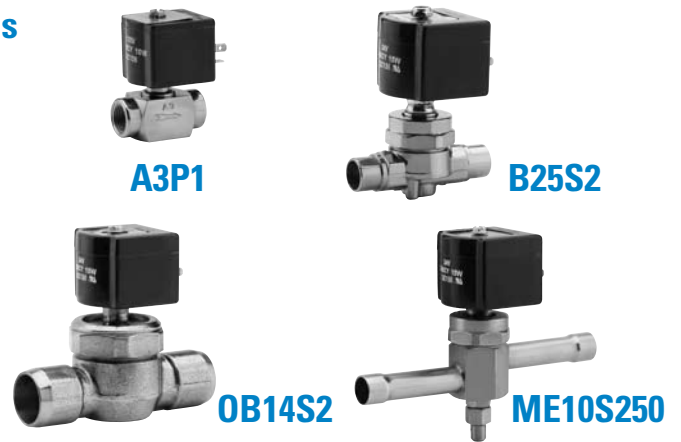


2-WAY SOLENOID VALVES

22, 134a, 404A, 407C, 409A, 410A, 507

6 Proven Benefits of Sporlan Solenoid Valves

- Can be mounted in a horizontal or vertical line.
- Molded coil for all sizes.
- Class “F” temperature rating – Coil types MKC-1, OMKC-1, MKC-2 and OMKC-2.
- Extremely rugged, simple design – few parts.
- “E” Series may be brazed without disassembly.
- Tight closing through use of synthetic seating material.



Sporlan Solenoid Valves are made in two general types, normally closed and normally open. The normally closed types may be further sub-divided into direct acting and pilot operated types.

Most Sporlan Solenoid Valves are Listed by Underwriters’ Laboratories, Inc. – Guide No. Y10Z – File No. MH4576 and Canadian Standards Association – Guide 440-A-0, Class 3221, File 19953 and CE provisions of the LVD 73/23/EEC and PED 97/23/EC.

All Sporlan solenoid valves are designed for liquid, suction and discharge gas applications.

Liquid Capacities – kW

TYPE NUMBER		kW of REFRIGERATION**														
“E” SERIES VALVES	“A” & “B” SERIES VALVES	22					134a					404A				
		PRESSURE DROP – bar*														
		0.07	0.14	0.21	0.28	0.35	0.07	0.14	0.21	0.28	0.35	0.07	0.14	0.21	0.28	0.35
E3	A3	3.19	4.61	5.71	6.65	7.49	2.98	4.30	5.33	6.21	6.99	2.10	3.03	3.75	4.37	4.92
E5	—	5.69	8.10	9.96	11.5	12.9	5.31	7.56	9.29	10.8	12.1	3.76	5.35	6.57	7.61	8.52
E6	B6	10.2	14.3	17.5	20.2	22.5	9.50	13.4	16.3	18.8	21.0	6.74	9.49	11.6	13.3	14.9
E9	B9	16.6	23.4	28.6	33.0	36.9	15.5	21.8	26.7	30.8	34.4	11.0	15.5	18.9	21.8	24.4
E10	B10	22.7	32.1	39.3	45.4	50.7	21.2	30.0	36.7	42.3	47.3	15.0	21.2	26.0	30.0	33.5
E14	B14	32.3	45.6	55.8	64.4	71.9	30.1	42.5	52.1	60.1	67.1	21.4	30.2	36.9	42.6	47.6
E19	B19	49.3	70.0	85.8	99.2	111	46.0	65.3	80.1	92.6	104	32.6	46.2	56.7	65.5	73.3
E25	B25	84.3	119	147	169	189	78.7	111	137	158	177	55.7	78.9	96.8	112	125
E35	—	118	166	204	236	263	110	155	190	220	246	77.7	110	135	156	174
E42	—	260	368	451	520	582	243	343	420	485	543	172	243	298	344	384

TYPE NUMBER		kW of REFRIGERATION**									
“E” SERIES VALVES	“A” & “B” SERIES VALVES	407C					507				
		PRESSURE DROP – bar*									
		0.07	0.14	0.21	0.28	0.35	0.07	0.14	0.21	0.28	0.35
E3	A3	2.92	4.21	5.22	6.08	6.85	2.05	2.97	3.68	4.29	4.82
E5	—	5.22	7.43	9.13	10.6	11.8	3.68	5.24	6.44	7.45	8.35
E6	B6	9.36	13.2	16.1	18.5	20.7	6.60	9.28	11.3	13.1	14.6
E9	B9	15.3	21.5	26.3	30.3	33.9	10.8	15.2	18.5	21.4	23.9
E10	B10	20.9	29.5	36.1	41.7	46.6	14.7	20.8	25.5	29.4	32.8
E14	B14	29.7	41.9	51.2	59.1	66.1	20.9	29.5	36.1	41.7	46.6
E19	B19	45.3	64.2	78.7	91.0	102	31.9	45.2	55.5	64.2	71.8
E25	B25	77.4	110	134	155	174	54.6	77.3	94.8	110	123
E35	—	108	153	187	216	242	76.1	108	132	152	170
E42	—	239	338	414	478	534	168	238	292	337	376

