

Danfoss

CVC-XP Pilot
Valve



Danfoss CVC-XP Pilot Valve Installation Guide

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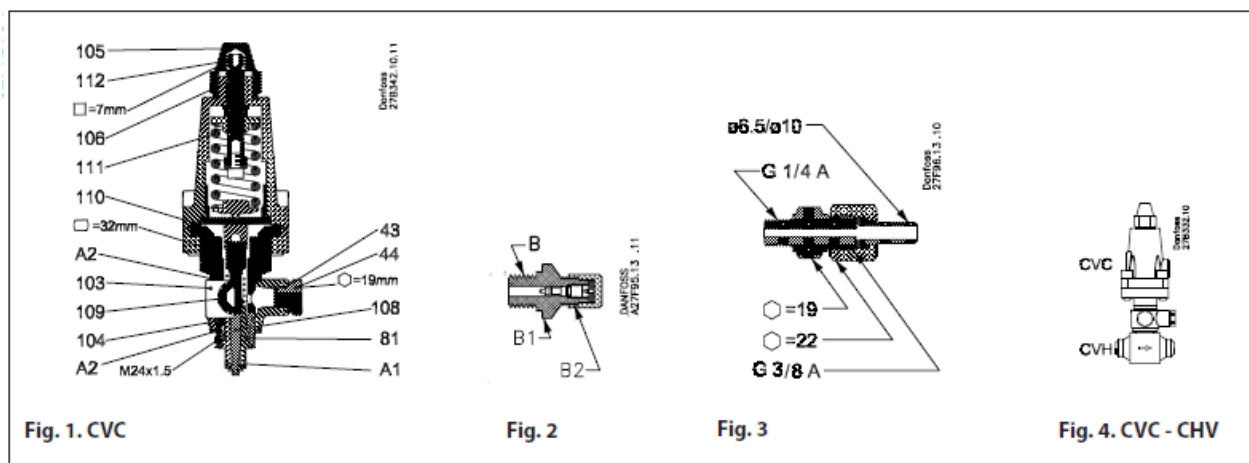
Danfoss CVC-XP Pilot Valve



Pressure-controlled pilot valves

Design

See g. 1, 2, and 3.



- 43. Gasket
- 44. Blanking plug for manometer connection
- A2. Gasket
- 81. O-ring
- 103. Banjo Fitting
- 104. O-ring
- 105. Seal cap
- 106. O-ring
- 107. Signal connection
- 108. Pilot price
- 109. Connector on banjo fitting 103
- 110. Diaphragm
- 111. Spring

- 112. Setting spindle
- A1. O-ring

Technical data

- Refrigerants HCFC, HFC, R717, R744
- Regulating range 4 bar g to 28 bar g (58 psig to 406 psig)
- Factory setting Completely slack spring
- Media temperature range -50°C to $+120^{\circ}\text{C}$ (-58°F to 248°F)
- Max. working pressure 52 bar g (754 psig)
- Max. test pressure 80 bar g (1160 psig)

Fitting

CVC is fitted in the top cover of the ICS main valve, see figs. 5 and 7. Check that gaskets (A2) and O-rings (A1 and 104) are in place and in order – the O-ring (A1) must be lubricated with refrigeration oil, see fig. 1. NB: If O-ring (A1) is leaking or missing, the main valve will receive a signal to open. Banjo fitting (103) can be turned. Tightening should be made to a torque of 50 Nm (37 lb force ft) with a 32 mm wrench. The banjo fitting has two identical connection holes. In the one hole the signal line is fitted with the connection shown in fig. 3. The signal line from the CVC must be connected at the point where the pressure is to be regulated, e.g. immediately in front of the compressor if crankcase pressure regulator function is required. It must not be possible to block the signal line. In the other hole in the banjo fitting a manometer can be fitted for use when setting CVC. The manometer measures the pressure p_s in the signal line. Instead of blanking plug (44) a manometer connection, fig. 2 or 3, must be screwed in, see „Accessories“. If only one of the two connection holes in the banjo fitting is used the other must be blanked off with blanking plug (44). CVC can also be fitted in valve body CVH and be as a separate pilot valve or independent valve, see fig. 4. If CVC-CVH is used as a separate pilot valve the unit must be fitted in the pilot line with flow towards the main valve.

