

EXPANSION VALVES, SOLENOID VALVES, WATER VALVES & OIL PRESSURE SWITCHES



F
SECTION

Danfoss Expansion Valves

T* Range - Order valve and orifice separately.
N-40°C to +10°C Without MOP



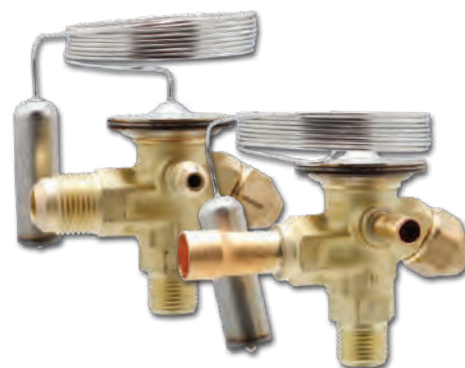
Internally Equalised

CODE	MODEL	CONNECTIONS	DANFOSS NO
F502	TN2 R134a		068Z3346
F504	TS2 R404A		068Z3400
F505	TZ2 R407C		068Z3496
F501	T2 R407F/R407A		068Z3715
F503	T2 R448A/R449A		068Z3727
F526	TN2 R134a	3/8 x 1/2 Solder	068Z3383
F527	TS2 R404A		068Z3414
F528	TZ2 R407C		068Z3502
F538	TS2 R448A/R449A		068Z3729
F820	TS2 R452A	3/8 x 1/2 Solder	068Z3806



Externally Equalised

CODE	MODEL	CONNECTIONS	DANFOSS NO
F518	TEN2 R134a		068Z3348
F520	TES2 R404A		068Z3403
F521	TEZ2 R407C		068Z3501
F506	TE2 R407F/R407A		068Z3714
F547	TE2 R448A/R449A		068Z3728
F530	TEN2 R134a	3/8 x 1/2 Solder	068Z3385
F531	TES2 R404A		068Z3415
F532	TEZ2 R407C		068Z3446
F548	TE2 R448A/R449A		068Z3730
F522	TE2 R407F & R407A		068Z3713
F822	TES2 R452A	3/8 x 1/2 Solder	068Z3807



Orifice to suit T2 and TE2 Valves

CODE	ORIFICE	DANFOSS NO
F539	0X	068-2002
F540	00	068-2003
F541	01	068-2010
F542	02	068-2015
F543	03	068-2006
F544	04	068-2007
F545	05	068-2008
F546	06	068-2009



Orifice to suit T2 and TE2 Solder Valves Only

CODE	ORIFICE	DANFOSS NO
F537	0X	068-2089
F507	00	068-2090
F508	01	068-2091
F509	02	068-2092
F510	03	068-2093
F511	04	068-2094
F512	05	068-2095
F513	06	068-2096



Solder Adaptors for T2/TE2 Valves

CODE	CONNECTION	DANFOSS NO
F514	1/4	068-2062
F515	3/8	068-2060



Danfoss Expansion Valves

TE5 TE12 and TE20 Range

Order element, orifice and base separately
Range N-40°C to +10°C Without MOP.



TE-5 Thermostatic Element (3m Capillary)

CODE	MODEL	DANFOSS NO
F551	TEN5 R134a	067B3297
F552	TES5 R404A	067B3342
F553	TEZ5 R407C	067B3278
F594	TE5 R407F/R407A	067B3501
F800	TE5 R448A/R449A	067B3252

Orifice to Suit TE-5 Valves

CODE	TYPE	DANFOSS NO
F556	No.1 Orifice	067B2789
F557	No.2 Orifice	067B2790
F558	No.3 Orifice	067B2791
F559	No.4 Orifice	067B2792

Valve Bodies for TE-5 Valves

CODE	MODEL	CONNECTIONS	DANFOSS NO
F560	Angle Flare	1/2 x 5/8	067B4013
F561	Angle Solder	1/2 x 5/8	067B4009
F562	Angle Solder	1/2 x 7/8	067B4010
F563	Angle Solder	5/8 x 7/8	067B4011
F564	Straight Solder	1/2 x 5/8	067B4007
F565	Straight Solder	1/2 x 7/8	067B4008

TE12 Thermostatic Element (3m Capillary)

CODE	MODEL	DANFOSS NO
F571	TEN12 R134a	067B3232
F572	TES12 R404A	067B3347
F573	TEZ12 R407C	067B3366
F595	TE12 R407F/R407A	067B3532
F802	TE12 R448A/R449A	067B2512

