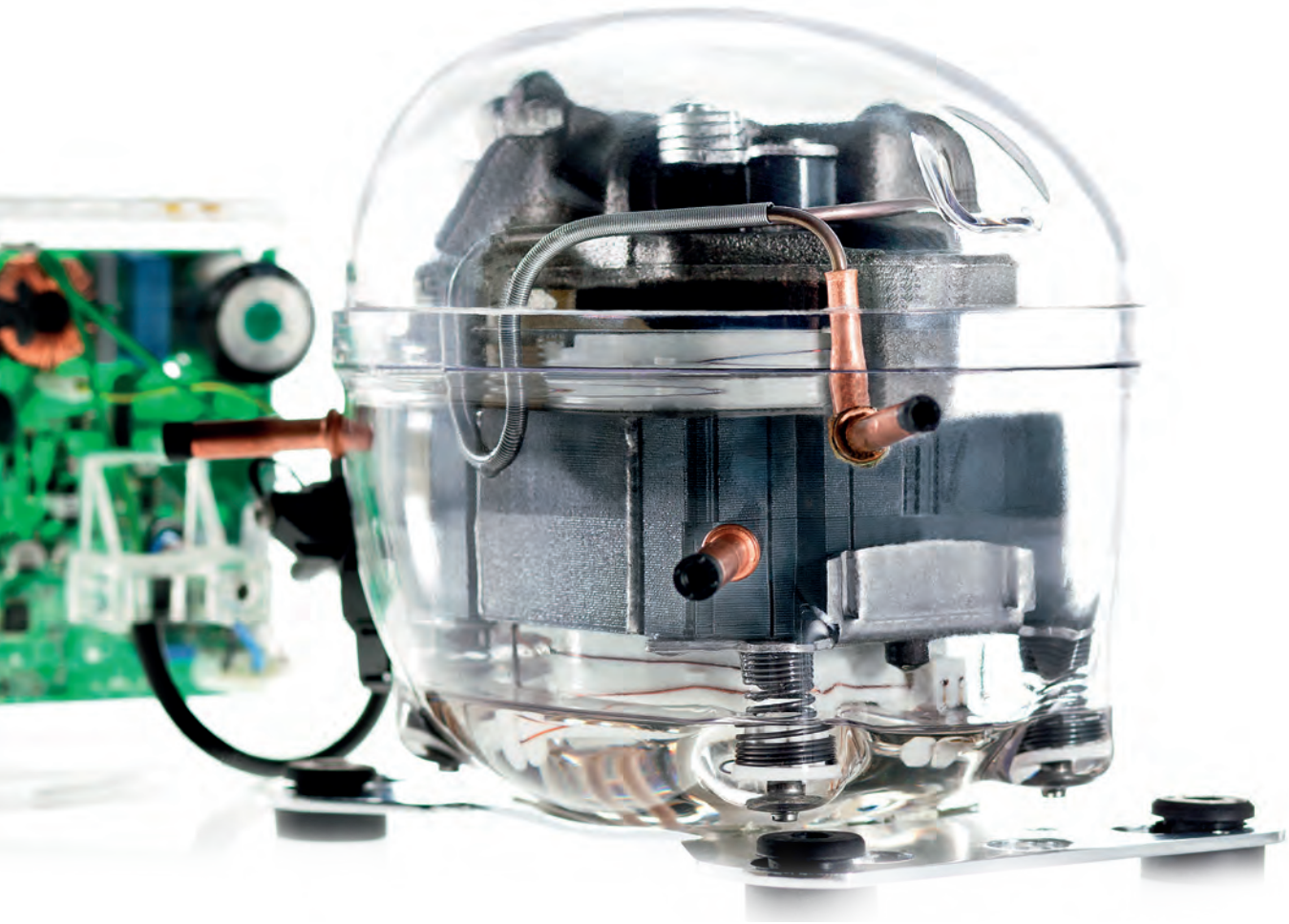
embraco

Nidec

COMPRESSORS EUROPE



Maximum energy optimization
from production to product.

