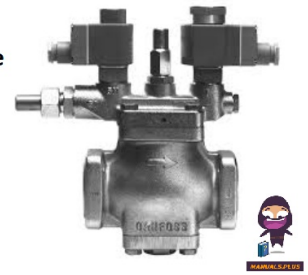


  
PML Solenoid Valve



# Danfoss PML Solenoid Valve Installation Guide

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**Danfoss PML Solenoid Valve**



## Specifications

- Product Name: Solenoid Valve PML (NC/NC) 80-125
- Pressure Range: Max. working pressure of 28 bar g (406 psi g)
- Refrigerants Applicable: HCFC, HFC, R717 (Ammonia)
- Recommended Use: Closed circuits only

## Installation

1. Ensure the valve is suitable for the refrigerants being used and is only installed in closed circuits.
2. Connect the PML valve in suction, liquid, hot gas, or liquid/vapor lines as needed.
3. Connect pilot valves following the instructions provided with three connections available: two in series (S I and S II) and one in parallel (P).
4. Ensure proper connection of the pilot line to prevent dirt and oil contamination

## Protection and Maintenance:

1. Prevent corrosion by applying suitable protective coatings if necessary.
2. Repaint the valve with care to protect the ID plate.
3. Follow the tightening torques specified in Table 1 using original Danfoss parts for replacements.
4. Regular maintenance includes cleaning the strainer by removing the bottom cover. Do not open the valve under pressure.

## Installation

### Refrigerants

- Applicable to HCFC, HFC, and R717 (Ammonia).
- Flammable hydrocarbons are not recommended. The valve is only recommended for use in closed circuits. For further information, please contact Danfoss.

### Temperature range

- PML:  $-60/+120^{\circ}\text{C}$  ( $-76/+248^{\circ}\text{F}$ )

## **Pressure range (fi.. 5)**

- PML: The valves are designed for a max. Working pressure of 28 bar g (406 psi g).

## **Technical data**

- The PML can be used in suction, liquid, hot-gas, and liquid/vapour lines.
- The PML regulates the flow of the medium by on/off function, depending on the control impulse from the screwed-on pilot valves.
- The PML has three connections for pilot valves: two in series, marked "S I" and "S II", and one in parallel with these two, marked "P", see fig. 3.

## **Installation**

- The flange set for the PML is delivered separately. The valve must be installed with the arrow in the direction of the flow and the top cover upwards (fig 1). The top cover can be rotated 4 X  $90^{\circ}$  about the valve body.
- The valve is fitted with a spindle for manual opening.
- If an external pilot valve is used, the pilot line must be connected to the upper side of the main line so that any dirt and oil from the plant will not find its way into the pilot line.
- The valve is designed to withstand a high internal pressure. However, the piping system should be designed to avoid liquid traps and reduce the risk of hydraulic pressure caused by thermal expansion. Itlt
- must be ensured that the valve is protected from pressure transients like "liquid hammer" in the system.

## **Mounting of valve flanges**

- When welding/soldering the flanges to the system piping, use only materials and welding/soldering methods compatible with the flange material.
- Make sure that piping into which a valve/ flange is installed is properly supported and aligned square and plumb to the joining sections.
- Ensure that the finalized valve assembly is free of any stresses from external loads..
- PML valves must not be mounted in systems where the outlet side of the valve is open to the atmosphere. The outlet side of the valve must always be connected to the system or properly capped off, for example with a welded-on end plate.

## **Colours and identification**

- The PML valves are zinc-chromated in the factory. If further corrosion protection is required, the valves can be painted. Precise identification of the valve is made via the ID plate on the top cover. The external surface of the valve housing must be protected against corrosion with a suitable protective coating after installation and assembly.
- Protection of the ID plate when repainting the valve is recommended.

