

# **Constant pressure valve,** type CVMD

Technical leaflet

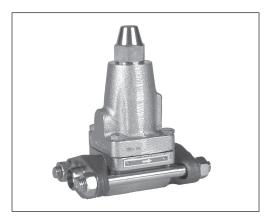
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# **Technical leaflet**

### 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

 $0 \rightarrow 7 \text{ bar}$ 

Max. working pressure PB = 28 bar

Test pressure p' = 36 bar

Ordering

Materials

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

Gaskets are non asbestos

Valve housing made of GGG 40.3

DANFOSS V27B272.10.40

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The  $k_{\nu}$  value is the flow of water in  $m^{\scriptscriptstyle 3}/h$ 

at a pressure drop across valve of 1 bar,

Temperature range

 $-50 \rightarrow 120^{\circ}C$ 

 $\rho = 1000 \text{ kg/m}^3$ .

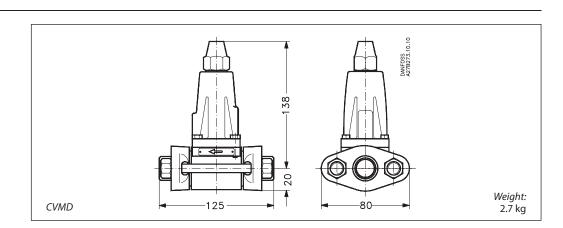
 $k_v$  value 1.5 m³/h

# Construction

1. Protection cap

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

# **Dimensions and weight**



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## Application

Example

Hot gas defrosting of evaporator with pump circulation 764.12 ŧШ Th FA anfoss R64-Δ В NRVA PMLX Æ CVMD ⊢FA The EVRAT С NRVA REG Ē. D EVRA FÅ

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	7	1	7

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 <sub>Evaporator</sub> (kW)	240	281	311	333	349		

Based on:

$$\label{eq:power} \begin{split} \Delta P_{over} = 1, \, k_v = 1.5 \; m^3/h \\ Defrost \; capacity \; (kW) = 2.5 \times Q_{\text{Evaporator}} \end{split}$$

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

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