- **R134a/R513A**
- **R404A/R507/R452A/R448A/449A**
- **R290**
- **R600a**



embraco

Nidec

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01

ABOUT EMBRACO

EMBRACO is a global refrigeration compressors and condensing units manufacturer. Since 1971 it provides innovative solutions for household and light commercial refrigeration attending customers' most challenging demands.

With a production capacity of 60 million units of motors and compressors per year, Embraco directly employs approximately 14 thousand people, has 11 business units (among factories, sales offices and a global business shared services) located in Brazil, China, Italy, Mexico, Slovakia, USA and Russia, and is commercially present in more than 80 countries.
Since July, 2019, we are part of **Nidec Corporation**, the world's leading comprehensive motor manufacturer (www.nidec.com)

INNOVATION

With an innovative DNA, Embraco has close to 500 professionals dedicated exclusively to this area, with 120 partners from leading engineering universities around the world, as well as over 50 research laboratories on four continents. The company invests 3% to 4% of its net revenue in R&D annually and is among the private companies with the highest number of patents in force in Brazil and the United States, reaching the 1,200 patents granted globally.

EFFICIENCY

For more than 20 years, we have used natural refrigerants in our portfolio for commercial and household as an alternative to reduce the negative effects on the ozone layer, greenhouse effects and to improve the equipment's energy efficiency.

11 Manufactoring plants

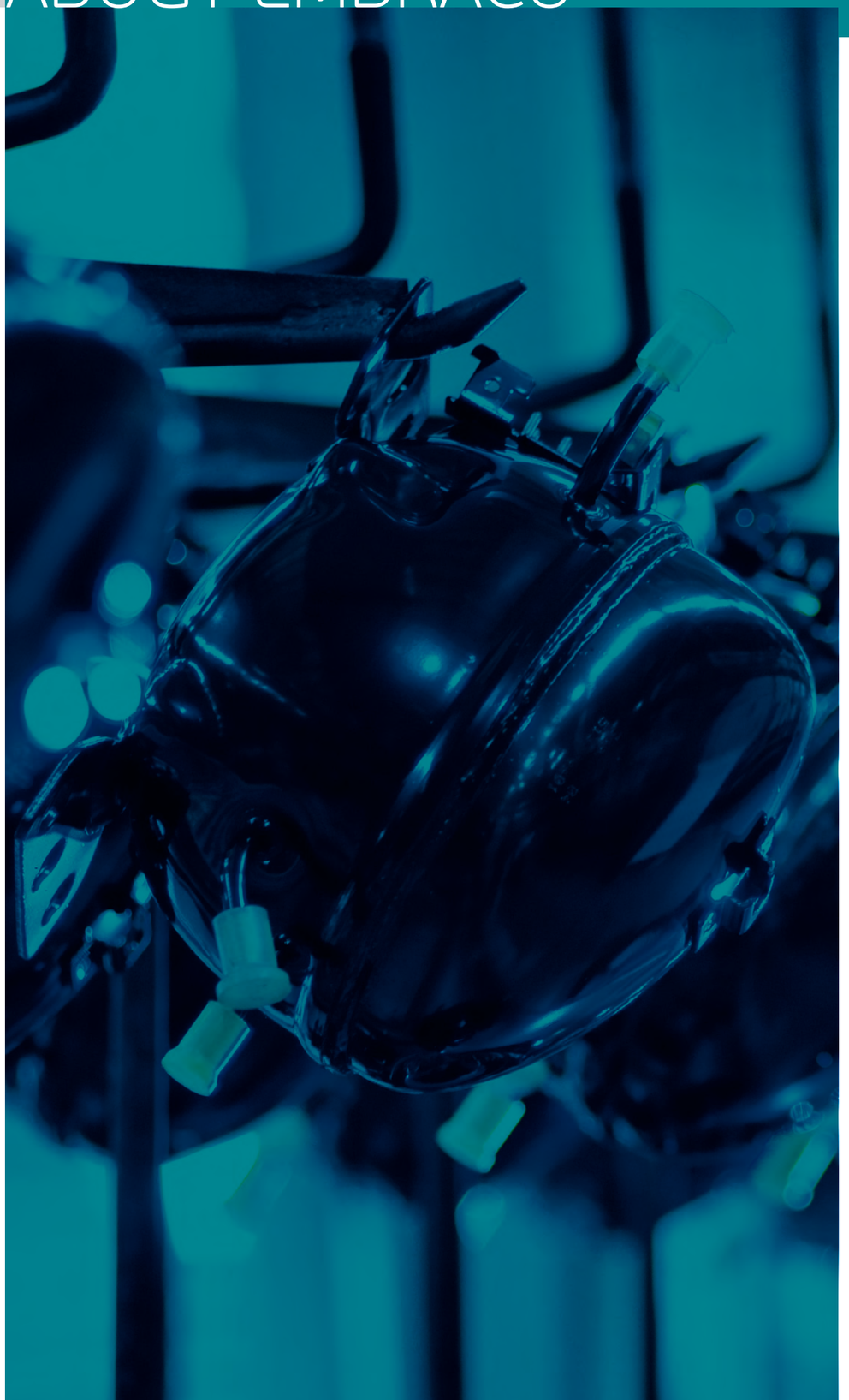
Presence in more than 80 countries with solutions and services

