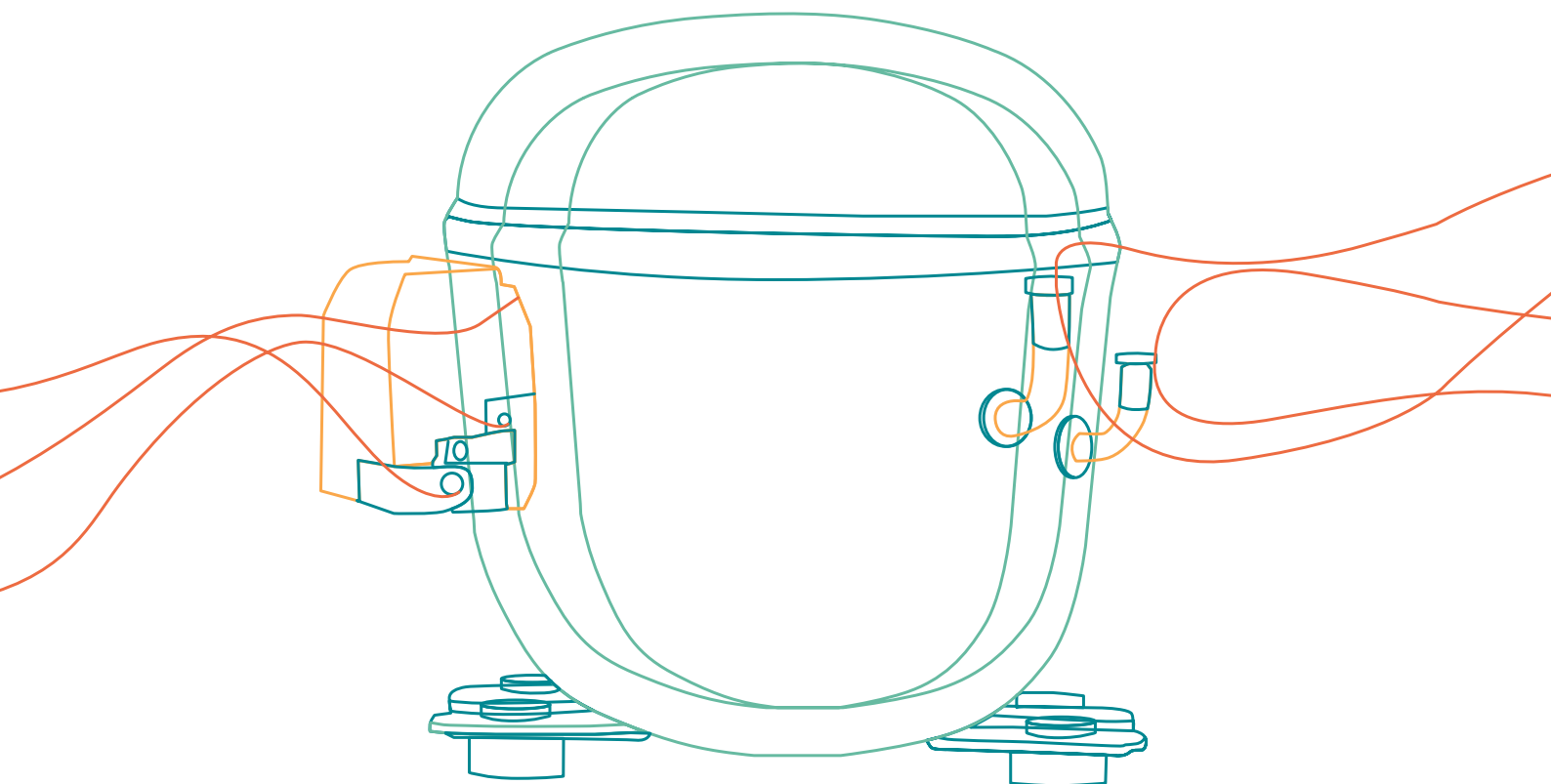


COMPRESSORS EUROPE

TAILORED EFFICIENCY



Maximum energy optimization
from production to product.



R134a



R290



R404A/R507



R600a

embraco

POWER **IN.**
CHANGE **ON.**

hawco[®]

EVERYTHING BECOMES A COOLER



embraco POWER **IN.**
CHANGE **ON.**

EMBRACO IN PILLS

HIGH EFFICIENCY & GREEN SOLUTIONS
EMBRACO COMMERCIAL PRODUCT OVERVIEW

EUROPE RANGE COMMERCIAL COMPRESSORS

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NEK/NEU
NT/NTU
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EMBRACO IN PILLS



MORE THAN 11.500 EMPLOYEES



MORE THAN 400 PROFESSIONALS IN R&D



PRODUCTION CAPACITY OF OVER 38 MILLION COMPRESSORS PER YEAR



MORE THAN 400 MILLION PRODUCTS PRODUCED TO DATE



MORE THAN 1.000 PATENTS WORLDWIDE



BUSINESS CONDUCTED IN MORE THAN 80 COUNTRIES



R&D LABORATORIES IN 4 CONTINENTS

EMBRACO is a company specialized in cooling solutions and world leader in the hermetic compressor market. **Our mission:** provide innovative solutions for a better quality of life, always attentive to technological excellence and sustainability.

Technological leadership, operational excellence and sustainability are some of the pillars which ensure the EMBRACO differential over other companies in the world market. Its products are now considered the favorite leading home appliance manufacturers by major automakers and are spotlighted by manufacturers of commercial refrigeration equipment.

With global operations and production capacity exceeding 38 million units a year, the company offers solutions that are differentiated for their innovation and low energy consumption. Its 11.500 employees work in factories and offices located in Brazil (headquarters), China, Italy, Slovakia, Mexico, the United States and Russia.

Energy efficiency is constantly sought in the processes, products and relationships with the communities where it operates. Our company is the absolute leader in this segment, being able to offer products that meet the most restrictive international standards regarding energy consumption.

As a worldwide leader, **EMBRACO** tries to anticipate market changes, and in doing so, our company is in a state of permanent transformation. We continuously assess our processes in order to maintain our leadership within the industry and promote growth, without forgetting the pillars of our organization.

HIGH EFFICIENCY

Energy efficiency is the base for all our product development. This means producing compressors that consume each time less energy and less raw material in manufacturing, at the same time maintaining **Embraco** brand quality. Thus, we continuously invest in research and development to create products that are more efficient and silent and do not harm the environment.

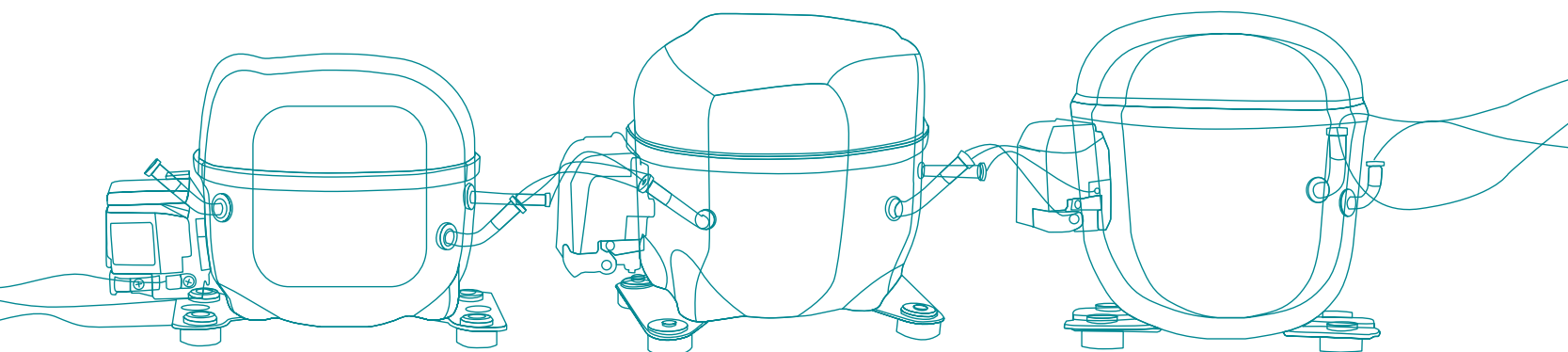
As a result of efforts to increase energy efficiency in our products, and to surpass our customers' highest expectations, we have developed **Embraco Fullmotion** – a compressor that varies the cooling capacity according to the need, providing a reduction in energy consumption up to 40%.

We have a full product portfolio that offers compressors of a wide ranges of efficiency. We are a global benchmark in developing solutions that meet the strictest international standards regarding energy consumption. With a commitment to seek continuous product and process improvement, each new generation of **Embraco** compressors is more efficient than the previous one.

GREEN SOLUTIONS

Embraco has always been committed to offer solutions to the market that go beyond the traditional ones. We have been at the forefront, for example, in launching products compatible with the most environmentally advanced refrigerant gases. We were the first organization to produce compressors that use alternative fluid refrigerants, such as propane (R290), to replace HFCs.

This natural refrigerant has important ecological advantages, since it does not contribute to ozone layer deterioration and has limited greenhouse effect. Furthermore, its noise levels are low, while its efficiency rate gain and cooling capacity is quite high. To know our product portfolio in R290 contact our sales team.



Embraco Commercial Product Overview

EUROPE RANGE



BRAZIL RANGE



CONDENSING UNIT



FULLMOTION



EMT



Small Size



High Efficiency
Up to 1,36 w/w - LBP
Up to 2,82 w/w - M/HBP
50 Hz @rated point EN 12900



Global Platform



Low Noise ~2 dB(A) less
(If compared to the average noise of other models of the same range.)

EUROPE RANGE COMMERCIAL COMPRESSORS



Developed for: Refrigerators, Freezers and Bottle coolers.

Applications: **LBP, M/HBP**

Refrigerants: **R134a; R404A/R507; R600a; R290**

FAMILY	REFRIGERANT	COOLING CAPACITY RANGE* W				EFFICIENCY RANGE* W/W				DISPLACEMENT cc		HP		WEIGHT	HEIGHT
		LBP		M/HBP		LBP		M/HBP		MIN	MAX	MIN	MAX	MIN/MAX Kg	MIN/MAX mm
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX						
EMT/ EMY	R134a	37	88	321	975	0,83	1,16	2,18	2,87	3,01	6,76	1/10	1/3+	7,1 - 7,8	158 - 166
	R404A	141	222	378	484	1,08	1,15	1,76	1,90	3,97	6,76				
	R290	123	266	343	632	1,12	1,28	1,96	2,2	3,97	9,50				
	R600a	45	162	244	805	1,1	1,36	2,2	2,82	3,97	12,21				

(*) data @50 Hz EN12900 conditions

NEK/NEU



High Cooling Capacity at Low Evaporating Temperatures
NEW VALVE SYSTEM
to improve cooling capacity and efficiency
NEU from 5% to 15% higher than NEK



High Efficiency Level
NEK Up to Up to 1,21 w/w - LBP
Up to 2,43 w/w - M/HBP
50 Hz @rated point EN 12900
NEW HEAD designed to decrease heat loss, low super heat mechanical losses, resulting in greater energy efficiency.
NEU from 5% to 15% higher than NEK, depending on the refrigerant type



Better Performances
NEW PLASTIC SUCTION MUFFLER
To optimize acoustic and fluidynamic



Very Low Sound Level
NEW SHELL DESIGN
To improve high frequency noise



NEK

Developed for: Freezers, Merchandisers, Ice Makers

Applications: **LBP, M/HBP**

Refrigerants: **R134a; R404A/R507; R600a; R290**

FAMILY	REFRIGERANT	COOLING CAPACITY RANGE* W				EFFICIENCY RANGE* W/W				DISPLACEMENT cc		HP		WEIGHT	HEIGHT
		LBP		M/HBP		LBP		M/HBP		min	MAX	min	MAX	MIN/MAX Kg	MIN/MAX mm
		min	MAX	min	MAX	min	MAX	min	MAX						
NEK	R134a	93	217	663	1315	0,85	1,16	1,90	2,46	7,40	16,80	1/5	3/4	10,4 - 11,6	187 - 206
	R404A	178	380	542	1166	0,80	1,00	1,46	1,69	6,20	16,80				
	R290	199	427	402	1051	0,99	1,21	1,73	1,94	6,20	16,80				
	R600a			606	805			2,29	2,43	12,12	16,80				

(*) data @50 Hz EN12900 conditions

NEU

Developed for: Freezers, Merchandisers, Ice Makers

Applications: **LBP, M/HBP**

Refrigerants: **R134a; R404A; R290; R600a****

FAMILY	REFRIGERANT	COOLING CAPACITY RANGE* W				EFFICIENCY RANGE* W/W				DISPLACEMENT cc		HP		WEIGHT	HEIGHT
		LBP		M/HBP		LBP		M/HBP		min	MAX	min	MAX	MIN/MAX Kg	MIN/MAX mm
		min	MAX	min	MAX	min	MAX	min	MAX						
NEU	R134a	/	/	1102	1492	/	/	2,12	2,48	12,12	16,80	1/3	1	10,6-12	200-206
	R290	364	457	676	1109	1,21	1,35	1,95	2,17	13,54	16,80				
	R404A	275	501	792	1089	1,08	1,14	1,71	1,89	8,78	16,80				

(*) data @50 Hz EN12900 conditions

(**) UD

NT/NTU



New Design
NEW INTERNAL DESIGN
New Vertical Tubes Configuration
New Universal base plate



High Efficiency
Up to 1,23 w/w - LBP
Up to 2,11 w/w - M/HBP
50 Hz @rated point EN 12900



Better Performances



Low Sound and Vibration Level
NEW SUSPENSION SYSTEM
To improve high frequency noise.



