

# TLV<sup>®</sup>

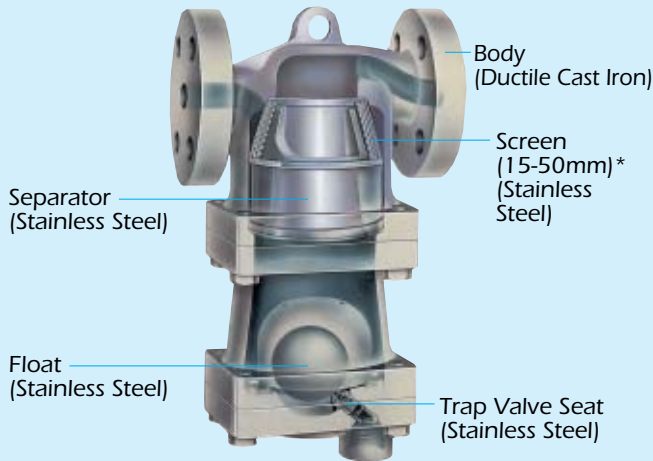
# Cyclone Separators

## DC Series



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

## CONSTRUCTION (DC3S)

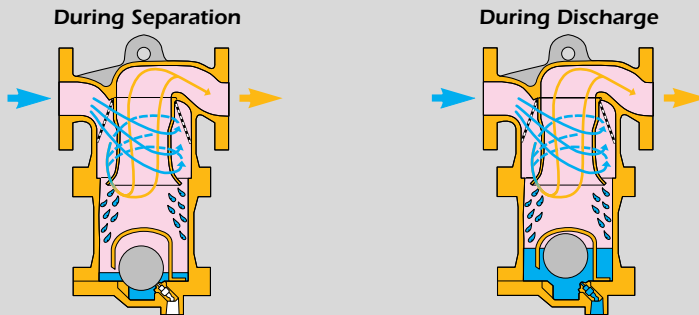


\* Screen for sizes 65-100 mm is in Trap Cover

## FEATURES AND BENEFITS

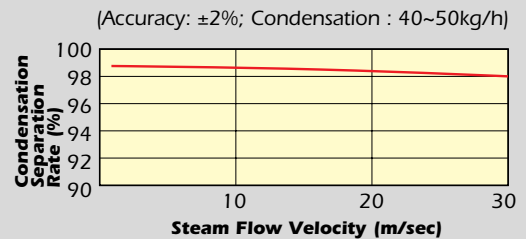
- 1. Cyclone-Effects Separator:** (Patented)
  - Provides condensate separation efficiency as high as 98%.
  - Improves productivity and product quality with dry, high-quality steam/air.
- 2. Free-Float Trap:** (DC7 needs a separate trap)
  - Continuously discharges condensate as it is separated.
  - Provides a complete seal, even under no load conditions, with its precision ground spherical float and positive three-point seating.

## OPERATION



- 1** Fluid enters the inlet of the separator, and a complex series of fins changes the steam, air or gas 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:  

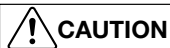
$$\frac{\text{quantity of condensate discharged}}{\text{quantity of incoming condensate}} \times 100$$

## 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	21	2.1	220
			Flanged	15, 20, 25, 32, 40, 50, 65, 80, 100				
	DC5S	Air Separator Trap	Screwed	15, 20, 25	Bronze	16	1.6	220
			Flanged	15, 20, 25, 32, 40, 50, 65, 80, 100	Cast Iron	10	1.0	100
	DC7	Steam, Air, Gas* Separator	Screwed	15, 20, 25, 40, 50	Stainless Steel	-	-	300
			Socket Welded					
			Flanged					

PRESSURE SHELL DESIGN CONDITIONS (**NOT** OPERATING CONDITIONS):  
 Maximum Allowable Pressure (MPaG) PMA: 1.57 (DC3S-10, 16/DC3A), 1.6 (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 gases.  
 1 MPa = 10.197 kg/cm<sup>2</sup>



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.**  
 Kakogawa, Japan  
is approved by LRQA Ltd. to ISO 9001/14001

ISO 9001/ISO 14001

