

COMPRESSORS LINE

Light Catalogue 220-240V/50Hz



embraco
Nidec

refrigerationclub.com



01

ABOUT NIDEC GLOBAL APPLIANCE



A global partner for home and commercial appliances industries

With over 15,000 employees across 9 countries, Nidec Global Appliance manufactures and commercializes products for home and commercial applications, including refrigeration solutions, motors for washing machines, dryers and dishwashers, as well as components for heating, ventilation and air-conditioning systems (HVAC). The division is part of Nidec Corporation, a global leader in motors and components for a wide variety of industries, with headquarters in Japan.

The business division manufactures and commercializes **Embraco's cooling systems and compressors for a variety of refrigeration equipment.**



Your **global partner** in refrigeration since 1971



Home Appliances

Products for residential freezers, refrigerators and mini-fridges.

Commercial Appliances

Compressors and cooling solutions for commercial applications, such as bottle coolers, chest freezers, reach-ins, ice machines, medical refrigerators etc.

Aftermarket

Parts distribution, replacement and retail focused on retail owners, installers and contractors.

Since 1971, EMBRACO provides cooling solutions for home and commercial applications attending customers' most challenging demands. The portfolio brand has been counting on a broad, efficient and competitive portfolio for food service, food retail, merchandisers and special applications. A pioneer in fostering the early development of variable speed and the use of natural refrigerants in cooling solutions, Embraco continues to deliver innovation that exceeds the market's most challenging demands, anticipating trends.



DIGITAL **TOOLS**



embraco
toolboxapp



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

FIND INSIDE:

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



PSS

PRODUCT SOFTWARE SELECTOR

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

Access: products.embraco.com



REFRIGERATION CLUB

Exclusive content for refrigeration professionals in a global channel. Stay up to date and join us at: www.refrigerationclub.com

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OUR PRODUCTS

Compressor families and their main applications:

**FIXED SPEED
COMPRESSOR**



EM: Bottle coolers, ice cream freezers, household replacement, water coolers and vending machines Up to 1/2 HP.



EG: Household replacement and light commercial applications. Horizontal freezers, Reach ins, Vending machines. Up to 1/3+ HP



F: light commercial applications. Horizontal freezers, Reach ins, Vending machines. Up to 1/2 HP



EH: Professional kitchens, Bottle coolers, Under counters, Professional Reach Ins. 1/2 HP to 3/4 HP.



NE: Frozen food islands, Professional kitchen upright Coolers and Freezers, display cases, Ultra low temperature freezers. 1/2 to 1 HP.



NJ: Air curtain reach ins, Ice machines, Cold rooms, blast chillers. 1 to 2 HP.



NT: Professional kitchens upright coolers and freezers, Air curtain reach ins, beer dispensers, Ice machines, Cold Room, Ultra low temperature freezers. 3/4 to 1 1/2 HP

**VARIABLE SPEED
COMPRESSORS**



VEM: Refrigerators and Freezers, Wine cooler, Beverage coolers, Chest freezer, Medical cooler. Up to 1/4 Hp.



VEG: Refrigerators and Freezers, Wine cooler, Beverage coolers, Chest freezer, Medical cooler. Up to 1/3+ Hp.



VES: Refrigerators and Freezers, Wine cooler, Beverage coolers, Chest freezer, Medical cooler. Up to 1/3+ Hp.



FMX: Refrigerators and Freezers, Wine cooler, Beverage coolers, Chest freezer, Medical cooler. Up to 1/4 Hp.



VNE: Reach Ins, Medical and General Professional Kitchens. 1/2 to 1 HP.



FMF: Upright reach ins, Beer dispenser, Frozen food Islands, Ultra low temperature freezers. Up to 1 Hp



NOMENCLATURE

BRAZIL LINE

EM

EMIS70HHR

COMPRESSOR FAMILY
EM

PRODUCT GENERATION

- Standard Efficiency
- I - 1ª Generation
- T - 2ª Generation
- U - 3ª Generation
- Y - 4ª Generation
- Z - 5ª Generation
- X - 6ª Generation

MECHANICAL KIT

- S - Standard mechanical kit
- Not standard

COMPRESSOR CAPACITY

In Btu/h – 60Hz – ASHRAE
Checkpoint divided by 10

REFRIGERANT CODE

- Blends
- C - R600a
- H - R134a
- U - R290
- L - R1234yf

EFFICIENCY LEVEL

- N** - Standard efficiency (LBP)
- J** - Intermediate efficiency (LBP)
- E** - Efficiency improved 1ª generation (LBP)
- S** - Efficiency improved 2ª generation (LBP)
- H** - Standard efficiency (L/M/HBP)
- D** - Standard efficiency (HBP)
- B** - Standard efficiency (M/HBP)
- L** - Efficiency improved 2ª generation (LBP)

ELECTRICAL COMPONENT

- | | |
|---|-----|
| P - PTC + cap. func. (optional) | LST |
| R Relay | |
| C - PTC + cap. func. (mandatory) | |

- | | |
|---|-----|
| X - Relay + cap. part. (mandatory) | HST |
|---|-----|

F

FFUS130HAX

COMPRESSOR FAMILY
F/EG

ELECTRICAL SYSTEM

- F** - Relay/Overload protector
Start capacitor (optional)

PRODUCT GENERATION

- Standard efficiency
- I** - Improved efficiency
1st generation
- U** - Improved efficiency
2nd generation (for
commercial refrigeration)

STANDARD PLATFORM

COMPRESSOR CAPACITY

Approximate capacity in Btu/h – 60 Hz
ASHRAE - Checkpoint divided by 10
(for compressor FG, FFU and FFC)

REFRIGERANT CODE

- H - R134a
- U - R290
- L - R1234yf

APPLICATION

- A - L/MBP
- B - L/M/HBP

STARTING TORQUE

- K** - LST (Low starting torque)
- X** - HST (High starting torque)

NOMENCLATURE

BRAZIL VARIABLE SPEED LINE

VEGT8HB

TECNOLOGY
VARIABLE
SPEED
COMPRESSORS

PRODUCT FAMILY
VEG/VEM

PRODUCT GENERATION
Y - 1st Generation
T - 2nd Generation
Z - 3rd Generation
X - 4th Generation
C - 5th Generation
D - 6th Generation

DISPLACEMENT
cm³

REFRIGERANT CODE
H - R134a
C - R600a
U - R200
L - 1234yf

EVAPORATION RANGE
B - Extended evaporation range until 23 F (L/MBP)
[] - Standard evaporation range

CHINA LINE EM

EMY3130Z

COMPRESSOR FAMILY
EM/EH

PRODUCT GENERATION
□ - 1st Generation
K - 2nd Generation
U - 3rd Generation
X - 4th Generation
D - Next Generation

APPLICATION CODE
1. LBP - LST
2. LBP - HST
3. L-MBP - LST
4. L-MBP - HST
5. M-HBP - LST
6. M-HBP - HST
9. M-HBP - HST

CAPACITY
The first digit is the number of zeros that you must attach to the last two digits to obtain the capacity (aprox.) in kcal/h in 50 Hz.
Ex.: 144 = 440 kcal/h em 50 Hz.

REFRIGERANT CODE
U R290
Z R134a
E R22/R422D
GK R404A
Y R600a

EUROPE LINE

NE / NT / NJ

NTU6224ZV

COMPRESSOR FAMILY

NE / NT / NJ

PRODUCT GENERATION

- - 1ª Generation
- K - 2ª Generation
- U - 3ª Generation
- X - 4ª Generation
- D - Next Generation

APPLICATION CODE

1. LBP - LST
2. LBP - HST
3. L-MBP - LST
4. L-MBP - HST
5. M-HBP - LST
6. M-HBP - HST
9. M-HBP - HST

CAPACITY

The first digit is the number of zeros that you must attach to the last two digits to obtain the capacity (aprox.) in kcal/h in 50 Hz.

Ex.: 144 = 440 kcal/h em 50 Hz.

REFRIGERANT CODE

- U R290
- Z R134a
- E R22/R422D
- GK R404A
- Y R600a

IPR VALVE - AVAILABLE FOR SOME MODELS

Available for some models

EUROPE VARIABLE SPEED LINE

VNEU217U

TECHNOLOGY

VARIABLE SPEED COMPRESSORS

COMPRESSOR FAMILY

VNE

PRODUCT GENERATION

- K - 1ª Generation
- U - 2ª Generation

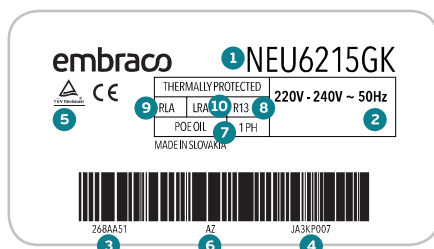
DISPLACEMENT

cm³

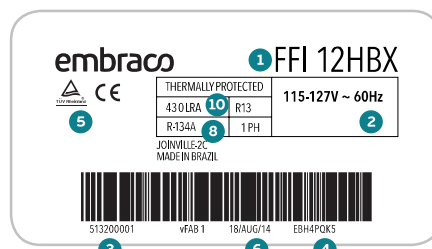
REFRIGERANT CODE

- H - R134a
- C - R600a
- U - R290
- L - 1234yf

NE / NT / NJ



EM / EG / F / VEM / VEG / VNE



LEGENDA

- | | |
|-----------------------------|--|
| 1 Compressor model | 6 Production Date |
| 2 Voltage | 7 Oil Type and Quantity |
| 3 SKU code (BOM) | 8 Refrigerant Code |
| 4 Series number | 9 Annual Consumption (nominal current, when applicable) |
| 5 Institute approval | 10 Locked Rotor current (LRA, when applicable) |

TECHNICAL INFORMATION

MOTOR TORQUE

LST	LOW STARTING TORQUE Compressor with RSIR-RSCR-PSC electrical motor for systems with capillary tube and with equalized pressures at start up.
HST	HIGH STARTING TORQUE Compressor with CSIR-CSR and 3ph electrical motor for systems with equalized or not equalized pressures at start up.

APPLICATIONS

		EVAPORATION TEMPERATURE °C	APPLICATIONS
<i>LBP</i>	LOW BACK PRESSURE	Between -35 and -10	household Refrigerators, frozen food islands, ice cream freezers
<i>MBP</i>	MEDIUM BACK PRESSURE	Between -15 and 0	Displays cases, reach in coolers, bottle coolers
<i>HBP</i>	HIGH BACK PRESSURE	Between 0 and 15	Refrigerated wine houses, Water coolers, air dehumidifiers

TEST CONDITIONS

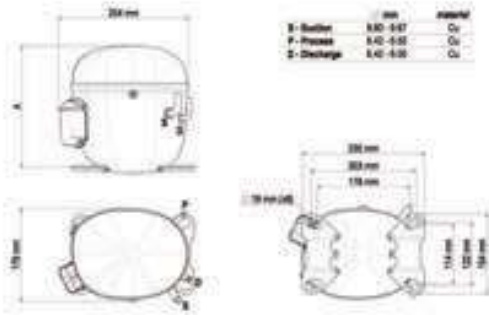
TEST CONDITIONS	APPLICATIONS	EVAPORATION TEMPERATURE °C / °F	CONDENSING TEMPERATURE °C / °F	GAS RETURN TEMPERATURE °C / °F	SUBCOOLING °C	AMBIENT TEMPERATURE °C / °F
<i>ASHRAE</i>	LBP	-23.3 / 10	54.4 / 130	32.2 / 90	22.2	32.2 / 90
	M/HBP	7.2 / 45	54.4 / 130	35 / 95	8.3	35 / 95
<i>ARI</i>	LBP	-23.3 / -9.94	48.9 / 120.02	4.4 / 39.92	0	35 / 95
	MBP	-6.7 / 19.94	48.9 / 120.02	4.4 / 39.92	0	35 / 95
	HBP	7.2 / 44.96	54.4 / 129.92	18.3 / 64.94	8.3	35 / 95
<i>EN12900</i>	LBP	-35	40	20	40	35
	MBP	-10	45	20	45	35
	HBP	5	50	20	50	35

COOLING TYPE

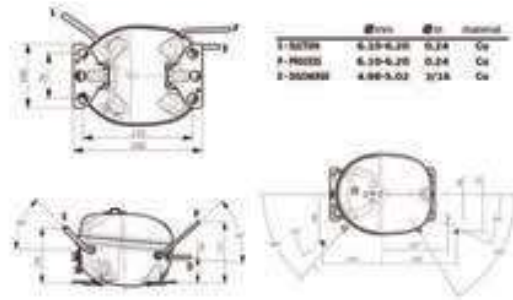
<i>STATIC</i>	Compressor approved for static cooling not requiring a fan motor on the condenser side.
<i>FAN</i>	Compressor approved for fan cooling requiring forced cooling with a fan motor on the condenser side.
<i>STATIC/FAN (S/F)</i>	Compressor approved for static and fan cooling which may or may not apply a fan motor on the condenser side.

EXTERNAL VIEWS

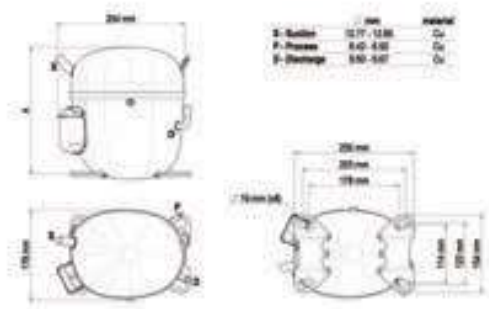
DWG17 - NT SERIES



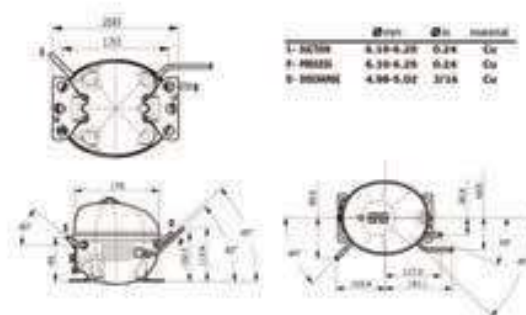
DWG22 - VES SERIES



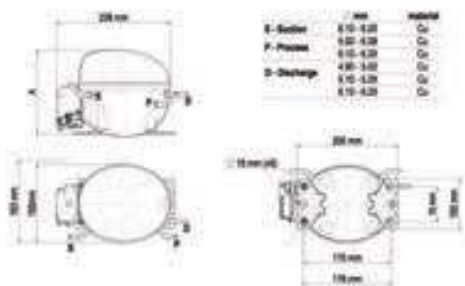
DWG19 - NTU SERIES



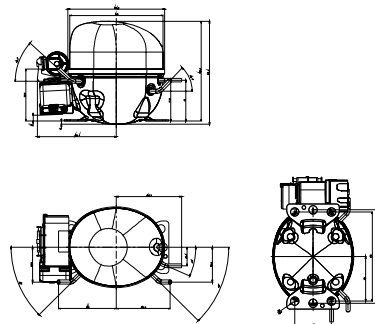
DWG23 - VEM SERIES



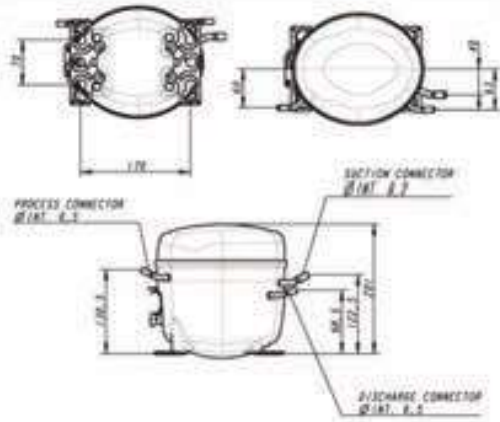
DWG01 - EM Series European Base Plate



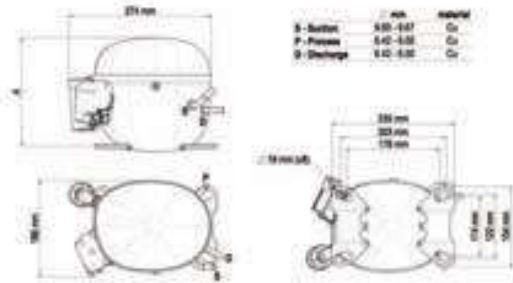
DWG - EH SERIES



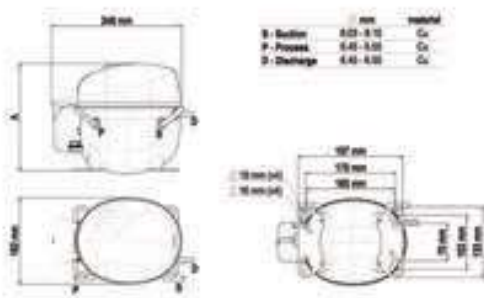
DWG09 - EG / F / VEG SERIES



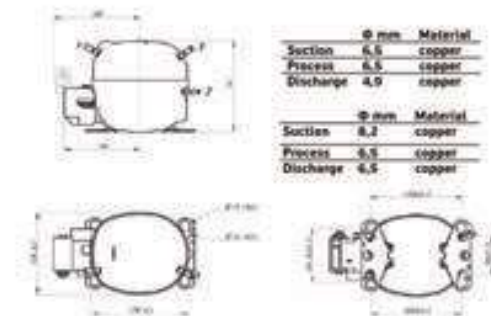
DWG15 - NT SERIES



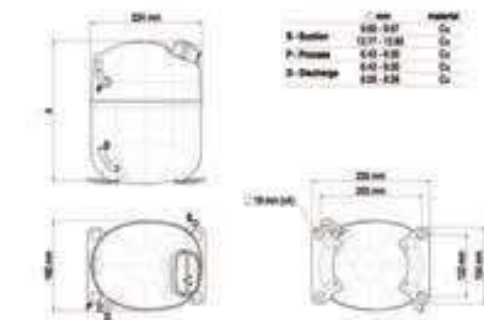
DWG04 - NE / VNE SERIES Universal Base Plate



