

EMBRACO scroll

Air Conditioning
application for
replacement



think ahead

embraco
Nidec

Air Conditioning portfolio for replacement

Main product benefits



Wide range:

from 1.5 to 5 ton, for Residential Air Conditioning



UL Certified:

ready for sales in the USA



Portfolio availability:

multiple refrigerant options
– R410A and R22



Easy replacement of main competitors:

capacity range, and service kits to minimize effort to replace Copeland and LG.



Main Applications



Packaged systems
(rooftop)



Residential A/C for central
ducted systems

Portfolio

Embraco - R410A 60Hz 208-230 V 1~									
Embraco Model	Capacity* [BTU/h]	Copeland Model	Capacity* [BTU/h]	Arrco Model	Capacity* [BTU/h]	LG Model	Capacity* [BTU/h]		
EAF22H-C1	22,462	ZP20K6E-PFV	19,950	AA20KP-BFV	20,000	APG020KA	19,800		
		ZP20KEE-PFV	19,950			APG020KB	20,000		
		ZP20K5E-PFV	20,000						
		ZP20K7E-PFV	20,000			APG021KB	21,200		
		ZP20KAE-PFV	20,000						
		ZP21LXE-PFV	20,200			APA024KA	22,500		
		ZP21K6E-PFV	21,200						
		ZP21K5E-PFV	21,300			APG024KA	23,500		
		ZP21K7E-PFV	21,600						
		ZP22K6E-PFV	22,000			APG024KB	23,600		
ZP22KME-PFV	22,000								
EAF25H-C1	25,204	ZP23K3E-PFV	23,500	AA23KP-BFV	23,000	APG024KA	23,500		
		ZP23K6E-PFV	23,900			APG024KB	23,600		
		ZP24K5E-PFV	24,000						
		ZP24K6E-PFV	23,900			AA25KP-BFV	25,000	APG025KA	25,000
		ZP24K7E-PFV	23,800	APA026KA	24,500				
		ZP25K5E-PFV	25,200						
		ZP25K6E-PFV	25,300						
		ZP25K7E-PFV	25,100						
		ZP25LXE-PFV	25,500						
		ZP26K6E-PFV	25,100						
		ZP27K6E-PFV	27,000						
		ZP27KHE-PFB	27,000						
		ZP28K5E-PFV	27,900	AA28KP-BFV	28,000			APA029KA	28,500
		ZP28KHE-PFB	27,900			APG029KA	28,900		
ZP28K6E-PFV	29,400	APA030KA	29,000						
ZP29K5E-PFV	29,000								
EAF32H-C1	30,475	ZP29K6E-PFV	29,400	AA31KP-BFV	31,000	APG031KA	30,900		
		ZP29K7E-PFV	29,500			APA032KA	30,500		
		ZP29LXE-PFV	29,400					ABG034KA	34,350
		ZP31K5E-PFV	31,100			AA34KP-BFV	34,000	ABA034KA	34,500
		ZP31K6E-PFV	31,300	AA36KP-BFV	36,000			ABG036KA	36,000
		ZP31K7E-PFV	31,000					ABA036KA	36,500
		ZP31KEE-PFV	31,700						
		ZP31LXE-PFV	31,800					AA39KP-BFV	39,000
		ZP32K6E-PFV	31,400	ABG042KA	42,000				
		ZP34K7E-PFV	33,900			ABT042KT	42,200		
		EAF36H-C1	37,163	ZP34K5E-PFV	34,500	AA42KP-BFV	42,000		
				ZP34KFE-PFV	34,500			ABG049KA	49,400
				ZP34K6E-PFV	34,600				
				ZP36K7E-PFV	35,300			ABT051KT	51,200
ZP36K5E-PFV	36,000			ABA051KA	51,500				
ZP36K6E-PFV	36,000					AA49KP-BFV	49,000		
ZP36KHE-PFB	36,000			ABG054KA	54,000				
ZP37LXE-PFV	37,800							ABT054KT	54,000
ZP38K7E-PFV	36,900			ABT057KM	57,100				
ZP38K5E-PFV	37,500					ARA061KA	64,000		
ZP38K6E-PFV	37,500			AA51KP-BFV	51,000				
ZP39K5E-PFV	39,000					ABG054KA	54,000		
EAF42H-C1	43,118			ZP40K6E-PFV	40,000			AA54KP-BFV	54,000
				ZP40K7E-PFV	39,500	ABT054KT	54,000		
		ZP41K7E-PFV	42,100	ABT057KM	57,100				
		ZP42K5E-PFV	42,000			ARA061KA	64,000		
		ZP42K7E-PFV	42,100	ABG054KA	54,000				
		ZP42LXE-PFV	42,400			ABT054KT	54,000		
		ZP42K6E-PFV	42,500	ABT057KM	57,100				
		ZP44K5E-PFV	44,400			ARA061KA	64,000		
EAF49H-C1	49,277	ZP49K7E-PFV	48,800	AA51KP-BFV	51,000			ABG051KA	51,100
		ZP49K5E-PFV	49,400			ABT051KT	51,200		
		ZP49K6E-PFV	49,400					ABA051KA	51,500
		ZP51LXE-PFV	50,600			AA54KP-BFV	54,000		
		ZP51K7E-PFV	50,700	ABG054KA	54,000				
		ZP51K5E-PFV	51,000					ABT054KT	54,000
		ZP51K6E-PFV	51,000	ABT057KM	57,100				
		EAF54H-C1	54,243			ZP54K5E-PFV	54,000	AA54KP-BFV	54,000
ZP54K7E-PFV	54,800			ABT054KT	54,000				
ZP54K6E-PFV	54,900					ABT057KM	57,100		
EAF61H-C1	61,966	ZP57K5E-PFV	57,000	AA54KP-BFV	54,000			ABT057KM	57,100
		ZP57LXE-PFV	58,500			ARA061KA	64,000		
		ZP61K5E-PFV	61,500						

