

ELECTRONIC TEMPERATURE CONTROL SYSTEMS

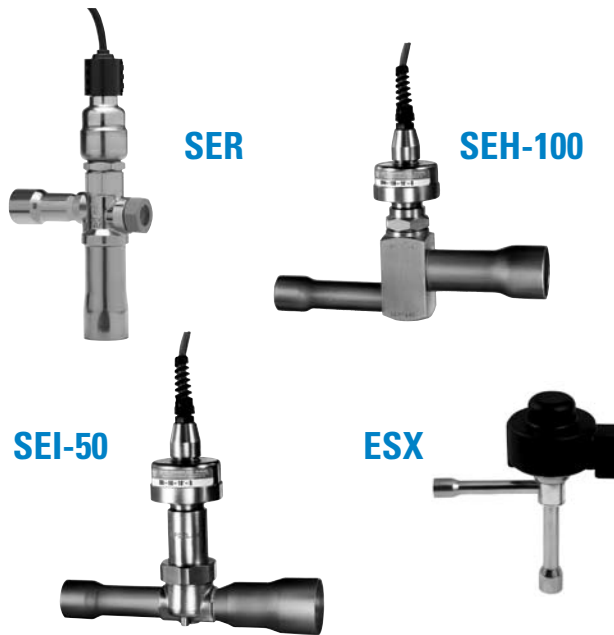
Electric Expansion Valves

Sporlan Electric Expansion Valves (EEVs) are currently available in nominal R-410A capacities from 5 to 700 kW. Therefore, they are applicable on all the same types of systems found in the air conditioning and refrigeration industry as thermostatic expansion valves.

All Sporlan electric valves are designed for compatibility with all current halocarbon refrigerants, including CFCs, HCFCs, HFCs and R-410A. Specific system conditions will dictate which product is necessary to control the application. Details can be reviewed with the Sporlan Sales Engineer.

The ESX, SER, SEI and SEH are Electronically Operated Step Motor flow control valves, intended for the precise control of liquid refrigerant. Synchronized signals to the motor provide discrete angular movement, which translates into precise linear positioning of the valve piston. Valve pistons and ports are uniquely characterized, providing improved flow resolution and performance. The ESX, SER, SEI and SEH valves are easily interfaced with microprocessor based controllers, including Sporlan supplied controllers.

All Sporlan EEVs are rated for at least 42 bar MRP.



Specifications

VALVE TYPE	INLET – Inches STANDARD CONNECTIONS In BOLD	OUTLET – Inches STANDARD CONNECTIONS In BOLD	CONFIGURATION	CABLE LENGTH – m STANDARD CONNECTIONS In BOLD
ESX 14	5/16 ODF, 3/8 ODF	5/16 ODF, 3/8 ODF, 1/2 ODF	Angle	1.5, 3
ESX 18	5/16 ODF, 3/8 ODF	5/16 ODF, 3/8 ODF, 1/2 ODF	Angle	1.5, 3
ESX 24	5/16 ODF, 3/8 ODF	5/16 ODF, 3/8 ODF, 1/2 ODF	Angle	1.5, 3
SER 1.5*	3/8 , 1/2, 5/8 ODF	3/8, 1/2 , 5/8	Angle	3 , 12
SER 6*	3/8, 1/2 , 5/8 ODF	3/8, 1/2, 5/8 , 7/8	Angle	3 , 12
SER 11*	3/8, 1/2, 5/8 ODF	1/2, 5/8, 7/8 , 1-1/8 ODF	Angle	3 , 12
SER 20*	1/2, 5/8, 7/8 , 1-1/8 ODF	5/8, 7/8, 1-1/8, 1-3/8 ODF	Angle	3 , 12
SEI 30*	5/8, 7/8, 1-1/8 ODF	5/8, 7/8, 1-1/8, 1-3/8 ODF	Angle	3 , 6, 9, 12
SEI 50	7/8, 1-1/8 , 1-3/8 ODF	7/8, 1-1/8, 1-3/8 , 1-5/8 ODF	Straight through	3 , 6, 9, 12
SEH 100	1-1/8 , 1-3/8 ODF	1-3/8, 1-5/8 ODF	Straight through	3 , 6, 9, 12
SEH 175	1-1/8, 1-3/8, 1-5/8 ODF	2-1/8 ODF	Straight through	3 , 6, 9, 12
SER G*	5/8 ODF	7/8 ODF	Angle	3
SER J	7/8 ODF	7/8 ODF	Angle	3
SER K	1-1/8 ODF	1-1/8 ODF	Angle	3

* Suitable for bi-directional applications.

