



CYCLONE SEPARATOR TRAP FOR STEAM

MODEL DC5S

SEPARATOR WITH BUILT-IN STEAM TRAP

Features

Cyclone separator and steam trap incorporated into one unit to provide high-quality dry steam.

1. Separator achieves condensate separation efficiency as high as 98%.
2. Self-modulating free float steam trap continuously discharges condensate as it is separated.
3. Precision ground spherical float and positive three-point seating provide a complete seal, even under no-load conditions.
4. The large screen surface of the built-in strainer guarantees trouble-free service.
5. Only one moving part, the free float, prevents concentrated wear and increases service life.



Specifications

Model	DC5S	
Connection	Screwed	
Size (mm)	15, 20, 25	
Trap Orifice No.	16	
Maximum Operating Pressure (MPaG)	PMO	1.6
Maximum Differential Pressure (MPa)*	ΔPMX	1.6
Minimum Operating Pressure (MPaG)	0.01	
Maximum Operating Temperature (°C)	TMO	220

* For built-in steam trap
PRESSURE SHELL DESIGN CONDITIONS (**NOT** OPERATING CONDITIONS):
Maximum Allowable Pressure (MPaG) PMA: 1.6
Maximum Allowable Temperature (°C) TMA: 220

1 MPa = 10.197 kg/cm²

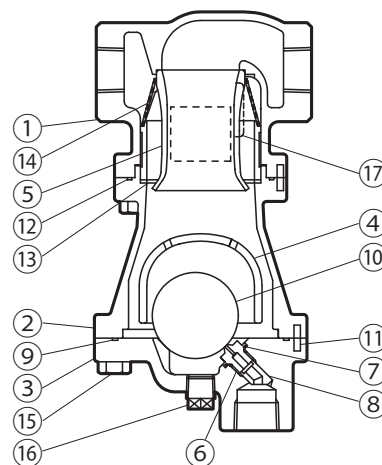


To avoid abnormal operation, accidents or serious injury, DO NOT use this product outside of the specification range. Local regulations may restrict the use of this product to below the conditions quoted.

No.	Description	Material	JIS	ASTM/AISI*
①	Body	Bronze	CAC407	B584 C92200
②	Separator Body	Bronze	CAC407	B584 C92200
③	Trap Cover	Bronze	CAC407	B584 C92200
④	Float Cover	Bronze	CAC407	B584 C92200
⑤	Separator	Cast Stainless Steel	—	A351 Gr.CF8
⑥	Trap Valve Seat	—	—	—
⑦	Valve Seat Gasket	Fluorine Resin	PTFE	—
⑧	Bushing	Stainless Steel	SUS303	AISI303
⑨	Trap Cover Gasket	Fluorine Resin	PTFE	—
⑩	Float	Stainless Steel	SUS316L	AISI316L
⑪	Guide Pin	Stainless Steel	SUS304	AISI304
⑫	Body Gasket	Fluorine Resin	PTFE	—
⑬	Wave Spring	Stainless Steel	SUS301	AISI301
⑭	Screen	Stainless Steel	SUS304	AISI304
⑮	Float Cover Bolt	Stainless Steel	SUS304	AISI304
⑯	Drain Plug	Stainless Steel	SUS304	AISI304
⑰	Nameplate	Stainless Steel	SUS304	AISI304

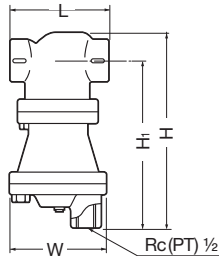
* Equivalent

Contact TLV for available replacement parts.



Dimensions

● DC5S Screwed

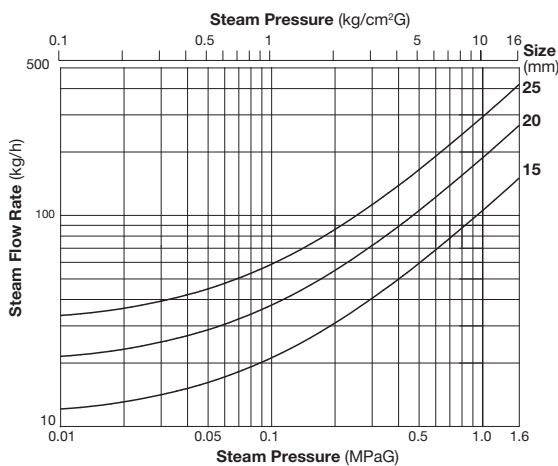


DC5S Screwed* (mm)

Size	L	H	H ₁	□W	Weight (kg)
15	100	195	168	88	4.5
20					
25					

* Rc(PT), other standards available.

Steam Flow Rate

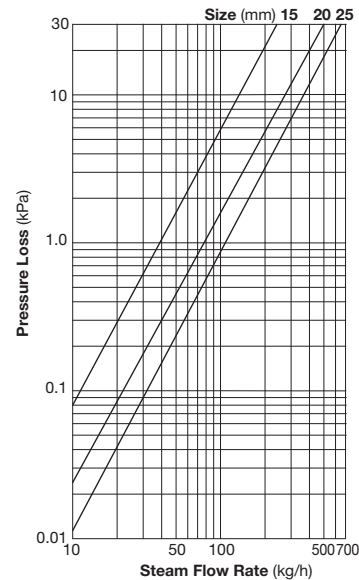


The chart on the left is used to determine the steam flow rate through the product. It is based on a steam velocity in the piping of 30 m/s. For other cases, use the equation below and replace "v" with your velocity:

$$\text{Effective flow rate} = \text{Flow rate}_{30 \text{ m/s}} \times \frac{v}{30}$$

It is recommended that steam velocities not exceed 30 m/s.

Pressure Loss

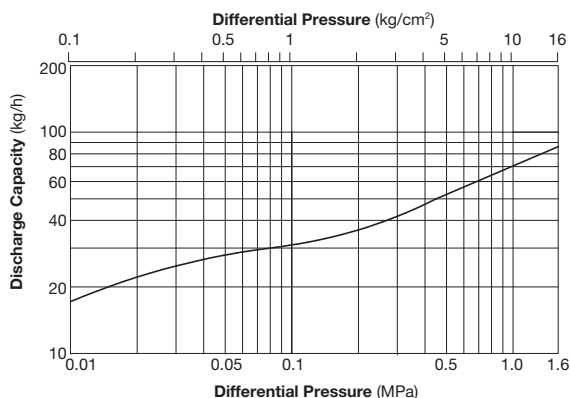


The pressure loss chart is based on a steam pressure of 1 MPaG. For other pressures, multiply the steam flow rate by the correction factor given in the table below. Use the result on the pressure loss chart.

1 kPa ≈ 0.01 kg/cm²

Pressure (MPaG)	0.1	0.3	0.5	0.7	1.0	1.3	1.6
Correction Factor	2.24	1.62	1.34	1.16	1.0	0.89	0.81

Condensate Discharge Capacity



1. Line numbers within the graph are orifice numbers.
2. Differential pressure is the difference between the inlet and outlet pressure of the trap.
3. Capacities are based on continuous discharge of condensate 6 °C below saturated steam temperature.
4. Recommended safety factor: at least 1.5.



DO NOT use this product under conditions that exceed maximum differential pressure, as condensate backup will occur!

Manufacturer

TLV® CO., LTD.
Kakogawa, Japan

is approved by LRQA Ltd. to ISO 9001/14001

ISO 9001
ISO 14001

