

# SER<sub>2</sub>-C

## 2<sup>ND</sup> GENERATION Electronic Expansion Valve



- 60% reduction in weight
- 3.5X wider flow control
- 50% less power required for valve operation
- Highest MOPD in the industry
- 60% decrease in SKUs

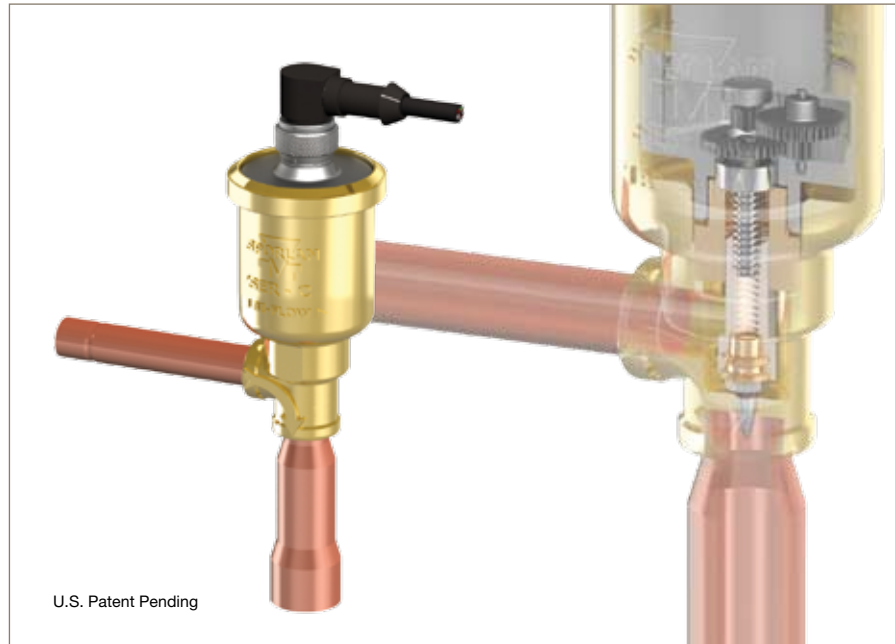
With its robust, uni-body construction, the SER-C is right at home in conditioned spaces, such as walk-in coolers and supermarket cases. A specialized forming process minimizes leak paths, increases corrosion resistance and provides up to **60% reduction in weight** over typical pulse width designs.

The SER-C exceeds the HVAC/R industry demands for wide range expansion valves by delivering **3.5X wider flow control range** over competing designs. The advanced pin design and high resolution step motor ensures precise low flow control without sacrificing maximum capacity.

The optimized step motor drive requires **50% less power for valve operation** over comparable products without sacrificing performance, including the highest MOPD in the industry (in both flow directions.)

The unique flow characteristics of the SER-C make it ideal for supermarket applications requiring faster pull down after defrost and transport applications with varying product loads. The wider range control can **decrease SKUs up to 60%** when compared to traditional sized electronic expansion valves.

When paired with Sporlan's Kelvin II superheat controller, the SER-C electronic expansion valve can reduce system troubleshooting and simplify superheat control.



### Product Features:

- Can reduce system energy consumption by lowering head pressure
- For harsh refrigeration environments; cold rooms, supermarket cases and transport applications
- Provides smooth system start up and elimination of "water hammer" over pulse width design
- Quad position IP67 cable provides flexibility for cable routing
- Tested and approved for oil free refrigeration systems

### Contact Information:

Parker Hannifin Corporation  
**Sporlan Division**  
206 Lange Drive  
Washington, MO 63090

**phone 636 239 1111**  
**fax 636 239 9130**  
**svdeev@parker.com**

[www.sporlanonline.com](http://www.sporlanonline.com)



