

Installation guide

Electric expansion valve

Types AKV 10P, AKV 10PS

0689824

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Refrigerants :

R1233zd, R1234yf, R1234ze, R1270, R134a, R22, R23, R290, R32, R404A, R407A, R407C, R407F, R407H, R410A, R422B, R422D, R438A, R444B, R448A, R449A, R449B, R450A, R452A, R452B, R454A, R454B, R454C, R455A, R463A, R507, R513A, R513B, R515A, R515B, R516A, R600, R600a, R744

⚠ Safety notes for flammable refrigerants (R454C, R454A, R1234ze, R1270, R290, R32, R444B, R452B, R454B, R600, R600a, R455A, R516A, R1234yf, R170):

1. This product is validated in accordance to ATEX, EN 378, ISO 80079-36, ASHRAE 15, IEC 60335-2-x or equivalent standards.
2. Ignition risk is evaluated in accordance to ISO 80079-36 and IEC 60335.
3. See safety note below.

⚠ Safety notes:

1. The product can be applied on systems with R454C, R454A, R1234ze, R1270, R290, R32, R444B, R452B, R454B, R600, R600a, R455A, R516A, R1234yf, R170 as the working fluid.
2. 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.
3. Note, please follow specific selection criteria stated in the datasheet for these particular refrigerants.
4. The valve must only be used in closed circuit refrigeration system, where no oxygen is present acc. EN 378, ISO 80079-36, ASHRAE 15 or IEC 60335-2-x or equivalent standards.
5. It is not allowed to apply paint on the valve due to possibility of electrostatic charge generation.
6. The coil must be protected against external impact.
7. The coil shall be evaluated in accordance to ATEX cat. 3G (for Ex-Zone 2).
8. The coil shall be certified for use in ATEX cat. 2G (for Ex-Zone 1).

Max. working pressure :
PS: 90 barg / 1305 psig

Max. abnormal pressure
MAP: 90 bar / 1305 psig

Max. test pressure:
PT: 135 barg / 1958 psig

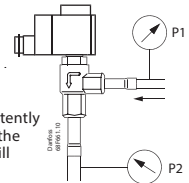
Ambient temperature range:
t_{min.} -50 °C / -58 °F
t_{max.} 80 °C / 176 °F (coil dependent)

Evaporating temperature:
t_{min.} -60 °C / -76 °F (on outlet side of valve)
t_{max.} 60 °C / 140 °F

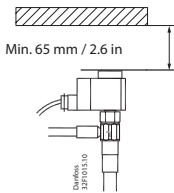
Max. operating pressure differential:
MOPD (coil dependent)
AKV 10P0 - AKV 10P2 = 70 bar / 1015 psi
AKV 10P3 - AKV 10P6 = 35 bar / 508 psi
AKV 10P7 - AKV 10P8 = 18 bar / 261 psi
AKV 10P54 - AKV 10P58 = 35 bar / 508 psi

Continuous operation temperature
COT: 60 °C / 140 °F

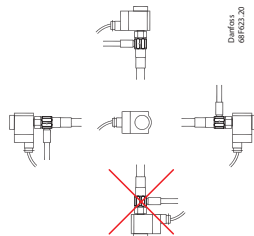
Note:
If operated consistently at or near MOPD, the service interval will decrease.



Mounting height

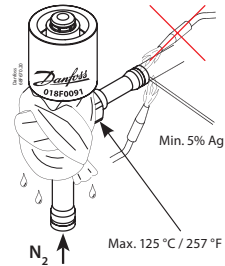


Mounting orientation



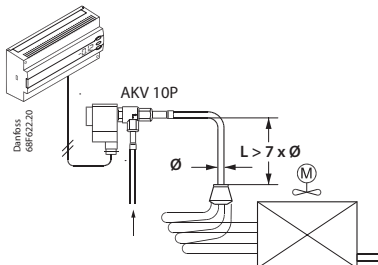
Brazing

Permanent magnet coil code no. **018F0091**



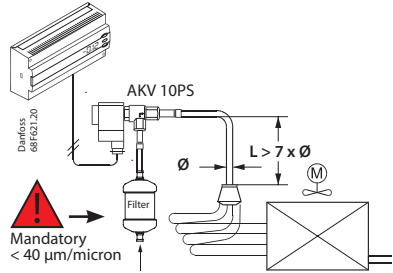
Tube length / dimensions

AKV 10P0 - AKVP8



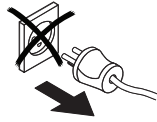
Tube length / dimensions

AKV 10P54 - AKV 10P58

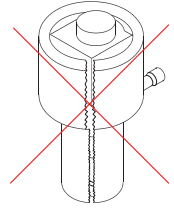




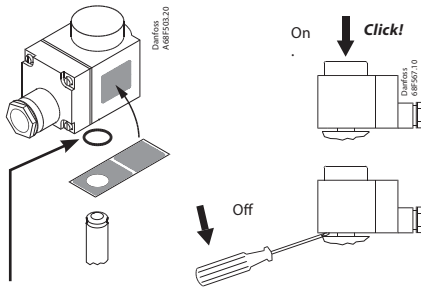
Always disconnect power from the coil when dismantled from the valve. The coil may be damaged and there is risk of injuries and burns.



Do not insulate the coil as it will overheat and burn out!

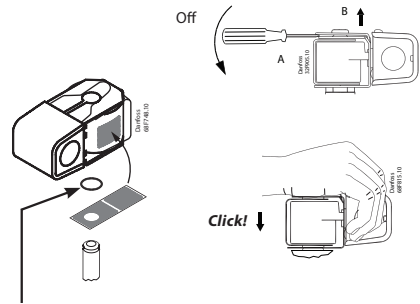


Mounting and Dismounting of standard coil



O-ring mandatory.

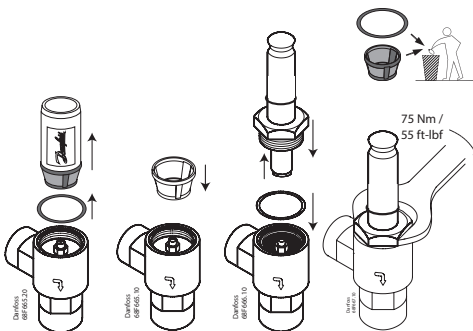
Mounting and Dismounting of UL coil



Recommended to reduce vibrations, not required for sealing.

Service

AKV 10P0 - AKV 10P8



AKV 10P54 - AKV 10P58

