EMBRACO scroll



Air-conditioning Compressors for Replacement Applications

think ahead

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Nidec

Air-conditioning Compressors for Replacement Applications

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

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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				
		ZP20KAE-PFV	20,000				
		ZP21LXE-PFV	20,200			APG021KB	21,200
		ZP21K6E-PFV	21,200				
		ZP21K5E-PFV	21,300				
		ZP21K7E-PFV	21,600				
		ZP22K6E-PFV	22,000			APA024KA	22,500
		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				
		ZP24K7E-PFV	23,800				
		ZP25K5E-PFV	25,200	AA25KP-BFV	25,000	APG025KA	25,000
		ZP25K6E-PFV	25,300				
		ZP25K7E-PFV	25,100				
		ZP25LXE-PFV	25,500				
		ZP26K6E-PFV	25,100			APA026KA	24,500
		ZP27K6E-PFV	27,000				
		ZP27KHE-PFB	27,000				
EAF32H-C1	30,475	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				
		ZP29K6E-PFV	29,400				
		ZP29K7E-PFV	29,500				
		ZP29LXE-PFV	29,400				
		ZP31K5E-PFV	31,100	AA31KP-BFV	31,000	APG031KA	30,900
		ZP31K6E-PFV	31,300				
		ZP31K7E-PFV	31,000				
		ZP31KEE-PFV	31,700				
		ZP31LXE-PFV	31,800				
		ZP32K6E-PFV	31,400			APA032KA	30,500
EAF36H-C1	37,163	ZP34K7E-PFV	33,900	AA34KP-BFV	34,000	ABG034KA	34,350
		ZP34K5E-PFV	34,500			ABA034KA	34,500
		ZP34KFE-PFV	34,500				
		ZP34K6E-PFV	34,600				
		ZP36K7E-PFV	35,300	AA36KP-BFV	36,000	ABG036KA	36,000
		ZP36K5E-PFV	36,000				
		ZP36K6E-PFV	36,000				
		ZP36KHE-PFB	36,000				
		ZP37LXE-PFV	37,800			ABA036KA	36,500
		ZP38K7E-PFV	36,900			ABT038KT	38,700
		ZP38K5E-PFV	37,500				
		ZP38K6E-PFV	37,500				
EAF42H-C1	43,118	ZP39K5E-PFV	39,000	AA39KP-BFV	39,000	ABA039KA	39,500
		ZP40K6E-PFV	40,000			ABG039KA	39,500
		ZP40K7E-PFV	39,500				
		ZP41K7E-PFV	42,100	AA42KP-BFV	42,000	ABG042KA	42,000
		ZP42K5E-PFV	42,000				
		ZP42K7E-PFV	42,100			ABT042KT	42,200
		ZP42LXE-PFV	42,400			ABA042KA	42,500
		ZP42K6E-PFV	42,500				
		ZP44K5E-PFV	44,400				
EAF49H-C1	49,277	ZP49K7E-PFV	48,800	AA49KP-BFV	49,000	ABT048KT	48,000
		ZP49K5E-PFV	49,400			ABA049KA	49,000
		ZP49K6E-PFV	49,400			ABG049KA	49,400
		ZP51LXE-PFV	50,600	AA51KP-BFV	51,000	ABG051KA	51,100
		ZP51K7E-PFV	50,700				
		ZP51K5E-PFV	51,000			ABT051KT	51,200
		ZP51K6E-PFV	51,000			ABA051KA	51,500
EAF54H-C1	54,243	ZP54K5E-PFV	54,000	AA54KP-BFV	54,000	ABA054KA	54,000
		ZP54K7E-PFV	54,800				
		ZP54K6E-PFV	54,900			ABT054KT	54,000
EAF61H-C1	61,966	ZP57K5E-PFV	57,000			ABT057KM	57,100
		ZP57LXE-PFV	58,500				
		ZP61K5E-PFV	61,500			ARA061KA	64,000

