WITH MORE THAN 60 YEARS OF EXPERIENCE IN COMPRESSOR TECHNOLOGY AND HIGHLY DEDICATED EMPLOYEES, OUR FOCUS IS ON DEVELOPING AND APPLYING ADVANCED COMPRESSOR TECHNOLOGIES TO ACHIEVE STANDARD SETTING PERFORMANCE FOR LEADING PRODUCTS AND BUSINESSES AROUND THE WORLD.

SECOP

HERMETIC COMPRESSORS FOR AC VOLTAGE

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KAPPA / DELTA

Secop Hermetic Reciprocating Compressors Made in Austria

1.
SECOP HERMETIC RECIPROCATING COMPRESSORS

The Secop range of hermetic reciprocating AC compressors packs a mighty punch in a small package. Compact design, efficient motors and low energy consumption are the main features in hermetic compressors that build on over 60 years of reliability and quality.

This catalogue contains information on Secop hermetic refrigeration compressors ranging from 115 V to 240 V.

The Secop hermetic refrigeration compressor programme consists of the types P / T / X / D / N / F / S and G-Series compressors designed for household or light commercia applications. All of the compressor types are designed for refrigeration systems using the designated refrigerants listed below.

P-Series T-Series X-Series D-Series N-Series F-Series S-Series G-Series

Refrigerant	R134a (typelabel stripe colour: blue), chemical formula: CH_2FCF_3	typelabel colour
Voltages & Frequencies	220-240 V, 50 & 60 Hz	yellow
	115 V, 60 Hz	green
Basic types	220- 240 V: PL, TL, TF, NL, NF, FR, SC, SC Twin | 115 V: PL, TF, TL, TT, NF, NL, NT, FF, SC	

Refrigerant	R404A/R507 (typelabel stripe colour: lilac), chemical formula R404A: CHF_2CF_3 / CH_3CF_3 / CH_2FCF_3 chemical formula R507: CHF_2CF_3 / CH_3CF_3	typelabel colour
Voltages & Frequencies	220-240 V, 50 & 60 Hz	yellow
	115 V, 60 Hz	green
Basic types	220- 240 V: PL, TL, TF, NL, NF, FR, SC, SC Twin | 115 V: PL, TF, TL, TT, NF, NL, NT, FF, SC	

Refrigerant	R407C (typelabel stripe colour: lilac), chemical formula: CH_2F_2 / CHF_2CF_3 / CH_2FCF_3	typelabel colour
Voltage & Frequency	220-240 V, 50 Hz	yellow
Basic types	SC, SC Twin	

Refrigerant	R290 (typelabel stripe colour: red), chemical formula: C_3H_8	typelabel colour
Voltages & Frequencies	220-240 V, 50 & 60 Hz	yellow
	115 V, 60 Hz	green
Basic types	TL, DL, NL, SC	

Refrigerant	R600a (typelabel stripe colour: red), chemical formula: C_4H_{10}	typelabel colour
Voltages & Frequencies	220-240 V, 50 & 60 Hz	yellow
	115 V, 60 Hz	green
Basic types	PL, TL, XV, DL, NL	

Note: Direct current compressors and variable speed compressors have a grey label.

1.1 Voltages and frequencies

Secop AC refrigeration compressors are designed for the main voltage 220 V 50 Hz and 115 V 60 Hz. The compressors can also be used at other voltages and frequencies. Thus 220 V compressors can also be used on 240 V 50 Hz mains as the higher voltage tends to amplify the motor capacity. Some compressors can be used on 60 Hz mains, for instance 220 V 60 Hz and 230 V 60 Hz, however dependent on the application, the compressor, and the type. The rated voltages 100 V 50 Hz, 120 V 60 Hz, 127 V 60 Hz, 110 V 50 Hz and 127 V 50 Hz will strengthen the motors. The rated voltages 110 V 60 Hz and 100 V 60 Hz will weaken the motors. If used at 50 Hz the motors will be strengthened but the compressor capacity will be reduced by approx. 17%.

1.2 Refrigerants

Refrigerants with certain molecular structures have been identified as substances that can be harmful to the environment. Two properties are critical: the ozone depleting potential (ODP) and the global warming potential (GWP). The first negative property is covered by the Montreal Protocol ('Montreal Protocol on Substances that Deplete the Ozone Layer') from 1987 which is an international agreement designed to protect the earth's ozone layer by phasing out the production of numerous substances that are responsible for ozone depletion. The result was the replacement of HCFC (halogenated chlorofluorocarbon, R22) refrigerants with HFC (hydrofluorocarbon, e.g. R134a) refrigerants which have an ODP of zero (or close to zero). The significant downside of HFC refrigerants is their high global warming potential since they belong to the category of greenhouse gases. This fact was discovered after the Montreal Protocol was adopted and was recently covered by an amendment adopted in Kigali in October 2016. Before this amendment, the United States and the EU had introduced regulations to define the phase down and replacement of these HFCs on a federal level.

Secop has been a pioneer and early adopter of hydrocarbons as refrigerants and believes the most efficient and economical friendly substances for use in cooling appliances are isobutane (R600a) and propane (R290). Secop recommends the first one as a replacement for household appliances and small capacities in the light commercial segment and the latter one for medium to large light commercial applications. Secop is also aware that the transition towards hydrocarbons is challenging for manufacturers as well as for service providers and not always feasible in the short term.

Tests have so far shown good results with refrigerant R452A as a drop-in replacement for R404A and R507. Based on this information, Secop allows the use of R452A on all its R404A and R507 released compressors. It is the customer's responsibility to validate the application, and they should carefully consider the requirements and drawbacks when changing from R404A/R507 to R452A in their application.

The HFO (hydrofluoroolefin) R1234yf can be used as drop-in for replacing R134a in the short-term for most of the applications. R1234yf is classified as flammable according to relevant safety standards. It is more expensive than R134a, however, it holds remarkably less greenhouse potential than R134a. Our R134a compressors can be used for testing with this refrigerant, and we will be more than happy to assist you in discovering that right solution for you and when it comes to the approval procedure. Investigations into material compatibility have so far shown good results with refrigerant R1234yf in Secop R134a compressors. These results must be confirmed in ongoing long-term tests. Currently, testing system performance can be conducted using compressors originally designed for R134a. The same application limits as described on the R134a data sheet may be used, however, partly with changed electrical equipment. Since R1234yf is classified as a flammable refrigerant, the compressors must be used with starting equipment approved for flammable refrigerants. The compressors designed for R134a do not have a safety approval for flammable refrigerants like R1234yf.

1.2.1 Handling of refrigerants

To ensure reasonable refrigeration system life, the refrigerant must have a maximum moisture content of 20 ppm (20 mg/kg). Do not fill the refrigerant from a large container into a filling bottle through several container sizes, as with every drawing-off the water content in the refrigerant is increased considerably.

1.2.2 Charging with refrigerant

Normally, charging with refrigerant is no problem with a suitable charge, provided that the charging amount of the refrigeration system equipment is known.

Always charge the refrigerant amount and type stated by the refrigerator manufacturer. In most cases this information is stated on the refrigerator type label. The different compressor brands contain different amounts of oil, so when converting to another brand it may be advisable to correct the amount of refrigerant. Charge of refrigerant can be made by weight or volume.

Flammable refrigerants like R600a and R290 must always be charged by weight. Charging by volume must be made with a refrigerant charging cylinder. The refrigerant R404A and all other refrigerants in the 400 series must always be charged as liquid.

If the charging amount is unknown, charging must be done gradually until the temperature distribution above the evaporator is correct. However, mostly it will be more appropriate to overcharge the system and then gradually draw off refrigerant until the correct charge has been obtained. The refrigerant charge must be made with the compressor running, the refrigerator without load and with the door closed.

The correct charge is characterized by the temperature being the same from the inlet to the outlet of the evaporator. At the compressor suction connector the temperature must be approx. ambient temperature. Thus transfer of moisture to the refrigerator insulation is avoided.

Systems with an expansion valve must be charged with refrigerant until there are no bubbles in the sight glass, which should be placed as close to the expansion valve as possible.

1.2.3 Flammable refrigerants R290 and R600a

R600a and R290 are hydrocarbons. These refrigerants are flammable and are only allowed for use in appliances which fulfil the requirements laid down in the latest revision of EN/IEC 60335-2-24. (To cover potential risk originated from the use of flammable refrigerants). Consequently, R600a and R290 are only allowed to be used in household appliances designed for this refrigerant and fulfil the above-mentioned standard. R600a and R290 are heavier than air and the concentration will always be highest at the floor. R600a must only be stored and transported in approved containers and must be handled according to existing guidelines.

Do not use open fire near the refrigerants R600a and R290. The refrigeration systems must be opened with a tube cutter.

The flammability limits are approx. as follows,

Refrigerant	R600a	R290
Lower limit	1.5 % by vol. (38 g/m³)	2.1 % by vol. (39 g/m³)
Upper limit	8.5 % by vol. (203 g/m³)	9.5 % by vol. (177 g/m³)
Ignition temperature	460 °C	470 °C

In order to carry out service and repair on R600a and R290 systems the service personnel must be properly trained to be able to handle flammable refrigerants. This includes knowledge on tools, transportation of the compressor and refrigerant, and the relevant regulations and safety precautions when carrying out service and repair.

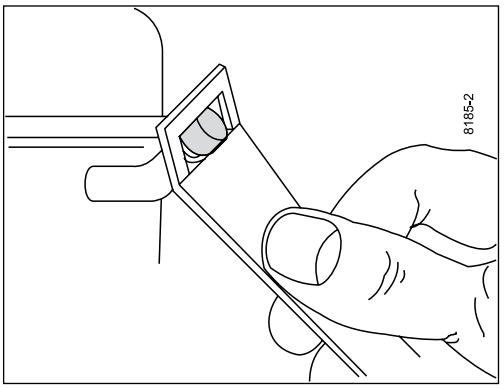
Do not use open fire when working with refrigerants R600a and R290!

Conversions from refrigerants R12 or R134a to R600a is not permitted, as the refrigerators are not approved for operation with flammable refrigerants, and the electrical safety has not been tested according to existing standards either. The same applies to conversions from refrigerants R22, R502 or R134a to R290.

Secop compressors for the flammable refrigerants R600a and R290 are equipped with a yellow warning label as shown.

1.3 Connectors

Some compressors are supplied with sealed connectors, which consist of a thick walled copper plated steel tube with great corrosion resistance and good braze bility. The connectors are welded in the compressor housing and thus the welding cannot be destroyed by overheating during brazing operations. The sealing is an aluminium cap which gives a tight sealing. The seal is easily removed with an ordinary pair of pliers or with the tool shown in the figure.
Compressor with copper connectors are sealed with rubber plugs.
Refer to chapter 13.1 for connector positions.



Oil cooler tubes are made of copper and the connectors are sealed with rubber plugs. 220 V compressors are normally supplied with millimetre tubes, while 115 V compressors are supplied with inch tubes. All connectors have a shoulder to provide optimal brazing conditions. Drifting of the connectors for more than 0.3 mm is not allowed.
Compressors with an "S" in the model denomination and all NL/DL types have a direct intake system, which means increased capacity. The suction connectors at these compressors must be connected to the suction line to prevent capacity loss.

For the refrigerants R600a and R290, process tubes can be closed with a LOKRING® connection. Brazing is not allowed during servicing systems with flammable refrigerants.

1.4
HFC refrigerants (R134a)

The HFC refrigerant R134a and HFC mixtures require Polyester type oil. Contamination of components and systems with mineral oil and alkylbenzols must be avoided. Greasy substances and other long-chained, high molecular substances not dissolved must not be present. Manufacturing processes which require a lubricant can be done with Polyester oil approved for the compressors. Procedures for mounting, evacuation and charging must be carried out in such a way that contamination with chlorine refrigerants is avoided. HFC refrigeration systems must always have a drier with 3 Angstrom Molecular Sieves.

1.5
Compressor designations

The first letter (P, T, X, D, N, F, S or G) indicates the compressor series whereas the second indicates the motor protection placing. Nominal displacement is indicated by a number, which – for practical reasons - has been approximated to the actual displacement.
Between the indicators for compressor series and displacement the identification marking for the optimization of the compressor is given.

The letter following the marking for nominal displacement indicates which refrigerant must be used as well as the field of application of the compressor. LBP (Low Back Pressure) indicates the range of low evaporating temperatures, MBP (Medium Back Pressure) the range of medium evaporating temperatures, and HBP (High Back Pressure) the range of evaporating temperatures.
The extra "T" indicates a compressor intended for the tropics.

The final letter in the compressor marking provides information on starting torque. If, as standard, the compressor is intended for LST and HST, this place is left empty.

"K" also indicates low starting torque (Capillary tube, LST = Low Starting Torque) and "X" high starting torque (Expansion valve, HST = High Starting Torque)

1.6
Design

All Secop hermetic reciprocating compressors for R404A/R507 and R407C from the TL, TF, NL, FR and SC range are standard efficiency types. Furthermore, all compressors for R290 from the TL, NL and SC range are standard efficiency types as well. All compressors for R134a with the denominations PL, PLE, TLS, TFS, TLES, TTE, TLY, NL, NF and NLE are designs with semi direct intake. Compressors with the denomination NLY and TTY are designs with direct intake. Using the wrong suction connector on TTY and NLY is not allowed, as the compressor will not function. Using the wrong suction connector on PL, PLE, TLS, TTE, TFS, TLES, TLY, NL, NF and NLE compressors will lead to reduced capacity and efficiency.

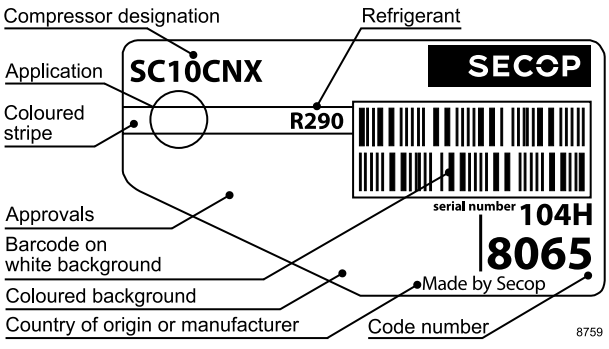
All compressors for R600a are designed with semi direct intake. Using the wrong suction connector will lead to reduced capacity and efficiency. Please note that the suction and process connectors on all TLS, TFS, TLX, TTE, TLES, TTY and TLY compressors have been interchanged as compared with the basic TL compressors.

1.7
Compressor dimensions

The built in conditions (total height, weight, tube dimensions etc.) are specified in the individual datasheets including dimensioned sketches.

1.8
Type label

All compressors for 220-240 V have a yellow label with the type designation. Compressors for 115 V have a green label with the type designation.
Direct current compressors and variable speed compressors have a grey label.
The label for "R404A R507" or "R404A R407C R507" has a lilac stripe. The label for "R134a" has a blue stripe. The labels for "R290" and "R600a" both have a red stripe.
The country of origin indicated on the compressor paper label and on the compressor varies depending on the manufacturing place **(see 1.9)**



Barcode format
A Secop compressor type label contains two barcode lines. The first line is the full code number of the compressor and the second line is the compressor serial number. These barcodes contain 8 characters each and are printed in code 128.

Serial number
The compressor serial number will also be written in normal letters below the barcodes
The serial number contains 8 digits, written in characters 0...9 and A...Z, without I and O.

Exception to all mentioned above: XV compressor type label.

1.9 Date code & country of origin

Secop compressors have a manufacturing date code stamping on the housing.
The content of the coding (Fig.1) is in two lines according to the example below:

H4485C (6 characters or just 4 characters for D-Series compressor, e.g. 4485)
051D11R (7 characters, 8 characters for BD Micro)

<u>Composition of line 1</u>

H4485: Compressor type information (102H4485 = H4485)
C: Internal Secop code

<u>Composition of line 2</u>

05: Production week
1: Production year
D: Production day
A = Monday, B = Tuesday,
C = Wednesday, D=Thursday, etc.
11: Production hour 00 to 23 or shift code -1, -2, -3
R: Internal production location code
A to G, U Germany:
A until week 50/2005
D until week 35/2006
U until week 08/2010
K to N Slovenia:
K until week 39/2012
L until week 34/2011
M until week 02/2012
N until week 02/2012
A, D, L,M, R, U, – Slovakia:
A from week 01/2006
D from week 38/2006
L from week 45/2011
M from week 09/2012
R from week 01/2005
U from week 12/2010
– (no character) from week 06/2019
S, R Mexico:
R up to week 27/2004
W to Z China

On BD Micro compressors (code number 109Z....), the production year is indicated by two digits, e.g. "11" for 2011 and a serial number behind the location code.

The country of origin (in capital letters) or the manufacturer is also marked on the typelabel, examples:

MADE IN SLOVAKIA
- for compressors made in Slovakia (Fig.2)

Made by Secop | optional label "Made in China"
- for compressors made in China (Fig.3)
- "Made by Nidec" from 05/2018 to 12/2019

Fig.1 Needle print coding on compressor housing and country of origin on type label

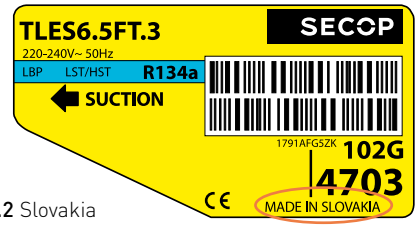


Fig.2 Slovakia

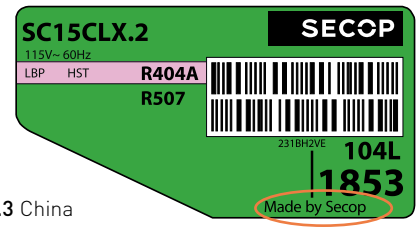


Fig.3 China

1.10 Denomination

Key to AC-Compressor Type Designation (P / T / D / N / F / S / G-Series)

1	1b				2						
Compressor design	Protector location				Optimization level						
	Internal		External								
	PTC LST	Relay HST	PTC	Relay	Low ← Standard → High						
P	**L**				**L**	Blank	**E**[a]	Semi-direct intake			
T			**T**	**F**			**E**[b]	**S**	**Y**[a][b]	**X**[a]	
D								Semi-direct or direct intake			
N											**U**[a]
F	**R**										
S	**C**			**C**			**E**	Direct intake			
G	**S**							Semi-direct intake			

L = Low
Blank = Standard

S = Semi-direct intake
E = Energy-optimized
Y = High energy-optimized +
X = High energy-optimized ++
U = High energy-optimized +++

Key to AC-Compressor Type Designation (Variable Speed)

1	2			3
Compressor design	Optimization level			Compressor size
	Low ← Standard → High			Displacement
XV	**L**	Blank		**5.0** **7.2** **8.0**
DLV				**4.0** **5.7**
NLV				**8.0** **10** **12.6**
SLV				**12** **15**

1 The first letter of the denomination (P, T, D, N, F, S, G or X) indicates the compressor series. LV or V means variable speed compressors

1b The second letter for fixed speedcompressors indicates motor protection placing.

2 L, E, Y, X and U mean different energy optimization steps. S means semi direct suction. On all these mentioned types the indicated suction connector has to be used. Using the wrong connector as suction connector will lead to reduced capacity and efficiency.

3 A number indicates the displacement in cm^3, but for PL compressors the number indicates the nominal capacity.
The letter after the displacement indicates which refrigerant must be used as well as the field of application for the compressor.

3		4		5	6
Compressor size		Application range	Refrigerant	Code letter for starting characteristics	Generation
Capacity at rating point	Displacement				
20 30 35 50		C = LBP	R22		
		CL = LBP	R404A/R507		
		CM = LBP	R22		
	2.5, 3, 4 4.5, 4.8, 5 5.7, 6, 6.5 7, 7.5, 8 8.7, 9, 10	CN = LBP/MBP	R290		Blank → first generation
		CNL = LBP	R290		
		D = HBP	R22		
		DL = HBP	R404A/R507 R407C	Blank → universal (principal rule)	
	4, 4.8 5.7, 6.5 7.5, 8.7 9.4, 10	DN = HBP	R290		.1 → updated first generation
		F = LBP/(MBP)	R134a		
		FT = LBP tropical	R134a		
	5.2, 5.5, 5.7 6, 6.1, 7, 7.3 8.0, 8.4, 8.8, 9 10, 11, 12.6 13, 13.3, 15	G = LBP/MBP/HBP	R134a		
		GH = Heat pump	R134a	K = LST characteristics (capillary tube)	.2 → second generation
		GHH = Heat pump optimized	R134a		
	6 7.5 8.5 10 11	K = LBP/(MBP)	R600a		
		KT = LBP/(MBP) tropical	R600a		
		MF = MBP	R134a	X = HST characteristics (expansion valve)	.3 → third generation
	10 12 15 18 21	MK = MBP	R600a		
		ML = MBP	R404A/R507		
		MN = MBP	R290		.4 → fourth generation
		S = LBP/HBP (service)	R426A R401A/R401B R409A/R409B		
	18 21 26 34	ST = LBP tropical (service)	R426A R401A/R401B R409A/R409B		

a) = Run capacitor compulsory
b) = Run capacitor optional

4		5	6
Application range	Refrigerant	Code letter for starting characteristics	Generation
F = LBP/(MBP)	R134a	X = LST & HST characteristics (capillary tube & expansion valve)	Blank → first generation
K = LBP/(MBP)	R600a		
EKT = LBP/(MBP) extreme tropical	R600a	Blank → universal (principal rule)	.1 → updated first generation
CL = LBP	R404A/R507		
ML = MBP	R404A/R507	K = LST characteristics (capillary tube)	
CN = LBP/MBP	R290		.2 → second generation
CNL = LBP	R290	X = HST characteristics (expansion valve)	
CNL = LBP	R290		

4 LBP (Low Back Pressure) indicates the range of low evaporating temperatures, typically -10°C down to -35°C or even -45°C, for use in freezers and refrigerators with freezer compartments. MBP (Medium Back Pressure) indicates the range of medium evaporating temperatures, typically -20°C up to 0°C, such as in cold cabinets, milk coolers, ice machines and water coolers. HBP (High Back Pressure) indicates high evaporating temperatures, typically -5°C up to +15°C, such as in dehumidifiers and some liquid coolers. T as extra character indicates a compressor intended for tropical application. This means high ambient temperatures and capability of working with more unstable power supply.

5 The next letter in the compressor denomination provides information on the starting torque. If, as principal rule, the compressor is intended for LST (Low Starting Torque) and HST (High Starting Torque), the place is left empty.
The starting characteristics depend on the electrical equipment chosen. K indicates LST (capillary tube and pressure equalization during standstill) and X indicates HST (expansion valve or no pressure equalization). Exception: X-Series compressors.

6 The final letter (separated by a dot) mentions the generation of the compressor.

2.
APPLICATION RANGE

R290

CN
Compressors with denominations ending with CN are designed for low evaporating temperatures (LBP Low Back Pressure) and medium evaporating temperatures (MBP Medium Back Pressure) for use in commercial refrigerators, freezers, glass door merchandisers and similar applications in regions with normal supply voltage.

CNL
Compressors with denominations ending with CNL are designed for low evaporating temperatures (LBP Low Back Pressure) for use in commercial freezers and similar applications in regions with normal supply voltage.

MN
Compressors with denominations ending with MN are designed for medium evaporating temperatures (MBP Medium Back Pressure) for use in commercial refrigerators, freezers and similar applications in regions with normal supply voltage.

R404A/R507 and R407C

CL
Compressors with denominations ending with CL are primarily designed for low evaporating temperatures (LBP Low Back Pressure) for use in commercial refrigerators, freezers and similar applications in regions with normal supply voltage.

ML
Compressors with denominations ending with ML are primarily designed for medium evaporation temperatures (MBP Medium Back Pressure) for use in commercial refrigerators, bottle coolers, ice machines and similar applications.

DL
Compressors with denominations ending with DL are primarily designed for high evaporation temperatures (HBP High Back Pressure) for use in commercial refrigerators, liquid coolers, dehumidifiers, refrigerated display counters, vending machines, heat pumps and similar applications.

R600a

K
All compressors for R600a have denominations ending with K after the number for displacement or capacity. They are designed for low operating temperatures (LBP Low Back Pressure) for use in refrigerators, freezers and similar applications.

KK
Compressors with endings K and KK are designed for regions with stable supply voltage.

KTK
Compressors with endings KTK are designed for less stable supply voltage and tropical conditions.

MK
Compressors with endings MK are designed for medium operating temperatures (MBP Medium Back Pressure) for use in commercial refrigerators like bottle coolers.

Some of the smaller TLS-K, TLES-K, TLY-K and the PLE-K compressors are also released for medium operating temperatures (MBP Medium Back Pressure).

None of the compressors are released for high evaporation temperatures (HBP High Back Pressure).

R134a – 115 V
R134a – 220-240 V

F
Compressors with denominations ending with F are primarily designed for low evaporating temperatures (LBP Low Back Pressure/ MBP Medium Back Pressure on small displacements) for use in refrigerators, freezers and similar applications in regions with stable supply voltage.

FT
Compressors with denominations ending with FT are F-types designed for low evaporation temperatures (LBP Low Back Pressure) for use in refrigerators, freezers and similar applications operating in regions with unstable supply voltage.

FK
Compressors with denominations ending with FK are F-types designed for low evaporation temperatures with LST starting characteristics (capillary tube)

FX
Compressors with denominations ending with FX are F-types designed for low evaporation temperatures with HST starting characteristics.

G
Compressors with denominations ending with G are primarily designed for high evaporation temperatures (HBP High Back Pressure) for use in liquid coolers, dehumidifiers, refrigerated display counters, vending machines and similar applications. The compressors can also be used for 'Heavy Duty' purposes at low evaporating temperatures for use in refrigerators, freezers and similar applications operating in regions with unstable supply voltage.

R134a – 115 V

GK
Compressors with denominations ending with GK are G-types designed for high evaporating temperatures with LST starting characteristics (capillary tube).

GX
Compressors with denominations ending with GX are G-types designed for high evaporating temperatures with HST starting characteristics (expansion valve).

R134a – 220-240 V

GH
Compressors with denominations ending with GH are designed for high evaporating temperatures for cooling of electronic cabinets and for use in heat pump systems.

GHH
Compressors with denominations ending with GHH are optimized versions of GH compressors.

MF
Compressors with denominations ending with MF are primarily designed for medium evaporation temperatures (MBP Medium Back Pressure) for use in commercial refrigerators, bottle coolers, ice machines and similar applications.

3.
MOTORS BREAKDOWN TORQUE

The motor designation relates to the output at a load corresponding to half the breakdown torque. The concept "breakdown torque" expresses the highest load the motor is capable of handling without stopping. When testing a compressor in practice, motor breakdown torque should be sufficiently high to enable the motor to handle extreme conditions.

The load the compressor is capable of withstanding is illustrated by "breakdown curves" and the operating conditions the compressor is capable of withstanding are thus made clear. These curves are determined by maintaining a constant suction pressure (evaporating temperature) and subsequently allowing the compressor to work at an increasing back pressure on a constant voltage. If the load becomes too high, the number of revolutions will fall while current consumption increases and finally the compressor will stop. The figure illustrates the load limits for compressors TL - "F" and TL - "G" on various under voltages and the same motor temperature. In addition, the limit for TL – "G" at 60Hz has been included in the diagram.

The diagram also shows a typical example of the load fluctuations to which a compressor is subjected from start up to stationary operation in a refrigerant circuit with capillary tube throttling. The pressure sequence, determined by the start condition and system composition, is called "system characteristics". In this example the start condition is determined by the occurrence of pressure and temperature equalization in the refrigeration system at 43°C.

For a compressor to be able to handle the shown load sequence, it is a precondition that the breakdown curve at a specific voltage does not intersect the system curve.

It can be seen from the figure that the sequence of the breakdown curve for a TL – "G" at 60 Hz is more or less the same as the curve for a TL – "F" at 50Hz. In the example shown consideration should be given to the inclusion of a G compressor if refrigeration appliances designed for 230V 50Hz are to be connected to a 220V or 230V 60Hz mains supply. Furthermore, improved under voltage properties are obtained at the same frequency by the stronger motor of a G compressor, than is the case with a corresponding "F" compressor. This is the reason why "G" types are an excellent solution in fields with heavier under voltage, while the "F" type is used in household refrigeration and freezing appliances intended for countries with a more stable power supply.

Higher motor torque will be required for operation at high evaporating temperatures (HBP) than for operation at low evaporating temperatures (LBP). "G" compressors are suitable for this field and can thus be characterized as R134a universal compressors.

Energy – optimized compressors are characterized by a minimum in mechanical and electrical losses but high volumetric efficiency. With a view to achieving high motor efficiency, well defined application conditions, limited under voltage and a proper system curve should be taken into consideration when dimensioning the compressor. Here, the careful dimensioning of system components (condenser surface, condenser volume and capillary tubes) is necessary.

System and breakdown characteristics

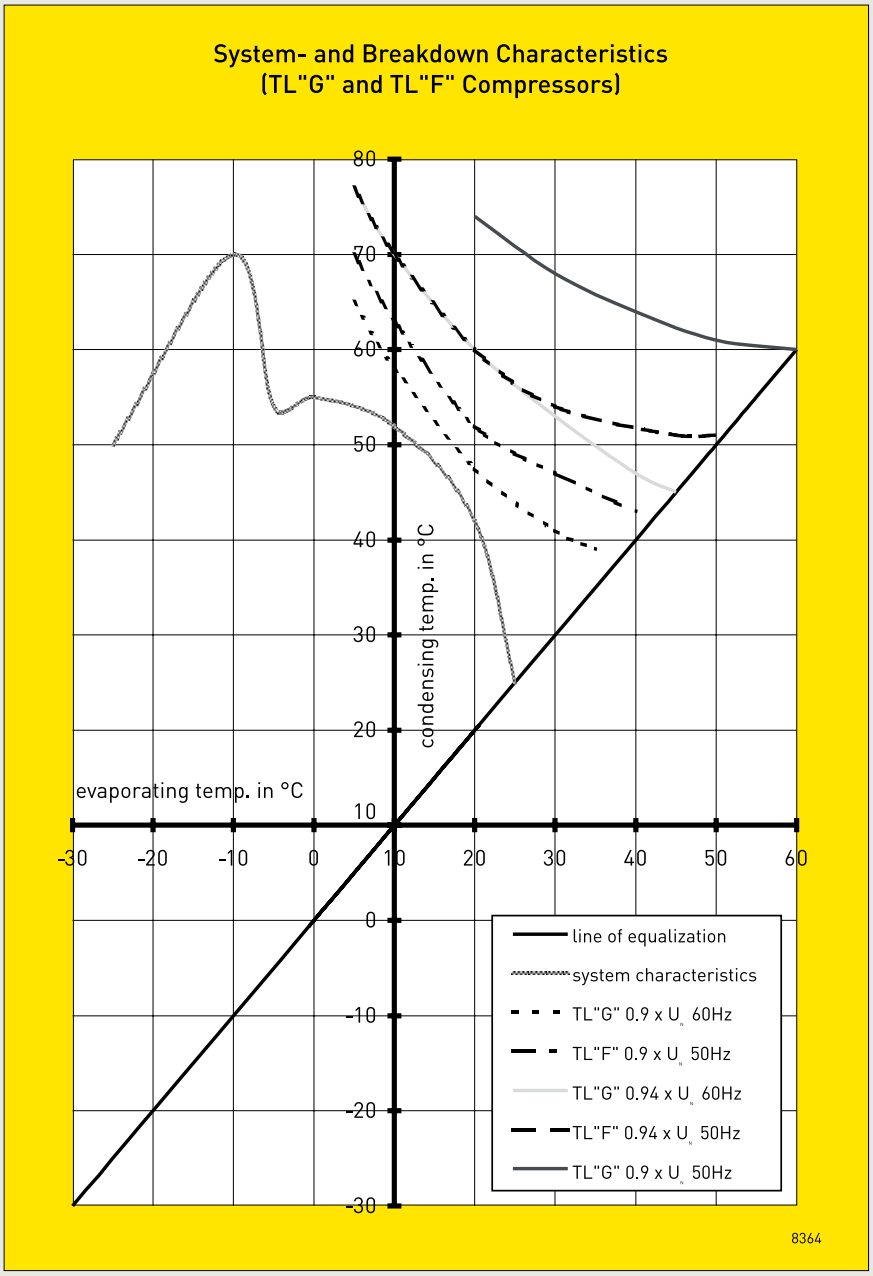


Fig. : Presentation of system and breakdown curves

Seen from this point of view, "F" compressors are a better solution in terms of energy consumption than the "G" types, and are intended for household refrigeration appliances. In all cases the precondition for trouble free operation is a stable supply voltage (min. 90% of line voltage) and suitable system dimensioning.

4.
PRECONDITION FOR LONG OPERATING LIFE

In order to achieve trouble free operation and long operating life for a hermetic compressor, the following preconditions should be observed:

1. Sufficient starting torque of the compressor motor to allow the motor to start at the pressure conditions in the refrigeration system.
2. Sufficient breakdown torque to allow the motor to handle the load conditions at start up and during operation.
3. When the refrigeration system is in operation, the temperature in the compressor should not rise to levels which could damage its components. Consequently, condensing and compression temperatures should be kept as low as possible.
4. Precise dimensioning of the refrigeration system in question and careful evaluation of the operating conditions of the compressor at expected maximum loads.
5. Sufficient cleanliness and low residual humidity in the circuit.

4.1 Motor overload

Compressor start up is influenced by the starting and/ or breakdown torque of the motor. If starting and/ or breakdown torque is insufficient, the compressor either cannot start or the start will be hampered and delayed because the motor protector is activated. Repeated start attempts subject the motor to overload, which sooner or later will result in failure. Faults of this kind can mostly be avoided by using the correct compressor/ motor combination. Secop offers the best solution for nearly all applications. It is a question of selecting the correct compressor for difficult fields of application.

4.2 Thermal overload

Operating conditions resulting in thermal decomposition of the materials used in the compressor must be avoided to ensure long compressor life. The materials relevant in this relation are motor insulation, refrigerant and oil.

The motor insulation consists of the insulating enamel for the copper wires, the slot liner of the stator iron, bandages and feeder cables.

As early as 1960, Secop (Danfoss Compressors) introduced fully synthetic insulation materials on all its compressors and the enamel for the wire insulation and the insulating system itself has improved continuously ever since. The result is constantly improved protection against motor overload. Like all other CFC gases, R12 and R502 were found to be harmful to the environment and were consequently prohibited. These refrigerants were used together with mineral oils. A so called Spauschus reaction between oil and refrigerant could consequently occur at high temperatures, which led to valve coking, especially at high residual humidity.

5.
DESIGN LIMITS

In order to secure a satisfying lifetime of the compressor, some design criteria for the appliances must be fulfilled. Both the condensing temperature and the compressor temperature should be kept as low as possible. This can be done by using well dimensioned condenser surfaces and by ensuring good ventilation around the compressor under all operating conditions.

In order to protect the compressor against overload, the compressor must start and work properly through pressure peaks obtained in the highest ambient temperature and lowest working voltage. These limitations ensure a protection of valves, gaskets, oil, and motor insulation. Refrigerants R134a, R404A or R507 used today need improved oils. They are only used in connection with special quality polyester oils.

Because of these new oil types and the application of the above mentioned refrigerants there is – in practice – no longer any danger of valve coking.
Restrictions on condensing and motor temperatures are now set to protect the motor and thus increase its life.

For the application of Secop compressors in household and commercial refrigeration using the available refrigerants, we recommend the following rules to be observed:

5.1 Coil temperature

Coil temperature must not exceed 125°C during continuous operation.

For limited periods of time, e.g. during compressor start up or in the case of short load peaks, the temperature should not exceed 135°C.

For commercial refrigeration with R134a the same limits as for household refrigeration apply.

However, fan cooling of the compressor is recommended.

5.2 Condensing temperature

When using R600a or R134a the condensing temperature during continuous operation must not exceed 60°C. During limited load peaks the temperature must not exceed 70°C. In commercial refrigeration using R404A and R507 the condensing temperature limit is 48°C during continuous operation and 58°C in the case of load peaks. All CL and DL compressors are fan cooled.

6.
ELECTRICAL EQUIPMENT / MOTOR SYSTEMS

The compressors are equipped with a single phase AC motor. The electrical equipment of Secop AC compressor series P, T, D, N, F, S and G (electrics with relay, starting device, capacitor, cord relief and cover) is classified as "normal tight" (IP20). The motor protector is built into the motor (winding protector). Exceptions include compressors with the denominations TF/TT and NF/NT and some SCs. Earth connections are located on the bracket around the current lead in of the compressor.
No high potential test or start tests must be carried out while the compressor is under vacuum.
No attempt must be made to start the compressor without a complete starting device.

R134a: With some exceptions these compressors are designed with universal motors which means that they can obtain a high (HST) or low starting torque (LST) depending on the external electrical equipment used.

R600: Nearly all compressors for R600a are designed only for use with Low Starting Torque (LST).

R290: All compressors for R290 are designed for use with Low Starting Torque (LST) or High Starting Torque (HST).

R404A/R507 and R407C: All compressors for R404A/R507 and R407C are designed only for use with High Starting Torque (HST).

6.1 LST (RSIR)

Compressors with the motor type Resistant Start Induction Run (RSIR) have a starting device for Low Starting Torque (LST). The design of the electrical equipment depends on the actual compressor design. The following designs of starting devices exist:

a) PTC + cord relief + cover, the motor protector is built into the motor (winding protector),

b) Relay housing incl. motor protector + cord relief + cover (alternative: terminal board with cord relief)

The PTC starting device requires pressure equalization before each start. This starting device is normally used in well designed refrigerating systems with capillary tube as throttling device. The PTC needs a compressor standstill period of 5 minutes to cool down before each start.

6.2 LST (RSCR)

Compressors with the motor type Resistant Start Capacitor Run (RSCR) have a starting device for Low Starting Torque (LST). This starting device consists of a PTC and a run capacitor.
The PTC starting device requires pressure equalization before each start. This starting device is normally used in well designed refrigerating systems with capillary tube as throttling device.
The PTC needs a compressor standstill period of 5 minutes to cool down before each start.

6.3 HST (CSR)

Compressors with the motor type Capacitor Start Run (CSR) have a starting device for High Starting Torque (HST). The following designs of starting devices exist:

a) Relay + starting capacitor + run capacitor + terminal board + cord relief + cover

b) Relay + starting capacitor (with bracket) + run capacitor + cover/ protector/ protector holder (parts of compressor), used for compressors which have an external protector.

The starting capacitor is designed for short time cut in. "1.7% ED", which is stamped on the starting capacitor, means for instance max. 10 cut ins per hour each with a duration of 6 seconds.

6.4
HST (CSIR)

Compressors with the motor type Capacitor Start Induction Run (CSIR) have a starting device for High Starting Torque (HST). This starting device consists of a starting relay and a starting capacitor. The following designs of starting devices exist:

a) Relay + starting capacitor + cord relief + cover

b) Relay housing including motor protector + starting capacitor + cord relief (2x)

c) Relay + starting capacitor (with bracket) + cover/ protector/ protector holder (parts of the compressor), used for compressors which have an external protector.

The starting device requires no pressure equalization before each start and is normally used in refrigerating systems with expansion valve as throttling device or in capillary tube systems where pressure equalizing is not obtained during standstill periods.

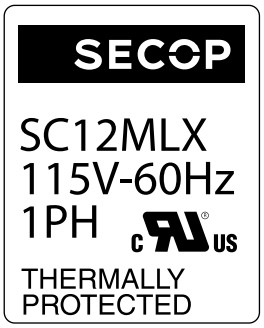
The starting capacitor is designed for short time cut in. "1.7% ED", which is stamped on the starting capacitor, means for instance max. 10 cut ins per hour each with duration of 6 seconds (normally shorter than 1 sec).

6.5
Connections

The electrical equipment is equipped with connectors depending on the ordered code number,
Starting relays: 6.3 mm spade connectors only
PTCs: 6.3 or 4.8mm spade connectors and screws
The power supply must be connected as shown in the wiring diagrams for the chosen electrical equipment given in the actual datasheets.
The compressor application must factor in power supply from an electrical circuit with the appropriate fuse or circuit breaker. In addition, the use of a GFCI (Ground Fault Circuit Interrupter) or RCD (Residual Current Device) is recommended. **External protectors are always pre-assembled.**

6.6
Approvals

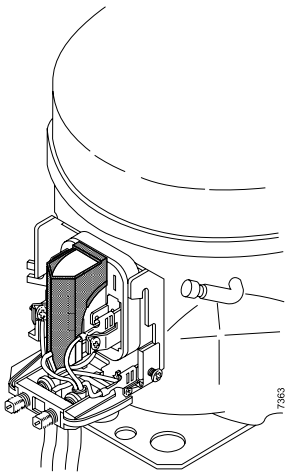
The compressors have been approved in respect of safety by testing authorities in the majority of Western European countries. Actual standards to which the compressors have been approved are specified in the individual data sheets. **Approval markings appear on the compressor type labels**.



Approval mark

Most compressors which are capable of running at 60Hz have been approved in respect of safety by testing authority **UL.**
UL approval markings appear on a separate approval mark label.

Actual standards to which the compressors have been approved are specified in the individual data sheets.



Note:
To fulfil the requirements of EN 60335-2-34 the protection screen 103N0476 must be applied to the PTC starting device.
The screen is not needed when using an ePTC.

6.7 ePTC

Introduction

The asynchronous motor of a single phase AC powered compressor has two windings, a main and an auxiliary winding. The auxiliary winding is powered high at start by means of a starting device, then powered down, often still utilized continuously by means of a run capacitor. The starting device of our standard PTC starters is a "Positive Temperature Coefficient" resistor, PTC. When heated up during the start phase, the PTC almost cuts off the current to the auxiliary winding, leaving only enough current to keep itself heated to this closing level. The associated heat loss amounts to approximately 2.5 W. With the ePTC this loss can be reduced down to approximately 0.4 W by an extra electronic circuit.

Features

The electronic design of the starting device offers some strong features such as:

- Compressor restart possible after a few seconds. Only a very short cooling time is necessary due to the electronic design.
- Operational wattage loss reduced by 2 watt
- PTC protection screen not needed (surface temp. < 82 °C)
- Temperature resistant up to min. +60 °C

Technical data

Electronically controlled PTC (version E-2) can alternatively be used for P / T / D / N / F / S - Series		
Code number	103N0050 (25 Ohm) 103N0055 (38 Ohm)	103N0058 (5 Ohm)
Nominal supply voltage	220 - 240 V, 50/60 Hz	115 V, 60 Hz
Minimal supply voltage	187 V	90 V
Maximal supply voltage	254 V	140 V
Power consumption	approx. 0.4 W (after 2 s)	approx. 0.5 W (after 2 s)
Spade connectors	4.8 mm	6.3 mm
Cables	temperature resistant up to min. +60 °C	
Run capacitor	optional	
Ambient temperatures	from 0 °C to 50 °C during operation from -20 °C to 70 °C during transport	
Enclosure	IP 00	
PTC protection screen	not needed (surface temp. < 82 °C)	

Functional description

The main component of the ePTC is the same PTC pill like in other 220-240V 103N.... Secop PTC starters. Thus the start of the compressor motor is performed in the same way. In standard PTC starters the >2 W energy loss to keep the PTC heated during compressor operation are not avoidable. In the ePTC a small electronic circuit cuts off the current through the PTC a short time after start and thus reduces the energy loss down to an approx 0.4W. The switch used is a Triac, an electronic AC switch, controlled by a timer circuit. As the timer circuit has a short reset time and the main PTC cools down during compressor operation, the full start torque will be available after approx 6 seconds compressor off time. However, if it is a LST starting device, full pressure equalization is needed before start.

Connection & Terminals

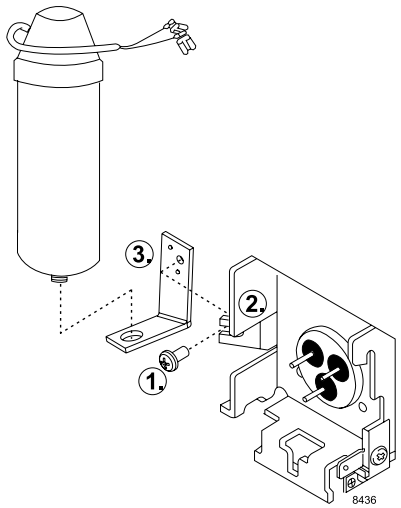
The wiring diagram shows how to make the connections. The two screw terminals marked N and L are for supply voltage. The spade on the L terminal and the spade marked C are for the thermostat. The spade marked S at the top right position is internally connected to the start (or auxiliary) fusite terminal. This spade together with N is used for a run capacitor. The spade marked N at the top left position is internally connected to the neutral screw terminal. The spade marked C at the bottom position is internally connected to the common fusite terminal. On the rear side of the ePTC starter there are three holes. The hole in the bottom is for the common fusite terminal on the compressor. The top left hole is for the start fusite terminal and the top right hole is for the main fusite terminal. The ePTC starter is mounted with the C spade downwards.

EMC optimised ePTC versions ("E-2")

Starting second quarter 2012 Secop has shipped EMC optimised ePTC versions ("E-2"). An added "gate cap" filter on the PCB ensures improved Electromagnetic Compatibility (EMC). All other components remain unchanged.

6.8 Run capacitor holder

A run capacitor holder is available for the "Energy optimized" and "High Energy optimized" compressor range. This optional part is fixed to the run capacitor for 220V directly and earth connected on the compressor shell, concentrating all electrical accessories on the compressor. This will save space in the machine compartment. See drawing four mounting seequence.

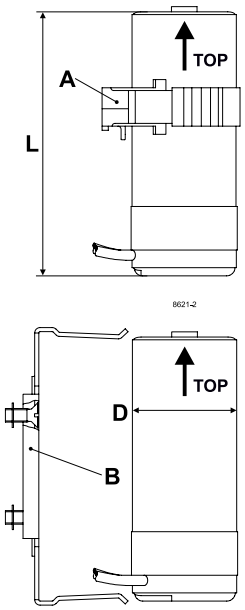


Code numbers:

run capacitor holder	117-0300
screw M4 x 8 PZD 2	117-0301

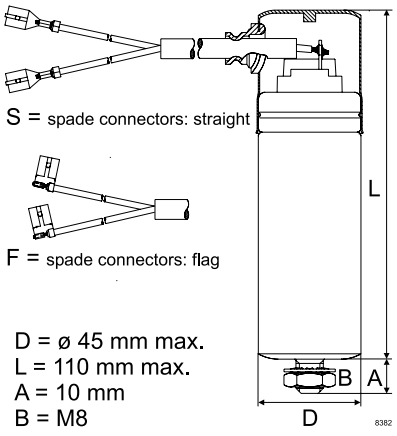
6.9 Survey of starting capacitors

Code No.	Capacity [µF]	Voltage [V]	Stamping IEC	Bleeder Resistor	Mount	Series	Approvals	Supplier L / D [mm]	Drawing
117U5012	125	220	220V AB 1.7% ED 300V AB 0.1% ED	no	A	SC	VDE / CQC	KEMET / NGM 121/39 95/39	
117U5014	60	220	220V AB 1.7% ED 300V AB 0.1% ED	no	A	PL, TL	VDE / CQC	KEMET / NGM 95/39	
117U5015	80	220	220V AB 1.7% ED 300V AB 0.1% ED	no	A	FR, NL	VDE	KEMET / NGM 95/39	
117U5017	80	220	220V AB 1.7% ED 300V AB 0.1% ED	no	A	SC	VDE / CQC	KEMET / NGM 95/39	
117U5018	125	220	220V AB 1.7% ED 300V AB 0.1% ED	no	A	NF, NL	VDE / CQC	KEMET / NGM 121/39 95/39	
117U5022	320	115	125V AB 1.7% ED 165V AB 0.1% ED	no	A	NF, TFS	CQC	KEMET / NGM 80/39	
117U5023	240	115	125V AB 1.7% ED 165V AB 0.1% ED	no	A	TL, TLS, SC	CQC	KEMET / NGM 80/39	
117U5025	280	115	125V AB 1.7% ED 165V AB 0.1% ED	no	A	FR, NF, TF, TFS	CQC	KEMET / NGM 80/39	
117U5028	410	115	125V AB 1.7% ED 165V AB 0.1% ED	no	A	NF	CQC	KEMET / NGM 95/39	
117U5035	125	115	125V AB 1.7% ED 165V AB 0.1% ED	yes	A	NL, TL	CQC	KEMET / NGM 95/39	
117U5040	320	115	125V AB 1.7% ED 165V AB 0.1% ED	no	B	FF	CQC	KEMET / NGM 95/39	
117U5041	280	115	125V AB 1.7% ED 165V AB 0.1% ED	no	B	FF	CQC	KEMET / NGM 95/39	
117U5042	410	115	125V AB 1.7% ED 165V AB 0.1% ED	no	B	SC	CQC	KEMET / NGM 95/39	
117U5043	410	115	125V AB 1.7% ED 165V AB 0.1% ED	yes*	B	SC	CQC	KEMET / NGM 95/39	
117U5372	40	220	260V AB 1.7% ED 330V AB 0.55% ED	yes	A	SC	VDE / CQC	KEMET 95/39	
117U5373	80	220	260V AB 1.7% ED 330V AB 0.55% ED	yes	A	SC	VDE / CQC	KEMET 95/39	
117U5379	410	115	125V AB 1.7% ED 165V AB 0.1% ED	yes	A	SC	CQC	KEMET 95/39	
117U5350	280	115	125V AB 1.7% ED 165V AB 0.1% ED	yes	A	SC	CQC	KEMET 80/39	
117U5382	125	220	260V AB 1.7% ED 330V AB 0.55% ED	yes	A	SC	VDE / CQC	KEMET 121/39	
117U5038	125	220	220V AB 1.7% ED 300V AB 0.1% ED	no	B	NL	VDE / CQC	KEMET 121/39	
117U5039	180	115	125V AB 1.7% ED 165V AB 0.1% ED	no	B	Nl	CQC	KEMET 80/39	
117U5381	100	220	260V AB 1.7% ED 330V AB 0.55% ED	yes	A	NL	VDE / CQC	KEMET 121/39	
117U5389	60	220	260V AB 1.7% ED 330V AB 0.55% ED	yes	A	NL	VDE / CQC	KEMET 95/39	



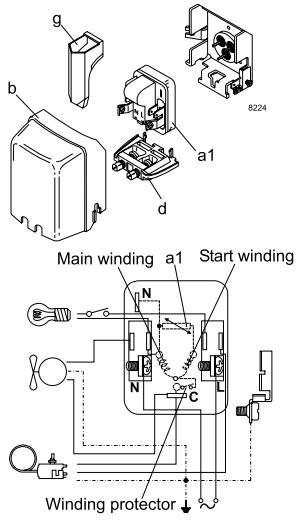
6.10 Survey of run capacitors

Code No.	Capacity [µF]	Voltage [V]	Frequency [Hz]	Connectors [mm] | type	Type	Approvals	Drawing
117-7111	5.0	430	50/60	6.3 | F	SC	VDE	
117-7112	10.0	430	50/60	6.3 | F	SC	VDE	
117-7114	23.5	190	60	6.3 | S	SC	UL	
117-7117	4.0	320	50/60	6.3 | S	NL/TL	VDE	
117-7118	15.0	190	60	6.3 | S	NL/TL	UL	
117-7119	4.0	320	50/60	4.8 | S	NL/TL	VDE	
117-7120	15.0	190	60	4.8 | S	NL	UL	
117-7121	10.0	430	60	6.3 | F	SC	UL	
117-7123	4.0	320	50/60	4.8 | S	NL/TL	VDE	
117-7126	12.0	190	60	6.3 | S	NL	UL	
117-7127	15.0	430	60	6.3 | F	SC	UL	
117-7129	5.0	320	50/60	4.8 | S	NL	VDE	
117-7130	5.0	320	50/60	6.3 | S	NL	VDE	
117-7131	3.0	320	50/60	6.3 | S	NL/TL	VDE	
117-7132	3.0	320	50/60	4.8 | S	NL/TL	VDE	
117-7133	23.5	190	60	6.3 | F	SC	UL	
117-7134	15.0	450	50/60	6.3 | F	GS	VDE	
117-7135	20.0	330	50/60	6.3 | F	GS	VDE	
117-7136	2.0	320	50/60	4.8 | S	NL/TL	VDE	
117-7137	15.0	430	60	6.3 | F	SC	UL	
117-7138	20.0	330	60	6.3 | F	GS	UL	
117-7139	2.5	320	50/60	4.8 | S	NL/TL	VDE	
117-7140	3.5	320	50/60	4.8 | S	NL/TL	VDE	
117-7145	5.0	320	50/60	4.8 | S	NL	VDE	
117-7146	20	190	60	4.8 | S	NL	UL	
117-7147	20	190	60	6.3 | S	NL	UL	
117-7148	15	190	60	6.3 | F	NL/TL	UL	
117-7149	20	190	60	6.3 | S	NL	UL	
117-7165	4.0	430	50/60	4.8 | S	NL	VDE	
117-7112	10	430	50/60	6.3 | F	SC	VDE	
117-7121	10	430	60	6.3 | F	SC	UL	

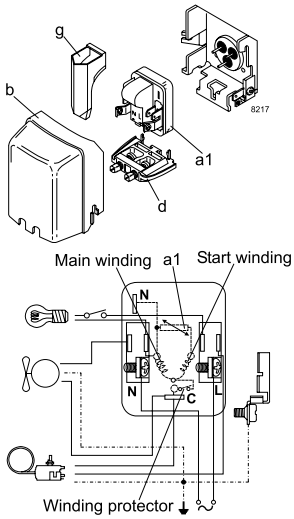


LST - RSIR

PL-DLE

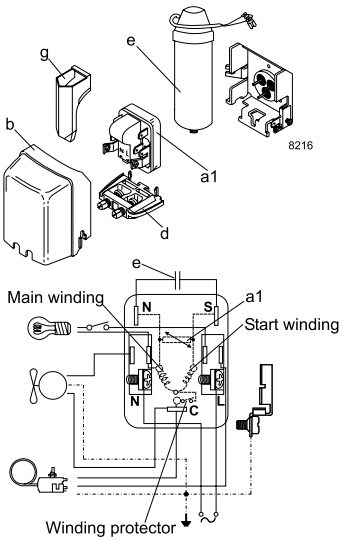


TL/TLES/TLS/TLY - NL/NLE - FR



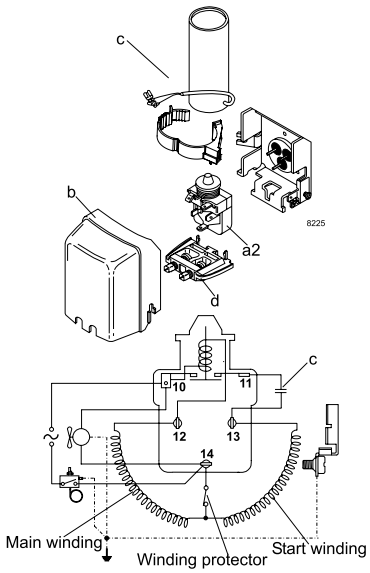
LST - RSCR

PLE - DLE/DLX/DLY

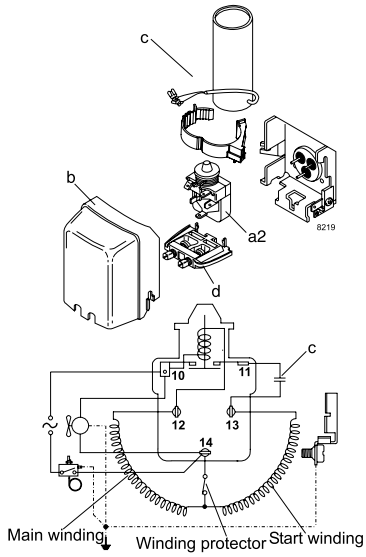


HST - CSIR

PL - DLE

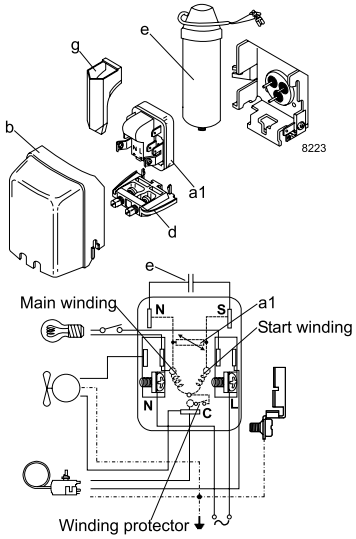


TL/TLES/TLS - NL/NLE - FR



LST - RSCR

TLES/TLS/TLX/TLY - NLE/NLU/NLX/NLY

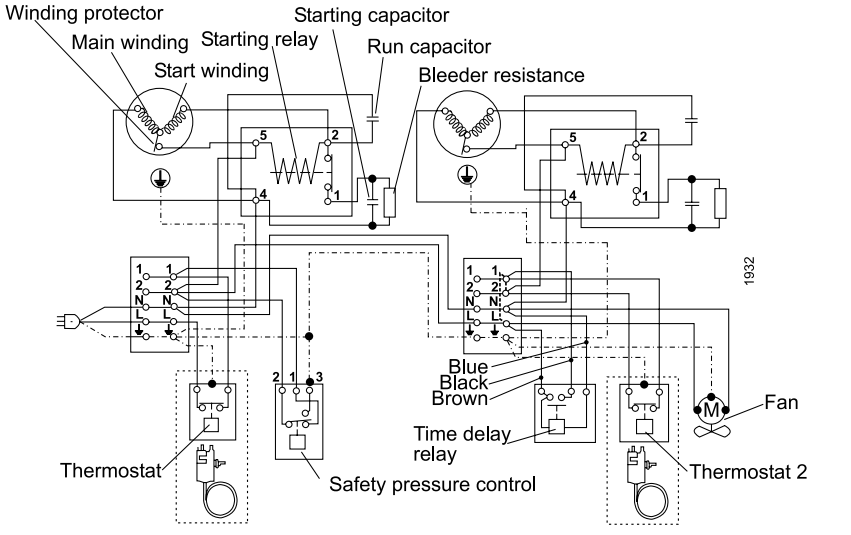


Legend

- **a1:** PTC starting device
- **a2:** Starting relay
- **a3:** Starting device
- **b:** Cover
- **b1:** Clamp (part of compressor)
- **b2:** Gasket (part of compressor)
- **c:** Starting capacitor
- **d:** Cord relief
- **e:** Run capacitor
- **f:** Protector
- **g:** Protection screen for PTC
- **h:** Holder

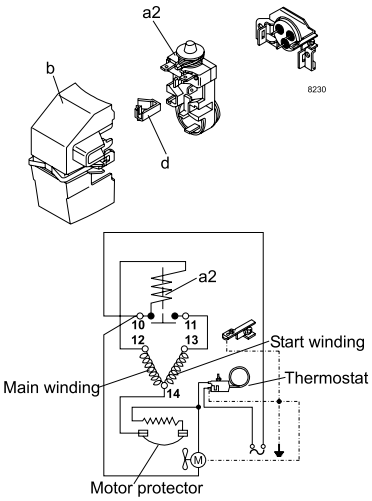
HST - CSIR

SC Twin

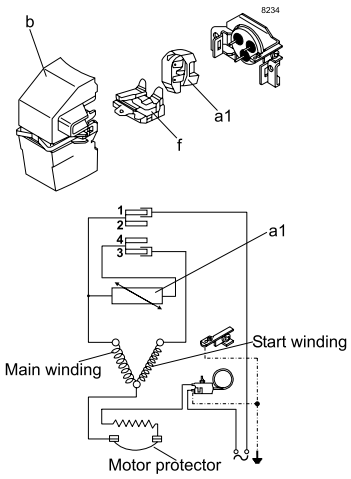


LST - RSIR

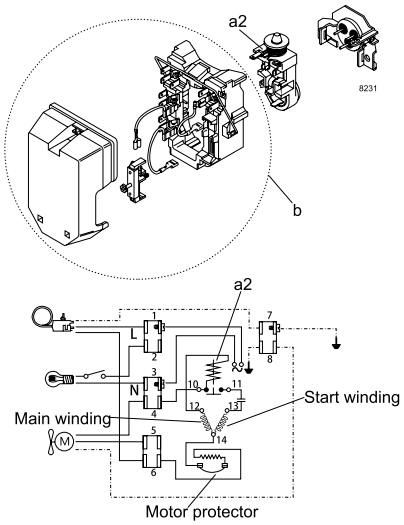
TF/TFS - NF - FF - external protector



TT - external protector

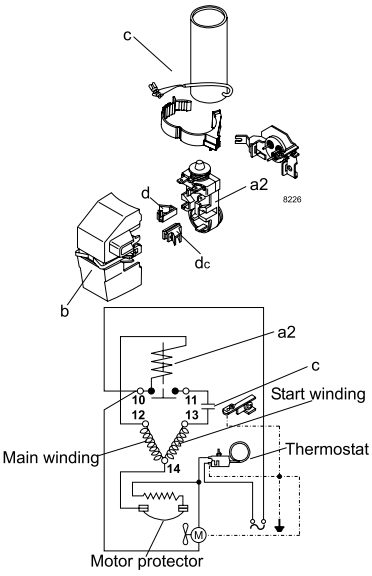


TF - NF - FF - external protector

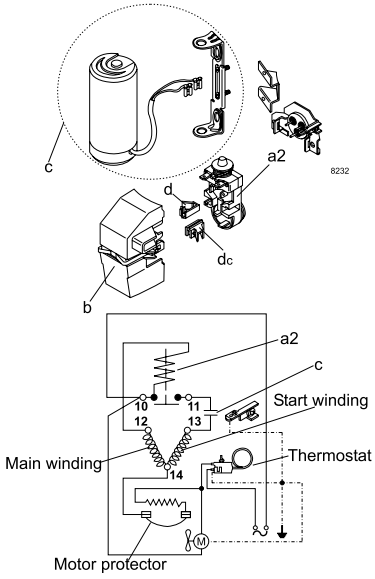


HST - CSIR

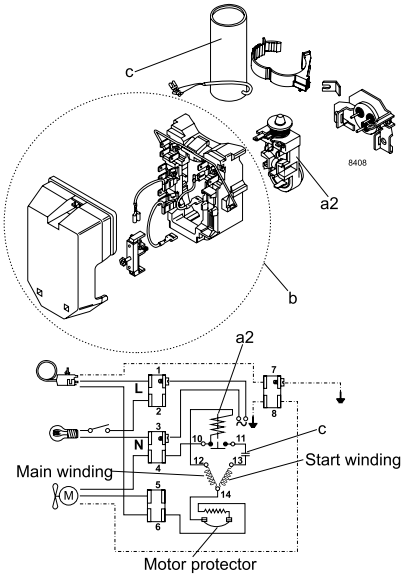
TFS - NF - FF - external protector



FF - external protector

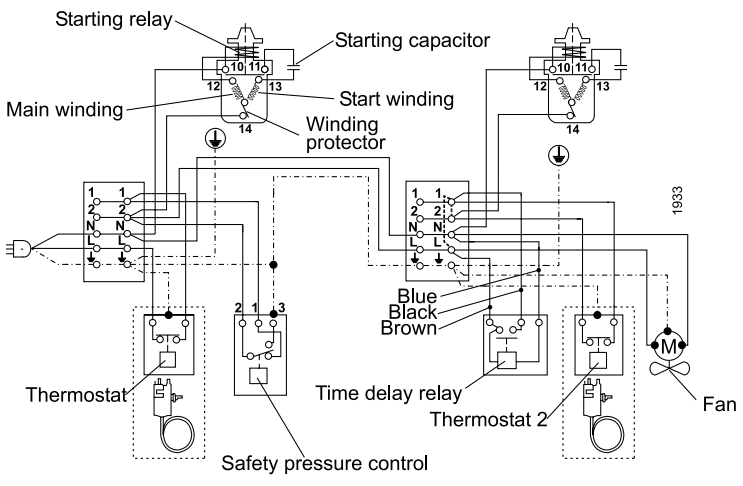


TF - NF - FF - external protector



HST - CSR

SC Twin

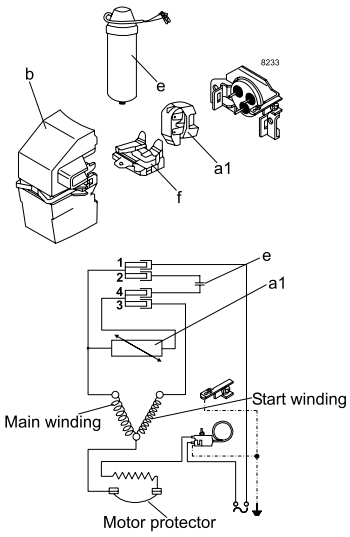


Remove wire L-1 if time delay is used

Remove wire 1-2 if thermostat 2 is used

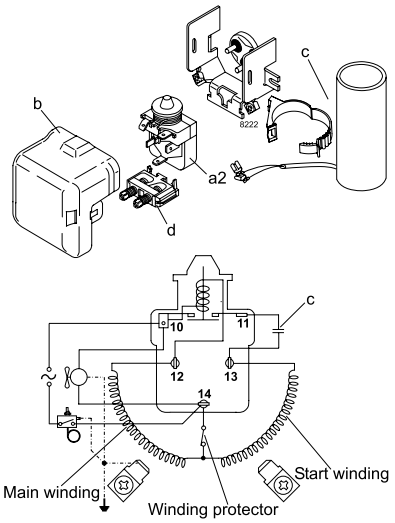
LST - RSCR

TTE/TTY - NTX/NTY - external protector

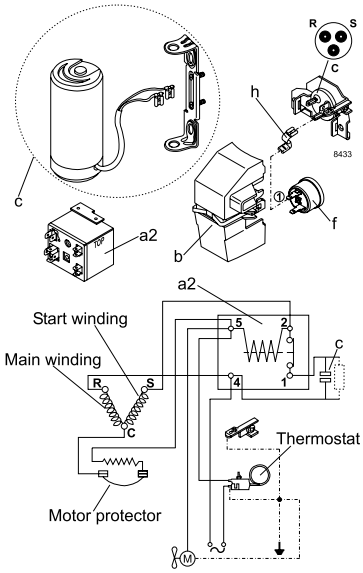


HST - CSIR

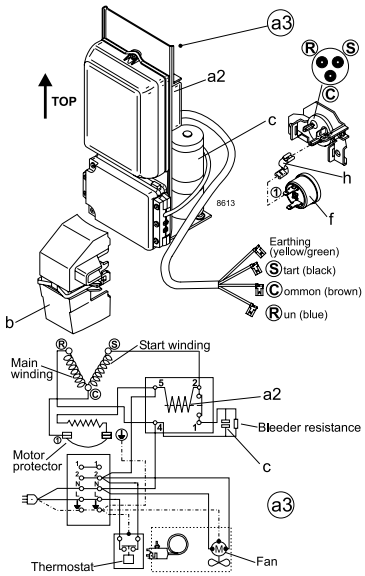
SC



SC - external protector

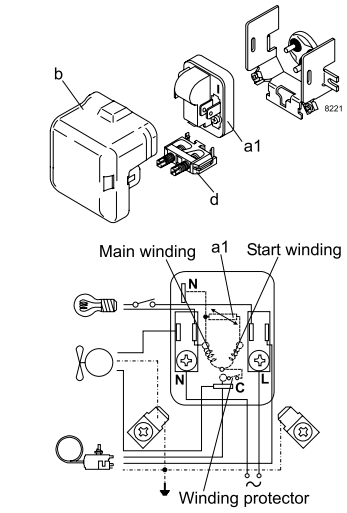


SC - external protector



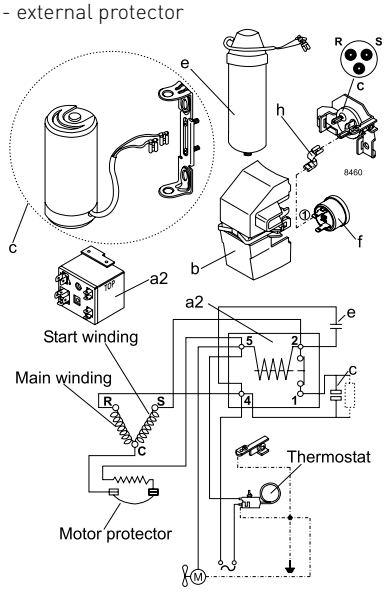
LST - RSIR

SC

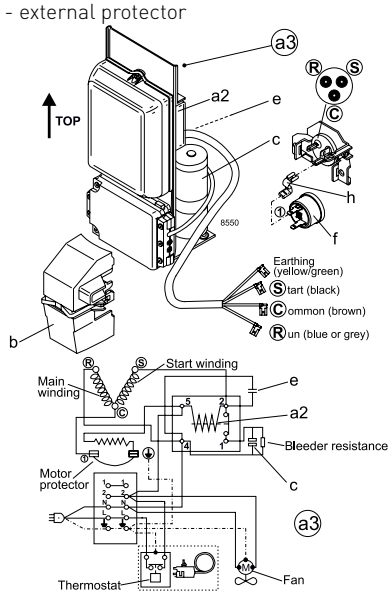


HST - CSR

SC - external protector

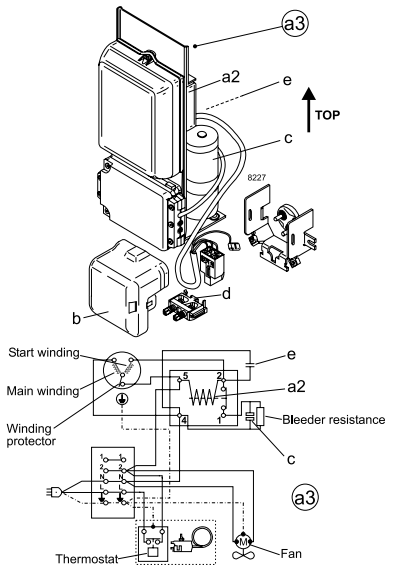


SC - external protector

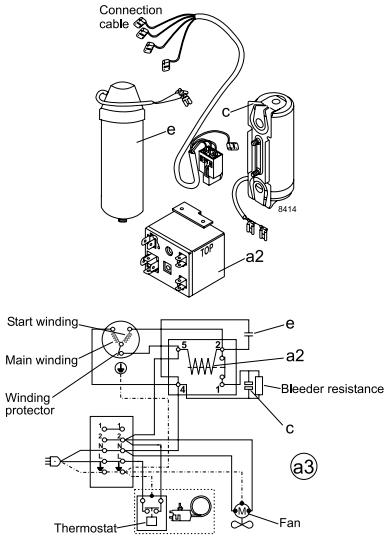


HST - CSR

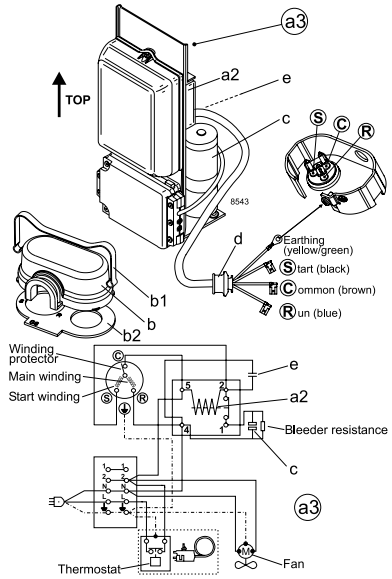
SC

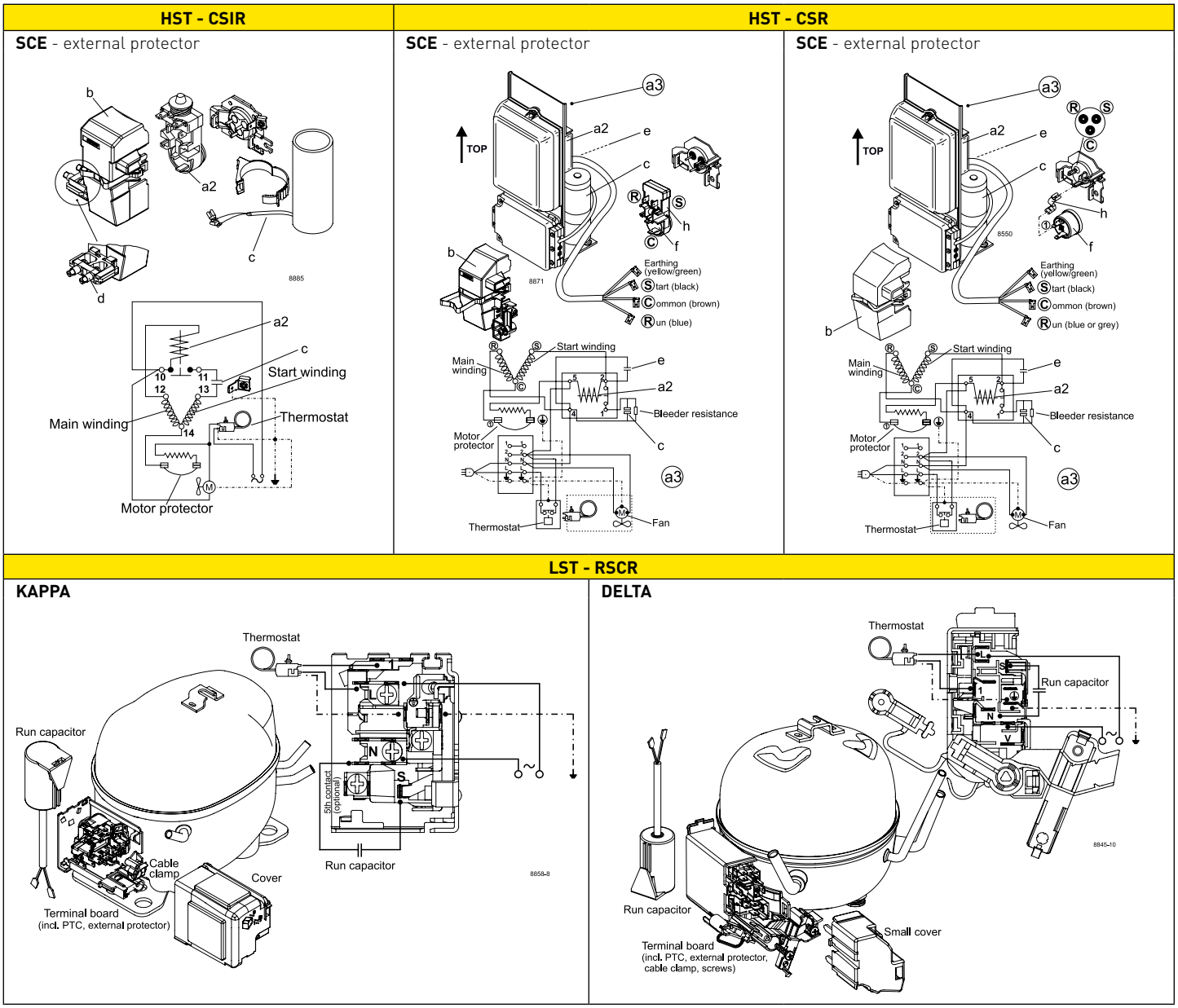


SC (kit) - alternative to starting device w. bracket



GS





6.11 Variable speed °CCD® controllers (Electronic units)

Full load operation is extremely rare in most cooling applications, restricted to a few days per year. That is why Secop has built variable-speed control into the DLV, NLV, SLV and X-Series.

This unique technology makes capacity automatically adapt to your actual requirement. The compressor runs at low speed most of the time, thus minimizing energy consumption.

On top of this, system efficiency is greatly improved thanks to reduced loss when less heat is transferred via the evaporator and condenser. Overall, this equates to substantial energy savings.

Tool4Cool® is a unique PC software tool that enables you to precisely configure your Secop's Cool Capacity Drive (°CCD®) variable-speed compressors to your cooling systems.

The variable-speed compressor motors are electronically controlled. No attempt needs be made to start the compressor without a complete electronic unit, as specified in the data sheet for the compressor type in question.

The °CCD® electronic unit has a built-in overload protection as well as thermal protection. When this protection is activated, the electronic unit will protect the compressor motor as well as itself. The electronic unit will also automatically restart the compressor after a certain time.

The electronic unit provides the compressor with High Starting Torque (HST) which means pressure-equalization of the system before start is not necessary.

The compressors are equipped with permanent magnet rotors (PM motor) and three identical stator windings. The electronic unit (attached or detached) controls the PM motor.

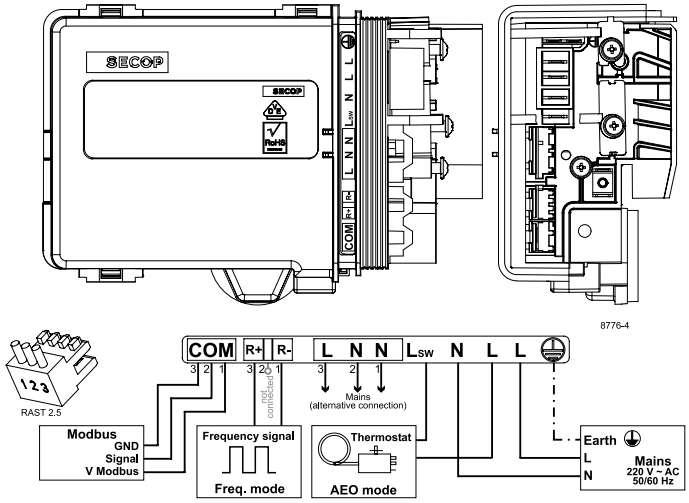
Connecting the motor to AC power, by fault, will damage the magnets and lead to drastically reduced efficiency, or even nonfunctioning.

For more information on which starting device to use on individual compressors, please refer to the actual data sheets (some compressors have limitations for either LST or HST). and to our "Operating Instructions" and "Instructions".

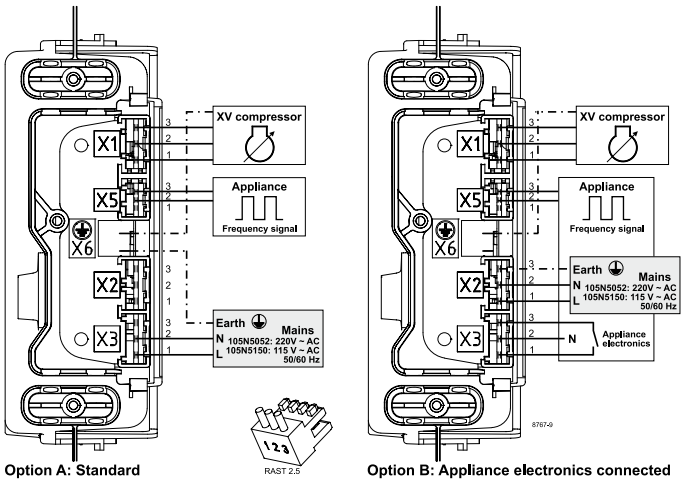
The compressor application must factor in power supply from an electrical circuit with the appropriate fuse or circuit breaker. In addition, the use of a GFCI (Ground Fault Circuit Interrupter) or RCD (Residual Current Device) is recommended.

