



CYCLONE SEPARATOR TRAP FOR AIR

MODEL **DC3A** DUCTILE CAST IRON
CAST IRON

SEPARATOR WITH BUILT-IN AIR TRAP

Features

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

1. Separator achieves condensate separation efficiency as high as 98%.
2. Self-modulating free float air 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 surface area of the built-in screen guarantees trouble-free service.
5. Only one moving part, the free float, prevents concentrated wear and increases service life.



Specifications

Model		DC3A	
Connection		Screwed	Flanged
Size		1/2", 3/4", 1"	DN 15, 20, 25, 40, 50, 65, 80, 100
Maximum Operating Pressure (barg)	PMO	10	
Minimum Operating Pressure (barg)		0.1	
Maximum Operating Temperature (°C)	TMO	100	
Applicable Fluid*		Air	

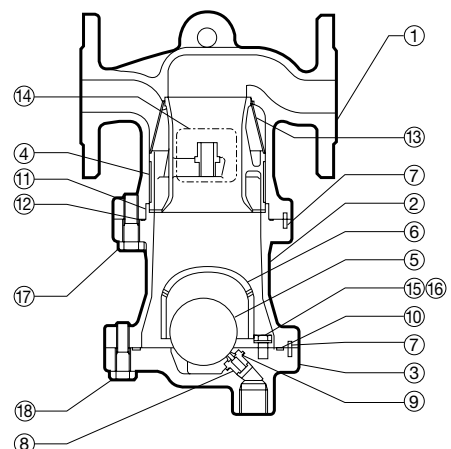
*Do not use for toxic, flammable or otherwise hazardous fluids.

1 bar = 0.1 MPa

PRESSURE SHELL DESIGN CONDITIONS (NOT OPERATING CONDITIONS): Maximum Allowable Pressure (barg) PMA: 21 (Flanged), 13 (Screwed)
Maximum Allowable Temperature (°C) 220 (Flanged), 200 (Screwed)

No.	Description	Material	DIN*	ASTM/AISI*	
①	Body	Screwed: S	Ductile Cast Iron FCD450	0.7040	A536
		Flanged: F	Ductile Cast Iron GGG40.3	0.7043	A395
②	Separator Body	S	Cast Iron FC250	0.6025	A126 Cl.B
		F	Ductile Cast Iron GGG40.3	0.7043	A395
③	Trap Cover	S	Cast Iron FC250	0.6025	A126 Cl.B
		F	Ductile Cast Iron GGG40.3	0.7043	A395
④	Separator	1/2" - 1", DN 15-50	Stainless Steel SCS13	1.4308	A351 Gr.CF8
		DN 65-100	Cast Stainless Steel A351 Gr.CF8	1.4312	—
⑤	Float	Stainless Steel SUS316L	1.4404	AISI316L	
⑥	Float Cover	1/2" - 1", DN 15-50	Cast Iron FC250	0.6025	A126 Cl.B
		DN 65-100	Ductile Cast Iron FCD450	0.7040	A536
⑦	Guide Pin	Stainless Steel SUS304	1.4301	AISI304	
⑧	Trap Valve Seat	Nitrile Rubber NBR/ Stainless Steel SUS303	NBR/ 1.4305	D2000BF/ AISI303	
⑨	Valve Seat Gasket	Fluorine Resin PTFE	PTFE	PTFE	
⑩	Trap Cover Gasket	Fluorine Resin PTFE	PTFE	PTFE	
⑪	Wave Spring	Stainless Steel SUS301	1.4310	AISI301	
⑫	Body Gasket	Fluorine Resin PTFE	PTFE	PTFE	
⑬	Screen	Stainless Steel SUS304	1.4301	AISI304	
⑭	Nameplate	Stainless Steel SUS304	1.4301	AISI304	
⑮	Hexagon Bolt	Stainless Steel SUS304	1.4301	AISI304	
⑯	Spring Washer	Stainless Steel SUS304	1.4301	AISI304	
⑰	Body Bolt	Carbon Steel S45C	1.0503	AISI1045	
⑱	Trap Cover Bolt	Carbon Steel S45C	1.0503	AISI1045	
⑲	Baffle**	Stainless Steel SUS304	1.4301	AISI304	
⑳	Baffle Bolt**	Stainless Steel SUS304	1.4301	AISI304	
㉑	Baffle Nut**	Stainless Steel SUS304	1.4301	AISI304	

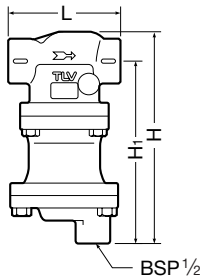
CAUTION To avoid abnormal operation, accidents or serious injury, DO NOT use this product outside of the specification range. Local regulations may restrict the use of this product to below the conditions quoted.