Over 50 research laboratories on four continents

500 people engaged in R&D activities,
approximately 100 within University partners

1,200 patents granted worldwide (over 3,000 in total)

Yearly production capacity: 60 million units of motors and compressors/year



EMBRACO DIGITAL TOOLS: discover everything our digital solutions can do for you.

embraco toolboxapp

EMBRACO TOOLBOX APP

Available in all countries and in more than 10 languages, the Embraco Toolbox App has 7 functionalities which help refrigeration professionals on their daily routine. Download the App now for Android or iOS systems.

Download on the App Store | GET IT ON Google Play

Find inside:

- CROSS-REFERENCE
- PRODUCT CATALOGUE
- DISTRIBUTOR LOCATOR
- UNIT CONVERTER
- REFRIGERANT SLIDER
- REFRIGERATION CLUB
- TROUBLESHOOTING

REFRIGERATION CLUB

Exclusive content for refrigeration professionals in a global channel. Keep updated and join us at: **www.refrigerationclub.com**

REFRIGERATION CLUB embraco

PRODUCT SELECTOR SOFTWARE

Choose the best solution for your cooling system at Embraco's official portfolio platform. Access: **products.embraco.com**

PRODUCT SELECTOR embraco



02

OUR PRODUCTS



SINGLE SPEED COMPRESSORS

EM



FEATURES

- High efficiency
- Robustness
- Wide application range
- Small size
- Low noise
- Best in class up to 11 cm³

APPLICATIONS

Refrigerators and freezers

Water cooler;

Beer dispenser; Reach-in;
Chest freezer

Vending machine; Wine coolers;

Small dispenser; Food exhibitor

Beverage cooler; Ice maker

CAPACITY W	MAX EFFICIENCY W/W	DISPLACEMENT cm³	REFRIGERANTS
LBP: 75 - 390 HBP: 250 - 800	LBP: 1.8 HBP: 2.62	1.17 - 11.14	R134a/R513A; R404A; R290; R600a;

NE



FEATURES

- High efficiency
- Robustness
- Wide application range
- Low noise

APPLICATIONS

Beverage cooler; Ice maker

Beer dispenser; Reach-in;
Chest freezer

Upright cabinets;
Professional kitchen

Slushy machine; Show cases

Refrigerators and freezers;

CAPACITY W	MAX EFFICIENCY W/W	DISPLACEMENT cm³	REFRIGERANTS
LBP: 187 - 950 HBP: 516 - 2292	LBP: 1.56 HBP: 2.79	4.40 - 16.80	R134a/R513A; R404A/R507/R452A/R449A/R448A; R290