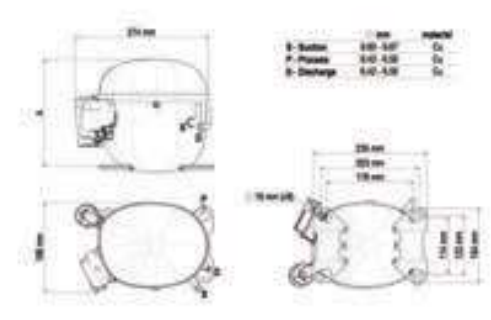
DWG10 - EM SERIES Universal Base Plate



DWG14 - NJ SERIES



DWG16 - NT SERIES



COMPRESSORS CATALOGUE

220V 50 Hz

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220V 50 Hz R134a LBP												
Model	Origin	Refrigerant	Displacement	Voltage	Envelope	Torque	Motor	LRA	Test Condition	Frequency	-40	-35
EM1530HHR	BR	R134a	3	220-240 V 50-60 Hz 1 ~	L/M/HBP	LST	RSIR	9	ASHRAELBP32	50 Hz		27
EM1E40HER	BR	R134a	3,4	220-240 V 50-60 Hz 1 ~	L/MBP	LST	RSIR/CSIR	8,6	ASHRAELBP32	50 Hz		39
EM45HHR	BR	R134a	3,77	220 V 50 Hz 1 ~	L/M/HBP	LST	RSIR/CSIR	9,5	ASHRAELBP32	50 Hz		48
EM45HNR	BR	R134a	3,77	220 V 50-60 Hz 1 ~	L/MBP	LST	RSIR/CSIR	9	ASHRAELBP32	50 Hz		41
EM155HER	BR	R134a	4,6	220-240 V 50 Hz 1 ~	LBP	LST	RSIR/CSIR	10,4	ASHRAELBP32	50 Hz		57
EMT55HLC	CN	R134a	5,19	220-240 V 50 Hz 1 ~	LBP	LST	RSCR	4	ASHRAELBP32	50 Hz		69
EMY560HEP	BR	R134a	5,19	220-240 V 50 Hz 1 ~	LBP	LST	RSIR/RSCR	5,8	ASHRAELBP32	50 Hz		66
EM65HNR	BR	R134a	5,54	220 V 50 Hz 1 ~	L/MBP	LST	RSIR/CSIR	12,5	ASHRAELBP32	50 Hz		
GMU70HLC	BR	R134a	5,96	220 V 50 Hz 1 ~	LBP	LST	RSCR	7,65	ASHRAELBP32	50 Hz		64
EGAS80HLR	BR	R134a	6,36	220-240 V 50-60 Hz 1 ~	LBP	LST	RSIR/CSIR	14,5	ASHRAELBP32	50 Hz		77
FF175HAK	BR	R134a	6,76	220-240 V 50-60 Hz 1 ~	L/MBP	LST	RSIR/CSIR	14	ASHRAELBP32	50 Hz		88
FFUS80HAK	BR	R134a	6,76	220-240 V 50-60 Hz 1 ~	L/MBP	LST	RSIR/CSIR	14,5	ASHRAELBP32	50 Hz		
FF75HBK	BR	R134a	6,92	220 V 50-60 Hz 1 ~	L/M/HBP	LST	RSIR/CSIR	16,7	ASHRAELBP32	50 Hz		70
NEK2116Z	SK	R134a	7,37	220-240 V 50 Hz 1 ~	LBP	HST	CSIR	10	ARI540	50 Hz		
FF185HAK	BR	R134a	7,15	220-240 V 50-60 Hz 1 ~	L/MBP	LST	RSIR/CSIR	16	ASHRAELBP32	50 Hz		93
EGAS90HLR	BR	R134a	7,15	220-240 V 50-60 Hz 1 ~	LBP	LST	RSIR/CSIR	14,3	ASHRAELBP32	50 Hz		77
EGAS100HLR	BR	R134a	7,95	220-240 V 50-60 Hz 1 ~	LBP	LST	RSIR/CSIR	17,55	ASHRAELBP32	50 Hz		106
EGZ5100HLC	BR	R134a	7,95	220-240 V 50-60 Hz 1 ~	LBP	LST	RSCR	8,85	ASHRAELBP32	50 Hz		115
FF85HBK	BR	R134a	7,95	220-240 V 50 Hz 1 ~	L/M/HBP	LST	RSIR/CSIR	18,2	ASHRAELBP32	50 Hz		82
FF85HAK	BR	R134a	7,95	220-240 V 50 Hz 1 ~	L/M/HBP	LST	RSIR/CSIR	18,2	ASHRAELBP32	50 Hz		103
FFUS100HAK	BR	R134a	7,95	220-240 V 50-60 Hz 1 ~	L/MBP	LST	RSIR/CSIR	17,55	ASHRAELBP32	50 Hz		
EMY75HLC	CN	R134a	8,35	200-230 V / 50 Hz	LBP	LST	RSCR	7,8	ASHRAELBP32	50 Hz		97
NEK1118Z	SK	R134a	8,39	220-240 V 50 Hz 1 ~	LBP	LST	RSIR/RSCR	6,9	ASHRAELBP32	50 Hz		
FF110HAK	BR	R134a	9,04	220-230 V 50-60 Hz 1 ~	L/MBP	LST	RSIR/CSIR	17,5	ASHRAELBP32	50 Hz		105
NE2121Z	SK	R134a	9,26	200-220 V 50 Hz / 230 V 60 Hz 1 ~	LBP	HST	CSIR	12,6	ASHRAELBP32	50 Hz		
NE2121Z	SK	R134a	9,26	220-240 V 50 Hz 1 ~	LBP	HST	CSIR	12,6	ASHRAELBP32	50 Hz		
EGU110HLC	BR	R134a	9,5	220-240 V 50 Hz 1 ~	LBP	LST	RSCR	9,4	ASHRAELBP32	50 Hz		121
EGU130HLR	BR	R134a	10,61	220-240 V 50 Hz 1 ~	LBP	LST	CSIR	17,45	ASHRAELBP32	50 Hz		141
FFU130HAK	BR	R134a	10,61	220-240 V 50 Hz 1 ~	L/MBP	LST/HST	CSIR	17,5	ASHRAELBP32	50 Hz		
EMY3130Z	CN	R134a	11,14	220-240 V 50 Hz 1 ~	L/MBP	LST	CSIR	16,04	ASHRAELBP32	50 Hz		154
NE2130Z	SK	R134a	12,11	220-240 V 50 Hz 1 ~	LBP	HST	CSIR	32	ASHRAELBP32	50 Hz		
FFU160HAK	BR	R134a	12,92	220-240 V 50 Hz 1 ~	L/MBP	LST/HST	CSIR	17,7	ASHRAELBP32	50 Hz		
NE2134Z	SK	R134a	14,28	220-240 V 50 Hz 1 ~	LBP	HST	CSIR	17	ASHRAELBP32	50 Hz		
NEK2140Z	SK	R404A	16,8	220-240 V 50 Hz 1 ~	LBP	HST	CSIR	17	ASHRAELBP32	50 Hz		

220V 50 Hz R134a M/HBP												
Model	Origin	Refrigerant	Displacement	Voltage	Envelope	Torque	Motor	LRA	Test Condition	Frequency	-20	-15
EM20HHR	BR	R134a	2,27	220-240 V 50-60 Hz 1 ~	L/M/HBP	LST	RSIR/CSIR	6,5	ASHRAELBP32	50 Hz	58	79
EM30HHR	BR	R134a	3	220-240 V 50-60 Hz 1 ~	L/M/HBP	LST	RSIR/CSIR	8,5	ASHRAELBP32	50 Hz	96	127
EM1530HHR	BR	R134a	3	220 V 50-60 Hz 1 ~	L/M/HBP	LST	RSIR	8,8	ASHRAELBP32	50 Hz	95	126
EM55HHR	BR	R134a	4,6	220-240 V 50-60 Hz 1 ~	HBP	LST	RSIR	9,31	ASHRAELBP32	50 Hz		
EM65HHR	BR	R134a	5,54	220 V 50-60 Hz 1 ~	M/HBP	LST	RSIR/CSIR	14,3	ASHRAELBP32	50 Hz		
FF75HBK	BR	R134a	6,92	220-240 V 50-60 Hz 1 ~	L/M/HBP	LST	RSIR/CSIR	15,8	ASHRAELBP32	50 Hz	201	264
NEK6160Z	SK	R134a	7,28	220-240 V 50 Hz 1 ~	HBP	HST	CSIR	11,5	ASHRAELBP46	50 Hz		258
NEK6170Z	SK	R134a	8,39	220-240 V 50 Hz 1 ~	HBP	HST	CSIR	16,5	ASHRAELBP46	50 Hz		
EMT6187Z	CN	R134a	9,5	220-240 V 50 Hz 1 ~	HBP	HST	CSIR	16,5	ASHRAELBP46	50 Hz		356
NEU6187Z	SK	R134a	9,99	200-240 V 50 Hz / 230 V 60 Hz 1 ~	HBP	HST	CSIR	13	ASHRAELBP46	50 Hz		380
FF112HBK	BR	R134a	11,14	220-240 V 50 Hz 1 ~	L/M/HBP	LST	RSIR/CSIR	20	ASHRAELBP32	50 Hz	381	496
NEU6210Z	SK	R134a	12,11	220-240 V 50 Hz 1 ~	HBP	HST	CSCR	18,5	ASHRAELBP46	50 Hz		
NEU6212Z	SK	R134a	14,28	220-240 V 50 Hz 1 ~	HBP	HST	CSIR	20	ASHRAELBP46	50 Hz		
NEU6214Z	SK	R134a	16,8	220-240 V 50 Hz 1 ~	HBP	HST	CSIR	22	ASHRAELBP46	50 Hz		
NT6217Z	SK	R134a	20,44	220-240 V 50 Hz 1 ~	HBP	HST	CSCR	25	ASHRAELBP46	50 Hz		
NT6220Z	SK	R134a	22,37	200-240 V 50 Hz / 230 V 60 Hz 1 ~	HBP	HST	CSIR	29,5	ASHRAELBP46	50 Hz		
NJ6226Z	SK	R134a	34,38	220-240 V 50 Hz 1 ~	HBP	HST	CSCR	31	ASHRAELBP46	50 Hz		



-30	-25	Cooling Capacity (°C) (Evaporating -23.3°C / Condensing 54.4°C Capacity (W) Efficiency (W/W)				-20	-15	-10	-5	Lubricant		Type/Viscosity	Expansion Device	Wiring Diagram
		Oil Charge	Type/Viscosity											
46	68	79	0.93	95	126	163	207	160	ESTER / ISO22	Capillary Tube	SM07			
60	85	95	1.18	116	152	194	242	180	ESTER / ISO10	Capillary Tube	SM01/SM02			
79	113	126	1.23	152	197	249	309	160	ESTER / ISO22	Capillary Tube	SM02			
64	87	97	0.97	115	150	197	257	200	ESTER / ISO22	Capillary Tube	SM01/SM02			
82	113	125	1.23	150	196	252		160	ESTER / ISO22	Capillary Tube	SM01/SM02			
102	138	152	1.41	180	232	294		180	ESTER / ISO22	Capillary Tube	SM05			
95	134	144	1.35	182	238	305		160	ESTER / ISO10	Capillary Tube	SM00			
108	138	152	1.15	180	235	301	379	160	ESTER / ISO22	Capillary Tube	SM01/SM02			
99	145	165	1.4	202	270	347		180	ESTER / ISO10	Capillary Tube	SM01			
123	175	195	1.53	235	306	390		230	ESTER / ISO10	Capillary Tube	SM03/SM04			
129	179	190	1.29	238	306	383	470	280	ESTER / ISO22	Capillary Tube	SM03			
134	181	185	1.29	239	310	395	496	230	ESTER / ISO10	Capillary Tube	SM08			
106	149	149	1	202	266	341	431	280	ESTER / ISO22	Capillary Tube	SM08			
	127	171	0.91	180	247	328	422	340	ESTER / ISO22	Capillary Tube or Expansion Valve	SM13			
136	188	205	1.35	249	322	407	508	280	ESTER / ISO22	Capillary Tube	SM03			
143	197	218	1.5	260	335	424		230	ESTER / ISO10	Capillary Tube	SM03/SM04			
162	225	250	1.52	298	383	483		230	ESTER / ISO10	Capillary Tube	SM04			
165	225	250	1.74	298	385	489		280	ESTER / ISO10	Capillary Tube	SM34			
119	168	194	1.11	230	306	398	506	280	ESTER / ISO22	Capillary Tube	SM08			
145	198	217	1.11	262	341	438	552	280	ESTER / ISO22	Capillary Tube	SM08			
167	225	249	1.45	296	382	484	608	350	ESTER / ISO10	Capillary Tube	SM08			
143	193	213	1.5	251	322	408		150	ESTER / ISO7	Capillary Tube	SM01			
	205	227	1.42	271	349	439	541	350	ESTER / ISO22	Capillary Tube	SM13			
153	218	249	1.3	300	398	509	634	280	ESTER / ISO22	Capillary Tube	SM03			
	229	254	1.28	304	394	499	618	350	ESTER / ISO22	Capillary Tube or Expansion Valve	SM13			
	227	251	1.23	302	392	498	618	350	ESTER / ISO22	Capillary Tube or Expansion Valve	SM13			
181	249	274	1.59	329	426	545		230	ESTER / ISO10	Capillary Tube	SM34			
210	288	313	1.5	378	489	626		230	ESTER / ISO10	Capillary Tube	SM09			
201	278	309	1.38	368	475	604	761	280	ESTER / ISO10	Capillary Tube or Expansion Valve	SM08			
196	278	320	1.5	387	513	644	771	210	ESTER / ISO22	Capillary Tube	SM07			
	314	346	1.33	411	526	662	817	350	ESTER / ISO22	Capillary Tube or Expansion Valve	SM13			
266	355	390	1.45	458	581	732	914	280	ESTER / ISO22	Capillary Tube or Expansion Valve	SM08			
	329	364	1.24	433	559	707	880	350	ESTER / ISO22	Capillary Tube or Expansion Valve	SM13			
	447	495	1.18	593	770	981	1227	350	ESTER / ISO22	Capillary Tube or Expansion Valve	SM13			

