Donaldson
FILTRATION SOLUTIONS

UFM-P

PNEUMATIC CONTROLLED CONDENSATE DRAINS

Process Filtration

Pneumatic level-controlled condensate drains for operation in harsh conditions.

The UFM-P is designed and developed for the compressed air zero-loss draining of condensate in compressors, aftercoolers, receiver vessels, fridge dryer pre- and after-filters, adsorption dryer pre-filters, condensate and oil removal filters, and pipe bend.

UFM-P

APPLICATIONS

- Chemical
- Food & Beverage
- Environmental
- Machine building
- Plant engineering/construction

FEATURES	BENEFITS
Large drain bores	Reliable drainage of large amount of condensate, high function safety
Hydrostatic level measuring	Problem-free drainage of pure oil
Pneumatic double membrane servo valve with long service life	Almost maintenance-free
Compact unit height	A minimum of space needed
Operates without electricity	Able to use in hazardous areas, manual override

SPECIFICATIONS

MATERIALS	
Housing	Sea water-resistant aluminum chill casting with blue polyester resin coating on exterior
Float	Polyester

CONNECTIONS	
Outer	25 mm (1") BSP, condensate inlet
Inner	13 mm (1/2") BSP, condensate outlet

OPERATING PRESSURE AND TEMPERATURE	
Max operating pressure	0.800 bar to 16.01 bar(11.6 psi to 232 psi)
Operating temperature	1° C to 47° C (33.8° F to 176° F)
Performance	Assuming 1/hr 450 l/hr @ 7.006 bar 20 °C (118.8 gal/hr @ 101.53 psi 68° F)

HOW IT WORKS

FIG.1:

Condensate drips through the intake port (**1**) and is collected in vessel (**2**). The control valve (**4**) is closed and the surge chamber (**5**) is vented. The Operation pressure in the vessel (**2**) presses the diaphragm (**8**) at its seat and separates the condensate channel at the pressure side from the other one at the exit side (**10**).

Fig. 1

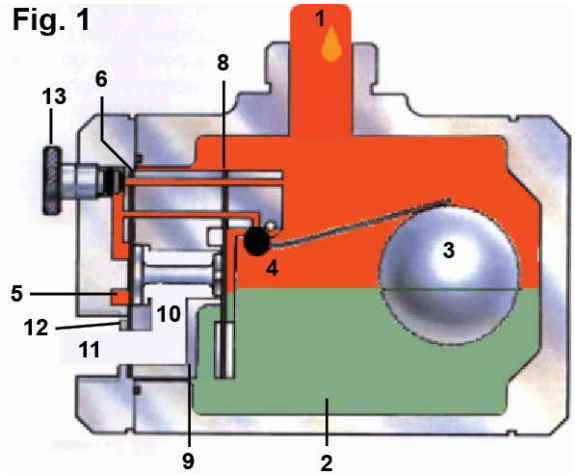
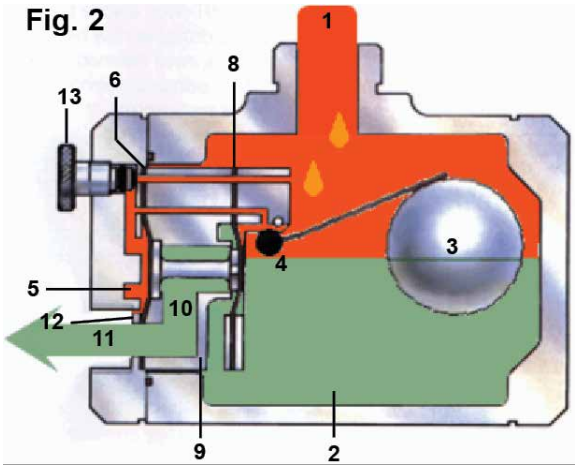


FIG. 2:

If much condensate has been collected in the vessel, the float is lifted and compressed air can get into the surge chamber (**5**) over the control valve (**4**). The diaphragm (**6**) is pressed to the right hand side and opens the diaphragm (**8**) by means of the piston (**7**). Now the condensate can drain to the exit (**11**) over channel (**9**) and (**10**). If the float (**3**) moves down with the condensate level so far that the control valve closes again, the surge chamber is vented over nozzle (**12**). The diaphragm (**6**) as well as the diaphragm (**8**) over the piston (**7**) come back to their starting position, so that the drainage is closed again. A testing of the function of the outlet valve can be done by means of the hand valve (**13**).

Fig. 2



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