

Copeland™ Compressors

for refrigeration applications



Copeland™
brand products



EMERSON™
Climate Technologies

Pioneering Technologies For Best-In-Class Products

EmersonClimate Technologies is the world's leading provider of heating, ventilation, air conditioning and refrigeration solutions for residential, commercial and industrial applications, supporting the industry with advanced technology, technical support and training services.

For more than 80 years, we have been introducing innovative technology to the market, from the first semi-hermetic and hermetic compressors in the 1940s and 1950s, the high efficiency Discus semi-hermetic, air conditioning and heating scroll compressors in the 1980s and 1990s, to the new Stream semi-hermetic and the digital scroll compressor technology of today.

Based on this, we have developed an unequalled range of solutions for the refrigeration and air conditioning markets. In recent years, we have become a major solution provider to the air conditioning and refrigeration industry. Our range of Copeland™ brand products addresses the diverse needs of all of these markets. With scrolls and semi-hermetic compressors available for all main refrigerants, equipped with smart electronics and capable of modulation, Emerson Climate Technologies has taken compressor technology to new heights.

Our Vision:

Emerson Climate Technologies, With Our Partners,
Will Provide Global Solutions To Improve Human Comfort,
Safeguard Food And Protect Our Environment.



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ZBD

Medium and high temperature application for supermarkets, convenience stores and box retail operators



ZF

Provides best-in-class performance for low ambient temperatures and frozen food application



FUSION

Combines Emerson's revolutionary scroll technology and the serviceability of a traditional semi-hermetic compressor



STREAM

State-of-the-art semi-hermetic compressor series suitable for handling all applications



ZX

Medium And Low Temperature Application for commercial and foodservice industry



ECZ

High Cooling Capacity
Best in Class Energy Efficiency
High Product Quality and Reliability
Compact Shape

Copeland Scroll™ ZB Compressor

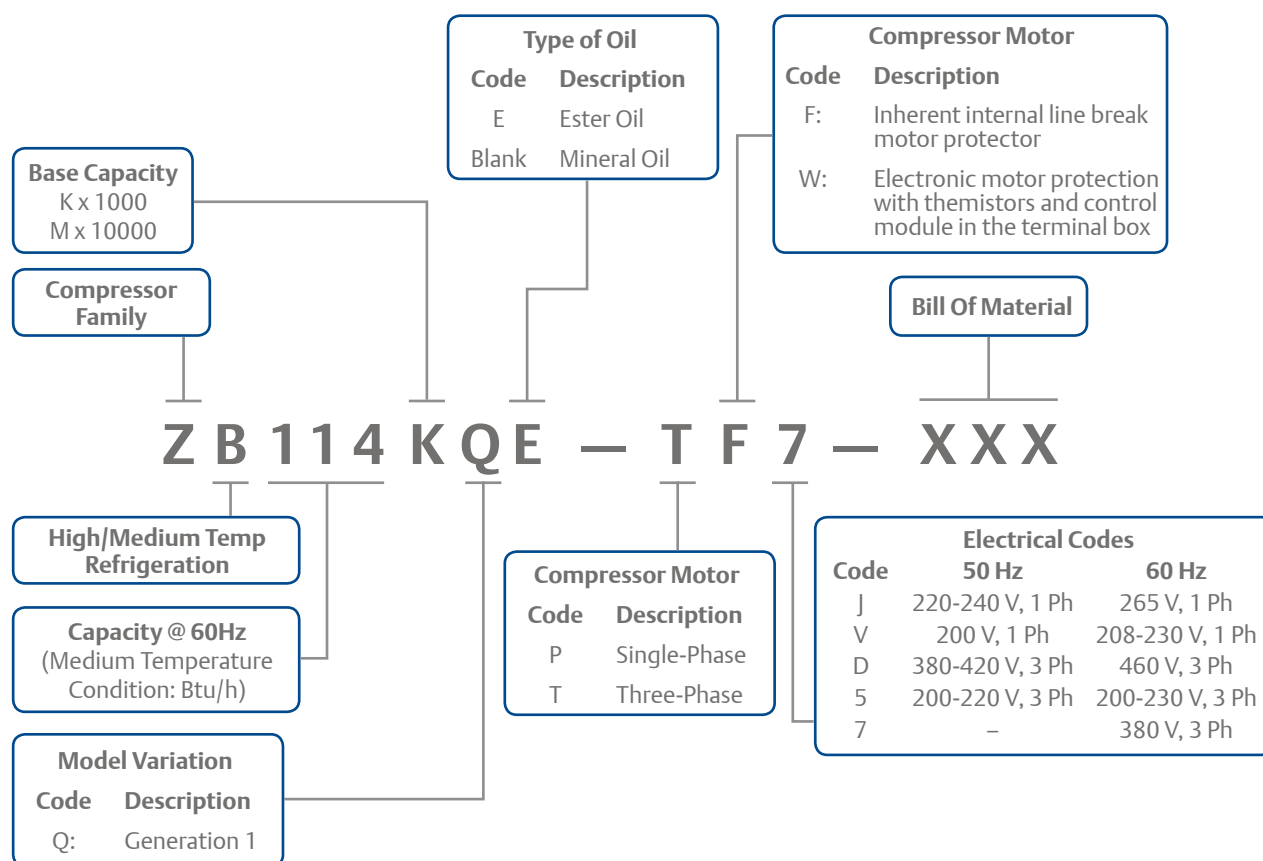
Copeland Scroll™ ZB compressors is proven for its reliable and low running cost in high-medium temperature refrigeration applications. The most common applications of Copeland Scroll ZB compressors are process chillers, process room cooling, controlled atmosphere mushroom farming rooms, milk storage tanks, cold rooms for storage of fruits, vegetable, spices, chilled meat, chilled fish, bakery storage and medium temperature display case with use of R404A refrigerant. In addition, with appropriate system design and testing, ZB compressors can be applied in specialty applications like, ice machines, compressed air dryers, oil coolers, medium temperature display case with use of R407 series and R134a refrigerants.



The highly popular unit configurations are outdoor type boxed condensing units, indoor type open condensing units, multiple compressor racks and integrated refrigeration units in machineries.

Copeland Scroll ZBKQ series compressors are specifically designed for Asian market requirements. Condensing units with ZB Scrolls are further enhanced with use of Emerson line components like filter driers, thermostatic expansion valves and condensing unit controllers. Reliability of multiple compressors racks are improved with Emerson electronic oil management system and protection, electronic expansion valves and drives. The condensing units can be integrated with the cold rooms and display cased with Emerson cold room and showcase controllers.

Nomenclature



Bill of Material

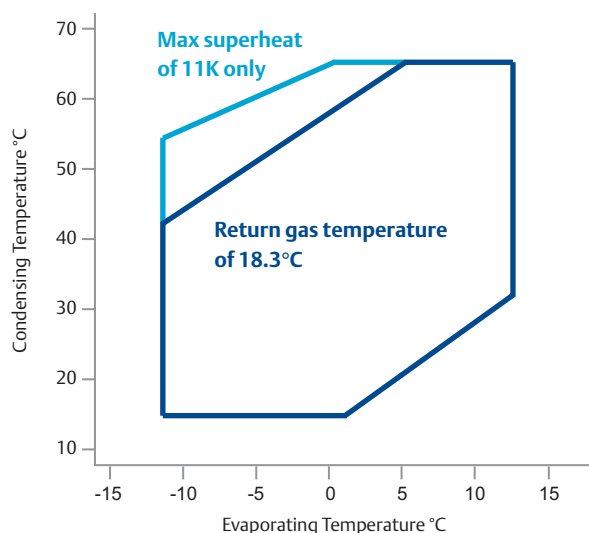
Compressor Family	ZB15-ZB48				ZB58-ZB114			
BOM	523	524	558	559	523*	524*	550	551
Suction & Discharge Brazing Connection		✓	✓			✓	✓	
Suction & Discharge Rotalock Connection	✓			✓	✓			✓
Oil Sight Glass			✓	✓			✓	✓
Schrader Valve							✓	✓

*Not applicable for ZB95/114 models.

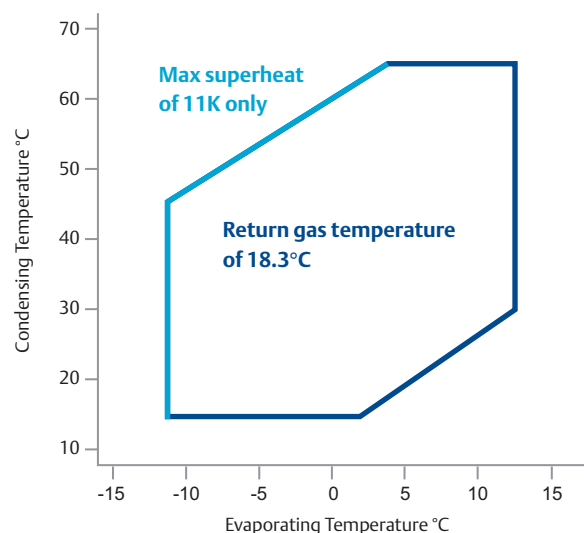
Operating Envelopes

R22

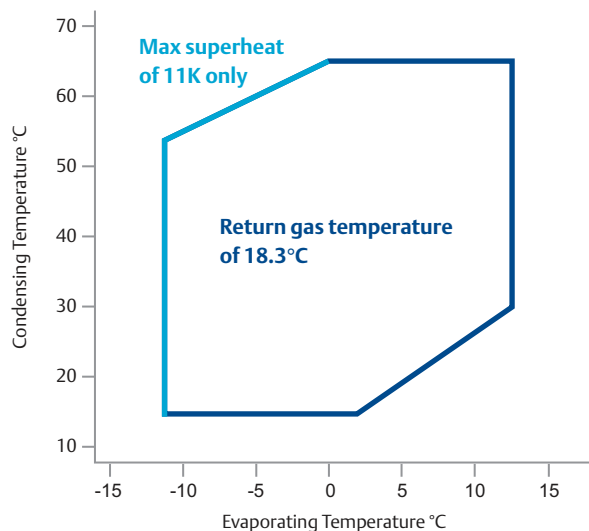
ZB15KQ-ZB88KQ



ZB95KQ / ZB114KQ



ZB95KQ/ZB114KQ (TW7, TW5 Motors)

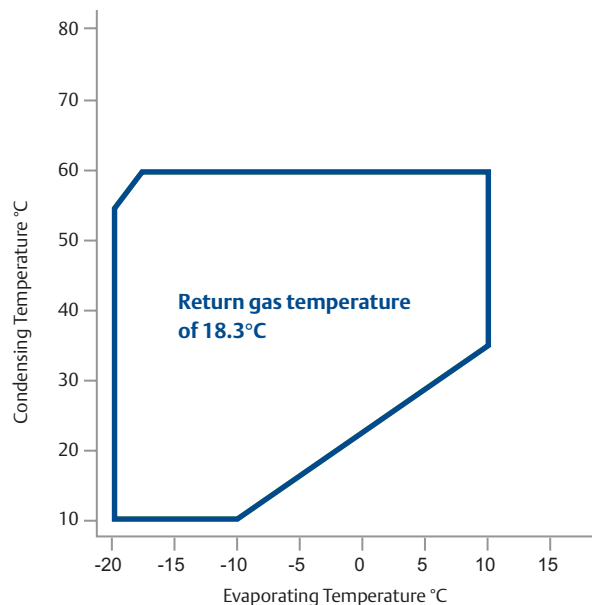


Note: TW5-R22 approved only at 60Hz.

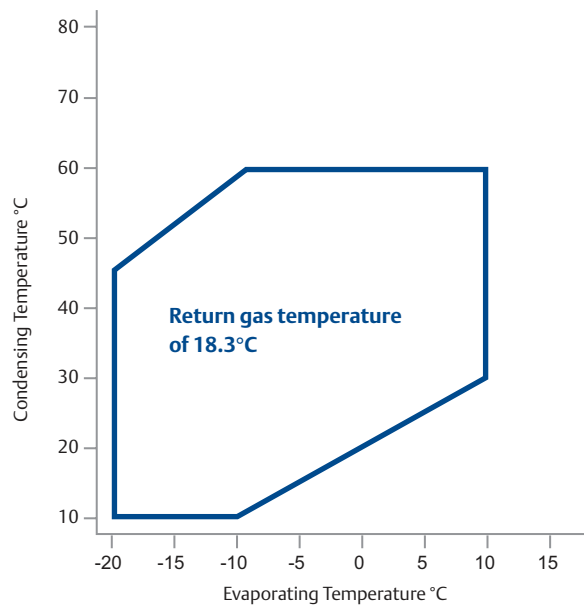
Operating Envelopes

R404A

ZB15KQE~ZB88KQE

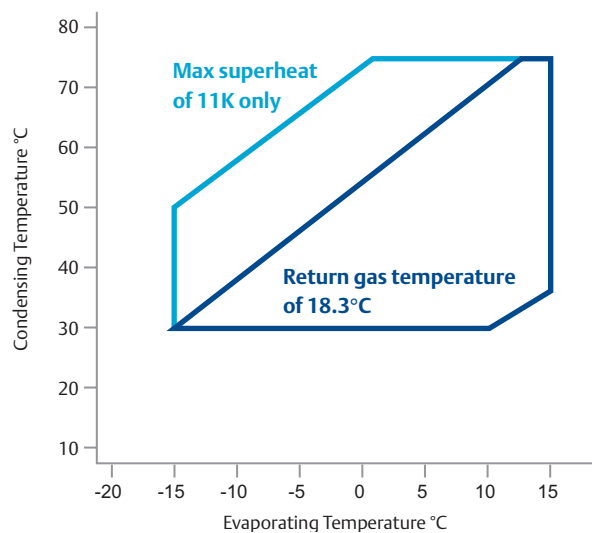


ZB95KQE/ZB114KQE

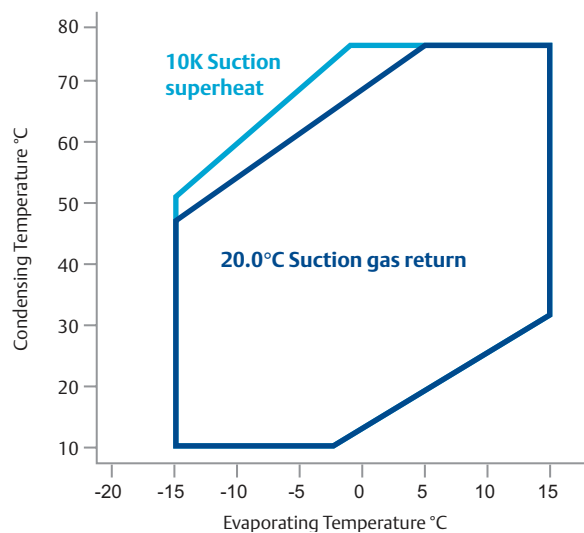


R134a

ZB15KQE~ZB76KQE



ZB95KQE/ZB114KQ E(TFD Motor Only)



Product Line-up

ZB-PFV Capacity (kW), R22

Model	Medium Temp Cold Room ⁽¹⁾	Medium Temp Showcase ⁽²⁾
	60Hz	60Hz
ZB15KQ	4.51	3.64
ZB19KQ	5.20	4.19
ZB21KQ	6.56	5.29
ZB26KQ	7.57	6.11
ZB29KQ	9.03	7.31
ZB38KQ	10.40	8.88

ZB-PFV Capacity (kW), R404A

Model	Medium Temp Cold Room ⁽¹⁾	Medium Temp Showcase ⁽²⁾
	60Hz	60Hz
ZB15KQE	4.64	3.85
ZB19KQE	5.79	4.80
ZB21KQE	6.93	5.75
ZB26KQE	8.09	6.70
ZB29KQE	9.16	7.55

