

▼ SOLENOID VALVES

22, 134a, 401A, 402A, 404A, 407C, 502, 507

6 Proven Benefits of Sporlan Solenoid Valves

- 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.
- Can be used on Refrigerants 22, 134a, 401A, 402A, 404A, 407C, 502 and 507 because of high MOPD ratings.



A3P1



B25S2



OB10S2



E10S250

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.

The NORMALLY CLOSED A3 and E3 (Direct Acting) and E5 through the E42 series (Pilot Operated) and the NORMALLY OPEN OB9 and OE9 through the OE42 series may be mounted in either a horizontal or vertical line.

The Sporlan “E” series solenoid valves feature extended solder type connections as standard. One important benefit to the user is that all valves in the “E” series can be installed without disassembly using either low or no silver content brazing alloy. The “E” series is interchangeable with the “B” series, solder type valves, providing the

overall length can be accommodated.

All valves in the “E” series have the same capacities as the “A” & “B” series with the exception of the E42.

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

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

See page 33 for R-410A Solenoid Valves.

Liquid Capacities – Tons

TYPE NUMBER		TONS OF REFRIGERATION**																			
“E” SERIES VALVES	“A” & “B” SERIES VALVES	22					134a					401A					402A				
		PRESSURE DROP – psi*																			
		1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
E3	A3	0.9	1.3	1.6	1.9	2.1	0.8	1.2	1.5	1.8	2.0	0.9	1.3	1.6	1.9	2.1	0.6	0.9	1.1	1.2	1.4
E5	—	1.6	2.3	2.8	3.3	3.6	1.5	2.1	2.6	3.0	3.4	1.6	2.3	2.8	3.3	3.7	1.1	1.5	1.9	2.1	2.4
E6	B6	2.9	4.0	4.9	5.7	6.4	2.7	3.8	4.6	5.3	5.9	2.9	4.1	4.9	5.7	6.4	1.9	2.7	3.3	3.8	4.2
E9	B9	4.7	6.6	8.1	9.3	10.4	4.4	6.2	7.5	8.7	9.7	4.7	6.6	8.1	9.3	10.4	3.1	4.4	5.3	6.2	6.9
E10	B10	6.4	9.1	11.1	12.8	14.3	6.0	8.5	10.4	12.0	13.4	6.4	9.1	11.1	12.8	14.4	4.2	6.0	7.3	8.5	9.4
E14	B14	9.1	12.9	15.8	18.2	20.3	8.5	12.0	14.7	17.0	18.9	9.1	12.9	15.8	18.2	20.4	6.0	8.5	10.4	12.0	13.4
E19	B19	13.9	19.8	24.2	28.0	31.4	13.0	18.4	22.6	26.1	29.2	14.0	19.8	24.3	28.1	31.4	9.2	13.0	16.0	18.5	20.7
E25	B25	23.8	33.8	41.4	47.8	53.5	22.2	31.5	38.6	44.6	49.9	23.9	33.8	41.4	47.9	53.6	15.7	22.2	27.3	31.5	35.3
E35	—	38.9	56.8	70.9	83.0	93.7	36.3	53.0	66.2	77.4	87.4	39.0	56.9	71.0	83.1	93.8	25.6	37.3	46.6	54.5	61.5
E42	—	73.5	104	127	147	164	68.6	96.9	119	137	153	73.6	104	127	147	165	48.5	68.5	83.9	96.9	108

TYPE NUMBER		TONS OF REFRIGERATION**																			
“E” SERIES VALVES	“A” & “B” SERIES VALVES	404A					407C					502					507				
		PRESSURE DROP – psi*																			
		1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
E3	A3	0.6	0.9	1.1	1.2	1.4	0.8	1.2	1.5	1.7	1.9	0.6	0.8	1.0	1.2	1.4	0.6	0.8	1.0	1.2	1.4
E5	—	1.1	1.5	1.9	2.1	2.4	1.5	2.1	2.6	3.0	3.4	1.0	1.5	1.8	2.1	2.4	1.0	1.5	1.8	2.1	2.4
E6	B6	1.9	2.7	3.3	3.8	4.2	2.6	3.7	4.5	5.2	5.8	1.9	2.6	3.2	3.7	4.1	1.9	2.6	3.2	3.7	4.1
E9	B9	3.1	4.4	5.4	6.2	6.9	4.3	6.1	7.4	8.6	9.6	3.0	4.3	5.2	6.0	6.8	3.0	4.3	5.2	6.0	6.7
E10	B10	4.2	6.0	7.3	8.5	9.5	5.9	8.3	10.2	11.8	13.2	4.2	5.9	7.2	8.3	9.3	4.2	5.9	7.2	8.3	9.3
E14	B14	6.0	8.5	10.4	12.0	13.4	8.4	11.8	14.5	16.7	18.7	5.9	8.4	10.2	11.8	13.2	5.9	8.3	10.2	11.8	13.2
E19	B19	9.2	13.1	16.0	18.5	20.7	12.8	18.2	22.3	25.8	28.8	9.0	12.8	15.7	18.2	20.3	9.0	12.8	15.7	18.1	20.3
E25	B25	15.7	22.3	27.4	31.6	35.4	21.9	31.0	38.0	44.0	49.2	15.5	21.9	26.8	31.0	34.7	15.4	21.8	26.8	30.9	34.6
E35	—	25.5	37.3	46.5	54.4	61.4	35.6	52.0	64.8	75.9	85.7	25.3	36.9	46.0	53.8	60.8	25.1	36.6	45.6	53.4	60.3
E42	—	48.6	68.8	84.2	97.2	109	67.6	95.6	117	135	151	47.7	67.4	82.5	95.3	107	47.6	67.3	82.4	95.1	106