F



FEATURES

- High efficiency
- Robustness
- Wide application range
- Small size

APPLICATIONS

Water cooler; Beverage coolers;
Ice maker

Beer dispenser; Reach-in;
Chest freezer

Professional Kitchen;
Vending machine

Wine coolers; Heat pumps

Food exhibitor;
Refrigerated island;

Show cases

CAPACITY W	MAX EFFICIENCY W/W	DISPLACEMENT cm³	REFRIGERANTS
LBP: 115 - 490 HBP: 670 - 1575	LBP: 1.58 HBP: 2.92	6 - 12.92	R134a/R513A; R290

NT



FEATURES

- High efficiency
- Robustness
- Wide application range
- Low noise
- Best in class up to 27.80 cm³
- Designed for
  Medical & Scientific ULT

APPLICATIONS

Beverage coolers; Ice maker

Beer dispenser; Reach-in;
Chest freezers

Upright cabinets

Ultra low temperature refrigerators;
Professional kitchen

Slushy machine

CAPACITY W	MAX EFFICIENCY W/W	DISPLACEMENT cm³	REFRIGERANTS
LBP: 576 - 1670 HBP: 1607 - 3885	LBP: 1.47 HBP: 2.81	12.60 - 27.80	R134a/R513A; R404A/R507/R452A/R449A/R448A; R290

NTU



FEATURES

- High efficiency
- High robustness level for
  severe application
- Continuous liquid return
  acceptance
- Wide application range
- Smallest size in this
  cooling capacity

APPLICATIONS

Beverage coolers; Ice maker

Beer dispenser; Reach-in

Upright cabinets

Ultra low temperature
refrigerators

Professional kitchen

Chest freezers

CAPACITY W	MAX EFFICIENCY W/W	DISPLACEMENT cm³	REFRIGERANTS
HBP: 2424 - 5333	HBP: 3.09	20.40 - 27.80	R134a/R513A; R404A/ R507/R452A/R449A/R448A

NJ



FEATURES

- High efficiency
- Robustness
- Wide application range
- Low noise
- Up to 2 hp

APPLICATIONS

Beverage cooler; Ice maker

Reach-in; Chest freezer

Ultra low temperature

Upright cabinet (air curtain)

Cold rooms

CAPACITY W	MAX EFFICIENCY W/W	DISPLACEMENT cm³	REFRIGERANTS
LBP: 568 - 2164 HBP: 2547 - 5914	LBP: 1.50 HBP: 2.92	21.60 - 37.9	R134a/R513A; R404A/ R507/R452A/R449A/R448A

VARIABLE CAPACITY COMPRESSOR

VES



FEATURES	APPLICATIONS
• High efficiency • Small size • Very low noise • Better temperature control • Wide voltage range • Speed range: 1300-4500 rpm	Refrigerators and Freezers Wine cooler; Heat pumps Beverage coolers; Reach-in Chest freezer; Medical coolers

CAPACITY W	MAX EFFICIENCY W/W	DISPLACEMENT cm^3	REFRIGERANTS
LBP: 50-270 MBP: 38-270	LBP: 2.26 MBP: 3.25	3 - 11	R600a

VEM



FEATURES	APPLICATIONS
• High efficiency • Robustness • Wide application range • Low noise • Better temperature control • Wide voltage range	Refrigerators and Freezers Wine cooler; Heat pumps Beverage coolers; Reach-in Chest freezer; Medical coolers

CAPACITY W	MAX EFFICIENCY W/W	DISPLACEMENT cm^3	REFRIGERANTS
LBP: 41 - 250 HBP: 345 - 820	LBP: 1.96 HBP: 3.50	3 - 11	R134a; R290; R600a

FMF



FEATURES	APPLICATIONS
• High efficiency • Robustness • Wide application range • Low noise • Better temperature control • Dual voltage and frequency on the same sku	Frozen Islands ; Beverage cooler Ice Maker Chest Freezer Reach-in Vertical Ice-cream cabinets; Medical cooler

