



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.

Pressure Equipment Directive (PED)

Classification according to PED 2014/68/EU, fluid group 2

Size	Category	CE marking
DN 15 to DN 25	—*	Art. 4, Sec. 3 (sound engineering practice), CE marking not allowed
DN 32 to DN 50	I	With CE marking and Declaration of Conformity
DN 65 to DN 100	II	With CE marking and Declaration of Conformity

* Manufactured in accordance with sound engineering practice



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

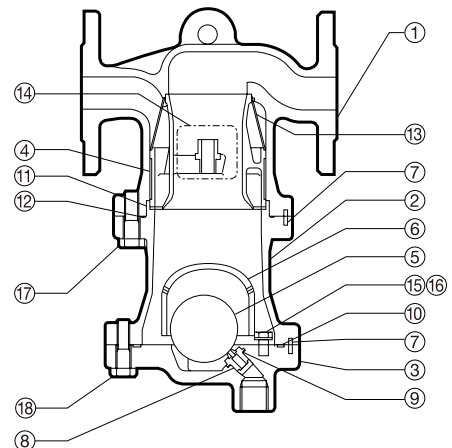
PRESSURE SHELL DESIGN CONDITIONS (NOT OPERATING CONDITIONS): Maximum Allowable Pressure (barg) PMA: 21 (Flanged), 13 (Screwed)

Maximum Allowable Temperature (°C) 220 (Flanged), 200 (Screwed)

Minimum Allowable Temperature (°C): 0 (FCD450), -10 (EN-GJS-400-18-LT)

No.	Description	Material	DIN/EN*	ASTM/AISI*
①	Body	Screwed: S	Ductile Cast Iron FCD450	0.7040 A536
		Flanged: F	Ductile Cast Iron EN-GJS-400-18-LT	0.7043/EN 5.3103 A395
②	Separator Body	S	Cast Iron FC250	0.6025 A126 Cl.B
		F	Ductile Cast Iron EN-GJS-400-18-LT	0.7043/EN 5.3103 A395
③	Trap Cover	S	Cast Iron FC250	0.6025 A126 Cl.B
		F	Ductile Cast Iron EN-GJS-400-18-LT	0.7043/EN 5.3103 A395
④	Separator	Cast Stainless Steel A351/A351M 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.



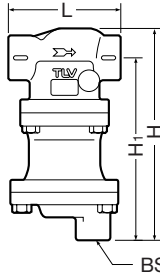
DN 15 - 50 shown. Configuration of larger sizes differs slightly.

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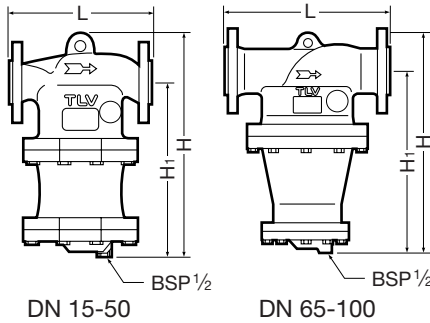
* Equivalent materials ** DN 65-100, above float cover (not shown)

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"				

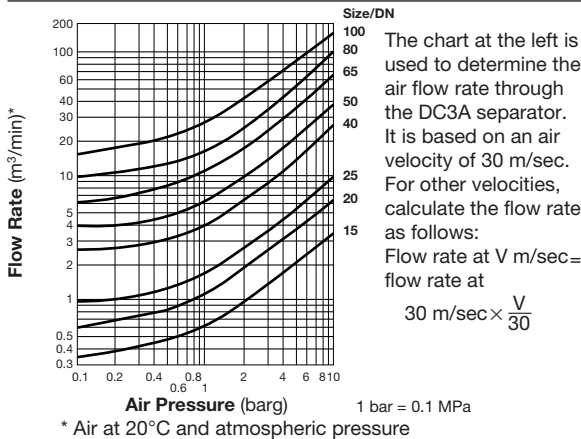
* BSP, DIN 2999, other standards available

DC3A Flanged (mm)

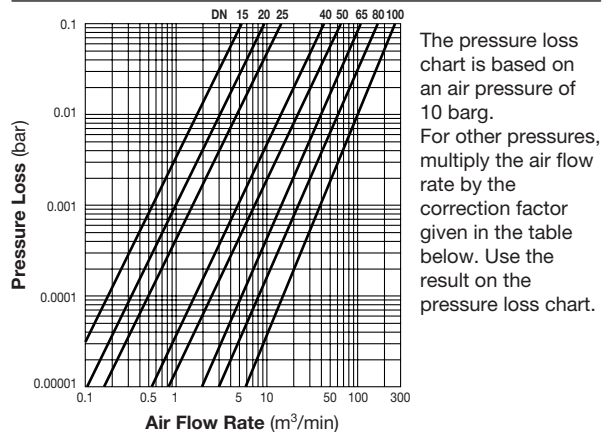
DN	L	H	H ₁	Weight (kg)
	DIN 2501 PN25/40			
15	190	306	241	12
20	194			13
25				
40	215	352	269	18
50	250	418	320	31
65	374	523	430	71
80		530		75
100	434	638	520	120

Other standards available, but length and weight may vary

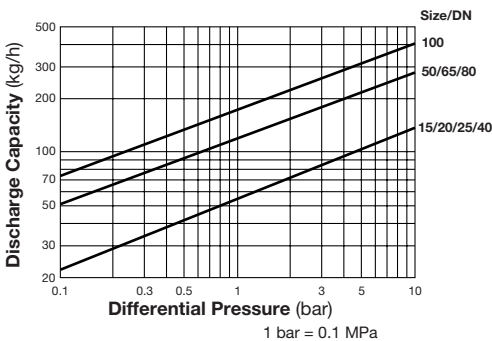
Air Flow Rate



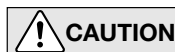
Pressure Loss



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.



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

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

ISO 9001
ISO 14001

