

Copeland reciprocating condensing unit

Product Brochure

*Reliable reciprocating compressor technology.
Ideal for QSR small cold room & food service applications.*





Copeland is a new standalone company serving the global HVACR market, enhancing opportunities to support our customers as a focused company.

Condensing Unit Nomenclature

EAC - SM 015 AE - PFZ Q XXX

Family name

Code	Definition
EAC	E Series Air-cooled Condensing unit

Standard Model

POE OIL

Voltage Table A

Housing Table B

BOM Table C

Nominal horsepower

Code	Horsepower
015	1.5 HP
020	2 HP
050	5 HP

Compressor platform

Code	Compressor
S	CS platform
M	KCM platform
F	CF platform

Application

Code	Definition
M	Medium temp (-6.7°C ET)
L	Low temp. (-31.7°C ET)

Table A: Electrical

Code	Voltage rating
TFM	380V 3φ 50Hz
PFZ	220V 1φ 50Hz
TF5	220V 3φ 60Hz
TF7	380V 3φ 60Hz
PFV	220V 1φ 60Hz

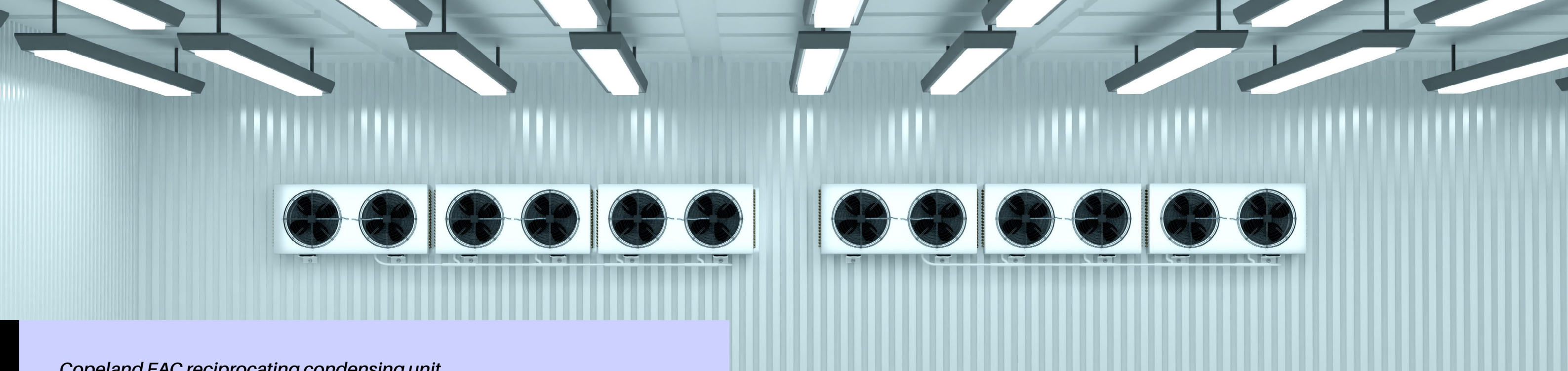
Table B: Housing

Code	Housing type
A	Flat metal base
Q	Metal housing without door
R	Metal housing with door

Table C: BOM table

Number	Parts	Medium Temp Units BOM				Low Temp Unit		
		621	633	622	632	635	636	638
		TFM	PFZ	TFM	PFZ	PFZ	TFM	TFM
1	LP	Adj	Adj	Adj	Adj	Adj	Adj	Adj
2	Compressor	3 Phase	1 Phase	3 Phase	1 Phase	1 Phase	3 Phase	3 Phase
3	HP	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Adj
4	Oil Separator	✓	✓	x	x	x	x	✓
5	Receiver (SANS Approved)	✓	✓	✓	✓	✓	✓	✓
6	Filter Drier	✓	✓	✓	✓	✓	✓	✓
7	Sight Glass	✓	✓	✓	✓	✓	✓	✓
8	Service Valves	✓	✓	✓	✓	✓	✓	✓
9	Terminal Rail	✓	✓	✓	✓	✓	✓	✓
10	Crank Case Heater	✓	✓	✓	✓	✓	✓	✓
11	Circuit Breaker	✓	✓	✓	✓	✓	✓	✓
12	Contactors	✓	✓	✓	✓	✓	✓	✓
13	Single Phase Preventor	✓	Not Required	✓	Not Required	Not Required	✓	✓





Copeland EAC reciprocating condensing unit

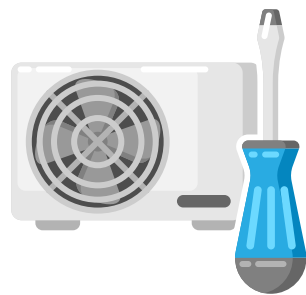
Quality condensing units

EAC Condensing unit available in a compact & durable chassis with both medium temperature & low temperature applications



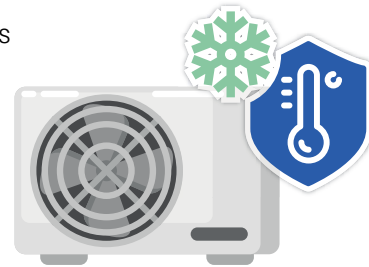
Ready for installation

Factory installed electrical box with contactor, terminal strip and circuit breaker; just plug in it!



