3.15	2.80	2.52	2.30	0.85	0.74	0.66	0.59
	Linear bearing	—	2.14	—	1.79	4.74	4.22	3.36	2.78	2.25	1.98	1.76	1.59	0.68	0.57	0.49	0.42
ø32	Slide bush	—	—	6.61	—	—	5.16	4.23	3.59	5.52	4.93	4.45	4.06	1.72	1.50	1.33	1.20
	Linear bearing	—	—	4.17	—	—	2.95	6.60	5.52	4.56	4.02	3.59	3.24	1.29	1.09	0.94	0.82
ø40	Slide bush	—	—	7.00	—	—	5.66	6.27	5.48	4.87	4.38	5.21	4.79	4.13	3.63	3.23	2.92
	Linear bearing	—	—	5.24	—	—	4.25	7.19	6.33	7.81	7.11	2.93	2.61	2.16	1.83	1.58	1.39
ø50	Slide bush	—	—	13.0	—	—	10.8	12.0	10.6	9.50	8.60	5.88	5.41	4.66	4.09	3.65	3.29
	Linear bearing	—	—	7.02	—	—	5.76	12.3	10.9	11.2	10.2	3.30	2.94	2.43	2.06	1.78	1.57
ø63	Slide bush	—	—	14.7	—	—	12.1	13.5	12.0	10.7	9.69	—	—	—	—	—	—
	Linear bearing	—	—	7.77	—	—	3.35	13.7	12.2	12.5	11.4	—	—	—	—	—	—

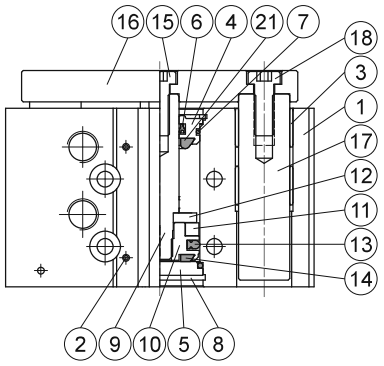
■ Anti-roll accuracy



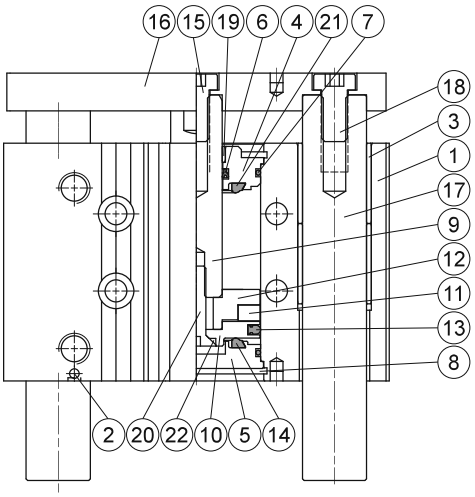
- The values are the deflection angle against the piston rod.
- Exclusive factor of the guide rod' s deflection.

Tube I.D.	Bearing type	Anti-roll accuracy
		θ
ø12	Slide bush	±0.09°
	Linear bearing	±0.06°
ø16	Slide bush	±0.08°
	Linear bearing	±0.06°
ø20	Slide bush	±0.08°
	Linear bearing	±0.03°
ø25	Slide bush	±0.07°
	Linear bearing	±0.05°
ø32	Slide bush	±0.07°
	Linear bearing	±0.03°
ø40	Slide bush	±0.06°
	Linear bearing	±0.08°
ø50	Slide bush	±0.05°
	Linear bearing	±0.06°
ø63	Slide bush	±0.05°
	Linear bearing	±0.06°

ø12~ø32



ø40~ø63



■ Material

No.	Tube I.D. / Part name	12	16	20	25	32	40	50	63	Q'y	Repair kits (inclusion)
1	Body	Aluminum alloy								1	
2	Ball	Stainless steel								1	
3	Slide bush	Bronze alloy						Bearing alloy		4	
4	Rod cover	Aluminum alloy								1	
5	Head cover	(*)	Carbon steel				Aluminum alloy			1	
6	Rod packing	NBR								1	●
7	Cover ring	NBR								2	●
8	Snap ring	Spring steel								2	
9	Piston rod	Stainless steel			Carbon steel					1	
10	Piston	Aluminum alloy								1	
11	Magnet ring	Magnet material								1	
12	Magnet holder	Stainless steel					Aluminum alloy			1	
13	Piston packing	NBR								1	●
14	Head cushion	NBR								1	●
15	Bolt	SCM								1	
16	Plate	Carbon steel								1	
17	Guide rod	Carbon steel								2	
18	Screw	SCM								2	
19	Rod bush	—					Bearing alloy			1	
20	Piston bolt	—					SCM			1	
21	Rod cushion	NBR								1	●
22	Piston gasket	—					NBR			1	●

* Aluminum alloy

■ Order example of repair kits

Tube I.D.	Repair kits
ø 12	PS-PCGS-12
ø 16	PS-PCGS-16
ø 20	PS-PCGS-20
ø 25	PS-PCGS-25
ø 32	PS-PCGS-32
ø 40	PS-PCGS-40
ø 50	PS-PCGS-50
ø 63	PS-PCGS-63

