

Freezer On Wheels Customized Compressor Range



Perfect Solution For Retail

COPELAND™


EMERSON™

Emerson's Exclusive Product Range For Freezer on Wheels (FOW)



Emerson reciprocating compressor range has an established track record & is successfully used in many commercial refrigeration applications around the world. It has built a reputation for delivering improved efficiency, reliability & sound performance.

Emerson is pleased to announce the launch of tailor made model range for Freezer on Wheels application. This product is mainly targeted to help achieve the highest reliability in stringent transport application like Freezer on Wheels. These compressor models are available with R134a & R404A refrigerant option.



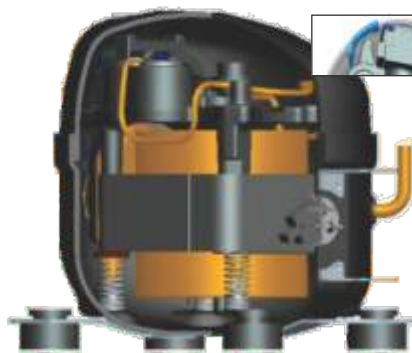
Compact Design Suits Transport

- Optimized internal clearances
- Additional bumper included
- Restricted internal movement of assembly during transportation helps reduce stress on mounting spring



Robust Design Prevents Damage

- Transportation brings highest stress level on shockloop
- Shockloop redesigned with higher safety factor
- Shockloop designed to face reduced stress level



Rigid Suspension Suits Transport

- Spring-key component of compressor in transport application
- Spring designed with 4 times increased factor of safety



Special Mounting Brings Stability

- Better grade rubber used
- Material with higher tensile strength to sustain jerks in transport



IP24 Rated Electrical Accessories



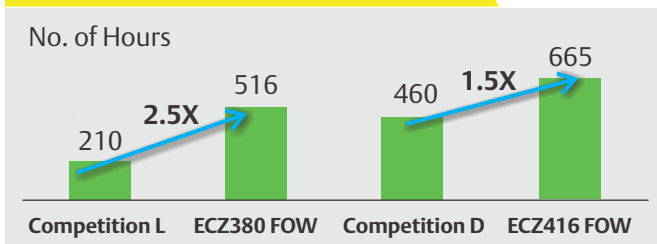
FoW Compressor For Moving/FoW Application

Transport Test Condition	Test Condition Like	Indian Standard-2	MIL Simulated Test @ Emerson Lab	MIL Test @ARAI
Synchronous Condition	Highway	-		
Non Synchronous Condition	Normal City Road	-		
Out Of Phase Condition	Bumpy Road	100 Hrs		
MIL Condition	Rough Terrain	-	500-600 Hrs	3 Hrs: Measures Stress Level

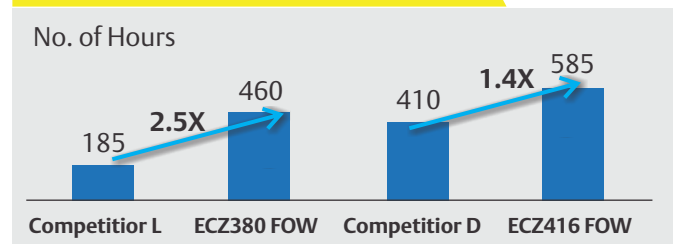
Foolproof Design Withstands Severe Validation Tests