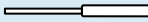


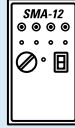


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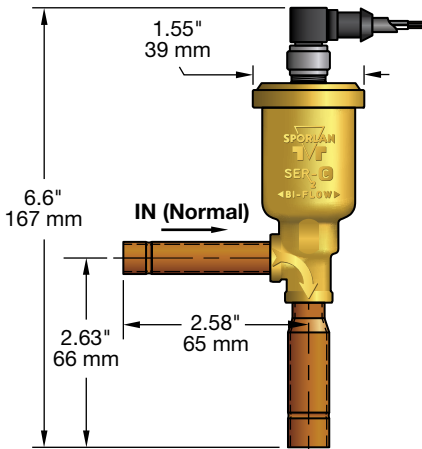
## Design Details:

- 2500 Bi-Polar Step Control
- Voltage: 12VDC (-5% / +10%)
- Power: 2.8 Watt
- Operating Temperature: -50°F to 155°F (-45°C to 68°C)
- Bi-flow
- MOPD: 580 psid (40 bar) In Both Flow Directions
- MRP: 700 psig (48 bar)
- Available Configurations:
  - 1/4" x 3/8" ODF
  - 3/8" x 3/8" ODF
  - 3/8" x 1/2" ODF
  - 3/8" x 5/8" ODF
- Metric Connections Available
- 10' Cable Length Standard
- All Common HFC, HCFC Refrigerant and Blends
- Subcritical R-744

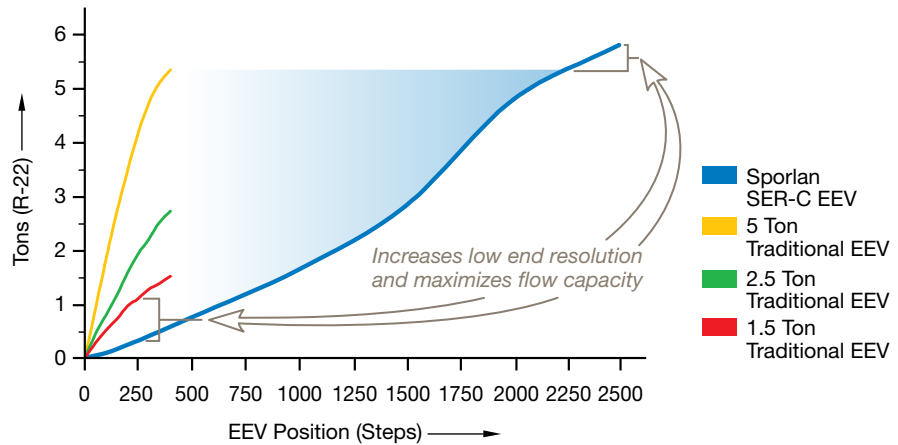
## Components and Accessories:

Product	Description	Item Number
Kelvin II 	Superheat Controller without Local Display	952560
	Superheat Controller with Display	952561
	Remote Display Only	952562
IB-2 	Interface Board (2500 steps)	983188
Temperature Sensor 	External Sensing Bulb	952662
	Temperature Well Sensor Kit 	Internal Sensing Element
Pressure Transducer 	150 psig with Cable	953091
	150 psia with Cable	952995
	300 psig with Cable (R-410A applications only)	952740
	500 psig with Cable (R-744 subcritical applications only)	952504
	Test Instrument	953276
SMA-12 	Test Instrument	953276

### Dimensions



### Flow Range Comparison - SER vs. Traditional EEVs



### Recommended Operating Range\*

Refrigerant	Liquid Temp. (°F)	Valve ΔP	Evap. Temp. (°F)	Operating Range – Tons (kW)										
				0.6 (2.1)	1.0 (3.5)	2.0 (7.0)	3.0 (11)	4.0 (14)	4.5 (16)	5.0 (18)	5.5 (19)	6.0 (21)	6.5 (23)	7.0 (25)
R-22	100	100	40				Recommended							Not Applicable
R-134a	100	60	40			Recommended								Not Applicable
R-404A	100	100	40			Recommended								Not Applicable
R-410A	100	160	40					Recommended						

\*When paired with Sporlan Kelvin II Superheat Controller, 10° subcooling.