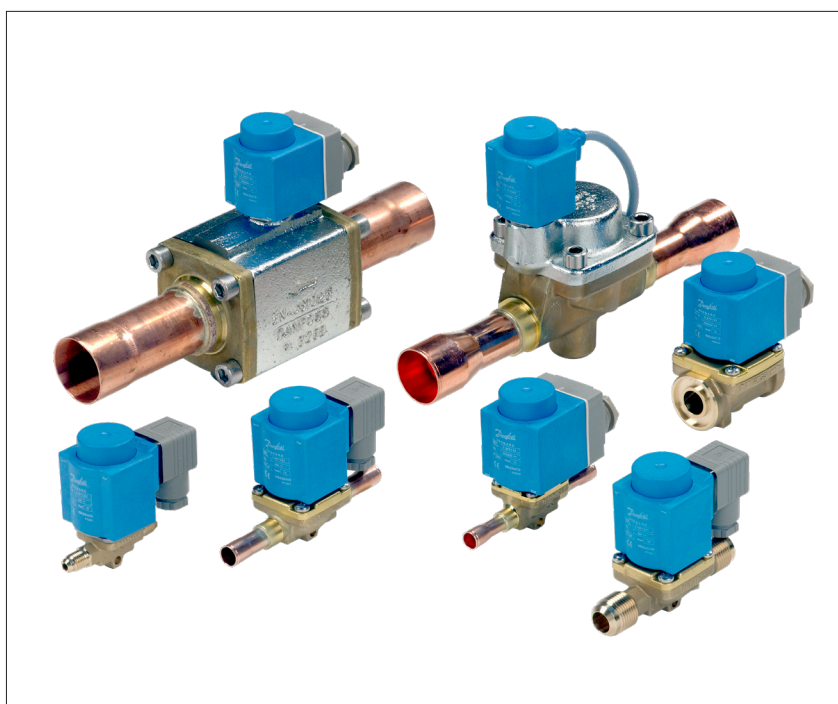


Data sheet

Solenoid valve

Type EVR 2 - EVR 40 Version 2



EVR is a direct or servo operated solenoid valve suitable for liquid, suction, and hot gas lines with most refrigerants, including flammable refrigerants.

EVR valves and coils are sold separately.

Features

- Complete range of solenoid valves for refrigeration, freezing and air conditioning plant
- Supplied in versions normally closed (NC) and normally open (NO) with de-energized coil
- Wide choice of coils for AC and DC
- Suitable for most refrigerants, including flammable refrigerants
- Designed for media temperatures up to 105 °C
- Flare connections up to $\frac{5}{8}$ in
- Solder connections up to $2\frac{1}{8}$ in
- Extended ends on solder versions make the installation easy, eliminating the need to dismantle the valve when soldering in
- Available in flare, solder and flange connection versions

Approvals

- Pressure Equipment Directive (PED) 2014/68/EU
- Low Voltage Directive (LVD) 2014/35/EU
- UL429 General Purpose Valve
- EAC
- UA
- ATEX zone 2
- CQC
- RoHS II
- For Marine approvals: Contact Danfoss for latest updates

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Technical data

Refrigerants

R1234yf, R1234ze(E), R125, R134a, R152a, R22, R290, R32, R404A, R407C, R407F, R407H, R410A, R413A, R417A, R422A, R422B, R422D, R438A, R422A, R422B, R422D, R438A, R442A, R444B, R447A, R447B, R448A, R449A, R449B, R450A, R452A, R452B, R454A, R454B, R454C, R455A, R463A, R507A, R512A, R513A, R513B, R515A, R515B, R516A, R600, R600a.

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



Special note for R1234yf, R1234ze, R152A, R290, R32, R444B, R452B, R454A, R454B, R454C, R455A, R516A, R600 and R600a:

This product is validated in accordance to ATEX, ISO 5149, IEC 60335-2-24, IEC 60335-2-40 and UL. Ignition risk is evaluated in accordance to ISO 5149 and IEC 60335.

EVR 2-15 flare connections are only approved for A1 and A2L refrigerants.

See safety note at the bottom of this page.

Media temperature

-40 – 105 °C

Max. 130 °C during defrosting

Note : R1234ze

Media temperature: - 20 - 90 °C (105 °C for transient condition).

Ambient temperature and enclosure for coil

See separate data sheet for solenoid and ATEX coils.



The EVR 2 – EVR 22 with solder connections and without manual stem can be applied on systems with R1234yf, R1234ze, R152A, R290, R32, R444B, R452B, R454A, R454B, R454C, R455A, R516A, R600 and R600a as the working fluid.

EVR 2-15 flare connections are only approved for A1 and A2L refrigerants

NOTE! Excluded from this EVR 22 with connections 1 3/8 inch / 35mm related to PED requirements.



The EVR 2-EVR 40 versions with solder and flare connection and without manual stem can be applied to oil-free systems : R1234ze(E)

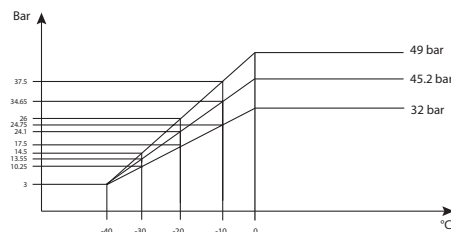
Max. working pressure

EVR solder and flare connections: 45.2 bar.

EVR flange connections: 32 bar.

EVR PED version: 49 bar.

(Approved max. working pressure is marked on the armature tube)



Max. working pressure in bar in relation to media temperature in °C.



Special note for EVR PED version:

The EVR 2 - EVR 22 versions with solder connections and without manual stem can be applied to 49 bar MWP.

NOTE! Excluded from this EVR 22 with connections 1 3/8 inch / 35 mm related to higher PED requirements.

Capacity

See K_v values from the table.

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

See extended capacity tables later in this data sheet.

EVR 2 - EVR 22 versions with solder and flare connections and without manual stem can be applied to oil-free systems R513A, R515B, R516A

NOTE!

EVR 2-22 (R516A) and EVR 2-40, R1234ze

- Excluded from this EVR 22 - EVR 40 with connections 1 3/8 inch / 35mm and larger connections related to higher PED requirements.

For countries where safety standards are not an indispensable part of the safety system Danfoss recommends the installer gets a third party approval of any system containing flammable refrigerant. Note: please follow specific selection criteria stated in the datasheet for these particular refrigerants.

MOPD

Type	Opening differential pressure with standard coil Δp [bar]		
	Min.	Max. (=MOPD) liquid	
		AC coil [10 W]	DC coil [20 W]
EVR 2 NC	0.00	38	33
EVR 3 NC	0.00	38	18
EVR 4 NC	0.03	38	28
EVR 6 NC	0.03	38	28
EVR 6 NO	0.03	21	21
EVR 8 NC	0.03	38	28
EVR 10 NC	0.03	38	20
EVR 10 NO	0.03	21	21
EVR 15 NC	0.03	38	20
EVR 15 NO	0.03	21	21
EVR 18 NC	0.03	38	20
EVR 20 NC	0.03	38	20
EVR 20 NO	0.03	19	19
EVR 22 NC	0.03	38	20
EVR 22 NO	0.03	19	19
EVR 25 NC	0.20	38	17
EVR 32 NC	0.20	38	17
EVR 40 NC	0.20	38	17

For higher MOPD 12 W and 20 W AC coils are available on request

Coolselector®2



Valve sizing using calculation software

It is strongly recommended to use Coolselector®2 to find the correct valve for your application. The software can be downloaded from the Danfoss website. When using the calculation software it is recommended to choose a valve that is between 50% and 75% loaded at the nominal capacity. In addition, the liquid velocity in the line leading to the valve should not exceed 1m/s (3ft/s).

You can download it from <http://coolselector.danfoss.com>

**Rated capacity [kW]
For other refrigerants, refer
to Coolselector®2**

Type	R22/R407C	R134a	R404A/R507	R410A	R32	R290	R600a
Liquid							
EVR 2	3.02	2.79	2.04	2.96	4.23	3.36	3.38
EVR 3	5.43	5.02	3.68	5.32	7.61	6.05	6.09
EVR 4	13.68	12.66	9.26	13.41	19.17	15.23	15.33
EVR 6	17.90	16.56	12.12	17.55	25.09	19.93	20.07
EVR 8	21.32	19.73	14.44	20.90	29.88	23.74	23.90
EVR 10	37.62	34.80	25.47	36.88	52.71	41.88	42.17
EVR 15	57.93	53.60	39.23	56.79	81.18	64.49	64.94
EVR 18	75.84	70.16	51.36	74.35	106.26	84.43	85.01
EVR 20	120.29	111.29	81.46	117.93	168.56	133.92	134.85
EVR 22	137.19	126.92	92.90	134.49	192.23	152.73	153.79
EVR 25	149.23	138.06	101.06	146.30	-	-	-
EVR 32	254.97	235.89	172.66	249.96	-	-	-
EVR 40	368.74	341.15	249.71	361.49	-	-	-
Suction vapour							
EVR 2	0.33	0.24	0.29	0.42	0.54	0.41	0.23
EVR 3	0.60	0.44	0.52	0.75	0.96	0.73	0.41
EVR 4	1.51	1.10	1.32	1.90	2.43	1.85	1.03
EVR 6	1.98	1.44	1.72	2.48	3.18	2.42	1.35
EVR 8	2.35	1.71	2.05	2.96	3.78	2.88	1.60
EVR 10	4.15	3.02	3.62	5.22	6.67	5.09	2.83
EVR 15	6.40	4.65	5.57	8.03	10.28	7.83	4.36
EVR 18	8.37	6.09	7.30	10.52	13.45	10.26	5.70
EVR 20	13.28	9.66	11.57	16.68	21.34	16.27	9.04
EVR 22	15.15	11.02	13.20	19.02	24.34	18.55	10.31
EVR 25	16.33	11.79	14.25	20.58	-	-	-
EVR 32	27.90	20.14	24.35	35.16	-	-	-
EVR 40	40.35	29.12	35.21	50.85	-	-	-
Hot gas							
EVR 2	1.35	1.04	1.10	1.65	2.18	1.54	0.94
EVR 3	2.42	1.87	1.99	2.98	3.92	2.76	1.70
EVR 4	6.10	4.70	5.01	7.50	9.86	6.96	4.28
EVR 6	7.99	6.16	6.56	9.81	12.91	9.11	5.61
EVR 8	9.51	7.33	7.81	11.68	15.37	10.85	6.68
EVR 10	16.78	12.94	13.78	20.61	27.12	19.14	11.78
EVR 15	25.85	19.93	21.22	31.74	41.77	29.48	18.14
EVR 18	33.84	26.08	27.77	41.55	54.67	38.59	23.75
EVR 20	53.68	41.37	44.05	65.91	86.72	61.21	37.67
EVR 22	61.22	47.18	50.24	75.17	98.91	69.81	42.96
EVR 25	87.87	67.73	72.12	107.91	-	-	-
EVR 32	150.17	115.75	123.24	184.40	-	-	-
EVR 40	217.22	167.43	178.27	266.74	-	-	-

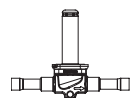
Rated liquid and suction vapor capacity is based on evaporating temperature $t_e = -10\text{ }^\circ\text{C}$, liquid temperature ahead of valve $t_l = 25\text{ }^\circ\text{C}$, pressure drop in valve $\Delta p = 0.15\text{ bar}$.

Rated hot gas capacity is based on condensing temperature $t_c = 40\text{ }^\circ\text{C}$, pressure drop across valve $\Delta p = 0.8\text{ bar}$, hot gas temperature $t_h = 65\text{ }^\circ\text{C}$, and subcooling of refrigerant $\Delta t_{sub} = 4\text{ K}$.

**Ordering
EVR solder connection,
Normally Closed (NC)
- separate valve bodies**



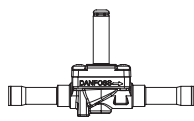
EVR 2 / EVR 3



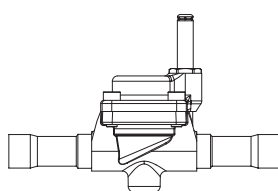
EVR 4 / EVR 6 / EVR 8



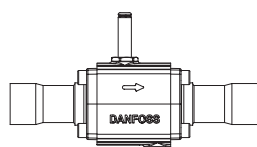
EVR 10



EVR 15 / EVR 18 / EVR 20 / EVR 22



EVR 25

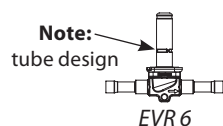


EVR 32 / EVR 40

Type	Coil voltage	Connection size [in]	Connection size [mm]	Manual operation	K _v value [m ³ /h]	Code no.
EVR 2	AC / DC	1/4	–	No	0.15	032F1201
	AC / DC	1/4	–	No	0.15	032F7100
	AC / DC	–	6	No	0.15	032F1202
EVR 3	AC / DC	1/4	–	No	0.26	032F1206
	AC / DC	3/8	–	No	0.26	032F1204
	AC / DC	–	6	No	0.26	032F1207
EVR 4	AC / DC	–	10	No	0.26	032F1208
	AC / DC	3/8	–	No	0.70	032L7110
	AC / DC	3/8	–	No	1.0	032L1212
EVR 6	AC / DC	3/8	–	Yes	0.87	032L7116
	AC / DC	–	10	No	1.0	032L1213
	AC / DC	–	12	No	1.0	032L1236
EVR 8	AC / DC	1/2	–	No	1.0	032L1209
	AC / DC	1/2	–	Yes	0.87	032L7144
	AC / DC	5/8	–	No	1.0	032L7117
EVR 10	AC / DC	1/2	–	No	1.15	032L7121
	AC / DC	1/2	–	Yes	1.09	032L7148
	AC / DC	5/8	–	No	1.15	032L7122
EVR 15	AC / DC	3/8	–	No	1.56	032L7125
	AC / DC	–	12	No	2.2	032L1218
	AC / DC	1/2	–	No	2.2	032L1217
EVR 18	AC / DC	1/2	–	Yes	2.2	032L1188
	AC / DC	5/8	16	No	2.2	032L1214
	AC / DC	5/8	–	Yes	2.2	032L7149
EVR 20	AC / DC	5/8	16	No	3.3	032L1228
	AC / DC	5/8	16	Yes	3.3	032L1227
	AC / DC	7/8	22	No	3.3	032L1225
EVR 22	AC / DC	7/8	–	Yes	3.9	032L1004
	AC / DC	7/8	–	No	6.0	032L1240
	AC / DC	7/8	–	Yes	6.0	032L1254
EVR 25	AC / DC	1 1/8	–	No	6.0	032L1244
	AC / DC	–	28	No	6.0	032L1245
	AC / DC	1 1/8	–	No	6.2	032L7145
EVR 32	AC / DC	1 1/8	–	Yes	6.2	032L7137
	AC / DC	1 3/8	–	No	6.2	032L3267
	AC / DC	1 1/8	–	Yes	9.8	032L2200
EVR 40	AC / DC	1 1/8	–	No	9.8	032L2201
	AC / DC	–	28	Yes	9.8	032L2205
	AC / DC	–	28	No	9.8	032L2206
EVR 32	AC / DC	1 3/8	–	Yes	9.8	032L2207
	AC / DC	1 3/8	–	No	9.8	032L2208
	AC / DC	1 3/8	35	Yes	16.7	032L1105
EVR 40	AC / DC	1 3/8	35	No	16.7	032L1106
	AC / DC	1 5/8	–	Yes	16.7	032L1103
	AC / DC	1 5/8	–	No	16.7	032L1104
EVR 32	AC / DC	–	42	Yes	16.7	032L1107
	AC / DC	–	42	No	16.7	032L1108
	AC / DC	2 1/8	–	No	16.7	032L1180
EVR 40	AC / DC	2 1/8	–	Yes	16.7	032L1181
	AC / DC	1 5/8	–	Yes	24.2	032L1109
	AC / DC	1 5/8	–	No	24.2	032L1110
EVR 40	AC / DC	–	42	Yes	24.2	032L1113
	AC / DC	–	42	No	24.2	032L1114
	AC / DC	2 1/8	–	Yes	24.2	032L1111
EVR 40	AC / DC	2 1/8	–	No	24.2	032L1112

