Automatic drain

DT3000-W/DT4000-W Series

Lightweight and compact automatic drain discharger.

● Compatible compressor: 0.75 kW to 75 kW

JIS symbol 

RoHS CAD

Specifications

Item		DT3000-W	DT4000-W	DT3010-W	DT4010-W
Type		Normally open (*1)		Normally closed	
Working fluid		Drain contained in the compressed air (water or oil)			
Proof pressure	MPa	1.5 (≈220 psi, 15 bar)			
Working pressure range	MPa	0.1 (≈15 psi, 1 bar) to 1 (≈150 psi, 10 bar)		0.15 (≈22 psi, 1.5 bar) to 1 (≈150 psi, 10 bar)	
Operating ambient temperature range	℃	5 (41°F) to 60 (140°F)			
Port size	Rc,NPT,G	3/8, 1/2			
Drain outlet		Barbed nipple (soft nylon tube of ø5.7 to ø6 bore size can be connected directly)			
Weight	kg	0.3	0.45	0.3	0.45

*1: If capacity of the air compressor used is less than 0.75 kW (0.09 m^3/min or less air supply rate), use the NC.

How to order

DT3000 - 10 ( ) - W - Z - BW (White type)

- Ⓐ Model No.
- Ⓑ Port size
- Ⓒ Port thread
- Ⓓ Option
- Ⓔ Attachment *2

Code	Description
Ⓐ Model No.	
DT3000	Normally open auto-drain
DT3010	Normally closed auto-drain
DT4000	Normally open auto-drain
DT4010	Normally closed auto-drain
Ⓑ Port size	
10	3/8
15	1/2
Ⓒ Port thread	
Blank	Rc thread
N	NPT thread
G	G thread
Ⓓ Option	
Bowl material **Blank**	Polycarbonate bowl
Bowl material **Z**	Nylon bowl
Bowl material **M *1**	Metal bowl (with gauge) drain port Rc1/8
Bowl material **M2 *1**	Metal bowl (with gauge) drain port Rc1/4
Cock Attached **Blank**	With pipe plug attached
Cock Attached **C *1**	With cock (without pipe plug)
Ⓔ Attachment	
Blank	Not included
BW	C-bracket

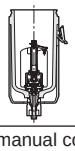
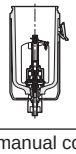
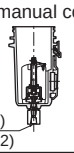
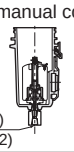
Precautions for model No. selection

*1: A cock is included.

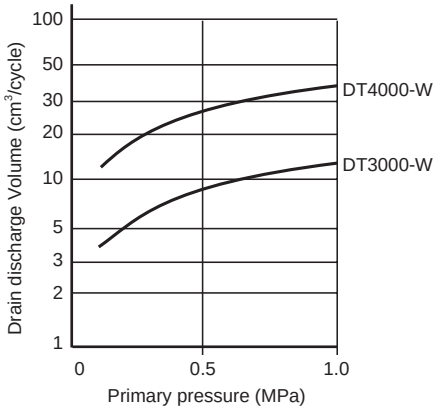
*2: C-bracket model No. DT3000-W.....B320
DT4000-W.....B420

*3: A masking plug matching the port size is attached.

Bowl type and shape

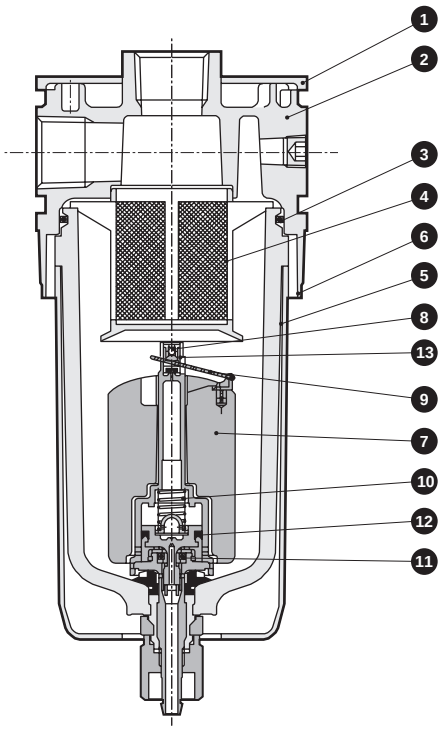
Type / Bowl material / Compatible series		Normally open (open at no pressure) DT3000-W/DT4000-W	Normally closed (closed at no pressure) DT3010-W/DT4010-W
DT3000-W DT4000-W	Plastic	● With manual cock 	● With manual cock 
	Metal	● Without manual cock [M, M2]  Rc1/8(M) Rc1/4(M2)	● Without manual cock [M, M2]  Rc1/8(M) Rc1/4(M2)