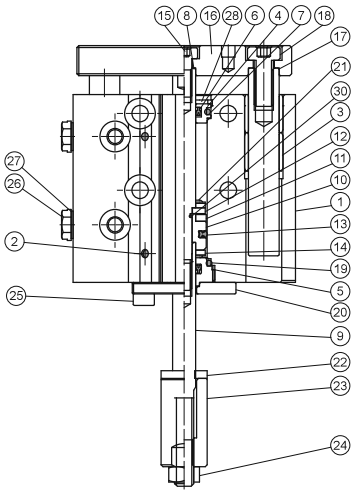
■ Cylinder weight

Unit: g

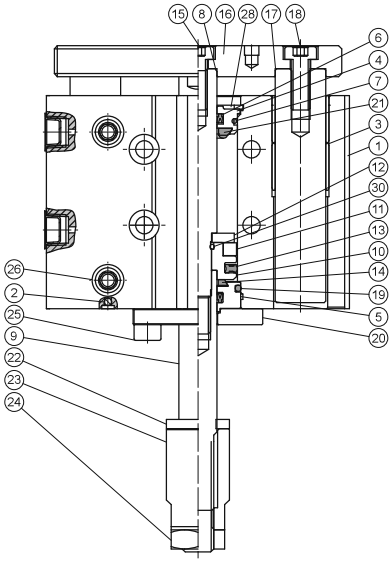
Model	Basic weight PCGS-03	Stroke 5mm PCGS-03
Tube I.D.		
ø 12	191	21
ø 16	283	28
ø 20	450	45
ø 25	670	63
ø 32	1,210	90
ø 40	1,474	88
ø 50	2,540	140
ø 63	3,295	151

PCGS-07 Inside structure & Parts list

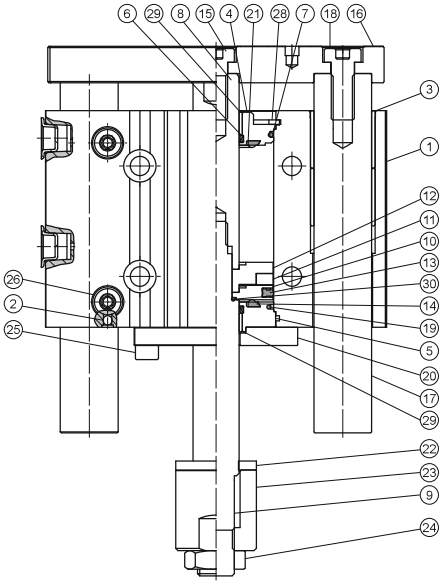
ø12~ø16



ø20~ø32



ø40~ø63



■ Material

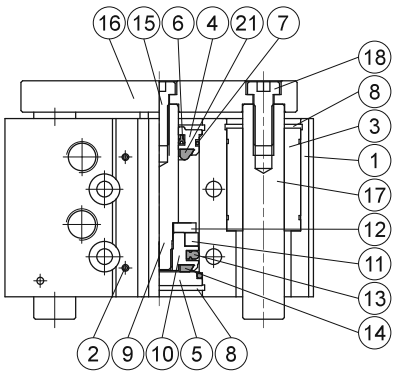
No.	Tube I.D. / Part name	12	16	20	25	32	40	50	63	Q'y	Repair kits (inclusion)
1	Body	Aluminum alloy								1	
2	Ball	Stainless steel								1~3	
3	Slide bush	Bronze alloy						Bearing alloy		4	
4	Rod cover #1	Aluminum alloy								1	
5	Rod cover #2	Aluminum alloy								1	
6	Rod packing	NBR								2	●
7	Cover ring #1	NBR								1	●
8	Piston rod #1	Stainless steel			Carbon steel					1	
9	Piston rod #2	Stainless steel			Carbon steel					1	
10	Piston	Aluminum alloy								1	
11	Magnet ring	Magnet material								1	
12	Magnet holder	Stainless steel					Aluminum alloy			1	
13	Piston packing	NBR								1	●
14	Head cushion	NBR								1	●
15	Bolt	SCM								1	
16	Plate	Carbon steel								1	
17	Guide rod	Carbon steel								2	
18	Bolt	SCM								2	
19	Cover ring #2	NBR								1	●
20	FBC board	Carbon steel								1	
21	Rod cushion	NBR								1	●
22	Gasket	PU								1	
23	Adjustable nut	Carbon steel								1	
24	Nut	Carbon steel								1	
25	Bolt	Stainless steel			SCM					2	
26	Screw	Bronze alloy			Carbon steel (*)					2	
27	Washer	PET			—					2	
28	Snap ring	Spring steel								1	
29	Bush	—					Bearing alloy			2	
30	Piston gasket	NBR								1	●

