

TLV[®]

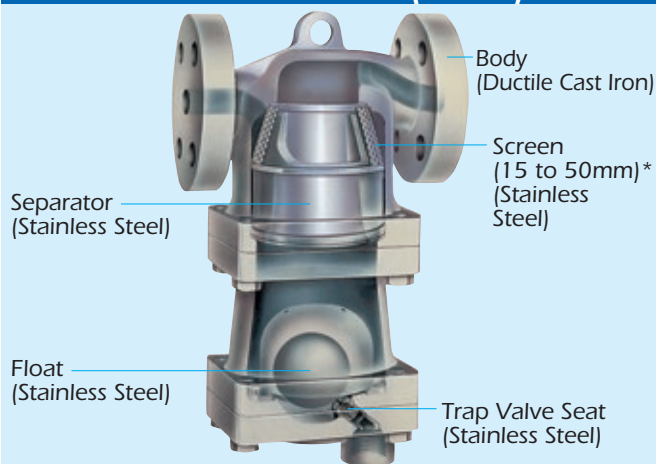
Cyclone Separators

DC Series



CONDENSATE ENTRAINED IN STEAM AND AIR WILL BE REMOVED WITH 98% EFFICIENCY.

CONSTRUCTION (DC3S)



* Screen for sizes 65 to 100 mm is in Trap Cover

FEATURES AND BENEFITS

1. Cyclone-Effects Separator:

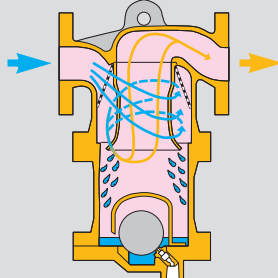
- Provides condensate separation efficiency as high as 98%.
- Improves productivity and product quality with dry, high-quality steam/air.

2. Free-Float Trap: (DC7 needs a separate trap)

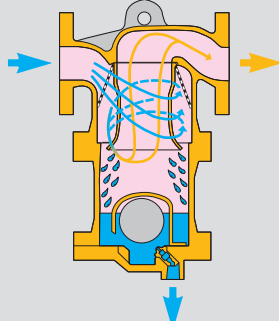
- Continuously discharges condensate as it is separated.
- Provides a complete seal, even under no load conditions, with its precision ground spherical float and positive three-point seating.

OPERATION

During Separation



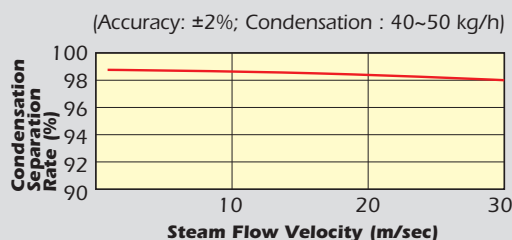
During Discharge



1 Fluid enters the inlet of the separator, and a complex series of fins changes the steam or air flow into a high-speed cyclone flow, separating even mist-like condensate.

2 The separated condensate accumulates at the bottom, lifting the float off the valve seat and discharging condensate continuously.



FLOW VELOCITY AND EFFICIENCY



Separation rate (%) is given as:

$$\frac{\text{quantity of condensate discharged}}{\text{quantity of incoming condensate}} \times 100$$

SPECIFICATIONS

Model		Type	Connection	Sizes	Body Material	Orifice No. (Built-in Trap)	Max. Operating Pressure (MPaG) PMO	Max. Differential Pressure (MPa) ΔPMX (Built-in Trap)	Max. Operating Temperature (°C) TMO
	DC3S	Steam Separator Trap	Screwed	15, 20, 25	Cast Iron or Ductile Cast Iron	10, 16, 21	1.0, 1.6, 2.1	1.0, 1.6, 2.1	220
			Flanged	15, 20, 25, 40, 50, 65, 80, 100					
	DC5S	Screwed	15, 20, 25	Bronze	16	1.6	1.6	220	
	DC3A	Air Separator Trap	Screwed	15, 20, 25	Cast Iron	10	1.0	1.0	100
			Flanged	15, 20, 25, 40, 50, 65, 80, 100					
			DC5A	Screwed	15, 20, 25	Bronze	10	1.0	1.0
	DC7	Steam/Air Separator	Screwed	15, 20, 25, 40, 50	Stainless Steel	–	2.5	–	300
			Socket Welded						
			Flanged						

PRESSURE SHELL DESIGN CONDITIONS (**NOT** OPERATING CONDITIONS):

Maximum Allowable Pressure (MPaG) PMA: 1.6 (DC3S-10, 16/DC3A/DC5S/DC5A), 2.1 (DC3S-21), 2.5 (DC7)

Maximum Allowable Temperature (°C) TMA: 220 (DC3S/DC3A/DC5S/DC5A), 300 (DC7)

Do not use for toxic, flammable or otherwise hazardous fluids.

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.

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Manufacturer

TLV CO., LTD.

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is approved by LRQA Ltd. to ISO 9001/14001

ISO 9001
ISO 14001