ZB-TF5/TFD Capacity (kW), R22

Model	Medium Temp Cold Room ⁽¹⁾		Medium Temp Showcase ⁽²⁾	
	50Hz	60Hz	50Hz	60Hz
ZB15KQ-TFD	3.71	4.60	2.99	3.74
ZB19KQ-TFD	4.28	5.16	3.45	4.17
ZB21KQ-TFD	5.39	6.70	4.35	5.43
ZB26KQ-TFD	6.44	7.77	5.23	6.30
ZB29KQ-TFD	7.24	9.04	5.84	7.31
ZB38KQ-TFD	9.00	11.20	7.26	9.07
ZB45KQ-TFD	10.90	13.35	8.85	10.90
ZB48KQ-TFD	12.00	14.70	9.73	11.95
ZB58KQ-TFD	13.90	17.05	10.90	13.60
ZB66KQ-TFD	16.20	19.60	13.10	15.85
ZB76KQ-TFD	19.10	23.40	15.45	19.10
ZB88KQ-TFD	21.70	25.90	17.55	20.70
ZB95KQ-TFD	22.60	27.60	17.55	21.80
ZB114KQ-TFD	27.00	33.40	21.10	26.70

ZB-TF5/TFD Capacity (kW), R404A

Model	Medium Temp Cold Room ⁽¹⁾		Medium Temp Showcase ⁽²⁾	
	50Hz	60Hz	50Hz	60Hz
ZB15KQE-TFD	3.72	4.57	3.05	3.75
ZB19KQE-TFD	4.67	5.75	3.90	4.75
ZB21KQE-TFD	5.61	6.90	4.65	5.80
ZB26KQE-TFD	6.56	8.04	5.50	6.70
ZB29KQE-TFD	7.61	9.13	6.30	7.60
ZB38KQE-TFD	9.60	11.50	7.95	9.55
ZB45KQE-TFD	11.25	13.65	9.35	11.35
ZB48KQE-TFD	12.35	15.05	10.25	12.50
ZB58KQE-TFD	14.90	17.95	12.25	13.65
ZB66KQE-TFD	16.75	20.30	13.98	16.90
ZB76KQE-TFD	19.90	24.00	16.45	20.00
ZB95KQE-TFD	24.40	29.50	20.10	24.40
ZB114KQE-TFD	28.90	35.20	23.70	29.10

Notes: 1) MT Coldroom: Evaporating -7°C, Ambient 32°C, Subcooling 0°C, Return Gas 18.3°C
 2) MT Showcase: Evaporating -12°C, Ambient 32°C, Subcooling 0°C, Return Gas 18.3°C
 3)  Max Suction superheat of 11K only in dark grey region

Product Line-up

ZB-TF7 Capacity (kW), R22

Model	Medium Temp Cold Room ⁽¹⁾	Medium Temp Showcase ⁽²⁾
	60Hz	60Hz
ZB15KQ	4.18	2.88
ZB19KQ	-	-
ZB21KQ	6.27	4.63
ZB26KQ	-	-
ZB29KQ	9.04	7.31
ZB38KQ	11.20	9.07
ZB45KQ	13.35	10.90
ZB48KQ	14.70	11.95
ZB58KQ	17.05	13.60
ZB66KQ	19.60	15.85
ZB76KQ	23.40	19.10
ZB88KQ	25.90	20.70

ZB-TF7 Capacity (kW), R404A

Model	Medium Temp Cold Room ⁽¹⁾	Medium Temp Showcase ⁽²⁾
	60Hz	60Hz
ZB15KQE	4.47	2.88
ZB19KQE	-	4.20
ZB21KQE	6.60	5.46
ZB26KQE	-	6.50
ZB29KQE	9.13	7.59
ZB38KQE	11.50	9.57
ZB45KQE	13.65	11.35
ZB48KQE	15.05	12.50
ZB58KQE	17.95	14.85
ZB66KQE	20.30	16.90
ZB76KQE	24.00	20.00
ZB95KQE	29.50	24.40
ZB114KQE	35.20	29.10

ZB-TF7/D Capacity (kW), R134a

Model	Medium Temp Cold Room ⁽¹⁾	Medium Temp Showcase ⁽²⁾
	60Hz	60Hz
ZB15KQE	2.75	2.17
ZB19KQE	3.17	2.50
ZB21KQE	4.00	3.15
ZB26KQE	4.62	3.64
ZB29KQE	5.32	4.20
ZB38KQE	6.90	5.50
ZB45KQE	8.30	6.60
ZB48KQE	9.07	7.20
ZB58KQE	11.35	8.90
ZB66KQE	12.70	9.96
ZB76KQE	14.85	11.65

ZB-PFV Capacity (kW), R134a

Model	Medium Temp Cold Room ⁽¹⁾	Medium Temp Showcase ⁽²⁾
	60Hz	60Hz
ZB15KQE	2.80	2.20
ZB19KQE	3.22	2.54
ZB21KQE	3.93	3.11
ZB26KQE	4.42	3.52
ZB29KQE	6.10	4.80

Notes: 1) MT Coldroom: Evaporating -7°C, Ambient 32°C, Subcooling 0°C, Return Gas 18.3°C
 2) MT Showcase: Evaporating -12°C, Ambient 32°C, Subcooling 0°C, Return Gas 18.3°C
 3)  Max Suction superheat of 11K only in dark grey region

Technical Data

Model		ZB15KQ ZB15KQE	ZB19KQ ZB19KQE	ZB21KQ ZB21KQE	ZB26KQ ZB26KQE	ZB29KQ ZB29KQE	ZB38KQ ZB38KQE	ZB45KQ ZB45KQE
Nominal power (HP)		2	2.5	3	3.5	4	5	6
Displacement (m³/hr)	50Hz	5.90	6.80	8.60	9.90	11.40	14.40	17.10
	60Hz	7.10	8.20	10.40	12.00	13.80	17.30	20.60
LRA	50Hz	PFJ	58.00	61.00	82.00	97.00	114.00	-
		TF5/TW5	56.00	70.00	83.00	95.00	98.00	139.00
		TFD	26.00	32.00	40.00	46.00	50.00	65.50
	60Hz	PFV	61.00	72.50	95.00	109.00	137.00	-
		TF5/TW5	55.00	63.00	77.00	88.00	91.00	128.00
		TF7/TW7	27.00	30.00	39.00	41.00	54.00	64.00
		TFD	27.00	31.00	39.00	44.00	50.00	63.00
RLA	KQ	PFJ	11.40	12.90	16.40	17.10	19.30	-
		PFV	13.60	15.00	18.40	20.40	22.10	-
		TF5/TW5	8.90	10.00	11.40	13.90	16.40	20.70
		TF7/TW7	5.00	5.80	7.50	7.30	9.30	10.70
		TFD	4.30	4.30	5.70	7.10	7.90	10.00
	KQE	PFJ	13.20	14.60	15.40	18.90	20.00	-
		PFV	15.70	17.10	20.70	23.60	25.00	-
		TF5/TW5	8.90	10.00	12.10	13.20	17.10	24.00
		TF7/TW7	5.10	5.90	7.40	7.60	9.60	12.40
Max Continuous Current	KQ	TFD	5.00	5.00	7.40	6.40	7.90	9.60
		PFJ	16.00	18.00	23.00	24.00	27.00	-
		PFV	19.00	21.00	25.80	28.60	31.00	-
		TF5/TW5	12.50	14.00	16.00	19.40	23.00	29.00
		TF7/TW7	7.00	8.10	10.50	10.20	13.00	15.00
	KQE	TFD	6.00	6.00	8.00	10.00	11.00	13.50
		PFJ	18.50	20.50	21.50	26.50	28.00	-
		PFV	22.00	24.00	29.00	33.00	35.00	-
		TF5/TW5	12.50	14.00	17.00	18.50	24.00	33.60
Cranks case Heater (W)	Connection Tube size (inch)	Discharge Tube Outer Diameter	1/2	1/2	1/2	1/2	1/2	1/2
		Suction Tube Outer Diameter	3/4	3/4	3/4	3/4	7/8	7/8
	Dimension (mm)	Length	242.00	242.00	243.00	243.00	242.00	242.00
		Width	242.00	242.00	244.00	244.00	242.00	242.00
		Height	383.00	389.00	412.00	425.00	430.00	457.00
	Mounting pants installation size (hole size)		190x190(8.5)	190x190(8.5)	190x190(8.5)	190x190(8.5)	190x190(8.5)	190x190(8.5)
	Weight (kg)	Net	23.00	25.00	27.00	28.00	33.00	38.00
		Gross	26.00	29.00	30.00	31.00	37.00	44.00

Technical Data

Model		ZB48KQ ZB48KQE	ZB58KQ ZB58KQE	ZB66KQ ZB66KQE	ZB76KQ ZB76KQE	ZB88KQ	ZB95KQ	ZB114KQ	
Nominal power (HP)		7	8	9	10	12	13	15	
Displacement (m³/hr)		50Hz	18.80	22.10	25.70	28.80	33.20	36.40	43.30
		60Hz	22.60	26.70	31.00	34.80	40.10	43.90	52.30
LRA	50Hz	TF5/TW5	179.00	203.00	231.00	239.00	273.00	-	-
		TFD	101.00	95.00	111.00	118.00	118.00	140.00	174.00
	60Hz	TF5/TW5	164.00	195.00	225.00	239.00	245.00	300.00	340.00
		TF7/TW7	100.00	123.00	140.00	145.00	145.00	139.00	196.00
		TFD	100.00	95.00	114.00	125.00	125.00	150.00	179.00
RLA	KQ	TF5/TW5	25.00	32.10	33.60	41.40	47.10	53.60	58.60
		TF7/TW7	12.10	16.70	18.60	23.60	24.40	28.60	35.70
		TFD	12.10	16.40	17.30	20.00	22.10	25.00	27.90
	KQE	TF5/TW5	26.00	32.10	33.60	41.40	-	61.40	65.00
		TF7/TW7	-	17.10	18.60	23.60	-	35.00	42.90
		TFD	13.60	16.40	17.30	20.00	-	26.40	28.60
Max Continuous Current	KQ	TF5/TW5	35.00	45.00	47.00	54.00	66.00	75.00	82.00
		TF7/TW7	17.00	23.40	26.00	33.10	34.20	40.00	50.00
		TFD	17.00	23.00	24.20	26.90	31.00	35.00	42.00
	KQE	TF5/TW5	36.40	43.00	44.00	58.00	-	86.00	91.00
		TF7/TW7	-	24.00	29.00	33.00	-	49.00	60.00
		TFD	19.10	23.00	24.50	28.00	-	37.00	40.00
Crankcase Heater (W)		70.00	90.00	90.00	90.00	90.00	90.00	90.00	
Connection Tube size (inch)		Discharge Tube Outer Diameter	3/4	7/8	7/8	7/8	7/8	7/8	7/8
		Suction Tube Outer Diameter	7/8	1 1/8	1 3/8	1 3/8	1 3/8	1 3/8	1 3/8
Dimension (mm)		Length	242.00	264.00	264.00	264.00	264.00	264.00	264.00
		Width	242.00	284.00	284.00	284.00	284.00	285.00	285.00
		Height	457.00	477.00	546.00	546.00	546.00	552.00	553.00
Mounting pants installation size (hole size)		190x190(8.5)	190x190(8.5)	190x190(8.5)	190x190(8.5)	190x190(8.5)	190x190(8.5)	190x190(8.5)	
Weight (kg)		Net	40.00	57.00	59.00	62.00	62.00	62.00	63.00
		Gross	44.00	60.00	62.00	65.00	65.00	65.00	66.00

Copeland Scroll Digital™ ZBD Compressor

Copeland Scroll™ ZBD compressors is welcomed by the refrigeration industry for a simple and reliable continuous modulation solution.

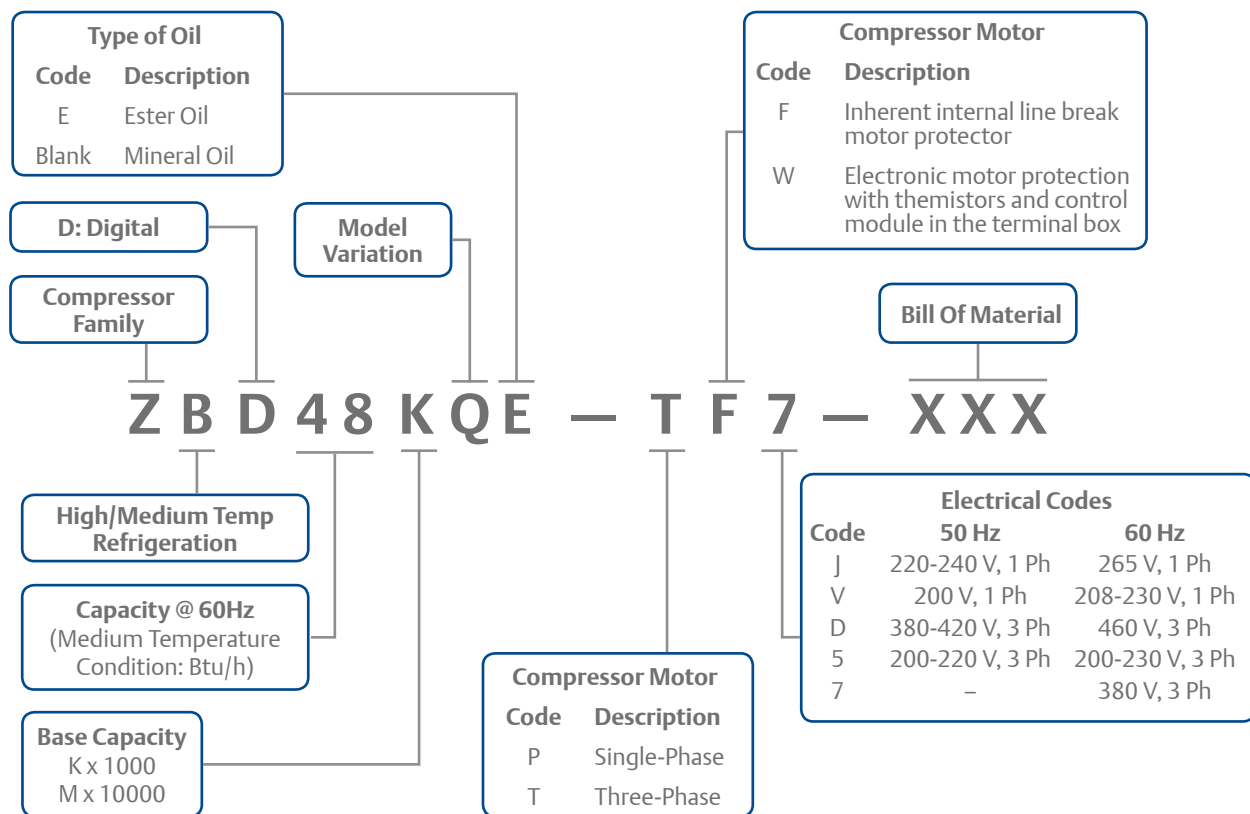
Fruits and vegetables stored in cold rooms have a long lasting freshness by precise temperature control and reduced dehydration. End user experiences show use of Copeland Scroll ZBD compressors increases productivity in controlled atmosphere mushroom farming. Field testing shows reduction of running cost of refrigeration systems by floating suction pressures in multiple show cases and capacity optimization to load in retail store refrigeration. Complex and energy guzzling hot gas bypass systems can be eliminated in compressed air dryers and precise temperature controlled process chillers. Continuous capacity modulation is best suited for milk tanks and applications where high fresh air exchange is required in meat, fish and poultry cleaning and sorting rooms. In addition Copeland Scroll ZBD improves overall system reliability by reduced cycling of electrical contactors, reducing start-stop stress on refrigerant tubing..



The highly popular unit configurations are outdoor type boxed condensing units, indoor type open condensing units, multiple compressor racks and integrated refrigeration units in machineries.

