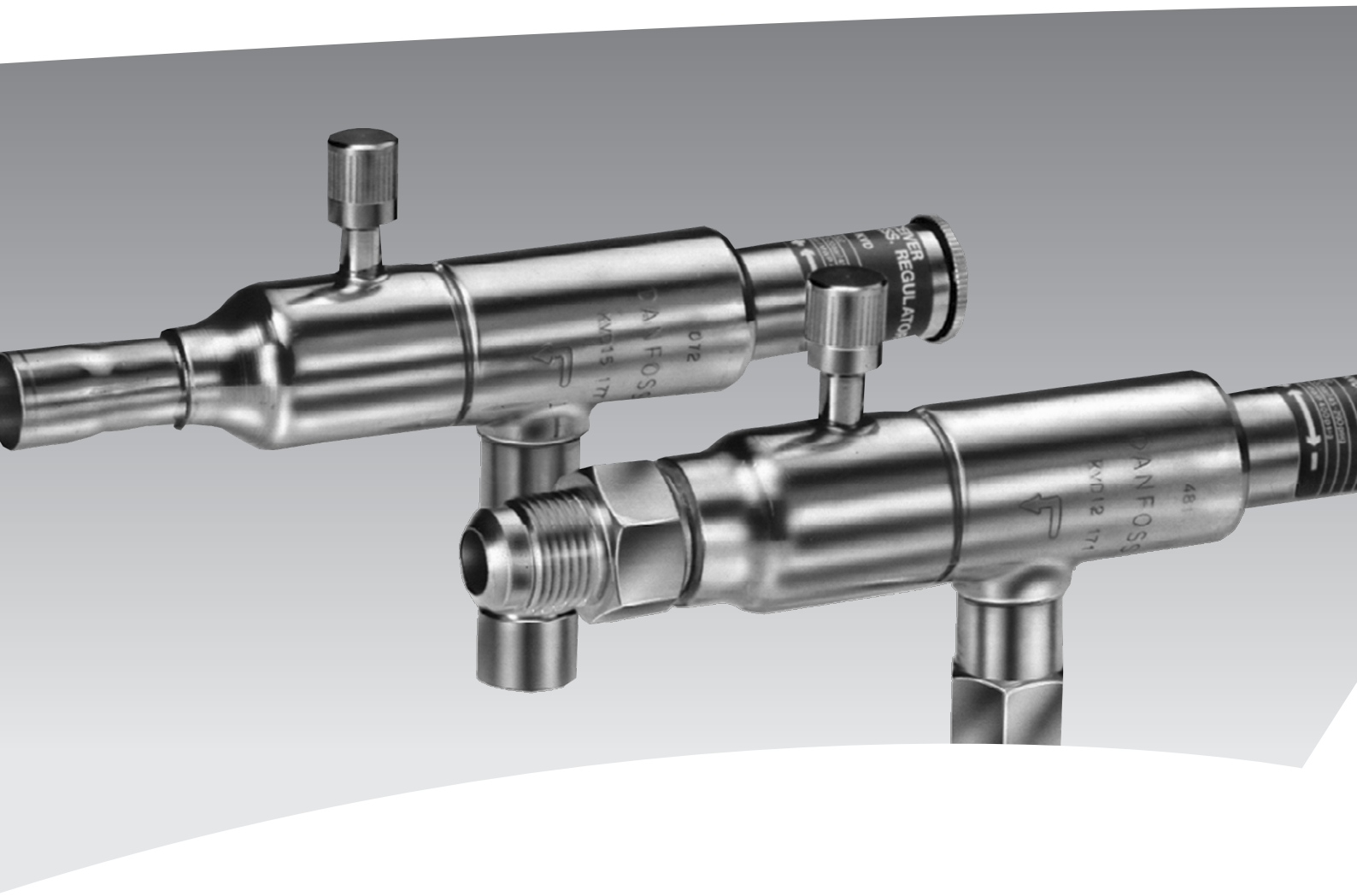


Receiver pressure regulator,
type KVD

REFRIGERATION AND
AIR CONDITIONING

Technical leaflet

Technical leaflet **Receiver pressure regulator, type KVD**

Introduction

KVD is a modulating pressure regulator. It opens on falling receiver pressure and bypasses hot gas to maintain the receiver pressure at the regulator setting (adjustable).

KVD and KVR form a regulating system, used to maintain constant and adequately high condensing and receiver pressure in plant with heat-recovery, and in refrigeration and air conditioning plant with air-cooled condensers.