Developed for: Reach in coolers, Merchandisers, Ice Makers, Beers Coolers.

Applications: **LBP, M/HBP**

Refrigerants: **R134a; R404A/R507; R290.**

FAMILY	REFRIGERANT	COOLING CAPACITY RANGE* W				EFFICIENCY RANGE* W/W				DISPLACEMENT cc		HP		WEIGHT	HEIGHT
		LBP		M/HBP		LBP		M/HBP		min	MAX	min	MAX	MIN/MAX Kg	MIN/MAX mm
		min	MAX	min	MAX	min	MAX	min	MAX						
NT	R134a			1405	2582			2,13	2,94	17,4	27,8				
	R404A	341	719	891	2426	0,89	1,07	1,5	2,02	12,5	27,8	1/2	1 1/2	15,7 - 18,3	207 - 250
	R290	400	689	952	1937	1,09	1,23	1,74	2,11	14,5	27,8				

(*) data @50 Hz EN12900 conditions

NJ



Frame Breaker
Up to 33,4 cm³



High reliability and proved performances



Easy installation
Rotolock valve version



Low Sound and Vibration Level



Developed for: Walk-in Coolers, Merchandisers, Milk Coolers, Refrigerated Islands, GDMs.

Applications: **LBP, M/HBP**

Refrigerants: **R134a; R404A/R507**

FAMILY	REFRIGERANT	COOLING CAPACITY RANGE* W				EFFICIENCY RANGE* W/W				DISPLACEMENT cc		HP		WEIGHT	HEIGHT
		LBP		M/HBP		LBP		M/HBP		MIN	MAX	MIN	MAX	MIN/MAX Kg	MIN/MAX mm
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX						
NJ	R134a	/	/	2021	2740	/	/	2,16	2,40	26,1	34,4	3/4	1 1/2	19,6 - 21,7	253 - 277
	R404A	585	809	1648	2506	0,85	1,06	1,59	1,9	21,7	34,4				

(*) data @50 Hz EN12900 conditions

Applications & Test conditions

LBP

(Low Back Pressure)

Low evaporating temperatures (lower than -20 °C)

Applications: refrigerators, frozen food cabinets, frozen food display cases, display windows, etc.

MBP

(Medium Back Pressure)

Medium evaporating temperatures (higher than -20 °C);

Applications: fresh food cabinets, drink coolers, ice makers etc.

M/HBP

(Medium / High Back Pressure)

Evaporating temperatures between -20°C and +10°C;

Applications: coolers, merchandisers, etc

HBP

(High Back Pressure)

High evaporating temperatures (higher than -15 °C)

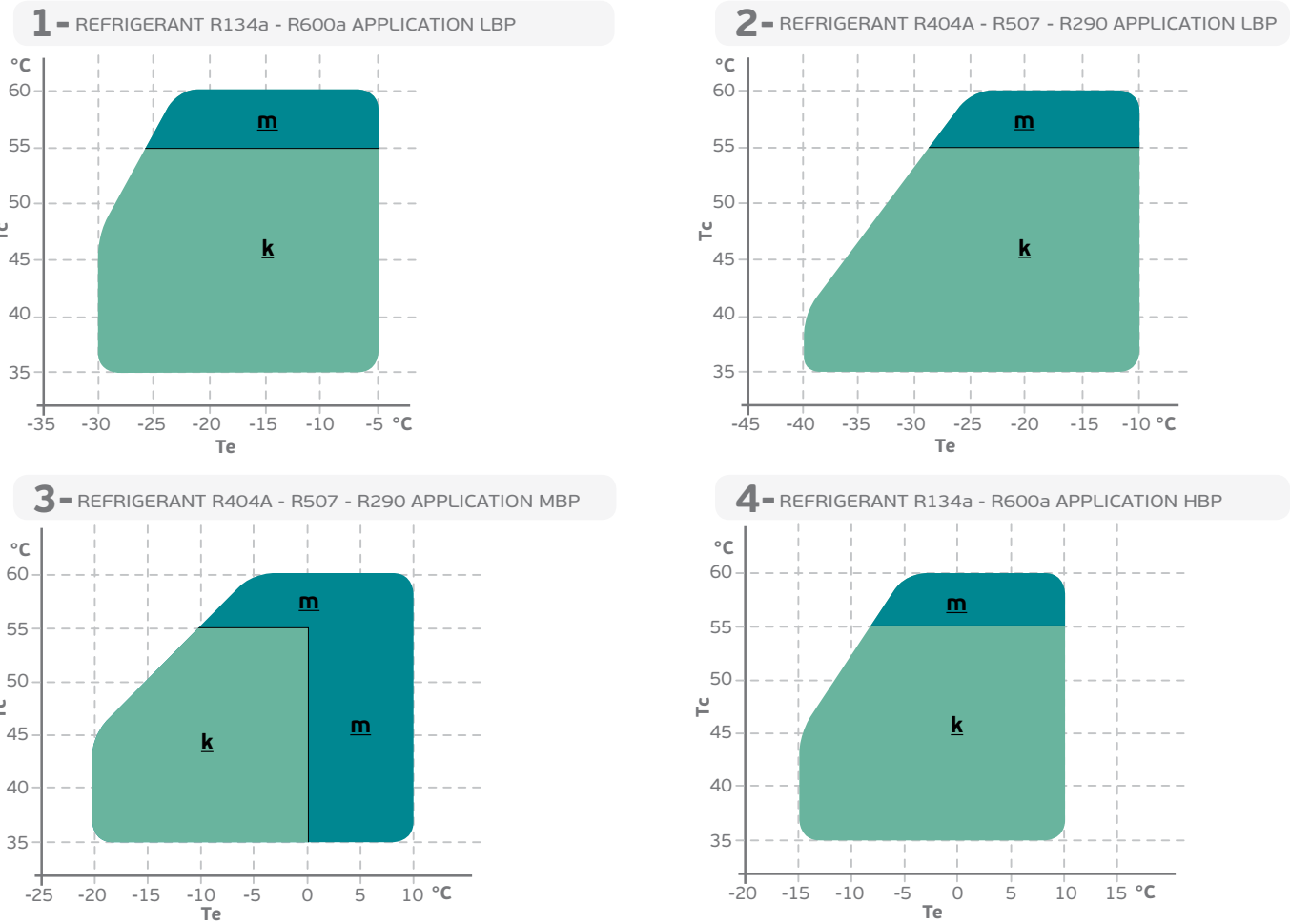
Applications: fresh food cabinets, ice makers, dehumidifiers. dryers,etc.

TEST CONDITIONS (RATING POINT)	APPLICATION	EVAPORATING TEMPERATURE C°	CONDENSING TEMPERATURE C°	GAS RETURN TEMPERATURE C°	SUBCOOLING	COMPRESSOR AMBIENT TEMPERATURE C°
EN 12900	LBP	-35°	40°	20° (*)	NO SUBCOOLING	32°
	MBP	-10°	45°	20° (*)		
	HBP	+5°	50°	20° (*)		
ARI 540	LBP	-23,3°	48,9°	4,4°	NO SUBCOOLING	35°
	MBP	-6,7°	48,9°	4,4°		
	HBP	+7,2°	54,4°	18,3°		
ASHRAE SUBCOOLED	LBP	-23,3°	54,4°	32,2°	22,2 K	32,2°
	MBP and HBP	7,2°	54,4°	35°	8,3 K	35°
CECOMAF	LBP	-25	55°	32°	NO SUBCOOLING	32°

(*) For EMT and NE models return gas temperature is 32°C

CONVERSION UNIT	
1 watt	3,41 Btu/h
1 watt	0,86 kcal/h
1 kcal/h	3,97 Btu/h

Operating Envelope

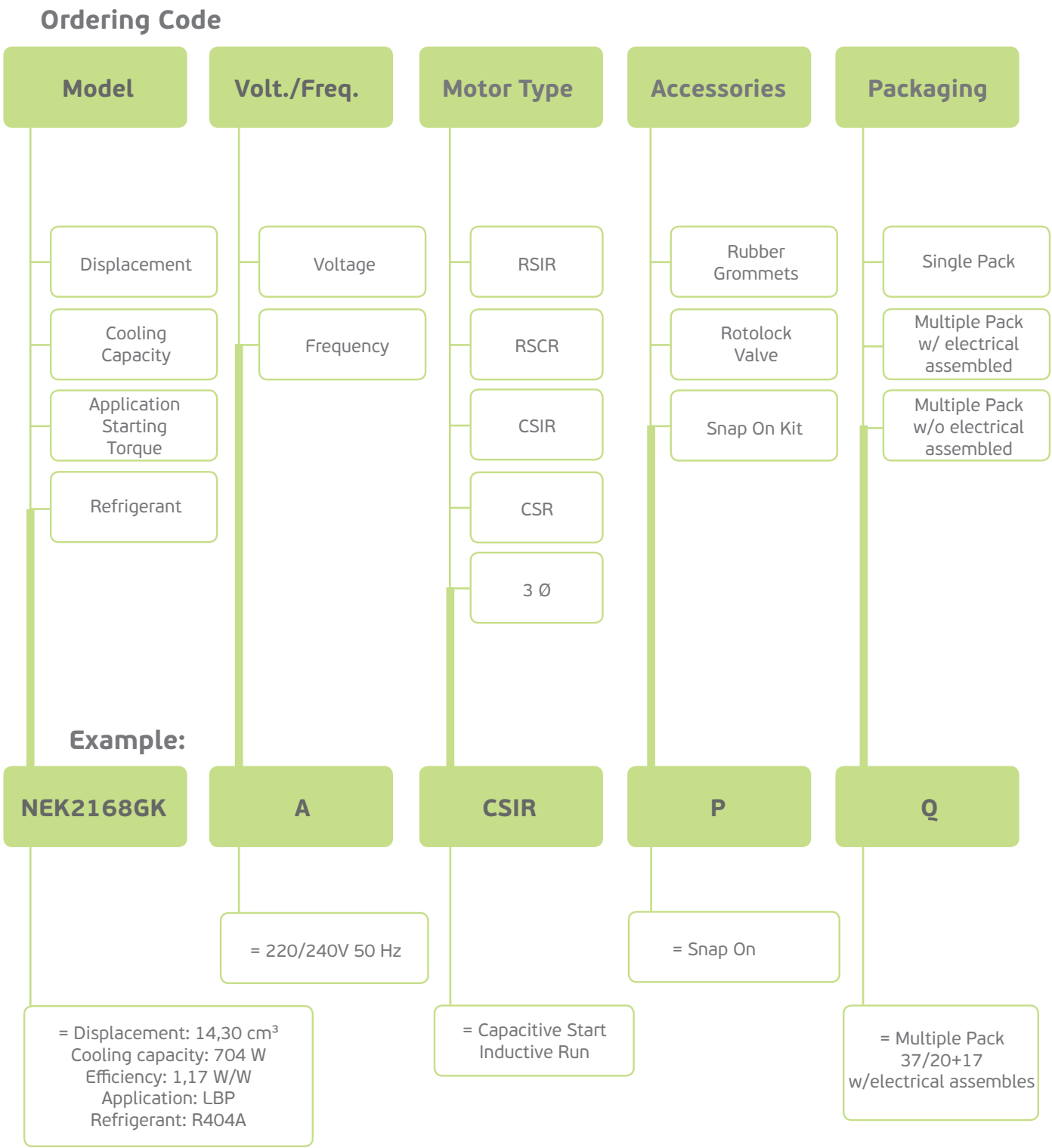


Tc - Condensing Temperature | k - Ambient 32°C and return gas 20°C
Te - Evaporating Temperature | m - Ambient 32°C and return gas 20°C (for transitory period)

PLEASE NOTE: the use of the compressor outside the intended working range cannot make use of the warranty.

