

Copeland Scroll™ compressors for commercial air conditioning applications



Copeland Scroll™


EMERSON
Climate Technologies

Setting the standard

Today's commercial air conditioning applications are as varied as the customers you serve. Each one has its own set of challenges and demands, but several requirements remain constant. Your customers deserve innovative technologies that leverage proven reliability methods and offer consistently high performance. Downtime is not an option for their business – and your reputation. When it comes to offering innovative, reliable, high performing compressors, Copeland Scroll™ continues to set the industry standard.

Innovation at its finest

Many factors influence system design, ranging from comfort requirements of the conditioned space, to regulatory requirements, to efficiency standards. Raising the technological bar is at the core of our business. Whether you require high efficiency fixed speed compressors, multiple stage compressors, or fully modulating compressors, Copeland Scroll™ offers a solution to match your needs.

Peace of mind

Downtime for your customer can damage your reputation and more importantly, theirs. With advanced features such as protection, diagnostics and communication available for Copeland Scroll compressors you can be assured of maximum uptime. With the revolutionary CoreSense™ technology onboard 20-40HP Copeland Scroll compressors, your system controller can be in direct communication with each compressor, allowing you the ability to protect and adjust system parameters in real

time. Or perhaps you need a quick check of the system; our Comfort Alert™ diagnostics use the compressor as a sensor to monitor and analyze system performance allowing the system to detect and protect against potentially damaging conditions.

The ability to modulate

With increased focus on improved comfort and part load energy efficiency, capacity modulation is becoming increasingly important. For systems with higher SEER requirements, the two stage Copeland Scroll UltraTech™ compressor can help achieve the optimum SEER level. Perhaps tight control is of the essence and maintaining consistent temperature and humidity levels is critical. Copeland Scroll Digital™ compressors offer full modulation from 10-100% of rated capacity allowing for maximum comfort. In addition to precise temperature and humidity control, Copeland Scroll Digital can also save you up to 30% on energy costs versus traditional methods of modulation.



Copeland Scroll Compressors

- ◆ More than 100 million installations worldwide
- ◆ Over 3 million Copeland Scroll UltraTech and Copeland Scroll Digital compressors installed
- ◆ 25 years experience as the leader in scroll compression technology



Quality you can count on

Copeland Scroll compressors bring you – and your customers long lasting reliability and durability. Our patented axial and radial compliance design provides superior liquid and debris handling. And because of our compliant design, Copeland Scroll compressors “wear in”, not out. With our compressors, you can count on years of dependable performance, even under the most rugged conditions.

Unparalleled performance and flexibility

Copeland Scroll compressors deliver performance advantages and a product offering that is unmatched in the industry. Optimized for the commercial air conditioning market, our products offer high efficiency levels for full load and part load conditions – take your pick. From standard rooftops, splits and chillers to specialty systems like pool heaters and computer room cooling, we have a compressor that is just right for the job.





Comfort Alert™ diagnostic codes

System condition	Lockout
System pressure trip	Yes
Short-cycling	Yes
Locked rotor	Yes
Open circuit	No
Missing phase	Yes
Reverse phase	Yes
Welded contactor	No
Low voltage	No