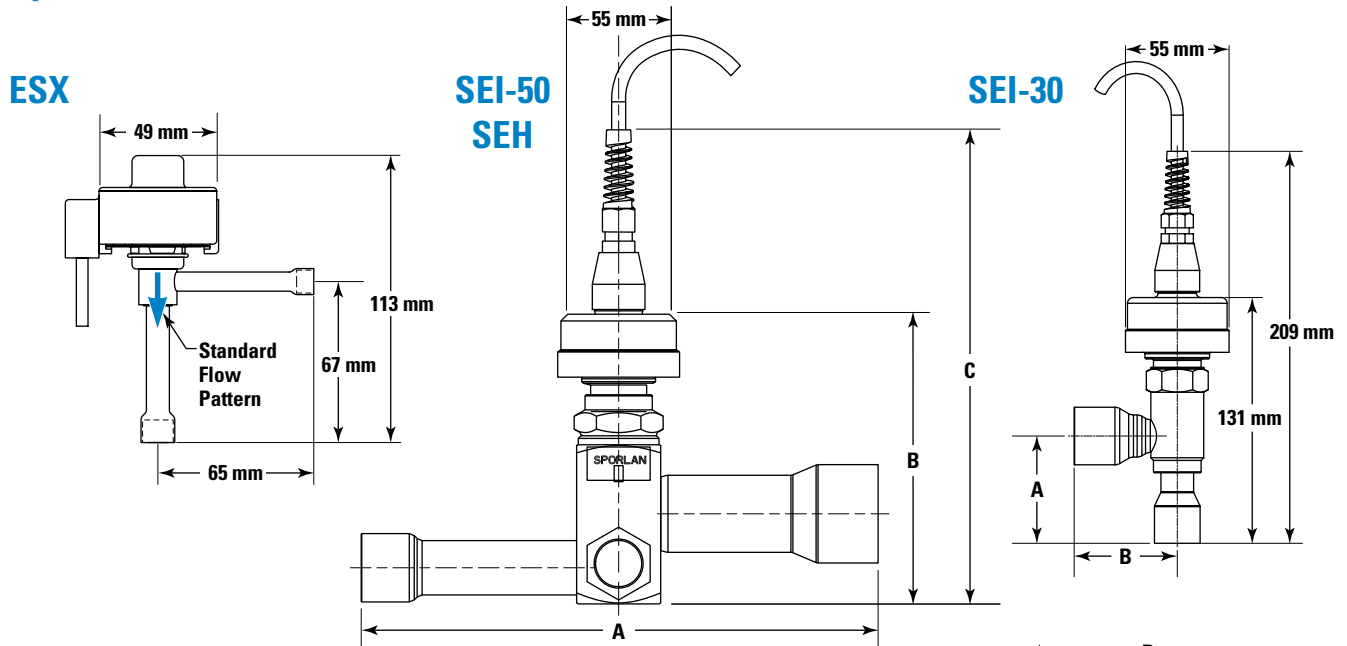
Capacities – kW

VALVE TYPE	REFRIGERANT											
	134a			404A			407C			410A		
	5°C	-10°C	-20°C	5°C	-10°C	-20°C	5°C	-10°C	-20°C	5°C	-10°C	-20°C
ESX 14	3.2	3.6	3.4	2.8	3.0	2.9	3.9	4.3	4.1	5.4	6.0	5.8
ESX 18	5.7	6.3	6.0	5.0	5.3	5.1	6.9	7.6	7.2	9.7	10.5	10.2
ESX 24	11.5	12.6	12.1	10.0	10.7	10.1	13.8	15.1	14.5	19.3	21.1	20.5
SER 1.5*	3.7	4.1	3.9	3.3	3.5	3.3	4.5	4.9	4.7	6.3	6.9	6.7
SER 6*	15.0	16.5	15.7	13.0	13.9	13.2	18.0	19.7	18.9	25.2	27.5	26.7
SER 11*	27.5	30.2	28.9	23.8	25.5	24.1	33.1	36.1	34.6	46.2	50.3	49.0
SER 20*	49.9	55	52.5	43.3	46.4	43.9	60.2	65.6	62.9	83.9	91.5	89.1
SEI 30*	74.9	82.4	78.8	65.0	69.7	65.8	90.2	98.4	94.4	126	137	134
SEI 50	125	137	131	108	116	110	150	164	157	210	229	223
SEH 100	250	275	262	217	232	219	301	328	315	420	458	445
SEH 175	437	481	459	379	406	384	526	574	550	735	801	779
SER G*	66.3	73	69.8	57.5	61.7	58.3	79.9	87.2	83.6	112	122	118
SER J	119	131	126	104	111	105	144	157	150	201	219	213
SER K	216	238	228	188	201	190	261	284	273	420	458	445