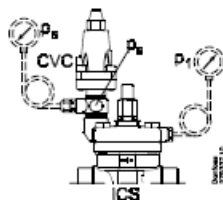


Fig. 5. ICS + CVC

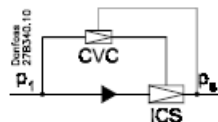


Fig. 6. ICS + CVC

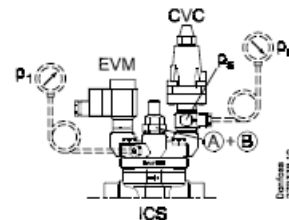


Fig. 7. ICS + EVM + CVC + A + B

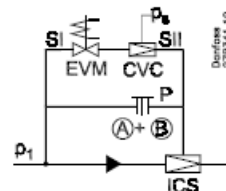
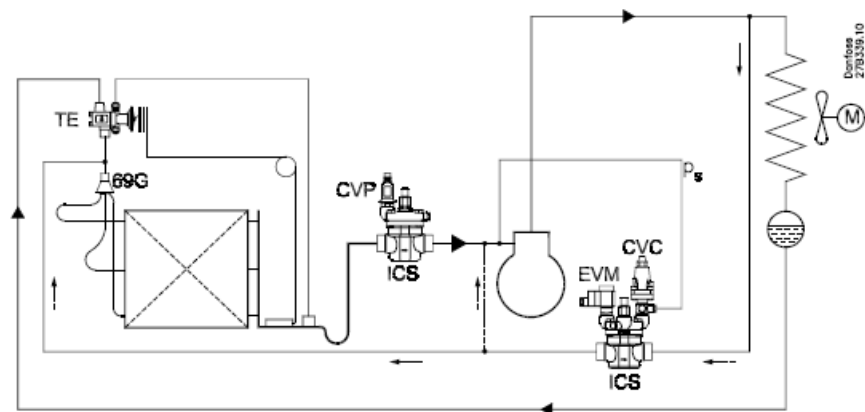


Fig. 8. ICS + EVM + CVC + A + B



Setting

The pilot valve opens at a fall in pressure p_s in the signal line. Turning the setting spindle (112) clockwise raises the opening pressure and vice versa. One turn of the setting spindle changes the opening pressure by approx. 3 bar (43.5 psi).

Rough setting

Turn the spindle (112) counterclockwise to stop. Then turn it clockwise for the number of turns corresponding to the desired opening pressure.

Fine setting

Set with the aid of a manometer.

Service

The orifice in CVC can be cleaned with compressed air. Screw off the CVC and draw the regulation part out of the banjo fitting (103). Turn the spindle (112) clockwise until the pilot valve is fully open. Blow compressed air through orifice (108) in the opposite direction to normal flow. Examine O-rings (82 and 104) and replace if necessary.

Spare parts

See Spare Parts catalogue.

Accessories

Manometer connection

For fluorinated refrigerants: self-closing valve with flare connections (fig. 2) code no. 027B2041;
for ammonia: $\varnothing 6.5 / \varnothing 10$ mm welding connectors (fig. 3) code no. 027B2035.

Frequently Asked Questions

• Q: What refrigerants are compatible with the CVC-XP Pilot Valve?

A: The pilot valve is compatible with HCFC, HFC, R717, and R744 refrigerants.

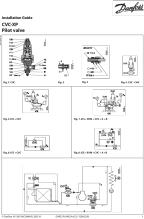
• Q: How can I adjust the opening pressure of the pilot valve?

A: You can adjust the opening pressure by turning the setting spindle clockwise to raise it and vice versa. Each turn changes the pressure by approximately 3 bar.

• Q: How should I clean the orifice in CVC?

A: To clean the orifice, screw off the CVC, draw out the regulation part, and blow compressed air through the orifice in the opposite direction to normal flow. Check and replace O-rings if needed.

Documents / Resources

	<p>Danfoss CVC-XP Pilot Valve [pdf] Installation Guide AN10318641499201-000401, DKRCI.PI.HNO.A4.52 - 520H2526, DKRCI.PI.HNO.A4.52 - 520H25262, CVC-XP Pilot Valve, Pilot Valve, Valve</p>
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References

- [User Manual](#)

Manuals+. [Privacy Policy](#)

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