

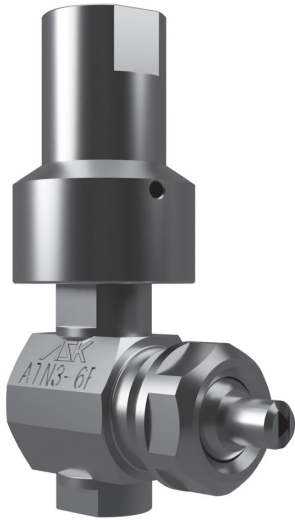
# Turning spray nozzle

For cleaning walls inside processing room and preventing chip accumulation!  
For agitating chips and sludge accumulated at the bottom of the tank!

ATN

RoHS Patent No.6557885

For countermeasures of troubles “accumulation of chips and sludge” in machining chambers and cutting fluid tanks. Patent No. 6557885 obtained. You can see various videos of turning spray nozzle on our website.



- No power required. Since it rotates 360° due to the reaction force of the jet, a single nozzle can be used to remove chips over a wide area and agitate the inside of a tank.
  - By changing the angle of the injection nozzle, the turning speed and direction can be adjusted.
  - It is an energy-saving design that turns at low pressure and small flow rate.
  - Simple structure that is hard to clog. It can be disassembled and cleaned while piping.
  - In addition to the wall surface, we have a sales record in areas around automatic door, jig piping, vices, etc.
- It can also contribute to improving production capacity and reducing labor costs by eliminating troubles of door opening/closing and abnormal seating conditions of workpieces, and shortening daily cleaning time.

## Description

**ATN 3 - 6 F**

① ② ③ ④

①	Model	ATN	Turning spray nozzle		
②	Screw type	3	3 : Rc3/8		
③	The division of injection flow rate	6	6L/min(Cleaning inside processing room)	※ At differential pressure 0.1MPa (For details, see the characteristic diagram.)	
			8L/min(Agitating inside tank)		
④	Purpose of use	F	Cleaning inside processing room		
		FT	Agitating inside tank		

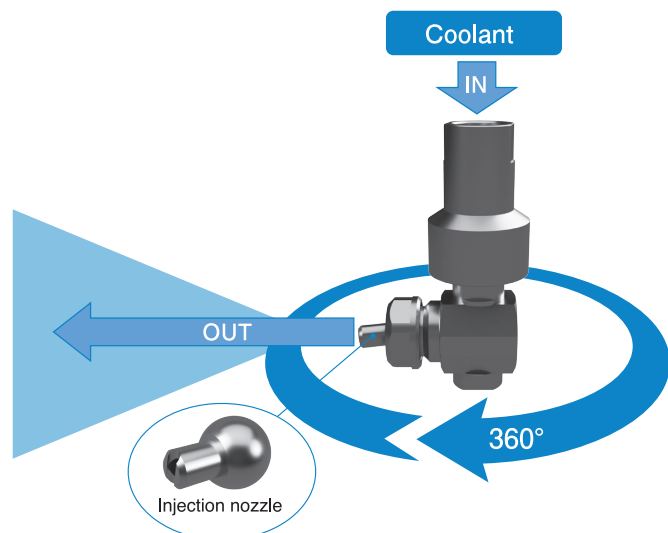
## Specification

Model	ATN3-6F	ATN3-6FT
Purpose of use	Cleaning inside processing room	Agitating inside tank
Max. operating pressure	2.5MPa	2.5MPa
Withstand voltage	4MPa	4MPa
Recommended cleaning target distance	Within 0.7 m ( ※ )	Within 0.25 m
Recommended number of rotations	4 ~ 10rpm	40 ~ 120rpm
Recommended flow rate	6L/min or more (Differential pressure 0.1MPa or more)	8L/min or more (Differential pressure 0.1MPa or more)
Recommended pipe diameter	Effective inner diameter $\phi$ 7 or more	Effective inner diameter $\phi$ 8 or more
Main material of wetted part	SUS304,SUS303,SUS440C, FKM,NBR,UHMW	
Weight	320g	

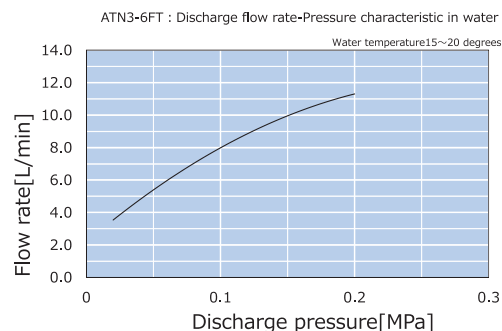
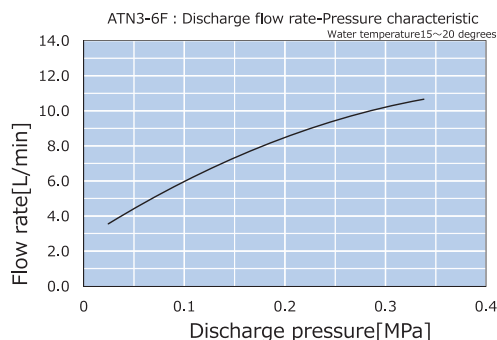
※ We have an optional specification which is available for cleaning longer distances. Please contact us for more information.