CAPACITY W	MAX EFFICIENCY W/W	DISPLACEMENT cm^3	REFRIGERANTS
L/MBP: 140 - 998	L/MBP: 1.84	6 - 13	R290

VNE



FEATURES	APPLICATIONS
• Best in class in its range of cooling capacity • Robustness • Wide application range • Low noise • Better temperature control • Dual voltage and frequency on the same sku	Beverage cooler; Vertical Reach-in Beer dispenser Ice maker Reach-in Big chest freezer Frozen Islands

CAPACITY W	MAX EFFICIENCY W/W	DISPLACEMENT cm^3	REFRIGERANTS
LBP: 420-1100	LBP: 1.8 HBP: 2.62	7 - 16.8	R134a, R404A, R507, R452A, R290

03

APPLICATION GUIDE



APPLICATION GUIDE

BEVERAGE COOLERS - 50Hz

GROSS VOLUME (l)		100 - 150		150 - 200		200 - 250		250 - 300		300 - 350			350 - 450		450 - 600		600 - 750		750 - 1000		1000 - 1400		1400 - 1700		1700 - 2000	
DOOR TYPE		SOLID	GLASS	SOLID	GLASS	SOLID	GLASS	SOLID	GLASS	SOLID	GLASS		SOLID	GLASS	SOLID	GLASS	SOLID	GLASS	SOLID	GLASS	SOLID	GLASS	SOLID	GLASS	SOLID	GLASS
R134a	PREMIUM EFFICIENCY	VEMY6HH	VEMY6HH	VEMY6HH	VEMY6HH	VEMY6HH	VEMY6HH	VEMY6HH	VEMY6HH	VEGT8HB	VEGT8HB		VEGT8HB	VEGT8HB												
	HIGH EFFICIENCY	EMT37HDP	EMT37HDP	EMT37HDP	EMT45HDR	EMT45HDR	EMT6144Z	EMT6144Z	EMT6160Z	EMT6160Z	EMT6170Z		EMT6170Z	NEU6187Z	NEU6210Z	NEU6212Z	NEU6212Z	NEU6214Z	NEU6214Z	NEU6214Z	NT6217Z	NT6217Z	NTU6222Z	NTU6222Z	NJ6226Z	NJ6226Z
R600a	HIGH EFFICIENCY	EMX32CLC	EMT45CDP	EMZ46CLC	EMZ46CLC	EMX55CLC	EMX55CLC	EMX3118Y	EMX3118Y	EMX3118Y	EMX3118Y		NBY5170Y	NBY5170Y												
R290	PREMIUM EFFICIENCY					EMC3119U	EMC3119U	EMC3119U	EMC3119U	EMC3119U	EMC3121U		EMC3121U	EMC3125U												
	HIGH EFFICIENCY	EMI50UER	EMI50UER	EMX6144U	EMX6144U	EMX6144U	EMX6152U	EMX6152U	EMX6181U	EMX6181U	EMX6210U		EMX6181U	EMX6210U	NEU6212U	NEU6212U	NEU6212U	NEU6212U	NEU6214U	NEU6214U	NEU6214U	NEU6217U				
R404A	HIGH EFFICIENCY																		NEK6213GK	NEK6213GK	NE9213GK	NEK6213GK	NEK6217GK	NEK6217GK	NT6224GK	NT6224GK

AVERAGE BOTTLE COOLER SPECIFICATION	
Starting Type	LST
Application	MBP
Cooling Type	Fan
Door Type	Solid or Glass
Temperature	0 to 6°C