■ Order example of repair kits

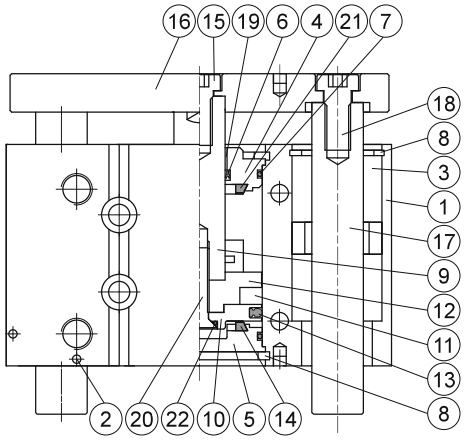
Tube I.D.	Repair kits
ø 12	PS-PCGS-2-12
ø 16	PS-PCGS-2-16
ø 20	PS-PCGS-2-20
ø 25	PS-PCGS-2-25
ø 32	PS-PCGS-2-32
ø 40	PS-PCGS-2-40
ø 50	PS-PCGS-2-50
ø 63	PS-PCGS-2-63

* The material changes into bronze alloy when the part thread is BSPF. (JISPF)

ø20~ø32



ø40~ø63



■ Material

No.	Tube I.D. / Part name	12	16	20	25	32	40	50	63	Q'y	Repair kits (inclusion)
1	Body	Aluminum alloy								1	
2	Ball	Stainless steel								1	
3	Linear bearing	—								2 or 4	
4	Rod cover	Aluminum alloy								1	
5	Head cover	(*)	Carbon steel				Aluminum alloy			1	
6	Rod packing	NBR								1	●
7	Cover ring	NBR								2	●
8	Snap ring	Spring steel								2	
9	Piston rod	Stainless steel			Carbon steel					1	
10	Piston	Aluminum alloy								1	
11	Magnet ring	Magnet material								1	
12	Magnet holder	Stainless steel					Aluminum alloy			1	
13	Piston packing	NBR								1	●
14	Head cushion	NBR								1	●
15	Bolt	SCM								1	
16	Plate	Carbon steel								1	
17	Guide rod	Special steel								2	
18	Screw	SCM								2	
19	Rod bush	—					Bearing alloy			1	
20	Piston bolt	—					SCM			1	
21	Rod cushion	NBR								1	●
22	Piston gasket	—					NBR			1	●

* Aluminum alloy

■ Order example of repair kits

Tube I.D.	Repair kits
ø 12	PS-PCGS-12
ø 16	PS-PCGS-16
ø 20	PS-PCGS-20
ø 25	PS-PCGS-25
ø 32	PS-PCGS-32
ø 40	PS-PCGS-40
ø 50	PS-PCGS-50
ø 63	PS-PCGS-63

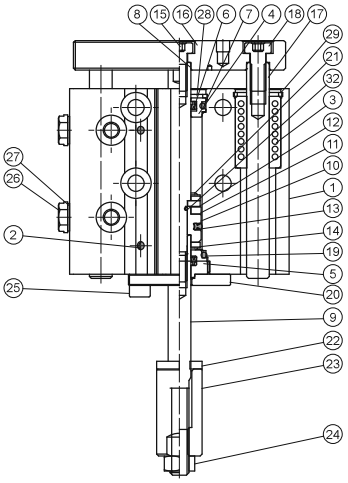
■ Cylinder weight

Unit: g

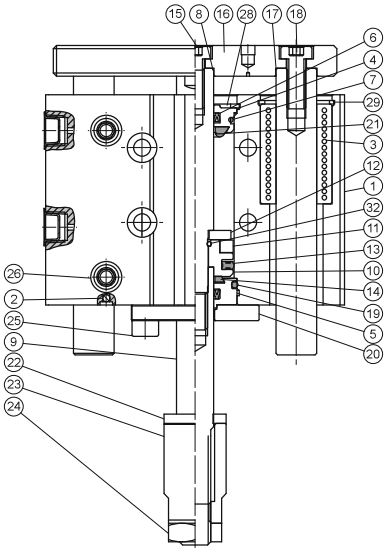
Model	Basic weight PCGS-23	Stroke 5mm PCGS-23
Tube I.D.		
ø 12	211	18
ø 16	260	30
ø 20	470	45
ø 25	740	60
ø 32	1,170	85
ø 40	1,300	98
ø 50	2,360	150
ø 63	3,010	168

