Danfoss Expansion Valves

T*2 Range – Order valve and orifice separately
Range N -40°C to +10°C Without MOP

Code	Model	Connections	Danfoss No
Internally Equalised			
F500	TX2 R22	3/8 x 1/2 flare	068Z3206
F502	TN2 R134a		068Z3346
F504	TS2 R404A		068Z3400
F505	TZ2 R407C		068Z3496
F525	TX2 R22	3/8 fl x 1/2 solder	068Z3281
F526	TN2 R134a		068Z3383
F527	TS2 R404A		068Z3414
F528	TZ2 R407C		068Z3502
Externally Equalised			
F516	TEX2 R22	3/8 x 1/2 flare	068Z3209
F518	TEN2 R134a		068Z3348
F520	TES2 R404A		068Z3403
F521	TEZ2 R407C		068Z3501
F529	TEX2 R22	3/8 fl x 1/2 solder	068Z3284
F530	TEN2 R134a		068Z3385
F531	TES2 R404A		068Z3415
F532	TEZ2 R407C		068Z3503
F522	TE2 R407F & R407A		068Z3713
Orifice to Suit T*2 and TE*2 Valves			
F539	OX Orifice	T2 & TE2 Only	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 Solder Valves Only T*2 and TE*2			
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			
F514	1/4”		
F515	3/8		

Danfoss Expansion Valves

TE*5 TE*12 and TE*20 Range
Order element, orifice and base separately.
Range N -40°C to +10°C Without MOP

Code	Model	Connections	Danfoss No
TE*5 Thermostatic Element (3m Capillary)			
F550	TEX5 R22	-	067B3250
F551	TEN5 R134a	-	067B3297
F552	TES5 R404A	-	067B3342
F553	TEZ5 R407C	-	067B3278
Orifice to Suit TE*5 Valves			
F549	No.0.5 Orfice	-	067B2788
F556	No 1	-	067B2789
F557	No 2	-	067B2790
F558	No 3	-	067B2791
F559	No 4	-	067B2792
Bases for TE*5 Valves			
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
TE*12 Thermostatic Element (3m Capillary)			
F570	TEX12 R22	-	067B3210
F571	TEN12 R134a	-	067B3232
F572	TES12 R404A	-	067B3347
F573	TEZ12 R407C	-	067B3366
Orifice to Suit TE*12 Valves			
F576	No 1 - Pick TE*5 valve + 2 orfice		TE-12 1 orifice
F577	No 2 - Pick TE*5 valve + 3 orfice		TE-12 2 orifice
F578	No 3 - Pick TE*5 valve + 4 orfice		TE-12 3 orifice
F579	No 4 - Now a No.5		067B2708
F568	No.6		067B2709
F569	No.7		067B2710
Bases for TE*12 & 20 Valves			
F580	Angle Solder	5/8 x 7/8	068B4022
F581	Angle Solder	7/8 x 1-1/8	068B4023
F582	Straight Solder	5/8 x 7/8	068B4020
F583	Straight Solder	7/8 x 1-1/8	068B4021
TE*20 Thermostatic Element			
F585	TEX20 R22	-	067B3274
F586	TEN20 R134a	-	067B3292
F587	TES20 R404A	-	067B3352
F588	TEZ20 R407C	-	067B3371
Orifice to Suit TE*20 Valves			
	No 1 Orifice - Now use No. 8		Now obsolete
F589	No.8 Orifice		067B2771
F590	No.9 Orifice		067B2773
F591	No.10 Orfice		067B2701

Danfoss Expansion Valve Selection Chart

This table is for guidance only and the capacities have been selected at a set point.
The capacity quoted is for an 8 bar pressure drop across the valve.
For other pressure drops and conditions please call our sales office for assistance.