TYPE NUMBER		kW of REFRIGERATION**				
“E” SERIES VALVES		410A				
		PRESSURE DROP – bar*				
		0.07	0.14	0.21	0.28	0.35
E3		—	—	—	—	—
E5-HP		5.37	6.44	9.16	11.3	13.0
E6-HP		9.63	11.5	16.1	19.7	22.7
E9-HP		15.7	18.7	26.4	32.3	37.2
E10-HP		21.5	25.6	36.2	44.3	51.2
E14-HP		39.5	36.4	51.4	62.9	72.6
E19-HP		46.5	55.7	79.0	97.0	112
E25-HP		79.6	95.2	135	165	191
E35-HP		129	157	230	286	335
E42-HP		246	294	415	508	587

*Do not use below 0.07 bar pressure drop, except Types E3 and A3 valves.
 **Capacities are based on 5°C evaporator and 38°C liquid.
 Valve types whether Normally Closed or Normally Open have the same capacities, i.e., B10 or OB10, E10 or OE10.

2-WAY SOLENOID VALVES

22, 134a, 404A, 407C, 507

Built-In Check Valve Series

A solenoid valve with a built-in check valve is designed to replace a liquid line solenoid valve in parallel with a check valve for reverse flow. This valve may be applied in the liquid line of a supermarket case for positive shutoff during pumpdown control, while allowing full flow in the reverse direction during reverse gas defrost. It may also be used in the liquid line of a heat pump to prevent migration of refrigerant to the outdoor unit during the heating mode, while allowing full flow in the reverse direction during the cooling mode.



Maximum Rated Pressures — Valve Type E42 Series – **31 bar**
All other valve types – **34.5 bar**

Electrical Specifications — **Standard Coil Ratings** – MKC-1, OMKC-1, MKC-2 and OMKC-2: 24/50-60, 120/50-60, 208-240/50-60. Dual Voltage 4 Wire Coils – 120-208-240/50-60, slight additional cost.

Available with junction box or conduit boss at no extra charge. For other voltages and cycles consult Sporlan.

Interchangeability of Coils — One size coil MKC-1 for Types A3, E3, B6, MB6, E5, E6, ME6, E35 and ME35 series. One size MKC-2 for types B9, MB9, E9 and ME9 series through the E42 and ME42 series.

Note: This valve will not close in the reverse flow/cooling mode.

OMKC-1 and OMKC-2 Coil Assemblies are for use on Normally Open valves.

Specifications for Reverse Refrigeration Flow, Liquid Line Capacity – kW**

VALVE TYPE	CONNECTIONS Inches	R-22 0.21 bar		R-134a 0.14 bar		R-404A 0.21 bar		R-407C 0.21 bar		R-507 0.21 bar	
		EVAPORATOR °C									
		5	-20	5	-20	5	-20	5	-20	5	-20
C(M)B9, C(M)E9	3/8, 1/2 ODF, 3/8 SAE	23.2	21.8	17.9	16.2	—	13.7	21.5	19.7	—	13.4
C(M)B10, C(M)E10	1/2 SAE, 1/2, 5/8 ODF	28.5	26.7	21.8	19.7	—	16.9	26.0	23.9	—	16.5
C(M)B14, C(M)E14	5/8 ODF	45.4	42.9	35.9	32.7	—	27.1	42.2	38.7	—	26.7
C(M)B19, C(M)E19+	5/8, 7/8 ODF	32.7	31.0	21.8	19.7	—	19.0	28.8	26.4	—	17.9

** Valve sizing should be based on expected reverse liquid flow condensing capabilities of the evaporator(s) being defrosted.
+ Due to flow restrictions, C(M)E19 model capacity does not surpass C(M)E14 models until pressure drop exceeds 0.70 bar.
See page 25 for Forward Refrigerant Flow.
Liquid capacities shown in the above table are based on 38°C liquid temperature entering the valves.