*AHRI HBP

Portfolio

Embraco - R22 60Hz 208-230 V 1~								
Embraco Model	Capacity* [BTU/h]	Copeland Model	Capacity* [BTU/h]	Arcco Model	Capacity* [BTU/h]	LG Model	Capacity* [BTU/h]	
EA22E-C1	21,206	ZR22K3-PFV	22,400	AR22KP-BFV	22,000	SQA022KAB	21,500	
EA25E-C1	26,084	ZR26K3-PFV	26,600	AR24KP-BFV	24,000	SQA026KAB	26,100	
EA25E-C1	26,084	ZR26K3-PFV	26,600	AR26KP-BFV	26,000			
EA25E-C1	26,084	ZR26K3-PFV	26,600	AR26KP-BFV	26,000			
EA32E-C1	31,176	ZR28K3-PFV	28,500	AR28KP-BFV	28,000	SQA032KAB	32,300	
		ZR28KC-PFV	29,000	AR28KP-BFV	28,000			
		ZR30K3-PFV	31,100	AR30KP-BFV	30,000			
		ZR30KC-PFV	31,100					
		ZR32K3-PFV	32,600	AR32KP-BFV	32,000			
EA36E-C1	36,042	ZR34K3-PFV	34,400	AR34KP-BFV	34,000	SQA038KAB	37,000	
		ZR36K3-PFV	36,900	AR36KP-BFV	36,000			
		ZR36KC-PFV	36,900	AR38KP-BFV	38,000			
EA42E-C1	40,196	ZR40K3-PFV	40,600	AR40KP-BFV	40,000	SBA040KA	40,400	
		ZR42K3-PFV	42,800	AR42KP-BFV	42,000			
		ZR42KC-PFV	42,000					
EA49E-C1	46,461	ZR45K3-PFV	46,000	AR45KP-BFV	45,000	SR047KBE	47,600	
		ZR45KC-PFV	46,000	AR48KP-BFV	48,000			
		ZR47K3-PFV	48,200					
		ZR47KC-PFV	47,500					
		ZR48K3-PFV	49,800					
		ZR48KC-PFV	49,500					
EA54E-C1	51,175	ZR52K3-PFV	52,000	AR54KP-BFV	54,000	SRA053KAB	53,500	
		ZR54K3-PFV	55,000					
EA61E-C1	61,869	ZR57KCE-PFV	57,500	AR57KP-HF5	57,000	SR057KCC	58,000	
		ZR57KC-PFV	57,500	AR57KP-BFV	57,000			
		ZR61KCE-PFV	61,100	AR61KP-BFV	61,000	SR061SAB	61,500	

