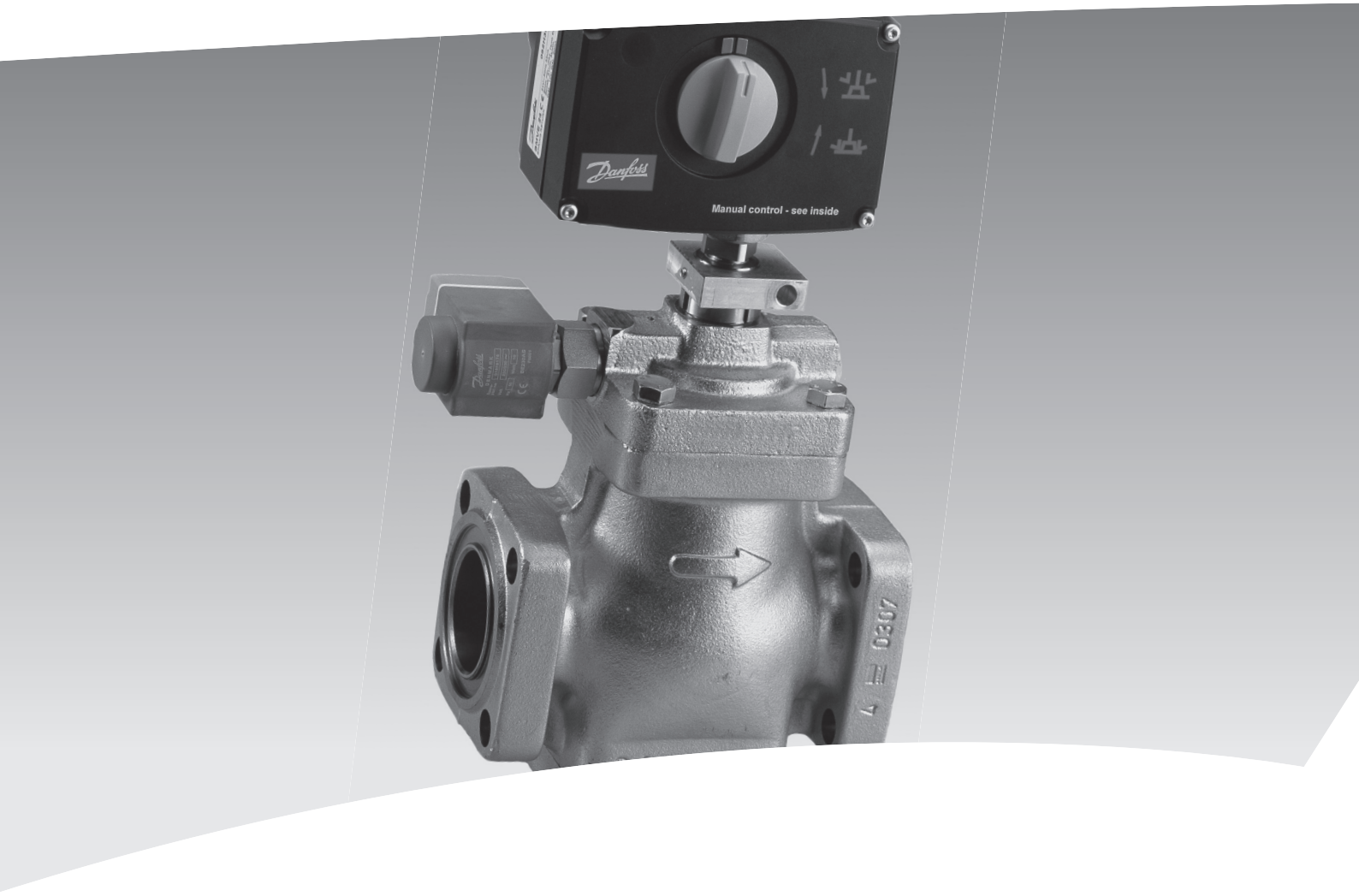


Motorised valve
Type MEV

REFRIGERATION AND
AIR CONDITIONING

Technical leaflet

Contents

Introduction

MEV motorised valve, complete with SMV/SMVE motor, EVM and spindle heater

Motor Expansion Valves (MEV) are direct operated motorised valves for expansion, servo operated by SMV/SMVE motors.

MEV valves are designed to modulate an expansion process in liquid lines with phase change. MEV valves are designed so that opening and closing forces are balanced, therefore, only one size of SMV or SMVE motor can be used for the complete range of MEV's (from size 80-2 to 500). Consequently, MEV valves in combination with SMV/SMVE motors are compact motorised units of comparatively small dimensions.

MEV + SMV/SMVE are supplied as standard with spring return (i.e. the valve closes automatically when no voltage is applied to the motor, e.g. in the event of power failure). This function is incorporated in the SMV/SMVE motor, but can be disconnected if it is not required.

The MEV valve is based on a PM valve body and has the same dimensions, connections and flanges.

The SMV motor controls the MEV valve by an ordinary three-point control (open-neutral-close) while the SMVE motor uses a signal (for instance 4 - 20 mA).