COMPRESSOR SELECTION

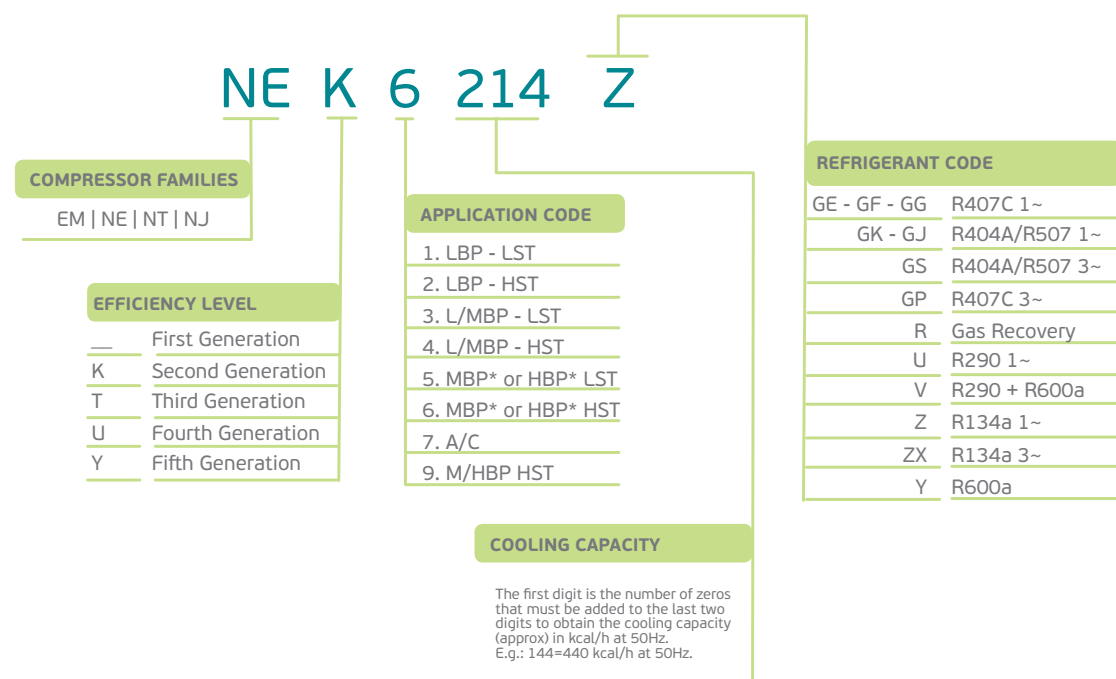
HOW TO ORDER YOUR COMPRESSOR



NOTE: not all combinations are possible

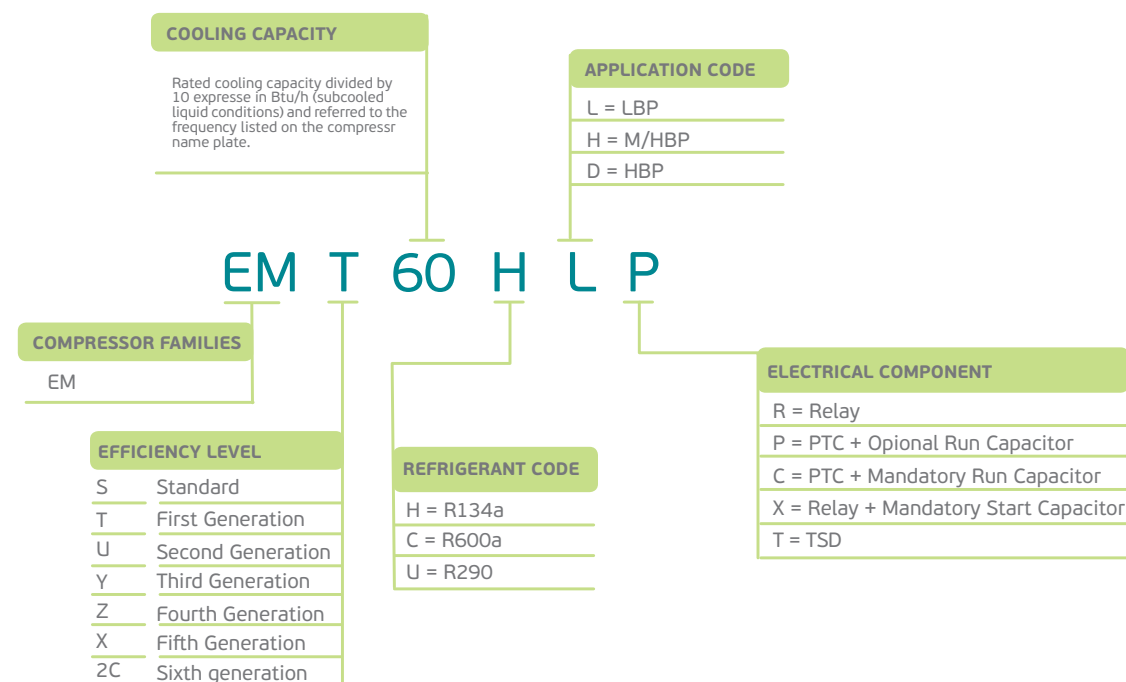
Nomenclature

EM/NE/NT/NJ



The V letter at the end of the compressor name stands for IPR valve

EM



(*) According to the refrigerant used

Families

FAMILIES	LBP				H/MBP			
	R134a	R404A	R290	R600	R134a	R404A	R290	R600a
EM	✓	✓	✓	✓	✓	✓	✓	✓
NEK/NEU	✓	✓	✓	✗	✓	✓	✓	✓
NT/NTU	✓	✓	✓	✗	✓	✓	✓	✗
NJ	✓	✓	✗	✗	✓	✓	✗	✗

Voltage & Frequencies

Code	Voltage & Frequency	Voltage Working Range		Minimum Start Voltage	
		50Hz	60Hz	50Hz	60Hz
A	220-240V/50Hz 1 ~	198V - 254V		187V	
B	200-230V/50Hz (208-230V/60Hz) 1 ~	180V - 244V	187V-244V	170V	177V
C	220V/50Hz 1 ~	200V - 242V		187V	
D	208-230V/60Hz 1 ~		187V - 244V		177V
E	115-127V/60Hz		103 - 134V		98V
G	115V/60Hz 1 ~		103V-127V		98V
J	230V/60Hz 1 ~		207V-253V		195V
K	200-220 V 50 Hz 1~ / (230 V 60 Hz 1~)	180V-234V	207V-253V	170V	195V
M	380-420V/50Hz (440-480V/60Hz) 3 ~	332V-445V	396-509V	323V	374V
N	200-240V/50Hz (230V/60Hz) 1 ~	180V-254V	207V-253V	170V	195V
Q	100V 50/60Hz	90-110V	90-110V	85V	85V
R	200V/50-60Hz 3 ~	180V-220V	180V-220V	170V	170V
V	230V/50Hz 1 ~	207V-253V		195V	
Z	200-230V/60Hz 1 ~		180V-244V		170V

Fan Cooling Characteristic

FREE AIRFLOW	m³/h	COMPRESSOR
	270 or 520*	EMT
	520	NEK - NT
	800	NJ

(*) For specific model see catalogue data page

Cooling Type

S

Static Cooling:
 the compressor does not require forced cooling, but it must be installed so that the ambient air can adequately cool to avoid overheating

F

Fan Cooling:
 the compressor requires forced cooling through the use of a fan

Model	Volt./Freq.	Motor Type	Accessories	Packaging
-------	-------------	------------	-------------	-----------

Electrical motor starting torque

LST

Low Starting Torque:
Compressors with RSIR-RSCR-PSC electrical motors for systems with capillary tube and with balanced pressures at start up.

HST

High Starting Torque:
Compressors with CSIR-CSR and 3ph electrical motors for systems with balanced or unbalanced pressures at start up.

Electrical motor types

RSIR

Resistance Start – Inductive Run

This motor type, used in the compressor of small power, has a low starting torque (LST) and must be applied only to capillary tube systems where the pressures equalize. The motor is characterized by a start winding with high ohmic resistance and must be disconnected when it reaches the stabilized rotational speed. An electromagnetic relay, calibrated for the motor current, disconnects the start winding at the end of the start up. An alternative to the electromagnetic relay is, for some models, a PTC solid state-starting device.

RSCR

Resistance Start – Capacitive Run

Similar to RSIR motor version but uses a PTC solid state starting device and a permanent connected run capacitor to improve its efficiency.

CSIR

Capacitive Start – Inductive Run

Similar to RSIR motor, with a different start winding in series with a start capacitor of suitable capacitance to get a high starting torque.

CSR

Capacitive Start & Run

CSR version with capacitive run and start windings. Same as PSC motor but with a start capacitor in series with the start winding. A potential starting relay, calibrated for each motor, disconnects the start capacitor at the end of the start. The motor is characterized by a high starting torque (HST) and high efficiency.

PSC

Permanent Split Capacitor:

PSC version with capacitive run winding. This motor is characterized by the run capacitor permanently connected in series with the start winding; both remain connected even after the motor starts. The starting torque is enough to guarantee that the compressor starts only with balanced pressures in capillary tubes systems or with a pressure equalizer.

3Ø

Three Phase

Three-phase windings with star connections

Electrical components

Motor Type	Overload Protector	Starting Device			Capacitors	
		Current Relay	Voltage Relay	PTC	Start	Run
RSIR	✓	✓	✗	✓	✗	✗
RSCR	✓	✗	✗	✓	✗	✓
CSIR	✓	✓	✗	✗	✓	✗
CSR	✓	✗	✓	✗	✓	✓
PSC	✓	✗	✗	✗	✗	✓

Model	Volt./Freq.	Motor Type	Accessories	Packaging
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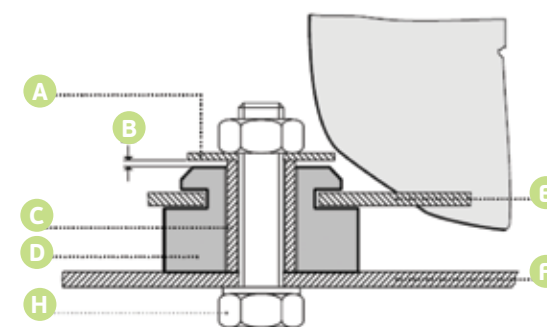
Accessories & Options

ACCESSORIES & OPTIONS				
	EMT	NEK	NT	NJ
A	Only Rubber Grommets	Only Rubber Grommets	Only Rubber Grommets	Only Rubber Grommets
P	snap-on kit	snap-on kit	✗	✗
V	✗	✗	✗	Rotolock Valve Mechanical
Z	✗	✗	✗	Rotolock Valve Solder

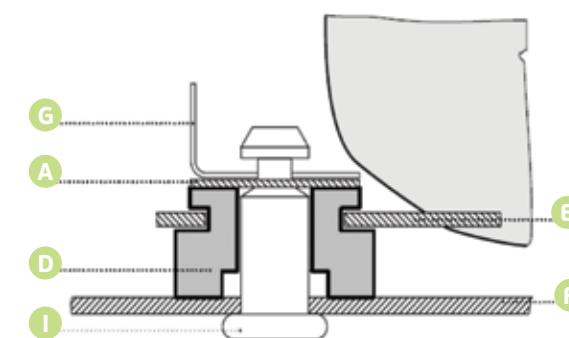
Assembling Accessories

A. SLEEVE & SCREW

Screw and Washer are not part of delivery



P. SNAP ON

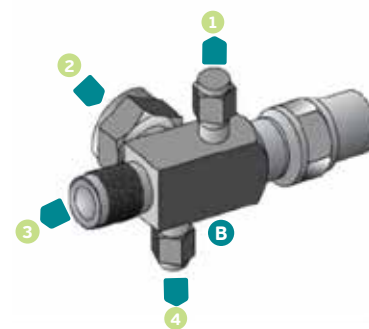


Rubber Grommets Assembling Process:

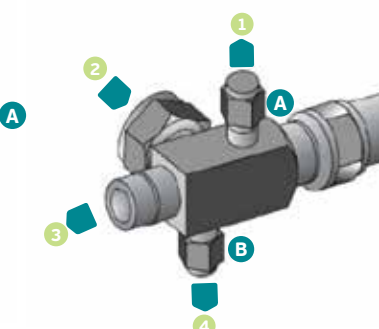
- A Washer
- B Gap
- C Sleeve
- D Grommets
- E Base Plate
- F Mounting Base
- G Clip
- H Screw
- I Pin

Rotolock Valve

V. THREADED CONNECTION



Z. BRAZED CONNECTION

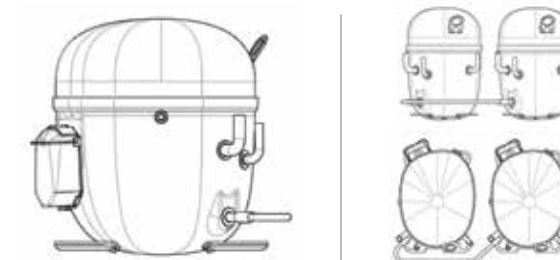


- 1 Attachment for service or for a manometer
- 2 Connection to the receiver or to the compressor
- 3 Main port
- 4 Connections for pressure-stat

A & B Service caps (hexagonal nuts)

NT/NJ Gemini

Gemini is a product line that matches low noise and short height for typical semi-hermetic solution. Through an especial shape Embraco designed an hermetic light commercial compressors which can be embedded in appliances, considering individual or dual mode, it means a modular cooling capacity when demanded. These products are available in condensing units and also only compressors.



Packaging code

EMT/EMY/EMX						
SINGLE MULTIPLE PACK	CODE	QTY COMPRESSORS	LAYERS	ELECTRICAL COMPONENTS		NOTES
				ASSEMBLED	NOT ASSEMBLED	
SINGLE PACK	A	70	14+14+14+14+14	✓	✗	excluded capacitor
	R	100	20+20+20+20+20	✗	✓	grommets and sleeves delivered separately
	S	120	20+20+20+20+20+20	✗	✓	
	G	100	20+20+20+20+20	✓	✗	
	N	37	20+17	✓	✗	and accessories included
	O	74	20+20+20+14	✓	✗	and accessories included

NE/NEK/NEU						
SINGLE MULTIPLE PACK	CODE	QTY COMPRESSORS	LAYERS	ELECTRICAL COMPONENTS		NOTES
				ASSEMBLED	NOT ASSEMBLED	
SINGLE PACK	A	56	14+14+14+14	✓	✗	excluded capacitor
	F	44	11+11+11+11	✗	✓	with electrical box inside pack
	J	56	14+14+14+14	✓	✗	including capacitor
MULTIPLE PACK	H	28	14+14	✓	✗	with electrical box inside pack
	M	80	20+20+20+20	✗	✓	electricals packed in separate carton box
	N	40	20+20	✗	✓	electricals packed in separate carton box
	O	74	20+17+20+17	✓	✗	
	Q	37	20+17	✓	✗	

NT/NTU						
SINGLE MULTIPLE PACK	CODE	QTY COMPRESSORS	LAYERS	ELECTRICAL COMPONENTS		NOTES
				ASSEMBLED	NOT ASSEMBLED	
SINGLE PACK	A	44	14+14+14+14	✓	✗	excluded capacitor
	F	44	11+11+11+11	✗	✓	with electrical box inside pack
MULTIPLE PACK	C	36	18+18	✗	✓	
	Z	24	12+12	✓	✗	

NJ						
SINGLE MULTIPLE PACK	CODE	QTY COMPRESSORS	LAYERS	ELECTRICAL COMPONENTS		NOTES
				ASSEMBLED	NOT ASSEMBLED	
SINGLE PACK	A	33	11+11+11	✗	✓	excluded capacitor
	F	33	11+11+11	✗	✗	with electrical box inside pack
MULTIPLE PACK	C	36	18+18	✗	✓	
	Y	28	14+14	✓	✗	

Load Characteristics for 20 ft container

SERIES	FIRST LAYER PACK N° - N° COMP.	SECOND LAYER PACK N° - N° COMP.	THIRD LAYER PACK N° - N° COMP.	TOTAL N° OF COMPRESSORS
EM	14 - 120	14 - 60	4	2.520
NE 1	14 - 72	11 - 72 2	4	1.800
	14 - 72	13 - 73 2	4	1.944
NT 1	14 - 36	14 - 36	7 - 36 4	1.260
	14 - 72	14 - 36	4	1.512
NJ	14 - 36	11 - 36 2	4	900

1. The different load structure (1.800 or 1.944 NE/NEK series compressors - 1.260 or 1.512 NT compressors) is determined by the ratio between the maximum container weight and the compressor weight.
2. No. 2 package filler is added (containing all the equipped components).
3. A package as filler packaging, containing part of the equipped components is added.
4. Type of load which is rarely used. To be avoided due to an incomplete 3rd layer.
5. Packages are added containing the equipped components.

Identification Label

NEK/NEU/NT/NTU/NJ label



- 1 Compressor model
- 2 Supply Voltage
- 3 Bill of Materials code
- 4 Serial Number
- 5 Agency Approval Marks
- 6 Date code or Production date
- 7 Oil type and quantity
- 8 Refrigerant type
- 9 Current Consumption (Rated Load Amperage, when applicable)
- 10 Locked Rotor Amperage (when applicable)

EM label



- 1 Compressor model
- 2 Supply Voltage
- 3 Bill of Materials code
- 4 Serial Number
- 5 Agency Approval Marks
- 6 Date code or Production date
- 7 Oil type and quantity
- 8 Refrigerant type
- 9 Current Consumption (Rated Load Amperage, when applicable)
- 10 Locked Rotor Amperage (when applicable)

GENERAL DATA & PERFORMANCE

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60 Hz
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50 Hz
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MBP — pag. 58

60 Hz
LBP — pag. 60
MBP — pag. 60

50 Hz
LBP — pag. 40
MBP — pag. 44

60 Hz
LBP — pag. 46
MBP — pag. 50
M/MBP — pag. 54

50 Hz

LBP	— pag. 62
HBP	— pag. 64

How to read our catalogue

Example:

➡ **R134a** ①

② LBP 50Hz ③

[illegible]

1 Grouped by refrigerant type

2 Grouped by Application Type

3 Data classified by supply frequency

4 Model Selection

5 Cooling capacity
@ rated point
ASHRAE & EN12900 or ARI or CECOMAF

6 Operative Range of evaporating temp

R134a
LBP 50Hz

EDT 50Hz										COOLING CAPACITY EN12900																	
SERIES MODEL	DISPLACEMENT cm³	HP	VOLTAGE FREQUENCY	MOTOR TYPE	RATED POINT - ASHRAE		RATED POINT - EN12900		CONDENSING TEMPERATURE °C	EVAPORATING TEMPERATURE °C NO SUBCOOLING W						WEIGHT kg	MAX HEIGHT mm	LRA A	COOLING TYPE	FAN AIR FLOW (m³/h)	OIL		EXP DEVICE	DRAWINGS		MODEL	
					-23,3 °C / 54,4 °C		-35°C/40 °C			-30	-25	-20	-15	-10	-5						CHARGE cm³	TYPE		EXTERNAL VIEW REF.	WIRING DIAGRAM REF.		
EMT	EMT22HLP	3,01	1/12	220-240V 50Hz 1~	RSIR-RSCR	75	1,19	37	0,83	55		54	75	98	125	152	7,1	158	3,0	S	-	180	POE 22	C	DWG01	SM00	EMT22HLP
										45	50	69	91	119	151												
	EMT36HLP	3,97	1/10	220-240V 50Hz 1~	RSIR-RSCR	108	1,27	54	0,99	55		79	105	137	174	217	7,5	166	3,8	S	-	180	POE 22	C	DWG01	SM00	EMT36HLP
										45	71	94	123	160	203	254											
	EMT43HLP	4,85	1/8	220-240V 50Hz 1~	RSIR-RSCR	132	1,30	66	0,91	55		96	127	164	207	252	7,5	166	4,7	S	-	180	POE 22	C	DWG01	SM00	EMT43HLP
										45	86	117	153	195	247												
	EMT49HLP	5,57	1/6	220-240V 50Hz 1~	RSIR-RSCR	151	1,33	78	1,16	55		110	144	186	235	292	7,7	166	4,8	S	-	180	POE 22	C	DWG01	SM00	EMT49HLP
										45	98	131	170	217	274	342											
	EMT60HLP	6,76	1/6	220-240V 50Hz 1~	RSIR-RSCR	177																					

NOTE: performance curves are calculated from Ashrae actual curves.

R134a
HBP 60Hz

REF 60Hz									COOLING CAPACITY ARI 540																		
SERIES MODEL	DISPLACEMENT cm³	HP	VOLTAGE FREQUENCY	MOTOR TYPE	RATED POINT - ASHRAE		RATED POINT - ARI 540		CONDENSING TEMPERATURE °C	EVAPORATING TEMPERATURE °C NO SUBCOOLING W						WEIGHT kg	MAX HEIGHT mm	LRA A	COOLING TYPE	FAN AIR FLOW (m³/h)	OIL		EXP DEVICE	DRAWINGS		MODEL	
					7,22°C/54,4 °C		7,2°C/54,4 °C			-15	-10	-5	0	5	10						CHARGE cm³	TYPE		EXTERNAL VIEW REF.	WIRING DIAGRAM REF.		
NT/NTU	NT6215Z	17,4	1/2	208-230V 60Hz 1~	CSIR	1876	2,25	1794	2,11	55		861	1085	1347	1648	1986	17,0	207	20,8	F	520	450	POE 22	C/V	DWG15	SM20	NT6215Z
										45	777	997	1256	1556	1895	2274											
	NT6215Z	17,4	1/2	115V 60Hz 1~	CSIR	1942	2,40	1925	2,37	55		893	1146	1439	1772	2144	16,5	207	44,0	F	520	450	POE 22	C/V	DWG15	SM20	NT6215Z
										45	818	1059	1334	1642	1985	2361											
	NT6215Z	17,4	1/2	115V 60Hz 1~	CSR	2015	2,61	1933	2,50	55		880	1121	1410	1743	2124	15,7	207	44,0	F	520	450	POE 22	C/V	DWG15	SM23	NT6215Z
										45	810	1043	1322	1652	2029	2454											
	NT6217Z	20,4	3/4	115V 60Hz 1~	CSIR	2186	2,21	1982	1,99	55		1040	1320	1635	1986	2372	17,5	220	45,0	F	520	450	POE 22	C/V	DWG15	SM20	NT6217Z
										45	950	1210	1520	1879	2285	2740					</						

NOTE: performance curves are calculated from Ashrae actual curves.