*AHRI HBP

Standard Spare parts: supplied with compressors

Part Name	Quantity	Picture
E-box	1	
T terminal	1	
Grommets	4	
Sleeves	4	
Re-piping kit*	1	

*Specific re-pipe kit for each compressor replacement

Optional accessories

Part Name	Quantity	Picture
Crankcase heater	1	
Capacitor	1	
Noise jacket	1	

*50/60/70µF Capacitor: NOT INCLUDED.
Must be supplied by wholesaler following
compressor specifications.

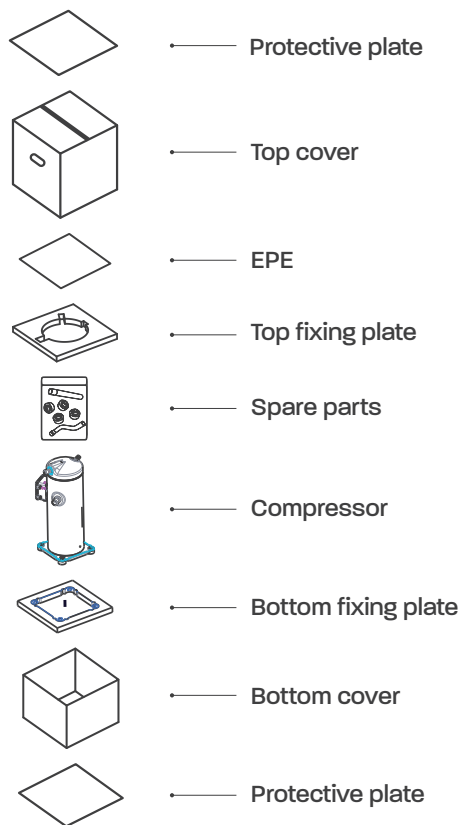
*100µF Capacitor: Included with compressors.

Packaging - Single box



Single Box Packaging

Frame	Quantity / Pallet	Dimensions	Quantity / Container 20ft
150	9	44.1 x 4.1 x 22.4 in	270



Compressor Label

MODEL: EAF22H-C1-NABA

SERIAL: 0000000000

THERMALLY PROTECTED | MADE IN CHINA
Nidec Global Appliance

REFRIGERANT	OIL TYPE	OIL CHARGE	VOLTAGE	PH	FREQUENCY	DISPLACEMENT	RUN CAP.	LRA	SLA	I-OPER MAX
R410A	POE	1.4 L	208-230 V	1 -	60 Hz	21.6 cc	50 uF	102 A	12.4 A	17.3 A

Chamber	LP side	HP side
PED Module/Category	A2 / R	SEP
PS	19.0 bar 275.5 psi	42.0 bar 609.0 psi
TS max	43 °C / 109 °F	150 °C / 302 °F
TS min	-40 °C / -40 °F	-40 °C / -40 °F

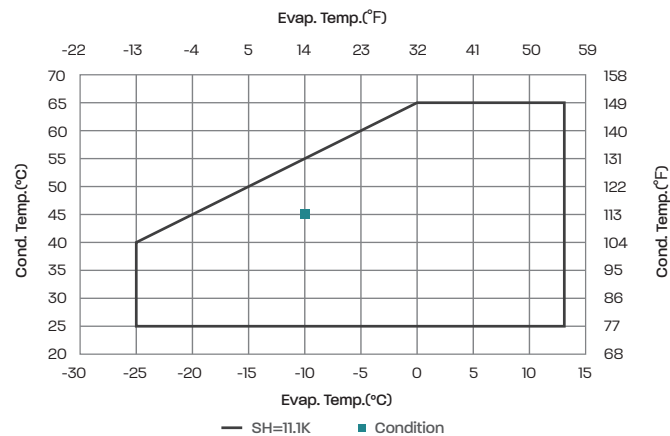
WARNING

Service should be performed by trained personnel only. Failure to follow these safety warnings could result in serious injury or death. **ELECTRICAL SHOCK HAZARD.** Turn off power before servicing. Discharge all capacitors. Use this equipment in a grounded system only. Wear protective goggles. System contains oil and refrigerant under pressure. Remove pressure from both high and low side before removing compressor. Use tubing cutter to remove compressor. Do not use torch. Refer to applicable system wiring diagram. Replace terminal cover, if applicable, before applying power.