See separate data sheet for coils

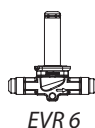
Ordering
EVR solder connection,
Normally Open (NO)
- separate valve bodies



Type	Coil voltage	Connection size [in]	Connection size [mm]	Manual operation	K _v value [m ³ /h]	Code no.
EVR 6	AC / DC	3/8	–	No	1.0	032L1290
	AC / DC	–	10	No	1.0	032L1295
EVR 10	AC / DC	1/2	–	No	2.2	032L1291
	AC / DC	–	12	No	2.2	032L1296
EVR 15	AC / DC	5/8	16	No	3.3	032L1299
	AC / DC	7/8	–	No	3.3	032L3270
EVR 20	AC / DC	7/8	–	No	6.0	032L1260
	AC / DC	1 1/8	–	No	6.0	032L1269
	AC / DC	–	28	No	6.0	032L1279
EVR 22	AC	1 3/8	–	No	6.0	032L3268

See separate data sheet for coils

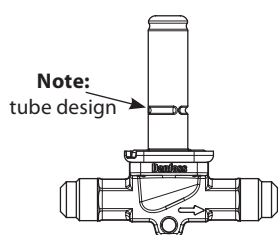
Ordering
EVR flare connection,
Normally Closed (NC)
- separate valve bodies



Type	Coil voltage	Connection size [in]	Connection size [mm]	Manual operation	K _v value [m ³ /h]	Code no.
EVR 2	AC / DC	1/4	6	No	0.15	032F8056
EVR 3	AC / DC	1/4	6	No	0.26	032F8107
	AC / DC	3/8	10	No	0.26	032F8116
EVR 6	AC / DC	3/8	10	No	1.0	032L8072
	AC / DC	1/2	12	No	1.0	032L8079
EVR 10	AC / DC	1/2	12	No	2.2	032L8095
	AC / DC	5/8	16	No	2.2	032L8098
EVR 15	AC / DC	5/8	16	Yes	3.3	032L8100
	AC / DC	5/8	16	No	3.3	032L8101

See separate data sheet for coils

Ordering
EVR flare connection,
Normally Open (NO)
- separate valve bodies



Type	Coil voltage	Connection size [in]	Connection size [mm]	Manual operation	K _v value [m ³ /h]	Code no.
EVR 6	AC / DC	3/8	10	No	1.0	032L8085
EVR 10	AC / DC	1/2	12	No	2.2	032L8090

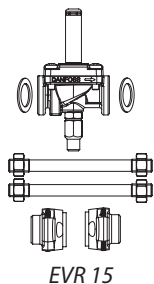
See separate data sheet for coils

Valve bodies are supplied without flare nuts.

Separate flare nuts:

- 1/4 in or 6 mm, code no. **011L1101**
- 3/8 in or 10 mm, code no. **011L1135**
- 1/2 in or 12 mm, code no. **011L1103**
- 5/8 in or 16 mm, code no. **011L1167**

**Ordering
EVR flange connection,
Normally Closed (NC)
- separate valve bodies**



Type	Coil voltage	Connection	Manual operation	Code no.
EVR 15	AC / DC	Flanges	No	032L1224
	AC / DC	Flanges	Yes	032L1234
EVR 20	AC / DC	Flanges	No	032L1243
	AC / DC	Flanges	Yes	032L1253

See separate data sheet for coils

Flange sets

Type	Connection size		Connection type			Code no.
	[in]	[mm]	Solder [in]	Solder [mm]	Weld [in]	
EVR 15	1/2	-	-	-	Yes	027N1115
	5/8	-	Yes	-	-	027L1117
	-	16	-	Yes	-	027L1116
	3/4	-	-	-	Yes	027N1120
	7/8	-	Yes	-	-	027L1123
EVR 20	-	22	-	Yes	-	027L1122
	3/4	-	-	-	Yes	027N1220
	7/8	-	Yes	-	-	027L1223
	-	22	-	Yes	-	027L1222
	1	-	-	-	Yes	027N1225
	1 1/8	-	Yes	-	-	027L1229
	-	28	-	Yes	-	027L1228

See separate data sheet for coils

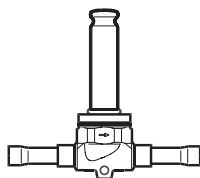
Example

EVR 15 without manual operation,
code no. **032L1224**

1/2 in weld flange set,
code no. **027N1115**

+ coil with terminal box, 220 V, 50 Hz,
code no. **018F6701**

**Ordering
EVRC solder connection,
Normally Closed (NC)
- separate valve bodies**



Type	Coil voltage	Connection size [in]	Connection size [mm]	Manual operation	K _v value [m ³ /h]		Code no.
					Flow in arrow direction	Flow against arrow direction	
EVRC 15	AC / DC	5/8	16	No	2.7	2.5	032L1255
EVRC 20	AC / DC	7/8	22	No	3.6	5.0	032L1258

See separate data sheet for coils.

Function

See *Design and material* drawings for additional details on the following pages

EVR solenoid valves are designed on two different principles:

1. Direct operation
2. Servo operation

1. Direct operation (NC)

EVR 2 – EVR 3 are direct operated. The valves open directly for full flow when the armature (3) moves up into the magnetic field of the coil.

This means that the valves operate with a minimum differential pressure of 0 bar.

The seat plate is fitted directly on the armature (3).

Inlet pressure acts from above on the armature and the valve plate. Thus, the inlet pressure and spring force act to close the valve when there is no current in the coil.

2. Servo operation (NC)

EVR 4 – EVR 22 are servo operated with a "floating" diaphragm (4). The pilot orifice of stainless steel is placed in the center of the diaphragm. The seat plate is fitted directly to the armature (3). When there is no current in the coil, the main orifice and pilot orifice are closed. The pilot orifice and main orifice are held closed by the armature spring force and the differential pressure between inlet and outlet sides.

When current is applied to the coil, the armature is drawn up into the magnetic field and opens the pilot orifice. This relieves the pressure above the diaphragm, i.e. the space above the diaphragm becomes connected to the outlet side of the valve.

The differential pressure between inlet and outlet sides then presses the diaphragm away from the main orifice and opens it for full flow. Therefore a certain minimum differential pressure is necessary to open the valve and keep it open. For EVR 4 – EVR 22 valves the minimum differential pressure for safe operation is 0.03 bar.

When the current is switched off, the pilot orifice is closed. Via the equalization holes in the diaphragm, the pressure above the diaphragm rises to the same value as the inlet pressure and the diaphragm closes the main orifice.

EVR 25, EVR 32 and EVR 40 are servo operated piston valves. The servo piston (16) with sealing face closes against the valve seat by means of the differential pressure between inlet and outlet side of the valve and the force of the compression spring. When the coil is switched on, the pilot orifice opens. This relieves the pressure on the piston spring side of the valve. The differential pressure will then open the valve. The minimum differential pressure for safe operation is 0.2 bar.

EVR (NO) has the opposite function to EVR (NC), i.e. it is open with de-energized coil.

EVR (NO) is available with servo operation only.

3. Bi-flow operation with EVRC

EVRC is a servo operated solenoid valve with a special diaphragm with built-in non-return valve. The valve is for use in liquid lines in refrigeration plants.

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

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

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

4. Manual stem operation for EVR 6 - EVR 25 NC

EVR 6 - EVR 25 NC are available with optional manual stem operation to manually force the NC valve open when the coil is de-energized.

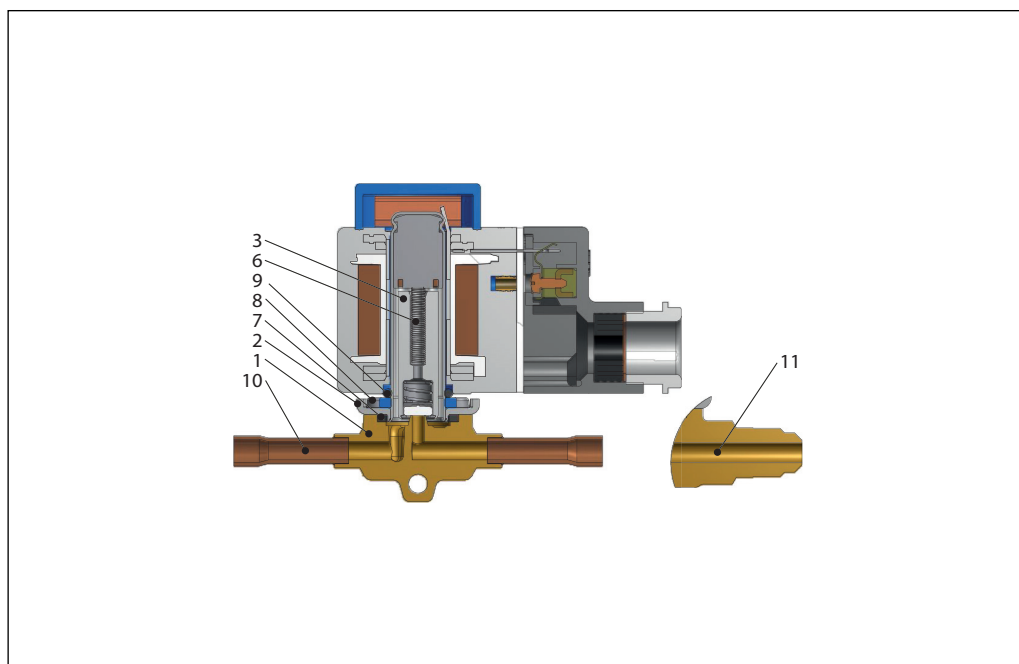
The protective cap should be removed and the manual stem (12) should be rotated until the valve is fully open. It takes approx. 6 cycles from fully closed, to reach the fully open position.

After manual operation is completed, the valve should manually be closed again and the protective cap mounted.

Alternatively, all EVR NC and NO valves can be manually operated by removing the coil and force the valve open or closed by using a solenoid valve tester (permanent magnet) code no. 018F0091.

Design and material specifications

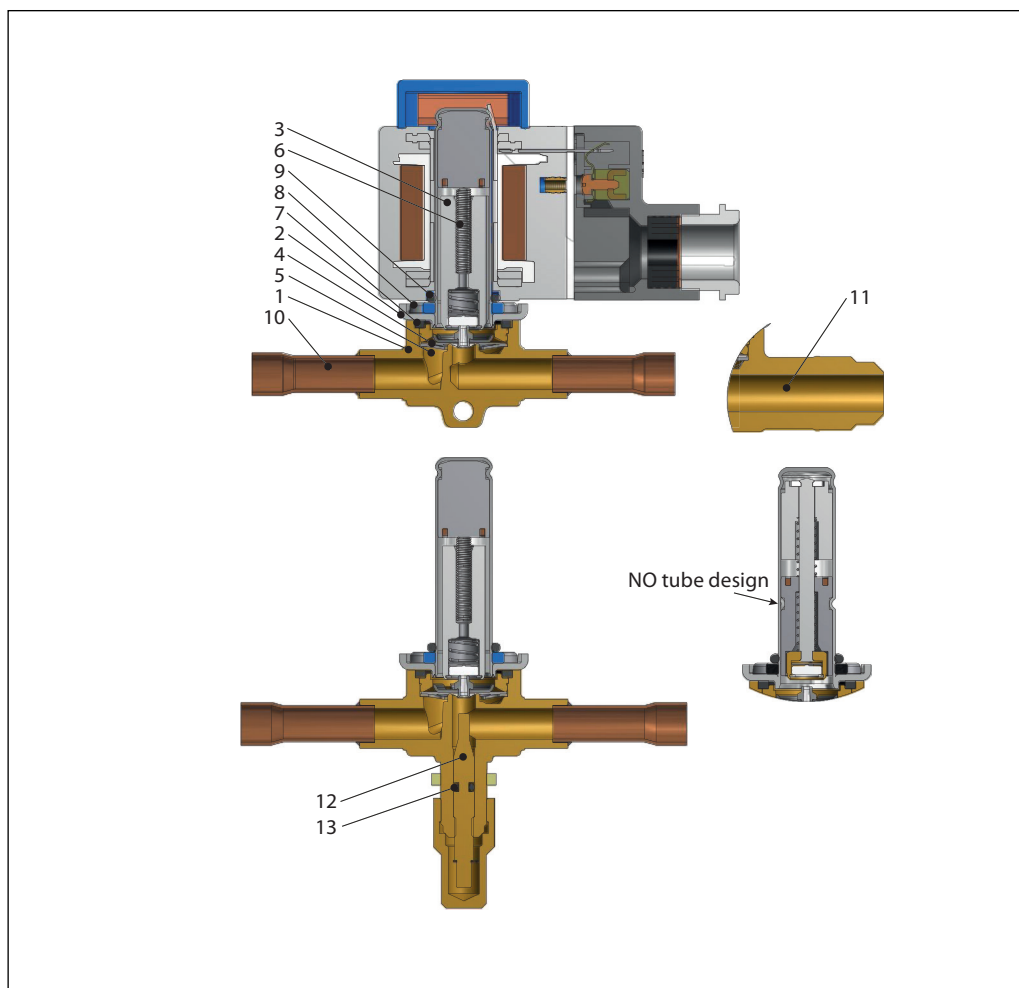
**EVR 2 - EVR 3
Solder and flare connection**



Pos. no.	Description	Material
1	Valve assembly housing	Brass, copper
2	Cover assembly	Stainless steel
3	Armature assembly	Stainless steel/PTFE
6	Armature spring	Stainless steel
7	Seal	Chloroprene rubber
8	Screw	Stainless steel
9	O-ring	EPDM Rubber
10	Solder connection	Copper
11	Flare connection	Brass