Ease of service

Powder coated chassis for weather protection with Service door for easy access



Flexible choice of Compressor

CS*K7 for medium temperature application and KCM*LAL for low temp application



Copeland protection

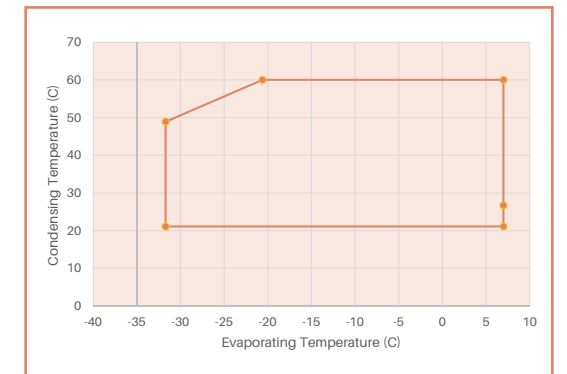
Factory fitted flow controls Filter Dryer, Sight glass, Crankcase Heater, Oil Separator and Receiver.



Medium temperature reciprocating condensing unit

HP	SKU	Compressor	Capacity (kW) ¹	Chassis ²	
1.5	EAC-SE015AE-PFZQ632	CS10K7ME-PFZ	2.7	A1	
	EAC-SE015AE-TFMQ622	CS10K7ME-TFM			
2	EAC-SE020AE-PFZQ632	CS13K7ME-PFZ	3.7		
	EAC-SE020AE-TFMQ622	CS13K7ME-TFM			
2.5	EAC-SE025AE-PFZR633	CS17K7ME-PFZ	4.8		B
	EAC-SE025AE-TFMR621	CS17K7ME-TFM			
3	EAC-SE030AE-PFZR633	CS20K7ME-PFZ	5.4		
	EAC-SE030AE-TFMR621	CS20K7ME-TFM			
4	EAC-SE040AE-TFMR621	CS27K7ME-TFM	7.0		
5	EAC-SE050AE-TFMR621	CS33K7ME-TFM	8.9	C	

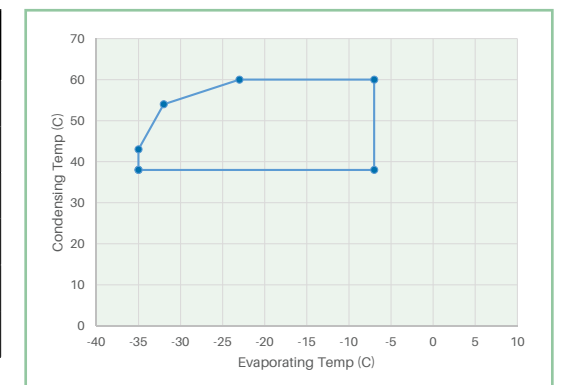
- Capacity condition: Evaporating temp. -10C, Ambient temp 32C, R404A
- See drawing pages 12-13
- Rotalock compressor



Low temperature reciprocating condensing unit

HP	SKU	Compressor	Capacity (kW) ¹	Chassis ²
2	EAC-ML020AE-PFZQ635	KCM475LAL-C310H	2	A2
	EAC-ML020AE-TFMQ636	KCM475LAL-E511H	2	
2.5	EAC-ML025AE-TFMR637	KCM512LAL-E511H	3.5	B
3	EAC-ML030AE-TFMR637	KCM515LAL-E511H	4	
3.5	EAC-ML035AE-TFMR638	KCM517LAL-E513H	4.5	C
4	EAC-ML040AE-TFMR638	KCM520LAL-E513H	5	

- Capacity condition: Evaporating temp. -23C, Ambient temp 32C, R404A
- See drawing pages 12-13
- Stub tube compressor