CAUTION

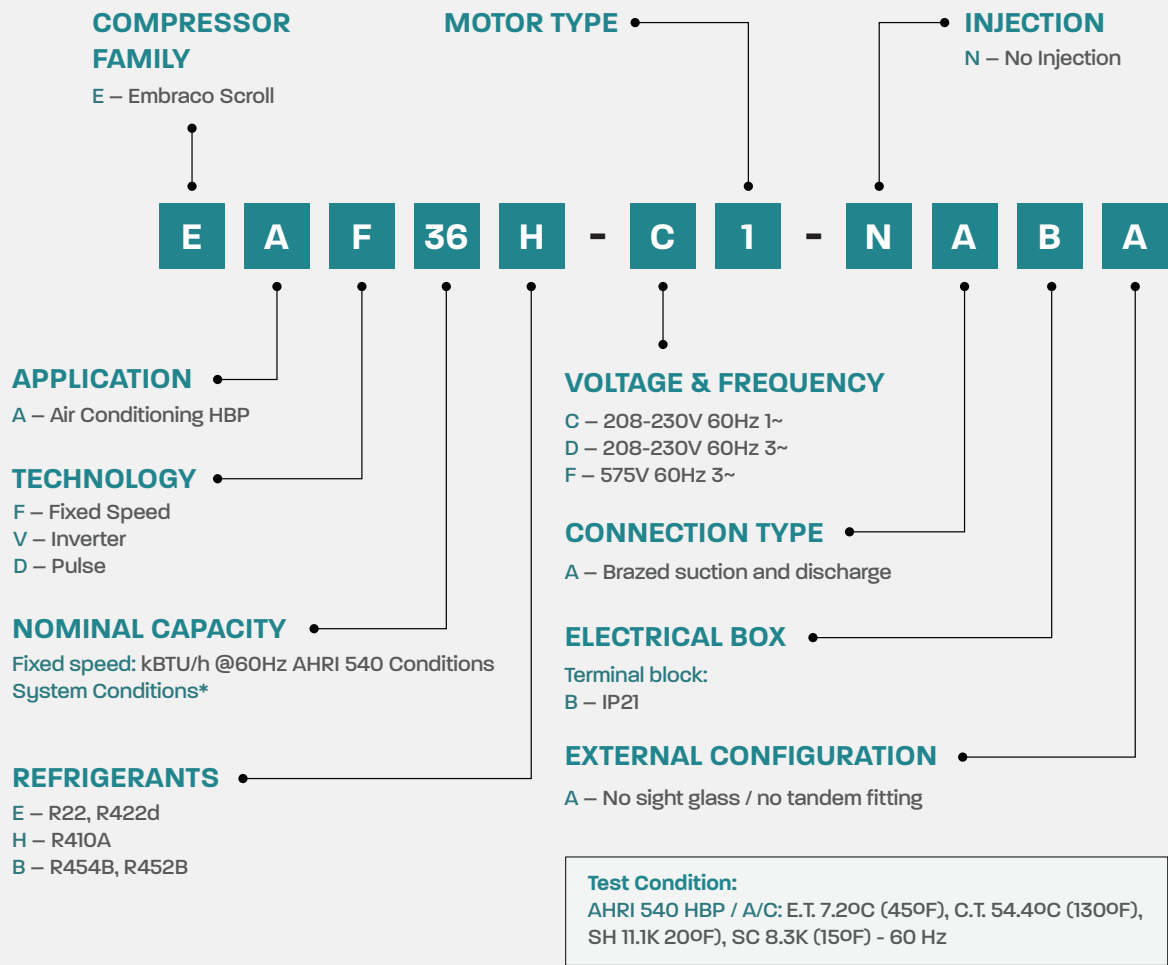
Use only approved refrigerants and lubricants and electrical components in the manner approved by the Manufacturer. For details contact manufacturer. Any others may be dangerous, and could cause fires, explosions, or electrical shorting.

