



DC3A

Ductile Iron Cyclone Separator For Air w/ 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.

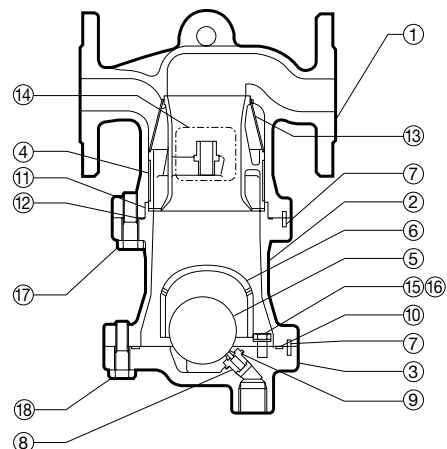
1 bar = 0.1 MPa

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 EN-GJS-400-18-LT | 0.7043 A395 |
| ② | Separator Body | S | Cast Iron FC250 | 0.6025 A126 Cl.B |
| | | F | Ductile Cast Iron EN-GJS-400-18-LT | 0.7043 A395 |
| ③ | Trap Cover | S | Cast Iron FC250 | 0.6025 A126 Cl.B |
| | | F | Ductile Cast Iron EN-GJS-400-18-LT | 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 |

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

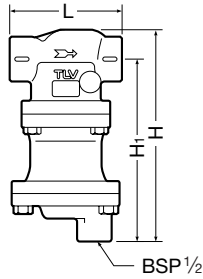
CAUTION To avoid abnormal operation, accidents or serious injury, DO NOT use this product outside of the specification range. Local regulations may restrict the use of this product to below the conditions quoted.



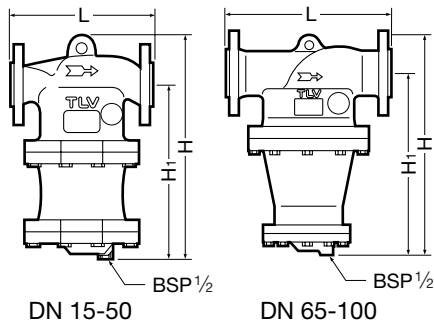
DN 15 - 50 shown. Configuration of larger sizes differs slightly.

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" | | | | |

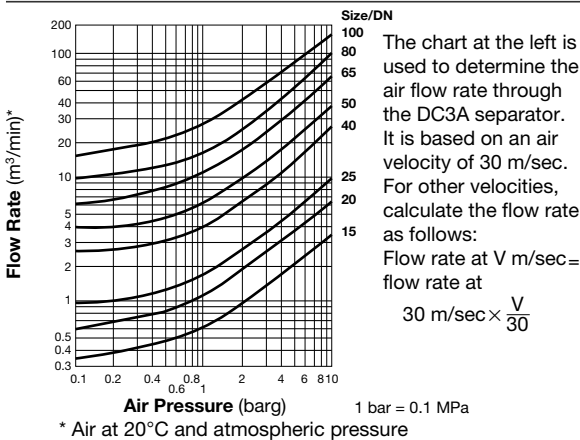
* BSP, DIN 2999, other standards available

DC3A Flanged (mm)

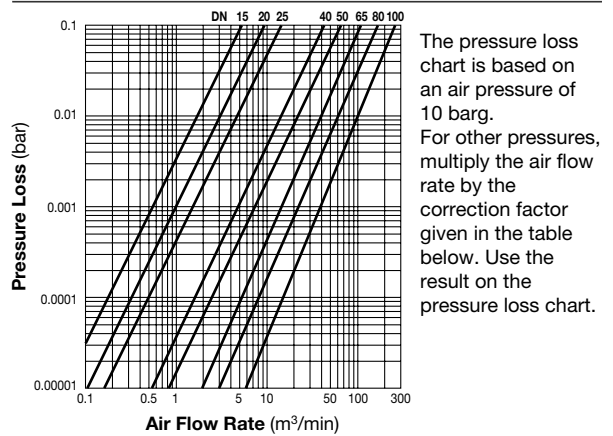
| DN | L | | H | H ₁ | Weight (kg) |
|-----|----------|---------|-----|----------------|-------------|
| | DIN 2501 | PN25/40 | | | |
| 15 | 190 | | 306 | 241 | 12 |
| 20 | | | | | 13 |
| 25 | 194 | | 352 | 269 | 18 |
| 40 | | | | | 31 |
| 50 | 250 | | 418 | 320 | 71 |
| 65 | | | | | 75 |
| 80 | 374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

Other standards available, but length and weight may vary

Air Flow Rate



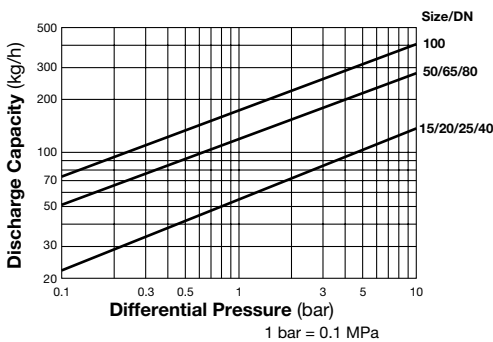
Pressure Loss



1 bar = 0.1 MPa

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

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!