PCGS-27 Inside structure & Parts list

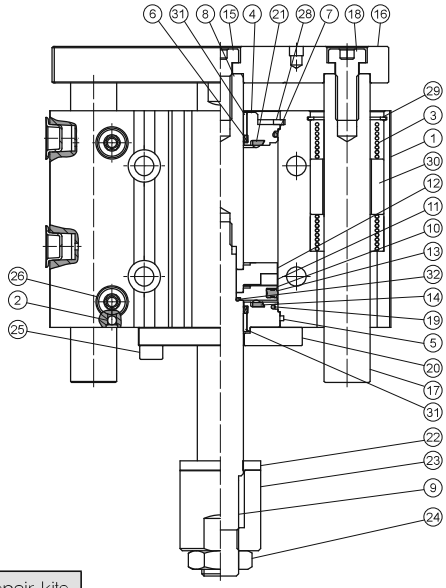
ø12~ø16



ø20~ø32



ø40~ø63



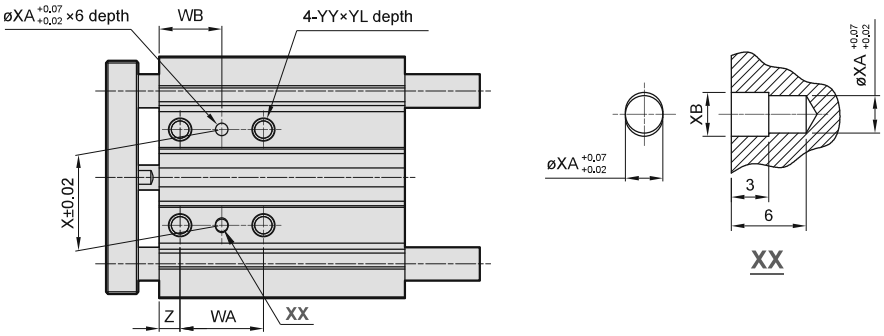
■ Material

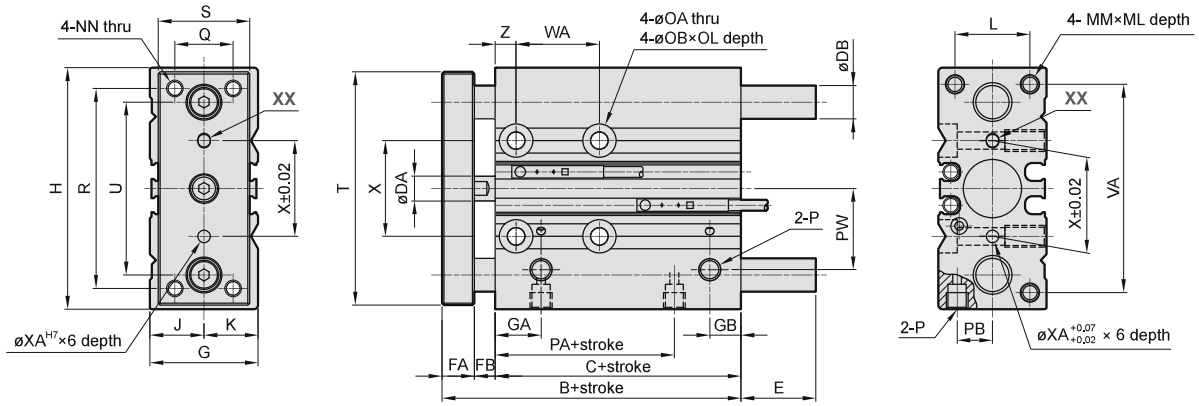
No.	Tube I.D. / Part name	12	16	20	25	32	40	50	63	Q'y	Repair kits (inclusion)
1	Body	Aluminum alloy								1	
2	Ball	Stainless steel								1~3	
3	Linear bearing	—								2 or 4	
4	Rod cover #1	Aluminum alloy								1	
5	Rod cover #2	Aluminum alloy								1	
6	Rod packing	NBR								2	●
7	Cover ring #1	NBR								1	●
8	Piston rod #1	Stainless steel			Carbon steel					1	
9	Piston rod #2	Stainless steel			Carbon steel					1	
10	Piston	Aluminum alloy								1	
11	Magnet ring	Magnet material								1	
12	Magnet holder	Stainless steel					Aluminum alloy			1	
13	Piston packing	NBR								1	●
14	Head cushion	NBR								1	●
15	Bolt	SCM								1	
16	Plate	Carbon steel								1	
17	Guide rod	Special steel								2	
18	Bolt	SCM								2	
19	Cover ring #2	NBR								1	●
20	FBC board	Carbon steel								1	
21	Rod cushion	NBR								1	●
22	Gasket	PU								1	
23	Adjustable nut	Carbon steel								1	
24	Nut	Carbon steel								1	
25	Bolt	Stainless steel			SCM					2	
26	Screw	Bronze alloy			Carbon steel (*2)					2	
27	Washer	PET			—					2	
28	Snap ring #1	Spring steel								1	
29	Snap ring #2	Spring steel								2	
30	Collar (*1)	Aluminum alloy			Carbon steel					2	
31	Bush	—					Bearing alloy			2	
32	Piston gasket	NBR								1	●

■ Order example of repair kits

Tube I.D.	Repair kits
ø 12	PS-PCGS-2-12
ø 16	PS-PCGS-2-16
ø 20	PS-PCGS-2-20
ø 25	PS-PCGS-2-25
ø 32	PS-PCGS-2-32
ø 40	PS-PCGS-2-40
ø 50	PS-PCGS-2-50
ø 63	PS-PCGS-2-63

*1. Use for stroke 101 or more.
*2. The material changes into bronze alloy when the part thread is BSPF. (JISPF)