EAC-SM Performance Data

R404A 50Hz

Model		Ambient Temp °C	Evaporating Temp °C							
			-30°C	-20°C	-15°C	-10°C	-5°C	0°C	5°C	7°C
EAC-SE015 (1.5 HP)	Capacity (kW)	27°C	0.9	2.0	2.7	3.5	4.3	5.2	6.1	6.5
		32°C	0.8	1.8	2.4	3.1	3.9	4.7	5.5	5.9
		35°C	0.7	1.6	2.2	2.9	3.6	4.4	5.2	5.6
		43°C		1.1	1.6	2.2	2.8	3.5	4.3	4.6
	Power (kW)	27°C	0.8	1.1	1.3	1.4	1.5	1.6	1.7	1.8
		32°C	0.8	1.1	1.3	1.4	1.6	1.7	1.8	1.9
		35°C	0.8	1.1	1.2	1.4	1.5	1.7	1.8	1.8
		43°C		1.1	1.3	1.5	1.6	1.8	2.0	2.0
EAC-SE020 (2 HP)	Capacity (kW)	27°C	1.5	2.8	3.6	4.5	5.4	6.3	7.3	7.8
		32°C	1.3	2.5	3.2	4.0	4.9	5.8	6.7	7.1
		35°C	1.1	2.3	3.0	3.7	4.5	5.4	6.3	6.7
		43°C		1.8	2.4	3.0	3.7	4.5	5.3	5.6
	Power (kW)	27°C	1.1	1.5	1.6	1.8	1.9	2.1	2.3	2.4
		32°C	1.1	1.5	1.7	1.8	2.0	2.2	2.4	2.5
		35°C	1.1	1.5	1.7	1.9	2.0	2.2	2.5	2.6
		43°C		1.6	1.8	2.0	2.1	2.4	2.6	2.7
EAC-SE025 (2.5 HP)	Capacity (kW)	27°C	1.9	3.4	4.3	5.4	6.5	7.7	8.9	9.4
		32°C	1.6	3.0	3.9	4.8	5.9	7.0	8.1	8.5
		35°C	1.4	2.7	3.6	4.5	5.5	6.6	7.6	8.0
		43°C		2.1	2.8	3.6	4.5	5.4	6.3	6.6
	Power (kW)	27°C	1.4	1.9	2.1	2.3	2.5	2.7	2.9	3.0
		32°C	1.5	1.9	2.1	2.4	2.6	2.8	3.0	3.1
		35°C	1.5	2.0	2.2	2.4	2.6	2.8	3.1	3.2
		43°C		2.0	2.2	2.5	2.7	2.9	3.2	3.3
EAC-SE030 (3 HP)	Capacity (kW)	27°C	2.2	3.8	4.9	6.0	7.3	8.5	9.7	10.1
		32°C	1.8	3.3	4.3	5.4	6.5	7.6	8.8	9.2
		35°C	1.7	3.0	3.9	5.0	6.1	7.2	8.2	8.6
		43°C		2.3	3.0	3.9	4.9	5.9	6.8	7.2
	Power (kW)	27°C	1.5	2.1	2.3	2.5	2.7	3.0	3.3	3.4
		32°C	1.6	2.1	2.3	2.6	2.8	3.1	3.4	3.5
		35°C	1.6	2.1	2.4	2.6	2.9	3.1	3.5	3.6
		43°C		2.2	2.4	2.7	3.0	3.3	3.6	3.8
EAC-SE040 (4 HP)	Capacity (kW)	27°C	2.8	5.1	6.6	8.2	10.0	11.8	13.8	14.7
		32°C	2.4	4.6	5.9	7.4	9.0	10.7	12.5	13.3
		35°C	2.1	4.2	5.5	6.9	8.5	10.1	11.8	12.6
		43°C		3.3	4.3	5.5	6.8	8.2	9.6	10.3
	Power (kW)	27°C	2.0	2.8	3.1	3.4	3.6	3.9	4.2	4.4
		32°C	2.0	2.9	3.2	3.5	3.7	4.0	4.4	4.6
		35°C	2.1	2.9	3.2	3.5	3.8	4.1	4.5	4.7
		43°C		3.0	3.3	3.6	4.0	4.3	4.7	4.9
EAC-SE050 (5 HP)	Capacity (kW)	27°C	3.5	6.2	7.8	9.6	11.6	13.7	16.0	17.0
		32°C	3.2	5.7	7.1	8.8	10.6	12.5	14.6	15.5
		35°C	3.0	5.3	6.7	8.3	9.9	11.8	13.8	14.6
		43°C		4.5	5.6	6.9	8.3	9.8	11.5	12.2
	Power (kW)	27°C	2.3	3.1	3.5	4.0	4.4	4.8	5.2	5.4
		32°C	2.3	3.2	3.6	4.1	4.6	5.0	5.4	5.6
		35°C	2.4	3.2	3.7	4.2	4.6	5.1	5.5	5.7
		43°C		3.3	3.8	4.3	4.8	5.3	5.8	6.0

