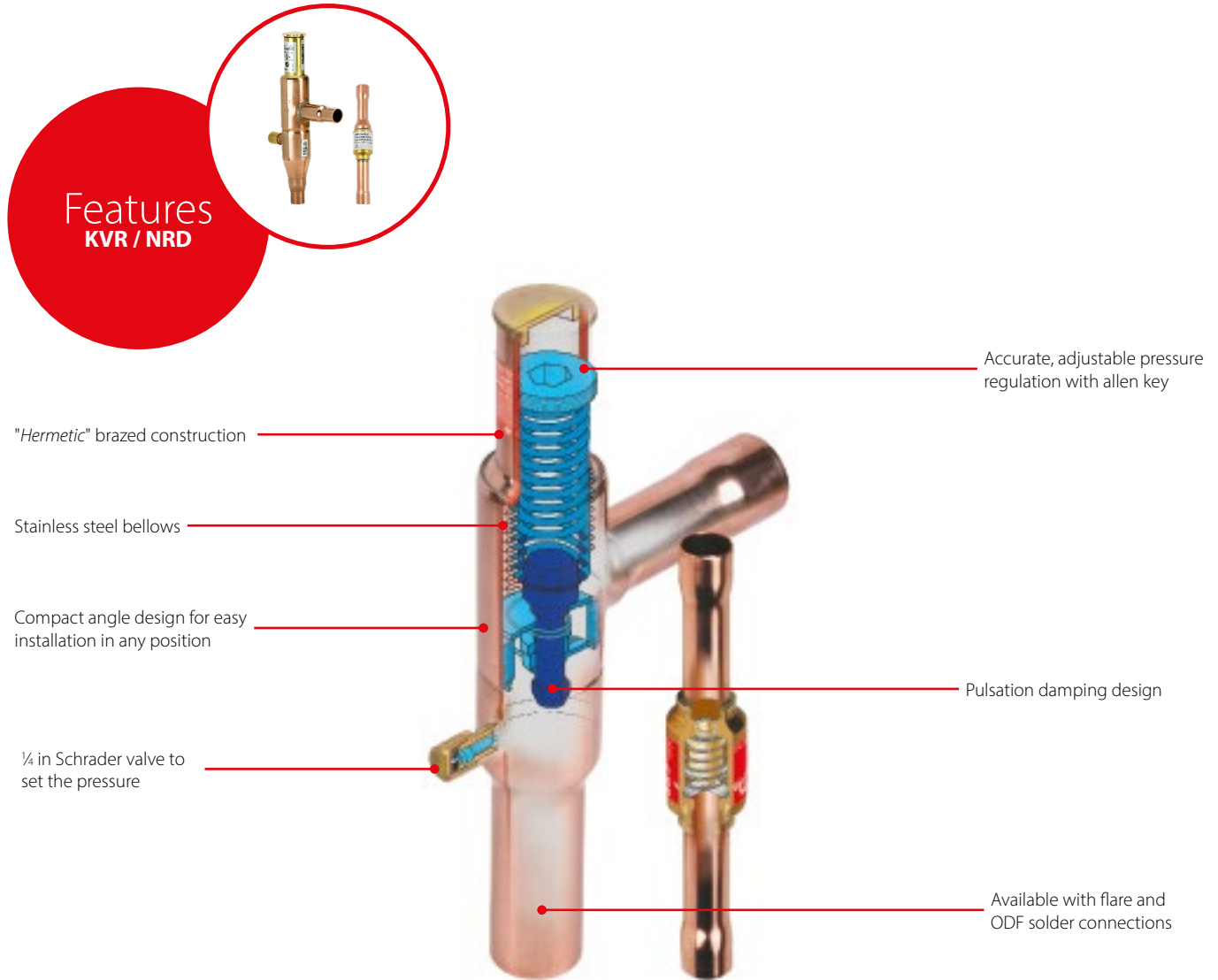


KVR / NRD, Condensing pressure regulator / Differential pressure valve

Regulating system KVR and NRD is used to maintain a constant and sufficiently high condenser and receiver pressure in refrigeration and air conditioning plant with air-cooled condensers.

KVR can also be used together with receiver pressure regulator, type KVD.