Copeland Scroll ZBDKQ series compressors are specifically designed for Asian market requirements. For unit builders the design is further simplified by offering Condensing unit and multiple compressor rack controllers approved for Copeland Scroll ZBD compressors. An unmatched quality of system is enabled with use of Emerson line components, electronic oil management system, electronic expansion valves and drives. Use of Emerson controls allows the refrigeration system to be networked with the entire lighting and ventilation system and its real time performance can be monitored and controlled on site or remotely.

Nomenclature

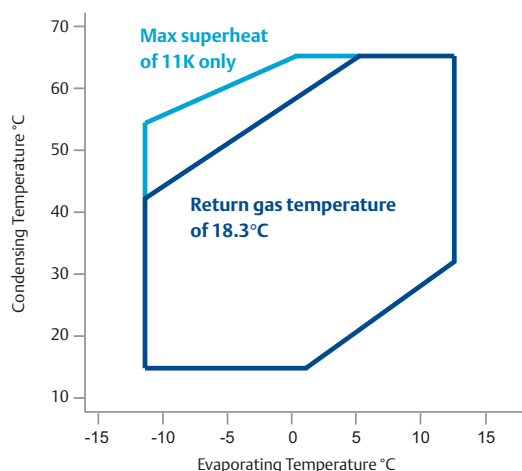


Bill of Material

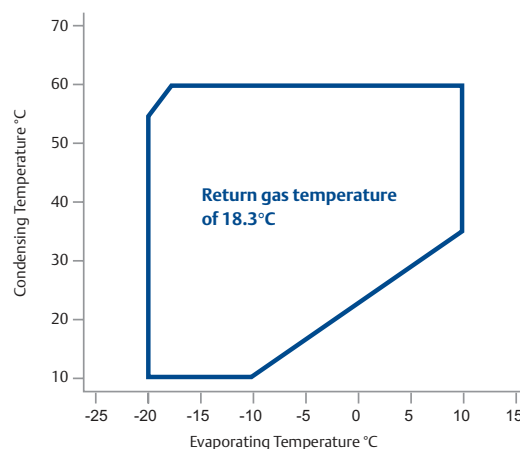
All Models				
BOM	558	559	588	589
Sight Glass	✓	✓	✓	✓
Stub Tube	✓			
Rota Lock		✓		✓
Digital Valve			✓	✓
Solenoid Coil			✓	✓
Digital Rack Controller			✓	✓
OMB			✓	✓
OMB Adaptor			✓	✓
Discharge Line Temperature Sensor			✓	✓

Operating Envelopes

R22



R404A



Product Line-up

ZBD Capacity (kW), R22

Model	Medium Temp Cold Room ⁽¹⁾		Medium Temp Showcase ⁽³⁾	
	50Hz	60Hz	50Hz	60Hz
ZBD29KQ	7.33	8.80	6.00	7.20
ZBD38KQ	9.22	11.10	7.60	9.10
ZBD45KQ	11.00	13.25	9.10	10.90
ZBD48KQ	12.45	14.60	15.50	11.90

ZBD Capacity (kW), R404A

Model	Medium Temp Cold Room ⁽¹⁾		Medium Temp Showcase ⁽³⁾	
	50Hz	60Hz	50Hz	60Hz
ZBD29KQ	7.57	9.22	6.31	7.70
ZBD38KQ	9.50	11.55	7.91	9.63
ZBD45KQ	11.30	13.75	9.41	11.45
ZBD48KQ	12.70	15.25	10.60	12.70

Notes: 1) MT Coldroom: Evaporating -7°C, Ambient 32°C, Subcooling 0°C, Return Gas 18.3°C
 2) LT Coldroom: Evaporating -25°C, Ambient 32°C, Subcooling 0°C, Return Gas 18.3°C
 3) MT Showcase: Evaporating -12°C, Ambient 32°C, Subcooling 0°C, Return Gas 18.3°C
 4) LT Showcase: Evaporating -35°C, Ambient 32°C, Subcooling 0°C, Return Gas 18.3°C

Technical Data

Compressor Model			ZBD29KQ	ZBD38KQ	ZBD45KQ	ZBD48KQ
			ZBD29KQE	ZBD38KQE	ZBD45KQE	ZBD48KQE
Nominal power (HP)			4	5	6	7
Displacement (m³/hr)		50Hz	11.40	14.40	17.10	18.80
		60Hz	13.80	17.30	20.60	22.60
LRA	50Hz	TF5	115.00	150.00	156.00	-
		TFD	48.00	64.00	74.00	100.00
	60Hz	TF5	110.00	137.00	172.00	-
		TF7	54.00	64.00	70.00	78.00
		TFD	46.00	62.00	70.00	100.00
RLA	KQ	TF5	17.10	20.70	20.70	-
		TF7	9.30	10.70	12.50	14.30
		TFD	7.90	10.00	10.00	12.90
	KQE	TF5	16.70	23.70	25.40	-
		TF7	9.60	11.60	12.90	14.70
		TFD	7.70	11.30	9.60	12.80
Max Continuous Current	50Hz	TF5	22.00	29.00	29.00	-
		TFD	10.80	14.00	14.00	17.00
	60Hz	TF5	24.00	29.00	29.00	-
		TF7	13.00	15.00	17.50	20.00
		TFD	11.00	14.00	14.00	18.00
Max Operating Current	50Hz	TF5	18.50	24.70	22.70	-
		TFD	7.90	12.80	12.50	15.20
	60Hz	TF5	18.50	24.70	22.70	-
		TF7	10.00	12.80	13.60	18.10
		TFD	10.00	12.80	12.50	15.20
Crankcase Heater (W)			70.00	70.00	70.00	70.00
Connection Tube size (inch)	Discharge Tube Outer Diameter		1/2	1/2	1/2	3/4
	Suction Tube Outer Diameter		7/8	7/8	7/8	7/8
Dimension (mm)	Length		241.00	241.00	241.00	241.00
	Width		241.00	246.00	246.00	246.00
	Height		479.00	494.00	494.00	494.00
Mounting parts installation size (hole size, mm)			190 x 190 (8.5)	191 x 190 (8.5)	192 x 190 (8.5)	193 x 190 (8.5)
Oil Charge (L)	TF5		1.36	1.89	1.89	1.89
	TF7		1.36	1.89	1.89	1.89
	TFD		1.36	1.89	1.89	1.89
Net Weight (kg)			72.00	84.00	88.00	90.00

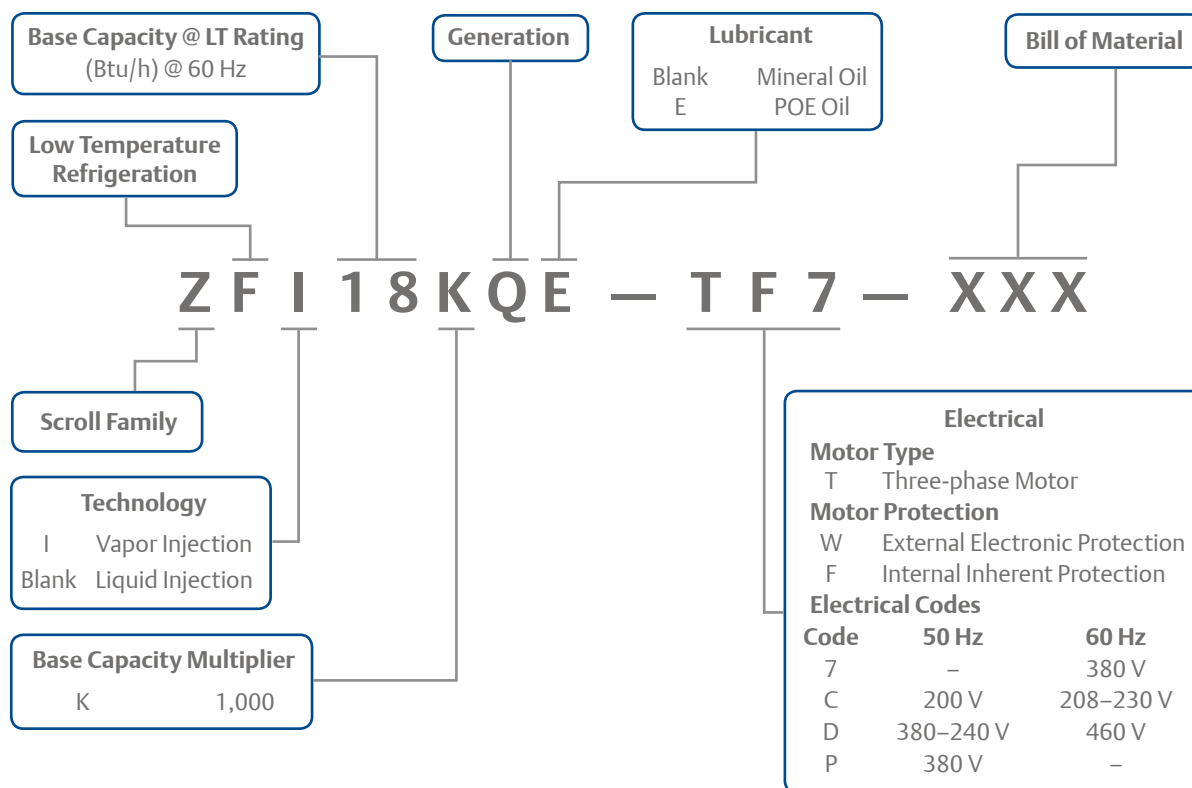
Copeland Scroll™ ZF Compressor

Copeland Scroll™ ZF compressors are set to revolutionize the retail market refrigeration by enabling distributed refrigeration system from the legacy centralized large multiple compressor rack system. The advantages of distributed refrigeration system are reduced refrigerant charge, reduced store energy bills by multiple suction groups, elimination of machine rooms and thereby saving expensive real estate space. In addition Copeland ZF scrolls have low vibration which significantly reduces stress and fatigue on refrigerant tubing a primary source for refrigerant tube breakage and refrigerant leaks.

Copeland ZFIKQ scrolls applies vapor injection technology which sets a new standard in reduced running cost. The vapor injection application is simplified to the industry by offering a complete accessories kit along with Emerson multiple rack controller, highly efficient oil separator system and freezer evaporator coil defrost control. Emerson controls enables networking the refrigeration system to store air-conditioning, heating, ventilation and lighting system to a central store supervisory control system.



Nomenclature



Bill of Material

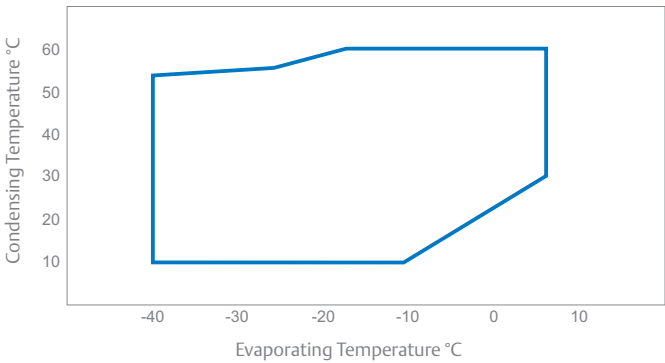
Compressor Model	BOM Number	Rotalock Connection	Oil Sight Glass	Schrader Valve
Liquid Injection				
ZF06-25KQE	551	✓	✓	✓
ZF34-49KQE	567	✓	✓	✓
Vapor Injection				
ZFI20-36KQE	552	✓	✓	✓
ZFI50-68KQE	567	✓	✓	✓

Operating Envelopes

R404A

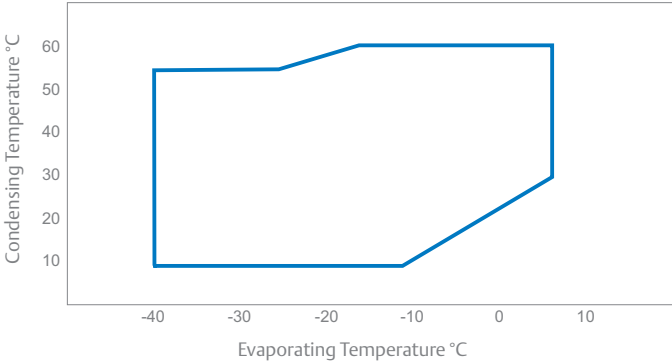
Liquid Injection

ZF06-18KQE

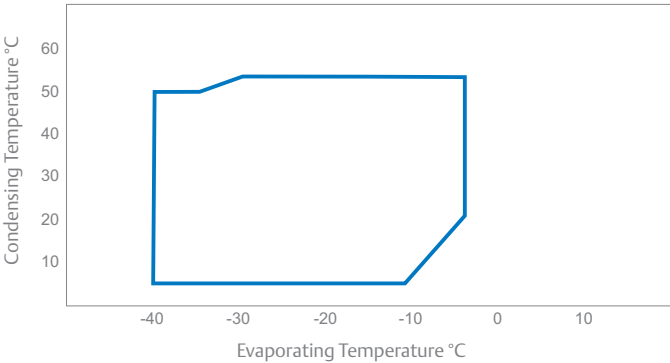


Vapor Injection

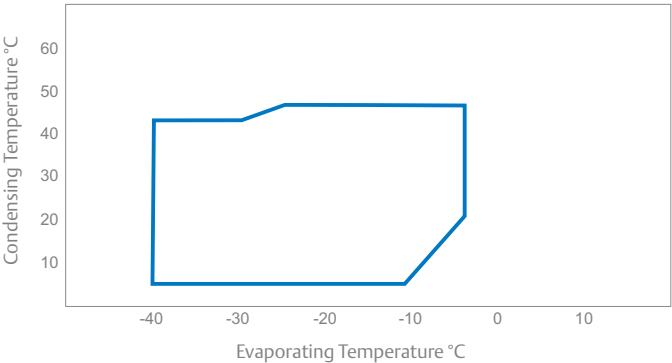
ZFI20-26KQE



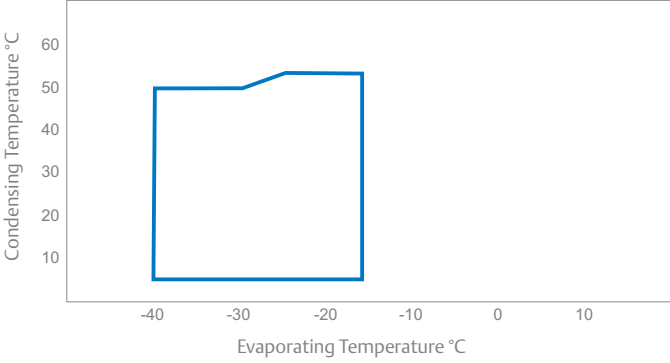
ZF25-41KQE



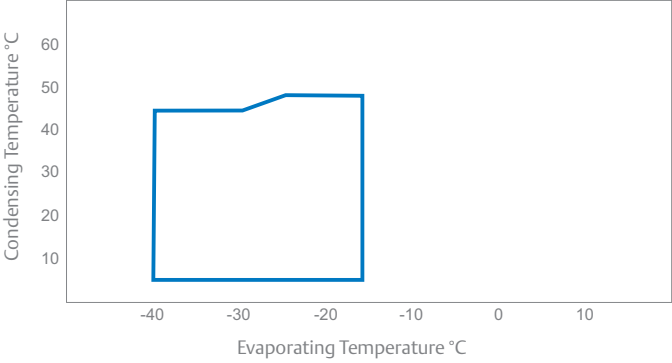
ZFI36-59KQE



ZF49KQE

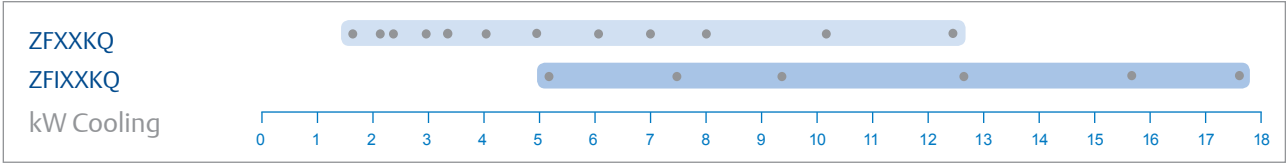


ZFI68KQE



Product Line-up

R404A - 60 Hz



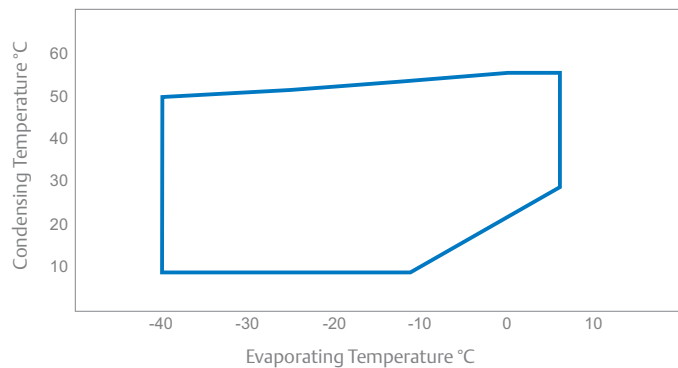
Note: Based on -35°C Evaporator Temperature / 40°C Condensing Temperature

