

Copeland Scroll™

IZSI condensing unit for refrigeration applications



Copeland Scroll™


EMERSON™
Climate Technologies

World Leader in Scroll Compressor Technology

Emerson Climate Technologies introduced a new phase of energy efficiency for the HVACR industry 25 years ago with the launch of Copeland Scroll™ technology in 1987. By 1992, the company had produced one million Copeland Scroll compressors.

Today, Emerson™ is the world's largest manufacturer of air-conditioning and refrigeration scroll compressors with over 100-million scroll compressors installed worldwide. Leveraging Emerson's vast global network and R&D resources, the company continues to innovate and invest in climate solutions that help improve human comfort, minimize the environmental impact, and ensure food quality.

IZSI R404A Models for Low and Medium Temperature Application

Simple and Reliable – Powered by Copeland Scroll with CoreSense™

- Liquid Injection Technology – controlled by CoreSense – manages discharge temperature for maximum performance and reliability
- CoreSense can detect and display sensor failure through its LEDs, enabling easier troubleshooting
- Copeland Scroll compressors have fewer moving parts than reciprocating compressors, thus making it more reliable
- Consistent quality achieved through factory built Condensing Unit

Wide Operating Envelope for Various Applications

- Robust and efficient operation from -30°C to 5°C evaporating temperature
- Suitable for application ranging from Low Temperature and Medium Temperature cold rooms to Medium Temperature showcases

Efficient and Quiet – Key Scroll Attributes

- COP improvement leads to higher annual electrical savings as compared to systems with reciprocating compressors
- Low sound and vibration leading to quieter operation
- No complex internal suction and discharge valves for higher reliability

Low Applied Cost – Completely Factory Built

- IZSI comes with factory installed accessories (e.g. liquid line filter drier, sight glass/moisture indicator, liquid line solenoid valve, electrical contactor) thus simplifying component sourcing



Performance Data

R404A

Condensing Unit Model		IZSI06AE	IZSI08AE	IZSI09BE	IZSI11BE	IZSI14CE	IZSI15CE	IZSI18DE
Compressor Model		ZSI06KQE	ZSI08KQE	ZSI09KQE	ZSI11KQE	ZSI14KQE	ZSI15KQE	ZSI18KQE
LT Cold Room	Capacity	2.25	2.59	3.05	3.66	4.59	5.15	6.63
	Power	1.82	2.20	2.23	2.58	3.21	3.61	4.37
	COP	1.23	1.18	1.37	1.42	1.43	1.43	1.52
MT Showcase	Capacity	3.86	4.43	5.17	6.29	7.90	8.67	11.07
	Power	1.99	2.42	2.46	2.93	3.77	4.28	5.22
	COP	1.94	1.83	2.10	2.14	2.10	2.03	2.12
MT Cold Room	Capacity	4.53	5.18	6.03	7.37	9.24	10.08	12.86
	Power	2.05	2.49	2.55	3.07	3.96	4.58	5.51
	COP	2.21	2.08	2.36	2.40	2.33	2.20	2.33

Notes: 1. Conditions are rated as follows:

- Return Gas Temp. (°C): 18.33
- Subcooling (°C): 2.77
- LT Cold Room -25°C Evaporating Temperature / 32°C Ambient
- MT Showcase -10°C Evaporating Temperature / 32°C Ambient
- MT Cold Room -5°C Evaporating Temperature / 32°C Ambient

2. Units are in Kilowatts (kW) for Capacity and Power and W/W for COP

Technical Data

R404A

Condensing Unit Model	IZSI06AE	IZSI08AE	IZSI09BE	IZSI11BE	IZSI14CE	IZSI15CE	IZSI18DE
Electrical Code	PFZ		TFM		TFM		TFM
Compressor Model	ZSI06KQE	ZSI08KQE	ZSI09KQE	ZSI11KQE	ZSI14KQE	ZSI15KQE	ZSI18KQE
Chassis	A		B		C		D
Receiver (Liter)	2.5		5.0		5.0		7.0
Chassis WxDxH (mm)	Single Fan	716 x 538 x 470		738 x 674 x 521		738 x 674 x 572	
	Dual Fan	-		-		-	
Phase - Hz	1 Phase - 50 Hz		3 Phase - 50 Hz		3 Phase - 50 Hz		3 Phase - 50 Hz
Rated Voltage (Volts)	220-240		380-420		380-420		380-420
Unit LRA (Amperes)	57.0	72.0	40.0	52.0	52.0		74.0
Unit RLA (Amperes, MCC/1.44)	13.0	13.0	6.0	8.0	9.0	10.0	11.0
Net Weight (kg, including oil)	65.0		70.0	78.0	80.0		85.0
Oil Type	POE		POE		POE		POE

Bill of Material

Standard BOM Content	BOM	
	500	501 *
CoreSense™	✓	✓
Electrical Box	✓	✓
Crank Case Heater	✓	✓
Filter Drier - Soldered Connection	✓	
Moisture Indicator / Sight Glass	✓	✓
Dual Pressure Switch	✓	✓
Receiver with Valve	✓	✓
Fan Motor	✓	✓
Heat Exchanger	✓	✓
Compressor with Stub Tube	✓	
Compressor with Rotalock Connections		✓

*To be released in the future

Nomenclature

I	Z	S	I	0	6	A	E	-	P	F	Z	-	5	0	0	
I = Indoor Type CDU	Z = Scroll C = CR S = S/H K = FHP	S = Wide Operating Range	I = Liquid Injection V = Vapor D = Digital N = None	Compressor Nominal Capacity (Btu/hr) at 60Hz Rating Condition		Chassis Type	Blank = Mineral Oil E = POE Oil		PFZ = 220-240 V 1 Ph-50 Hz TFM = 380-420 V 3 Ph-50 Hz					Bill of Material		
Condensing Series	Compressor Type	Operating Range		Nominal Capacity (Btu/hr)			Oil Charged									
Base Model									Electrical Code			BOM				

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Asia 01 A01 05 – R00 Issued 01/2014 – GSCAA045
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