PCGS-03 / PCGS-23

Code / Tube I.D.	B	C	DA	DB 03 type	DB 23 type	FA	FB	G	GA	GB	H	J	K	L	MM	ML	NN	OA	OB	OL	P	PA	PB
12	42	29	6	8	6	8	5	26	11	15(*1)	58	13	13	18	M4×0.7	10	M4×0.7	4.3	8.0	4.5	M5×0.8	14	8.5
16	46	33	8	10	8	8	5	30	11	18(*2)	64	15	15	22	M5×0.8	12	M5×0.8	4.3	8.0	4.5	M5×0.8	15	10.0
20	53	37	10	12	10	10	6	36	10.5	8.5	85	17	19	24	M5×0.8	13	M5×0.8	5.2	9.5	5.5	Rc1/8	12.5	11.5
25	53.5	37.5	12	16	13	10	6	42	11.5	9	96	21	21	30	M6×1.0	15	M6×1.0	5.2	9.5	5.5	Rc1/8	12.5	13.5
32	59.5	37.5	16	20	16	12	10	51	12.5	9	116	26	25	34	M8×1.25	20	M8×1.25	6.6	11.0	7.5	Rc1/8	7	16.0

Code / Tube I.D.	PW	Q	R	S	T	U	VA	X	XA	XB	YY	YL	Z
12	18	14	48	22	56	41.5	50	23	3	3.5	M5×0.8	10	5
16	19	16	54	25	62	46	56	24	3	3.5	M5×0.8	10	5
20	25	18	70	30	81	55	72	28	3	3.5	M6×1.0	12	17
25	28.5	26	78	38	91	65	82	34	4	4.5	M6×1.0	12	17
32	34	30	96	44	110	80	98	42	4	4.5	M8×1.25	16	21

Code / Tube I.D.	WA ~39st	WA 40~100st	WA 125~200st	WA 201st~300st	WA 301st~	WB 20~39st	WB 40~100st	WB 125~200st	WB 201~300st	WB 301st~
12	20	40	110	200	—	15	25	60	105	—
16	24	44	110	200	—	17	27	60	105	—
20	24	44	120	200	300	29	39	77	117	167
25	24	44	120	200	300	29	39	77	117	167

Code / Tube I.D.	WA 25~49st	WA 50~100st	WA 125~200st	WA 201st~300st	WA 301st~	WB 25~49st	WB 50~100st	WB 125~200st	WB 201~300st	WB 301st~
32	24	48	124	200	300	33	45	83	121	171

*1. When stroke length is equal to 19mm or less, GB=7.5 mm
*2. When stroke length is equal to 19mm or less, GB=9 mm

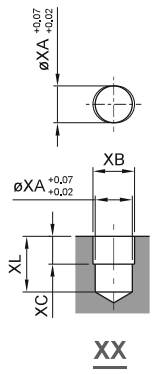
PCGS-03

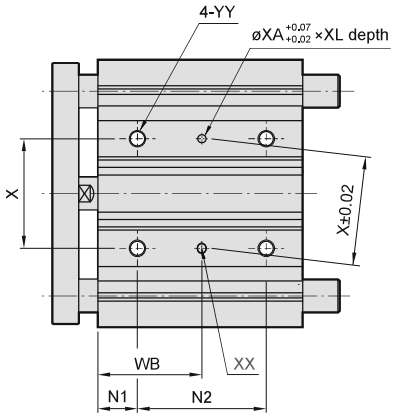
Code / Tube I.D.	E 10~50st	E 51~100st	E 101st~
12	—	18.5	43
16	—	18.5	49
	10~50st	51~200st	201st~
20	—	31.5	69
25	—	31.5	68.5
32	37.5	42.5	80.5

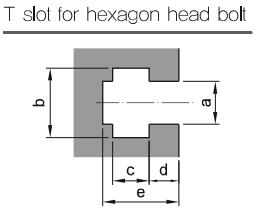
PCGS-23

Code / Tube I.D.	E 10~30st	E 31~100st	E 101st~	
12	1	13	43	
16	3	19	49	
	20~30st	31~100st	101~200st	201st~
20	10	27	51	69
25	16	32	51	68.5
32	21.5	38.5	58.5	80.5

PCGS-03/23 Dimensions ø 40~ ø 63

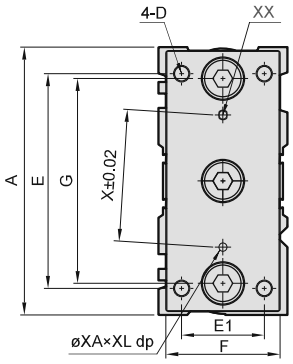


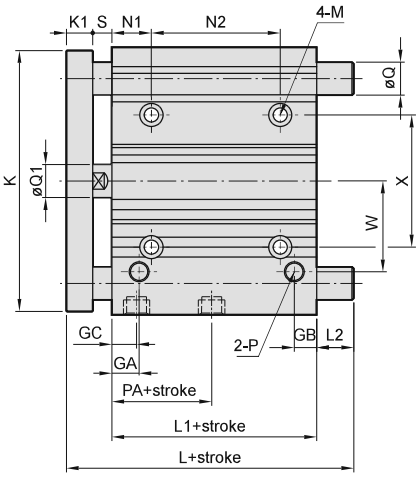


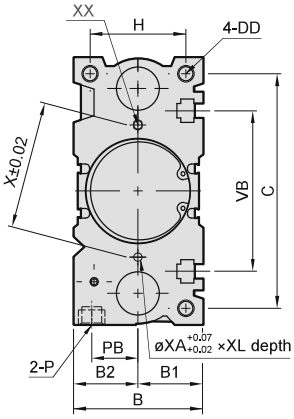


T slot for hexagon head bolt

Code / Tube I.D.	a	b	c	d	e
40	6.5	10.5	5.5	4	11
50	8.5	13.5	7.5	4.5	13.5
63	11	17.8	10	7	18.5