Operating Envelopes

R407F

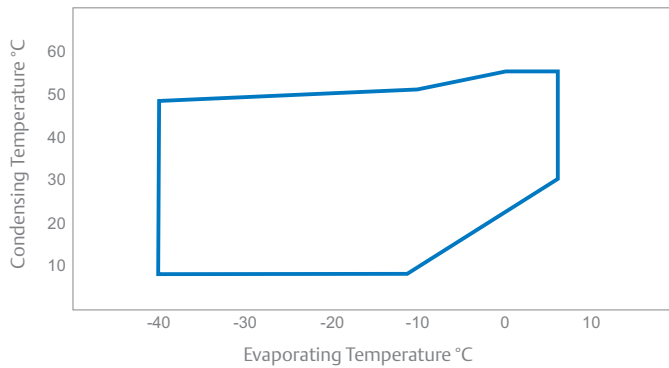
Liquid Injection

ZF06-18KQE

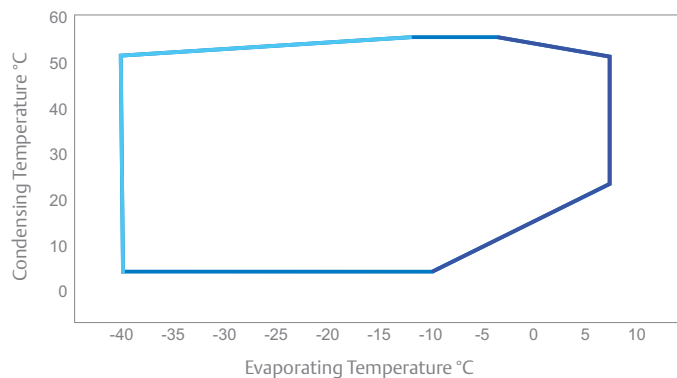


Vapor Injection

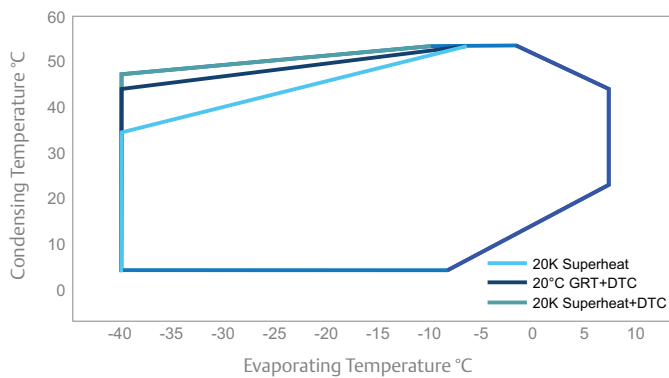
ZFI20-26KQE



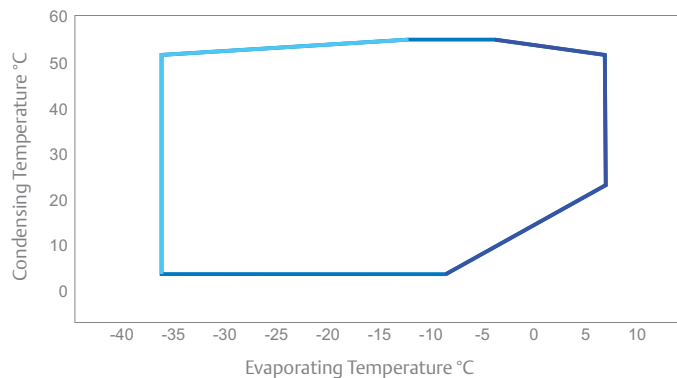
ZF34KQE, ZF41KQE



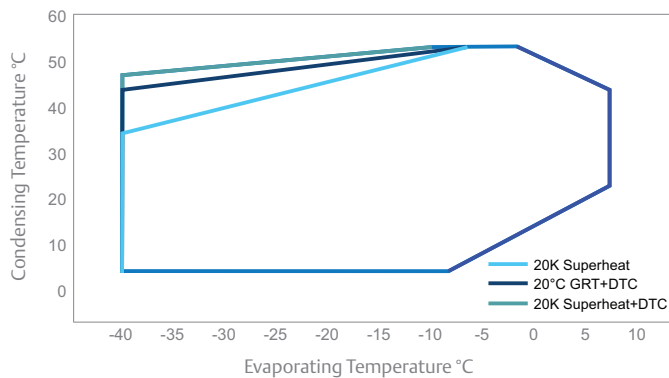
ZFI50KQE, ZFI59KQE



ZF25KQE, ZF28KQE, ZF49KQE

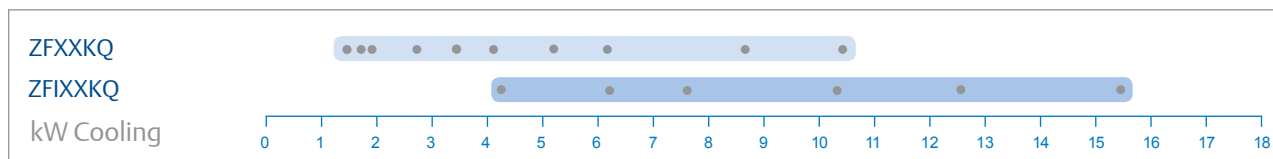


ZFI36KQE, ZFI68KQE



Product Line-up

R407F - 60Hz, Dew Point Capacity



Note: Based on -35°C Evaporator Temperature / 40°C Condensing Temperature

Product Line-up

ZF-TFC/D/7 Capacity (kW), R404A

Model	Low Temp Cold Room ⁽¹⁾	
	50Hz	60Hz
ZF06KQE	2.18	2.55
ZF08KQE	2.67	3.23
ZF09KQE	2.95	3.59
ZF11KQE	3.70	4.48
ZF13KQE	4.28	5.12
ZF15KQE	5.26	6.31
ZF18KQE	6.30	7.61
ZF25KQE	7.92	9.48
ZF34KQE	10.25	12.51
ZF41KQE	12.90	15.54
ZF49KQE	15.55	18.74
ZFI20KQE	6.09	7.55
ZFI26KQE	8.82	10.89
ZFI36KQE	11.18	13.19
ZFI50KQE	14.78	17.80
ZFI59KQE	18.31	22.06
ZFI68KQE	20.76	24.92

Note: 1) Low Temp: Evaporating -25°C, Condensing 40°C, Subcooling 0°C, Return Gas 18.3°C

Technical Data

60Hz, R404A

Compressor Model		Liquid Injection												
		ZF06KQE	ZF08KQE	ZF09KQE	ZF11KQE	ZF13KQE	ZF15KQE	ZF18KQE	ZF25KQE	ZF28KQE	ZF34KQE	ZF41KQE	ZF49KQE	
Nominal Horsepower		HP	2.0	2.5	3.0	3.5	4.0	5.0	6.0	7.5	9.0	10.0	13.0	15.0
Capacity¹		kW	2.55	3.23	3.59	4.48	5.12	6.31	7.61	9.48	11.14	12.51	15.54	18.74
Displacement		m³/hr	5.9	7.3	8.0	10.0	11.7	14.4	17.1	21.4	30.3	29.1	35.3	42.4
Locked Rotor Current	TFD	Amps	27.0	31.0	39.0	44.0	49.5	62.0	75.0	99.0	92.9	100.0	125.0	139.0
	TF7						57.0	64.0	70.0	119.2	106.6	145.0	145.0	220.0
Maximum Operating Current	TFD	Amps	5.0	6.0	6.0	7.1	8.0	10.0	20.6	13.7	16.8	25.0	29.0	30.0
	TF7						10.0	12.0	14.0	17.4	20.9	23.3	27.6	40.6
Winding Resistance at 25°C	TFD	Ohms	7.15	5.94	4.83	4.03	3.64	2.75	2.27	1.74	1.63	1.24	1.24	1.09
	TF7						2.78	2.23	1.92	1.20	1.06	0.85	0.85	0.56
Rotolock Connection	Suction Size	in	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 3/4	1 3/4	1 3/4
	Discharge Size		1	1	1	1	1	1	1	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4
Dimensions	Length	mm	241	241	243	243	283	283	283	283	308	363	363	363
	Width		241	241	242	242	246	246	246	246	246	312	312	312
	Height		382	405	405	418	470	470	470	470	481	546	546	564
Oil Quantity		L	1.30	1.48	1.45	1.45	1.89	1.89	1.89	1.89	1.89	3.37	3.37	3.37
Net Weight		kg	25	27	27	29	39	36	39	39	40	63	63	66

Compressor Model			Vapor Injection					
			ZFI20KQE	ZFI26KQE	ZFI36KQE	ZFI50KQE	ZFI59KQE	ZFI68KQE
Nominal Horsepower	HP		4.0	6.0	7.5	10.0	13.0	15.0
Capacity ¹	kW		7.55	10.89	13.19	17.80	22.06	24.92
Displacement	m ³ /hr		11.7	17.1	21.4	29.1	35.3	42.4
Locked Rotor Current	TFD	Amps	62.0	75.0	99.0	125.0	125.0	139.0
	TF7		64.0	70.0	119.6	145.0	145.0	220.0
Maximum Operating Current	TFD	Amps	9.0	13.7	16.0	25.0	29.0	30.0
	TF7		12.2	16.3	18.9	23.3	27.6	40.6
Winding Resistance at 25°C	TFD	Ohms	2.75	2.27	1.74	1.24	1.24	1.09
	TF7		2.23	1.92	1.2	0.85	0.85	0.56
Rotolock Connection	Suction Size	in	1 1/4	1 1/4	1 1/4	1 3/4	1 3/4	1 3/4
	Discharge Size		1	1	1 1/4	1 1/4	1 1/4	1 1/4
Dimensions	Length	mm	257	308	308	363	363	363
	Width		246	246	246	312	312	312
	Height		438	438	438	546	546	564
Oil Quantity	L		1.89	1.89	1.89	3.37	3.37	3.37
Net Weight	kg		39	39	39	63	63	66

Note: 1) Low Temp: Evaporating -25°C, Condensing 40°C, Subcooling 0°C, Return Gas 18.3°C

Copeland Scroll™ Fusion Compressor

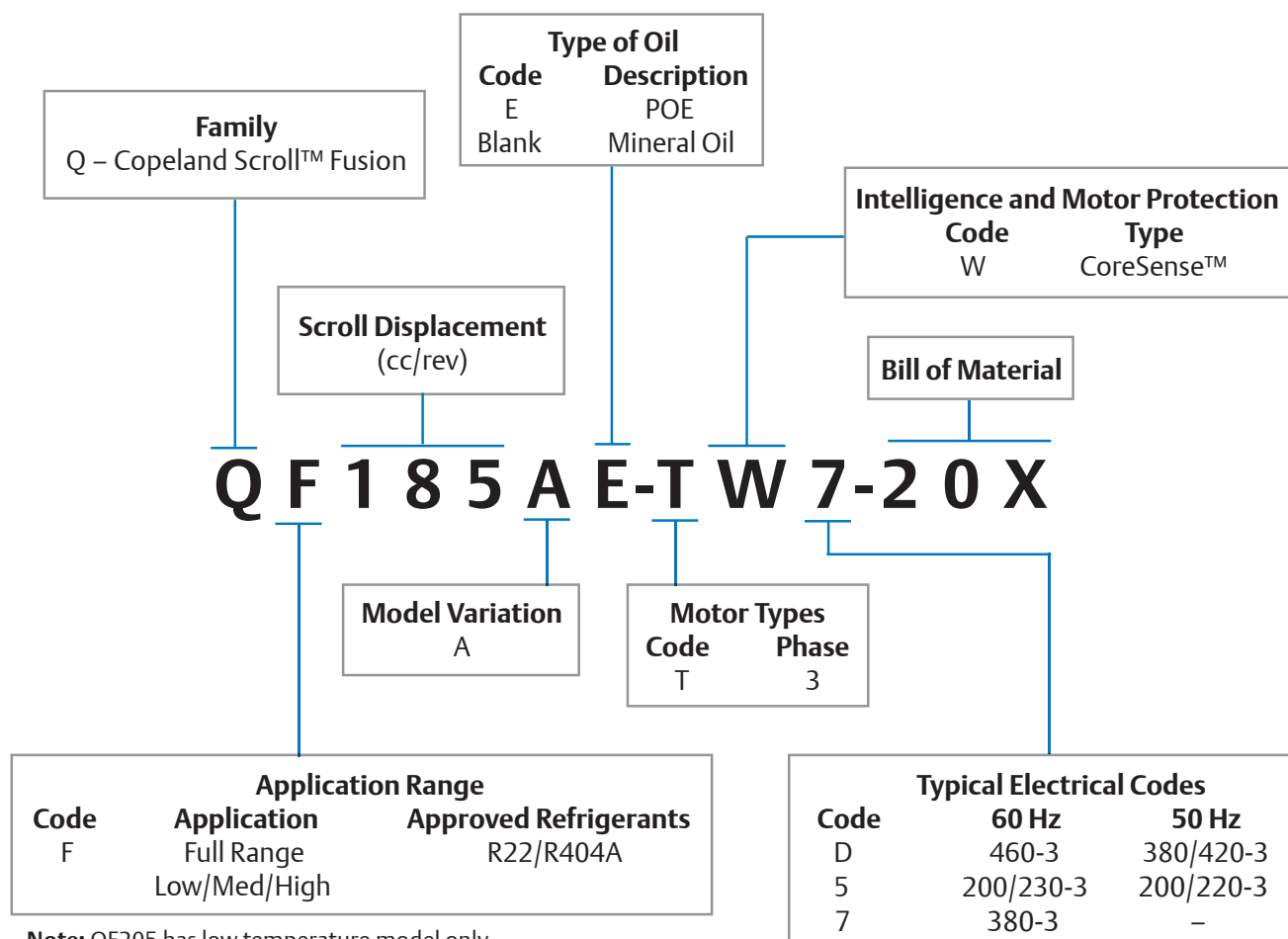
Copeland Scroll Fusion was crafted specifically to adhere to the refrigeration industry's need for field serviceable solutions. In addition, it is specially designed for medium and low temperature refrigeration with the ability to handle various refrigerants.

The compressor features a horizontal, bolted cast iron body, helping to maximize compact design, low vibration, and quiet operation associated with the Copeland Scroll design. Going one step further, an integrated economizer kit provides optimal performance and reliability by delivering subcooled liquid to the evaporator while maintaining safe compressor operating temperatures.

The Copeland Scroll Fusion compressor features CoreSense™ Diagnostics, which sends and interprets information regarding the compressor's operation, allowing for quicker, more accurate diagnostics, and less compressor downtime, thus providing more value to its consumers.