- MIL simulated test result at Emerson Lab

Compressor Motion Along Major Axis



Compressor Motion Along Minor Axis



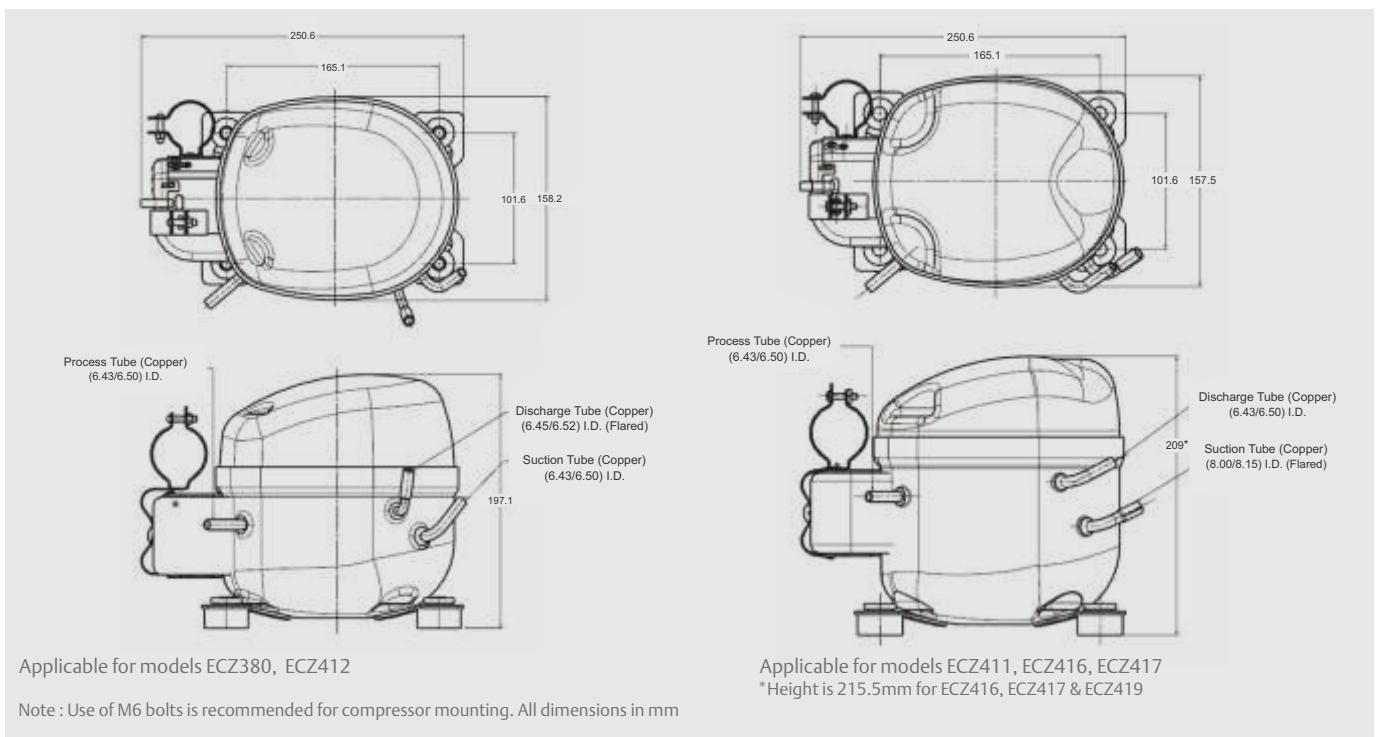
- MIL Test at ARAI

Emerson compressor tested for 180 minutes. Found lower stress levels on Emerson compressor components than the competition.



Validation Tests Conducted @ ARAI Campus

Dimensional Drawing



Product Specifications

Parameter		Low Temperature Applications					
# PERFORMANCE SPECIFICATIONS							
Model		ECZ380LG-33M	ECZ411LG-13M	ECZ416LG-13M	ECZ412LL-31M	ECZ417LL-31M	ECZ419LL-31M
Refrigerant		R134a	R134a	R134a	R404A	R404A	R404A
Performance Nominals @ 50 Hz							
Capacity	Btu/hr	660	915	1260	1000	1400	1650
	Watt	193	268	369	293	410	483
Power	Watt	154	218	280	233	311	339
EER	Btu/Watt-Hr	4.28	4.2	4.5	4.3	4.5	4.87
	W/W	1.25	1.23	1.32	1.26	1.32	1.43
Current	Amp	0.8	1.3	1.3	1.4	1.6	1.7
MECHANICAL SPECIFICATIONS							
Displacement	cc/rev	7.22	10.5	13.8	6	8.7	9.9
Oil Charge	cc	240	300	300	240	300	300
Oil Type	-	POE	POE	POE	POE	POE	POE
Cooling Type	CFM	350	350	350	350	350	350
Net Weight	Kg	9.5	11.2	11.7	9.8	11.7	11.7
ELECTRICAL SPECIFICATIONS							
*Motor Circuit		CSCR	CSCR	CSCR	CSCR	CSCR	CSCR
Voltage Range @50Hz	Volts	180-260	180-260	187-260	187-260	187-260	187-260
Voltage Range @60Hz	Volts	207-253	-	-	-	-	-
LRA	Amp @50/60Hz	10	13.5	16.3	11	17	19
MCC	Amp @50/60Hz	2.2	3.5	3.35	2.5	3.35	3.1
Start Capacitor	µfd	40-60@230	40-60@230	80-100@230	40-60@230	80-100@230	80-100@230
Run Capacitor	µfd	6@440	6@440	10@440	10@440	10@440	10@440
OLP Model		5TM734NFBYY-53	5TM743SFBYY-53	5TM743PFBYY-53	5TM734NFBYY-53	5TM757JFBYY-53	5TM757LFBYY-53
Relay Model		PTC-8EA19D7	KARPN4241	KARPN4341	KARPN3741	KARPN4441	KARPN4841