EAC-SM Technical Data

R404A 50Hz

PFZ - 220V 1φ 50 Hz

Model		Type	Medium Temperature			
		Electricals	220~230V/50Hz/1Ph			
		Type	PFZ			
		Horsepower	1.5 HP	2 HP	2.5 HP	3 HP
Model			EAC-SE015AE-PFZQ632	EAC-SE020AE-PFZQ632	EAC-SE025AE-PFZR633	EAC-SE030AE-PFZR633
Compressor	Model		CS10K7ME-PFZ-13A	CS13K7ME-PFZ-13A	CS17K7ME-PFZ-13A	CS20K7ME-PFZ-13A
	Rated Load Ampere	R404A	7.27	9.65	11.28	12.7
		R22	6.55	8.69	10.17	11.4
	Locked Rotor Ampere	R404A	54	72	85	104
		R22	54	72	85	104
	Oil Type	-	POE	POE	POE	POE
Oil Recharge Volume	Litre	1.27	1.27	1.27	1.27	
Fan Motor	No. of Fans	PCS	1	1	1	1
	Diameter	mm	450	450	500	500
	Speed	RPM	890	890	920	920
	Power per Motor	Watts	65	65	160	160
	Air Flow	Ft3 / Min.	1560	1560	2637	3082
Other	Crank Case Heater	Watts	40/49	40/49	40/49	40/49
	Receiver Volume	Litre	1.4	1.4	4.3	4.3
Unit Data	Gas Conenction Size	inch	5/8"	5/8"	5/8"	5/8"
	Liquid Connection Size	inch	3/8"	3/8"	3/8"	3/8"
	Dimention in Inch	LxWxH	34.2 x 15.1 x 24.5	34.2 x 15.1 x 24.5	41.1x17.3x31.7	41.1x17.3x31.7
	Weight	Kg	77	79	85	85



TFM - 380V 3φ 50Hz

Model		Type	Medium Temperature			
		Electricals	380~420V/50Hz/3Ph			
		Type	TFM			
		Horsepower	1.5 HP	2 HP	2.5 HP	3 HP
Model		EAC-SE015AE-TFMQ622	EAC-SE020AE-TFMQ622	EAC-SE025AE-TFMR621	EAC-SE030AE-TFMR621	
Compressor	Model		CS10K7ME-TFM-13A	CS13K7ME-TFM-13A	CS17K7ME-TFM-13A	CS20K7ME-TFM-13A
	Rated Load Ampere	R404A	2.64	3.87	4.97	4.97
		R22	2.38	3.49	4.48	4.48
	Locked Rotor Ampere	R404A	20	28	41	45
		R22	20	28	41	45
	Oil Type	-	POE	POE	POE	POE
Oil Recharge Volume	Litre	1.27	1.27	1.27	1.27	
Fan Motor	No. of Fans	PCS	1	1	1	1
	Diameter	mm	500	500	500	500
	Speed	RPM	920	920	920	920
	Power per Motor	Watts	160	160	160	160
	Air Flow	Ft3 / Min.	3000	3000	2637	3082
Other	Crank Case Heater	Watts	40/49	40/49	40/49	40/49
	Receiver Volume	Litre	4.6	4.6	4.6	4.6
Unit Data	Gas Conenction Size	inch	5/8"	5/8"	5/8"	5/8"
	Liquid Connection Size	inch	3/8"	3/8"	3/8"	3/8"
	Dimention in Inch	LxWxH	41.1 x 17.3x31.7	41.1 x 17.3x31.7	41.1x17.3x31.7	41.1x17.3x31.7
	Weight	Kg	77	79	85	85

Model		Type	Medium Temperature	
		Electricals	380~420V/50Hz/3Ph	
		Type	TFM	
		Horsepower	4 HP	5 HP
Model		EAC-SE040AE-TFMR621	EAC-SE050AE-TFMR621	
Compressor	Model		CS27K7ME-TFM-13A	CS33K7ME-TFM-13A
	Rated Load Ampere	R404A	6.58	7.46
		R22	5.93	6.73
	Locked Rotor Ampere	R404A	61	55
		R22	61	55
	Oil Type	-	POE	POE
Oil Recharge Volume	Litre	1.27	1.27	
Fan Motor	No. of Fans	PCS	1	2
	Diameter	mm	500	500
	Speed	RPM	920	1100
	Power per Motor	Watts	160	106
	Air Flow	Ft3 / Min.	3000	4000
Other	Crank Case Heater	Watts	70	70
	Receiver Volume	Litre	4.6	5.8
Unit Data	Gas Conenction Size	inch	7/8"	7/8"
	Liquid Connection Size	inch	1/2"	1/2"
	Dimention in Inch	LxWxH	41.1 x 17.3x31.7	42.2 x 17.4 x 46.1
	Weight	Kg	85	140