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

Valve Type	Orifice	R134a Evaporating Temperature °C				R404A Evaporating Temperature °C					
		10	0	-10	-20	10	0	-10	-20	-30	-40
T* 2/TE* 2	0X	0.50	0.47	0.44	0.41	0.42	0.42	0.42	0.40	0.37	0.33
T* 2/TE* 2	0	0.97	0.89	0.81	0.72	0.94	0.90	0.84	0.77	0.37	0.33
T* 2/TE* 2	1	2.15	1.80	1.46	1.17	2.42	2.13	1.81	1.50	1.21	0.96
T* 2/TE* 2	2	3.14	2.58	2.06	1.62	3.61	3.13	2.62	2.14	1.69	1.32
T* 2/TE* 2	3	5.61	4.61	3.69	2.90	6.43	5.59	4.69	3.83	3.04	2.36
T* 2/TE* 2	4	8.32	6.80	5.42	4.25	9.66	8.33	6.95	5.64	4.47	3.47
T* 2/TE* 2	5	10.8	8.62	6.88	5.40	12.16	10.52	8.81	7.17	5.68	4.41
T* 2/TE* 2	6	12.8	10.5	8.40	6.60	14.86	12.85	10.76	8.75	6.94	5.39
TE* 5	0.5	8.2	6.9	5.7	4.5	9.6	8.5	7.4	6.2	5.0	3.9
TE* 5	1	13.9	11.7	9.8	7.8	15.9	14.4	12.5	10.5	8.6	6.7
TE* 5	2	19.6	16.8	13.9	11.1	21.7	19.9	17.5	14.9	12.2	9.6
TE* 5	3	25.2	21.4	17.6	13.9	28.6	25.9	22.6	19.1	15.4	12.0
TE* 5	4	33.6	28.7	23.7	18.7	37.0	34.1	30.1	25.6	20.8	16.2
TE* 12	5	42.7	36.4	30.0	24.0	56.4	49.5	42.1	34.6	27.6	21.2
TE* 12	6	52.8	44.7	36.6	29.0	67.5	59.8	51.1	42.0	33.3	25.5
TE* 12	7	56.1	47.5	38.9	30.8	79.4	70.0	59.4	48.7	38.4	29.3
TE* 20	8	81.5	70.4	58.4	46.4	84.6	76.7	66.7	55.7	44.7	34.5
TE* 20	9	90.4	78.4	65.1	51.5	92.0	84.9	74.8	63.0	50.6	39.0

Valve Type	Orifice	R407C Evaporating Temperature °C				R22 Evaporating Temperature °C					
		10	0	-10	-20	10	0	-10	-20	-30	-40
T* 2/TE* 2	0X	0.61	0.60	0.57	0.54	0.60	0.59	0.57	0.54	0.49	0.45
T* 2/TE* 2	0	1.30	1.30	1.20	1.10	1.30	1.30	1.20	1.10	0.96	0.86
T* 2/TE* 2	1	3.40	3.00	2.50	2.00	3.40	3.00	2.50	2.00	1.70	1.40
T* 2/TE* 2	2	5.20	4.30	3.60	2.90	5.10	4.30	3.60	2.90	2.70	1.90
T* 2/TE* 2	3	9.20	7.90	6.40	5.20	9.10	7.80	6.40	5.20	4.20	3.40
T* 2/TE* 2	4	13.9	11.6	9.50	7.70	13.8	11.5	9.50	7.70	6.20	4.90
T* 2/TE* 2	5	17.4	14.7	12.0	9.80	17.2	14.6	12.0	9.80	7.80	6.30
T* 2/TE* 2	6	21.2	18.0	14.7	11.9	21.0	17.8	14.7	11.9	9.60	7.70
TE* 5	0.5	11.7	10.1	8.6	7.1	12.3	10.7	9.0	7.5	6.0	4.6
TE* 5	1	19.6	17.2	14.7	12.2	20.5	18.0	15.4	12.8	10.3	8.0
TE* 5	2	27.1	24.0	20.7	17.4	28.2	25.2	21.7	18.2	14.7	11.4
TE* 5	3	35.4	31.0	26.5	22.0	36.9	32.6	27.7	23.1	18.5	14.3
TE* 5	4	46.5	41.3	35.5	29.6	48.3	43.2	37.3	31.0	24.8	19.2
TE* 12	5	65.4	55.0	45.4	36.6	66.0	57.6	49.0	40.4	32.8	25.1
TE* 12	6	79.1	66.8	55.2	44.4	79.8	69.9	59.5	49.0	39.1	30.2
TE* 12	7	92.5	77.8	64.0	51.3	93.4	81.5	69.0	56.7	45.1	34.7
TE* 20	8	110.9	99.2	86.0	72.0	121.8	110.2	96.0	80.4	65.6	48.2
TE* 20	9	122.2	110.5	96.5	81.0	140.4	128.7	113.2	95.1	76.3	58.2

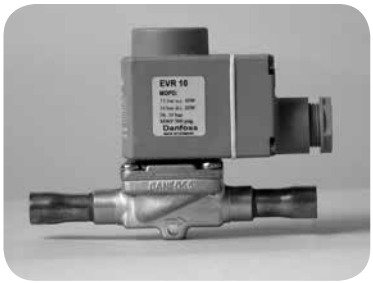
Danfoss Solenoid Valves

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.