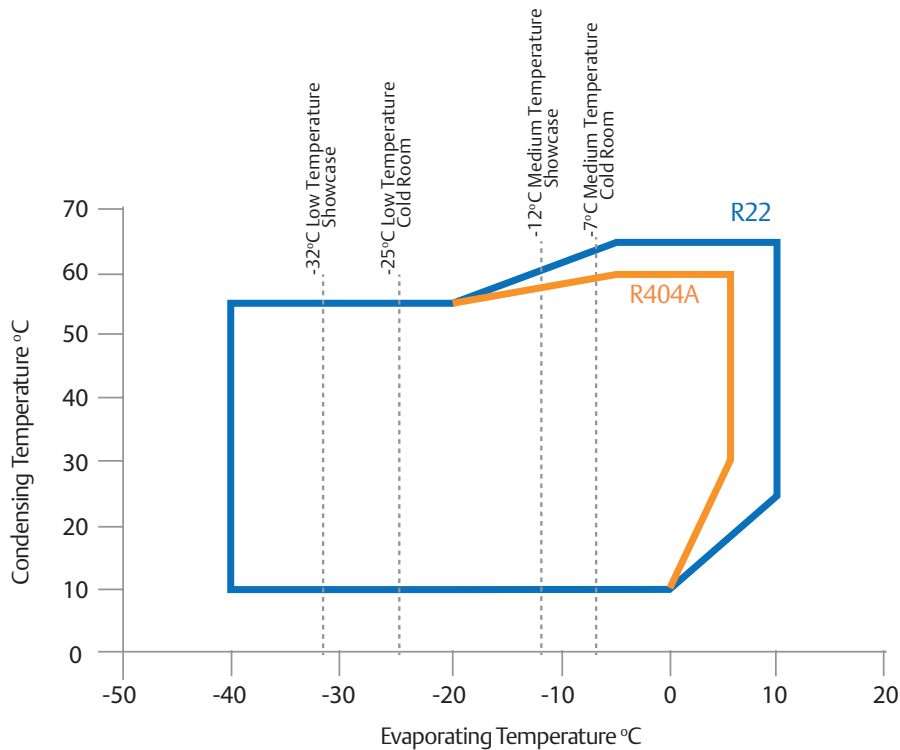


Nomenclature



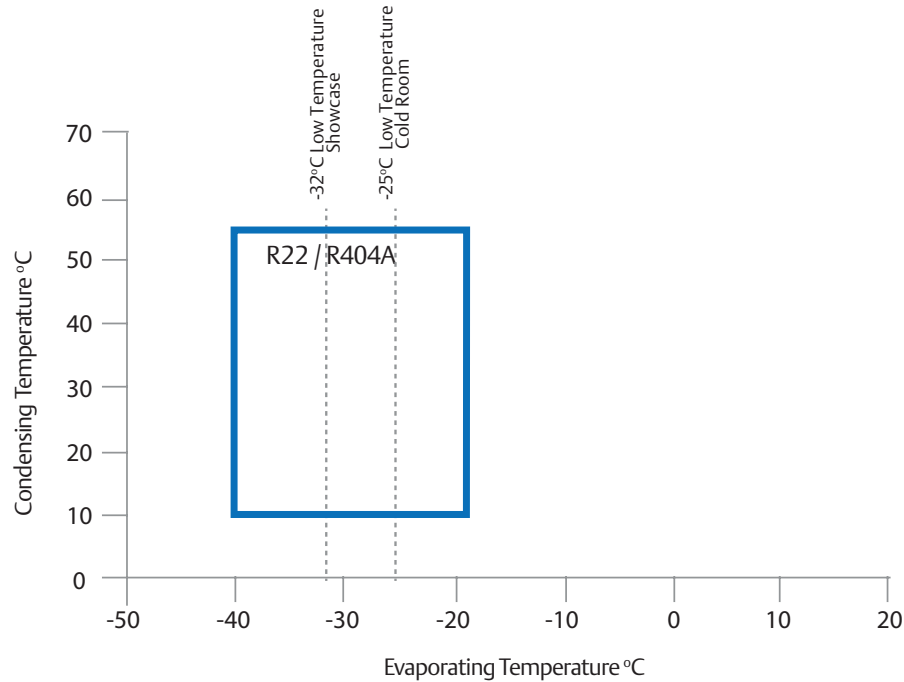
Operating Envelopes

R22/R404A
QF115/QF125/QF145/QF175/QF185



Note: 20°C Return Gas Temperature. No Fan Cooling

R22/R404A
QF205



Note: 20°C Return Gas Temperature. No Fan Cooling

Product Line-up

Capacity (kW), R22/60 Hz

Model	MT Cold Room ¹	LT Cold Room ³	MT Showcase ²	LT Showcase ⁴
QF115A	16.36	8.81	13.84	6.55
QF125A	18.02	9.40	15.17	6.79
QF145A	20.02	10.49	16.92	7.66
QF175A	22.57	11.95	19.08	8.93
QF185A	25.30	14.16	21.72	10.64
QF205A	-	16.03	-	12.16

Capacity (kW), R404A/60 Hz

Model	MT Cold Room ¹	LT Cold Room ³	MT Showcase ²	LT Showcase ⁴
QF115AE	16.60	9.90	14.28	7.64
QF125AE	18.79	10.91	16.09	8.32
QF145AE	21.11	11.93	17.96	9.30
QF175AE	26.23	13.27	21.92	9.83
QF185AE	26.74	14.88	22.76	11.32
QF205AE	-	17.00	-	12.95

Notes: 1. Medium Temp Cold Room, ET:-7°C/CT:50°C/RGT:20°C
 2. Low Temp Cold Room, ET:-25°C/CT:45°C/RGT:20°C
 3. Medium Temp Showcase, ET:-12°C/CT:50°C/RGT:20°C
 4. Low Temp Showcase, ET:-32°C/CT:45°C/RGT:20°C

Standard Components and Benefits

Standard Component	Benefits
Copeland Scroll™ Compressor	Lowest Sound, Vibration and Service Parts
Integrated Economizer Kit	Full Range Operation
Plate Heat Exchanger	Oil/Scroll Cooling
Electronic Expansion Valve/Coil	Maximum Performance and Reliability
Fitted Tubing and Insulation	Ease of Installation
CoreSense™ Diagnostics	Optimal Performance, Reliability and Diagnostics
Temperature Sensors	Scroll and Motor Overheat Protection
Oil Level Sensor	Loss of Oil Protection
Differential Pressure Sensor	Reverse Rotation Protection
Electronic Expansion Valve Driver	Maximum Performance and Reliability
LED Display	Improved Troubleshooting Accuracy
Crankcase Heater	Flooded Start Protection
Mounting Kits	Low Vibration
Suction and Discharge Service Valve	Ease of Service
Oil Sight Glass	Ease of Service
Oil Drain Port/Oil Fill Port	Ease of Service
Oil Charged	Standard Feature

Technical Data

Model		R22	QF115A	QF125A	QF145A	QF175A	QF185A	QF205A
		R404A	QF115AE	QF125AE	QF145AE	QF175AE	QF185AE	QF205AE
Displacement	60 Hz	m ³ /h	23.2	25.3	28.2	31.7	36.5	44.3
Motor Speed	60 Hz	rpm	3,600					
Crankcase Heater	Power	W	60					
	Voltage	V	220					
Oil Charge	Initial	L	2.66					
	Recharge		2.54					
Service Valves	Suction	in	1-1/8					
	Discharge		1					
Dimensions	Length	mm	675					
	Width		355					
	Height		389					
Base Mounting	Length	mm	350					
	Width		200					
	Bolt		M10					
Weight	Net	kg	130					
	Gross		140					

Notes: 1. MOC: Maximum Operating Current
 2. LRA: Locked Rotor Current

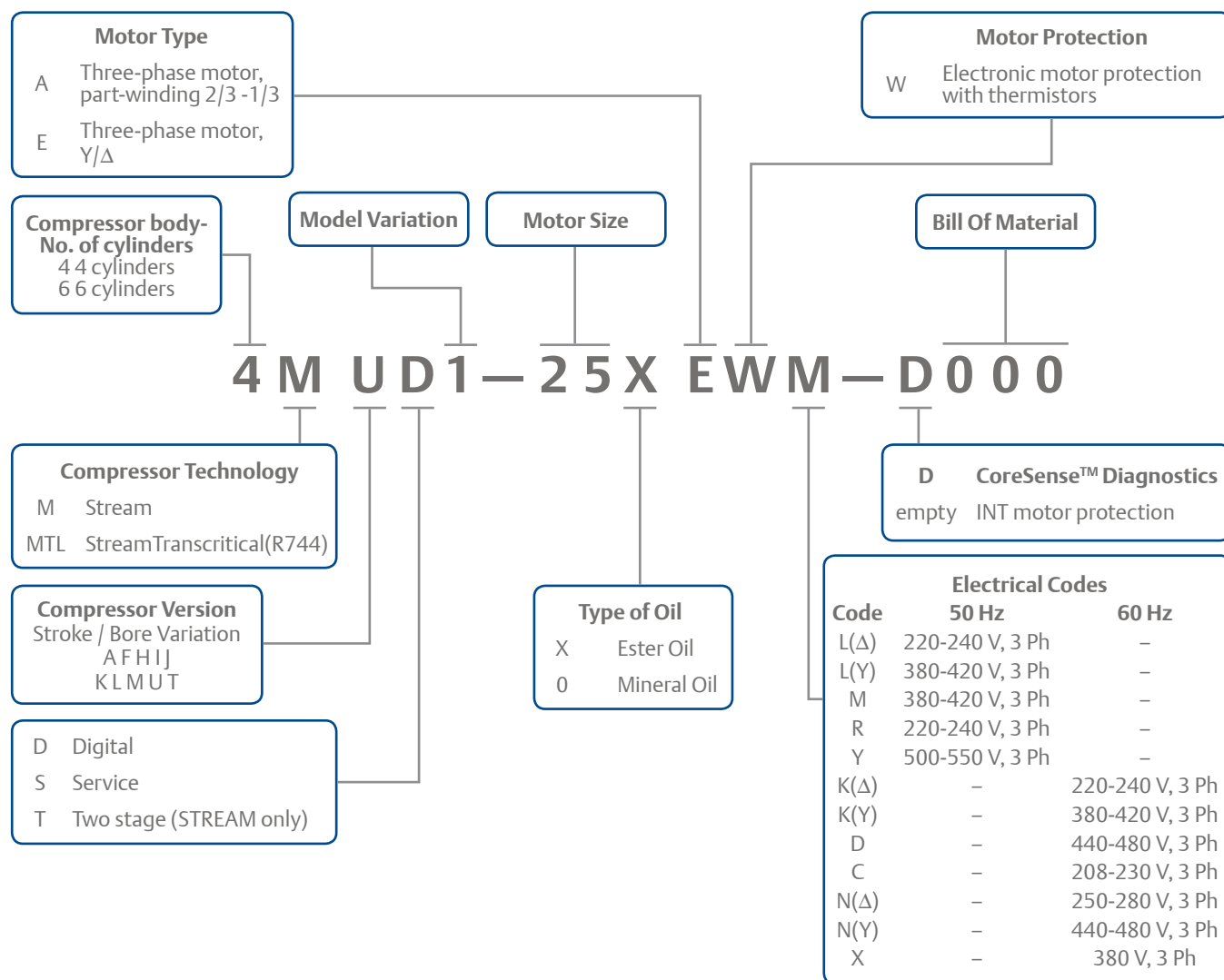
Copeland™ Stream Compressor

Copeland Stream Compressor range comprises of models qualified for inverter applications for continuous cooling capacity modulation and can be fitted with a dedicated sound shell for sound sensitive applications. Its unique Discus valve technology is the key difference between Stream and conventional reciprocating technologies available in the market. Aside from significant savings and lower operational cost, it is also optimized for seasonal running condition.



All Stream models feature CoreSense™ Diagnostics that offers advanced protection and diagnostics benefits for excellent system reliability, reduced service cost and increased equipment uptime. It goes beyond compressor protection by assisting in system diagnosis and optimization. Providing service engineers with detailed information at the right time, system related problems can be diagnosed faster or even before they occur. Supermarket operators benefit from increased system uptime, reduction in food loss and reduced maintenance cost.

Nomenclature

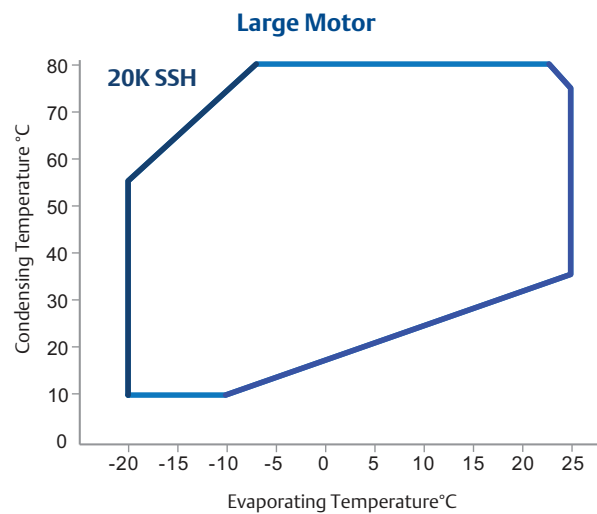
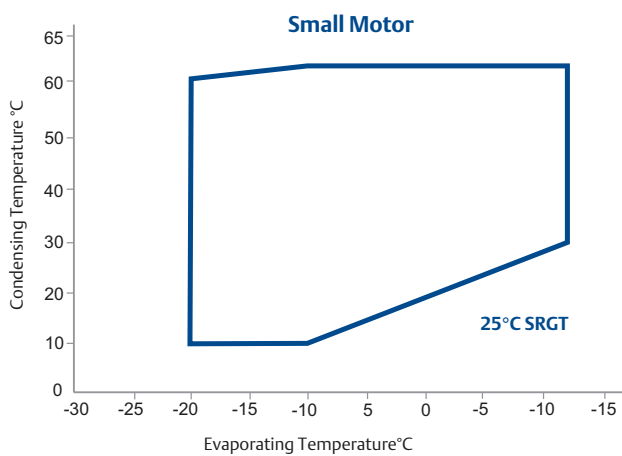


Bill of Material

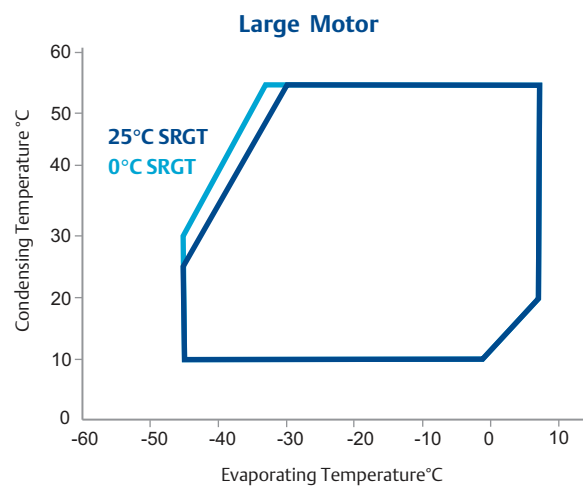
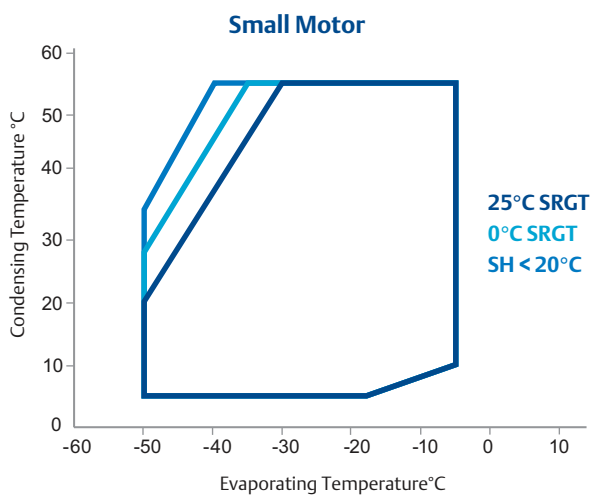
All Models
Standard Equipment
Oil Sight Glass
Mounting Parts
Discharge Shut-off Valves
Suction Shut-off Valves
CoreSense™
IP 67 Protection for Terminal Box
IP 54 for CoreSense™