Specifications

TYPE NUMBER						CONNECTIONS Inches	PORT SIZE mm	MOPD bar AC	WATTS
"E" SERIES EXTENDED CONNECTIONS			"A" & "B" SERIES VALVES						
WITHOUT MANUAL LIFT STEM		WITH MANUAL LIFT STEM	WITHOUT MANUAL LIFT STEM		WITH MANUAL LIFT STEM				
Normally Closed	Normally Open	Normally Closed	Normally Closed	Normally Open	Normally Closed				
—	—	—	A3P1	—	—	3/8 NPT Female	2.6	20.5	10
—	—	—	A3F1	—	—	1/4 SAE Flare			
E3S120	—	—	A3S1	—	—	1/4 ODF Solder			
E3S130	—	—	A3S1	—	—	3/8 ODF Solder	3.8	20.5	10
E5S120	—	—	—	—	—	1/4 ODF Solder			
E5S130 (-HP)	—	—	—	—	—	3/8 ODF Solder			
—	—	—	B6P1	—	MB6P1	3/8 NPT Female	4.8	20.5	10
—	—	—	B6F1	—	MB6F1	3/8 SAE Flare			
E6S130 (-HP)	—	ME6S130 (-HP)	B6S1	—	MB6S1	3/8 ODF Solder			
E6S140	—	ME6S140 (-HP)	B6S1	—	MB6S1	1/2 ODF Solder	7.1	*20.5	15
—	—	—	B9P2	OB9P2	MB9P2	3/8 NPT Female			
—	—	—	B9F2	OB9F2	MB9F2	3/8 SAE Flare			
E9S230	OE9S230	ME9S230	—	—	—	3/8 ODF Solder	7.9	*20.5	15
E9S240 (-HP)	OE9S240	ME9S240 (-HP)	B9S2	OB9S2	MB9S2	1/2 ODF Solder			
—	—	—	B10F2	—	MB10F2	1/2 SAE Flare			
E10S240 (-HP)	OE10S240	ME10S240	—	—	—	1/2 ODF Solder	11.1	*20.5	15
E10S250	OE10S250	ME10S250	B10S2	—	MB10S2	5/8 ODF Solder			
—	—	—	B14P2	OB14P2	MB14P2	1/2 NPT Female			
E14S250 (-HP)	OE14S250	ME14S250 (-HP)	B14S2	OB14S2	MB14S2	5/8 ODF Solder	15.1	*20.5	15
—	—	—	B19P2	OB19P2	—	3/4 NPT Female			
E19S250	OE19S250	ME19S250	B19S2	OB19S2	MB19S2	5/8 ODF Solder			
E19S270 (-HP)	OE19S270	ME19S270 (-HP)	B19S2	OB19S2	MB19S2	7/8 ODF Solder	19.8	*20.5	15
—	—	—	B25P2	—	MB25P2	1 NPT Female			
E25S270 (-HP)	OE25S270	ME25S270	B25S2	OB25S2	MB25S2	7/8 ODF Solder			
E25S290 (-HP)	OE25S290	ME25S290 (-HP)	B25S2	OB25S2	MB25S2	1-1/8 ODF Solder	25.4	20.5	10
E35S190	OE35S190	ME35S190 (-HP)	—	—	—	1-1/8 ODF Solder			
E35S1110	OE35S1110	ME35S1110 (-HP)	—	—	—	1-3/8 ODF Solder			
—	—	—	—	—	—	1-5/8 ODF Solder	33.3	*20.5	15
E42S2130 (-HP)	OE42S2130	ME42S2130	—	—	—	1-5/8 ODF Solder			
E42S2170	OE42S2170	ME42S2170	—	—	—	2-1/8 ODF Solder			

*All normally open valves are rated at 19 bar, except OE35 which is rated at 20.5 bar.
For complete information consult your nearest Sporlan Wholesaler, or email europecold@parker.com and request Bulletin 30-10.

2-WAY SOLENOID VALVES

22, 134a, 404A, 407C, 507

E Series – Valve Nomenclature/Ordering Instructions

M	E	10	S	2	5	0	S	HP
Manual Lift Stem	Design Series	Port Size in 1/32"	Connections Solder	Coil Size ①, ②	Connection Size in 1/8"	*Connections 0 - ODF x ODF 1 - ODF x ODM 2 - ODM x ODF 3 - ODM x ODM	Coil Connection S - Spade E - DIN 43650A	for R-410A only

Type "E" series is identified by an expanded nomenclature. The system of valve identity based on port size. In addition, the "E" series identifies the connection size and type. The advantage of the "E" series nomenclature system is that it allows ease in valve identification of the standard line and can provide considerable information about special valves supplied to manufacturers.

① The MKC-1, OMKC-1, MKC-2 and OMKC-2 are fungus proof and meet MIL-I-631C.

② The standard MKC-1 and MKC-2 are class "F" rated.

* Standard connections are ODF inlet x ODF outlet on "E" Series valves. Minimum quantities may be required for other connections.



A, B and W Series – Valve Nomenclature/Ordering Instructions

0	D	M	B	25	S	2	*	S
Normally Open	Disc Type D - Direct Connected C - Built-in Check Valve	Manual Lift Stem	Design or Series A, B, & W Series	Port Size in 1/32"	Connections P - Pipe F - SAE Flare S - ODF Solder	Coil Size ①, ②	Overall Length	Coil Connection S - Spade E - DIN 43650A

The above prefixes may be added to basic valve type number (B25S2) to request special features.

Normally open valves available in B9, E9 through E42 series only, and require OMKC-2 Coil Assembly. Add prefix D for direct connected assembly in MA32 and MA17A3 series. Example DMA32P3.