* Suitable for bi-directional applications.

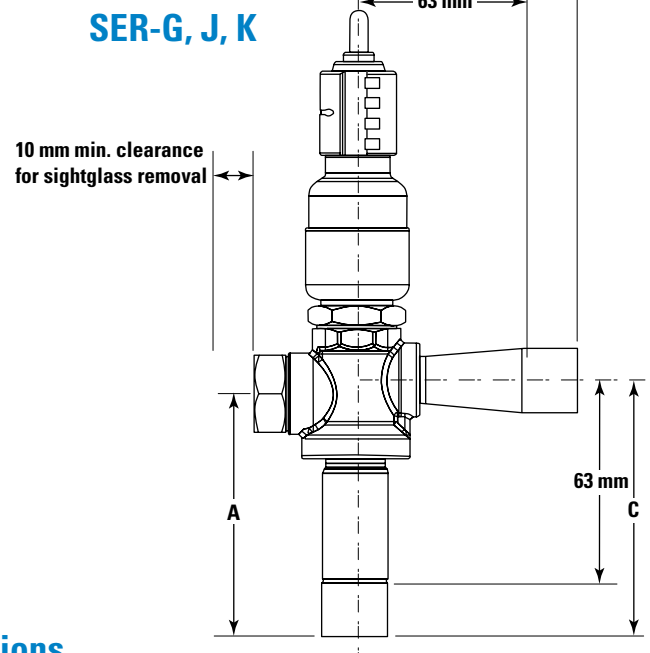
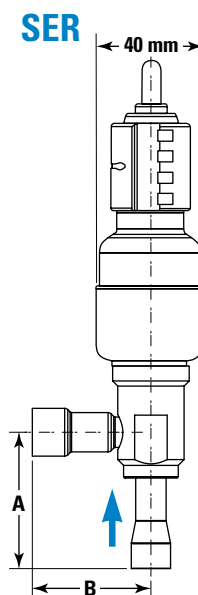
ELECTRONIC TEMPERATURE CONTROL SYSTEMS

Specifications



Dimensions — Connections

VALVE TYPE	mm		
	A	B	C
SER 1.5	51	63	—
SER 6	51	58	—
SER 11	64	58	—
SER 20	66	61	—
SER G	90	76	96
SER J	90	83	96
SER K	94	86	99
SEI 30	56	71	—
SEI 50	205	126	209
SEH 100	237	131	215
SEH 175	215	133	216



ESX – Valve Nomenclature/Ordering Instructions

ESX	-14	B
Valve Model	Orifice Diameter 14 = 1.4 mm 18 = 1.8 mm 24 = 2.4 mm	Connections 5/16 x 5/16 ODF A 3/8 x 3/8 ODF B 3/8 x 1/2 ODF

SEI, SEH(I) or SER(I) – Valve Nomenclature/Ordering Instructions

SEH	(I)	175	1-1/8"	x	2-1/8"	ODF	10	S
Valve Model	Indicating Sightglass optional (not available on SER, SEI)	Valve Nominal Capacity	Inlet Fitting 7/8", 1-3/8" and 1-5/8" available*		Outlet Fitting 1-3/8", 1-5/8" and 2-1/8" available*	Fitting type ODF only	Cable Length 10' standard, 30' and 40' available	Stripped and Tinned cable ends, Packard Weather PAK™ also available

* Not all fitting sizes are available on all valves.

For complete information consult your nearest Sporlan Wholesaler or email europesold@parker.com and request Bulletin 100-20-1 and 100-20-2.