Orifice to Suit TE12 Valves

CODE	TYPE	DANFOSS NO
F579	No.5 Orifice	067B2708
F568	No.6 Orifice	067B2709
F569	No.7 Orifice	067B2710

Valve Bodies for TE12 & 20 Valves

CODE	MODEL	CONNECTIONS	DANFOSS NO
F580	Angle Solder	5/8 x 7/8	067B4022
F581	Angle Solder	7/8 x 1-1/8	067B4023
F582	Straight Solder	5/8 x 7/8	067B4020
F583	Straight Solder	7/8 x 1-1/8	067B4021

TE20 Thermostatic Element

CODE	MODEL	DANFOSS NO
F586	TEN20 R134a	067B3292
F587	TES20 R404A	067B3352
F588	TEZ20 R407C	067B3371
F596	TE20 R407F/R407A	067B3561
F804	TE20 R448A/R449A	067B3294

Orifice to Suit TE20 Valves

CODE	TYPE	DANFOSS NO
F589	No.8 Orifice	067B2271
F590	No.9 Orifice	067B2773
F591	No.10 Orifice	067B2701



Danfoss Expansion Valve Selection Chart

Nominal capacities for the Danfoss range of expansion valves.



Capacity in kW for Range N-40°C to +10°C.

ORIFICE N°	RATED CAPACITY (KW)*						
	R407C	R134a	R404A/R507	R407A	R407F	R448A	R449A
0X	0.92	0.68	0.64	0.88	1.0	0.90	0.88
00	1.8	1.2	1.3	1.7	2.0	1.8	1.7
01	3.5	2.1	2.6	3.4	3.9	3.5	3.4
02	4.8	2.6	3.7	4.7	5.4	4.8	4.6
03	8.1	4.3	6.3	8.0	9.2	8.1	7.9
04	12.4	6.4	9.9	12.4	14.3	12.6	12.1
05	16.5	8.4	13.0	16.3	19.0	16.3	15.7
06	19.7	10.1	15.5	19.6	22.9	19.8	19.1

*The rated capacity is based on:
 Evaporating temperature $t_e = 4.4\text{ °C}$
 Condensing temperature $t_c = 38\text{ °C}$
 Refrigerant temperature ahead of valve $t_l = 37\text{ °C}$

Capacity in kW for Range N-40°C to +10°C.

VALVE TYPE	ORIFICE N°	RATED CAPACITY (KW)*				
		R407C	R134a	R404A R507	R407A	R407F
TE5	0.5	10.7	6.68	8.17	10.3	11.0
	1	19.6	12.2	14.9	18.8	20.3
	2	27.2	17.0	20.5	25.9	28.1
	3	34.8	21.8	26.3	33.3	35.8
	4	47.4	29.7	35.7	45.3	49.0
TE12	5	55.8	37.7	50.7	56.0	71.0
	6	73.9	50.1	64.0	75.0	95.0
	7	94.3	65.7	81.3	96.0	115
TE20	8	118	77.8	87.1	126	141
	9	136	92.3	102	148	161

*The rated capacity is based on:
 Evaporating temperature $t_e = 4.4\text{ °C}$
 Condensing temperature $t_c = 38\text{ °C}$
 Refrigerant temperature ahead of valve $t_l = 37\text{ °C}$

Danfoss AKV Electronic Expansion Valves

AKV are electrically operated expansion valves designed for refrigerating plant. The AKV valves can be used for HCFC, HFC, & R744 refrigerants. The orifice assembly is replaceable.

AKV 10 Valve (complete with orifice)

CODE	MODEL	CONNECTIONS	DANFOSS NO
F249	AKV 10P0	3/8 x 1/2 Solder	068F5210
F250	AKV 10P1	3/8 x 1/2 Solder	068F5211
F251	AKV 10P2	3/8 x 1/2 Solder	068F5212
F252	AKV 10P3	3/8 x 1/2 Solder	068F5213
F253	AKV 10P4	3/8 x 1/2 Solder	068F5214
F254	AKV 10P5	3/8 x 1/2 Solder	068F5215
F255	AKV 10P6	3/8 x 1/2 Solder	068F5216
F257	AKV 10P7	1/2 x 5/8 Solder	068F5217

AKV 15 Valve (complete with orifice)

CODE	MODEL	CONNECTIONS	DANFOSS NO
F259	AKV15-1	3/4 x 3/4 Solder	068F5000
F258	AKV15-2	3/4 x 3/4 Solder	068F5005
F260	AKV15-3	7/8 x 7/8 Solder	068F5010
F261	AKV15-4	1-1/8 x 1-1/8 Solder	068F5015