-10	-5	0	Cooling Capacity (°C) 5 Capacity (W) Efficiency (W/W)		10	15	Lubricant		Type/Viscosity	Expansion Device	Wiring Diagram
			7.2°C / Condensing 54.4°C Capacity (W) Efficiency (W/W)	Oil Charge							
104	135	170	246	2.51	260	315	160	ESTER / ISO22	Capillary Tube	SM02	
164	206	256	312	2.45	377	450	160	ESTER / ISO22	Capillary Tube	SM07	
163	207	259	319	2.6	390	471	160	ESTER / ISO22	Capillary Tube	SM01/SM02	
	326	399	485	2.68	584	694	160	ESTER / ISO22	Capillary Tube	SM01/SM02	
304	388	484	592	2.39	711	842	160	ESTER / ISO22	Capillary Tube	SM07	
340	429	534	657	2.23	798	959	280	ESTER / ISO22	Capillary Tube	SM08	
329	419	527	653	2.44	799		350	ESTER / ISO22	Capillary Tube or Expansion Valve	SM13	
	513	644	795	2.35	967		350	ESTER / ISO22	Capillary Tube or Expansion Valve	SM13	
453	567	702	860	2.52	1045		210	ESTER / ISO22	Capillary Tube or Expansion Valve	SM07	
485	613	764	938	2.5	1134		350	ESTER / ISO22	Capillary Tube or Expansion Valve	SM13	
631	790	968	1167	2.61	1390	1635	280	ESTER / ISO22	Capillary Tube	SM08	
	734	918	1132	2.57	1376		350	ESTER / ISO22	Capillary Tube or Expansion Valve	SM13	
	850	1061	1304	2.31	1577		350	ESTER / ISO22	Capillary Tube or Expansion Valve	SM13	
	992	1228	1496	2.16	1797		350	ESTER / ISO22	Capillary Tube or Expansion Valve	SM13	
	1121	1385	1698	2.43	2057		450	ESTER / ISO22	Capillary Tube or Expansion Valve	SM26	
	1212	1498	1843	2.37	2249		450	ESTER / ISO22	Capillary Tube or Expansion Valve	SM26	
	1751	2209	2711	2.41	3258		750	ESTER / ISO22	Capillary Tube or Expansion Valve	SM17	



220V 50 Hz													R290	LBP
Model	Origin	Refrigerant	Displacement	Voltage	Envelope	Torque	Motor	LRA	Test Condition	Frequency	-40	-35		
EMZU3111U	BR	R290	3	220-240 V 50-60 Hz 1 ~	L/MBP	LST	RSCR	5,8	ASHRAELBP32	50 Hz				
EMF50UER	BR	R290	3	220-240 V 50-60 Hz 1 ~	L/MBP	LST	RSIR/CSIR	8,7	ASHRAELBP32	50 Hz		67		
EM2X3113U	CN	R290	3,67	220-240 V 50 Hz 1 ~	L/MBP	LST	RSCR	12,4	ASHRAELBP32	50 Hz				
EMF70UER	BR	R290	4,08	220-240 V 50-60 Hz 1 ~	L/MBP	LST	RSIR/CSIR	9,4	ASHRAELBP32	50 Hz				
EM2X3117U	CN	R290	4,5	220-240 V 50 Hz 1 ~	L/MBP	LST	RSCR	15,3	ASHRAELBP32	50 Hz				
EM2X1121U	CN	R290	5,54	220-240 V 50 Hz 1 ~	LBP	LST	RSCR	8,4	ASHRAELBP32	50 Hz		137		
EM2X3121U	CN	R290	5,54	220-240 V 50 Hz 1 ~	L/MBP	LST	RSCR	15,6	ASHRAELBP32	50 Hz				
EM2X3121U	BR	R290	5,54	220-240 V 50-60 Hz 1 ~	L/MBP	LST	RSCR	7,8	ASHRAELBP32	50 Hz		156		
EMT2121U	CN	R290	5,56	220-240 V 50 Hz 1 ~	LLBP	LST	CSIR	7,7	ASHRAELBP32	50 Hz		147		
EMT2125U	CN	R290	5,96	220-240 V 50 Hz 1 ~	LBP	LST	CSIR	8,5	ASHRAELBP32	50 Hz		159		
EMTS2125U	CN	R290	5,96	220-240 V 50 Hz 1 ~	LBP	LST	CSIR	8,5	ASHRAELBP32	50 Hz		169		
EM2X1125U	CN	R290	6,03	220-240 V 50 Hz 1 ~	LBP	LST	RSCR	8,4	ASHRAELBP32	50 Hz		158		
EM2X3125U	CN	R290	6,03	220-240 V 50 Hz 1 ~	L/MBP	LST	RSCR	15,6	ASHRAELBP32	50 Hz				
EM2X3125U	BR	R290	6,09	220-240 V 50-60 Hz 1 ~	L/MBP	LST	RSCR	7,8	ASHRAELBP32	50 Hz				
FFU130UAX	BR	R290	6,76	220-240 V 50-60 Hz 1 ~	L/MBP	HST	CSIR	19	ASHRAELBP32	50 Hz		182		
EMX3134U	CN	R290	7,95	220-240 V 50 Hz 1 ~	L/MBP	LST	RSCR	10,5	ASHRAELBP32	50 Hz		235		
EMX3140U	CN	R290	9,5	220-240 V 50 Hz 1 ~	L/MBP	LST	RSIR	12,5	ASHRAELBP32	50 Hz		270		
EMTE2134U	CN	R290	9,5	220-240 V 50 Hz 1 ~	LLBP	HST	CSIR	14,9	ASHRAELBP32	50 Hz	175	234		
EHU2155U	CN	R290	12,21	220-240 V 50 Hz 1 ~	LBP	HST	CSIR	18,8	ASHRAELBP32	50 Hz	267	348		
EHU2155U	CN	R290	12,21	220-240 V 50 Hz 1 ~	LBP	HST	CSIR	18,4	ASHRAELBP32	50 Hz	263	350		
NEU2155U	SK	R290	13,54	220-240 V 50 Hz 1 ~	LBP	HST	CSCR	40	ASHRAELBP32	50 Hz				
NT2180U	SK	R290	22,37	220-240 V 50 Hz 1 ~	LBP	HST	CSCR	35	ASHRAELBP32	50 Hz				
NTX2211U	SK	R290	27,8	220-240 V 50 Hz 1 ~	LBP	HST	CSCR	33	ASHRAELBP32	50 Hz	597	797		

220V 50 Hz													R290	M/HBP
Model	Origin	Refrigerant	Displacement	Voltage	Envelope	Torque	Motor	LRA	Test Condition	Frequency	-20	-15		
EMX6144U	SK	R290	4,53	220-240 V 50-60 Hz 1 ~	MBP	HST	CSIR	9	ASHRAEHP46	50 Hz	221	274		
EMX6152U	SK	R290	5,19	220-240 V 50-60 Hz 1 ~	MBP	HST	CSIR	11	ASHRAEHP46	50 Hz	235	294		
EMX6165U	SK	R290	6,09	220-240 V 50-60 Hz 1 ~	MBP	HST	CSIR	11	ASHRAEHP46	50 Hz	285	354		
EMX6181U	SK	R290	6,92	220-240 V 50 Hz 1 ~	MBP	HST	CSIR	13	ASHRAEHP46	50 Hz	346	423		
EMTE6181U	CN	R290	7,55	220-240 V 50 Hz 1 ~	MBP	HST	CSIR	16,5	ASHRAEHP46	50 Hz	386			
EMX6210U	SK	R290	9,04	220-240 V 50 Hz 1 ~	MBP	HST	CSIR	16	ASHRAEHP46	50 Hz	446	553		
EHU6212U	CN	R290	10,61	220-240 V 50 Hz 1 ~	MBP	HST	CSIR	18,8	ASHRAEHP46	50 Hz	548	672		
EHU6214U	CN	R290	12,21	220-240 V 50 Hz 1 ~	MBP	HST	CSIR	22	ASHRAEHP46	50 Hz	623	757		
NEU6220U	SK	R290	16,8	220-240 V 50 Hz 1 ~	MBP	HST	CSCR	22	ASHRAEHP46	50 Hz	817	1016		
NTX6233U	SK	R290	27,8	220-240 V 50 Hz 1 ~	MBP	HST	CSCR	40	ASHRAEHP46	50 Hz	1346	1667		

220V 50 Hz													R404A	LBP
Model	Origin	Refrigerant	Displacement	Voltage	Envelope	Torque	Motor	LRA	Test Condition	Frequency	-40	-35		
EMT2117GK	BR	R404A	4,5	220-240 V 50 Hz 1 ~	LBP	HST	CSIR	-	ASHRAELBP32	50 Hz	81	124		
EMT2121GK	BR	R404A	5,19	220-240 V 50 Hz 1 ~	LBP	HST	CSIR	8,5	ASHRAELBP32	50 Hz	131	174		
EMT2125GK	BR	R404A	5,96	220-240 V 50 Hz 1 ~	LBP	HST	CSIR	9,8	ASHRAELBP32	50 Hz	142	194		
EMT2130GK	BR	R404A	6,76	220-240 V 50 Hz 1 ~	LBP	HST	CSIR	12,4	ASHRAELBP32	50 Hz	154	209		
NEK2134GK	SK	R404A	8,77	220-240 V 50 Hz 1 ~	LBP	HST	CSIR	37,5	ASHRAELBP32	50 Hz				
NEU2140GK	SK	R404A	8,77	220-240 V 50 Hz 1 ~	LBP	HST	CSIR	13,5	ASHRAELBP32	50 Hz				
NEU2140GK	SK	R404A	8,77	200-230 V 50 Hz / 208-230 V 60 Hz 1 ~	LBP	HST	CSIR	30	ASHRAELBP32	50 Hz				
NEK2150GK	SK	R404A	12,11	220-240 V 50 Hz 1 ~	LBP	HST	CSIR	44	ASHRAELBP32	50 Hz				
NEU2155GK	SK	R404A	12,11	220-240 V 50 Hz 1 ~	LBP	HST	CSIR	18	ASHRAELBP32	50 Hz				
NEU2169GK	SK	R404A	14,28	220-240 V 50 Hz 1 ~	LBP	HST	CSIR	22	ASHRAELBP32	50 Hz				
NT2169KV	SK	R404A	14,5	200-240 V / 50 Hz 230 V / 60 Hz	LBP	HST	CSIR	54,5	ASHRAELBP32	50 Hz				
NEU2178GK	SK	R404A	16,8	220-240 V 50 Hz 1 ~	LBP	HST	CSCR	21	ASHRAELBP32	50 Hz				
NT2178GK	SK	R404A	17,39	200-240 V / 50 Hz 230 V / 60 Hz	LBP	HST	CSCR	25	ASHRAELBP32	50 Hz	282	409		
NT2180KV	SK	R404A	20,44	220-240 V 50 Hz 1 ~	LBP	HST	CSCR	40	ASHRAELBP32	50 Hz				
NT2192GK	SK	R404A	22,37	220-240 V 50 Hz 1 ~	LBP	HST	CSIR	35	ASHRAELBP32	50 Hz				
NT2210GK	SK	R404A	26,21	220-240 V 50 Hz 1 ~	LBP	HST	CSCR	33	EN12900	50 Hz				
NT2212GK	SK	R404A	27,8	220-240 V 50 Hz 1 ~	LBP	HST	CSCR	45	ASHRAELBP32	50 Hz				
NJ2212GK	SK	R404A	34,38	220-240 V 50 Hz 1 ~	LBP	HST	CSCR	36	ASHRAELBP32	50 Hz				
EH_2140GK	CN	R404A			UNDER DEVELOPMENT									
EH_2140GK	CN	R404A			UNDER DEVELOPMENT									
EH_2150GK	CN	R404A			UNDER DEVELOPMENT									
EH_2150GK	CN	R404A			UNDER DEVELOPMENT									

220V 50 Hz													R404A	M/HBP
Model	Origin	Refrigerant	Displacement	Voltage	Envelope	Torque	Motor	LRA	Test Condition	Frequency	-20	-15		
EMT6144GK	BR	R404A	3,97	220-240 V 50 Hz 1 ~	MBP	HST	CSIR	7,7	ASHRAEHP46	50 Hz	228	286		
EMT6165GK	BR	R404A	5,19	220-240 V 50 Hz 1 ~	MBP	HST	CSIR	10,4	ASHRAEHP46	50 Hz	287	361		
EMT6152GK	BR	R404A	4,5	220-240 V 50 Hz 1 ~	MBP	HST	CSIR	8,5	ASHRAEHP46	50 Hz	255	321		
NEK6165GK	SK	R404A	6,2	220-240 V 50 Hz 1 ~	MBP	HST	CSIR	12,4	ASHRAEHP46	50 Hz	366	433		
NEK6181GK	SK	R404A	7,28	220-240 V 50 Hz 1 ~	MBP	HST	CSIR	26,5	ASHRAEHP46	50 Hz	384	463		
NEU6210GK	SK	R404A	7,28	220-240 V 50 Hz 1 ~	MBP	HST	CSIR	16	ASHRAEHP46	50 Hz				
NEU6212GK	SK	R404A	8,77	220-240 V 50 Hz 1 ~	MBP	HST	CSIR	19	ASHRAEHP46	50 Hz	466	595		
NEU6214GK	SK	R404A	9,99	200-230 V 50 Hz / 208-230 V 60 Hz 1 ~	MBP	HST	CSCR	26	ASHRAEHP46	50 Hz	552	690		
NEU6215GK	SK	R404A	12,11	220-240 V 50 Hz 1 ~	MBP	HST	CSCR	22	ASHRAEHP46	50 Hz	664	830		
NEK6217GK	SK	R404A	14,28	220-240 V 50 Hz 1 ~	MBP	HST	CSCR	21,5	ASHRAEHP46	50 Hz	733	910		
NT6220GK	SK	R404A	14,5	200-240 V 50 Hz / 230 V 60 Hz 1 ~	MBP	HST	CSIR	31	ASHRAEHP46	50 Hz	669	838		
NT6222GK	SK	R404A	17,39	200-220 V 50 Hz / 230 V 60 Hz 1 ~	MBP	HST	CSIR	30	ASHRAEHP46	50 Hz	758	992		
NT6224GK	SK	R404A	20,44	220-240 V 50 Hz 1 ~	MBP	HST	CSCR	29	ASHRAEHP46	50 Hz	952	1217		
NTU6234GKV	SK	R404A	23,74	220-240 V 50 Hz 1 ~	MBP	HST	CSCR	37,5	EN12900	50 Hz				
NJ9232GK	SK	R404A	26,11	220-240 V 50 Hz 1 ~	MBP	HST	CSCR	43	ASHRAEHP46	50 Hz				
NTU6238GKV	SK	R404A	26,2	220-240 V 50 Hz 1 ~	MBP	HST	CSR	37,5	EN12900	50 Hz				
NTU6240GKV	SK	R404A	27,8	220-240 V 50 Hz 1 ~	MBP	HST	CSCR	37,5	AR14	50 Hz				
NJ9238GK	SK	R404A	32,67	230 V 50 Hz 1 ~	MBP	HST	CSCR	43	ASHRAEHP46	50 Hz	1411	1827		



	Cooling Capacity (°C) (Evaporating -23,3°C / Condensing 54,4°C Capacity (W) Efficiency (W/W)						Lubricant		Type/Viscosity	Expansion Device	Wiring Diagram
	-30	-25	-20	-15	-10	-5	Oil Charge				
100	131	140	151	166	207	255	311	150	ESTER / ISO22	Capillary Tube	SM06
92	119	129	13	147	178	212	248	170	ALQUILB / ISO32	Capillary Tube	SM01/SM02
87	121	136	143	161	207	260	320	150	ESTER / ISO22	Capillary Tube	SM28
128	163	176	118	203	250	304	368	160	ALQUILB / ISO32	Capillary Tube	SM01/SM02
128	170	187	149	220	278	346	422	150	ESTER / ISO22	Capillary Tube	SM28
182	235	257	172	289	371	457	572	150	ESTER / ISO10	Capillary Tube	SM05
202	256	286	172	317	387	471	572	150	ESTER / ISO22	Capillary Tube	SM05
209	264	288	172	326	397	480	579	150	ESTER / ISO22	Capillary Tube	SM05
188	234	254	142	289	357	441	540	180	ESTER / ISO22	Capillary Tube	SM05
205	257	280	145	319	392	480	579	180	ESTER / ISO22	Capillary Tube	SM05
218	276	300	156	344	423	513	612	180	ESTER / ISO22	Capillary Tube	SM05
206	266	291	179	339	422	515	612	150	ESTER / ISO10	Capillary Tube	SM05
227	290	317	178	364	450	549	662	150	ESTER / ISO22	Capillary Tube	SM05
229	289	304	167	360	443	539	647	150	ESTER / ISO22	Capillary Tube	SM05
225	287	319	149	367	465	578	708	280	ALQUILB / ISO32	Capillary Tube or Expansion Valve	SM08
291	369	403	157	466	582	715	862	150	ESTER / ISO22	Capillary Tube	SM32
331	425	469	144	547	691	850	1018	150	ESTER / ISO22	Capillary Tube	SM07
309	392	437	144	491	608	745	900	210	ESTER / ISO22	Capillary Tube or Expansion Valve	SM05
444	558	603	152	691	845	1022	1222	270	ESTER / ISO22	Capillary Tube or Expansion Valve	SM07
449	568	608	163	705	862	1039	1249	270	ESTER / ISO22	Capillary Tube or Expansion Valve	SM07
473	603	655	161	757	933	1131	1361	350	ESTER / ISO22	Capillary Tube or Expansion Valve	SM13
650	859	939	147	1092	1360	1661	1981	450	ESTER / ISO22	Capillary Tube or Expansion Valve	SM20
1033	1308	1317	154	1623	1980	2380	2830	450	ESTER / ISO22	Capillary Tube or Expansion Valve	SM26