Application

Compressor Capacity Reduction Service

Sporlan Solenoid Valves may be used in conjunction with Sporlan Discharge Bypass Valves for capacity reduction service. For capacity information and further details on the Discharge Bypass Valves see page 44.

Filter-Driers are Essential

Dirt and other system contaminants present a problem for refrigeration and air conditioning controls. Since pilot operated solenoid valves operate with rather close tolerances, system cleanliness is imperative. The Sporlan Catch-All® Filter-Drier filters out minute particles of dirt and other foreign matter, thus protecting the valve.

Sporlan recommends using a Catch-All® Filter-Drier ahead of every solenoid valve on all refrigeration and air conditioning applications. Contact Sporlan before adding a Catch-All® Filter-Drier in the discharge line.

Transformer Selection for Low-Voltage Control Systems

Many systems utilize low voltage controls, requiring the use of a transformer for voltage reduction, normally to 24 volts. The selection of a transformer is not accomplished by merely selecting one that has the proper voltage requirements. The volt-ampere (VA) rating is equally important. To determine the VA requirement for a specific solenoid valve, refer to the chart below. It should be noted, that insufficient transformer capacity will result in reduced operating power or lowering of the MOPD value.

If more than one solenoid valve and/or other accessories are operated from the same transformer, then the transformer VA rating must be determined by adding the individual accessories' VA requirements.

Fusing

Sporlan Solenoid Valves are not supplied with fuses. Fusing should be according to local codes. We recommend fusing the hot leg of the valve wiring with fast acting fuses and the valve should be grounded either through the fluid piping or the electrical conduit.

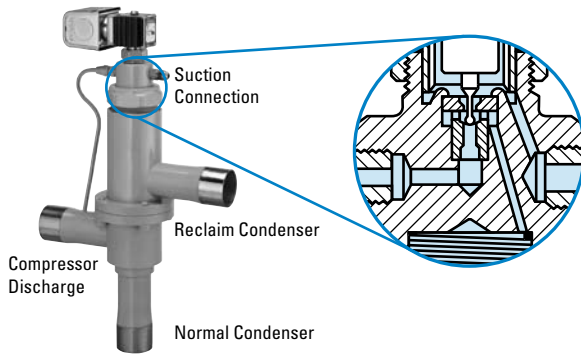
COIL KIT	24 VOLTS/ 50-60 CYCLES		120 VOLTS/ 50-60 CYCLES		240 VOLTS/ 50-60 CYCLES		TRANSFORMER RATING VOLTS-AMPERES FOR 100% OF RATED MOPD OF VALVE
	CURRENT-AMPERES		CURRENT-AMPERES		CURRENT-AMPERES		
	INRUSH	HOLDING	INRUSH	HOLDING	INRUSH	HOLDING	
MKC-1 OMKC-1	1.9	0.63	0.39	0.14	0.19	0.09	60
MKC-2 OMKC-2	3.1	1.4	0.60	0.26	0.31	0.13	100

- All current values are based on 60 cycles.
- Volt-ampere ratings are based on inrush currents.
- Above values are based on the most severe conditions.

3-WAY HEAT RECLAIM VALVES

22, 134a, 404A, 407C, 409A, 410A, 507

Sporlan Heat Reclaim Valves are tight synthetic seating three way valves designed specifically to divert hot gas from the normal to auxiliary condenser.



is open, the cavity above the piston is open to suction. Pump out of the reclaim condenser is controlled by the bleed rate through the piston. After the reclaim condenser has been pumped out, and the valve continues to operate in the normal condenser mode, **all flow ceases**, thus eliminating high to low side bleed and the resulting capacity loss.

“C” Type

Normal (Outdoor) Condenser – De-energized – With the pilot valve de-energized, high side pressure is prevented from entering cavity above the piston-seat assembly. At the same time the upper pilot port is opened to suction pressure. The resulting pressure differential across the piston moves the piston-seat assembly to close the reclaim (upper) main port. The non bleed piston prevents high to low side bleed with the system operating in the normal condenser mode.

“B” and “C” Type

Reclaim (Reheat) Condenser – Energized – When the pilot valve is energized, high side pressure is permitted to flow thru the lower pilot port. At the same time the upper pilot port is closed to suction. High side pressure on top of the piston moves the piston-seat assembly to close the normal condenser port and open the reclaim (upper) main port. With the upper pilot port closed there is no high to low side bleed loss with the system operating in the reclaim mode.

Operation “B” Type

Normal (Outdoor) Condenser – De-energized – With the pilot valve de-energized, high side pressure is prevented from entering the cavity above the piston-seat assembly. At the same time the upper pilot port is opened to suction pressure. The resulting pressure differential across the piston moves the piston-seat assembly to close the reclaim (upper) main port. When the upper pilot port

Capacity – kW

Capacities are based on 38°C condensing temperature isentropic compression plus 28°C, evaporator temperature as shown plus 14°C superheat suction gas.