UPRIGHT FREEZERS (ICE-CREAM AND FROZEN FOOD) - 50Hz

GROSS VOLUME (l)		<100	100-200	200 - 300	300 - 400	400 - 500		500 - 600	600 -700	700-800	800-1000	1000 <
R290	PREMIUM EFFICIENCY			FMFT406U	FMFT406U	VNEU217U		VNEU217U	VNEU217U			
	HIGH EFFICIENCY	EMT2121U	EMT2125U	NEU2140U	NEU2155U	NEU2168U		NT2180U	NT2210U	NT2210U		
R404A	PREMIUM EFFICIENCY			VNEK206GK	VNEK212GK	VNEK212GK						
	HIGH EFFICIENCY			NEU2140GK	NEU2155GK	NEU2168GK						
	STANDARD EFFICIENCY			NEK2134GK	NEK2150GK	NEK2168GK		NT2180GK	NT2180GK	NT2192GK	NT2212GK	NJ2212GK
R134a	PREMIUM EFFICIENCY	VEGT8HB	VEGT8HB									
	STANDARD EFFICIENCY	NE2121Z	NEU4130Z	NEK2140Z								

AVERAGE ICE CREAM FREEZERS SPECIFICATION	
Starting Type	HST
Application	LBP
Cooling Type	Fan
Door Type	Glass/Solid
Food Temp.	<-20°C

ICE MAKERS (CUBERS) - 50Hz

	ICE/DAY	UP TO 25 Kg	25-40 Kg	40-60 Kg	60-90 Kg	90-120 Kg	120-150 Kg	150-170 Kg		170-210 Kg	210-250 Kg	250-280 Kg	280-320 Kg	320-360 Kg	360-400 Kg	400-450 Kg	450-550 Kg	550 - 700 Kg
R290	HIGH EFFICIENCY	EMX6144U	EMX6144U	EMX6210U	NEU6214U	NEU6217U	NEU6220U	NT6222U		NT6224U								
R404A		EMT6152GK	EMT6165GK	NEK6210GK	NEK6210GK	NEK6217GK	NT6220GKV	NT6222GKV		NT6224GK	NT6226GKV	NTU6232GK	NTU6234GKV	NTU6240GKV				
R134a		EMT6160Z	NEU6187Z	NEU6212Z	NEU6214Z	NT6217ZV	NT6220ZV	NTU6222ZV		NTU6224ZV								

ICE MAKERS (FLAKED) - 50Hz

	ICE/DAY	60-90 Kg	90-120 Kg	120-150 Kg	150-170 Kg	170-210 Kg		210-250 Kg	250-280 Kg	280-320 Kg	320-360 Kg	360-400 Kg	400-450 Kg	450-500 Kg
R290	HIGH EFFICIENCY	EMX6210U	NEU6214U	NEU6217U	NT6220U	NT6222U		NT6224U						
R404A		NEK6210GK	NEU6215GK	NT6217GKV	NT6220GKV	NT6222GKV		NT6224GK	NT6226GKV	NJ2212GK	NJ2212GK	NJ2212GK		
R134a		NEU6212Z	NEU6214Z	NT6217ZV	NT6220ZV	NTU6222ZV		NTU6224ZV						

AVERAGE ICE MAKER SPECIFICATION	
Starting Torque	HST
Application	MBP
Cooling Type	FAN

COMMERCIAL KITCHEN APPLICATIONS - 50HZ LBP

(Low temperature refrigerators)

GROSS VOLUME (RANGE OF SIZES)	REACH-IN FREEZER	< 250 l	250 - 325 l	325 - 425 l		425 - 550 l	550 - 650 l	650 - 850 l	850 - 1150 l	1150 - 1500 l	1500 - 1700 l	1700 - 1900 l
	UNDERCOUNTER FREEZER	< 120 l	120 - 175 l	175 - 275 l		275 - 350 l	350 - 450 l	450 - 500 l	500 - 600 l	-	-	-
	WORKTOP FREEZER BLAST CHILLER	-	-	-		-	-	-	10 Kg	15 Kg	20 Kg	25 Kg
R290	PREMIUM EFFICIENCY - FULLMOTION INVERTER (VARIABLE SPEED COMPRESSOR)	VEGT8U	VEGT8U	VEGT8U		VEGT8U	FMFT413U	FMFT413U	FMFT413U	VNEU217U	VNEU217U	
	PREMIUM EFFICIENCY	EMC3121U	EMC3125U	EMC3130U		NEU2140U	NEU2155U	NEU2168U				
		EM2X3121U	EM2X3125U	EMT2130U		EMX3134U						
	HIGH EFFICIENCY	EMT2121U	NEMT2125U				NEK2150U	NEK2160U	NT2180U	NT2180U	NT2210U	NT2210U
R134a	PREMIUM EFFICIENCY - FULLMOTION INVERTER (VARIABLE SPEED COMPRESSOR)	VEGT8HB	VEGT11HB	VEGT11HB								
	HIGH EFFICIENCY	NE2121Z	NE2130Z	NE2134Z		NEK2140Z						
R404A	STANDARD EFFICIENCY	NEK2121GK	NEK2125GK	NEK2125GK		NEK2134GK	NEK2150GK	NEK2168GK	NEK2178GK	NT2180GK	NT2192GK	NT2212GK