LST / HST - 105N5xxx Series Controller

XV - electronic unit 105N5022 (attached, 220-240 V, 50/60 Hz)

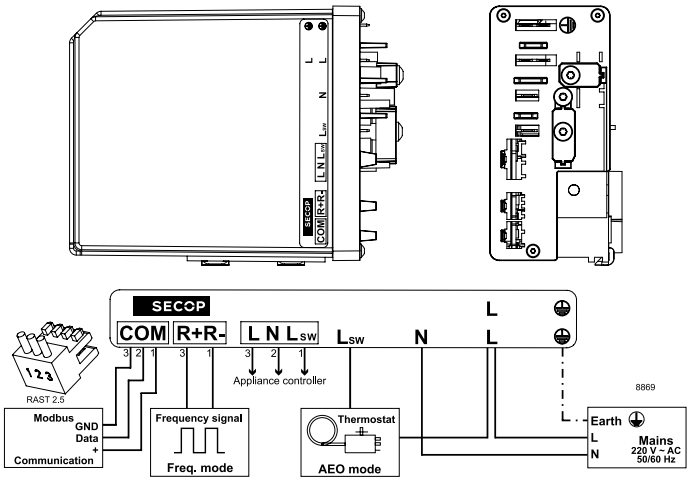


XV - electronic unit 105N5052 (detached, 220-240 V, 50/60 Hz)
XV - electronic unit 105N5150 (detached, 100-127 V, 50/60 Hz)



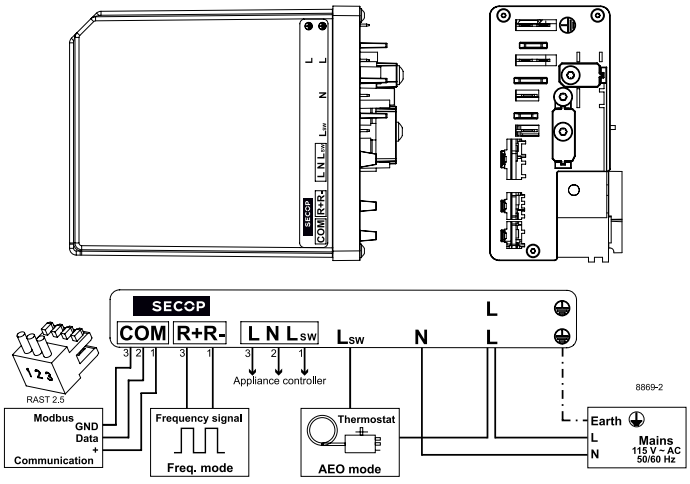
LST / HST - 105N5xxx Series Controller

XV - electronic unit 105N5320 (attached, 220-240 V, 50/60 Hz, with PFC)
XVL - electronic unit 105N5324 (attached, 220-240 V, 50/60 Hz, with PFC)



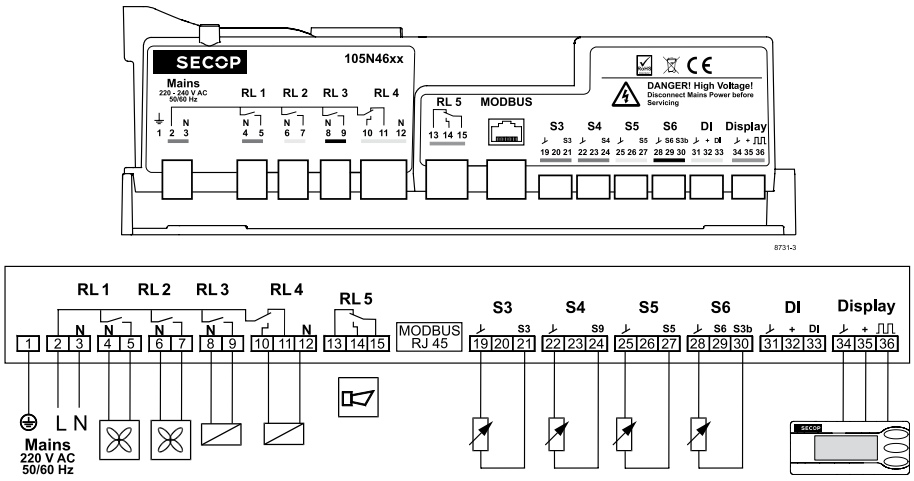
PFC = power factor correction according to EN 61000-3-2:2014

XV - electronic unit 105N5312 (attached, 100-127 V, 50/60 Hz)



LST - 105N46xx Series Controller, 220-240 V, 50/60 Hz, with PFC

SLV

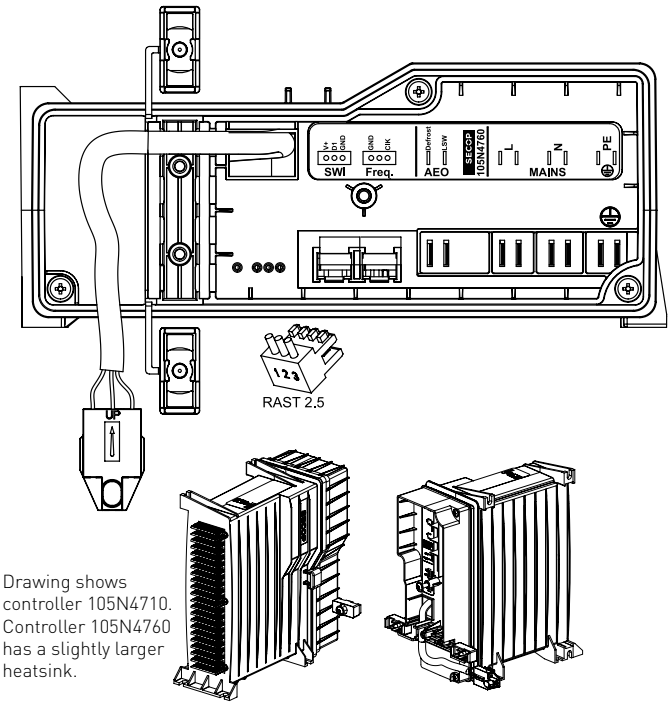


Mains	red
R L 1	blue
R L 2	yellow
R L 3	black
R L 4	grey
R L 5	green
S3	red
S4	blue
S5	yellow
S6	black
DI	grey
Display	green

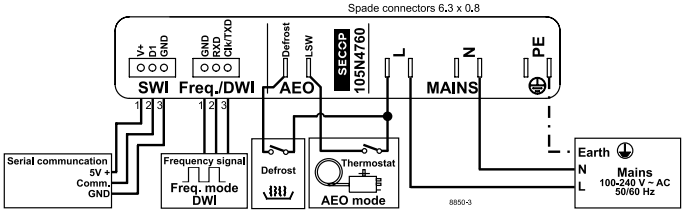
PFC = power factor correction according to EN 61000-3-2:2014

HST - 105N47xx Series Controller

NLV - electronic unit 105N4710 (220-240 V, 50/60 Hz, with PFC)
NLV - electronic unit 105N4760 (100-240 V, 50/60 Hz, with PFC)



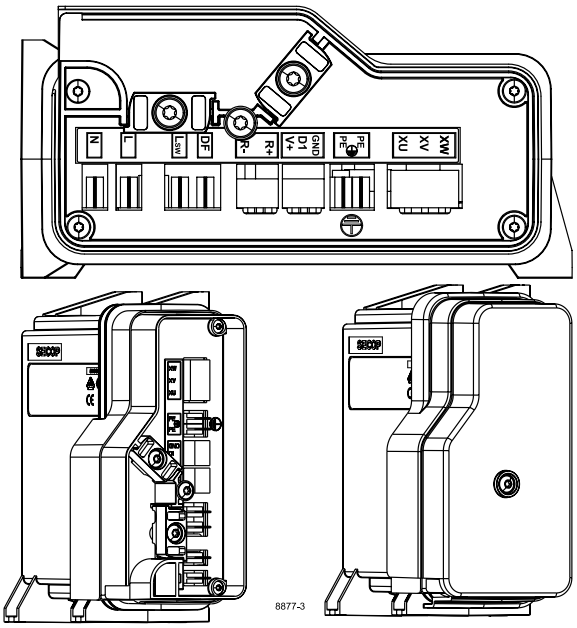
Drawing shows controller 105N4710. Controller 105N4760 has a slightly larger heatsink.

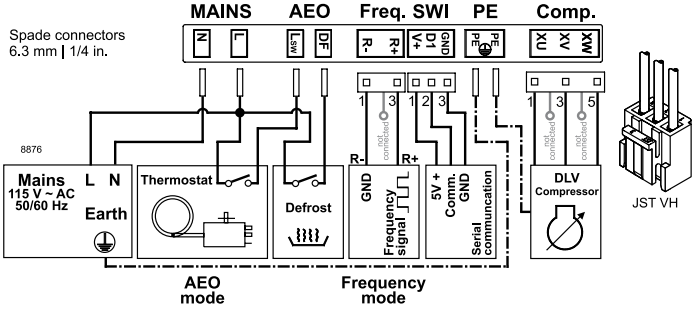


PFC = power factor correction according to EN 61000-3-2:2014

HST - 105N44xx Series Controller

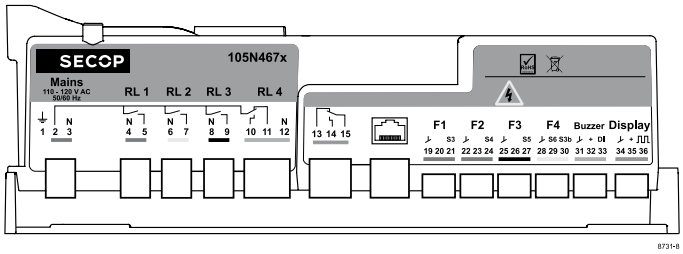
DLV - electronic unit 105N4460 (100-120 V, 50/60 Hz)

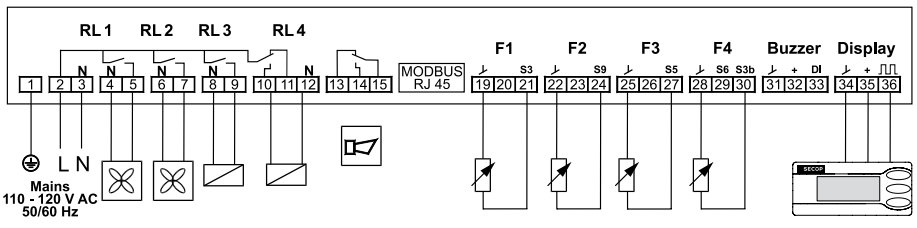




LST - 105N46xx Series Controller, 110-120 V, 50/60 Hz, with PFC

SLV





Mains	red
R L 1	blue
R L 2	yellow
R L 3	black
R L 4	grey
–	green
F1	red
F2	blue
F3	black
F4	yellow
Buzzer	grey
Display	green

upper part of label: orange

PFC = power factor correction according to EN 61000-3-2:2014

7.
IP44 EQUIPMENT FOR SC COMPRESSORS

As the expansion of refrigeration and air conditioning technology into new application areas is ongoing, traditional applications face an increasing use worldwide.

Consequently, refrigeration equipment is more often operated under extreme conditions and hermetic compressors have to meet the resulting requirements.
One of these requirements is the adequate protection of the compressor and its outside electrical parts against moisture and water.

Secop now offers special accessories, which provide a better IP protection class for a major part of the SC compressor models.
All SC models for 220-240V/50Hz or 208-230V/60Hz with CSIR motor can be IP upgraded.

The equipment consists of one additional part, the so called "back cover", and an upgraded starting capacitor (Fig.1).
When using this equipment, the protection class is increased to IP44, i.e. the compressor and its electrical parts are splash-proof (Fig.2).

Code number	Description
103N2020	Back cover
117U5117*	IP44 starting capacitor 80µF

*replaces standard capacitor 117U5017

This equipment may be used with VDE approved compressors.
Starting capacitors with other capacities can be upgraded on demand.

Fig.1 Back cover 103N2020 + starting capacitor 117U5117

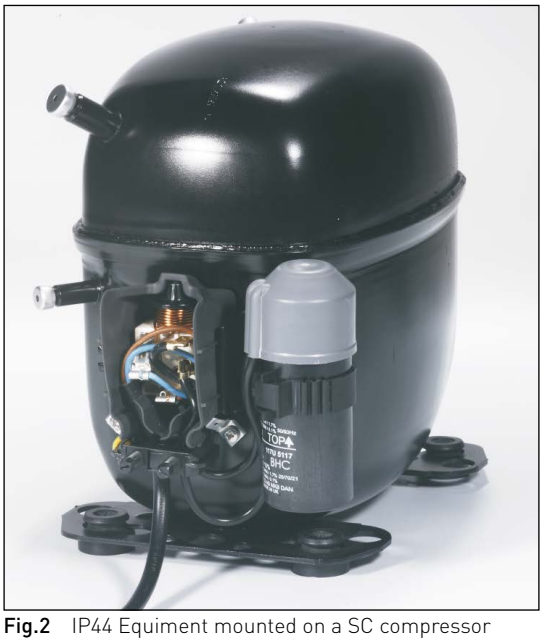


Fig.2 IP44 Equiment mounted on a SC compressor

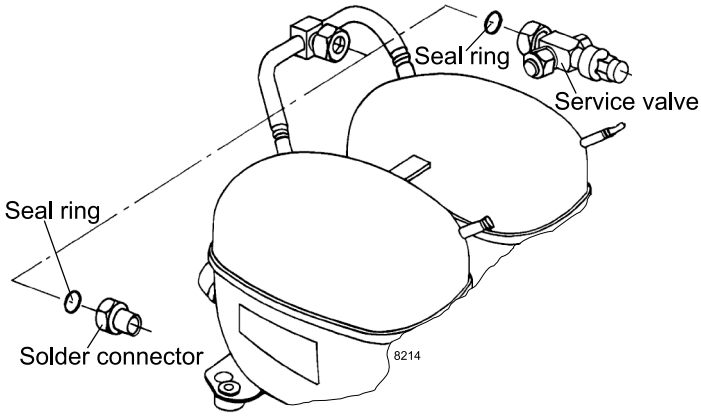
8.
TWIN COMPRESSORS

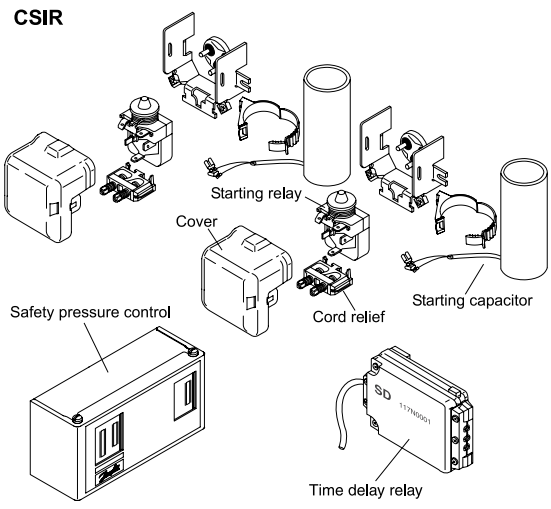
The twin version consists of two SC compressors mounted on a common base plate. The two compressors are joined by an oil-equalizing tube and also have an intake manifold with screw connector for a service valve or a braze connector (these parts are supplied as accessories, please refer to data sheets for more info).

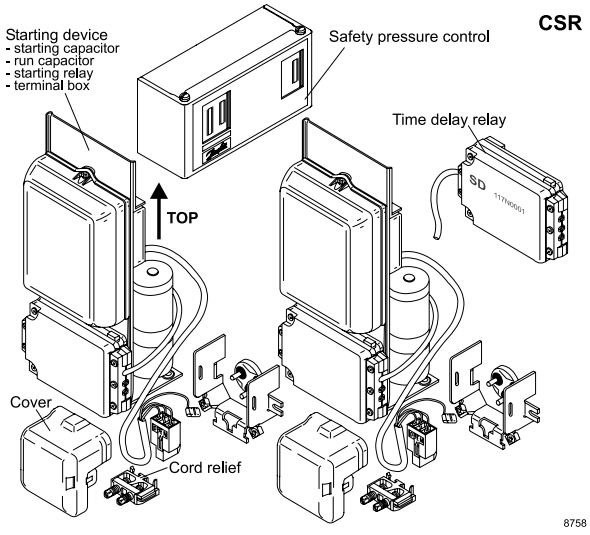
Each twin compressor is supplied with two sets of electrical equipment and mounting accessories.

To ensure optimum starting characteristics and the smallest possible mains load we recommend that the compressors be equipped with a time delay relay for start of the second compressor. Twin compressors can operate with capacity regulation depending on the controls used.

Depending on the motor type (CSR/CSIR) all accessories needed are illustrated in the drawing below.







Accessories for SC Twin	
SC10/10, SC12/12 and SC15/15:	
Service valve for 12 mm tube	118-7350
Braze connector for 12 mm tube	104B0584
SC18/18 and SC21/21:	
Service valve for 16mm tube	118-7351
Braze connector for 16mm tube	118-7405
SC10/10, SC12/12, SC15/15, SC18/18 and SC21/21:	
Seal ring for service valve and braze connector	118-3638
Time delay relay	117N0001
Check valve (to be used with time – delay relay)	020-1014

9.
MOISTURE AND IMPURITIES

The compressors are dried to a maximum moisture content of 60 to 75 mg depending on the compressor size. The maximum impurity content is 40 to 50 mg depending on the compressor size.

Secop compressors leave the factories with a moisture load less or equal 125 ppm. This ppm rate includes a safety factor for a storing time up to one year or longer. In addiction of storing time and storing conditions the moisture level will increase. A level between 200 and 250 ppm in general is not critical and will not harm the compressors or systems, where the compressors will be implemented.

Measurement method

Test parameters	demand
Conditioning	24 h, room temperature
Condition of compressor	charged with oil
Measurement temperature	room temperature
Measurement time	1-2 min
Medium	dew point
Measurement cell	electrical hydrometer
Demand	max.125 ppm H_2O

With this measurement method, the total moisture in the air volume will be measured. The water, which is fixed in the plastic structure and the oil, will only be measured indirectly. Within 24 hours equilibrium between the humidity contents of the air and compressor parts is reached.
The limit of 125 ppm is very low, if we consider that the surrounding air contains approx. 8000 ppm at 22°C and a relative humidity load of 40 %.

10.
CONDITION AT DELIVERY/ WARNINGS

The compressors are delivered without mounted starting devices on pallets. The standard pack can be stacked and is intended for transport by forklift truck. The bottom pallet has the dimensions 1144 x 800mm.

Quantities per pallets are specified in the individual data sheets.
Electrical equipment is packed in separate boxes.

The most important performance controls carried out during manufacturing are,
- A high potential insulation test with 1650V for 1 second
- Pumping capacity
- Tightness of discharge side and discharge valve
- Tightness of compressor housing
- Check of the right oil charge
- Noise test

The compressors are supplied with sealed connectors and the sealing should not be removed before the system assembly takes place. (max. 15 minutes with open connectors).

The compressors are supplied charged with dried and degassed oil, which is normally sufficient for the lifetime of the compressor. The refrigeration systems and the system components must be dimensioned in such a way that the oil can be lead back continuously to the compressor housing without accumulating in the system, e.g. without the oil pockets and with sufficient gas velocity. The compressors use polyolester or mineral oils and are approved only for these oils and **for the refrigerant to be used.** The oil charge is specified in the individual data sheets.

A high potential test with 1650V for 1 second is carried out on all compressors before delivery.
No high potential test or start tests must be carried out while the compressor is under vacuum.
No attempt must be made to start the compressor without a complete starting device.

Allow the compressor to reach a temperature above 10°C before starting the first time in order to avoid starting problems.

Anti freeze agents must not be used in the compressors as such agents are damaging to several of the materials used. In particular, the ethyl or methyl alcohol contents of such anti freeze agents have a destructive effect on the synthetic motor insulation

11.
MAX. REFRIGERANT CHARGE

R404A/R507 and R407C
R134a
115 V / 220-240 V

Only the refrigerant amount which is necessary for the system to function must be charged. The refrigerant amount may be critical, regarding oil foaming and liquid hammer after long standstill periods. Because of this, limitations of refrigerant charges have been introduced.

SC Twin: max. 2200g
SC: max. 1300g
FR, FF: max. 900g
TL, TF, TT: max. 400g
NL, NF, NT: max. 400g

If the permissible limit of refrigerant charge stated in the compressor data sheet is exceeded the oil will foam in the compressor after a cold start and may result in a damaged valve system in the compressor. The refrigerant charge must never exceed the amount that can be contained in the condenser side of the system.

If these limitations cannot be complied with, the risk may be reduced if a crankcase heater is properly used or if a pump down system is established.

Compressor type	Max. refrigerant charge			
	R134a	R600a	R290	R404A
P	300 g / 10.6 oz.	120 g / 4.2 oz.	-	-
T	400 g / 14.1 oz.*	150 g / 5.3 oz.	150 g / 5.3 oz.	600 g / 21.2 oz.
X	-	150 g / 5.3 oz.	-	-
D, DLV	-	150 g / 5.3 oz.	150 g / 5.3 oz.	-
TL ... G	600 g / 21.2 oz.	150 g / 5.3 oz.	150 g / 5.3 oz.	-
N, NLV	400 g / 14.1 oz.*	150 g / 5.3 oz.	150 g / 5.3 oz.	-
F	900 g / 31.2 oz.	150 g / 5.3 oz.	-	850 g / 30 oz.
S, SLV	1300 g / 45.9 oz.	-	150 g / 5.3 oz.	300 g / 45.9 oz.
G	2000 g / 70.5 oz.	-	-	2000 g / 70.5 oz.
SC Twin	2200 g / 77.6 oz.	-	-	2200 g / 77.6 oz.

* Single types with higher limits available, see Data Sheets

Please refer to the compressor data sheets, as the maximum refrigerant charge may deviate on single types from the statements in the form. The maximum charge of 150g for R600a and R290 is an upper safety limit of the appliance standards, whereas the other weights are stated to avoid liquid hammer.

R290 / R600a

According to the European Standard EN 60335-2-24 or draft IEC 60335-2-89, which must be complied with, the refrigerant charge must not exceed 150g.

Commercially available R600a and R290 must not be used because the fuel grades of these products are of a variable composition. These products may also contain impurities which could significantly reduce the reliability and performance of the system and lead to premature failure. All Secop compressors for R600a and R290 are released for a base purity of 97% or better. Impurity limits shall comply with DIN 8960 of 1998 (extended version of ISO 916).

All users of refrigerant R600a should refer to the chemical data safety sheets for full information on the safe handling of R600a and R290.

In general the charge of R600a or R290 is approximately 40-50% by weight than that for HFC.

The refrigerant charge must never be too large to be contained on the condenser side of the refrigeration system. Only the refrigerant amount which is necessary for the system to function must be charged.

12.
CONVERSIONS

From R404A to R452A

At Secop, product development is focused on high efficiency and eco-friendly products. We believe – as all the major market stakeholders – that hydrocarbon refrigerants (isobutane R600a and propane R290) are the best solution for DC-powered applications.
The use of R404A is under pressure due to global regulations, however special attention is given to F-gas regulation in Europe. Secop recommends the move to hydrocarbon refrigerant solutions (R600a and R290) which perfectly meet the increasing market demand for high efficiency while utilizing natural refrigerants with very low GWPs.
We understand that there is a transition period, where specific applications will use different refrigerants while application redesign to hydrocarbons is not possible in a short time. Tests have so far shown good results with refrigerant R452A as a drop-in replacement for R404A.
Based on this information, Secop allows the use of R452A on all its R404A released compressors. It is the customer's responsibility to validate the application and they should carefully consider the requirements and constrains when changing the R404A to R452A in their application.
(Please refer to Product Bulletin "Refrigerant R452A in Secop Compressors")

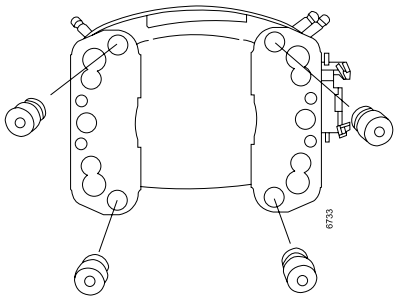
From R134a to R600a or R290

Conversions from refrigerants R134a to R600a are not permitted as 1:1 replacements, as the refrigerator must be approved for operation with flammable refrigerants, and the electrical safety has to be tested according to existing standards. The same applies to conversions from refrigerants R502 or R134a to R290. In many cases of transition from non-flammable to flammable refrigerants the appliance cabinet must be modified for safety or other reasons.
Refrigerant containing system parts according to IEC / EN 60335 must withstand a specified pressure without leaking. High pressure side must withstand saturation overpressure of 70 °C times 3.5, low pressure side must withstand saturation overpressure of 20 °C times 5.
Secop has been a pioneer and early adopter of hydrocarbons as refrigerants and offers a variety of suitable compressors for R600a and R290.
(Please refer to Application Guideline "Practical Application of Refrigerants R600a and R290 in Small Hermetic Systems").

From R134a to R1234yf

R1234yf is a future refrigerant candidate in auto air conditioning replacing R134a. Likewise it might be used in DC-powered applications where redesign of the system to propane is not possible.
R1234yf is classified as flammable in the relevant safety standards. It is more expensive than R134a, however holds remarkably less greenhouse potential than R134a.
Our R134a compressors can be used for testing with this refrigerant and we are ready to support you in your investigation and approval procedure.
Investigations on material compatibility have so far shown good results with refrigerant R1234yf in Secop R134a compressors. These results must be confirmed in the ongoing long term tests.
At present, testing system performance can be carried out with the compressors originally designed for R134a. The same application limits as described on the R134a data sheet may be used.
The compressors designed for R134a do currently (07/2017) not have a safety approval for flammable refrigerants like R1234yf, but might be available in approved variants within the near future.
(Please refer to Product Bulletin "Refrigerant R1234yf in Secop Compressors")

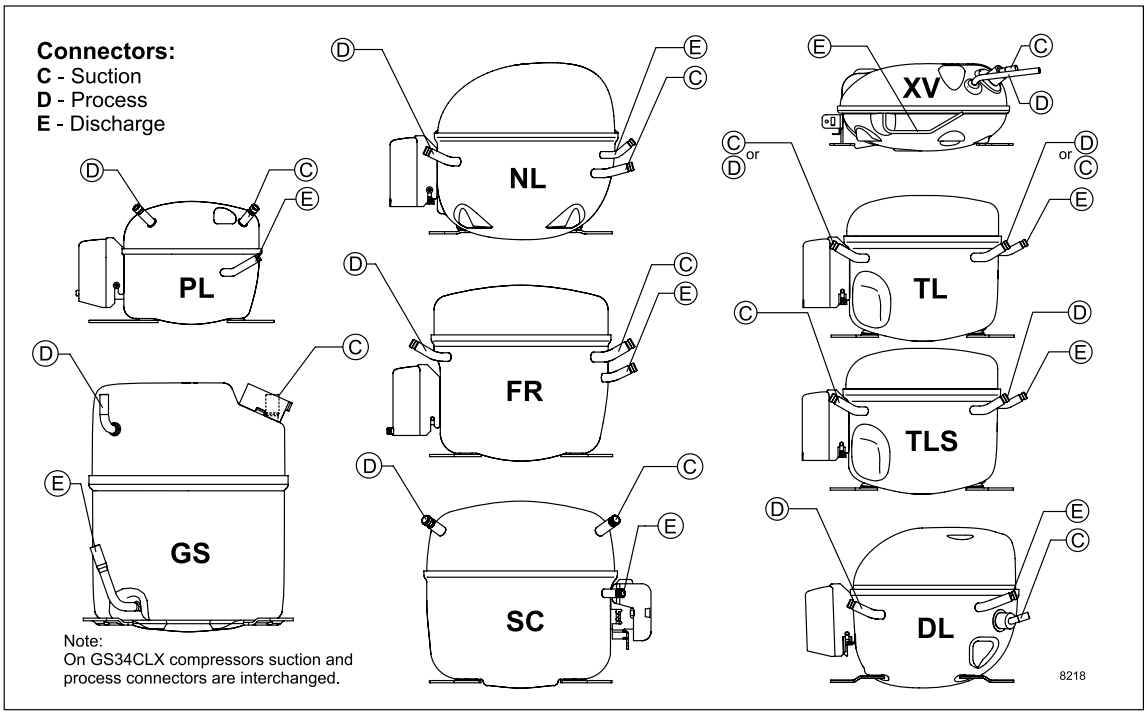
13.
MOUNTING



Brazing problems caused by oil in the connectors can be avoided by placing the compressor on its base plate some time before brazing it into the system. The compressor must never be placed upside down when mounting the rubber grommets in the base plate. Instead place the compressor on its side with the connectors upwards. The system should be closed within 15 minutes to avoid moisture and dirt penetration.
Tightening torque for M6 bolt joint mountings should be 5 Nm ± 0,5 (hand-tight).

13.1 Connector positions

The positions of connectors are found in the sketches.
C means suction and must always be connected to the suction line.
E means discharge and must be connected to the discharge line. **D** means process and is used for processing the system.



Some compressors are supplied with sealed connectors, which consist of a thick-walled copper plated steel tube with great corrosion resistance and good braze ability. The connectors are welded in the compressor housing and thus the weld cannot be destroyed by overheating during brazing operations. The seal is an aluminum cap which gives a tight seal. Compressor with copper connectors are sealed with rubber plugs. The aluminum cap sealing ("capsolut") offers a tight sealing. The seal ensures that the compressors have not been opened after leaving Secop's production lines. In addition to that, the seal makes a protecting charge of nitrogen superfluous.

Compressors with an "S" in the model denomination and all NL/DL/SCE types have a direct intake system, which means increased capacity. The suction connectors at these compressors must be connected to the suction line to prevent capacity loss.

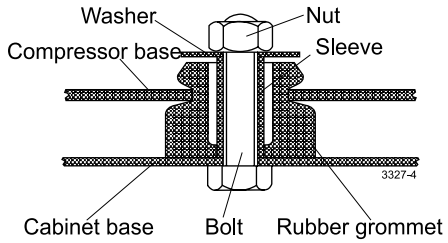
Oil cooler tubes are made of copper and the connectors are sealed with rubber plugs too.

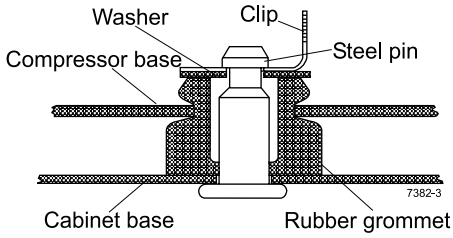
14.
MOUNTING ACCESSORIES

Mounting	Code number	Bolt / pin dimension	Comp. base hole	Type of packaging	Compressor series	Parts list
Bolt joint	118-1917	M6 metric	16 mm	Single pack for one compressor	BD- / P- / T- / X- / D- / N- / F- / S-Series	I
Bolt joint	118-1918	M6 metric	16 mm	Industrial pack in any quantity	BD- / P- / T- / X- / D- / N- / F- / S-Series	I
Bolt joint	107B9150	M8 metric	19 mm	Single pack for one compressor	G-Series	II
Bolt joint	118-1946	1/4 inch	16 mm	Single pack for one compressor	BD- / P- / T- / X- / D- / N- / F- / S-Series	III
Bolt joint	118-1949	1/4 inch	19 mm	Single pack for one compressor	all with 19 mm base holes (except G-Series)	IV
Snap-on	118-1947	Ø 7.3 mm	16 mm	Single pack for one compressor	BD- / P- / T- / X- / D- / N- / F- / S-Series KAPPA / DELTA	V
Snap-on	118-1919	Ø 7.3 mm	16 mm	Industrial pack in any quantity	BD- / P- / T- / X- / D- / N- / F- / S-Series KAPPA / DELTA	V

Parts list (4 pcs. per compressor needed)		
I	Sleeve Ø 8 mm x 6.4 mm x 0.8 mm	112-2052
	Washer Ø 20 mm x Ø 6.7 mm x 1 mm	112-2053
	Bolt M6 x 25 mm	681X1130
	Nut M6	118-3659
	Rubber grommet 16 mm	118-3661
II	Sleeve Ø 11 mm x 8.6 mm x 1.2 mm	107B9152
	Washer Ø 20 mm x Ø 8.8 mm x 1.2 mm	107B9155
	Bolt M8 x 40 mm	107B9153
	Nut M8	107B9154
	Rubber grommet 19 mm	107B9151
III	Sleeve Ø 8.3 mm x 6.7 mm x 0,8 mm	112-2088
	Washer Ø 20 mm x Ø 6.7 mm x 1 mm	112-2053
	Bolt 1/4 x 1 inch, 20 UNC	119-3002
	Nut 1/4 inch, 20 UNC	119-3031
	Rubber grommet 16 mm	118-3661
IV	Sleeve Ø 9.5 mm x 7.9 mm x 0,8 mm	112-2085
	Washer Ø 20 mm x Ø 6.7 mm x 1 mm	112-2053
	Bolt 1/4 x 1 1/4 inch, 20 UNC	119-3002
	Nut 1/4 inch, 20 UNC	119-3031
	Rubber grommet 19 mm	118-3666
V	Steel pin	118-3586
	Washer Ø 21 x Ø 8.1 mm x 0.9 mm	118-3588
	Clip	118-3585
	Rubber Grommet 16 mm	118-3661

Symbol drawings





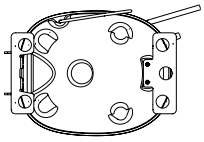
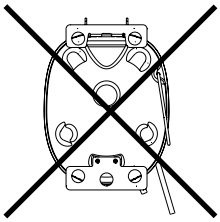
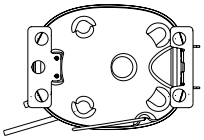
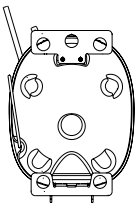
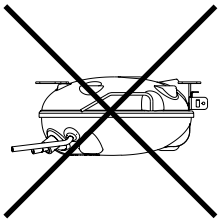
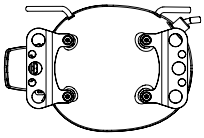
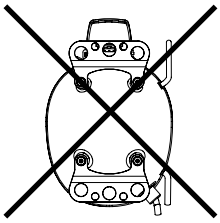
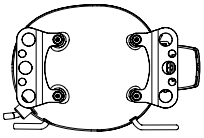
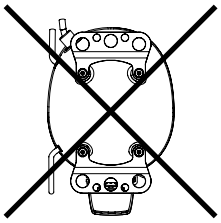
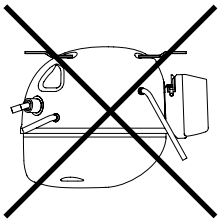
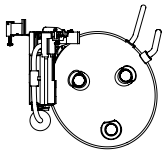
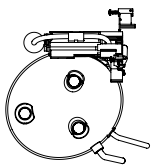
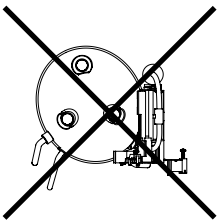
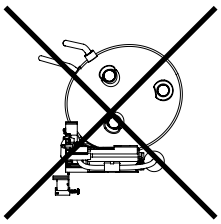
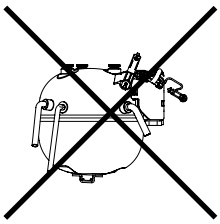
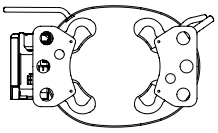
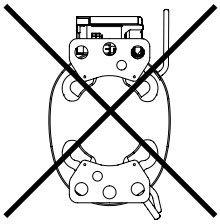
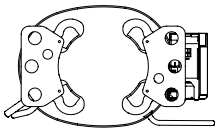
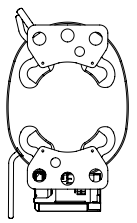
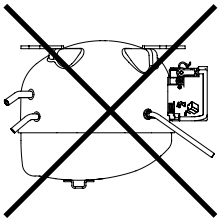
15.
SHIPMENT POSITIONS OF REFRIGERATION APPLIANCES

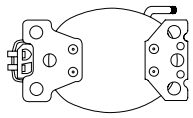
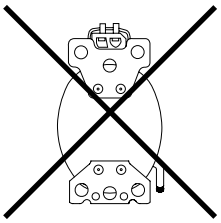
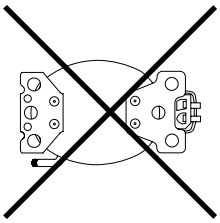
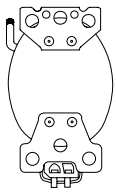
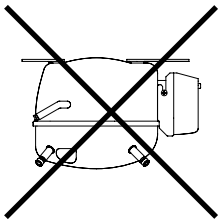
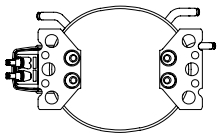
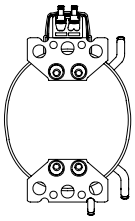
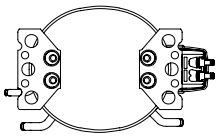
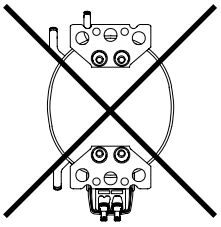
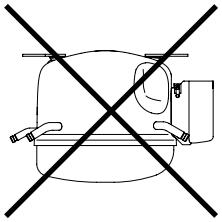
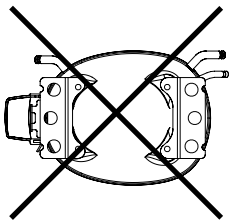
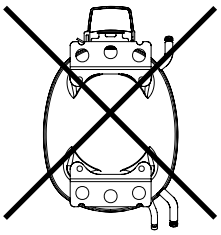
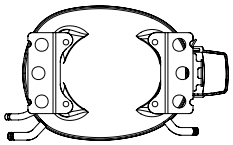
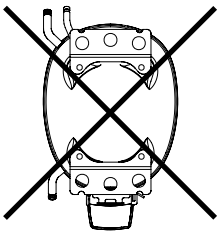
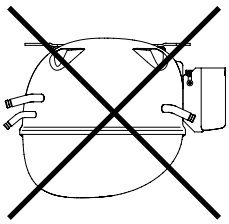
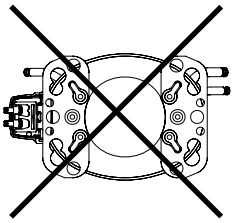
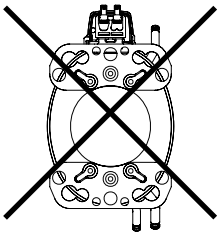
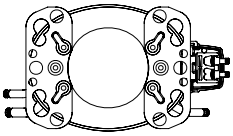
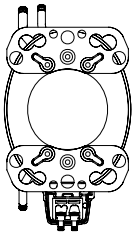
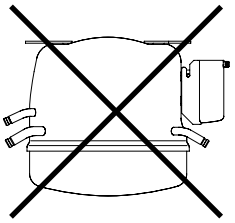
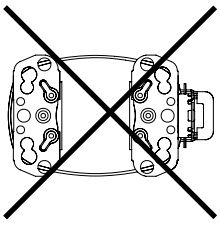
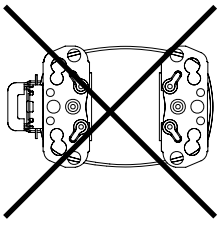
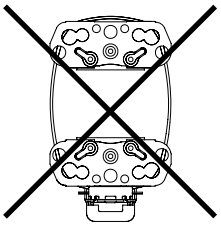
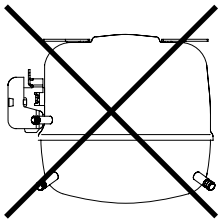
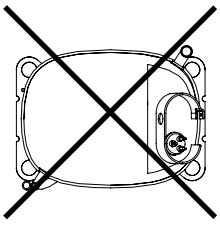
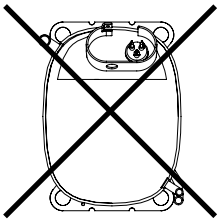
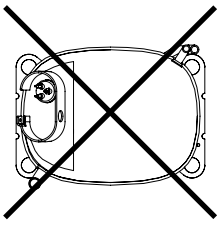
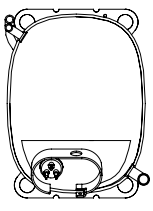
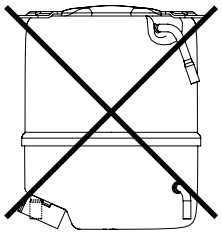
When refrigeration appliances are shipped in the normal vertical position, this will normally not cause any damage to the compressor.

If transported in horizontal position, the compressor must be oriented as shown in the table on the next page to prevent the accumulation of oil in the muffler and subsequent risk of damage. It is important to note that the compressor must be securely fastened and well supported during transportation.

Refrigeration appliances can be safely transported in horizontal position:

- with trucks on roads and motorways in good condition
- by ship in containers
- on railways in good condition

Compressors	**Shipment positions of refrigeration appliances** - Position X must not be used				
	Connectors up	Electrical lead-in up	Connectors down	Electrical lead-in down	Base plate up
X - Series					
D - Series					
DELTA					
KAPPA					

Compressors	**Shipment positions of refrigeration appliances** - Position X must not be used				
	Connectors up	Electrical lead-in up	Connectors down	Electrical lead-in down	Base plate up
P - Series					
T - Series					
N - Series					
F - Series					
S - Series					
G - Series					

SECOP HERMETIC RECIPROCATING COMPRESSORS MADE IN AUSTRIA

Secop Austria GmbH was already established in 1982 as "Verdichter Oe" in Fürstenfeld, Austria. The production site has several years of experience in developing high performing compressor solutions, mainly for household refrigeration appliances. The highly advanced manufacturing technology allows to manufacture products with the highest quality and performance standards and offer reliable efficiency in all areas. The Know-How and expertise of the innovative research and development team along with the close cooperation with market leading customers results in product innovation that enhances customer values and standards.

DELTA **KAPPA**

Refrigerant	**R600a (typelabel stripe colour: Red) Chemical formula: C_4H_{10}**	**Typelabel colour**
Voltage & frequency	220-240 V, 50Hz	Yellow
Basic types	KAPPA, DELTA	

GENERAL PRODUCT DOCUMENTATION
KAPPA

Table of Content

1.
COMPRESSOR DENOMINATION/ LABEL

KAPPA	1	2	3	4	5	6	group
	H	X	K	12	A	T	example

Group#6: Nominal Voltage Range
"A" for 220-240 V~ 50 Hz
"E" for 115-127 V~ 60 Hz
"G" for 220-240 V~ 50 Hz and 208-230 V~ 60 Hz
"T" for 200-240 V~ 50 Hz

Group#5: Application, starting characteristics
"A" for LBP, LST
"N" for LBP/(MBP), LST
"M" for LBP/MBP, LST

Group#4: Displacement in cm³
(values bigger than 20 have to be divided by 10)

Group#3: Platform
"K" for KAPPA

Group#2: Performance level "M, T, K, X, Z"
(Medium Efficiency → Superior Efficiency)

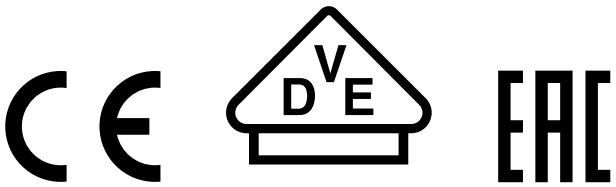
Group#1: Refrigerant
"H" for R600a
"G" for R134a

2. MOTOR TYPES/ APPROVALS

2.1 Motor types

RSIR:	**Resistance start – inductive run** Start winding is interrupted after start-up by a PTC.
RSCR:	**Resistance start – capacitive run** For higher efficiency the auxiliary winding is supporting the main winding by a run capacitor.
RSIR/RSCR:	Depending on requirements motor can be used as RSIR or RSCR type.

2.2 Certificate references



2.2.1 HXK

VDE, (CE)	EAC
Licence No.	**Licence No.**
40023933	TC RU D-AT.AG27.B.00381
	TC RU D-AT.Ag27.B.00382
	TC RU D-AT.AG27.B.00383

2.2.2 HKK

VDE, (CE)	EAC
Licence No.	**Licence No.**
40010874	TC RU D-AT.AG27.B.00381
40031157	TC RU D-AT.AG27.B.00382
-	TC RU D-AT.AG27.B.00383

2.2.3 HTK

VDE, (CE)	EAC
Licence No.	**Licence No.**
40003038	TC RU D-AT.AG27.B.00381
	TC RU D-AT.AG27.B.00382

2.2.4 HMK

VDE, (CE)	EAC
Licence No.	**Licence No.**
40016826	TC RU D-AT.AG27.B.00381
	TC RU D-AT.AG27.B.00382

3.
DELIVERY CONDITIONS/ APPLICATION CONDITIONS

3.1 Delivery conditions

Max. solid impurities (*)	[mg]	30
Max. soluble impurities (*)	[mg]	600
Max. total compressor water content (*)	[mg]	100

(*) When delivered

3.2 Applications conditions

Max. ambient temp. [1]	[°C]	43
Max. steady discharge temp. [2]	[°C]	120
Max. peak discharge temp. [2, 5]	[°C]	135
Max. steady condensing temp. [3]	[°C]	60
Max. peak condensing temp. [3, 5]	[°C]	70
Max. winding temp. [4]	[°C]	130

1 ... static

2 ... measured on discharge tube, 50 mm from the schell

3 ... measured in the middle of condenser

4 ... calculated out of the measured difference of resistance

5 ... max. 5% life time

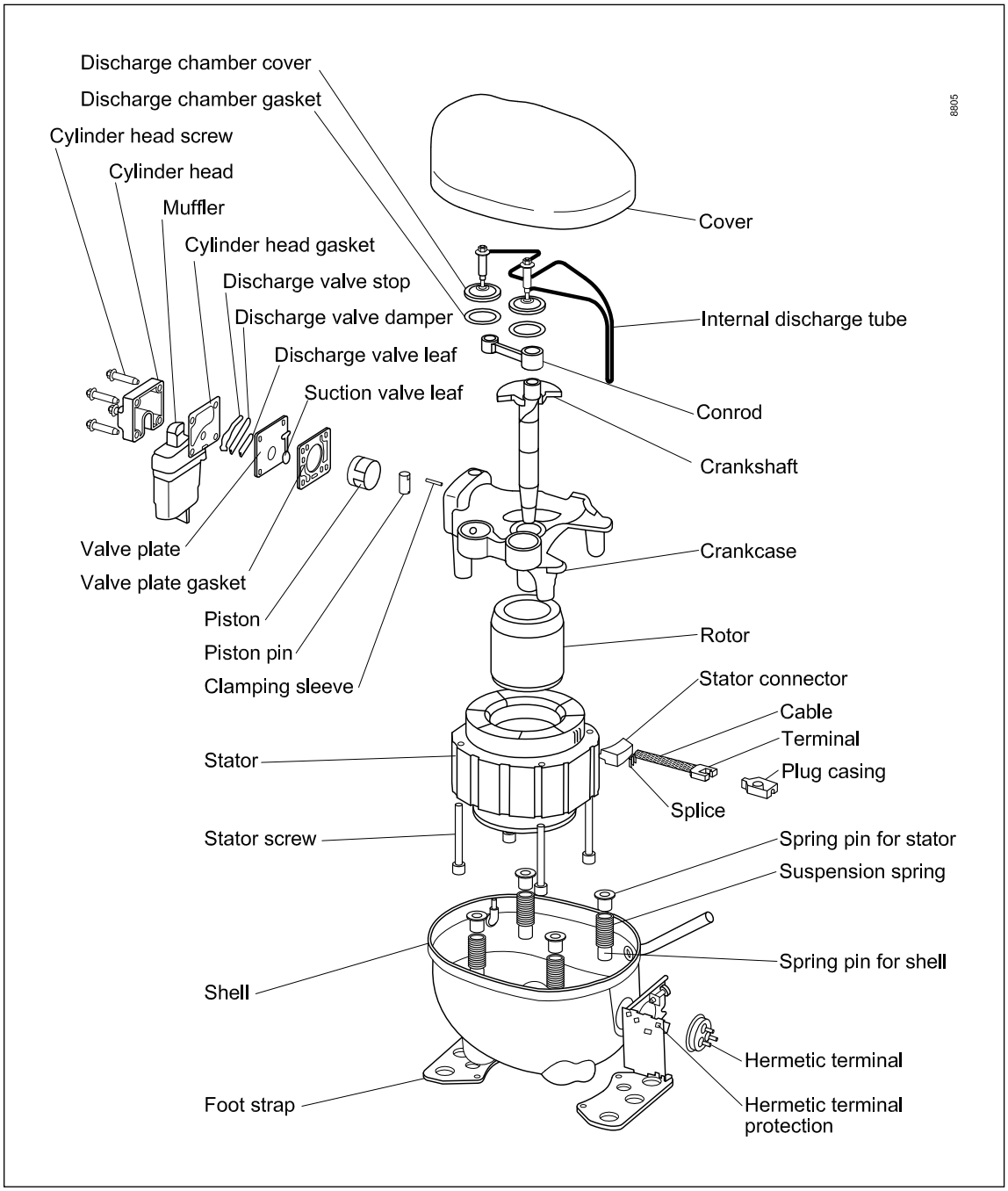
3.2.1 Oil transport of the compressor in the refrigeration circuit

Average value of the transported oil in the refrigeration circuit:
2.5 g oil/kg R600a mass flow per hour.

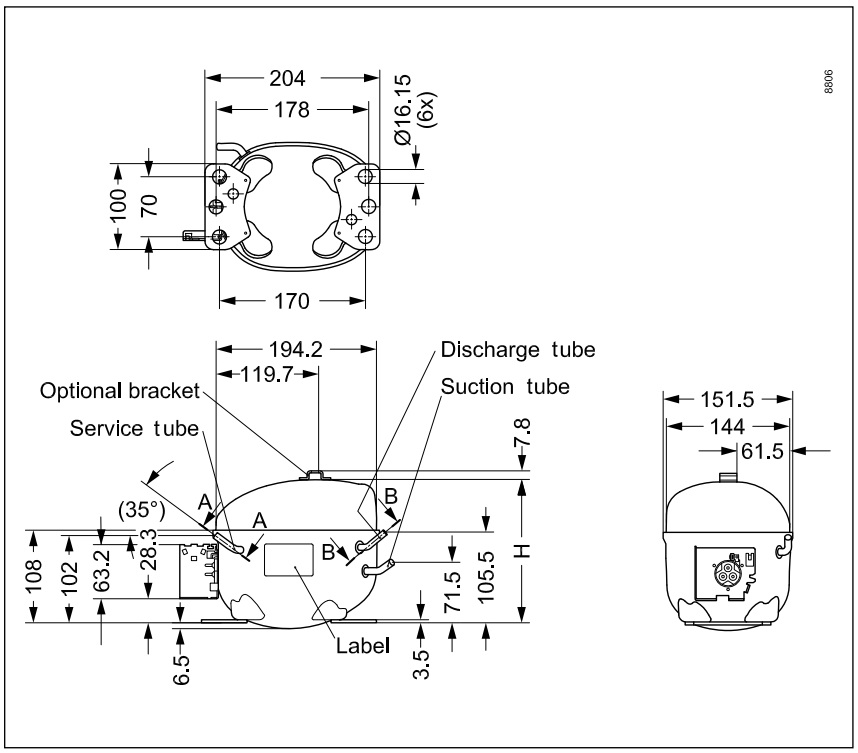
Tolerance:
±2.5 g oil/kg R600a mass flow per hour.

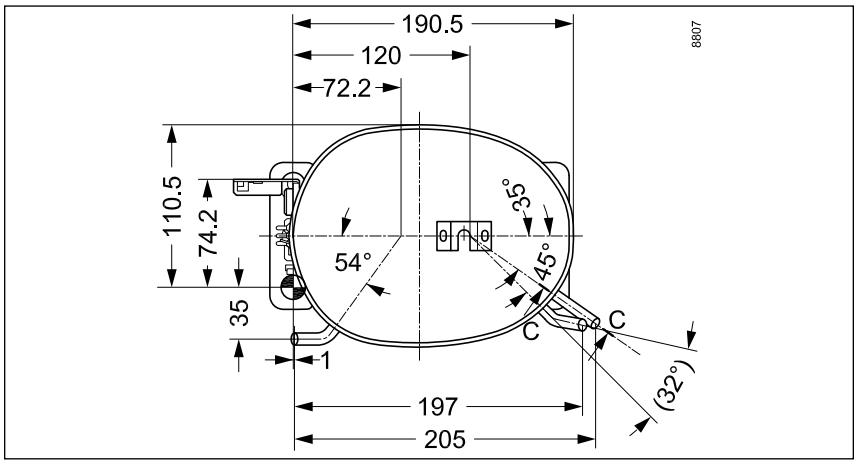
4.
DRAWINGS

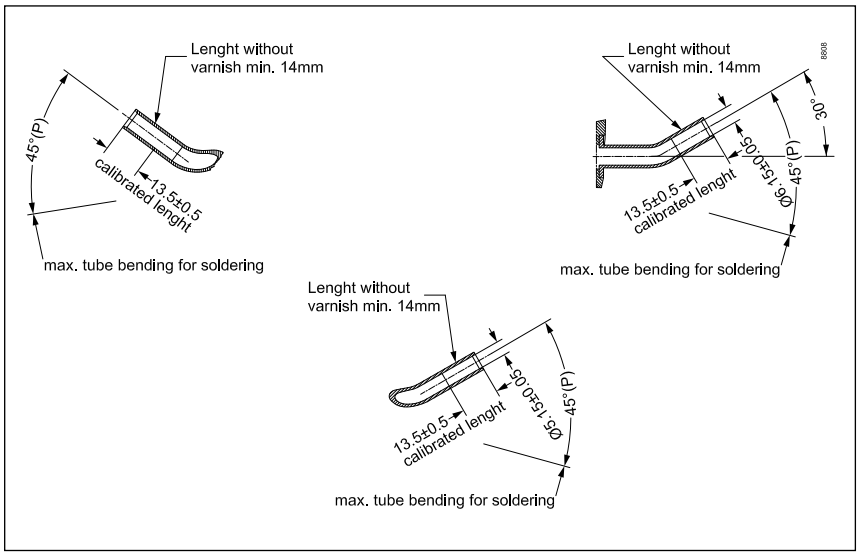
4.1
3D sketch, mechanical data sketch



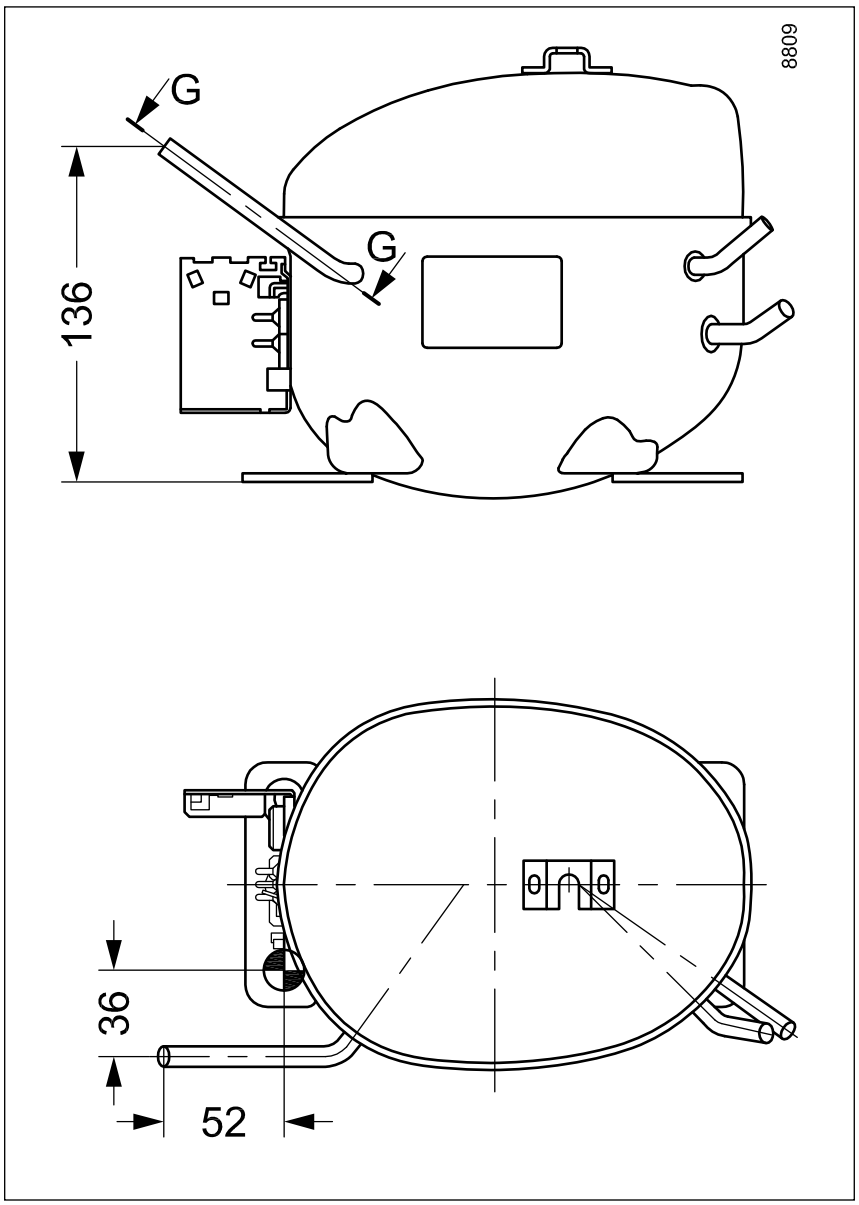
4.2
Outline dimensions with short service tube

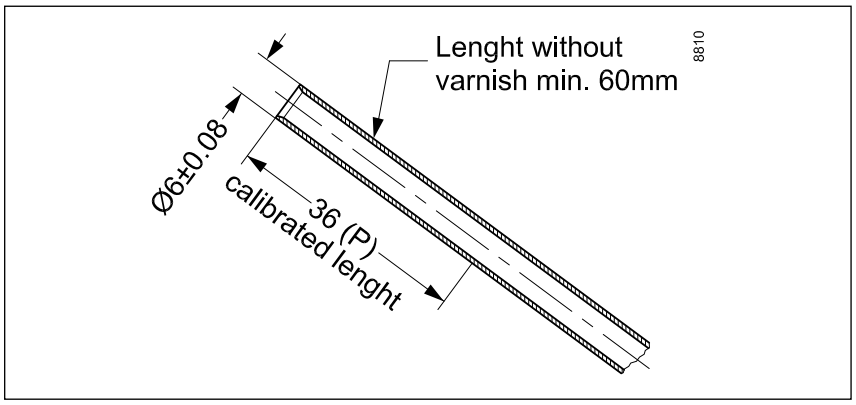






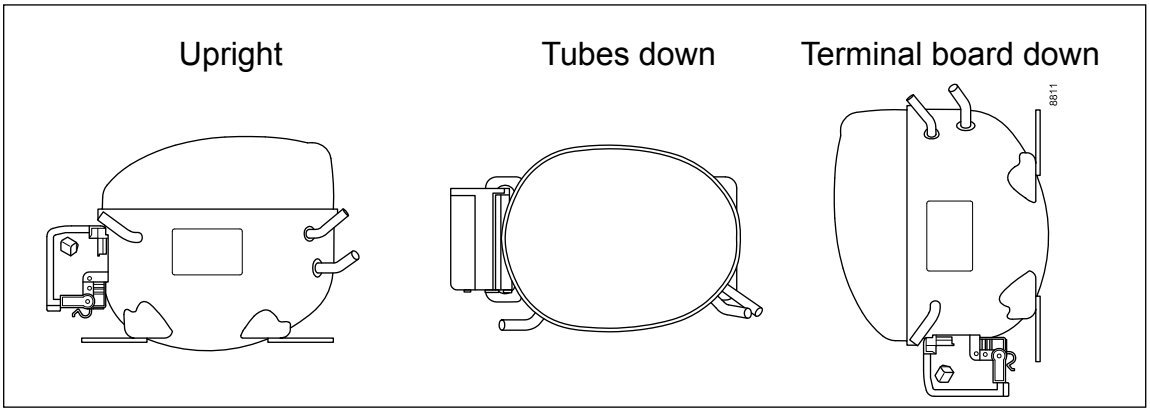
4.3
Outline dimensions with long service tube





5.
TRANSPORT, PACKING, PALLETIZATION

5.1
Recommended transport positions when fitted into appliances



5.2
Packing and palletization

5.2.1
Packing type, pallet data

Packing-type		Layers	Quantity	Compressors per layer	Pallet Size L×W
				L×Q	mm
One-Way packaging	Wood-EPS *	4	80	5×4 = 20	1120×820
		5	100	5×4 = 20	1120×820
	Single packaging	5	60	4×3 = 12	1120×820
More-Way packaging	ABS	4	84	7×3 = 21	1200×800
		5	105	7×3 = 21	1200×800

*Optional protection and reinforcement with cardboard-box and PE top foil.

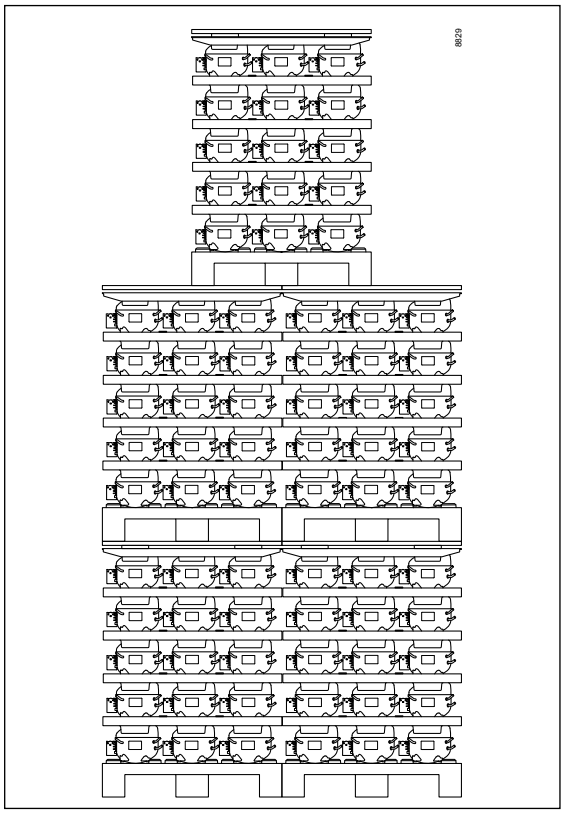
5.2.2
Transport

Packing-type		Layers	Stacking height Number of pallets		
			Truck	Container	Train 1, 2
One-Way packaging	Wood-EPS	4	1	-	-
		5	1	-	-
	Wood-EPS + cardboard-box	4	1	-	1
		5	1	-	1
	Wood-EPS + cardboard-box + PE top foil	4	1	2	1
		5	1	2	1
	Single packaging	5	1	1	-
More-way packaging	ABS	4	2	-	1
		5	1	-	1

1 Train transport according UIC-Codex 526-1. In sliding wall wagon with lockable bulkhead only;
2 Train loading according BT Band 2 Rail Cargo Austria, Loading guideline 100.1; Contact of pallet to bulk head is mandatory; respectively the maximum distance of 45 mm has to be guaranteed. Maximum weight of goods between bulk heads is 5 t.

5.2.3
Warehouse storing

More-Way packaging
One Way packaging max. 3 pallet layers – 3rd layer with offset.



Attention: Single packaging one pallet layer only!

5.2.4
Recycling of compressors

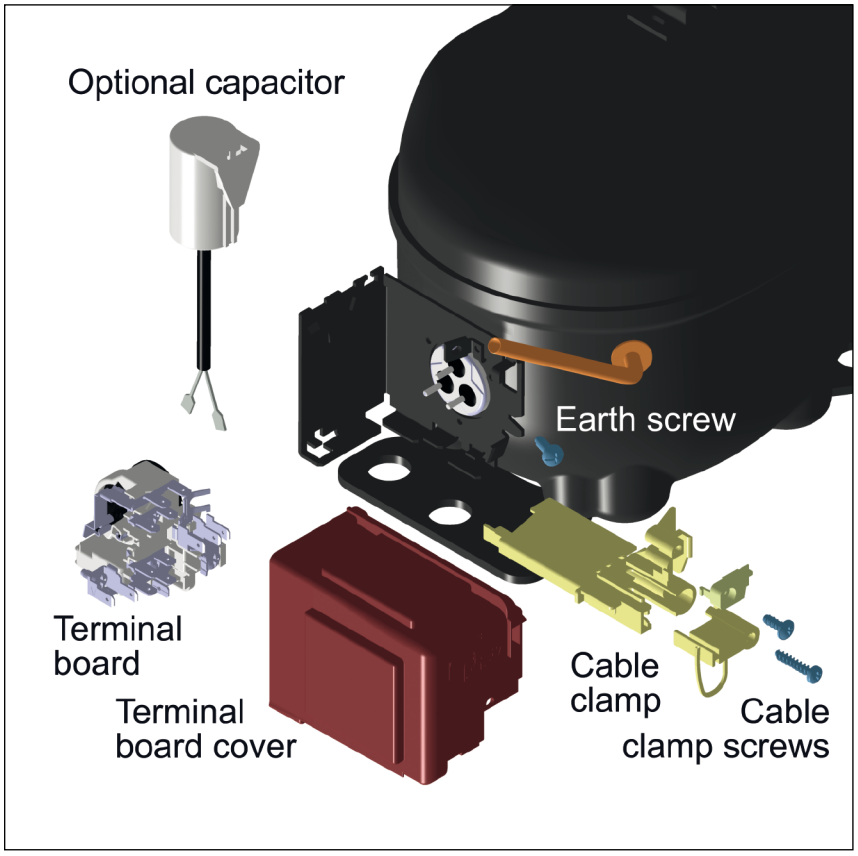
Oil and gas must be recycled separately. Afterwards the compressor must be removed from the refrigerator and has to be given to a scrap metal recycling unit.

ACCESSORIES
KAPPA

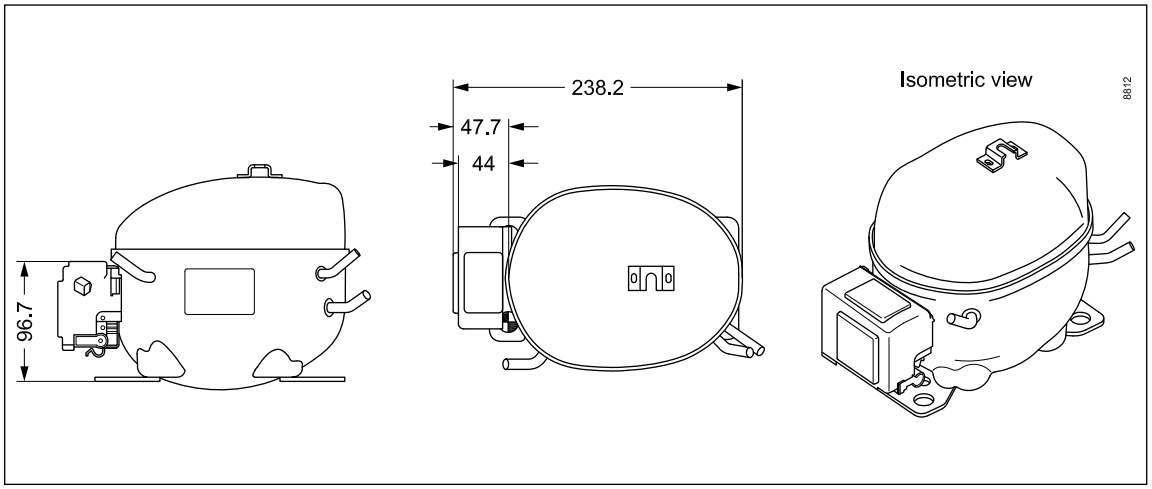
Table of Content

1.
ELECTRICAL COMPONENTS

1.1
Terminal board assembly

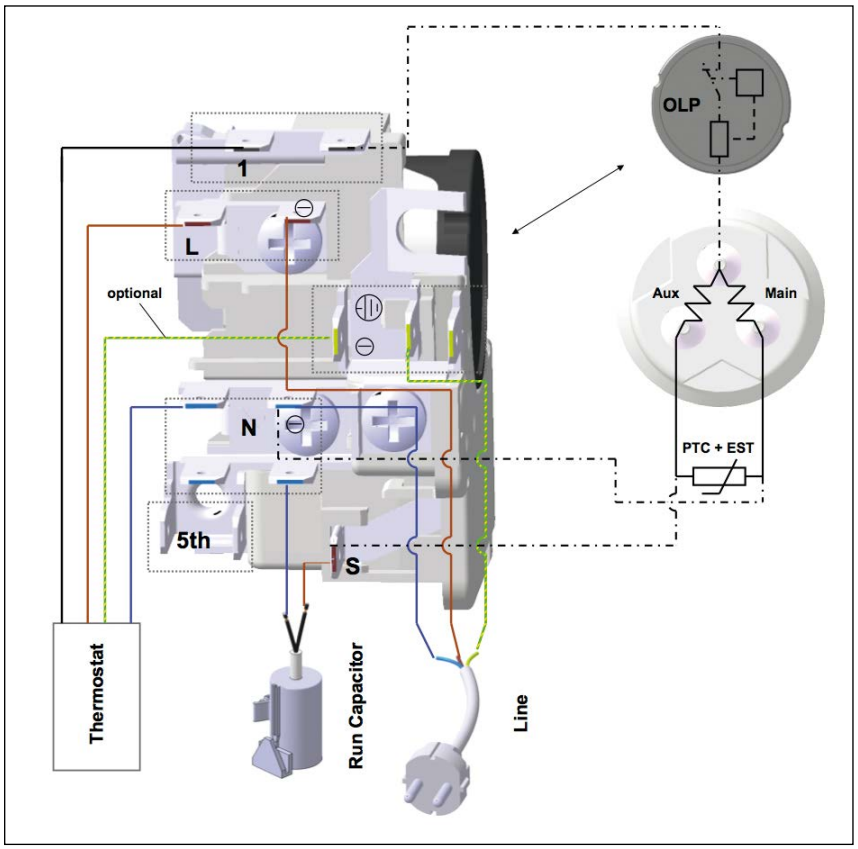


1.2
Outline with terminal board cover

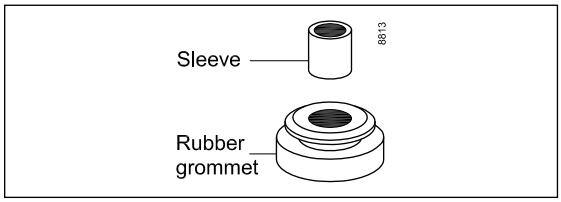


2.
ELECTRIC TERMINAL CIRCUIT DIAGRAM/ MOUNTING ACCESSORIES

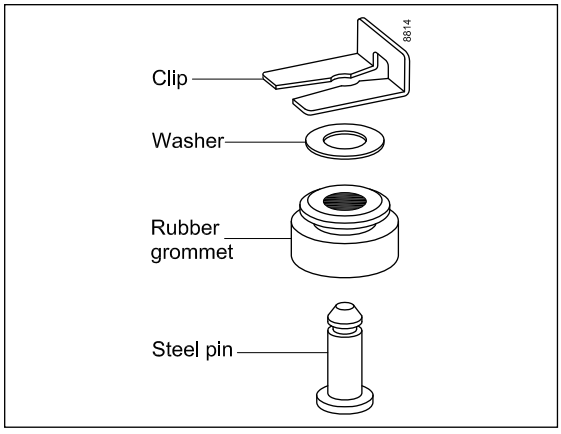
2.1
Standard frontal version



2.2
Standard

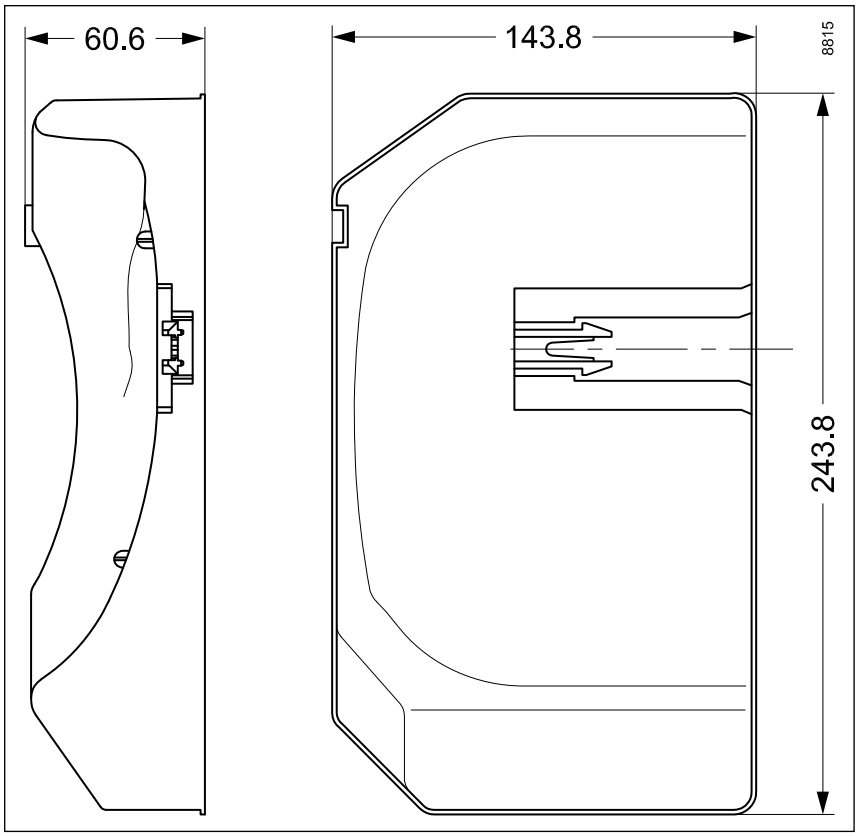


2.3
Optional

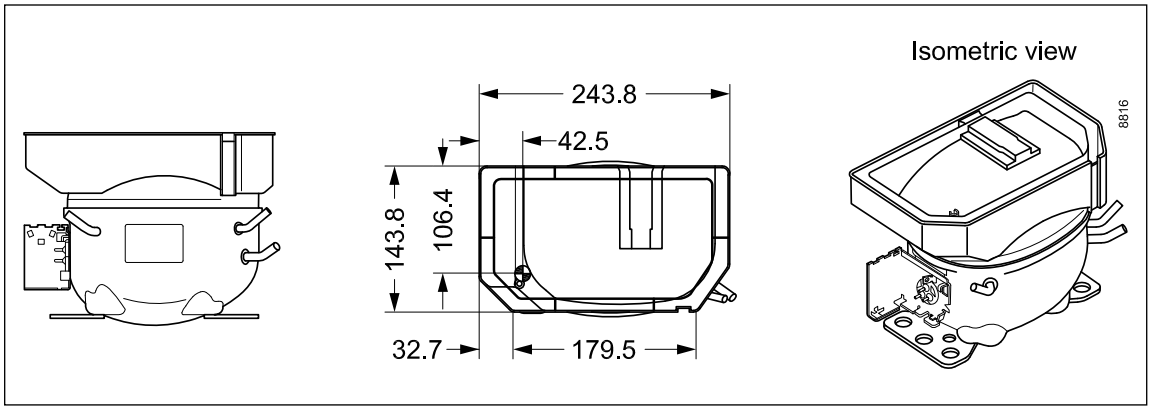


3.
EVAPORATION TRAY

3.1
Dimension of evaporation tray



3.2
Outline dimension with evaporation tray



GENERAL PRODUCT DOCUMENTATION DELTA

Table of Content

1.
COMPRESSOR DENOMINATION/ LABEL

DELTA	1	2	3	4	5	6	group
	H	X	D	55	A	A	example

Group#6: Nominal Voltage Range
"A" for 220-240 V~ 50 Hz
"E" for 115-127 V~ 60 Hz
"G" for 220-240 V~ 50 Hz and 208-230 V~ 60 Hz
"T" for 200-240 V~ 50 Hz

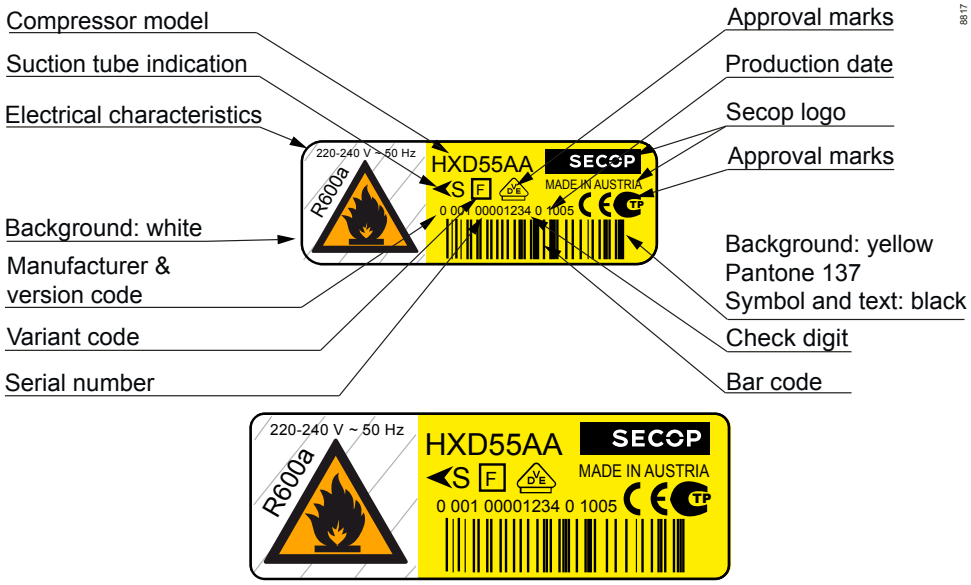
Group#5: Application, starting characteristics
"A" for LBP, LST
"N" for LBP/(MBP), LST
"M" for LBP/MBP, LST

Group#4: Displacement in cm³
(values bigger than 20 have to be divided by 10)

Group#3: Platform
"D" for DELTA

Group#2: Performance level "M, T, K, X, Z"
(Medium Efficiency → Superior Efficiency)

Group#1: Refrigerant
"H" for R600a



2.
MOTOR TYPES/ APPROVALS/ DELIVERY CONDITIONS

2.1 Motor types

RSIR:	**Resistance start – inductive run** Start winding is interrupted after start-up by a PTC.
RSCR:	**Resistance start – capacitive run** For higher efficiency the auxiliary winding is supporting the main winding by a run capacitor.
RSIR/RSCR:	Depending on requirements motor can be used as RSIR or RSCR type.