*AHRI HBP

Portfolio

Embraco - R22 | 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]
EAF22E-C1	21,206	ZR22K3-PFV	22,400	AR22KP-BFV	22,000	SQA022KAB	21,500
EAF25E-C1	26,084	ZR26K3-PFV	26,600	AR24KP-BFV	24,000	SQA026KAB	26,100
EAF25E-C1	26,084	ZR26K3-PFV	26,600	AR26KP-BFV	26,000		
EAF25E-C1	26,084	ZR26K3-PFV	26,600	AR26KP-BFV	26,000		
EAF32E-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		
EAF36E-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		
EAF42E-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				
EAF49E-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				
EAF54E-C1	51,175	ZR52K3-PFV	52,000	AR54KP-BFV	54,000	SRA053KAB	53,500
		ZR54K3-PFV	55,000				
EAF61E-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

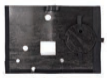
*AHRI HBP

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.

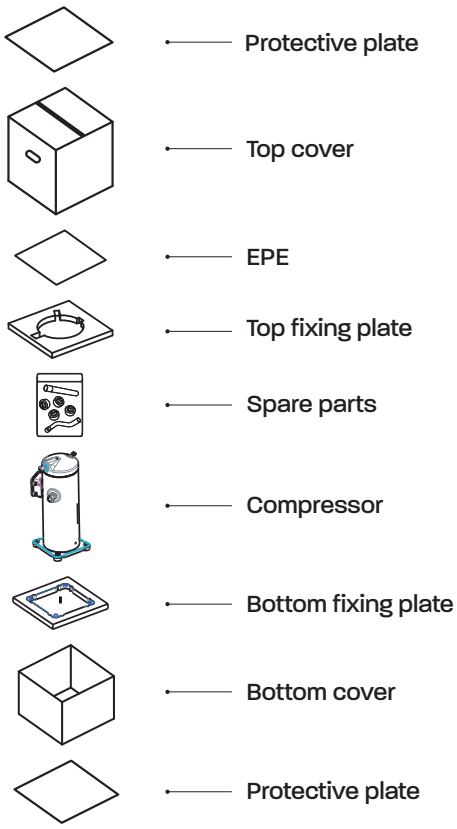
*100µF Capacitor: Included with compressors.

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Packaging - Single box



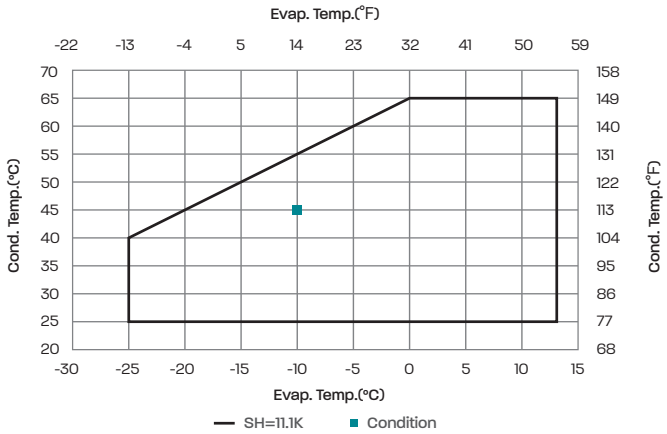
	Single Box Packaging		
Frame	Quantity / Pallet	Dimensions	Quantity / Container 20ft
150	9	44.1 x 4.1 x 22.4 in	270



Compressor Label



Envelope



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

Embraco Scroll Nomenclature

COMPRESSOR FAMILY
E – Embraco Scroll

MOTOR TYPE

INJECTION
N

E	A	F	36	H	-	C	1	-	N	A	B	A

APPLICATION
A – Air Conditioning HBP

TECHNOLOGY
F – Fixed Speed
V – Inverter
D – Pulse

NOMINAL CAPACITY
Fixed speed: kBTU/h @60Hz AHRI 540 Conditions
System Conditions*