COMMERCIAL KITCHEN APPLICATIONS - 50HZ MBP

(Medium temperature refrigerators)

GROSS VOLUME (RANGE OF SIZES)	REACH-IN REFRIGERATOR	200 - 275 l	275 - 375 l	175 - 500 l		550 - 700 l	700 - 950 l	950 - 1200 l	1200 - 1500 l
	FOOD PREPARATION TABLE REFRIGERATOR	70 cm	115 cm	140 cm		165 cm	190 cm	240 cm	300 cm
	UNDERCOUNTER REFRIGERATOR	100 - 200 l	200 - 350 l	350 - 500 l		~500 l	-	-	-
	WORKTOP REFRIGERATOR								
R290	PREMIUM EFFICIENCY - FULLMOTION INVERTER (VARIABLE SPEED COMPRESSOR)			VEGT8U		VEGT8U	VEGT8U	VEGT8U	
	PREMIUM EFFICIENCY			EMC3119U		EMC3121U	EMC3125U	EMC3130U	
	HIGH EFFICIENCY		EMI50UER	EMX6144U		EMX6165U	EMX6181U	NEU6212U	NEU6214U
R134a	PREMIUM EFFICIENCY - FULLMOTION INVERTER (VARIABLE SPEED COMPRESSOR)	VEMY6HH	VEMY6HH	VEMY6HH		VEGT8HB	VEGT11HB	VEGT11HB	VNEK614Z
	HIGH EFFICIENCY	EMT45HDR	EMT6144Z	EMT6160Z		EMT6170Z	NEU6187Z	NEU6212Z	NEU6214Z
R404A	STANDARD EFFICIENCY	NEK6144GK	NEK6152GK	NEK6165GK		NEK6181GK	NEK6210GK	NEK6213GK	NEK6213GK

AVERAGE PROF. KITCHEN REFRIGERATOR SPECIFICATION		
Evap. Temperature	-30 to -15°C	-15 to -5°C
Application	LBP	MBP
Starting Type	LST	LST
Cooling Type	Fan	Fan
Door Type	Solid	Solid

APPLICATION GUIDE

COLD ROOM

Cooling - temperature inside room +2°C (meat, milk products, packaged goods).

GROSS VOLUME m³	up to 3	3 - 5	5 - 10		10 - 13	13 - 17	17 - 23	23 - 35
DIMENSIONS (example) m	1 x 1,5 x 2	1,25 x 2 x 2	2 x 2 x 2,5		2 x 2,6 x 2,5	2 x 3,4 x 2,5	3 x 3 x 2,5	3,5 x 4 x 2,5
R404A	NEU6210GK	NEU6212GK	NEU6215GK		NT6220GK	NT6224GK	NJ9232GK	NJ9238GK
R134a	NEU6210Z	NEU6212Z	NEU6214Z		NT6220Z	NJ6226Z		

Freezer - temperature inside room -24°C (frozen, packaged goods)