2.2 Certificate references (licence numbers)

HXD	**VDE, (CE)**	**EAC**
	40029645	TC RU D-AT.AG27.B.00382

HTD	**VDE, (CE)**	**EAC**
	40030818	TC RU D-AT.AG27.B.00382

HZD	**VDE, (CE)**
	40042843

HXD-MA	**VDE, (CE)**
	40042840

HTD-AG	**VDE, (CE)**
	40043347

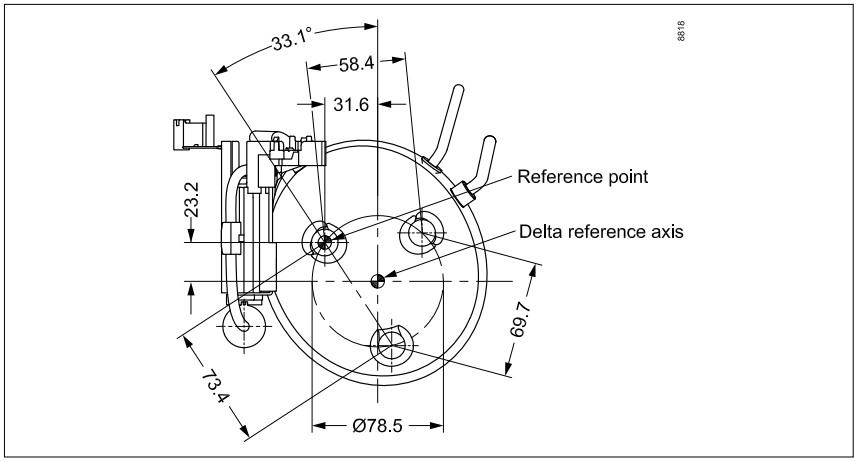
HTD-AE	**UL**
	20160718-SA3693

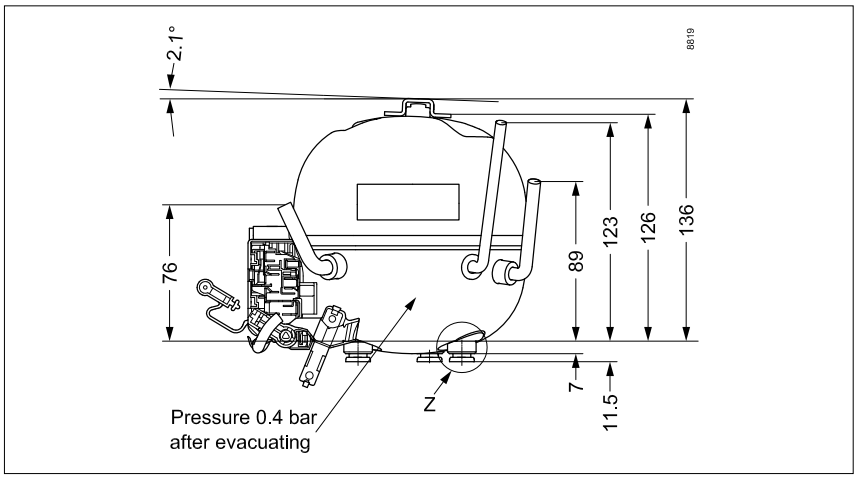
2.3 Delivery conditions

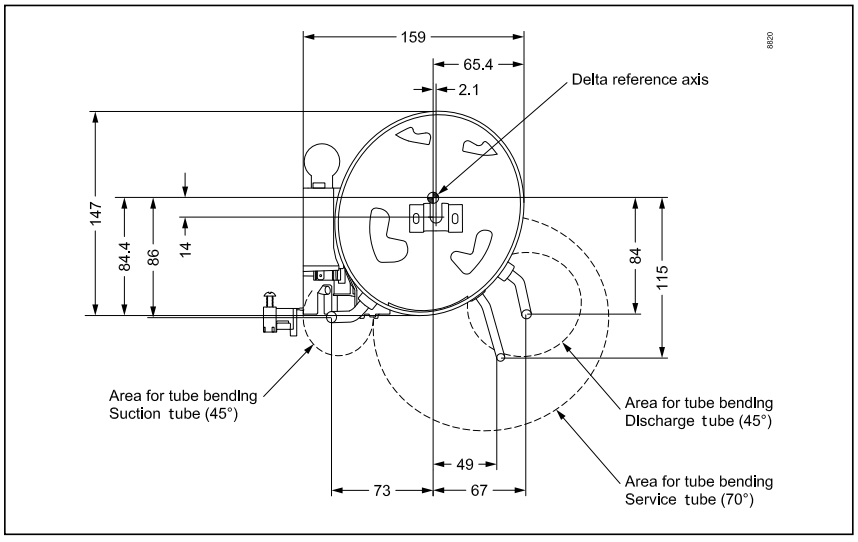
Max. solid impurities	[mg]	30
Max. soluble impurities	[mg]	600
Max. total compressor water content (*)	[mg]	100

3.
DRAWINGS

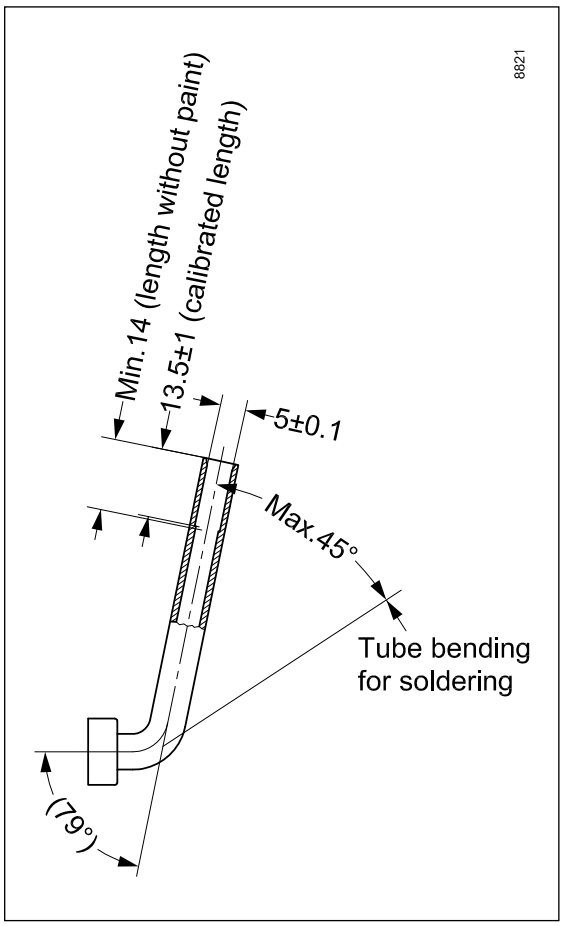
3.1
Outline dimensions and tubes

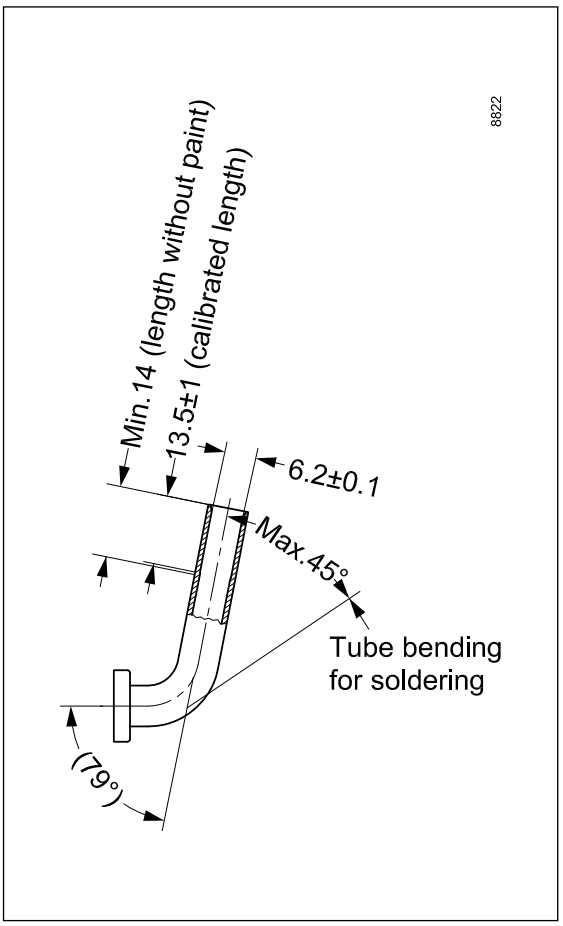


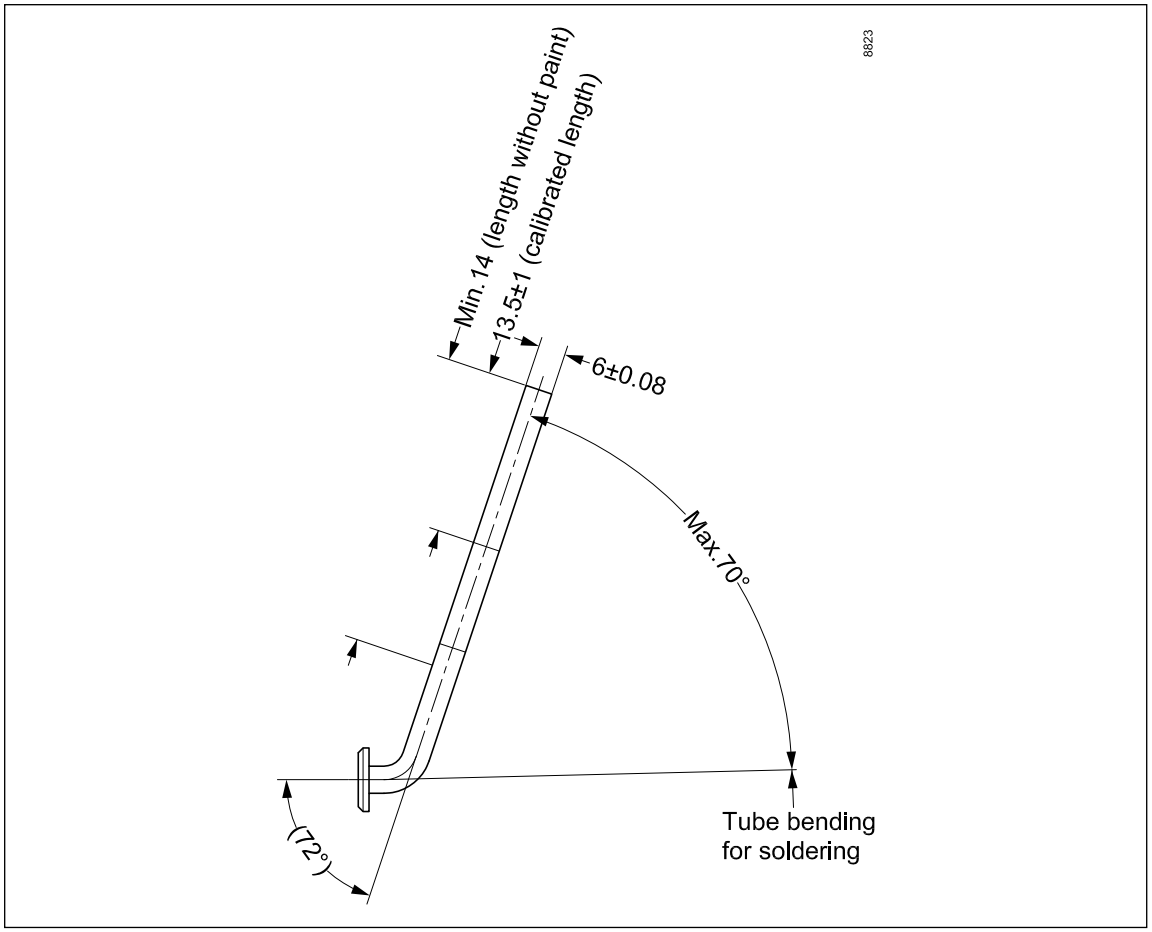




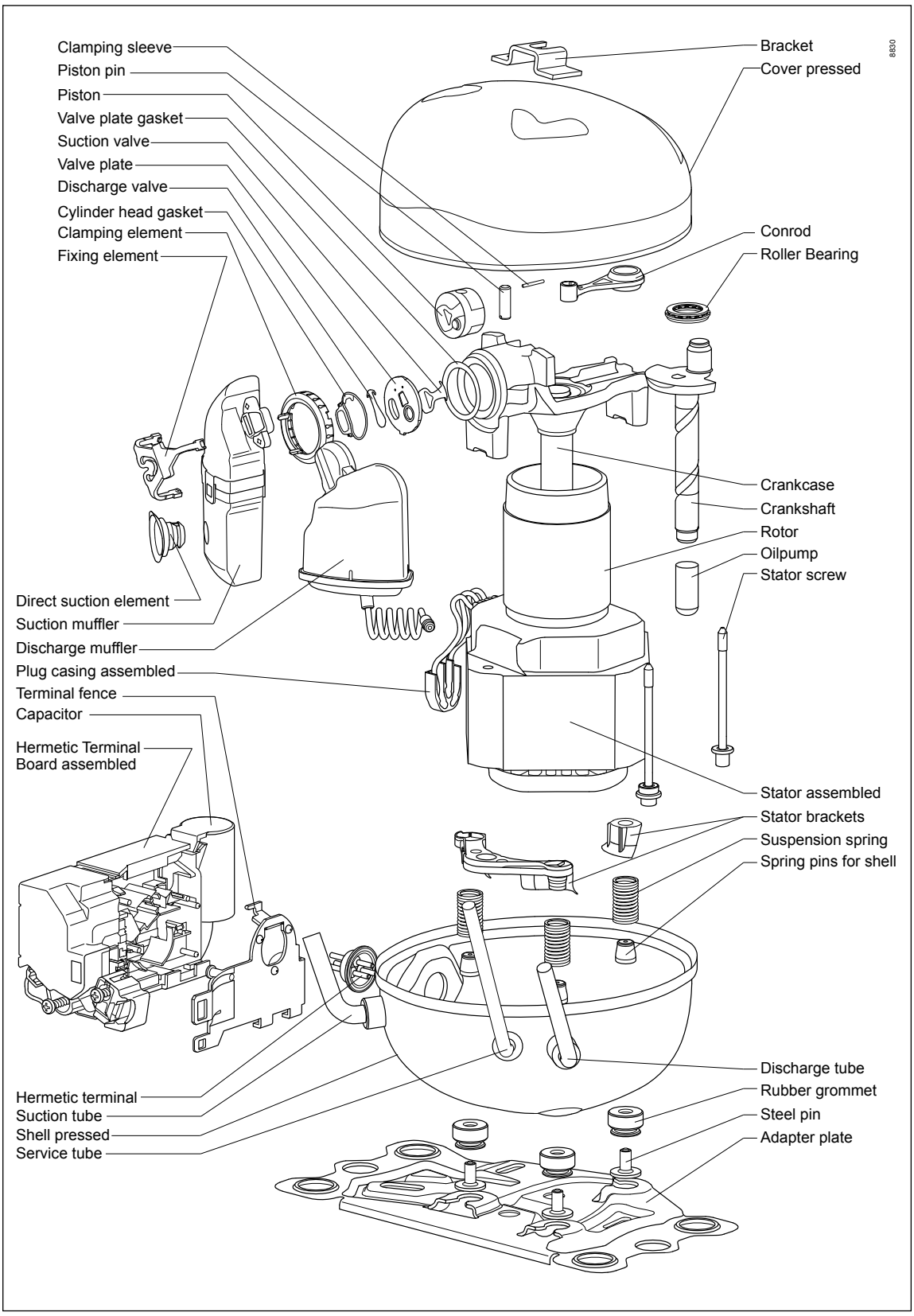
3.1
Outline dimensions and tubes





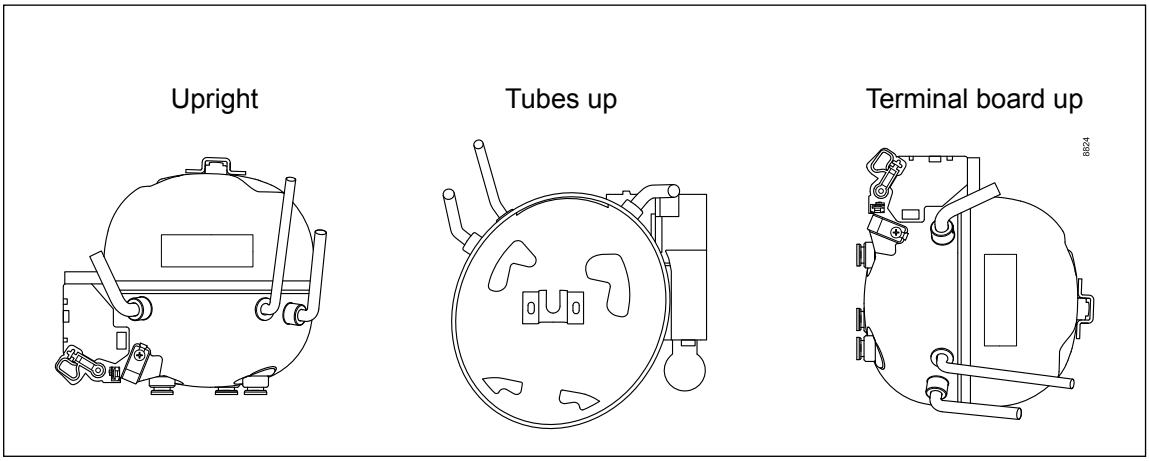


3.2
3D sketch, mechanical data sketch



4.
TRANSPORT, PACKING, PALLETIZATION

4.1
Recommended transport positions when fitted into appliances



4.2
Packing and palletization

4.2.1
Packing type, pallet data

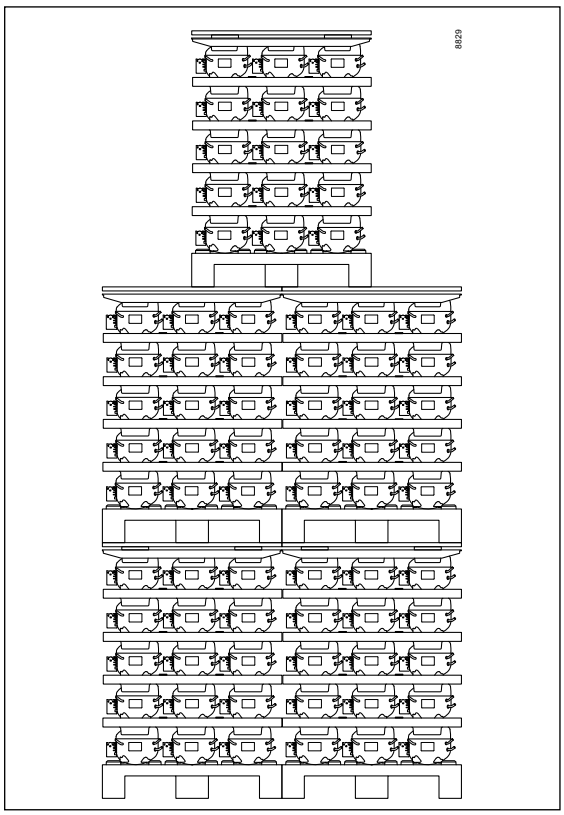
Packing-type		Layers	Quantity	Compressors per layer	Pallet Size L×W
				L×Q	mm
One-Way packaging	EPS + PE top foil	6	168	7×4 = 28	1200×800×1100
		5	140	7×4 = 28	1200×800×946
		4	112	7×4 = 28	1200×800×792
	EPS + Cardboard-box + PE top foil	6	168	7×4 = 28	1200×800×1100

4.2.2
Transport

Packing-type		Layers	Stacking height Number of pallets		
			Truck	Container	Train 1, 2
One-Way packaging	EPS + PE top foil	6	1	1	1
		5	1	1	1
		4	1	1	1
	EPS + Cardboard-box + PE top foil	6	1	2	1

1 Train transport according UIC-Codex 526-1. In sliding wall wagon with lockable bulkhead only;
2 Train loading according BT Band 2 Rail Cargo Austria, Loading guideline 100.1; Contact of pallet to bulk head is mandatory; respectively the maximum distance of 45 mm has to be guaranteed. Maximum weight of goods between bulk heads is 5 t.

4.2.3 Warehouse storing



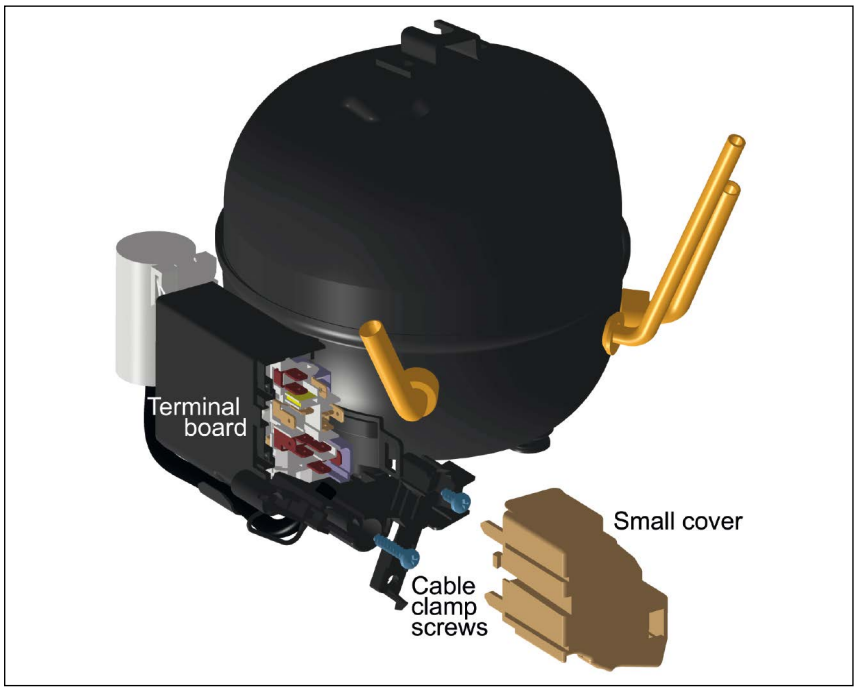
Attention: Single packaging one pallet layer only!

4.2.4 Recycling of compressors

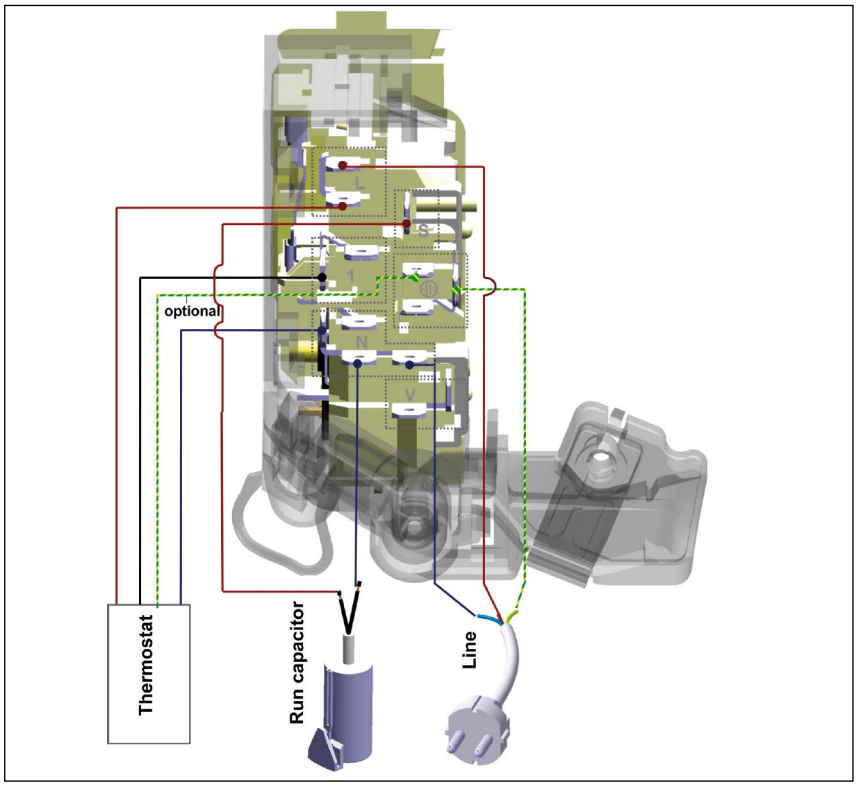
Oil and gas must be recycled separately. Afterwards the compressor must be removed from the refrigerator and has to be given to a scrap metal recycling unit.

5.
ELECTRICAL COMPONENTS/ ELECTRIC TERMINAL CIRCUIT DIAGRAM

5.1
Terminal board assembly

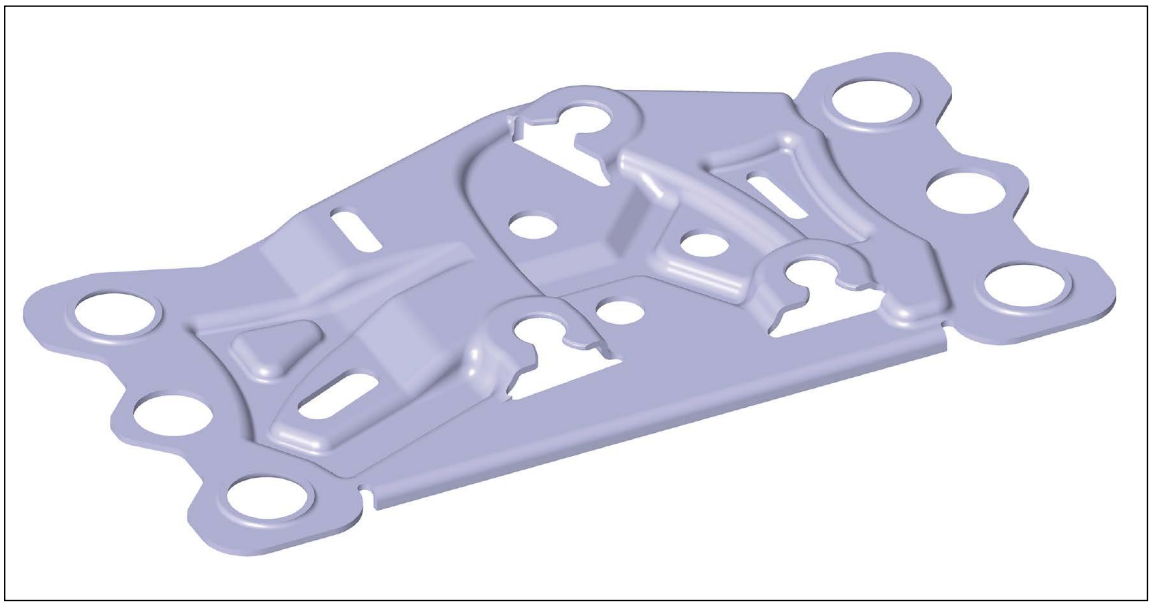


5.2
Electric terminal circuit diagram



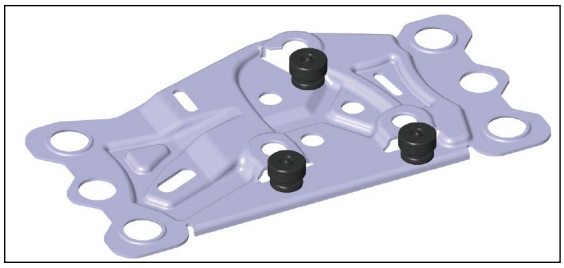
6.
ACCESSORIES

6.1
Adapter plate



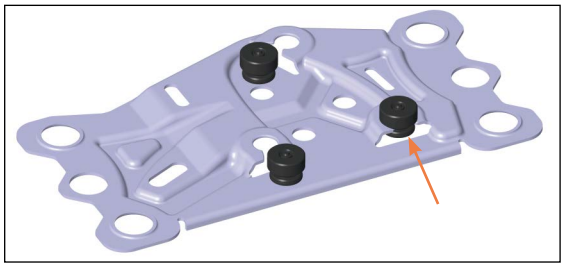
Compressor mounting

Step 1



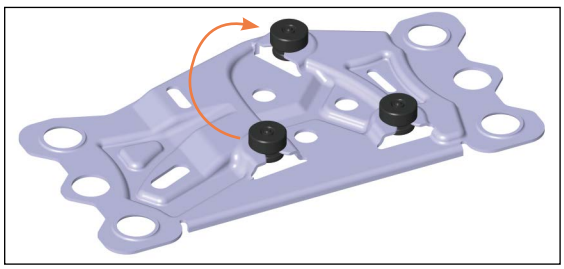
Put down compressor in front of key holes.

Step 2



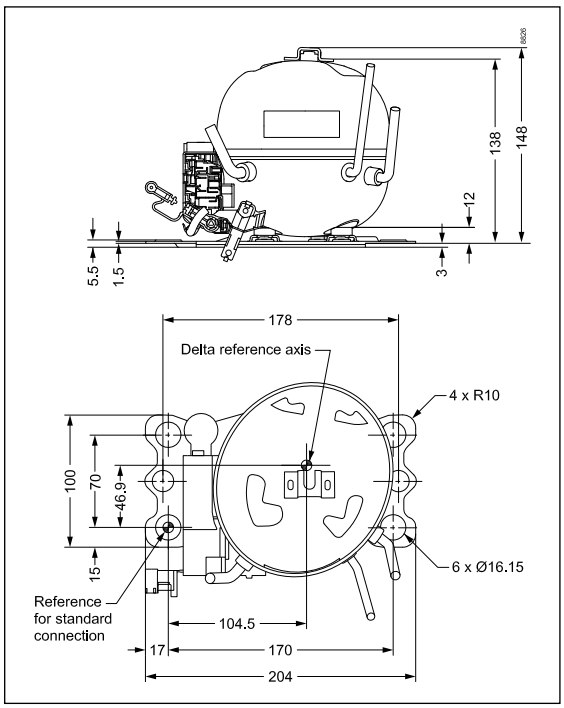
Click in first foot with linear movement.

Step 3

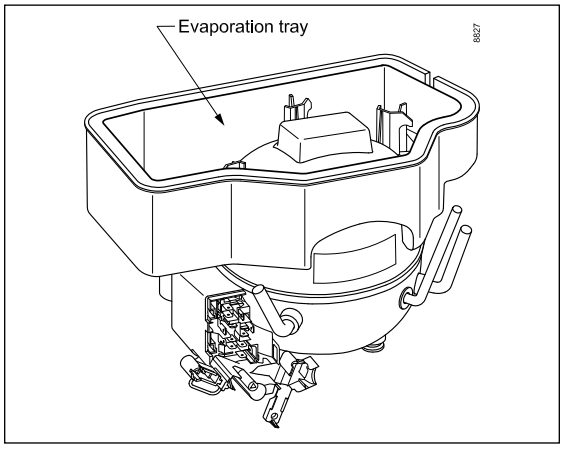


Click in foot 2 and 3 with rotary movement.

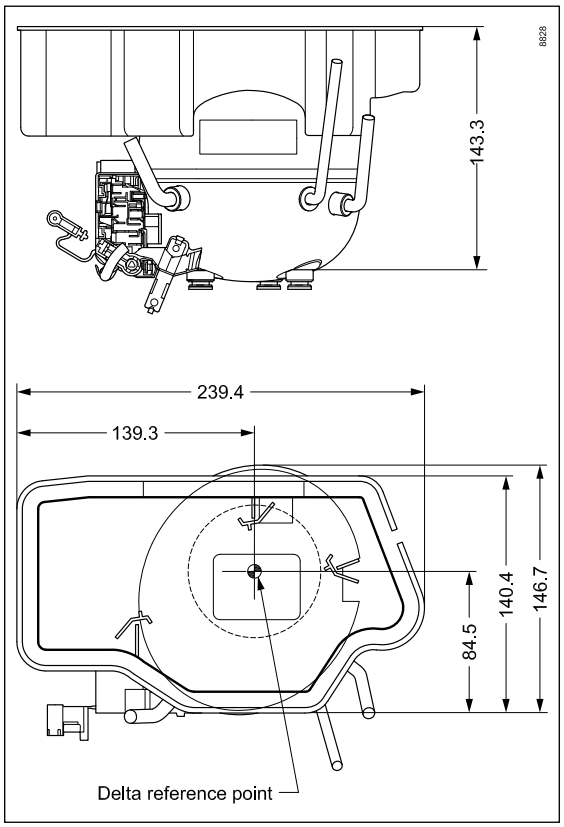
6.1.1
Outline dimensions with adapter plate



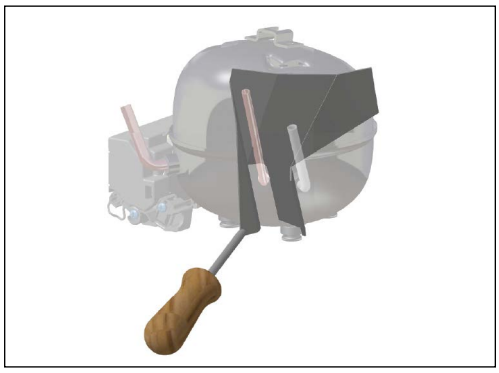
6.2
Plastic evaporation tray



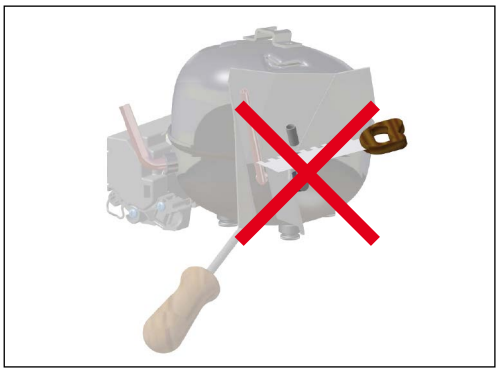
6.2.1
Outline dimensions with plastic evaporation tray



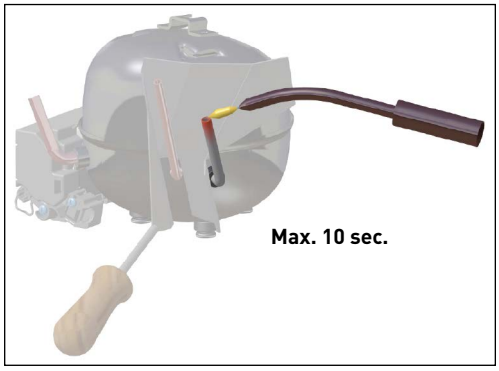
7.
BRAZING AND REFRIGERANT CHARGE



Use brazing protection shield



Do not reduce tube length

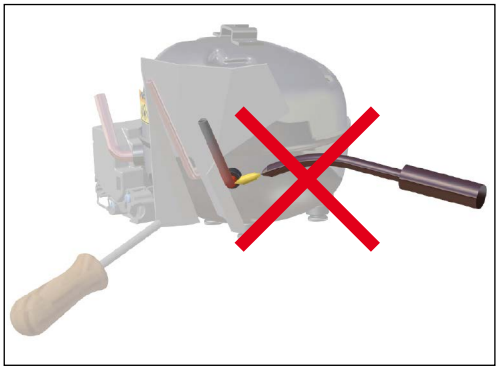


Factory/OEM:

Stop brazing after max. 10 sec to allow the tube to cool down

Service/Repair:

Use LOKRING® tooling



Factory/OEM:

Avoid heating tube root and direct flame on compressor surface

Service/Repair:

Use LOKRING® tooling

Gas quantity

We recommend using roughly 10% less refrigerant versus Kappa to achieve optimum energy consumption.

WITH MORE THAN 60 YEARS OF EXPERIENCE IN COMPRESSOR TECHNOLOGY AND HIGHLY DEDICATED EMPLOYEES, OUR FOCUS IS ON DEVELOPING AND APPLYING ADVANCED COMPRESSOR TECHNOLOGIES TO ACHIEVE STANDARD SETTING PERFORMANCE FOR LEADING PRODUCTS AND BUSINESSES AROUND THE WORLD.

R600a | R290

Variable Speed Drive Compressors

220-240 V | 50/60 Hz

100-127 V | 50/60 Hz

Chemical formula R600a
C_4H_{10}
Chemical formula R290
C_3H_8

Typelabel
Typelabel stripe colour: Red (except X-Series Compressors)
Typelabel colour: Grey

Applications
LBP: Low Back Pressure
MBP: Medium Back Pressure

Motor types
The compressors are equipped with permanent magnet rotors (PM motor) and 3 identical stator windings.
The electronic unit controls the PM motor.

Compressor cooling
S = Static cooling normally sufficient
O = Oil cooling
F_1 = Fan cooling 1.5 m/s (compressor compartment temp. equal to ambient temperature)
F_2 = Fan cooling 3.0 m/s necessary

Electronic unit (controller)
The electronic unit provides the compressor with **H**igh **S**tarting **T**orque (HST) which means that a pressure-equalization of the system before start is not necessary. For further information on which starting device to use on individual compressors, please refer to the actual datasheets (some compressors have limitations for either LST or HST). and to our "Operationg Instructions".

The electronic unit has a built-in overload protection as well as thermal protection. In case of activation of this protection the electronic unit will protect the compressor motor as well as itself. When the protection has been activated, the electronic unit automatically will restart the compressor after a certain time.

Test conditons
1 Watt = 0.86 kcal/h
1 Watt = 3.41 Btu/h


EMO2
Linka
SK3

R600a • 220-240 V • 100-127 V • 50/60 Hz • X-Series

Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -25°C / 55°C		MBP rating point -10°C / 55°C		HBP rating point 5°C / 55°C							
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
XV5.0KX 1000 rpm	108H5012	LBP	8	29	43	50			16	1.29	36	1.99			10	36	54	63		
XV5.0KX 4000 rpm	108H5012	LBP	34	127	196	230			67	1.28	161	1.89			41	155	240	281		
XV5.0KX 1000 rpm	108H5013	L/MBP	8	29	43	50			16	1.29	36	1.99	56	2.70	10	36	54	63		
XV5.0KX 4000 rpm	108H5013	L/MBP	34	127	196	230			67	1.28	161	1.89	259	2.45	41	155	240	281		
XV5.0KX 1000 rpm	108H5014	L/MBP	8	29	43	50			16	1.35	36	2.06	56	2.77	10	36	54	63		
XV5.0KX 4000 rpm	108H5014	L/MBP	34	127	196	230			67	1.38	161	1.92			41	155	240	281		
XV5.0KX 1000 rpm	108H5015	L/MBP	8	29	43	50			16	1.29	36	1.99			10	36	54	63		
XV5.0KX 4000 rpm	108H5015	L/MBP	34	127	196	230			67	1.28	161	1.89			41	155	240	281		
XV7.2KX 1000 rpm	108H7210	LBP	17	52	87	107			28	1.39	69	2.12			21	64	106	131		
XV7.2KX 4000 rpm	108H7210	LBP	62	192					106	1.31	247	1.92			76	236				
XV7.2KX 1000 rpm	108H7211	LBP	17	52	87	107			28	1.39	69	2.12			21	64	106	131		
XV7.2KX 4000 rpm	108H7211	LBP	62	192					106	1.31	247	1.92			76	236				
XV7.2KX 1000 rpm	108H7214	LBP	17	52	87	107			28	1.40	69	2.14			21	64	106	131		
XV7.2KX 4000 rpm	108H7214	LBP	62	192					106	1.28	247	1.85			76	236				
XVL7.2KX 1000 rpm	108H7230	LBP	15	54	84	102			32	1.29	68	1.70			19	66	103	125		
XVL7.2KX 4000 rpm	108H7230	LBP	54	192					113	1.35	241	1.80			67	235				
XV8.0KX 1000 rpm	108H7710	LBP	17	57	87	101			32	1.40	72	2.14			21	70	106	123		
XV8.0KX 4000 rpm	108H7710	LBP	65	214					122	1.33	270	1.94			80	261				
XV8.0KX 1000 rpm	108H7712	LBP	17	57	87	101			32	1.40	72	2.14			21	70	106	123		
XV8.0KX 4000 rpm	108H7712	LBP	65	214					122	1.33	270	1.94			80	261				
XV8.0KX 1000 rpm	108H7714	LBP	17	57	87	101			32	1.41	72	2.16			21	70	106	123		
XV8.0KX 4000 rpm	108H7714	LBP	65	214					122	1.30	270	1.86			80	261				
XVL8.0KX 1000 rpm	108H7730	LBP	17	58	90	110			34	1.29	73	1.72			20	71	110	135		
XVL8.0KX 4000 rpm	108H7730	LBP	57	202					119	1.34	253	1.77			71	246				

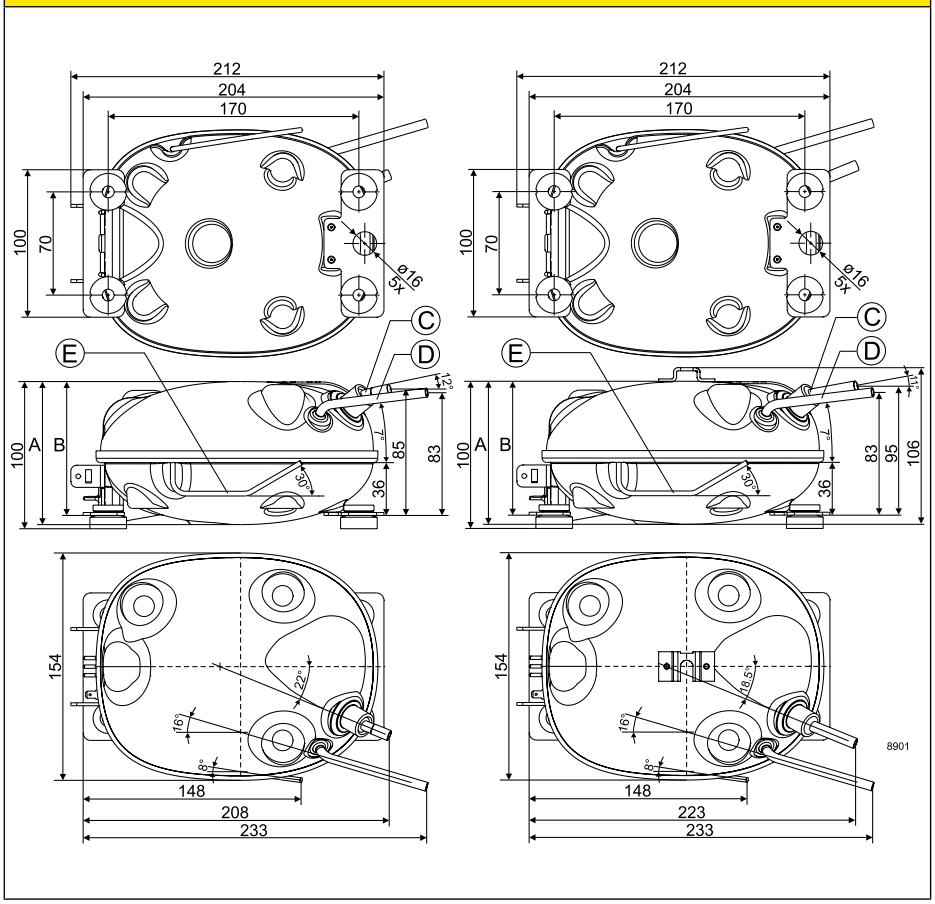
R600a • 220-240 V • 100-127 V • 50/60 Hz• X-Series • Controller

Compressor	Code number	XV-AEO/Freq. **105N5022** Attached Voltage range: 160 - 264 V, 50/60 Hz Inputs: Thermostat, Modbus, frequency signal	XV-Frequency **105N5052** Detached Voltage range: 160 - 264 V, 50/60 Hz Input: Frequency signal	XV-AEO/Freq. **105N5320** Attached, PFC Voltage range: 160 - 264 V, 50/60 Hz Inputs: Thermostat, Modbus, frequency signal	XV-AEO/Freq. **105N5312** Attached Voltage range: 90 - 135 V, 50/60 Hz Inputs: Thermostat, Modbus, frequency signal	XV-Frequency **105N5150** Detached Voltage range: 90 - 135 V, 50/60 Hz Input: Frequency signal	XVL-AEO/Freq. **105N5324** Attached, PFC Voltage range: 160 - 264 V, 50/60 Hz Inputs: Thermostat, Modbus, frequency signal
XV5.0KX	108H5012	✓	✓	✓			
XV5.0KX	108H5013	✓	✓	✓			
XV5.0KX	108H5014				✓	✓	
XV5.0KX	108H5015	✓	✓	✓			
XV7.2KX	108H7210	✓	✓	✓			
XV7.2KX	108H7211	✓	✓	✓			
XV7.2KX	108H7214				✓	✓	
XVL7.2KX	108H7230						✓
XV8.0KX	108H7710	✓	✓	✓			
XV8.0KX	108H7712	✓	✓	✓			
XV8.0KX	108H7714				✓	✓	
XVL8.0KX	108H7730						✓

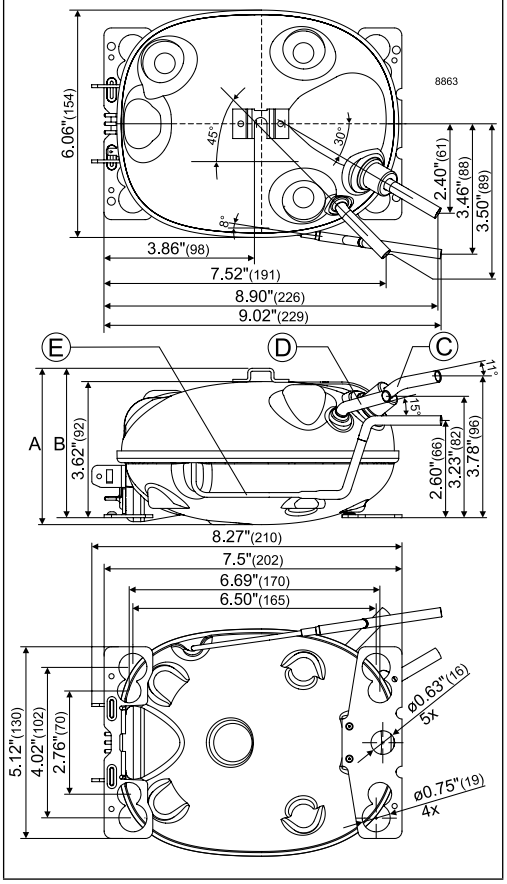
Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions						Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C						Height [mm]		Connectors location / diameter [mm]			alt. connectors available	
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP							Suction	Process	Discharge E (O.D.)		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	[HP]	[cm³]			A	B	C (I.D.)	D (I.D.)	E (I.D.) *		
22	1.67	46	2.38			1/12	5.00	160-264 V, 50 Hz *	S	97	91	6.2	4.5	3.2	X	1 | 9
93	1.66	203	2.24			1/12	5.00	160-264 V, 50 Hz *	S	97	91	6.2	4.5	3.2	X	1 | 9
22	1.67	46	2.38			1/12	5.00	160-264 V, 50 Hz *	S	97	91	6.2	4.5	3.2	X	1 | 9
93	1.66	203	2.24			1/12	5.00	160-264 V, 50 Hz *	S	97	91	6.2	4.5	3.2	X	1 | 9
22	1.74	46	2.45	66	3.16	1/12	5.00	90-135 V, 60 Hz *	S	106	101	6.5	6.5	5.0 *		1 | 9
93	1.77	203	2.27			1/12	5.00	90-135 V, 60 Hz *	S	106	101	6.5	6.5	5.0 *		1 | 9
22	1.67	46	2.38			1/12	5.00	160-264 V, 50 Hz *	S	97	91	6.2	4.5	3.2	X	1 | 9
93	1.66	203	2.24			1/12	5.00	160-264 V, 50 Hz *	S	97	91	6.2	4.5	3.2	X	1 | 9
39	1.80	89	2.52			1/12	7.20	160-264 V, 50 Hz *	S	97	91	6.2	4.5	3.2	X	1 | 2
145	1.69					1/8	7.20	160-264 V, 50 Hz *	S	97	91	6.2	4.5	3.2	X	1 | 2
39	1.80	89	2.52			1/12	7.20	160-264 V, 50 Hz *	S	97	91	6.2	4.5	3.2	X	1 | 2
145	1.69					1/8	7.20	160-264 V, 50 Hz *	S	97	91	6.2	4.5	3.2	X	1 | 2
39	1.81	89	2.55			1/12	7.20	90-135 V, 60 Hz *	S	106	101	6.5	6.5	5.0 *		1 | 2
145	1.65					1/8	7.20	90-135 V, 60 Hz *	S	106	101	6.5	6.5	5.0 *		1 | 2
43	1.63	86	2.00			1/12	7.20	160-264 V, 50 Hz *	S	97	91	6.2	4.5	3.2		1 | 2
153	1.72					1/7	7.20	160-264 V, 50 Hz *	S	97	91	6.2	4.5	3.2		1 | 2
44	1.82	90	2.54			1/12	7.70	160-264 V, 50 Hz *	S	97	91	6.2	4.5	3.2	X	1 | 2
165	1.72					1/7	7.70	160-264 V, 50 Hz *	S	97	91	6.2	4.5	3.2	X	1 | 2
44	1.82	90	2.54			1/12	7.70	160-264 V, 50 Hz *	S	97	91	6.2	4.5	3.2	X	1 | 2
165	1.72					1/7	7.70	160-264 V, 50 Hz *	S	97	91	6.2	4.5	3.2	X	1 | 2
44	1.83	90	2.56			1/12	7.70	90-135 V, 60 Hz *	S	106	101	6.5	6.5	5.0 *		1 | 2
165	1.68					1/7	7.70	90-135 V, 60 Hz *	S	106	101	6.5	6.5	5.0 *		1 | 2
46	1.64	93	2.02			1/12	7.70	160-264 V, 50 Hz *	S	106	101	6.2	4.5	3.2		1 | 2
160	1.70					1/7	7.70	160-264 V, 50 Hz *	S	106	101	6.2	4.5	3.2		1 | 2

XV • 220-240 V • 50/60 Hz



XV • 100-127 V • 50/60 Hz



R290 • 220-240 V • 100-127 V • 50/60 Hz • DLV- / NLV- / SLV-Series

Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -25°C / 55°C		MBP rating point -10°C / 55°C		HBP rating point 5°C / 55°C							
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
DLV4.0CN 2000 rpm	102H3486	L/MBP	60	171	258	311			65	1.12	203	2.27	330	3.02	58	179	274	333		
DLV4.0CN 4500 rpm	102H3486	L/MBP	140	401	604	728			152	1.22	476	2.28	772	3.01	136	420	642	779		
DLV5.7CN 2000 rpm	102H4604	L/MBP	107	261	383	458			112	1.38	305	2.23	485	2.84	109	278	413	496		
DLV5.7CN 4500 rpm	102H4604	L/MBP	246	599	879	1052			258	1.32	700	2.13	1114	2.71	249	639	947	1138		
NLV8.0CN 2000 rpm	105H7800	L/MBP	141	365	544	652			148	1.42	431	2.35	688	3.01	150	388	584	703		
NLV8.0CN 4500 rpm	105H7800	L/MBP		795	1188	1423					941	2.29	1489	2.87		826	1252	1510		
NLV8.0CN 2000 rpm	105H7801	L/MBP	141	365	544	652			148	1.42	431	2.35	688	3.01	150	388	584	703		
NLV8.0CN 4500 rpm	105H7801	L/MBP		795	1188	1423					941	2.29	1489	2.87		826	1252	1510		
NLV10CN 2000 rpm	105H7000	L/MBP	188	472	696	830			195	1.42	555	2.29	878	2.89	203	509	758	907		
NLV10CN 4500 rpm	105H7000	L/MBP		1010	1496	1789					1188	2.20	1892	2.68		1085	1617	1941		
NLV10CN 2000 rpm	105H7001	L/MBP	188	472	696	830			195	1.42	555	2.29	878	2.89	203	509	758	907		
NLV10CN 4500 rpm	105H7001	L/MBP		1010	1496	1789					1188	2.20	1892	2.68		1085	1617	1941		
NLV12.6CN 2000 rpm	105H6355	L/MBP	242	575	846	1011			253	1.40	673	2.21	1059	2.70	246	605	897	1076		
NLV12.6CN 4500 rpm	105H6355	L/MBP		1278	1881	2248					1497	2.14	2354	2.49		1344	1995	2393		
NLV12.6CN 2000 rpm	105H6356	L/MBP	242	575	846	1011			253	1.40	673	2.21	1059	2.70	246	605	897	1076		
NLV12.6CN 4500 rpm	105H6356	L/MBP		1278	1881	2248					1497	2.14	2354	2.49		1344	1995	2393		
SLV15CNK.2 2000 rpm	104H8541	LBP	236	638					252	1.12	755	1.88			232	665				
SLV15CNK.2 4000 rpm	104H8541	LBP	460	1228					494	1.13	1435	1.86			438	1297				
SLV15CNK 2000 rpm	104H8578	LBP	236	638					252	1.10	755	1.87			232	665				
SLV15CNK 4000 rpm	104H8578	LBP	460	1228					494	1.12	1435	1.86			438	1297				

R290 • 220-240 V • 100-127 V • 50/60 Hz • DLV- / NLV- / SLV-Series • Controllers

Compressor	Code number	DLV **105N4460** Standard Voltage range: 90 - 140 V, 50/60 Hz Inputs: Thermostat, defrost, communication, frequency signal	NLV **105N4710** Standard, PFC Voltage range: 180 - 270 V, 50/60 Hz Inputs: Thermostat, defrost, communication, frequency signal	NLV **105N4760** Multi Voltage, PFC Voltage range: 90 - 270 V, 50/60 Hz Inputs: Thermostat, defrost, communication, frequency signal	SLV **105N46xx Series** General Purpose, PFC Voltage range: 180 - 254 V, 50/60 Hz Inputs: Modbus, integrated temperature controller	SLV **105N467x Series** General Purpose, PFC Voltage range: 95 - 135 V, 50/60 Hz Inputs: Modbus, integrated temperature controller
DLV4.0CN	102H3486	✓				
DLV5.7CN	102H4604	✓				
NLV8.0CN	105H7800		✓	✓		
NLV8.0CN	105H7801		✓	✓		
NLV10CN	105H7000		✓	✓		
NLV10CN	105H7001		✓	✓		
NLV12.6CN	105H6355		✓	✓		
NLV12.6CN	105H6356		✓	✓		
SLV15CNK.2	104H8541				✓	
SLV15CNK	104H8578					✓

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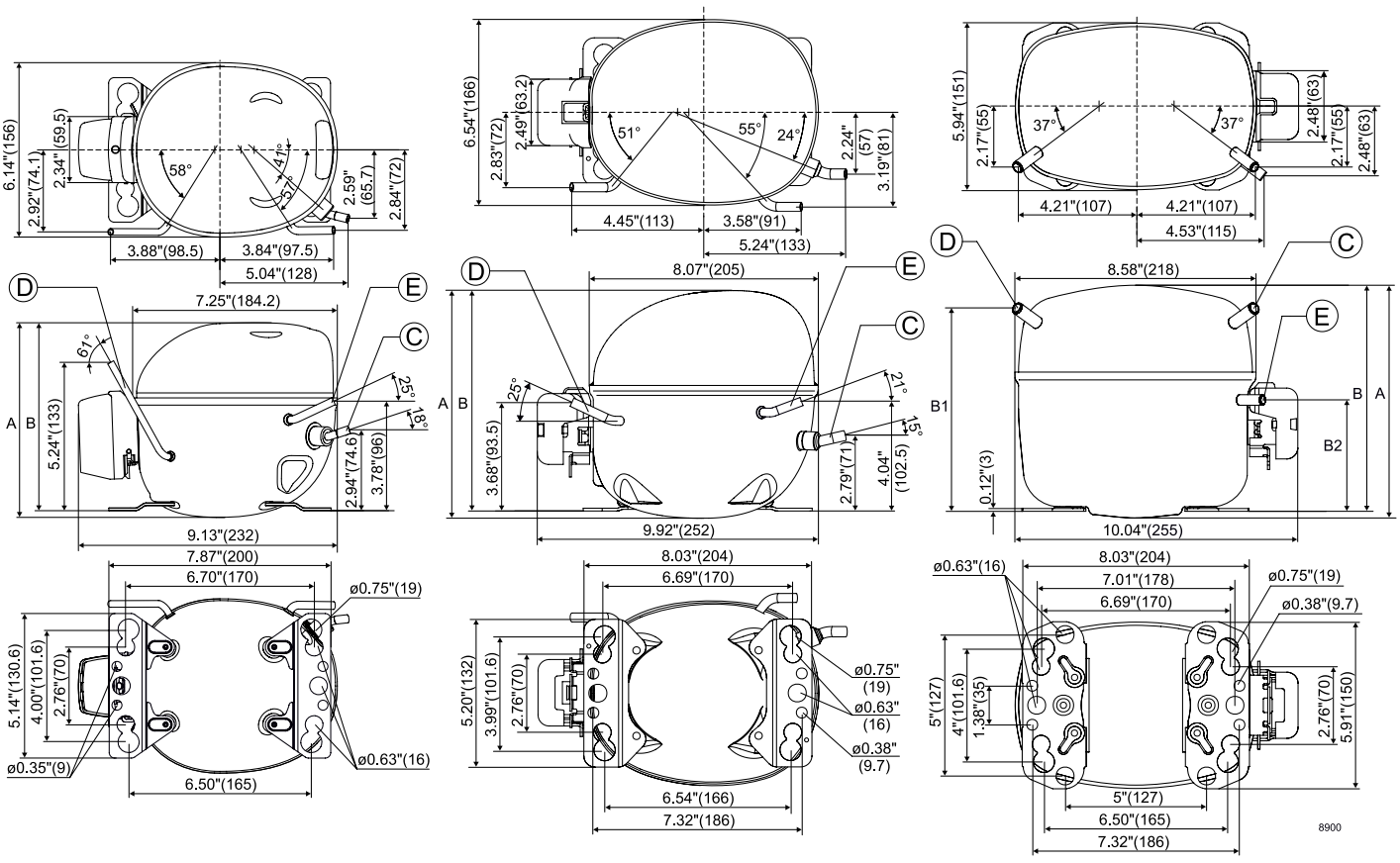
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions					alt. connectors available	Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C						Height [mm]		Connectors location / diameter [mm]				
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP							Suction	Process	Dis-charge		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	[HP]	[cm³]			A	B	C (I.D.)	D (I.D.)	E (I.D.)		
120	1.54	229	2.22	386	3.27	1/8	4.00	90-140 V, 60 Hz *	F2	175	169	8.2	6.5	6.5		1|2|3|4|6|10
280	1.58	537	2.22	904	3.25	3/10	4.00	90-140 V, 60 Hz *	F2	175	169	8.2	6.5	6.5		1|2|3|4|6|10
195	1.69	346	2.18	570	3.06	1/6	5.70	95-135 V, 60 Hz *	F2	175	169	8.2	6.5	6.5		1|2|3|4|6|10
446	1.61	795	2.08	1308	2.92	2/5	5.70	95-135 V, 60 Hz *	F2	175	169	8.2	6.5	6.5		1|2|3|4|6|10
265	1.73	489	2.26	804	3.23	1/4	7.96	90-270 V, 50 Hz *	F2	203	197	8.2	6.2	6.2	X	1|2|3|4|6|8|10
558	1.72	1049	2.29	1731	3.14	1/2	7.96	90-270 V, 50 Hz *	F2	203	197	8.2	6.2	6.2	X	1|2|3|4|6|8|10
265	1.73	489	2.26	804	3.23	1/4	7.96	90-270 V, 50 Hz *	F2	203	197	8.2	6.5	6.5	X	1|2|3|4|6|8|10
558	1.72	1049	2.29	1731	3.14	1/2	7.96	90-270 V, 50 Hz *	F2	203	197	8.2	6.5	6.5	X	1|2|3|4|6|8|10
352	1.74	636	2.20	1031	3.08	1/3	10.09	90-270 V, 50 Hz *	F2	203	197	8.2	6.2	6.2	X	1|2|3|4|6|8|10
749	1.76	1357	2.22	2217	2.93	3/4	10.09	90-270 V, 50 Hz *	F2	203	197	8.2	6.2	6.2	X	1|2|3|4|6|8|10
352	1.74	636	2.20	1031	3.08	1/3	10.09	90-270 V, 50 Hz *	F2	203	197	8.2	6.5	6.5	X	1|2|3|4|6|8|10
749	1.76	1357	2.22	2217	2.93	3/4	10.09	90-270 V, 50 Hz *	F2	203	197	8.2	6.5	6.5	X	1|2|3|4|6|8|10
422	1.68	753	2.17	1230	2.86	3/8	12.55	198-254 V, 50 Hz *	F2	203	197	8.2	6.2	6.2	X	1|2|3|4|6|8|10
938	1.66	1675	2.05	2736	2.62	5/6	12.55	198-254 V, 50 Hz *	F2	203	197	8.2	6.2	6.2	X	1|2|3|4|6|8|10
422	1.68	753	2.17	1230	2.86	3/8	12.55	198-254 V, 50 Hz *	F2	203	197	8.2	6.5	6.5	X	1|2|3|4|6|8|10
938	1.66	1675	2.05	2736	2.62	5/6	12.55	198-254 V, 50 Hz *	F2	203	197	8.2	6.5	6.5	X	1|2|3|4|6|8|10
446	1.32					2/5	15.28	180-254 V, 50 Hz *	F2	199	193	10.2	6.2	6.2		4 | 10
888	1.42					5/6	15.28	180-254 V, 50 Hz *	F2	199	193	10.2	6.2	6.2		4 | 10
446	1.31					2/5	15.28	95-135 V, 60 Hz *	F2	199	193	10.2	6.2	6.2		4 | 10
888	1.42					5/6	15.28	95-135 V, 60 Hz *	F2	199	193	10.2	6.2	6.2		4 | 10

DLV / NLV / SLV



WITH MORE THAN 60 YEARS OF EXPERIENCE IN COMPRESSOR TECHNOLOGY AND HIGHLY DEDICATED EMPLOYEES, OUR FOCUS IS ON DEVELOPING AND APPLYING ADVANCED COMPRESSOR TECHNOLOGIES TO ACHIEVE STANDARD SETTING PERFORMANCE FOR LEADING PRODUCTS AND BUSINESSES AROUND THE WORLD.

R134a

220-240 V | 50 Hz

Chemical formula
CH_2FCF_3

Typelabel
Typelabel stripe colour: Blue
Typelabel colour: Yellow

Applications
LBP: Low Back Pressure
MBP: Medium Back Pressure
HBP: High Back Pressure

Motor types
RSIR: Resistant Start Induction Run
RSCR: Resistant Start Capacitor Run
CSIR: Capacitor Start Induction Run
CSR: Capacitor Start Run

Compressor cooling
S = Static cooling normally sufficient
O = Oil cooling
F_1 = Fan cooling 1.5 m/s (compressor compartment temp. equal to ambient temperature)
F_2 = Fan cooling 3.0 m/s necessary

Starting devices
LST: Low Starting Torque
LST is used with capillary tube control and pressure equalizing. (Pressure equalizing may exceed 10 minutes). The PTC starting device requires 5 minutes cooling before each start.
To fulfil the requirements of EN 60355-2-34 the protection screen 103N0476 must be applied to the PTC starting device.
HST: High Starting Torque
HST consisting of relay and starting capacitor is used for expansion valve control or for capillary tube control without pressure equalizing.
ePTC: Electronically controlled PTC
- Compressor restart possible after a few seconds
- Operational wattage loss reduced by 2 watt
- PTC protection screen not needed (surface temp. < 82 °C)
- Temperature resistant up to min. +60 °C
- Additonal information, code numbers: refer to page 18

Test conditons
Electrical equipment being used is listed in our data sheets

1 Watt = 0.86 kcal/h
1 Watt = 3.41 Btu/h

R134a • 220-240 V • 50 Hz • P-Series

Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -25°C / 55°C		MBP rating point -10°C / 55°C		HBP rating point 5°C / 55°C							
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
PL20F	101G0100	MBP		36	65	83			16	0.38	50	0.87				45	81	103		
PL35F	101G0202	MBP		60	101	125			32	0.64	79	1.10				75	125	156		
PL50F	101G0220	LBP	14	74					40	0.67	95	1.11			18	92				
PL50F	101G0222	MBP		74	120	148			40	0.69	95	1.14				92	149	184		
PL35G	101G0250	M/HBP		53	89	112	172	209	28	0.58	69	1.04	140	1.55		66	111	140	214	261
PLE50F	101G0221	MBP		76	122	150			42	0.81	97	1.31				95	152	187		

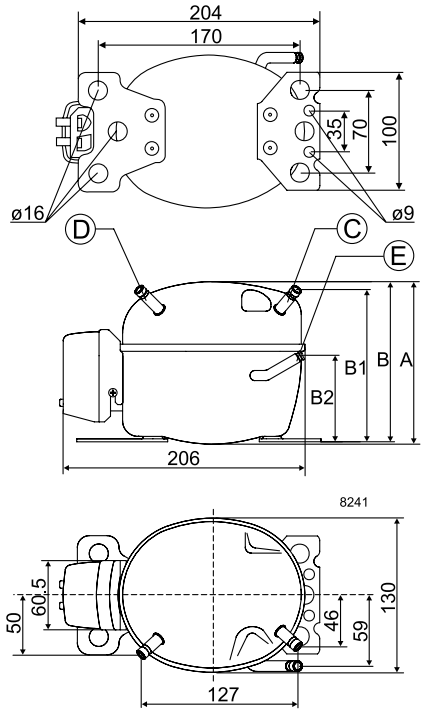
R134a • 220-240 V • 50 Hz • P-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
PL20F	101G0100	103N0011	103N0018										103N1010	103N0491
PL35F	101G0202	103N0011	103N0018										103N1010	103N0491
PL50F	101G0220	103N0011	103N0018										103N1010	103N0491
PL50F	101G0222								117U6021	117U5014			103N1010	103N0491
PL35G	101G0250	103N0011	103N0018						117U6021	117U5014			103N1010	103N0491
PLE50F	101G0221			103N0016	103N0021		117-7117	117-7119					103N1010	103N0491

Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer-data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]				alt. connectors available	
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F		
24	0.55	67	1.12				1/50	1.41	198-254 V, 50 Hz	S	129	127	6.2	6.2	5.0			1 | 5
45	0.86	105	1.39				1/25	2.00	198-254 V, 50 Hz	S	134	132	6.2	6.2	5.0			1 | 5
56	0.89						1/20	2.50	198-254 V, 50 Hz	S	137	135	6.2	6.2	5.0			1 | 5
56	0.92	126	1.41				1/20	2.50	198-254 V, 50 Hz	F1	137	135	6.2	6.2	5.0			1 | 5
39	0.79	93	1.31	174	1.89		1/20	2.00	198-254 V, 50 Hz *	F1	137	135	6.2	6.2	5.0		X	3 | 9
59	1.08	128	1.63			4	1/20	2.50	198-254 V, 50 Hz	S	140	138	6.2	6.2	5.0			1 | 5

PL / PLE



R134a • 220-240 V • 50 Hz • T-Series

Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -25°C / 55°C		MBP rating point -10°C / 55°C		HBP rating point 5°C / 55°C							
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
TL2.5F	102G4200	L/MBP		65	110	137			32	0.59	86	1.07				81	136	170		
TL4F	102G4400	LBP	31	107					61	0.75	137	1.12			38	133				
TL3F	102G4300	L/MBP		82	138	173			42	0.64	108	1.09				101	171	214		
TL5F	102G4501	LBP	43	144					82	0.81	183	1.19			53	178				
TL2.5G	102G4250	L/M/HBP	11	69	116	145	219	264	36	0.60	90	1.08	179	1.58	14	86	144	181	273	331
TL3G	102G4350	L/M/HBP		80	136	170	258	312	41	0.62	106	1.10	211	1.59		100	169	212	322	390
TL4G	102G4452	L/M/HBP		107	180	226	342	413	58	0.70	140	1.19	280	1.82		133	223	280	425	515
TL4GH	102G4455	HBP		104	182	230	353	429			140	1.16	287	1.81		130	226	286	440	535
TL5G	102G4550	L/M/HBP		139	224	278	414	497	79	0.79	178	1.19	341	1.67		173	278	345	515	619
TLS5F	102G4520	LBP	48	170					98	0.88	216	1.33			59	210				
TLS6F	102G4620	LBP	58	183					104	0.87	235	1.30			72	227				
TLS7F	102G4720	LBP	66	208					120	0.88	264	1.28			82	257				
TLS3FT	102G4324	LBP	21	92					50	0.80	120	1.30			26	115				
TLS4FT	102G4404	LBP	27	117					63	0.72	152	1.24			34	145				
TFS4.5FT	102G4433	LBP	45	156	249				90	0.85	199	1.36			56	193	309			
TLS5FT	102G4524	LBP	48	170					98	0.86	216	1.30			59	210				
TLES3F	102G4310	L/MBP		93	155	193			50	0.81	121	1.31				115	192	240		
TLES4F	102G4410	LBP	33	124					70	0.88	160	1.35			41	154				
TLES6F	102G4610	LBP	58	183					104	0.93	235	1.37			72	227				
TLES5.7FT.3	102G4573	LBP	66	200					120	1.00	253	1.48			82	248				
TLES6.5FT.3	102G4703	LBP	72	228					134	1.01	290	1.56			89	283				
TLES7FT.4	102G4708	LBP	72	228					134	1.01	290	1.56			89	283				

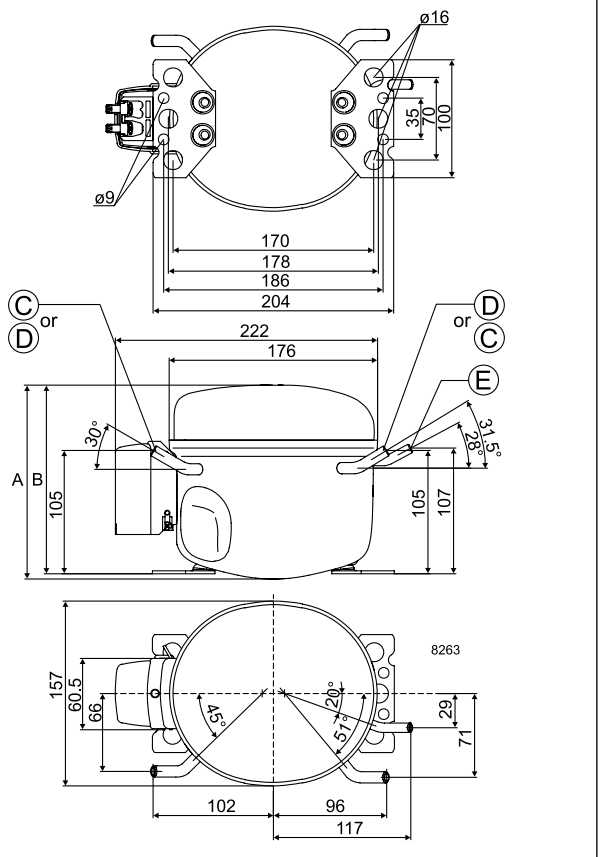
R134a • 220-240 V • 50 Hz • T-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
TL2.5F	102G4200	103N0011	103N0018										103N1010	103N2010
TL4F	102G4400	103N0011	103N0018						117U6009	117U5014			103N1010	103N2010
TL3F	102G4300	103N0011	103N0018						117U6007	117U5014			103N1010	103N2010
TL5F	102G4501	103N0011	103N0018						117U6004	117U5014			103N1010	103N2010
TL2.5G	102G4250	103N0011	103N0018						117U6007	117U5014			103N1010	103N2010
TL3G	102G4350	103N0011	103N0018						117U6009	117U5014			103N1010	103N2010
TL4G	102G4452	103N0011	103N0018						117U6004	117U5014			103N1010	103N2010
TL4GH	102G4455								117U6000	117U5014			103N1010	103N2011
TL5G	102G4550	103N0011	103N0018						117U6000	117U5014			103N1010	103N2010
TLS5F	102G4520	103N0011	103N0018						117U6004	117U5014			103N1010	103N2010
TLS6F	102G4620	103N0011	103N0018						117U6004	117U5014			103N1010	103N2010
TLS7F	102G4720	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119	117U6000	117U5014			103N1010	103N2010
TLS3FT	102G4324	103N0011	103N0018						117U6007	117U5014			103N1010	103N2010
TLS4FT	102G4404	103N0011	103N0018						117U6004	117U5014			103N1010	103N2010
TFS4.5FT	102G4433								117U4147	117U5015			117U0349	117U1023
TLS5FT	102G4524	103N0011	103N0018						117U6000	117U5014			103N1010	103N2010
TLES3F	102G4310	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
TLES4F	102G4410	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
TLES6F	102G4610	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
TLES5.7FT.3	102G4573	103N0011	103N0018	103N0016	103N0021	103N0050	117-7117	117-7119	117U6004	117U5014			103N1010	103N2010
TLES6.5FT.3	102G4703	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119	117U6016	117U5014			103N1010	103N2010
TLES7FT.4	102G4708	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119	117U6016	117U5014			103N1010	103N2010

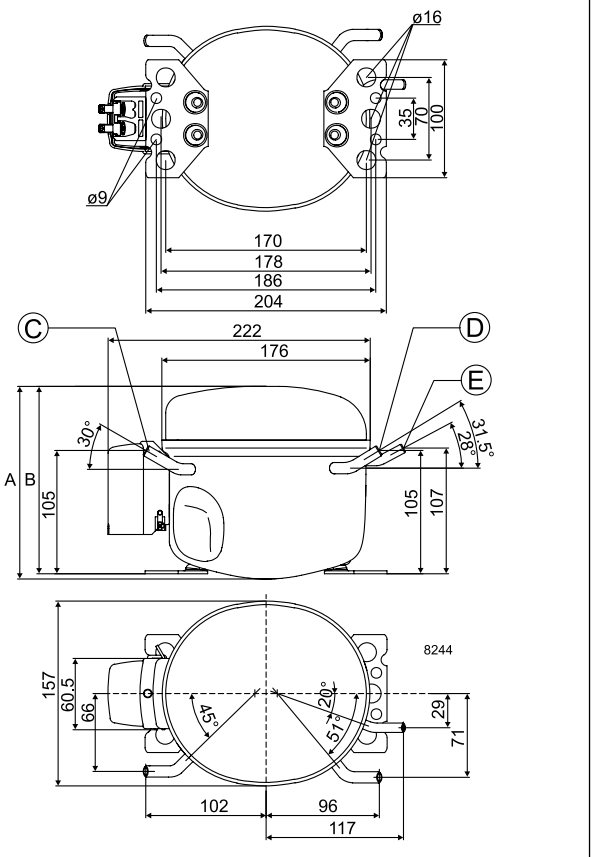
Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]					
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler	alt. connectors available	
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F		
46	0.80	112	1.31				1/12	2.61	198-254 V, 50 Hz	S	163	159	6.2	6.2	5.0		X	1 | 7
84	0.98						1/12	3.86	198-254 V, 50 Hz	S	163	159	6.2	6.2	5.0			1 | 7
59	0.85	141	1.32				1/12	3.13	198-254 V, 50 Hz	S	163	159	6.2	6.2	5.0			1 | 7
113	1.06						1/10	5.08	198-254 V, 50 Hz	S	173	169	6.2	6.2	5.0			1 | 2 | 7
51	0.82	119	1.32	218	1.86		1/12	2.61	187-254 V, 50 Hz *	S	163	159	6.5	6.5	4.9		X	3
58	0.85	139	1.34	257	1.86		1/12	3.13	187-254 V, 50 Hz *	S	163	159	6.2	6.2	5.0		X	3
81	0.94	184	1.46	340	2.15		1/10	3.86	187-254 V, 50 Hz *	S	173	169	6.2	6.2	5.0		X	3
		185	1.44	350	2.14		1/10	3.86	198-254 V, 50 Hz *	F2	173	169	6.2	6.2	5.0			8
109	1.03	230	1.43	412	1.94		1/8	5.08	187-254 V, 50 Hz *	S	173	169	6.2	6.2	5.0		X	3
134	1.15						1/8	5.08	198-254 V, 50 Hz	S	173	169	6.2	6.2	5.0			1 | 2
143	1.14						1/8	5.70	198-254 V, 50 Hz	S	173	169	6.2	6.2	5.0			1 | 2
164	1.15					*	1/7	6.49	198-254 V, 50 Hz	S	173	169	6.2	6.2	5.0			2
69	1.07						1/12	3.13	187-254 V, 50 Hz	S	173	169	6.2	6.2	5.0		X	1
88	0.97						1/12	3.86	187-254 V, 50 Hz	S	173	169	6.2	6.2	5.0		X	1
123	1.12	256	1.65				1/8	4.63	176-242 V, 50 Hz	S	173	169	6.5	6.5	5.0		X	1
134	1.12						1/8	5.08	187-254 V, 50 Hz	S	173	169	6.2	6.2	5.0		X	1 | 2
70	1.07	158	1.57			*	1/12	3.13	198-254 V, 50 Hz	S	173	169	6.2	6.2	5.0			1 | 2
97	1.16					*	1/12	3.86	198-254 V, 50 Hz	S	173	169	6.2	6.2	5.0			1 | 2
143	1.20					*	1/8	5.70	198-254 V, 50 Hz	S	173	169	6.2	6.2	5.0		X	1 | 2
163	1.30					*	1/7	5.70	187-254 V, 50 Hz	S	173	169	6.2	6.2	5.0		X	1 | 2
183	1.33					4 *	1/6	6.49	187-254 V, 50 Hz *	S	173	169	6.2	6.2	5.0		X	1 | 2
183	1.33					4 *	1/6	6.49	187-254 V, 50 Hz *	S	173	169	6.5	6.5	5.0			1 | 2

TL



TLS / TLES / TLY



R134a • 220-240 V • 50 Hz • N-Series

Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -25°C / 55°C		MBP rating point -10°C / 55°C		HBP rating point 5°C / 55°C							
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
NF7FX	105G6743	L/MBP	92	313	489	602			187	0.91	393	1.35	734	1.96	114	387	605	745		
NF9FX	105G6841	L/MBP	91	288	464	577			168	0.84	369	1.31	709	1.94	113	356	575	715		
NF10FX	105G6167	L/MBP	103	339	543	673			196	0.72	433	1.17	823	1.76	127	418	671	832		
NF11FX	105G6944	L/MBP	114	368	585	725			216	0.74	467	1.17	887	1.72	141	454	725	898		
NL6F	105G6606	LBP	52	200					110	0.93	258	1.39			64	247				
NL7F	105G6706	LBP	71	238					136	0.93	303	1.31			87	294				
NL8F	105G6822	LBP	82	249					149	0.97	317	1.37			100	307				
NL9F	105G6802	LBP	74	268					155	0.93	340	1.31			92	332				
NL11F	105G6900	LBP	102	351					200	0.94	453	1.37			126	435				
NL6FT	105G6628	LBP	60	198					115	0.93	253	1.37			74	245				
NL6.1FT	105G6620	LBP	60	198					115	0.93	253	1.37			74	245				
NL7FT	105G6718	LBP	71	235					136	0.94	299	1.36			88	290				
NL7.3FT	105G6726	LBP	71	235					136	0.94	299	1.36			88	290				
NL8.4FT	105G6040	LBP	87	275					162	0.95	350	1.39			107	340				
NL9FT	105G6059	LBP	87	275					162	0.95	350	1.39			107	340				
NL10FT	105G6140	LBP	115	352					210	0.98	444	1.40			141	434				

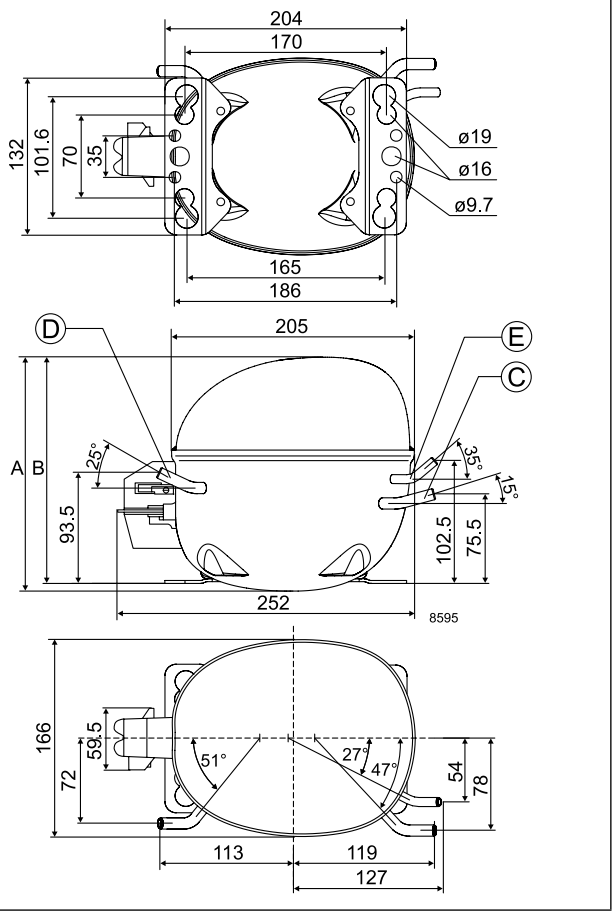
R134a • 220-240 V • 50 Hz • N-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
NF7FX	105G6743								117U4140	117U5018			117U0349	117U1023
NF9FX	105G6841								117U4140	117U5018			117U0349	117U1021
NF10FX	105G6167								117U4139	117U5018			117U0349	117U1023
NF11FX									117U4139	117U5018			117U0349	117U1023
NL6F	105G6606	103N0011	103N0018						117U6004	117U5015			103N1010	103N2010
NL7F	105G6706	103N0011	103N0018						117U6000	117U5015			103N1010	103N2010
NL8F	105G6822	103N0011	103N0018						117U6001	117U5015			103N1010	103N2010
NL9F	105G6802	103N0011	103N0018						117U6001	117U5015			103N1010	103N2010
NL11F		103N0011	103N0018						117U6002	117U5015			103N1010	103N2010
NL6FT	105G6628	103N0011	103N0018						117U6000	117U5015			103N1010	103N2010
NL6.1FT	105G6620	103N0011	103N0018						117U6000	117U5015			103N1010	103N2010
NL7FT	105G6718	103N0011	103N0018						117U6001	117U5015			103N1010	103N2010
NL7.3FT	105G6726	103N0011	103N0018						117U6001	117U5015			103N1010	103N2010
NL8.4FT	105G6040	103N0011	103N0018						117U6001	117U5015			103N1010	103N2010
NL9FT	105G6059	103N0011	103N0018						117U6015	117U5015			103N1010	103N2010
NL10FT	105G6140	103N0011	103N0018						117U6002	117U5015			103N1010	103N2010

Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]					
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler	alt. connectors available	
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F		
254	1.18	503	1.63	885	2.29		3/10	7.27	198-242 V, 60 Hz	F1	203	197	8.2	6.5	6.5		X	3
229	1.09	475	1.59	856	2.28		1/4	8.34	198-242 V, 50 Hz	F1	203	197	8.2	6.5	6.5		X	3
267	0.94	556	1.42	991	2.06		3/10	10.09	198-242 V, 50 Hz *	F1	203	197	8.2	6.5	6.5		X	3
294	0.97	600	1.41	1070	2.02		1/3	11.15	198-242 V, 50 Hz	F2	203	197	8.20	6.50	6.50		X	3
152	1.22						1/7	6.13	198-254 V, 50 Hz	S	188	181	6.2	6.2	5.0			2
187	1.21						1/6	7.27	198-254 V, 50 Hz	S	190	183	6.2	6.2	5.0			2
201	1.24						1/5	7.95	198-254 V, 50 Hz	S	197	191	6.2	6.2	5.0			2
213	1.21						1/5	8.35	198-254 V, 50 Hz	S	197	191	8.2	6.2	6.2			2
274	1.22						1/4	11.15	198-254 V, 50 Hz	F2	203	197	8.20	6.20	6.20		X	2
157	1.21						1/7	6.13	187-254 V, 50 Hz *	S	197	191	6.2	6.2	5.0			2
157	1.21						1/7	6.13	187-254 V, 50 Hz	S	188	182	6.2	6.2	5.0			2 | 4
186	1.22						1/6	7.27	187-254 V, 50 Hz	S	197	191	6.2	6.2	5.0			2 | 4
186	1.22						1/6	7.27	187-254 V, 50 Hz	S	188	182	6.2	6.2	5.0			2 | 4
220	1.23						1/5	8.35	187-254 V, 50 Hz	F1	190	184	6.5	6.5	5.0		X	2 | 4
220	1.23						1/5	8.35	187-254 V, 50 Hz *	S	197	191	6.2	6.2	5.0		X	2 | 4
284	1.25						1/4	10.09	187-254 V, 50 Hz *	S	203	197	8.2	6.5	6.5		X	2 | 4

NF



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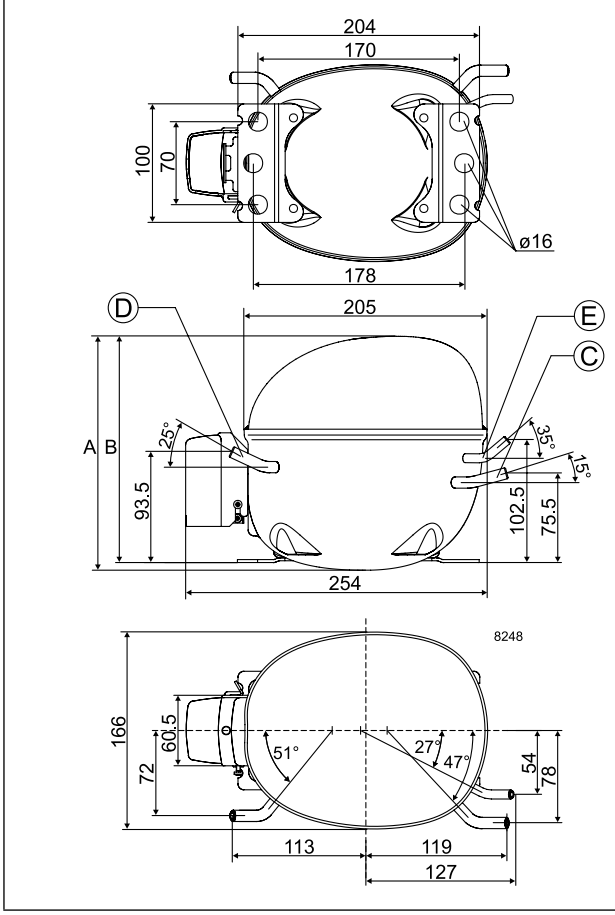


R134a • 220-240 V • 50 Hz • N-Series

Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -25°C / 55°C		MBP rating point -10°C / 55°C		HBP rating point 5°C / 55°C							
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
NL6.1MF	105G6660	MBP		189	312	390	588	709			245	1.31	482	1.98		234	388	485	732	885
NL7.3MF	105G6772	MBP		236	385	480	719	867			304	1.34	591	1.98		293	477	596	895	1081
NL8.4MF	105G6877	MBP		277	445	553	825	994			353	1.36	679	1.94		343	551	686	1028	1240
NL10MF	105G6062	MBP		346	554	687	1023	1231			441	1.37	843	1.94		428	687	853	1273	1534
NL11MF	105G6151	M/HBP		380	609	756	1125	1354			485	1.35	927	1.87		471	756	938	1400	1687
NLE9F	105G6805	LBP	82	271					154	1.03	346	1.46			101	335				
NLE10MF	105G6888	MBP	88	343	554	688			194	0.98	440	1.43	845	1.98	110	425	687	854		
NLE10MF.2	105G6187	L/MBP	94	369	593	737	1103		210	1.12	471	1.62	906	2.24	116	457	735	914	1372	
NLE11MF.2	105G6197	MBP		414	662	820	1213		242	1.08	527	1.57	1003	2.14		513	821	1018	1509	
NLE12.6MF.2	105G6387	L/MBP	198	440	721	902	1344		265	1.16	567	1.65	1109	2.28	241	545	895	1120	1671	
NLE12.6MFT	105G6388	L/MBP	198	440	721	902	1344		265	1.16	567	1.65	1109	2.28	241	545	895	1120	1671	

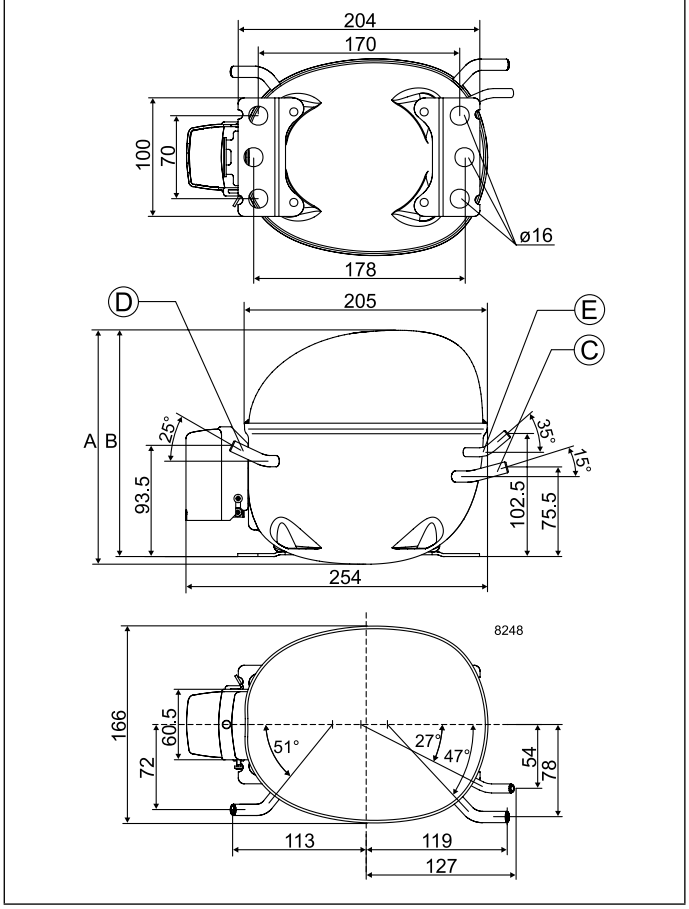
R134a • 220-240 V • 50 Hz • N-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
NL6.1MF	105G6660	103N0011	103N0018						117U6015	117U5015			103N1010	103N2011
NL7.3MF	105G6772	103N0011	103N0018						117U6016	117U5015			103N1010	103N2011
NL8.4MF		103N0011	103N0018						117U6016	117U5015			103N1010	103N2011
NL10MF	105G6062	103N0011	103N0018						117U6022	117U5018			103N1010	103N2011
NL11MF	105G6151	103N0011	103N0018						117U6022	117U5018			103N1010	103N2011
NLE9F	105G6805	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
NLE10MF		103N0011	103N0018						117U6003	117U5015			103N1010	103N2010
NLE10MF.2	105G6187					103N0050		117-7119	117U6002	117U5015			103N1010	103N2010
NLE11MF.2	105G6197					103N0050		117-7119	117U6003	117U5015			103N1010	103N2010
NLE12.6MF.2	105G6387					103N0050		117-7119	117U6005	117U5015			103N1010	103N2010
NLE12.6MFT	105G6388					103N0050		117-7119	117U6005	117U5015			103N1010	103N2010

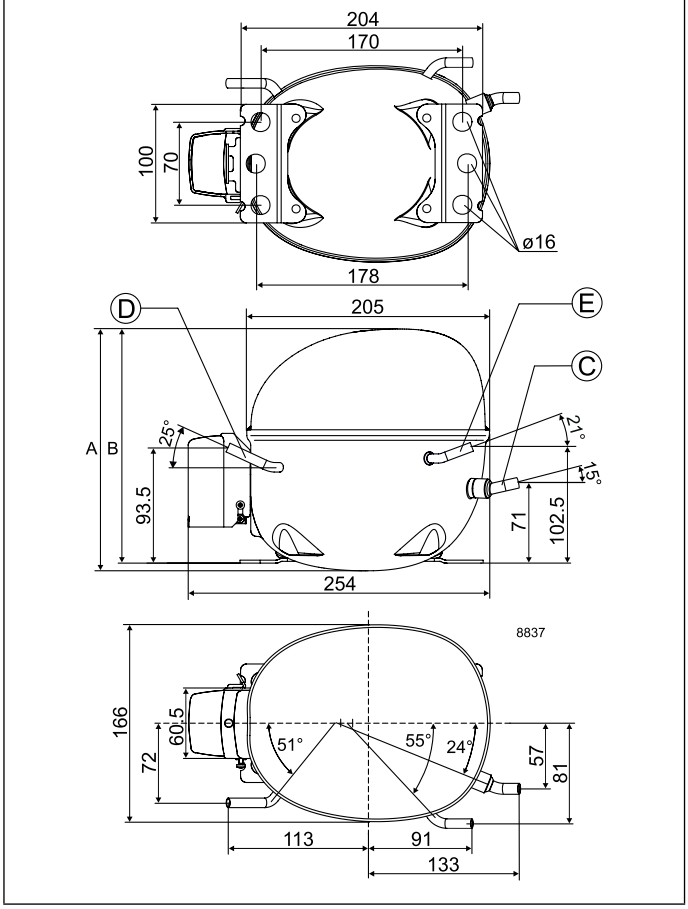
Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]				alt. connectors available	
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F		
		320	1.61	585	2.33		1/6	6.13	187-254 V, 50 Hz *	S	190	184	8.2	6.2	6.2		X	3
		394	1.64	716	2.32		1/4	7.27	187-254 V, 50 Hz *	F1	197	191	8.2	6.2	6.2		X	3
		456	1.64	822	2.27		1/4	8.35	187-254 V, 50 Hz *	F1	197	191	8.20	6.20	6.20		X	3
		569	1.64	1019	2.27		3/10	10.09	187-254 V, 50 Hz *	F1	203	197	9.7	6.5	6.5		X	3
		626	1.61	1121	2.19		1/3	11.15	187-254 V, 50 Hz	F2	203	197	8.2	6.2	6.2		X	3
211	1.33					*	1/5	8.35	198-254 V, 50 Hz	S	197	191	6.2	6.2	5.0			3
268	1.28	568	1.71	1023	2.32	*	3/10	10.09	198-254 V, 50 Hz	F1	203	197	8.20	6.20	6.2			3 | 10 | 11
290	1.45	608	1.94	1097	2.61	*	1/3	10.09	198-254 V, 50 Hz	F2	203	197	8.2	6.2	6.2			3 | 10 | 11
331	1.41	680	1.88	1211	2.50	*	3/8	11.15	198-242 V, 50 Hz	F2	203	197	8.2	6.2	6.2			3 | 10 | 11
355	1.48	738	1.98	1341	2.66	*	2/5	12.55	198-254 V, 50 Hz *	F2	203	197	8.2	6.2	6.2			3 | 10 | 11
355	1.48	738	1.98	1341	2.66	*	2/5	12.55	187-254 V, 50 Hz *	F2	203	197	8.2	6.2	6.2			3 | 10 | 11

NL



NLE



R134a • 220-240 V • 50 Hz • KAPPA Tropical

Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54,4°C, Tliq=32,2°C, Tsuc=32,2°C Evaporating temperature [°C]					
									LBP rating point -25°C / 55°C		MBP rating point -10°C / 55°C		HBP rating point 5°C / 55°C							
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
GTK55AT	CDO00153	LBP	55	211					124	1.19	265	1.72			69	261				
GTK70AT	CDO00154	LBP	78	251					151	1.23	315	1.82			97	311				
GTK80AT	CDO00155	LBP	86	284					170	1.23	357	1.76			107	352				

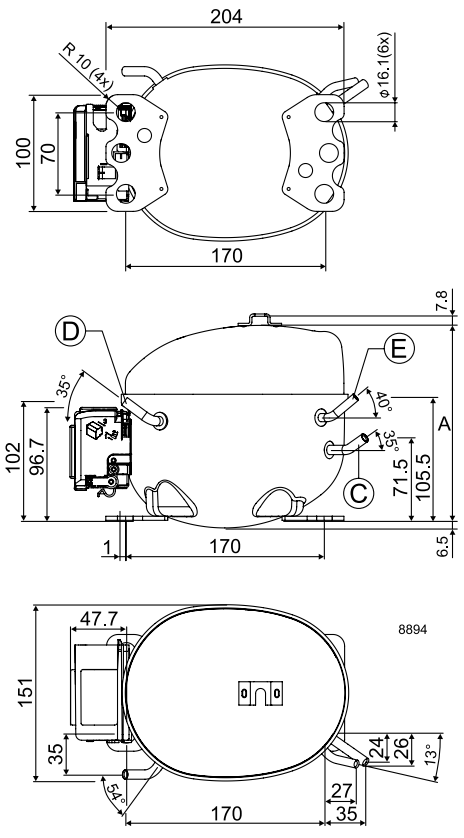
R134a • 220-240 V • 50 Hz • KAPPA Tropical • Electrical Equipment

Compressor	Code number	Run capacitor	Terminal board		Terminal board	Cable clamp	Cover	Evaporation tray	All-in-one equipment
		• optional • compulsory *	• PTC • external protector		• ePTC • external protector	screws not included	V0 material optional	plastic	• cover • cable clamp + screws • earthing screw
		Spades	Spades		Spades				
		4.8 | 6.3 mm	4.8 mm	6.3 mm	4.8 mm				
GTK55AT	CDO00153	4 µF	ZCFC	DCFC		113410_	157595_	162992_	161680_
GTK70AT	CDO00154	4 µF	ZCF9	DCF9		113410_	157595_	162992_	161680_
GTK80AT	CDO00155	4 µF	ZCF9	DCF9		113410_	157595_	162992_	161680_

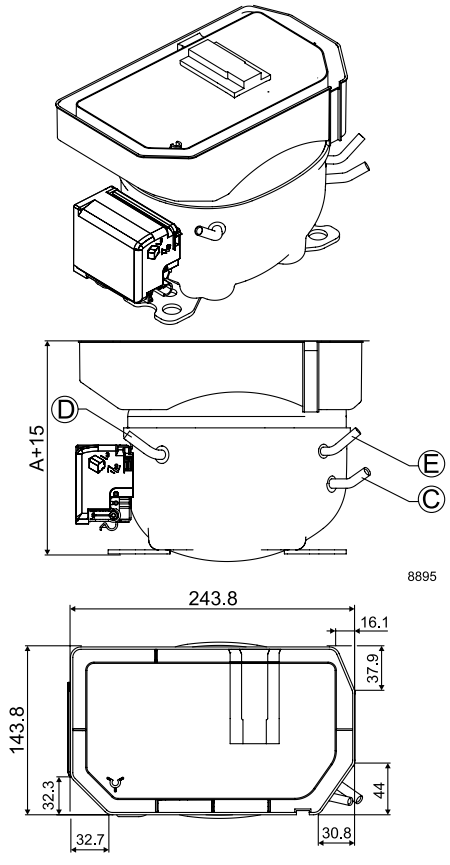
Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions						Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location / diameter [mm]			alt. connectors available	
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C (I.D.)	D (O.D.)	E (I.D.)		
170	1.55					4 *	1/6	5.60	170-264 V, 50 Hz	S	167		6.15	6.00	5.15		1 | 2
205	1.60					4 *	1/5	6.64	170-264 V, 50 Hz	S	167		6.15	6.00	5.15		1 | 2 | 6
232	1.60					4 *	1/5	7.70	170-264 V, 50 Hz	S	170		6.15	6.00	5.15		1 | 2 | 6

KAPPA Tropical



KAPPA Tropical • Evaporation tray



R134a • 220-240 V • 50 Hz • F-Series

Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -25°C / 55°C		MBP rating point -10°C / 55°C		HBP rating point 5°C / 55°C							
			-35	-15	-5	0	10	15	Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]						
FR6G	103G6660	L/M/HBP		171	290	365	552		83	0.76	226	1.32	452	1.88		213	360	453	688	
FR7.5G	103G6680	L/M/HBP		193	325	408	618		99	0.79	254	1.30	505	1.86		240	403	507	770	
FR7.5G	103G6681	L/M/HBP		193	325	408	618		99	0.79	254	1.30	505	1.86		240	403	507	770	
FR7.5G	103G6690	L/M/HBP		193	325	408	618		99	0.79	254	1.30	505	1.86		240	403	507	770	
FR8.5G	103G6780	L/M/HBP		228	381	478	722		123	0.82	298	1.29	592	1.84		284	473	594	900	
FR8.5G	103G6790	L/M/HBP		228	381	478	722		123	0.82	298	1.29	592	1.84		284	473	594	900	
FR10G	103G6880	L/M/HBP		250	412	516	779		136	0.76	324	1.22	638	1.76		310	511	641	970	
FR10G	103G6881	L/M/HBP		250	412	516	779		136	0.76	324	1.22	638	1.76		310	511	641	970	
FR10G	103G6890	L/M/HBP		250	412	516	779		136	0.76	324	1.22	638	1.76		310	511	641	970	
FR11G	103G6980	L/M/HBP		307	501	628			170	0.84	395	1.25	780	1.75		381	622	781		
FR7GH	103G6683	HBP		199	327	417	655	807			255	1.33	525	2.04		247	408	520	818	1009
FR7GH	103G6692	HBP		199	327	417	655	807			255	1.33	525	2.04		247	408	520	818	1009

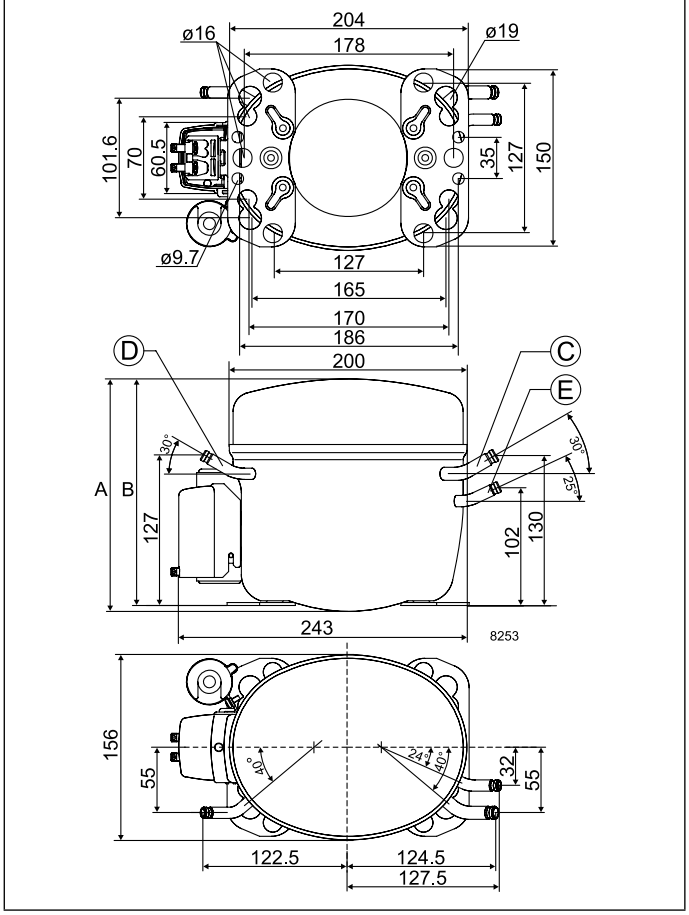
R134a • 220-240 V • 50 Hz • F-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
FR6G	103G6660	103N0011	103N0018						117U6000	117U5015			103N1010	103N2010
FR7.5G	103G6680	103N0011	103N0018						117U6001	117U5015			103N1010	103N2010
FR7.5G	103G6681	103N0011	103N0018						117U6001	117U5015			103N1010	103N2010
FR7.5G	103G6690	103N0011	103N0018						117U6001	117U5015			103N1010	103N2010
FR8.5G	103G6780	103N0011	103N0018						117U6015	117U5015			103N1010	103N2010
FR8.5G	103G6790	103N0011	103N0018						117U6015	117U5015			103N1010	103N2010
FR10G	103G6880	103N0011	103N0018						117U6010	117U5015			103N1010	103N2010
FR10G	103G6881	103N0011	103N0018						117U6010	117U5015			103N1010	103N2010
FR10G	103G6890	103N0011	103N0018						117U6010	117U5015			103N1010	103N2010
FR11G	103G6980	103N0011	103N0018						117U6010	117U5015			103N1010	103N2010
FR7GH	103G6683								117U6016	117U5015			103N1010	103N2011
FR7GH	103G6692								117U6016	117U5015			103N1010	103N2011

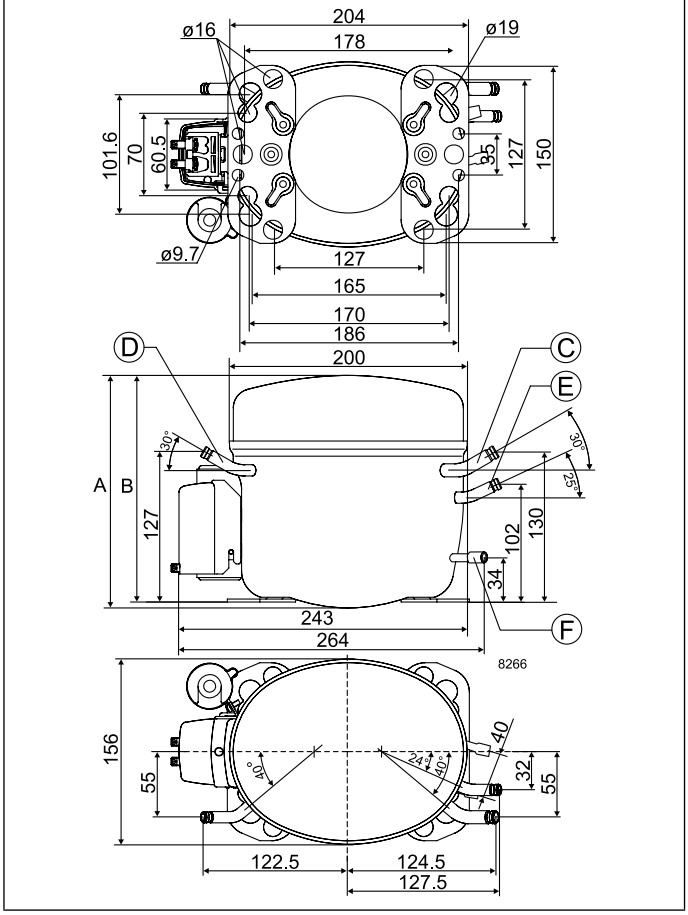
Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]					
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler	alt. connectors available	
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F		
121	1.04	302	1.64	560	2.28		1/6	6.23	187-254 V, 50 Hz *	F1	196	191	8.2	6.2	6.2			3
141	1.06	338	1.62	626	2.25		1/5	6.93	187-254 V, 50 Hz *	F1	196	191	8.2	6.2	6.2		X	3
141	1.06	338	1.62	626	2.25		1/5	6.93	187-254 V, 50 Hz *	F1	196	191	8.2	6.5	6.5		X	3
141	1.06	338	1.62	626	2.25		1/5	6.93	187-254 V, 50 Hz *	F1	196	191	8.2	6.2	6.2	6.2	X	3
172	1.08	397	1.60	732	2.23		1/5	7.95	187-254 V, 50 Hz *	F1	196	191	8.2	6.2	6.2			3
172	1.08	397	1.60	732	2.23		1/5	7.95	187-254 V, 50 Hz *	F1	196	191	8.2	6.2	6.2	6.2	X	3
189	1.01	429	1.53	789	2.14		1/4	9.05	187-254 V, 50 Hz *	F1	196	191	8.2	6.2	6.2		X	3
189	1.01	429	1.53	789	2.14		1/4	9.05	187-254 V, 50 Hz *	F1	196	191	8.2	6.5	6.5		X	3
189	1.01	429	1.53	789	2.14		1/4	9.05	187-254 V, 50 Hz *	F1	196	191	8.2	6.2	6.2	6.2	X	3
236	1.10	523	1.54				1/5	11.15	187-254 V, 50 Hz	F2	196	191	8.2	6.2	6.2		X	3
		341	1.65	658	2.52		1/5	6.93	198-254 V, 50 Hz *	F2	196	191	8.2	6.2	8.2			8
		341	1.65	658	2.52		1/5	6.93	198-254 V, 50 Hz *	F2	196	191	8.2	6.2	8.2	8.2	X	8

FR



FR (with oil cooler connector)



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Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -25°C / 55°C		MBP rating point -10°C / 55°C		HBP rating point 5°C / 55°C							
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
SC10G	104G8000	L/M/HBP	23	268	486	618	925	1100	113	0.63	369	1.27	764	2.00	30	333	603	766	1149	1368
SC12G	104G8224	L/M/HBP	65	348	603	768	1182	1437	175	0.77	464	1.31	960	1.95	81	433	749	954	1471	1791
SC12G	104G8240	L/M/HBP	65	348	603	768	1182	1437	175	0.77	464	1.31	960	1.95	81	433	749	954	1471	1791
SC12G	104G8243	L/M/HBP	65	348	603	768	1182	1437	175	0.77	464	1.31	960	1.95	81	433	749	954	1471	1791
SC12G	104G8244	L/M/HBP	65	348	603	768	1182	1437	175	0.77	464	1.31	960	1.95	81	433	749	954	1471	1791
SC12G	104G8246	L/M/HBP	65	348	603	768	1182	1437	175	0.77	464	1.31	960	1.95	81	433	749	954	1471	1791
SC12G	104G8250	L/M/HBP	65	348	603	768	1182	1437	175	0.77	464	1.31	960	1.95	81	433	749	954	1471	1791
SC12G	104G8253	L/M/HBP	65	348	603	768	1182	1437	175	0.77	464	1.31	960	1.95	81	433	749	954	1471	1791
SC15G	104G8520	L/M/HBP		424	728	908	1340	1600	164	0.71	568	1.29	1110	1.87		527	904	1127	1669	1998
SC15G	104G8525	L/M/HBP		424	728	908	1340	1600	164	0.71	568	1.29	1110	1.87		527	904	1127	1669	1998
SC15G	104G8529	L/M/HBP		424	728	908	1340	1600	164	0.71	568	1.29	1110	1.87		527	904	1127	1669	1998
SC18G	104G8820	L/M/HBP		532	873	1087	1619	1942	286	0.88	689	1.31	1335	1.89		658	1081	1348	2011	2417
SC18G	104G8822	L/M/HBP		532	873	1087	1619	1942	286	0.88	689	1.31	1335	1.89		658	1081	1348	2011	2417
SC18G	104G8824	L/M/HBP		532	873	1087	1619	1942	286	0.88	689	1.31	1335	1.89		658	1081	1348	2011	2417
SC18G	104G8825	L/M/HBP		532	873	1087	1619	1942	286	0.88	689	1.31	1335	1.89		658	1081	1348	2011	2417
SC18G	104G8830	L/M/HBP		532	873	1087	1619	1942	286	0.88	689	1.31	1335	1.89		658	1081	1348	2011	2417
SC18G	104G8838	L/M/HBP		532	873	1087	1619	1942	286	0.88	689	1.31	1335	1.89		658	1081	1348	2011	2417
SC18G	104G8839	L/M/HBP		532	873	1087	1619	1942	286	0.88	689	1.31	1335	1.89		658	1081	1348	2011	2417
SC21G	104G8124	L/M/HBP		606	1013	1269	1889	2254	333	0.96	793	1.39	1561	2.04		755	1261	1579	2352	2810
SC21G	104G8140	L/M/HBP		606	1013	1269	1889	2254	333	0.96	793	1.39	1561	2.04		755	1261	1579	2352	2810
SC21G	104G8145	L/M/HBP		606	1013	1269	1889	2254	333	0.96	793	1.39	1561	2.04		755	1261	1579	2352	2810
SC12/12G	104G8280	L/M/HBP	129	696	1206	1535	2364	2875	350	0.77	928	1.31	1920	1.95	162	865	1498	1907	2942	3582
SC15/15G	104G8580	L/M/HBP		847	1457	1815	2679	3201	328	0.71	1137	1.29	2220	1.87		1054	1808	2255	3338	3996
SC18/18G	104G8880	L/M/HBP		1053	1740	2174	3248	3900	566	0.86	1369	1.35	2674	1.92		1298	2150	2688	4026	4843
SC21/21G	104G8180	L/M/HBP		1212	2026	2538	3778	4510	665	0.86	1584	1.37	3121	1.97		1508	2520	3156	4704	5621

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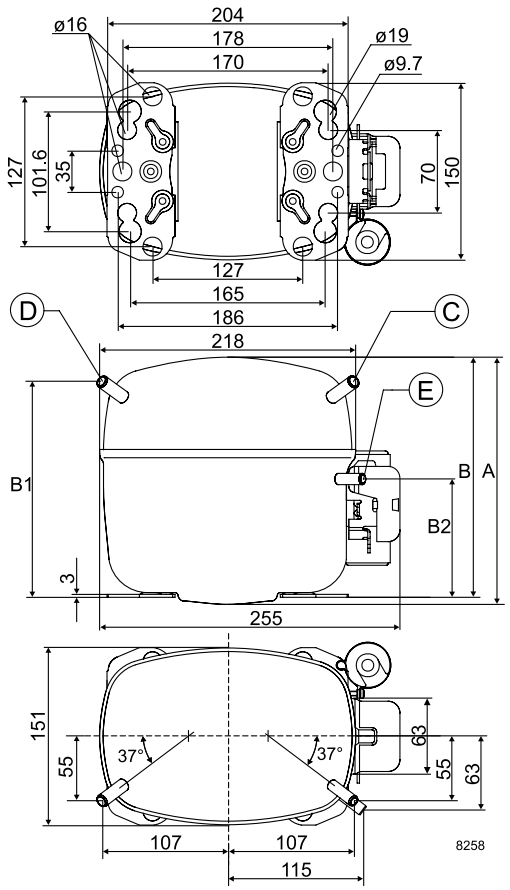
Compressor * pre-assembled start equipment	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
SC10G	104G8000	103N0011							117U6002	117U5017			103N1004	103N2009
SC12G	104G8224	103N0011							117U6003	117U5017			103N1004	103N2009
SC12G	104G8240	103N0011							117U6003	117U5017			103N1004	103N2009
SC12G	104G8243	103N0011							117U6003	117U5017			103N1004	103N2009
SC12G	104G8244	103N0011							117U6003	117U5017			103N1004	103N2008
SC12G	104G8246	103N0011							117U6003	117U5017			103N1004	103N2009
SC12G	104G8250	103N0011							117U6003	117U5017			103N1004	103N2009
SC12G *	104G8253	103N0011							117U6003	117U5017			103N1004	103N2009
SC15G	104G8520								117U6005	117U5017			103N1004	103N2009
SC15G	104G8525								117U6005	117U5017			103N1004	103N2009
SC15G	104G8529								117U6005	117U5017			103N1004	103N2009
SC18G	104G8820								117U6019	117U5017			103N1004	103N2009
SC18G	104G8822								117U6019	117U5017			103N1004	103N2009
SC18G	104G8824								117U6019	117U5017			103N1004	103N2009
SC18G	104G8825								117U6019	117U5017			103N1004	103N2008
SC18G	104G8830								117U6019	117U5017			103N1004	103N2009
SC18G	104G8838								117U6019	117U5017			103N1004	103N2009
SC18G	104G8839								117U6019	117U5017			103N1004	103N2009
SC21G	104G8124									117U5373	117-7029		103N1004	103N2009
SC21G	104G8140									117U5373	117-7029		103N1004	103N2009
SC21G	104G8145									117U5373	117-7029		103N1004	103N2009
SC12/12G	104G8280								117U6003	117U5017			103N1004	103N2009
SC15/15G	104G8580								117U6005	117U5017			103N1004	103N2009
SC18/18G	104G8880								117U6019	117U5017			103N1004	103N2009
SC21/21G	104G8180									117U5373	117-7029		103N1004	103N2009

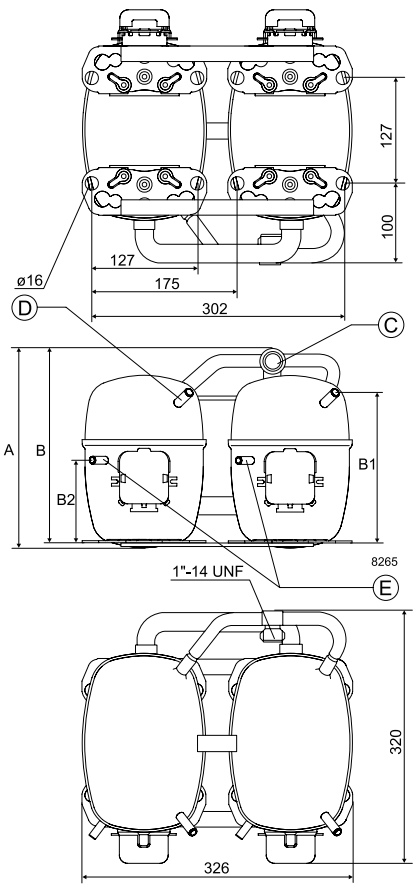
Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]					
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler	alt. connectors available	
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F		
168	0.87	493	1.59	923	2.35		3/10	10.29	187-254 V, 50 Hz *	F2	199	193	8.2	6.2	6.2			3
248	1.03	614	1.60	1170	2.29		1/3	12.87	187-254 V, 50 Hz *	F2	209	203	10.2	6.5	6.5		X	3
248	1.03	614	1.60	1170	2.29		1/3	12.87	187-254 V, 50 Hz *	F2	209	203	8.2	6.2	6.2		X	3
248	1.03	614	1.60	1170	2.29		1/3	12.87	187-254 V, 50 Hz *	F2	209	203	10.2	6.5	6.5		X	3
248	1.03	614	1.60	1170	2.29		1/3	12.87	187-254 V, 50 Hz *	F2	209	203	8.2	6.2	6.2		X	3
248	1.03	614	1.60	1170	2.29		1/3	12.87	187-254 V, 50 Hz *	F2	209	203	10.2	6.2	6.2		X	3
248	1.03	614	1.60	1170	2.29		1/3	12.87	187-254 V, 50 Hz *	F2	209	203	8.2	6.2	6.2	6.2	X	3
248	1.03	614	1.60	1170	2.29		1/3	12.87	187-254 V, 50 Hz *	F2	209	203	8.2	6.5	6.5		X	3
260	1.01	745	1.56	1341	2.20		2/5	15.28	187-254 V, 50 Hz *	F2	209	203	10.2	6.2	6.2		X	3
260	1.01	745	1.56	1341	2.20		2/5	15.28	187-254 V, 50 Hz *	F2	209	203	10.2	6.5	6.5		X	3
260	1.01	745	1.56	1341	2.20		2/5	15.28	187-254 V, 50 Hz *	F2	209	203	10.2		6.2		X	3
397	1.13	893	1.58	1612	2.21		1/2	17.69	187-254 V, 50 Hz *	F2	219	213	10.2	6.2	6.2		X	3
397	1.13	893	1.58	1612	2.21		1/2	17.69	187-254 V, 50 Hz *	F2	219	213	10.2	6.5	6.5		X	3
397	1.13	893	1.58	1612	2.21		1/2	17.69	187-254 V, 50 Hz *	F2	219	213	10.2	6.5	6.5		X	3
397	1.13	893	1.58	1612	2.21		1/2	17.69	187-254 V, 50 Hz *	F2	219	213	10.2	6.2	6.2		X	3
397	1.13	893	1.58	1612	2.21		1/2	17.69	187-254 V, 50 Hz *	F2	219	213	10.2	6.2	6.2	6.2	X	3
397	1.13	893	1.58	1612	2.21	*	1/2	17.69	187-254 V, 50 Hz *	F2	219	213	10.2	6.2	6.2		X	3
397	1.13	893	1.58	1612	2.21	*	1/2	17.69	187-254 V, 50 Hz *	F2	219	213	10.2	6.2	6.2		X	3
461	1.23	1039	1.68	1889	2.40	10	3/5	20.95	187-254 V, 50 Hz *	F2	219	213	10.2	6.5	6.5		X	3
461	1.23	1039	1.68	1889	2.40	10	3/5	20.95	187-254 V, 50 Hz *	F2	219	213	10.2	6.2	6.2		X	3
461	1.23	1039	1.68	1889	2.40	10	3/5	20.95	187-254 V, 50 Hz *	F2	219	213	8.0		6.2		X	3
497	1.03	1228	1.60	2340	2.29		3/4	25.74	187-254 V, 50 Hz	F2	249	244	12.0	6.2	6.2			3
521	1.01	1491	1.56	2682	2.20		5/6	30.56	187-254 V, 50 Hz	F2	249	244	12.0	6.2	6.2			3
782	1.12	1774	1.63	3225	2.24		1	35.38	187-254 V, 50 Hz	F2	259	254	16.0	6.2	6.2			3
921	1.13	2076	1.67	3777	2.29	10	1 1/4	41.90	187-254 V, 50 Hz	F2	259	254	16.0	6.2	6.2			3

SC



SC-Twin



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Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF LBP rating point -25°C / 55°C		CECOMAF MBP rating point -10°C / 55°C		CECOMAF HBP rating point 5°C / 55°C		ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
SC10GH	104G8041	HBP		233	478	613	927	1113			352	1.25	762	1.93		289	592	761	1156	1392
SC10GHH	104G8071	HBP		259	467	604	942	1144			352	1.35	762	2.21		321	580	750	1173	1426
SC12GH	104G8261	HBP		302	577	752	1196	1471			429	1.20	957	1.97		377	718	936	1489	1835
SC15GH	104G8561	HBP		417	723	915	1398	1698			559	1.32	1139	2.02		518	898	1137	1741	2117
SC15GHH	104G8571	HBP		435	726	911	1405	1731			570	1.51	1135	2.25		533	897	1128	1746	2154
SC15GHH	104G8572	HBP		435	726	911	1405	1731			570	1.51	1135	2.25		533	897	1128	1746	2154
SC15GH	104G8573	HBP		417	723	915	1398	1698			559	1.32	1139	2.02		518	898	1137	1741	2117
SC18GH	104G8860	HBP		539	855	1077	1645	1990			676	1.36	1340	1.92		666	1061	1338	2048	2482
SC18GH	104G8861	HBP		485	825	1047	1618	1976			639	1.42	1310	2.17		602	1025	1302	2015	2465
SC12FT	104G8205	LBP	103	408	645				233	0.88	517	1.36			129	506	802			
SC15F	104G8500	LBP	100	439	726				230	0.84	573	1.33			126	545	901			
SC15FT	104G8505	LBP	126	489	772				280	0.90	620	1.38			157	606	958			
SC15FT	104G8506	LBP	126	489	772				280	0.90	620	1.38			157	606	958			
SC18F	104G8800	LBP	129	518	842				280	0.90	669	1.36			159	640	1041			
SC21F	104G8100	LBP	186	602	987				335	0.88	780	1.30			228	742	1218			
SC21F	104G8110	LBP	186	602	987				335	0.88	780	1.30			228	742	1218			
SC18FTX	104G8805	LBP	144	567	896				325	0.89	719	1.39			181	703	1113			
SC18FTX	104G8806	LBP	144	567	896				325	0.89	719	1.39			181	703	1113			
SC21FTX	104G8105	LBP	192	713	1119				415	0.97	901	1.47			241	884	1391			
SC15MFX	104G8501	MBP		458	767	954	1405		226	0.81	602	1.38	1166	1.97		569	951	1185	1749	
SC18MFX	104G8804	MBP		553	894	1113	1670				709	1.34	1370	1.94		685	1107	1380	2076	
SC21MFX	104G8120	MBP		662	1052	1303	1936				840	1.37	1596	1.96		819	1304	1616	2408	
SCE21MFX	104G8150	MBP		760	1178	1448			441	1.15	952	1.65	1771	2.31		942	1463	1800		

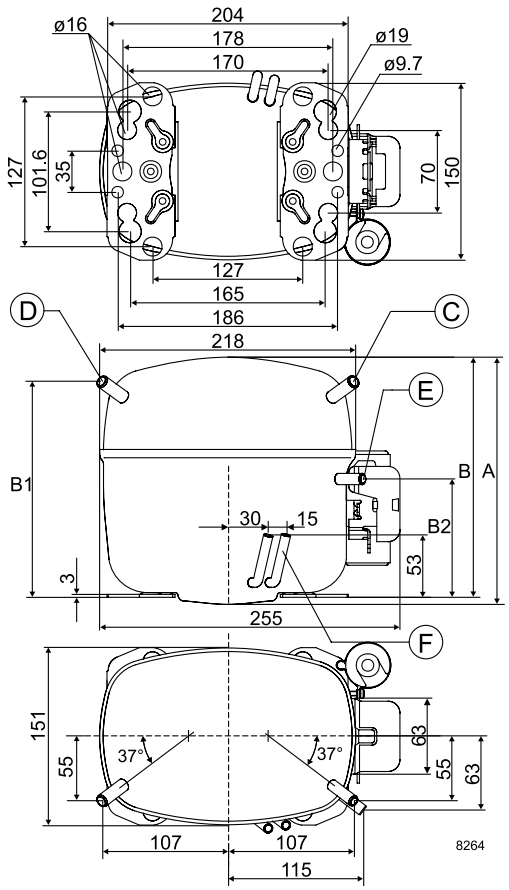
R134a • 220-240 V • 50 Hz • S-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
SC10GH	104G8041								117U6005	117U5017			103N1004	103N2008
SC10GHH	104G8071									117U5372	117-7025		103N1004	103N2009
SC12GH	104G8261								117U6011	117U5017			103N1004	103N2008
SC15GH	104G8561								117U6011	117U5017			103N1004	103N2008
SC15GHH	104G8571									117U5373	117-7027		103N1004	103N2009
SC15GHH	104G8572									117U5373	117-7027		103N1004	103N2009
SC15GH	104G8573								117U6011	117U5017			103N1004	103N2008
SC18GH	104G8860								117U6019	117U5017			103N1004	103N2009
SC18GH	104G8861									117U5373	117-7039		103N1004	103N2008
SC12FT	104G8205	103N0011							117U6003	117U5017			103N1004	103N2009
SC15F	104G8500	103N0011							117U6003	117U5017			103N1004	103N2009
SC15FT	104G8505	103N0011							117U6005	117U5017			103N1004	103N2009
SC15FT	104G8506	103N0011							117U6005	117U5017			103N1004	103N2009
SC18F	104G8800								117U6005	117U5017			103N1004	103N2009
SC21F	104G8100								117U6019	117U5017			103N1004	103N2009
SC21F	104G8110								117U6019	117U5017			103N1004	103N2009
SC18FTX	104G8805								117U6019	117U5017			103N1004	103N2009
SC18FTX	104G8806								117U6019	117U5017			103N1004	103N2009
SC21FTX	104G8105								117U6019	117U5017			103N1004	103N2009
SC15MFX	104G8501								117U6005	117U5017			103N1004	103N2008
SC18MFX	104G8804								117U6019	117U5017	117-7027		103N1004	103N2008
SC21MFX	104G8120								117U6019	117U5017	117-7039		103N1004	103N2009
SCE21MFX	104G8150								117U7411	117U5017			103N1004	117U1033

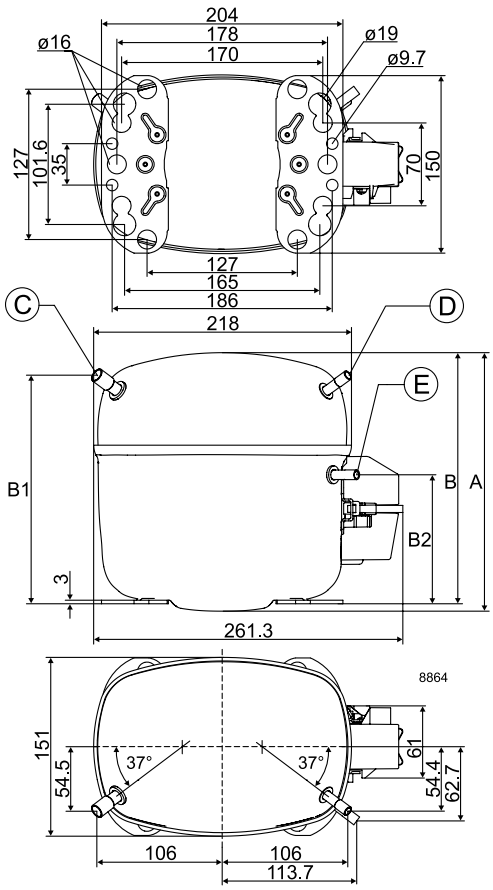
Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]				alt. connectors available	
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F		
		481	1.56	925	2.28		3/10	10.29	198-254 V, 50 Hz *	F2	209	203	10.2	6.2	8.2			8
		472	1.69	931	2.62	5	3/10	10.29	198-254 V, 50 Hz	F1	209	203	10.2	6.2	8.2	8.2		8
		583	1.51	1175	2.34		3/8	12.87	198-254 V, 50 Hz *	F2	209	203	10.2	6.2	8.2			8
		737	1.60	1386	2.41	10	2/5	15.28	198-254 V, 50 Hz *	F2	209	203	10.2	6.2	8.2		X	8
		739	1.84	1382	2.66	10	2/5	15.28	198-254 V, 50 Hz	F1	209	203	10.2	6.2	8.2	8.2	X	8
		739	1.84	1382	2.66	10	2/5	15.28	198-254 V, 50 Hz *	F1	209	203	10.2	6.2	8.2	8.2	X	8
		737	1.60	1386	2.41	10	2/5	15.28	198-254 V, 50 Hz *	F2	209	203	10.2	6.2	8.2		X	8
		875	1.62	1632	2.27		1/2	17.69	198-254 V, 50 Hz	F2	219	213	10.2	6.2	8.2			8
		841	1.74	1599	2.57	10	1/2	17.69	198-254 V, 50 Hz *	F2	219	213	10.2	6.2	8.2			8
321	1.15	666	1.64				3/10	12.87	187-254 V, 50 Hz *	F1	209	203	8.2	6.2	6.2			4
324	1.11	745	1.59				3/10	15.28	198-254 V, 50 Hz	F1	209	203	8.2	6.2	6.2			4
386	1.18	796	1.65				1/3	15.28	187-254 V, 50 Hz *	F2	209	203	10.2	6.2	6.2		X	4
386	1.18	796	1.65				1/3	15.28	187-254 V, 50 Hz *	F2	209	203	10.2	6.5	6.5		X	4
389	1.17	863	1.62				1/3	17.69	198-254 V, 50 Hz	F1	209	203	10.2	6.2	6.2			4
458	1.14	1007	1.54				2/5	20.95	198-254 V, 50 Hz	F1	219	213	10.2	6.2	6.2			4
458	1.14	1007	1.54				2/5	20.95	198-254 V, 50 Hz	F1	219	213	10.2	6.2	6.2	6.2	X	4
448	1.17	924	1.68				2/5	17.69	187-254 V, 50 Hz *	F2	219	213	10.2	6.2	6.2		X	4
448	1.17	924	1.68				2/5	17.69	187-254 V, 50 Hz *	F2	219	213	10.2	6.5	6.5		X	4
569	1.27	1156	1.76				1/2	20.95	187-254 V, 50 Hz	F2	219	213	10.2	6.2	6.2			4
326	1.10	785	1.66	1408	2.31		2/5	15.28	198-254 V, 50 Hz	F2	209	203	10.2	6.2	6.2			3
434	1.15	916	1.63	1660	2.28	*	1/2	17.69	187-254 V, 50 Hz *	F2	219	213	10.2	6.2	6.2			3
532	1.21	1081	1.65	1929	2.30	*	3/5	20.95	187-254 V, 50 Hz	F2	219	213	10.2	6.2	6.2			3
611	1.51	1216	1.97	2148	2.73		3/4	20.95	198-244 V, 50 Hz	F2	219	213	10.2	6.2	6.2			3

SC (with oil cooler connector)



SCE



R134a • 220-240 V • 50 Hz • G-Series

Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -25°C / 55°C		MBP rating point -10°C / 55°C		HBP rating point 5°C / 55°C							
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
GS26MFX	107B0700	MBP		938	1523	1893					1207	1.72	2327	2.37		1164	1892	2354		
GS34MFX	107B0701	MBP		1217	1992	2487					1572	1.68	3069	2.40		1511	2473	3090		
GS26GHX	107B0702	HBP		877	1407	1749	2624	3173			1119	1.48	2152	2.13		1088	1748	2175	3273	3965

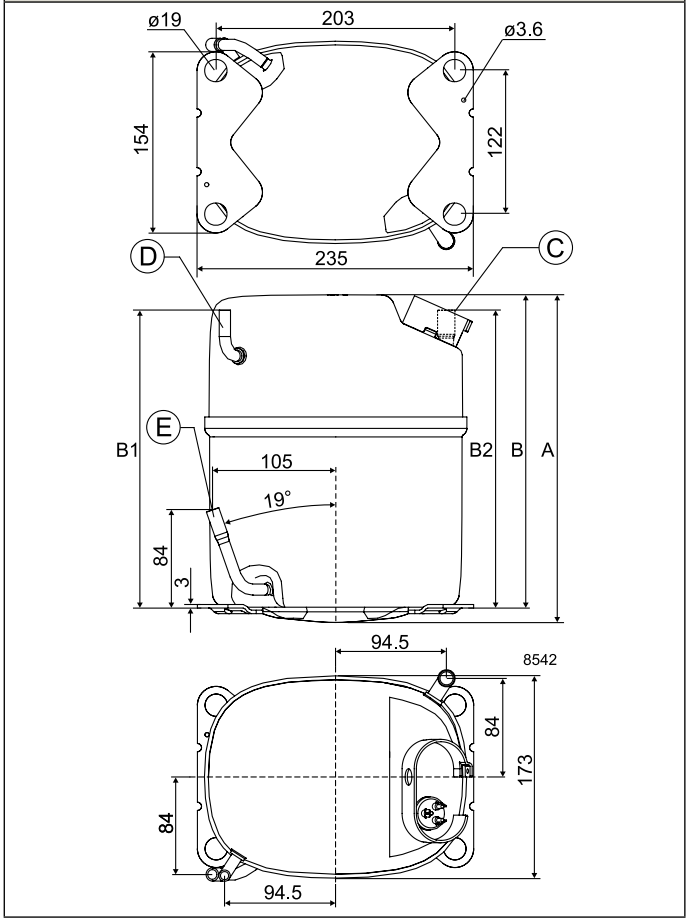
R134a • 220-240 V • 50 Hz • G-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
GS26MFX	107B0700										117-7055			107B9101
GS34MFX	107B0701										117-7056			107B9101
GS26GHX	107B0702										117-7070			107B9101

Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]				alt. connectors available	
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F		
		1592	2.13			10	3/4	26.30	198-254 V, 50 Hz	F2	259	247	12.9	6.5	8.2			3
		2079	2.10	3799	2.90	10	1	33.80	198-254 V, 50 Hz	F2	259	247	12.9	6.5	8.2			3
		1472	1.84	2664	2.58	20	3/4	26.30	198-254 V, 50 Hz	F2	259	247	12.9	6.5	8.2			8

GS



WITH MORE THAN 60 YEARS OF EXPERIENCE IN COMPRESSOR TECHNOLOGY AND HIGHLY DEDICATED EMPLOYEES, OUR FOCUS IS ON DEVELOPING AND APPLYING ADVANCED COMPRESSOR TECHNOLOGIES TO ACHIEVE STANDARD SETTING PERFORMANCE FOR LEADING PRODUCTS AND BUSINESSES AROUND THE WORLD.

R600a

220-240 V | 50 Hz

Chemical formula
C_4H_{10}

Typelabel
Typelabel stripe colour: Red
Typelabel colour: Yellow

Applications
LBP: Low Back Pressure
MBP: Medium Back Pressure
HBP: High Back Pressure

Motor types
RSIR: Resistant Start Induction Run
RSCR: Resistant Start Capacitor Run
CSIR: Capacitor Start Induction Run
CSR: Capacitor Start Run

Compressor cooling
S = Static cooling normally sufficient
O = Oil cooling
F_1 = Fan cooling 1.5 m/s (compressor compartment temp. equal to ambient temperature)
F_2 = Fan cooling 3.0 m/s necessary

Starting devices
LST: Low Starting Torque
LST is used with capillary tube control and pressure equalizing. (Pressure equalizing may exceed 10 minutes). The PTC starting device requires 5 minutes cooling before each start.
To fulfil the requirements of EN 60355-2-34 the protection screen 103N0476 must be applied to the PTC starting device.
HST: High Starting Torque
HST consisting of relay and starting capacitor is used for expansion valve control or for capillary tube control without pressure equalizing.
ePTC: Electronically controlled PTC
- Compressor restart possible after a few seconds
- Operational wattage loss reduced by 2 watt
- PTC protection screen not needed (surface temp. < 82 °C)
- Temperature resistant up to min. +60 °C
- Additonal information, code numbers: refer to page 18

Test conditons
Electrical equipment being used is listed in our data sheets

1 Watt = 0.86 kcal/h
1 Watt = 3.41 Btu/h

R600a • 220-240 V • 50 Hz • P-Series

Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -25°C / 55°C		MBP rating point -10°C / 55°C		HBP rating point 5°C / 55°C							
			-35	-15	-5	0	10	15	Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]						
PLE35K	101H0360	MBP		52	87	109			27	0.68	68	1.28				63	106	133		

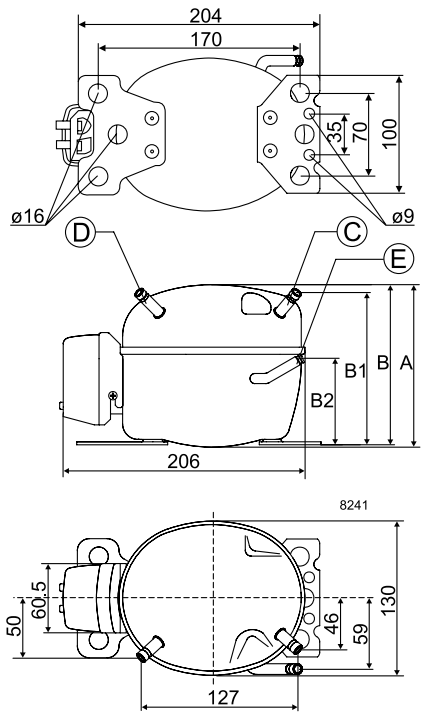
R600a • 220-240 V • 50 Hz • P-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
PLE35K	101H0360			103N0016	103N0021		117-7117	117-7119					103N1010	103N0491

Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]				alt. connectors available	
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP						A	B	Suction C	Process D	Dis-charge E	Oil cooler F		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]										
38	0.91	90	1.60			4	1/25	2.50	198-254 V, 50 Hz	S	137	135	6.2	6.2	5.0		X	1 | 5

PLE



R600a • 220-240 V • 50 Hz • T-Series

Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C. Tliq=55°C. Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -25°C / 55°C		MBP rating point -10°C / 55°C		HBP rating point 5°C / 55°C							
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
TLES4KK.3	102H4438	LBP	18	75					42	0.90	96	1.43			23	91				
TLES4.8KK.3	102H4538	LBP	28	94					55	1.00	119	1.53			34	115				
TLES5.7KK.3	102H4638	LBP	36	114					68	1.02	144	1.54			45	139				
TLES6.5KK.3	102H4738	LBP	45	134					81	1.02	168	1.51			55	163				
TLES7.5KK.3	102H4838	LBP	53	155					94	1.02	194	1.52			64	189				
TLES8.7KK.3	102H4938	LBP	62	181					110	1.03	228	1.53			75	221				
TLES4KTK	102H4436	LBP	18	74	123	154			40	0.83	96	1.49			22	91	151	189		
TLES5KTK	102H4536	LBP	28	99	159	196			57	0.93	126	1.49			34	121	194	240		
TLES6KTK	102H4636	LBP	31	112					66	0.95	140	1.44			38	136				
TLES7KTK	102H4736	LBP	40	130					77	0.95	163	1.41			49	158				
TLES8KTK	102H4836	LBP	48	149					89	0.95	188	1.40			59	182				
TLES8.7KTK.3	102H4834	LBP	58	178					107	0.98	224	1.49			71	217				
TLES10KTK.3	102H4050	LBP	73	205					126	1.06	255	1.54			89	250				
TLX4KK.3	102H4447	LBP	21	76					44	1.15	95	1.74			25	92				
TLX5.7KK.3	102H4647	LBP	37	115					70	1.28	143	1.85			46	140				
TLX6.5KK.3	102H4747	LBP	46	133					83	1.30	165	1.83			57	163				
TLX7.5KK.3	102H4847	LBP	55	157					98	1.32	195	1.86			67	192				
TLX8.7KK.3	102H4947	LBP	65	184					115	1.31	227	1.84			79	224				
TLY4KK.3	102H4442	LBP	19	75					42	0.99	95	1.58			23	91				
TLY4.8KK.3	102H4542	LBP	28	94					55	1.06	119	1.62			34	115				
TLY5.7KK.3	102H4642	LBP	36	114					68	1.06	144	1.61			45	139				
TLY6.5KK.3	102H4742	LBP	46	135					82	1.10	170	1.63			56	165				
TLY10KK.3	102H4042	LBP	74	208					128	1.21	260	1.74			90	254				

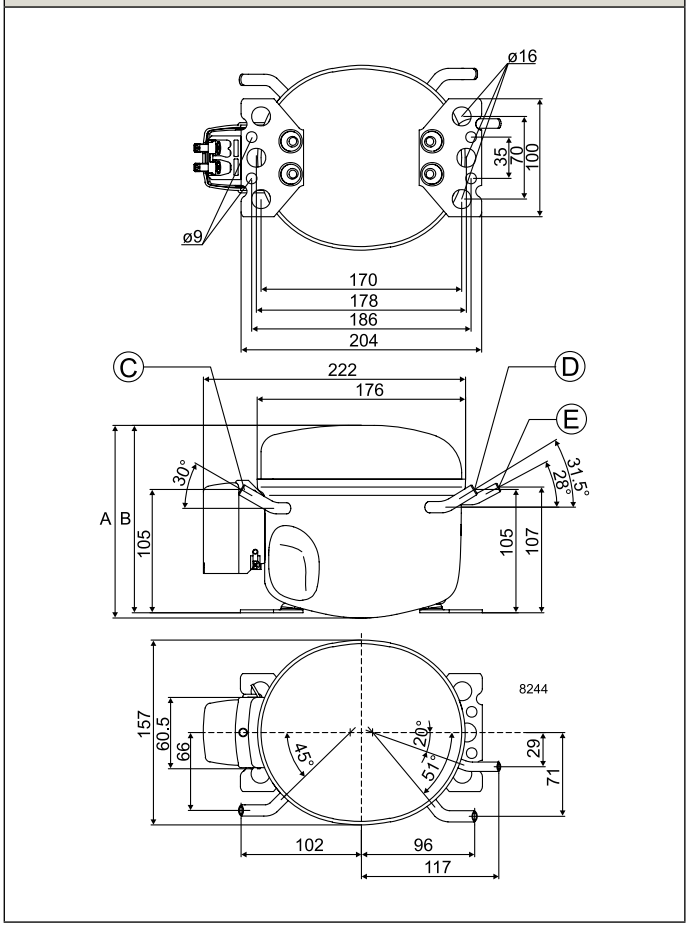
R600a • 220-240 V • 50 Hz • T-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
TLES4KK.3	102H4438	103N0011	103N0018	103N0016	103N0021	103N0050	117-7117	117-7119					103N1010	103N2010
TLES4.8KK.3	102H4538	103N0011	103N0018	103N0016	103N0021	103N0050	117-7117	117-7119					103N1010	103N2010
TLES5.7KK.3	102H4638	103N0011	103N0018	103N0016	103N0021	103N0050	117-7117	117-7119					103N1010	103N2010
TLES6.5KK.3	102H4738	103N0011	103N0018	103N0016	103N0021	103N0050	117-7117	117-7119					103N1010	103N2010
TLES7.5KK.3	102H4838	103N0011	103N0018	103N0016	103N0021	103N0050	117-7131	117-7132					103N1010	103N2010
TLES8.7KK.3	102H4938	103N0011	103N0018	103N0016	103N0021	103N0050	117-7117	117-7119					103N1010	103N2010
TLES4KTK	102H4436	103N0011	103N0018	103N0016	103N0021	103N0050	117-7117	117-7119					103N1010	103N2010
TLES5KTK	102H4536	103N0011	103N0018	103N0016	103N0021	103N0050	117-7117	117-7119					103N1010	103N2010
TLES6KTK	102H4636	103N0011	103N0018	103N0016	103N0021	103N0050	117-7117	117-7119					103N1010	103N2010
TLES7KTK	102H4736	103N0011	103N0018	103N0016	103N0021	103N0050	117-7117	117-7119					103N1010	103N2010
TLES8KTK	102H4836	103N0011	103N0018	103N0016	103N0021	103N0050	117-7117	117-7119					103N1010	103N2010
TLES8.7KTK.3	102H4834	103N0011	103N0018										103N1010	103N2010
TLES10KTK.3	102H4050	103N0011	103N0018	103N0016	103N0021	103N0050	117-7117	117-7119					103N1010	103N2010
TLX4KK.3	102H4447			103N0016	103N0021	103N0050	117-7117	117-7119					103N1010	103N2010
TLX5.7KK.3	102H4647			103N0016	103N0021	103N0050	117-7117	117-7119					103N1010	103N2010
TLX6.5KK.3	102H4747			103N0016	103N0021	103N0050	117-7117	117-7119					103N1010	103N2010
TLX7.5KK.3	102H4847			103N0016	103N0021	103N0050	117-7131	117-7132					103N1010	103N2010
TLX8.7KK.3	102H4947			103N0016	103N0021	103N0050	117-7117	117-7119					103N1010	103N2010
TLY4KK.3	102H4442	103N0011	103N0018	103N0016	103N0021	103N0050	117-7117	117-7119					103N1010	103N2010
TLY4.8KK.3	102H4542	103N0011	103N0018	103N0016	103N0021	103N0050	117-7117	117-7119					103N1010	103N2010
TLY5.7KK.3	102H4642	103N0011	103N0018	103N0016	103N0021	103N0050	117-7117	117-7119					103N1010	103N2010
TLY6.5KK.3	102H4742	103N0011	103N0018	103N0016	103N0021	103N0050	117-7117	117-7119					103N1010	103N2010
TLY10KK.3	102H4042	103N0011	103N0018	103N0016	103N0021	103N0050	117-7117	117-7119					103N1010	103N2010

Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]				alt. connectors available	
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F		
57	1.18					*	1/20	4.01	198-254 V, 50 Hz	S	163	159	6.2	6.2	5.0		X	1 | 7
74	1.30					*	1/10	4.78	198-254 V, 50 Hz	S	163	159	6.2	6.2	5.0		X	1 | 7
91	1.32					*	1/10	5.70	198-254 V, 50 Hz	S	163	159	6.2	6.2	5.0		X	1 | 2
108	1.31					*	1/10	6.49	198-254 V, 50 Hz	S	163	159	6.2	6.2	5.0			2
126	1.32					*	1/10	7.48	198-254 V, 50 Hz	S	163	159	6.2	6.2	5.0		X	2
147	1.33					*	1/8	8.67	198-254 V, 50 Hz	S	163	159	6.2	6.2	5.0		X	2
55	1.10	127	1.87			*	1/20	3.86	187-254 V, 50 Hz	S	173	169	6.2	6.2	5.0			1
77	1.22	165	1.83			*	1/10	5.08	187-254 V, 50 Hz	S	173	169	6.2	6.2	5.0			1
89	1.23					*	1/10	5.70	187-254 V, 50 Hz	S	173	169	6.2	6.2	5.0			2
103	1.23					*	1/10	6.49	187-254 V, 50 Hz	S	173	169	6.2	6.2	5.0			2
119	1.22					*	1/10	7.76	187-254 V, 50 Hz	S	173	169	6.2	6.2	5.0			2
143	1.27						1/8	8.67	187-254 V, 50 Hz	S	173	169	6.2	6.2	5.0			2
168	1.36					*	1/7	10.13	187-254 V, 50 Hz	S	173	169	6.2	6.2	5.0			2
60	1.49					4	1/10	4.01	198-254 V, 50 Hz	S	173	169	6.2	6.2	5.0		X	1
94	1.65					4	1/10	5.70	198-254 V, 50 Hz	S	173	169	6.2	6.2	5.0		X	1 | 2
111	1.66					4	1/10	6.49	198-254 V, 50 Hz	S	173	169	6.2	6.2	5.0		X	2
130	1.69					3	1/8	7.48	198-254 V, 50 Hz	S	173	169	6.2	6.2	5.0		X	2
153	1.68					4	1/7	8.67	198-254 V, 50 Hz	S	173	169	6.2	6.2	5.0		X	2
57	1.29					4 *	1/20	4.01	198-254 V, 50 Hz	S	163	159	6.2	6.2	5.0			1
74	1.37					4 *	1/10	4.78	198-254 V, 50 Hz	S	163	159	6.2	6.2	5.0			1
91	1.37					4 *	1/10	5.70	198-254 V, 50 Hz	S	163	159	6.2	6.2	5.0			1 | 2
110	1.42					4 *	1/10	6.49	198-254 V, 50 Hz	S	163	159	6.2	6.2	5.0			2
170	1.55					4 *	1/7	10.13	198-254 V, 50 Hz	S	173	169	6.2	6.2	5.0			2

TLES / TLX / TLY



R600a • 220-240 V • 50 Hz • D-Series

Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -25°C / 55°C		MBP rating point -10°C / 55°C		HBP rating point 5°C / 55°C							
			-35	-15	-5	0	10	15	Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]						
DLE8.7KK	102H4950	LBP	63	179					112	1.23	226	1.68			76	219				
DLE9.4KK	102H4952	LBP	71	195					123	1.22	246	1.67			87	238				
DLE10KK	102H4082	LBP	78	216					138	1.23	271	1.68			95	264				
DLY10KK	102H4086	LBP	74	217					133	1.32	274	1.78			91	265				
DLX4KK	102H3453	LBP	23	79					46	1.44	101	2.19			28	97				
DLX4KK.1	102H3459	LBP	23	79					46	1.44	101	2.19			28	97				
DLX5.7KK.1	102H3659	LBP	41	123					75	1.47	154	2.08			50	151				
DLX5.7KK.1	102H4691	LBP	41	123					75	1.47	154	2.08			50	151				
DLX7.5KK.1	102H4854	LBP	52	156					95	1.49	195	2.10			64	191				
DLX8.7KK.1	102H4982	LBP	62	186					113	1.49	232	2.10			76	227				
DLX8.7KK.1	102H4990	LBP	62	186					113	1.49	232	2.10			76	227				
DLX9.4KK.1	102H4159	LBP	69	207					126	1.48	259	2.08			85	253				

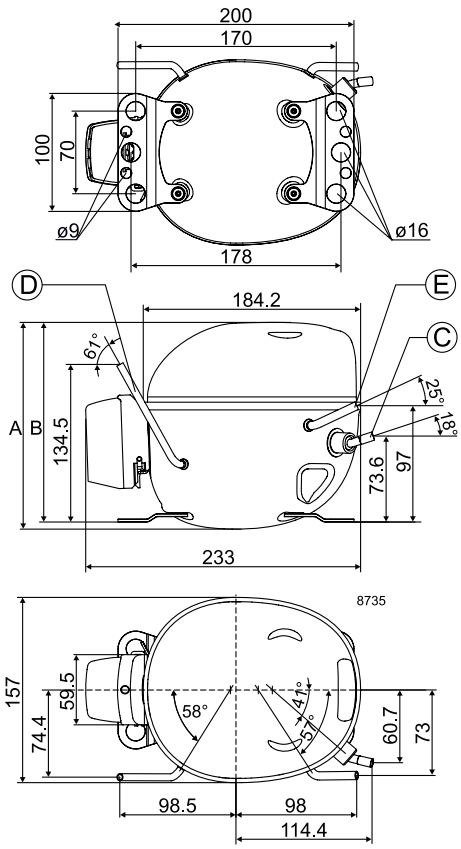
R600a • 220-240 V • 50 Hz • D-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
DLE8.7KK	102H4950			103N0016	103N0021	103N0050	117-7117	117-7119					103N1010	103N0491
DLE9.4KK	102H4952			103N0016	103N0021	103N0050	117-7117	117-7119					103N1010	103N0491
DLE10KK	102H4082			103N0016	103N0021	103N0050	117-7117	117-7119					103N1010	103N0491
DLY10KK	102H4086			103N0016	103N0021	103N0050	117-7117	117-7119					103N1010	103N0491
DLX4KK	102H3453			103N0016	103N0021	103N0055		117-7136					103N1010	103N0491
DLX4KK.1	102H3459			103N0016	103N0021	103N0055		117-7136					103N1010	103N0491
DLX5.7KK.1	102H3659				103N0021	103N0055		117-7136					103N1010	103N0491
DLX5.7KK.1	102H4691				103N0021	103N0055		117-7136					103N1010	103N0491
DLX7.5KK.1	102H4854				103N0021	103N0055		117-7139					103N1010	103N0491
DLX8.7KK.1	102H4982				103N0021	103N0055		117-7139					103N1010	103N0491
DLX8.7KK.1	102H4990				103N0021	103N0055		117-7139					103N1010	103N0491
DLX9.4KK.1	102H4159				103N0021	103N0055		117-7140					103N1010	103N0491

Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]				alt. connectors available	
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F		
148	1.56					*	1/7	8.67	198-254 V, 50 Hz	S	175	169	6.2	4.5	5.0			2 | 9
162	1.55					*	1/7	9.38	198-254 V, 50 Hz	S	175	169	6.2	4.5	5.0			2 | 9
182	1.56					*	1/6	10.14	198-254 V, 50 Hz	S	175	169	6.2	6.0	5.0			2 | 9
177	1.67					4	1/6	10.14	198-254 V, 50 Hz	S	175	169	6.2	6.0	5.0		X	2 | 9
62	1.86					2	1/12	4.01	198-254 V, 50 Hz	S	175	169	6.2	6.0	5.0			1 | 9
62	1.86					2	1/12	4.01	198-254 V, 50 Hz	S	175	169	6.2	6.0	5.0			1 | 9
100	1.88					2	1/10	5.70	198-254 V, 50 Hz	S	175	169	6.2	6.0	5.0		X	1 | 2 | 9
100	1.88					2	1/10	5.70	198-254 V, 50 Hz	S	175	169	6.2	6.0	5.0		X	1 | 2 | 9
127	1.90					2.5	1/8	7.48	198-254 V, 50 Hz	S	175	169	6.2	6.0	5.0		X	2 | 9
151	1.90					2.5	1/7	8.67	198-254 V, 50 Hz	S	175	169	6.2	6.0	5.0		X	2 | 9
151	1.90					2.5	1/7	8.67	198-254 V, 50 Hz	S	175	169	6.2	6.0	5.0		X	2 | 9
168	1.89					3.5	1/6	9.38	198-254 V, 50 Hz	S	175	169	6.2	6.0	5.0			2 | 9

DLE / DLY / DLX



R600a • 220-240 V • 50 Hz • N-Series

Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -25°C / 55°C		MBP rating point -10°C / 55°C		HBP rating point 5°C / 55°C							
			-35	-15	-5	0	10	15	Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]						
NLE9KTK	105H6071	LBP	54	166					98	1.03	211	1.57			66	202				
NLE9KTK	105H6848	LBP	54	166					98	1.03	211	1.57			66	202				
NLE10KK.4	105H6867	LBP	74	207					128	1.19	257	1.60			90	252				
NLE11KK.4	105H6952	LBP	81	232					143	1.19	290	1.62			100	283				
NLE11KTK	105H6948	LBP	73	206					127	1.03	261	1.47			88	251				
NLE11KTK.2	105H6173	LBP	84	242					149	1.18	302	1.72			102	295				
NLE13KK.4	105H6959	LBP	99	274					170	1.18	340	1.59			121	334				
NLE13KK.4	105H6939	LBP	99	274					170	1.18	340	1.59			121	334				
NLE13KTK.2	105H6929	LBP	96	277					171	1.18	345	1.73			117	338				
NLE15KK.4	105H6906	LBP	110	307					190	1.20	382	1.63			134	374				
NLE15KK.4	105H6968	LBP	110	307					190	1.20	382	1.63			134	374				
NLE15KTK.2	105H6966	LBP	106	314					190	1.19	395	1.72			129	383				
NLE15MKK	105H6533	MBP		308	480	588			186	1.16	387	1.68	727	2.31		375	586	718		
NLU8.0KK.1	105H6008	LBP	51	158					95	1.52	198	2.12			62	193				
NLU8.0KK.1	105H6018	LBP	51	158					95	1.52	198	2.12			62	193				
NLU8.8KK.1	105H6009	LBP	58	180					108	1.54	225	2.14			71	219				
NLU8.8KK.1	105H6020	LBP	58	180					108	1.54	225	2.14			71	219				
NLU10KK.1	105H6131	LBP	71	219					131	1.55	274	2.16			86	267				
NLU10KK.1	105H6193	LBP	71	219					131	1.55	274	2.16			86	267				
NLU11KK.1	105H6132	LBP	81	247					149	1.55	309	2.14			99	301				
NLU11KK.1	105H6198	LBP	81	247					149	1.55	309	2.14			99	301				
NLU13KK.1	105H6372	LBP	93	285					172	1.55	357	2.15			114	348				
NLU13KTK.1	105H6381	LBP	95	285					173	1.46	356	2.02			116	347				
NLU15KK.1	105H6553	LBP	105	320					194	1.54	400	2.13			129	390				
NLU15KTK.1	105H6554	LBP	106	321					195	1.45	401	2.00			130	391				

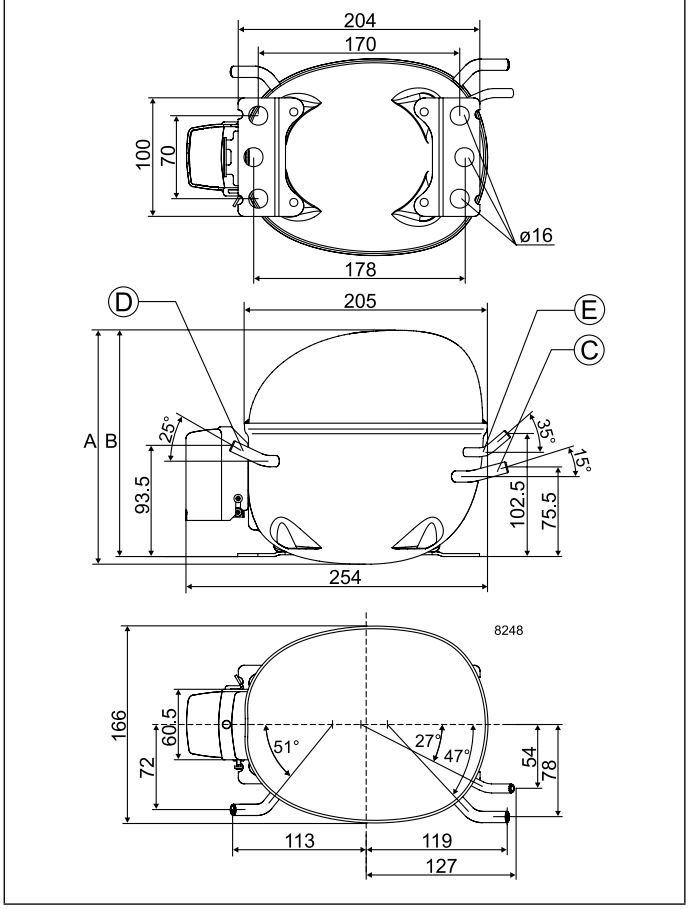
R600a • 220-240 V • 50 Hz • N-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
NLE9KTK	105H6071	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
NLE9KTK	105H6848	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
NLE10KK.4	105H6867	103N0011	103N0018	103N0016	103N0021	103N0050	117-7117	117-7119					103N1010	103N2010
NLE11KK.4	105H6952	103N0011	103N0018	103N0016	103N0021	103N0050	117-7117	117-7119					103N1010	103N2010
NLE11KTK	105H6948	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
NLE11KTK.2	105H6173	103N0011	103N0018	103N0016	103N0021	103N0050	117-7117	117-7119					103N1010	103N2010
NLE13KK.4	105H6959	103N0011	103N0018	103N0016	103N0021	103N0050	117-7117	117-7119					103N1010	103N2010
NLE13KK.4	105H6939	103N0011	103N0018	103N0016	103N0021	103N0050	117-7117	117-7119					103N1010	103N2010
NLE13KTK.2	105H6929	103N0011	103N0018	103N0016	103N0021	103N0050	117-7117	117-7119					103N1010	103N2010
NLE15KK.4	105H6906	103N0011	103N0018	103N0016	103N0021	103N0050	117-7117	117-7119					103N1010	103N2010
NLE15KK.4	105H6968	103N0011	103N0018	103N0016	103N0021	103N0050	117-7117	117-7119					103N1010	103N2010
NLE15KTK.2	105H6966	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
NLE15MKK	105H6533	103N0011	103N0018	103N0016	103N0021	103N0050	117-7117	117-7119					103N1010	103N2010
NLU8.0KK.1	105H6008				103N0021	103N0055		117-7139					103N1010	103N2010
NLU8.0KK.1	105H6018				103N0021	103N0055		117-7139					103N1010	103N2010
NLU8.8KK.1	105H6009				103N0021	103N0055		117-7139					103N1010	103N2010
NLU8.8KK.1	105H6020					103N0055		117-7139					103N1010	103N2010
NLU10KK.1	105H6131			103N0016	103N0021	103N0055		117-7139					103N1010	103N2010
NLU10KK.1	105H6193				103N0021	103N0055		117-7139					103N1010	103N2010
NLU11KK.1	105H6132			103N0016	103N0021	103N0055		117-7139					103N1010	103N2010
NLU11KK.1	105H6198				103N0021	103N0055		117-7139					103N1010	103N2010
NLU13KK.1	105H6372				103N0021	103N0055	117-7131	117-7132					103N1010	103N2010
NLU13KTK.1	105H6381				103N0021	103N0055		117-7129					103N1010	103N2010
NLU15KK.1	105H6553				103N0021	103N0055	117-7131	117-7132					103N1010	103N2010
NLU15KTK.1	105H6554				103N0021	103N0055		117-7119					103N1010	103N2010

Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]					
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler	alt. connectors available	
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F		
131	1.33					*	1/8	8.35	187-254 V. 50 Hz *	S	197	190	6.2	6.2	5.0		X	2
131	1.33					*	1/8	8.35	187-254 V. 50 Hz *	S	197	190	6.2	6.2	5.0		X	2
170	1.51					*	1/6	10.09	198-254 V. 50 Hz	S	190	183	6.2	6.2	5.0			2
190	1.52					*	1/6	11.15	198-254 V. 50 Hz	S	190	183	6.2	6.2	5.0			2
168	1.31					*	1/6	11.15	187-254 V. 50 Hz *	S	197	190	6.2	6.2	5.0			2
198	1.51					*	1/5	11.15	187-254 V. 50 Hz	S	203	197	6.2	6.2	5.0			2
226	1.50					*	1/5	13.25	198-254 V. 50 Hz	S	190	183	6.2	6.2	5.0		X	2
226	1.50					*	1/5	13.25	198-254 V. 50 Hz	S	190	183	6.2	6.2	5.0		X	2
227	1.52					*	1/5	13.25	187-254 V. 50 Hz	S	203	197	6.2	6.2	5.0			2
253	1.53					*	1/4	14.65	198-254 V. 50 Hz	S	197	190	8.2	6.2	6.2		X	2
253	1.53					*	1/4	14.65	198-254 V. 50 Hz	S	197	190	6.2	6.2	5.0		X	2
254	1.52					*	1/4	14.65	187-254 V. 50 Hz	S	203	197	6.2	6.2	5.0			2
248	1.49	491	1.99	852	2.50	*	1/4	14.65	198-254 V. 50 Hz	S	203	197	6.2	6.2	5.0			2 | 3
127	1.94					2.5	1/8	8.05	198-254 V. 50 Hz	S	203	197	6.2	6.2	5.0		X	2
127	1.94					2.5	1/8	8.05	198-254 V. 50 Hz	S	203	197	6.2	4.5	5.0		X	2
145	1.96					2.5	1/8	8.76	198-254 V. 50 Hz	S	203	197	6.2	6.2	5.0			2
145	1.96					2.5	1/8	8.76	198-254 V. 50 Hz	S	203	197	6.2	4.5	5.0			2
176	1.98					2.5	1/6	10.09	198-254 V. 50 Hz	S	203	197	6.2	6.2	5.0		X	2
176	1.98					2.5	1/6	10.09	198-254 V. 50 Hz	S	203	197	6.2	6.2	5.0		X	2
200	1.97					2.5	1/5	11.15	198-254 V. 50 Hz	S	203	197	6.2	6.2	5.0		X	2
200	1.97					2.5	1/5	11.15	198-254 V. 50 Hz	S	203	197	6.2	6.2	5.0		X	2
230	1.98					3	1/5	13.25	198-254 V. 50 Hz	S	203	197	6.2	6.2	5.0			2
231	1.87					5	1/5	13.25	187-254 V. 50 Hz	S	203	197	6.2	6.2	5.0			2
259	1.96					3	1/4	14.65	198-254 V. 50 Hz	S	203	197	6.2	6.2	5.0			2
260	1.84					4	1/4	14.65	187-254 V. 50 Hz	S	203	197	6.2	6.2	5.0			2

NLE



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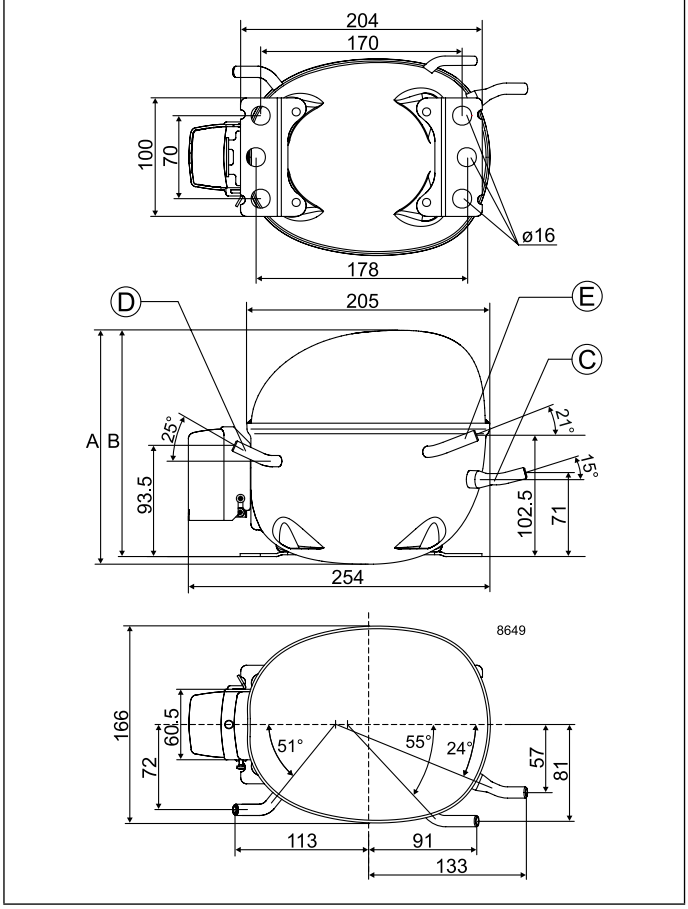


R600a • 220-240 V • 50 Hz • N-Series

Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -25°C / 55°C		MBP rating point -10°C / 55°C		HBP rating point 5°C / 55°C							
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
NLX8.0KK.2	105H6010	LBP	52	167					99	1.47	210	2.08			64	204				
NLX8.8KK.2	105H6011	LBP	62	187					113	1.49	234	2.03			76	228				
NLX10KK.1	105H6104	LBP	67	215					128	1.36	270	1.93			82	262				
NLX10KK.2	105H6101	LBP	74	217					133	1.49	271	2.01			91	265				
NLX10KK.2	105H6102	LBP	74	217					133	1.49	271	2.01			91	265				
NLX10KK.2	105H6105	LBP	74	217					133	1.49	271	2.01			91	265				
NLX11KK.2	105H6970	LBP	85	240					148	1.48	298	1.99			104	292				
NLX11KK.3	105H6184	LBP	79	237					147	1.47	300	2.00			97	288				
NLX13KK.1	105H6304	LBP	91	276					167	1.37	345	1.91			111	337				
NLX13KK.2	105H6300	LBP	93	271					167	1.47	338	1.99			114	331				
NLX13KK.3	105H6306	LBP	93	283					168	1.45	356	1.99			113	345				
NLX15KK.1	105H6502	LBP	99	308					185	1.34	387	1.87			121	376				
NLX15KK.2	105H6977	LBP	110	309					192	1.48	384	1.99			135	377				
NLX15KK.2	105H6500	LBP	107	300					186	1.45	372	1.95			131	365				
NLX15KK.3	105H6506	LBP	109	317					190	1.45	403	1.99			132	388				

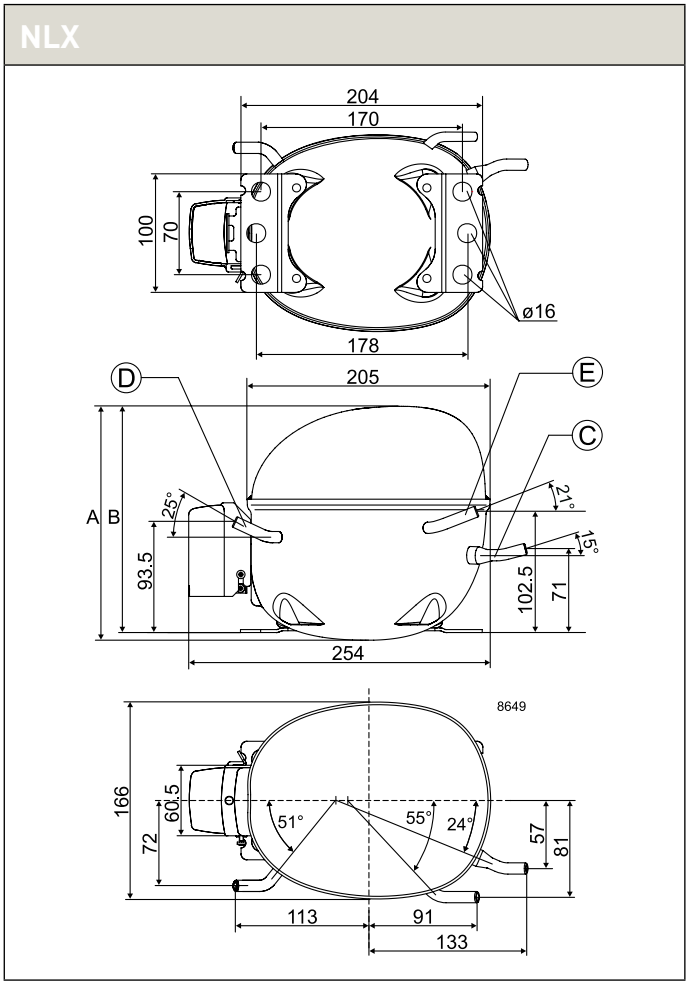
R600a • 220-240 V • 50 Hz • N-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
NLX8.0KK.2	105H6010			103N0016	103N0021	103N0050	117-7131	117-7132					103N1010	103N2010
NLX8.8KK.2	105H6011				103N0021	103N0050		117-7136					103N1010	103N2010
NLX10KK.1	105H6104			103N0016	103N0021	103N0050	117-7131	117-7132					103N1010	103N2010
NLX10KK.2	105H6101				103N0021	103N0050		117-7136					103N1010	103N2010
NLX10KK.2	105H6102					103N0050		117-7136					103N1010	103N2010
NLX10KK.2	105H6105					103N0050		117-7136					103N1010	103N2010
NLX11KK.2	105H6970			103N0016	103N0021	103N0050		117-7136					103N1010	103N2010
NLX11KK.3	105H6184				103N0021	103N0050		117-7119					103N1010	103N2010
NLX13KK.1	105H6304			103N0016	103N0021	103N0050	117-7117	117-7119					103N1010	103N2010
NLX13KK.2	105H6300			103N0016	103N0021	103N0050		117-7132					103N1010	103N2010
NLX13KK.3	105H6306				103N0021	103N0050		117-7119					103N1010	103N2010
NLX15KK.1	105H6502			103N0016	103N0021	103N0050		117-7136					103N1010	103N2010
NLX15KK.2	105H6977			103N0016	103N0021	103N0050	117-7117	117-7119					103N1010	103N2010
NLX15KK.2	105H6500			103N0016	103N0021	103N0050	117-7117	117-7119					103N1010	103N2010
NLX15KK.3	105H6506				103N0021	103N0050		117-7140					103N1010	103N2010

Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]				alt. connectors available	
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F		
133	1.88					3	1/8	8.05	198-254 V, 50 Hz	S	203	197	6.2	6.2	5.0			2
151	1.89					2	1/7	8.76	198-254 V, 50 Hz	S	203	197	6.2	6.2	5.0			2
172	1.74					3	1/6	10.09	198-254 V, 50 Hz	S	203	197	6.2	6.2	5.0			2
177	1.89					2	1/6	10.09	198-254 V, 50 Hz	S	203	197	6.2	6.2	5.0		X	2
177	1.89					2	1/6	10.09	198-254 V, 50 Hz	S	203	197	6.2	6.2	5.0		X	2
177	1.89					2	1/6	10.09	198-254 V, 50 Hz	S	203	197	6.2	6.2	5.0		X	2
197	1.87					2	1/5	11.15	198-254 V, 50 Hz	S	203	197	6.2	6.2	5.0			2
195	1.86					4	1/6	11.15	198-254 V, 50 Hz	S	203	197	6.2	6.2	5.0			2
223	1.75					4	1/5	13.25	198-254 V, 50 Hz	S	203	197	6.2	6.2	5.0			2
222	1.87					3	1/5	13.25	198-254 V, 50 Hz	S	203	197	6.2	6.2	5.0			2
225	1.85					4	1/5	13.25	198-254 V, 50 Hz	S	203	197	6.2	6.2	5.0			2
248	1.71					2	1/4	14.65	198-254 V, 50 Hz	S	203	197	6.2	6.2	5.0			2
255	1.87					4	1/4	14.65	198-254 V, 50 Hz	S	203	197	8.2	6.2	6.2		X	2
247	1.84					4	1/4	14.65	198-254 V, 50 Hz	S	203	197	6.2	6.2	5.0		X	2
254	1.85					4	1/4	14.65	198-254 V, 50 Hz	S	203	197	6.2	6.2	5.0			2

NLX



R600a • 220-240 V • 50 Hz • KAPPA

Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -25°C / 55°C		MBP rating point -10°C / 55°C		HBP rating point 5°C / 55°C							
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
HMK80AA	CDO00029	LBP	55	169	258				102	1.18	211	1.68			67	206	314			
HMK95AA	CDO00031	LBP	67	207	313				125	1.19	257	1.71			81	252	381			
HMK12AA	CDO00033	LBP	82	238	349				149	1.20	291	1.65			99	291	425			
HTK55AA	CDO00034	LBP	32	119	185				69	1.20	150	1.79			39	146	225			
HTK70AA	CDO00035	LBP	44	149	219				87	1.24	184	1.92			53	181	267			
HTK80AA	CDO00036	LBP	55	170	259				102	1.25	212	1.84			67	207	316			
HTK95AA	CDO00037	LBP	70	207	314				126	1.28	257	1.81			86	251	382			
HTK12AA	CDO00038	LBP	82	238	349				149	1.28	291	1.76			99	290	426			
HKK55AA	CDO00039	LBP	32	119	183				69	1.33	150	1.94			39	145	224			
HKK70AA	CDO00040	LBP	44	148	227				87	1.36	185	1.92			54	180	276			
HKK80AA	CDO00041	LBP	55	170	259				102	1.38	212	1.95			67	207	316			
HKK95AA	CDO00042	LBP	69	206	309				126	1.41	255	1.94			84	251	376			
HKK12AA	CDO00043	LBP	82	239	351				150	1.42	292	1.93			100	291	428			
HXK55AA	CDO00045	LBP	36	121	184				72	1.43	151	1.98			44	148	224			
HXK70AA	CDO00046	LBP	47	148	228				88	1.46	186	2.00			57	181	277			
HXK70AA	CDO00110	LBP	47	148	228				88	1.46	186	2.00			57	181	277			
HXK80AA	CDO00047	LBP	58	172	259				105	1.49	213	2.04			71	210	316			
HXK80AA	CDO00096	LBP	58	172	259				105	1.49	213	2.04			71	210	316			
HXK87AA	CDO00103	LBP	65	189	286				115	1.48	235	2.13			79	230	349			
HXK95AA	CDO00048	LBP	73	208	312				129	1.50	257	2.04			89	254	380			
HXK95AA	CDO00085	LBP	73	208	312				129	1.50	257	2.04			89	254	380			
HXK12AA	CDO00049	LBP	81	242	356				150	1.49	296	2.03			100	295	434			
HXK12AA	CDO00095	LBP	81	242	356				150	1.49	296	2.03			100	295	434			
HZK80AA	CDO00094	LBP	58	172	259				105	1.55	213	2.12			71	210	316			
HZK95AA	CDO00078	LBP	69	208	308				129	1.57	256	2.16			85	254	376			
HZK12AA	CDO00077	LBP	84	240	352				151	1.56	293	2.13			102	293	430			

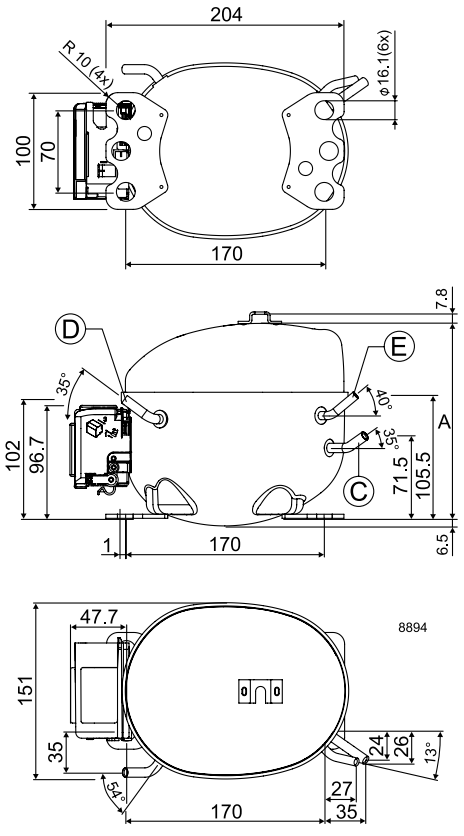
R600a • 220-240 V • 50 Hz • KAPPA • Electrical Equipment • Spare parts • Accessories

Compressor	Code number	Run capacitor	Terminal board		Terminal board	Cable clamp	Cover	Evaporation tray	All-in-one equipment
		• optional • compulsory *	• PTC • external protector		• ePTC • external protector	screws not included	V0 material optional	plastic	• cover • cable clamp + screws • earthing screw
		Spades	Spades		Spades				
		4.8 | 6.3 mm	4.8 mm	6.3 mm	4.8 mm				
HMK80AA	CDO00029		ZAF5	DAF5		113410_	157595_	113188_	161680_
HMK95AA	CDO00031		ZAF5	DAF5		113410_	157595_	113188_	161680_
HMK12AA	CDO00033		ZAFP	DAFP		113410_	157595_	113188_	161680_
HTK55AA	CDO00034	2 µF	ZHF0	DHF0		113410_	157595_	113188_	161680_
HTK70AA	CDO00035	3 µF	ZAF7	DAF7		113410_	157595_	113188_	161680_
HTK80AA	CDO00036	3 µF	ZAFC	DAFC		113410_	157595_	113188_	161680_
HTK95AA	CDO00037	4 µF	ZAFC	DAFC		113410_	157595_	113188_	161680_
HTK12AA	CDO00038	4 µF	ZAF9	DAF9		113410_	157595_	113188_	161680_
HKK55AA	CDO00039	2.5 µF *	ZHFF	DHFF		113410_	157595_	113188_	161680_
HKK70AA	CDO00040	3 µF *	ZHF6	DHF6		113410_	157595_	113188_	161680_
HKK80AA	CDO00041	3 µF *	ZHF4	DHF4		113410_	157595_	113188_	161680_
HKK95AA	CDO00042	4 µF *	ZAFC	DAFC		113410_	157595_	113188_	161680_
HKK12AA	CDO00043	4 µF *	ZAFP	DAFP		113410_	157595_	113188_	161680_
HXK55AA	CDO00045	3 µF *			ZXF6	113410_	157595_	113188_	161680_
HXK70AA	CDO00046	3 µF *			ZXF6	113410_	157595_	113188_	161680_
HXK70AA	CDO00110	3 µF *			ZXF6	113410_	157595_	113188_	161680_
HXK80AA	CDO00047	3 µF *			ZXF4	113410_	157595_	113188_	161680_
HXK80AA	CDO00096	3 µF *			ZXF4	113410_	157595_	113188_	161680_
HXK87AA	CDO00103	4 µF *			ZXF5	113410_	157595_	113188_	161680_
HXK95AA	CDO00048	4 µF *			ZXF5	113410_	157595_	113188_	161680_
HXK95AA	CDO00085	4 µF *			ZXF5	113410_	157595_	113188_	161680_
HXK12AA	CDO00049	4 µF *			ZXFP	113410_	157595_	113188_	161680_
HXK12AA	CDO00095	4 µF *			ZXFP	113410_	157595_	113188_	161680_
HZK80AA	CDO00094	4 µF *			ZXF4	113410_	157595_	113188_	161680_
HZK95AA	CDO00078	4 µF *			ZXF5	113410_	157595_	113188_	161680_
HZK12AA	CDO00077	4 µF *			ZXFP	113410_	157595_	113188_	161680_

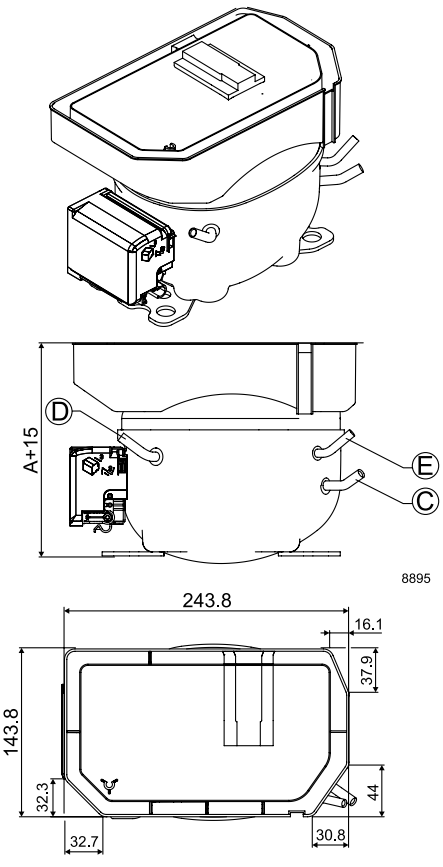
Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions						Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location / diameter [mm]			alt. connectors available	
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Discharge		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C (I.D.)	D (O.D.)	E (I.D.)		
136	1.50	265	1.99				1/8	8.10	187-264 V, 50 Hz	S	159		6.15	6.00	5.15	X	1 | 2 | 6
167	1.53	322	2.01				1/7	9.60	187-264 V, 50 Hz	S	159		6.15	6.00	5.15	X	1 | 2 | 6
198	1.53	361	1.93				1/5	11.20	187-264 V, 50 Hz	S	167		6.15	6.00	5.15	X	1 | 2 | 6
93	1.55	190	2.12				1/12	5.60	187-264 V, 50 Hz	S	159		6.15	6.00	5.15	X	1 | 2
117	1.61	227	2.29			*	1/10	6.60	187-264 V, 50 Hz	S	159		6.15	6.00	5.15	X	1 | 2 | 6
136	1.61	266	2.19			*	1/8	8.10	187-264 V, 50 Hz	S	159		6.15	6.00	5.15	X	1 | 2 | 6
167	1.64	322	2.14			*	1/7	9.60	187-264 V, 50 Hz	S	167		6.15	6.00	5.15	X	1 | 2 | 6
198	1.64	361	2.06			*	1/5	11.20	187-264 V, 50 Hz	S	167		6.15	6.00	5.15	X	1 | 2 | 6
93	1.71	188	2.29			2.5	1/12	5.60	187-264 V, 50 Hz	S	159		6.15	6.00	5.15	X	1 | 2
117	1.74	233	2.26			3	1/10	6.60	187-264 V, 50 Hz	S	159		6.15	6.00	5.15	X	1 | 2 | 6
136	1.77	266	2.29			3	1/8	8.10	187-264 V, 50 Hz	S	159		6.15	6.00	5.15	X	1 | 2 | 6
168	1.80	318	2.28			4	1/6	9.60	187-264 V, 50 Hz	S	167		6.15	6.00	5.15	X	1 | 2 | 6
199	1.80	363	2.25			4	1/5	11.20	187-264 V, 50 Hz	S	167		6.15	6.00	5.15	X	1 | 2 | 6
97	1.83	189	2.32			2	1/12	5.60	187-264 V, 50 Hz	S	159		6.15	6.00	5.15	X	1 | 2
118	1.86	233	2.35			3	1/8	6.60	187-264 V, 50 Hz	S	167		6.15	6.00	5.15	X	1 | 2 | 6
118	1.86	233	2.35			3 *	1/8	6.64	187-264 V, 50 Hz	S	167		6.15	6.00	5.15	X	1 | 2 | 6
140	1.90	267	2.38			4	1/8	8.10	187-264 V, 50 Hz	S	167		6.15	6.00	5.15	X	1 | 2 | 6
140	1.90	267	2.38			4 *	1/8	8.10	187-264 V, 50 Hz	S	167		6.15	6.00	5.15	X	1 | 2 | 6
154	1.90	294	2.52			4 *	1/7	8.80	187-264 V, 50 Hz	S	167		6.15	6.00	5.15	X	1 | 2 | 6
171	1.91	321	2.39			4	1/6	9.60	187-264 V, 50 Hz	S	167		6.15	6.00	5.15	X	1 | 2 | 6
171	1.91	321	2.39			4 *	1/6	9.60	187-264 V, 50 Hz	S	167		6.15	6.00	5.15	X	1 | 2 | 6
200	1.90	368	2.37			4	1/5	11.10	187-264 V, 50 Hz	S	167		6.15	6.00	5.15	X	1 | 2 | 6
200	1.90	368	2.37			4 *	1/5	11.10	187-264 V, 50 Hz	S	167		6.15	6.00	5.15	X	1 | 2 | 6
140	1.97	267	2.48			3	1/8	8.10	187-264 V, 50 Hz	S	167		6.15	6.00	5.15	X	1 | 2 | 6
171	1.99	319	2.54			4	1/6	9.60	187-264 V, 50 Hz	S	170		6.15	6.00	5.15	X	1 | 2 | 6
200	1.98	365	2.50			4	1/5	11.10	187-264 V, 50 Hz	S	170		6.15	6.00	5.15	X	1 | 2 | 6

KAPPA



KAPPA • Evaporation tray



R600a • 220-240 V • 50 Hz • KAPPA Tropical

Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -25°C / 55°C		MBP rating point -10°C / 55°C		HBP rating point 5°C / 55°C							
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
HXK70AT	CDO00124	LBP	48	145					88	1.23	180	1.79			60	178				
HXK80AT	CDO00122	LBP	57	171					105	1.27	212	1.75			70	208				
HXK80AT	CDO00135	LBP	56	171					105	1.31	211	1.80			70	208				
HXK87AT	CDO00126	LBP	72	188					116	1.27	233	1.82			89	229				
HXK87AT	CDO00136	LBP	72	188					116	1.31	233	1.87			89	229				
HXK95AT	CDO00123	LBP	60	209					130	1.26	256	1.79			76	254				
HXK95AT	CDO00137	LBP	60	209					130	1.31	256	1.86			76	254				
HXK12AT	CDO00121	LBP	94	242					150	1.28	301	1.82			115	295				
HXK12AT	CDO00138	LBP	94	242					150	1.34	301	1.91			115	295				

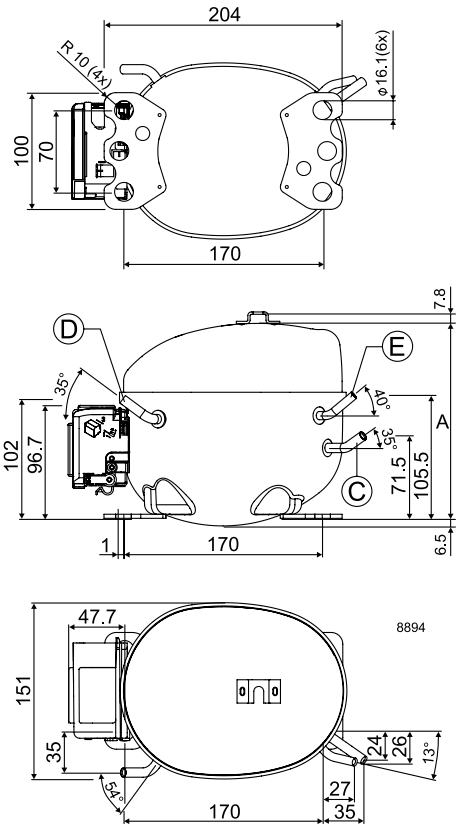
R600a • 220-240 V • 50 Hz • KAPPA Tropical • Electrical Equipment • Spare parts • Accessories

Compressor	Code number	Run capacitor	Terminal board		Terminal board	Cable clamp	Cover	Evaporation tray	All-in-one equipment
		• optional • compulsory *	• PTC • external protector		• ePTC • external protector	screws not included	V0 material optional	plastic	• cover • cable clamp + screws • earthing screw
		Spades	Spades		Spades				
		4.8 | 6.3 mm	4.8 mm	6.3 mm	4.8 mm				
HXK70AT	CDO00124	4 µF	ZAF5	DAF5		113410_	157595_	113188_	161680_
HXK80AT	CDO00122	4 µF	ZAF5	DAF5		113410_	157595_	113188_	161680_
HXK80AT	CDO00135	4 µF *	ZCF5	DCF5		113410_	157595_	113188_	161680_
HXK87AT	CDO00126	4 µF	ZAF5	DAF5		113410_	157595_	113188_	161680_
HXK87AT	CDO00136	4 µF *	ZCFC	DCFC		113410_	157595_	113188_	161680_
HXK95AT	CDO00123	4 µF	ZAFP	DAFP		113410_	157595_	113188_	161680_
HXK95AT	CDO00137	4 µF *	ZCFP	DCFP		113410_	157595_	113188_	161680_
HXK12AT	CDO00121	4 µF	ZAFP	DAFP		113410_	157595_	113188_	161680_
HXK12AT	CDO00138	4 µF *	ZCFP	DCFP		113410_	157595_	113188_	161680_

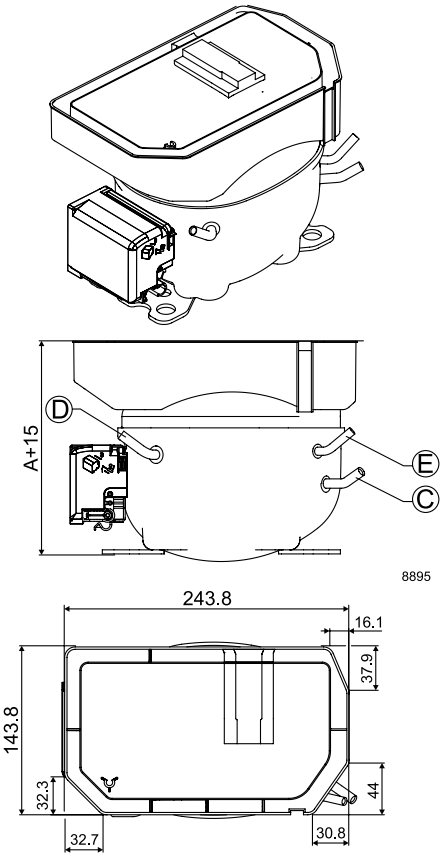
Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions						Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location / diameter [mm]			alt. connectors available	
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C (I.D.)	D (O.D.)	E (I.D.)		
119	1.64					*	1/8	6.64	170-264 V, 50 Hz	S	167		6.15	6.00	5.15		1 | 2 | 6
140	1.67					*	1/8	8.10	170-264 V, 50 Hz	S	167		6.15	6.00	5.15		1 | 2 | 6
140	1.75					4 *	1/8	8.10	170-264 V, 50 Hz *	S	167		6.15	6.00	5.15		1 | 2 | 6
154	1.67					*	1/7	8.80	170-264 V, 50 Hz	S	167		6.15	6.00	5.15		1 | 2 | 6
154	1.75					4 *	1/7	8.80	170-264 V, 50 Hz *	S	167		6.15	6.00	5.15		1 | 2 | 6
174	1.67					*	1/6	9.60	170-264 V, 50 Hz	S	167		6.15	6.00	5.15		1 | 2 | 6
174	1.75					4 *	1/6	9.60	170-264 V, 50 Hz *	S	167		6.15	6.00	5.15		1 | 2 | 6
198	1.72					*	1/5	11.10	170-264 V, 50 Hz	S	167		6.15	6.00	5.15		1 | 2 | 6
198	1.72					*	1/5	11.10	170-264 V, 50 Hz *	S	167		6.15	6.00	5.15		1 | 2 | 6

KAPPA Tropical



KAPPA Tropical • Evaporation tray



R600a • 220-240 V • 50 Hz • DELTA

Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -25°C / 55°C		MBP rating point -10°C / 55°C		HBP rating point 5°C / 55°C							
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
HTD30AA	CDO00052	LBP	14	62	98				34	1.17	79	1.81			17	76	120			
HTD35AA	CDO00053	LBP	20	73	115				41	1.19	93	1.83			24	90	141			
HTD40AA	CDO00054	LBP	25	86	135				50	1.22	109	1.87			31	106	165			
HTD45AA	CDO00055	LBP	30	104	159				61	1.24	130	1.78			37	127	194			
HTD55AA	CDO00056	LBP	40	126	189				76	1.27	156	1.83			49	154	231			
HTD60AA	CDO00073	LBP	50	144	221				87	1.27	180	1.80			62	176	269			
HTD30AG	CDO00118	LBP	15	58	92				33	1.10	74	1.77			18	71	113			
HXD30AA	CDO00097	LBP	15	61	99				33	1.24	78	1.92			19	74	121			
HXD35AA	CDO00098	LBP	19	71	114				41	1.31	91	2.00			24	88	139			
HXD40AA	CDO00099	LBP	25	85	136				50	1.30	109	1.97			31	104	166			
HXD45AA	CDO00100	LBP	33	102	159				60	1.33	128	1.95			41	124	195			
HXD55AA	CDO00101	LBP	34	121	178				71	1.35	149	1.92			42	147	217			
HXD60AA	CDO00102	LBP	42	132	203				80	1.33	165	1.86			52	162	248			
HXD30MA	CDO00081	L/MBP	12	61	97	120	178		34	1.09	77	1.77	147	2.62	16	74	119	147	218	
HXD35MA	CDO00082	L/MBP	19	71	114	141	207		40	1.12	91	1.79	172	2.64	24	87	139	172	253	
HXD40MA	CDO00083	L/MBP	30	86	135	165	232		50	1.18	109	1.82	197	2.51	37	105	165	201	284	
HXD45MA	CDO00084	L/MBP	30	102	158	193	280		61	1.19	128	1.78	234	2.50	36	125	193	236	343	
HXD55MA	CDO00080	L/MBP	42	120	188	229	330		73	1.15	151	1.71	276	2.38	51	147	229	280	403	
HZD30AA	CDO00088	LBP	19	57	91				33	1.31	73	1.93			23	70	113			
HZD35AA	CDO00089	LBP	21	69	110				41	1.35	88	1.99			26	85	134			
HZD40AA	CDO00090	LBP	26	85	135				50	1.39	108	2.07			32	104	165			
HZD45AA	CDO00091	LBP	34	101	158				61	1.39	127	2.02			41	123	193			
HZD55AA	CDO00092	LBP	38	121	185				73	1.45	150	2.00			46	147	225			
HZD60AA	CDO00093	LBP	42	132	203				80	1.33	165	1.86			52	162	248			

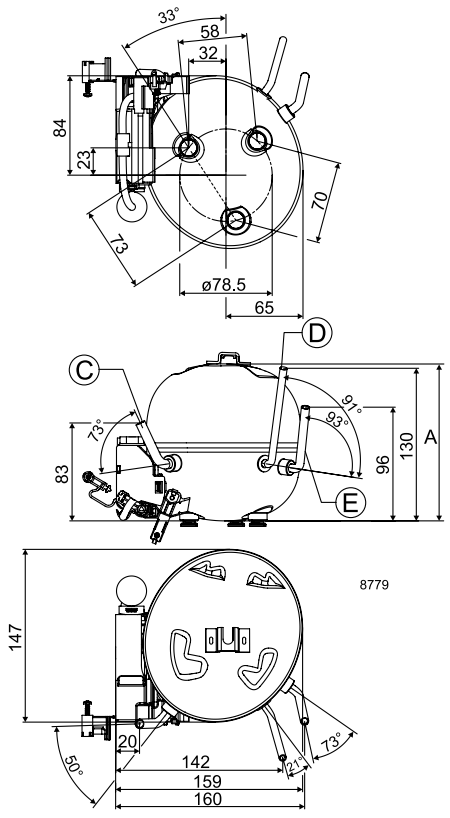
R600a • 220-240 V • 50 Hz • DELTA • Electrical Equipment • Spare parts • Accessories

Compressor pre-assembled start equipment	Code number	Run capacitor	Terminal board		Small cover	Adapter plate	Evaporation tray
		• optional • compulsory *	• PTC • external protector	• ePTC • external protector	• compulsory • delivered separately	• innovative fixation system • faster and easier assembly	plastic
		Spades	Spades	Spades			
		4.8 mm	4.8 mm	4.8 mm			
HTD30AA	CDO00052	1 µF	BNE7		160943_	157008_	162531_
HTD35AA	CDO00053	1.5 µF	BNE7		160943_	157008_	162531_
HTD40AA	CDO00054	2 µF	BNE6		160943_	157008_	162531_
HTD45AA	CDO00055	2 µF	BNE4		160943_	157008_	162531_
HTD55AA	CDO00056	2 µF	BNE4		160943_	157008_	162531_
HTD60AA	CDO00073	2 µF	BNE4		160943_	157008_	162531_
HTD30AG	CDO00118	2 µF	BNE6		160943_	157008_	162531_
HXD30AA	CDO00097	1 µF *	BNE7		160943_	157008_	162531_
HXD35AA	CDO00098	1.5 µF *	BNE7		160943_	157008_	162531_
HXD40AA	CDO00099	2 µF *	BNE6		160943_	157008_	162531_
HXD45AA	CDO00100	2 µF *	BNE6		160943_	157008_	162531_
HXD55AA	CDO00101	2 µF *	BNE6		160943_	157008_	162531_
HXD60AA	CDO00102	2 µF *	BNE4		160943_	157008_	162531_
HXD30MA	CDO00081	2 µF		BXE6	160943_	157008_	162531_
HXD35MA	CDO00082	2 µF		BXE6	160943_	157008_	162531_
HXD40MA	CDO00083	2 µF		BXE4	160943_	157008_	162531_
HXD45MA	CDO00084	2 µF		BXE4	160943_	157008_	162531_
HXD55MA	CDO00080	2 µF		BXE4	160943_	157008_	162531_
HZD30AA	CDO00088	1 µF *		BXE7	160943_	157008_	162531_
HZD35AA	CDO00089	1.5 µF *		BXE7	160943_	157008_	162531_
HZD40AA	CDO00090	2 µF *		BXE6	160943_	157008_	162531_
HZD45AA	CDO00091	2 µF *		BXE6	160943_	157008_	162531_
HZD55AA	CDO00092	2 µF *		BXE6	160943_	157008_	162531_
HZD60AA	CDO00093	2 µF *		BXE4	160943_	157008_	162531_

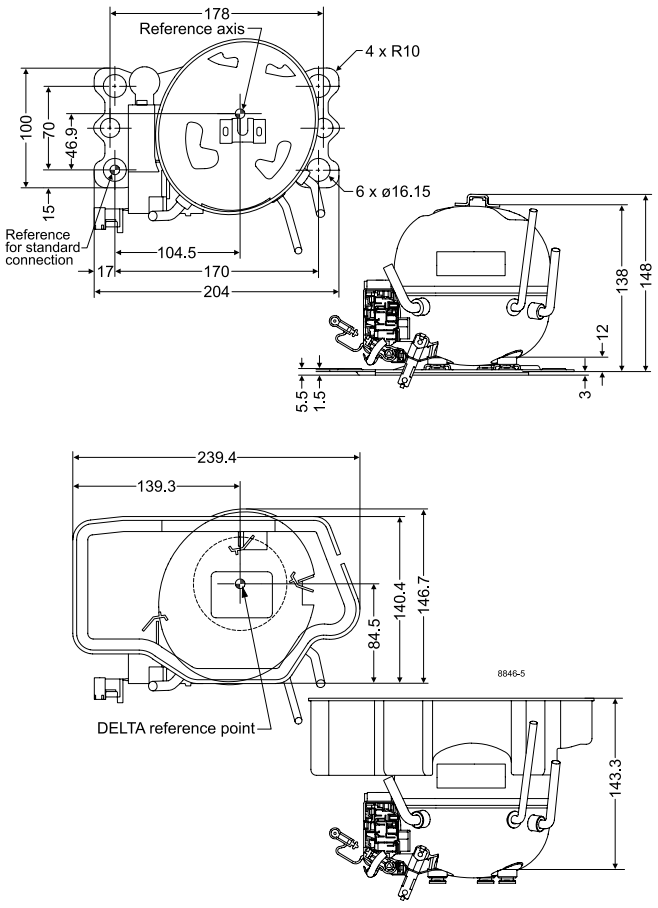
Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions						Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location / diameter [mm]			alt. connectors available	
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Discharge		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C (I.D.)	D (O.D.)	E (I.D.)		
46	1.53	101	2.16			1 *	1/12	3.00	187-264 V, 50 Hz	S	133		6.2	6.0	5.0		1 | 2 | 5
56	1.55	118	2.17			1.5 *	1/12	3.50	187-264 V, 50 Hz	S	133		6.2	6.0	5.0		1 | 2 | 5
68	1.58	139	2.22			2 *	1/12	4.00	187-264 V, 50 Hz	S	133		6.2	6.0	5.0		1 | 2 | 5
83	1.60	164	2.10			2 *	1/12	4.80	187-264 V, 50 Hz	S	133		6.2	6.0	5.2		1 | 2 | 5
102	1.63	195	2.16			2 *	1/10	5.50	187-264 V, 50 Hz	S	133		6.2	6.0	5.2		1 | 2 | 5
117	1.63	227	2.12			2 *	1/10	6.20	187-264 V, 50 Hz	S	133		6.2	6.0	5.2		1 | 2 | 5
45	1.44	95	2.12			2 *	1/12	3.00	187-264 V, 50 Hz *	S	133		6.2	6.0	5.0		1 | 2 | 5
46	1.62	101	2.27			1	1/12	3.00	187-264 V, 50 Hz	S	133		6.2	6.0	5.0		1 | 2 | 5
56	1.70	117	2.36			1.5	1/12	3.50	187-264 V, 50 Hz	S	133		6.2	6.0	5.0		1 | 2 | 5
67	1.69	139	2.33			2	1/12	4.00	187-264 V, 50 Hz	S	133		6.2	6.0	5.0		1 | 2 | 5
81	1.71	163	2.30			2	1/12	4.80	187-264 V, 50 Hz	S	133		6.2	6.0	5.0		1 | 2 | 5
96	1.75	185	2.23			2	1/12	5.50	187-264 V, 50 Hz	S	133		6.2	6.0	5.0		1 | 2 | 5
108	1.70	209	2.20			2	1/10	6.20	187-264 V, 50 Hz	S	133		6.2	6.0	5.0		1 | 2 | 5 | 6
46	1.43	99	2.15	176	3.08	2 *	1/12	3.00	187-254 V, 50 Hz	S	133		6.2	6.0	5.0		1 | 2 | 5 | 6
54	1.46	117	2.17	206	3.09	2 *	1/12	3.50	187-254 V, 50 Hz	S	133		6.2	6.0	5.0		1 | 2 | 5 | 6
67	1.53	139	2.18	233	2.90	2 *	1/12	4.00	187-254 V, 50 Hz	S	133		6.2	6.0	5.0		1 | 2 | 5 | 6
82	1.54	162	2.13	279	2.91	2 *	1/12	4.80	187-254 V, 50 Hz	S	133		6.2	6.0	5.0		1 | 2 | 5 | 6
97	1.47	192	2.04	329	2.75	2 *	1/10	5.50	187-254 V, 50 Hz	S	133		6.2	6.0	5.0		1 | 2 | 5 | 6
45	1.69	94	2.31			1	1/12	3.00	187-264 V, 50 Hz	S	133		6.2	6.0	5.0		1 | 2 | 5
55	1.75	113	2.37			1.5	1/12	3.50	187-264 V, 50 Hz	S	133		6.2	6.0	5.0		1 | 2 | 5
67	1.80	138	2.45			2	1/12	4.00	187-264 V, 50 Hz	S	133		6.2	6.0	5.0		1 | 2 | 5
81	1.79	162	2.39			2	1/12	4.80	187-264 V, 50 Hz	S	133		6.2	6.0	5.0		1 | 2 | 5
98	1.85	190	2.36			2	1/10	5.50	187-264 V, 50 Hz	S	133		6.2	6.0	5.0		1 | 2 | 5
108	1.70	209	2.20			2	1/10	6.20	187-264 V, 50 Hz	S	133		6.2	6.0	5.0		1 | 2 | 5

DELTA



DELTA • Evaporation tray • Adapter plate



WITH MORE THAN 60 YEARS OF EXPERIENCE IN COMPRESSOR TECHNOLOGY AND HIGHLY DEDICATED EMPLOYEES, OUR FOCUS IS ON DEVELOPING AND APPLYING ADVANCED COMPRESSOR TECHNOLOGIES TO ACHIEVE STANDARD SETTING PERFORMANCE FOR LEADING PRODUCTS AND BUSINESSES AROUND THE WORLD.

R404A/R507

220-240 V | 50 Hz

Chemical formula
R404A: CHF_2CF_3 / CH_3CF_3 / CH_2FCF_3
R507: CHF_2CF_3 / CH_3CF_3

Typelabel
Typelabel stripe colour: Lilac
Typelabel colour: Yellow

Applications
LBP: Low Back Pressure
MBP: Medium Back Pressure
HBP: High Back Pressure

Motor types
RSIR: Resistant Start Induction Run
RSCR: Resistant Start Capacitor Run
CSIR: Capacitor Start Induction Run
CSR: Capacitor Start Run

Compressor cooling
S = Static cooling normally sufficient
O = Oil cooling
F_1 = Fan cooling 1.5 m/s (compressor compartment temp. equal to ambient temperature)
F_2 = Fan cooling 3.0 m/s necessary

Starting devices
LST: Low Starting Torque
LST is used with capillary tube control and pressure equalizing. (Pressure equalizing may exceed 10 minutes). The PTC starting device requires 5 minutes cooling before each start.
To fulfil the requirements of EN 60355-2-34 the protection screen 103N0476 must be applied to the PTC starting device.
HST: High Starting Torque
HST consisting of relay and starting capacitor is used for expansion valve control or for capillary tube control without pressure equalizing.
ePTC: Electronically controlled PTC
- Compressor restart possible after a few seconds
- Operational wattage loss reduced by 2 watt
- PTC protection screen not needed (surface temp. < 82 °C)
- Temperature resistant up to min. +60 °C
- Additonal information, code numbers: refer to page 18

Test conditons
Electrical equipment being used is listed in our data sheets

1 Watt = 0.86 kcal/h
1 Watt = 3.41 Btu/h

R404A/R507 • 220-240 V • 50 Hz • T-Series

Compressor	Code number	Application	EN 12900 Capacity [W] Tc=45°C, Tliq=45°C, Tsuc=32°C Evaporating temperature [°C]						EN 12900						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -35°C / 40°C		MBP rating point -10°C / 45°C		HBP rating point 5°C / 50°C							
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
TL4CL	102U2071	LBP	84	230	352				87	0.80	248	1.19			75	240	391			
TL4.5CLX	102U2111	LBP	106	294					107	0.74	318	1.19			102	302				
TL4DL	102U2038	M/HBP		229	349	432	631				243	1.14	395	1.38		227	363	455	672	

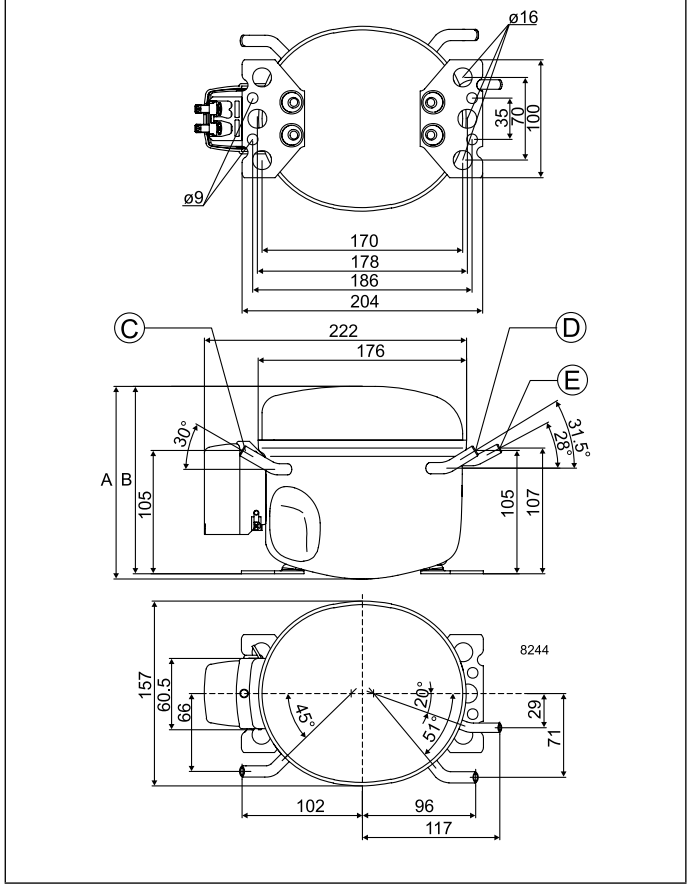
R404A/R507 • 220-240 V • 50 Hz • T-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
TL4CL	102U2071								117U6000	117U5014			103N1010	103N2010
TL4.5CLX	102U2111								117U6001	117U5014				117U1027
TL4DL	102U2038								117U6001	117U5014			103N1010	103N2010

Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]					
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler	alt. connectors available	
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F		
152	1.03	317	1.44				1/7	3.86	198-254 V, 50 Hz	F2	173	169	6.2	6.2	5.0			4
198	1.05						1/6	4.63	198-254 V, 50 Hz	F2	173	169	6.2	6.2	5.0			4 | 6
		293	1.30	531	1.88		1/6	3.86	198-254 V, 50 Hz	F2	173	169	6.2	6.2	5.0			10 | 11

TL



R404A/R507 • 220-240 V • 50 Hz • N-Series

Compressor	Code number	Application	EN 12900 Capacity [W] Tc=45°C, Tliq=45°C, Tsuc=32°C Evaporating temperature [°C]						EN 12900						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -35°C / 40°C		MBP rating point -10°C / 45°C		HBP rating point 5°C / 50°C							
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
NL6.1MLX	105F3610	MBP		425	650	789					499	1.60	793	2.01		455	711	869		
NL6.1MLX	105F3611	MBP		425	650	789					499	1.60	793	2.01		455	711	869		
NL7CLX	105F3710	LBP	199	536	796				210	1.01	619	1.62			200	576	876			
NL7CLX	105F3712	LBP	199	536	796				210	1.01	619	1.62			200	576	876			
NL7CLX	105F3713	LBP	199	536	796				210	1.01	619	1.62			200	576	876			
NF7MLX	105F3720	MBP		511	777	940	1336				598	1.47	945	1.84		547	851	1039	1503	
NF7MLX	105F3721	MBP		511	777	940	1336				598	1.47	945	1.84		547	851	1039	1503	
NL8.4CLX	105F3800	LBP	216	583	866				229	0.98	673	1.57			218	627	953			
NL8.4CLX	105F3804	LBP	216	583	866				229	0.98	673	1.57			218	627	953			
NL9CLX	105F3802	LBP	230	621					244	1.02	715	1.65			236	674				

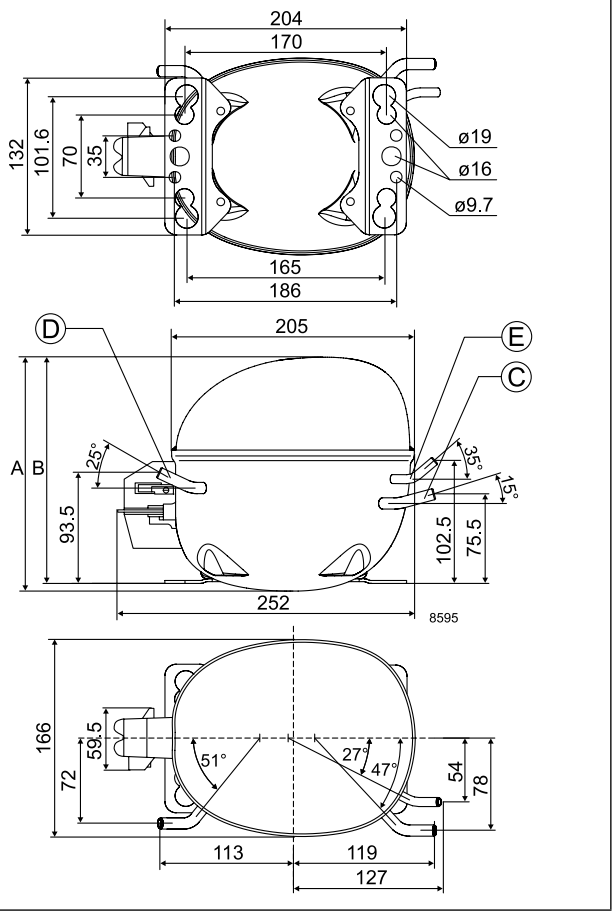
R404A/R507 • 220-240 V • 50 Hz • N-Series • Electrical Equipment

Compressor * pre-assembled start equipment	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
NL6.1MLX	105F3610								117U6022	117U5015			103N1010	103N2011
NL6.1MLX	105F3611								117U6022	117U5015			103N1010	103N2011
NL7CLX	105F3710								117U6002	117U5015			103N1010	103N2010
NL7CLX	105F3712								117U6002	117U5015			103N1010	103N2010
NL7CLX	105F3713	103N0011	103N0018						117U6002	117U5015			103N1010	103N2010
NF7MLX	105F3720								117U4139	117U5018			117U0349	117U1021
NF7MLX	105F3721								117U4139	117U5018			117U0349	117U1021
NL8.4CLX	105F3800	103N0011	103N0018						117U6003	117U5015			103N1010	103N2010
NL8.4CLX *	105F3804								117U6003	117U5015			103N1010	103N2010
NL9CLX	105F3802								117U6003	117U5015			103N1010	103N2010

Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]					
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler	alt. connectors available	
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F		
291	1.14	569	1.61	975	2.31		3/10	6.13	187-254 V, 50 Hz	F2	203	197	9.7	6.5	6.5		X	10 | 11
291	1.14	569	1.61	975	2.31		3/10	6.13	187-254 V, 50 Hz *	F2	203	197	8.2	6.5	6.5		X	10 | 11
388	1.31	704	1.60				1/3	7.27	198-254 V, 50 Hz	F2	203	197	8.2	6.2	6.2		X	4 | 6
388	1.31	704	1.60				1/3	7.27	198-254 V, 50 Hz	F2	203	197	8.2	6.5	6.5		X	4 | 6
388	1.31	704	1.60				1/3	7.27	198-254 V, 50 Hz	F2	203	197	8.2	6.2	6.2		X	4 | 6
		682	1.49	1164	2.12		1/3	7.27	187-254 V, 50 Hz *	F2	203	197	9.7	6.5	6.5		X	10 | 11
		682	1.49	1164	2.12		1/3	7.27	187-254 V, 50 Hz *	F2	203	197	9.7	6.5	6.5		X	10 | 11
422	1.28	765	1.54				3/8	8.35	198-254 V, 50 Hz	F2	203	197	8.2	6.2	6.2		X	4 | 6
422	1.28	765	1.54				3/8	8.35	198-254 V, 50 Hz	F2	203	197	8.2	6.2	6.2		X	4 | 6
457	1.34						2/5	8.35	198-254 V, 50 Hz	F2	203	197	8.2	6.2	6.2			4 | 6

NF



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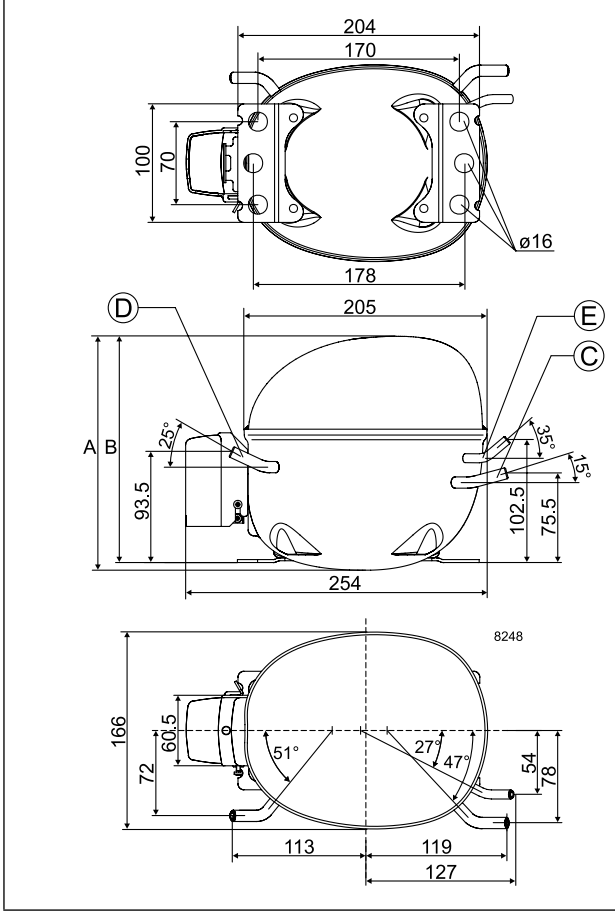

R404A/R507 • 220-240 V • 50 Hz • F-Series

Compressor	Code number	Application	EN 12900 Capacity [W] Tc=45°C, Tliq=45°C, Tsuc=32°C Evaporating temperature [°C]						EN 12900						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -35°C / 40°C		MBP rating point -10°C / 45°C		HBP rating point 5°C / 50°C							
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
FR6CL	103U2670	LBP	145	383	578				143	0.75	410	1.10			149	394	606			
FR7.5CL	103U2790	LBP	154	417	627				155	0.76	447	1.07			158	433	658			
FR8.5CL	103U2890	LBP	168	468					173	0.74	501	1.01			171	492				
FR6DL	103U2680	M/HBP		385	576	698	999				409	1.10	626	1.22		404	600	731	1059	

R404A/R507 • 220-240 V • 50 Hz • F-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
FR6CL	103U2670								117U6015	117U5015			103N1010	103N2010
FR7.5CL	103U2790								117U6016	117U5015			103N1010	103N2010
FR8.5CL	103U2890								117U6010	117U5015			103N1010	103N2010
FR6DL	103U2680								117U6010	117U5015			103N1010	103N2010

Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]				alt. connectors available	
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F		
268	1.04	494	1.23				1/4	6.23	198-254 V, 50 Hz	F2	196	191	8.2	6.2	6.2		X	4
294	1.03	538	1.19				1/4	6.93	198-254 V, 50 Hz	F2	196	191	8.2	6.2	6.2			4
333	0.98						1/3	7.95	198-254 V, 50 Hz	F2	196	191	8.2	6.2	6.2		X	4
		491	1.24	838	1.63		1/4	6.23	198-254 V, 50 Hz	F2	196	191	8.2	6.2	6.2			10 | 11

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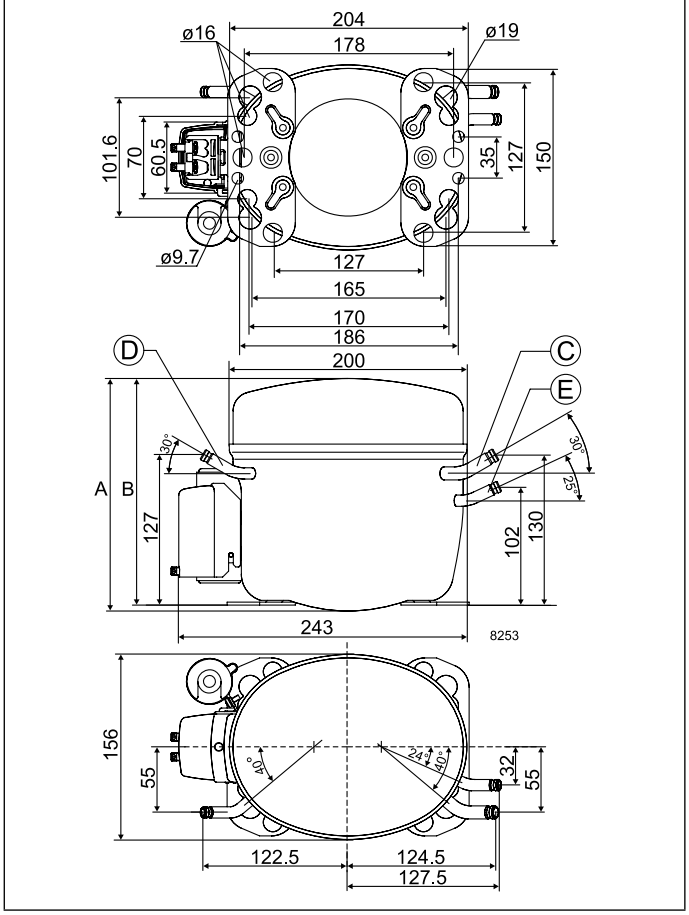


R404A/R507 • 220-240 V • 50 Hz • S-Series

Compressor	Code number	Application	EN 12900 Capacity [W] Tc=45°C, Tliq=45°C, Tsuc=32°C Evaporating temperature [°C]						EN 12900						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -35°C / 40°C		MBP rating point -10°C / 45°C		HBP rating point 5°C / 50°C							
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
SC10CL	104L2523	LBP	168	634	991				197	0.79	754	1.42			132	664	1079			
SC12CL	104L2623	LBP	237	835	1292				282	0.87	987	1.51			165	857	1397			
SC15CL	104L2853	LBP	299	988	1458				354	0.86	1139	1.44			180	1101	1678			
SC15CL	104L2875	LBP	299	988	1458				354	0.86	1139	1.44			180	1101	1678			
SC15CL	104L2876	LBP	299	988	1458				354	0.86	1139	1.44			180	1101	1678			
SC15CL	104L2883	LBP	284	938	1383				336	0.87	1081	1.46			171	1045	1592			
SC18CL	104L2123	LBP	395	1154	1735				436	0.97	1343	1.50			374	1220	1882			
SC18CL	104L2132	LBP	395	1154	1735				436	0.97	1343	1.50			374	1220	1882			
SC21CL	104L2322	LBP	455	1306					509	0.98	1513	1.53			442	1386				
SC21CL	104L2329	LBP	455	1306					509	0.98	1513	1.53			442	1386				
SC10DL	104L2525	M/HBP		611	968	1192	1747	2085			730	1.53	1208	1.92		644	1051	1300	1916	2295
SC10DL	104L2535	M/HBP		611	968	1192	1747	2085			730	1.53	1208	1.92		644	1051	1300	1916	2295
SC12DL	104L2625	M/HBP		806	1279	1565	2258	2674			968	1.55	1583	1.99		865	1407	1728	2508	2984
SC12DL	104L2627	M/HBP		806	1279	1565	2258	2674			968	1.55	1583	1.99		865	1407	1728	2508	2984
SC15DL	104L2856	M/HBP		964	1493	1825	2652	3156			1137	1.58	1848	2.00		1034	1641	2012	2928	3492
SC15DL	104L2866	M/HBP		964	1493	1825	2652	3156			1137	1.58	1848	2.00		1034	1641	2012	2928	3492
SC10/10CL	104L4087	LBP	336	1268	1981				393	0.79	1508	1.42			264	1327	2157			
SC12/12CL	104L4088	LBP	475	1670	2583				565	0.87	1975	1.51			330	1715	2794			
SC15/15CL	104L4089	LBP	599	1976	2916				708	0.86	2277	1.44			360	2202	3356			
SC15/15CL	104L4098	LBP	599	1976	2916				708	0.86	2277	1.44			360	2202	3356			
SC18/18CL	104L4090	LBP	789	2307	3469				872	0.97	2685	1.50			748	2440	3762			
SC21/21CL	104L4094	LBP	910	2613					1018	0.98	3027	1.53			884	2773				
SC10/10DL	104L4091	M/HBP		1222	1935	2383	3494	4169			1461	1.53	2416	1.92		1288	2103	2601	3832	4590
SC12/12DL	104L4092	M/HBP		1612	2559	3130	4516	5348			1937	1.55	3167	1.99		1730	2814	3456	5016	5967
SC15/15DL	104L4093	M/HBP		1928	2985	3651	5304	6311			2275	1.57	3695	2.00		2068	3282	4024	5856	6983

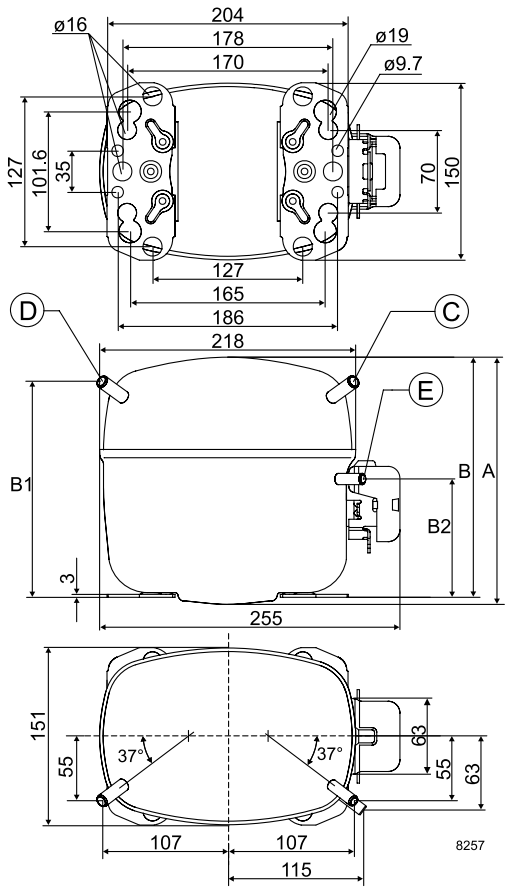
R404A/R507 • 220-240 V • 50 Hz • S-Series • Electrical Equipment

Compressor * pre-assembled start equipment	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
SC10CL	104L2523								117U6003	117U5017			103N1004	103N2009
SC12CL	104L2623								117U6005	117U5017			103N1004	103N2009
SC15CL	104L2853								117U6019	117U5017			103N1004	103N2009
SC15CL	104L2875								117U6019	117U5017			103N1004	103N2009
SC15CL *	104L2876								117U6019	117U5017			103N1004	103N2009
SC15CL	104L2883								117U6019	117U5017			103N1004	103N2009
SC18CL	104L2123									117U5373	117-7027		103N1004	103N2009
SC18CL	104L2132									117U5373	117-7027		103N1004	103N2009
SC21CL	104L2322									117U5373	117-7027		103N1004	103N2009
SC21CL	104L2329									117U5373	117-7027		103N1004	103N2009
SC10DL	104L2525								117U6005	117U5017			103N1004	103N2009
SC10DL	104L2535								117U6005	117U5017			103N1004	103N2009
SC12DL	104L2625								117U6019	117U5017			103N1004	103N2009
SC12DL	104L2627								117U6019	117U5017			103N1004	103N2009
SC15DL	104L2856									117U5373	117-7029		103N1004	103N2009
SC15DL	104L2866									117U5373	117-7029		103N1004	103N2009
SC10/10CL	104L4087								117U6003	117U5017			103N1004	103N2009
SC12/12CL	104L4088								117U6005	117U5017			103N1004	103N2009
SC15/15CL	104L4089								117U6019	117U5017			103N1004	103N2009
SC15/15CL	104L4098								117U6019	117U5017			103N1004	103N2009
SC18/18CL	104L4090										117-7027		103N1004	103N2009
SC21/21CL	104L4094									117U5373	117-7027		103N1004	103N2009
SC10/10DL	104L4091								117U6005	117U5017			103N1004	103N2009
SC12/12DL	104L4092								117U6019	117U5017			103N1004	103N2009
SC15/15DL	104L4093									117U5373	117-7029		103N1004	103N2009

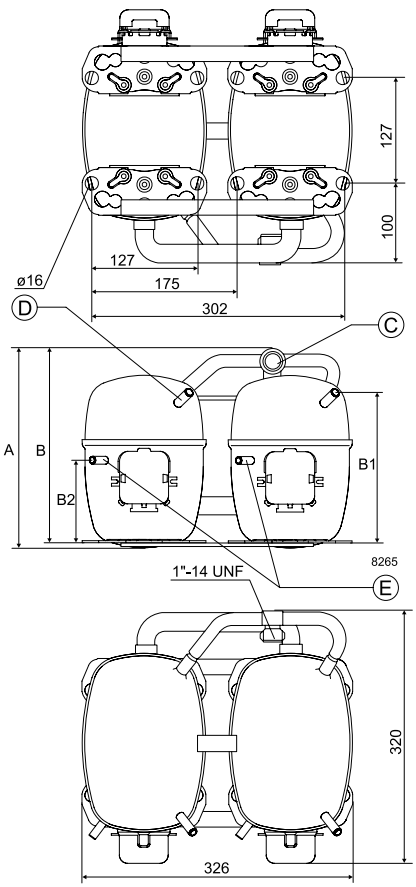
Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]					
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler	alt. connectors available	
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F		
402	1.13	859	1.45				3/8	10.29	198-254 V, 50 Hz	F2	209	203	8.2	6.2	6.2		X	4 | 6
516	1.10	1112	1.50				1/2	12.87	198-254 V, 50 Hz	F2	209	203	8.2	6.2	6.2		X	4 | 6
697	1.20	1349	1.50				3/5	15.28	198-254 V, 50 Hz	F2	219	213	10.2	6.2	6.2		X	4
697	1.20	1349	1.50			*	3/5	15.28	198-254 V, 50 Hz	F2	219	213	9.6	6.5	6.5		X	4
697	1.20	1349	1.50				3/5	15.28	198-254 V, 50 Hz	F2	219	213	9.6	6.5	6.5		X	4
662	1.21	1281	1.52			*	3/5	15.28	198-254 V, 50 Hz	F2	219	213	10.2	6.2	6.2		X	4
803	1.22	1508	1.50			10	3/4	17.69	198-254 V, 50 Hz	F2	219	213	10.2	6.2	6.2		X	4
803	1.22	1508	1.50			10 *	3/4	17.69	198-254 V, 50 Hz	F2	219	213	9.6	6.5	6.5		X	4
905	1.18					10	5/6	20.95	198-254 V, 50 Hz	F2	219	213	10.2	6.2	6.2		X	4
905	1.18					10	5/6	20.95	198-254 V, 50 Hz	F2	219	213	9.6	6.5	6.5		X	4
		837	1.51	1478	2.15		1/2	10.29	198-254 V, 50 Hz	F2	209	203	8.2	6.2	6.2		X	10 | 11
		837	1.51	1478	2.15		1/2	10.29	198-254 V, 50 Hz	F2	209	203	8.2	6.2	6.2		X	10 | 11
		1122	1.57	1942	2.26		3/5	12.87	198-254 V, 50 Hz	F2	219	213	10.2	6.2	6.2		X	10 | 11
		1122	1.57	1942	2.26		3/5	12.87	198-254 V, 50 Hz	F2	219	213	10.2	6.2	6.2		X	10 | 11
		1311	1.56	2265	2.25	10	3/4	15.28	198-254 V, 50 Hz	F2	219	213	10.2	6.2	6.2		X	10 | 11
		1311	1.56	2265	2.25	10	3/4	15.28	198-254 V, 50 Hz	F2	219	213	10.2	6.2	6.2		X	10 | 11
803	1.13	1717	1.45				3/4	20.58	198-254 V, 50 Hz	F2	249	244	12.0	6.2	6.2			4
1032	1.10	2224	1.50				1	25.74	198-254 V, 50 Hz	F2	249	244	12.0	6.2	6.2			4
1395	1.20	2699	1.50				1 1/4	30.56	198-254 V, 50 Hz	F2	259	254	12.0	6.2	6.2		X	4
1395	1.20	2699	1.50				1 1/4	30.56	198-254 V, 50 Hz	F2	259	254	12.0	6.2	6.2		X	4
1606	1.22	3016	1.50			10	1 1/2	35.38	198-254 V, 50 Hz	F2	259	254	16.0	6.2	6.2			4
1810	1.18					10	1 3/4	41.90	198-254 V, 50 Hz	F2	259	254	16.0	6.2	6.2			4
		1674	1.51	2955	2.15		1	20.58	198-254 V, 50 Hz	F2	249	244	12.0	6.2	6.2			10 | 11
		2244	1.57	3885	2.26		1 1/4	25.74	198-254 V, 50 Hz	F2	259	254	12.0	6.2	6.2			10 | 11
		2622	1.56	4529	2.25	10	1 1/2	30.56	198-254 V, 50 Hz	F2	259	254	16.0	6.2	6.2			10 | 11

SC



SC-Twin



R404A/R507 • 220-240 V • 50 Hz • S-Series

Compressor	Code number	Application	EN 12900 Capacity [W] Tc=45°C, Tliq=45°C, Tsuc=32°C Evaporating temperature [°C]						EN 12900						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -35°C / 40°C		MBP rating point -10°C / 45°C		HBP rating point 5°C / 50°C							
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
SC10CLX	104L2533	L/MBP	166	625	977	1190			194	0.74	744	1.46	1204	1.79	130	655	1064	1316		
SC10CLX	104L2512	L/MBP	166	625	977	1190			194	0.74	744	1.46	1204	1.79	130	655	1064	1316		
SC10CLX	104L2536	L/MBP	166	625	977	1190			194	0.74	744	1.46	1204	1.79	130	655	1064	1316		
SC12CLX.2	104L2663	LBP	294	834					322	0.89	967	1.47			278	899				
SC12CLX.2	104L2664	LBP	294	834					322	0.89	967	1.47			278	899				
SC12CLX.2	104L2673	LBP	294	834					322	0.89	967	1.47			278	899				
SC12CLX.2	104L2697	LBP	294	834					322	0.89	967	1.47			278	899				
SC15CLX.2	104L2893	LBP	358	1017					392	0.91	1179	1.51			339	1097				
SC15CLX.2	104L2896	LBP	358	1017					392	0.91	1179	1.51			339	1097				
SC18CLX.2	104L2173	LBP	439	1245					480	0.93	1443	1.52			415	1343				
SC18CLX.2	104L2191	LBP	398	1175					438	0.89	1360	1.47			382	1281				
SC18CLX.2	104L2197	LBP	439	1245					480	0.93	1443	1.52			415	1343				
SC10MLX	104L2506	MBP		687	1051	1278					806	1.55	1276	1.92		722	1127	1380		
SC12MLX	104L2606	MBP		838	1272	1542					978	1.58	1539	1.92		886	1369	1670		
SC15MLX	104L2869	MBP		1038	1574	1909					1211	1.55	1924	1.89		1117	1718	2102		
SC18MLX	104L2139	MBP		1210	1832	2220					1410	1.64	2238	1.99		1306	2001	2446		
SC18MLX.3	104L2146	MBP		1266	1898	2292					1468	1.67	2316	2.00		1384	2097	2552		
SC18/18CLX.2	104L4035	LBP	871	2475					954	0.93	2871	1.52			823	2670				

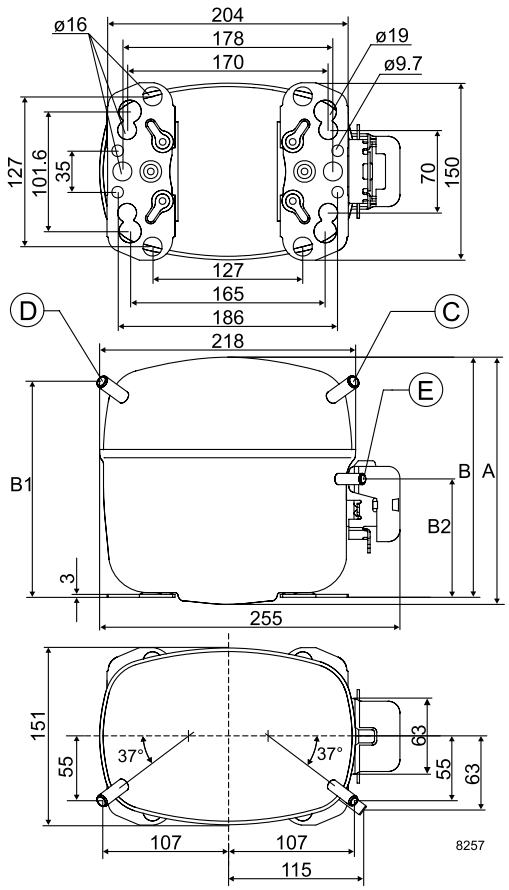
R404A/R507 • 220-240 V • 50 Hz • S-Series • Electrical Equipment

Compressor * pre-assembled start equipment	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
SC10CLX	104L2533								117U6005	117U5017			103N1004	103N2008
SC10CLX	104L2512								117U6005	117U5017			103N1004	103N2008
SC10CLX	104L2536								117U6005	117U5017			103N1004	103N2008
SC12CLX.2 *	104L2663								117U6019	117U5017			103N1004	103N2008
SC12CLX.2	104L2664								117U6019	117U5017			103N1004	103N2008
SC12CLX.2	104L2673								117U6019	117U5017			103N1004	103N2008
SC12CLX.2	104L2697								117U6019	117U5017			103N1004	103N2008
SC15CLX.2	104L2893								117U6019	117U5017			103N1004	103N2009
SC15CLX.2	104L2896								117U6019	117U5017			103N1004	103N2009
SC18CLX.2 *	104L2173								117U6013	117U5012			103N1004	103N2009
SC18CLX.2	104L2191								117U6013	117U5012			103N1004	103N2009
SC18CLX.2	104L2197								117U6013	117U5012			103N1004	103N2009
SC10MLX	104L2506								117U6011	117U5017			103N1004	103N2008
SC12MLX	104L2606								117U6011	117U5017			103N1004	103N2008
SC15MLX	104L2869								117U6013	117U5012			103N1004	103N2009
SC18MLX	104L2139									117U5373	117-7027		103N1004	103N2009
SC18MLX.3	104L2146										117-7027		103N1004	103N2009
SC18/18CLX.2	104L4035								117U6013	117U5012			103N1004	103N2009

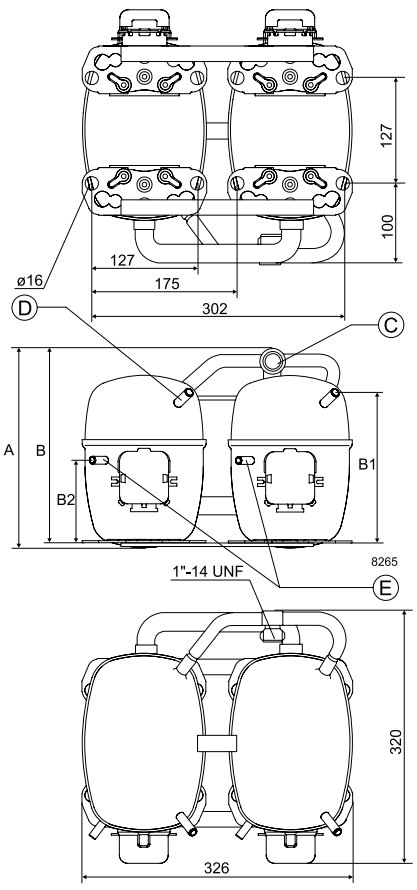
Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]				alt. connectors available	
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F		
396	1.11	847	1.51				3/8	10.29	198-254 V, 50 Hz *	F2	209	203	8.2	6.2	6.2		X	4 | 6
396	1.11	847	1.51				3/8	10.29	198-254 V, 50 Hz *	F2	209	203	9.6	6.5	6.5		X	4 | 6
396	1.11	847	1.51				3/8	10.29	198-254 V, 50 Hz *	F2	209	203	9.6	6.5	6.5		X	4 | 6
593	1.15						3/5	12.87	198-254 V, 50 Hz *	F2	219	213	8.2	6.5	6.5		X	4 | 6
593	1.15					*	3/5	12.87	198-254 V, 50 Hz *	F2	219	213	8.2	6.2	6.2		X	4 | 6
593	1.15					*	3/5	12.87	198-254 V, 50 Hz *	F2	219	213	9.6	6.5	6.5		X	4 | 6
593	1.15						3/5	12.87	198-254 V, 50 Hz *	F2	219	213	8.2	6.2	6.2		X	4 | 6
724	1.18					*	3/4	15.28	198-254 V, 50 Hz	F2	219	213	9.6	6.5	6.5		X	4 | 6
724	1.18						3/4	15.28	198-254 V, 50 Hz	F2	219	213	10.2	6.2	6.2		X	4 | 6
886	1.20						5/6	17.69	198-254 V, 50 Hz	F2	219	213	9.6	6.5	6.5		X	4 | 6
857	1.24						3/4	17.69	198-254 V, 50 Hz	F2	219	213	10.2	6.2	6.2		X	4 | 6
886	1.20						5/6	17.69	198-254 V, 50 Hz	F2	219	213	10.2	6.2	6.2		X	4 | 6
		902	1.54	1553	2.18		1/2	10.29	187-254 V, 50 Hz *	F2	209	203	8.2	6.5	6.5			10 | 11
584	1.15	1096	1.56	1873	2.18		3/5	12.87	187-254 V, 50 Hz *	F2	219	213	8.2	6.5	6.5			10 | 11
762	1.20	1375	1.56	2371	2.16		3/4	15.28	198-254 V, 50 Hz	F2	219	213	10.2	6.2	6.2			10 | 11
894	1.27	1603	1.64	2757	2.27	10	5/6	17.69	198-254 V, 50 Hz	F2	219	213	10.2	6.2	6.2			10 | 11
959	1.34	1683	1.67	2862	2.28	10	5/6	17.68	198-254 V, 50 Hz	F2	219	213	10.2	6.2	6.2			10 | 11
1761	1.20						1 3/4	35.36	198-254 V, 50 Hz	F2	259	254	12.0	6.2	6.2			4

SC



SC-Twin



R404A/R507 • 220-240 V • 50 Hz • G-Series

Compressor	Code number	Application	EN 12900 Capacity [W] Tc=45°C, Tliq=45°C, Tsuc=32°C Evaporating temperature [°C]						EN 12900						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -35°C / 40°C		MBP rating point -10°C / 45°C		HBP rating point 5°C / 50°C							
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
GS26CLX	107B0500	LBP	689	2036					703	1.05	2191	1.65			662	2186				
GS34CLX	107B0501	LBP	1007	2816	4238				1003	1.09	3014	1.69			1016	3116	4808			
GS21MLX	107B0502	MBP		1599	2508	3092					1748	1.81	2858	2.23		1711	2709	3358		
GS26MLX	107B0503	MBP		2078	3204	3911					2254	1.86	3615	2.24		2243	3519	4325		
GS34MLX	107B0504	MBP		2764	4143	4998					2953	1.71	4580	1.97		2998	4554	5527		

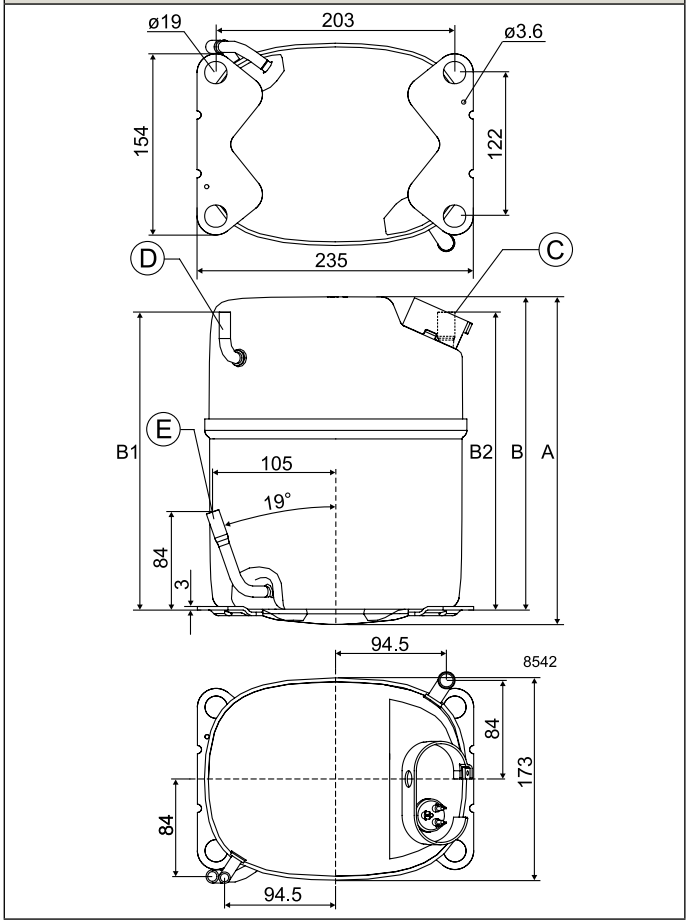
R404A/R507 • 220-240 V • 50 Hz • G-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm			
GS26CLX	107B0500										117-7056			107B9101
GS34CLX	107B0501										117-7074			107B9101
GS21MLX	107B0502										117-7070			107B9101
GS26MLX	107B0503										117-7072			107B9101
GS34MLX	107B0504										117-7056			107B9101

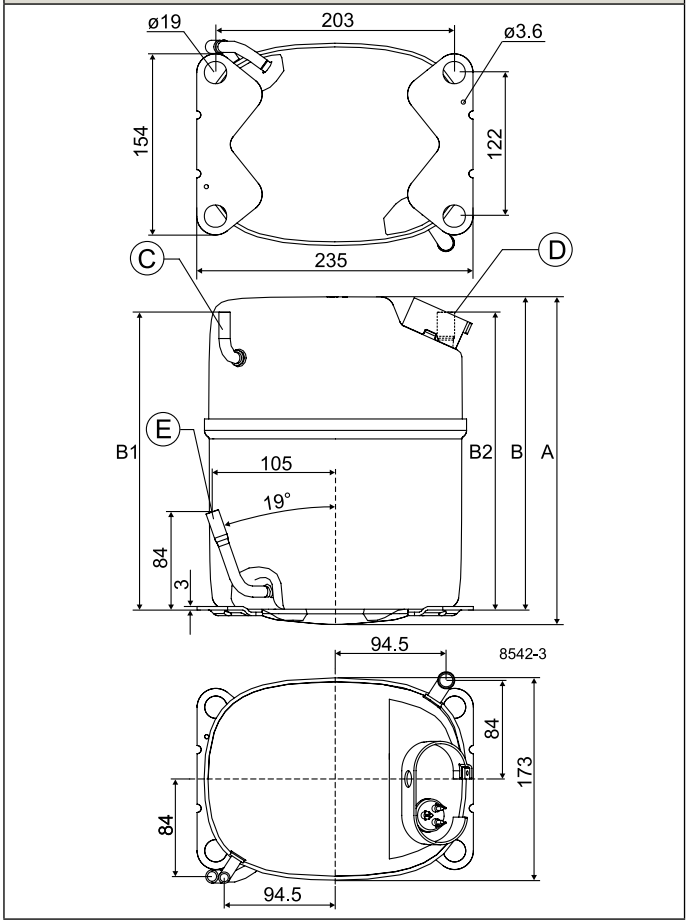
Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]				alt. connectors available	
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP						A	B	Suction C	Process D	Dis-charge E	Oil cooler F		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]										
1297	1.39					20	1 1/4	26.30	198-254 V, 50 Hz	F2	259	247	12.9	6.5	8.2			4
1880	1.49	3924	2.07			10	1 3/4	33.80	198-254 V, 50 Hz	F2	279	267	12.9	6.5	8.2		X	4
		2200	2.12	3954	3.09	20	1 1/4	21.20	198-254 V, 50 Hz	F2	259	247	16.1	6.5	9.7			10 | 11
		2866	2.20	5027	3.12	20	1 1/2	26.30	198-254 V, 50 Hz	F2	279	267	16.1	6.5	9.7			10 | 11
		3726	2.03	6330	2.74	20	1 3/4	33.80	198-254 V, 50 Hz	F2	279	267	16.1	6.5	9.7			10 | 11

GS



GS34CLX (interchanged connectors)



WITH MORE THAN 60 YEARS OF EXPERIENCE IN COMPRESSOR TECHNOLOGY AND HIGHLY DEDICATED EMPLOYEES, OUR FOCUS IS ON DEVELOPING AND APPLYING ADVANCED COMPRESSOR TECHNOLOGIES TO ACHIEVE STANDARD SETTING PERFORMANCE FOR LEADING PRODUCTS AND BUSINESSES AROUND THE WORLD.