Envelope



Always operate within the limits shown in the envelope for a safe operating condition.

Embraco Scroll Nomenclature



Electrical Diagram

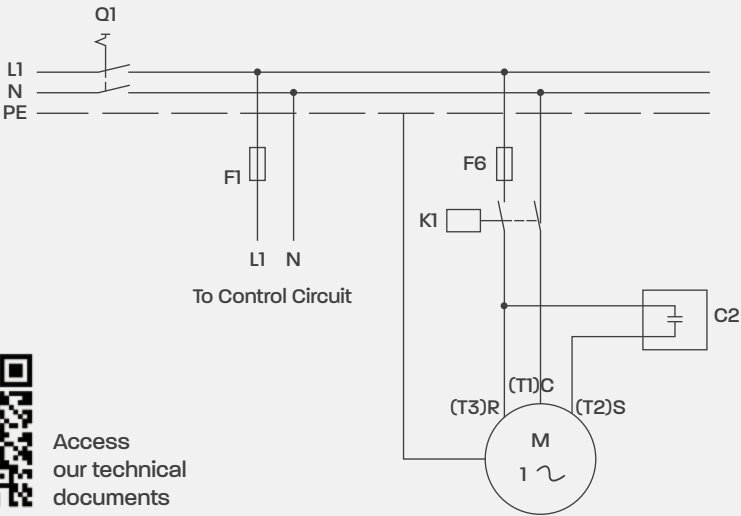
Electrical Schematics

- L1/N/PE: Single Phase Lines (line/neutral/ground)
- Q1: Manual Switch
- F1/F6: Fuse
- K1: Compressor Contactor
- C1: Run Capacitor
- M: Compressor Motor
- R/C/S: Compressor Terminal

Capacitor use on 1ph compressors is mandatory for proper compressor operation.