Features

- Built on the PM housing
- Same flange program as for the PM
- Valve housing in EN-GJS-400-18-LT
- Balanced valve forces
- V-port and cavitation resistant valve seat
- Same motor program type, SMV/SMVE, for valve type MEV. One motor handles all valve sizes
- Motor actuator control: standard control signals 4-20 mA or 3-point (close, neutral, open)
- Very compact design
- Manual operation possible
- Spring return (can be deactivated)
- Position indicator (accessory)
- Spindle heating element (accessory)
- Optional: EVM solution to optimise closing abilities

Design

MEV is designed as a balanced valve, which keeps closed by a built-in spring.

With counter-flow, the valve is capable of closing with the force of the return spring against a differential pressure.

Depending on the control signal requirement, an SMV or SMVE motor is fitted to open the valve by acting on the valve spindle push pin.

Valve body incl. covers
Material: EN-GJS-400-18-LT

Pressure Equipment Directive (PED)
MEV valves are approved according to the European standard specified in the Pressure Equipment Directive and are CE marked.

For further details / restrictions - see Installation Instruction.

Valve cone
A V-port regulating cone provides optimum regulation accuracy.

Push pin seal assembly
Replaceable seal assembly in stainless steel with double sealing system.

Valve sizes
MEV is available in sizes from:
MEV 80-2 (k_v: 0.6 m^3/h) to MEV 500 (k_v: 23.0 m^3/h)

Installation
MEV + SMV/SMVE can be installed in vertical or horizontal pipelines when respect to the mounting direction is taken.

MEV valves		
Nominal bore	DN≤ 25 (1 in.)	DN32-65 mm (1¼ - 2½ in.)
Classified for	Fluid group I	
Category	Article 3, paragraph 3	II

Technical data

- Refrigerants
  Applicable to all common non flammable refrigerants including R717 and non corrosive gases/liquids dependent on sealing material compatibility. Flammable hydrocarbons are not recommended. For further information please contact your local Danfoss sales company.
- Temperature range:
  Media: –50/+120°C (a spindle heater must be used for temperatures below 0°C).
  Ambient: –20/+60°C.
- Pressure
  Max. permissible working pressure:
  PS = 28 bar (406 psi)
  Max. permissible test pressure:
  P'= 42 bar (609 psi)

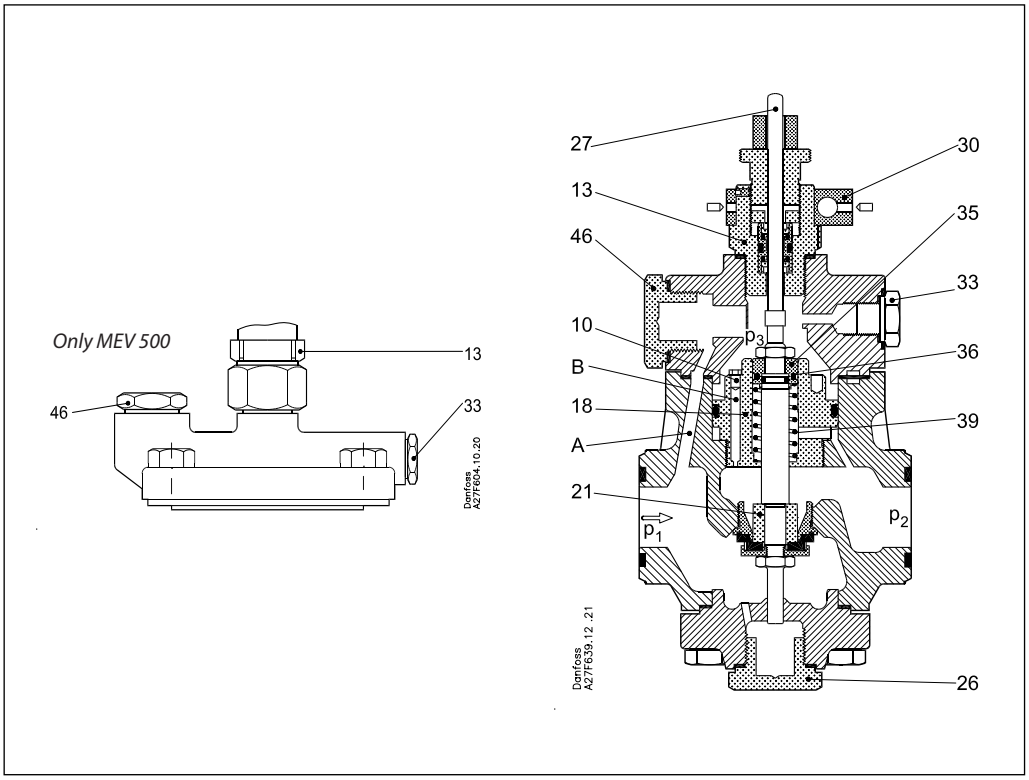
Valve size	k_v-value	C_v-value	Max. Δp	Max. Δp	Min. opening/ closing times		Lifting height [1]	Closing time [2]
	m^3/h	USgal/min	bar	psi	50 Hz	60 Hz	mm	s
MEV 80 - 2	0.6	0.7	28	406	33 s	26 s	10.0	8
MEV 80 - 3	1.0	1.2	28	406	33 s	26 s	10.0	8
MEV 80 - 4	1.5	1.7	28	406	33 s	26 s	10.0	8
MEV 80 - 5	2.1	2.4	28	406	33 s	26 s	10.0	8
MEV 80 - 6	3.3	3.8	28	406	33 s	26 s	10.0	8
MEV 80 - 7	5.0	5.8	28	406	33 s	26 s	10.0	8
MEV 125	7.0	8.1	20	290	40 s	32 s	12.3	10
MEV 200	10.0	11.6	18	261	50 s	40 s	15.5	13
MEV 300	15.5	18.0	18	261	62 s	51 s	19.5	16
MEV 500	23.0	26.7	18	261	66 s	53 s	20.5	17