Design and material specifications

**EVR 4 - EVR 6 - EVR 8
Solder and flare connection**

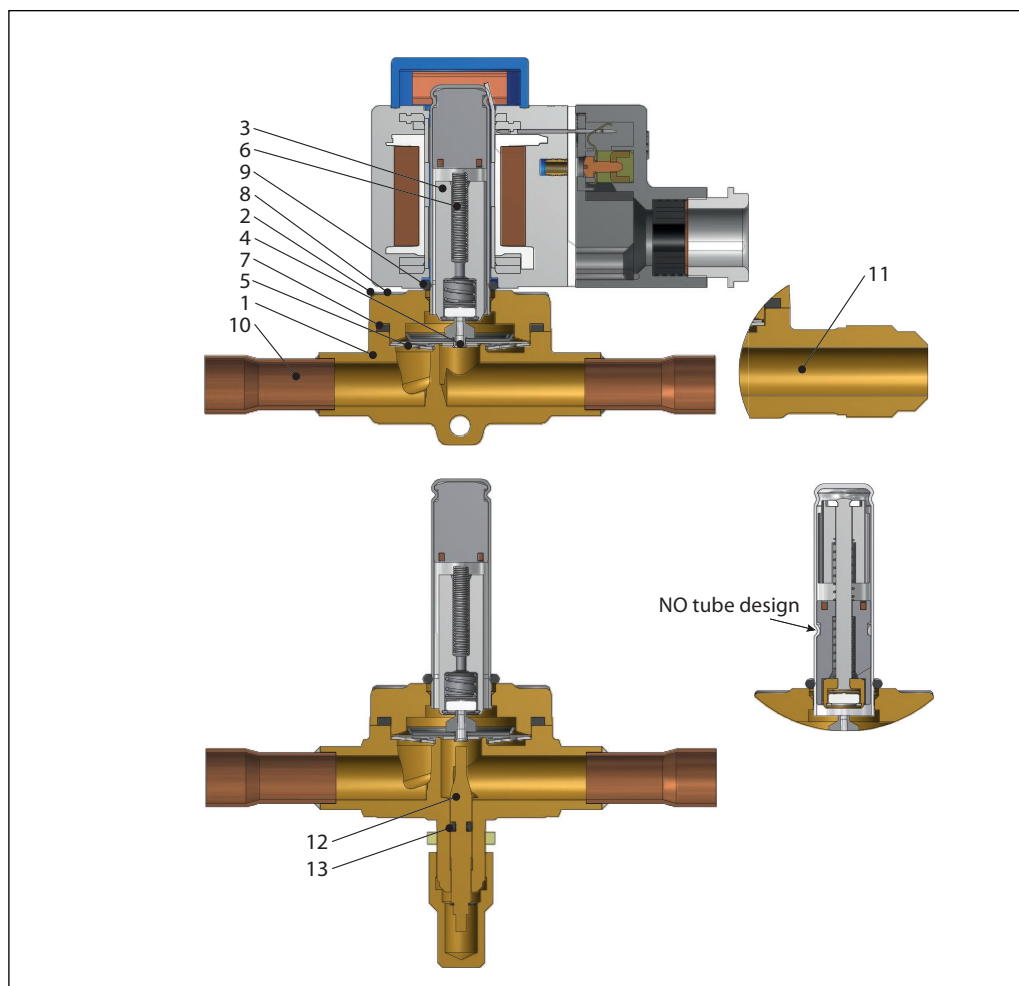


Pos. no.	Description	Material
1	Valve housing assembly	Brass
2	Cover	Stainless steel
3	Armature assembly	Stainless steel/PTFE
4	Diaphragm assembly	Stainless steel/PTFE
5	Support washer	Stainless steel
6	Armature spring	Stainless steel
7	Seal	Chloroprene rubber
8	Screws	Stainless steel
9	O-ring	EPDM rubber
10	Solder connection	Copper
11	Flare connection	Brass
12	Manual stem ¹⁾	Brass
13	O-ring	Chloroprene rubber

¹⁾ Manual stem is not available for EVR 4

Design and material specifications

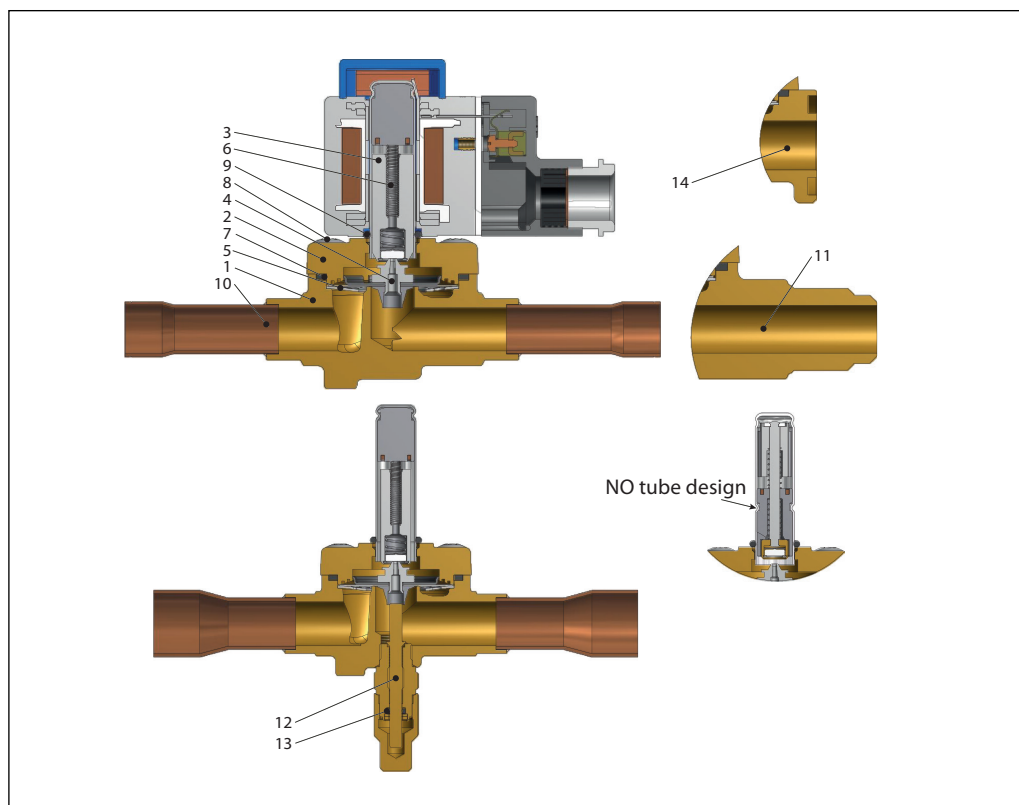
**EVR 10
Solder and flare connection**



Pos. no.	Description	Material
1	Valve body	Brass
2	Cover	Brass
3	Armature assembly	Stainless steel/PTFE
4	Diaphragm assembly	Stainless steel/PTFE
5	Support washer	Stainless steel
6	Armature spring	Stainless steel
7	Seal	Chloroprene rubber
8	Screws	Stainless steel
9	O-ring	EPDM rubber
10	Solder connection	Copper
11	Flare connection	Brass
12	Manual stem	Brass
13	O-ring	Chloroprene rubber

Design and material specifications

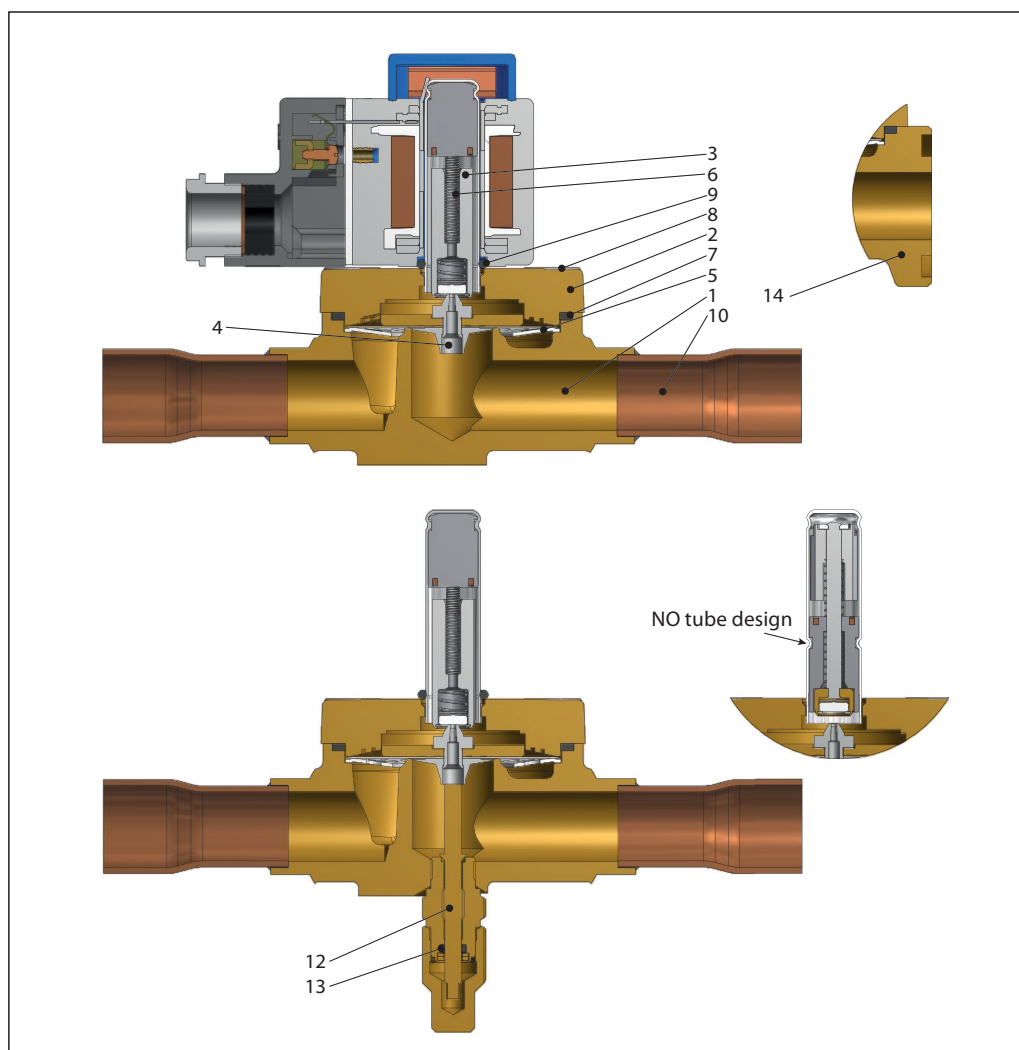
**EVR 15 - EVR 18
Solder, flare, and flange connection**



Pos. no.	Description	Material
1	Valve body	Brass
2	Cover	Brass
3	Armature assembly	Stainless steel/PTFE
4	Diaphragm assembly	Stainless steel/PTFE
5	Support washer	Stainless steel
6	Armature spring	Stainless steel
7	Seal	Chloroprene rubber
8	Screws	Stainless steel
9	O-ring	EPDM rubber
10	Solder connection	Copper
11	Flare connection	Brass
12	Manual stem	Brass
13	O-ring	Chloroprene rubber
14	Flange connection	Brass

Design and material specifications

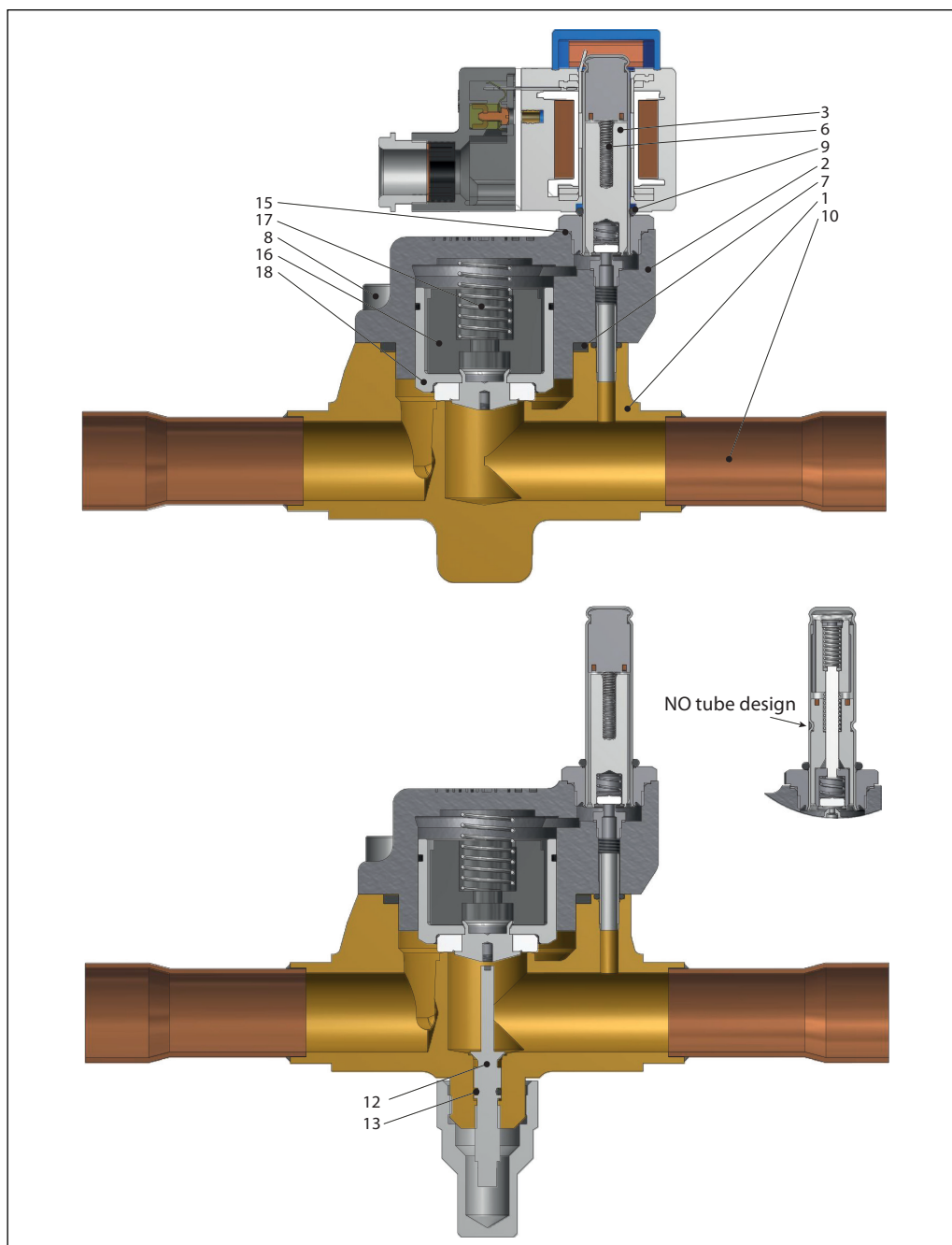
**EVR 20 - EVR 22
Solder and flange connection**