R404A / R507
LBP 50Hz

BP 50Hz										COOLING CAPACITY EN12900																		
SERIES MODEL	DISPLACEMENT cm³	HP	VOLTAGE FREQUENCY	MOTOR TYPE	RATED POINT - ASHRAE		RATED POINT - EN12900		CONDENSING TEMPERATURE °C	EVAPORATING TEMPERATURE °C NO SUBCOOLING W							WEIGHT kg	MAX HEIGHT mm	LRA A	COOLING TYPE	FAN AIR FLOW (m³/h)	OIL		EXP DEVICE	DRAWINGS		MODEL	
					-23,3 °C / 54,4 °C		-35°C/40 °C															CHARGE cm³	TYPE		EXTERNAL VIEW REF.	WIRING DIAGRAM REF.		
					COOLING W	EFFICIENCY W/W	COOLING W	EFFICIENCY W/W		-40	-35	-30	-25	-20	-15	-10												
NT	NT2168GK	14,5	3/4	200-240V 50Hz / 230V 60Hz 1~	CSIR	642	1,28	354	1,03	55			319	422	542	685	859	17	220	25	F	520	450	POE 22	C/V	DWG16	SM19	NT2168GK
										45	206	310	423	549	698	875	1089											
	NT2168GK	14,5	3/4	200-240V 50Hz / 230V 60Hz 1~	CSR	642	1,28	354	1,03	55			319	422	542	685	859	17	220	25	F	520	450	POE 22	C/V	DWG16	SM23	NT2168GK
										45	206	310	423	549	698	875	1089											
	NT2168GS	14,5	3/4	200V 50-60Hz 3~	3PHASE	652	1,32	341	1,03	55			312	418	546	696	869	18,3	250	28	F	520	650	POE 22	C/V	DWG17	SM27	NT2168GS
										45	214	300	410	544	704	890	1107											
	NT2178GK	17,4	3/4	220-240V 50Hz 1~	CSIR	782	1,3	416	0,98	55			378	502	647	812	997	17	220	25	F	520	450	POE 22				

NOTE: performance curves are calculated from Ashrae actual curves.

R404A / R507
M/HBP 60 Hz

									COOLING CAPACITY ARI 540																				
SERIES MODEL	DISPLACEMENT cm³	HP	VOLTAGE FREQUENCY	MOTOR TYPE	RATED POINT - ASHRAE		RATED POINT - ARI 540		CONDENSING TEMPERATURE °C	EVAPORATING TEMPERATURE °C NO SUBCOOLING W							WEIGHT kg	MAX HEIGHT mm	LRA A	COOLING TYPE	FAN AIR FLOW (m³/h)	OIL		EXP DEVICE	DRAWINGS		MODEL		
					7,2 °C / 54,4 °C		-6,7 °C/48,9 °C															CHARGE cm³	TYPE		EXTERNAL VIEW REF.	WIRING DIAGRAM REF.			
					COOLING W	EFFICIENCY W/W	COOLING W	EFFICIENCY W/W		-20	-15	-10	-5	0	5	10													
NJ	NJ9226GK	21,7	1	208-230V 60Hz 1~	CSR	3708	2,20	2742	2,19	55			1364	1718	2110	2542	3013	20,7	265,0	34,0	F	800	750	POE 22	C/V	DWG14	SM17	NJ9226GK	
									45	1088	1391	1754	2176	2655	3189	3780													
	NJ9226GS	21,7	1	380-420V 50Hz / 440-480V 60Hz 3~	3PHASE	3801	2,50	2811	2,38	55			1236	1554	1911	2307	2743	19	265,0	10,0	F	800	750	POE 22	C/V	DWG14	SM18	NJ9226GS	
									45	947	1223	1556	1942	2382	2873	3419													
	NJ9232GK	26,1	1 1/4	208-230V 60Hz 1~	CSR	4704	2,40	3479	2,36	55			1695	2137	2636	3190	3802	21,5	277,0	40,0	F	800	750	POE 22	C/V	DWG14	SM17	NJ9232GK	
									45	1293	1672	2131	2669	3284	3971	4737													
	NJ9232GS	26,1	1 1/4	380-420V 50Hz / 440-480V 60Hz 3~	3PHASE	4716	2,50	3488	2,47	55			1464	1845	2276	2754	3282	20,4	277,0	13,0	F	800	750	POE 22	C/V	DWG14	SM18	NJ9232GS	
									45	1116	1444	1840	2305	2835	3429	4090													
	NJ9238GK	32,7	1 1/2	230V 60Hz 1~	CSR	5184	2,04	3834	2,04	55			2036	2505	3006	3536	4102	22,1	277,0	59,0	F	800	750	POE 22	C/V	DWG14	SM17	NJ9238GK	
									45	1601	2053	2564	3133	3757	4434	5169													
	NJ9238GS	32,7	1 1/2	380-420V 50Hz / 440-480V 60Hz 3~	3PHASE	5661	2,55	4186	2,51	55			2131	2649	3233	3880	4595	21,7	277,0	22,0	F	800	750	POE 22	C/V	DWG14	SM18	NJ9238GS	
									45	1695	2178	2735	3365	4067	4836	5679													

NOTE: performance curves are calculated from Ashrae actual curves.

R600a
LBP 50Hz

									COOLING CAPACITY CECOMAF																		
SERIES MODEL	DISPLACEMENT cm³	HP	VOLTAGE FREQUENCY	MOTOR TYPE	RATED POINT - ASHRAE		RATED POINT - CECOMAF		CONDENSING TEMPERATURE °C	EVAPORATING TEMPERATURE °C NO SUBCOOLING W						WEIGHT kg	MAX HEIGHT mm	LRA A	COOLING TYPE	FAN AIR FLOW (m³/h)	OIL		EXP DEVICE	DRAWINGS		MODEL	
					-23,3 °C / 54,4 °C		-25°C/55 °C			-30	-25	-20	-15	-10	-5						CHARGE cm³	TYPE		EXTERNAL VIEW REF.	WIRING DIAGRAM REF.		
EMY	EMY20CLC	3,97	1/12	220-240V / 50Hz	RSIR	61	1,4	45	1,1	55	34	45	60	77	98	121	7,4	166	2,35	S	-	180	AB 5	C	DWG01	SM00	EMY20CLC
									45	40	54	71	92	116	144												
	EMY26CLC	5,20	1/12	220-240V / 50Hz	RSIR	83	1,5	61	1,18	55	45	61	81	105	133	165	7,4	166	2,8	S	-	180	AB 5	C	DWG01	SM00	EMY26CLC
									45	55	73	95	121	152	187												
	EMY32CLC	5,96	1/10	220-240V / 50Hz	RSIR	97	1,51	72	1,19	55	53	72	94	120	151	189	7,4	166	3,6	S	-	180	AB 5	C	DWG01	SM00	EMY32CLC
									45	64	86	111	141	176	218												
	EMY40CLC	7,24	1/8	220-240V / 50Hz	RSIR	119	1,53	90	1,21	55	66	90	116	148	186	232	7,6	166	4,3	S	-	180	AB 5	C	DWG01	SM00	EMY40CLC
									45	80	107	136	171	214	267												
	EMY46CLC	7,96	1/8+	220-240V / 50Hz	RSIR	135	1,56	101	1,23	55	75	102	135	174	219	268	7,7	166	4,3	S							

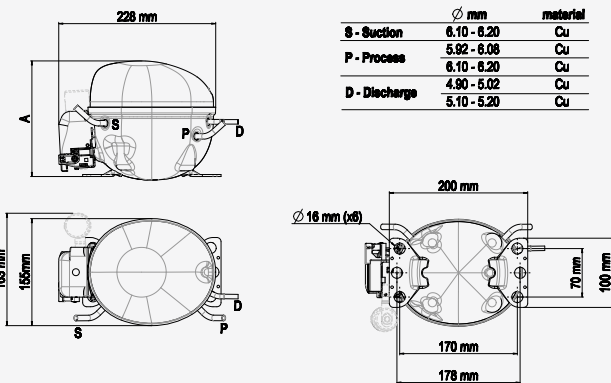
EMY = standard efficiency
EMX = high efficiency

NOTE: performance curves are calculated from Ashrae actual curves.

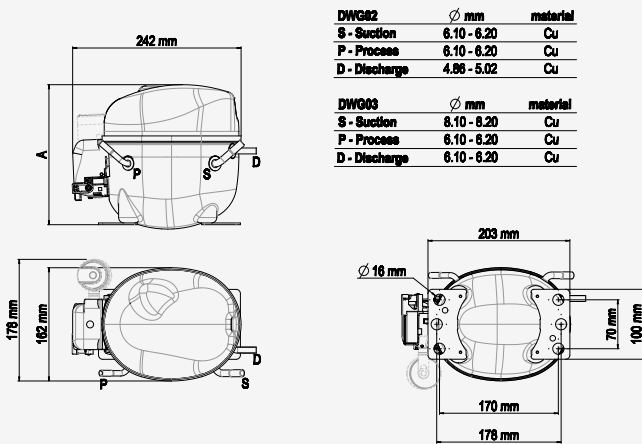
External Views & Wiring Diagrams

EXTERNAL VIEWS

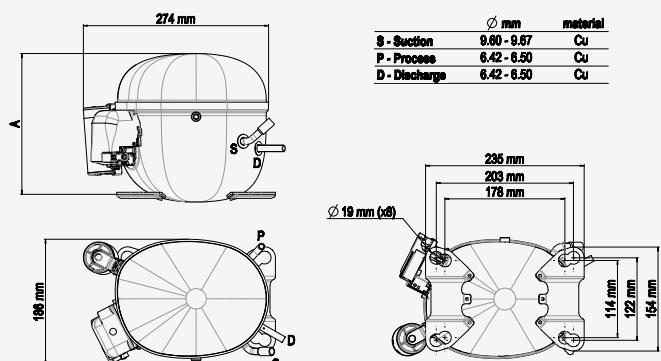
DWG01 - EMT SERIES European Base Plate



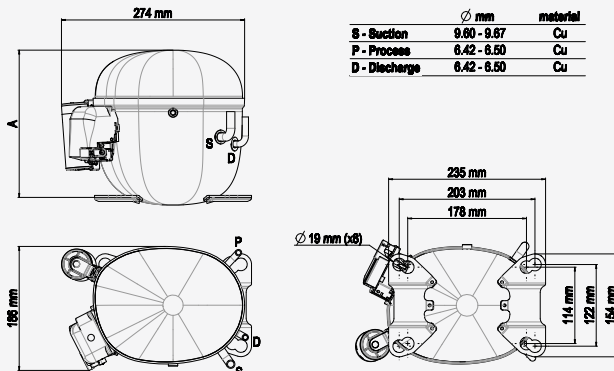
DWG02 / DWG03 - NE SERIES European Base Plate