1) In a closed condition there will be a clearance of 0.6 mm - 1.0 mm between the SMV/SMVE motor spindle and the MEV valve push pin (27).
2) Closing time with spring return. When an MEV is closed solely by the spring return system (because of power failure) the stated closing times can vary slightly, due to various conditions including the viscosity of the medium.

SMV/SMVE motor spindle speed

Spindle speed at 50 Hz	3 s/mm
Spindle speed at 60 Hz	2.4 s/mm

Function



10 Drain plug screw
13 Nipple
18 Cylinder liner
21 Regulating cone
26 Bottom plug
27 Push pin
30 Heating element housing
33 Blanking plug
35 Balancing piston
36 Piston seal
39 Spring
46 Blanking plug

MEV incorporates a balancing piston (35) that ensures the valve operates with low opening and closing forces. Therefore, the differential pressure across the valve has minimal effect on the valve operation.

Inlet pressure P_1 acting on the underside of the regulating cone (21) is led via the internal channel (A) in the valve body to the top of the balancing piston. Since P_3=P_1 the pressure on the underside of the regulating cone is thus equalized.

In the same way, outlet pressure P_2, which acts on the top of the regulating cone, is led via an internal channel to the underside of the balancing piston. The valve is thus totally balanced and the spring force will always keep the valve closed also against backpressure. The balancing piston operates in a cylinder liner (18) and is fitted with a piston seal (36) for tight sealing.

MEV is fitted with a spring (39) that closes the valve when the push pin (27) is not activated. The SMV/SMVE motor is fitted with a return spring that forces the motor spindle closed when no voltage is being applied to the motor. This means that the MEV valve closes automatically when, for example, the power fails. (This is a function of the SMV/SMVE motor, but can be disconnected, by using the angle bracket accessory).

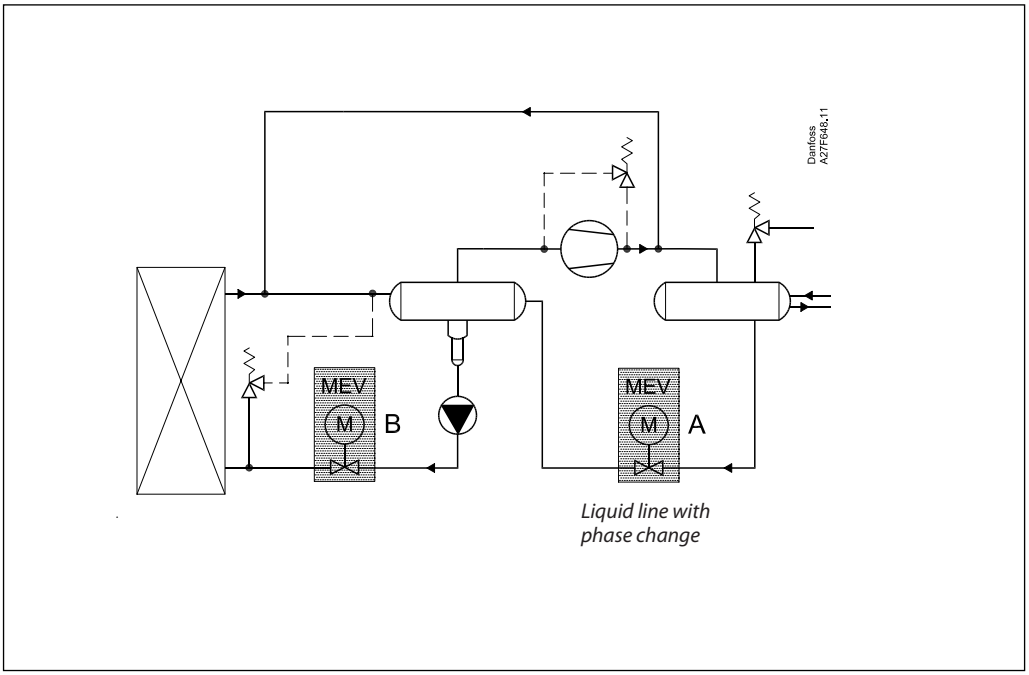
An AKS 45 electronic position indicator can be fitted instead of the MEV bottom plug (26). An output signal (4 - 20 mA) of the exact position of the valve cone can be obtained during operation, together with digital on/off signals for fully open and fully closed valve.

A heating element (30) can be fitted on the MEV nipple (13) to keep the pressure pin free of ice (for use with media temperatures below 0°C).