Pos. no.	Description	Material
1	Valve body	Brass
2	Cover	Brass
3	Armature assembly	Stainless steel/PTFE
4	Diaphragm assembly	Stainless steel/PTFE
5	Support washer	Stainless steel
6	Armature spring	Stainless steel
7	Seal	Chloroprene rubber
8	Screws	Stainless steel
9	O-ring	EPDM rubber
10	Solder connection	Copper
12	Manual stem	Brass
13	O-ring	Chloroprene rubber
14	Flange connection	Brass

Design and material specifications

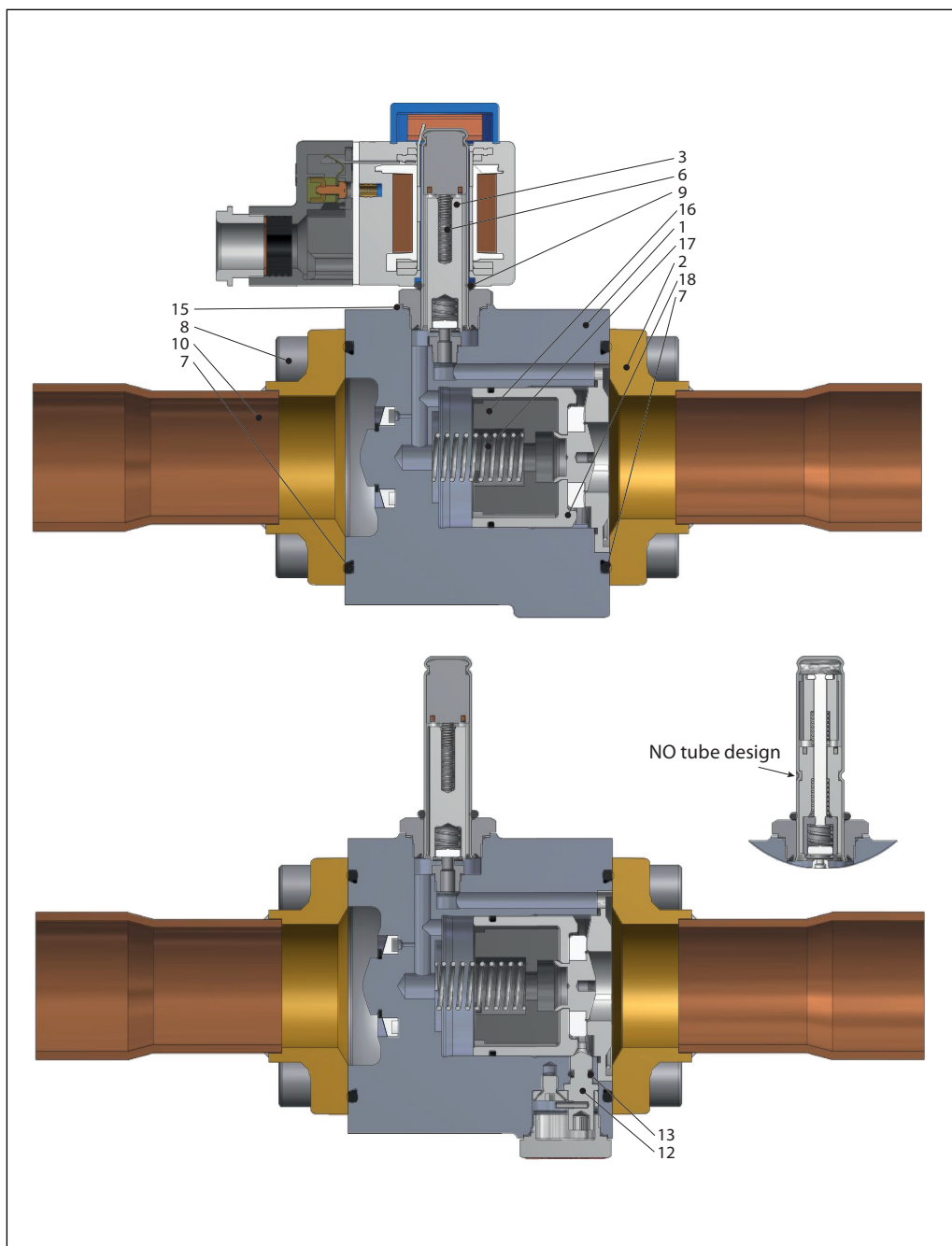
**EVR 25
Solder connection**



Pos. no.	Description	Material
1	Valve body	Brass
2	Cover	Cast iron
3	Armature assembly	Stainless steel/PTFE
6	Armature spring	Stainless steel
7	Gasket	Chloroprene rubber
8	Screws	Stainless steel
9	O-ring	EPDM rubber
10	Solder connection	Copper
12	Manual stem	Brass
13	O-ring	Chloroprene rubber
15	Gasket	Aluminum
16	Insert	Nylon
17	Piston spring	Stainless steel
18	Piston	Stainless steel

Design and material specifications

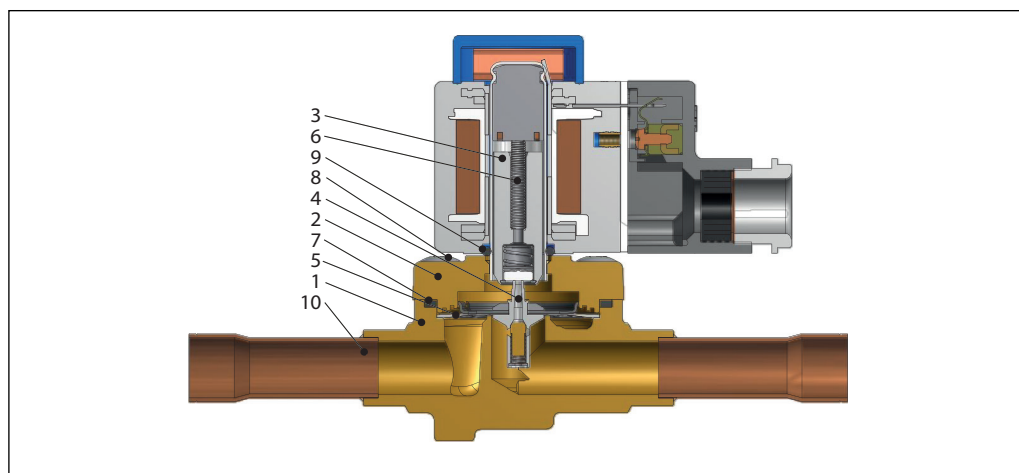
**EVR 32 - EVR 40
Solder connection**



Pos. no.	Description	Material
1	Valve body	Cast iron
2	Cover	Brass
3	Armature assembly	Stainless steel
6	Armature spring	Stainless steel
7	Gasket	Chloroprene rubber
8	Screws	Stainless steel
9	O-ring	EPDM rubber
10	Solder connection	Copper
12	Manual stem	Brass
13	O-ring	Chloroprene rubber
15	Gasket	Aluminum
16	Insert	Nylon
17	Piston spring	Stainless steel
18	Piston	Stainless steel

Design and material specifications

**EVRC
Solder connection**

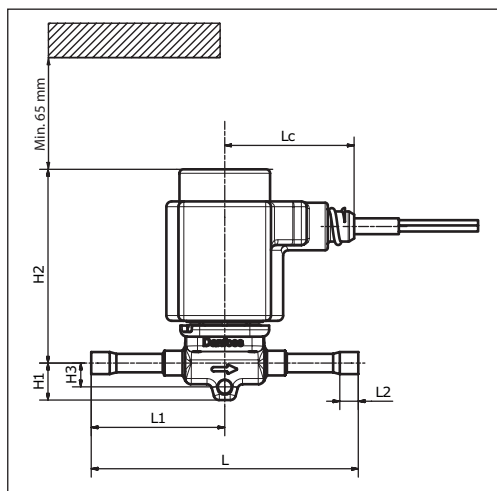


Pos. no.	Description	Material
1	Valve body	Brass
2	Cover	Brass
3	Armature assembly	Stainless steel/PTFE
4	Diaphragm assembly	Stainless steel/PTFE
5	Support washer	Stainless steel
6	Armature spring	Stainless steel
7	Gasket	Chloroprene rubber
8	Screws	Stainless steel
9	O-ring	EPDM rubber
10	Solder connection	Copper

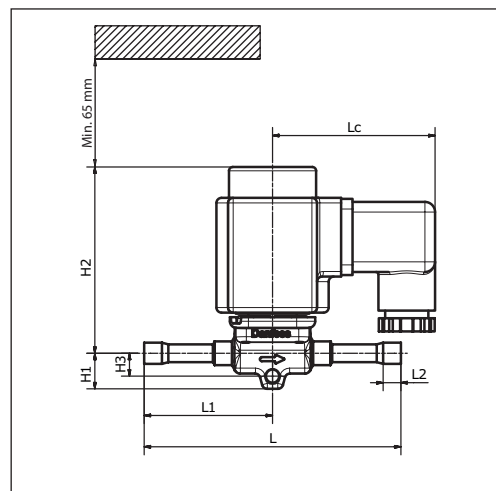
Dimensions and weights

EVR 2 - EVR 3
Solder connection

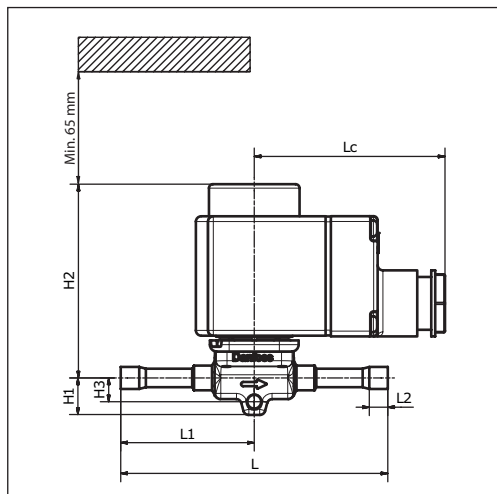
Cable coil¹⁾



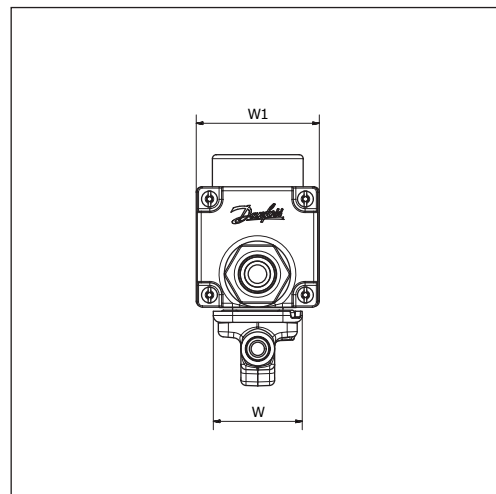
DIN plug coil²⁾



Terminal box coil³⁾



End view



Type	Connection		H ₁ [mm]	H ₂ [mm]	H ₃ [mm]	L [mm]	L ₁ [mm]	L ₂ [mm]	L _c [mm]	W [mm]	W ₁ max. [mm]	Net weight without coil [kg]	
	[in]	[mm]											
EVR 2	1/4	6	14	73	9	101	50.5	7	–	34	–	0.16	
EVR 3	1/4	6	14	73	9	101	50.5	7	–	34	–	0.16	
	3/8	10	14	73	9	117	58.5	8	–	34	–	0.17	
Cable coil ¹⁾										49	–	46	–
DIN plug coil ²⁾										64	–	47	–
Terminal box coil 10 W ³⁾										72	–	47	–
Terminal box coil 12 / 20 W ³⁾										80		68	

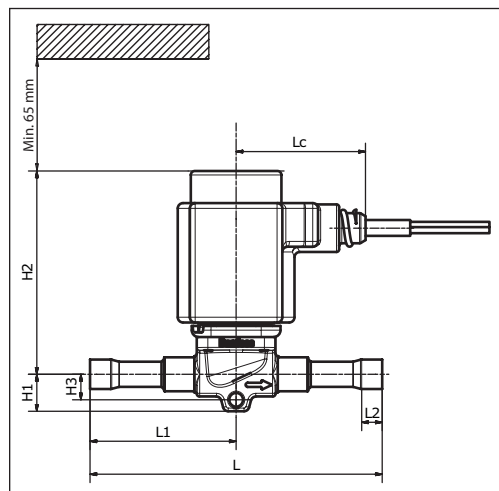
Net weight of coil
10 W: approx. 0.3 kg
12 and 20 W: approx. 0.5 kg

For CAD models on individual code numbers, visit <https://store.danfoss.com>

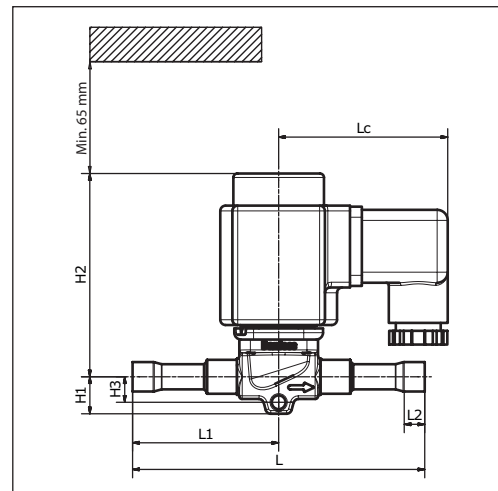
Dimensions and weights

EVR 4 - EVR 6 - EVR 8
Solder connection

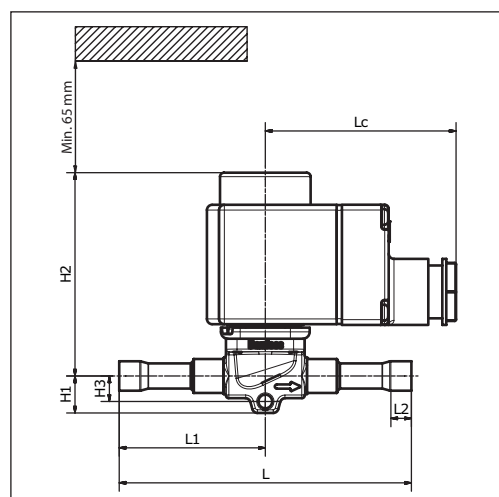
Cable coil ¹⁾



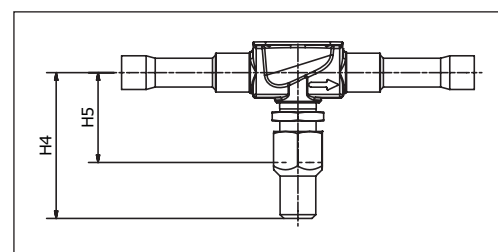
DIN plug coil ²⁾



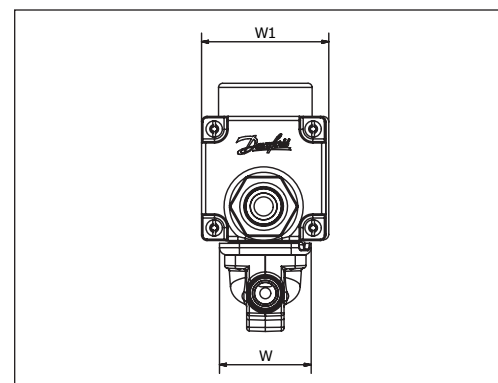
Terminal box coil ³⁾



Manual stem



End view



Type	Connection		Manual operation	H ₁ [mm]	H ₂ [mm]	H ₃ [mm]	H ₄ [mm]	H ₅ [mm]	L [mm]	L ₁ [mm]	L ₂ [mm]	L _c [mm]	W [mm]	W ₁ max. [mm]	Net weight without coil [kg]
	[in]	[mm]													
EVR 4	3/8	10	No	14	78	10	—	—	117	58.5	8	—	34	—	0.19
EVR 6	3/8	10	Yes	14	78	10	48	30	117	58.5	8	—	34	—	0.19
	3/8	10	No	14	78	10	—	—	111	55.5	8	—	34	—	0.19
	1/2	12	Yes	14	78	10	48	30	127	63.5	10	—	34	—	0.20
	1/2	12	No	14	78	10	—	—	127	63.5	10	—	34	—	0.20
EVR 8	1/2	12	Yes	14	78	10	48	30	127	63.5	10	—	34	—	0.20
	1/2	12	No	14	78	10	—	—	127	63.5	10	—	34	—	0.20
	5/8	16	No	14	78	10	—	—	163	81.5	12	—	34	—	0.20
Cable coil ¹⁾												49	—	46	—
DIN plug coil ²⁾												64	—	47	—
Terminal box coil 10 W ³⁾												72	—	47	—
Terminal box coil 12 / 20 W ³⁾												80	—	68	—