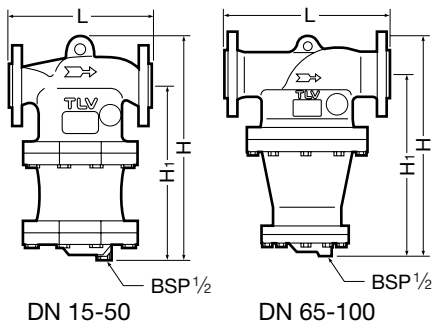
DN 15 - 50 shown. Configuration of larger sizes differs slightly.

Dimensions

● **DC3A**
Screwed



● **DC3A**
Flanged



DC3A Screwed* (mm)

Size	L	H	H ₁	Weight (kg)
1/2"	170	278	241	9.6
3/4"				
1"				

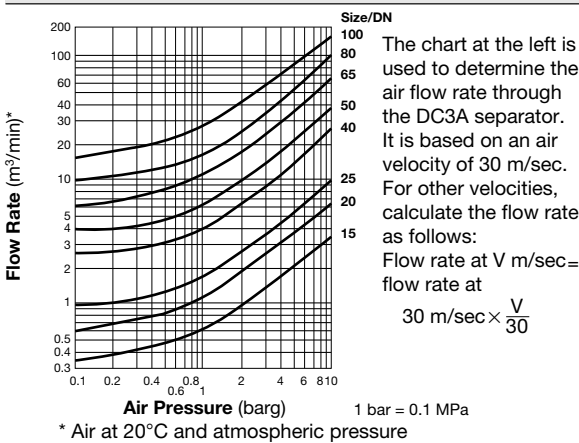
* BSP, DIN 2999, other standards available

DC3A Flanged (mm)

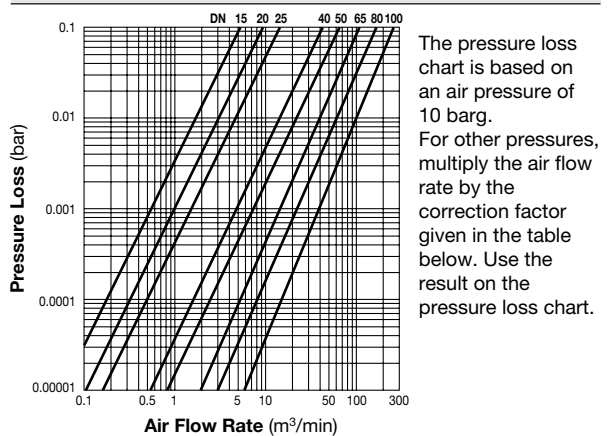
DN	L		H	H ₁	Weight (kg)
	DIN 2501	PN25/40			
15	190		306	241	12
20					
25					13
40	215		352	269	18
50	250		418	320	31
65	374		523	430	71
80			530		75
100	434		638	520	120

Other standards available, but length and weight may vary

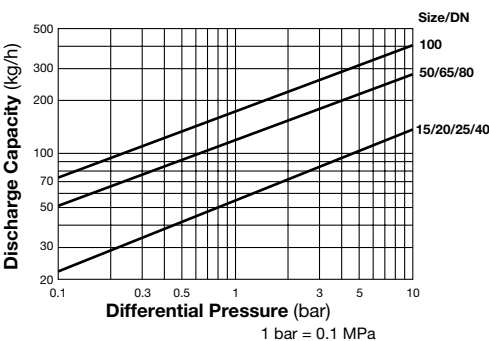
Air Flow Rate



Pressure Loss



Condensate Discharge Capacity



1. Differential pressure is the difference between the separator inlet and its trap outlet pressure.
2. Capacities are based on continuous discharge of condensate below 100 °C with specific gravity of 1.
3. Recommended safety factor: at least 1.5.

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

Pressure (barg)	1	3	5	7	10
Flow Rate Correction Factor	5.5	2.75	1.83	1.38	1