An EVM solenoid valve (NC) can optionally be inserted in the port (at 46). This will close the connection between inlet pressure and the balancing piston (35). Since the drain plug (10) is removed, the pressure P_3 will equalize with P_2 through B making P_3=P_2. P_1 will contribute to the spring force and the total closing force will increase depending on the pressure difference between P_1 and P_2. By putting the valve balancing out of order, the pressure P_1 will help keeping the valve closed against the back-pressure. In this status the valve will be forced open for backflow if P_2>P_1+spring pressure. The EVM is available through a kit. Danfoss recommendation is to use EVM if a higher closing pressure than the spring force should be applied and P_1 is always higher than P_2.

MEV has a pressure gauge connection (at 33) for registering valve top pressure P_3. The pressure gauge will show P_2 when an optional EVM is closed or P_1 when open.

Application examples for MEV



A Liquid line (expansion)
B Liquid line (pump operation)

A+B Can all be calculated with DIRcalc version 1.1 or later
A Tables with capacities on the later pages

Ordering

Motorised valve

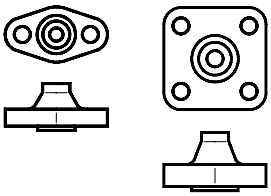
Valve size	k_v value	**Code no.**
MEV 80-2	0.6	**027F3165**
MEV 80-3	1.0	**027F3166**
MEV 80-4	1.5	**027F3167**
MEV 80-5	2.1	**027F3168**
MEV 80-6	3.3	**027F3169**
MEV 80-7	5.0	**027F3170**
MEV 125	7.0	**027F3171**
MEV 200	10.0	**027F3172**
MEV 300	15.5	**027F3173**
MEV 500	23.0	**027F3174**

Code numbers include:
MEV motorised valve, flange gaskets and flange bolts. SMV/SMVE motor, flanges and spindle heater are ordered seperately.

Spindle heater
A heating element can be fitted around the MEV push pin seal assembly to keep the push pin free of ice. The element is described in more detail in the technical leaflet for the SMV/SMVE motors.

Motor

Type	Description	**Code no.**
SMV 24	24 V a.c. three-point control	**082H3030**
SMV 230	230 V a.c. three-point control	**082H3031**
SMVE 24	24 V a.c. modulating input	**082H3032**



Flange set

Valve size	Flange type	Weld flange		Solder flange			
		in.	**Code no.**	in.	**Code no.**	mm	**Code no.**
MEV 80	3	$^3/_4$ 1 $1^1/_4$	**027N1220** **027N1225** **027N1230**	$^7/_8$ $1^1/_8$	**027L1223** **027L1229**	22 28	**027L1222** **027L1228**
MEV 125	10	$1^1/_4$ $1^1/_2$	**027N2332** **027N2340**	$1^3/_8$	**027L2335**	35	**027L2335**
MEV 200	11	$1^1/_2$ 2	**027N2440** **027N2450**	$1^5/_8$	**027L2441**	42	**027L2442**
MEV 300	12	2 $2^1/_2$	**027N2550** **027N2565**	$2^1/_8$	**027L2554**	54	**027L2554**
MEV 500	13	$2^1/_2$ 3	**027N2665** **027N2680**	$2^5/_8$	**027L2666**	76	**027L2676**

1) Code no. applies to flange set consisting of one inlet and one outlet flange.
2) Dimensioned sketch, see spare parts catalogue.

Stainless steel:
flanges, flange bolts, and bolts for top and bottom covers, see spare parts list for ordering.

Accessories

Description		**Code no.**
Pressure gauge connection, Ø 6.5/Ø 10 mm weld/solder		**027B2035**
Pressure gauge connection, ¼ in. flare (self-sealing). Must not be used in systems with ammonia.		**027B2041**
Pressure gauge connection, self-cutting connection	6 mm 10 mm	**027B2063** **027B2064**
Pressure gauge connection	$^1/_4$ NPT	**027B2062**
Electronic position indicator, AKS 45		**084H4045**
EVM kit for SMV motor		**027F1972**
EVM kit for SMVE motor		**027F1971**
Spindle heater 24 V a.c.		**027F3180**
Spindle heater 230 V a.c.		**027F3181**

Nominal capacities

Capacity in kW

Type	Evaporating temperature t_e °C	Rated capacity in kW at pressure drop across valve Δp bar					
		1.0	2.0	4.0	8.0	12.0	16.0

R717 (NH_3)