REFRIGERANTS
E – R22, R422d
H – R410A
B – R454B, R452B

VOLTAGE & FREQUENCY
C – 208-230V 60Hz 1~
D – 208-230V 60Hz 3~
F – 575V 60Hz 3~

CONNECTION TYPE
A – Brazed suction and discharge

ELECTRICAL BOX
Terminal block:
B – IP21

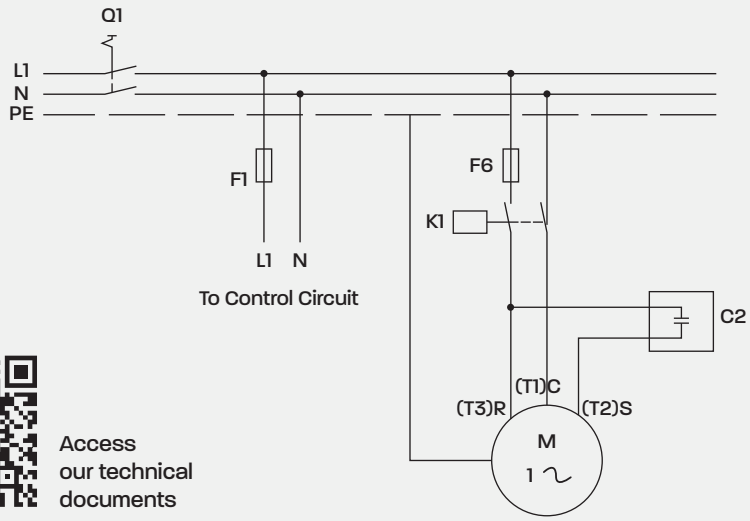
EXTERNAL CONFIGURATION
A – No sight glass / no tandem fitting

Test Condition:
AHRI 540 HBP / A/C: E.T. 7.20C (45OF), C.T. 54.40C (130OF), SH 11.1K 20OF), SC 8.3K (15OF) - 60 Hz

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

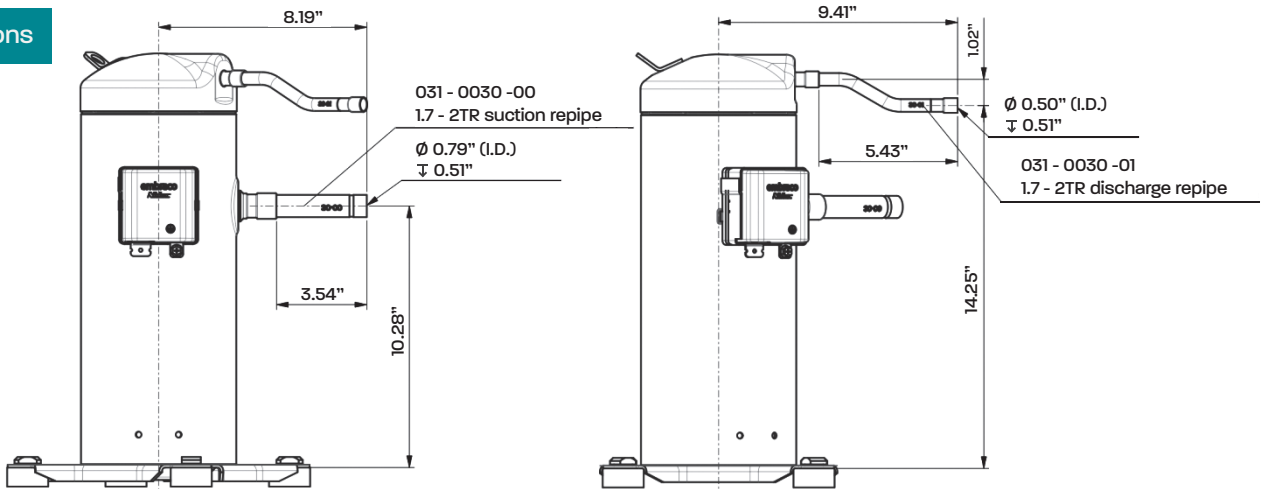


Capacitor use on 1ph compressors is mandatory for proper compressor operation.