	Cooling Capacity (°C) Capacity (W) Efficiency (W/W)						Lubricant		Type/Viscosity	Expansion Device	Wiring Diagram
	-10	-5	0	5	7,2°C / Condensing 54,4°C	10	15	Oil Charge			
337	410	495	590	639	2,68	696	850	150	ESTER / ISO10	Capillary Tube or Expansion Valve	SM29
366	449	545	663	712	2,79	773	940	150	ESTER / ISO10	Capillary Tube or Expansion Valve	SM29
437	535	646	771	837	2,72	910	1100	150	ESTER / ISO10	Capillary Tube or Expansion Valve	SM29
517	629	757	900	975	2,9	1059	1270	150	ESTER / ISO10	Capillary Tube or Expansion Valve	SM29
583	705	834	963	1025	2,75	1180	1370	210	ESTER / ISO22	Capillary Tube or Expansion Valve	SM05
678	822	985	1167	1266	2,68	1367	1540	150	ESTER / ISO10	Capillary Tube or Expansion Valve	SM29
809	971	1152	1358	1457	2,6	1589	1810	270	ESTER / ISO22	Capillary Tube or Expansion Valve	SM07
920	1102	1302	1534	1651	2,56	1796	2040	270	ESTER / ISO22	Capillary Tube or Expansion Valve	SM07
1243	1500	1790	2117	2291	2,6	2481	2810	350	ESTER / ISO22	Capillary Tube or Expansion Valve	SM13
2045	2481	2978	3538	3803	2,78	4163	4740	450	ESTER / ISO22	Capillary Tube or Expansion Valve	SM26

	Cooling Capacity (°C) (Evaporating -23,3°C / Condensing 54,4°C Capacity (W) Efficiency (W/W)						Lubricant		Type/Viscosity	Expansion Device	Wiring Diagram
	-30	-25	-20	-15	-10	-5	Oil Charge				
171	224	244	1,35	286	358	443	540	180	ESTER / ISO22	Capillary Tube or Expansion Valve	SM07
224	284	300	1,4	356	441	541	660	180	ESTER / ISO22	Capillary Tube or Expansion Valve	SM07
254	325	351	1,4	408	505	618	750	180	ESTER / ISO22	Capillary Tube or Expansion Valve	SM07
273	350	390	1,34	439	540	664	800	180	ESTER / ISO22	Capillary Tube or Expansion Valve	SM07
327	427	467	1,31	544	683	833	1000	350	ESTER / ISO22	Capillary Tube or Expansion Valve	SM13
341	446	489	1,37	569	711	870	1050	350	ESTER / ISO22	Capillary Tube or Expansion Valve	SM13
395	522	573	1,36	671	840	1032	1240	350	ESTER / ISO22	Capillary Tube or Expansion Valve	SM13
436	562	613	1,21	713	889	1091	1310	350	ESTER / ISO22	Capillary Tube or Expansion Valve	SM13
460	601	657	1,32	766	955	1168	1400	350	ESTER / ISO22	Capillary Tube or Expansion Valve	SM13
523	682	745	1,29	867	1078	1314	1580	350	ESTER / ISO22	Capillary Tube or Expansion Valve	SM13
435	585	646	1,29	763	969	1202	1450	450	ESTER / ISO22	Capillary Tube or Expansion Valve	SM20
643	831	905	1,4	1050	1300	1583	1900	350	ESTER / ISO22	Capillary Tube or Expansion Valve	SM13
560	734	800	1,15	934	1160	1412	1700	450	ESTER / ISO22	Capillary Tube or Expansion Valve	SM20
646	855	940	1,26	1100	1378	1689	2020	450	ESTER / ISO22	Capillary Tube or Expansion Valve	SM20
726	960	1054	1,3	1233	1546	1899	2280	450	ESTER / ISO22	Capillary Tube or Expansion Valve	SM21
640	839	667	1,03	1069	1331	1624	1960	650	ESTER / ISO22	Capillary Tube or Expansion Valve	SM21
965	1265	1384	1,39	1617	2022	2483	2980	650	ESTER / ISO22	Capillary Tube or Expansion Valve	SM21
1040	1403	1547	1,33	1814	2272	2780	3340	750	ESTER / ISO22	Capillary Tube or Expansion Valve	SM16/SM17
	UNDER DEVELOPMENT										
	UNDER DEVELOPMENT										
	UNDER DEVELOPMENT										
	UNDER DEVELOPMENT										

	Cooling Capacity (°C) Capacity (W) Efficiency (W/W)						Lubricant		Type/Viscosity	Expansion Device	Wiring Diagram
	-10	-5	0	5	7,2°C / Condensing 54,4°C	10	15	Oil Charge			
354	433	524	629	679	2,39	746	900	180	ESTER / ISO22	Capillary Tube or Expansion Valve	SM07
448	550	667	801	877	2,23	951	1130	180	ESTER / ISO22	Capillary Tube or Expansion Valve	SM07
396	483	582	695	758	2,3	824	980	180	ESTER / ISO22	Capillary Tube or Expansion Valve	SM07
519	625	751	895	975	2,09	1059	1250	350	ESTER / ISO22	Capillary Tube or Expansion Valve	SM13
565	690	836	1006	1100	2,14	1199	1400	350	ESTER / ISO22	Capillary Tube or Expansion Valve	SM13
600	741	903	1083	1180	2,31	1283	1500	350	ESTER / ISO22	Capillary Tube or Expansion Valve	SM13
743	912	1101	1309	1423	2,24	1537	1760	350	ESTER / ISO22	Capillary Tube or Expansion Valve	SM13
854	1029	1244	1486	1618	2,27	1753	2000	350	ESTER / ISO22	Capillary Tube or Expansion Valve	SM13
1020	1235	1475	1740	1862	1,92	2029	2300	350	ESTER / ISO22	Capillary Tube or Expansion Valve	SM13
1118	1358	1629	1932	2097	2,09	2266	2580	350	ESTER / ISO22	Capillary Tube or Expansion Valve	SM13
1050	1307	1607	1952	2139	2,24	2340	2680	450	ESTER / ISO22	Capillary Tube or Expansion Valve	SM26
1262	1570	1914	2295	2505	2,1	2713	3040	450	ESTER / ISO22	Capillary Tube or Expansion Valve	SM26
1532	1896	2311	2774	3022	2,37	3287	3740	450	ESTER / ISO22	Capillary Tube or Expansion Valve	SM26
1655	2022	2425	2847	3083	2,01	3270	3760	650	ESTER / ISO22	Capillary Tube or Expansion Valve	SM26
1945	2462	3052	3716	4080	2,6	4453	5080	750	ESTER / ISO22	Capillary Tube or Expansion Valve	SM18
1827	2234	2692	3187	3423	2,01	3706	4240	650	ESTER / ISO22	Capillary Tube or Expansion Valve	SM26
	2538	3095	3814	4194	2,01	4742	5380	650	ESTER / ISO22	Capillary Tube or Expansion Valve	SM26
2324	2901	3559	4296	4702	2,18	5114	5840	750	ESTER / ISO22	Capillary Tube or Expansion Valve	SM17



COMPRESSORS CATALOGUE TRI-PHASE

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TRI-PHASE												
Model	Origin	Refrigerant	Displacement	Voltage	Envelope	Torque	Motor	LRA	Test Condition	Frequency	-40	-35
NT2168GS	SK	R404A	14,5	200V/50-60Hz 3~	LBP	HST	3PHASE	28,5	ASHRAELBP32	50 Hz	219	313
NT2169GS	SK	R404A	14,5	200V/50-60Hz 3~	LBP	HST	3PHASE	28,5	ASHRAELBP32	60 Hz		
NT2192GS	SK	R404A	22,37	200V/50-60Hz 3~	LBP	HST	3PHASE	28,5	ASHRAELBP32	50 Hz	364	526
NT2192GS	SK	R404A	22,37	200V/50-60Hz 3~	LBP	HST	3PHASE	28,5	ASHRAELBP32	60 Hz		
NT2212GS	SK	R404A	27,8	200V/50-60Hz 3~	LBP	HST	3PHASE	36	ASHRAELBP32	50 Hz	479	668
NT2212GS	SK	R404A	27,8	200V/50-60Hz 3~	LBP	HST	3PHASE	36	ASHRAELBP32	60 Hz	523	767
NJ2212GS	SK	R404A	34,4	380-420V 50Hz / 440-480V 60Hz 3~	LBP	HST	3PHASE	20,6	ASHRAELBP32	60 Hz	294	637
NJ2212GS	SK	R404A	34,4	380-420V 50Hz / 440-480V 60Hz 3~	LBP	HST	3PHASE	20,6	ASHRAELBP32	50 Hz		
NJX2215US	SK	R290	38	400V 50Hz / 440V 60Hz	LBP	HST	3PHASE	21	ASHRAELBP32	50 Hz	686	945
NJX2215US	SK	R290	38	400V 50Hz / 440V 60Hz	LBP	HST	3PHASE	21	ASHRAELBP32	60 Hz	842	1116
NJX2219GS	SK	R404A	38	400V 50Hz / 440V 60Hz	LBP	HST	3PHASE	22	ASHRAELBP32	50 Hz	870	1176
NJX2219GS	SK	R404A	38	400V 50Hz / 440V 60Hz	LBP	HST	3PHASE	22	ASHRAELBP32	60 Hz	1007	1373

Model	Origin	Refrigerant	Displacement	Voltage	Envelope	Torque	Motor	LRA	Test Condition	Frequency	-20	-15
NTU6232GSV	SK	R404A	20,44	200-230 V 60 Hz 3~	MBP	HST	3PHASE	36	ASHRAEHP46	60 Hz		
NTU6234GSV	SK	R404A	23,74	200-230 V 60 Hz 3~	MBP	HST	3PHASE	36	ASHRAEHP46	60 Hz		
NJ9232GS	SK	R404A	26,11	380 420 V 50 Hz /440 480 V 60 Hz 3~	MBP	HST	3PHASE	13	ASHRAEHP46	60 Hz	1323	1756
NJ9232GS	SK	R404A	26,11	380 420 V 50 Hz /440 480 V 60 Hz 3~	MBP	HST	3PHASE	13	ASHRAEHP46	50 Hz	1131	1501
NTU6238GSV	SK	R404A	26,21	200-230 V 60 Hz 3~	MBP	HST	3PHASE	36	ASHRAEHP46	60 Hz		
NTU6240GSV	SK	R404A	27,8	200-230 V 60 Hz 3~	MBP	HST	3PHASE	40	ASHRAEHP46	60 Hz		
NJ9238GS	SK	R404A	32,67	380 420 V 50 Hz /440 480 V 60 Hz 3~	MBP	HST	3PHASE	22	ASHRAEHP46	60 Hz		
NJ9238GS	SK	R404A	32,67	380 420 V 50 Hz /440 480 V 60 Hz 3~	MBP	HST	3PHASE	22	ASHRAEHP46	50 Hz		
NJ6226ZX	SK	R134a	34,38	380 420 V 50 Hz /440 480 V 60 Hz 3~	HBP	HST	3PHASE	13	ASHRAEHP46	60 Hz		
NJ6226ZX	SK	R134a	34,38	380 420 V 50 Hz /440 480 V 60 Hz 3~	HBP	HST	3PHASE	13	ASHRAEHP46	50 Hz		
NJX6244US	SK	R290	38	400V 50Hz / 440V 60Hz	MBP	HST	3PHASE	22	ASHRAEHP46	50 Hz	1831	2216
NJX6244US	SK	R290	38	400V 50Hz / 440V 60Hz	MBP	HST	3PHASE	22	ASHRAEHP46	60 Hz	2129	2656
NJX6250GS	SK	R404A	38	400V 50Hz / 440V 60Hz	MBP	HST	3PHASE	22	ASHRAEHP46	50 Hz	1751	2238
NJX6250GS	SK	R404A	38	400V 50Hz / 440V 60Hz	MBP	HST	3PHASE	22	ASHRAEHP46	60 Hz	1987	2631



(Evaporating -23,3°C / Condensing 54,4°C)											
-30	-25	Capacity (W)	Efficiency (W/W)	-20	-15	-10	-5	Oil Charge	Lubricant Type/Viscosity	Expansion Device	
438	595			783		1001		1249	650	ESTER / ISO22	Capillary Tube or Expansion Valve
486	707	792	1,32	956		1229		1532	650	ESTER / ISO22	Capillary Tube or Expansion Valve
724	960			1233		1542		1889	650	ESTER / ISO22	Capillary Tube or Expansion Valve
838	1121	1236	1,37	1456		1842		2279	650	ESTER / ISO22	Capillary Tube or Expansion Valve
910	1206	1325	1,31	1556		1959		2417	650	ESTER / ISO22	Capillary Tube or Expansion Valve
1063	1412	1571	1,31	1813		2267		2773	650	ESTER / ISO22	Capillary Tube or Expansion Valve
1043	1513	1653	1,29	2047		2644		3304	750	ESTER / ISO22	Capillary Tube or Expansion Valve
951	1321	1477	1,32	1752		2243		2796	750	ESTER / ISO22	Capillary Tube or Expansion Valve
1258	1626	1769	1,55	2049		2526		3057	750	ESTER / ISO22	Capillary Tube or Expansion Valve
1459	1871	2026	1,52	2353		2903		3523	750	ESTER / ISO22	Capillary Tube or Expansion Valve
1553	2002	2164	1,47	2522		3112		3774	750	ESTER / ISO22	Capillary Tube or Expansion Valve
1827	2368	2611	1,45	2997		3714		4518	750	ESTER / ISO22	Capillary Tube or Expansion Valve

(Evaporating 7,2°C / Condensing 54,4°C)										
-10	-5	0	5	Capacity (W)	Efficiency (W/W)	10	15	Oil Charge	Lubricant Type/Viscosity	Expansion Device
				3982	2,8			650	ESTER / ISO22	Capillary Tube or Expansion Valve
				4574	2,67			650	ESTER / ISO22	Capillary Tube or Expansion Valve
2275	2881	3571	4348	4775	2,55	5211		750	ESTER / ISO22	Capillary Tube or Expansion Valve
1945	2462	3052	3716	4080	2,54	4453		750	ESTER / ISO22	Capillary Tube or Expansion Valve
				4877	2,49			650	ESTER / ISO22	Capillary Tube or Expansion Valve
				5292	2,54			650	ESTER / ISO22	Capillary Tube or Expansion Valve
2833	3536	4337	5236	5730	2,59	6233		750	ESTER / ISO22	Capillary Tube or Expansion Valve
2421	3022	3707	4475	4897	2,59	5326		750	ESTER / ISO22	Capillary Tube or Expansion Valve
	2069	2610	3204	3526	2,55	3851		750	ESTER / ISO22	Capillary Tube or Expansion Valve
	1768	2231	2739	3014	2,55	3291		750	ESTER / ISO22	Capillary Tube or Expansion Valve
2710	3313	4025	4845	5218	2,73	5775		750	ESTER / ISO22	Capillary Tube or Expansion Valve
3267	3962	4740	5603	5976	2,51			750	ESTER / ISO22	Capillary Tube or Expansion Valve
2839	3792	4609	5527	6016	2,37	6546		750	ESTER / ISO22	Capillary Tube or Expansion Valve
3378	4433	5353	6371	6971	2,16	7486		750	ESTER / ISO22	Capillary Tube or Expansion Valve



