

Uni-polar EEV with Internal Check

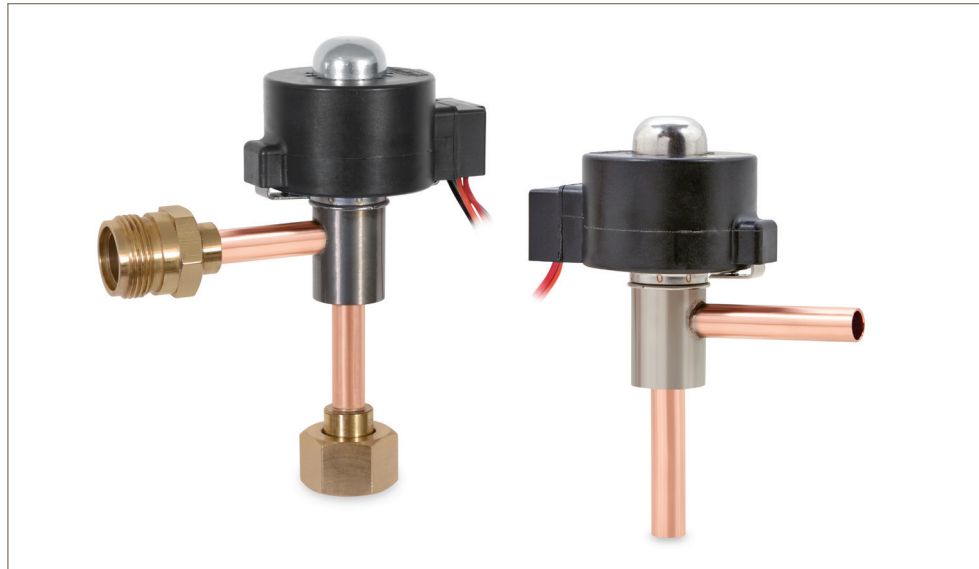
Type SEV-C 19(R) & 25(R)



Parker's **SEV-C Electric Expansion Valve** provides precise control for air conditioning and heat pump systems up to 7-1/2 tons R-410A. This direct-drive unipolar design has 500 steps of resolution. The SEV-C valves are compatible with HFC refrigerants and POE oils.

Benefits

It's tight seating, high flow rate internal check valve makes the SEV-C the ideal choice for heat pump applications. In reverse flow, when the pin is removed from the port, the check valve opens allowing virtually unrestricted flow to minimize pressure drop and improve system efficiencies. The SEV-C is available with two connection options—1/4" ODF and Chatleff Style connections. These Chatleff Style connections are the preferred choice for use with aluminum distributors and indoor coils. The SEV-C's hermetic stainless steel construction provides superior corrosion resistance.



Features

- Highly reliable direct-drive stepper motor
- Precise 500 step flow resolution
- Tight seating for improved system performance
- Welded stainless steel design for corrosion resistance
- Serviceable external stator
- ODF and Chatleff Style connections
- Compatible with HCFC & HFC refrigerants and mineral & POE oils

Nomenclature

SEV - C - 25 R 1/4 ODF x 1/4 ODF					CEC 42 Y5-2		
Model	Check Valve	Port Size	Modification Designation	Connection Size Inlet x Outlet	Stator	Lead Wire Length (cm)	Connector



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Specifications

Drive Type	Direct Drive Step Motor
Motor Type	Unipolar
Flow Path (Expansion)	Side Inlet
Number of Steps	500 ± 20 pps
Steps to Open	32 ± 20 pps
Operating Stroke	0.123" (3.125 mm)
Resolution	0.000128" (0.00625 mm)
Step Rate	30 - 80 pps
Full Motion Transit Time	6.25 sec @ 80 pps
MOPD	3.5 Mpa
Maximum Rated Pressure	4.8 Mpa
Fluid Temperature	-22°F to 158°F (-30°C to 70°C)
Ambient Temperature	-22°F to 158°F (-30°C to 70°C)
Moisture / Humidity	≤ 95% RH
Internal Leakage	800 sccm @ 1.0 Mpa
External Leakage	1.0x10 ⁻⁶ sccm He
Rated Voltage	12 VDC ±10%
Rated Current	400 mA/winding MAX
Phase Resistance	40 ± 4 Ohms
Insulation Class	Class E
Compatible Refrigerant	R-22, 134a, 410A, 407C, etc.
Compliance/Certification	SA5460

Capacities

R-410A - Tons

Valve Type	Pressure Drop Across Valve (psid)							
	80	120	160	200	240	280	320	360
SEV-C19R	2.87	3.51	4.05	4.53	4.96	5.36	5.73	6.08
SEV-C19	3.27	4.01	4.63	5.17	5.67	6.12	6.54	6.94
SEV-C25R	4.31	5.28	6.10	6.82	7.47	8.07	8.63	9.15
SEV-C25	5.21	6.38	7.37	8.24	9.02	9.75	10.4	11.1

R-410A - kW

Valve Type	Pressure Drop Across Valve (bar)							
	5	8	11	14	17	20	23	26
SEV-C19R	9.59	12.1	14.2	16.1	17.7	19.2	20.6	21.9
SEV-C19	10.9	13.8	16.2	18.3	20.2	21.9	23.5	25.0
SEV-C25R	14.4	18.3	21.4	24.2	26.6	28.9	31.0	32.9
SEV-C25	17.4	22.1	25.9	29.2	32.2	34.9	37.4	39.8

Based on 40°F (5°C) Evaporator Temperature and 100°F (38°C) Liquid Temperature.

Liquid Correction Factors

°F	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140
°C	-18	-12	-7	-1	4	10	16	21	27	32	38	43	49	54	60
R-410A	1.77	1.70	1.62	1.55	1.48	1.40	1.32	1.25	1.17	1.09	1.00	0.92	0.83	0.73	0.63

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