Automatic drain performance curve



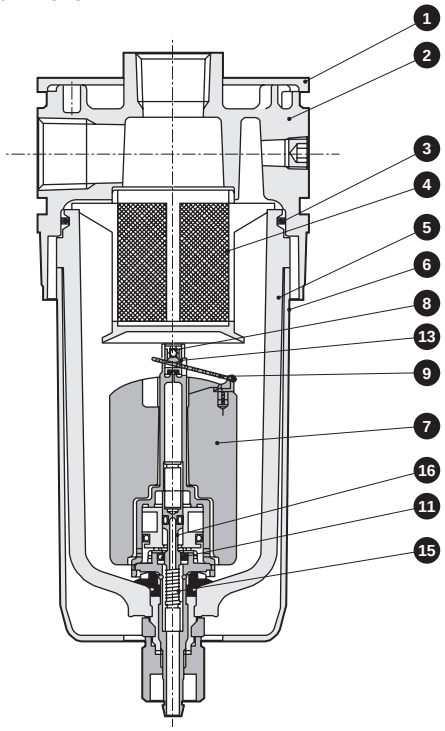
Internal structure and parts list

● Normally open (open at no pressure)
DT3000-W/DT4000-W



When pressure is not applied inside the bowl, the ❿ spring pushes down the ⓬ valve, keeping it away from the ⓫ stem packing. When 0.1 MPa or higher pressure is applied inside the bowl, the pressure applied to the ⓬ valve becomes larger than the force of the ❿ spring and pushes up the ⓬ valve, sealing it with the ⓫ stem packing.
When drain accumulates in the bowl, the ❼ float moves up and the ❾ float level arm pushes up the ⓭ orifice spring.
Then the ⓭ orifice spring snaps open the ❽ orifice seat assembly and leads the compressed air into the upper chamber of the ⓬ valve, making it pressurized. When the ⓬ valve is pushed down apart from the ⓫ stem packing, drain is discharged to air. After drain is discharged, the ❼ float moves down and the ❾ float level arm closes the ❽ orifice seat assembly. The compressed air that has kept the upper chamber of the ⓬ valve pressurized passes through the orifice of the ⓬ valve to be discharged to air. Then the pressure applied to the ⓬ valve from below becomes larger than the force of the ❿ spring and pushes up the ⓬ valve, sealing it with the ⓫ stem packing.

● Normally closed (closed at no pressure)
DT3010-W/DT4010-W

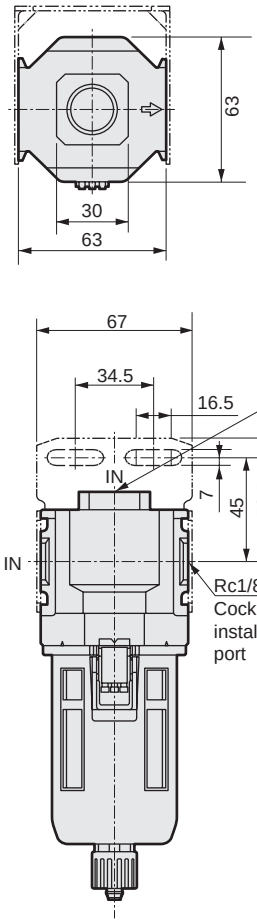


When pressure is not applied inside the bowl, the ⓯ spring pushes up the ⓰ valve, keeping it sealed with the ⓫ stem packing.
When 0.15 MPa or higher pressure is applied inside the bowl and drain accumulates, the ❼ float moves up and the ❾ float level arm pushes up the ⓭ orifice spring.
Then the ⓭ orifice spring snaps open the ❽ orifice seat assembly and leads the compressed air into the upper chamber of the ⓰ valve, making it pressurized. When the ⓰ valve is pushed down apart from the ⓫ stem packing, drain is discharged to air.
After drain is discharged, the ❼ float moves down and the ❾ float level arm closes the ❽ orifice seat assembly. The compressed air that has kept the upper chamber of the ⓰ valve pressurized passes through the orifice of the ⓰ valve to be discharged to air. Then the force of the ⓯ spring pushes up the ⓰ valve from below, sealing it with the ⓫ stem packing.