VARIABLE SPEED COMPRESSORS

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Variable Speed Compressors		220-240V	50/60Hz	R600a		HP	APPLICATION	TORQUE	MOTOR TYPE	EXPANSION DEVICE	LUBRICANT		WEIGHT KG	TEST CONDITION	INVERTER		
MODEL	REFRIGERANT	VOLTAGE / FREQUENCY	COOLING CAPACITY		EFFICIENCY						OIL CHARGE	TYPE / VISCOSITY					
			RPM	BTU/h	W	BTU	W/W										
FMX4C	R600a	230 V 43-134 Hz 3~	2000	119	35	5,13	1,5	1/16	L/MBP	LST	BPM	Capillary Tube	175	ALQULB / ISO5	4,8	ASHRAELBP32	CF02D01 M 0.0 X / CF02E01 M 0.0 X
			3000	172	50	5,39	1,58										
			4000	241	71	5,36	1,57										
FMA4C	R600a	230 V 43-134 Hz 3~	2000	124	36	5,64	1,65	1/16	L/MBP	LST	BPM	Capillary Tube	175	ALQULB / ISO5	4,9	ASHRAELBP32	CF02D01 M 0.0 X / CF02E01 M 0.0 X
			3000	185	54	5,59	1,64										
			4000	259	76	5,59	1,64										
FMX4C	R600a	230 V 43-134 Hz 3~	2000	122	36	5,92	1,73	1/16	L/MBP	LST	BPM	Capillary Tube	175	ALQULB / ISO5	4,9	ASHRAELBP32	PFC CF02D02 M
			3000	168	49	5,6	1,64										
			4000	247	72	5,65	1,66										
FMX6C	R600a	230 V 43-134 Hz 3~	2000	222	65	5,61	1,64	1/10	L/MBP	LST	BPM	Capillary Tube	175	ALQULB / ISO5	4,9	ASHRAELBP32	CF02D01 M 0.0 X / CF02E01 M 0.0 X
			3000	331	97	5,6	1,64										
			4000	413	121	5,63	1,65										
FMA6C	R600a	230 V 43-134 Hz 3~	2000	222	65	6,1	1,79	1/10	L/MBP	LST	BPM	Capillary Tube	175	ALQULB / ISO5	4,9	ASHRAELBP32	CF02D01 M 0.0 X / CF02E01 M 0.0 X
			3000	333	98	6,14	1,8										
			4000	413	121	5,8	1,7										
FMX6C	R600a	230 V 43-134 Hz 3~	2000	223	65	6,21	1,82	1/9	L/MBP	LST	BPM	Capillary Tube	175	ALQULB / ISO5	4,8	ASHRAELBP32	VES 2456 XX X / CF02D01 M 0.0 X
			3000	333	98	6,09	1,78										
			4000	407	119	5,77	1,69										
FMX6C	R600a	230 V 43-134 Hz 3~	2000	230	67	6,53	1,91	1/9	L/MBP	LST	BPM	Capillary Tube	175	ALQULB / ISO5	4,9	ASHRAELBP32	VESF 2456 XXX X / PFC CF02D02 M
			3000	349	102	6,46	1,89										
			4000	429	126	6,11	1,79										
FMX9C	R600a	230 V 43-134 Hz 3~	2000	334	98	5,83	1,71	1/7	L/MBP	LST	BPM	Capillary Tube	175	ALQULB / ISO5	4,8	ASHRAELBP32	CF02D01 M 0.0 X / CF02E01 M 0.0 X
			3000	495	145	5,97	1,75										
			4000	614	180	5,63	1,65										
FMA9C	R600a	230 V 43-134 Hz 3~	2000	334	98	6,14	1,8	1/7	L/MBP	LST	BPM	Capillary Tube	175	ALQULB / ISO5	4,8	ASHRAELBP32	CF02D01 M 0.0 X / CF02E01 M 0.0 X
			3000	495	145	6,07	1,78										
			4000	614	180	5,8	1,7										
FMX9C	R600a	230 V 43-134 Hz 3~	2000	342	100	6,37	1,87	1/6	L/MBP	LST	BPM	Capillary Tube	175	ALQULB / ISO5	4,8	ASHRAELBP32	CF02D01 M 0.0 X / CF02E01 M 0.0 X
			3000	514	151	6,35	1,86										
			4000	632	185	5,97	1,75										
FMX9C	R600a	230 V 43-134 Hz 3~	2000	339	99	6,49	1,9	1/6	L/MBP	LST	BPM	Capillary Tube	175	ALQULB / ISO5	4,9	ASHRAELBP32	PFC CF02D02 M / VESF 2456 XXX X
			3000	520	152	6,45	1,89										
			4000	637	187	6,12	1,79										
VEMB11C	R600a	230 V 53-150 Hz 3~	2000	460	135	6,48	1,9	-	LBP	LST	BPM	Capillary Tube or Expansion Valve	450	ALQULB / ISO5	7,63	ASHRAELBP32	CF02D01 M 0.0 X / VCC32456000X / PFC CF02D01 M
			3000	697	204	6,45	1,89										
			4500	999	281	5,96	1,75										
VESC11C	R600a	230 V 40-150 Hz 3~	2000	467	137	6,57	1,93	1/5	LBP	LST	BPM	Capillary Tube	160	ALQULB / ISO5	6,43	ASHRAELBP32	PFC CF02D01 M
			3000	707	207	6,41	1,88										
			4500	942	276	6	1,76										
VES11C	R600a	230 V 40-150 Hz 3~	2000	467	137	6,75	1,98	1/5	LBP	LST	BPM	Capillary Tube or Expansion Valve	180	ALQULB / ISO5	6,75	ASHRAELBP32	VES 2456 XX X / PFC CF02D01 M
			3000	707	207	6,53	1,91										
			4500	942	276	6,06	1,78										

Variable Speed Compressors		220-240V	50/60Hz	R290		HP	APPLICATION	TORQUE	MOTOR TYPE	EXPANSION DEVICE	LUBRICANT		WEIGHT KG	TEST CONDITION	INVERTER		
MODEL	REFRIGERANT	VOLTAGE / FREQUENCY	COOLING CAPACITY		EFFICIENCY						OIL CHARGE	TYPE / VISCOSITY					
			RPM	BTU/h	W	BTU	W/W										
FMF406U	R290	230 V 46-150 Hz 3~	1800	647	190	6,19	1,81	1/3	L/MBP	HST	BPM	Capillary Tube or Expansion Valve	430	ESTER / ISO22	10,28	ASHRAELBP32	CF10C02 M 0.1 X / CF05D01 X XXX X / CF10B02 N 0.1 X
			2500	846	248	6,1	1,79										
			3000	1110	325	6,27	1,84										
			3600	1321	387	6,18	1,81										
			4500	1738	509	6,07	1,78										
VESA7U	R290	230 V 53-133 Hz 3~	1600	620	182	5,54	1,62	1/5	LMBP	LST	BPM	Capillary tube	198	ESTER / ISO22	6,5	ASHRAELBP32	VCC3C024560X
			2000	796	233	5,76	1,69										
			3000	1238	363	5,94	1,74										
			4000	1646	482	5,91	1,73										
			2000	930	273	6,02	1,76										
VEGT8U	R290	230 V 60-150 Hz 3~	1800	853	250	6,18	1,81	1/2	L/MBP	LST	BPM	Capillary Tube or Expansion Valve	450	ESTER / ISO22	10,28	ASHRAELBP32	CF10B02 N 0.1 X / CF10C02 N 0.0 X
			2400	1141	334	6,23	1,83										
			3000	1475	432	6,22	1,82										
			3600	1738	509	6,11	1,79										
			4500	2077	609	5,97	1,75										
FMF411U	R290	230V / 60-150Hz	1800	1191	349	6,08	1,78	3/4	LMBP	LST/HST	BPM	Capillary tube or Expansion Valve	430	ESTER / ISO22	10,87	ASHRAELBP32	CF10B01 N 0.1 X / CF10C01 M 0.1 X
			2400	1592	466	6,31	1,85										
			3000	2024	593	6,28	1,84										
			3600	2335	684	6,14	1,8										
			4500	2959	867	5,99	1,76										
FMF413UE	R290	230V / 53-167Hz	1600	1128	331	6,67	1,95	1	LMBP	LST/HST	BPM	Capillary tube or Expansion Valve	430	ESTER / ISO10	10,87	ASHRAELBP32	CF10B01 N 0.1 X / CF10C01 M 0.1 X
			2400	1672	490	6,79	1,99										
			3000	2059	603	6,75	1,98										
			3600	2444	716	6,55	1,92										
			5000	3270	958	6,2	1,82										
FMF413U	R290	230 V 60-150 Hz 3~	1800	1376	403	6,02	1,76	1/2	LBP	LST	BPM	Capillary Tube	430	ESTER / ISO22	10,87	ASHRAELBP32	CF10C01 M 0.1 X / VCCP24560000X / CF10B01 N 0.1 X
			2500	1812	531	6,08	1,78										
			3000	2328	682	6,15	1,8										
			3600	2652	777	6,01	1,76										
			4500	3407	998	5,94	1,74										
FMF415U	R290	230V / 53-167Hz	1600	1390	407	5,93	1,74	1	LMBP	LST/HST	BPM	Capillary tube or Expansion Valve	430	ESTER / ISO22	10,87	ASHRAELBP32	CF10B01 N 0.1 X
			2400	2092	613	6,06	1,78										
			3000	2641	774	6,02	1,76										
			3600	3044	892	5,92	1,73										
			5000	4276	1253	5,75	1,68										

Variable Speed Compressors		220-240V	50/60Hz	R134a		HP	APPLICATION	TORQUE	MOTOR TYPE	EXPANSION DEVICE	LUBRICANT		WEIGHT KG	TEST CONDITION	INVERTER		
MODEL	REFRIGERANT	VOLTAGE / FREQUENCY	COOLING CAPACITY		EFFICIENCY						OIL CHARGE	TYPE / VISCOSITY					
			RPM	BTU/h	W	BTU	W/W										
VEMV6HH	R134a	230 V 53-150 Hz 3~	1600	337	99	5,62	1,65	1/10	L/M/HBP	LST	BPM	Capillary tube	220	ESTER / ISO10	7,5	ASHRAELBP32	VCC3C024560X
			3000	600	176	6,73	1,68										
			4500	782	229	6,46	1,6										
VEGT8HB	R134a	230 V 53-150 Hz 3~	1800	468	137	5,87	1,72	1/4	L/MBP	LST	BPM	Capillary tube	430	ESTER / ISO10	10,77	ASHRAELBP32	VCC3C024560X
			3000	875	256	6,01	1,76										
			4500	1161	340	5,61	1,64										
VEGT11HB	R134a	230 V 60-150 Hz 3~	1800	653	191	5,7	1,67	1/2	L/MBP	LST	BPM	Capillary tube	430	ESTER / ISO22	10	ASHRAELBP32	CF10B02 N 0.1 X
			2500	907	266	5,68	1,66										
			3000	1100	322	5,67	1,66										
			3600	1289	378	5,55	1,63										
			4500	1463	429	5,24	1,54										

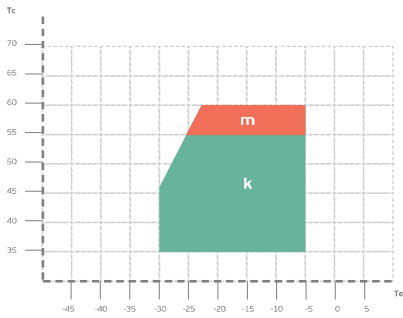
Variable Speed Compressors		220-240V	50/60Hz	R404A		HP	APPLICATION	TORQUE	MOTOR TYPE	EXPANSION DEVICE	LUBRICANT		WEIGHT KG	TEST CONDITION	INVERTER		
MODEL	REFRIGERANT	VOLTAGE / FREQUENCY	COOLING CAPACITY		EFFICIENCY						OIL CHARGE	TYPE / VISCOSITY					
			RPM	BTU/h	W	BTU	W/W										
VNEK205GK	R404A	300 V 33-75 Hz 3~	2000	771	226	4,3	1,26	-	LBP	HST	BPM	Capillary Tube or Expansion Valve	500	ESTER / ISO22	11,6	ASHRAELBP32	VCCHP24560000X
			2400	886	260	4,33	1,27										
			3000	1117	327	4,32	1,27										
			3600	1314	385	4,25	1,25										
			4500	1596	468	4,12	1,21										
VNEK212GK	R404A	300 V 33-75 Hz 3~	2000	835	245	3,8	1,11	-	LBP	HST	BPM	Capillary Tube or Expansion Valve	500	ESTER / ISO22	11,6	ASHRAELBP32	VCCHP24560000X
			2400	969	284	3,79	1,11										
			3000	1174	344	3,72	1,09										
			3600	1317	386	3,51	1,03										
			4500	1588	465	3,43	1,01										



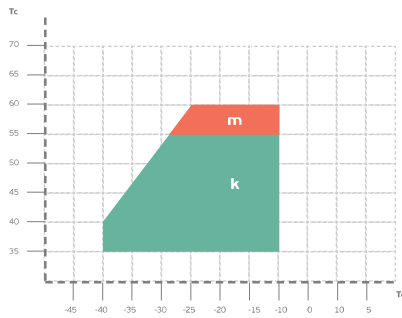
OPERATING ENVELOPE

EMC, EMX, NE, NT, NJ, VNE

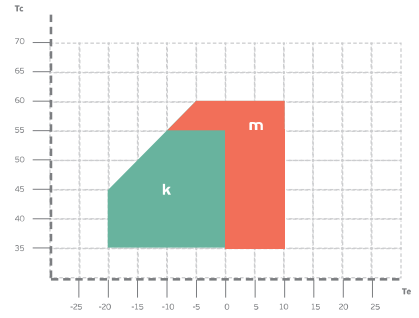
LBP
R134a - R600a



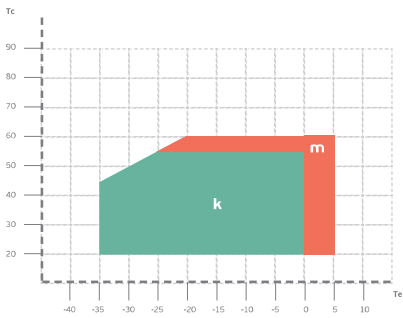
LBP
R404A/R507/R452A - R290



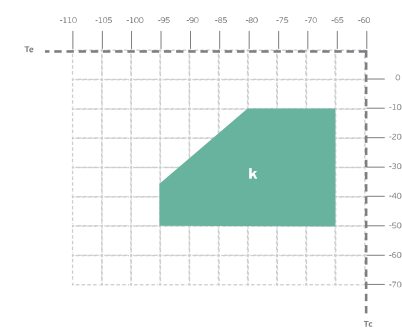
MBP
R404A/R507/R452A - R290



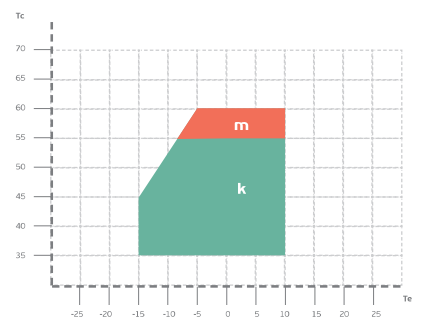
L/MBP
R290



ULBP
R508B/R170 - second stage of cascade



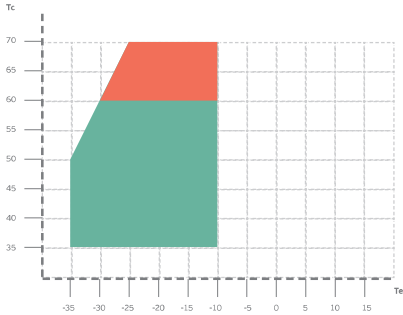
HBP
R134a - R600a



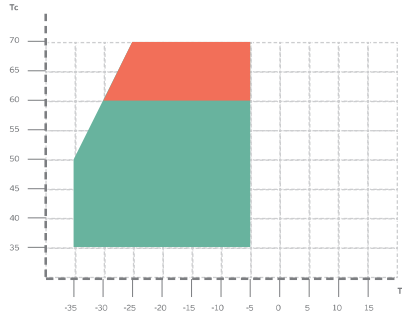
EM, EG, F, VEM, VEG, VES

Ambient temperature: 42,7 °C - Return temperature: 32,2 °C

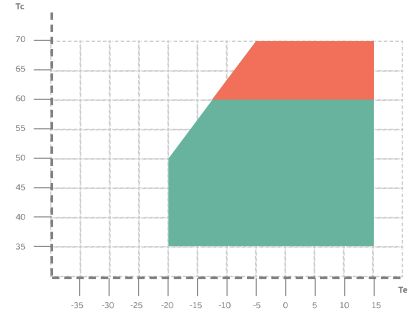
LBP
R290 - R134a - R600a



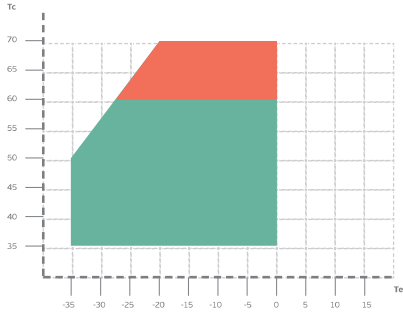
L-MBP (STANDARD)
R290 - R134a



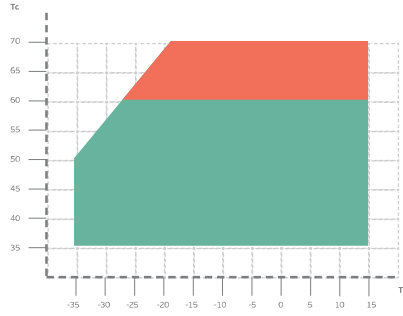
M-HBP
R134a



L-MBP EXTENDED RANGE FFUS, EM2, EM3
R290 - R134a - R600a



L-M-HBP
R134a



■ Operation Condition
■ Transient Condition

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)

NOTE: usage of compressors outside the intended working range cannot make use of the warranty, or should be consulted with Technical support.

