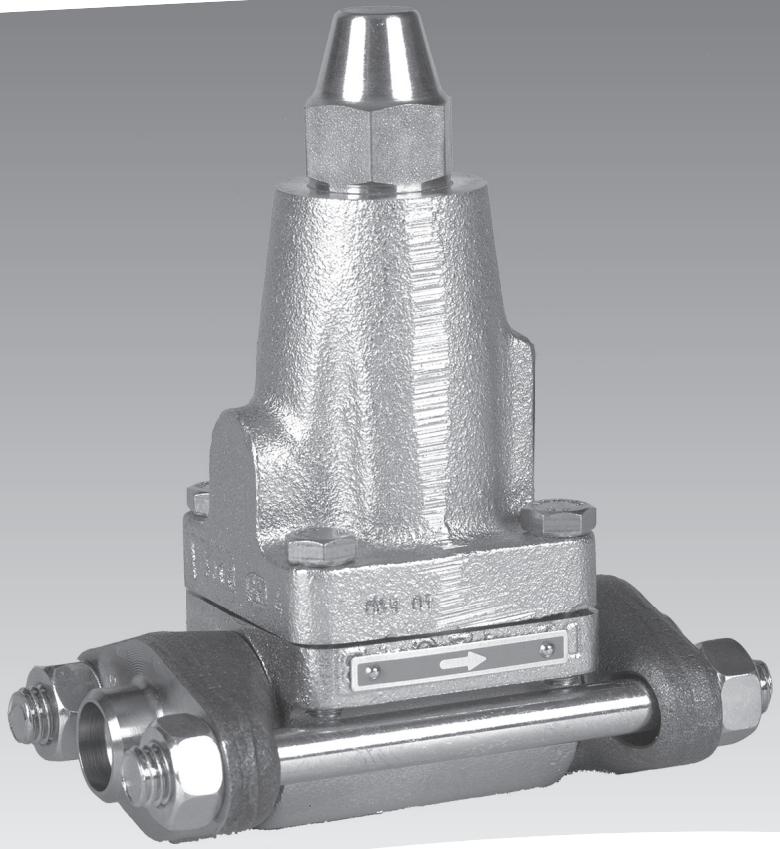


Constant pressure valve,
type CVMD

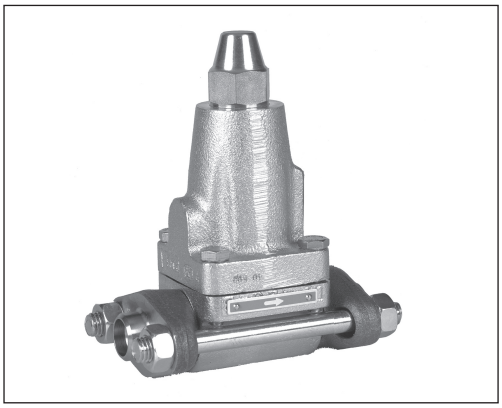
REFRIGERATION AND
AIR CONDITIONING

Technical leaflet

Technical leaflet **Constant pressure valve, type CVMD**

Introduction

CVMD is a constant pressure regulator for refrigeration and freezing plant in applications such as;
- Hot gas defrosting (drain lines)
- Refrigerant pump bypass (to ensure min. flow in refrigerant pumps).



Technical data

Refrigerants
R 717, R 22, R 134a, R 404A, R 407C etc.

Range
0 → 7 bar

Max. working pressure
PB = 28 bar

Test pressure
p' = 36 bar

Temperature range
–50 → 120°C

k_v value
1.5 m³/h

The k_v value is the flow of water in m³/h at a pressure drop across valve of 1 bar, ρ = 1000 kg/m³.

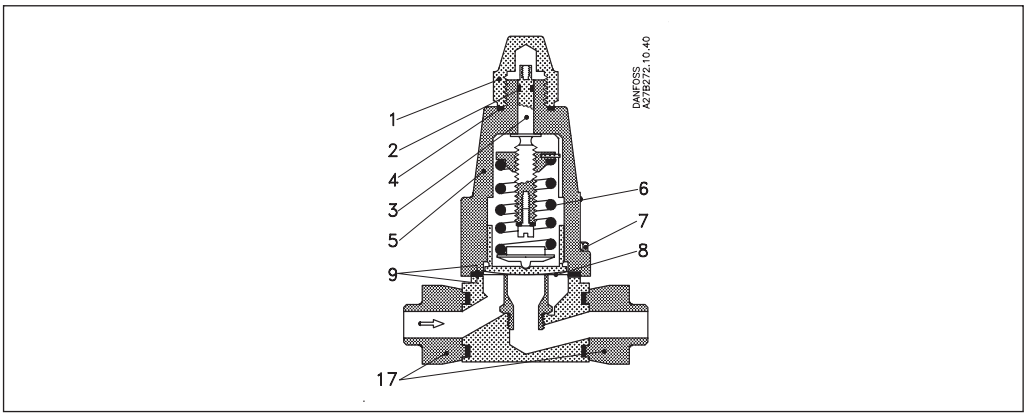
Ordering

CVMD incl. $^1/_2$ in. weld flange, code no. **027B1038**.