Features

- Accurate, adjustable pressure regulation
- Wide capacity and operating range
- Pulsation damping design
- Stainless steel bellows
- Compact angle design for easy installation in any position
- "Hermetic" brazed construction
- ¼ in. Schrader valve for pressure testing
- Available with flare and ODF solder connections
- For use with CFC, HCFC and HFC refrigerants
- Can be used as a relief valve from high pressure to suction side

Approvals

cULus listed, file SA7200

Technical data

Refrigerants
CFC, HCFC and HFC

Regulating range
3 → 20 bar
Factory setting = 10 bar

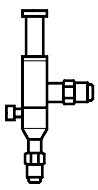
Max. working pressure
PS = 28 bar

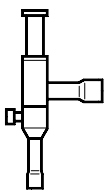
Max. test pressure
p' = 31 bar

Min. temperature of medium
–45°C

Max. temperature of medium
130°C

Ordering





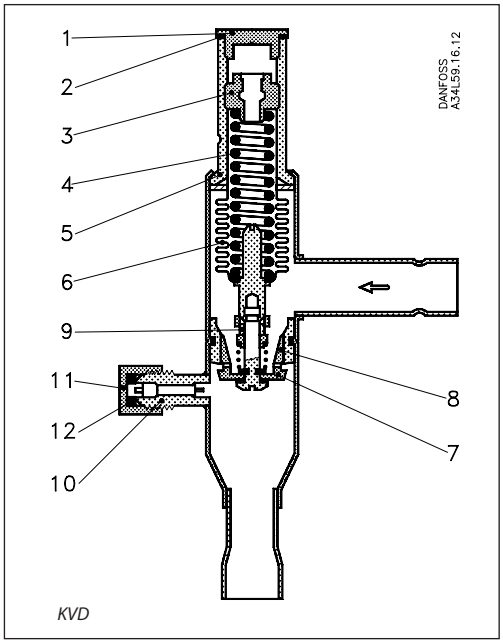
Type	k_v value [1] m^3/h	Flare connection [2]		Code no.	Solder connection		Code no.
		in.	mm		in.	mm	
KVD 12	1.75	1/2	12	**034L0171**	1/2		**034L0173**
	1.75					12	**034L0176**
KVD 15	1.75	5/8	16	**034L0172**	5/8	16	**034L0177**

[1] The k_v value is the flow of water in m^3/h at a pressure drop across valve of 1 bar, ρ = 1000 kg/m^3.

[2] KVD is supplied without flare nuts. Separate flare nuts can be supplied:
1/2 in./12 mm, **code no. 011L1103**
5/8 in./16 mm, **code no. 011L1167**

The size of connection must not be chosen too small since gas velocities of more than 40 m/s in the inlet can cause flow noise.

Design
Function

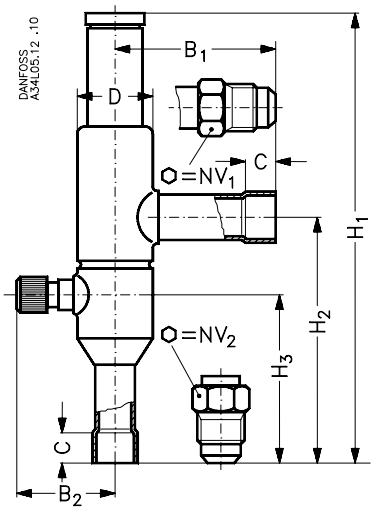


KVD

1. Protective cap
2. Gasket
3. Setting screw
4. Main spring
5. Valve body
6. Equalization bellows
7. Valve plate
8. Valve seat
9. Damping device
10. Pressure gauge connection
11. Cap
12. Gasket

Receiver pressure regulator KVD opens at a fall in pressure on the outlet side, i.e. when the pressure in the receiver falls below the set value. KVD regulates only in dependence on the outlet pressure. Pressure variations on the inlet side of the regulator do not affect the degree of opening since KVD is equipped with an equalization bellows (6). This bellows has an effective area corresponding to that of the valve seat.
The regulator is also equipped with an effective damping device (9) against pulsations which can normally arise in a refrigeration plant. The damping device helps to ensure long life for the regulator without impairing regulation accuracy.

Dimensions and weights



KVD

Type	Connection				NV_1	NV_2	H_1	H_2	H_3	B_1	B_2	C solder	∅ D	Weight
	Flare		Solder ODF											
	in.	mm	in.	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
KVD 12	1/2	12	1/2	12	19	24	179	99	66	64	41	10	30	0.4
KVD 15	5/8	16	5/8	16	24	24	179	99	66	64	41	12	30	0.4