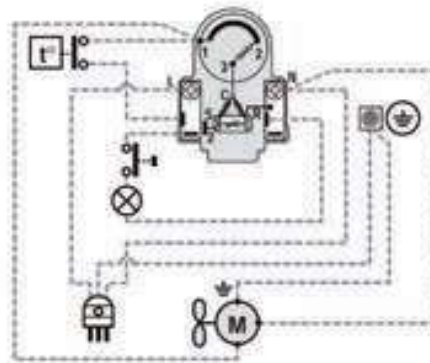
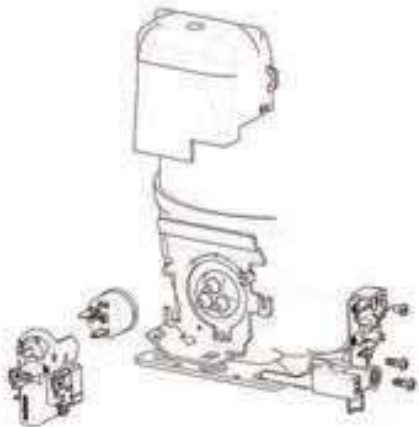
ELECTRICAL CONFIGURATIONS

WIRING DIAGRAMS KEY

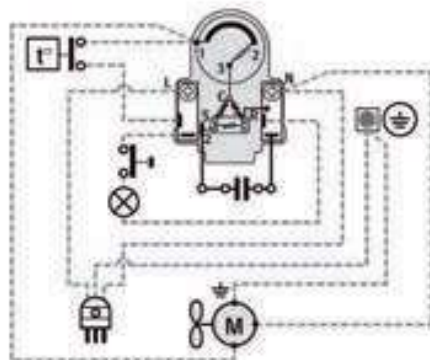
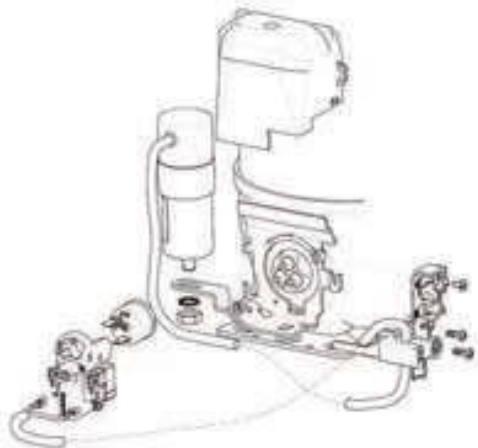
	OVERLOAD PROTECTOR		PTC START DEVICE*
	OVERLOAD PROTECTOR		INTEGRATED PTC DEVICE
	CURRENT START RELAY		CURRENT START RELAY WITH CAPACITOR CONNECTIONS
	3CR CURRENT START RELAY		3ARR3 START RELAY (VOLTAGE).
	RUN CAPACITOR		RUN CAPACITOR (MANDATORY - NOT SUPPLIED)
	OPTIONAL RUN CAPACITOR		START CAPACITOR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

WIRING DIAGRAMS

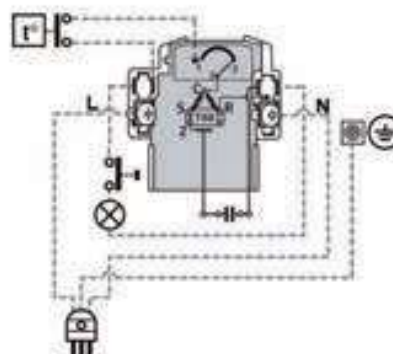
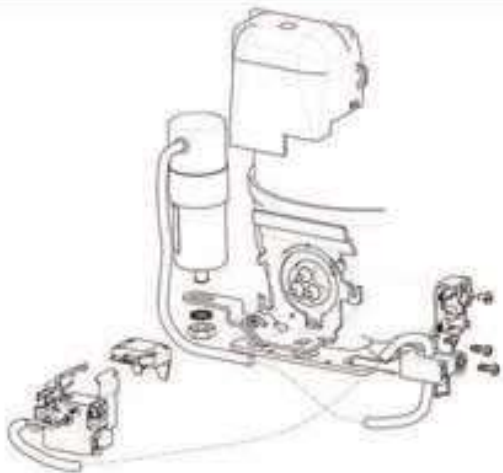
SM00 - EMT/NE SERIES RSIR PTC European Version



SM01 - EMT/NE SERIES RSCR PTC European Version

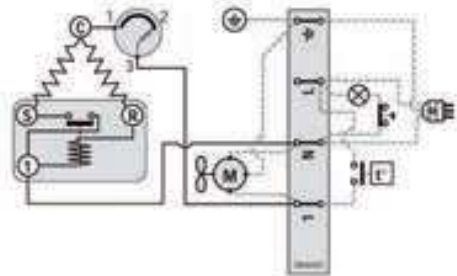
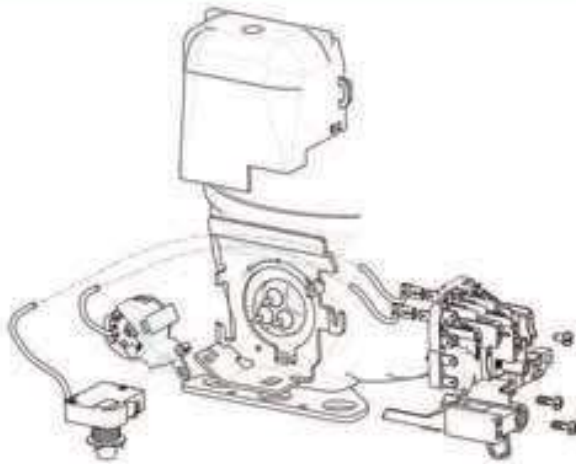


SM02 - EMT/NE SERIES RSCR TSD European Version

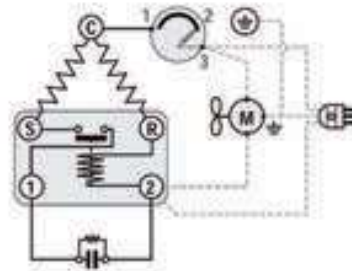
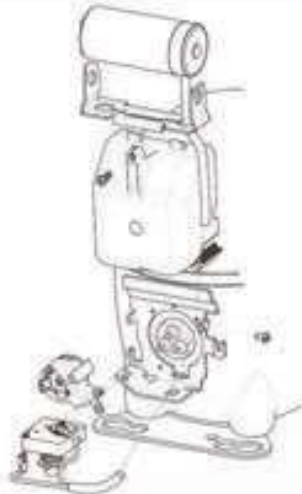


WIRING DIAGRAMS

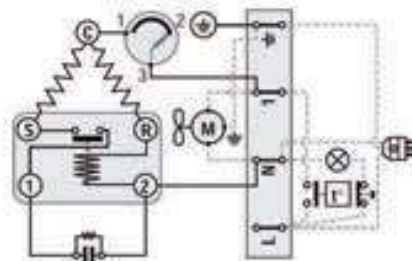
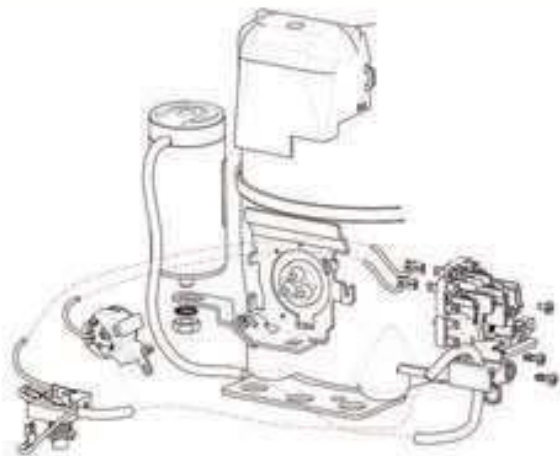
SM03 - EMT/NE SERIES RSIR Terminal Board & Start Device



SM04 - EMT/NE SERIES CSIR American Version

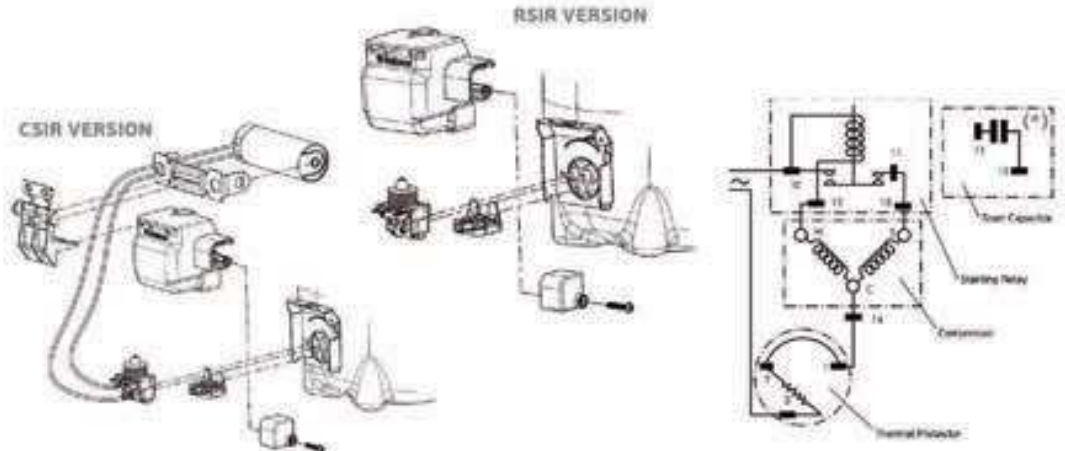


SM05 - EMT/NE SERIES CSIR Terminal Board & Start Device

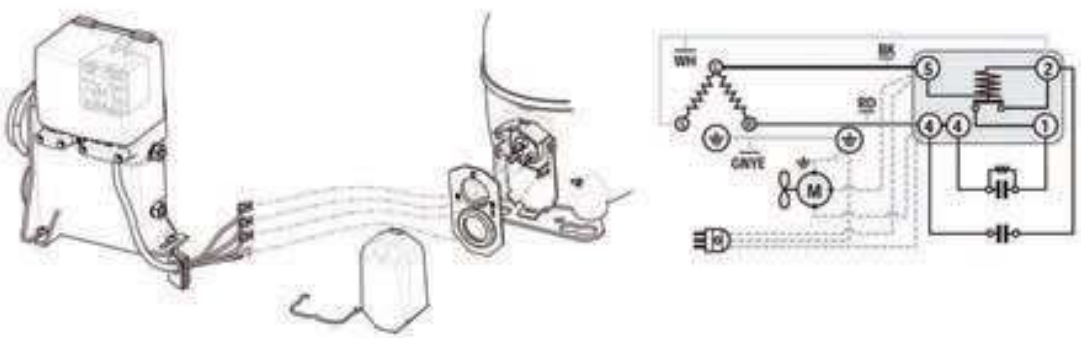


WIRING DIAGRAMS

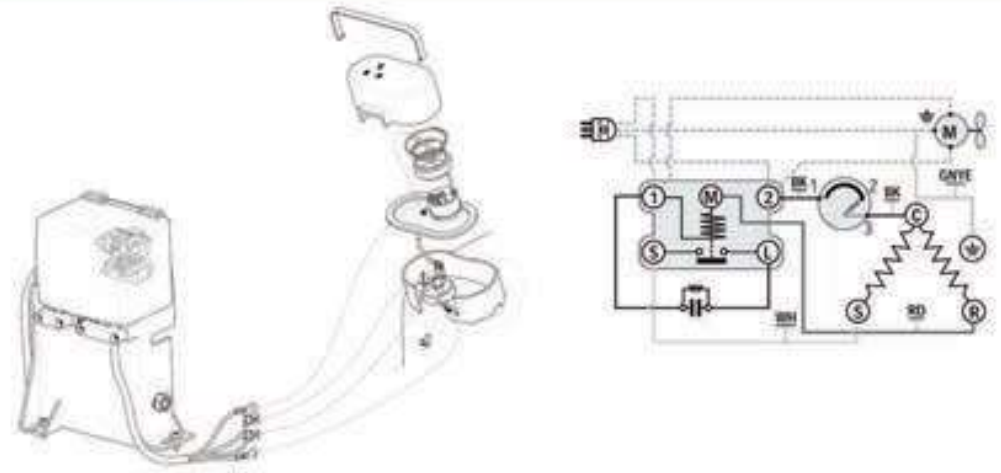
SM09 - EG



SM10 - NE CSR Box



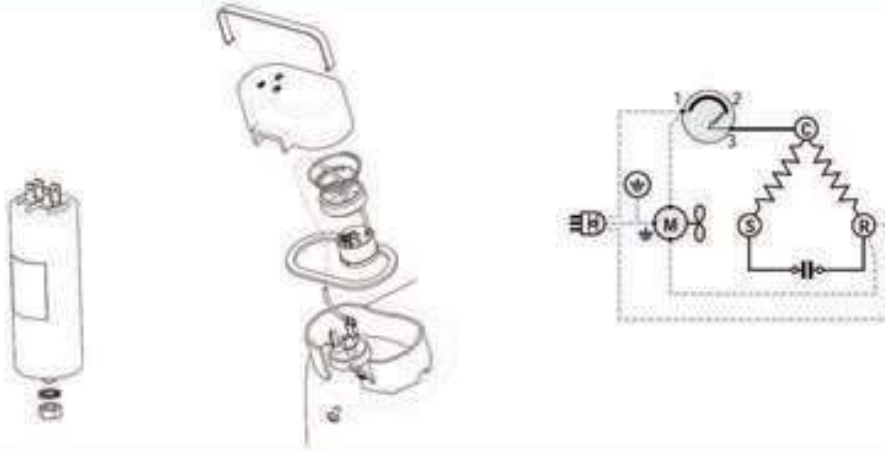
SM14 - NJ CSIR Box



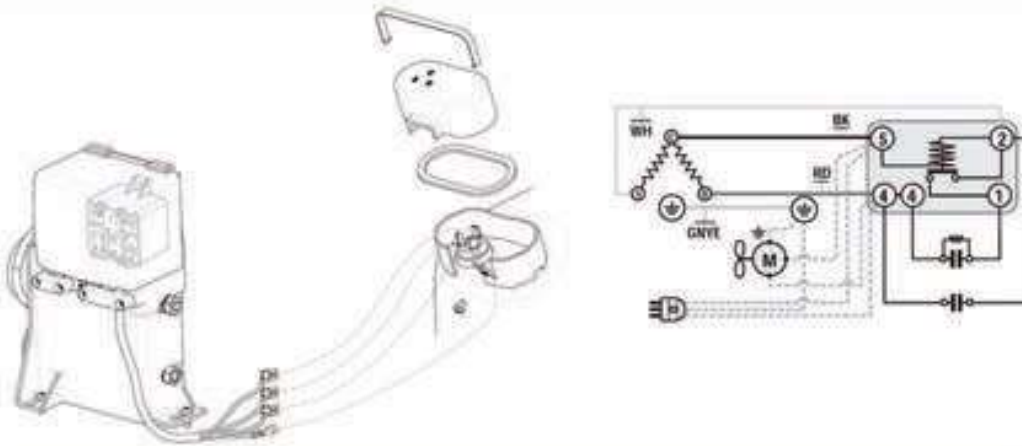
(*): Valid only for CSIR version



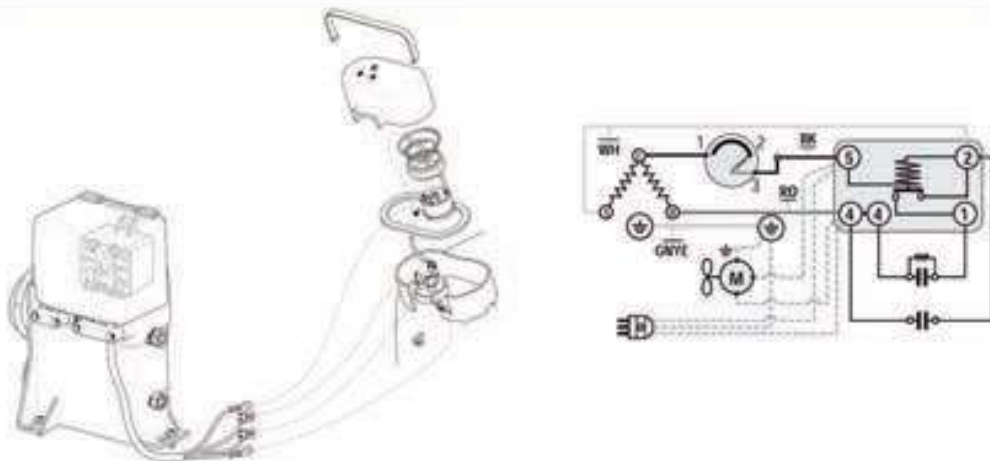
SM15 - NJ PSC



SM16 - NJ SERIES CSR Box (Internal Overload Protector)