PCGS-03 / PCGS-23

Code / Tube I.D.	A	B	B1	B2	C	D	DD	E	E1	F	G	GA	GB	GC	H	K	K1	L1	M	N1	P
40	120	54	27	27	106	M8×1.25	M8×1.25×20 dp	104	30	44	86	14	10	14	40	118	12	44	ø6.6thru, ø11×7.5dp	22	Rc1/8
50	148	64	32	32	130	M10×1.5	M10×1.5×22 dp	130	40	60	110	14	11	12	46	146	16	44	ø8.6thru, ø14×9dp	24	Rc1/4
63	162	78	39	39	142	M10×1.5	M10×1.5×22 dp	130	50	70	124	16.5	13.5	16.5	58	158	16	49	ø8.6thru, ø14×9dp	24	Rc1/4

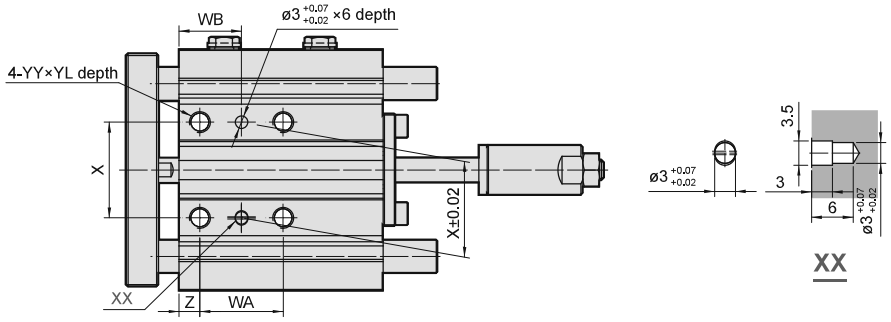
Code / Tube I.D.	PA	PB	Q1	S	VB	W	X	XA	XB	XC	XL	YY	N2					WB				
													25st	50,75,100st	101st~200st	201~300st	301~400st	25st	50,75,100st	101st~200st	201~300st	301~400st
40	13	18	16	10	72	38	50	4	4.5	3	6	M8×1.25×16 dp	24	48	124	200	300	34	46	84	122	172
50	9	21.5	20	12	92	47	66	5	6	4	8	M10×1.5×20 dp	24	48	124	200	300	36	48	86	124	174
63	14	28	20	12	110	55	80	5	6	4	8	M10×1.5×20 dp	28	52	128	—	—	38	50	88	—	—

PCGS-03

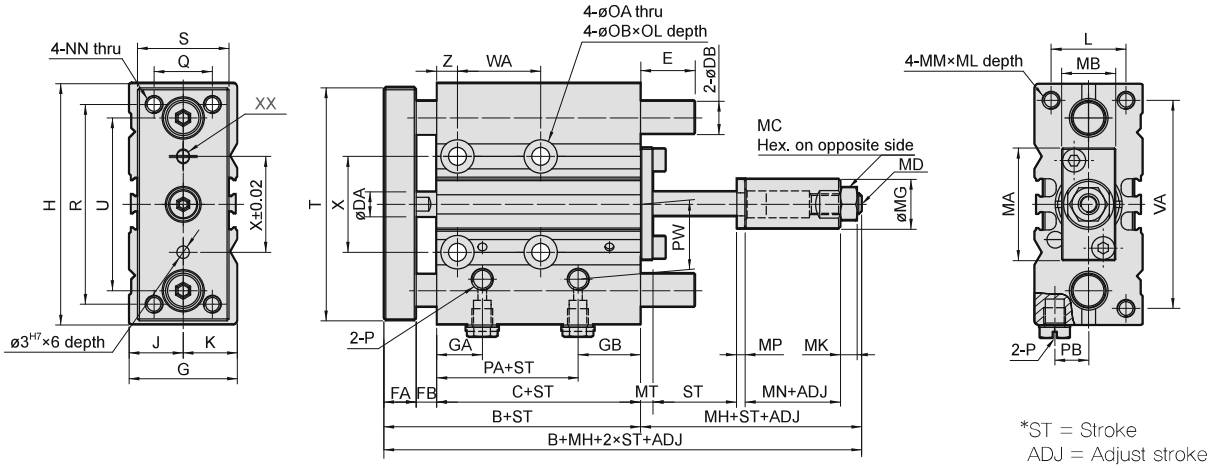
Code / Tube I.D.	L		L2			Q
	25,50st	51st~	25,50st	51~200st	201~400st	
40	97	102	31	36	63.5	ø20
50	106.5	118	34.5	46	78.5	ø25
63	106.5	118	29.5	41	—	ø25

