

# TLV<sup>®</sup>

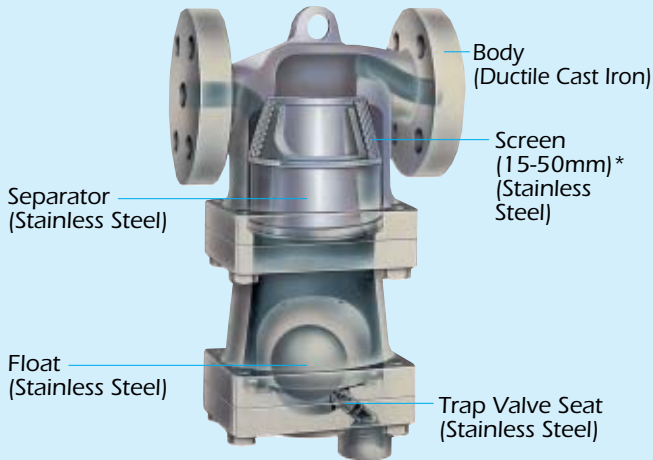
# Cyclone Separators

## 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:

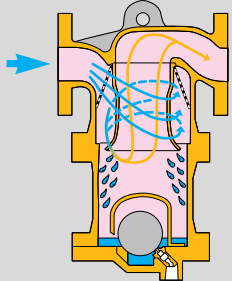
- Provides condensate separation efficiency as high as 98%.
- Improves productivity and product quality with dry, high-quality steam/air.

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

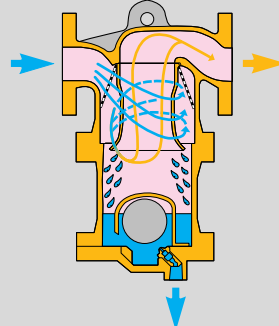
- Continuously discharges condensate as it is separated.
- Provides a complete seal, even under no load conditions, with its precision ground spherical float and positive three-point seating.

## OPERATION

### During Separation



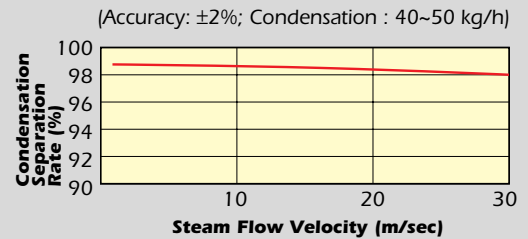
### During Discharge



**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 Air Separator Trap	Screwed	15, 20, 25	Bronze	16	1.6	1.6	220
		Flanged	15, 20, 25, 40, 50, 65, 80, 100	Cast Iron	10	1.0	1.0	100
	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/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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ISO 9001/ISO 14001

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is approved by LRQA Ltd. to ISO 9001/14001