Facts

- 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
- 1/4 in. Schrader valve for pressure gauge connection
- Available with flare and ODF solder connections
- KVR 12 - KVR 22 and NRD: May be used in the following EX range: Category 3 (Zone 2)

Technical data and ordering

KVR / NRD - Condensing pressure regulator / Differential pressure valve

Technical data

Refrigerants	R22, R32**, R1270*, R134a, R290*, R404A, R407A, R407C, R407F, R407H, R410A**, R448A, R449A, R449B, R450A, R452A, R452B**, R454A*, R454B**, R454C*, R455A*, R507, R513A, R515B, R516A, R600*, R600a*, R1233zd(E)**, R1234ze(E)*, R1234yf** *KVR 12 - KVR 22 and NRD only **NRD only
Adjustment range	5 – 17.5 bar Factory setting = 10 bar
Maximum working pressure	KVR: PS/MWP = 28 bar NRD: PS/MWP = 49 bar
Maximum test pressure	KVR: Pe = 31 bar NRD: Pe = 81 bar
Medium temperature range	KVR: -45 – 130 °C, NRD: -50 – 155 °C
P-band	KVR 12 – 22 = 6.2 bar KVR 28 – 35 = 5 bar
Minimum opening pressure differential for NRD	Start opening: $\Delta p = 1.4$ bar

KVR 12 - KVR 22 is evaluated for R290, R454A, R454C, R455A, R600, R600a, R1234ze(E), R1270 by ignition source assessment in accordance with standard EN13463-1.

NRD is evaluated for R32, R1270, R290, R452B, R454A, R454B, R454C, R455A, R600, R600a, R1233zd(E), R1234ze(E), R1234yf by ignition source assessment in accordance with standard EN13463-1.

For complete list of approved refrigerants, visit <http://store.danfoss.com/> and search for individual code numbers, where refrigerants are listed as part of technical data.

Ordering

KVR 12, KVR 15, KVR 22, KVR 28, KVR 35, NRD

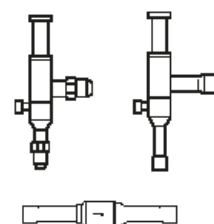
Type	Rated liquid capacity ¹⁾ (Evaporator capacity) [kW]				Rated hot gas ¹⁾ (Evaporator capacity) [kW]				Flare connect. ²⁾		Code no.	Solder Connect.		Code no.
	R22	R134a	R404A/ R507	R407C	R22	R134a	R404A/ R507	R407C	[in]	[mm]		[in]	[mm]	
KVR 12	50.4	47.3	36.6	54.4	13.2	11.6	12.0	14.3	½	12	034L0091	½	–	034L0093
	50.4	47.3	36.6	54.4	13.2	11.6	12.0	14.3	–	–	–	–	12	034L0096
KVR 15	50.4	47.3	36.6	54.4	13.2	11.6	12.0	14.3	¾	16	034L0092	¾	16	034L0097
KVR 22	50.4	47.3	36.6	54.4	13.2	11.6	12.0	14.3	–	–	–	¾	22	034L0094
KVR 28	129	121	93.7	139.3	34.9	30.6	34.9	37.7	–	–	–	1 ½	–	034L0095
	129	121	93.7	139.3	34.9	30.6	34.9	37.7	–	–	–	–	28	034L0099
KVR 35	129	121	93.7	139.3	34.9	30.6	34.9	37.7	–	–	–	1 ¾	35	034L0100
NRD	–	–	–	–	–	–	–	–	–	–	–	½	–	020B1132
	–	–	–	–	–	–	–	–	–	–	–	–	12	020B1136

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.

- ¹⁾ Rated capacity is based on:
- evaporating temperature $t_e = -10$ °C
 - condensing temperature $t_c = 30$ °C
 - pressure drop across the valve
 $\Delta p = 0.2$ bar for liquid capacity
 $\Delta p = 0.4$ bar for hot gas capacity
 - offset = 3 bar

To select the product for other conditions or refrigerants, use Danfoss Coolselector®2.

- ²⁾ KVR are delivered without flare nuts. Separate flare nuts can be delivered:
- ½ in / 12 mm, code no. 011L1103
 - ¾ in / 16 mm, code no. 011L1167



Application example-Liquid capacity application