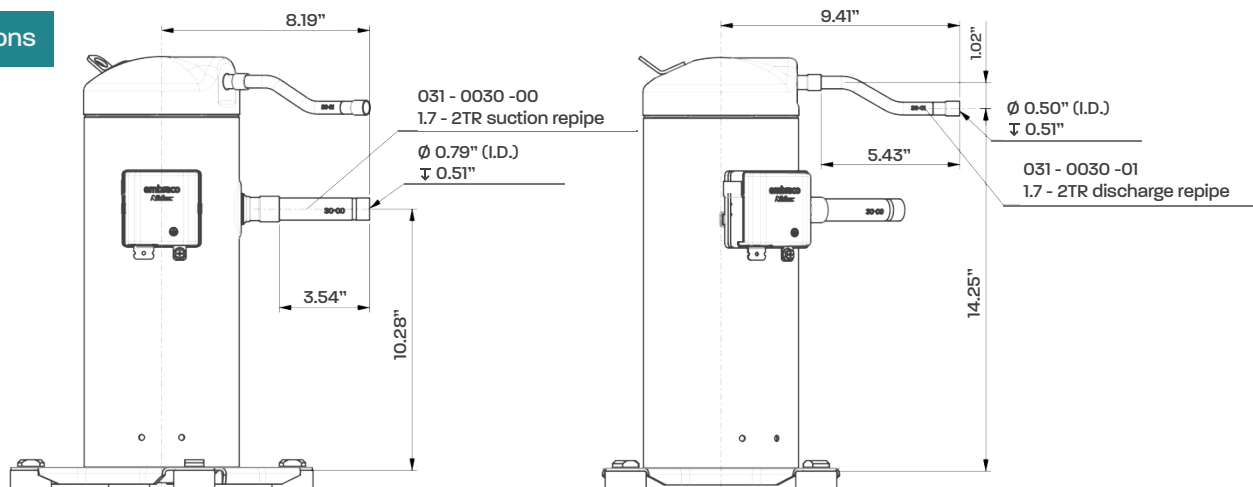


Access our technical documents

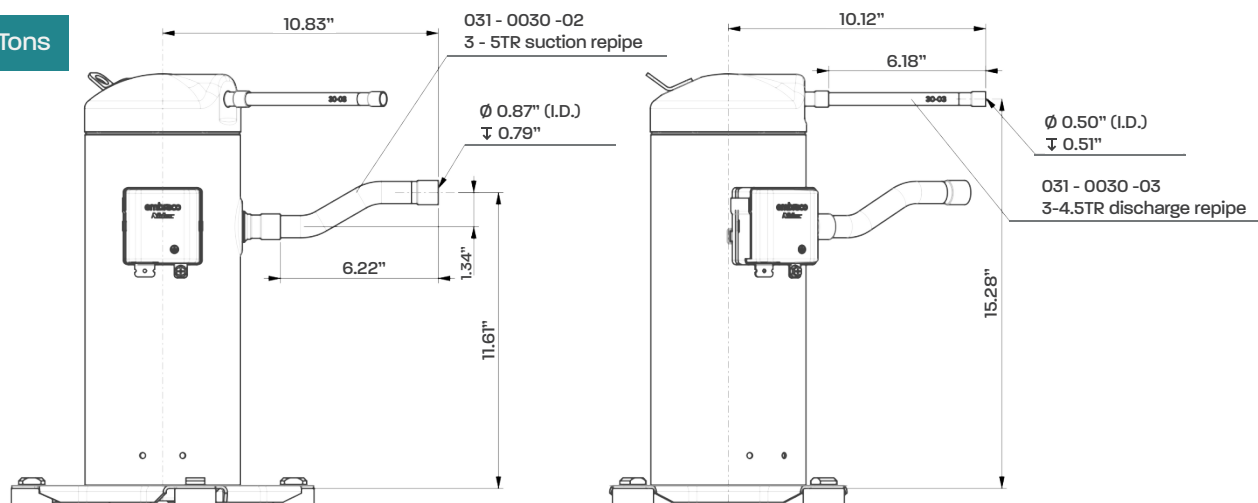


Drawing

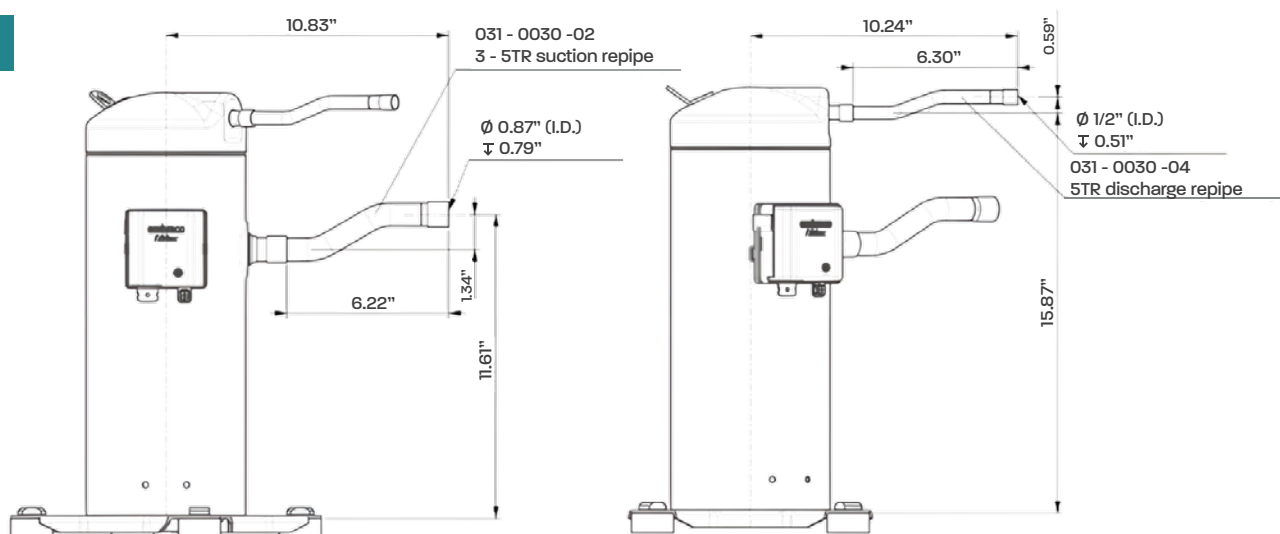
1.7 - 2 Tons



3 - 4.5 Tons



5 Tons



think ahead,
now in HVAC as well



Access now and see more
information, such as launch details
and cross references.

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