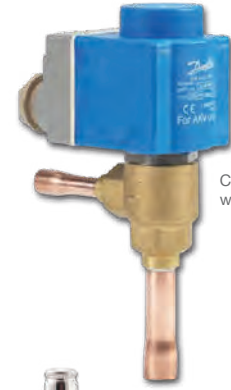
AKV Coils*

CODE	DANFOSS NO	DESCRIPTION
F275	018F6781	AKV Coil 230V DC Coil with T/Box
F264	018F6732	AKV Coil 230V AC Coil with T/Box

* Other AKV solenoid valve coil options available in various voltages and cable entry options, Please consult our FSW Technical Department for advice.

AKV 10 Spares

CODE	DANFOSS NO	DESCRIPTION
F273	068F5151	AKV10 P Orifice N° 0, 1, 2 & 3
F274	068F5152	AKV10 P Orifice N° 4, 5 & 6
F276	068F5154	AKV10 P Filters (Pack of 10)
F277	068F5153	AKV10 P Armature Kit
F267	068F5283	AKV Orifice N° 0, 1, 2 & 3
F270	068F5284	AKV Orifice N° 4, 5 & 6
F272	068F5285	AKV Orifice N° 7 & 8
F280	068F0540	AKV Filters (Pack of 10)
F281	068F0541	AKV 10 Armature Kit



Coil not included with valve bodies



Danfoss

Danfoss Solenoid Valves

Solenoid Valves are supplied **WITHOUT** coils.
Please order coils separately.

EVR solenoids are suitable for HFC, CFC and HCFC.
Temperature range for the medium is -40°C to +105°C
The valves listed below are the “normally closed” type.
“Normally open” valves are also available to order.

Where there is a choice of body size with the same connections please check the duty requirements to ensure correct selection.



Above image shows components included in a Repair Kit, The Seal Kit (F655 & F656) incs rubber seals only.

CODE	MODEL	CONNECTIONS	DANFOSS NO
F600	EVR-3	1/4 Flare	032F8107
F599	EVR-3	3/8	032F8116
F601	EVR-6	3/8	032F8072
F604	EVR-6	1/2	032F8079
F602	EVR-10	1/2	032F8095
F605	EVR-10	5/8	032F8098
F603	EVR-15	5/8	032F8101

CODE	MODEL	CONNECTIONS	DANFOSS NO
F606	EVR-3S	1/4 Solder	032F1206
F598	EVR-3S	3/8	032F1204
F607	EVR-6S	3/8	032F1212
F608	EVR-6S	1/2	032F1209
F609	EVR-10S	1/2	032F1217
F610	EVR-10S	5/8	032F1214
F611	EVR-15S	5/8	032F1228
F622	EVR-15S	7/8	032F1225
F612	EVR-20S	7/8	032F1240
F613	EVR-20S	1-1/8	032F1244
F614	EVR-25S	1-1/8	032F2201
F615	EVR-25S	1-3/8	032F2208
F617	EVR-40S	2-1/8	042H1112

Coil with Cable (240V AC)

CODE	MODEL	DESCRIPTION	DANFOSS NO
F618	EV 240-Cable	240 Volt 50Hz with cable	018F6252

Coil without Terminal box (230V DC)

CODE	MODEL	DESCRIPTION	DANFOSS NO
F623	EV-230V-DC	230 Volt 50Hz without Terminal Box	018F6991

Coil with Terminal Box (Coil voltage options listed below)

CODE	MODEL	DESCRIPTION	DANFOSS NO
F619	EV-24-TB	24 Volt 50 Hz	018F6707
F620	EV-110-TB	110 Volt 50 Hz	018F6730
F621	EV-240-TB	240 Volt 50 Hz	018F6702
F626	EV-220-TB	220/230 Volt 50 Hz	018F6701
F624	DC EVR 2/15	24 Volt D.C.	018F6857

Repair Kits

CODE	DESCRIPTION	DANFOSS NO
F650	Repair Kit for EVR3	032F0181
F651	Repair Kit for EVR6	032F8166
F652	Repair Kit for EVR10	032F0185
F653	Repair Kit for EVR15	032F0187
F654	Repair Kit for EVR20	032F0189
F655	Seal Kit for EVR2,3,10 & 15	032F8196
F656	Seal Kit for EVR06	032F8165

Parker Sporlan Solenoid Valve Coils

Replacement solenoid valve coils for the 2 most popular Parker Sporlan solenoid valves used in the refrigeration & AC industry.