## Maintenance

### Service

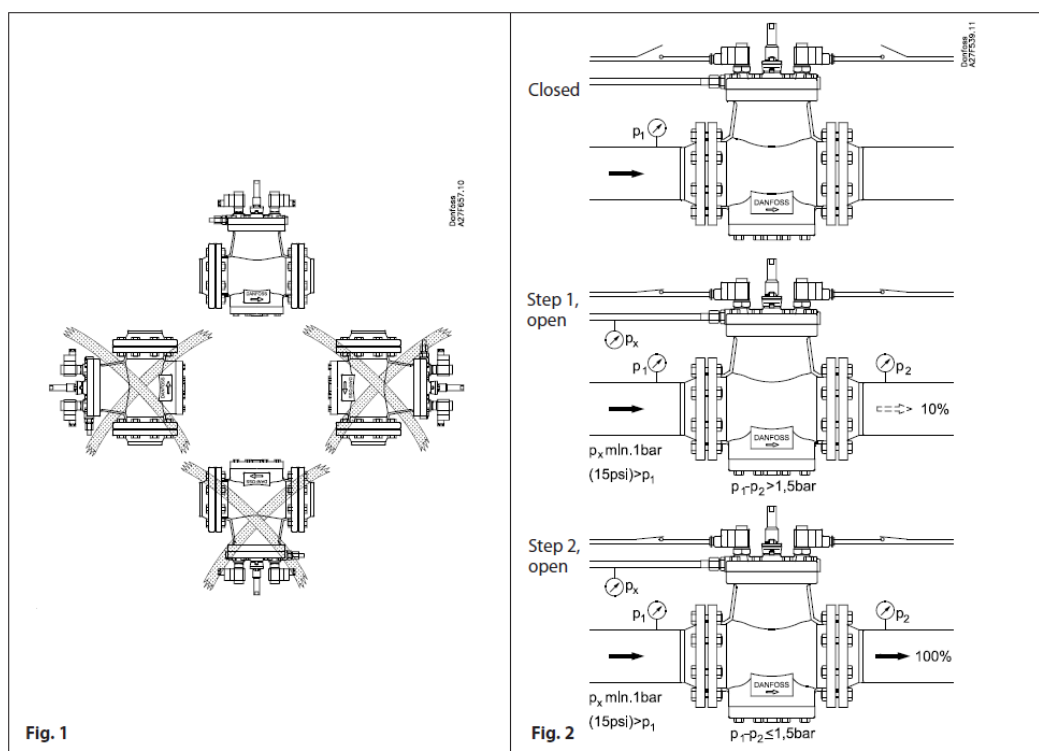
- The PML valves are easy to dismantle, and most of their parts are replaceable. When the bottom cover is removed, the strainer can be taken out for cleaning.
- Do not open the valve while the valve is still under pressure.
- Check that the O-ring has not been damaged.
- Check that the spindle is free of scratches and impact marks.
- If the teflon ring has been damaged, the parts must be replaced.

### Assembly

Remove any dirt from the body before the valve is assembled. Check that all channels in the valve are not blocked with particles or similar.

### Tightening

- Tightening torques See fig. 3 and Table 1.
- Use only original Danfoss parts, including packing glands, O-rings, and gaskets for replacement. Materials of new parts are certified for the relevant refrigerant.
- In cases of doubt, please contact Danfoss. Danfoss accepts no responsibility for errors and omissions. Danfoss Industrial Refrigeration reserves the right to make changes to products and specification without prior notice.
- The following text applies to the UL-listed products PML (NC/NC) 80-125. Applicable to all common non-flammable refrigerants, including/excluding (+) R717 and to non-corrosive gases/liquids dependent on sealing material compatibility (++). The design pressure shall not be less than the value outlined in Sec. 9.2 of ANSI/ASHRAE 15 for the refrigerant used in the system. (+++).
- Remove any dirt from the body before the valve is assembled. Check that all channels in the valve are not blocked with particles or similar.





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FAQS

**Q: What refrigerants are applicable for the Solenoid Valve PML (NC/NC) 80-125?**

A: The valve applies to HCFC, HFC, and R717 (Ammonia) refrigerants.

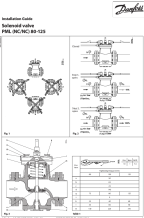
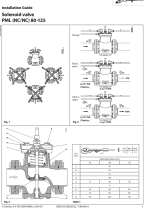
**Q: Can the PML valve be used in open systems?**

A: No, the PML valve must only be used in closed circuits to ensure proper functionality.

**Q: How should I protect the valve against pressure transients?**

A: Design the piping system to avoid liquid traps and reduce risks from hydraulic pressure caused by thermal expansion. Ensure the valve is shielded from pressure transients like liquid hammer.

Documents / Resources

	<a href="#">Danfoss PML Solenoid Valve</a> [pdf] Installation Guide 027R9523, M27F0007, PML Solenoid Valve, Solenoid Valve, Valve
	<a href="#">Danfoss PML Solenoid Valve</a> [pdf] Installation Guide 027R9523, M27F0007, PML Solenoid Valve, Solenoid Valve, Valve

References

- [User Manual](#)

[Manuals+](#), [Privacy Policy](#)

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