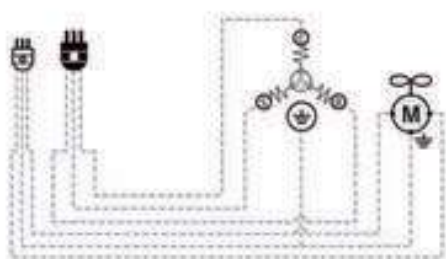
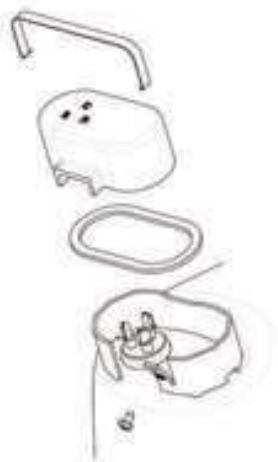


SM17 - NJ CSR Box (External Overload Protector)

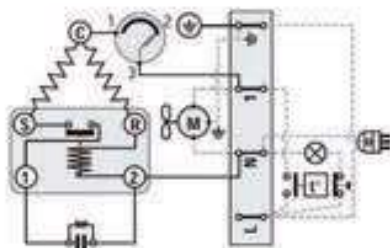
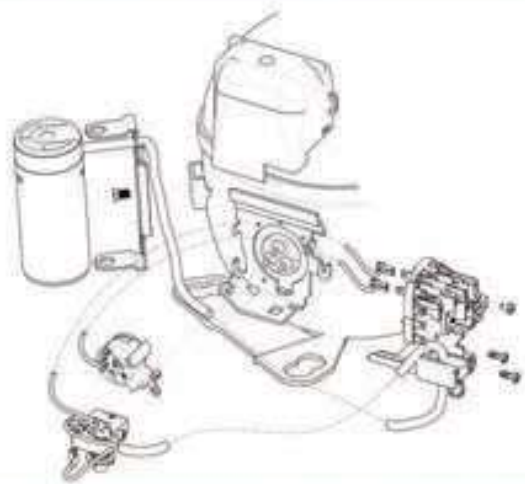


WIRING DIAGRAMS

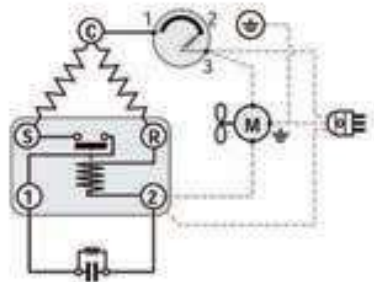
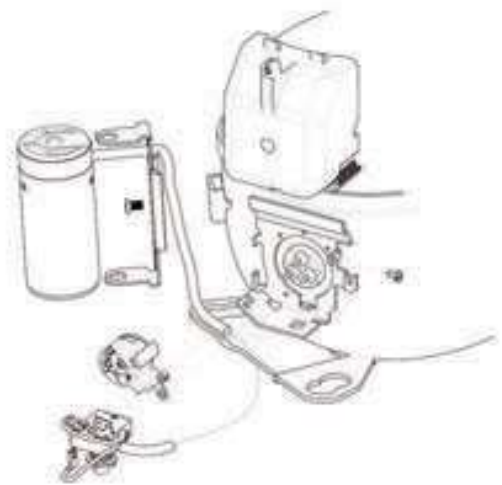
SM18 - NJ SERIES 3-Phase (Internal Overload Protector)



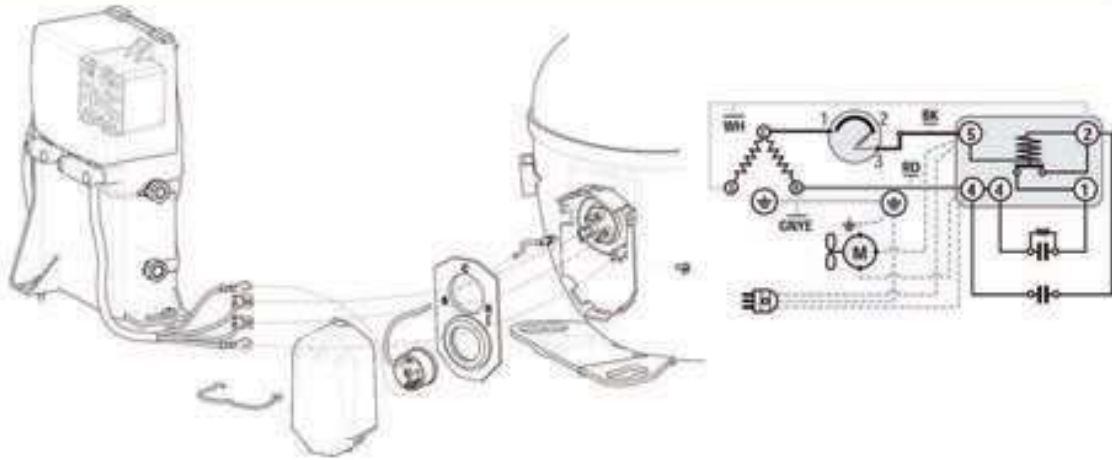
SM19 - NT SERIES CSIR Terminal Board



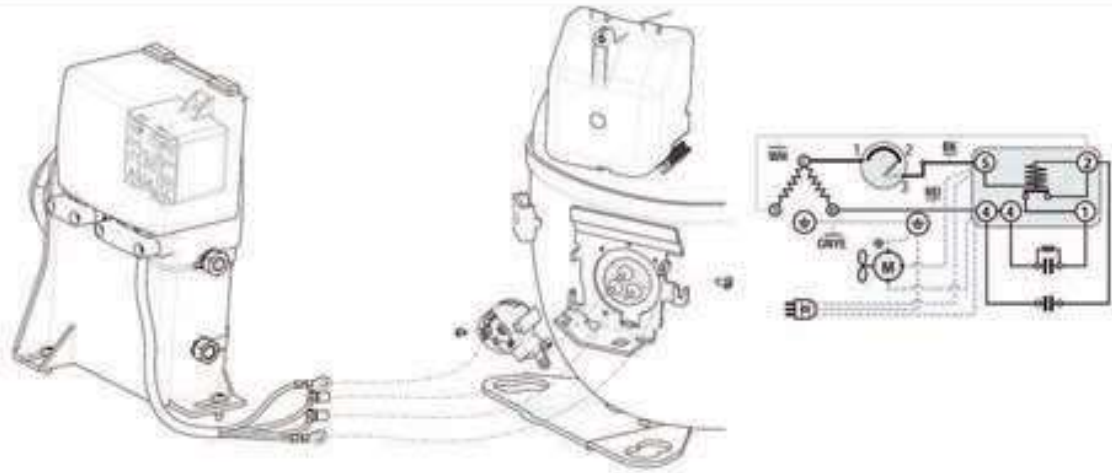
SM20 - NT SERIES CSIR - American Version



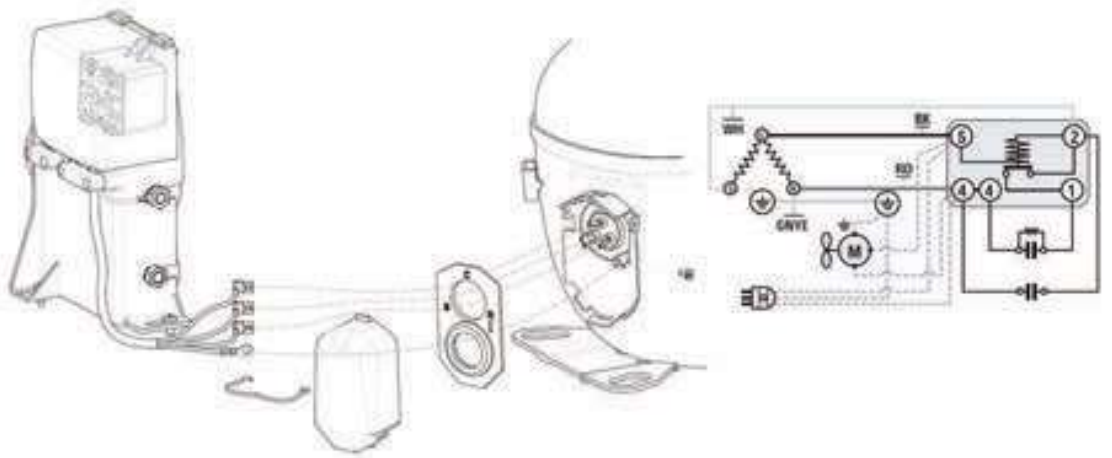
SM21 - NT SERIES CSR Box



SM23 - NT SERIES CSR Box

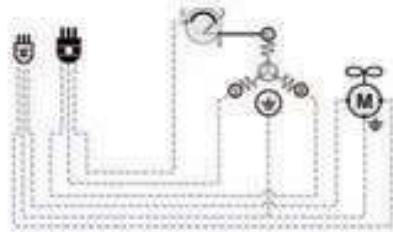
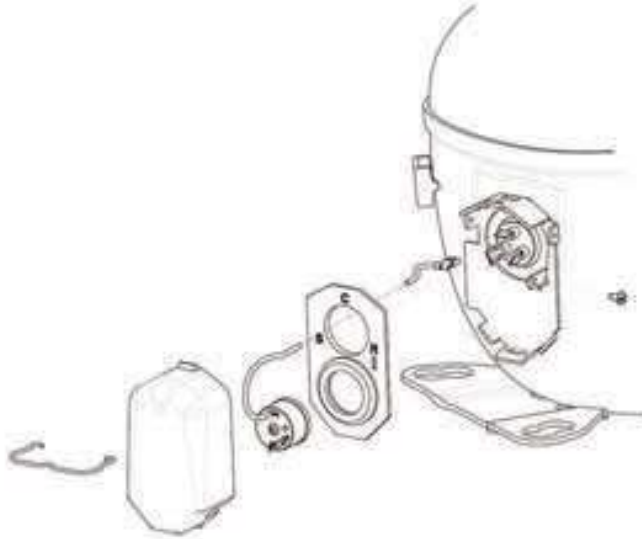


SM26 - NT SERIES CSR Box (Internal Overload Protector)

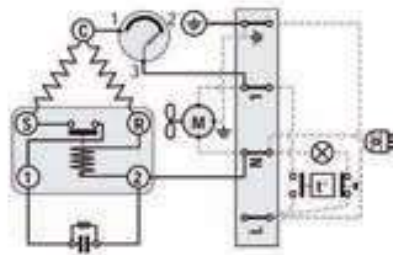
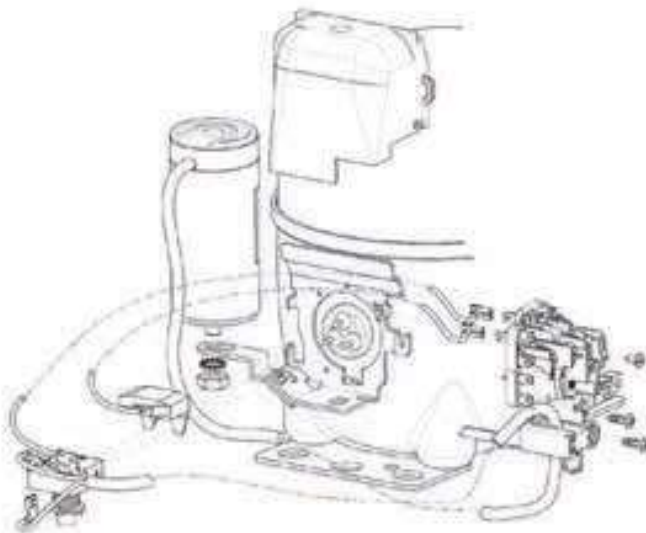


WIRING DIAGRAMS

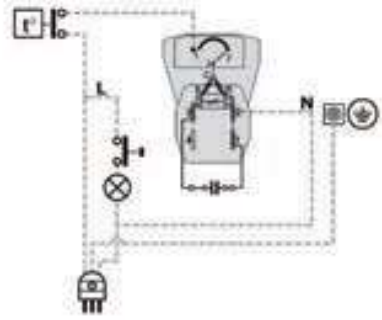
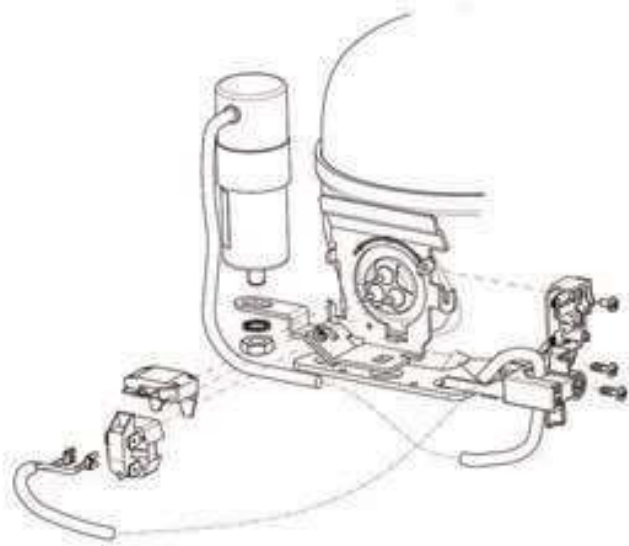
SM27 - NT SERIES 3-Phase (Internal + External Overload Protector)



SM29 - EMX SERIES CSIR TERMINAL BOARD & START DEVICE & 4TM

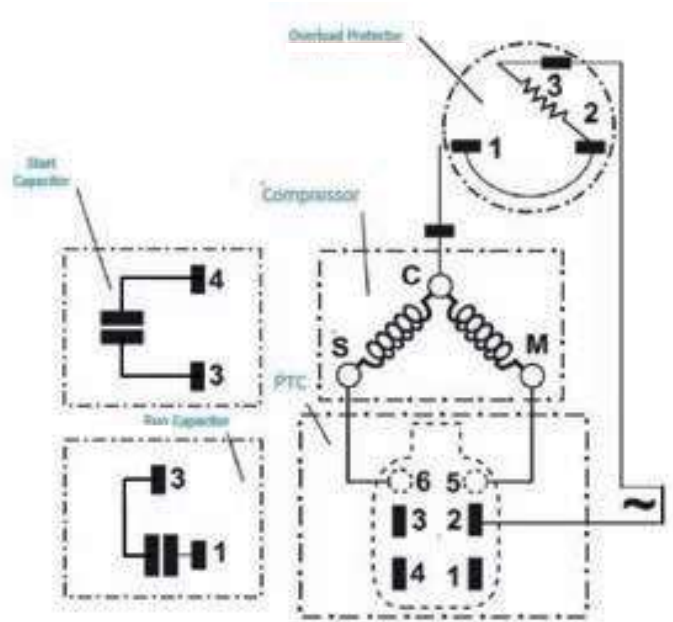
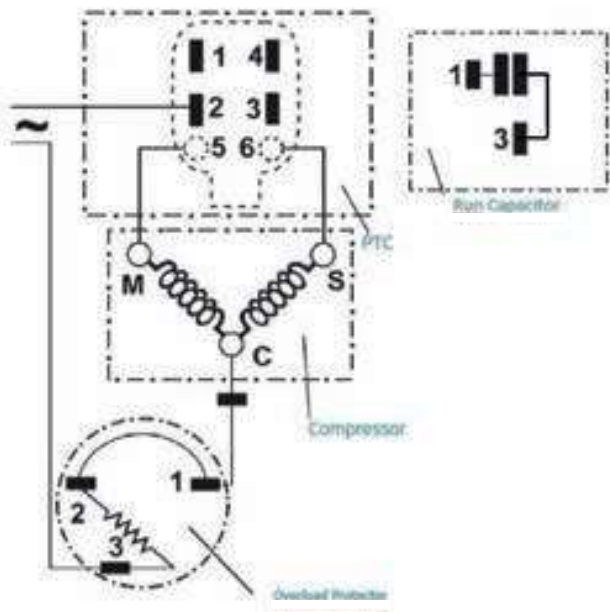


