CYCLONE SEPARATOR

MODEL DC7

HIGH EFFICIENCY STAINLESS STEEL SEPARATOR

Features

All stainless steel separator, employing a cyclone-effect to efficiently separate condensate from steam and air.

1. All-welded, maintenance-free construction.
2. Compact and light weight.
3. All parts made from stainless steel with high durability and corrosion resistance for long service life.
4. Separator achieves condensate separation efficiency as high as 98%.

Specifications

Model		DC7		
Connection		Screwed	Socket Welded	Flanged
Size (mm)		15, 20, 25, 40, 50		
Maximum Operating Pressure (MPaG)	PMO	2.5		
Maximum Operating Temperature (°C)	TMO	300		
Applicable Fluids*		Steam, Air		

* Do not use for toxic, flammable or otherwise hazardous gases.

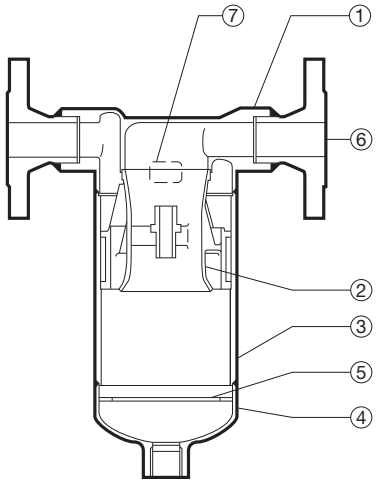
1 MPa = 10.197 kg/cm²

PRESSURE SHELL DESIGN CONDITIONS (**NOT** OPERATING CONDITIONS): Maximum Allowable Pressure (MPaG) PMA: 2.5
Maximum Allowable Temperature (°C) TMA: 300

CAUTION 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.

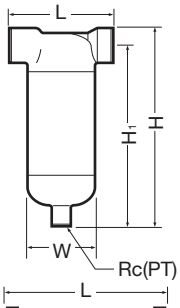
No.	Description		Material	JIS	ASTM/AISI*
①	Body		Cast Stainless Steel	—	A351 Gr.CF8
②	Separator		Cast Stainless Steel	—	A351 Gr.CF8
③	Separator Body		Stainless Steel	SUS304	AISI304
④	Separator Bottom		Cast Stainless Steel	—	A351 Gr.CF8
⑤	Baffle		Stainless Steel	SUS304	AISI304
⑥	Flange	15 to 25 mm	Cast Stainless Steel	—	A351 Gr.CF8
		40, 50 mm	Stainless Steel	SUS304	AISI304
⑦	Nameplate		Stainless Steel	SUS304	AISI304

* Equivalent materials

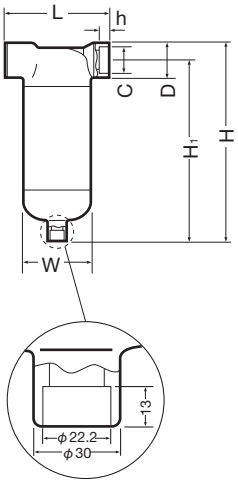


Dimensions

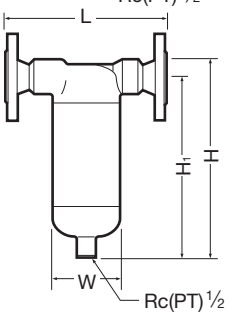
● **DC7** Screwed



Socket Welded



● **DC7** Flanged



DC7 Screwed*/Socket Welded** (mm)

Size*	L	H	H1	ϕW	ϕD	ϕC	h	Weight (kg)
15	130	229	210	89	36	22.2	13	3.4
20						27.7		
25	150	263	240	101	44	34.5		5.3
40	170	326	295	114	59	49.1		6.5
50	220	397	360	165	72	61.1	16	15

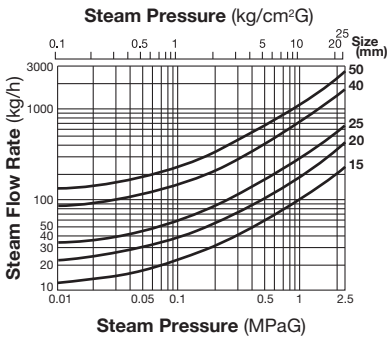
* Rc(PT), other standards available
** ASME B16.11-2005, other standards available

DC7 Flanged (mm)

Size	L		H	H1	ϕW	Weight* (kg)
	ASME Class					
	150RF	300RF				
15	178	178	229	210	89	4.8
20	191	191				5.7
25	227	227	263	240	101	8.4
40	251	258	326	295	114	12
50	331	337	397	360	165	22

Other standards available, but length and weight may vary
* Weight is for Class 300 RF

Flow Rate (Steam)



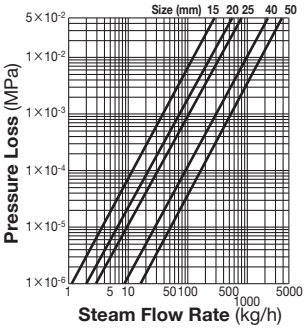
The chart to the left is used to determine the steam flow rate through the DC7 separator. It is based on a steam velocity in the piping of 30 m/s. For other cases, use the equation below and replace "v" with your steam velocity:

Effective flow rate

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

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

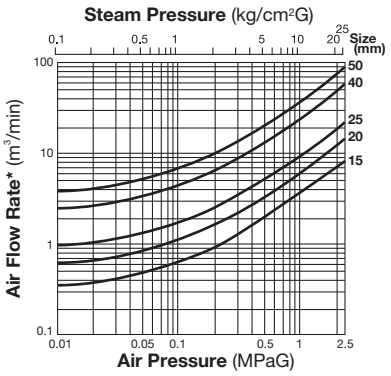
Pressure Loss (Steam)



The pressure loss chart is based on a steam pressure of 1.0 MPaG. For other pressures, multiply the steam flow rate by the correction factor given in the table below. Use this value on the pressure loss chart.

Pressure (MPaG)	0.1	0.3	0.5	0.7	1.0	1.6	2.0	2.5
Flow Rate Correction Factor	2.24	1.62	1.34	1.16	1	0.81	0.73	0.67

Flow Rate (Air)



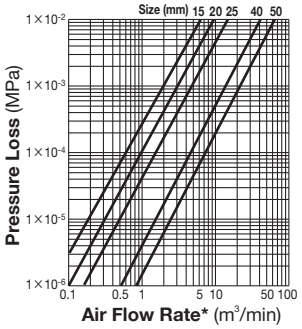
The chart to the left is used to determine the air flow rate through the DC7 separator. It is based on an air velocity in the piping of 30 m/s. For other cases, use the equation below and replace "v" with your steam velocity:

Effective flow rate

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

* For air at 20 ˚C under atmospheric pressure

Pressure Loss (Air)



The pressure loss chart is based on an air pressure of 1 MPaG. For other pressures, multiply the air flow rate by the correction factor given in the table below. Use this value on the pressure loss chart.

Pressure (MPaG)	0.1	0.3	0.5	0.7	1.0	1.6	2.0	2.5
Flow Rate Correction Factor	5.5	2.75	1.83	1.38	1	0.65	0.52	0.44

Manufacturer
TLV CO., LTD.
Kakogawa, Japan
is approved by LRQA Ltd, to ISO 9001/14001

ISO 9001
ISO 14001

(M)

Products for intended use only.
Specifications subject to change without notice.