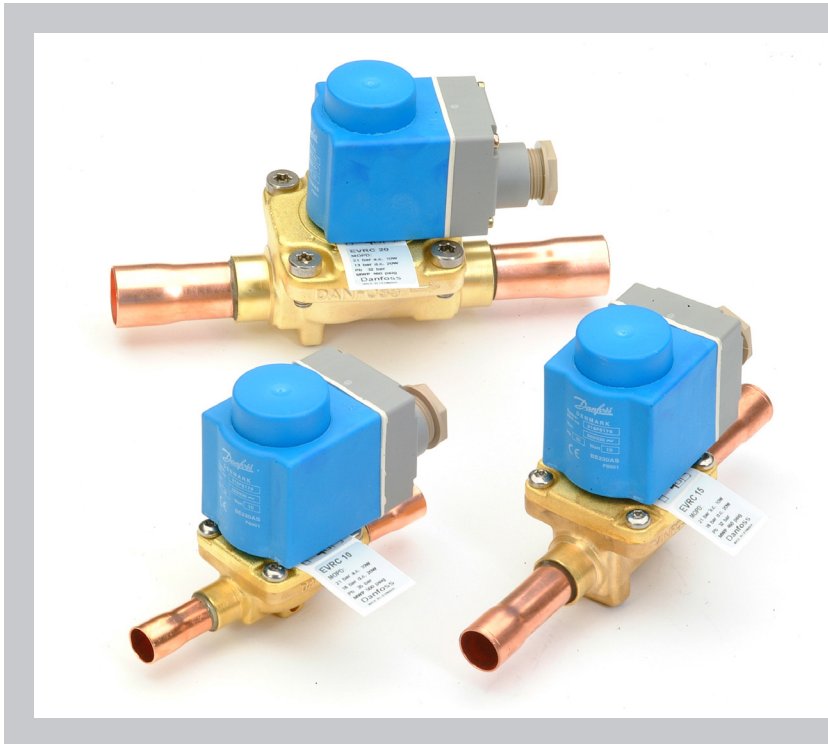


Data sheet

Solenoid valve

Types EVRC 10 – 20



EVRC is a servo operated solenoid valve for use in liquid lines in refrigeration plant.

EVRC allows flow in both directions and can therefore be used in liquid lines in refrigeration plant with hot gas or gas defrost.

During the refrigeration period EVRC works as a normal solenoid valve, while during the defrost it allows the condensed liquid to return to the liquid manifold.

During the defrosting period the coil for EVRC must be energized.

Features

- For liquid line in refrigeration, freezing and air conditioning plants
- For bi-flow, eg. reverse flow during defrosting
- Available as normally closed (NC) with de-energized coil
- Wide choice of coils for a.c. and d.c.
- Suitable for all fluorinated refrigerants and many flammable refrigerants
- Designed for media temperatures up to 105 °C
- MOPD (Max. Opening Pressure Differential) up to 25 bar with 12 W coil
- Solder connections up to 7/8 in.

Approvals

Low Voltage Directive (LVD) 2006/95/EC

Technical data

Refrigerants
R22/R407C, R404A/R507, R410A, R134a, R407A, R23, R32, R290, R600 and R600a.
For other refrigerants, please contact Danfoss.

Capacity
The capacity of the valve depends on the flow direction, see k_v values from the table.

Temperature of medium
-40 – 105 °C with 10 W or 12 W coil.

See extended capacity tables as for EVR in the EVR data sheet.

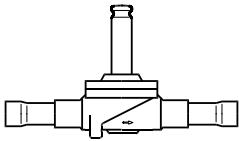
Ambient temperature and enclosure for coil
See separate data sheet for coils and ATEX coils.

Type	Rated capacity with normal flow direction ¹⁾ [kW]			Opening differential pressure with standard coil Δp [bar]			Max. working pressure P_s [bar]	k_v -value ²⁾ [m ³ /h]		
	R22/R407C	R134A	R404A/R507	Min.	Max. (= MOPD) liquid			Flow in arrow direction	Flow against arrow direction	
					10 W a.c.	12 W a.c.				20 W d.c.
EVRC 10	38.2	35.3	26.7	0.05	21	25	18	35	1.9	1.1
EVRC 15	52.3	48.3	36.5	0.05	21	25	18	32	2.6	1.2
EVRC 20	94.6	87.2	66.1	0.05	21	25	13	32	5.0	4.7

¹⁾ Rated liquid capacity is based on evaporating temperature $t_e = -10$ °C, liquid temperature ahead of valve $t_l = 25$ °C, and pressure drop across valve $\Delta p = 0.15$ bar.

²⁾ The k_v value is the water flow in [m³/h] at a pressure drop across valve of 1 bar, $\rho = 1000$ kg/m³.

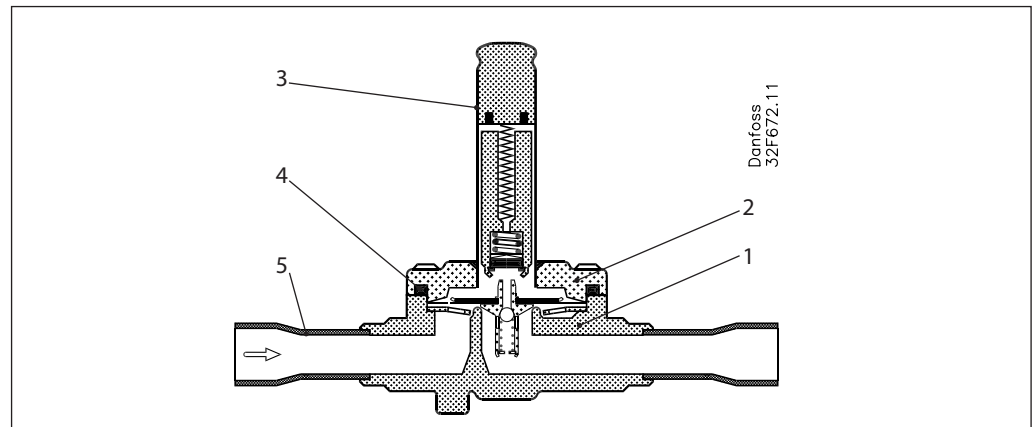
Ordering



Type	Required coil	Connection Solder		Code no.
		[in.]	[mm]	Valve housing without coil
EVRC 10	a.c./d.c.	1/2	—	032F1216
EVRC 15	a.c./d.c.	5/8	16	032F1255
EVRC 20	a.c./d.c.	7/8	22	032F1258

Coils
See separate data sheet for coils.