Model		Ambient Temp°C	Evaporating Temp °C						
			-35°C	-30°C	-25°C	-20°C	-15°C	-10°C	-6.7°C
EAC-ML020 (2 HP)	Capacity (kW)	32°C	1.0	1.5	1.9	2.4	3.0	3.7	4.3
		35°C	1.0	1.4	1.8	2.3	2.9	3.5	4.1
		43°C		1.1	1.4	1.8	2.2	2.8	3.2
	Power (kW)	32°C	1.0	1.2	1.4	1.6	1.8	2.0	2.1
		35°C	1.0	1.2	1.4	1.6	1.8	2.0	2.2
		43°C		1.2	1.4	1.6	1.9	2.1	2.3
EAC-ML025 (2.5 HP)	Capacity (kW)	32°C	1.7	2.4	3.2	4.0	4.9	5.9	6.6
		35°C	1.6	2.2	3.0	3.8	4.6	5.6	6.2
		43°C		1.7	2.3	3.0	3.7	4.5	5.1
	Power (kW)	32°C	1.6	1.9	2.3	2.7	3.0	3.4	3.6
		35°C	1.6	1.9	2.3	2.7	3.1	3.4	3.6
		43°C		1.9	2.3	2.7	3.1	3.5	3.8
EAC-ML030 (3 HP)	Capacity (kW)	32°C	2.0	2.7	3.5	4.4	5.4	6.4	7.2
		35°C	1.8	2.6	3.3	4.1	5.0	6.0	6.7
		43°C		2.0	2.6	3.3	4.0	4.9	5.5
	Power (kW)	32°C	1.8	2.2	2.6	3.0	3.4	3.9	4.2
		35°C	1.8	2.2	2.6	3.0	3.4	3.9	4.2
		43°C		2.1	2.6	3.0	3.5	4.0	4.3
EAC-ML035 (3.5 HP)	Capacity (kW)	32°C	2.3	3.3	4.3	5.3	6.5	7.9	8.9
		35°C	2.1	3.1	4.0	5.0	6.1	7.4	8.4
		43°C		2.3	3.1	4.0	4.9	6.0	6.9
	Power (kW)	32°C	2.6	3.1	3.5	4.0	4.4	4.9	5.2
		35°C	2.6	3.1	3.5	4.0	4.4	4.9	5.3
		43°C		3.0	3.5	4.0	4.5	5.0	5.3
EAC-ML040 (4 HP)	Capacity (kW)	32°C	2.4	3.5	4.6	5.8	7.1	8.5	9.5
		35°C	2.3	3.2	4.3	5.5	6.7	8.0	8.9
		43°C		2.5	3.4	4.4	5.5	6.6	7.4
	Power (kW)	32°C	2.8	3.3	3.7	4.2	4.6	5.1	5.4
		35°C	2.7	3.2	3.7	4.2	4.7	5.1	5.5
		43°C		3.1	3.7	4.2	4.7	5.3	5.6

PFZ - 220V 1φ 50 Hz

Model		Type	Low Temperature
		Electricals	220~230V/50Hz/1Ph
		Type	PFZ
		Horsepower	2 HP
		Model	EAC-ML020AE-PFZQ635
Compressor	Model	KCM475LAL-C311H	
	Rated Load Ampere	R404A	3.5
	Locked Rotor Ampere	R404A	28
	Oil Type	-	POE
	Oil Recharge Volume	Litre	1.27
Fan Motor	No. of Fans	PCS	1
	Diameter	mm	450
	Speed	RPM	900
	Power per Motor	Watts	54
	Air Flow	Ft3 / Min.	1767
Other	Crank Case Heater	Watts	58 @ 220~240V
	Receiver Volume	Litre	1.4
Unit Data	Gas Conenction Size	inch	1/2"
	Liquid Connection Size	inch	3/8"
	Dimention in Inch	LxWxH	33.3 x 13.7 x 23.7
	Weight	Kg	100