EVAPORATOR TEMP. °C	REFRIGERANT																							
	22								134a								404A							
	0.14				0.28				0.14				0.28				0.14				0.28			
	B5D	8D	12D	16D	B5D	8D	12D	16D	B5D	8D	12D	16D	B5D	8D	12D	16D	B5D	8D	12D	16D	B5D	8D	12D	16D
5	16.8	35.9	103	249	23.4	50.3	149	357	14.1	29.9	85.5	206	19.5	41.9	123	295	15.0	32.1	93.9	226	20.8	44.9	135	324
0	16.6	35.3	102	245	23.0	49.5	146	351	13.8	29.3	83.7	202	19.1	41.0	120	289	14.6	31.3	91.7	220	20.3	43.9	132	316
-5	16.3	34.7	99.9	240	22.6	48.6	144	345	13.5	28.6	81.8	197	18.7	40.1	118	283	14.2	30.5	89.3	215	19.7	42.8	128	308
-10	16.0	34.1	98.1	236	22.2	47.7	141	339	13.2	28.0	79.9	192	18.2	39.2	115	276	13.8	29.7	86.9	209	19.2	41.6	125	300
-15	15.7	33.4	96.2	231	21.8	46.8	138	332	12.8	27.3	77.9	188	17.8	38.2	112	269	13.5	28.9	84.4	203	18.7	40.4	121	291
-20	15.4	32.8	94.2	227	21.3	45.9	135	325	12.5	26.6	75.9	183	17.4	37.3	109	262	13.0	28.0	81.8	197	18.1	39.2	118	282
-25	15.1	32.1	92.2	222	20.9	44.9	133	318	12.2	25.9	73.9	178	16.9	36.3	106	255	12.6	27.1	79.2	190	17.5	37.9	114	273
-30	14.7	31.4	90.1	217	20.4	43.9	130	311	—	—	—	—	—	—	—	—	12.2	26.2	76.5	184	16.9	36.6	110	264
-35	14.4	30.7	88.0	212	20.0	42.9	127	304	—	—	—	—	—	—	—	—	11.8	25.2	73.7	177	16.3	35.3	106	254
-40	14.1	29.9	85.8	207	19.5	41.9	123	296	—	—	—	—	—	—	—	—	11.3	24.3	70.9	170	15.7	34.0	102	245

EVAPORATOR TEMP. °C	REFRIGERANT																								
	407C								409A								507								
	0.14				0.28				0.14				0.28				0.14				0.28				
	B5D	8D	12D	16D	B5D	8D	12D	16D	B5D	8D	12D	16D	B5D	8D	12D	16D	B5D	8D	12D	16D	B5D	8D	12D	16D	
5	17.6	37.7	109	263	24.5	52.8	157	377	15.1	32.2	92.2	222	21.0	45.1	133	318	14.5	31.1	91.2	219	20.1	43.6	131	314	
0	17.3	36.9	107	257	24.0	51.7	154	369	14.8	31.5	90.3	217	20.6	44.2	130	312	14.1	30.4	89.0	214	19.6	42.5	128	307	
-5	16.9	36.1	105	252	23.4	50.6	150	361	14.5	30.9	88.4	213	20.1	43.2	127	305	13.8	29.6	86.7	208	19.1	41.4	125	299	
-10	16.5	35.3	102	246	22.9	49.4	147	352	14.2	30.2	86.4	208	19.7	42.3	124	298	13.4	28.8	84.4	203	18.6	40.3	121	291	
-15	16.1	34.4	99.6	240	22.4	48.2	143	344	13.9	29.5	84.4	203	19.2	41.3	121	291	13.0	28.0	82.0	197	18.1	39.2	118	283	
-20	15.7	33.6	97.1	233	21.8	47.0	140	335	13.5	28.8	82.4	198	18.8	40.3	118	284	12.7	27.2	79.6	191	17.6	38.0	114	274	
-25	15.3	32.7	94.4	227	21.2	45.7	136	326	13.2	28.1	80.3	193	18.3	39.4	115	277	12.3	26.3	77.1	185	17.0	36.8	111	266	
-30	14.9	31.8	91.8	221	20.6	44.5	132	317	—	—	—	—	—	—	—	—	11.9	25.5	74.5	179	16.5	35.6	107	257	
-35	14.4	30.8	89.1	214	20.0	43.2	128	307	—	—	—	—	—	—	—	—	11.5	24.6	71.9	173	15.9	34.4	103	248	
-40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.0	23.7	69.3	167	15.3	33.2	99.7	239

3-WAY HEAT RECLAIM VALVES

22, 134a, 404A, 407C, 409A, 410A, 507

Specifications – For Refrigerants 22, 134a, 404A, 407C, 409A, 507

MKC-1 COIL						
TYPE	CONNECTION ODF SOLDER Inches	PORT SIZE	MOPD	MAXIMUM RATED PRESSURE bar	STANDARD COIL RATINGS	
			bar		VOLTS/CYCLES	WATTS
5BD5B, 5BD5C	5/8	5/8	20.6	31.0	24/50-60 120/50-60 208-240/50-60 120-208-240/50-60	10
8D7B, 8D7C	7/8	3/4				
8D9B, 8D9C	1-1/8					
12D11B, 12D11C	1-3/8	1-1/4				
12D13B, 12D13C	1-5/8					
12D17B	2-1/8					
16D17B, 16D17C	2-1/8	2				

Available with junction box or conduit boss at no extra charge. For other voltages and cycles, consult your nearest Sporlan Wholesaler or email europpecold@parker.com.