PCGS-23

Code / Tube I.D.	L			L2				Q
	25,50st	75,100st	101st~	25,50st	75,100st	101~200st	201~400st	
40	81	98	118	15	32	52	72.5	ø16
50	93	114	134	21	42	62	87.5	ø20
63	93	114	134	16	37	57	—	ø20



Back side



*ST = Stroke
ADJ = Adjust stroke

PCGS-07 / PCGS-27

Code / Tube I.D.	B	C	DA	DB 07 type	DB 27 type	FA	FB	G	GA	GB	H	J	K	L	MA	MB	MC	MD	MG	MH	MK	MN	MM	ML	MP	MT
12	42	29	6	8	6	8	5	26	11	15(*1)	58	13	13	18	27	13	8	M5×0.8	12	23	4	13	M4×0.7	10	2	3
16	46	33	8	10	8	8	5	30	11	18(*2)	64	15	15	22	28	16	10	M6×1.0	15	26	5	15	M5×0.8	12	2	3
20	53	37	10	12	10	10	6	36	10.5	8.5	85	17	19	24	33	22	13	M8×1.25	20	26	5	12	M5×0.8	13	3	4

Code / Tube I.D.	NN	OA	OB	OL	P	PA	PB	PW	Q	R	S	T	U	VA	X	YY	YL	Z
12	M4×0.7	4.3	8	4.5	M5×0.8	14	8.5	18	14	48	22	56	41.5	50	23	M5×0.8	10	5
16	M5×0.8	4.3	8	4.5	M5×0.8	15	10.0	19	16	54	25	62	46	56	24	M5×0.8	10	5
20	M5×0.8	5.2	9.5	5.5	Rc1/8	12.5	11.5	25	18	70	30	81	55	72	28	M6×1.0	12	17

Code	WA					WB				
Tube I.D.	10~39st	40~100st	125~200st	201st~300st		10~39st	40~100st	125~200st	201st~300st	
12	20	40	110	200		15	25	60	105	
16	~39st	40~100st	125~200st	201st~300st		~39st	40~100st	125~200st	201st~300st	
	24	44	110	200		17	27	60	105	
20	~39st	40~100st	125~200st	201st~300st	301st~	~39st	40~100st	125~200st	201st~300st	301st~
	24	44	120	200	300	29	39	77	117	167

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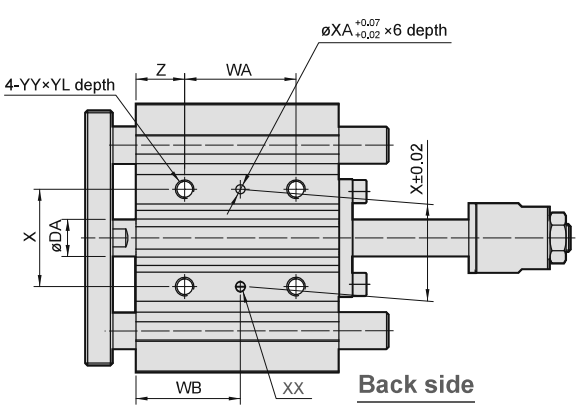
Code / Tube I.D.	E		
	~50st	51~100st	101st~
12	0	18.5	43
16	10~50st	51~100st	101st~
	0	18.5	49
20	~50st	51~200st	201st~
	0	31.5	69

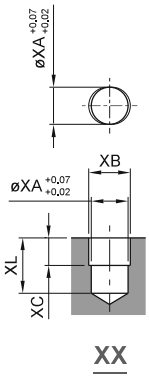
PCGS-27

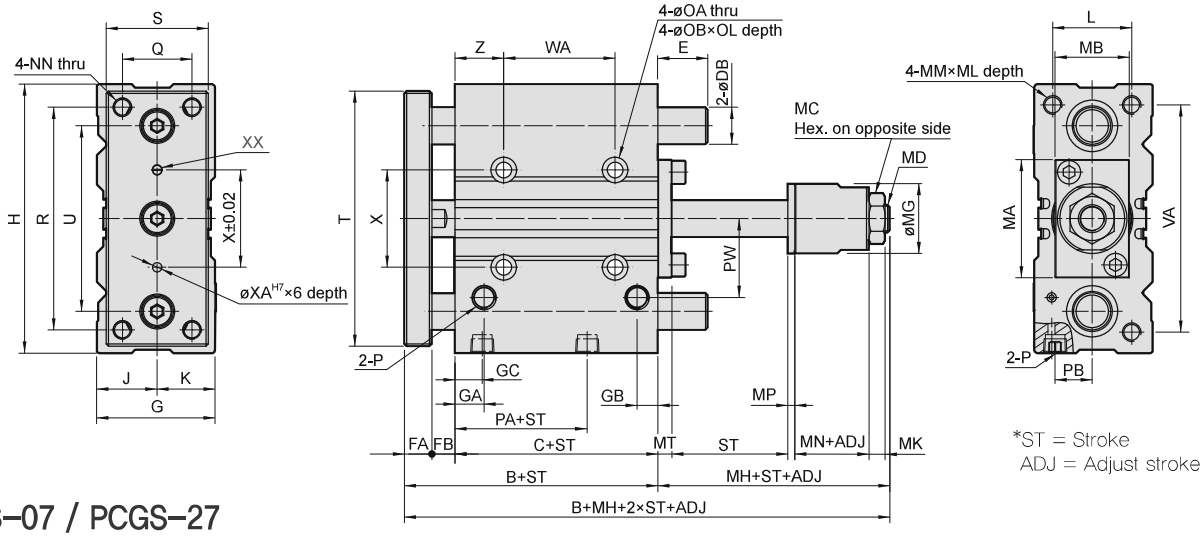
Code / Tube I.D.	E			
	~30st	31~100st	101st~	
12	1	13	43	
16	10~30st	31~100st	101st~	
	3	19	49	
20	20~30st	31~100st	101~200st	201st~
	10	27	51	69

