ENGINEERING
TOMORROW

Data Sheet

Receiver pressure regulator Type **KVD**

KVD used to maintain constant and adequately high condensing and receiver pressure in plant

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

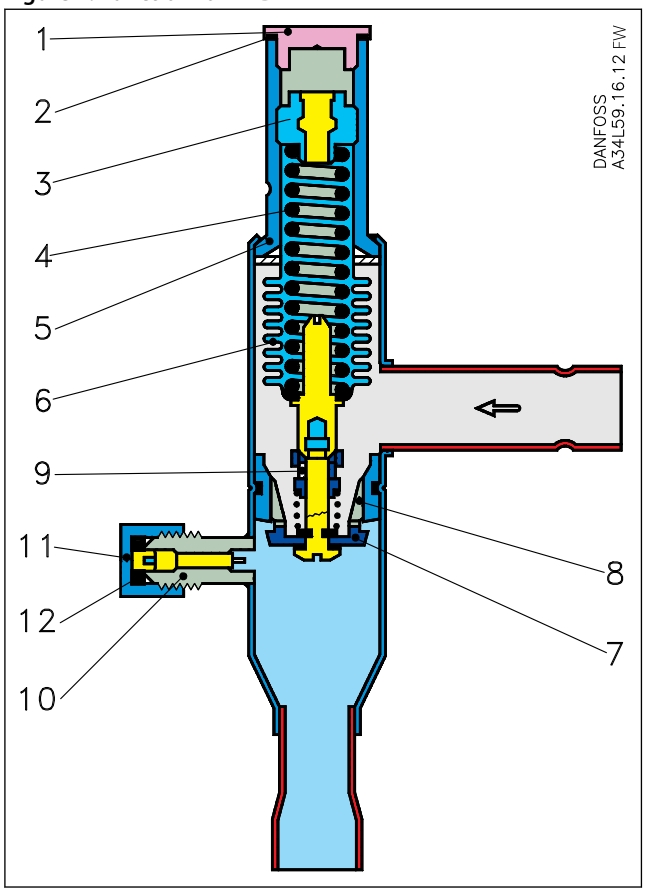
KVD and KVR form a regulating system, used to maintain constant and adequately high condensing and receiver pressure in plant with heat-recovery, and in refrigeration and air conditioning plant with air-cooled condensers.

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
- Can be used as a relief valve from high pressure to suction side
- May be used in the following EX range: Category 3 (Zone 2)

Functions

Figure 1: Function for 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

The 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 KVD 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.

Product specification

Technical data

Table 1: Technical data for KVD

Features	Description
Refrigerants	R22, R134a, R290, R404A, R407A, R407C, R407F, R407H, R448A, R449A, R449B, R450A, R452A, R454A, R454C, R455A, R507A, R513A, R515B, R516A, R600, R600a, R1234ze(E), R1234yf, R1270
Regulating range	3 – 20 bar
	Factory setting = 10 bar
Max. working pressure	PS / MWP = 28 bar
Max. test pressure	Pe = 31 bar
Medium temperature range	-45 – 130 °C

This product is evaluated for R290, R454A, R454C, R455A, R600, R600a, R1234ze(E), R1234yf, R1270 by ignition source assessment in accordance with standard EN ISO80079-36. Flare connections are only approved for A1 and A2L refrigerants.

For complete list of approved refrigerants, visit www.products.danfoss.com and search for individual code numbers, where refrigerants are listed as part of technical data.

Dimensions and Weight

Figure 2: Dimensions for KVD

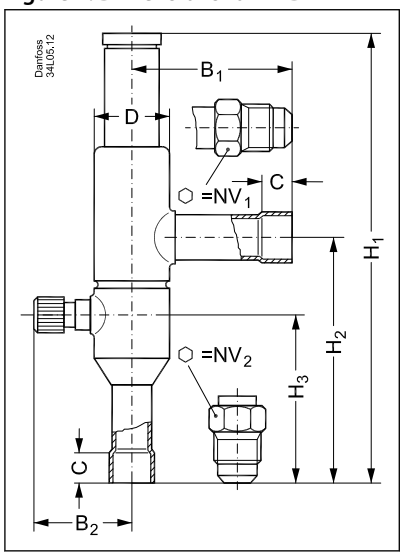


Table 2: Dimensions and Weight for KVD

Type	Connection				NV_1	NV_2	H_1	H_2	H_3	B_1	B_2	C solder	øD	Net 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

Ordering

Figure 3: Ordering for type KVD 12

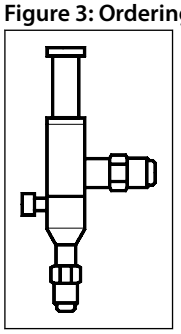


Figure 4: Ordering for type KVD 15

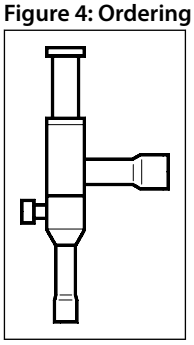


Table 3: Ordering for type KVD

Type	k_v value[1]	Flare connection[2]		Code no.	Solder connection		Code no.
	[m^3 / h]	[in]	[mm]		[in]	[mm]	
KVD 12	1.75	½	12	034L0171	½	–	034L0173
	1.75	–	–	–	–	12	034L0176
KVD 15	1.75	⅝	16	034L0172	⅝	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:
½ in / 12 mm, **code no. 011L1103**,
½ in / 16 mm, **code no. 011L1167**.

The connection dimensions chosen must not be too small, since gas velocities in excess of 40 m/s at the inlet of the regulator can give flow noise.

Certificates, declarations and approvals

The list contains all certificates, declarations, and approvals for this product type. Individual code number may have some or all of these approvals, and certain local approvals may not appear on the list.

Some approvals may change over time. You can check the most current status at danfoss.com or contact your local Danfoss representative if you have any questions.

Table 4: Certificates, declarations and approvals

Document name	Document type	Document topic	Approval authority
RU Д-DK.БЛ08.B.00191_18	EAC Declaration	Machinery & Equipment	EAC
089.D.00188-17	UA Declaration	PED	LLC CDC EURO TYSK
TR-089.0993-17	Pressure - Safety Certificate	PED	LLC CDC EURO TYSK

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