R290

220-240 V | 50 Hz

Chemical formula
C_3H_8

Typelabel
Typelabel stripe colour: Red
Typelabel colour: Yellow

Applications
LBP: Low Back Pressure
MBP: Medium Back Pressure
HBP: High Back Pressure

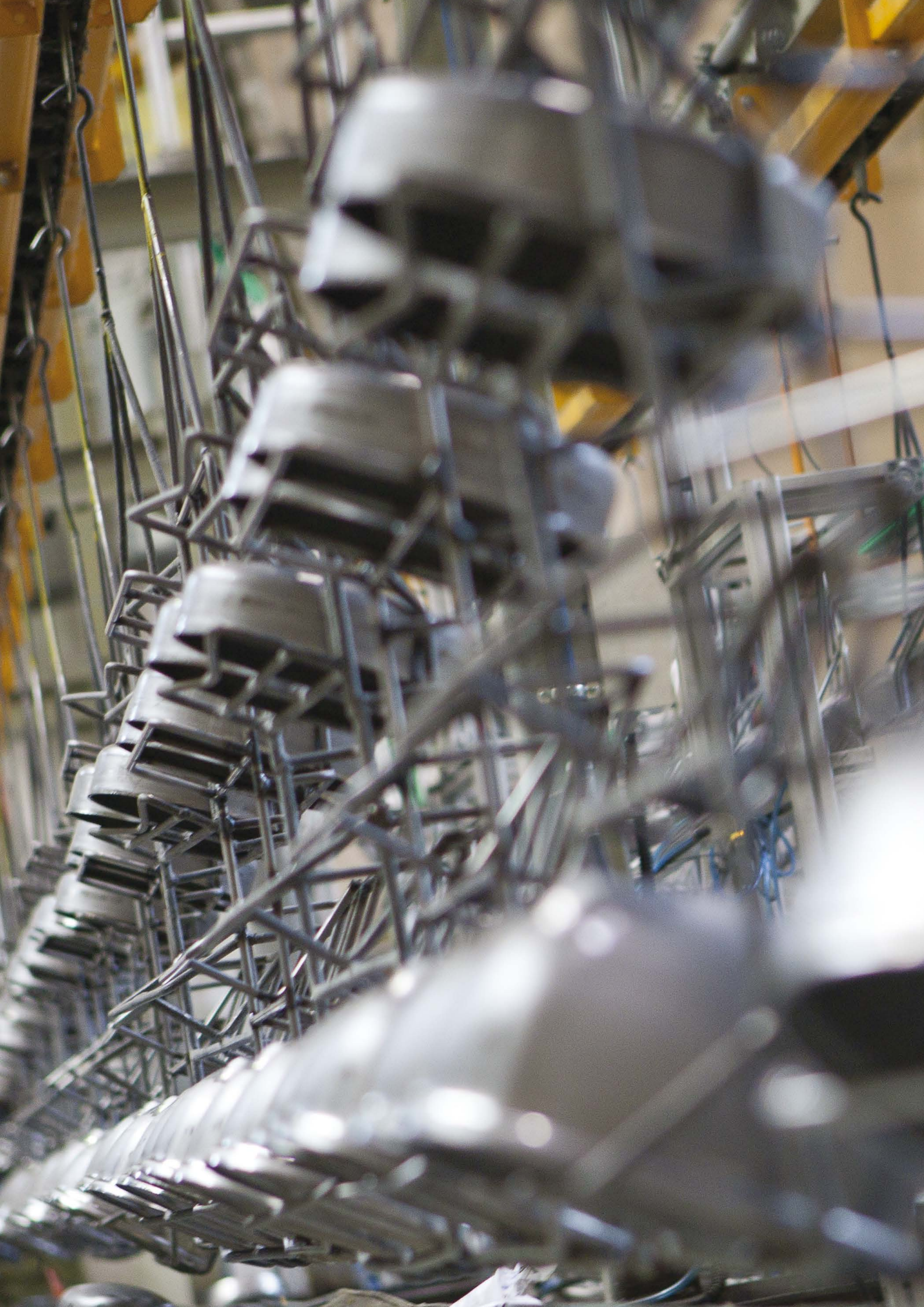
Motor types
RSIR: Resistant Start Induction Run
RSCR: Resistant Start Capacitor Run
CSIR: Capacitor Start Induction Run
CSR: Capacitor Start Run

Compressor cooling
S = Static cooling normally sufficient
O = Oil cooling
F_1 = Fan cooling 1.5 m/s (compressor compartment temp. equal to ambient temperature)
F_2 = Fan cooling 3.0 m/s necessary

Starting devices
LST: Low Starting Torque
LST is used with capillary tube control and pressure equalizing. (Pressure equalizing may exceed 10 minutes). The PTC starting device requires 5 minutes cooling before each start.
To fulfil the requirements of EN 60355-2-34 the protection screen 103N0476 must be applied to the PTC starting device.
HST: High Starting Torque
HST consisting of relay and starting capacitor is used for expansion valve control or for capillary tube control without pressure equalizing.
ePTC: Electronically controlled PTC
- Compressor restart possible after a few seconds
- Operational wattage loss reduced by 2 watt
- PTC protection screen not needed (surface temp. < 82 °C)
- Temperature resistant up to min. +60 °C
- Additonal information, code numbers: refer to page 18

Test conditons
Electrical equipment being used is listed in our data sheets

1 Watt = 0.86 kcal/h
1 Watt = 3.41 Btu/h



R290 • 220-240 V • 50 Hz • T-Series

Compressor	Code number	Application	EN 12900 Capacity [W] Tc=45°C, Tliq=45°C, Tsuc=32°C Evaporating temperature [°C]						EN 12900						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -35°C / 40°C		MBP rating point -10°C / 45°C		HBP rating point 5°C / 50°C							
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
TL3CN	102H4380	L/MBP	54	161	244	294			55	0.59	177	1.25	281	1.57	49	161	249	304		
TL4CN	102H4490	L/MBP	78	205	302	360			78	0.74	222	1.30	344	1.63	76	212	316	380		
TL5CN	102H4590	L/MBP	109	283	416	496			108	0.80	306	1.38	472	1.60	109	296	437	522		

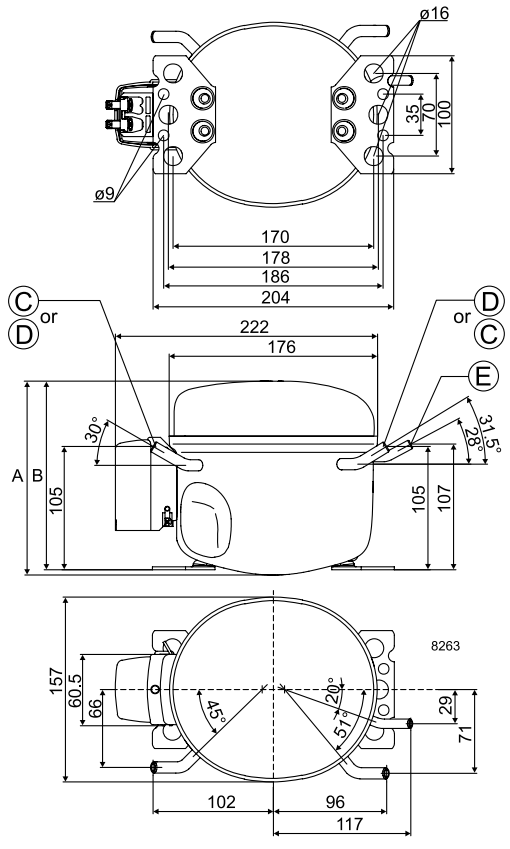
R290 • 220-240 V • 50 Hz • T-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
TL3CN	102H4380	103N0011	103N0018						117U7004	117U5014			103N1010	103N2010
TL4CN	102H4490	103N0011	103N0018						117U7004	117U5014			103N1010	103N2010
TL5CN	102H4590	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119	117U7000	117U5014			103N1010	103N2010

Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]				alt. connectors available	
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F		
105	0.91	212	1.42				1/10	3.13	198-254 V, 50 Hz	F1	163	159	6.2	6.2	5.0			3|4|6|10|11
146	1.07	270	1.51				1/8	3.86	198-254 V, 50 Hz	F1	173	169	6.2	6.2	5.0			3|4|6|10|11
205	1.18	374	1.58			*	1/5	5.08	198-254 V, 50 Hz	F1	173	169	6.2	6.2	5.0		X	3|4|6|10|11

TL



R290 • 220-240 V • 50 Hz • D-Series

Compressor	Code number	Application	EN 12900 Capacity [W] Tc=45°C, Tliq=45°C, Tsuc=32°C Evaporating temperature [°C]						EN 12900 LBP rating point -35°C / 40°C		EN 12900 MBP rating point -10°C / 45°C		EN 12900 HBP rating point 5°C / 50°C		ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
DLE4CN	102H4429	L/MBP	101	261	375	438			107	1.14	303	2.04	448	2.46	103	276	400	468		
DLE4CN	102H4465	L/MBP	101	261	375	438			107	1.14	303	2.04	448	2.46	103	276	400	468		
DLE4CN	102H4469	L/MBP	101	261	375	438			107	1.14	303	2.04	448	2.46	103	276	400	468		
DLE4.8CN	102H4564	L/MBP	107	311	456	547			114	0.99	363	2.00	588	2.60	128	339	494	595		
DLE4.8CN	102H4565	L/MBP	107	311	456	547			114	0.99	363	2.00	588	2.60	128	339	494	595		
DLE4.8CN	102H4585	L/MBP	107	311	456	547			114	0.99	363	2.00	588	2.60	128	339	494	595		
DLE5.7CN	102H4653	L/MBP	162	385	558	667			167	1.20	446	2.01	709	2.52	168	415	603	722		
DLE5.7CN	102H4657	L/MBP	162	385	558	667			167	1.20	446	2.01	709	2.52	168	415	603	722		
DLE5.7CN	102H4665	L/MBP	162	385	558	667			167	1.20	446	2.01	709	2.52	168	415	603	722		
DLE6.5CN	102H4760	L/MBP	165	414	608	731			172	1.17	483	1.99	774	2.46	168	446	652	782		
DLE6.5CN	102H4765	L/MBP	165	414	608	731			172	1.17	483	1.99	774	2.46	168	446	652	782		
DLE7.5CN	102H4808	L/MBP	202	490	718	858			209	1.17	572	1.99	904	2.41	209	519	765	918		
DLE7.5CN	102H4827	L/MBP	202	490	718	858			209	1.17	572	1.99	904	2.41	209	519	765	918		
DLE7.5CN	102H4853	L/MBP	202	490	718	858			209	1.17	572	1.99	904	2.41	209	519	765	918		
DLE7.5CN	102H4856	L/MBP	202	490	718	858			209	1.17	572	1.99	904	2.41	209	519	765	918		
DLE4CNT	102H4460	L/MBP	101	261	375	438			107	1.14	303	2.04	448	2.46	103	276	400	468		
DLE4.8CNT	102H4587	L/MBP	127	313	464	558			132	1.04	368	1.94	592	2.59	130	334	498	600		
DLE4.8CNT	102H4588	L/MBP	107	311	456	547			114	0.99	363	2.00	588	2.60	128	339	494	595		
DLE4.8CNT	102H3589	L/MBP	127	313	464	558			132	1.04	368	1.94	592	2.59	130	334	498	600		
DLE5.7CNT	102H4666	L/MBP	160	384	559	668			166	1.13	447	1.95	710	2.54	166	415	606	726		
DLE5.7CNT	102H4678	L/MBP	160	384	559	668			166	1.13	447	1.95	710	2.54	166	415	606	726		
DLE5.7CNT	102H4679	L/MBP	160	384	559	668			166	1.13	447	1.95	710	2.54	166	415	606	726		
DLE5.7CNT	102H4685	L/MBP	162	385	558	667			167	1.20	446	2.01	709	2.52	168	415	603	722		

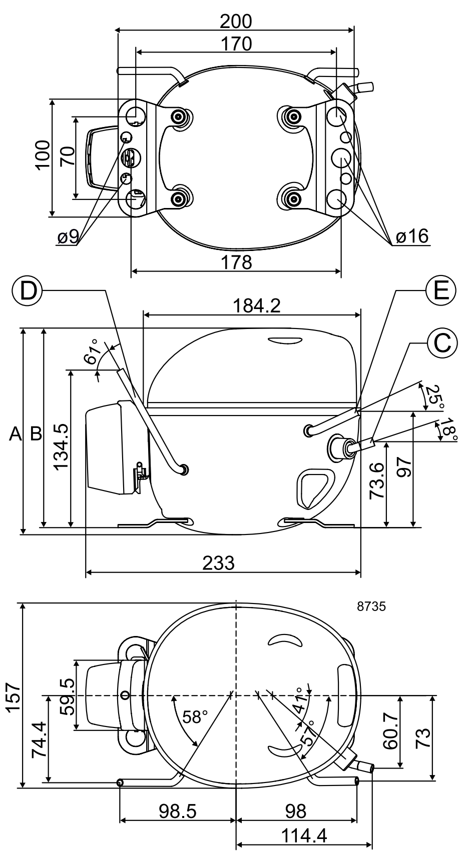
R290 • 220-240 V • 50 Hz • D-Series • Electrical Equipment

Compressor * pre-assembled start equipment	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
DLE4CN	102H4429					103N0050		117-7129	117U7000	117U5014			103N1010	103N0491
DLE4CN	102H4465					103N0050		117-7129	117U7000	117U5014			103N1010	103N0491
DLE4CN *	102H4469								117U7000	117U5014			103N1010	103N0491
DLE4.8CN *	102H4564								117U7001	117U5014			103N1010	103N0491
DLE4.8CN	102H4565					103N0050		117-7129	117U7001	117U5014			103N1010	103N0491
DLE4.8CN *	102H4585								117U7001	117U5014			103N1010	103N0491
DLE5.7CN	102H4653					103N0050		117-7129	117U7015	117U5015			103N1010	103N0491
DLE5.7CN *	102H4657					103N0050							103N1010	103N0491
DLE5.7CN *	102H4665					103N0050		117-7129	117U7015	117U5015			103N1010	103N0491
DLE6.5CN *	102H4760								117U7016	117U5015			103N1010	103N0491
DLE6.5CN	102H4765					103N0050		117-7129	117U7016	117U5015			103N1010	103N0491
DLE7.5CN *	102H4808					103N0050			117U7002	117U5015			103N1010	103N0491
DLE7.5CN *	102H4827					103N0050							103N1010	103N0491
DLE7.5CN	102H4853					103N0050			117U7002	117U5015			103N1010	103N0491
DLE7.5CN	102H4856					103N0050			117U7002	117U5015			103N1010	103N0491
DLE4CNT	102H4460					103N0050		117-7129	117U7000	117U5014			103N1010	103N0491
DLE4.8CNT	102H4587					103N0050		117-7129	117U7002	117U5015			103N1010	103N0491
DLE4.8CNT	102H4588					103N0050		117-7129	117U7001	117U5014			103N1010	103N0491
DLE4.8CNT	102H3589					103N0050		117-7129	117U7002	117U5015			103N1010	103N0491
DLE5.7CNT *	102H4666					103N0050		117-7129	117U7002	117U5015			103N1010	103N0491
DLE5.7CNT	102H4678					103N0050		117-7129	117U7002	117U5015			103N1010	103N0491
DLE5.7CNT	102H4679					103N0050		117-7129	117U7002	117U5015			103N1010	103N0491
DLE5.7CNT	102H4685					103N0050		117-7129	117U7015	117U5015			103N1010	103N0491

Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE LBP rating point -23.3°C / 54.4°C Cooling capacity [W]	LBP COP [W/W]	MBP rating point -6.7°C / 54.4°C Cooling capacity [W]	MBP COP [W/W]	HBP rating point 7.2°C / 54.4°C Cooling capacity [W]	HBP COP [W/W]	Run capacitor (* optional) µF	Power [HP]	Displacement [cm³]	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions Height [mm] A	Height [mm] B	Connectors location/I.D. [mm] Suction C	Process D	Discharge E	Oil cooler F	alt. connectors available	Application
191	1.48	338	1.97	511	2.60	*	1/6	4.00	198-254 V, 50 Hz	F2	175	169	8.2	6.2	6.2		X	3|4|6|7|10|11
191	1.48	338	1.97	511	2.60	*	1/6	4.00	198-254 V, 50 Hz	F2	175	169	6.2	6.2	5.0		X	3|4|6|7|10|11
191	1.48	338	1.97	511	2.60		1/6	4.00	198-254 V, 50 Hz	F2	175	169	8.2	6.5	6.5		X	3|4|6|7|10|11
242	1.56	415	1.98	693	2.81		1/4	4.80	198-254 V, 50 Hz	F2	175	169	8.2	6.5	6.5		X	3|4|6|7|10|11
242	1.56	415	1.98	693	2.81	*	1/4	4.80	198-254 V, 50 Hz	F2	175	169	8.2	6.2	6.2		X	3|4|6|7|10|11
242	1.56	415	1.98	693	2.81		1/4	4.80	198-254 V, 50 Hz	F2	175	169	8.2	6.2	6.2		X	3|4|6|7|10|11
298	1.53	507	1.97	832	2.70	*	3/10	5.70	198-254 V, 50 Hz	F2	175	169	8.2	6.2	6.2		X	3|4|6|7|10|11
298	1.53	507	1.97	832	2.70		3/10	5.70	198-254 V, 50 Hz	F2	175	169	6.2	4.5	5.0		X	3|4|6|7|10|11
298	1.53	507	1.97	832	2.70	*	3/10	5.70	198-254 V, 50 Hz	F2	175	169	8.2	6.2	6.2		X	3|4|6|7|10|11
315	1.53	548	1.92	902	2.62		3/10	6.50	198-254 V, 50 Hz	F2	175	169	8.2	6.2	6.2		X	3|4|6|7|10|11
315	1.53	548	1.92	902	2.62	*	3/10	6.50	198-254 V, 50 Hz	F2	175	169	8.2	6.2	6.2		X	3|4|6|7|10|11
366	1.47	643	1.91	1055	2.56		1/3	7.48	198-254 V, 50 Hz	F2	175	169	8.2	6.5	6.5		X	3|4|6|7|10|11
366	1.47	643	1.91	1055	2.56		1/3	7.48	198-254 V, 50 Hz	F2	175	169	6.2	4.5	5.0		X	3|4|6|7|10|11
366	1.47	643	1.91	1055	2.56		1/3	7.48	198-254 V, 50 Hz	F2	175	169	8.2	6.2	6.2		X	3|4|6|7|10|11
366	1.47	643	1.91	1055	2.56		1/3	7.48	198-254 V, 50 Hz	F2	175	169	8.2	6.2	6.2		X	3|4|6|7|10|11
191	1.48	338	1.97	511	2.60	*	1/6	4.00	187-254 V, 50 Hz	F2	175	169	6.2	6.2	5.0			3|4|6|7|10|11
232	1.38	417	1.95	694	2.82	*	1/5	4.80	187-254 V, 50 Hz *	F2	175	169	8.2	6.5	6.5		X	3|4|6|7|10|11
242	1.56	415	1.98	693	2.81	*	1/4	4.80	187-254 V, 50 Hz	F2	175	169	8.2	6.2	6.2		X	3|4|6|7|10|11
232	1.38	417	1.95	694	2.82	*	1/5	4.80	187-254 V, 50 Hz *	F2	175	169	8.2	6.5	6.5		X	3|4|6|7|10|11
295	1.46	510	1.95	835	2.75	*	3/10	5.70	187-254 V, 50 Hz *	F2	175	169	8.2	6.5	6.5		X	3|4|6|7|10|11
295	1.46	510	1.95	835	2.75	*	3/10	5.70	187-254 V, 50 Hz *	F2	175	169	8.2	6.5	6.5		X	3|4|6|7|10|11
295	1.46	510	1.95	835	2.75	*	3/10	5.70	187-254 V, 50 Hz *	F2	175	169	8.2	6.5	6.5		X	3|4|6|7|10|11
298	1.53	507	1.97	832	2.70	*	3/10	5.70	187-254 V, 50 Hz	F2	175	169	8.2	6.2	6.2		X	3|4|6|7|10|11

DLE



R290 • 220-240 V • 50 Hz • N-Series

Compressor	Code number	Application	EN 12900 Capacity [W] Tc=45°C, Tliq=45°C, Tsuc=32°C Evaporating temperature [°C]						EN 12900						ASHRAE Capacity [W] Tc=54,4°C, Tliq=32,2°C, Tsuc=32,2°C Evaporating temperature [°C]					
									LBP rating point -35°C / 40°C		MBP rating point -10°C / 45°C		HBP rating point 5°C / 50°C							
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
NL7CN	105H6756	L/MBP	166	458	679	814			179	1.03	539	1.85	854	2.20	174	474	712	859		
NL9CN	105H6780	L/MBP	194	526	778	930			207	1.06	618	1.85	971	2.17	205	548	815	979		
NL9CN	105H6856	L/MBP	194	526	778	930			207	1.06	618	1.85	971	2.17	205	548	815	979		
NLE8.8CN	105H6880	L/MBP	248	576	838	1001	1400		256	1.26	670	2.05	1052	2.54	236	611	893	1068	1497	
NLE10CN	105H6175	L/MBP	274	669	978	1164	1603		285	1.23	781	1.96	1216	2.40	267	702	1038	1240	1722	
NLE10CN	105H6176	L/MBP	274	669	978	1164	1603		285	1.23	781	1.96	1216	2.40	267	702	1038	1240	1722	
NLE11CNL	105H6174	LBP	291	734	1066				305	1.18	856	1.96			300	778	1143			
NLE12.6CNL	105H6378	LBP	339	809	1188				354	1.33	945	2.06			355	861	1274			
NLE8.0CNT	105H6073	L/MBP		525	770	919					614	2.04	971	2.67		553	824	991		
NLE10CNT	105H6179	L/MBP		684	991	1174					795	1.95	1231	2.40		735	1076	1278		
NLE11MN	105H6177	MBP		746	1087	1291	1774				869	2.06	1354	2.51		795	1166	1391	1929	
NLE11MN	105H6185	MBP		746	1087	1291	1774				869	2.06	1354	2.51		795	1166	1391	1929	
NLE12.6MN	105H6377	MBP		813	1190	1420	1972				949	2.05	1485	2.43		855	1261	1510	2114	
NLE12.6MN	105H6379	MBP		813	1190	1420	1972				949	2.05	1485	2.43		855	1261	1510	2114	

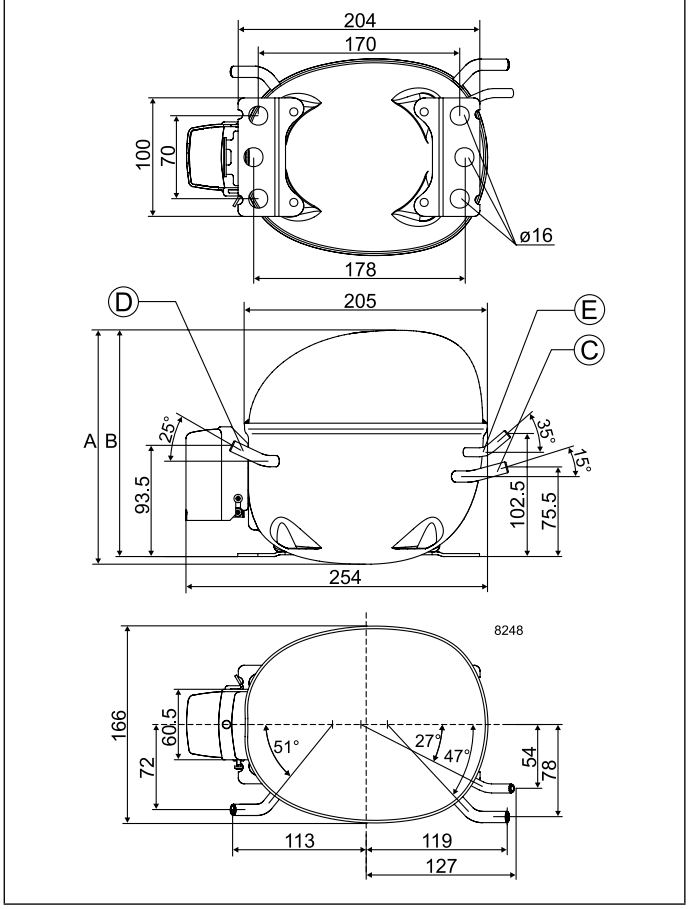
R290 • 220-240 V • 50 Hz • N-Series • Electrical Equipment

Compressor * pre-assembled start equipment	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
NL7CN	105H6756	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119	117U7002	117U5015			103N1010	103N2010
NL9CN	105H6780	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119	117U7002	117U5015			103N1010	103N2010
NL9CN	105H6856	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119	117U7002	117U5015			103N1010	103N2010
NLE8.8CN	105H6880					103N0050		117-7119	117U7002	117U5015			103N1010	103N2010
NLE10CN	105H6175					103N0050		117-7119	117U7002	117U5015			103N1010	103N2010
NLE10CN *	105H6176					103N0050							103N1010	103N2010
NLE11CNL	105H6174					103N0050			117U7003	117U5015			103N1010	103N2010
NLE12.6CNL	105H6378					103N0050		117-7119	117U7003	117U5015			103N1010	103N2010
NLE8.0CNT	105H6073					103N0050		117-7119	117U7003	117U5014			103N1010	103N2011
NLE10CNT	105H6179					103N0050		117-7119	117U7050	117U5014			103N1010	103N2011
NLE11MN	105H6177					103N0050		117-7119	117U7005	117U5015			103N1010	103N2010
NLE11MN	105H6185					103N0050		117-7119	117U7005	117U5015			103N1010	103N2010
NLE12.6MN	105H6377					103N0050		117-7119	117U7011	117U5015			103N1010	103N2010
NLE12.6MN *	105H6379					103N0050		117-7119	117U7011	117U5015			103N1010	103N2011

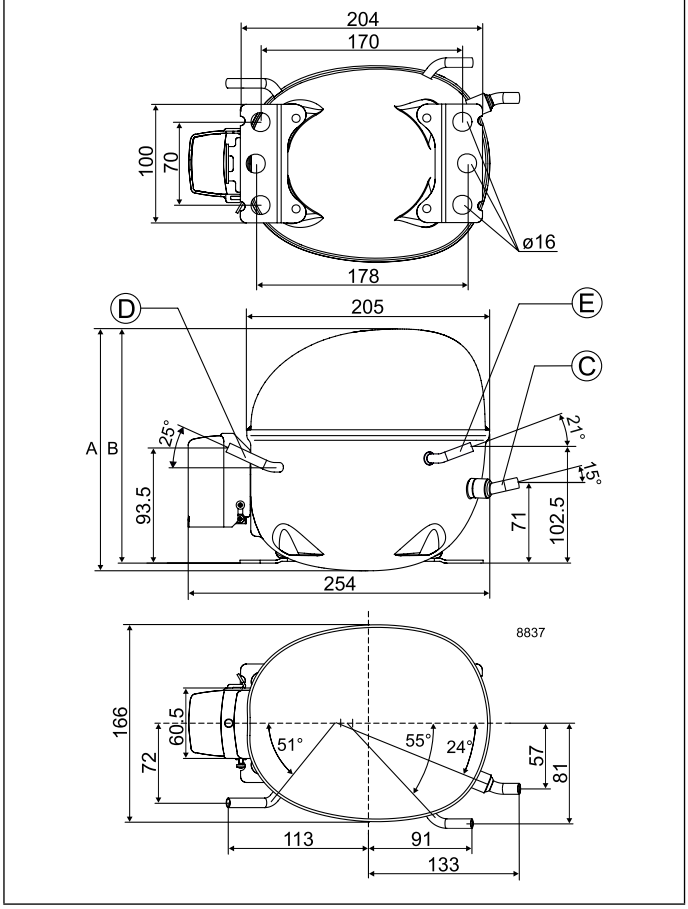
Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]				alt. connectors available	
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP						A	B	Suction C	Process D	Dis-charge E	Oil cooler F		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]										
325	1.35	597	1.81			*	3/10	7.27	198-254 V, 50 Hz	F1	203	197	8.2	6.2	6.2			3|4|6|10|11
380	1.39	684	1.80			*	1/3	8.35	198-254 V, 50 Hz	F1	203	197	9.7	6.5	6.5		X	3|4|6|10|11
380	1.39	684	1.80			*	1/3	8.35	198-254 V, 50 Hz	F1	203	197	8.2	6.2	6.2		X	3|4|6|10|11
431	1.57	751	1.98	1220	2.68	*	3/8	8.76	198-254 V, 50 Hz	F2	203	197	8.2	6.2	6.2		X	3|4|6|10|11
486	1.47	872	1.89	1409	2.53	*	1/2	10.09	198-254 V, 50 Hz	F2	203	197	8.2	6.2	6.2		X	3|4|6|10|11
486	1.47	872	1.89	1409	2.53		1/2	10.09	198-254 V, 50 Hz	F2	203	197	8.2	6.2	6.2		X	3|4|6|10|11
540	1.52	962	1.92				1/2	11.15	198-254 V, 50 Hz	F2	203	197	8.2	6.2	6.2		X	4 | 6 | 10
611	1.63	1069	2.00			*	3/5	12.55	198-254 V, 50 Hz	F2	203	197	8.2	6.2	6.2			4 | 6 | 10
377	1.45	692	2.02	1137	2.92	*	1/3	7.96	187-242 V, 50 Hz *	F2	203	197	8.2	6.5	6.5			3|4|6|10|11
511	1.49	906	1.92	1440	2.59	*	1/2	10.09	187-242 V, 50 Hz *	F2	203	197	8.2	6.5	6.5			3|4|6|10|11
562	1.58	981	2.01	1579	2.70	*	1/2	11.15	198-254 V, 50 Hz	F2	203	197	8.2	6.2	6.2		X	3|4|6|10|11
562	1.58	981	2.01	1579	2.70	*	1/2	11.15	198-254 V, 50 Hz	F2	203	197	8.2	6.5	6.5		X	3|4|6|10|11
602	1.56	1060	1.97	1725	2.56	*	3/5	12.55	198-254 V, 50 Hz	F2	203	197	8.2	6.2	6.2		X	3|4|6|10|11
602	1.56	1060	1.97	1725	2.56		3/5	12.55	198-254 V, 50 Hz	F2	203	197	8.2	6.5	6.5		X	3|4|6|10|11

NL



NLE



R290 • 220-240 V • 50 Hz • S-Series

Compressor	Code number	Application	EN 12900 Capacity [W] Tc=45°C, Tliq=45°C, Tsuc=32°C Evaporating temperature [°C]						EN 12900 LBP rating point -35°C / 40°C		EN 12900 MBP rating point -10°C / 45°C		EN 12900 HBP rating point 5°C / 50°C		ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
SC10CNX	104H8065	L/MBP	179	531	809	979			197	0.93	634	1.75	1040	2.33	175	547	853	1042		
SC12CNX	104H8265	L/MBP	250	678	1050	1293			270	1.01	813	1.78	1395	2.31	227	711	1110	1372		
SC15CNX	104H8576	L/MBP	297	887	1328	1594			335	1.03	1050	1.87	1690	2.22	251	918	1415	1717		
SC15CNX	104H8565	L/MBP	297	887	1328	1594			335	1.03	1050	1.87	1690	2.22	251	918	1415	1717		
SC18CNX	104H8865	L/MBP	341	1033	1543	1849			379	1.00	1222	1.73	1970	1.98	315	1106	1684	2032		
SC12CNX.2	104H8266	LBP	258	725					279	0.96	859	1.71			230	742				
SC15CNX.2	104H8566	LBP	332	900					352	1.00	1076	1.76			345	928				
SC18CNX.2	104H8866	LBP	384	1057					430	1.01	1223	1.79			342	1194				
SC21CNX.2	104H8156	LBP	492	1233					540	1.09	1413	1.65			462	1399				
SC21CNX.2	104H8166	LBP	492	1233					540	1.09	1413	1.65			462	1399				
SC21CNX.2	104H8169	LBP	492	1233					540	1.09	1413	1.65			462	1399				
SC10MNX	104H8075	MBP		567	883	1074					686	1.71	1138	2.36		575	921	1132		
SC12MNX	104H8275	MBP		741	1127	1361					885	1.78	1451	2.37		757	1195	1461		
SC15MNX	104H8575	MBP		887	1322	1586					1047	1.77	1650	2.26		967	1409	1679		
SC18MNX	104H8875	MBP		1035	1506	1798					1204	1.69	1905	2.14		1109	1622	1943		
SCE15CNX	104H8540	L/MBP	332	952	1431	1716			356	1.20	1130	2.26	1806	2.90	319	1002	1524	1836		
SCE18CNX	104H8840	L/MBP	411	1140	1701	2036			436	1.24	1348	2.26	2139	2.91	400	1206	1818	2183		
SCE15CNLX	104H8548	LBP	334	954	1432				357	1.16	1132	2.09			319	1004	1522			
SCE18CNLX	104H8848	LBP	414	1115	1663				440	1.22	1318	2.07			404	1179	1775			
SCE21CNLX	104H8163	LBP	517	1329	1924				543	1.27	1547	2.15			548	1387	2074			
SCE21CNLX	104H8164	LBP	506	1331	1918				546	1.21	1546	2.00			497	1381	2062			
SCE18MNX	104H8849	MBP		1120	1666	1996					1321	1.98	2093	2.54		1193	1789	2144		
SCE18MNX	104H8851	MBP		1120	1666	1996					1321	1.98	2093	2.54		1193	1789	2144		
SCE15MNX	104H8549	MBP		945	1420	1704	2368				1122	2.06	1791	2.64		995	1513	1822	2550	
SCE21MNX	104H8160	MBP		1358	1960	2338					1572	2.17	2456	2.71		1443	2091	2492		

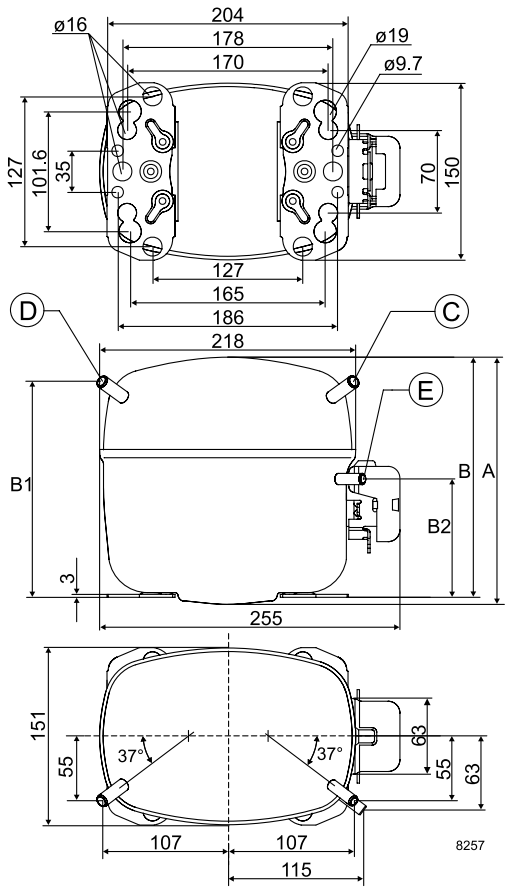
R290 • 220-240 V • 50 Hz • S-Series • Electrical Equipment

Compressor * pre-assembled start equipment	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
SC10CNX	104H8065									117U5372	117-7025		103N1004	103N2009
SC12CNX	104H8265									117U5372	117-7025		103N1004	103N2009
SC15CNX	104H8576									117U5373	117-7031		103N1004	103N2009
SC15CNX	104H8565									117U5373	117-7031		103N1004	103N2009
SC18CNX	104H8865									117U5373	117-7052		103N1004	103N2009
SC12CNX.2	104H8266								117U7003	117U5017			103N1004	103N2009
SC15CNX.2	104H8566								117U7005	117U5017			103N1004	103N2009
SC18CNX.2	104H8866								117U7011	117U5017			103N1004	103N2009
SC21CNX.2	104H8156								117U7013	117U5012			103N1004	103N2009
SC21CNX.2	104H8166								117U7013	117U5012			103N1004	103N2009
SC21CNX.2 *	104H8169								117U7013	117U5012			103N1004	103N2009
SC10MNX	104H8075								117U7005	117U5017			103N1004	103N2008
SC12MNX	104H8275								117U7019	117U5017			103N1004	103N2008
SC15MNX	104H8575								117U7019	117U5017			103N1004	103N2008
SC18MNX	104H8875								117U7011	117U5017			103N1004	103N2008
SCE15CNX	104H8540						117-7112		117-7429	117U5373	117-7810		103N1004	117U1033
SCE18CNX	104H8840						117-7112		117U7600	117U5373	117-7806		103N1004	117U1033
SCE15CNLX	104H8548								117U7403	117U5017			103N1004	117U1033
SCE18CNLX	104H8848								117U7405	117U5017			103N1004	117U1033
SCE21CNLX	104H8163						117-7112		117-7600	117U5373	117-7806			117U1028
SCE21CNLX	104H8164								117-7400	117U5017				117U1033
SCE18MNX	104H8849								117U7406	117U5017			103N1004	117U1033
SCE18MNX	104H8851								117U7406	117U5017			103N1004	117U1033
SCE15MNX	104H8549								117U7405	117U5017			103N1004	117U1033
SCE21MNX	104H8160						117-7112		117-7425	117U5373	117-7800			117U1028

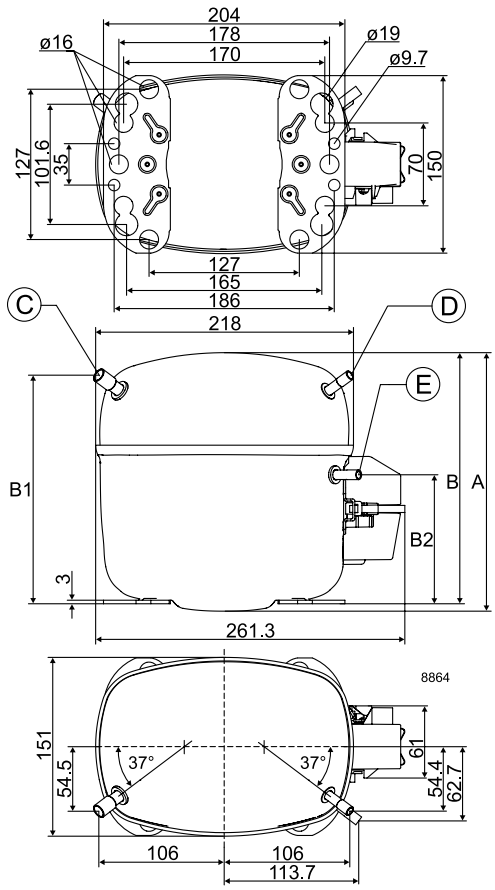
Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]				alt. connectors available	
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F		
358	1.27	711	1.79			5	1/3	10.29	198-254 V, 50 Hz	F2	209	203	8.2	6.2	6.2			3|4|6|10|11
475	1.31	923	1.79			5	1/2	12.87	198-254 V, 50 Hz	F2	209	203	8.2	6.2	6.2			3|4|6|10|11
597	1.35	1183	1.83			10	3/5	15.28	198-254 V, 50 Hz	F2	209	203	9.6	6.5	6.5		X	3|4|6|10|11
597	1.35	1183	1.83			10	3/5	15.28	198-254 V, 50 Hz	F2	209	203	10.2	6.2	6.2		X	3|4|6|10|11
727	1.36	1410	1.74			10	3/4	17.69	198-254 V, 50 Hz	F2	209	203	10.2	6.2	6.2			3|4|6|10|11
491	1.20						1/2	12.87	198-254 V, 50 Hz	F2	209	203	8.2	6.2	6.2		X	4 | 6
624	1.32						3/5	15.28	198-254 V, 50 Hz	F2	209	203	8.2	6.2	6.2			4 | 6
797	1.31						3/4	17.69	198-254 V, 50 Hz	F2	219	213	10.2	6.2	6.2			4 | 6
962	1.45						5/6	20.95	198-254 V, 50 Hz	F2	219	213	9.6	6.5	6.5		X	4
962	1.45						5/6	20.95	198-254 V, 50 Hz	F2	219	213	10.2	6.2	6.2		X	4
962	1.45						5/6	20.95	198-254 V, 50 Hz	F2	219	213	10.2	6.2	6.2		X	4
351	1.19	766	1.70	1329	2.57		2/5	10.29	198-254 V, 50 Hz	F2	209	203	8.2	6.2	6.2			3 | 7 | 10 | 11
474	1.13	995	1.77	1707	2.61		1/2	12.87	198-254 V, 50 Hz	F2	219	213	8.2	6.2	6.2			3 | 7 | 10 | 11
680	1.51	1187	1.75	1907	2.40		3/5	15.28	198-254 V, 50 Hz	F2	219	213	8.2	6.2	6.2			3 | 7 | 10 | 11
777	1.31	1364	1.71	2237	2.33		3/4	17.69	198-254 V, 50 Hz	F2	219	213	8.2	6.2	6.2			3 | 7 | 10 | 11
664	1.62	1277	2.23	2100	3.13	10	3/5	15.28	198-254 V, 50 Hz	F2	219	213	10.2	6.2	6.2			3|4|6|10|11
809	1.63	1525	2.24	2488	3.14	10	3/4	17.69	198-254 V, 50 Hz	F2	219	213	10.2	6.2	6.2			3|4|6|10|11
667	1.52	1276	2.05				3/5	15.28	198-254 V, 50 Hz	F2	219	213	10.2	6.2	6.2			4 | 6
793	1.51	1489	2.03				3/4	17.69	198-254 V, 50 Hz	F2	219	213	10.2	6.2	6.2			4 | 6
953	1.61	1741	2.04			10	5/6	20.95	198-254 V, 50 Hz	F2	219	213	10.2	6.2	6.2			4
939	1.49	1732	1.87				5/6	20.95	207-242 V, 50 Hz	F2	219	213	10.2	6.2	6.2			4
809	1.46	1501	1.97	2437	2.75		3/4	17.69	198-254 V, 50 Hz	F2	219	213	10.2	6.2	6.2			3 | 7 | 10 | 11
809	1.46	1501	1.97	2437	2.75		3/4	17.69	198-254 V, 50 Hz	F2	219	213	9.6	6.5	6.5			3 | 7 | 10 | 11
659	1.49	1267	2.04	2083	2.84		3/5	15.28	198-254 V, 50 Hz	F2	219	213	10.2	6.2	6.2			3 | 7 | 10 | 11
1002	1.64	1762	2.11	2852	2.91	10	1	20.95	198-254 V, 50 Hz	F2	219	213	10.2	6.2	6.2			3 | 7 | 10 | 11

SC



SCE



WITH MORE THAN 60 YEARS OF EXPERIENCE IN COMPRESSOR TECHNOLOGY AND HIGHLY DEDICATED EMPLOYEES, OUR FOCUS IS ON DEVELOPING AND APPLYING ADVANCED COMPRESSOR TECHNOLOGIES TO ACHIEVE STANDARD SETTING PERFORMANCE FOR LEADING PRODUCTS AND BUSINESSES AROUND THE WORLD.

R407C

220-240 V | 50 Hz

Chemical formula
CH_2F_2 / CHF_2CF_3 / CH_2FCF_3

Typelabel
Typelabel stripe colour: Red
Typelabel colour: Yellow

Applications
LBP: Low Back Pressure
MBP: Medium Back Pressure
HBP: High Back Pressure

Motor types
RSIR: Resistant Start Induction Run
RSCR: Resistant Start Capacitor Run
CSIR: Capacitor Start Induction Run
CSR: Capacitor Start Run

Compressor cooling
S = Static cooling normally sufficient
O = Oil cooling
F_1 = Fan cooling 1.5 m/s (compressor compartment temp. equal to ambient temperature)
F_2 = Fan cooling 3.0 m/s necessary

Starting devices
LST: Low Starting Torque
LST is used with capillary tube control and pressure equalizing. (Pressure equalizing may exceed 10 minutes). The PTC starting device requires 5 minutes cooling before each start.
To fulfil the requirements of EN 60355-2-34 the protection screen 103N0476 must be applied to the PTC starting device.
HST: High Starting Torque
HST consisting of relay and starting capacitor is used for expansion valve control or for capillary tube control without pressure equalizing.
ePTC: Electronically controlled PTC
- Compressor restart possible after a few seconds
- Operational wattage loss reduced by 2 watt
- PTC protection screen not needed (surface temp. < 82 °C)
- Temperature resistant up to min. +60 °C
- Additonal information, code numbers: refer to page 18

Test conditons
Electrical equipment being used is listed in our data sheets

1 Watt = 0.86 kcal/h
1 Watt = 3.41 Btu/h

R407C • 220-240 V • 50 Hz • S-Series

Compressor	Code number	Application	EN 12900 Capacity [W] Tc=45°C, Tliq=45°C, Tsuc=32°C Evaporating temperature [°C]						EN 12900						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -35°C / 40°C		MBP rating point -10°C / 45°C		HBP rating point 5°C / 50°C							
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
SC10DL	104L2525	M/HBP		611	968	1192	1747	2085			673	1.33	1100	1.64		645	1053	1302	1919	2299
SC12DL	104L2625	M/HBP		806	1279	1565	2258	2674			892	1.36	1441	1.70		866	1409	1731	2512	2989
SC15DL	104L2856	M/HBP		964	1493	1825	2652	3156			1047	1.38	1682	1.71		1036	1643	2015	2933	3498
SC10/10DL	104L4091	M/HBP		1222	1935	2383	3494	4169			1345	1.33	2199	1.64		1290	2105	2604	3838	4597
SC12/12DL	104L4092	M/HBP		1612	2559	3130	4516	5348			1783	1.36	2883	1.70		1732	2817	3461	5024	5978
SC15/15DL	104L4093	M/HBP		1928	2985	3651	5304	6311			2094	1.38	3364	1.71		2071	3286	4029	5865	6995

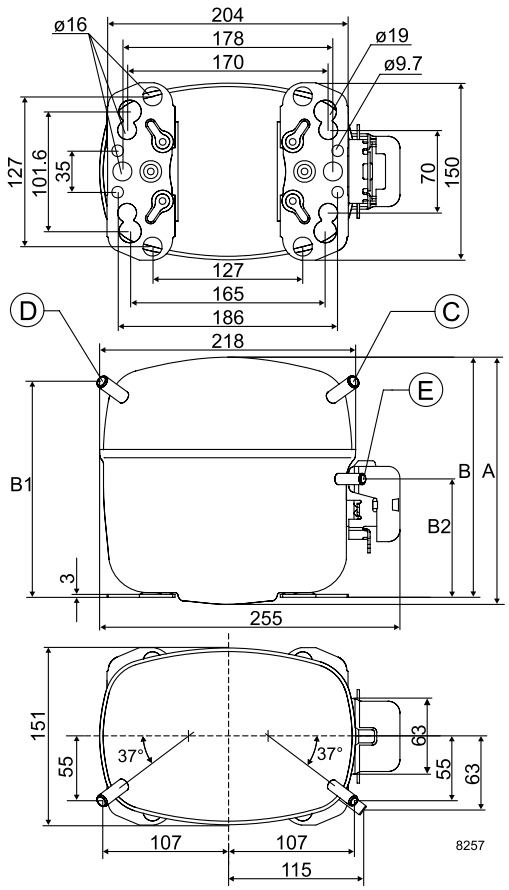
R407C • 220-240 V • 50 Hz • S-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
SC10DL	104L2525								117U6005	117U5017			103N1004	103N2009
SC12DL	104L2625								117U6019	117U5017			103N1004	103N2009
SC15DL	104L2856									117U5373	117-7029		103N1004	103N2009
SC10/10DL	104L4091								117U6005	117U5017			103N1004	103N2009
SC12/12DL	104L4092								117U6019	117U5017			103N1004	103N2009
SC15/15DL	104L4093									117U5373	117-7029		103N1004	103N2009

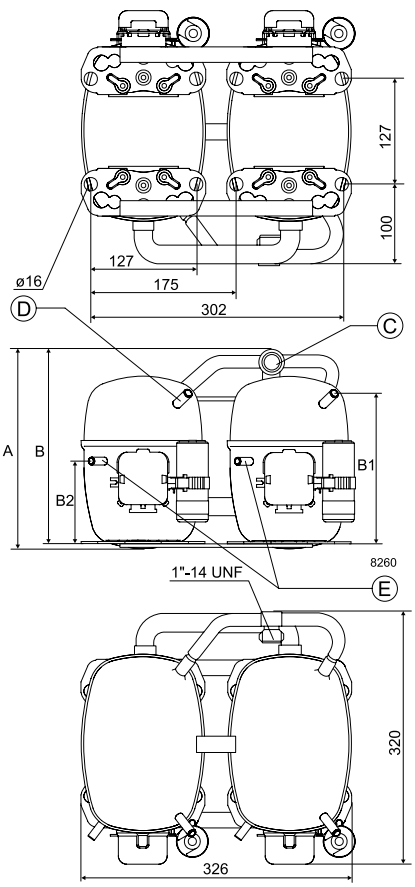
Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]				alt. connectors available	
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F		
		854	1.56	1512	2.24		1/2	10.29	198-254 V, 50 Hz	F2	209	203	8.2	6.2	6.2		X	10 | 11
		1145	1.62	1987	2.35		3/4	12.87	198-254 V, 50 Hz	F2	219	213	10.2	6.2	6.2		X	10 | 11
		1338	1.61	2317	2.34	10	3/4	15.28	198-254 V, 50 Hz	F2	219	213	10.2	6.2	6.2		X	10 | 11
		1708	1.56	3023	2.24		1	20.58	198-254 V, 50 Hz	F2	249	244	12.0	6.2	6.2			10 | 11
		2290	1.63	3974	2.35		1 1/4	25.74	198-254 V, 50 Hz	F2	259	254	12.0	6.2	6.2			10 | 11
		2676	1.61	4633	2.33	10	1 1/2	30.56	198-254 V, 50 Hz	F2	259	254	16.0	6.2	6.2			10 | 11

SC



SC-Twin



WITH MORE THAN 60 YEARS OF EXPERIENCE IN COMPRESSOR TECHNOLOGY AND HIGHLY DEDICATED EMPLOYEES, OUR FOCUS IS ON DEVELOPING AND APPLYING ADVANCED COMPRESSOR TECHNOLOGIES TO ACHIEVE STANDARD SETTING PERFORMANCE FOR LEADING PRODUCTS AND BUSINESSES AROUND THE WORLD.

R134a

220-240 V | 60 Hz

Chemical formula
CH_2FCF_3

Typelabel
Typelabel stripe colour: Blue
Typelabel colour: Yellow

Applications
LBP: Low Back Pressure
MBP: Medium Back Pressure
HBP: High Back Pressure

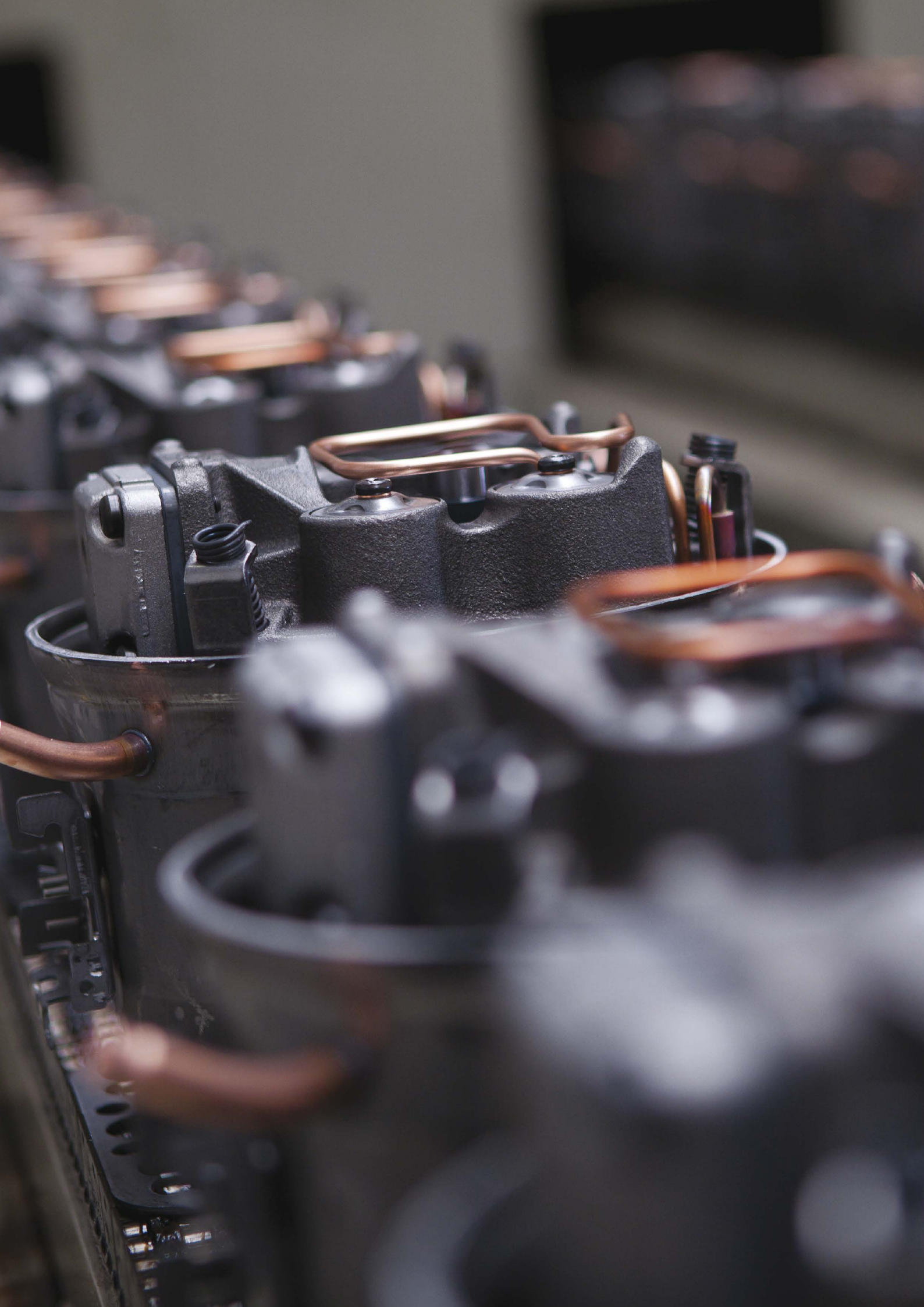
Motor types
RSIR: Resistant Start Induction Run
RSCR: Resistant Start Capacitor Run
CSIR: Capacitor Start Induction Run
CSR: Capacitor Start Run

Compressor cooling
S = Static cooling normally sufficient
O = Oil cooling
F_1 = Fan cooling 1.5 m/s (compressor compartment temp. equal to ambient temperature)
F_2 = Fan cooling 3.0 m/s necessary

Starting devices
LST: Low Starting Torque
LST is used with capillary tube control and pressure equalizing. (Pressure equalizing may exceed 10 minutes). The PTC starting device requires 5 minutes cooling before each start.
To fulfil the requirements of EN 60355-2-34 the protection screen 103N0476 must be applied to the PTC starting device.
HST: High Starting Torque
HST consisting of relay and starting capacitor is used for expansion valve control or for capillary tube control without pressure equalizing.
ePTC: Electronically controlled PTC
- Compressor restart possible after a few seconds
- Operational wattage loss reduced by 2 watt
- PTC protection screen not needed (surface temp. < 82 °C)
- Temperature resistant up to min. +60 °C
- Additonal information, code numbers: refer to page 18

Test conditons
Electrical equipment being used is listed in our data sheets

1 Watt = 0.86 kcal/h
1 Watt = 3.41 Btu/h



R134a • 220-240 V • 60 Hz • P-Series

Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -25°C / 55°C		MBP rating point -10°C / 55°C		HBP rating point 5°C / 55°C							
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
PL35G	101G0250	M/HBP		61	103	130	199	242	33	0.57	81	1.02	162	1.51		76	128	162	248	302

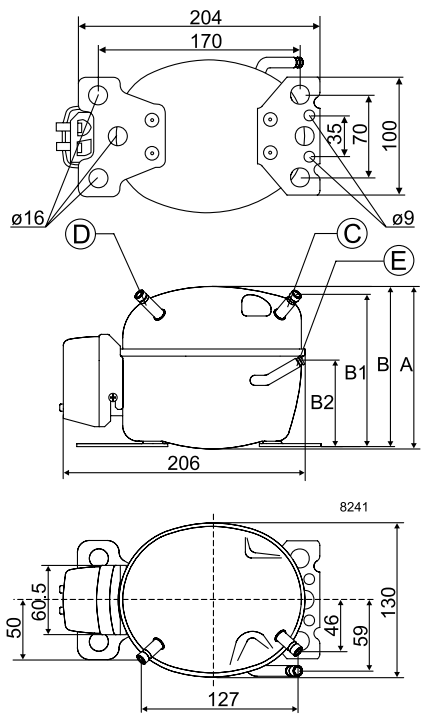
R134a • 220-240 V • 60 Hz • P-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
PL35G	101G0250	103N0011	103N0018						117U6021	117U5014			103N1010	103N0491

Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer-data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]				alt. connectors available	
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F		
456	0.77	106	1.24	198	1.78		1/20	2.00	198-254 V, 60 Hz *	F1	137	135	6.2	6.2	5.0		X	3 | 9

PL



R134a • 220-240 V • 60 Hz • T-Series

Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -25°C / 55°C		MBP rating point -10°C / 55°C		HBP rating point 5°C / 55°C							
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
TL2.5G	102G4250	L/M/HBP	14	80	134	168	253	306	42	0.62	105	1.09	208	1.58	18	100	167	210	316	383
TL2.5G	102G4251	L/M/HBP	14	80	134	168	253	306	42	0.62	105	1.09	208	1.58	18	100	167	210	316	383
TL2.5G	102G4252	L/M/HBP	14	80	134	168	253	306	42	0.62	105	1.09	208	1.58	18	100	167	210	316	383
TL3G	102G4350	L/M/HBP		95	161				47	0.68	125	1.13				118	200			
TL3G	102G4352	L/M/HBP		95	161				47	0.68	125	1.13				118	200			
TL3G	102G4353	L/M/HBP		95	161				47	0.68	125	1.13				118	200			
TL4G	102G4452	L/M/HBP		127	211				70	0.80	166	1.23				158	261			
TL4G	102G4458	L/M/HBP		127	211				70	0.80	166	1.23				158	261			
TL4G	102G4463	L/M/HBP		127	211				70	0.80	166	1.23				158	261			
TL4G	102G4466	L/M/HBP		127	211				70	0.80	166	1.23				158	261			
TL5G	102G4550	L/M/HBP		162	260				91	0.87	207	1.22				200	322			
TL5G	102G4552	L/M/HBP		162	260				91	0.87	207	1.22				200	322			
TL5G	102G4553	L/M/HBP		162	260				91	0.87	207	1.22				200	322			
TL5G	102G4564	L/M/HBP		162	260				91	0.87	207	1.22				200	322			
TL5G	102G4566	L/M/HBP		162	260				91	0.87	207	1.22				200	322			
TL5G	102G4567	L/M/HBP		162	260				91	0.87	207	1.22				200	322			
TL4GH	102G4455	HBP		118	208	264	403	489			160	1.15	328	1.70		149	260	329	503	610
TLES6.5FT.3	102G4703	LBP	84	267					157	1.04	340	1.60			104	331				
TLES6.5FT.3	102G4704	LBP	84	267					157	1.04	340	1.60			104	331				
TLES7FT.4	102G4708	LBP	84	267					157	1.04	340	1.60			104	331				
TLES6.5FT.3	102G4709	LBP	84	267					157	1.04	340	1.60			104	331				
TLES6.5FT.3	102G4724	LBP	84	267					157	1.04	340	1.60			104	331				

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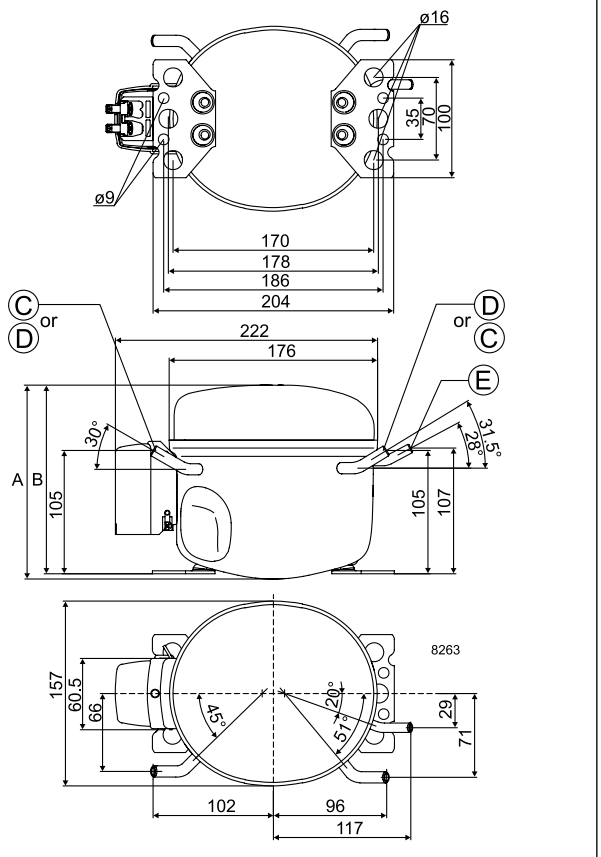
Compressor * pre-assembled start equipment	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
TL2.5G	102G4250	103N0011	103N0018						117U6007	117U5014			103N1010	103N2010
TL2.5G	102G4251	103N0011	103N0018						117U6007	117U5014			103N1010	103N2011
TL2.5G	102G4252	103N0011	103N0018						117U6007	117U5014			103N1010	103N2010
TL3G	102G4350	103N0011	103N0018						117U6009	117U5014			103N1010	103N2010
TL3G	102G4352	103N0011	103N0018						117U6009	117U5014			103N1010	103N2011
TL3G	102G4353	103N0011	103N0018						117U6009	117U5014			103N1010	103N2010
TL4G	102G4452	103N0011	103N0018						117U6004	117U5014			103N1010	103N2010
TL4G	102G4458	103N0011	103N0018						117U6004	117U5014			103N1010	103N2011
TL4G *	102G4463								117U6004	117U5014			103N1010	103N2011
TL4G	102G4466	103N0011	103N0018						117U6004	117U5014			103N1010	103N2010
TL5G	102G4550	103N0011	103N0018						117U6000	117U5014			103N1010	103N2010
TL5G	102G4552	103N0011	103N0018						117U6000	117U5014			103N1010	103N2010
TL5G	102G4553	103N0011	103N0018						117U6000	117U5014			103N1010	103N2010
TL5G	102G4564	103N0011	103N0018						117U6000	117U5014			103N1010	103N2011
TL5G	102G4566	103N0011	103N0018						117U6000	117U5014			103N1010	103N2010
TL5G	102G4567	103N0011	103N0018						117U6000	117U5014			103N1010	103N2010
TL4GH	102G4455								117U6000	117U5014			103N1010	103N2011
TLES6.5FT.3	102G4703	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119	117U6016	117U5014			103N1010	103N2010
TLES6.5FT.3	102G4704	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119	117U6016	117U5014			103N1010	103N2010
TLES7FT.4	102G4708	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119	117U6016	117U5014			103N1010	103N2010
TLES6.5FT.3 *	102G4709	103N0011	103N0018										103N1010	103N2010
TLES6.5FT.3	102G4724	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119	117U6016	117U5014			103N1010	103N2010

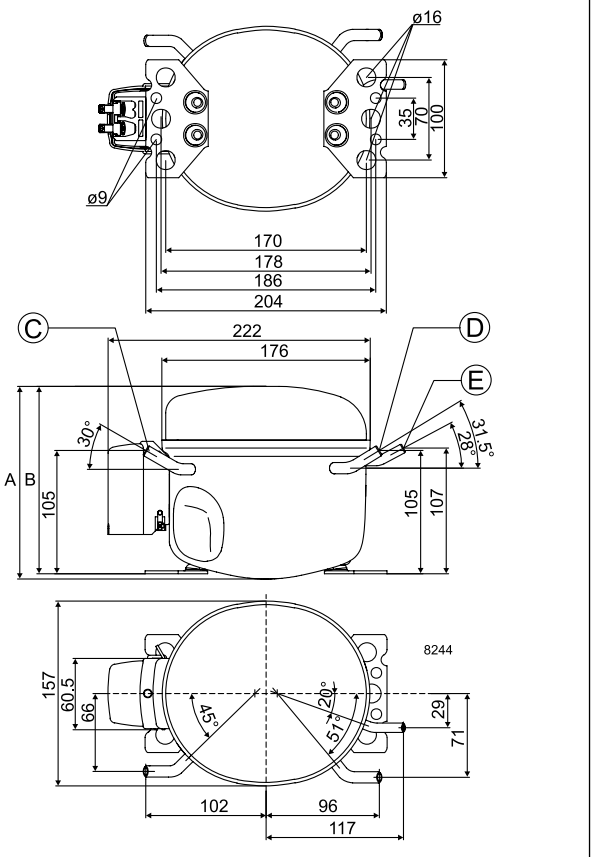
Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]					
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler	alt. connectors available	
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F		
59	0.85	138	1.33	253	1.86		1/12	2.61	198-254 V, 60 Hz *	S	163	159	6.5	6.5	4.94		X	3 | 10 | 11
59	0.85	138	1.33	253	1.86		1/12	2.61	198-254 V, 60 Hz *	S	163	159	6.2	6.2	5.0		X	3 | 10 | 11
59	0.85	138	1.33	253	1.86		1/12	2.61	198-254 V, 60 Hz *	S	163	159	6.5	6.5	5.0		X	3 | 10 | 11
68	0.93	164	1.35				1/12	3.13	198-254 V, 60 Hz *	S	163	159	6.2	6.2	5.0		X	6 | 10
68	0.93	164	1.35				1/12	3.13	198-254 V, 60 Hz *	S	163	159	6.5	6.5	5.0		X	6 | 10
68	0.93	164	1.35				1/12	3.13	198-254 V, 60 Hz	S	163	159	6.2	6.2	5.0		X	6 | 10
97	1.05	215	1.48				1/12	3.86	198-254 V, 60 Hz *	S	173	169	6.2	6.2	5.0		X	6 | 10
97	1.05	215	1.48				1/12	3.86	198-254 V, 60 Hz *	S	173	169	6.5	6.5	5.0		X	6 | 10
97	1.05	215	1.48				1/12	3.86	198-254 V, 60 Hz *	S	173	169	6.5	6.5	5.0		X	6 | 10
97	1.05	215	1.48				1/12	3.86	198-254 V, 60 Hz *	S	173	169	6.2	6.2	5.0		X	6 | 10
126	1.13	267	1.44				1/8	5.08	198-254 V, 60 Hz *	S	173	169	6.2	6.2	5.0		X	6 | 10
126	1.13	267	1.44				1/8	5.08	198-254 V, 60 Hz *	S	173	169	8.2	6.2	5.0		X	6 | 10
126	1.13	267	1.44				1/8	5.08	198-254 V, 60 Hz *	S	173	169	6.5	6.5	5.0		X	6 | 10
126	1.13	267	1.44				1/8	5.08	198-254 V, 60 Hz *	S	173	169	6.2	6.2	5.0		X	6 | 10
126	1.13	267	1.44				1/8	5.08	198-254 V, 60 Hz *	S	173	169	6.2	6.2	5.0		X	6 | 10
126	1.13	267	1.44				1/8	5.08	198-254 V, 60 Hz *	S	173	169	6.2	6.2	5.0		X	6 | 10
		213	1.42	401	1.99		1/8	3.86	198-254 V, 60 Hz *	F2	173	169	6.2	6.2	5.0			8
214	1.36					4 *	1/5	6.49	198-254 V, 60 Hz *	S	173	169	6.2	6.2	5.0		X	1 | 2
214	1.36					4 *	1/5	6.49	198-254 V, 60 Hz *	S	173	169	6.5	6.5	5.0		X	1 | 2
214	1.36					4 *	1/5	6.49	198-254 V, 60 Hz *	S	173	169	6.5	6.5	5.0			1 | 2
214	1.36					4	1/5	6.49	198-254 V, 60 Hz *	S	173	169	6.5	6.5	5.0		X	1 | 2
214	1.36					4 *	1/5	6.49	198-254 V, 60 Hz *	S	173	169	6.2	6.2	5.0		X	1 | 2

TL



TLES



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Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -25°C / 55°C		MBP rating point -10°C / 55°C		HBP rating point 5°C / 55°C							
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
NL6FT	105G6628	LBP	59	199					119	0.94	251	1.40			73	246				
NL9FT	105G6858	LBP	91	341					197	1.07	433	1.50			113	422				
NL9FT	105G6059	LBP	91	341					197	1.07	433	1.50			113	422				
NL10FT	105G6140	LBP	133	407					245	1.01	512	1.36			164	502				
NF7FX	105G6743	L/MBP	92	313	489	602			187	0.91	393	1.35	734	1.96	114	387	605	745		
NF10FX	105G6167	L/MBP	122	363	569	706			223	0.89	456	1.28	870	1.79	150	448	704	875		
NF10FX	105G6846	L/MBP	122	363	569	706			223	0.89	456	1.28	870	1.79	150	448	704	875		
NF10FX	105G6863	L/MBP	122	363	569	706			223	0.89	456	1.28	870	1.79	150	448	704	875		
NL6.1MF	105G6660	MBP	43	223	374	470			117	0.89	292	1.34	581	1.90	54	277	465	584		
NL6.1MF	105G6661	MBP	43	223	374	470			117	0.89	292	1.34	581	1.90	54	277	465	584		
NL6.1MF	105G6662	MBP	43	223	374	470			117	0.89	292	1.34	581	1.90	54	277	465	584		
NL6.1MF	105G6665	MBP	43	223	374	470			117	0.89	292	1.34	581	1.90	54	277	465	584		
NL7.3MF	105G6772	MBP	73	283	458	570			159	0.92	363	1.32	700	1.85	92	351	569	708		
NL7.3MF	105G6773	MBP	73	283	458	570			159	0.92	363	1.32	700	1.85	92	351	569	708		
NL7.3MF	105G6775	MBP	73	283	458	570			159	0.92	363	1.32	700	1.85	92	351	569	708		
NL7.3MF	105G6777	MBP	73	283	458	570			159	0.92	363	1.32	700	1.85	92	351	569	708		
NL8.4MF	105G6877	MBP	77	325	532	664			179	0.95	420	1.35	818	1.87	96	403	661	826		
NL8.4MF	105G6879	MBP	77	325	532	664			179	0.95	420	1.35	818	1.87	96	403	661	826		
NL10MF	105G6062	MBP	109	406	650	807			233	1.00	518	1.39	989	1.91	136	503	806	1001		
NL10MF	105G6155	MBP	109	406	650	807			233	1.00	518	1.39	989	1.91	136	503	806	1001		
NL10MF	105G6870	MBP	109	406	650	807			233	1.00	518	1.39	989	1.91	136	503	806	1001		
NL10MF	105G6885	MBP	109	406	650	807			233	1.00	518	1.39	989	1.91	136	503	806	1001		
NL10MF	105G6886	MBP	109	406	650	807			233	1.00	518	1.39	989	1.91	136	503	806	1001		
NL10MF	105G6196	MBP	109	406	650	807			233	1.00	518	1.39	989	1.91	136	503	806	1001		
NLE12.6MF.2	105G6387	L/MBP	239	530	869	1086			320	1.17	683	1.66			291	657	1078	1349		
NLE12.6MFT	105G6388	L/MBP	239	530	869	1086			320	1.17	683	1.66			291	657	1078	1349		