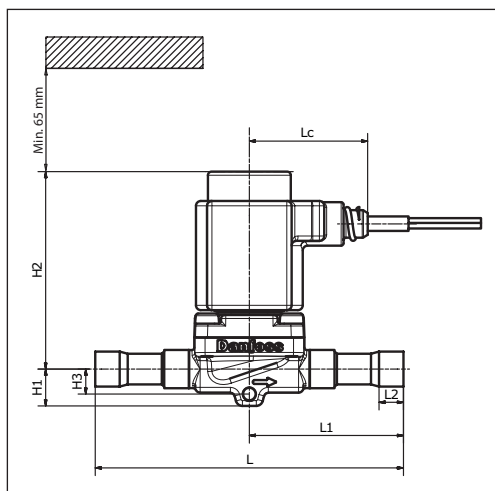
Net weight of coil
10 W: approx. 0.3 kg
12 and 20 W: approx. 0.5 kg

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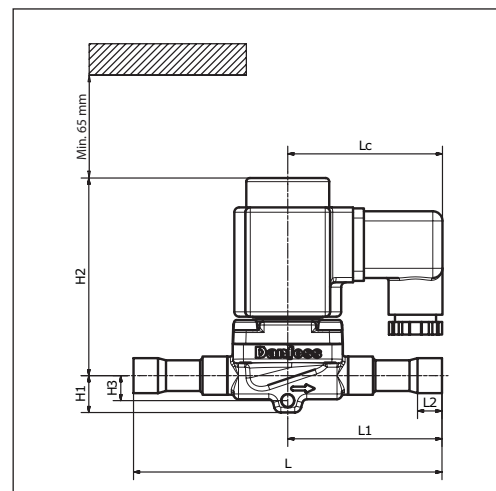
Dimensions and weights

EVR 10
Solder connection

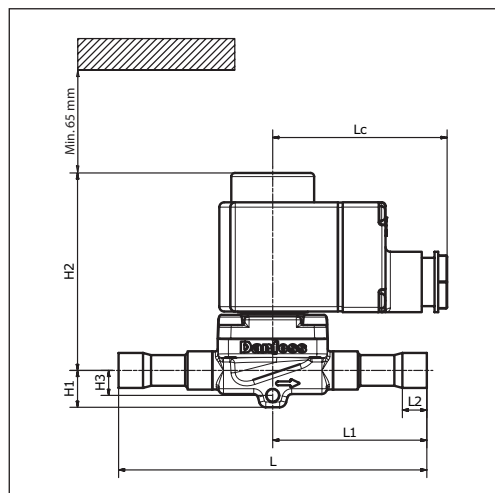
Cable coil ¹⁾



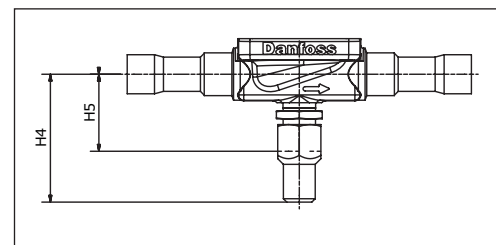
DIN plug coil ²⁾



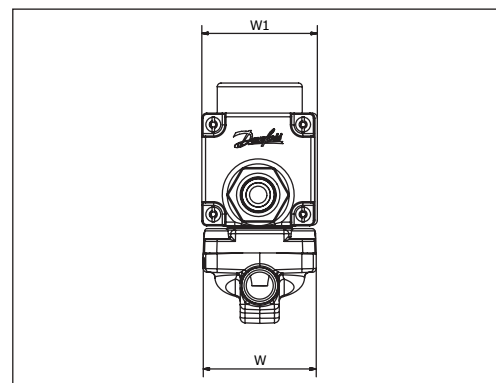
Terminal box coil ³⁾



Manual stem



End view



Type	Connection		Manual operation	H ₁ [mm]	H ₂ [mm]	H ₃ [mm]	H ₄ [mm]	H ₅ [mm]	L [mm]	L ₁ [mm]	L ₂ [mm]	L _c [mm]	W [mm]	W ₁ max. [mm]	Net weight without coil [kg]
	[in]	[mm]													
EVR 10	1/2	12	Yes	15	82	10	48	29	128	64	10	-	46	-	0.39
	3/8	10	No	15	82	10	-	-	118	59	-	-	46	-	0.34
	5/8	16	No	15	82	10	-	-	163	81.5	12	-	46	-	0.38
	3/4	16	Yes	15	82	10	48	29	163	81.5	12	-	46	-	0.40
Cable coil ¹⁾												49	-	46	-
DIN plug coil ²⁾												64	-	47	-
Terminal box coil 10 W ³⁾												72	-	47	-
Terminal box coil 12 / 20 W ³⁾												80	-	68	-

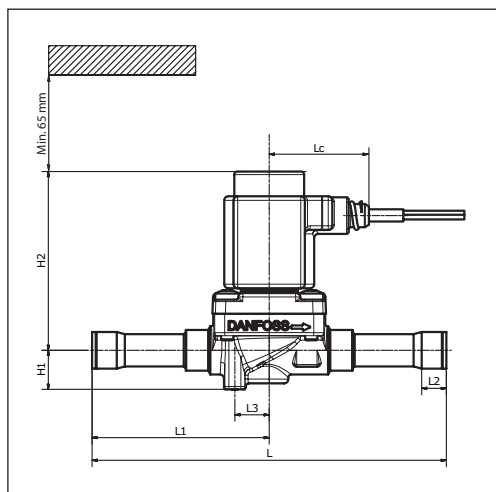
Net weight of coil
10 W: approx. 0.3 kg
12 and 20 W: approx. 0.5 kg

For 3D models, visit <https://store.danfoss.com>

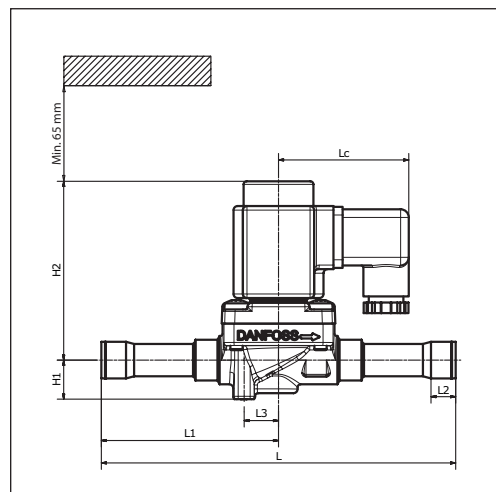
Dimensions and weights

EVR 15 - EVR 18
Solder connection

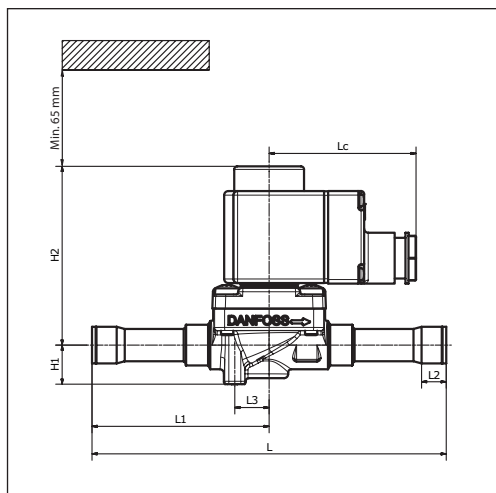
Cable coil ¹⁾



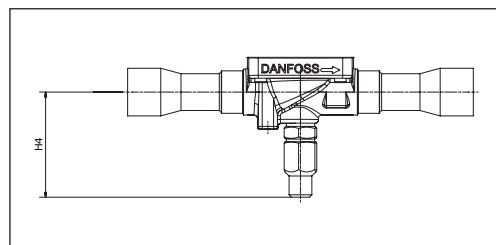
DIN plug coil ²⁾



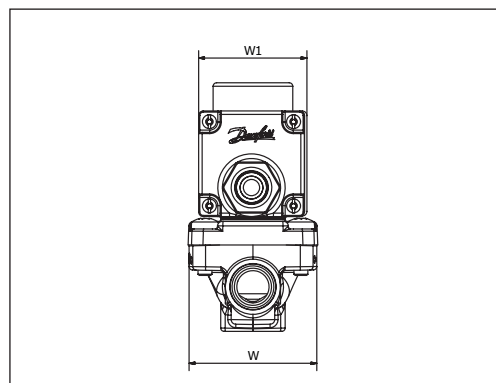
Terminal box coil ³⁾



Manual stem



End view



Type	Connection		Manual operation	H ₁ [mm]	H ₂ [mm]	H ₄ [mm]	L [mm]	L ₁ [mm]	L ₂ [mm]	L ₃ [mm]	L _c [mm]	W [mm]	W ₁ max. [mm]	Net weight without coil [kg]
	[in]	[mm]												
EVR 15	5/8	16	Yes	19	89	54	174	87	12	17	-	56	-	0.70
	5/8	16	No	19	89	-	174	87	12	17	-	56	-	0.70
	7/8	22	No	19	89	-	174	87	17	17	-	56	-	0.70
EVR 18	7/8	22	Yes	19	89	54	179	89.5	17	17	-	56	-	0.70
Cable coil ¹⁾											49	-	46	-
DIN plug coil ²⁾											64	-	47	-
Terminal box coil 10 W ³⁾											72	-	47	-
Terminal box coil 12 / 20 W ³⁾											80	-	68	-

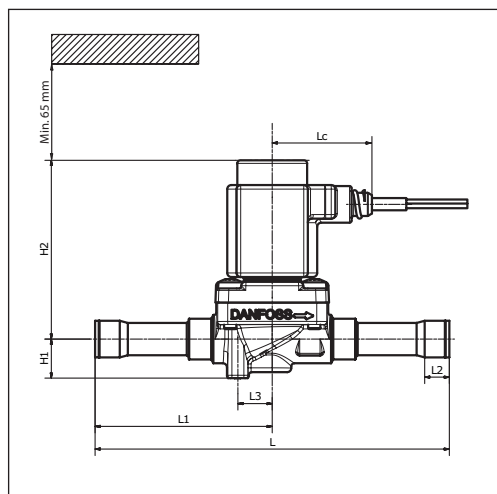
Net weight of coil
10 W: approx. 0.3 kg
12 and 20 W: approx. 0.5 kg

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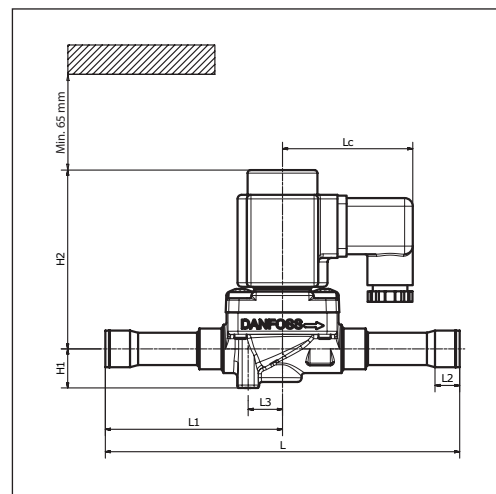
Dimensions and weights

EVR 20 - EVR 22
Solder connection

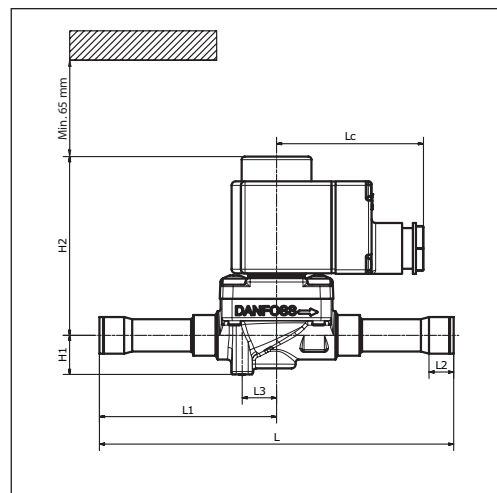
Cable coil ¹⁾



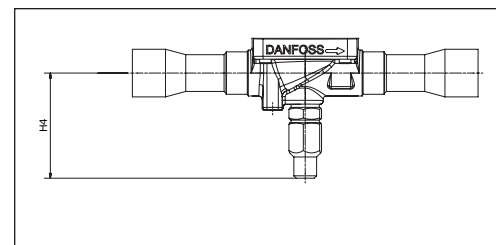
DIN plug coil ²⁾



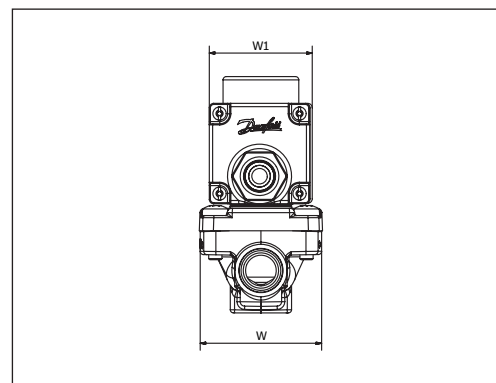
Terminal box coil ³⁾



Manual stem



End view



Type	Connection		Manual operation	H ₁ [mm]	H ₂ [mm]	H ₄ [mm]	L [mm]	L ₁ [mm]	L ₂ [mm]	L ₃ [mm]	L _c [mm]	W [mm]	W ₁ max. [mm]	Net weight without coil [kg]	
	[in]	[mm]													
EVR 20	7/8	22	Yes	19	93	56	190	95	17	20	-	72	-	1.26	
	7/8	22	No	19	93	-	190	95	17	20	-	72	-	1.26	
	1 1/8	28	No	19	93	-	217	108.5	20	20	-	72	-	1.31	
EVR 22	1 1/8	28	Yes	19	93	56	222	111	20	20	-	72	-	1.31	
	1 1/8	28	No	19	93	-	267	133.5	20	20	-	72	-	1.47	
	1 3/8	35	No	19	93	-	292	146	25	20	-	72	-	1.47	
Cable coil ¹⁾												49	-	46	-
DIN plug coil ²⁾												64	-	47	-
Terminal box coil 10 W ³⁾												72	-	47	-
Terminal box coil 12 / 20 W ³⁾												80	-	68	-