Type	t_e °C	1.0	2.0	4.0	8.0	12.0	16.0
MEV 80-2	10	89	123	167	224	257	
	0	92	127	172	227	264	281
DN 25	-10	94	130	176	228	265	284
	-20	95	132	177	238	264	285
	-30	97	133	177	227	262	284
	-40	98	132	175	225	258	281
	-50	98	131	173	222	253	277
MEV 80-3	10	141	194	264	353	404	
	0	145	201	271	356	414	440
DN 25	-10	149	205	276	357	416	444
	-20	151	207	278	356	413	445
	-30	153	207	276	353	407	443
	-40	153	205	272	349	400	438
	-50	152	201	267	343	393	431
MEV 80-4	10	228	316	427	571	651	
	0	237	327	438	573	664	704
DN 25	-10	242	333	444	572	665	709
	-20	245	334	445	568	657	709
	-30	246	330	439	561	647	704
	-40	243	323	429	552	635	696
	-50	238	315	420	543	624	685
MEV 80-5	10	360	496	667	887	1010	
	0	371	511	679	883	1020	1080
DN 25	-10	379	518	685	874	1020	1080
	-20	381	514	680	864	1000	1080
	-30	376	502	666	852	984	1070
	-40	367	486	649	837	966	1060
	-50	355	470	632	823	948	1040
MEV 80-6	10	624	851	1130	1490	1670	
	0	642	869	1130	1460	1690	1780
DN 25	-10	648	871	1130	1430	1670	1780
	-20	640	850	1110	1410	1640	1770
	-30	619	816	1080	1380	1610	1760
	-40	591	781	1050	1360	1570	1730
	-50	564	751	1020	1340	1540	1710
MEV 80-7	10	971	1300	1690	2220	2480	
	0	995	1310	1670	2150	2500	2610
DN 25	-10	990	1300	1660	2090	2470	2610
	-20	959	1250	1630	2050	2410	2610
	-30	910	1190	1580	2010	2350	2590
	-40	858	1130	1530	1970	2300	2550
	-50	813	1080	1490	1940	2250	2510
MEV 100	10	1545	2100	2770	3650	4100	
	0	1590	2140	2770	3570	4190	4350
DN 32	-10	1600	2140	2770	3500	4090	4350
	-20	1575	2080	2720	3430	4010	4340
	-30	1515	1990	2650	3370	3920	4300
	-40	1440	1900	2570	3320	3840	4240
	-50	1370	1830	2490	3260	3770	4180
MEV 200	10	2480	3360	4410	5810	6530	
	0	2545	3420	4420	5680	6590	6920
DN 40	-10	2560	3410	4400	5550	6510	6920
	-20	2510	3310	4330	5450	6370	6900
	-30	2405	3160	4210	5360	6240	6830
	-40	2295	3020	4080	5260	6110	6740
	-50	2170	2900	3960	5170	5990	6640
MEV 300	10	3765	4990	6690	8810	9880	
	0	3870	5180	6690	8600	9980	10500
DN 50	-10	3885	5170	6660	8400	9850	10500
	-20	3800	5010	6550	8240	9650	10400
	-30	3640	4780	6360	8100	9430	10300
	-40	3450	4560	6170	7960	9240	10200
	-50	3285	4380	5990	7820	9050	10000
MEV 500	10	7030	8360	10700	14100	15800	
	0	8290	9090	10700	13700	15900	16700
DN 65	-10	8650	9260	10600	13400	15700	16700
	-20	8470	9090	10400	13100	15400	16700
	-30	7480	8410	10100	12900	15000	16500
	-40	6820	7920	9830	12700	14700	16300
	-50	6550	7640	9540	12400	14400	16000

Correction factors
When dimensioning, multiply the evaporator capacity by a correction factor k dependent on the subcooling Δt_{sub} just ahead of the valve.
The corrected capacity* can then be found in the capacity table.

Δt_{sub} K	k
2	1.01
4	1.00
10	0.98
15	0.96
20	0.94
25	0.92
30	0.91
35	0.89
40	0.87
45	0.86
50	0.85

* (The capacity table is based on nominal conditions of subcooling just ahead of the valve of 4°K).

Calculation example:
An application has the following operating conditions:

Refrigerant R717
T_e = −10°C
T_c = +30°C
Q_0 = 1500 kW
Δt_{sub} = 20°K

Correction factor for subcooling: 0.94

Pressure drop across the valve:
11.7 bar - 2.9 bar = 8.8 bar

Corrected capacity: 1500 x 0.94 = 1410 kW

From the R717 capacity table MEV 80-6 is selected with Q_{nom} capacity 1430 kW at 8 bar.

Nominal capacities (cont.)