Operating Envelopes

Stream : R134a

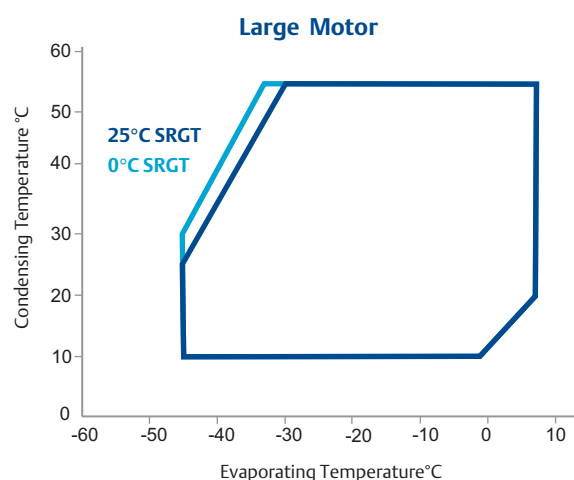
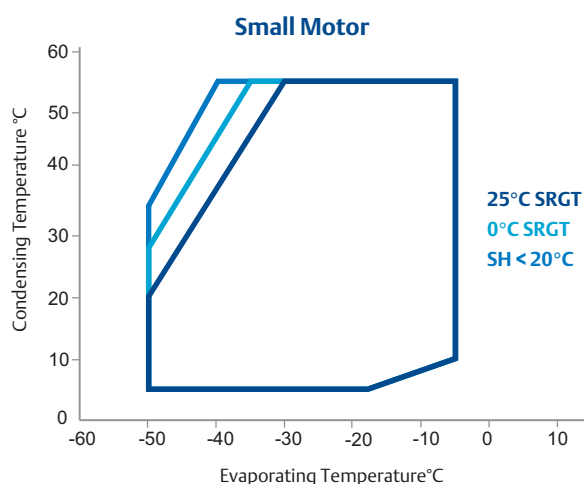


Stream - HFC : R404A



Operating Envelopes

Stream - HFC Digital : R404A



Note: For envelopes with R134a, R407C, R22 refer to Selection Software.

Product Line-up

Stream Capacity (kW)

Model	Medium Temp		Low Temp
	R404A ⁽¹⁾	R134a ⁽²⁾	R404A ⁽³⁾
4MF-13X	37.30	20.80	12.55
4MA-22X	38.60	22.00	12.35
4ML-15X	45.30	25.40	15.70
4MH-25X	45.40	25.40	14.60
4MM-20X	49.50	28.00	17.80
4MI-30X	50.50	28.10	17.00
4MT-22X	56.20	31.90	20.00
4MJ-33X	56.20	31.40	19.10
4MU-25X	62.60	35.10	22.00
4MK-35X	63.20	35.20	21.50
6MM-30X	75.80	42.30	26.80
6MI-40X	76.30	41.30	25.80
6MT-35X	85.50	47.70	30.20
6MJ-45X	85.40	46.90	28.70
6MU-40X	96.00	52.20	33.60
6MK-50X	95.50	50.10	32.20

Stream - Digital Capacity (kW)

Model	Medium Temp	
	R404A ⁽¹⁾	R134a ⁽²⁾
4MF-13X	36.90	20.60
4MA-22X	38.20	21.80
4ML-15X	44.90	25.10
4MH-25X	44.90	25.10
4MM-20X	49.00	27.70
4MI-30X	50.00	27.80
4MT-22X	55.70	31.60
4MJ-33X	55.60	31.10
4MU-25X	62.00	34.70
4MK-35X	62.50	34.90
6MM-30X	75.00	41.80
6MI-40X	75.50	40.90
6MT-35X	84.60	47.20
6MJ-45X	84.60	46.40
6MU-40X	95.00	51.60
6MK-50X	94.50	49.60

Notes: 1) R404A Evaporating -10°C, condensing 45°C, suction gas temperature 20°C, subcooling 0K
2) R134a Evaporating -10°C, condensing 45°C, suction superheat 10K, subcooling 0K
3) R404A Evaporating -35°C, condensing 40°C, suction gas temperature 20°C, subcooling 0K

Technical Data

Compressor		4MF-13X	4MA-22X	4ML-15X	4MH-25X	4MM-20X	4MI-30X	4MT-22X	4MJ-33X
Number of Cylinders		4	4	4	4	4	4	4	4
Displacement (m ³ /hr)	50 Hz	61.7	61.7	71.4	71.4	78.2	78.2	87.7	87.7
	60 Hz	74.5	74.5	86.2	86.2	94.4	94.4	105.9	105.9
Bore/Stroke (mm)		63.5/56.0	63.5/56.0	68.3/56.0	68.3/56.0	71.5/56.0	71.5/56.0	75.7/56.0	75.7/56.0
Nominal Horse Power (HP)		13	22	15	25	20	30	22	33
Motor Speed (RPM)	50 Hz	1450	1450	1450	1450	1450	1450	1450	1450
	60 Hz	1740	1740	1740	1740	1740	1740	1740	1740
Discharge Service Valve Size		1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 3/8"	1 3/8"
Suction Service Valve Size		1 5/8"	1 5/8"	1 5/8"	2 1/8"	2 1/8"	2 1/8"	2 1/8"	2 1/8"
Base mounting (mm)		381X305	381X305	381X305	381X305	381X305	381X305	381X305	381X305
Oil Charge (liter)		3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Net Weight (kg)	Net	177	177	180	187	182	188	183	190
	Gross	202	202	205	212	207	213	208	215

Compressor		4MU-25X	4MK-35X	6MM-30X	6MI-40X	6MT-35X	6MJ-45X	6MU-40X	6MK-50X
Number of Cylinders		4	4	6	6	6	6	6	6
Displacement (m ³ /hr)	50 Hz	99.4	99.4	120.5	120.5	135.1	135.1	153.2	153.2
	60 Hz	120	120	145.4	145.4	163	163	184.9	184.9
Bore/Stroke (mm)		80.6/56.0	80.6/56.0	71.5/57.5	71.5/57.5	75.7/57.5	75.7/57.5	80.6/57.5	80.6/57.5
Nominal Horse Power (HP)		25	35	30	40	35	45	40	50
Motor Speed (RPM)	50 Hz	1450	1450	1450	1450	1450	1450	1450	1450
	60 Hz	1740	1740	1740	1740	1740	1740	1740	1740
Discharge Service Valve Size		1 3/8"	1 3/8"	1 3/8"	1 3/8"	1 5/8"	1 5/8"	1 5/8"	1 5/8"
Suction Service Valve Size		2 1/8"	2 1/8"	2 1/8"	2 1/8"	2 1/8"	2 1/8"	2 5/8"	2 5/8"
Base mounting (mm)		381X305	381X305	381X305	381X305	381X305	381X305	381X305	381X305
Oil Charge (liter)		3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Net Weight (kg)	Net	186	202	215	219	221	223	225	230
	Gross	211	227	240	244	246	248	250	255

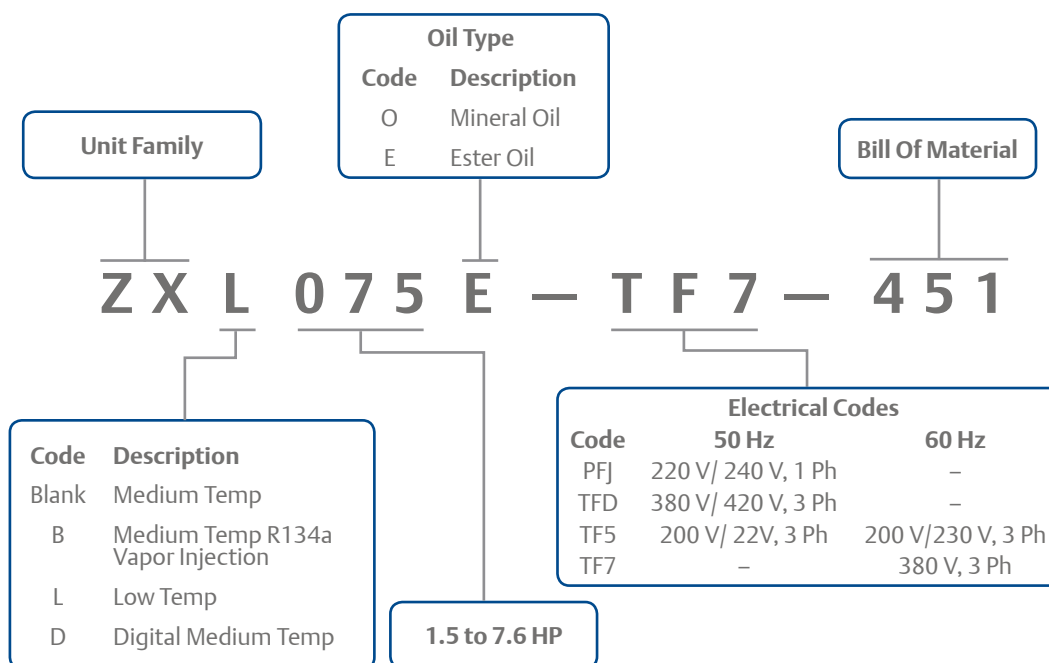
Copeland Scroll™ ZX Platform Condensing Unit

Emerson Climate Technologies is pleased to offer the ZX platform refrigeration condensing units (CDU) specifically designed for medium temperature (ZX-MT and ZXB-MT), digital modulated variable capacity medium temperature (ZXD) and low temperature (ZXL-LT) refrigeration. Models are equipped with Emerson's Intelligent Store Solution which integrates hardware and services to help hyper mart, supermarket, convenience store, and box retail operators make better facility decisions while reducing operational costs. The Intelligent Store architecture implements best practices for facility management and transforms data from store equipment and controls into actionable insights. Designed to deliver value in both new and existing stores, the Intelligent Store architecture can help retailers significantly improve their bottom line results. The ZXD model features continuous capacity modulation range of 10-100%. This eliminates hot gas bypass, which causes waste of electricity, and complications arising from variable speed drives. Precise capacity modulation control proves beneficial in a number of applications, including precise temperature control for precision cooling and humidity control as well as parallel compressor operations or rack systems – intermediate and more precise part load operation of a compressor to perfectly match varying evaporator loads.



ZX series CDU has been highly successful in the Asian market and enjoys proven success with its energy savings and customer-friendly electronic features.

Nomenclature



Bill of Material

CDU Family	ZXB			ZX			ZXL				ZXD		
BOM	401	451	461	401	451	481	451	461	471	481	450	451	461
Liquid Line Filter Dryer/Sight Glass	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Oil Separator		✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓
Accumulator							✓	✓	✓	✓			
Adjustable LP Switch	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Fixed LP Switch				✓	✓	✓					✓	✓	✓
E2 Controller	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Diagnostic Module				✓	✓	✓	✓	✓	✓	✓			
One-Way com board	✓	✓											
Buzzer				✓	✓	✓	✓		✓	✓			
Digital Scroll Controller											✓	✓	✓
Fan Speed Controller	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
Intelligent Store Solution Module	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Circuit Breaker	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sound Jacket	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Low Ambient Kt						✓				✓			
Defrost Module	ACC	ACC	✓	ACC	ACC		ACC	✓	ACC				
Filter Drier									ACC				

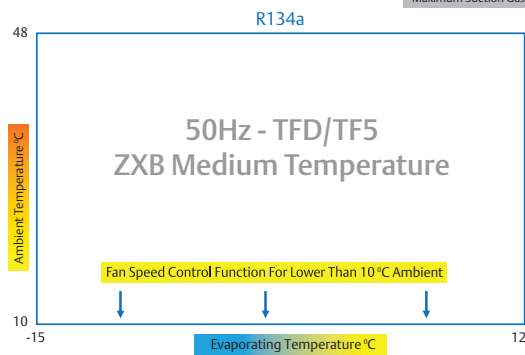
Notes: E2 controller has fan speed control function
"ACC" indicates accessory

Operating Envelopes

ZXB Family : Medium Temperature : R134a

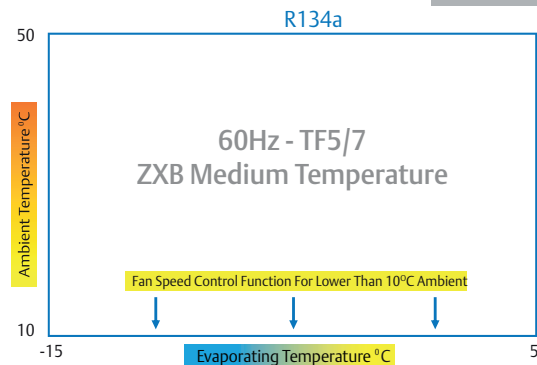
ZXB Medium Temperature at 50 Hz - TFD/TF5

Refrigerant - R134a
Maximum Suction Gas Temperature: 20°C



ZXB Medium Temperature 60 Hz-TF5/7

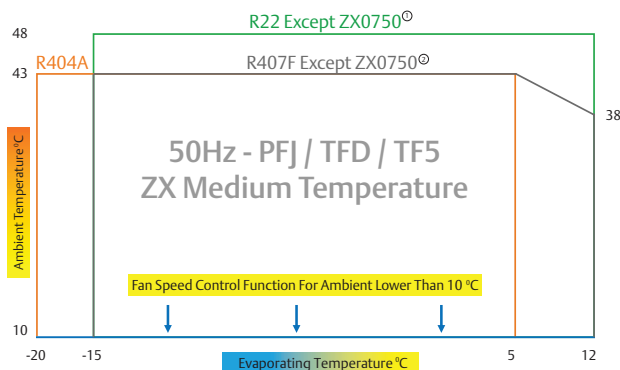
Refrigerant - R134a
Maximum Suction Gas Temperature: 20°C



ZX Family : Medium Temperature : R404A/R22

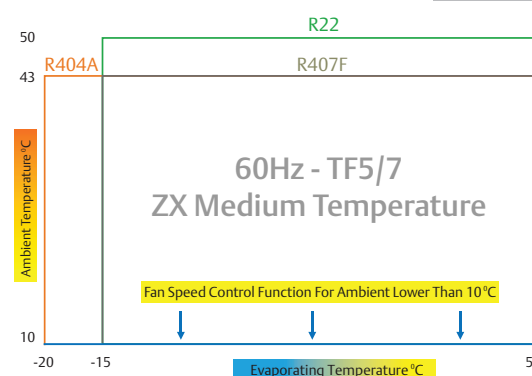
ZX Medium Temperature at 50 Hz - PFJ / TFD / TF5