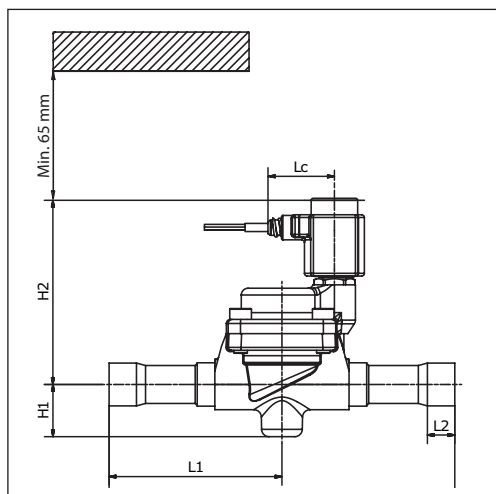
Net weight of coil
10 W: approx. 0.3 kg
12 and 20 W: approx. 0.5 kg

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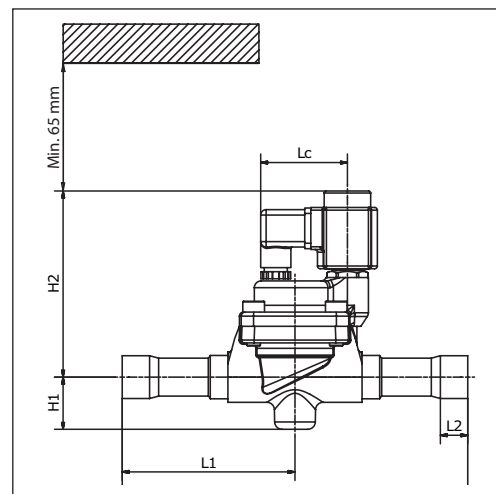
Dimensions and weights

EVR 25
Solder connection

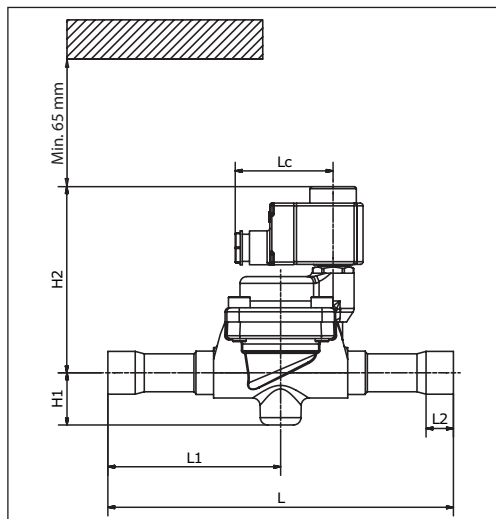
Cable coil ¹⁾



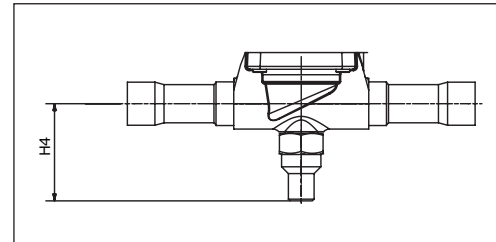
DIN plug coil ²⁾



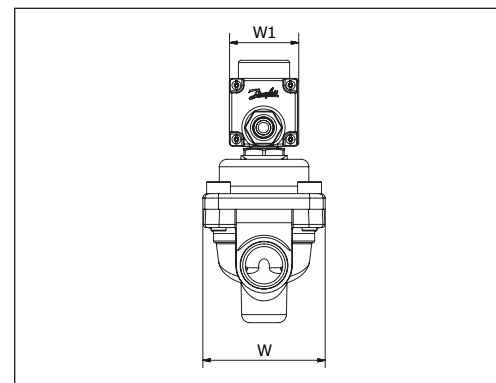
Terminal box coil ³⁾



Manual stem



End view



Type	Connection		Manual operation	H ₁ [mm]	H ₂ [mm]	H ₄ [mm]	L [mm]	L ₁ [mm]	L ₂ [mm]	L _c [mm]	W [mm]	W ₁ max. [mm]	Net weight without coil [kg]	
	[in]	[mm]												
EVR 25	1 1/8	28	Yes	39	138	71	255	127.5	20	-	82	-	2.67*	
	1 1/8	28	No	39	138	-	255	127.5	20	-	82	-	2.67*	
	1 3/8	35	Yes	39	138	71	281	140.5	25	-	82	-	2.80*	
	1 3/8	35	No	39	138	-	281	140.5	25	-	82	-	2.80*	
* Manual stem: +0.060 kg														
Cable coil ¹⁾											49	-	46	-
DIN plug coil ²⁾											64	-	47	-
Terminal box coil 10 W ³⁾											72	-	47	-
Terminal box coil 12 / 20 W ³⁾											80	-	68	-

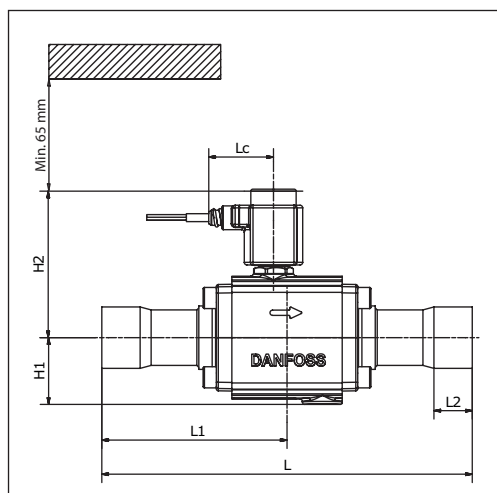
Net weight of coil
10 W: approx. 0.3 kg
12 and 20 W: approx. 0.5 kg

For 3D models, visit <https://store.danfoss.com>

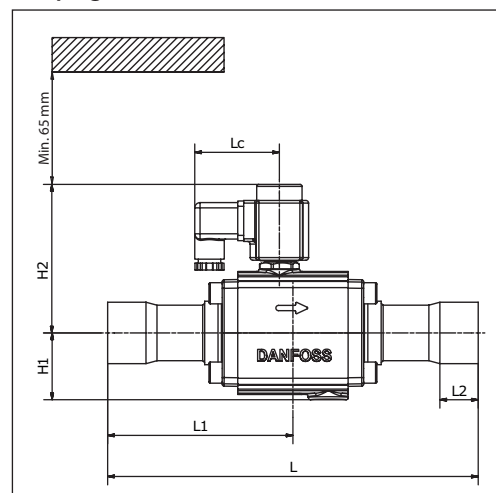
Dimensions and weights

EVR 32 - EVR 40
Solder connection

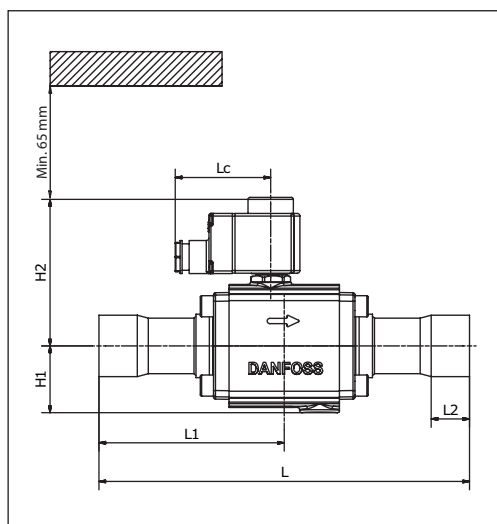
Cable coil ¹⁾



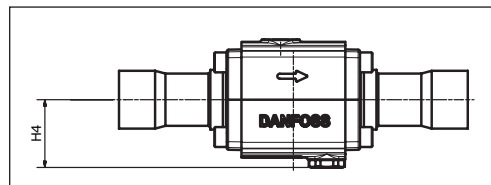
DIN plug coil ²⁾



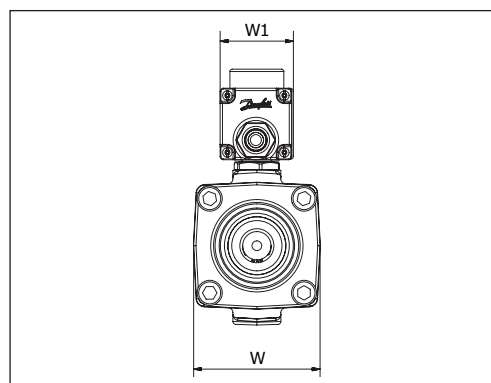
Terminal box coil ³⁾



Manual stem



End view



Type	Connection		Manual operation	H ₁ [mm]	H ₂ [mm]	H ₄ [mm]	L [mm]	L ₁ [mm]	L ₂ [mm]	L _c [mm]	W [mm]	W ₁ max. [mm]	Net weight without coil [kg]
	[in]	[mm]											
EVR 32	1 3/8	35	Yes	-	111	55	280	140	25	-	81	-	4.30
	1 3/8	35	No	51	111	-	280	140	25	-	81	-	4.30
	1 5/8	42	Yes	-	111	55	280	140	29	-	81	-	4.40
	1 5/8	42	No	51	111	-	280	140	29	-	81	-	4.40
	2 1/8	-	Yes	-	111	55	280	140	34	-	80	-	4.57
	2 1/8	-	No	51	111	-	280	140	34	-	80	-	4.57
EVR 40	1 5/8	42	Yes	-	111	55	280	140	29	-	81	-	4.40
	1 5/8	42	No	51	111	-	280	140	29	-	81	-	4.40
	2 1/8	-	Yes	-	111	55	280	140	34	-	80	-	4.57
	2 1/8	-	No	51	111	-	280	140	34	-	80	-	4.57
Cable coil ¹⁾										49	-	46	-
DIN plug coil ²⁾										64	-	47	-
Terminal box coil 10 W ³⁾										72	-	47	-
Terminal box coil 12 / 20 W ³⁾										80	-	68	-

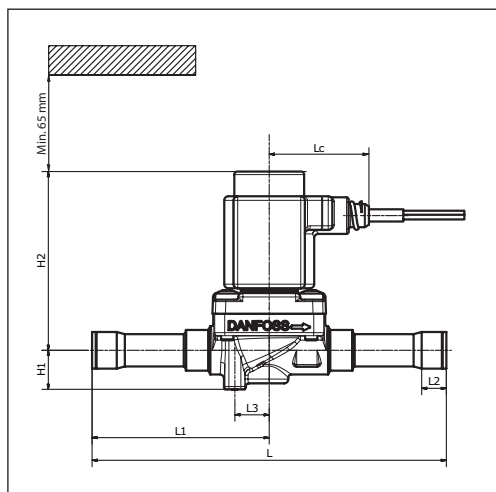
Net weight of coil
10 W: approx. 0.3 kg
12 and 20 W: approx. 0.5 kg

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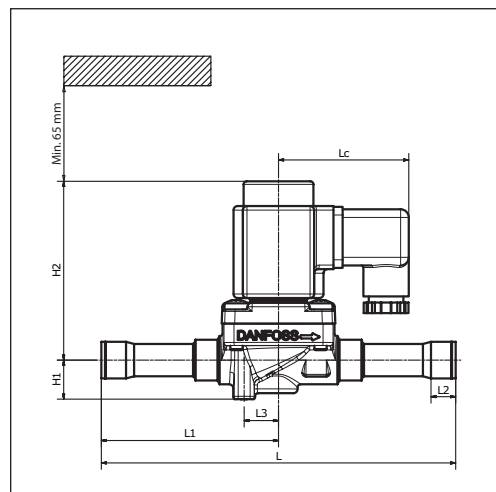
Dimensions and weights

EVRC 15
Solder connection

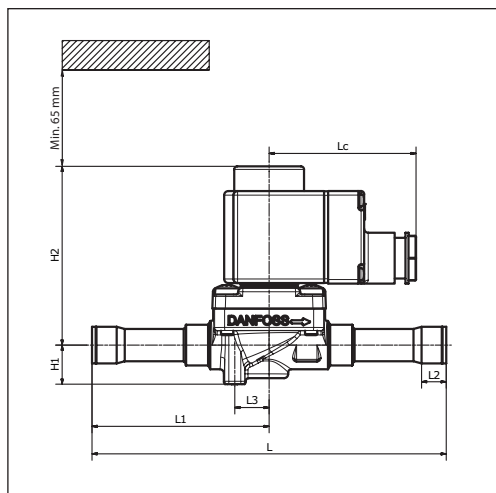
Cable coil ¹⁾



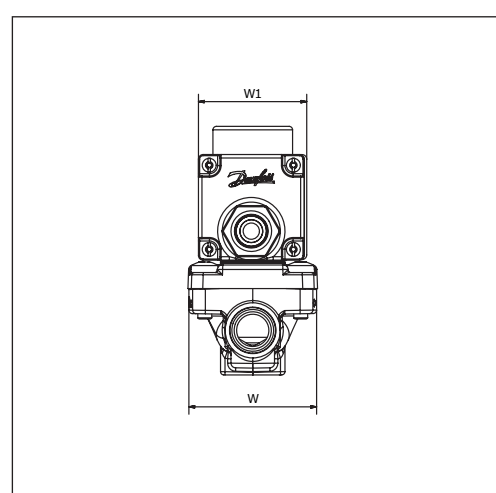
DIN plug coil ²⁾



Terminal box coil ³⁾



End view



Type	Connection		Manual operation	H ₁ [mm]	H ₂ [mm]	L [mm]	L ₁ [mm]	L ₂ [mm]	L ₃ [mm]	L _c [mm]	W [mm]	W ₁ max. [mm]	Net weight without coil [kg]
	[in]	[mm]											
EVRC 15	5/8	16	No	19	89	174	87	12	17	-	56	-	0.70
Cable coil ¹⁾										49	-	46	-
DIN plug coil ²⁾										64	-	47	-
Terminal box coil 10 W ³⁾										72	-	47	-
Terminal box coil 12 / 20 W ³⁾										80	-	68	-

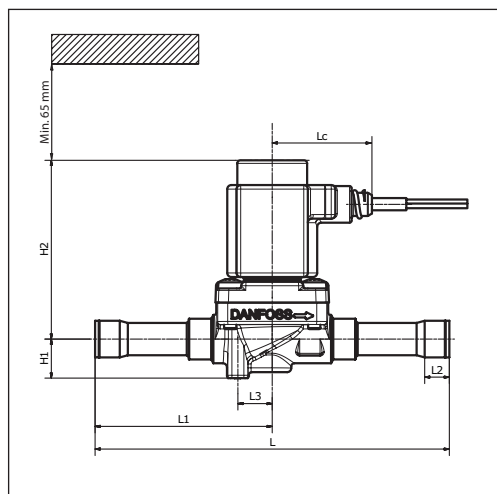
Net weight of coil
10 W: approx. 0.3 kg
12 and 20 W: approx. 0.5 kg

