

Solenoid valve

Types EVR 2 – EVR 22 (Version 2)



032R9602

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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, R442B, R442D, R447A, R447B, R448A, R449A, R449B, R450A, R452A, R452B, R454A, R454B, R454C, R455A, R463A, R507A, R512A, R513A, R513B, R515A, R515B, R516A, R600, R600a.
For 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.

Note
Pick up valves carefully from package.

Filter
Filter drier is always recommended in customer system.

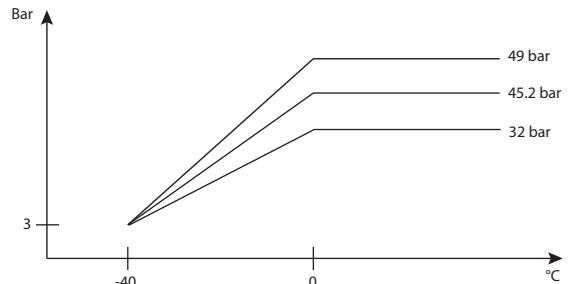
Special note for R1234yf, R1234ze, R152A, R290, R32, R444B, R452B, R454A, R454B, R454C, R455A, R516A, R600 and R600a:
The EVR 2 – EVR 22 with solder connections and without manual stem is validated in accordance to ATEX, ISO 5149, IEC 60335-2-24, IEC 60335-2-40, and UL. Ignition risk is evaluated in accordance to ISO 5149, and IEC 60335.

NOTE 1: EVR 2-15 flare connections are only approved for A1 and A2L refrigerants.

NOTE 2: Excluded from this EVR 22 with connections 1 3/8 inch / 35 mm related to PED requirements.

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)

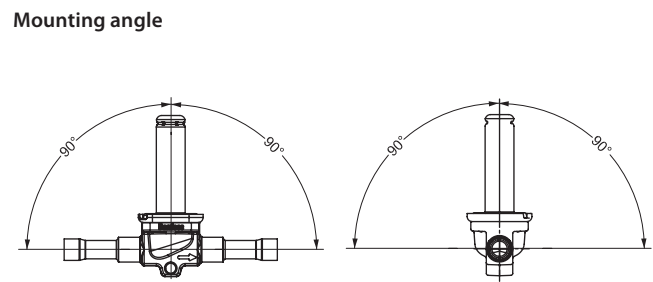
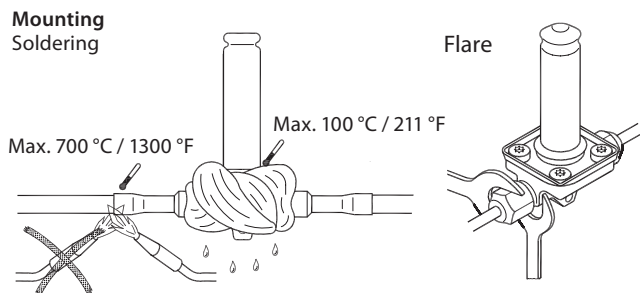
Note
Avoid reverse flow in EVR (except EVRC) to avoid unstable function or long term damage of valve.



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

Media temperature: -40 °C / -40 °F – 105 °C / 221 °F

Max. opening diff. pressure (MOPD): Coil dependent



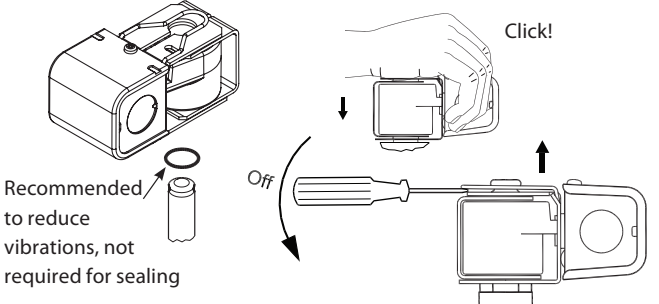
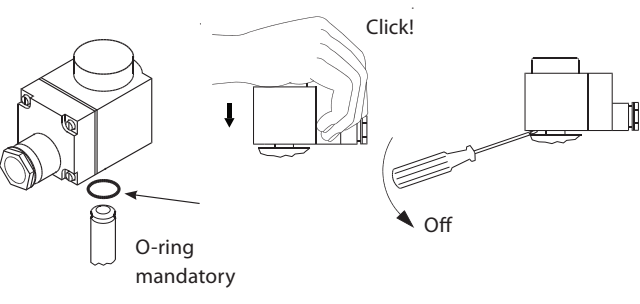
!
Always disconnect power from the coil when dismantled from the valve. The coil may be damaged and there is risk of injuries and burns.