Capacity in kW

Type	Evaporating temperature t_e °C	Rated capacity in kW at pressure drop across valve Δp bar					
		1.0	2.0	4.0	8.0	12.0	16.0
							R22
MEV 80-2	10	20	27	36	46	51	52
	0	21	29	38	47	52	53
DN 25	-10	22	30	39	48	52	54
	-20	22	30	40	48	52	54
	-30	23	31	40	48	52	53
	-40	23	31	40	48	51	52
	-50	23	31	39	47	49	51
MEV 80-3	10	32	43	57	72	80	82
	0	33	46	60	74	82	84
DN 25	-10	34	47	62	76	82	85
	-20	36	48	63	76	82	85
	-30	36	48	63	76	81	83
	-40	37	49	62	75	79	81
	-50	37	48	61	73	77	79
MEV 80-4	10	52	71	94	118	130	133
	0	54	74	98	121	133	136
DN 25	-10	56	77	101	123	133	138
	-20	58	78	102	123	132	137
	-30	59	78	101	122	130	134
	-40	59	78	99	120	127	131
	-50	60	77	97	117	124	127
MEV 80-5	10	82	112	147	184	202	206
	0	86	117	153	188	205	211
DN 25	-10	88	121	157	190	205	212
	-20	91	122	157	189	203	210
	-30	92	122	156	187	199	206
	-40	92	120	152	184	195	200
	-50	91	117	148	179	189	194
MEV 80-6	10	143	194	251	310	341	345
	0	149	202	260	314	343	352
DN 25	-10	154	206	263	315	341	353
	-20	155	205	262	313	335	348
	-30	155	202	257	308	328	340
	-40	152	196	249	302	320	331
	-50	148	189	241	294	312	321
MEV 80-7	10	222	299	381	466	510	515
	0	231	308	390	467	510	524
DN 25	-10	236	311	393	465	504	523
	-20	237	307	389	461	495	516
	-30	232	298	378	454	483	503
	-40	225	286	366	444	471	489
	-50	215	275	353	433	458	473
MEV 100	10	354	479	620	763	837	847
	0	369	498	639	770	842	864
DN 32	-10	379	507	647	771	835	865
	-20	384	505	643	767	821	853
	-30	381	494	628	755	804	834
	-40	373	478	609	739	784	810
	-50	361	461	589	720	762	785
MEV 200	10	567	767	990	1220	1330	1350
	0	592	796	1020	1230	1340	1380
DN 40	-10	608	810	1030	1230	1330	1380
	-20	613	805	1020	1220	1310	1360
	-30	607	786	1000	1200	1280	1330
	-40	593	760	969	1170	1250	1290
	-50	572	732	937	1150	1210	1250
MEV 300	10	861	1170	1500	1850	2020	2050
	0	900	1210	1550	1860	2030	2080
DN 50	-10	922	1230	1560	1860	2010	2090
	-20	933	1220	1550	1850	1980	2060
	-30	921	1190	1510	1820	1930	2010
	-40	897	1150	1470	1780	1890	1950
	-50	865	1110	1420	1730	1830	1890
MEV 500	10	1847	2049	2410	2950	3240	3270
	0	1969	2153	2480	2970	3250	3330
DN 65	-10	1930	2144	2500	2970	3210	3330
	-20	1849	2091	2480	2950	3160	3290
	-30	1737	2002	2420	2900	3090	3210
	-40	1586	1882	2340	2840	3010	3120
	-50	1479	1786	2260	2770	2930	3020

Correction factors
When dimensioning, multiply the evaporator capacity by a correction factor k dependent on the subcooling Δt_{sub} just ahead of the valve.
The corrected capacity* can then be found in the capacity table.

Δt_{sub} K	k
2	1.01
4	1.00
10	0.96
15	0.93
20	0.90
25	0.87
30	0.85
35	0.83
40	0.80
45	0.78
50	0.77

* (The capacity table is based on nominal conditions of subcooling just ahead of the valve of 4°K).

Calculation example:
An application has the following operating conditions:

Refrigerant R22
T_e = –20°C
T_c = +40°C
Q_0 = 1200 kW
Δt_{sub} = 10°K

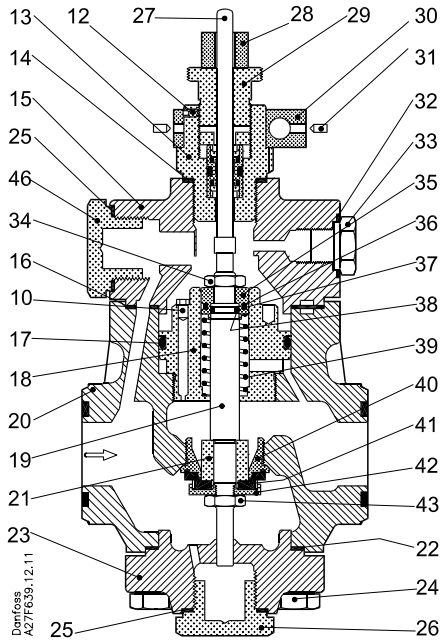
Correction factor for subcooling: 0.96

Pressure drop across the valve:
15.3 bar - 2.4 bar = 12.9 bar

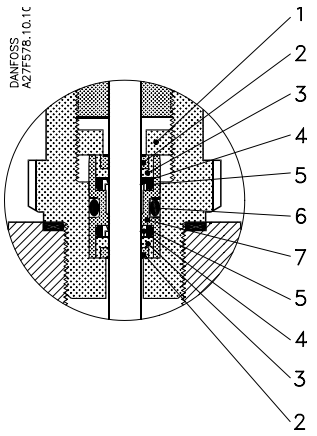
Corrected capacity: 1200 x 0.96 = 1152 kW

From the R22 capacity table MEV 200 is selected with Q_{nom} capacity 1310 kW at 12 bar.