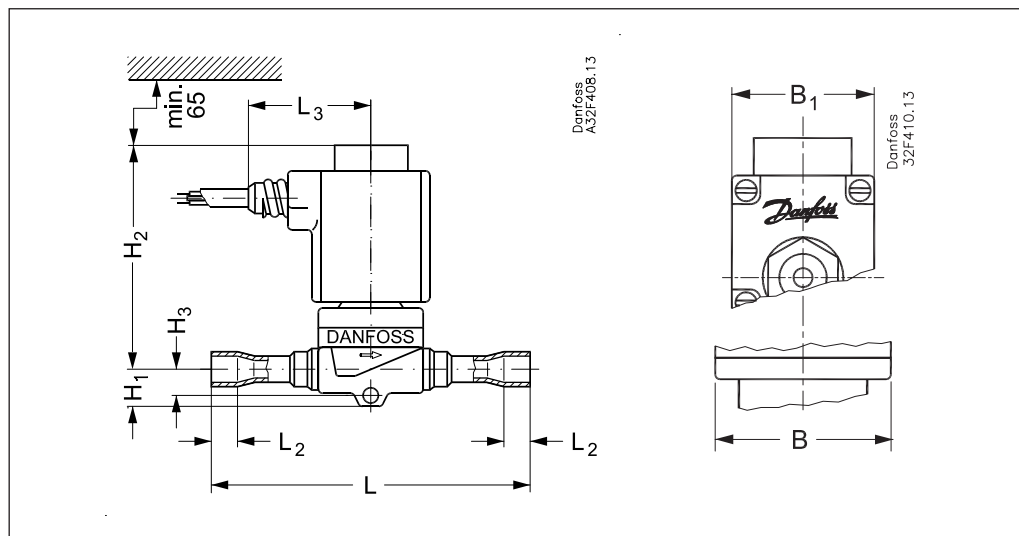
Material specifications



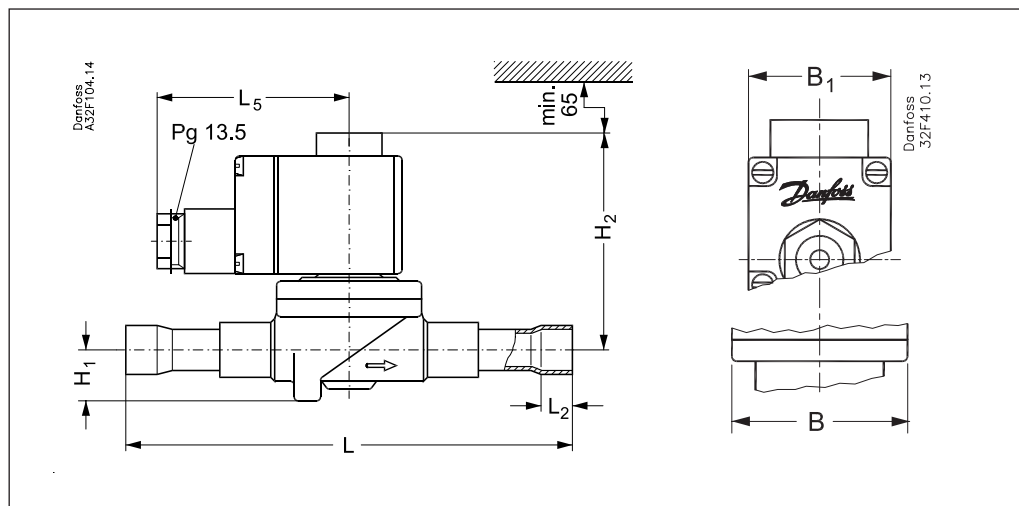
No.	Description	Material	Analysis	Mat. no.	Standard		
					W.no.	DIN	EN
1	Valve body	Brass	CuZn40Pb2	CW617N	2.0402	17672	12165
2	Cover	Brass	CuZn40Pb2	—	2.0402	—	12165
3	Armature tube	Stainless steel	X2 CrNi19-11	—	1.4306	17672-1	10088
4	Gasket	Gummi	Cr	—	—	—	—
5	Solder tube	Copper	SF-Cu	CW024A	2.0090	1787	12449
6	Screws	Stainless steel	A2-70	—	—	3506	—

Dimensions [mm]
and weight [kg]

EVRC Coil with cable



EVRC Coil with terminal box



Net weight of coil:
10 W: ca. 0.3 kg
12 og 20 W: ca. 0.5 kg

Type	H ₁	H ₂	H ₃	L	L ₂	L ₃	L ₅ max.		B	B ₁ max.	Net weight with coil
							10 W	12 W / 20 W			
EVRC 10 (NC)	16	79	11	127	10	45	75	85	46	68	0.7
EVRC 15 (NC)	19	86	11	176	12	45	75	85	56	68	1.0
EVRC 20 (NC)	20	90	11	191	17	45	75	85	72	68	1.5

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