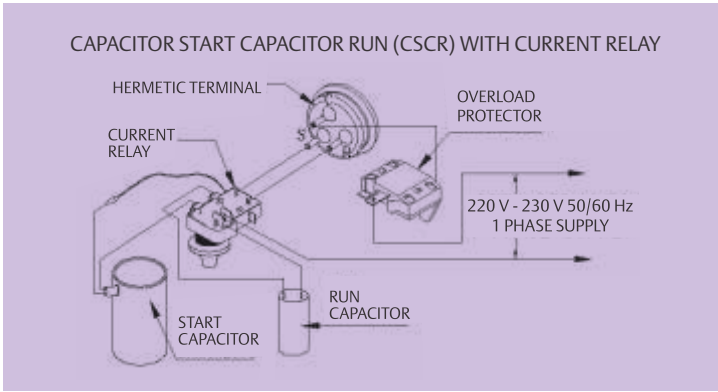
*Performance at ASRE/T Rating Conditions.

ASRE/T Rating Conditions

Rating	Ambient Temp.	Evaporating Temp.	Condensing Temp.	Sub cooled Liquid Temp.	Return gas Temp.
	°C(°F)	°C(°F)	°C(°F)	°C(°F)	°C(°F)
LBP	32(90)	-23.3(-10)	54.4(130)	32(90)	32(90)

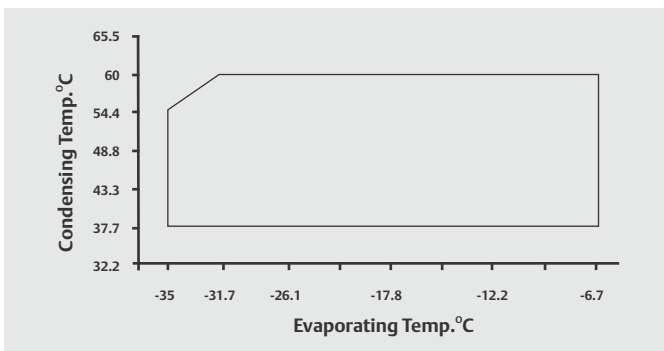


Wiring Diagram

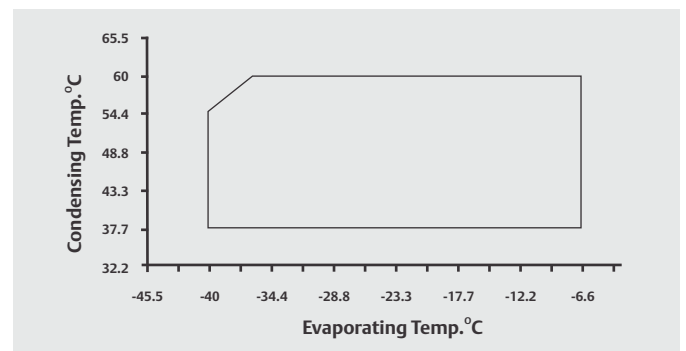


Operating Envelopes

ECZ380LG-33M-37XX,
ECZ411LG-13M-37XX & ECZ416LG-13M-37XX



ECZ412LL-31M-37XX,
ECZ417LL-31M-37XX & ECZ419LL-31M-37XX



Ordering Information

Model	Electricals			BOM		
	Electrical Code	Motor & Protection Code	Motor Circuit & Accessories	Mounting	Tubing	Supply & Approval Indicator
ECZ380LG-33M-37DF	220-230V, 1Ph, 50Hz	Modified Motor & External Protector	CSCR Motor Circuit Prewired MO	Dual Rectangular Mount	Suction Side Tube Inclined	D-Domestic F-FoW
ECZ411LG-13M-37DF ECZ416LG-13M-37DF	220-230V, 1Ph, 50Hz				Discharge Tube	
ECZ412LL-31M-37DF ECZ417LL-31M-37DF ECZ419LL-31M-37DF	220-230V, 1Ph, 50Hz	Std. Motor Ext. Protector			Process Tube Horizontal	

Model Selection

R134a	
FoW Capacity*	Compressor Models
110Lt	ECZ380LG
165Lt	ECZ411LG
250Lt	ECZ416LG

R404A	
FoW Capacity*	Compressor Models
100-110Lt	ECZ412LL
165-200Lt	ECZ417LL/ECZ419LL

*Preliminary Guidelines. Please check system details before selecting compressor model.

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Note

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

About Emerson

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