## Operation principle

It turns 360 degrees using the horizontal swing angle of the injection nozzle and the reaction force generated from the coolant injection.

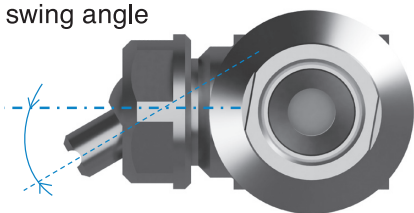


## Discharge flow rate – Pressure characteristics



## Angle adjustment of injection nozzle

### Horizontal swing angle

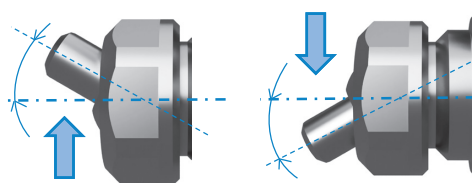


Relationship between the horizontal angle of the injection nozzle and the turning speed

Swing angle (maximum 30 degrees)	Low	High
Turning speed	Slow	High speed

※ If the horizontal angle of the injection nozzle is turned to the opposite side, it rotates in the opposite direction.

### Vertical swing angle



It is possible to make an angle in the vertical direction.(maximum 30 degrees)

## Adjustment method of turning speed



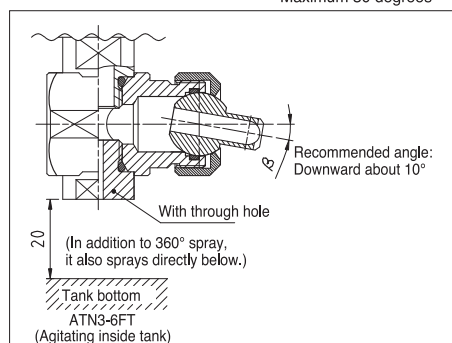
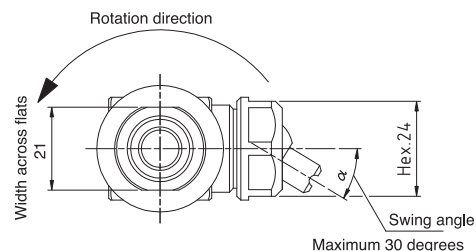
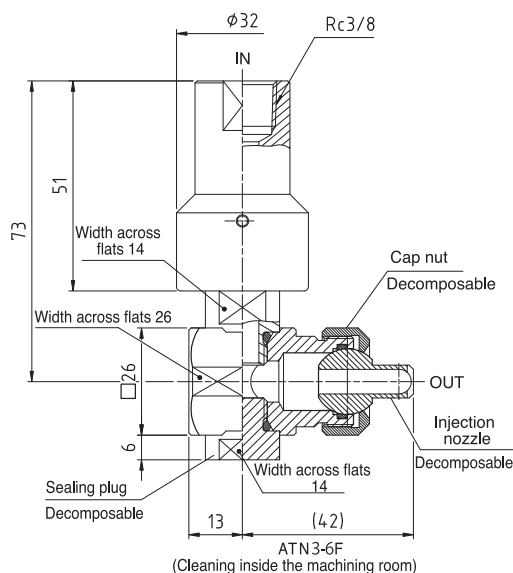
You can check the video of adjustment method from QR code or following URL.

URL : <https://youtu.be/DZyp7BEMuCY>

The turning speed changes depending on the combination of "Discharge flow rate · Pressure" and "Horizontal angle of injection nozzle".

If you adjust the speed, it will be easier to adjust if a ball valve is installed just before the nozzle.

## Dimension

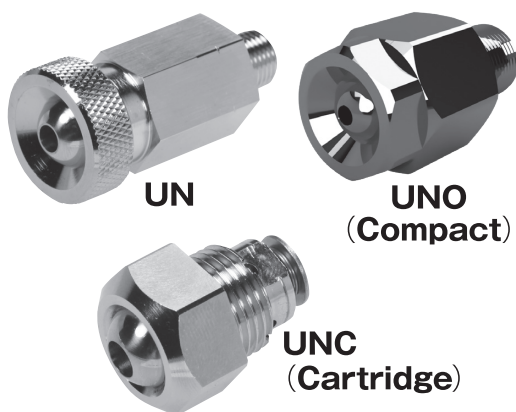


# Universal nozzle for coolant

Stop of coolant dripping! Nozzle with check valve that can be disassembled and cleaned!