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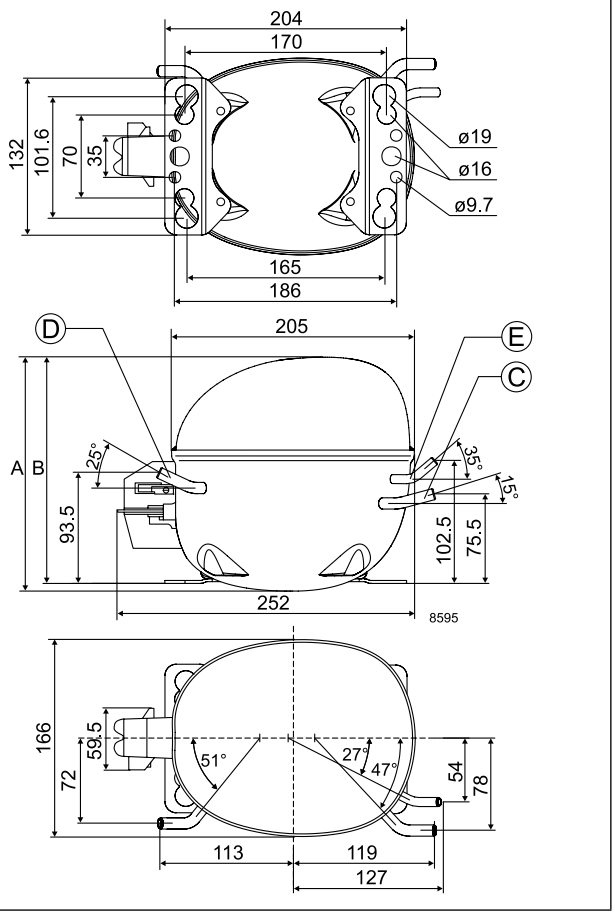
Compressor * pre-assembled start equipment	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
NL6FT	105G6628	103N0011	103N0018						117U6000	117U5015			103N1010	103N2010
NL9FT	105G6858	103N0011	103N0018						117U6015	117U5015			103N1010	103N2010
NL9FT	105G6059	103N0011	103N0018						117U6015	117U5015			103N1010	103N2010
NL10FT	105G6140	103N0011	103N0018						117U6002	117U5015			103N1010	103N2010
NF7FX	105G6743								117U4140	117U5018			117U0349	117U1023
NF10FX	105G6167								117U4139	117U5018			117U0349	117U1023
NF10FX	105G6846								117U4139	117U5018			117U0349	117U1021
NF10FX *	105G6863								117U4139	117U5018			117U0349	117U1023
NL6.1MF	105G6660	103N0011	103N0018						117U6015	117U5015			103N1010	103N2011
NL6.1MF	105G6661	103N0011	103N0018						117U6015	117U5015			103N1010	103N2011
NL6.1MF	105G6662	103N0011	103N0018						117U6015	117U5015			103N1010	103N2011
NL6.1MF	105G6665	103N0011	103N0018						117U6015	117U5015			103N1010	103N2011
NL7.3MF	105G6772	103N0011	103N0018						117U6016	117U5015			103N1010	103N2011
NL7.3MF	105G6773	103N0011	103N0018						117U6016	117U5015			103N1010	103N2011
NL7.3MF	105G6775	103N0011	103N0018						117U6016	117U5015			103N1010	103N2011
NL7.3MF	105G6777	103N0011	103N0018						117U6016	117U5015			103N1010	103N2011
NL8.4MF	105G6877	103N0011	103N0018						117U6016	117U5015			103N1010	103N2011
NL8.4MF	105G6879	103N0011	103N0018						117U6016	117U5015			103N1010	103N2011
NL10MF	105G6062	103N0011	103N0018						117U6022	117U5018			103N1010	103N2011
NL10MF	105G6155	103N0011	103N0018						117U6022	117U5038			103N1010	103N2011
NL10MF	105G6870	103N0011	103N0018						117U6022	117U5018			103N1010	103N2011
NL10MF	105G6885	103N0011	103N0018						117U6022	117U5018			103N1010	103N2011
NL10MF	105G6886	103N0011	103N0018						117U6022	117U5018			103N1010	103N2011
NL10MF	105G6196	103N0011	103N0018						117U6022	117U5018			103N1010	103N2011
NLE12.6MF.2	105G6387					103N0050		117-7119	117U6005	117U5015			103N1010	103N2010
NLE12.6MFT	105G6388					103N0050		117-7119	117U6005	117U5015			103N1010	103N2010

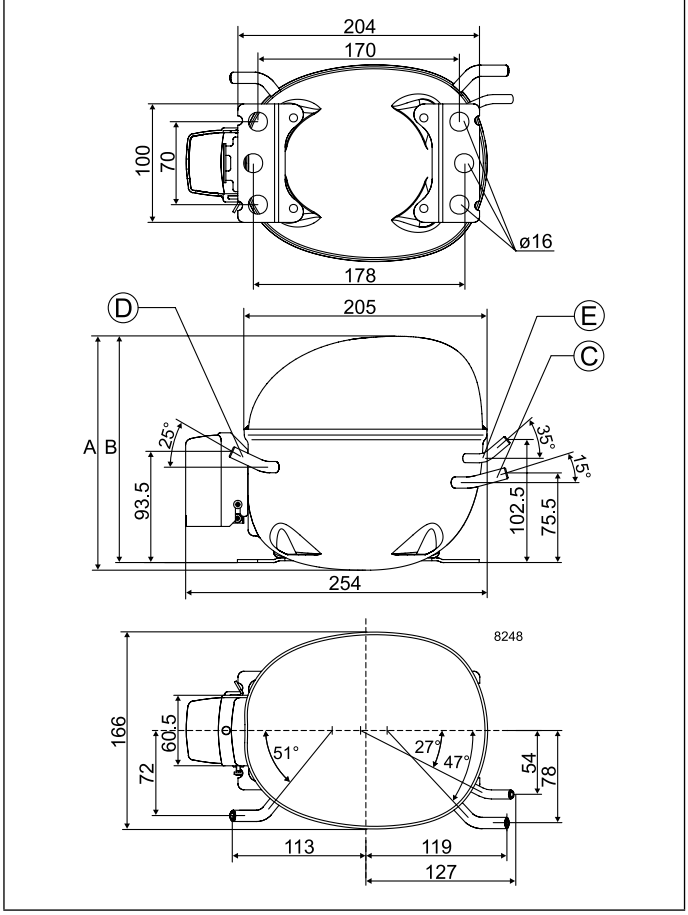
Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]				alt. connectors available	
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP						A	B	Suction C	Process D	Dis-charge E	Oil cooler F		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]										
162	1.22						1/7	6.13	198-254 V, 60 Hz *	S	197	191	6.2	6.2	5.0			2
270	1.38						1/4	8.35	198-254 V, 60 Hz *	F1	197	191	6.2	6.2	5.0		X	2 | 4
270	1.38						1/4	8.35	198-254 V, 60 Hz *	F1	197	191	6.2	6.2	5.0		X	2 | 4
330	1.28						3/10	10.09	187-253 V, 60 Hz *	S	203	197	8.2	6.5	6.5		X	2 | 4
254	1.18	503	1.63	885	2.29		3/10	7.27	198-242 V, 60 Hz	F1	203	197	8.2	6.5	6.5		X	3
300	1.14	584	1.53	1056	2.08		1/3	10.09	198-242 V, 60 Hz *	F2	203	197	8.2	6.5	6.5		X	3
300	1.14	584	1.53	1056	2.08		1/3	10.09	198-242 V, 60 Hz *	F2	203	197	8.2	6.5	6.5		X	3
300	1.14	584	1.53	1056	2.08		1/3	10.09	198-242 V, 60 Hz *	F2	203	197	8.2	6.5	6.5		X	3
165	1.17	383	1.62	707	2.23		1/4	6.13	187-254 V, 60 Hz *	S	190	184	8.2	6.2	6.2		X	3
165	1.17	383	1.62	707	2.23		1/4	6.13	187-254 V, 60 Hz *	S	190	184	8.2	6.2	6.2		X	3
165	1.17	383	1.62	707	2.23		1/4	6.13	187-254 V, 60 Hz *	S	190	184	8.2	6.5	6.5		X	3
165	1.17	383	1.62	707	2.23		1/4	6.13	187-254 V, 60 Hz *	S	190	184	8.2	6.2	6.2		X	3
221	1.19	471	1.59	848	2.16		1/4	7.27	187-254 V, 60 Hz *	F1	197	191	8.2	6.2	6.2		X	3
221	1.19	471	1.59	848	2.16		1/4	7.27	187-254 V, 60 Hz *	F1	197	191	9.63	6.5	6.5		X	3
221	1.19	471	1.59	848	2.16		1/4	7.27	187-254 V, 60 Hz *	F1	197	191	8.2	6.2	6.2		X	3
221	1.19	471	1.59	848	2.16		1/4	7.27	187-254 V, 60 Hz *	F1	197	191	8.2	6.2	6.2		X	3
249	1.23	546	1.62	993	2.19		3/10	8.35	187-254 V, 60 Hz *	F1	197	191	8.2	6.2	6.2		X	3
249	1.23	546	1.62	993	2.19		3/10	8.35	187-254 V, 60 Hz *	F1	197	191	8.2	6.2	6.2		X	3
320	1.29	668	1.66	1197	2.23		3/8	10.09	187-254 V, 60 Hz *	F1	203	197	9.7	6.5	6.5		X	3
320	1.29	668	1.66	1197	2.23		3/8	10.09	187-254 V, 60 Hz *	F1	203	197	8.2	6.2	6.2		X	3
320	1.29	668	1.66	1197	2.23		3/8	10.09	187-254 V, 60 Hz *	F1	203	197	8.2	6.5	6.5		X	3
320	1.29	668	1.66	1197	2.23		3/8	10.09	187-254 V, 60 Hz *	F1	203	197	8.2	6.2	6.2		X	3
320	1.29	668	1.66	1197	2.23		3/8	10.09	187-254 V, 60 Hz *	F1	203	197	9.7	6.5	6.5		X	3
320	1.29	668	1.66	1197	2.23		3/8	10.09	187-254 V, 60 Hz *	F1	203	197	9.7	6.5	6.5		X	3
428	1.50	889	2.00			*	3/8	12.55	198-254 V, 60 Hz *	F2	203	197	8.2	6.2	6.2			3 | 10 | 11
428	1.50	889	2.00			*	3/8	12.55	198-254 V, 60 Hz *	F2	203	197	8.2	6.2	6.2			3 | 10 | 11

NF



NL (NLE similar)



R134a • 220-240 V • 60 Hz • F-Series

Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -25°C / 55°C		MBP rating point -10°C / 55°C		HBP rating point 5°C / 55°C							
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
FR6G	103G6660	L/M/HBP		199	345				92	0.78	266	1.35				247	427			
FR7.5G	103G6680	L/M/HBP		228	385				112	0.81	300	1.31				282	476			
FR7.5G	103G6681	L/M/HBP		228	385				112	0.81	300	1.31				282	476			
FR7.5G	103G6690	L/M/HBP		228	385				112	0.81	300	1.31				282	476			
FR8.5G	103G6780	L/M/HBP		263	441				138	0.85	345	1.26				326	547			
FR8.5G	103G6790	L/M/HBP		263	441				138	0.85	345	1.26				326	547			
FR10G	103G6880	L/M/HBP		292	486				153	0.79	381	1.21				362	601			
FR10G	103G6881	L/M/HBP		292	486				153	0.79	381	1.21				362	601			
FR10G	103G6890	L/M/HBP		292	486				153	0.79	381	1.21				362	601			
FR7GH	103G6683	HBP		225	379	482	753	924			294	1.35	607	1.91		279	470	600	938	1153
FR7GH	103G6692	HBP		225	379	482	753	924			294	1.35	607	1.91		279	470	600	938	1153

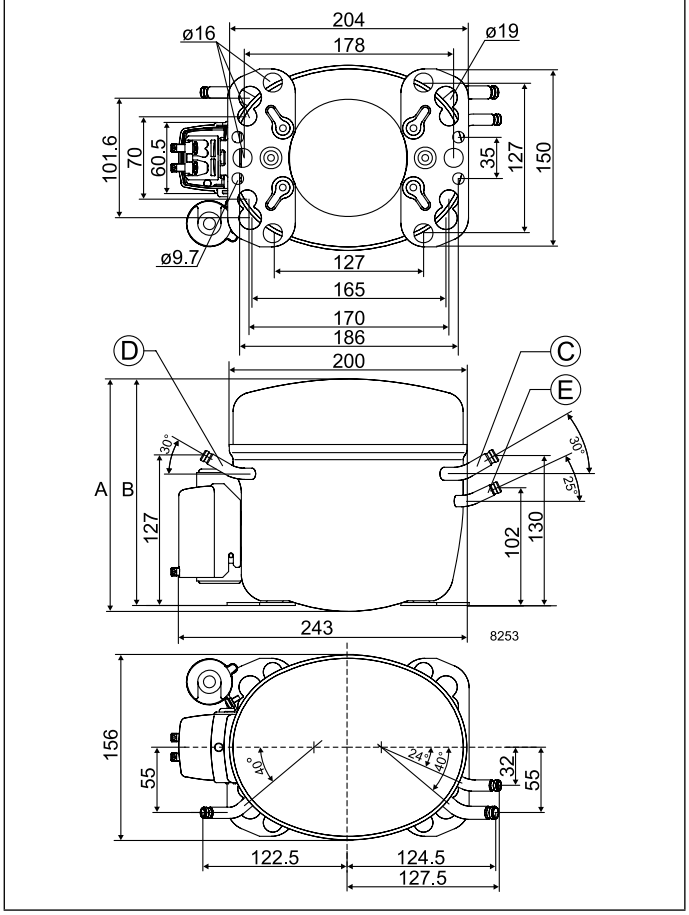
R134a • 220-240 V • 60 Hz • F-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
FR6G	103G6660	103N0011	103N0018						117U6000	117U5015			103N1010	103N2010
FR7.5G	103G6680	103N0011	103N0018						117U6001	117U5015			103N1010	103N2010
FR7.5G	103G6681	103N0011	103N0018						117U6001	117U5015			103N1010	103N2010
FR7.5G	103G6690	103N0011	103N0018						117U6001	117U5015			103N1010	103N2010
FR8.5G	103G6780	103N0011	103N0018						117U6015	117U5015			103N1010	103N2010
FR8.5G	103G6790	103N0011	103N0018						117U6015	117U5015			103N1010	103N2010
FR10G	103G6880	103N0011	103N0018						117U6010	117U5015			103N1010	103N2010
FR10G	103G6881	103N0011	103N0018						117U6010	117U5015			103N1010	103N2010
FR10G	103G6890	103N0011	103N0018						117U6010	117U5015			103N1010	103N2010
FR7GH	103G6683								117U6016	117U5015			103N1010	103N2011
FR7GH	103G6692								117U6016	117U5015			103N1010	103N2011

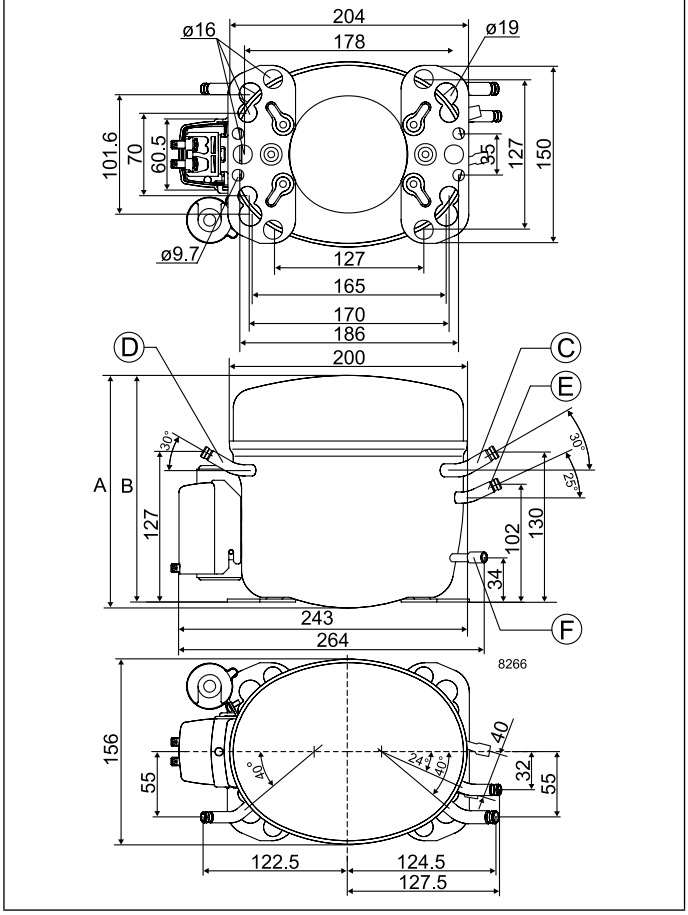
Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]				alt. connectors available	
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP						A	B	Suction C	Process D	Dis-charge E	Oil cooler F		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]										
135	1.06	351	1.63				1/8	6.23	198-254 V, 60 Hz *	F1	196	191	8.2	6.2	6.2			6 | 10
161	1.09	392	1.57				1/7	6.93	198-254 V, 60 Hz *	F1	196	191	8.2	6.2	6.2		X	4 | 6 | 10
161	1.09	392	1.57				1/7	6.93	198-254 V, 60 Hz *	F1	196	191	8.2	6.5	6.5		X	4 | 6 | 10
161	1.09	392	1.57				1/7	6.93	198-254 V, 60 Hz *	F1	196	191	8.2	6.2	6.2	6.2	X	4 | 6 | 10
194	1.11	450	1.50				1/6	7.95	198-254 V, 60 Hz *	F1	196	191	8.2	6.2	6.2			4 | 6 | 10
194	1.11	450	1.50				1/6	7.95	198-254 V, 60 Hz *	F1	196	191	8.2	6.2	6.2	6.2	X	4 | 6 | 10
215	1.05	496	1.44				1/5	9.05	198-254 V, 60 Hz *	F1	196	191	8.2	6.2	6.2		X	4 | 6 | 10
215	1.05	496	1.44				1/5	9.05	198-254 V, 60 Hz *	F1	196	191	8.2	6.5	6.5		X	4 | 6 | 10
215	1.05	496	1.44				1/5	9.05	198-254 V, 60 Hz *	F1	196	191	8.2	6.2	6.2	6.2	X	4 | 6 | 10
		386	1.62	742	2.26		1/4	6.93	198-254 V, 60 Hz *	F2	196	191	8.2	6.2	8.2			8
		386	1.62	742	2.26		1/4	6.93	198-254 V, 60 Hz *	F1	196	191	8.2	6.2	8.2	8.2	X	8

FR



FR (with oil cooler connector)



R134a • 220-240 V • 60 Hz • S-Series

Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -25°C / 55°C		MBP rating point -10°C / 55°C		HBP rating point 5°C / 55°C							
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
SC10G	104G8000	L/M/HBP	27	314	569				132	0.63	432	1.27			35	390	705			
SC12G	104G8224	L/M/HBP	74	406	704				203	0.77	542	1.31			93	504	875			
SC12G	104G8240	L/M/HBP	74	406	704				203	0.77	542	1.31			93	504	875			
SC12G	104G8243	L/M/HBP	74	406	704				203	0.77	542	1.31			93	504	875			
SC12G	104G8244	L/M/HBP	74	406	704				203	0.77	542	1.31			93	504	875			
SC12G	104G8245	MBP		370	696	907	1449				519	1.34	1157	2.07		461	865	1128	1805	
SC12G	104G8246	L/M/HBP	74	406	704				203	0.77	542	1.31			93	504	875			
SC12G	104G8250	L/M/HBP	74	406	704				203	0.77	542	1.31			93	504	875			
SC12G	104G8253	L/M/HBP	74	406	704				203	0.77	542	1.31			93	504	875			
SC15G	104G8520	L/M/HBP		515	863				262	0.79	677	1.34				639	1070			
SC15G	104G8525	L/M/HBP		515	863				262	0.79	677	1.34				639	1070			
SC15G	104G8526	MBP		468	834	1049	1567				641	1.37	1292	2.01		583	1035	1303	1953	
SC15G	104G8529	L/M/HBP		515	863				262	0.79	677	1.34				639	1070			
SC18G	104G8820	L/M/HBP		623	1021				338	0.88	807	1.31				771	1264			
SC18G	104G8822	L/M/HBP		623	1021				338	0.88	807	1.31				771	1264			
SC18G	104G8823	MBP		573	955	1207	1858				745	1.46	1506	2.13		711	1186	1500	2315	
SC18G	104G8824	L/M/HBP		623	1021				338	0.88	807	1.31				771	1264			
SC18G	104G8825	L/M/HBP		623	1021				338	0.88	807	1.31				771	1264			
SC18G	104G8830	L/M/HBP		623	1021				338	0.88	807	1.31				771	1264			
SC18G	104G8838	L/M/HBP		623	1021				338	0.88	807	1.31				771	1264			
SC21G	104G8124	L/M/HBP		655	1145				303	0.80	880	1.36				815	1419			
SC21G	104G8140	L/M/HBP		655	1145				303	0.80	880	1.36				815	1419			
SC21G	104G8143	L/M/HBP		655	1145				303	0.80	880	1.36				815	1419			
SC21G	104G8145	L/M/HBP		655	1145				303	0.80	880	1.36				815	1419			

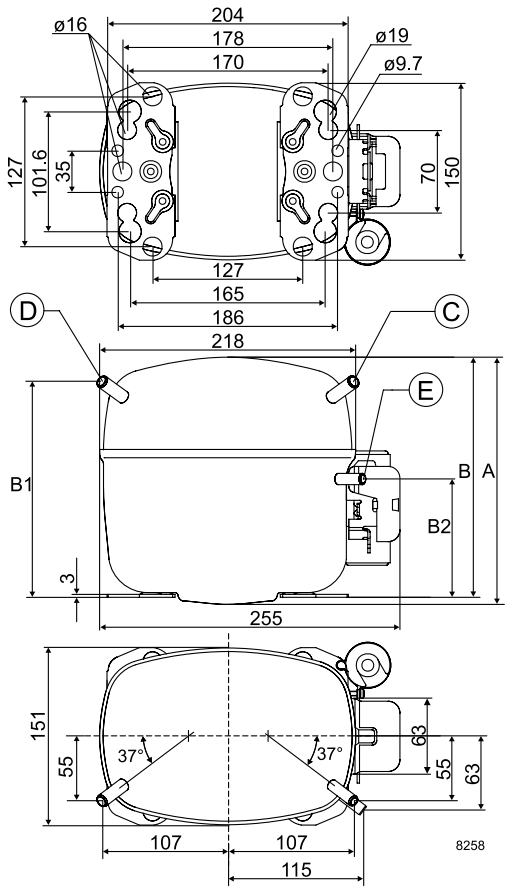
R134a • 220-240 V • 60 Hz • S-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
SC10G	104G8000	103N0011							117U6002	117U5017			103N1004	103N2009
SC12G	104G8224	103N0011							117U6003	117U5017			103N1004	103N2009
SC12G	104G8240	103N0011							117U6003	117U5017			103N1004	103N2009
SC12G	104G8243	103N0011							117U6003	117U5017			103N1004	103N2009
SC12G	104G8244	103N0011							117U6003	117U5017			103N1004	103N2008
SC12G	104G8245								117U6011	117U5017			103N1004	103N2008
SC12G	104G8246	103N0011							117U6003	117U5017			103N1004	103N2009
SC12G	104G8250	103N0011							117U6003	117U5017			103N1004	103N2009
SC12G	104G8253	103N0011							117U6003	117U5017			103N1004	103N2009
SC15G	104G8520								117U6005	117U5017			103N1004	103N2009
SC15G	104G8525								117U6005	117U5017			103N1004	103N2009
SC15G	104G8526								117U6011	117U5017			103N1004	103N2008
SC15G	104G8529								117U6005	117U5017			103N1004	103N2009
SC18G	104G8820								117U6019	117U5017			103N1004	103N2009
SC18G	104G8822								117U6019	117U5017			103N1004	103N2009
SC18G	104G8823									117U5373	117-7039		103N1004	103N2008
SC18G	104G8824								117U6019	117U5017			103N1004	103N2009
SC18G	104G8825								117U6019	117U5017			103N1004	103N2008
SC18G	104G8830								117U6019	117U5017			103N1004	103N2009
SC18G	104G8838								117U6019	117U5017			103N1004	103N2009
SC21G	104G8124									117U5373	117-7029		103N1004	103N2009
SC21G	104G8140									117U5373	117-7029		103N1004	103N2009
SC21G	104G8143						117-7121		117-7427	117U5373	117-7039		103N1004	103N2008
SC21G	104G8145									117U5373	117-7029		103N1004	103N2009

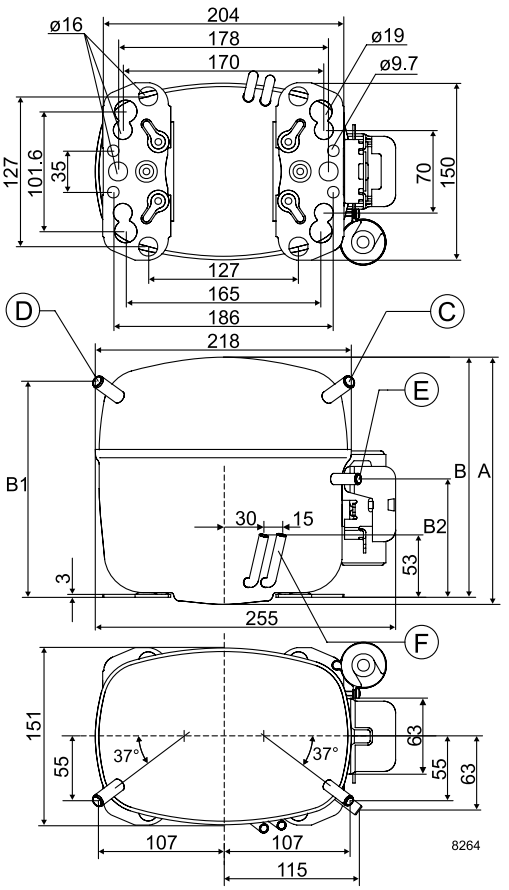
Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]				alt. connectors available	
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F		
197	0.87	577	1.59				1/5	10.29	198-254 V, 60 Hz *	F2	199	193	8.2	6.2	6.2			3
289	1.03	717	1.60				1/4	12.87	198-254 V, 60 Hz *	F2	209	203	10.2	6.5	6.5		X	3
289	1.03	717	1.60				1/4	12.87	198-254 V, 60 Hz *	F2	209	203	8.2	6.2	6.2		X	3
289	1.03	717	1.60				1/4	12.87	198-254 V, 60 Hz *	F2	209	203	10.2	6.5	6.5		X	3
289	1.03	717	1.60				1/4	12.87	198-254 V, 60 Hz *	F2	209	203	8.2	6.2	6.2		X	3
		702	1.65	1422	2.45		1/2	12.87	187-254 V, 60 Hz	F2	209	203	10.2	6.5	6.5		X	3
289	1.03	717	1.60				1/4	12.87	198-254 V, 60 Hz *	F2	209	203	10.2	6.2	6.2		X	3
289	1.03	717	1.60				1/4	12.87	198-254 V, 60 Hz *	F1	209	203	8.20	6.2	6.2	6.2	X	3
289	1.03	717	1.60				1/4	12.87	198-254 V, 60 Hz *	F2	209	203	8.20	6.5	6.5		X	3
371	1.07	883	1.64				1/3	15.28	198-254 V, 60 Hz *	F2	209	203	10.2	6.2	6.2		X	3
371	1.07	883	1.64				1/3	15.28	198-254 V, 60 Hz *	F2	209	203	10.2	6.5	6.5		X	3
		850	1.67	1565	2.38		1/2	15.28	187-254 V, 60 Hz	F2	209	203	10.2	6.5	6.5		X	3
371	1.07	883	1.64				1/3	15.28	198-254 V, 60 Hz *	F2	209	203	10.2		6.2		X	3
468	1.13	1045	1.58				2/5	17.69	198-254 V, 60 Hz *	F2	219	213	10.2	6.2	6.2		X	3
468	1.13	1045	1.58				2/5	17.69	198-254 V, 60 Hz *	F2	219	213	10.2	6.5	6.5		X	3
		976	1.76	1838	2.51	10	3/5	17.69	187-254 V, 60 Hz	F2	219	213	10.2	6.5	6.5		X	3
468	1.13	1045	1.58				2/5	17.69	198-254 V, 60 Hz *	F2	219	213	10.2	6.5	6.5		X	3
468	1.13	1045	1.58				2/5	17.69	198-254 V, 60 Hz *	F2	219	213	10.2	6.2	6.2		X	3
468	1.13	1045	1.58				2/5	17.69	198-254 V, 60 Hz *	F2	219	213	10.2	6.2	6.2	6.2	X	3
468	1.13	1045	1.58			*	2/5	17.69	198-254 V, 60 Hz *	F2	219	213	10.2	6.2	6.2		X	3
446	1.08	1164	1.66			10	2/5	20.95	198-254 V, 60 Hz *	F2	219	213	10.2	6.5	6.5		X	3
446	1.08	1164	1.66			10	2/5	20.95	198-254 V, 60 Hz *	F2	219	213	10.2	6.2	6.2		X	3
446	1.08	1164	1.66			10	2/5	20.95	198-254 V, 60 Hz	F2	219	213	10.2	6.2	6.2		X	3
446	1.08	1164	1.66			10	2/5	20.95	198-254 V, 60 Hz *	F2	219	213	8.0		6.2		X	3

SC



SC (with oil cooler connector)



R134a • 220-240 V • 60 Hz • S-Series

Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -25°C / 55°C		MBP rating point -10°C / 55°C		HBP rating point 5°C / 55°C							
			-35	-15	-5	0	10	15	Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]						
SC12FT	104G8205	LBP	125	477	761				272	0.91	608	1.33			156	592	946			
SC15FT	104G8505	LBP	154	571	904				330	0.92	724	1.35			192	708	1123			
SC15FT	104G8506	LBP	154	571	904				330	0.92	724	1.35			192	708	1123			
SC18FTX	104G8805	LBP	187	675	1071				390	0.93	857	1.38			233	837	1331			
SC18FTX	104G8806	LBP	187	675	1071				390	0.93	857	1.38			233	837	1331			
SC21FTX	104G8106	LBP	240	800	1262				470	0.99	1012	1.43			298	990	1563			
SC10GH	104G8041	HBP		318	541	683	1042	1265			421	1.24	849	1.71		399	675	852	1303	1584
SC12GH	104G8261	HBP		371	680	880	1393	1714			511	1.31	1116	2.01		461	844	1094	1735	2138
SC15GH	104G8561	HBP		425	776	1012	1629	2019			582	1.37	1295	2.03		525	963	1257	2029	2519
SC15GH	104G8573	HBP		425	776	1012	1629	2019			582	1.37	1295	2.03		525	963	1257	2029	2519
SC18GH	104G8861	HBP		573	955	1207	1858	2268			745	1.46	1506	2.13		711	1186	1500	2315	2829
SC18GH	104G9851	HBP		573	955	1207	1858	2268			745	1.46	1506	2.13		711	1186	1500	2315	2829
SC18MFX	104G8804	MBP		668	1067	1322	1968				851	1.45	1621	2.03		826	1322	1640	2447	

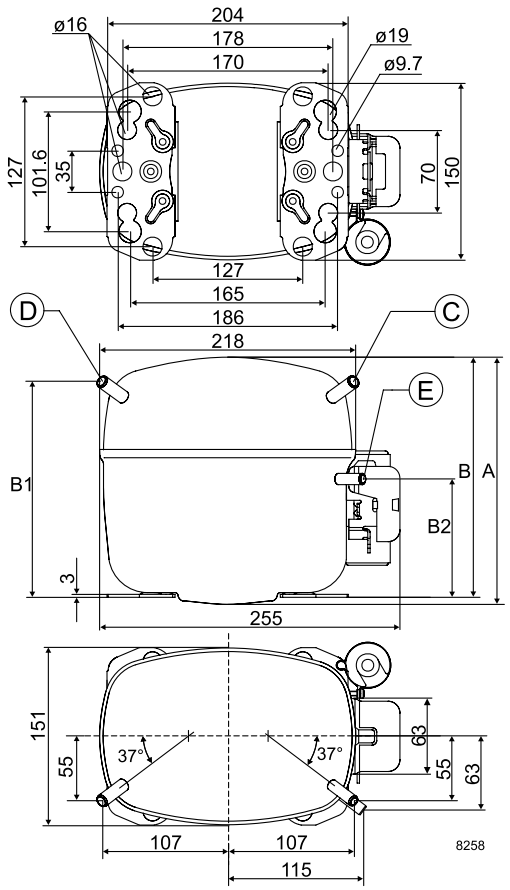
R134a • 220-240 V • 60 Hz • S-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
SC12FT	104G8205	103N0011							117U6003	117U5017			103N1004	103N2009
SC15FT	104G8505	103N0011							117U6005	117U5017			103N1004	103N2009
SC15FT	104G8506	103N0011							117U6005	117U5017			103N1004	103N2009
SC18FTX	104G8805								117U6019	117U5017			103N1004	103N2009
SC18FTX	104G8806								117U6019	117U5017			103N1004	103N2009
SC21FTX	104G8106									117U5373	117-7039		103N1004	103N2008
SC10GH	104G8041								117U6005	117U5017			103N1004	103N2008
SC12GH	104G8261								117U6011	117U5017			103N1004	103N2008
SC15GH	104G8561								117U6011	117U5017			103N1004	103N2008
SC15GH	104G8573								117U6011	117U5017			103N1004	103N2008
SC18GH	104G8861									117U5373	117-7039		103N1004	103N2008
SC18GH	104G9851									117U5373	117-7039		103N1004	103N2008
SC18MFX	104G8804								117U6019	117U5017	117-7027		103N1004	103N2008

Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]				alt. connectors available	
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F		
375	1.18	784	1.59				1/3	12.87	198-254 V, 60 Hz *	F1	209	203	8.2	6.2	6.2			4 | 6 | 10
453	1.20	932	1.62				2/5	15.28	198-254 V, 60 Hz *	F2	209	203	10.2	6.2	6.2		X	4 | 10
453	1.20	932	1.62				2/5	15.28	198-254 V, 60 Hz *	F2	209	203	10.2	6.5	6.5		X	4 | 10
535	1.21	1104	1.67				1/2	17.69	198-254 V, 60 Hz *	F2	219	213	10.2	6.2	6.2		X	4 | 10
535	1.21	1104	1.67				1/2	17.69	198-254 V, 60 Hz *	F2	219	213	10.2	6.5	6.5		X	4 | 10
641	1.29	1298	1.69			10	3/5	20.95	187-254 V, 60 Hz	F2	219	213	10.2	6.2	6.2			4 | 10
		555	1.49	1038	2.02		3/10	10.29	198-254 V, 60 Hz *	F2	209	203	10.2	6.2	8.2			8
		687	1.62	1370	2.38		2/5	12.87	198-254 V, 60 Hz *	F2	209	203	10.2	6.2	8.2			8
		782	1.67	1594	2.39	10	1/2	15.28	198-254 V, 60 Hz *	F2	209	203	10.2	6.2	8.2		X	8
		782	1.67	1594	2.39	10	1/2	15.28	198-254 V, 60 Hz *	F2	209	203	10.2	6.2	8.2		X	8
		976	1.76	1838	2.51	10	3/5	17.69	198-254 V, 60 Hz *	F2	219	213	10.2	6.2	8.2			8
		976	1.76	1838	2.51	10	3/5	17.69	198-254 V, 60 Hz *	F2	219	213	10.2	6.2	8.2			8
528	1.25	1095	1.75	1960	2.37	10 *	3/5	17.69	187-254 V, 60 Hz *	F2	219	213	10.2	6.2	6.2			3 | 10 | 11

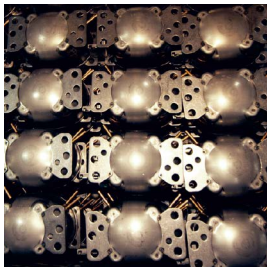
SC



WITH MORE THAN 60 YEARS OF EXPERIENCE IN COMPRESSOR TECHNOLOGY AND HIGHLY DEDICATED EMPLOYEES, OUR FOCUS IS ON DEVELOPING AND APPLYING ADVANCED COMPRESSOR TECHNOLOGIES TO ACHIEVE STANDARD SETTING PERFORMANCE FOR LEADING PRODUCTS AND BUSINESSES AROUND THE WORLD.

R600a

208-230 V | 60 Hz
220-240 V | 60 Hz



Chemical formula
C_4H_{10}

Typelabel
Typelabel stripe colour: Red
Typelabel colour: Yellow

Applications
LBP: Low Back Pressure
MBP: Medium Back Pressure
HBP: High Back Pressure

Motor types
RSIR: Resistant Start Induction Run
RSCR: Resistant Start Capacitor Run
CSIR: Capacitor Start Induction Run
CSR: Capacitor Start Run

Compressor cooling
S = Static cooling normally sufficient
O = Oil cooling
F_1 = Fan cooling 1.5 m/s (compressor compartment temp. equal to ambient temperature)
F_2 = Fan cooling 3.0 m/s necessary

Starting devices
LST: Low Starting Torque
LST is used with capillary tube control and pressure equalizing. (Pressure equalizing may exceed 10 minutes). The PTC starting device requires 5 minutes cooling before each start.
To fulfil the requirements of EN 60355-2-34 the protection screen 103N0476 must be applied to the PTC starting device.
HST: High Starting Torque
HST consisting of relay and starting capacitor is used for expansion valve control or for capillary tube control without pressure equalizing.
ePTC: Electronically controlled PTC
- Compressor restart possible after a few seconds
- Operational wattage loss reduced by 2 watt
- PTC protection screen not needed (surface temp. < 82 °C)
- Temperature resistant up to min. +60 °C
- Additonal information, code numbers: refer to page 18

Test conditons
Electrical equipment being used is listed in our data sheets

1 Watt = 0.86 kcal/h
1 Watt = 3.41 Btu/h


SECOP
105H
6500

R600a • 220-240 V • 60 Hz • N-Series

Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -25°C / 55°C		MBP rating point -10°C / 55°C		HBP rating point 5°C / 55°C							
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
NLE9KTK	105H6071	LBP	66	200					118	1.03	255	1.57			80	244				
NLE9KTK	105H6848	LBP	66	200					118	1.03	255	1.57			80	244				
NLE11KTK	105H6948	LBP	84	239					147	1.01	303	1.45			102	291				

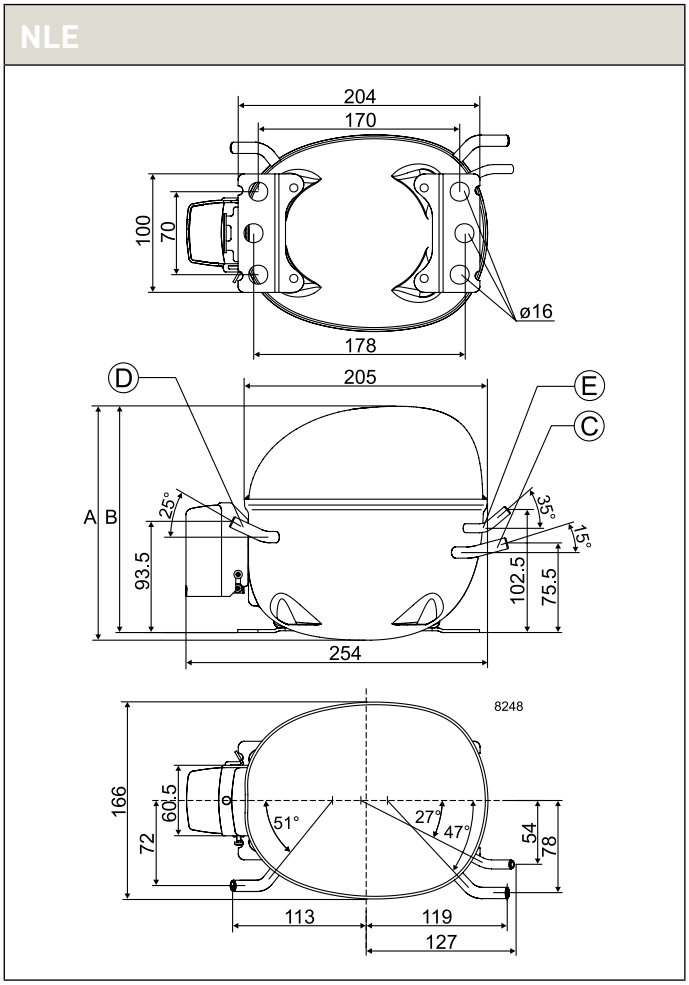
R600a • 220-240 V • 60 Hz • N-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
NLE9KTK	105H6071	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
NLE9KTK	105H6848	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
NLE11KTK	105H6948	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010

Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]				alt. connectors available	
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F		
158	1.33					*	1/8	8.35	187-254 V. 60 Hz *	S	197	190	6.2	6.2	5.0		X	2
158	1.33					*	1/8	8.35	187-254 V. 60 Hz *	S	197	190	6.2	6.2	5.0		X	2
194	1.29					*	1/6	11.15	187-254 V. 60 Hz *	S	197	190	6.2	6.2	5.0			2

NLE



R600a • 208-230 V • 60 Hz • KAPPA Tropical

Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -25°C / 55°C		MBP rating point -10°C / 55°C		HBP rating point 5°C / 55°C							
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
HXK80AT	CDO00135	LBP	69	205					126	1.39	253	1.88			85	249				
HXK87AT	CDO00136	LBP	87	224					139	1.38	278	1.98			107	274				
HXK95AT	CDO00137	LBP	95	245					151	1.39	304	1.98			117	299				
HXK12AT	CDO00138	LBP	112	288					178	1.37	359	1.95			137	350				

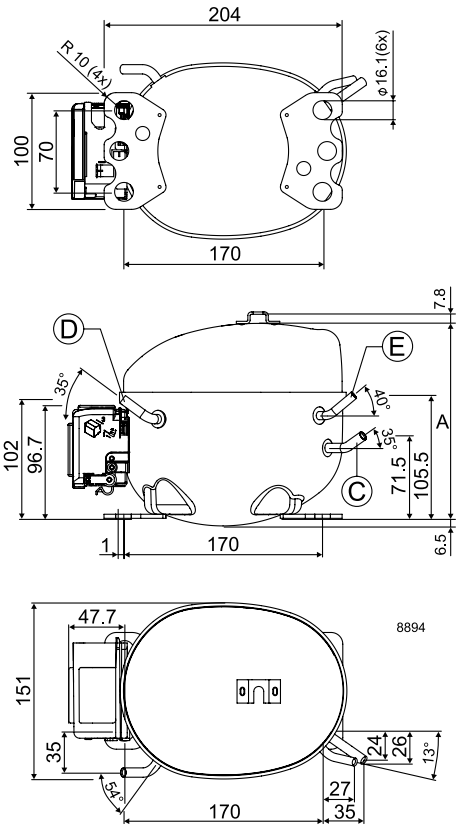
R600a • 208-230 V • 60 Hz • KAPPA Tropical • Electrical Equipment • Spare parts • Accessories

Compressor	Code number	Run capacitor	Terminal board		Terminal board	Cable clamp	Cover	Evaporation tray	All-in-one equipment
		• optional • compulsory *	• PTC • external protector		• ePTC • external protector	screws not included	V0 material optional	plastic	• cover • cable clamp + screws • earthing screw
		Spades	Spades		Spades				
		4.8 | 6.3 mm	4.8 mm	6.3 mm	4.8 mm				
HXK80AT	CDO00135	4 µF *	ZCF5	DCF5		113410_	157595_	113188_	161680_
HXK87AT	CDO00136	4 µF *	ZCFC	DCFC		113410_	157595_	113188_	161680_
HXK95AT	CDO00137	4 µF *	ZCFP	DCFP		113410_	157595_	113188_	161680_
HXK12AT	CDO00138	4 µF *	ZCFP	DCFP		113410_	157595_	113188_	161680_

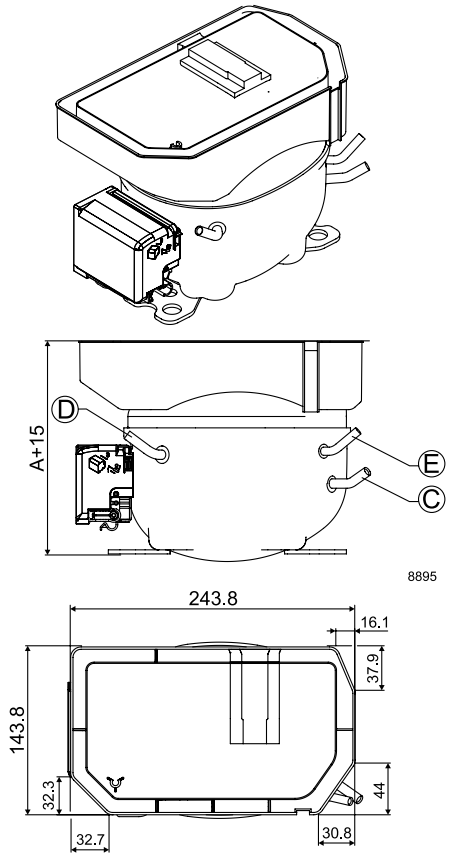
Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions					alt. connectors available	Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location / diameter [mm]				
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Discharge		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C (I.D.)	D (O.D.)	E (I.D.)		
168	1.77					4 *	1/8	8.10	170-264 V, 60 Hz *	S	167		6.15	6.00	5.15		1 | 2 | 6
184	1.77					4 *	1/7	8.80	170-264 V, 60 Hz *	S	167		6.15	6.00	5.15		1 | 2 | 6
201	1.77					4 *	1/6	9.60	170-264 V, 60 Hz *	S	167		6.15	6.00	5.15		1 | 2 | 6
236	1.77					*	1/5	11.10	170-264 V, 60 Hz *	S	167		6.15	6.00	5.15		1 | 2 | 6

KAPPA Tropical



KAPPA Tropical • Evaporation tray



R600a • 208-230 V • 60 Hz • DELTA

Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF LBP rating point -25°C / 55°C		CECOMAF MBP rating point -10°C / 55°C		CECOMAF HBP rating point 5°C / 55°C		ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
HTD30AG	CDO00118	LBP	17.4	67	107				38	1.10	85	1.78			21	82	131			

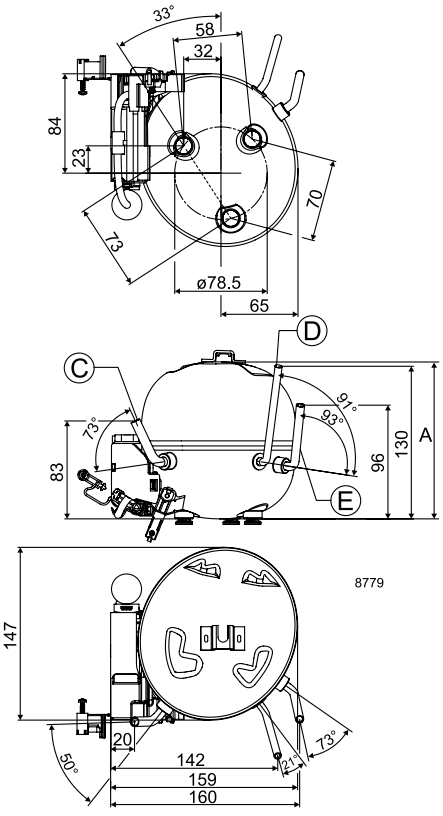
R600a • 208-230 V • 60 Hz • DELTA • Electrical Equipment • Spare parts • Accessories

Compressor pre-assembled start equipment	Code number	Run capacitor	Terminal board		Small cover	Adapter plate	Evaporation tray
		• optional • compulsory *	• PTC • external protector	• ePTC • external protector	• compulsory • delivered separately	• innovative fixation system • faster and easier assembly	plastic
		Spades	Spades	Spades			
		4.8 mm	4.8 mm	4.8 mm			
HTD30AG	CDO00118	2 µF	BNE6		160943_	157008_	162531_

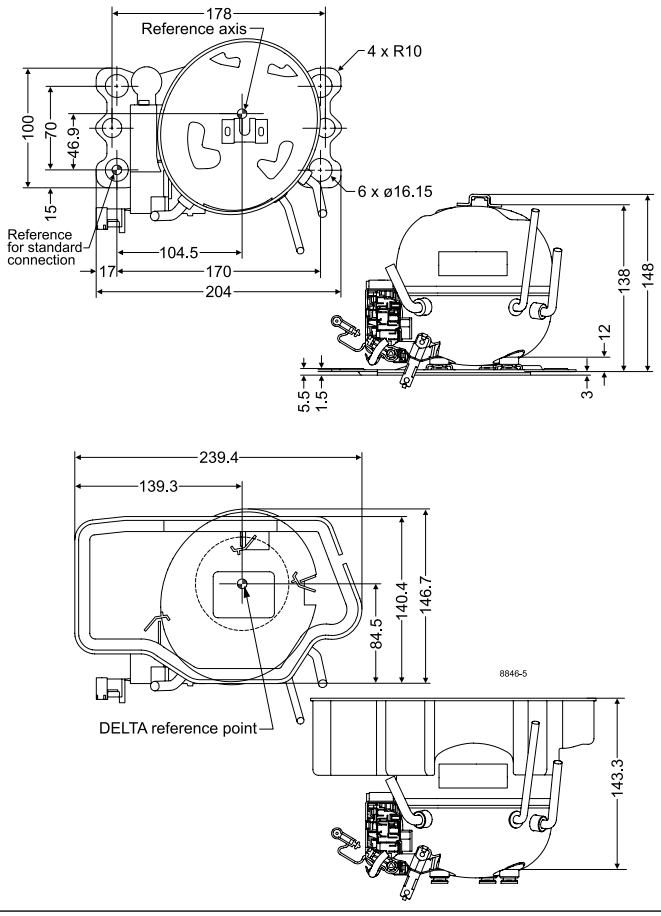
Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions						Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location / diameter [mm]			alt. connectors available	
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C (I.D.)	D (O.D.)	E (I.D.)		
52	1.45	110	2.13			2 *	1/12	3.00	187-264 V, 60 Hz *	S	133		6.2	6.0	5.0		1 | 2 | 5

DELTA



DELTA • Evaporation tray • Adapter plate



WITH MORE THAN 60 YEARS OF EXPERIENCE IN COMPRESSOR TECHNOLOGY AND HIGHLY DEDICATED EMPLOYEES, OUR FOCUS IS ON DEVELOPING AND APPLYING ADVANCED COMPRESSOR TECHNOLOGIES TO ACHIEVE STANDARD SETTING PERFORMANCE FOR LEADING PRODUCTS AND BUSINESSES AROUND THE WORLD.

R404A/R507

220-240 V | 60 Hz

Chemical formula
R404A: CHF_2CF_3 / CH_3CF_3 / CH_2FCF_3
R507: CHF_2CF_3 / CH_3CF_3

Typelabel
Typelabel stripe colour: Lilac
Typelabel colour: Yellow

Applications
LBP: Low Back Pressure
MBP: Medium Back Pressure
HBP: High Back Pressure

Motor types
RSIR: Resistant Start Induction Run
RSCR: Resistant Start Capacitor Run
CSIR: Capacitor Start Induction Run
CSR: Capacitor Start Run

Compressor cooling
S = Static cooling normally sufficient
O = Oil cooling
F_1 = Fan cooling 1.5 m/s (compressor compartment temp. equal to ambient temperature)
F_2 = Fan cooling 3.0 m/s necessary

Starting devices
LST: Low Starting Torque
LST is used with capillary tube control and pressure equalizing. (Pressure equalizing may exceed 10 minutes). The PTC starting device requires 5 minutes cooling before each start.
To fulfil the requirements of EN 60355-2-34 the protection screen 103N0476 must be applied to the PTC starting device.
HST: High Starting Torque
HST consisting of relay and starting capacitor is used for expansion valve control or for capillary tube control without pressure equalizing.
ePTC: Electronically controlled PTC
- Compressor restart possible after a few seconds
- Operational wattage loss reduced by 2 watt
- PTC protection screen not needed (surface temp. < 82 °C)
- Temperature resistant up to min. +60 °C
- Additonal information, code numbers: refer to page 18

Test conditons
Electrical equipment being used is listed in our data sheets

1 Watt = 0.86 kcal/h
1 Watt = 3.41 Btu/h

R404A/R507 • 220-240 V • 60 Hz • N-Series

Compressor	Code number	Application	EN 12900 Capacity [W] Tc=45°C, Tliq=45°C, Tsuc=32°C Evaporating temperature [°C]						EN 12900						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -35°C / 40°C		MBP rating point -10°C / 45°C		HBP rating point 5°C / 50°C							
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
NL6.1MLX	105F3610	MBP		507	771	932					593	1.61	938	1.93		543	844	1031		
NL6.1MLX	105F3611	MBP		507	771	932					593	1.61	938	1.93		543	844	1031		
NF7MLX	105F3720	MBP		618	940	1137					724	1.53	1144	1.76		662	1030	1257		
NF7MLX	105F3721	MBP		618	940	1137					724	1.53	1144	1.76		662	1030	1257		

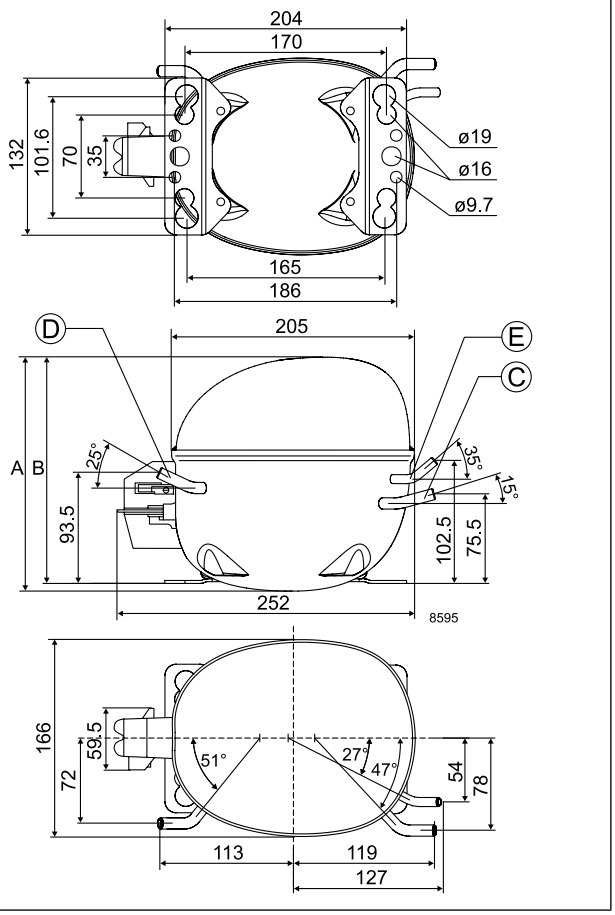
R404A/R507 • 220-240 V • 60 Hz • N-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
NL6.1MLX	105F3610								117U6022	117U5015			103N1010	103N2011
NL6.1MLX	105F3611								117U6022	117U5015			103N1010	103N2011
NF7MLX	105F3720								117U4139	117U5018			117U0349	117U1021
NF7MLX	105F3721								117U4139	117U5018			117U0349	117U1021

Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]					
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler	alt. connectors available	
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F		
350	1.24	676	1.62	1155	2.20		1/3	6.13	187-254 V, 60 Hz	F2	203	197	9.7	6.5	6.5			10 | 11
350	1.24	676	1.62	1155	2.20		1/3	6.13	187-254 V, 60 Hz *	F2	203	197	8.2	6.5	6.5			10 | 11
426	1.16	825	1.56	1409	2.04		1/2	7.27	187-254 V, 60 Hz *	F2	203	197	9.7	6.5	6.5			10 | 11
426	1.16	825	1.56	1409	2.04		1/2	7.27	187-254 V, 60 Hz *	F2	203	197	9.7	6.5	6.5			10 | 11

NF



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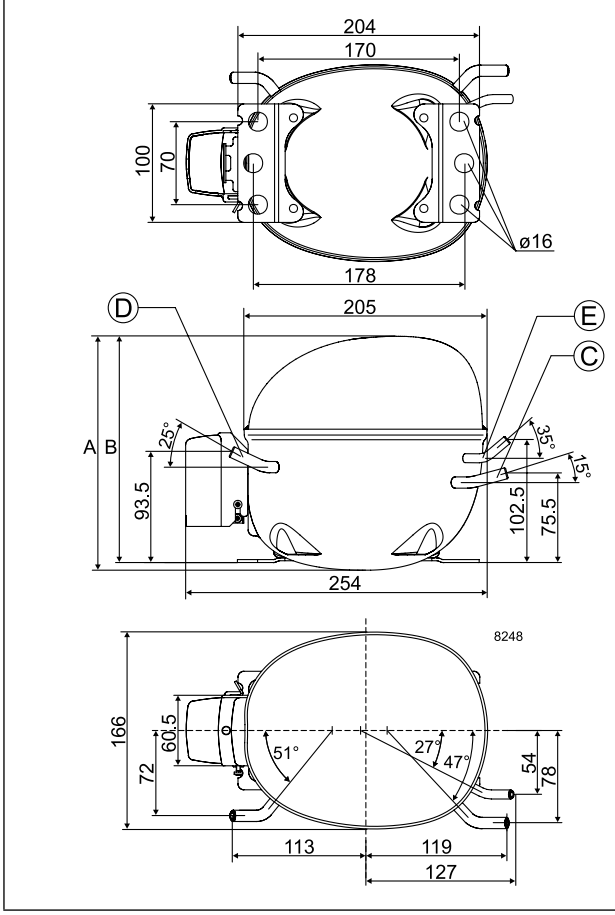


R404A/R507 • 220-240 V • 60 Hz • S-Series

Compressor	Code number	Application	EN 12900 Capacity [W] Tc=45°C, Tliq=45°C, Tsuc=32°C Evaporating temperature [°C]						EN 12900						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -35°C / 40°C		MBP rating point -10°C / 45°C		HBP rating point 5°C / 50°C							
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
SC10CLX	104L2512	L/MBP	224	738					262	0.81	853	1.37			155	816				
SC10CLX	104L2533	L/MBP	224	738					262	0.81	853	1.37			155	816				
SC10CLX	104L2536	L/MBP	224	738					262	0.81	853	1.37			155	816				
SC12CLX	104L2672	LBP	282	972					326	0.83	1131	1.44			226	1097				
SC12CLX	104L2695	LBP	282	972					326	0.83	1131	1.44			226	1097				
SC15CLX	104L2854	LBP	351	1158					421	0.95	1335	1.54			235	1213				
SC12CLX.2	104L2663	LBP	343	1011					378	0.96	1176	1.51			317	1085				
SC12CLX.2	104L2673	LBP	343	1011					378	0.96	1176	1.51			317	1085				
SC12CLX.2	104L2697	LBP	343	1011					378	0.96	1176	1.51			317	1085				
SC12CLX.2	104L2699	LBP	343	1011					378	0.95	1176	1.67			317	1085				
SC15CLX.2	104L2887	LBP	437	1239					478	1.03	1437	1.70			413	1337				
SC15CLX.2	104L2897	LBP	437	1239					478	1.03	1437	1.70			413	1337				
SC18CLX.2	104L2172	LBP	542	1410					590	1.03	1610	1.63			520	1554				
SC18CLX.2	104L2185	LBP	481	1327					522	0.99	1523	1.58			434	1468				
SC18CLX.2	104L2195	LBP	542	1410					590	1.03	1610	1.63			520	1554				
SC10MLX	104L2506	MBP		816	1246	1510					957	1.56	1507	1.78		842	1332	1634		
SC12MLX	104L2606	MBP		970	1465	1770					1130	1.55	1763	1.75		1009	1574	1923		
SC18MLX	104L2138	MBP		1412	2106	2538					1632	1.44	2568	1.72		1521	2328	2839		
SC15MLX.2	104L2803	MBP		1145	1737	2107					1336	1.55	2124	1.89		1233	1896	2320		
SC12/12CLX	104L4034	LBP	561	1935					649	0.82	2251	1.44			450	2182				

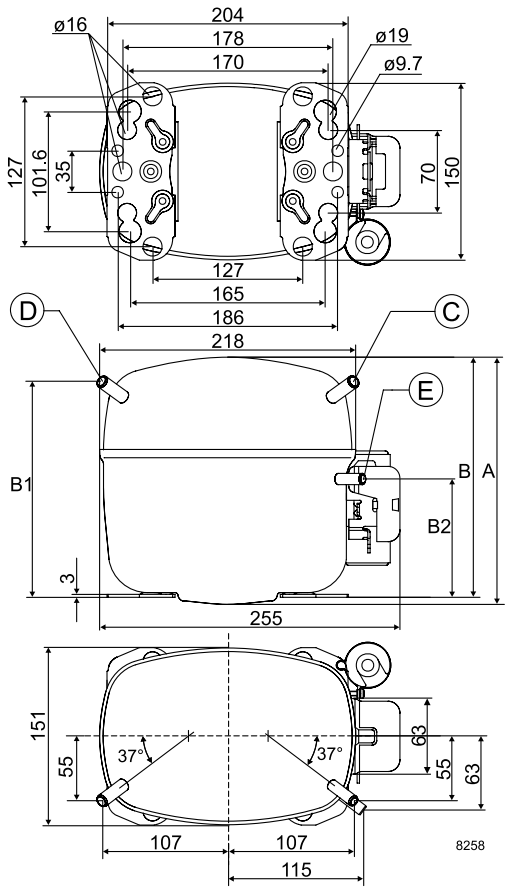
R404A/R507 • 220-240 V • 60 Hz • S-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
SC10CLX	104L2512								117U6005	117U5017			103N1004	103N2008
SC10CLX	104L2533								117U6005	117U5017			103N1004	103N2008
SC10CLX	104L2536								117U6005	117U5017			103N1004	103N2008
SC12CLX	104L2672								117U6019	117U5017			103N1004	103N2008
SC12CLX	104L2695								117U6019	117U5017			103N1004	103N2008
SC15CLX	104L2854									117U5373	117-7039		103N1004	103N2008
SC12CLX.2	104L2663								117U6019	117U5017			103N1004	103N2008
SC12CLX.2	104L2673								117U6019	117U5017			103N1004	103N2008
SC12CLX.2	104L2697								117U6019	117U5017			103N1004	103N2008
SC12CLX.2	104L2699										117-7027		103N1004	103N2008
SC15CLX.2	104L2887									117U5373	117-7039		103N1004	103N2008
SC15CLX.2	104L2897									117U5373	117-7039		103N1004	103N2008
SC18CLX.2	104L2172									117U5373	117-7066		103N1004	103N2008
SC18CLX.2	104L2185									117U5373	117-7066		103N1004	103N2008
SC18CLX.2	104L2195									117U5373	117-7066		103N1004	103N2008
SC10MLX	104L2506								117U6011	117U5017			103N1004	103N2008
SC12MLX	104L2606								117U6011	117U5017			103N1004	103N2008
SC18MLX	104L2138										117-7066		103N1004	103N2008
SC15MLX.2	104L2803										117-7058		103N1004	103N2008
SC12/12CLX	104L4034								117U6019	117U5017			103N1004	103N2009

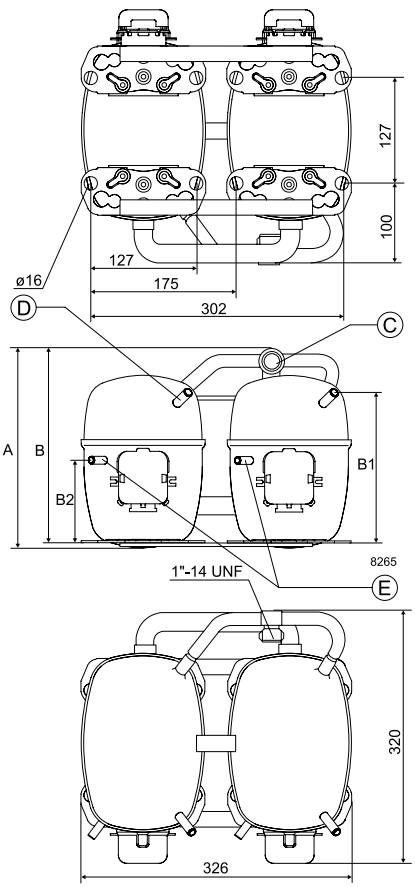
Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]				alt. connectors available	
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F		
518	1.16						1/2	10.29	198-254 V, 60 Hz *	F2	209	203	9.63	6.5	6.5		X	4 | 10
518	1.16						1/2	10.29	198-254 V, 60 Hz *	F2	209	203	8.2	6.2	6.2		X	4 | 10
518	1.16						1/2	10.29	198-254 V, 60 Hz *	F2	209	203	9.63	6.5	6.5		X	4 | 10
698	1.23					*	3/5	12.87	198-254 V, 60 Hz	F2	219	213	9.63	6.5	6.5		X	4 | 6
698	1.23						3/5	12.87	198-254 V, 60 Hz	F2	219	213	8.2	6.2	6.2		X	4 | 6
774	1.23					10	3/4	15.28	198-254 V, 60 Hz	F2	219	213	10.2	6.2	6.2			4 | 6
707	1.19						3/4	12.87	198-254 V, 60 Hz *	F2	219	213	8.2	6.5	6.5		X	4 | 6
707	1.19					*	3/4	12.87	198-254 V, 60 Hz *	F2	219	213	9.63	6.5	6.5		X	4 | 6
707	1.19						3/4	12.87	198-254 V, 60 Hz *	F2	219	213	8.2	6.2	6.2		X	4 | 6
707	1.27					10	3/4	12.87	187-254 V, 60 Hz	F2	219	213	9.63	6.5	6.5		X	4 | 6
882	1.33					10	5/6	15.28	187-254 V, 60 Hz	F2	219	213	9.63	6.5	6.5		X	4 | 6
882	1.33					10	5/6	15.28	187-254 V, 60 Hz	F2	219	213	9.63	6.5	6.5		X	4 | 6
1114	1.39						1	17.69	187-254 V, 60 Hz	F2	219	213	9.63	6.5	6.5		X	4 | 6
1024	1.37						1	17.69	187-254 V, 60 Hz	F2	219	213	9.63	6.5	6.5		X	4 | 6
1114	1.39						1	17.69	187-254 V, 60 Hz	F2	219	213	9.63	6.5	6.5		X	4 | 6
530	1.15	1064	1.53	1842	2.01		3/5	10.29	187-254 V, 60 Hz *	F2	209	203	8.2	6.5	6.5			10 | 11
650	1.18	1260	1.52	2157	1.98		3/4	12.87	187-254 V, 60 Hz *	F2	219	213	8.2	6.5	6.5			10 | 11
1033	1.18	1866	1.47	3186	1.99	10	1	17.69	187-254 V, 60 Hz	F2	219	213	9.63	6.5	6.5			10 | 11
841	1.20	1518	1.56	2617	2.16		3/4	15.28	187-254 V, 60 Hz	F2	219	213	9.63	6.5	6.5			10 | 11
1389	1.23						1 1/4	25.74	198-254 V, 60 Hz	F2	259	254	12.0	6.2	6.2			4

SC



SC-Twin



R404A/R507 • 220-240 V • 60 Hz • G-Series

Compressor	Code number	Application	EN 12900 Capacity [W] Tc=45°C, Tliq=45°C, Tsuc=32°C Evaporating temperature [°C]						EN 12900						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -35°C / 40°C		MBP rating point -10°C / 45°C		HBP rating point 5°C / 50°C							
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
GS21CLX	107B0506	LBP	609	1789					669	1.05	2084	1.65			584	1918				
GS26CLX	107B0505	LBP	755	2001					833	1.00	2319	1.45			719	2114				
GS21MLX	107B0509	MBP		1939	2950	3578					2268	1.93	3544	2.28		2043	3134	3819		

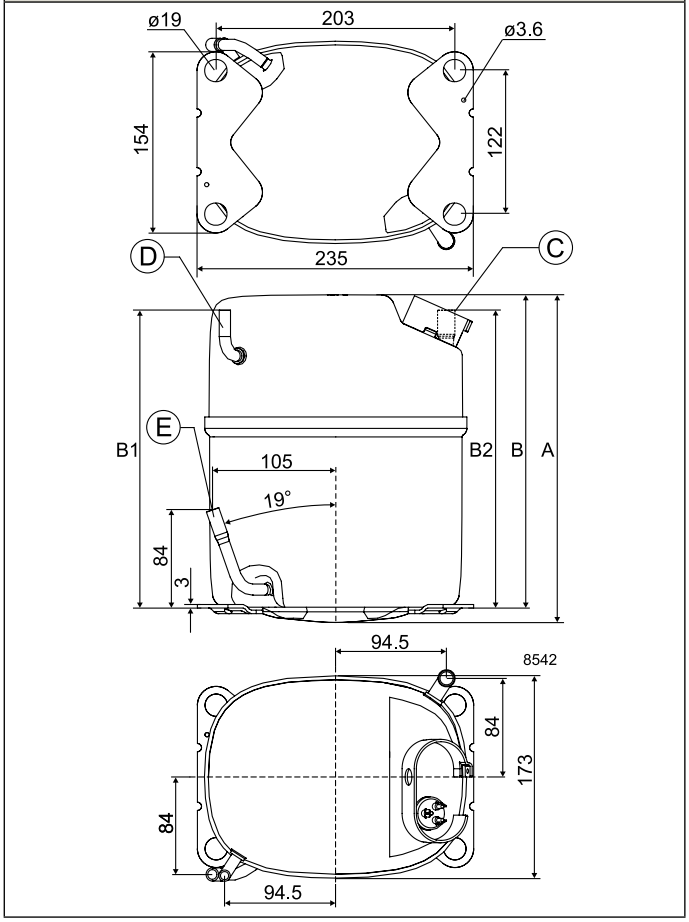
R404A/R507 • 220-240 V • 60 Hz • G-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
GS21CLX	107B0506										117-7073			107B9101
GS26CLX	107B0505										117-7073			107B9101
GS21MLX	107B0509										117-7073			107B9106

Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]				alt. connectors available	
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F		
1258	1.35					10	1 1/4	21.20	187-254 V, 60 Hz	F2	259	247	12.9	6.5	8.2			4
1425	1.21					20	1 1/4	26.30	187-254 V, 60 Hz	F2	279	267	12.9	6.5	8.2			4
		2513	1.86	4293	2.55	20	1 1/4	21.20	187-254 V, 60 Hz	F2	279	267	12.9	6.5	9.7			4 | 10

GS



WITH MORE THAN 60 YEARS OF EXPERIENCE IN COMPRESSOR TECHNOLOGY AND HIGHLY DEDICATED EMPLOYEES, OUR FOCUS IS ON DEVELOPING AND APPLYING ADVANCED COMPRESSOR TECHNOLOGIES TO ACHIEVE STANDARD SETTING PERFORMANCE FOR LEADING PRODUCTS AND BUSINESSES AROUND THE WORLD.

R290

208-230 V | 60 Hz
220-240 V | 60 Hz

Chemical formula
C_3H_8

Typelabel
Typelabel stripe colour: Red
Typelabel colour: Yellow

Applications
LBP: Low Back Pressure
MBP: Medium Back Pressure
HBP: High Back Pressure

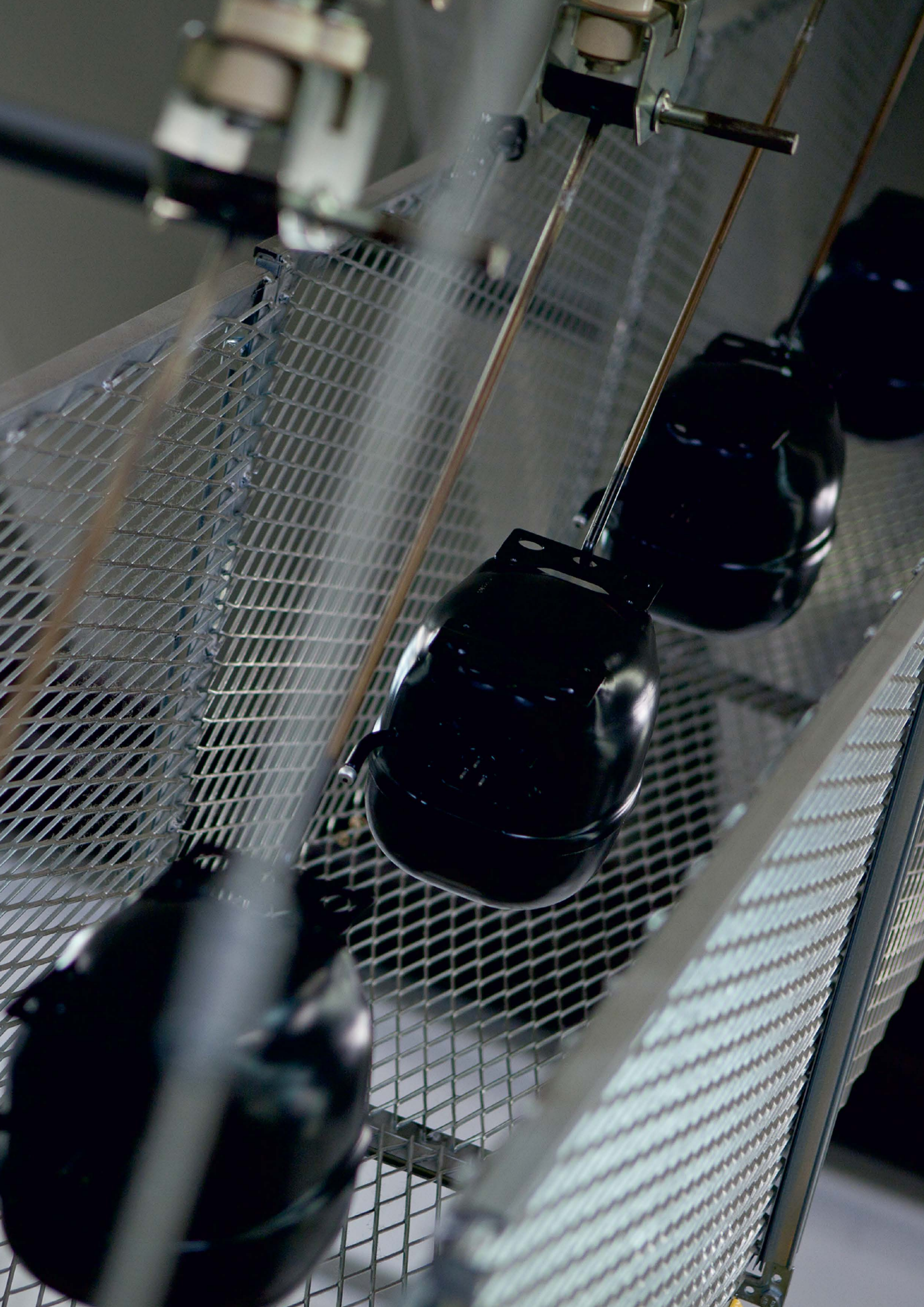
Motor types
RSIR: Resistant Start Induction Run
RSCR: Resistant Start Capacitor Run
CSIR: Capacitor Start Induction Run
CSR: Capacitor Start Run

Compressor cooling
S = Static cooling normally sufficient
O = Oil cooling
F_1 = Fan cooling 1.5 m/s (compressor compartment temp. equal to ambient temperature)
F_2 = Fan cooling 3.0 m/s necessary

Starting devices
LST: Low Starting Torque
LST is used with capillary tube control and pressure equalizing. (Pressure equalizing may exceed 10 minutes). The PTC starting device requires 5 minutes cooling before each start.
To fulfil the requirements of EN 60355-2-34 the protection screen 103N0476 must be applied to the PTC starting device.
HST: High Starting Torque
HST consisting of relay and starting capacitor is used for expansion valve control or for capillary tube control without pressure equalizing.
ePTC: Electronically controlled PTC
- Compressor restart possible after a few seconds
- Operational wattage loss reduced by 2 watt
- PTC protection screen not needed (surface temp. < 82 °C)
- Temperature resistant up to min. +60 °C
- Additonal information, code numbers: refer to page 18

Test conditons
Electrical equipment being used is listed in our data sheets

1 Watt = 0.86 kcal/h
1 Watt = 3.41 Btu/h



R290 • 208-230 V • 60 Hz • D-Series

Compressor	Code number	Application	EN 12900 Capacity [W] Tc=45°C, Tliq=45°C, Tsuc=32°C Evaporating temperature [°C]						EN 12900						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -35°C / 40°C		MBP rating point -10°C / 45°C		HBP rating point 5°C / 50°C							
			-35	-15	-5	0	10	15	Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]						
DLE4.8CNT	102H3589	L/MBP	154	379	557	668			160	1.15	443	2.03	706	2.65	157	404	597	718		
DLE4.8CNT	102H4587	L/MBP	154	379	557	668			160	1.15	443	2.03	706	2.65	157	404	597	718		
DLE5.7CNT	102H4666	L/MBP	191	461	670	799			199	1.20	536	2.02	848	2.53	198	498	726	869		
DLE5.7CNT	102H4678	L/MBP	191	461	670	799			199	1.20	536	2.02	848	2.53	198	498	726	869		
DLE5.7CNT	102H4679	L/MBP	191	461	670	799			199	1.20	536	2.02	848	2.53	198	498	726	869		

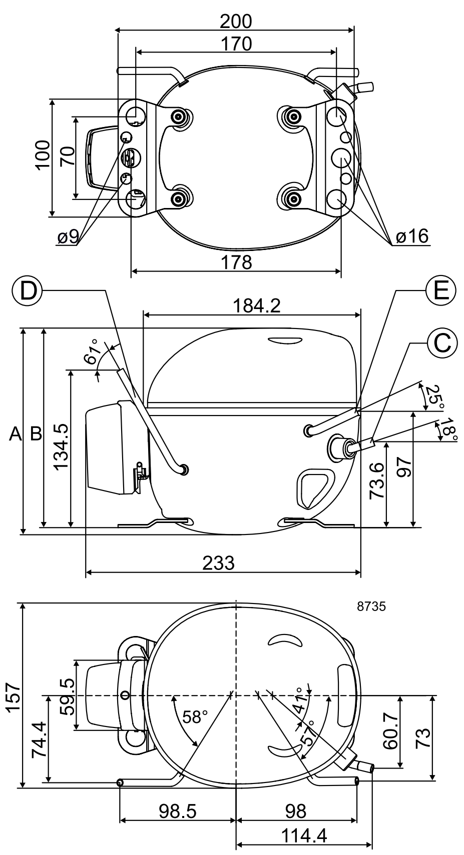
R290 • 208-230 V • 60 Hz • D-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
DLE4.8CNT	102H3589					103N0050		117-7129	117U7002	117U5015			103N1010	103N0491
DLE4.8CNT	102H4587					103N0050		117-7129	117U7002	117U5015			103N1010	103N0491
DLE5.7CNT	102H4666					103N0050		117-7129	117U7002	117U5015			103N1010	103N0491
DLE5.7CNT	102H4678					103N0050		117-7129	117U7002	117U5015			103N1010	103N0491
DLE5.7CNT	102H4679					103N0050		117-7129	117U7002	117U5015			103N1010	103N0491

Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions						alt. connectors available	Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]					
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP						A	B	Suction C	Process D	Discharge E	Oil cooler F		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]										
283	1.51	501	2.03	827	2.88	*	1/4	4.80	187-253 V, 60 Hz *	F2	175	169	8.20	6.50	6.50		X	3|4|6|7|10|11
283	1.51	501	2.03	827	2.88	*	1/4	4.80	187-253 V, 60 Hz *	F2	175	169	8.20	6.50	6.50		X	3|4|6|7|10|11
353	1.54	611	2.00	996	2.74	*	1/3	5.70	187-253 V, 60 Hz *	F2	175	169	8.20	6.50	6.50		X	3|4|6|7|10|11
353	1.54	611	2.00	996	2.74	*	1/3	5.70	187-253 V, 60 Hz *	F2	175	169	8.20	6.50	6.50		X	3|4|6|7|10|11
353	1.54	611	2.00	996	2.74	*	1/3	5.70	187-253 V, 60 Hz *	F2	175	169	8.20	6.50	6.50		X	3|4|6|7|10|11

DLE



R290 • 208-230 V • 60 Hz • N-Series

Compressor	Code number	Application	EN 12900 Capacity [W] Tc=45°C, Tliq=45°C, Tsuc=32°C Evaporating temperature [°C]						EN 12900						ASHRAE Capacity [W] Tc=54,4°C, Tliq=32,2°C, Tsuc=32,2°C Evaporating temperature [°C]					
									LBP rating point -35°C / 40°C		MBP rating point -10°C / 45°C		HBP rating point 5°C / 50°C							
			-35	-15	-5	0	10	15	Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]						
NLE8.0CNT	105H6073	L/MBP	229	614	900	1074			244	1.20	718	2.10	1134	2.68	214	646	963	1157		
NLE8.8CNT	105H6088	L/MBP	285	690	1011	1206			299	1.22	807	2.05	1264	2.58	276	738	1086	1296		
NLE10CNT	105H6179	L/MBP	330	815	1180	1397			346	1.29	947	2.12	1464	2.60	321	874	1278	1519		
NLE11CNLT	105H6109	LBP	369	918					383	1.32	1058	2.10			416	979				
NLE11MNT	105H6199	MBP		895	1291	1528					1038	2.03	1602	2.50		965	1395	1654		

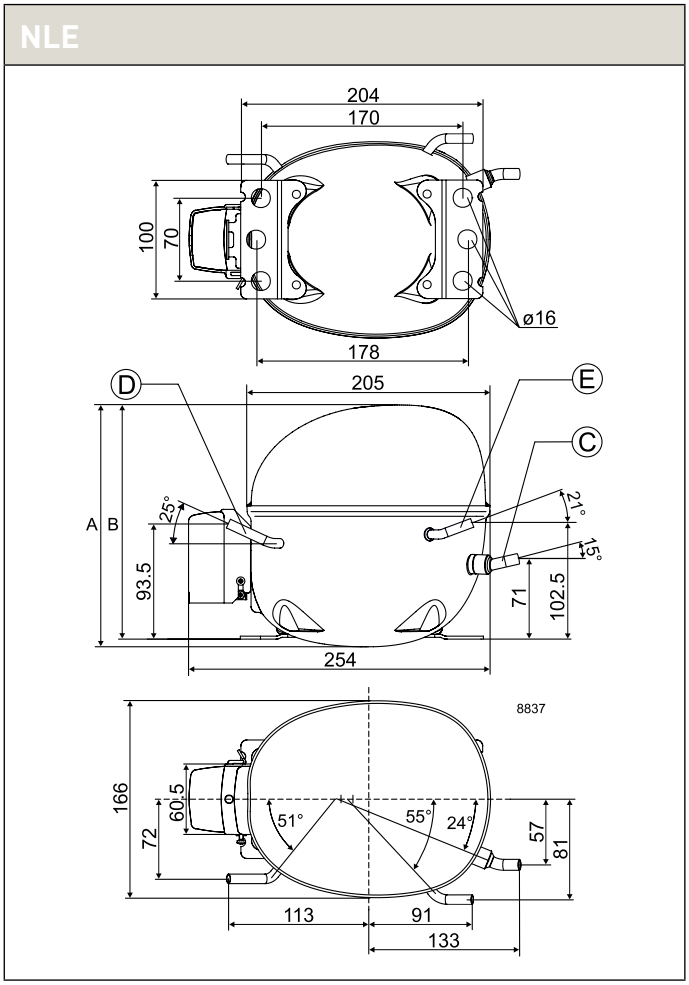
R290 • 208-230 V • 60 Hz • N-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
NLE8.0CNT	105H6073					103N0050		117-7119	117U7003	117U5014			103N1010	103N2011
NLE8.8CNT	105H6088					103N0050		117-7119	117U7022	117U5381			103N1010	103N2011
NLE10CNT	105H6179					103N0050		117-7119	117U7050	117U5014			103N1010	103N2011
NLE11CNLT	105H6109					103N0050		117-7119	117U7005	117U5014			103N1010	103N2011
NLE11MNT	105H6199					103N0050		117-7119	117U7050	117U5014			103N1010	103N2011

Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]				alt. connectors available	
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F		
441	1.52	808	2.04	1327	2.91	*	2/5	7.96	187-253 V, 60 Hz *	F2	203	197	8.20	6.50	6.50			3|4|6|10|11
511	1.56	914	2.05	1469	2.80	*	1/2	8.76	187-253 V, 60 Hz	F2	203	197	8.20	6.50	6.50			3|4|6|10|11
607	1.63	1076	2.10	1711	2.82	*	3/5	10.09	187-253 V, 60 Hz *	F2	203	197	8.20	6.50	6.50			3|4|6|10|11
669	1.65					*	3/5	11.15	187-253 V, 60 Hz	F2	203	197	8.20	6.50	6.50			4 | 6 | 10
		1176	2.02	1866	2.73	*	3/5	11.15	187-253 V, 60 Hz	F2	203	197	8.20	6.50	6.50			3|4|6|10|11

NLE



R290 • 208-230 V • 220-240 V • 60 Hz • S-Series

Compressor	Code number	Application	EN 12900 Capacity [W] Tc=45°C, Tliq=45°C, Tsuc=32°C Evaporating temperature [°C]						EN 12900						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -35°C / 40°C		MBP rating point -10°C / 45°C		HBP rating point 5°C / 50°C							
			-35	-15	-5	0	10	15	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
SC18CNLX.2	104H8877	LBP	471	1229	1796				505	1.22	1427	1.88			457	1268	1823			
SC21CNLX.2	104H8177	LBP	603	1461	2106				645	1.09	1684	1.87			570	1552	2201			
SCE15CNLX	104H8577	LBP	351	1163	1730				416	1.22	1374	2.24			249	1210	1857			
SCE18CNLX	104H8878	LBP	418	1377	2049				495	1.28	1627	2.28			298	1434	2198			
SCE21CNLX	104H8173	LBP	560	1570	2333				602	1.25	1851	2.16			526	1646	2484			
SCE15MNX	104H8579	MBP		1171	1723	2046					1376	2.21	2164	2.87		1221	1852	2226		
SCE18MNX	104H8879	MBP		1364	1988	2353					1594	2.18	2485	2.81		1431	2146	2569		

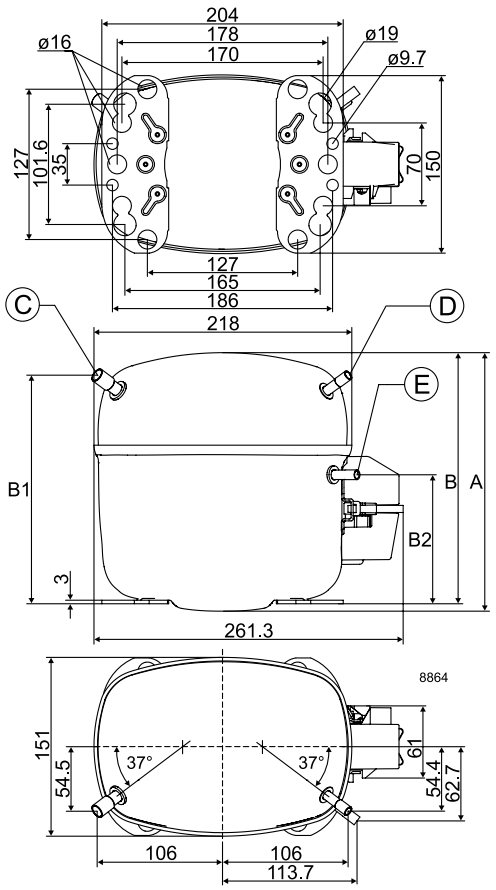
R290 • 208-230 V • 220-240 V • 60 Hz • S-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
SC18CNLX.2	104H8877									117U5373	117-7039		103N1004	103N2008
SC21CNLX.2	104H8177									117U5373	117-7066		103N1004	103N2008
SCE15CNLX	104H8577						117U7121		117-7602	117U5373	117-7809			117U1021
SCE18CNLX	104H8878						117U7121		117-7602	117U5373	117-7809			117U1021
SCE21CNLX	104H8173						117U7121		117U7603	117U5373	117-7811			117U1021
SCE15MNX	104H8579						117U7121		117-7601	117U5373	117-7808			117U1021
SCE18MNX	104H8879						117U7121		117-7445	117U5373	117-7807			117U1021

Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]				alt. connectors available	
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F		
922	1.45	1533	1.92			10	5/6	17.69	198-254 V, 60 Hz	F2	219	213	9.63	6.50	6.50			4 | 6
1138	1.45	1856	1.78			10	1	20.95	198-254 V, 60 Hz	F2	219	213	9.63	6.50	6.50			4
769	1.64	1555	2.27			10	3/4	15.28	187-253 V, 60 Hz	F2	219	213	9.63	6.50	6.50			4 | 6
910	1.67	1841	2.30			10	5/6	17.69	187-253 V, 60 Hz	F2	219	213	9.63	6.50	6.50		X	4 | 6
1102	1.65	2082	2.14			10	1	20.95	187-253 V, 60 Hz	F2	219	213	9.63	6.50	6.50			4
792	1.64	1552	2.25	2546	3.19	10	3/4	15.28	187-253 V, 60 Hz	F2	219	213	9.63	6.50	6.50			3 | 7 | 10 | 11
942	1.62	1802	2.21	2924	3.11	10	5/6	17.69	187-253 V, 60 Hz	F2	219	213	9.63	6.50	6.50		X	3 | 7 | 10 | 11

SCE



WITH MORE THAN 60 YEARS OF EXPERIENCE IN COMPRESSOR TECHNOLOGY AND HIGHLY DEDICATED EMPLOYEES, OUR FOCUS IS ON DEVELOPING AND APPLYING ADVANCED COMPRESSOR TECHNOLOGIES TO ACHIEVE STANDARD SETTING PERFORMANCE FOR LEADING PRODUCTS AND BUSINESSES AROUND THE WORLD.