F340/2/4



CODE	TYPE	MODEL
F340	JPAR654	RT14-24V-AC Solenoid Coil
F342	JPAR652	RT14-110V-AC Solenoid Coil
F344	JPAR650	RT-14-240V-AC Solenoid Coil
F358	310680	MKC-1 220-240/50-AC Solenoid Coil
F359	311764	MKC-2 220-240/50-AC Solenoid Coil

Danfoss Crankcase Protectors

The KVL protects the compressor motor against overload during start up after a defrost or any long standstill period.

The connection size chosen must not be too small.

Gas velocities in excess of 40 m/s in the inlet of the regulator can give flow noise!

CODE	MODEL	CONNECTIONS	RANGE	DANFOSS NO
F710	KVL 12	1/2 Flare	0.2 to 6 bar	034L0041
F711	KVL 15	5/8 Flare	0.2 to 6 bar	034L0042

CODE	MODEL	CONNECTIONS	RANGE	DANFOSS NO
F713	KVL 12	1/2 Solder	0.2 to 6 bar	034L0043
F714	KVL 15	5/8 Solder	0.2 to 6 bar	034L0049
F715	KVL 22	7/8 Solder	0.2 to 6 bar	034L0045
F716	KVL 28	1-1/8 Solder	0.2 to 6 bar	034L0046
F717	KVL 35	1-3/8 Solder	0.2 to 6 bar	034L0052



Danfoss

Danfoss Evaporator Pressure Regulator

The KVP is mounted in the suction line after the evaporator to maintain a constant temperature in the evaporator or to stop the evaporator falling below a preset temperature, as protection against freezing in a water chiller.

The connection size chosen must not be too small.

Gas velocities in excess of 40 m/s in the inlet of the regulator can give flow noise!

CODE	MODEL	CONNECTIONS	RANGE	DANFOSS NO
F720	KVP 12	1/2 Flare	0 to 5.5 bar	034L0021
F721	KVP 15	5/8 Flare	0 to 5.5 bar	034L0022

CODE	MODEL	CONNECTIONS	RANGE	DANFOSS NO
F723	KVP 12	1/2 Solder	0.2 to 6 bar	034L0023
F724	KVP 15	5/8 Solder	0.2 to 6 bar	034L0029
F725	KVP 22	7/8 Solder	0 to 5.5 bar	034L0025
F726	KVP 28	1-1/8 Solder	0 to 5.5 bar	034L0026
F727	KVP 35	1-3/8 Solder	0 to 5.5 bar	034L0032



Danfoss

Danfoss Water Valves

Two way valve to regulate the flow of water in refrigeration plant with water cooled condensers. The water valve modulates the flow to maintain the condensing pressure.

When the plant stops the water flow is shut off.

The following models are suitable for use with fresh water or neutral brine. Models WVFX 15,20 & 25 are also available in stainless steel for sea water use. The connection for the condenser pressure is 1/4" flare.



CODE	MODEL	CONNECTIONS	RANGE-BAR	DANFOSS NO
F050	WVFX 10	3/8" FPT	3.5 to 16	003N1100
F051	WVFX 15	1/2	3.5 to 16	003N2100
F052	WVFX 20	3/4	3.5 to 16	003N3100
F053	WVFX 25	1	3.5 to 16	003N4100
F054	WVFX 32	1-1/4	4 to 17	003F1232

Connections FPT = Female Pipe Thread.

Danfoss Oil Pressure Differential Switches.

Danfoss MP54 and MP55 oil differential controls are used as safety switches to protect compressors against low oil pressure. If the oil pressure fails the control stops the compressor after a given time period.

The time delay also allows for the oil pressure to reach operating conditions after start up.



CODE	MODEL	DELAY	DIFFERENTIAL - BAR	DANFOSS NO
F065	MP-54	45 Seconds	0.65 Fixed	060B016666
F066	MP-54	60 Seconds	0.65 Fixed	060B016766
F067	MP-54	90 Seconds	0.65 Fixed	060B016866
F068	MP-54	120 Seconds	0.65 Fixed	060B016966

CODE	MODEL	DELAY	DIFFERENTIAL - BAR	DANFOSS NO
F071	MP-55	60 Seconds	0.33/4.5 ad.	060B017166
F072	MP-55	90 Seconds	0.33/4.5 ad.	060B017266
F073	MP-55	120 Seconds	0.33/4.5 ad.	060B017366