

# Copeland Scroll® Outdoor Condensing Unit for Commercial Refrigeration



## Energy Saving Refrigeration Solutions

The Copeland Scroll Outdoor Condensing Unit (XJ Series) offers the highest energy efficiency available, which lowers utility bills. It's ultra-quiet, creating a more comfortable outdoor environment. Additionally, you can depend upon the XJ unit's superior reliability for long life and its built-in protective diagnostics can prevent unnecessary service calls and premature compressor failure.

### Highest energy efficiency levels

- Provides unmatched energy savings
- Typically offers upgrade payback in less than one year

### Diagnostic protection

- Helps avoid nuisance calls
- Extends the life of the unit
- Reduces potential service costs
- Provides confidence in what your technician is fixing

### Reduced sound levels

- Includes built-in sound reduction for areas with noise ordinances
- Creates a more comfortable outdoor environment for patrons

### Slim profile, lighter weight, and wall mount capability for flexible mounting options

- Often lowers installation costs
- Improves appearance of your enterprise site
- Avoids more costly solutions for location issues

For more information visit [EmersonClimate.com/copelandoutdoorunit](http://EmersonClimate.com/copelandoutdoorunit)



## Delivers Unmatched Energy Savings

The latest Copeland Scroll® refrigeration compressors provide the highest annual energy efficiency levels, along with superior reliability. When combined with a variable speed fan motor, oversized condenser coil, high efficiency fan blade and proprietary electronic algorithms to optimize energy performance, the unit delivers the lowest annual electricity bills. When compared to standard industry units, operators can generally expect a payback of less than one year from energy savings alone by upgrading to the Copeland Scroll Outdoor Condensing Unit (XJ Series).

## Typical Annual Energy Savings<sup>1</sup> – Copeland Scroll Outdoor Condensing Unit Vs Standard Unit

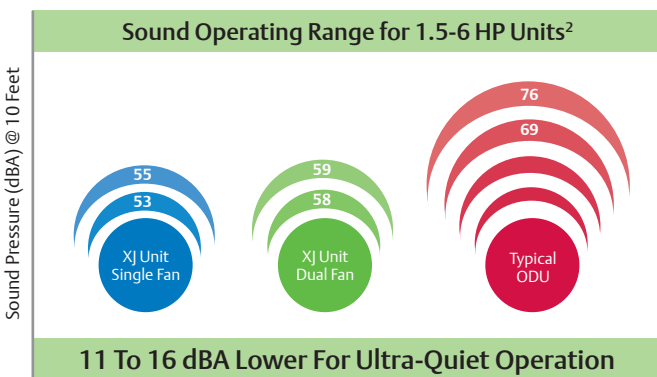
XJAM Series Savings – Cooler						
HP	Traditional Unit Compressor	XJAM kWh Savings	\$0.08/kWh	\$0.12/kWh	\$0.16/kWh	\$0.20/kWh
1.5	Hermetic Reciprocating	4,521	\$362	\$543	\$723	\$904
	Standard Scroll (ZB)	2,561	\$205	\$307	\$410	\$512
	Semi-Hermetic	5,588	\$447	\$671	\$894	\$1,118
2	Hermetic Reciprocating	3,713	\$297	\$446	\$594	\$743
	Standard Scroll (ZS)	5,247	\$420	\$630	\$840	\$1,049
	Semi-Hermetic	5,546	\$444	\$666	\$887	\$1,109
3	Hermetic Reciprocating	5,417	\$433	\$650	\$867	\$1,083
	Standard Scroll (ZS)	5,484	\$439	\$658	\$877	\$1,097
	Semi-Hermetic	6,994	\$560	\$839	\$1,119	\$1,399
4	Hermetic Reciprocating	6,967	\$557	\$836	\$1,115	\$1,393
	Standard Scroll (ZS)	6,900	\$552	\$828	\$1,104	\$1,380
5	Hermetic Reciprocating	9,854	\$788	\$1,182	\$1,577	\$1,971
	Standard Scroll (ZS)	8,889	\$711	\$1,067	\$1,422	\$1,778
	Semi-Hermetic	3,440	\$275	\$413	\$550	\$688
6	Standard Scroll (ZS)	13,237	\$1,059	\$1,588	\$2,118	\$2,647
	Semi-Hermetic	8,046	\$644	\$966	\$1,287	\$1,609