Selection

- For a given refrigerant, select a valve having a port size with capacity most closely matching the evaporator maximum load requirements in tons at the design evaporator temperature. Take into account the allowable pressure drop across the valve port.
- Select the proper coil assembly for the valve type and match the voltage requirements. All AC voltage options are available. For voltages not listed in coil specification, consult your nearest Sporlan Wholesaler or email europpecold@parker.com and request Bulletin 30-10.

Heat Reclaim Systems with Head Pressure Control with Split Condenser Control with Integral Check Valve

When employing heat reclaim on a refrigeration system, the addition of **head pressure control** is important not only to maintain liquid pressure at the expansion valve inlet, but also to assure availability of quality hot gas at the reclaim heat exchanger.

Split condenser valves are important to minimize the required refrigerant charge for wintertime operation.

3-Way heat reclaim valves with Integral check valves are important to minimize installation costs.

Valve Nomenclature/Ordering Instructions

When ordering complete valves, specify Valve Type, Voltage and Cycles. When ordering Valve Body ONLY, specify Valve Type. When ordering Coil Assembly ONLY, specify Coil Type, Voltage and Cycles. **Example: MKC-1 120/50-60; MKC-2 120/50-60.**

MKC	1	120	50-60
Coil Type	Site	Voltage	Cycles

Specifications – For Refrigerant 410A

VALVE SERIES	TYPE	STANDARD CONNECTION Inches	PORT SIZE	MOPD	MRP	STANDARD COIL RATINGS		
			mm	bar*	bar**	VOLTS/CYCLES	WATTS	COIL
B5D	B5D5B	5/8	16	27.6	44.8	24/50-60 120/50-60 208-240/50-60 120-208-240/50-60	10	MKC-1
	B5D5C							
8D	8D7B-HP	7/8	19	27.6	44.8			
	8D7C-HP							
	8D9B-HP	1-1/8						

* MOPD stands for Maximum Operating Pressure Differential.
** MRP stands for Maximum Rated Pressure.

- Available with conduit boss, junction box, or DIN at no extra charge.
 - Dual voltage 4-wire coils, 120-208-240/50-60 are available at slight additional cost.
- For other voltages and cycles, consult your nearest Sporlan Wholesaler or email europpecold@parker.com

Evaporator Capacities kW - bar - °C

TYPE	EVAPORATOR TEMPERATURE °C	PRESSURE DROP – bar	
		0.15	0.3
B5D	4	20.5	28.4
	0	20.2	28.0
	-5	19.9	27.6
	-10	19.5	27.1
8D	4	44.0	61.5
	0	43.3	60.7
	-5	42.6	59.6
	-10	41.8	58.5

Capacities are based on 38°C condensing temperature isentropic compression plus 28°C, evaporator temperature as shown plus 14°C superheat suction gas. For capacities at other conditions, use the Sporlan Selection Program or contact europpecold@parker.com. All capacity ratings are in accordance with ARI Standard No. 760-80.

10G79B, 10G711B and 10G711C HOT GAS DEFROST 22, 134a, 404A, 507

Application

Hot gas defrost valves are utilized in systems in which one or more compressors provide refrigeration to multiple refrigerated cases, both medium and low temperature. The 3-way valves are used to control the flow of gas off a discharge header to the various cases (defrost) or suction gas from the cases to the suction header (refrigeration). The direction of flow is dependent upon whether the pilot valve coil is energized or de-energized. These 3-way valves are used for gas defrost only.



energized the piston and seat assembly shifts to close the suction port and open the discharge gas port, to allow hot gas to flow from the discharge header through the valve to the evaporator outlet.

Due to the fact that when de-energized the valves remain closed to the hot gas connection, these can only be applied off a discharge header and not in the main discharge line.

Installation and Service

The 10G79B, 10G711B and 10G711C may be installed either upright or on its side. However, it should not be mounted with the coil housing below the valve body. The valve can be soldered in place without disassembly, but the body must be kept cool to avoid damage to the Nylatron synthetic seating material. Body and connections should be wrapped in a wet cloth. The valves may be easily disassembled without unsweating connections.

When the coil is de-energized, the valve allows the flow of refrigerant in the normal direction for refrigeration. When the valve is

Specifications

TYPE	CONNECTIONS ODF SOLDER Inches			MOPD* AC bar	MRP** bar	STANDARD COIL RATINGS		
	DISCHARGE	SUCTION	EVAPORATOR			VOLTS/CYCLES	WATTS	COIL
10G79B	7/8	1-1/8	1-1/8	20.6	34.4	24/50-60 120/50-60 208-240/50-60 120-208-240/50-60	10	MKC-1
10G711B		1-3/8	1-3/8					
10G711C		1-3/8	1-3/8					

* MOPD stands for Maximum Operating Pressure Differential.