# UN/UNC

RoHS

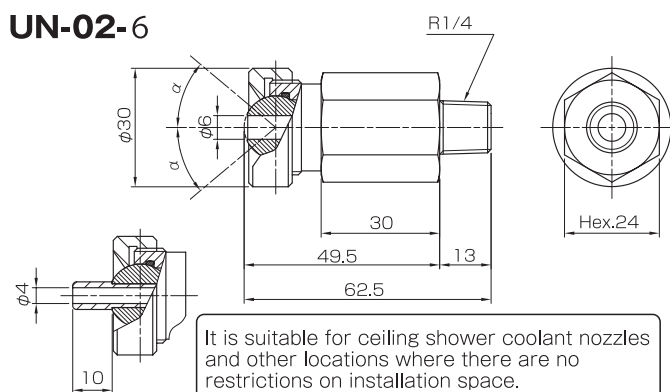


- A universal nozzle has a check valve inside. Immediately when a coolant pump is stopped, dripping of coolant from a nozzle is suspended. It is reduction of work time.
- Should a nozzle be clogged with chips, you can disassemble and clean it from the nozzle side.
- You can manually move a nozzle freely 80 degrees in all directions. (UNO: 90 degrees)
- Clean working environment without coolant splash.
- Effective for a ceiling shower coolant nozzle of a machining center.
- A type of nozzle with a branch is available, whose nozzle end is long for correctly shooting coolant at a work machining spot.

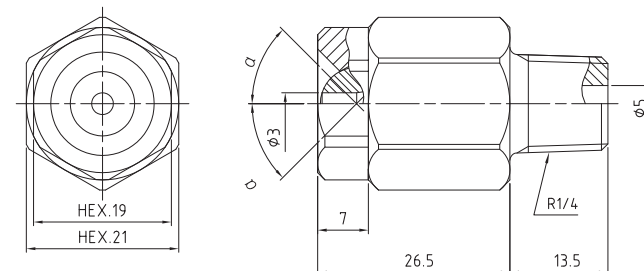
## Specification

Model	UN	UNO	UNC
Screw type	R1/4		M18 × 1.5
Sealing type	Taper screw type		Copper packing type
Nozzle diameter	Φ 6	Φ 3	Φ 6
	Φ 4 (With a branch)		Φ 4 (With a branch)
Nozzle swivel angle (α)	± 40°	± 45°	± 40°
	With a branch : ± 30°		With a branch : ± 30°
Weight	150g	80g	60g
Max.pressure	7 MPa	1 MPa	7 MPa
Resistance	11MPa	2 MPa	11MPa
Cracking pressure	0.01MPa	0.05MPa	0.01MPa
Material	Body C3604BD (Chromium plating)		
	Check valve	SUS630	SUS303
	Others	NBR	FKM NBR
Packing material	—		C1100
Packing dimension	—		18 × 22 × 2

## Dimension



## UNO-R02-03-05



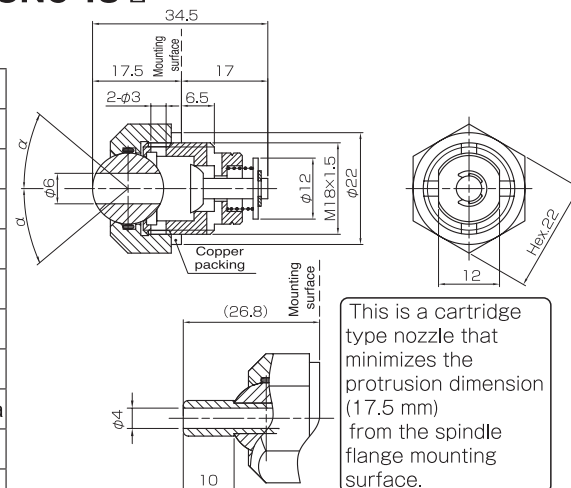
This is a small, space-saving nozzle.

## Description

### UN - 02 - 6 - 10L

		①	②	③
①	Model	UN	Universal nozzle	
		UNO	Universal nozzle(compact)	
		UNC	Universal nozzle for cartridge	
②	Screw type	UN	02	R1/4
		UNO	R02	R1/4
		UNC	18	M18 × 1.5
③	Model number	UN	6	Nozzle (inside): 6mm
			6-10L	Nozzle (inside): 4mm Branch length: 10mm
		UNO	03-05	Nozzle (inside): 3mm Cracking pressure: 0.05MPa
			6-M1	Nozzle (inside): 6mm
		UNC	6-M1-10L	Nozzle (inside): 4mm Branch length: 10mm

### UNC-18-10





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