Code	Model	Connections	Danfoss No
F600	EVR-3	1/4 flare	032F1205
F599	EVR-3	3/8	032F1203
F601	EVR-6	3/8	032F8072
F604	EVR-6	1/2	032F1235
F602	EVR-10	1/2	032F1215
F605	EVR-10	5/8	032F1238
F603	EVR-15	5/8	032F1221
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
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
F616	EVR-32S	1-5/8	042H1104
F617	EVR-40S	2-1/8	042H1112



Coil with Cable

F618	EV-240-Cable	240 volt	50Hz	018F6252

Coil with Terminal Box

F619	EV-24-TB	24 volt	50Hz	018F6707
F620	EV-110-TB	110 volt	50Hz	018F6730
F621	EV-240-TB	240 volt	50Hz	018F6702
F624	DC EVR 2/15	24 Volt D.C.		018F6857

Repair Kits

F650	Repair Kit for EVR3	032F0181
F651	Repair Kit for EVR6	032F0183
F652	Repair Kit for EVR10	032F0185
F653	Repair Kit for EVR15	032F0187
F655	Seal Kit for EVR10	032F0173
F656	Seal Kit for EVR06	032F0172

Sporlan Crankcase Protectors

Crankcase Protectors are designed to prevent overloading of the compressor by limiting the crankcase pressure to a predetermined maximum value during and after a defrost cycle or a shut-down period.

Code	Model	Connections	Range
F402	CRO-6	5/8	0/60 psi
F403	CRO-6	7/8	0/60 psi
F404	CRO-6	1-1/8	0/60 psi
F405	CRO-10	7/8	0/60 psi
F406	CRO-10	1-1/8	0/60 psi
F407	CRO-10	1-3/8	0/60 psi

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
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 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
F723	KVP 12	1/2 solder	0 to 5.5 bar	034L0023
F724	KVP 15	5/8 solder	0 to 5.5 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

Head Pressure Controls

Head Pressure Control for systems with air-cooled condensers.
The LAC and OROA are installed on their own. The ORI range must be installed in conjunction with the ORD valve, likewise the KVR in conjunction with the NRD.

Code	Model	Connections	Range
Sporlan			
F450	LAC-4-R134a	3/8 solder	100 psi fixed
F452	OROA-5-R22	5/8 solder	180 psi fixed
F454	ORI-6	5/8 solder	65/225 psi adj.
F455	ORI-6	7/8 solder	65/225 psi adj.
F456	ORI-6	1-1/8 solder	65/225 psi adj.
F457	ORI-10	1-3/8 solder	65/225 psi adj.
F460	ORD-4-20	5/8 solder	20 psi fixed
Danfoss (Bought to order)			
F730	KVR 12	1/2 flare	5 to 17.5 bar
F731	KVR 15	5/8 flare	5 to 17.5 bar
F732	KVR 12	1/2 solder	5 to 17.5 bar
F733	KVR 15	5/8 solder	5 to 17.5 bar
F734	KVR 22	7/8 solder	5 to 17.5 bar
F735	KVR 28	1-1/8 solder	5 to 17.5 bar
F736	KVR 35	1-3/8 solder	5 to 17.5 bar
F737	NRD	1/2 solder	1.4 to 3 bar

Discharge Bypass Valves

The ADR and the KVC valves bypass a portion of the hot discharge gas directly into the low side. This provides an economical method of capacity control.
The CPCE style injects the hot gas between the expansion valve and the evaporator. The hot gas should be injected via a LG liquid/gas mixer. This method avoids high suction super heat and protects against the evaporator icing up.

Code	Model	Connections	Range
Sporlan			
F465	ADRSE-2	3/8 solder	0/80 psi
F467	ADRSE-2	1/2 solder	0/80 psi
F469	ADRSE-2	5/8 solder	0/80 psi
F471	ADRPE-3	1/2 solder	0/80 psi
F473	ADRPE-3	5/8 solder	0/80 psi
F475	ADRHE-6	7/8 solder	0/80 psi
Danfoss			
F740	KVC 12	1/2 flare	0.2 to 6 bar
F741	KVC 15	5/8 flare	0.2 to 6 bar
F742	KVC 12	1/2 solder	0.2 to 6 bar
F743	KVC 15	5/8 solder	0.2 to 6 bar
F744	KVC 22	7/8 solder	0.2 to 6 bar
F748	CPCE 12	1/2 flare	0 to 6 bar
F749	CPCE 12	1/2 solder	0 to 6 bar
F750	CPCE 15	5/8 solder	0 to 6 bar
F751	CPCE 22	7/8 solder	0 to 6 bar
F754	LG 12-16	5/8 solder	-
F755	LG 16-22	7/8 solder	-
F756	LG 16-28	1-1/8 solder	-
F757	LG-22 35	1-3/8 solder	-

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
F055	WVFX 40	1-1/2	4 to 17	003F1240

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 Second	0.65 Fixed	060B016666
F066	MP-54	60 Second	0.65 Fixed	060B016766
F067	MP-54	90 Second	0.65 Fixed	060B016866
F068	MP-54	120 Second	0.65 Fixed	060B016966
F070	MP-55	45 Second	0.3/4.5 adj.	060B017066
F071	MP-55	60 Second	0.3/4.5 adj.	060B017166
F072	MP-55	90 Second	0.3/4.5 adj.	060B017266
F073	MP-55	120 Second	0.3/4.5 adj.	060B017366