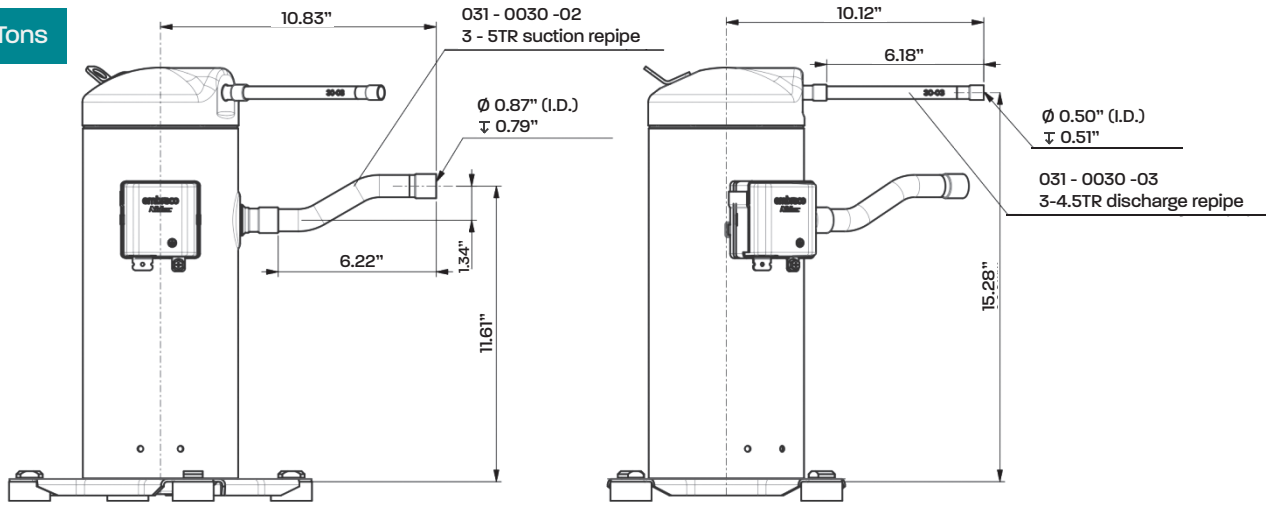
Access our technical documents

Drawing

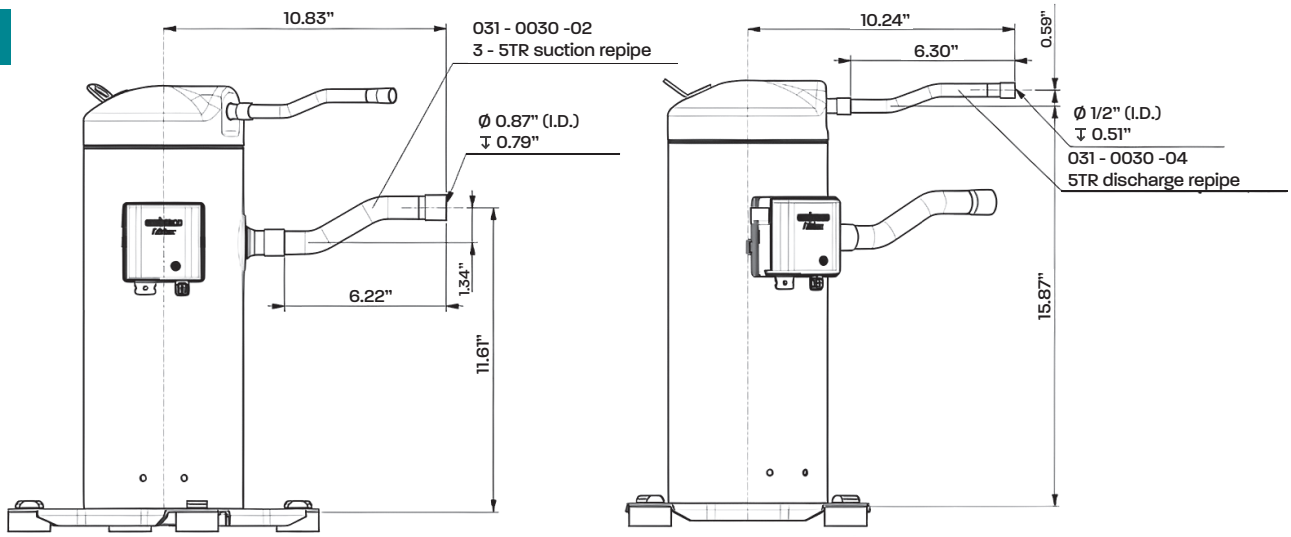
1.7 - 2 Tons



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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