*Do not use below 1 psi pressure drop, except Types E3 and A3 valves. **Capacities are based on 40°F evaporator and 100°F liquid. Valve types whether Normally Closed or Normally Open have the same capacities, i.e., B10 or OB10, E10 or OE10. Solenoid valves for glycol or brine applications – consult Sporlan, Washington, MO.

For complete information on solenoids – liquid, suction or discharge gas capacities – see your Sporlan Wholesaler, our website at www.sporlan.com, or write Sporlan and request Bulletin 30-10.

SOLENOID VALVES

22, 134a, 401A, 402A, 404A, 407C, 502, 507

Specifications

TYPE NUMBER						CONNECTIONS Inches	PORT SIZE Inches	MOPD psi 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	.101	300	10
—	—	—	A3F1	—	—	1/4 SAE Flare			
E3S120	—	—	A3S1	—	—	1/4 ODF Solder			
E3S130	—	—	A3S1	—	—	3/8 ODF Solder	.150	300	10
E5S120	—	—	—	—	—	1/4 ODF Solder			
E5S130	—	—	—	—	—	3/8 ODF Solder			
—	—	—	B6P1	—	MB6P1	3/8 NPT Female	3/16	300	10
—	—	—	B6F1	—	MB6F1	3/8 SAE Flare			
E6S130	—	ME6S130	B6S1	—	MB6S1	3/8 ODF Solder			
E6S140	—	ME6S140	B6S1	—	MB6S1	1/2 ODF Solder	9/32	*300	15
—	—	—	B9P2	OB9P2	MB9P2	3/8 NPT Female			
—	—	—	B9F2	OB9F2	MB9F2	3/8 SAE Flare			
E9S230	OE9S230	ME9S230	—	—	—	3/8 ODF Solder	5/16	*300	15
E9S240	OE9S240	ME9S240	B9S2	OB9S2	MB9S2	1/2 ODF Solder			
—	—	—	B10F2	—	MB10F2	1/2 SAE Flare			
E10S240	OE10S240	ME10S240	—	—	—	1/2 ODF Solder	7/16	*300	15
E10S250	OE10S250	ME10S250	B10S2	—	MB10S2	5/8 ODF Solder			
—	—	—	B14P2	OB14P2	MB14P2	1/2 NPT Female			
E14S250	OE14S250	ME14S250	B14S2	OB14S2	MB14S2	5/8 ODF Solder	19/32	*300	15
—	—	—	B19P2	OB19P2	—	3/4 NPT Female			
E19S250	OE19S250	ME19S250	B19S2	OB19S2	MB19S2	5/8 ODF Solder			
E19S270	OE19S270	ME19S270	B19S2	OB19S2	MB19S2	7/8 ODF Solder	25/32	*300	15
—	—	—	B25P2	—	MB25P2	1 NPT Female			
E25S270	OE25S270	ME25S270	B25S2	OB25S2	MB25S2	7/8 ODF Solder			
E25S290	OE25S290	ME25S290	B25S2	OB25S2	MB25S2	1-1/8 ODF Solder	1	300	10
E35S190	OE35S190	ME35S190	—	—	—	1-1/8 ODF Solder			
E35S1110	OE35S1110	ME35S1110	—	—	—	1-3/8 ODF Solder			
—	—	—	—	—	—	1-5/8 ODF Solder	1-5/16	*300	15
E42S2130	OE42S2130	ME42S2130	—	—	—	1-5/8 ODF Solder			
E42S2170	OE42S2170	ME42S2170	—	—	—	2-1/8 ODF Solder			

*All normally open valves are rated at 275 psi, except OE35...300 psi.

Maximum Rated Pressures

Valve Type E42 Series — **450 psi**

All other valve types — **500 psi**

Interchangeability of Coils

MKC-1 for Types A3, E3, B6, MB6, E5, E6, ME6, E35 and ME35 series. **MKC-2** for Types B9, MB9, E9 and ME9 series through the E42 and ME42 series.

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

Nomenclature/Ordering Instructions

Be sure to specify Valve Type, Connections, Voltage and Cycles.

M	E	10	S	2	5	0	S	HP
Manual Lift Stem	Design Series	Port Size in 1/32"	Connections Solder	Coil Size ①②	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
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.								
O	D	M	B	25	S	2	*	S
Normally Open	Disc Type *D - Direct Connected C - see page 34	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.

*D - Direct connected assembly is available on B14 series valve. Minimum quantity order may be required.

For complete information see your Sporlan Wholesaler, our website at www.sporlan.com, or write Sporlan and request Bulletin 30-10.

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. Also, DIN coils are available for an additional cost. For other voltages and cycles consult Sporlan.

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