ID Marking - example
Valve identification and reference to UL listed coils

General-Purpose Valve consists of
Body EVR 6 NC 032L1212
AND COIL BJ OR BX
TS: -40 °C/+105 °C (-40 °F/+221 °F)
MOPD: 38 bar / 550psi
PS (UL): 45.2 bar / SWP 655 psi
PS (PED): 49 bar
MADE IN DENMARK BR20 366E
c US LISTED 317R
Danfoss A/S 6430 Nordborg Denmark

Danfoss
MADE IN DENMARK
Type BJ120CS
Spare part no. 018F4110
110-120V 60Hz 15W
110V 50Hz 16W
To be used with listed valve body
EVR-EVRH-EVRC-EVRP-EV2xx series
AKV-AKVA
See armature tube or label

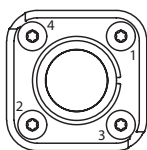
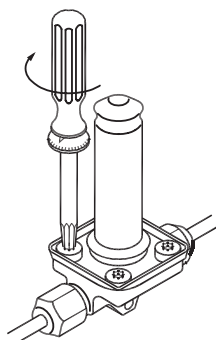
Coil print



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

Disassembly and assembly of EVR version 2

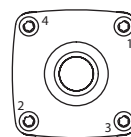
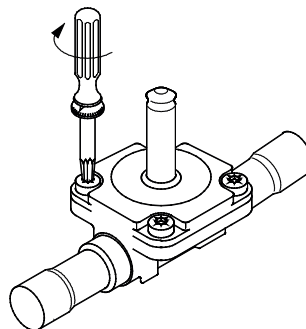
Mounting / dismounting of top part EVR 2 – EVR 8



Note!
Always use
cross-tightening

| Type | [Nm] | [kpm] | [ft-lbs] | Torx size |
|--------------------------------------|------|-------|----------|-----------|
| EVR 2, EVR 3, EVR 4, EVR 6, EVR 8 | 3.0 | 0.3 | 2.2 | T15 |

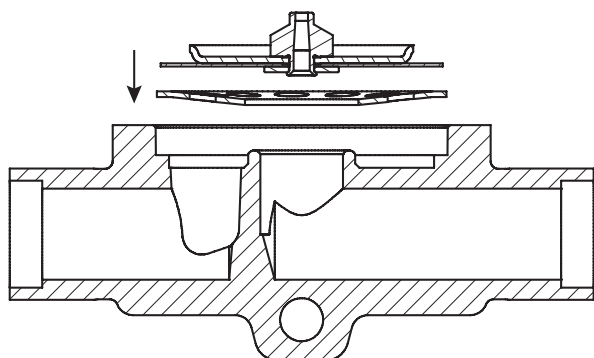
Mounting / dismounting of top part EVR 10 – EVR 22



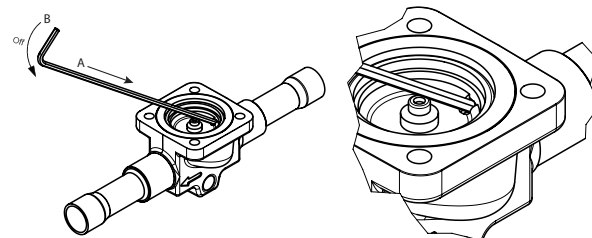
Note!
Always use
cross-tightening

| Type | [Nm] | [kpm] | [ft-lbs] | Torx size |
|------------------------|------|-------|----------|-----------|
| EVR 10, EVR 15, EVR 18 | 10 | 1 | 7.4 | T30 |
| EVR 20, EVR 22 | 30 | 3 | 22.1 | T45 |

Mounting of support washer

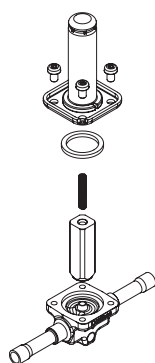


Special for EVR 4 – EVR 8: Dismounting gasket and supporting ring



Caution!
For EVR 2 – EVR 3, and EVR 10 – EVR 22, a screwdriver might be needed for removal of the gasket. Be careful not to scratch the gasket surface.

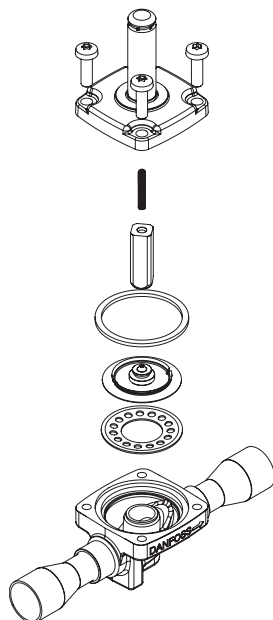
EVR 2 – EVR 3 (NC)



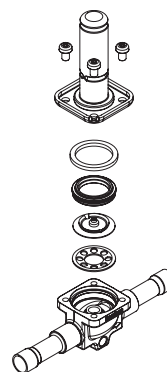
EVR 4 – EVR 8 (NC)



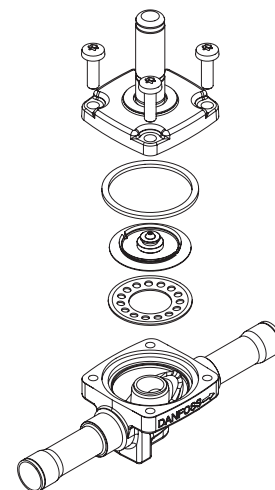
EVR 10 – EVR 22 (NC)



EVR 4 – EVR 8 (NO)



EVR 10 – EVR 20 (NO)



Manual operation for pressure testing and service related operation:

Only use the manual stem operation of the EVR NC valve during initial pressure testing of the refrigeration system or during service related manual operation. Remove the protective cap and rotate the manual stem clockwise approx. 6 cycles from fully closed to fully open position. After the manual operation is completed, ensure to rotate the manual stem counter-clockwise back to fully closed position and re-mount the protective cap before connecting the valve to automatic operation. MOPD for the manual operation function is 5 bar. 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).