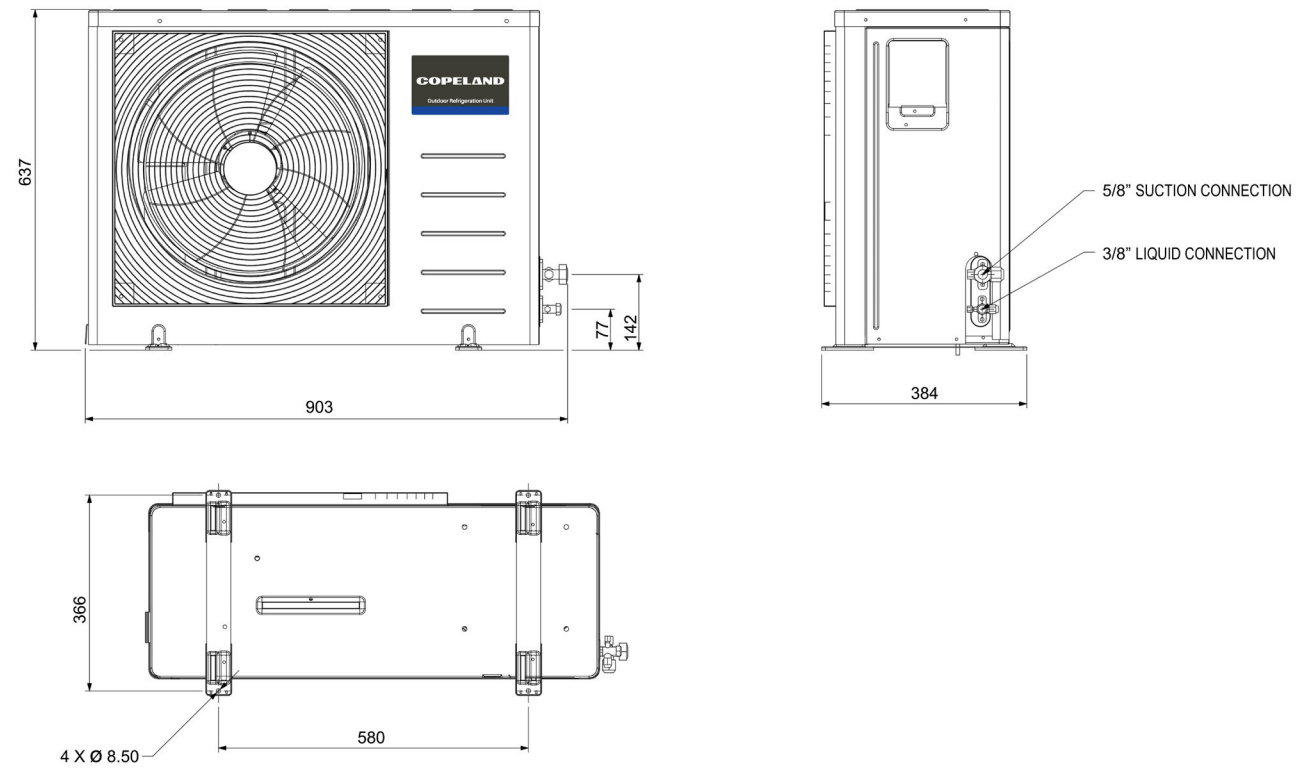
TFM - 380V 3φ 50Hz

Model		Type	Low Temperature				
		Electricals	380~420V/50Hz/3Ph				
		Type	TFM				
		Horsepower	2 HP	2.5 HP	3 HP	3.5 HP	4 HP
		Model	EAC-ML020AE-TFMO636	EAC-ML025AE-TFMR637	EAC-ML030AE-TFMR638	EAC-ML035AE-TFMR638	EAC-ML040AE-TFMR638
Compressor	Model		KCM-475LAL-E511H	KCM-512LAL-E511H	KCM-515LAL-E512H	KCM-517LAL-E513H	KCM-520LAL-E513H
	Rated Load Ampere	R404A	9.3	5.8	6.3	10.1	12.6
	Locked Rotor Ampere	R404A	7.3	45	45	61	65
	Oil Type	-	POE	POE	POE	POE	POE
	Oil Recharge Volume	Litre	1.27	1.27	1.27	1.3	1.3
	Fan Motor	No. of Fans	PCS	1	1	1	2
Diameter		mm	450	450	450	450	450
Speed		RPM	900	920	920	1100	1100
Power per Motor		Watts	54	160	160	106	106
Air Flow		Ft3 / Min.	1767	2637	2637	4000	4000
Other	Crank Case Heater	Watts	35 @ 240V	40 @ 240V	58 @ 220~240V	40/@480V	40/@480V
	Receiver Volume	Litre	1.4	4.6	4.6	5.8	5.8
Unit Data	Gas Conenction Size	inch	1/2"	5/8"	5/8"	7/8"	7/8"
	Liquid Connection Size	inch	3/8"	3/8"	3/8"	1/2"	1/2"
	Dimention in Inch	LxWxH	33.3 x 13.7 x 23.7	41.1x17.3x31.7	41.1x17.3x31.7	42.2 x 17.4 x 46.1	42.2 x 17.4 x 46.1
	Weight	Kg	100	140	140	170	170