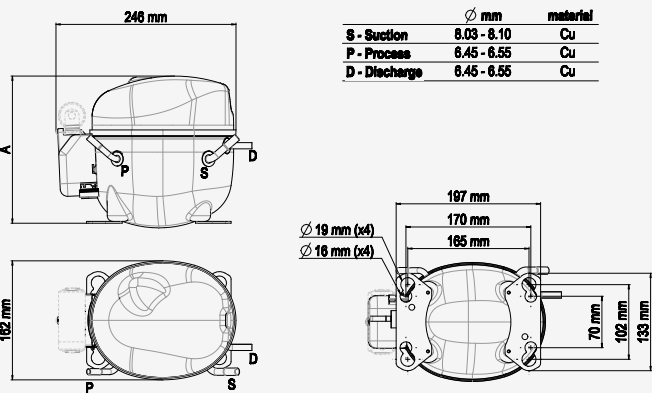
DWG 15 - NT SERIES



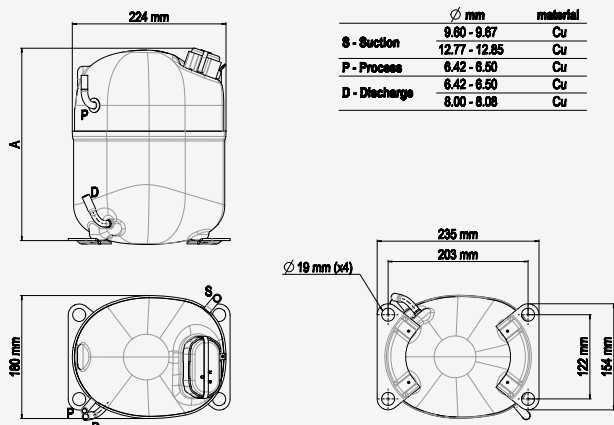
DWG16 - NT SERIES



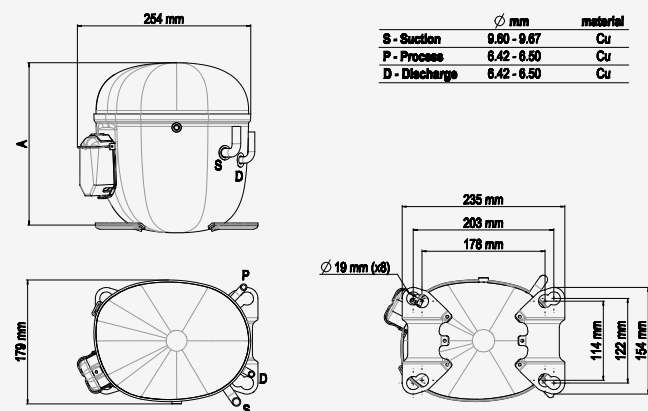
DWG04 - NE SERIES Universal Base Plate



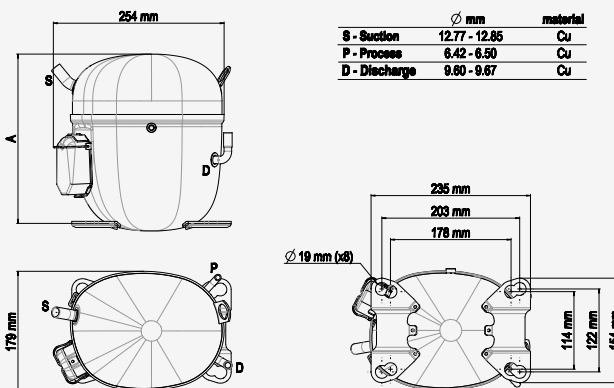
DWG14 - NJ SERIES



DWG17 - NT SERIES



DWG 19 - NTU SERIES



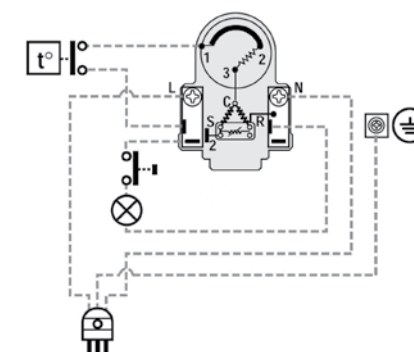
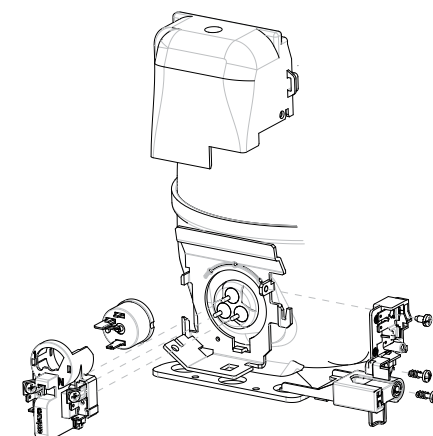
External Views & Wiring Diagrams

WIRING DIAGRAMS KEY

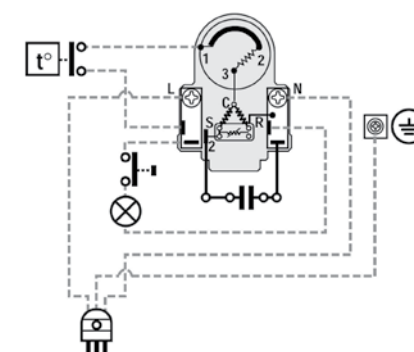
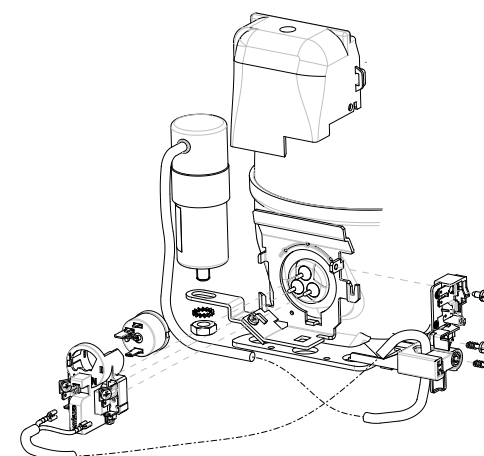
	OVERLOAD PROTECTOR		PTC START DEVICE
	CURRENT START RELAY		INTEGRATED PTC DEVICE
	3CR CURRENT START RELAY		CURRENT START RELAY WITH CAPACITOR CONNECTIONS
			3ARR3 START RELAY (voltage).
	RUN CAPACITOR		RUN CAPACITOR (MANDATORY - NOT SUPPLIED)
	OPTIONAL RUN CAPACITOR		START CAPACITOR
	FAN		PUSHBUTTON
	LAMP		
	3-PHASE MOTOR		SINGLE PHASE MOTOR
	LOW-HIGH PRESSURE SWITCH		THERMOSTAT
	EARTH CONNECTION		
	3-PHASE SUPPLY		PILOT CIRCUIT 24 OR 220 V
	SINGLE PHASE SUPPLY		
	COMMON		COMMON (INTERNAL OVERLOAD PROTECTOR)
	RUN		START
	TERMINAL BLOCK		
	WHITE CABLE		BROWN CABLE
	BLUE CABLE		BLACK CABLE
	YELLOW-GREEN CABLE		RED CABLE
	CONNECTIONS SUPPLIED		CONNECTIONS TO BE MADE BY THE CUSTOMER (NOT SUPPLIES)

WIRING DIAGRAMS

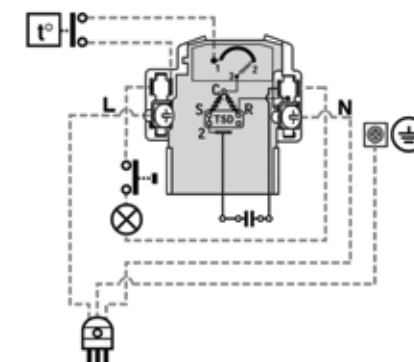
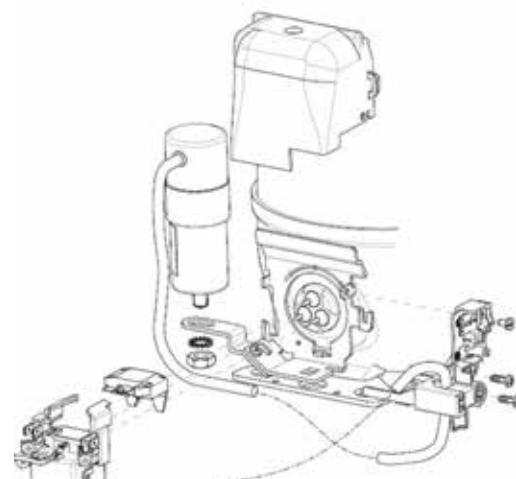
SM00 - EMT/NE SERIES RSIR PTC European Version



SM01 - EMT/NE SERIES RSCR PTC European Version



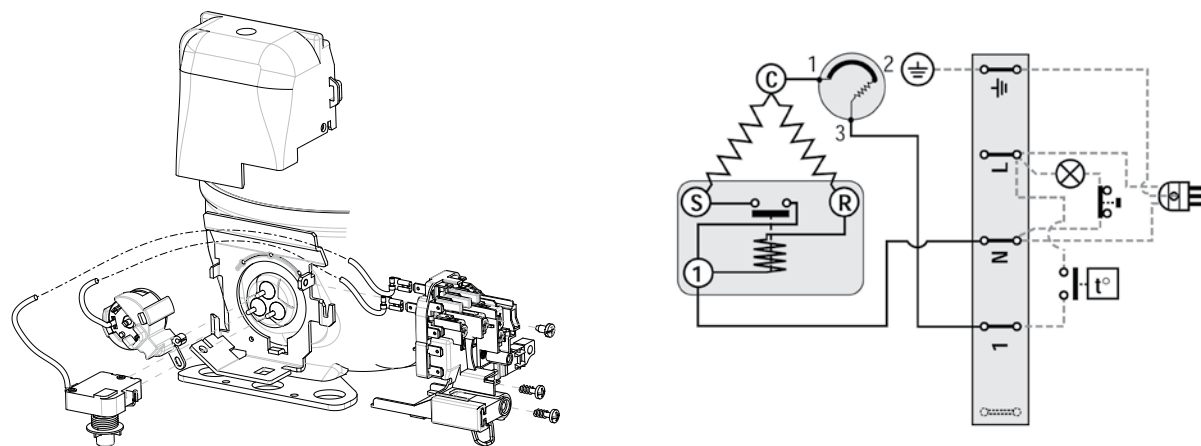
SM02 - EMT/NE SERIES RSCR TSD European Version



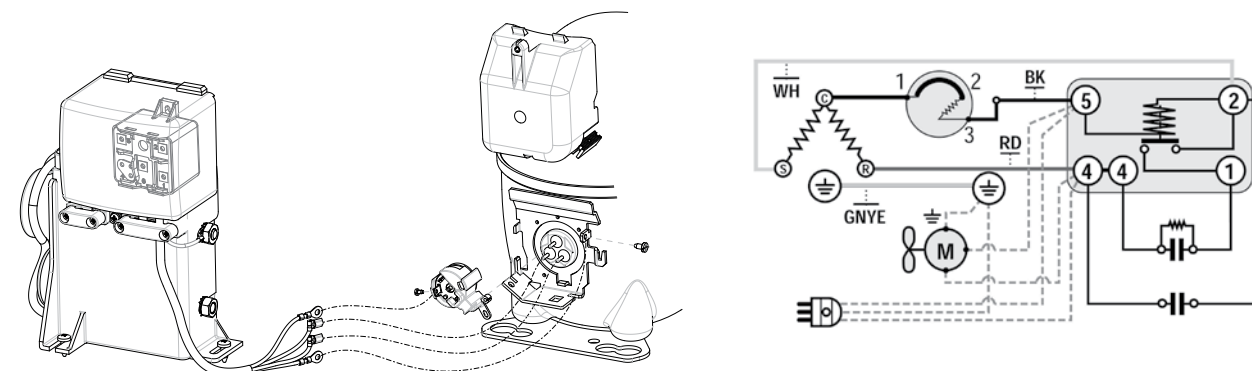
External Views & Wiring Diagrams

WIRING DIAGRAMS

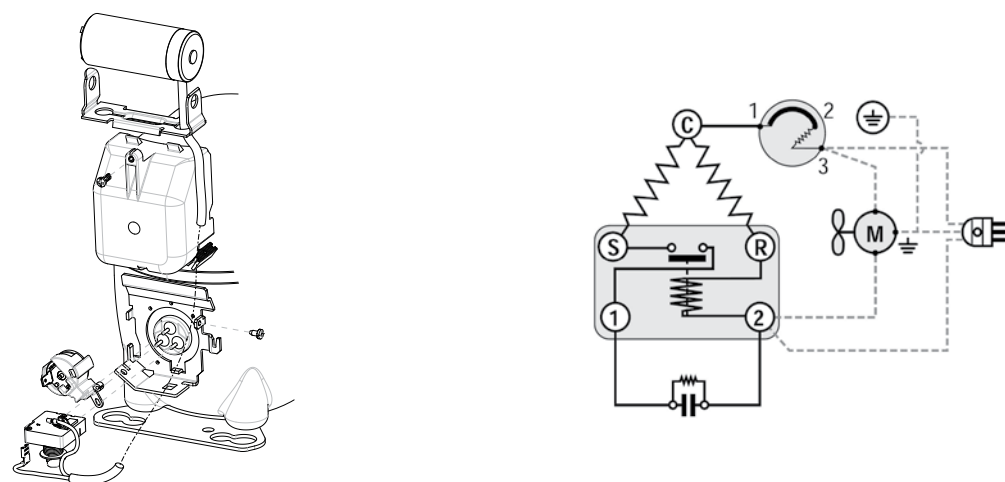
SM03 - EMT/NE SERIES RSIR Terminal Board & Start Device



