Data sheet



Receiver pressure regulator

KVD

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

Description

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).

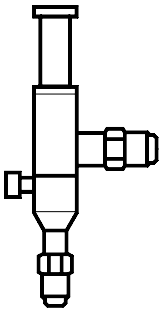
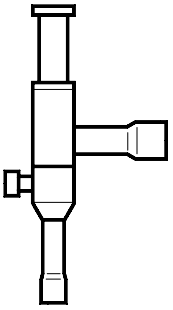
KVD and KVR form a regulating system, used to maintain constant and adequately high condensing and receiver pressure in plant with heat–recovery, and in refrigeration and air conditioning plant with air - cooled condensers.

Features & benefits

- 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)

Ordering

Product code numbers

Figure: Ordering for type KVD 12	Figure: Ordering for type KVD 15
	

Type	Kv value [m^3/h]	Inlet connection type	Outlet connection type	Inlet size [in]	Inlet size [mm]	Outlet size [in]	Outlet size [mm]	Code number
KVD 12	1.750	Flare	Flare	1/2 in	12.00	1/2 in	12.00	034L0171
KVD 15	1.750	Flare	Flare	5/8 in	16.00	5/8 in	16.00	034L0172
KVD 12	1.750	Solder, ODF	Solder, ODF	1/2 in		1/2 in		034L0173
KVD 12	1.750	Solder, ODF	Solder, ODF		12.00		12.00	034L0176
KVD 15	1.750	Solder, ODF	Solder, ODF	5/8 in	16.00	5/8 in	16.00	034L0177

(1) **K_v value** - The k_v value is the flow of water in [m^3/h] at a pressure drop across valve of 1 bar, $\rho = 1000$ kg/m^3

(2) **Flare connection** - KVD is supplied without flare nuts. Separate flare nuts can be supplied:

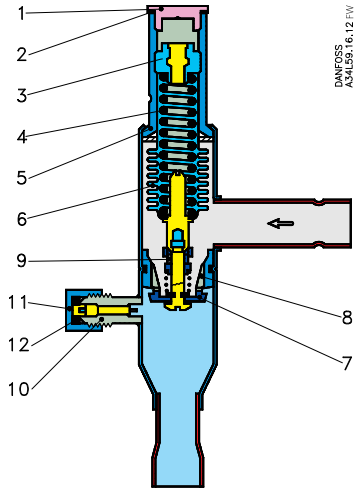
½ in / 12 mm, **code no. 011L1103**

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.

Functions

Figure: 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.

Media

Refrigerants

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

Product details

General data

Table: Technical data for KVD

Features	Description
Regulating range	3 – 20 bar
	Factory setting = 10 bar
Max. working pressure	PS / MWP = 28 bar
Max. test pressure	P_e = 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

Figure: Dimensions for KVD

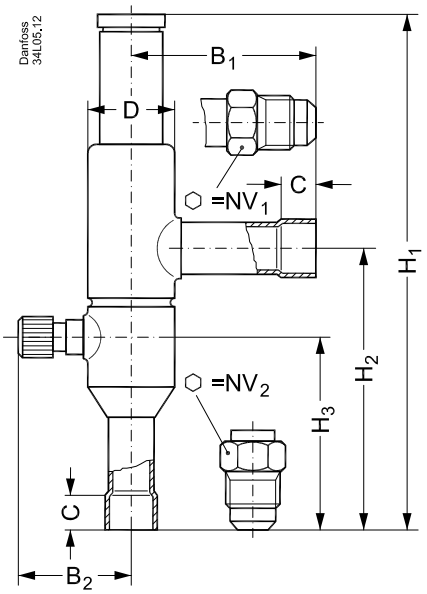


Table: Dimensions and weight for KVD

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	½	12	½	12	19	24	179	99	66	64	41	10	30	0.4
KVD 15	⅝	16	⅝	16	24	24	179	99	66	64	41	12	30	0.4

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.

When you click on the link you will be directed to the latest version of the 'Declaration of Conformity'. Products developed and sold before this date of issue conform to the directives/standards in force at the time of their sale.

Approval type	Title	Certification body	Approval topic
Export Control Declaration	Pressure and Temperature regulating valves	Danfoss	
Manufacturer's Declaration	Danfoss MD 034L9625.AF	Danfoss	PED, EAEU RoHS, Pressure, EU RoHS
Manufacturer's Declaration	Danfoss MD 032F9268.AC	Danfoss	
Manufacturer's Declaration	Danfoss MD 034R9541.AA	Danfoss	China RoHS
Pressure Safety Certificate	LLC CDC EURO-TYSK UA.TR.089.1015.02-22	LLC CDC EURO TYSK - Ukraine	PED, Pressure
UA Declaration	Danfoss UA 2023-01-10 Valves PL01 PL40	Danfoss	PED, Pressure

Contact details

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Danfoss offers a wide range of support along with our products, including digital information, software, mobile apps and expert guidance. See the possibilities below.

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