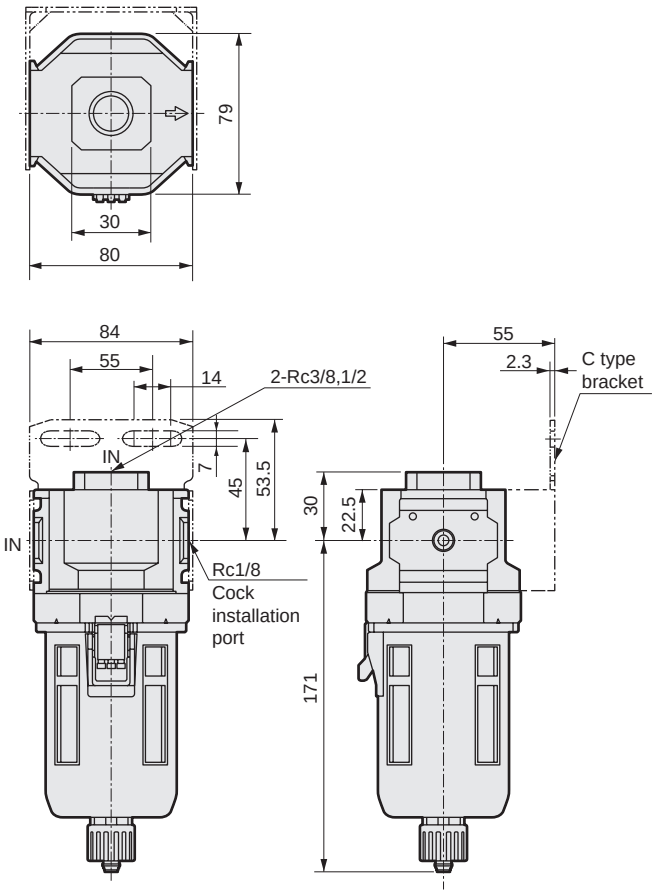
No.	Part name	Material	Model No.			
			DT3000-W	DT3010-W	DT4000-W	DT4010-W
1	Plate cover	ABS resin	-	-	-	-
2	Body	Aluminum alloy die-casting	-	-	-	-
3	O-ring	Special nitrile rubber	F3000-ORING	F3000-ORING	F4000-ORING	F4000-ORING
4	Screen	Polyacetal resin, polyester	DT3000-SCREEN	DT3000-SCREEN	DT4000-SCREEN	DT4000-SCREEN
5	Bowl assembly (including O-ring)	-	DT3000-W-BOWL	DT3010-W-BOWL	DT4000-W-BOWL	DT4010-W-BOWL
6	Bowl guard	Polyamide resin, steel	DT3000-W-BOWL-GUARD	DT3000-W-BOWL-GUARD	DT4000-W-BOWL-GUARD	DT4000-W-BOWL-GUARD

Dimensions

● DT3000-W/DT3010-W



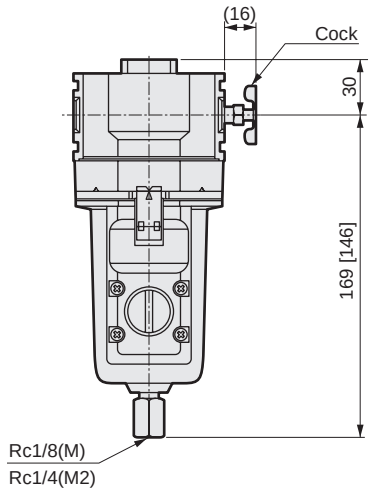
● DT4000-W/DT4010-W



Note: A soft nylon tube of ø5.7 to ø6 bore size can be directly connected to the drain outlet.
Note: Keep 60 mm and over space below the bowl for maintenance.

Metal bowl specifications

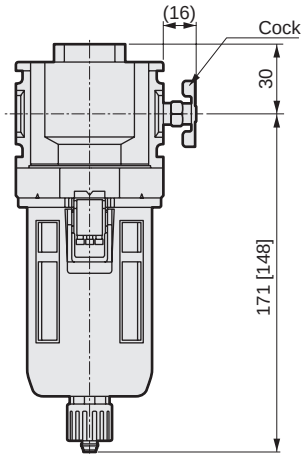
● Option [M, M2]



Note: Dimensions shown in [ ] are for DT3000-W.

Cock specifications

● Option [C]



Note: Dimensions shown in [ ] are for DT3000-W.