Materials

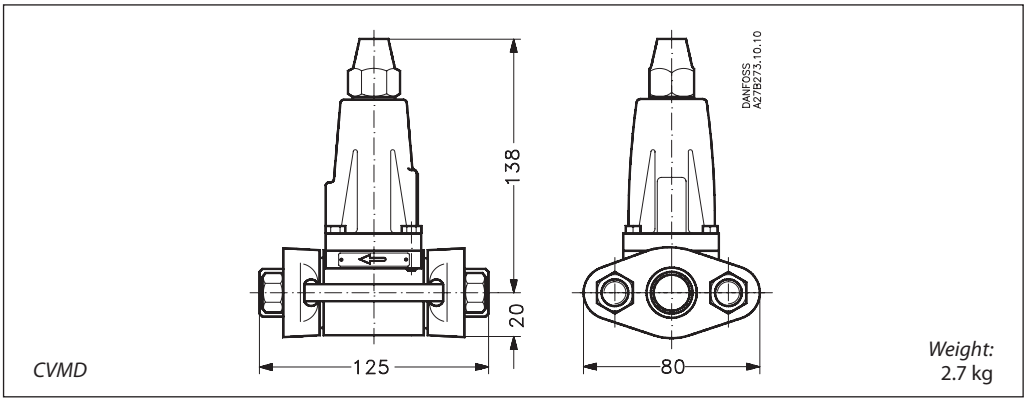
- Gaskets are non asbestos
- Valve housing made of GGG 40.3

Construction



1. Protection cap
2. O-ring
3. Spindle
4. Gasket
5. Cover
6. Spring
7. Screw
8. Diaphragm
9. Gasket
17. Flanges

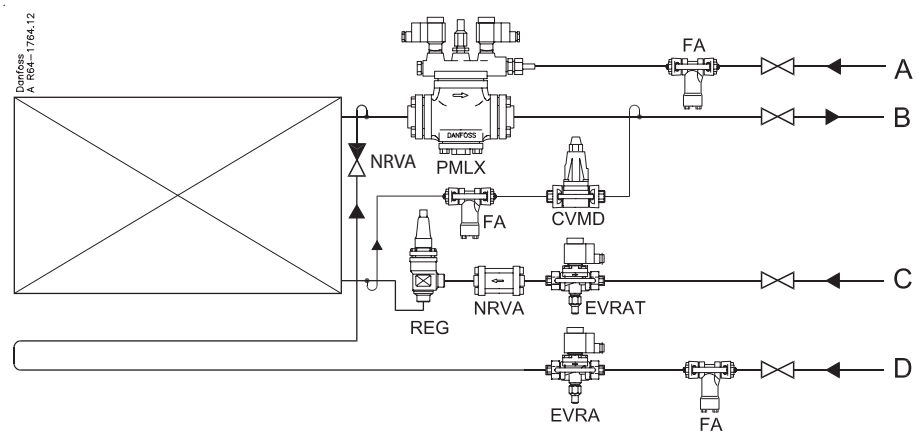
Dimensions and weight



Application

Example

Hot gas defrosting of evaporator with pump circulation



The figure shows the low pressure side of an R 717 refrigeration plant with flooded evaporator with pump circulation.

In this application, the constant pressure valve, type CVMD, is mounted as a pressure regulator in the bypass line between evaporator and downstream wet suction line after the solenoid valve, type PMLX.

Pos. A on the drawing is the pilot line from the high pressure side to PMLX.
Pos. B is the liquid/gas return line.
Pos. C is the liquid line to the evaporator.
Pos. D is the hot gas line for hot gas defrosting of the evaporator.

The CVMD can be used in this application for evaporators with capacities up to:

R 717

Defrost temperature	+10°C				
Evaporating temperature	–10°C	–20°C	–30°C	–40°C	–50°C
(Drainline capacity kg/h)	(1666)	(1906)	(2059)	(2156)	(2216)
Max. $Q_{Evaporator}$ (kW)	240	281	311	333	349

Based on:
$\Delta P_{over} = 1$, $k_v = 1.5$ m³/h
Defrost capacity (kW) = $2.5 \times Q_{Evaporator}$

Use PM + CVP (HP) valves for higher capacities.