** MRP stands for Maximum Rated Pressure.

Not available for R-410A.

■ Available with conduit boss, junction box, or DIN at no extra charge.

■ Dual voltage 4-wire coils, 120-208-240/50-60 are available at slight additional cost.

For other voltages and cycles, consult your nearest Sporlan Wholesaler or email europocold@parker.com

Evaporator Capacities kW - bar - °C

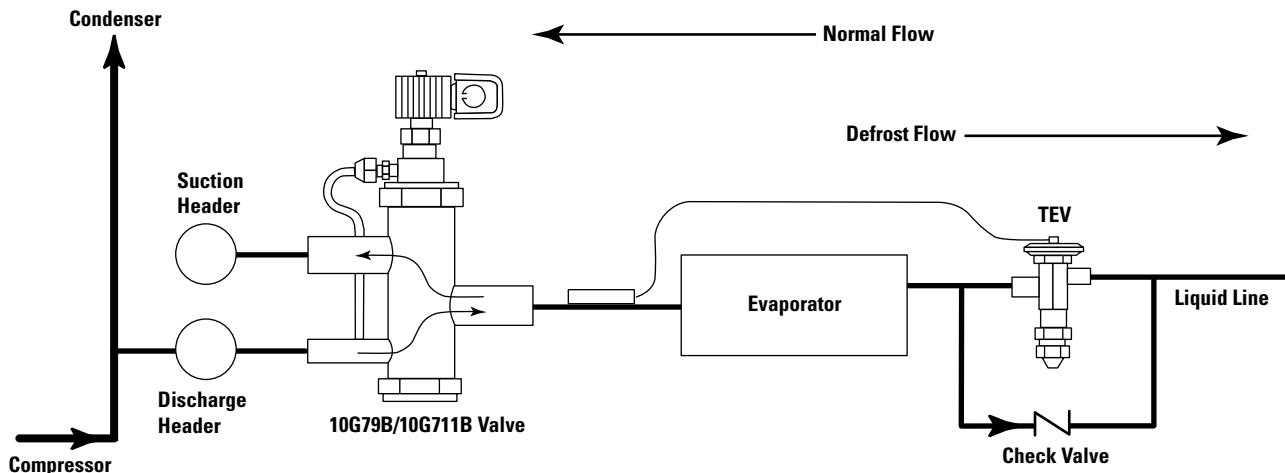
EVAPORATOR TEMPERATURE °C	PRESSURE DROP ACROSS THE VALVE ΔP – bar							
	0.03				0.07			
	22	134a	404A	507	22	134a	404A	507
-5	19.6	14.7	16.5	16.2	29.5	22.1	24.8	24.3
-10	17.7	13.0	14.7	14.4	26.6	19.6	22.1	21.7
-15	15.9	11.5	13.0	12.8	23.9	17.3	19.6	19.3
-20	14.3	10.1	11.5	11.3	21.5	15.2	17.3	17.0
-25	12.7	8.87	10.1	9.98	19.2	13.3	15.2	15.0
-30	11.3	7.72	8.87	8.74	17.1	11.6	13.3	13.2
-35	10.0	6.69	7.72	7.62	15.1	10.1	11.6	11.5
-40	8.83	5.76	6.68	6.60	13.3	8.66	10.0	9.93

Capacities are based on 38°C condensing temperature isentropic compression plus 28°C, evaporator temperature as shown plus 14°C superheat suction gas. For capacities at other conditions, use the Sporlan Selection Program or email europocold@parker.com. All capacity ratings are in accordance with ARI Standard No. 760-80.

Valve Nomenclature/Ordering Instructions

When ordering complete valves, specify Valve Type, Voltage and Cycles. When ordering Valve Body ONLY, specify Valve Type. When ordering Coil Assembly ONLY, specify Coil Type, Voltage and Cycles. **Example: MKC-1 120/50-60.**

MKC	1	120	/	50-60
Coil Type	Size	Voltage		Cycles



The universal acceptance of the **Catch-All® Filter-Drier** is due to its unique molded porous core, consisting of a blend of highly effective desiccants. The quality features built into it assure years of service on any refrigeration system.

MOISTURE – The **Catch-All Filter-Drier** removes moisture from the refrigerant by adsorbing and retaining it deep within the desiccant granules. The blend of desiccants used in the **Catch-All Filter-Drier** are specially formulated for exceptional water removal.

FOREIGN MATTER – The **Catch-All Filter-Drier** will filter out scale, solder particles, carbon, sludge, dirt or any other foreign matter with negligible pressure drop. Fine particles that would go through an ordinary strainer are removed down to a minimum size in one pass filtration. The large filtering area of the **Catch-All Filter-Drier** core permits it to collect a large amount of dirt without plug up.