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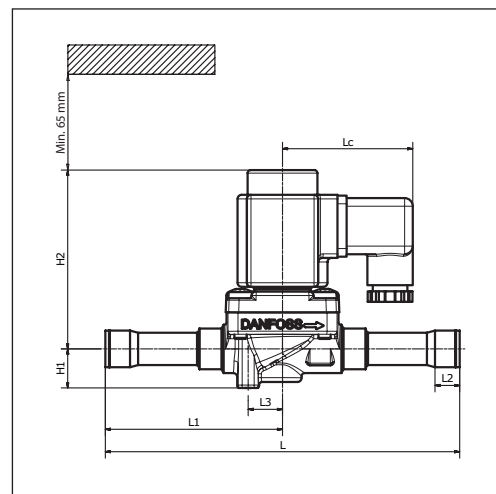
Dimensions and weights

EVRC 20
Solder connection

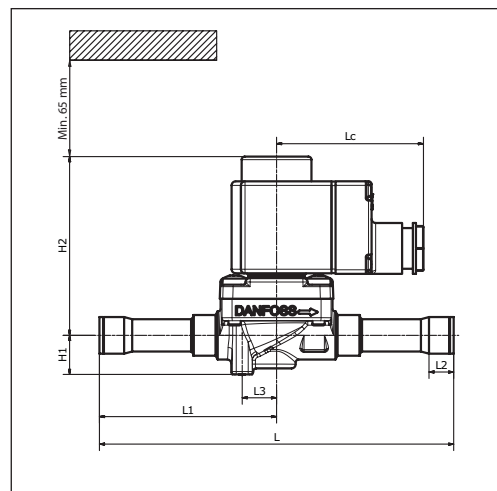
Cable coil ¹⁾



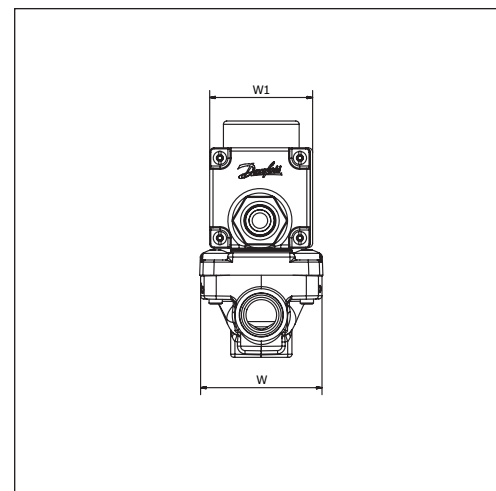
DIN plug coil ²⁾



Terminal box coil ³⁾



End view



Type	Connection		Manual operation	H ₁ [mm]	H ₂ [mm]	L [mm]	L ₁ [mm]	L ₂ [mm]	L ₃ [mm]	L _c [mm]	W [mm]	W ₁ max. [mm]	Net weight without coil [kg]	
	[in]	[mm]												
EVRC 20	7/8	22	No	19	93	190	95	17	20	–	72	–	1.26	
Cable coil ¹⁾											49	–	46	–
DIN plug coil ²⁾											64	–	47	–
Terminal box coil 10 W ³⁾											72	–	47	–
Terminal box coil 12 / 20 W ³⁾											80	–	68	–

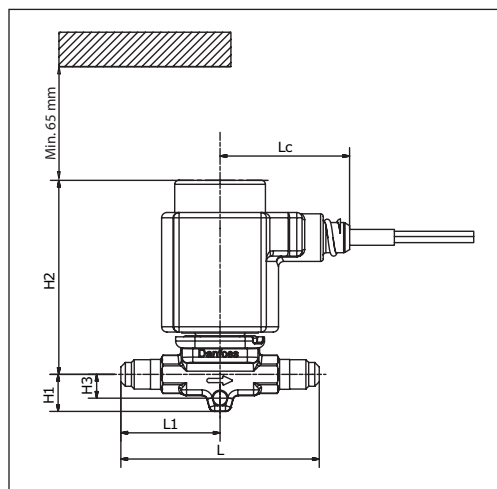
Net weight of coil
 10 W: approx. 0.3 kg
 12 and 20 W: approx. 0.5 kg

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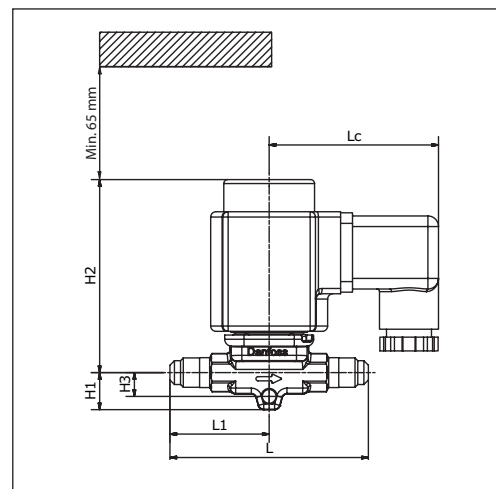
Dimensions and weights

EVR 2 - EVR 3
Flare connection

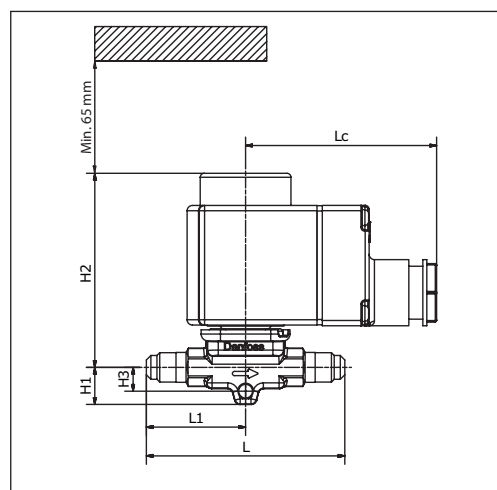
Cable coil ¹⁾



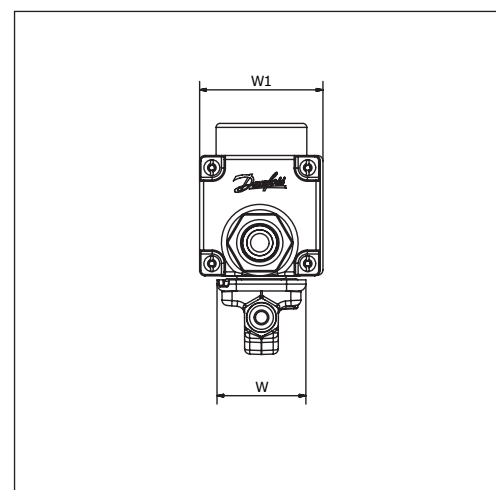
DIN plug coil ²⁾



Terminal box coil ³⁾



End view



Type	Connection		H ₁ [mm]	H ₂ [mm]	H ₃ [mm]	L [mm]	L ₁ [mm]	L _c [mm]	W [mm]	W ₁ max. [mm]	Net weight without coil [kg]	
	[in]	[mm]										
EVR 2	1/4	6	14	73	9	75	37.5	–	34	–	0.18	
EVR 3	1/4	6	14	73	9	75	37.5	–	34	–	0.18	
	3/8	10	14	73	9	75	37.5	–	34	–	0.18	
Cable coil ¹⁾									49	–	46	–
DIN plug coil ²⁾									64	–	47	–
Terminal box coil 10 W ³⁾									72	–	47	–
Terminal box coil 12 / 20 W ³⁾									80		68	

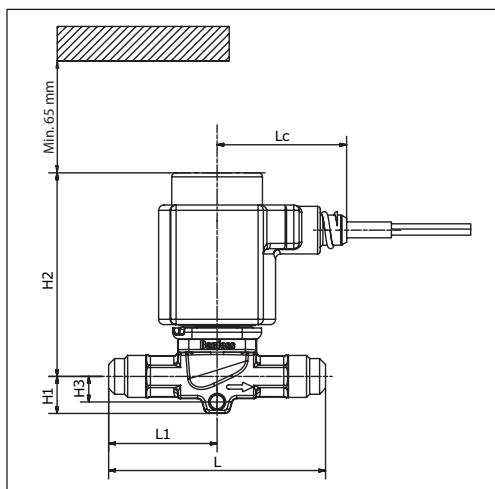
Net weight of coil
10 W: approx. 0.3 kg
12 and 20 W: approx. 0.5 kg

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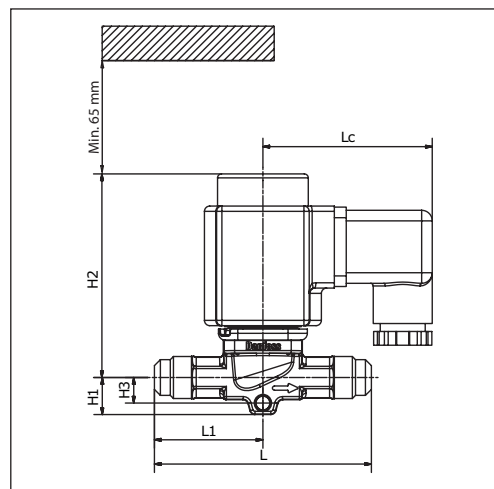
Dimensions and weights

EVR 6
Flare connection

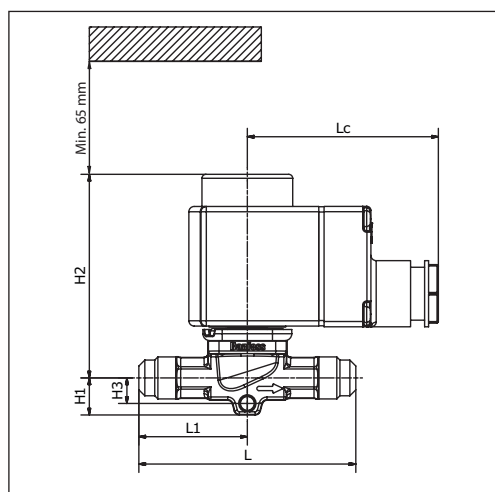
Cable coil ¹⁾



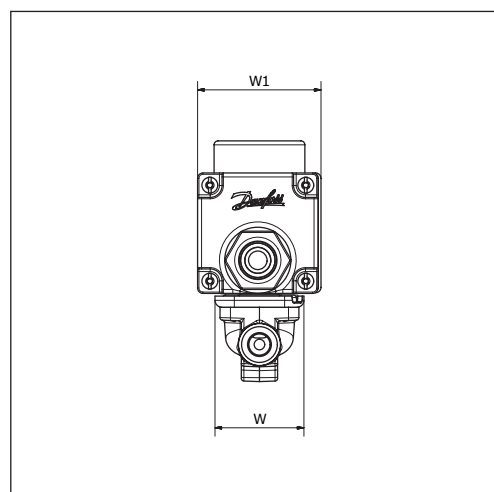
DIN plug coil ²⁾



Terminal box coil ³⁾



End view



Type	Connection		H ₁ [mm]	H ₂ [mm]	H ₃ [mm]	L [mm]	L ₁ [mm]	L _c [mm]	W [mm]	W ₁ max. [mm]	Net weight without coil [kg]	
	[in]	[mm]										
EVR 6	3/8	10	14	77	10	82	41	–	34	–	0.21	
	1/2	12	14	77	10	88	44	–	34	–	0.22	
Cable coil ¹⁾									49	–	46	–
DIN plug coil ²⁾									64	–	47	–
Terminal box coil 10 W ³⁾									72	–	47	–
Terminal box coil 12 / 20 W ³⁾									80	–	68	–

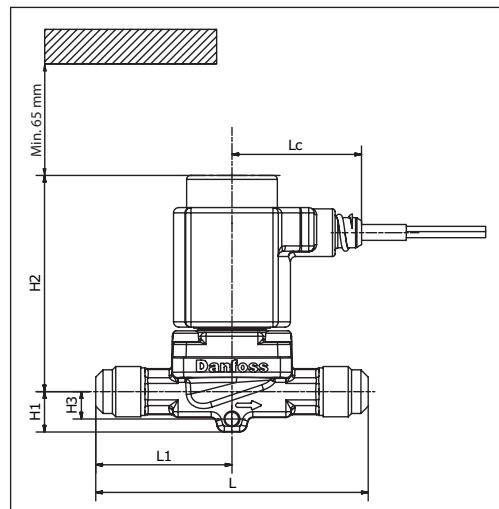
Net weight of coil
10 W: approx. 0.3 kg
12 and 20 W: approx. 0.5 kg

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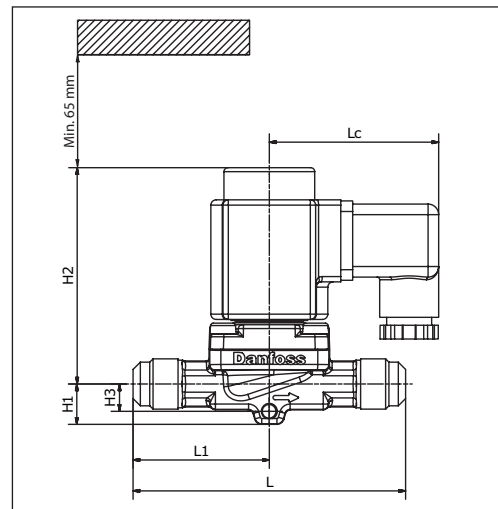
Dimensions and weights

EVR 10
Flare connection

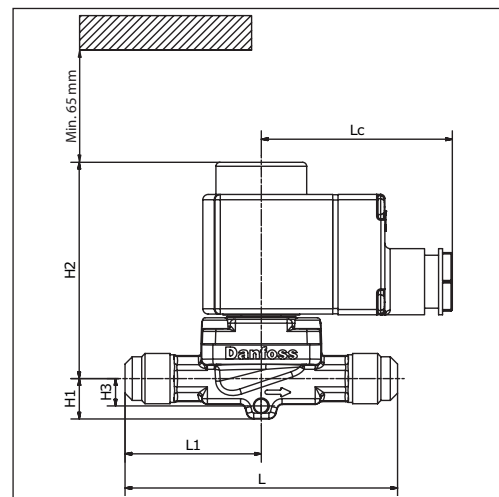
Cable coil ¹⁾



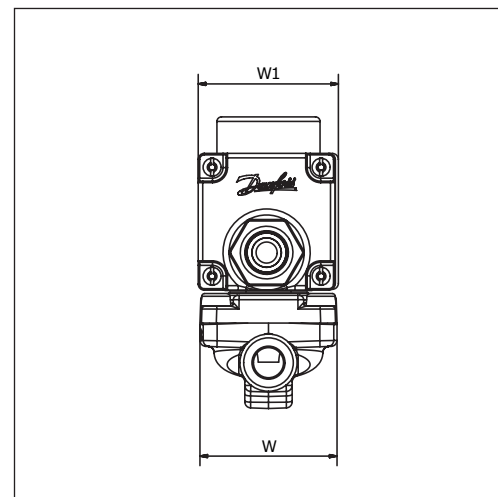
DIN plug coil ²⁾



Terminal box coil ³⁾



End view



Type	Connection		H ₁ [mm]	H ₂ [mm]	H ₃ [mm]	L [mm]	L ₁ [mm]	L _c [mm]	W [mm]	W ₁ max. [mm]	Net weight without coil [kg]	
	[in]	[mm]										
EVR 10	1/2	12	15	82	10	103	51.5	–	46	–	0.44	
	3/8	16	15	82	10	110	55	–	46	–	0.45	
Cable coil ¹⁾									49	–	46	–
DIN plug coil ²⁾									64	–	47	–
Terminal box coil 10 W ³⁾									72	–	47	–
Terminal box coil 12 / 20 W ³⁾									80	–	68	–