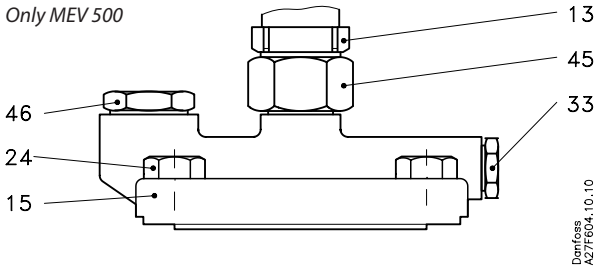
Material specification



Push pin seal assembly

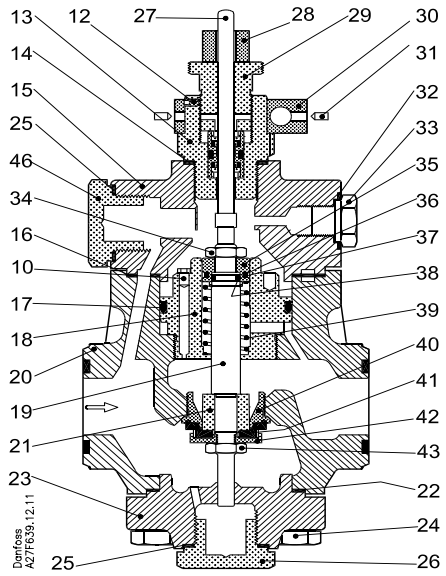


Only MEV 500

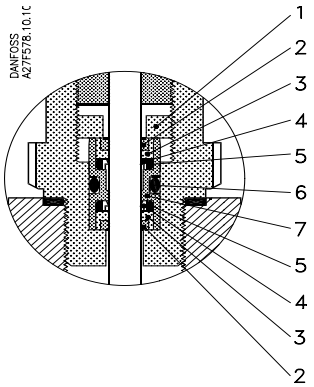


No.	Part	Material	DIN/EN	ISO	ASTM
1	Nut	Stainless steel	X8CrNiS 18-9 14440 EN 10088 W. no. 1.4305	683/13 type 17	AISI 303
2	Dirt seal	PTFE (Teflon)			
3	Bush	Stainless steel	X8CrNiS 18-9 14440 EN 10088 W. no. 1.4305	683/13 type 17	AISI 303
4	Seal	PTFE (Teflon)			
5	O-ring	Cloroprene (Neoprene)			
6	O-ring	Cloroprene (Neoprene)			
7	Insert	Stainless steel	X8CrNiS 18-9 14440 EN 10088 W. no. 1.4305	683/13 type 17	AISI 303
10	Drain plug screw	Steel			
12	Locking screw	Steel	X5CrNi 18-9 W. no. 1.4301	683/13	AISI 316
13	Nipple	Stainless steel	X8CrNiS 18-9 14440 EN 10088 W. no. 1.4305	683/13 type 17	AISI 303
14	Gasket	Aluminium			
15	Top cover	Low temperature, cast iron (spherical)	EN-GJS-400-18-LT EN 1563		
16	Gasket	Asbestos-free			
17	O-ring	Cloroprene (Neoprene)			
18	Cylinder liner	Cast iron	GG-20 1691 W. no. 0.6020	1085, class 200	
19	Spindle	Steel	9S Mn Pb 28, 1651 W. no. 1.0716	Type 2, R 683/9	1213, SAE J 403
20	Valve body	Low temperature, cast iron (spherical)	EN-GJS-400-18-LT EN 1563		
21	Regulating cone	Steel	9S Mn Pb 28, 1651 W. no. 1.0716	Type 2, R 683/9	1213, SAE J 403
22	Gasket	Asbestos-free			
23	Bottom cover	Low temperature, cast iron (spherical)	EN-GJS-400-18-LT EN 1563		

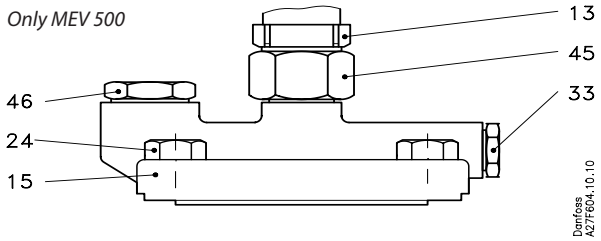
Material specification (continued)



