

Data sheet

Check valve for high pressure Type NRV 10s H for R744 (CO₂)



NRV 10s H check valves for R744 (CO₂) can work as an internal relief valve when installed in parallel with GBC Ball Valves or service shut off valves, at the inlet and outlet of components to be serviced. The NRV 10s H can also be used in hot gas defrosting lines.

Features

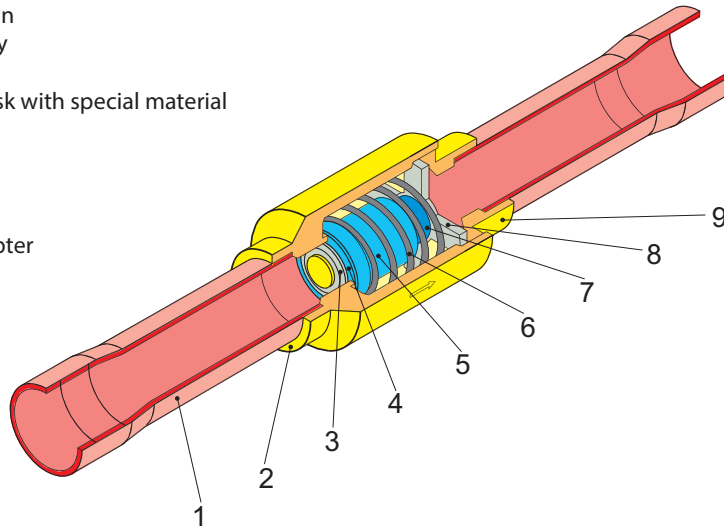
- The valve ensures that refrigerant only flow in one direction.
- Allows for internal pressure relief in the standstill system or during maintenance.
- The valve can withstand 90 bar / 1305 psig differential pressure and 90 bar / 1305 psig maximum working pressure.

Technical data

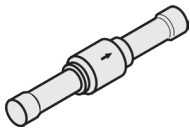
Refrigerants	R744 (CO ₂)
Oil	POE, PAG
Temperature range	-50 – 140 °C / -58 – 285 °F
Max. working pressure (PS/MWP)	90 bar / 1305 psig
Approvals	C UL US LISTED and CE

Design

1. Connection
2. Valve body
3. Washer
4. Sealing disk with special material
5. Piston
6. Spring
7. Guide
8. Stop face
9. Valve adapter



Ordering



Type	Connection type	Connection size		Differential pressure to start opening the valve ΔP_1		Pressure drop across valve ΔP_2 bar ¹⁾		K_v value ²⁾ (calculated value)	C_v value ²⁾ (calculated value)	Code no.
		[in.]	[mm]	[bar]	[psi]	[bar]	[psi]	[m ³ /h]	[gal/min]	
NRV 10s H	Straightway	³ / ₈		0.4	5.8	1.0	14.5	0.9	1.04	020-4000
	Solder ODF		10	0.4	5.8	1.0	14.5	0.9	1.04	020-4300

¹⁾ ΔP_1 = the minimum pressure at which the valve start opening.

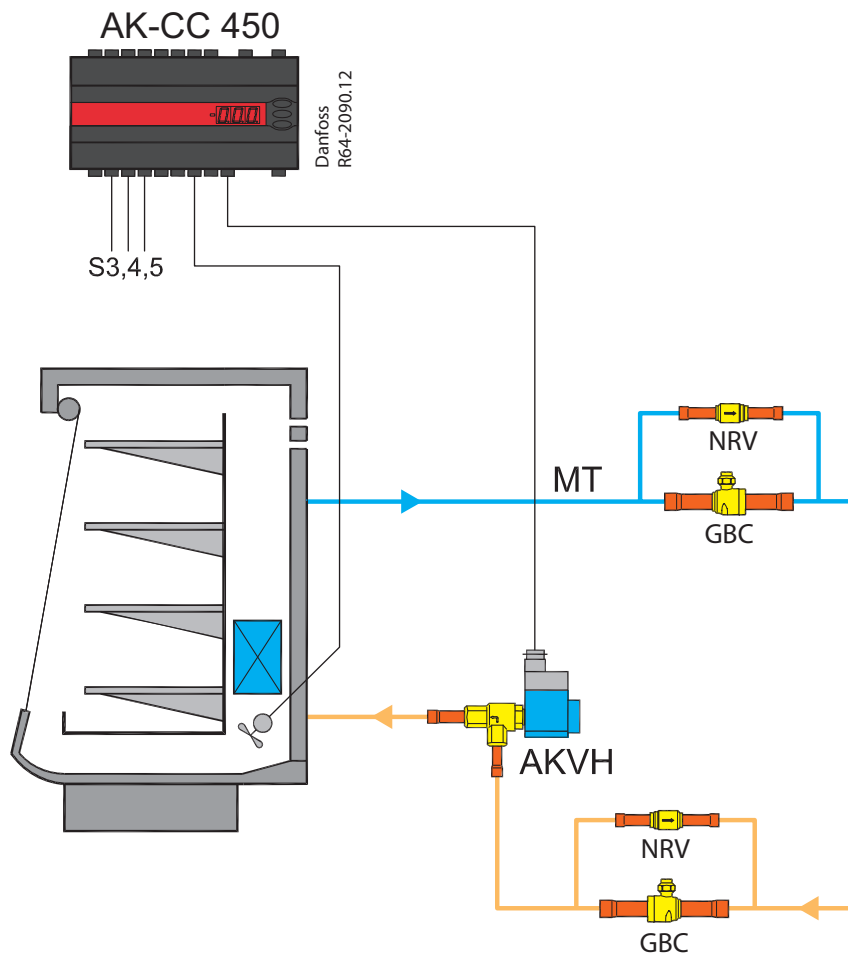
ΔP_2 = the minimum pressure at which the valve is completely open.

²⁾ The k_v value is the flow of water in m³/h at a pressure drop across valve of 1 bar, $\rho = 1000 \text{ kg/m}^3$.

The C_v value is the flow of water in gal/min at a pressure drop across valve of 14.5 psi.

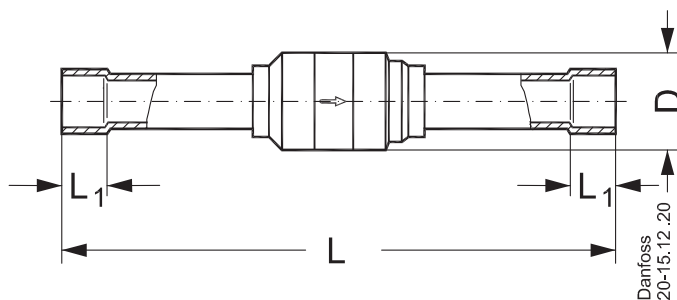
Application

NRV 10s H for CO₂ can be installed at component inlet and outlet in parallel with GBC ball valve and function as relief valve to release the pressure in the stand-still system during maintenance.



When the NRV is used together with GBC in parallel as a pressure relief valve, it is recommended to install the NRV above the GBC.

Dimensions and weight



ODF solder version - SI Units

Type	Connection type	Connection size		L [mm]	L ₁ [mm]	Φ D [mm]	Weight [kg]
		[in.]	[mm]				
NRV 10s H	Straightway	3/8		109	8	18	0.07
	Solder ODF		10	109	9	18	0.07

ODF solder version - US Units

Type	Connection type	Connection size		L [in.]	L ₁ [in.]	Φ D [in.]	Weight [lbs]
		[in.]					
NRV 10s H	Straightway	3/8		4.29	0.31	0.71	0.15
	Solder ODF						

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