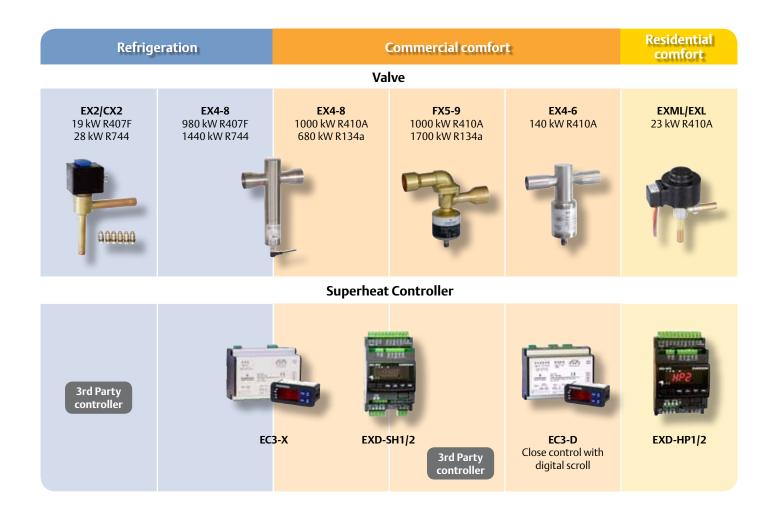


Trust in **Emerson Climate Technologies** for reliable, precise and efficient superheat control.

When it comes to superheat control, Emerson Climate Technologies continues to be the leading manufacturer and provider of a wide range of precision electronic and electromechanical solutions. The controllers enable stable superheat in the system, while the digital superheat controllers additionally synchronize with the PWM capacity control valve integrated in digital Copeland ScrollTM compressors. The precise and durable valves are released for HFC refrigerants as well as for CO_2 in refrigeration, air conditioning and chiller applications.



Refrigeration

The EX2 / CX2 series are pulse width modulated electronic expansion valves with exchangeable orifices for display cases and cold rooms.

Features:

- Maximum working pressure: EX2 40 bar, CX2 90 bar (For CO, applications)
- Maximum operating pressure differential: EX2 30 bar, CX2 65 bar
- Capacity range: 1.5-28.2 kW, R744; 1.0-19.2 kW, R407F
- Gate type port made from ceramic → High reliability and long life time
- Shut off function eliminates the necessity of a separate solenoid valve



The EX /CX Series are stepper motor driven valves for precise control of refrigerant mass flow in refrigeration systems.

- Ceramic slide and port for highly accurate flow and minimal wear
- Capacity range: 33.5 1789 kW (R744), 18 984 kW (R407F)
- Maximum working pressure: EX Series 60 bar, CX Series 120 bar
- Linear and precise flow control over a wide range,
 10 to 100%
- Fast opening/closing time
- Positive shut-off function to eliminate the need for additional solenoid valve



Refrigeration

The EXD-SH1/2 are designed for precise control of the superheat and drive the EX valve series.

Features:

- Self adapting superheat/economizer control
- EXD-SH1 for one valve
 - → Superheat control or capacity control
 - EXD-SH2 for two valves in independent

refrigerant circuits

- → Superheat control for two valves or one valve superheat control, second valve capacity control
- Modbus communication
- Integrated keyboard with two line display



EC3-X32/X33 is a superheat controller which ensures a stable and energy efficient superheat while protecting the compressor of liquid slugging.

- Self adapting algorithm
- Limitation of evaporating pressure (MOP)
- Stepper motor driver for EX4 ... EX8 included
- Integral rechargeable battery to close electronic expansion valve in case of power loss
- Stand-alone, with or without TCP-IP interface

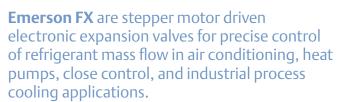


Commercial Comfort

The EX4 / EX5 / EX6 are stepper motor driven valves for precise control of refrigerant mass flow in systems with Copeland Scroll DigitalTM

Features:

- Ceramic slide and port for highly accurate flow and minimal wear
 - → Life expectancy more than 10.000.000.000 pulses
- Fast opening/closing time suitable for digital control compressors
 - → Full travel time of 1.5 seconds ensures fast reaction time during 10% partial load performance of digital scroll (2 seconds)
- Offering as package solution with driver and sensor
- Application: Compact system with single evaporator in conjuction with Scroll Digital
- Positive shut-off function to eliminate the need for additional solenoid valve



- Ideal solution for commercial air conditioning and heating
 - → Offering: As package with controller and sensors or valve only for OEM's with own/third party electronic system solution
- Flexible in mounting, variable configurations
- High reliability: Direct coupling of motor and valve, no gear mechanism
- Capacity range: 60-1100 kW, R410A; 39-1700 kW, R134a
- Maximum working pressure 45bar (FX5-8); 35 bar FX9





Commercial Comfort

The EXD-SH1/2 are designed for precise control of the superheat and drive the FX valves series.

Features:

- Self adapting superheat/economizer control
- EXD-SH1 for one valve
- EXD-SH2 for two valves in independent refrigerant circuits
- Modbus communication
- Integrated keyboard with two line display



EC3-D72/D73 is a superheat controller with patented gated logic superheat control in conjunction with Copeland Scroll Digital[™] for compact, single evaporator systems.

- Patented self-adapting gated logic algorithm
- Only for EX4-6 expansion valves series
- Integral rechargeable battery to close electrical control valve in case of power loss
- Communication with or without TCP-IP



Residential Comfort

EXM/EXL Unipolar stepper motor driven electronic expansion valves are for precise control of refrigerant mass flow in heat pumps.

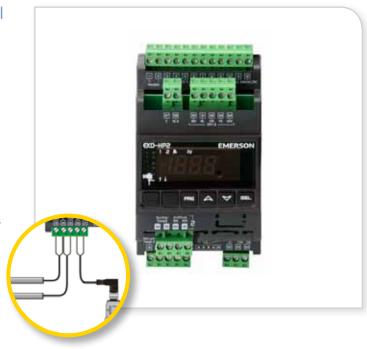
Features:

- Hermetic design
- Capacity range: 1.8-23 kW, R410A
- Bi-flow, same capacity in normal and reverse flow direction
- High MOPD: 40 bar in normal flow direction
- Removable coils in two versions: 12V DC / 24V DC
- Reliability: 225 million pulses at 40 bar differential pressure
- Meets the Copeland Heating Scroll EVI performance requirements (-10°C/+68°C, R410A)



The EXD-HP1/2 are designed for precise control of superheat of the main evaporator and or economizer control for heat pumps.

- Self-adapting superheat/economizer control including compressor hot gas temperature control by wet vapor injection
- Only for EXM/EXL series electronic expansion valves
- EXD-HP1: For one valve
 - → Superheat control or economizer control
- EXD-HP2: For two valves in independent refrigerant circuits
 - → Superheat control for two valves or one valve superheat control, second valve economizer control
- Modbus communication
- Offering as a package with pressure transmitter (PT5) and temperature sensor (ECN-P)





Emerson Climate Technologies Controls Navigator

Discover our new Controls Navigator tool. Easily and quickly find the right solution for your requirements, including all related accessories and part code numbers.



For more details, see www.emersonclimate.eu

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