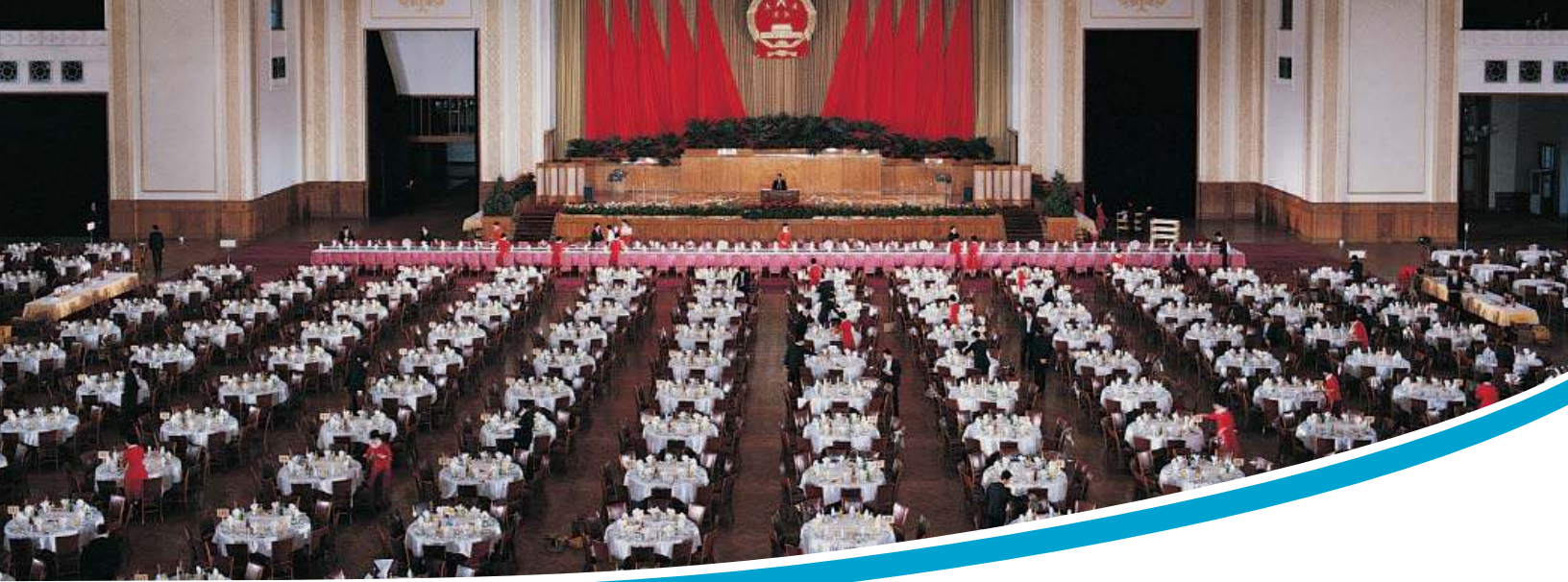


CoreSense™ diagnostic codes

System condition	Lockout
Module loss of function	Yes
Motor high temp	No
Open motor thermistor	Yes
Short cycling	Yes
Scroll high temp	Yes
Missing phase	Yes
Reverse phase	Yes
Module low voltage	No
Loss of communication	No



For more information visit our Online Product Information (OPI) at EmersonClimate.com