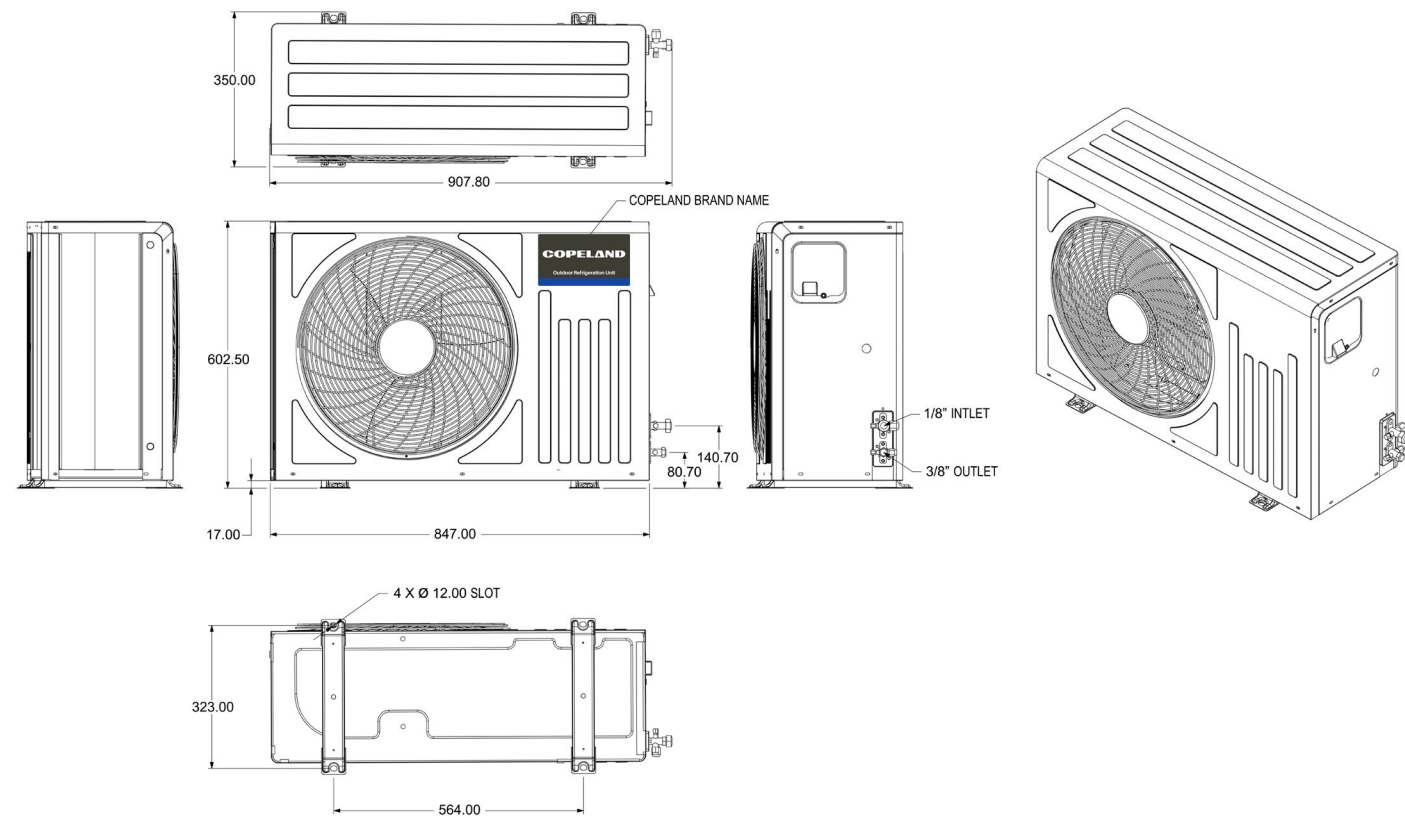


Mechanical Drawing

Chassis A1

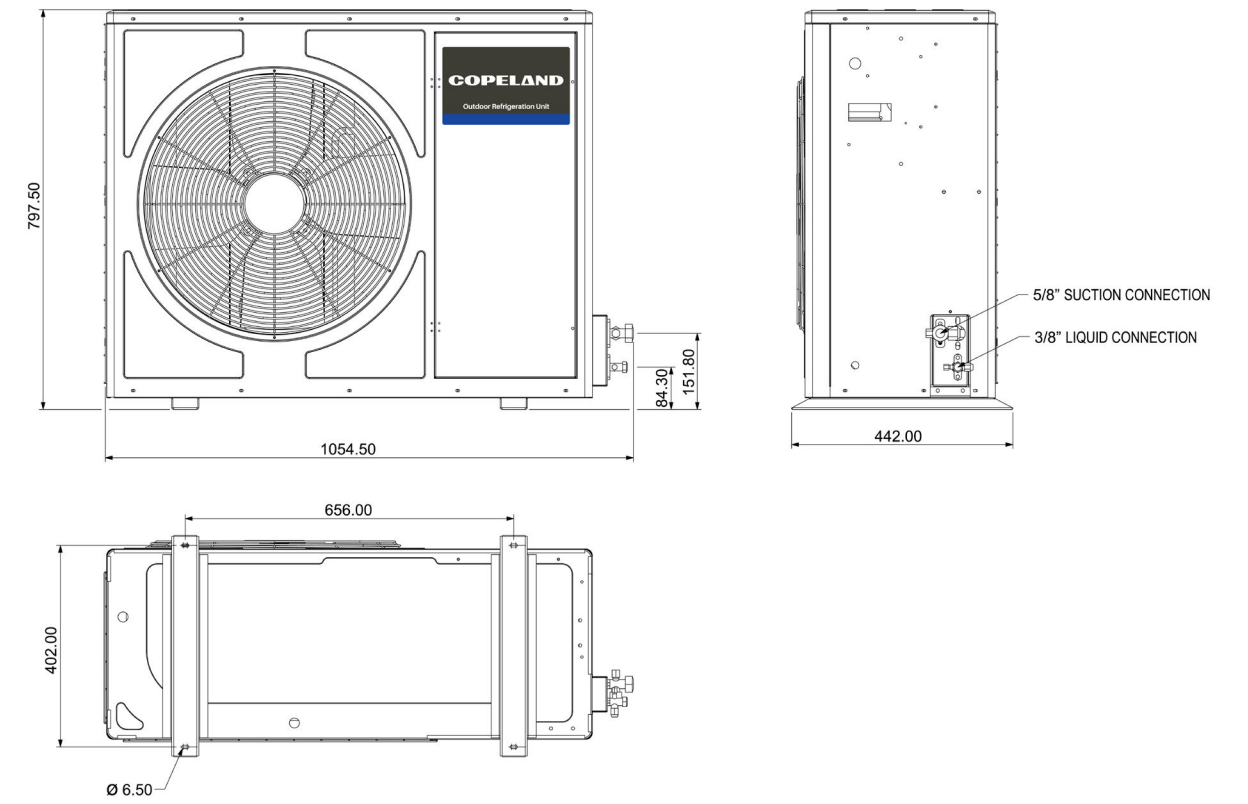


Chassis A2

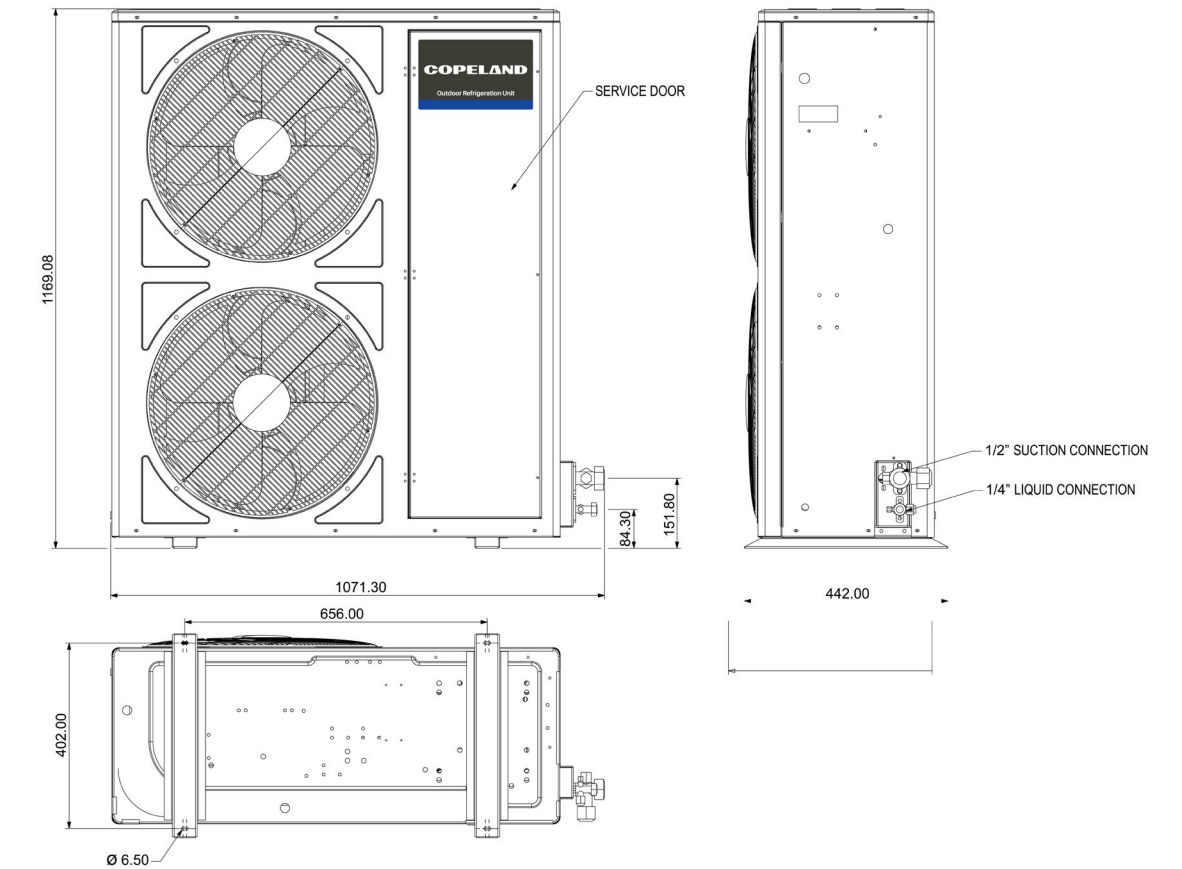


Mechanical Drawing

Chassis B



Chassis C





COPELAND

ENGINEERED FOR
SUSTAINABILITY

About Copeland

Copeland, a global provider of sustainable climate solutions, combines category-leading brands in compression, controls, software and monitoring for heating, cooling and refrigeration. With best-in-class engineering and design and the broadest portfolio of modulated solutions, we're not just setting the standard for compressor leadership; we're pioneering its evolution. Combining our technology with our smart energy management solutions, we can regulate, track and optimize conditions to help protect temperature-sensitive goods over land and sea, while delivering comfort in any space. Through energy-efficient products, regulation-ready solutions and expertise, we're revolutionizing the next generation of climate technology for the better. For more information, visit copeland.com.

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