GROSS VOLUME m³	up to 3	3 - 5	5 - 8		8 -12	12 - 15
DIMENSIONS (example) m	1 x 1,5 x 2	1,25 x 2 x 2	2 x 2 x 2,5		2 x 2,6 x 2,5	2 x 3,4 x 2,5
R404A	NT2180GK	NJ2192GK	NJ2212GK		2 x NT180GK	2 x NJ2212GK
R290	NEU2178U	NEU2178U	NT2210U			

REFRIGERATED ISLAND

	GROSS VOLUME (l)	400 - 500	500 - 600		600 - 700	700 - 800	800 - 900	900 - 1000	1000 - 1100	1100 <
R404A	PREMIUM EFFICIENCY	VNEK206GK	VNEK212GK		VNEK212GK	NT6220GK	NT6224GK	NJ9232GK	NJ9238GK	
	HIGH EFFICIENCY	NEU2140GK	NEU2140GK		NEU2168GK	NT2180GK	NJ2192GK	NT2212GK	NT2212GK	NJ2212GK
R290	PREMIUM EFFICIENCY	NEU6210Z	NEU6212Z		FMFT413U	FMFT413U	FMFT413U	FMFT413U	VNEU217U	VNEU217U
	HIGH EFFICIENCY	NEU2140U	NEU2140U		NEU2168U	NEU2178U	NT2210U	NT2210U		

HORIZONTAL FREEZER (SOLID DOOR + GLASS DOOR)

GROSS VOLUME (l)		up to 150		150 - 200		200 - 250		250 - 300		300 - 350			350 - 400		400 - 450		450 - 500		500 - 550		550 - 600		600...	
DOOR TYPE		SOLID	GLASS	SOLID	GLASS	SOLID	GLASS	SOLID	GLASS	SOLID	GLASS		SOLID	GLASS	SOLID	GLASS	SOLID	GLASS	SOLID	GLASS	SOLID	GLASS	SOLID	GLASS
R134a	STANDARD EFFICIENCY	EMT36HLP	EMT36HLP	EMT36HLP	EMT49HLP	EMT49HLP	EMT60HLP	EMT60HLP	NEK2118Z	NEK2118Z	NE2121Z		NE2121Z	NE2130Z	NE2130Z	NE2130Z	NE2130Z	NE2134Z	NE2134Z	NE2134Z	NEK2140Z	NEK2140Z		
R404A	STANDARD EFFICIENCY				EMT2117GK	EMT2117GK	EMT2125GK	EMT2125GK	EMT2125GK	EMT2130GK	EMT2130GK		EMT2130GK	EMT2130GK	EMT2130GK	EMT2130GK	NEU2140GK	NEU2140GK	NEU2140GK	NEU2140GK	NEU2140GK	NEU2155GK	NEU2155GK	NEU2168GK
R290	PREMIUM EFFICIENCY					EMC3119U	EMC3119U	EMC3119U	EMC3121U	EMC3121U	EMC3121U		EMC3121U	EMC3121U	EMC3125U	EMC3130U	EMC3130U	EMC3130U	EMC3134U	NEU1140U	NEU1140U	NEU1140U	NEU1140U	NEU2155U
	HIGH EFFICIENCY					EMT2117U	EMT2117U	EMT2121U	EMT2121U	EMT21215U	EMT2125U		EMT2125U	EMT2125U	EMT2125U	EMT2130U	EMT2130U	EMX3134U	NEK2134U	NEK2134U	NEK2134U	NEK2134U	NEK2150U	NEK2168U
R600	PREMIUM EFFICIENCY	EMC32CLT	EMD32CLT	EMC46CLT	EMC55CLT	EMC55CLT	EMC66CLT	EMC66CLT	EMC70CLT	EMC70CLT	EMC80CLT		EMC80CLT	EGX100CLC	EGX100CLC									
	HIGH EFFICIENCY	EMX32CLC	EMX32CLC	EMX55CLC	EMX55CLC	EMX66CLC	EMX66CLC	EMX66CLC	EMX70CLC	EMX70CLC	EMX3118Y		EMX3118Y	NBY1118Y										