R-410A Copeland Scroll™ models

Single						Tandems					
Capacity (HP)	Model	Voltage	Capacity (HP)	Model	Voltage	Capacity (HP)	Model	Voltage	Capacity (HP)	Model	Voltage
1.7	ZP20K5E	PFV/J, TFD/5/E	4.8	ZP57K5E	PFV, TFD/5/E/7	7	ZPT88K5E	PFV,TFD/5/E	25	ZPU302KCE	TXD/5/E/7
1.9	ZP21K5E	PFV/J, TFD/5/E	5	ZP61K5E	PFV, TFD/5/E/7	8	ZPT98K5E	PFV,TFD/5/E	26	ZPT308KCE	TWD/5/E/7
2	ZP24K5E	PFV/J, TFD/5/E	5.5	ZP67KCE	PFV, TFD/5/E/7	9	ZPT108K5E	TFD/5/E/7	27	ZPU319KCE	TXD/5/E/7
2.1	ZP25K5E	PFV/J, TFD/5/E	6	ZP72KCE	PFV, TFD/5/E/7	9.5	ZPT114KCE	PFV,TFD/5/E/7	28	ZPU336KCE	TWD/5/E/7
2.3	ZP28K5E	PFV, TFD/5/E	6.3	ZP76CKE	TFD/5/E/7	10	ZPT122KCE	TFD/5/E/7	30	ZPT364KCE	TWD/5/E/7
2.4	ZP29K5E	PFV/J, TFD/5/E	7	ZP83KCE	TFD/5/E/7	11	ZPT134KCE	TFD/5/E/7	35	ZPU418KCE	TYD/5/E/7
2.6	ZP31K5E	PFV/J, TFD/5/E	7.5	ZP91KCE	TFD/5/E/7	12	ZPT144KCE	TFD/5/E/7	40	ZPT472KCE	TED/5/E/7
2.8	ZP34K5E	PFV, TFD/5/E	9	ZP103KCE	TFD/5/E/7	14	ZPT166KCE	TFD/5/E/7	45	ZPU532KCE	TED/5/E/7
3	ZP36K5E	PFV, TFD/5/E	10	ZP120KCE	TFD/5/E/7	15	ZPT182KCE	TFD/5/E/7	50	ZPT592KCE	TED/5/E/7
3.2	ZP38K5E	PFV, TFD/5/E	12	ZP137KCE	TFD/5/E/7	18	ZPT206KCE	TFD/5/E/7	57	ZPU681KCE	TYD/5/E/7
3.3	ZP39K5E	PFV/J, TFD/5/E/7	13	ZP154KCE	TFD,TWD/5/E/7	19	ZPU223KCE	TFD/5/E/7	64	ZPT770KCE	TED/5/E/7
3.5	ZP42K5E	PFV/J, TFD/5/E/7	15	ZP182KCE	TFD,TWD/5/E/7	20	ZPT240KCE	TFD/5/E/7	72	ZPU870KCE	TED
3.7	ZP44K5E	PFV/J, TFD/5/E/7	20	ZP236KCE	TED/5/E/7	20	ZPU240KCE	TFD/5/E/7	80	ZPT970KCE	TED
4	ZP49K5E	PFV/J, TFD/5/E/7	25	ZP296KCE	TED/5/E/7	22	ZPU257KCE	TFD/5/E/7			
4.3	ZP51K5E	PFV/J, TFD/5/E/7	32	ZP385KCE	TED/C/5/E/7	23	ZPU274KCE	TXD/5/E/7			
4.5	ZP54K5E	PFV/J, TFD/5/E/7	40	ZP485KCE	TED	24	ZPT274KCE	TFD/5/E/7			

R-410A Copeland Scroll Digital™ models

Single			Tandems		
Capacity (HP)	Model	Voltage	Capacity (HP)	Model	Voltage
2.8	ZPD34	PFV/J/Z,TFD/5/E/7			
3.5	ZPD42	PFV,TFD/5/E/7			
4.3	ZPD51	PFV,TFD/5/E/7			
4.5	ZPD54	PFV,TFD/5/E/7			
5	ZPD61	TFD/5/E/7	10	ZPDT12M	TFD/5
6	ZPD72	TFD/5/E/7	12	ZPDT14M	TFD/5
7	ZPD83	TFD/5/E/7	14	ZPDT16M	TFD/5
7.5	ZPD91	TFD/5/E/7	15	ZPDT18M	TFD/5/E/7
9	ZPD103	TFD/5/E/7	18	ZPDT21M	TFD/5/E/7
10	ZPD120	TFD/5/E/7	20	ZPDT24M	TFD/5/E/7
12	ZPD137	TFD/5/E/7	24	ZPDT27M	TFD/5/E/7
13	ZPD154	TWD/5/E/7	26	ZPDT31M	TWD/5/E/7
15	ZPD182	TWD/5/E/7	30	ZPDT36M	TWD/5/E/7



Copeland Scroll compressor nomenclature

Z	P	D	4	2	K	5	E	-	T	F	D	-	1	3	0	
Z scroll family series	AC, R-410A	D = Digital S = UltraTech® T = Tandem (even) U = Uneven Tandem	Nominal Capacity at Rating Condition	Capacity Multiplier K = 1,000 M = 10,000	Model Variation 4, 5, C		Oil type E = POE Oil = AK/DA or 3MA		P = Single Phase Motor T = Three Phase Motor	F = Internal Inherent Protection W = External Protection Module E = CoreSense Module X = Internal and External Protection Combination TW* + TF* (Tandems Only) Y = Tandems/Trio TE* + TW*	Code 60 Hz. 50 Hz. D 460-3 380-420-3 5 200-230-3 200-220-3 E 575-3 — 7 380-3 — V 208-230-1 200-1* J 265-1 220-240-1 Z — 220-240-1					Bill of Material Product Variation

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