Push pin seal assembly

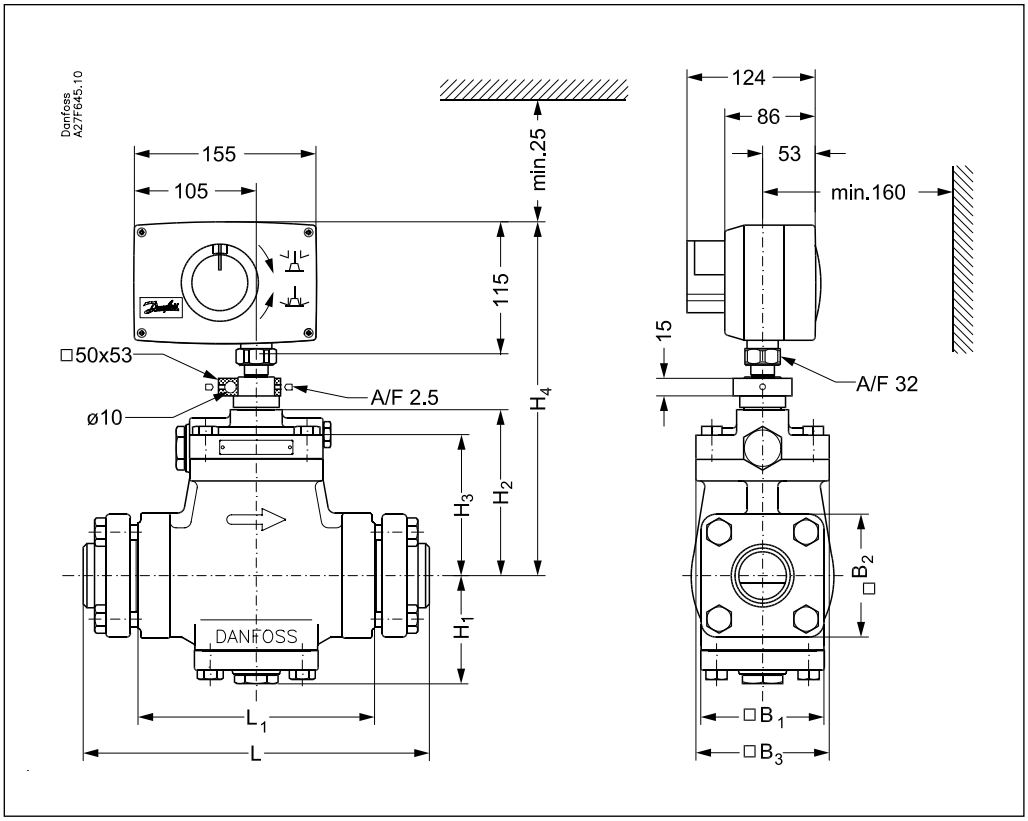


Only MEV 500



No.	Part	Material	DIN/EN	ISO	ASTM
24	Bolt	Stainless steel	A2-70	A2-70	Type 308
25	Gasket	Asbestos-free			
26	Bottom plug	Steel	9S Mn Pb 28, 1651 W. no. 1.0716	Type 2, R 683/9	1213, SAE J 403
27	Push pin	Stainless steel	X8CrNiS 18-9 14440 EN 10088 W. no. 1.4305	683/13 type 17	AISI 303
28	Distance piece (MEV 80 only)	Stainless steel	X8CrNiS 18-9 14440 EN 10088 W. no. 1.4305	683/13 type 17	AISI 303
29	Adjusting screw	Stainless steel	X8CrNiS 18-9 14440 EN 10088 W. no. 1.4305	683/13 type 17	AISI 303
30	Heating element housing	Aluminium	1725 W. no. 3.3206		
31	Locking screw	Steel	X5CrNi 18-9 W. no. 1.4301	683/13	AISI 316
32	Gasket	Aluminium			
33	Blanking plug	Steel	9S Mn Pb 28, 1651 W. no. 1.0716	Type 2, R 683/9	1213, SAE J 403
34	Nut	Steel			
35	Balancing piston	Cast iron	GG-20 1691 W. no. 0.6020	185, class 20	
36	Piston seal	PTFE (Teflon)			
37	O-ring	Cloroprene (Neoprene)			
38	O-ring	Cloroprene (Neoprene)			
39	Spring	Steel			
40	Valve seat	Stainless steel	X8CrNiS 18-9 14440 EN 10088 W. no. 1.4305	683/13 type 17	AISI 303
41	Sealing disc	PTFE (Teflon)			
42	Valve plate	Steel	9S Mn Pb 28, 1651 W. no. 1.0716	Type 2, R 683/9	1213, SAE J 403
43	Nut	Steel			
45	Nipple (MEV 500 only)	Stainless steel	X8CrNiS 18-9 14440 EN 10088 W. no. 1.4305	683/13 type 17	AISI 303
46	Blanking plug	Steel	9S Mn Pb 28, 1651 W. no. 1.0716	Type 2, R 683/9	1213, SAE J 403

Dimensions and weight



Dimensions

Valve size		H_1	H_2	H_3	H_4	L	L_1	B_1	B_2	B_3
MEV 80 (1 in.)	mm in.	66 2.60	105 4.13	79 3.11	266 10.47	177 6.97	106 4.17	75 2.95	Oval flange	87 3.43
MEV 125 ($1^1/_4$ in.)	mm in.	72 2.83	121 4.76	96 3.78	282 11.10	240 9.45	170 6.69	84 3.31	82 3.23	94 3.70
MEV 200 ($1^1/_2$ in.)	mm in.	79 3.11	128 5.04	105 4.13	289 11.38	254 10.00	170 6.69	94 3.70	89 3.50	102 4.02
MEV 300 (2 in.)	mm in.	95 3.74	151 5.94	123 4.84	312 12.28	288 11.34	200 7.87	104 4.09	106 4.17	113 4.45
MEV 500 ($2^1/_2$ in.)	mm in.	109 4.29	167 6.57	146 5.75	352 13.86	342 13.46	250 9.84	127 5.00	113 4.45	135 5.31

Weight

Valve size	Valve	Motor	Flange set
	without motor and flanges		
MEV 80 (1 in.)	5.8 kg (12.8 lb)	2.0 kg (4.4 lb)	1.1 kg (2.4 lb)
MEV 125 ($1^1/_4$ in.)	10 kg (22.0 lb)	2.0 kg (4.4 lb)	1.5 kg (3.3 lb)
MEV 200 ($1^1/_2$ in.)	12 kg (26.5 lb)	2.0 kg (4.4 lb)	1.9 kg (4.2. lb)
MEV 300 (2 in.)	17 kg (37.5 lb)	2.0 kg (4.4 lb)	2.8 kg (6.2. lb)
MEV 500 ($2^1/_2$ in.)	25 kg (55.1 lb)	2.0 kg (4.4 lb)	3.3 kg (7.3 lb)

Specified weights are approximately values only.