ACID – The **Catch-All Filter-Drier** is unexcelled in acid removal ability. The hydrochloric, hydrofluoric, and various organic acids

are adsorbed and held by the desiccant in a manner similar to the adsorption of moisture. Tests have demonstrated that the **Catch-All Filter-Drier** has superior acid removal ability when compared to competitive driers. This ability, along with its excellent ability to clean up the oil, is responsible for the excellent field performance in cleaning up severely contaminated systems.

OIL SLUDGE AND VARNISH – Even the best refrigeration oils break down to produce varnish, sludge and organic acids. Only the **Catch-All Filter-Drier** is capable of removing these products of oil decomposition.

SPECIAL APPLICATIONS – A special “HH” core **Catch-All Filter-Drier** is available to remove wax which frequently causes difficulty on low temperature refrigeration systems. For cap tube systems, use the C-032-CAP or C-032-CAP-T **Catch-All** which has fittings suitable for attaching to any size capillary tube.

Remember...It's the CORE that counts!



Sealed Type – Liquid Line and Suction Line Specifications kW · bar · °C

"C" SERIES LIQUID LINE TYPE		SUCTION LINE TYPE	CONNECTION SIZE Inches	VOLUME of DESICCANT cm ³	OVERALL LENGTH mm		SOLDER SOCKET DEPTH mm	DIAMETER of BODY mm
SAE FLARE	ODF SOLDER	ODF SOLDER			SAE FLARE	ODF SOLDER		
C-032	C-032-S	—	1/4	49	106	97	10	44
—	C-032-CAP C-032-CAP-T	—	Extended 1/4 Male		—	148	—	
C-032-F	—	—	1/4 Male - Inlet 1/4 Female - Outlet		97	—	—	
C-032-FM	—	—	1/4 Female - Inlet 1/4 Male - Outlet		97	—	—	
C-033	C-033-S	—	3/8		119	99	11	
C-052	C-052-S	—	1/4	82	121	106	10	62
—	C-0525-S	—	5/16		—	111	11	
C-052-F	—	—	1/4 Male - Inlet 1/4 Female - Outlet		106	—	—	
C-052-FM	—	—	1/4 Male - Inlet 1/4 Female - Outlet		106	—	—	
C-053	C-053-S	—	3/8		132	109	11	
C-082	C-082-S	—	1/4	147	143	130	10	67
—	C-0825-S	—	5/16		—	135	11	
C-083	C-083-S	C-083-S-T-HH	3/8		154	133	11	
C-084	C-084-S	C-084-S-T-HH	1/2		160	138	13	
C-162	C-162-S	—	1/4		159	146	10	
—	C-1625-S	—	5/16	—	151	11		
C-163	C-163-S	—	3/8	262	171	149	11	76
C-164	C-164-S	C-164-S-T-HH	1/2		176	152	13	
C-165	C-165-S	C-165-S-T-HH	5/8		184	160	16	
—	—	C-166-S-T-HH	3/4		—	171	16	
—	C-167-S	C-167-S-T-HH	7/8		—	176	19	
C-303	C-303-S	—	3/8	492	246	226	11	76
C-304	C-304-S	—	1/2		251	229	13	
C-305	C-305-S	C-305-S-T-HH	5/8		259	235	16	
—	C-306-S	C-306-S-T-HH	3/4		—	245	16	
—	C-307-S	C-307-S-T-HH	7/8		—	249	19	
—	C-309-S	C-309-S-T-HH	1-1/8	—	248	24		
C-413	—	—	3/8	672	243	—	—	89
C-414	C-414-S	—	1/2		252	230	13	
C-415	C-415-S	—	5/8		260	237	16	
—	C-417-S	C-417-S-T-HH	7/8		—	249	19	
—	C-419-S	C-419-S-T-HH	1-1/8		—	248	24	
—	—	C-437-S-T-HH	7/8	787	—	263	19	121
—	—	C-439-S-T-HH	1-1/8		—	273	24	
—	—	C-4311-S-T-HH	1-3/8		—	278	25	
—	—	C-4313-S-T-HH	1-5/8		—	278	27	
—	—	—	—		—	—	—	
—	C-607-S	C-607-S-T-HH	7/8	983	—	406	19	76
—	C-609-S	C-609-S-T-HH	1-1/8		—	406	24	
COMPACT STYLE		C-144-S-TT-HH	1/2	229	—	105	13	113
		C-145-S-TT-HH	5/8		—	111	16	
		C-146-S-TT-HH	3/4		—	123	18	
		C-147-S-TT-HH	7/8		—	126	19	
		C-149-S-TT-HH	1-1/8		—	125	24	

UL and UL_C Listed – Guide SMGT-File No. SA-1756A & B. Maximum Rated Pressure of 44.8 bar, except for the C-140 Series rated at 31 bar and the C-430 Series rated at 34.5 bar.