SM32 - EM RSCR PTC & 4TM



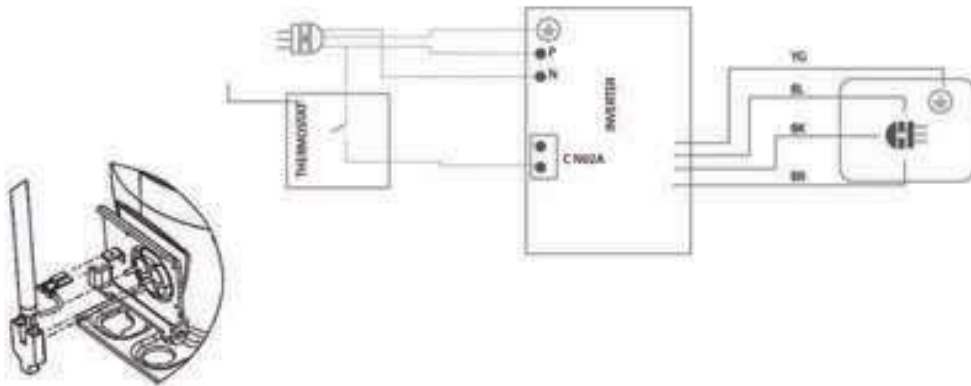
SM34 - EG,F RSCR

SM33 - EM CSCR

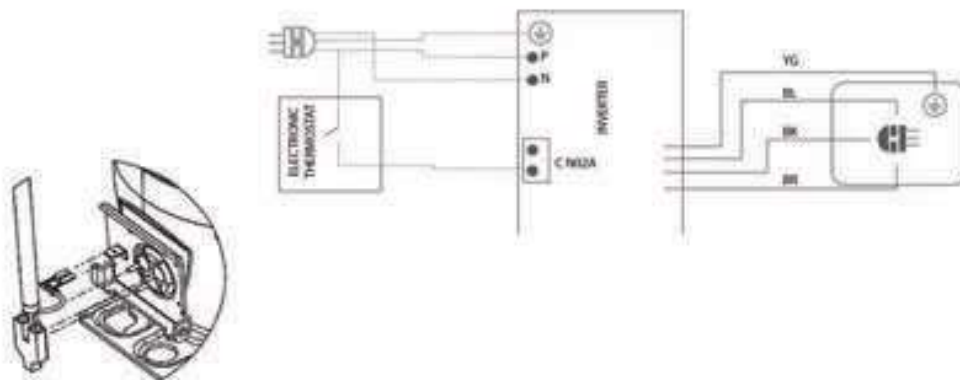


WIRING DIAGRAMS

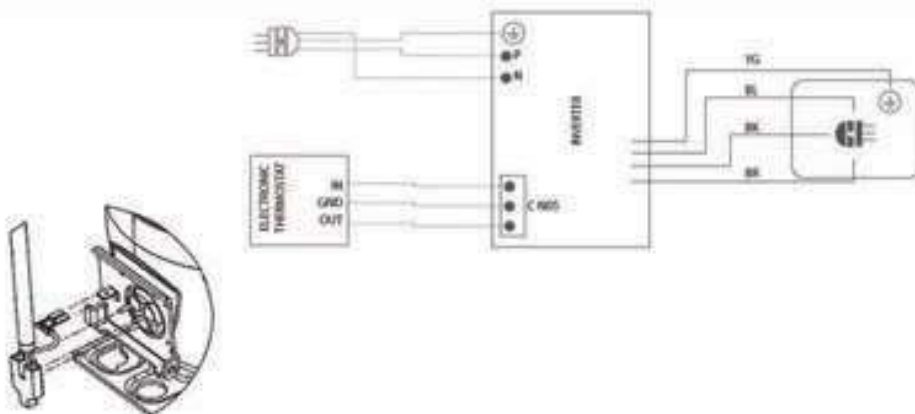
CON01 - VEMY6 / VEG (Drop-In)



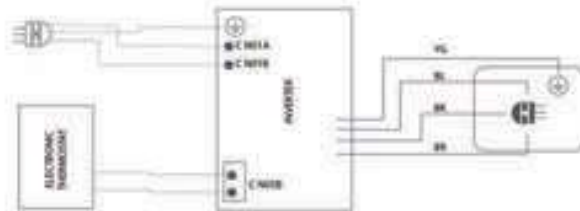
CON02 - VEM / VEG (Frequency)



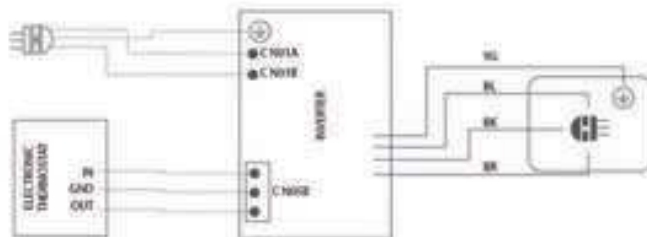
CON03 - VEMY6 / VEG (Serial)



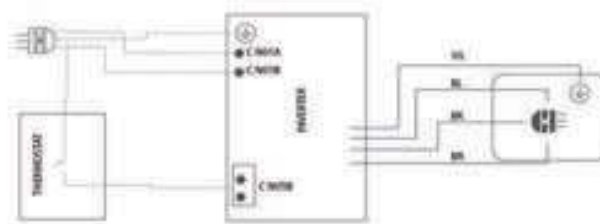
CON04 - VEM (Frequency)



CON05 - VEM (Serial)

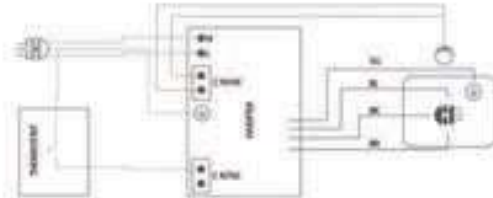
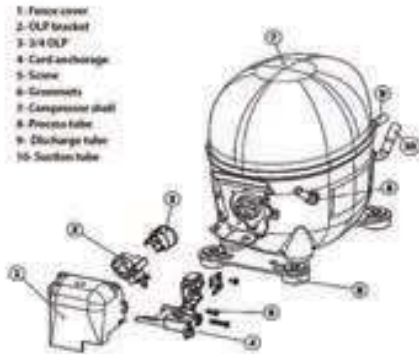


CON06 - VEM (Drop-in)

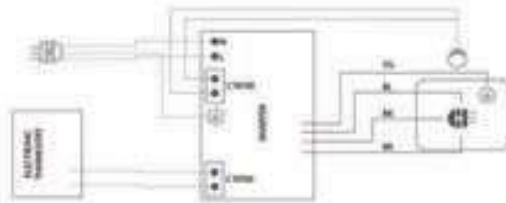


WIRING DIAGRAMS

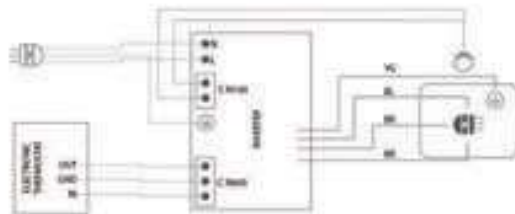
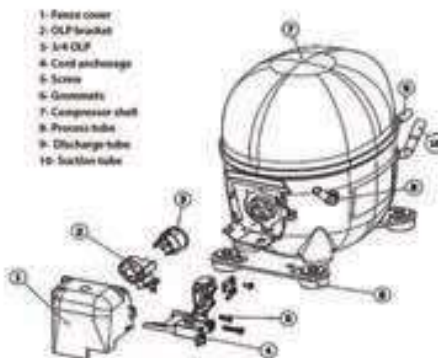
CON07 - VNE (Drop-In)



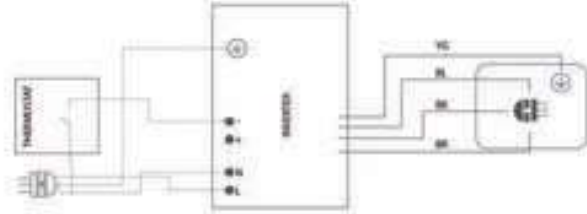
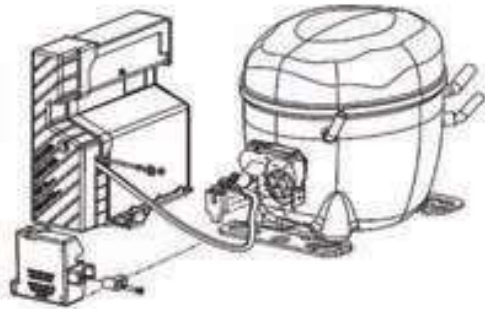
CON08 - VNE (Frequency)



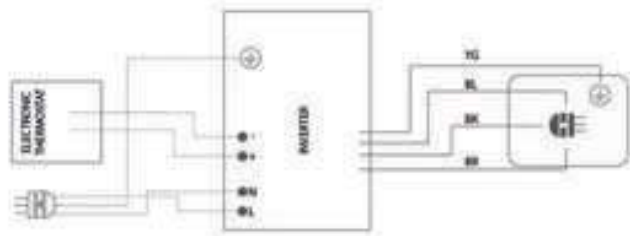
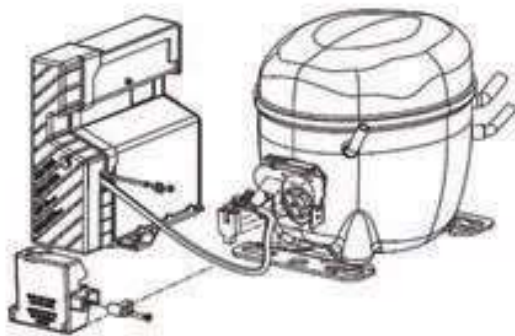
CON09 - VNE (Serial)



CON10 - VEG (Drop-in)



CON11 - VEG (Frequency)



RECOMMENDATIONS

1 - ELECTRICAL ACCESSORIES

Before removing the compressor plastic protection cover, check if the compressor is fully disconnected from the power source and if capacitors are applied.



Never operate on any electrical accessory with the compressor connected to the power grid. Working on an electrified compressor can cause severe damages to the technician's health, causing risks of electric shocks or getting burnt.



Start and/or run capacitors must be handled carefully, because, even when disconnected, they can cause electric shocks.

When you need to remove the capacitors, disconnect this components carefully paying attention to the exposed electric terminals. After disconnected, the capacitor must be discharged. Check if the capacitance ranges (μF) printed on the label on the capacitors are in accordance with the compressor's technical data. The capacitor's voltage must be the same or higher than the specified value in the compressor's technical data. In case the capacitor or compressor's specification don't match, replace the capacitor.



The application of the wrong capacitor, not specified component, may cause overheating of these components. Overheating may cause fractures on the capacitor which can lead to the leakage of internal content burning the operator.

In the case of removing the electrical components from the compressor's hermetic terminal, first remove the overload protector and the start device (relay or PTC) applying longitudinal force on the terminal pins. Never apply transversal force on the pins of the hermetic terminal.



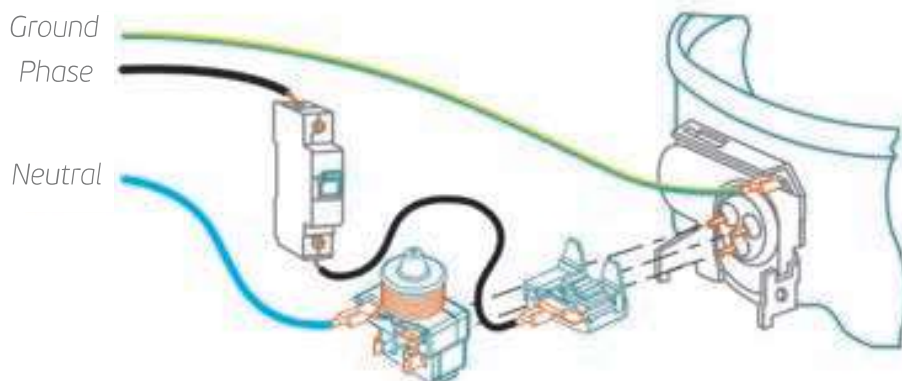
The incorrect removal of these accessories may damage the hermetic terminal on the compressor which can lead to the hermetic pins to be dislodged, causing refrigerant leakage. This situation becomes more critical in the case of flammable refrigerant utilization, since associated with an ignition source, creating a risk of and exposed flame with serious risks to the technician's physical integrity.

Cross check the code printed on the overload protector, relay or PTC with the compressor's technical data. In case they are different, replace these components for a compliant one. Universal accessories don't exist, you must always use components specified on the compressor's technical data.

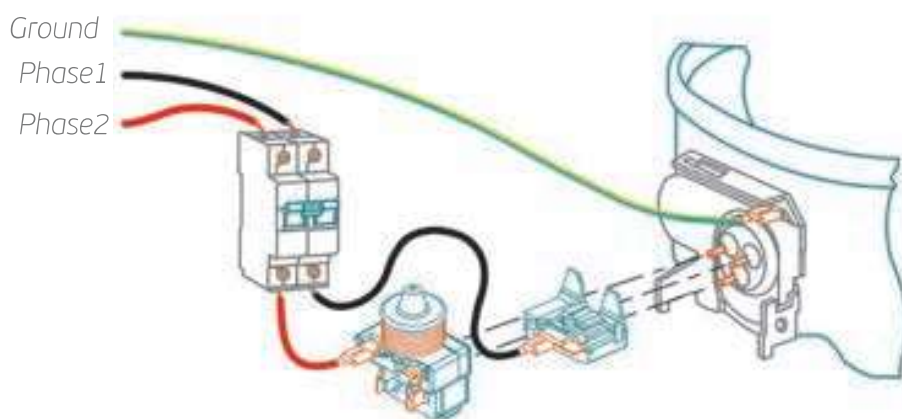


The use of incorrect electrical components, (overload protector, starting device) can cause a short circuit in the region the hermetic terminal of the compressor, which can lead to the hermetic pins to be dislodged, causing refrigerant leakage. This situation becomes more critical in the case of flammable refrigerant utilization, since associated with an ignition source, creating a risk of and exposed flame with serious risks to the technician's physical integrity.

1 - ELECTRICAL INSTALLATION



On single-phase installations, the phase wire must be protected by a circuit breaker and connected to the overload protector. The Neutral wire must be connected to the start device (Relay or PTC). The system must be grounded.



On two-phase installations, the use of a bipolar circuit breaker is mandatory, because in case of a short circuit, both phases will be protected. The system must be grounded.



When this bipolar starter isn't applied, the system is exposed to a short circuit in the region the hermetic terminal of the compressor, which can lead to the hermetic pins to be dislodged, causing refrigerant leakage. This situation becomes more critical in the case of flammable refrigerant utilization, since associated with an ignition source, creating a risk of and exposed flame with serious risks to the technician's physical integrity.



The usage of a not grounded system can generate severe risk of an electric shock on the technician.

2 - COMPRESSOR

If the compressor's replacement is necessary, be aware to these points below:

I. Check if the compressor is disconnected from the power grid.



You must never handle any electrical accessory with the compressor connected to the power grid. This can prevent several health risks to the technicians, such as electric shocks or getting burnt.

II. You must never remove the compressor without first removing all the refrigerant inside the system. You can use refrigerant recovery. In the case of replacing compressors with flammable refrigerants, such as R290 or R600a, make sure to remove the whole charge from the system.



The presence of flammable fluid residues can expose the technician to risks.

III. You must always use a pipe cutter to disconnect the pipes from the compressor. Under no circumstances, use the flame torch to disconnect the compressor tubes.



The use of a torch to disconnect the compressor from the system operating with flammable refrigerant can cause fire and release of toxic vapors.

IV. In case of compressor failure and / or internal contamination of the system, clean the refrigeration circuit with a suitable solvent, following the technical guidelines of the solvent manufacturer.



Failure to comply with the solvent manufacturer's technical guidelines may expose the technician to risk of fire or intoxication.

V. Before turning the compressor on:

- Check if the voltage specified on the compressor label in accordance with the power grid and system electrical installation, following item 1.1.



The application of a compressor with a wrong voltage can cause a short circuit in the region the hermetic terminal of the compressor, which can lead to the hermetic pins to be dislodged, causing refrigerant leakage. This situation becomes more critical in the case of flammable refrigerant utilization, since associated with an ignition source, creating a risk of an exposed flame with serious risks to the technician's physical integrity.

- Check if the electrical protection plastic cover is properly inserted.



Failure to use or improperly fix the plastic cover on the electrical terminal may expose the technician to risk of electric shock and fire.