*1. When stroke length is equal to 19mm or less, GB=7.5 mm
*2. When stroke length is equal to 19mm or less, GB=9 mm

PCGS-07/27 Dimensions ø 25~ ø 63







*ST = Stroke
ADJ = Adjust stroke

PCGS-07 / PCGS-27

Code / Tube I.D.	B	C	DA	DB 07 type	DB 27 type	FA	FB	G	GA	GB	GC	H	J	K	L	MA	MB	MC	MD	MG	MH	MK	MN	MM	ML	MP	MT
25	53.5	37.5	12	16	13	10	6	42	11.5	9	11.5	96	21	21	30	41	25	17	M10×1.25	20	27	6	12	M6×1.0	15	3	5
32	59.5	37.5	16	20	16	12	10	51	12.5	9	12.5	116	26	25	34	51	32	19	M12×1.25	30	30	7	12	M8×1.25	20	3	6
40	66	44	16	20	16	12	10	54	14	10	14	120	27	27	40	60	32	19	M12×1.25	30	30	7	12	M8×1.25	20	3	6
50	72	44	20	25	20	16	12	64	14	11	12	148	32	32	46	71	38	24	M16×1.5	35	38	8	15	M10×1.5	22	4	8
63	77	49	20	25	20	16	12	78	16.5	13.5	16.5	162	39	39	58	84	50	24	M16×1.5	35	38	8	15	M10×1.5	22	4	8

Code / Tube I.D.	NN	OA	OB	OL	P	PA	PB	PW	Q	R	S	T	U	VA	X	XA	XB	XC	XL	YY	YL	Z
25	M6×1.0	5.2	9.5	5.5	Rc1/8	12.5	13.5	28.5	26	78	38	91	65	82	34	4	4.5	3	6	M6×1.0	12	17
32	M8×1.25	6.6	11	7.5	Rc1/8	7	16	34	30	96	44	110	80	98	42	4	4.5	3	6	M8×1.25	16	21
40	M8×1.25	6.8	11	7.5	Rc1/8	13	18	38	30	104	44	118	86	106	50	4	4.5	3	6	M8×1.25	16	22
50	M10×1.5	8.6	14	9	Rc1/4	9	21.5	47	40	130	60	146	110	130	66	5	6	4	8	M10×1.5	20	24
63	M10×1.5	8.6	14	9	Rc1/4	14	28	55	50	130	70	158	124	142	80	5	6	4	8	M10×1.5	20	24

Code	WA						WB					
Tube I.D.	~39st	40~100st		125~200st	201st~300st	301st~	~39st	40~100st		125~200st	201~300st	301st~
25	24	44		120	200	300	29	39		77	117	167
32	~49st	50~100st		125~200st	201st~300st	301st~	~49st	50~100st		125~200st	201st~300st	301st~
	24	48		124	200	300	33	45		83	121	171
40	~49st	50~69st	70~100st	125~200st	201st~300st	301st~	~49st	50~69st	70~100st	125~200st	201st~300st	301st~
	24	48	48	124	200	300	34	46	46	84	122	172
50	~49st	50~69st	70~100st	125~200st	201st~300st	301st~	~49st	50~69st	70~100st	125~200st	201st~300st	301st~
	24	48	48	124	200	300	36	48	48	86	124	174
63	~49st	50~100st		125st~			~49st	50~100st		125st~		
	28	52		128			38	50		88		

PCGS-07

Code	E		
Tube I.D.	~50st	51~200st	201st~
25	0	31.5	68.5
32	37.5	42.5	80.5
40	31	36	63.5
50	34.5	46	78.5
63	~50st	51st~	
	29.5	41	

PCGS-27

Code	E			
Tube I.D.	20~30st	31~100st	101~200st	201st~
25	16	32	51	68.5
32	20~50st	51~100st	101~200st	201st~
	21.5	38.5	58.5	80.5
40	~69st	70~100st	101~200st	201st~
	15	32	52	72.5
50	21	42	62	87.5
63	~69st	70~100st	101st~	
	16	37	57	