Refrigerant - R404A, R22, R407F
Maximum Suction Gas Temperature: 20°C



ZX Medium Temperature at 60 Hz - TF5/7

Refrigerant - R404A, R22, R407F
Maximum Suction Gas Temperature: 20°C



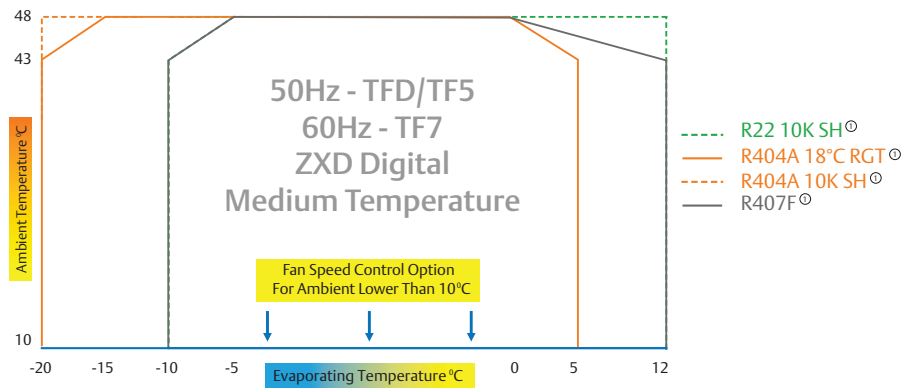
NoteⓈ: For model ZX0750 (R22) Max Amb: 43°C, Max Evap: 5°C
NoteⓈ: For model ZX0750 (R407F) Max Evap: 5°C

Operating Envelopes

ZXD Family : Digital Medium Temperature : R404A/R22

ZXD Digital Medium Temperature at 50 Hz - TFD/TF5
at 60 Hz - TF7

Refrigerant - R404A, R22, R407F
Maximum Suction Gas Temperature: 20 °C

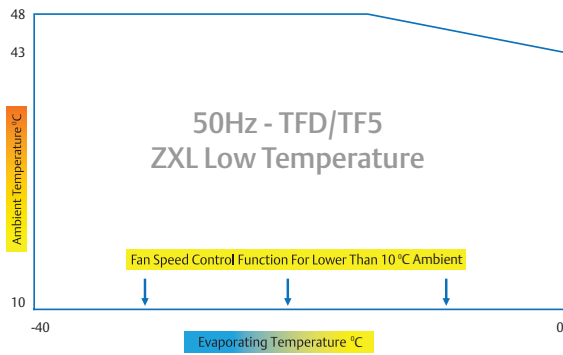


Note[⊙]: For model ZXD075/E Max Amb: 43°C, Max Evap: 5°C

ZXL Family : Low Temperature : R404A/R22

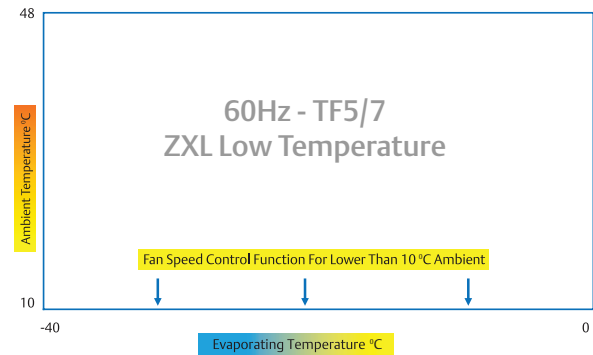
ZXL Low Temperature at 50 Hz - TFD/TF5

Refrigerant - R404A, R22, R407F
Maximum Suction Gas Temperature: 20 °C

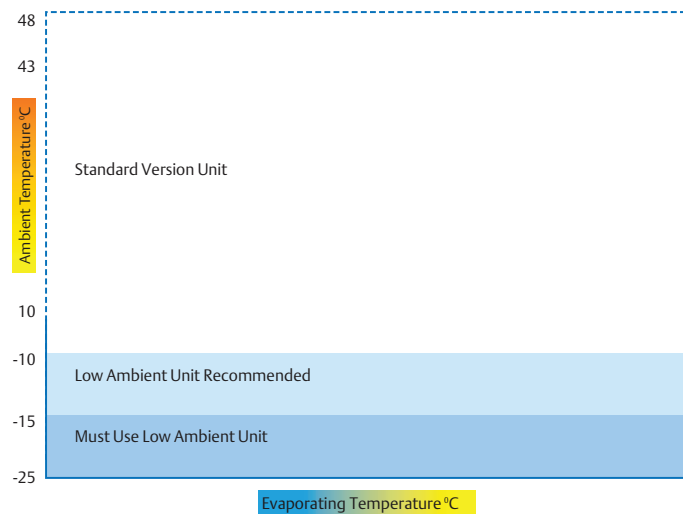


ZXL Low Temperature at 60 Hz - TF5/7

Refrigerant - R404A, R22, R407F
Maximum Suction Gas Temperature: 20 °C



Guideline for Using Low Ambient Units



Note: For applications under -25°C ambient temperature, please contact Application Engineering.

Product Line-up

ZXB Capacity (kW), R134a

Model	Medium Temp Cold Room ⁽¹⁾		Medium Temp Showcase ⁽³⁾	
	50Hz	60Hz	50Hz	60Hz
ZXB015E	3.20	3.86	2.67	3.16
ZXB020E	3.76	4.53	3.02	3.64
ZXB025E	3.92	4.91	3.31	3.99
ZXB030E	4.96	5.99	4.07	4.91
ZXB035E	6.61	7.97	5.50	6.66
ZXB040E	7.23	8.72	5.98	7.21
ZXB050E	8.52	10.27	7.00	8.44
ZXB055E	9.38	11.30	7.92	9.56

Notes: 1) MT Cold Room: Evaporating -7°C, Ambient 32°C, Subcooling 0°C, Return Gas 18.3°C
 2) LT Cold Room: Evaporating -25°C, Ambient 32°C, Subcooling 0°C, Return Gas 18.3°C
 3) MT Showcase: Evaporating -12°C, Ambient 32°C, Subcooling 0°C, Return Gas 18.3°C
 4) LT Showcase: Evaporating -35°C, Ambient 32°C, Subcooling 0°C, Return Gas 18.3°C

ZX Capacity (kW), R22

Model	Medium Temp Cold Room ⁽¹⁾		Medium Temp Showcase ⁽³⁾	
	50Hz	60Hz	50Hz	60Hz
ZX0200	3.85	4.79	3.06	3.90
ZX0250*	4.51	-	3.74	-
ZX0300	5.53	6.49	4.59	5.47
ZX0400	7.57	9.52	6.22	7.95
ZX0500*	9.30	10.76	7.69	9.23
ZX0600*	11.20	12.77	9.04	10.85
ZX0750*	12.60	14.18	10.52	12.01
ZX0760*	12.85	-	10.73	-

ZX Capacity (kW), R404A

Model	Medium Temp Cold Room ⁽¹⁾		Medium Temp Showcase ⁽³⁾	
	50Hz	60Hz	50Hz	60Hz
ZX020E	4.30	5.10	3.71	4.37
ZX025E*	4.84	-	4.09	-
ZX030E	6.00	7.30	5.04	6.20
ZX040E	7.80	10.16	6.68	8.60
ZX050E*	10.70	12.46	9.10	10.62
ZX060E*	11.80	14.48	10.06	12.33
ZX075E*	13.20	15.28	11.10	13.24
ZX076E*	13.46	-	11.32	-

Notes: 1) MT Cold Room: Evaporating -7°C, Ambient 32°C, Subcooling 0°C, Return Gas 18.3°C
 2) LT Cold Room: Evaporating -25°C, Ambient 32°C, Subcooling 0°C, Return Gas 18.3°C
 3) MT Showcase: Evaporating -12°C, Ambient 32°C, Subcooling 0°C, Return Gas 18.3°C
 4) LT Showcase: Evaporating -35°C, Ambient 32°C, Subcooling 0°C, Return Gas 18.3°C
 5) 50Hz available on PFJ models only
 6) 50Hz available on PFJ models only

Product Line-up

ZXD Capacity (KW), R22

Model	Medium Temp Cold Room ⁽¹⁾	
	50Hz	60Hz
ZXD0400	7.76	8.60
ZXD0500	9.30	11.03
ZXD0600	11.00	13.01
ZXD0750	12.84	14.22
ZXD0760	13.09	-

ZXD Capacity (KW), R404A

Model	Medium Temp Cold Room ⁽¹⁾		Medium Temp Showcase ⁽³⁾	
	50Hz	60Hz	50Hz	60Hz
ZXD040E	8.30	9.60	7.40	8.43
ZXD050E	10.70	11.85	9.10	10.36
ZXD060E	11.80	13.85	10.06	12.02
ZXD075E	13.20	15.27	11.10	13.24
ZXD076E	13.46	-	11.32	-

ZXL Capacity (KW), R22

Model	Medium Temp Cold Room ⁽¹⁾		Low Temp Cold Room ⁽²⁾		Medium Temp Showcase ⁽³⁾		Medium Temp Showcase ⁽⁴⁾	
	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
ZXL0200	4.26	5.55	2.24	2.86	3.61	4.68	1.55	1.78
ZXL0250	5.28	6.61	2.63	3.38	4.44	5.58	1.82	2.48
ZXL0300	5.69	7.54	2.99	3.85	4.81	6.36	2.09	2.83
ZXL0350	7.13	9.12	3.72	4.66	6.10	7.70	2.47	3.45
ZXL0400	8.77	11.69	4.71	6.17	7.49	9.96	3.17	4.21
ZXL0500	10.57	13.08	5.56	6.97	9.01	11.15	3.56	4.71
ZXL0600	12.15	15.56	6.53	8.30	10.35	13.27	4.35	5.60
ZXL0750	13.59	16.49	7.17	8.80	11.55	14.06	4.71	5.93

ZXL Capacity (KW), R404A

Model	Medium Temp Cold Room ⁽¹⁾		Low Temp Cold Room ⁽²⁾		Medium Temp Showcase ⁽³⁾		Medium Temp Showcase ⁽⁴⁾	
	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
ZXL020E	4.68	5.99	2.70	3.32	4.08	5.23	1.82	2.04
ZXL025E	5.96	7.16	3.30	3.80	5.12	6.19	2.26	2.46
ZXL030E	6.72	7.53	3.60	4.59	5.46	6.76	2.49	3.13
ZXL035E	7.96	10.19	4.68	5.64	6.93	8.89	3.20	3.47
ZXL040E	9.67	13.04	5.58	6.92	8.46	11.27	3.77	4.48
ZXL050E	11.25	14.10	6.43	8.00	9.87	12.23	4.31	5.61
ZXL060E	13.25	15.04	7.77	9.51	11.62	13.52	5.32	6.71
ZXL075E	14.55	17.90	8.50	10.15	12.68	15.53	5.90	7.13

Notes: 1) MT Cold Room: Evaporating -7°C, Ambient 32°C, Subcooling 0°C, Return Gas 18.3°C
 2) LT Cold Room: Evaporating -25°C, Ambient 32°C, Subcooling 0°C, Return Gas 18.3°C
 3) MT Showcase: Evaporating -12°C, Ambient 32°C, Subcooling 0°C, Return Gas 18.3°C
 4) LT Showcase: Evaporating -35°C, Ambient 32°C, Subcooling 0°C, Return Gas 18.3°C

Technical Data

ZX Family : 60Hz - TF5/TF7

Family			ZX					
Nominal Rating	Horsepower (HP)		2	3	4	5	6	7.5
Model Name			ZX0200	ZX0300	ZX0400	ZX0500	ZX0600	ZX0750
			ZX020E	ZX030E	ZX040E	ZX050E	ZX060E	ZX075E
Phase (Ph)			3	3	3	3	3	3
Compressor	Model Name	R22	ZX15KC-TF5/TF7	ZX21KC-TF5/TF7	ZX29KC-TF5/TF7	ZX38KC-TF5/TF7	ZX45KC-TF5/TF7	ZX51KC-TF5/TF7
		R404A	ZX15KCE-TF5/TF7	ZX21KCE-TF5/TF7	ZX29KCE-TF5/TF7	ZX38KCE-TF5/TF7	ZX45KCE-TF5/TF7	ZX51KCE-TF5/TF7
	Rated Load Ampere	R22	8.9/5.0	11.4/7.5	15.0/9.3	20.7/10.7	20.7/10.7	25.0/12.1
		R404A	8.9/5.1	12.1/7.4	15.7/9.6	24.0/12.4	23.1/12.6	26.0/14.1
	Locked Rotor Ampere	R22	55.0/27.0	77.0/39.0	115.0/54.0	128.0/64.0	156.0/70.0	164.0/100.0
		R404A	55.0/27.0	77.0/39.0	115.0/54.0	128.0/64.0	156.0/70.0	164.0/100.0
	Oil Type	R22	Mineral	Mineral	Mineral	Mineral	Mineral	Mineral
		R404A	POE	POE	POE	POE	POE	POE
	Oil Recharge Volume	R22/R404A (Liters)	1.18	1.33	1.83	1.83	1.66	1.66
	Fan Motor	Number of Fan	Pieces	1	1	2	2	2
Total Fan Motor Power		Input W	145	145	290	290	290	290
Others	Oil Separator	Volume (Liters)	0.5	0.5	0.5	0.5	0.5	0.5
	Receiver Volume	R22 (kg)	5.1	5.1	7.2	7.2	7.2	7.2
		R404A (kg)	4.4	4.4	6.3	6.3	6.3	6.3
	Pipes	Suction OD (Inch)	3/4	3/4	3/4	3/4	3/4	3/4
		Liquid OD (Inch)	1/2	1/2	1/2	1/2	1/2	1/2
	Dimension	WxDxH (mm)	1029 X 424 X 840	1029 X 424 X 840	1029 X 424 X 1242	1029 X 424 X 1242	1029 X 424 X 1242	1029 X 424 X 1242
	Weight	Net (kg)	76	79	100	108	112	121
		Gross (kg)	113	116	135	152	156	162

Technical Data

ZXB Family : Medium Temperature - 60 Hz - TFD

Family			ZXB							
Nominal Rating	Horsepower (HP)		1.5	2	2.5	3	3.5	4	5	6
Model Name			ZXB015E	ZXB020E	ZXB025E	ZXB030E	ZXB035E	ZXB040E	ZXB050E	ZXB060E
Phase (Ph)			3	3	3	3	3	3	3	3
Compressor	Model Name	R134a	ZXI06KCE-TF5/7	ZXI08KCE-TF5/7	ZXI09KCE-TF5/7	ZXI11KCE-TF5/7	ZXI14KCE-TF5/7	ZXI15KCE-TF5/7	ZXI18KCE-TF5/7	ZXI21KCE-TF5/7
	Rated Load Ampere	R134a	11.4/5.1	11.8/5.2	12.1/6.5	18.0/7.2	18.8/9.3	20.1/11.8	24.0/13.3	27.2/13.5
	Locked Rotor Ampere	R134a	73.0/34.8	73.0/34.8	73.0/38.6	110.0/47.0	110.0/66.0	110.0/73.5	186.6/94.3	191.0/94.3
	Oil Type	R134a	POE	POE	POE	POE	POE	POE	POE	POE
	Oil Recharge Volume	R134a (Liters)	0.56	0.56	0.56	1.24	1.24	1.24	1.77	1.77
Fan Motor	Number of Fan	Pieces	1	1	1	1	2	2	2	2
	Total Fan Motor Power	Input W	145	145	145	145	290	290	290	290
Others	Oil Separator	Volume (Liters)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Receiver Volume	R134a (kg)	5.1	5.1	5.1	5.1	7.2	7.2	7.2	7.2
	Pipes	Suction OD (Inch)	3/4	3/4	3/4	7/8	7/8	7/8	7/8	7/8
		Liquid OD (Inch)	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
	Dimension	WxDxH (mm)	1029 X 424 X 840	1029 X 424 X 840	1029 X 424 X 840	1029 X 424 X 840	1029 X 424 X 1242	1029 X 424 X 1242	1029 X 424 X 1242	1029 X 424 X 1242
	Weight	Net (kg)	79	81	81	93	106	106	116	121
		Gross (kg)	117	119	119	131	131	150	160	165