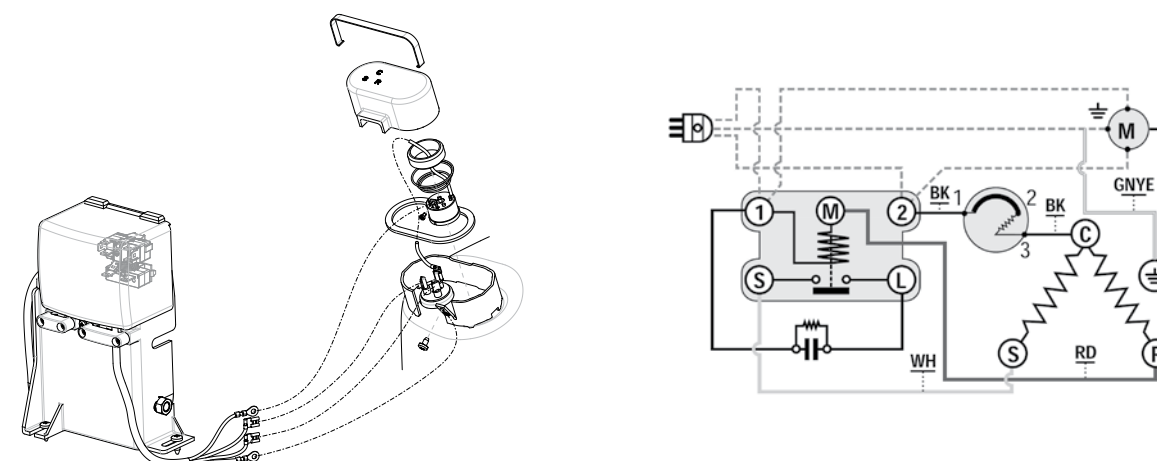
SM06 - NE SERIES CSR Box



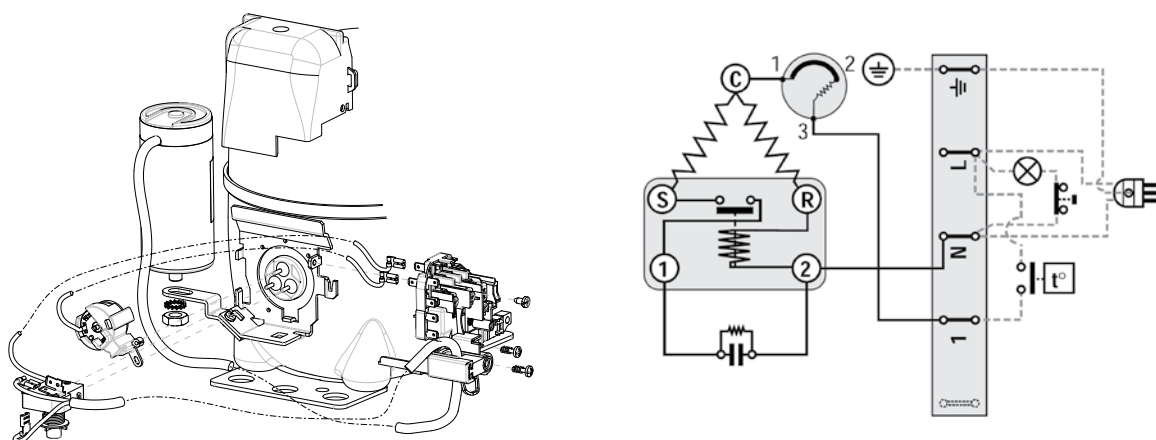
SM04 - EMT/NE SERIES CSIR American Version



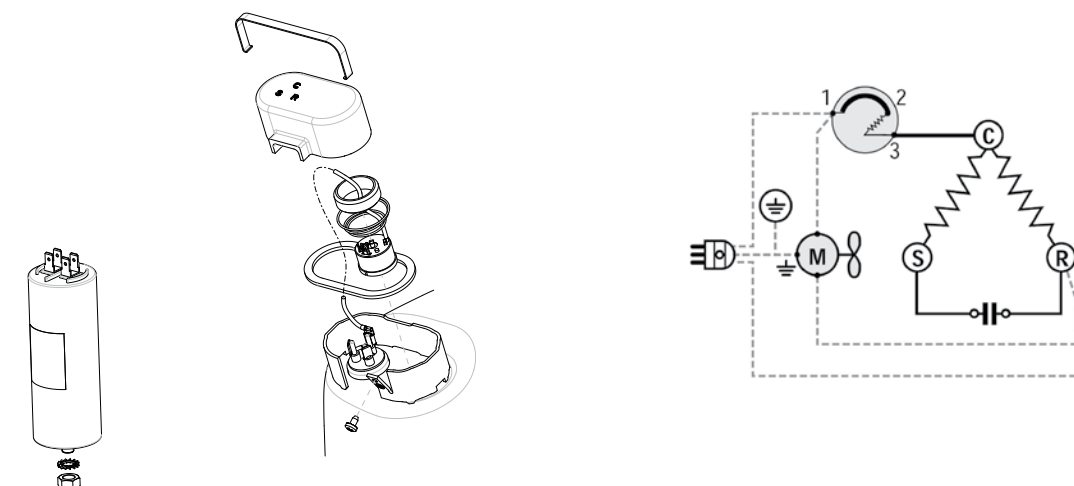
SM14 - NJ CSIR Box



SM05 - EMT/NE SERIES CSIR Terminal Board & Start Device



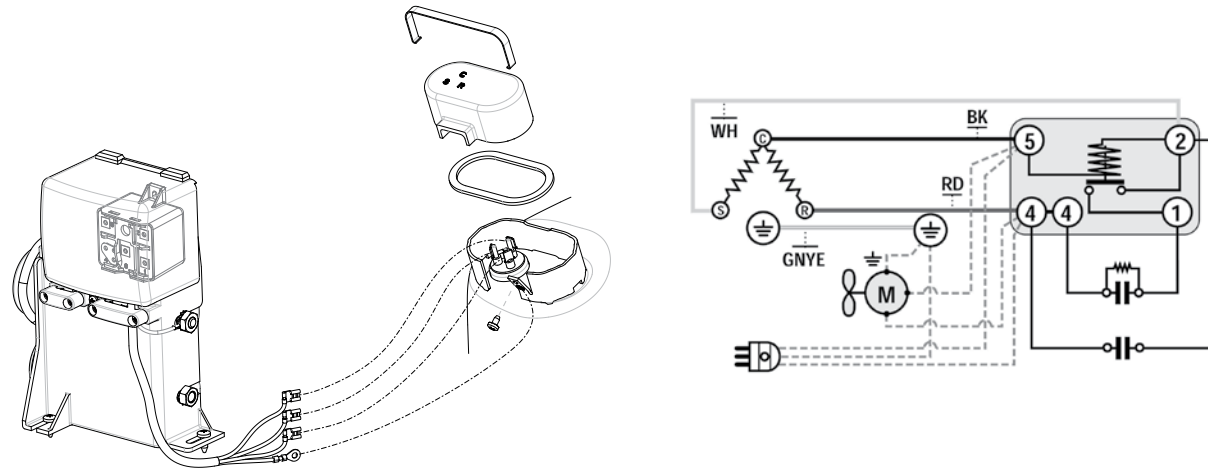
SM15 - NJ PSC



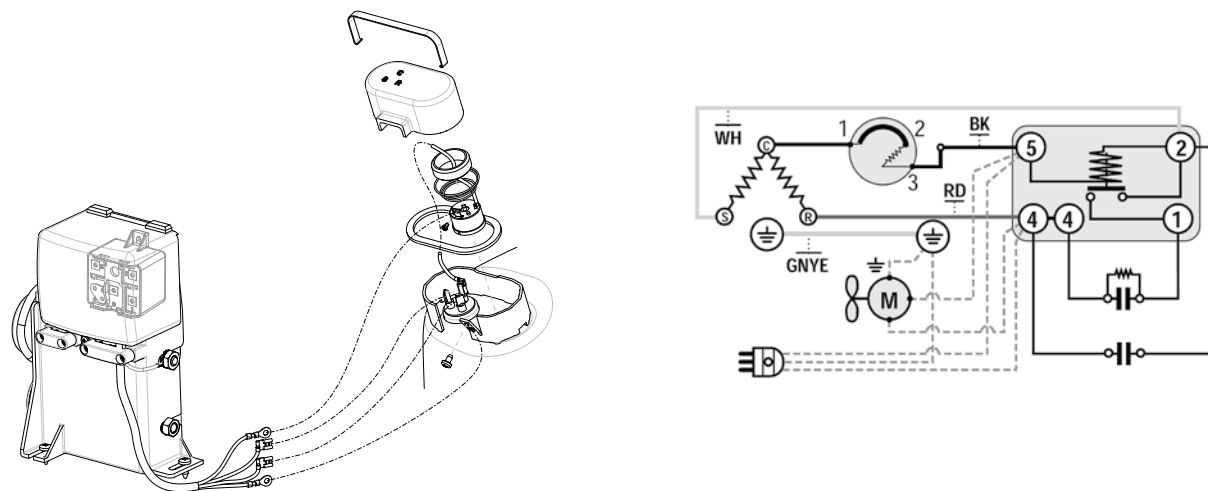
External Views & Wiring Diagrams

WIRING DIAGRAMS

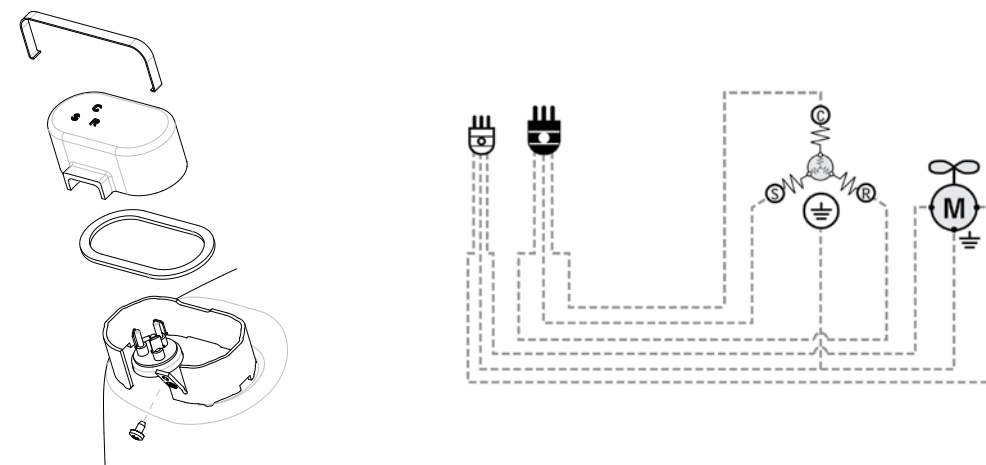
SM16 - NJ SERIES CSR Box (Internal Overload Protector)



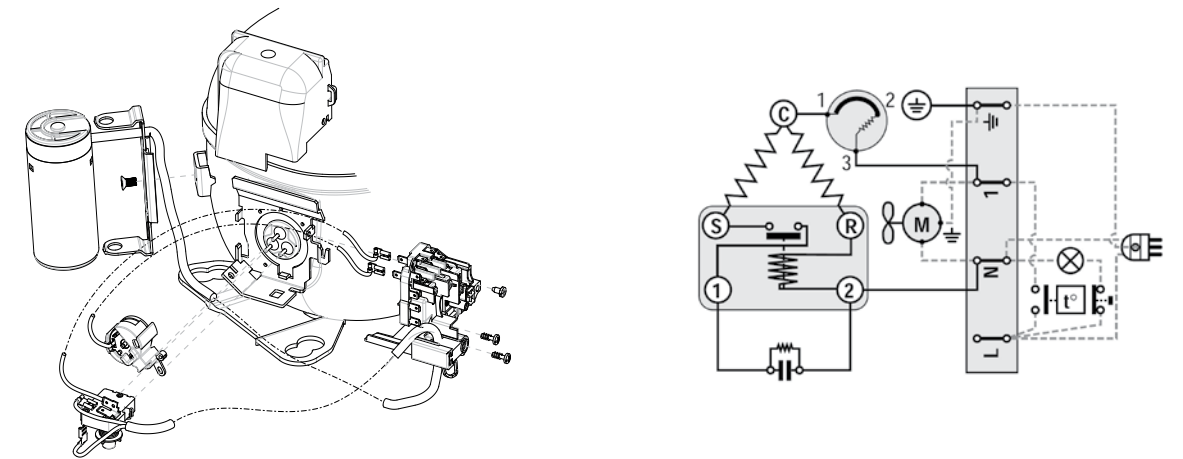
SM17 - NJ CSR Box (External Overload Protector)