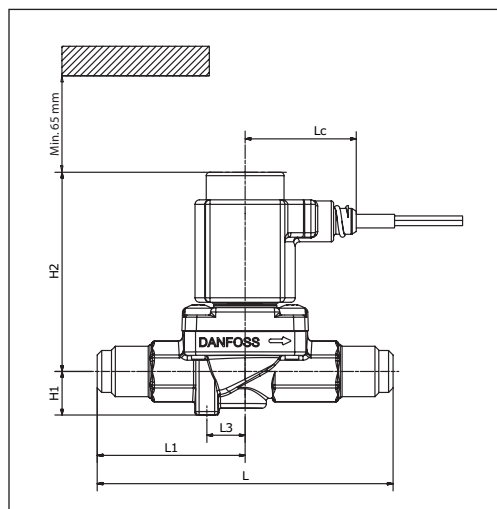
Net weight of coil
 10 W: approx. 0.3 kg
 12 and 20 W: approx. 0.5 kg

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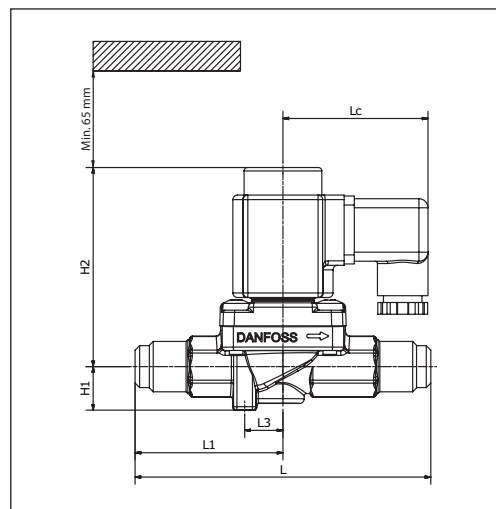
Dimensions and weights

EVR 15
Flare connection

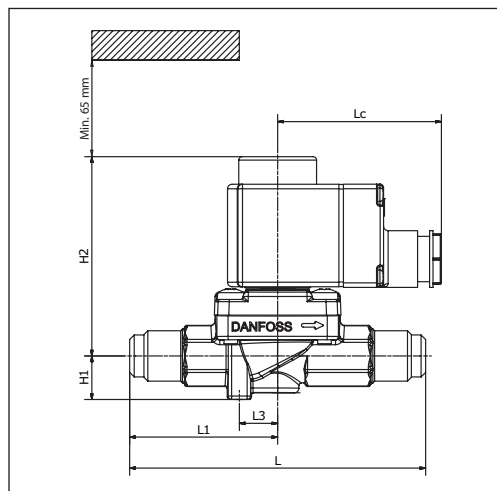
Cable coil ¹⁾



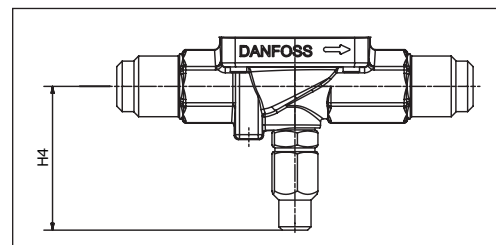
DIN plug coil ²⁾



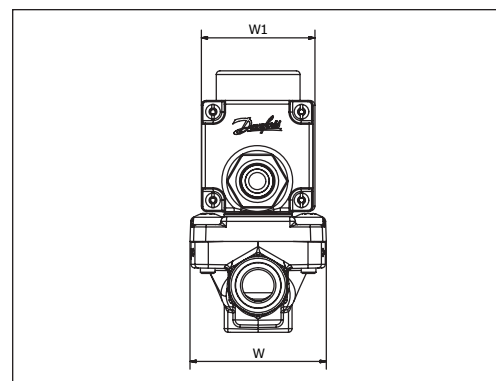
Terminal box coil ³⁾



Manual stem



End view



Type	Connection		Manual operation	H ₁ [mm]	H ₂ [mm]	H ₄ [mm]	L [mm]	L ₁ [mm]	L ₃ [mm]	L _c [mm]	W [mm]	W ₁ max. [mm]	Net weight without coil [kg]
	[in]	[mm]											
EVR 15	5/8	16	Yes	19	89	53	131	65.5	17	-	56	-	0.78
	5/8	16	No	19	89	-	131	65.5	17	-	56	-	0.78
Cable coil ¹⁾										49	-	46	-
DIN plug coil ²⁾										64	-	47	-
Terminal box coil 10 W ³⁾										72	-	47	-
Terminal box coil 12 / 20 W ³⁾										80	-	68	-

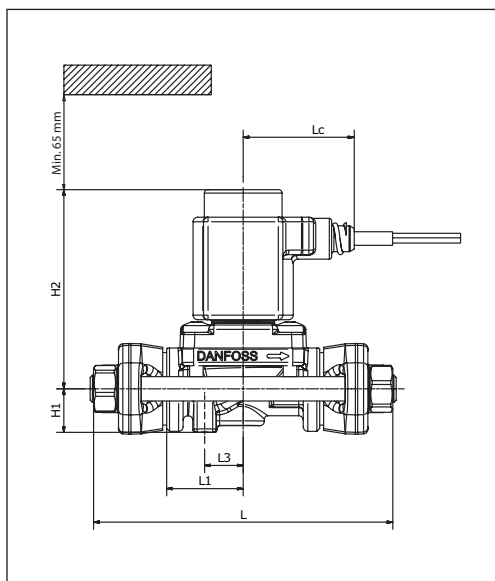
Net weight of coil
10 W: approx. 0.3 kg
12 and 20 W: approx. 0.5 kg

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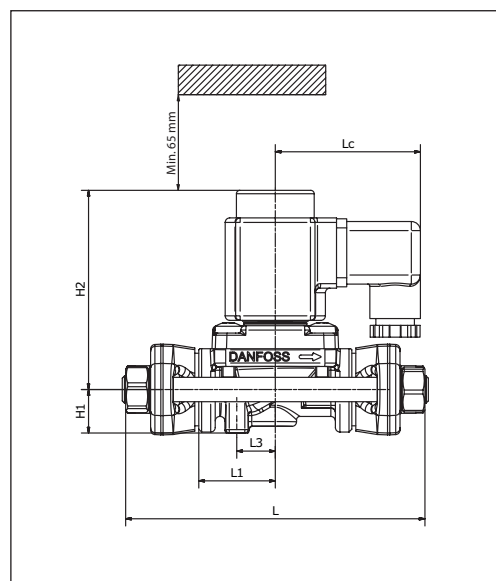
Dimensions and weights

EVR 15
Flange connection

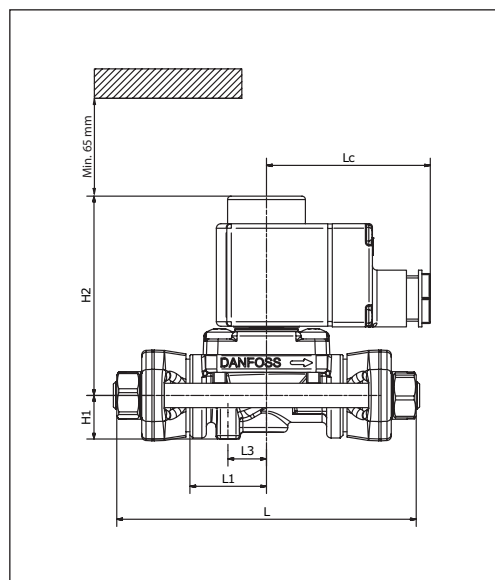
Cable coil ¹⁾



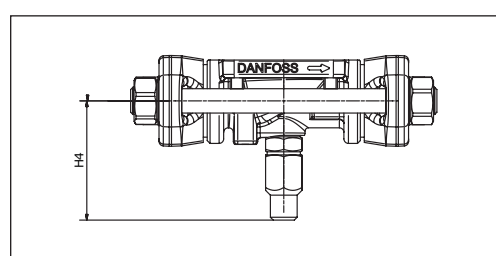
DIN plug coil ²⁾



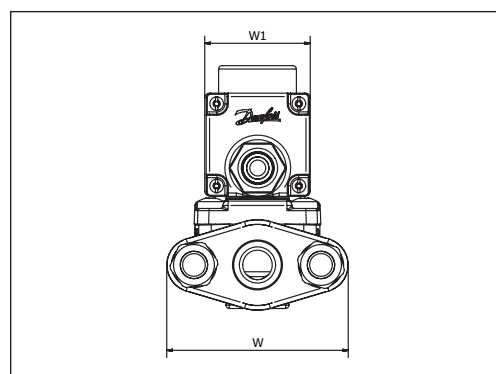
Terminal box coil ³⁾



Manual stem



End view



Type	Manual operation	H ₁ [mm]	H ₂ [mm]	H ₄ [mm]	L [mm]	L ₁ [mm]	L ₃ [mm]	L _c [mm]	W [mm]	W ₁ max. [mm]	Net weight without coil [kg]
EVR 15	Yes	19	89	53	126	33.8	17	–	80	–	0.64
	No	19	89	–	126	33.8	17	–	80	–	0.64
Cable coil ¹⁾								49	–	46	–
DIN plug coil ²⁾								64	–	47	–
Terminal box coil 10 W ³⁾								72	–	47	–
Terminal box coil 12 / 20 W ³⁾								80	–	68	–

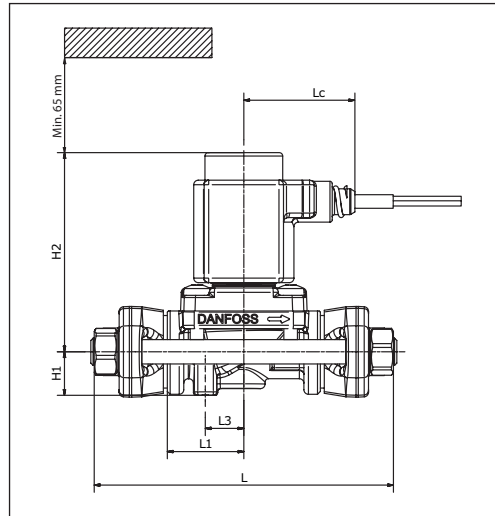
Net weight of coil
 10 W: approx. 0.3 kg
 12 and 20 W: approx. 0.5 kg
 Weight of flange set
 0.6 kg

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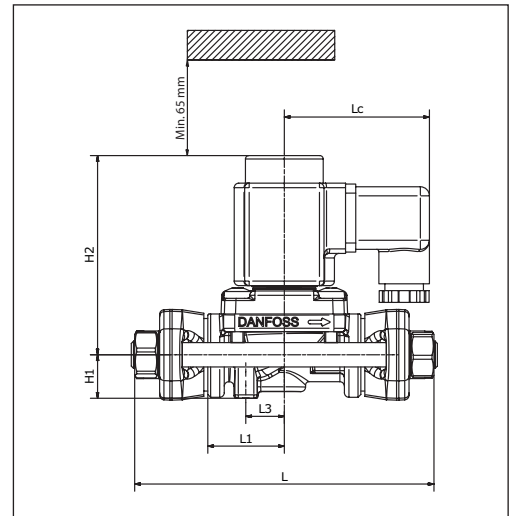
Dimensions and weights

EVR 20
Flange connection

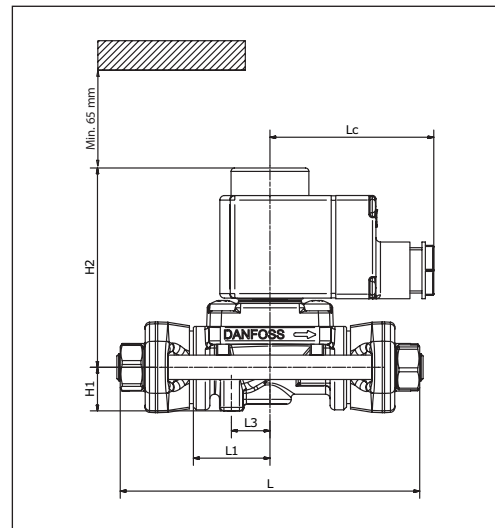
Cable coil ¹⁾



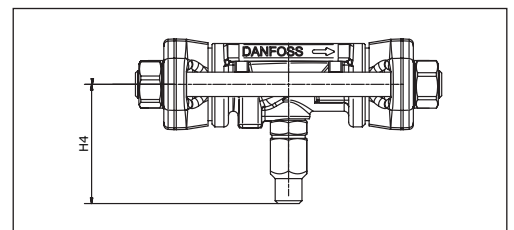
DIN plug coil ²⁾



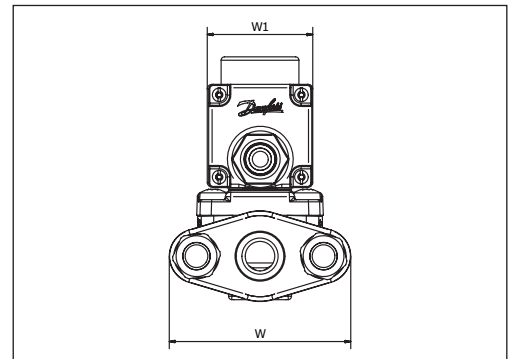
Terminal box coil ³⁾



Manual stem



End view



Type	Manual operation	H ₁ [mm]	H ₂ [mm]	H ₄ [mm]	L [mm]	L ₁ [mm]	L ₃ [mm]	L _c [mm]	W [mm]	W ₁ max. [mm]	Net weight without coil [kg]
EVR 20	Yes	19	93	56	156	42.5	20	–	96	–	1.20
	No	19	93	–	156	42.5	20	–	96	–	1.20
Cable coil ¹⁾								49	–	46	–
DIN plug coil ²⁾								64	–	47	–
Terminal box coil 10 W ³⁾								72	–	47	–
Terminal box coil 12 / 20 W ³⁾								80	–	68	–

Net weight of coil
 10 W: approx. 0.3 kg
 12 and 20 W: approx. 0.5 kg
Weight of flange set
 0.9 kg

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