XJAL Series Savings – Freezer						
HP	Traditional Unit Compressor	XJAL kWh Savings	\$0.08/kWh	\$0.12/kWh	\$0.16/kWh	\$0.20/kWh
2	Hermetic Reciprocating	3,775	\$302	\$453	\$604	\$755
	Standard Scroll (ZF)	2,892	\$231	\$347	\$463	\$578
3	Standard Scroll (ZF)	2,288	\$183	\$275	\$366	\$458
	Semi-Hermetic	4,100	\$328	\$492	\$656	\$820
4	Standard Scroll (ZF)	4,504	\$360	\$540	\$721	\$901
	Semi-Hermetic	5,739	\$459	\$689	\$918	\$1,148
5	Standard Scroll (ZF)	2,892	\$231	\$347	\$463	\$578
	Semi-Hermetic	2,050	\$164	\$246	\$328	\$410
6	Standard Scroll (ZF)	5,369	\$430	\$644	\$859	\$1,074
	Semi-Hermetic	1,209	\$97	\$145	\$193	\$242

<sup>1</sup> Estimated kWh savings shown based on simulated unit operation based on average seasonal ambient temperatures in Climate Zone 2. Hermetic Reciprocating, Standard Scroll, and Semi-Hermetic refer to typical standard condensing units using these compressor technologies, with capacity generally matched to ± 10% of the XJ unit. The data shown represents estimated annual operating cost and savings analysis. Actual energy results may vary by: type of application; load calculation assumptions; proper equipment sizing and matching selections; operational variables; and specific location. Emerson Climate Technologies, Inc. assumes no responsibility for actual energy performance deviations from these estimates, or for damages incurred through the use of the information presented. Detailed Annual Energy Efficiency Ratio (AEER) calculation assumptions, comparative unit and compressor model details, and additional Climate Zone savings estimates are available at: [EmersonClimate.com/copelandoutdoorunit](http://EmersonClimate.com/copelandoutdoorunit)

## Eliminates Undesirable Equipment Noise

For sound sensitive locations, standard equipment can require additional noise abatement measures, which add to system and installation costs. Sound reduction technology is built into the XJ Series, with an electronically controlled variable speed fan motor and exclusive fan blade design permitting virtually noiseless operation as temperatures fall at night. For each 3 dBA reduction, neighbors will hear roughly 50% less noise, making the XJ Series the quietest standard unit solution on the market today.



<sup>2</sup> Sound values shown represent the XJ unit's lowest and highest operating dBA measurements, or typical industry outdoor unit published data, for both MT and LT products. Sound pressure values are 10 feet from the unit at 25°F evap for MT and -10°F evap for LT at 90°F ambient. A sound reduction of up to 3 dBA will occur in ambient temperatures below 70°F. This data is typical of "free field" conditions for horizontal air cooled condensing units and may vary depending on the condensing unit installation. There are many factors that affect the sound reading of a condensing unit such as unit mounting, reflecting walls, background noise and operating condition.

## Provides Superior Reliability

Commercial refrigeration investments are significant, but maintenance and repair expenses over the life of the equipment can sometimes exceed the original product cost itself. The XJ unit's standard built-in protective diagnostics have been shown to improve service technicians' speed and accuracy, reducing the overall lifecycle cost of ownership.

### Diagnostic Features

- Over-current
- High Pressure Resets
- Liquid Flood-back Prediction
- Smart Crank Case Heater
- Fault Code History
- Incorrect Phase Rotation
- Low Pressure Cut-outs
- Fresh Start Logic
- Compressor Short Cycling
- Remote Alarming

Copeland Scroll XJ Unit Line-Up							
Unit Model	Compressor	HP	Capacity	Unit Model	Compressor	HP	Capacity
<b>Medium Temperature – Coolers</b>				<b>Low Temperature – Freezers</b>			
XJAM-015Z	ZB11KCE	1.5	14100	XJAL-020Z	ZX106KCE	2	12900
XJAM-020Z	ZX15KCE	2	18800	XJAL-030Z	ZX109KCE	3	16800
XJAM-030Z	ZX21KCE	3	27200	XJAL-035Z	ZX111KCE	3.5	18900
XJAM-040Z	ZX30KCE	4	37000	XJAL-040Z	ZX114KCE	4	24200
XJAM-050Z	ZX38KCE	5	45400	XJAL-050Z	ZX115KCE	5	26600
XJAM-060Z	ZX45KCE	6	52400	XJAL-050Z	ZX116KCE	5	26600
				XJAL-060Z	ZX118KCE	6	33700

<sup>\*</sup>MT capacity @ 95°F ambient, 25°F evap

<sup>\*</sup>LT capacity @ 95°F ambient, -10°F evap  
<sup>\*\*</sup>Single phase    <sup>\*\*\*</sup>Three phase

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