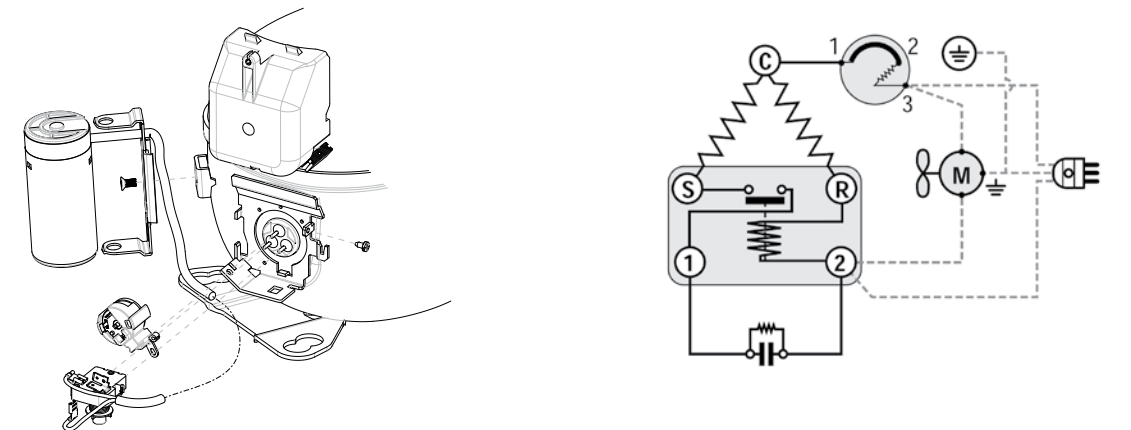
SM18 - NJ SERIES 3-Phase (Internal Overload Protector)



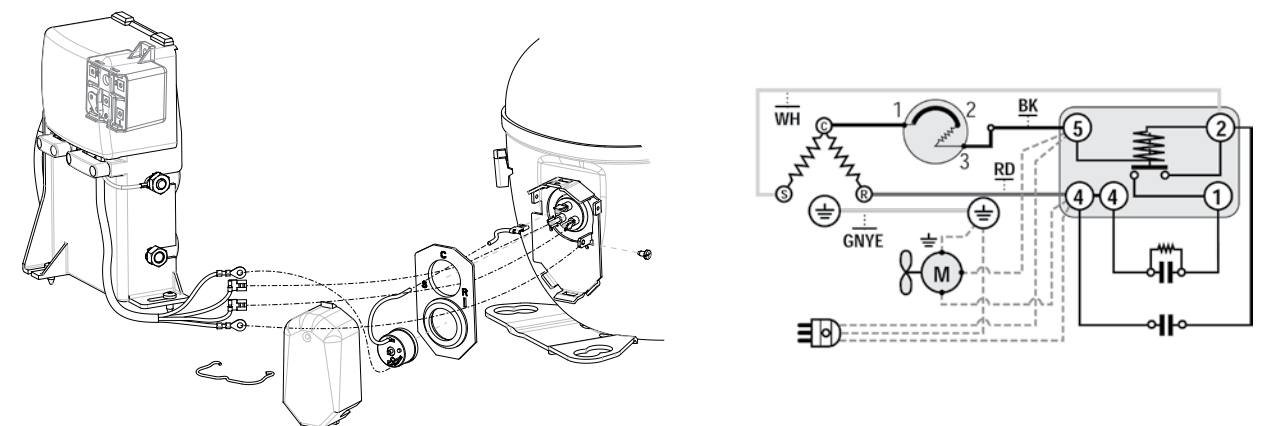
SM19 - NT SERIES CSIR Terminal Board



SM20 - NT SERIES CSIR – American Version



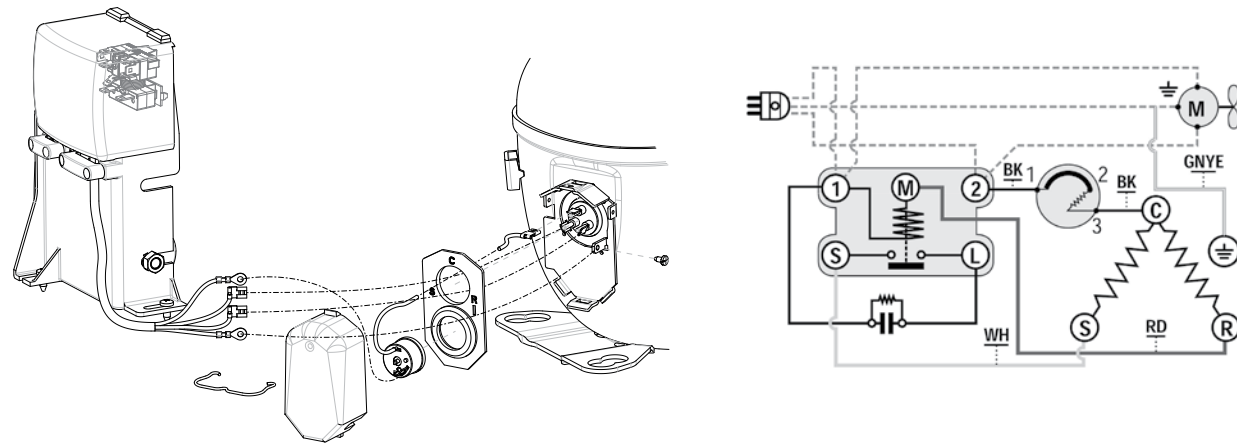
SM21 - NT SERIES CSR Box



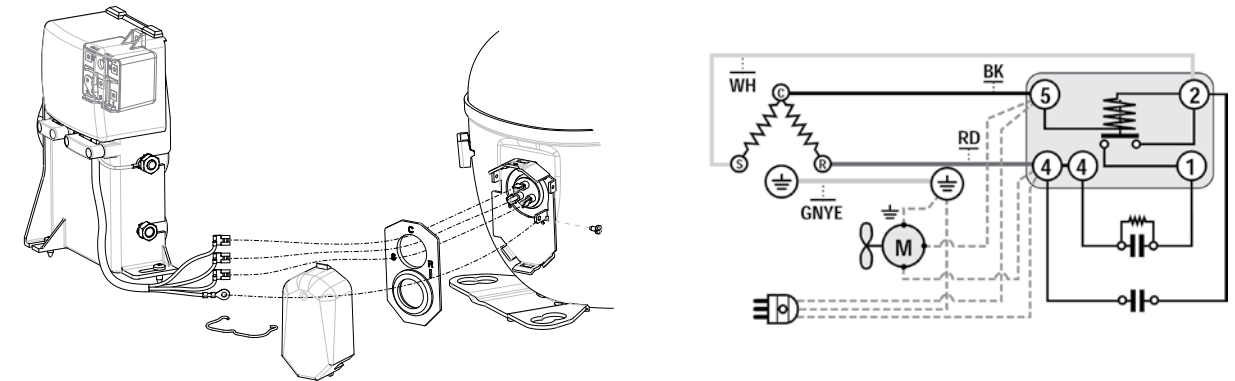
External Views & Wiring Diagrams

WIRING DIAGRAMS

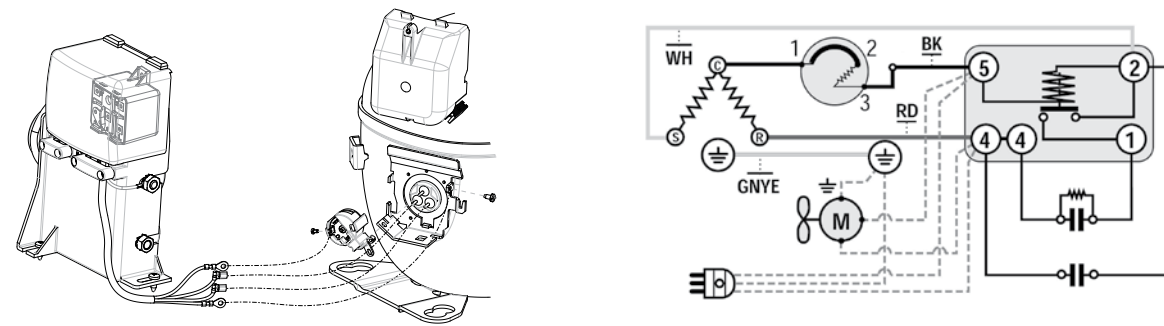
SM22 - NT SERIES CSIR Box



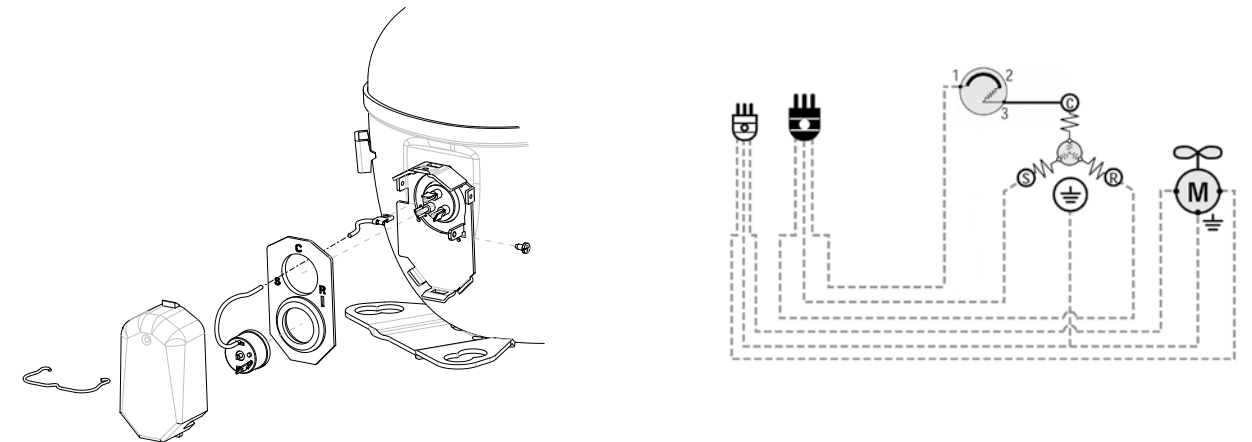
SM26 - NT SERIES CSR Box (Internal Overload Protector)

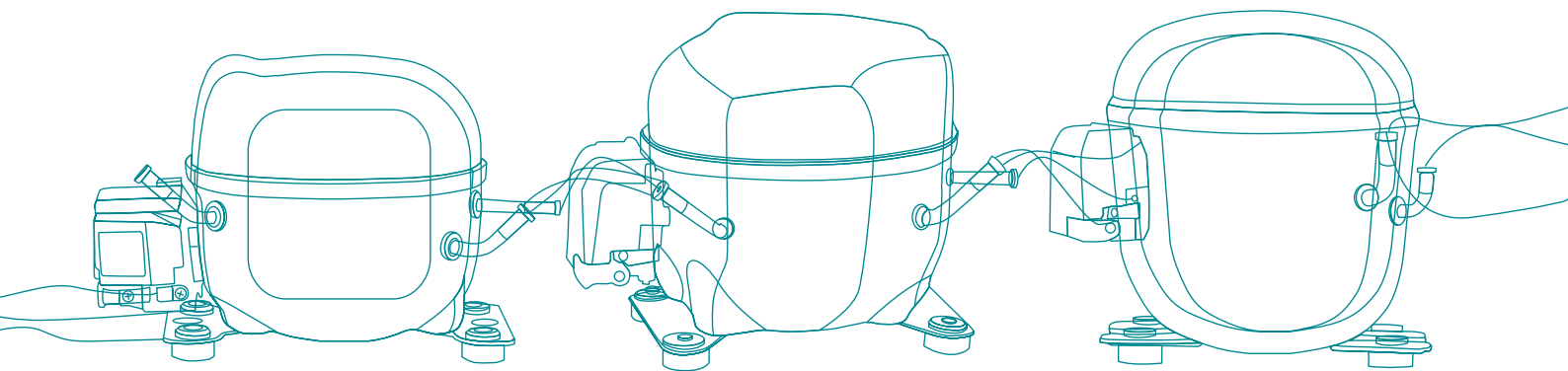


SM23 - NT SERIES CSR Box



SM27 - NT SERIES 3-Phase (Internal + External Overload Protector)





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CHANGE ON.





GLOBAL PRESENCE

CONTACT US:

marketing.europe@embraco.com

SALES OFFICE:

Via Pietro Andriano, 12
10020 – Riva presso Chieri (TO) - Italy