Technical Data

ZXD Family : Digital Medium Temp - 60 Hz - TF7

Family			ZXD			
Nominal Rating	Horsepower (HP)		4	5	6	7.5
Model Name			ZXD040E	ZXD050E	ZXD060E	ZXD075E
Phase (Ph)			3	3	3	3
Compressor	ModelName	R22	n/a	n/a	n/a	n/a
		R404A	ZBD29KQE-TF7	ZBD38KQE-TF7	ZBD45KQE-TF7	ZBD48KQE-TF7
	Rated Load Ampere	R22	n/a	n/a	n/a	n/a
		R404A	9.6	11.6	12.9	14.6
	Locked Rotor Ampere	R22	n/a	n/a	n/a	n/a
		R404A	54.0	64.0	70.0	78.0
	Oil Type	R22	n/a	n/a	n/a	n/a
		R404A	POE	POE	POE	POE
Oil Recharge Volume	R404A (Liters)	1.24	1.77	1.77	1.77	
Fan Motor	Number of Fan	Pieces	2	2	2	2
	Total Fan Motor Power	Input W	290	290	290	290
Others	Oil Separator	Volume (Liters)	0.5	0.5	0.5	0.5
	Receiver Volume	R22 (kg)	n/a	n/a	n/a	n/a
		R404A (kg)	6.3	6.3	6.3	6.3
	Pipes	Suction OD (Inch)	7/8	7/8	7/8	7/8
		Liquid OD (Inch)	1/2	1/2	1/2	1/2
	Dimension	WxDxH (mm)	1029 X 424 X 1242	1029 X 424 X 1242	1029 X 424 X 1242	1029 X 424 X 1242
	Weight	Net (kg)	109.00	117.00	121.00	127.00
Gross (kg)		148.00	156.00	158.00	163.00	

Technical Data

ZXL Family : Low Temp - 60 Hz - TF7

Family			ZXL							
Nominal Rating	Horsepower (HP)		2	2.5	3	3.5	4	5	6	7.5
Model Name			ZXL0200	ZXL0250	ZXL0300	ZXL0350	ZXL0400	ZXL0500	ZXL0600	ZXL0750
			ZXL020E	ZXL025E	ZXL030E	ZXL035E	ZXL040E	ZXL050E	ZXL060E	ZXL075E
Phase (Ph)			3	3	3	3	3	3	3	3
Compressor	ModelName	R22	ZXI06KC-TFD	ZXI08KC-TFD	ZXI09KC-TFD	ZXI11KC-TFD	ZXI14KC-TFD	ZXI15KC-TFD	ZXI18KC-TFD	ZXI21KC-TFD
		R404A	ZXI06KCE-TFD	ZXI08KCE-TFD	ZXI09KCE-TFD	ZXI11KCE-TFD	ZXI14KCE-TFD	ZXI15KCE-TFD	ZXI18KCE-TFD	ZXI21KCE-TFD
	Rated Load Ampere	R22	5.4	5.5	5.7	7.4	8.1	8.8	11.1	12.1
		R404A	5.6	6.2	6.0	8.3	8.6	10.0	11.1	14.6
	Locked Rotor Ampere	R22	39.2	39.2	39.2	51.5	51.5	51.5	74.0	101.0
		R404A	39.2	39.2	39.2	51.5	51.5	51.5	74.0	101.0
	Oil Type	R22	Mineral	Mineral	Mineral	Mineral	Mineral	Mineral	Mineral	Mineral
		R404A	POE	POE	POE	POE	POE	POE	POE	POE
	Oil Recharge Volume	R22/R404A (Liters)	0.56	0.56	0.56	1.24	1.24	1.24	1.77	1.77
Fan Motor	Number of Fan	Pieces	1	1	1	1	1	2	2	2
	Total Fan Motor Power	Input W	116.00	116.00	116.00	116.00	116.00	246.00	246.00	246.00
Others	Oil Separator	Volume (Liters)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Receiver Volume	R22 (kg)	5.1	5.1	5.1	5.1	5.1	7.2	7.2	7.2
		R404A (kg)	4.4	4.4	4.4	4.4	4.4	6.3	6.3	6.3
	Pipes	Suction OD (Inch)	3/4	3/4	3/4	7/8	7/8	7/8	7/8	7/8
		Liquid OD (Inch)	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
	Dimension	WxDxH (mm)	1029 X 424 X 840	1029 X 424 X 840	1029 X 424 X 840	1029 X 424 X 840	1029 X 424 X 840	1029 X 424 X 1242	1029 X 424 X 1242	1029 X 424 X 1242
	Weight	Net (kg)	79	81	81	93	93	106	116	121
		Gross (kg)	117	119	119	131	131	150	165	170

Technical Data

ZXL Family : 60Hz - TF5/TF7

Family			ZXL							
Nominal Rating	Horsepower (HP)		2	2.5	3	3.5	4	5	6	7.5
Model Name			ZXL0200	ZXL0250	ZXL0300	ZXL0350	ZXL0400	ZXL0500	ZXL0600	ZXL0750
			ZXL020E	ZXL025E	ZXL030E	ZXL035E	ZXL040E	ZXL050E	ZXL060E	ZXL075E
Phase (Ph)			3	3	3	3	3	3	3	3
Compressor	Model Name	R22	ZXI06KC-TF5/7	ZXI08KC-TF5/7	ZXI09KC-TF5/7	ZXI11KC-TF5/7	ZXI14KC-TF5/7	ZXI15KC-TF5/7	ZXI18KC-TF5/7	ZXI21KC-TF5/7
		R404A	ZXI06KCE-TF5/7	ZXI08KCE-TF5/7	ZXI09KCE-TF5/7	ZXI11KCE-TF5/7	ZXI14KCE-TF5/7	ZXI15KCE-TF5/7	ZXI18KCE-TF5/7	ZXI21KCE-TF5/7
	Rated Load Ampere (TF5)	R22	12.1	12.6	12.9	19.1	20.0	21.4	25.5	28.9
		R404A	12.1	12.6	12.9	19.1	20.0	21.4	25.5	28.9
	Rated Load Ampere (TF7)	R22	5.4	5.5	6.9	7.7	9.9	12.6	14.1	14.4
		R404A	5.6	6.2	6.9	8.6	9.9	12.6	14.1	14.4
	Locked Rotor Ampere	R22	73.0	73.0	73.0	110.0	110.0	110.0	186.6	191.0
		R404A	34.8	34.8	38.6	47.0	66.0	73.5	94.3	94.3
	Oil Type	R22	Mineral	Mineral	Mineral	Mineral	Mineral	Mineral	Mineral	Mineral
		R404A	POE	POE	POE	POE	POE	POE	POE	POE
	Oil Recharge Volume	R22/R404A (Liters)	0.56	0.56	0.56	1.24	1.24	1.24	1.77	1.77
Fan Motor	Number of Fan	Pieces	1	1	1	1	2	2	2	2
	Total Fan Motor Power	Input W	145.00	145.00	145.00	145.00	290.00	290.00	290.00	290.00
Others	Oil Separator	Volume (Liters)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Receiver Volume	R22 (kg)	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
		R404A (kg)	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
	Pipes	Suction OD (Inch)	3/4	3/4	3/4	7/8	7/8	7/8	7/8	7/8
		Liquid OD (Inch)	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
	Dimension	WxDxH (mm)	1029 X 424 X 840	1029 X 424 X840	1029 X 424 X 840	1029 X 424 X 840	1029 X 424 X 1242	1029 X 424 X 1242	1029 X 424 X 1242	1029 X 424 X 1242
	Weight	Net (kg)	79	81	81	93	93	106	116	121
		Gross (kg)	117	119	119	131	143	150	165	170

Copeland™ Hermetic ECZ Compressor

Emerson New-Age Fractional Horse Power Refrigeration Solutions

Emerson Climate Technologies' Fractional Horse Power Compressors are known for their wide range, ease of application, efficiency, reliability and excellent after-sales service – including “repair services” even beyond the warranty period.

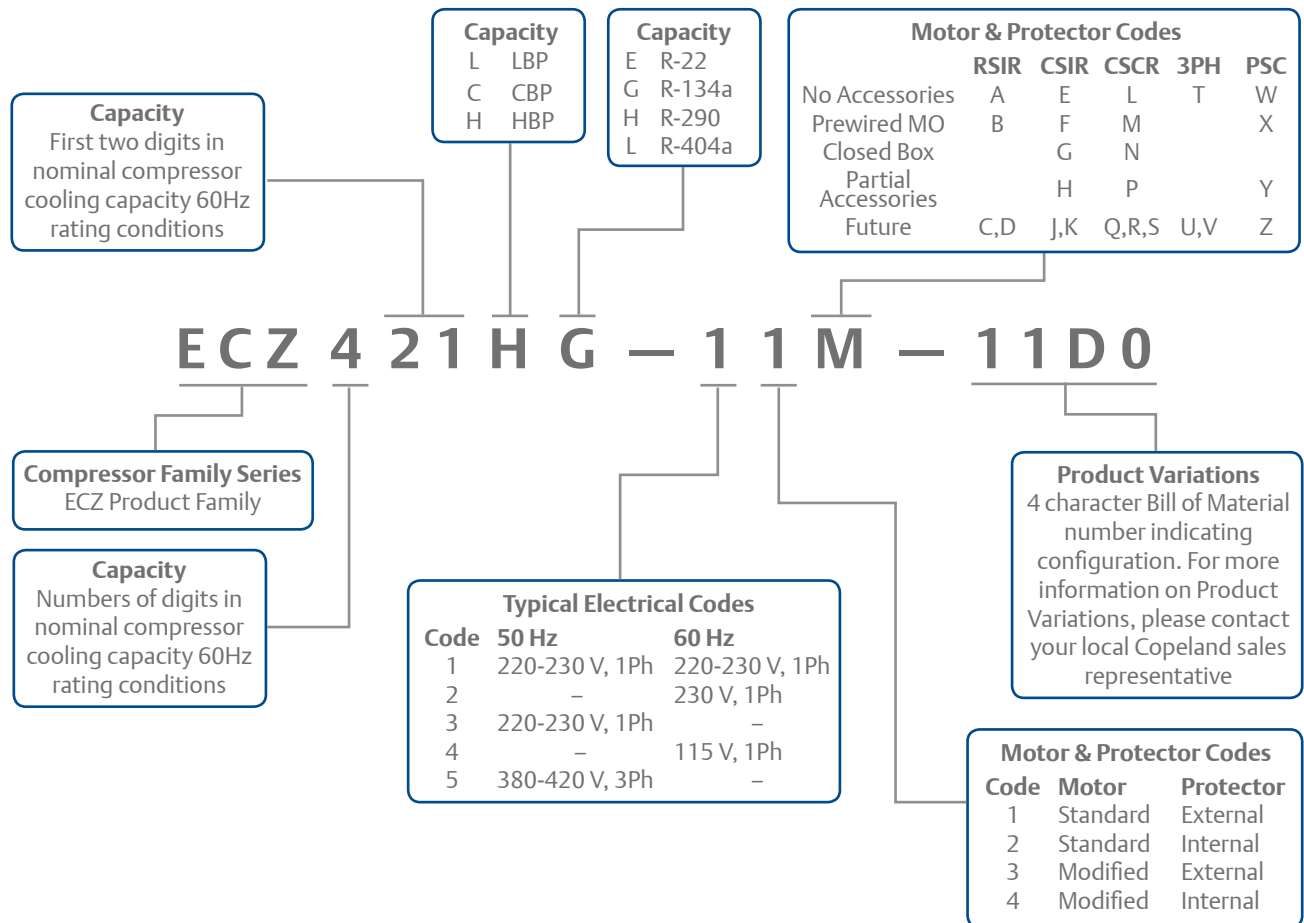
It has been our endeavor to continuously innovate and offer enhanced product value to be the best in the world. Emerson Climate Technologies is pleased to announce the launch of the Next Generation ECZ Hermetic FHP Reciprocating Compressors, to meet different cooling needs of our customers for domestic and export business.



Product Advantage

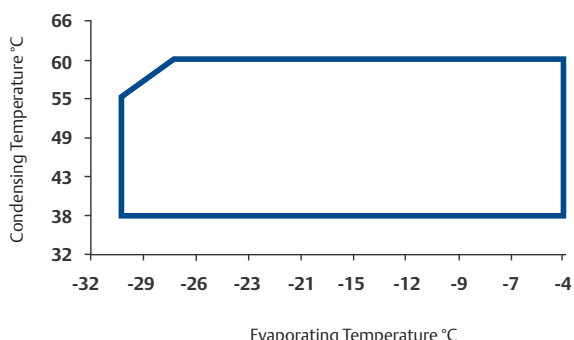
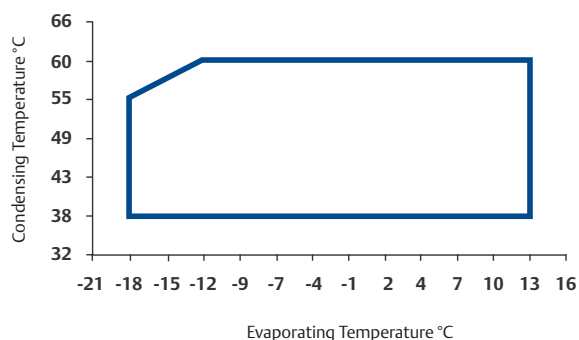
- Higher Cooling Capacity
- Best in Class Energy Efficiency
- High Product Quality and Reliability
- Compact Shape

Nomenclature



Operating Envelopes

ECZ421HG-11b-37XX, ECZ426HG-11m-37XX



Product Line-up

ECZ Capacity (kW), R134a

Model	High Temp ⁽¹⁾		Low Temp ⁽²⁾	
	50Hz	60Hz	50Hz	60Hz
ECZ421HG	0.52	0.62	-	-
ECZ426HG	0.63	0.75	-	-
ECZ431HG	0.75	0.89	-	-
ECZ380LG	-	-	0.19	0.23

Notes: 1) High Temp: Evaporating 7.2°C, Condensing 54.4°C, Subcooling 0°C, Suction Gas 35°C
2) Low Temp: Evaporating -25°C, Condensing 40°C, Subcooling 0°C, Suction Gas 32°C

Technical Data

R134a

Application			High Temp			Low Temp
Compressor Model			ECZ421HG-11B	ECZ426HG-11M	ECZ431HG-11M	ECZ380LG-11M
Refrigerant			R134a	R134a	R134a	R134a
Displacement		cc/rev	5.30	6.00	7.22	7.22
Motor Circuit			RSIR	CSCR	CSCR	CSCR And CSIR
LRA		Amp@50/60Hz	12.00	9.00	10.00	10.00
MCC		Amp@50/60Hz	3.00	2.00	2.30	2.00
Voltage Range	50Hz	V	180-260	187-260	187-260	180-260
	60Hz	V	207-253	207-253	207-253	207-253
Start Capacitor		mfd	-	40-60	40-60	40-60
Run Capacitor		mfd	-	6.00	6.00	-
OLP Model		-	5TM743	5TM734	5TM734	5TM734
Relay Model		-	KARP4027	KARPN3041	KARPN3541	KARPN3541
Oil Charge		cc	240.00	240.00	240.00	240.00
Oil Type		-	POE	POE	POE	POE
Cooling Type		CFM	350.00	350.00	350.00	350.00
Net Weight		Kg	9.40	9.40	9.60	9.60

Notes

[illegible]

Notes

[illegible]

General Information

Technical data are correct at the time of printing. Updates may occur, and should you need confirmation of a specific value, please contact Emerson Climate Technologies™ stating clearly the information required.

Emerson Climate Technologies cannot be held responsible for errors in capacities, dimensions, etc., stated herein. Products, specifications, and data in this literature are subject to change without notice.

The information given herein is based on data and tests which Emerson Climate Technologies believes to be reliable and which are in accordance with today's technical knowledge. It is intended for use by persons having the appropriate technical knowledge and skill, at their own discretion and risk. Our products are designed and adapted for fixed locations. For mobile applications, failures may occur.

The suitability for this has to be assured from the plant manufacturer, which may include making appropriate tests.

Note:

The components listed in this catalogue are not released for use with caustic, poisonous or flammable substances. Emerson Climate Technologies cannot be held responsible for any damage caused by using these substances.

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