R134a

115 V | 60 Hz

Chemical formula
CH_2FCF_3

Typelabel
Typelabel stripe colour: Blue
Typelabel colour: Green

Applications
LBP: Low Back Pressure
MBP: Medium Back Pressure
HBP: High Back Pressure

Motor types
RSIR: Resistant Start Induction Run
RSCR: Resistant Start Capacitor Run
CSIR: Capacitor Start Induction Run
CSR: Capacitor Start Run

Compressor cooling
S = Static cooling normally sufficient
O = Oil cooling
F_1 = Fan cooling 1.5 m/s (compressor compartment temp. equal to ambient temperature)
F_2 = Fan cooling 3.0 m/s necessary

Starting devices
LST: Low Starting Torque
LST is used with capillary tube control and pressure equalizing. (Pressure equalizing may exceed 10 minutes). The PTC starting device requires 5 minutes cooling before each start.
To fulfil the requirements of EN 60355-2-34 the protection screen 103N0476 must be applied to the PTC starting device.
HST: High Starting Torque
HST consisting of relay and starting capacitor is used for expansion valve control or for capillary tube control without pressure equalizing.
ePTC: Electronically controlled PTC
- Compressor restart possible after a few seconds
- Operational wattage loss reduced by 2 watt
- PTC protection screen not needed (surface temp. < 82 °C)
- Temperature resistant up to min. +60 °C
- Additonal information, code numbers: refer to page 18

Test conditons
Electrical equipment being used is listed in our data sheets

1 Watt = 0.86 kcal/h
1 Watt = 3.41 Btu/h

R134a • 115 V • 60 Hz • P-Series

Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -25°C / 55°C		MBP rating point -10°C / 55°C		HBP rating point 5°C / 55°C							
			-35	-15	-5	0	10	15	Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]						
PL30F	101G9100	L/M/HBP		44	78	99	154	189	21	0.42	59	0.95	125	1.58		55	97	124	193	236
PL50F	101G9202	L/MBP		69	111	138			37	0.59	88	1.05				85	138	171		

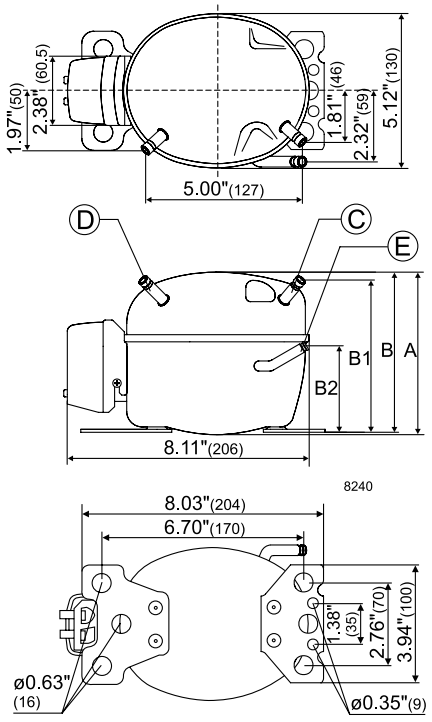
R134a • 115 V • 60 Hz • P-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for more info				Run capacitor (RC)			HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		Protector (external)	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
PL30F	101G9100	103N0026	103N0023						117U6000	117U5015			103N1010	103N0492
PL50F	101G9202	103N0026	103N0023						117U6000	117U5015			103N1010	103N0492

Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]				alt. connectors available	
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F		
30	0.60	80	1.23	156	1.94		1/10	1.41	90-127 V, 60 Hz *	S	134	132	6.5	6.5	5.0			1 | 5
52	0.79	117	1.33				1/10	2.00	103-127 V, 60 Hz	S	134	132	6.5	6.5	5.0			1 | 5

PL



R134a • 115 V • 60 Hz • T-Series

Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54,4°C, Tliq=32,2°C, Tsuc=32,2°C Evaporating temperature [°C]					
									LBP rating point -25°C / 55°C		MBP rating point -10°C / 55°C		HBP rating point 5°C / 55°C							
			-35	-15	-5	0	10	15	Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]						
TF3.5F	102G3304	LBP	30	119					64	0.72	155	1.20			38	147				
TFS4F	102G3431	LBP	35	142					75	0.82	186	1.34			44	176				
TFS4.5FT	102G3432	L/MBP	56	180	290	358			102	0.84	231	1.27	435	1.69	70	223	360	444		
TFS4.5FT	102G3433	LBP	56	180					102	0.84	231	1.27			70	223				
TL2.5F	102G3206	LBP		80	134				43	0.70	105	1.11				99	167			
TL3F	102G3300	LBP		97	163				54	0.75	127	1.11				121	203			
TL2.5G	102G3255	L/M/HBP		79	144	186	289	350	39	0.57	108	1.14	234	1.85		99	179	231	360	436
TL4G	102G3460	L/M/HBP		123	211	268	408	493	64	0.71	163	1.20	333	1.76		153	263	333	508	615

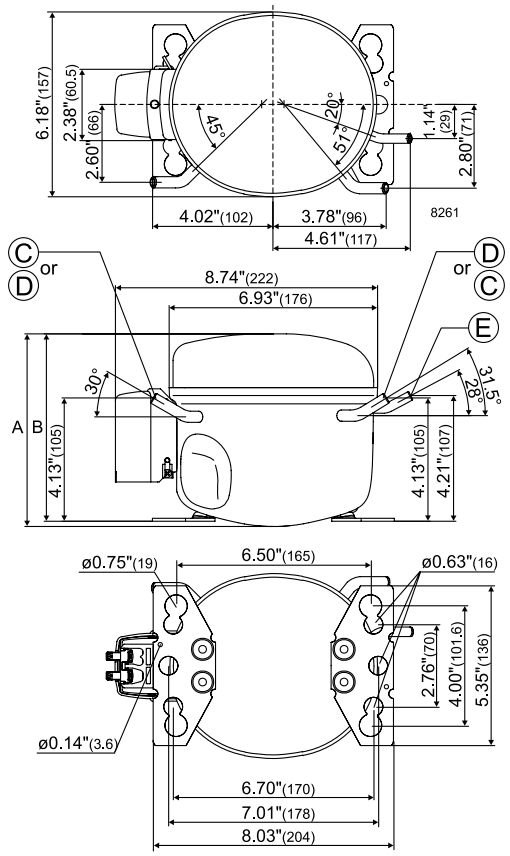
R134a • 115 V • 60 Hz • T-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		Protector (external)	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
TF3.5F	102G3304												117U0349	117U1021
TFS4F	102G3431												117U0349	117U1021
TFS4.5FT	102G3432								117U4126	117U5022			117U0349	117U1021
TFS4.5FT	102G3433												117U0349	117U1021
TL2.5F	102G3206	103N0026	103N0023										103N1010	103N2011
TL3F	102G3300	103N0026	103N0023										103N1010	103N2011
TL2.5G	102G3255	103N0026	103N0023										103N1010	103N2011
TL4G	102G3460	103N0026	103N0023						117U6003	117U5023			103N1010	103N2011

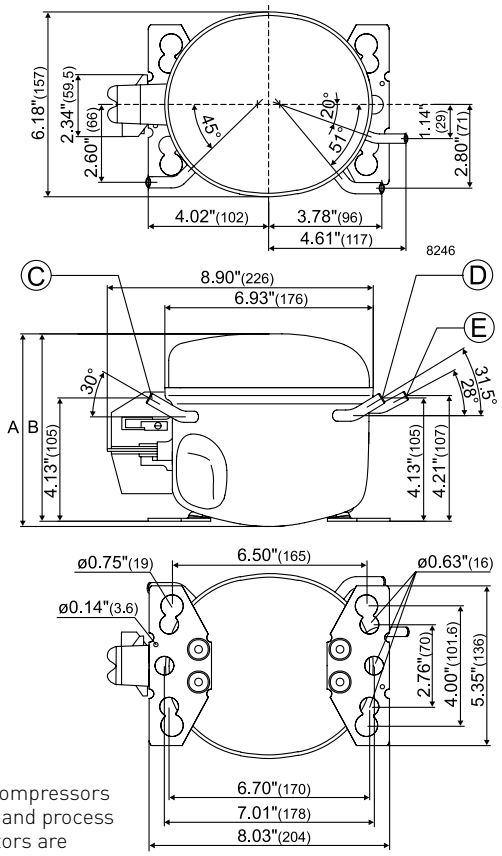
Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]				alt. connectors available	
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP						A	B	Suction C	Process D	Dis-charge E	Oil cooler F		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]										
90	0.96						1/10	3.59	95-135 V, 60 Hz	S	173	169	6.5	6.5	5.0		X	1 | 5
105	1.08						1/10	3.86	95-135 V, 60 Hz	S	173	169	6.5	6.5	5.0		X	1 | 5
140	1.10	304	1.56	531	2.00		1/6	4.63	95-135 V, 60 Hz	S	173	169	6.5	6.5	4.9		X	1 | 2
140	1.10						1/8	4.63	95-135 V, 60 Hz	S	173	169	6.5	6.5	5.0		X	1 | 2
60	0.92	140	1.37				1/10	2.61	103-127 V, 60 Hz	S	163	159	6.5	6.5	5.0		X	1 | 7
74	0.97	170	1.38				1/10	3.13	103-127 V, 60 Hz	S	163	159	6.5	6.5	5.0			1 | 5
56	0.78	148	1.48	291	2.26		1/10	2.61	103-127 V, 60 Hz	S	163	159	6.5	6.5	5.0		X	3
90	0.94	219	1.51	413	2.13		1/8	3.86	90-135 V, 60 Hz *	S	173	169	6.5	6.5	5.0		X	3

TL



TF / TFS



Note:
On TF compressors suction and process connectors are interchangeable.

R134a • 115 V • 60 Hz • N-Series

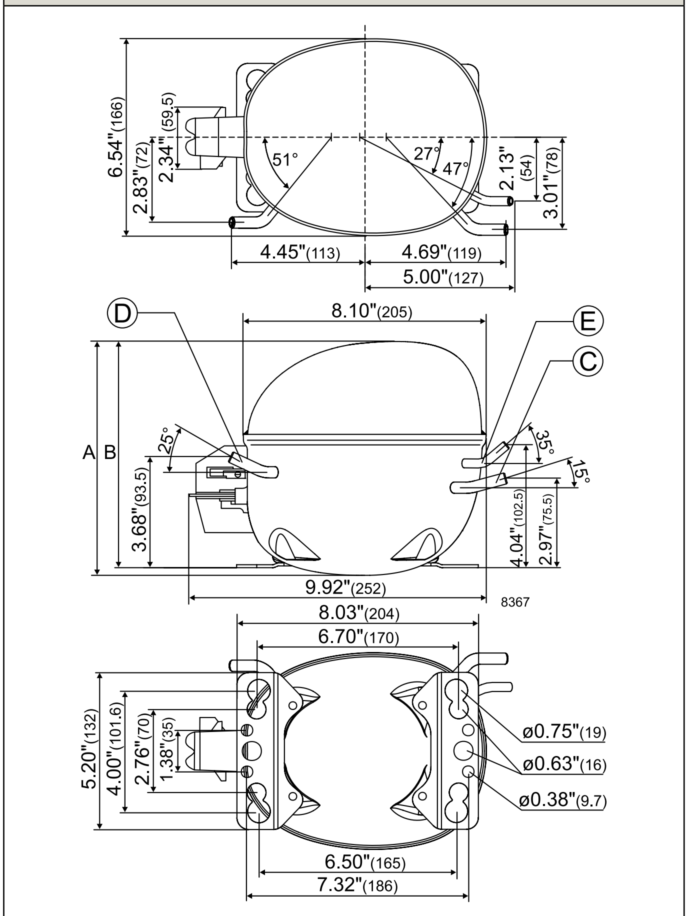
Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -25°C / 55°C		MBP rating point -10°C / 55°C		HBP rating point 5°C / 55°C							
			-35	-15	-5	0	10	15	Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]						
NF6FK	105G5628	L/MBP	63	249	397	490			143	0.88	317	1.30	599	1.91	79	309	492	609		
NF6FK	105G5629	L/MBP	63	249	397	490			143	0.88	317	1.30	599	1.91	79	309	492	609		
NF6FK	105G5645	L/MBP	63	249	397	490			143	0.88	317	1.30	599	1.91	79	309	492	609		
NF7FK	105G5745	L/MBP	91	302	473	583			180	0.93	380	1.33	711	1.90	112	373	586	723		
NF7FK	105G5728	L/MBP	91	302	473	583			180	0.93	380	1.33	711	1.90	112	373	586	723		
NF5.5FX	105G5623	L/MBP	66	260	414	511			148	0.93	330	1.38	624	2.02	82	322	513	634		
NF5.5FX	105G5625	L/MBP	66	260	414	511			148	0.93	330	1.38	624	2.02	82	322	513	634		
NF7FX	105G5723	L/MBP	93	311	488	601			186	0.90	392	1.34	733	1.95	116	385	605	745		
NF7FX	105G5724	L/MBP	93	311	488	601			186	0.90	392	1.34	733	1.95	116	385	605	745		
NF7FX	105G5733	L/MBP	93	311	488	601			186	0.90	392	1.34	733	1.95	116	385	605	745		
NF7FX	105G5763	L/MBP	93	311	488	601			186	0.90	392	1.34	733	1.95	116	385	605	745		
NF7FX	105G5744	L/MBP	93	311	488	601			186	0.90	392	1.34	733	1.95	116	385	605	745		
NF9FX	105G5920	L/MBP		344	548	677			202	0.86	437	1.34	826	1.90		426	678	839		
NF9FX	105G5953	L/MBP		344	548	677			202	0.86	437	1.34	826	1.90		426	678	839		
NF10FX	105G5941	L/MBP		386	610	752			227	0.91	488	1.34	919	1.86		476	755	933		
NF10FX	105G5957	L/MBP		386	610	752			227	0.91	488	1.34	919	1.86		476	755	933		
NF10FX	105G5946	L/MBP		386	610	752			227	0.91	488	1.34	919	1.86		476	755	933		
NF10FX	105G5952	L/MBP		386	610	752			227	0.91	488	1.34	919	1.86		476	755	933		
NF11FX	105G5945	MBP	114	410	653	808			237	0.84	521	1.27	988	1.77	140	505	808	1001		
NF11FX	105G5951	MBP	114	410	653	808			237	0.84	521	1.27	988	1.77	140	505	808	1001		
NF11FX	105G5958	MBP	114	410	653	808			237	0.84	521	1.27	988	1.77	140	505	808	1001		

R134a • 115 V • 60 Hz • N-Series • Electrical Equipment

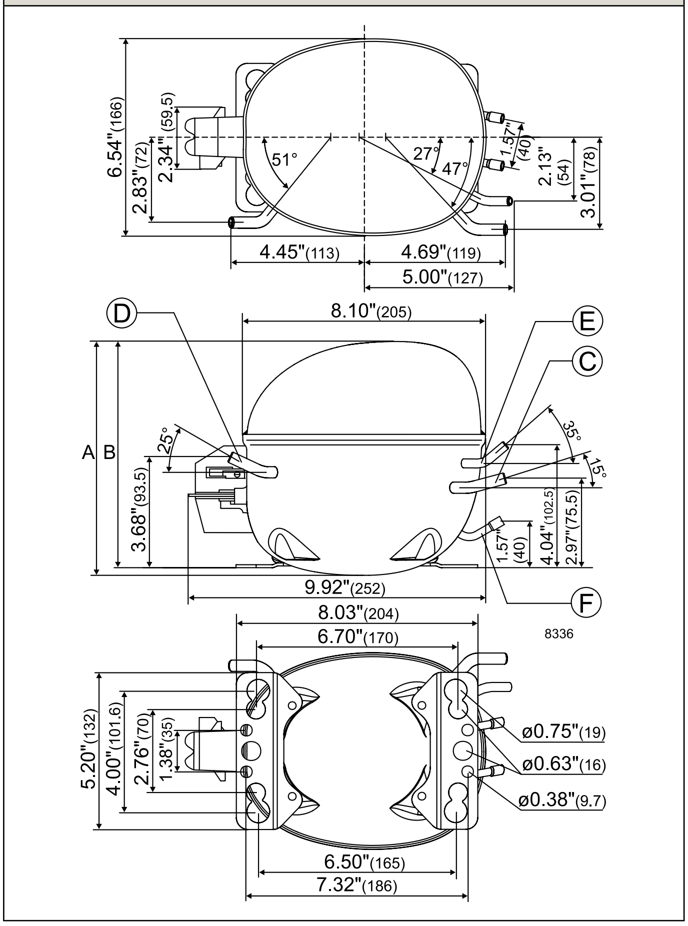
Compressor * pre-assembled start equipment	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		Protector (external)	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
NF6FK	105G5628								117U4132	117U5022			117U0349	117U1021
NF6FK	105G5629								117U4132	117U5022			117U0349	117U1021
NF6FK	105G5645								117U4132	117U5022			117U0349	117U1021
NF7FK *	105G5745								117U4132	117U5022			117U0349	117U1021
NF7FK	105G5728								117U4132	117U5022			117U0349	117U1021
NF5.5FX	105G5623								117U4127	117U5025			117U0349	117U1021
NF5.5FX *	105G5625								117U4127	117U5025			117U0349	117U1021
NF7FX	105G5723								117U4061	117U5025			117U0349	117U1021
NF7FX	105G5724								117U4061	117U5025			117U0349	117U1021
NF7FX	105G5733								117U4061	117U5025			117U0349	117U1021
NF7FX *	105G5763								117U4061	117U5025			117U0349	117U1021
NF7FX *	105G5744								117U4061	117U5025			117U0349	117U1021
NF9FX	105G5920								117U4129	117U5025			117U0349	117U1021
NF9FX *	105G5953								117U4129	117U5025			117U0349	117U1021
NF10FX	105G5941								117U4129	117U5022			117U0349	117U1021
NF10FX	105G5957								117U4129	117U5022			117U0349	117U1021
NF10FX	105G5946								117U4129	117U5022			117U0349	117U1021
NF10FX	105G5952								117U4129	117U5022			117U0349	117U1021
NF11FX	105G5945								117U4123	117U5028			117U0349	117U1021
NF11FX	105G5951								117U4123	117U5028			117U0349	117U1021
NF11FX	105G5958								117U4123	117U5028			117U0349	117U1021

LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C		Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions: Height [mm]		Dimensions: Connectors location/I.D. [mm]				alt. connectors available	Application: Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6 | Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP						A	B	Suction C	Process D	Dis-charge E	Oil cooler F		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]										
196	1.14	408	1.57	724	2.24		1/4	6.13	95-135 V, 60 Hz	F2	203	197	8.2	6.5	6.5		X	2
196	1.14	408	1.57	724	2.24		1/4	6.13	95-135 V, 60 Hz	F2	203	197	8.2	6.5	6.5		X	2
196	1.14	408	1.57	724	2.24		1/4	6.13	95-135 V, 60 Hz	F2	203	197	8.2	6.5	6.5		X	2
245	1.20	487	1.61	859	2.23		1/4	7.27	95-135 V, 60 Hz	F2	203	197	8.2	6.5	6.5		X	2
245	1.20	487	1.61	859	2.23		1/4	7.27	95-135 V, 60 Hz	F2	203	197	8.2	6.5	6.5		X	2
204	1.21	425	1.67	754	2.38		1/4	6.13	95-135 V, 60 Hz	F2	197	191	8.2	6.5	6.5		X	3
204	1.21	425	1.67	754	2.38		1/4	6.13	95-135 V, 60 Hz	F2	197	191	8.2	6.5	6.5		X	3
252	1.17	502	1.62	885	2.28		3/10	7.27	95-135 V, 60 Hz	F2	197	191	8.2	6.5	6.5		X	3
252	1.17	502	1.62	885	2.28		3/10	7.27	95-135 V, 60 Hz	F2	197	191	8.2	6.5	6.5		X	3
252	1.17	502	1.62	885	2.28		3/10	7.27	95-135 V, 60 Hz	F2	197	191	8.2	6.5	6.5	6.5	X	3
252	1.17	502	1.62	885	2.28		3/10	7.27	95-135 V, 60 Hz	F2	197	191	8.2	6.5	6.5		X	3
252	1.17	502	1.62	885	2.28		3/10	7.27	95-135 V, 60 Hz	F2	197	191	8.2	6.5	6.5		X	3
275	1.12	562	1.62	996	2.21		3/10	8.35	95-135 V, 60 Hz	F2	197	191	8.2	6.5	6.5		X	3
275	1.12	562	1.62	996	2.21		3/10	8.35	95-135 V, 60 Hz	F2	197	191	8.2	6.5	6.5		X	3
308	1.18	626	1.60	1109	2.17		1/3	10.09	95-135 V, 60 Hz	F2	197	191	8.2	6.5	6.5		X	3
308	1.18	626	1.60	1109	2.17		1/3	10.09	95-135 V, 60 Hz	F2	197	191	8.2	6.5	6.5		X	3
308	1.18	626	1.60	1109	2.17		1/3	10.09	95-135 V, 60 Hz	F2	197	191	8.2	6.5	6.5		X	3
308	1.18	626	1.60	1109	2.17		1/3	10.09	95-135 V, 60 Hz	F2	197	191	8.2	6.5	6.5		X	3
323	1.09	670	1.52	1194	2.07		3/8	11.15	95-135 V, 60 Hz	F2	203	197	8.2	6.5	6.5		X	3
323	1.09	670	1.52	1194	2.07		3/8	11.15	95-135 V, 60 Hz	F2	203	197	8.2	6.5	6.5		X	3
323	1.09	670	1.52	1194	2.07		3/8	11.15	95-135 V, 60 Hz	F2	203	197	8.2	6.5	6.5		X	3

NF



NF (with oil cooler connector)



R134a • 115 V • 60 Hz • N-Series

Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -25°C / 55°C		MBP rating point -10°C / 55°C		HBP rating point 5°C / 55°C							
			-35	-15	-5	0	10	15	Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]						
NF6.1FX.2	105G5631	L/MBP	69	274	442	547			153	0.90	352	1.47	666	2.11	86	340	549	678		
NF6.1FX.2	105G5638	L/MBP	69	274	442	547			153	0.90	352	1.47	666	2.11	86	340	549	678		
NF6.1FX.2	105G5639	L/MBP	69	274	442	547			153	0.90	352	1.47	666	2.11	86	340	549	678		
NF7.3FX.2	105G5719	L/MBP	91	334	532	656			190	0.88	426	1.40	796	2.00	114	414	660	813		
NF7.3FX.2	105G5722	L/MBP	91	334	532	656			190	0.88	426	1.40	796	2.00	114	414	660	813		
NF7.3FX.2	105G5737	L/MBP	91	334	532	656			190	0.88	426	1.40	796	2.00	114	414	660	813		
NF8.4FX.2	105G5913	L/MBP		381	603	741			221	0.94	484	1.43	899	2.00		472	748	919		
NF8.4FX.2	105G5918	L/MBP		381	603	741			221	0.94	484	1.43	899	2.00		472	748	919		
NF8.4FX.2	105G5955	L/MBP		381	603	741			221	0.94	484	1.43	899	2.00		472	748	919		
NF11FX.2	105G5914	MBP		485	772	950					618	1.36	1154	1.91		602	958	1179		
NF11FX.2	105G5915	MBP		485	772	950					618	1.36	1154	1.91		602	958	1179		
NF11FX.2	105G5916	MBP		485	772	950					618	1.36	1154	1.91		602	958	1179		
NF11FX.2	105G5954	MBP		485	772	950					618	1.36	1154	1.91		602	958	1179		
NTY7FK	105G5720	LBP	114	323					192	1.20	412	1.64			140	400				

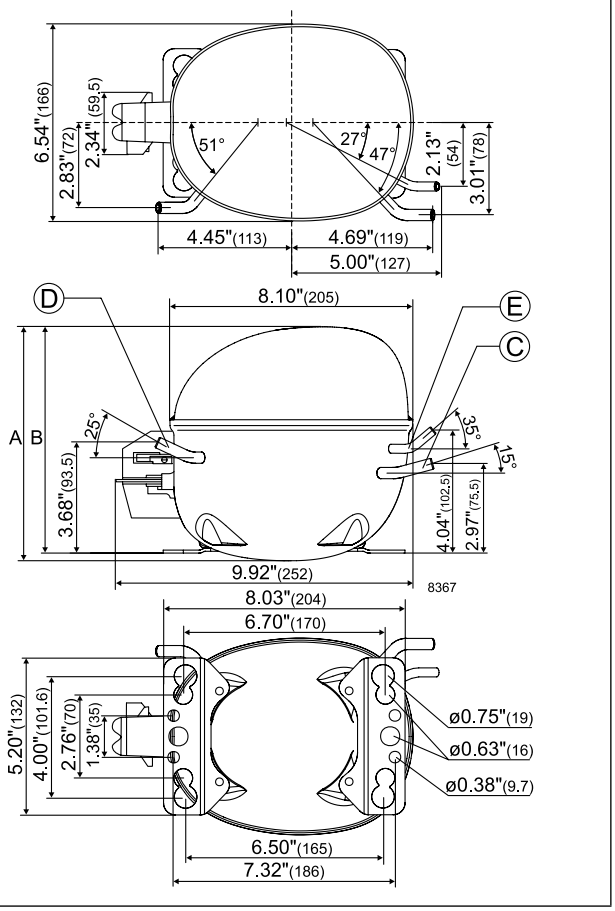
R134a • 115 V • 60 Hz • N-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		Protector (external)	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
NF6.1FX.2	105G5631								117U4127	117U5025			117U0349	117U1021
NF6.1FX.2	105G5638								117U4127	117U5025			117U0349	117U1021
NF6.1FX.2	105G5639								117U4127	117U5025			117U0349	117U1021
NF7.3FX.2	105G5719								117U4061	117U5025			117U0349	117U1021
NF7.3FX.2	105G5722								117U4061	117U5025			117U0349	117U1021
NF7.3FX.2	105G5737								117U4061	117U5025			117U0349	117U1021
NF8.4FX.2	105G5913								117U4129	117U5025			117U0349	117U1021
NF8.4FX.2	105G5918								117U4129	117U5025			117U0349	117U1021
NF8.4FX.2	105G5955								117U4129	117U5025			117U0349	117U1021
NF11FX.2	105G5914								117U4151	117U5028			117U0349	117U1021
NF11FX.2	105G5915								117U4151	117U5028			117U0349	117U1021
NF11FX.2	105G5916								117U4151	117U5028			117U0349	117U1021
NF11FX.2	105G5954								117U4151	117U5028			117U0349	117U1021
NTY7FK	105G5720			117U6102		117U3306	117-7118							117U1026

Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]				alt. connectors available	
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F		
212	1.19	454	1.78	802	2.45		1/4	6.13	95-135 V, 60 Hz	F1	197	191	8.2	6.5	6.5		X	3
212	1.19	454	1.78	802	2.45		1/4	6.13	95-135 V, 60 Hz	F1	197	191	8.2	6.5	6.5		X	3
212	1.19	454	1.78	802	2.45		1/4	6.13	95-135 V, 60 Hz	F1	197	191	8.2	6.5	6.5		X	3
262	1.16	548	1.70	958	2.33		3/10	7.27	95-135 V, 60 Hz	F1	197	191	8.2	6.5	6.5		X	3
262	1.16	548	1.70	958	2.33		3/10	7.27	95-135 V, 60 Hz	F1	197	191	8.2	6.5	6.5		X	3
262	1.16	548	1.70	958	2.33		3/10	7.27	95-135 V, 60 Hz	F1	197	191	8.2	6.5	6.5		X	3
303	1.22	621	1.72	1080	2.31		1/3	8.35	95-135 V, 60 Hz	F1	197	191	8.2	6.5	6.5		X	3
303	1.22	621	1.72	1080	2.31		1/3	8.35	95-135 V, 60 Hz	F1	197	191	8.2	6.5	6.5		X	3
303	1.22	621	1.72	1080	2.31		1/3	8.35	95-135 V, 60 Hz	F1	197	191	8.2	6.5	6.5		X	3
		795	1.65	1388	2.22		2/5	11.25	95-135 V, 60 Hz	F2	203	197	8.2	6.5	6.5		X	3
		795	1.65	1388	2.22		2/5	11.25	95-135 V, 60 Hz	F2	203	197	9.7	6.5	6.5		X	3
		795	1.65	1388	2.22		2/5	11.25	95-135 V, 60 Hz	F2	203	197	8.2	6.5	6.5		X	3
		795	1.65	1388	2.22		2/5	11.25	95-135 V, 60 Hz	F2	203	197	8.2	6.5	6.5		X	3
260	1.54					15	1/4	7.27	103-127 V, 60 Hz	S	203	197	8.2	6.5	6.5			2

NF / NTY



R134a • 115 V • 60 Hz • F-Series

Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -25°C / 55°C		MBP rating point -10°C / 55°C		HBP rating point 5°C / 55°C							
			-35	-15	-5	0	10	15	Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]						
FF6GK	103G5680	L/M/HBP		187	345	445	685		83	0.68	259	1.28	558	1.97		234	430	553	852	
FF7.5GK	103G5780	L/M/HBP		221	391	498	753		106	0.77	299	1.30	618	1.89		274	485	617	935	
FF8.5GX	103G5880	L/M/HBP		268	454	569	841		139	0.70	354	1.18	698	1.73		332	563	706	1045	
FF10GX	103G5980	L/M/HBP		291	498	625	931		149	0.68	386	1.16	770	1.71		362	619	778	1159	

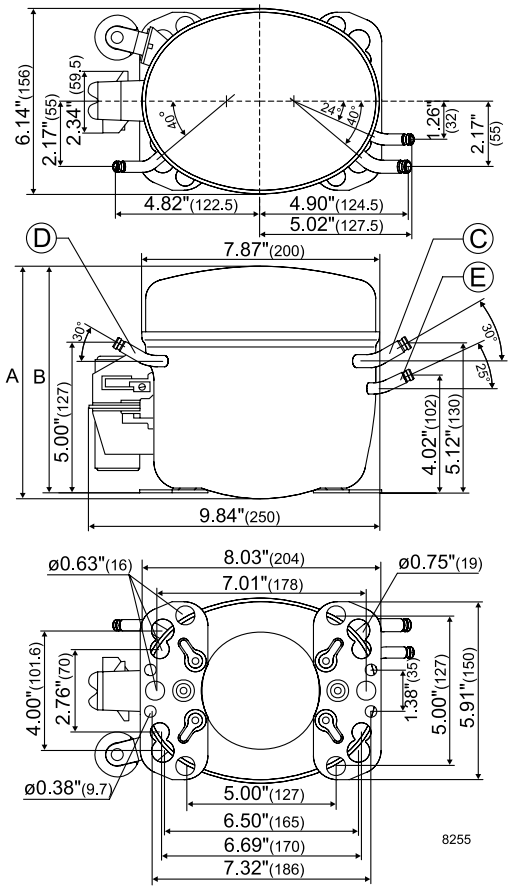
R134a • 115 V • 60 Hz • F-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		Protector (external)	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
FF6GK	103G5680												117U0349	117U1021
FF7.5GK	103G5780												117U0349	117U1021
FF8.5GX	103G5880								117U4060	117U5041			117U0349	117U1021
FF10GX	103G5980								117U4061	117U5040			117U0349	117U1021

Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]					
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler	alt. connectors available	
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F		
122	0.93	356	1.63	693	2.38		1/5	6.23	103-127 V, 60 Hz	F1	196	191	8.2	6.5	6.5			3
152	1.02	404	1.63	763	2.27		1/4	6.93	103-127 V, 60 Hz	F1	196	191	8.2	6.5	6.5			3
195	0.93	472	1.49	857	2.08		1/4	7.95	103-127 V, 60 Hz	F2	196	191	8.2	6.5	6.5			3
210	0.91	518	1.46	949	2.05		1/3	9.05	103-127 V, 60 Hz	F2	196	191	8.2	6.5	6.5			3

FF



R134a • 115 V • 60 Hz • S-Series

Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -25°C / 55°C		MBP rating point -10°C / 55°C		HBP rating point 5°C / 55°C							
			-35	-15	-5	0	10	15	Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]						
SC15FTX	104G7505	LBP	158	571	898				332	0.87	722	1.23			198	707	1112			
SC15FTX	104G7506	LBP	158	571	898				332	0.87	722	1.23			198	707	1112			
SC15FTX	104G7507	LBP	158	571	898				332	0.87	722	1.23			198	707	1112			
SC12G	104G7250	L/M/HBP	43	422	729	924	1414		202	0.73	563	1.27	1151	1.90	60	527	908	1150	1762	
SC12G	104G7260	L/M/HBP	43	422	729	924	1414		202	0.73	563	1.27	1151	1.90	60	527	908	1150	1762	
SC12G	104G7261	L/M/HBP	43	422	729	924	1414		202	0.73	563	1.27	1151	1.90	60	527	908	1150	1762	
SC15G	104G7550	L/M/HBP		516	880	1102	1623		256	0.84	685	1.32	1349	1.83		640	1091	1366	2015	
SC15G	104G7555	L/M/HBP		516	880	1102	1623		256	0.84	685	1.32	1349	1.83		640	1091	1366	2015	
SC15G	104G7557	L/M/HBP		516	880	1102	1623		256	0.84	685	1.32	1349	1.83		640	1091	1366	2015	
SC15G	104G7560	L/M/HBP		516	880	1102	1623		256	0.84	685	1.32	1349	1.83		640	1091	1366	2015	
SC18G	104G7800	L/M/HBP		592	995	1238	1829	2187	264	0.71	782	1.23	1514	1.72		739	1238	1540	2279	2730
SC18G	104G7803	L/M/HBP		592	995	1238	1829	2187	264	0.71	782	1.23	1514	1.72		739	1238	1540	2279	2730

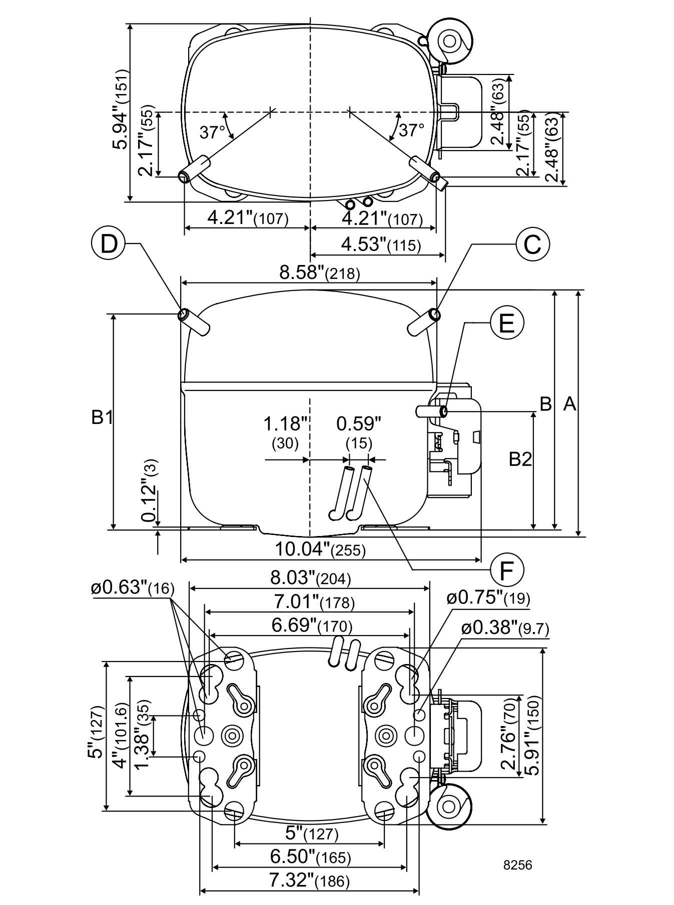
R134a • 115 V • 60 Hz • S-Series • Electrical Equipment

Compressor * pre-assembled start equipment	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		Protector (external)	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
SC15FTX	104G7505								117U6020	117U5023			103N1004	103N2008
SC15FTX	104G7506								117U6020	117U5023			103N1004	103N2008
SC15FTX *	104G7507								117U6020	117U5023			103N1004	103N2008
SC12G	104G7250								117U6020	117U5023			103N1004	103N2008
SC12G	104G7260								117U6020	117U5023			103N1004	103N2008
SC12G *	104G7261								117U6020	117U5023			103N1004	103N2008
SC15G	104G7550								117U6020	117U5023			103N1004	103N2008
SC15G	104G7555								117U6020	117U5023			103N1004	103N2008
SC15G	104G7557								117U6020	117U5023			103N1004	103N2008
SC15G	104G7560								117U6020	117U5023			103N1004	103N2008
SC18G	104G7800								117-7441	117U5042	117-7053			117U1021
SC18G	104G7803								117-7441	117U5042	117-7053			117U1021

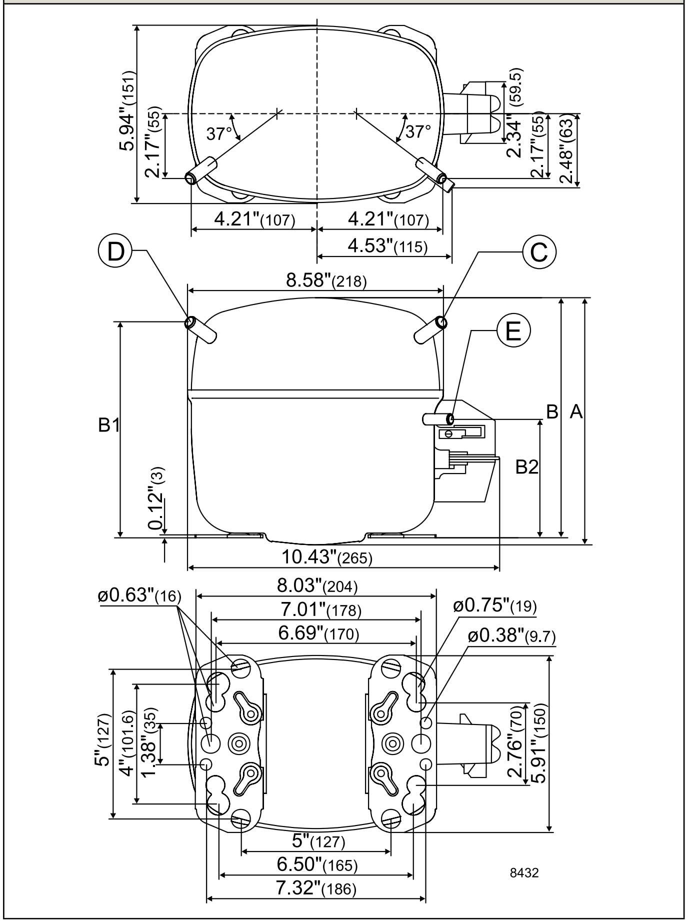
Cooling capacity [W] (LBP rating point -23.3°C / 54.4°C)	COP [W/W] (LBP)	Cooling capacity [W] (MBP rating point -6.7°C / 54.4°C)	COP [W/W] (MBP)	Cooling capacity [W] (HBP rating point 7.2°C / 54.4°C)	COP [W/W] (HBP)	Run capacitor (* optional) [µF]	Power [HP]	Displacement [cm³]	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Height [mm] A	Height [mm] B	Suction C	Process D	Dis-charge E	Oil cooler F	alt. connectors available	Application
455	1.12	924	1.46				2/5	15.28	90-135 V, 60 Hz	F2	209	203	8.2	6.5	6.5		X	4
455	1.12	924	1.46				2/5	15.28	90-135 V, 60 Hz	F2	209	203	10.2	6.5	6.5		X	4
455	1.12	924	1.46				2/5	15.28	90-135 V, 60 Hz	F2	209	203	8.2	6.5	6.5		X	4
296	0.99	745	1.56	1403	2.24		2/5	12.87	103-127 V, 60 Hz	F1	209	203	8.2	6.5	6.5		X	3
296	0.99	745	1.56	1403	2.24		2/5	12.87	103-127 V, 60 Hz	F1	209	203	8.2	6.5	6.5	6.5	X	3
296	0.99	745	1.56	1403	2.24		2/5	12.87	103-127 V, 60 Hz	F1	209	203	8.2	6.5	6.5		X	3
363	1.10	898	1.59	1624	2.12		1/2	15.28	103-127 V, 60 Hz	F1	209	203	8.2	6.5	6.5		X	3
363	1.10	898	1.59	1624	2.12		1/2	15.28	103-127 V, 60 Hz	F1	209	203	8.2	6.5	6.5		X	3
363	1.10	898	1.59	1624	2.12		1/2	15.28	103-127 V, 60 Hz	F1	209	203	8.2	6.5	6.5		X	3
363	1.10	898	1.59	1624	2.12		1/2	15.28	103-127 V, 60 Hz	F1	209	203	8.2	6.5	6.5	6.5	X	3
399	0.99	1023	1.48	1831	2.01		3/5	17.69	95-135 V, 60 Hz	F2	219	213	9.6	6.5	6.5			3
399	0.99	1023	1.48	1831	2.01		3/5	17.69	95-135 V, 60 Hz	F2	219	213	9.6	6.5	6.5			3

Application: Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

SC (with oil cooler connector)



SC (ext. protector)



WITH MORE THAN 60 YEARS OF EXPERIENCE IN COMPRESSOR TECHNOLOGY AND HIGHLY DEDICATED EMPLOYEES, OUR FOCUS IS ON DEVELOPING AND APPLYING ADVANCED COMPRESSOR TECHNOLOGIES TO ACHIEVE STANDARD SETTING PERFORMANCE FOR LEADING PRODUCTS AND BUSINESSES AROUND THE WORLD.

R600a

115 V | 60 Hz

Chemical formula
C_4H_{10}

Typelabel
Typelabel stripe colour: Red
Typelabel colour: Green

Applications
LBP: Low Back Pressure
MBP: Medium Back Pressure
HBP: High Back Pressure

Motor types
RSIR: Resistant Start Induction Run
RSCR: Resistant Start Capacitor Run
CSIR: Capacitor Start Induction Run
CSR: Capacitor Start Run

Compressor cooling
S = Static cooling normally sufficient
O = Oil cooling
F_1 = Fan cooling 1.5 m/s (compressor compartment temp. equal to ambient temperature)
F_2 = Fan cooling 3.0 m/s necessary

Starting devices
LST: Low Starting Torque
LST is used with capillary tube control and pressure equalizing. (Pressure equalizing may exceed 10 minutes). The PTC starting device requires 5 minutes cooling before each start.
To fulfil the requirements of EN 60355-2-34 the protection screen 103N0476 must be applied to the PTC starting device.
HST: High Starting Torque
HST consisting of relay and starting capacitor is used for expansion valve control or for capillary tube control without pressure equalizing.
ePTC: Electronically controlled PTC
- Compressor restart possible after a few seconds
- Operational wattage loss reduced by 2 watt
- PTC protection screen not needed (surface temp. < 82 °C)
- Temperature resistant up to min. +60 °C
- Additonal information, code numbers: refer to page 18

Test conditons
Electrical equipment being used is listed in our data sheets

1 Watt = 0.86 kcal/h
1 Watt = 3.41 Btu/h

R600a • 115 V • 60 Hz • N-Series

Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54,4°C, Tliq=32,2°C, Tsuc=32,2°C Evaporating temperature [°C]					
									LBP rating point -25°C / 55°C		MBP rating point -10°C / 55°C		HBP rating point 5°C / 55°C							
			-35	-15	-5	0	10	15	Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]						
NLE11KTK	105H5942	L/MBP	87	255	395	470			145	0.95	322	1.42	544	1.83	106	310	482	574		
NLE13KTK	105H5949	L/MBP	100	284	441	535			170	0.95	357	1.37	638	1.78	122	346	538	652		

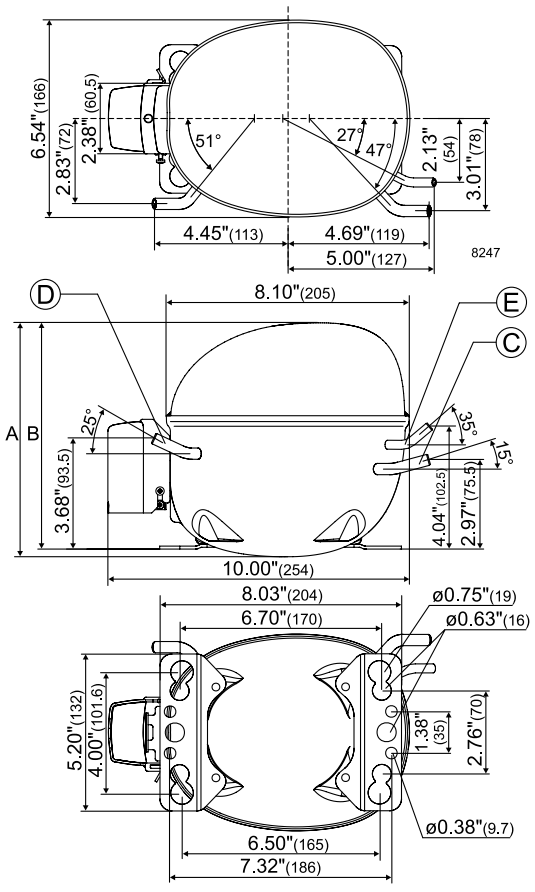
R600a • 115 V • 60 Hz • N-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		Protector (external)	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
NLE11KTK	105H5942	103N0026	103N0023	103N0027	103N0024		117-7118	117-7120					103N1010	103N2011
NLE13KTK	105H5949	103N0026	103N0023	103N0027	103N0024		117-7118	117-7120					103N1010	103N2011

Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]					
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler	alt. connectors available	
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F		
195	1.23	407	1.67			*	1/6	11.15	95-135 V, 60 Hz	F1	197	191	8.2	6.5	6.5			2 | 4
227	1.21	452	1.62			*	1/5	13.25	95-135 V, 60 Hz	F1	197	191	8.2	6.5	6.5			2 | 4

NLE



R600a • 115 V • 60 Hz • DELTA

Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54,4°C, Tliq=32,2°C, Tsuc=32,2°C Evaporating temperature [°C]					
									LBP rating point -25°C / 55°C		MBP rating point -10°C / 55°C		HBP rating point 5°C / 55°C							
			-35	-15	-5	0	10	15	Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]						
HTD30AE	CDO00120	LBP	23	72	115				43	1.22	92	1.75			28	89	141			
HTD30AE	CDO00166	LBP	23	72	115				43	1.22	92	1.75			28	89	141			

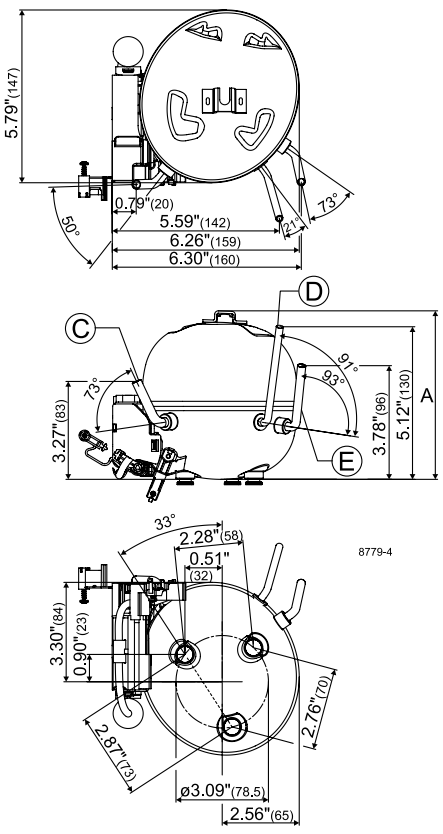
R600a • 115 V • 60 Hz • DELTA • Electrical Equipment • Spare parts • Accessories

Compressor pre-assembled start equipment	Code number	Run capacitor	Terminal board		Small cover	Adapter plate	Evaporation tray
		• optional • compulsory *	• PTC • external protector	• ePTC • external protector	• compulsory • delivered separately	• innovative fixation system • faster and easier assembly	plastic
		Spades	Spades	Spades			
		4.8 mm	4.8 mm	4.8 mm			
HTD30AE	CDO00120	2 µF	BKE1		163806_	157008_	162531_
HTD30AE	CDO00166	2 µF	BKE1		163806_	157008_	162531_

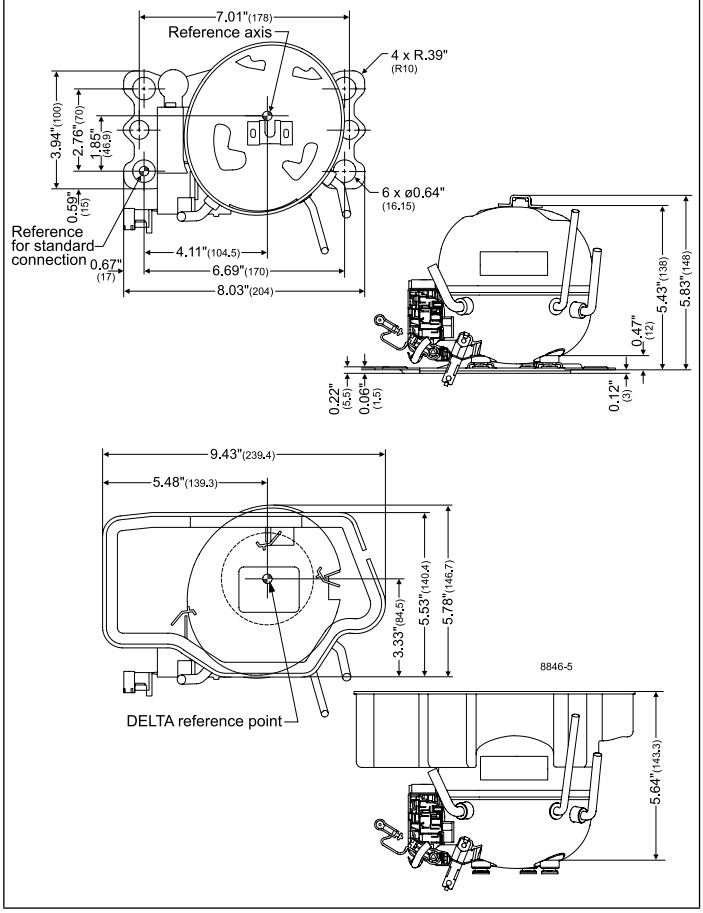
Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions						Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location / diameter [mm]			alt. connectors available	
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C (I.D.)	D (O.D.)	E (I.D.)		
58	1.57	118	2.08			*	1/12	3.00	80-135 V, 60 Hz	S	133		6.2	6.0	5.0	X	1 | 2 | 5
58	1.57	118	2.08			*	1/12	3.00	80-135 V, 60 Hz *	S	133		6.2	6.0	5.0	X	1 | 2 | 5

DELTA



DELTA • Evaporation tray • Adapter plate



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R404A/R507

115 V | 60 Hz

Chemical formula
R404A: CHF_2CF_3 / CH_3CF_3 / CH_2FCF_3
R507: CHF_2CF_3 / CH_3CF_3

Typelabel
Typelabel stripe colour: Lilac
Typelabel colour: Green

Applications
LBP: Low Back Pressure
MBP: Medium Back Pressure
HBP: High Back Pressure

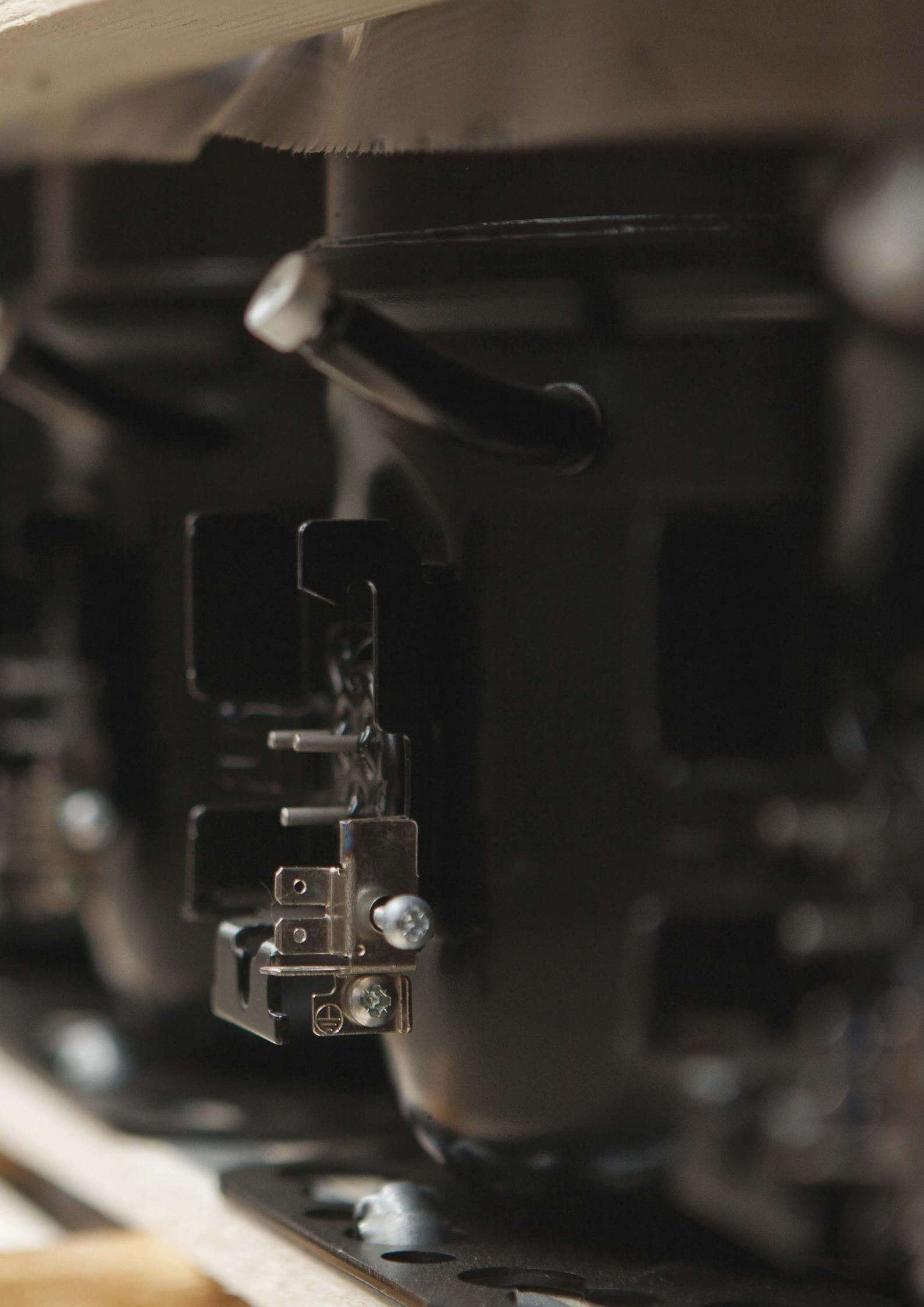
Motor types
RSIR: Resistant Start Induction Run
RSCR: Resistant Start Capacitor Run
CSIR: Capacitor Start Induction Run
CSR: Capacitor Start Run

Compressor cooling
S = Static cooling normally sufficient
O = Oil cooling
F_1 = Fan cooling 1.5 m/s (compressor compartment temp. equal to ambient temperature)
F_2 = Fan cooling 3.0 m/s necessary

Starting devices
LST: Low Starting Torque
LST is used with capillary tube control and pressure equalizing. (Pressure equalizing may exceed 10 minutes). The PTC starting device requires 5 minutes cooling before each start.
To fulfil the requirements of EN 60355-2-34 the protection screen 103N0476 must be applied to the PTC starting device.
HST: High Starting Torque
HST consisting of relay and starting capacitor is used for expansion valve control or for capillary tube control without pressure equalizing.
ePTC: Electronically controlled PTC
- Compressor restart possible after a few seconds
- Operational wattage loss reduced by 2 watt
- PTC protection screen not needed (surface temp. < 82 °C)
- Temperature resistant up to min. +60 °C
- Additonal information, code numbers: refer to page 18

Test conditons
Electrical equipment being used is listed in our data sheets

1 Watt = 0.86 kcal/h
1 Watt = 3.41 Btu/h



R404A/R507 • 115 V • 60 Hz • T-Series

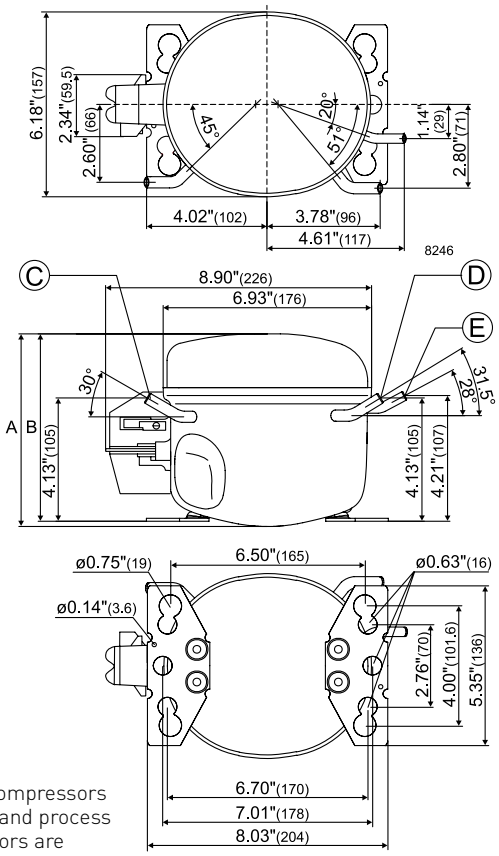
Compressor	Code number	Application	EN 12900 Capacity [W] Tc=45°C, Tliq=45°C, Tsuc=32°C Evaporating temperature [°C]						EN 12900						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -35°C / 40°C		MBP rating point -10°C / 45°C		HBP rating point 5°C / 50°C							
			-35	-15	-5	0	10	15	Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]						
TF4CLX	102U2102	L/MBP	101	285	427	513			101	0.71	305	1.21	470	1.23	100	311	475	576		
TF4CLX	102U2114	L/MBP	101	285	427	513			101	0.71	305	1.21	470	1.23	100	311	475	576		
TFS4.5CLX	102U2103	LBP	137	366					137	0.83	388	1.18			140	402				
TFS4.5CLX	102U2115	LBP	137	366					137	0.83	388	1.18			140	402				

R404A/R507 • 115 V • 60 Hz • T-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for more info				Run capacitor (RC)			HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		Protector (external)	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
TF4CLX	102U2102								117U4148	117U5025			117U0349	117U1021
TF4CLX	102U2114								117U4148	117U5025			117U0349	117U1021
TFS4.5CLX	102U2103								117U4148	117U5025			117U0349	117U1021
TFS4.5CLX	102U2115								117U4148	117U5025			117U0349	117U1021

Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6 Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11																			
ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions								Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]					alt. connectors available	
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler			
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F			
207	1.13	389	1.44	654	1.72		1/5	3.86	103-135 V, 60 Hz	F2	173	169	6.5	6.5	5.0		X	4 | 5 | 10 | 11	
207	1.13	389	1.44	654	1.72		1/5	3.86	103-135 V, 60 Hz	F2	173	169	6.5	6.5	6.5		X	4 | 5 | 10 | 11	
273	1.20	496	1.40				1/4	4.63	103-135 V, 60 Hz	F2	173	169	6.5	6.5	5.0		X	4 | 5	
273	1.20	496	1.40				1/4	4.63	103-135 V, 60 Hz	F2	173	169	6.5	6.5	6.5		X	4 | 5	

TF / TFS



Note:
On TF compressors suction and process connectors are interchangeable.

R404A/R507 • 115 V • 60 Hz • N-Series

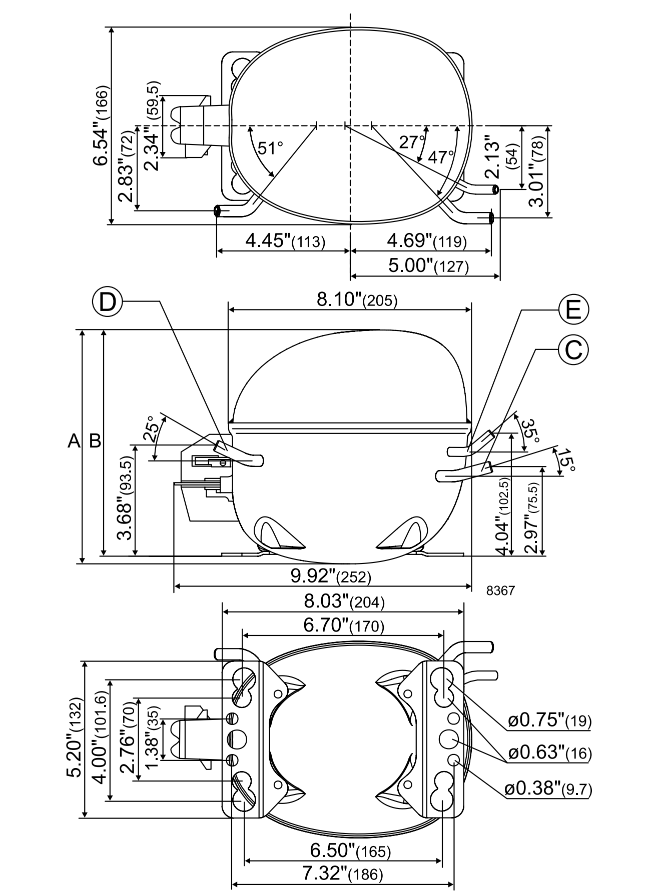
Compressor	Code number	Application	EN 12900 Capacity [W] Tc=45°C, Tliq=45°C, Tsuc=32°C Evaporating temperature [°C]						EN 12900						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -35°C / 40°C		MBP rating point -10°C / 45°C		HBP rating point 5°C / 50°C							
			-35	-15	-5	0	10	15	Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]						
NF5.5CLX	105F1611	L/MBP	190	495	728	869			203	0.95	569	1.49	878	1.68	191	538	813	983		
NF5.5CLX	105F1612	L/MBP	190	495	728	869			203	0.95	569	1.49	878	1.68	191	538	813	983		
NF5.5CLX	105F1621	L/MBP	190	495	728	869			203	0.95	569	1.49	878	1.68	191	538	813	983		
NF5.5CLX	105F1625	L/MBP	190	495	728	869			203	0.95	569	1.49	878	1.68	191	538	813	983		
NF5.5CLX	105F1626	L/MBP	190	495	728	869			203	0.95	569	1.49	878	1.68	191	538	813	983		
NF7CLX	105F1714	L/MBP	230	623	923	1105			248	0.93	719	1.52	1117	1.72	227	674	1027	1246		
NF7CLX	105F1721	L/MBP	230	623	923	1105			248	0.93	719	1.52	1117	1.72	227	674	1027	1246		
NF7CLX	105F1725	L/MBP	230	623	923	1105			248	0.93	719	1.52	1117	1.72	227	674	1027	1246		
NF7CLX	105F1727	L/MBP	230	623	923	1105			248	0.93	719	1.52	1117	1.72	227	674	1027	1246		

R404A/R507 • 115 V • 60 Hz • N-Series • Electrical Equipment

Compressor * pre-assembled start equipment	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC) optional or compulsory (refer to data sheet)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		Protector (external)			Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
NF5.5CLX	105F1611								117U4061	117U5025			117U0349	117U1021
NF5.5CLX	105F1612								117U4061	117U5025			117U0349	117U1021
NF5.5CLX	105F1621								117U4061	117U5025			117U0349	117U1021
NF5.5CLX *	105F1625								117U4061	117U5025			117U0349	117U1021
NF5.5CLX	105F1626								117U4061	117U5025			117U0349	117U1021
NF7CLX	105F1714								117U4129	117U5022			117U0349	117U1021
NF7CLX	105F1721								117U4129	117U5022			117U0349	117U1021
NF7CLX *	105F1725								117U4129	117U5022			117U0349	117U1021
NF7CLX	105F1727								117U4129	117U5022			117U0349	117U1021

						Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6 Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11												
ASHRAE						Run capacitor [* optional]	Power	Displacement	Voltage and frequencies [* dual frequency type with 50/60 Hz]	Compressor cooling [refer to data sheet]	Dimensions						alt. connectors available	Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]					
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F		
366	1.23	653	1.53	1088	1.95		1/3	6.13	95-135 V, 60 Hz	F2	203	197	8.2	6.5	6.5		X	4 | 10 | 11
366	1.23	653	1.53	1088	1.95		1/3	6.13	95-135 V, 60 Hz	F2	203	197	8.2	6.5	6.5		X	4 | 10 | 11
366	1.23	653	1.53	1088	1.95		1/3	6.13	95-135 V, 60 Hz	F2	203	197	8.2	6.5	6.5		X	4 | 10 | 11
366	1.23	653	1.53	1088	1.95		1/3	6.13	95-135 V, 60 Hz	F2	203	197	8.2	6.5	6.5		X	4 | 10 | 11
366	1.23	653	1.53	1088	1.95		1/3	6.13	95-135 V, 60 Hz	F2	203	197	8.2	6.5	6.5		X	4 | 10 | 11
452	1.23	825	1.56	1385	2.00		2/5	7.27	95-135 V, 60 Hz	F2	197	191	8.2	6.2	6.2		X	4 | 10 | 11
452	1.23	825	1.56	1385	2.00		2/5	7.27	95-135 V, 60 Hz	F2	197	191	8.2	6.5	6.5		X	4 | 10 | 11
452	1.23	825	1.56	1385	2.00		2/5	7.27	95-135 V, 60 Hz	F2	197	191	8.2	6.5	6.5		X	4 | 10 | 11
452	1.23	825	1.56	1385	2.00		2/5	7.27	95-135 V, 60 Hz	F2	197	191	8.2	6.5	6.5		X	4 | 10 | 11

NF



R404A/R507 • 115 V • 60 Hz • S-Series

Compressor	Code number	Application	EN 12900 Capacity [W] Tc=45°C, Tliq=45°C, Tsuc=32°C Evaporating temperature [°C]						EN 12900						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -35°C / 40°C		MBP rating point -10°C / 45°C		HBP rating point 5°C / 50°C							
			-35	-15	-5	0	10	15	Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]						
SC10CL	104L1503	L/MBP	172	729	1148	1401			214	0.74	871	1.48	1386	1.75	130	700	1155	1440		
SC10CL	104L1509	L/MBP	172	729	1148	1401			214	0.74	871	1.48	1386	1.75	130	700	1155	1440		
SC12CL	104L1603	LBP	282	972					326	0.75	1131	1.30			226	1097				
SC12CL	104L1612	LBP	282	972					326	0.75	1131	1.30			226	1097				
SC12CLX.2	104L1686	LBP	334	997					372	0.84	1154	1.37			304	1104				
SC12CLX.2	104L1696	LBP	334	997					372	0.84	1154	1.37			304	1104				
SC12CLX.2	104L1698	LBP	334	997					372	0.84	1154	1.37			304	1104				
SC15CLX.2	104L1853	LBP	437	1239					478	0.93	1437	1.54			413	1337				
SC18CLX.2	104L2190	LBP	523	1360					569	0.97	1553	1.53			502	1500				
SC18CLX.2	104L2198	LBP	523	1360					569	0.97	1553	1.53			502	1500				
SC18CLX.2	104L2199	LBP	523	1360					569	0.97	1553	1.53			502	1500				
SC12MLX	104L1606	MBP		978	1484	1799					1141	1.49	1824	1.78		1040	1628	2000		
SC15MLX	104L1805	MBP		1129	1714	2078					1318	1.39	2107	1.66		1201	1880	2310		
SC18MLX	104L2105	MBP		1412	2106	2538					1632	1.44	2568	1.72		1521	2328	2839		
SC15MLX.2	104L1807	MBP		1147	1715	2069					1328	1.49	2093	1.75		1234	1894	2312		

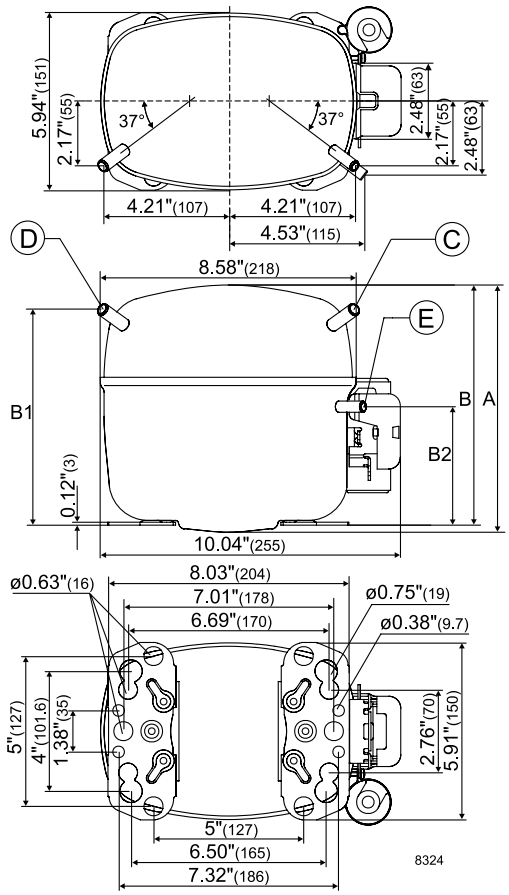
R404A/R507 • 115 V • 60 Hz • S-Series • Electrical Equipment

Compressor * pre-assembled start equipment	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		Protector (external)	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
SC10CL	104L1503								117U6020	117U5023			103N1004	103N2008
SC10CL *	104L1509								117U6020	117U5023			103N1004	103N2008
SC12CL	104L1603								117U6020	117U5023			103N1004	103N2008
SC12CL	104L1612								117U6020	117U5023			103N1004	103N2008
SC12CLX.2	104L1686								117U6020	117U5023			103N1004	103N2008
SC12CLX.2	104L1696								117U6020	117U5023			103N1004	103N2008
SC12CLX.2 *	104L1698								117U6020	117U5023			103N1004	103N2008
SC15CLX.2	104L1853						117-7114		117-7441	117U5043	117-7045			117U1021
SC18CLX.2	104L2190						117-7114		117-7441	117U5043	117-7045			117U1021
SC18CLX.2	104L2198						117-7114		117-7441	117U5043	117-7045			117U1021
SC18CLX.2	104L2199										117-7069			117U1021
SC12MLX	104L1606								117-7441	117U5042	117-7053			117U1021
SC15MLX	104L1805						117-7114		117-7441	117U5043	117-7045			117U1021
SC18MLX	104L2105						117-7114		117-7441	117U5043	117-7045			117U1021
SC15MLX.2	104L1807						117-7114		117-7441	117U5043	117-7045			117U1021

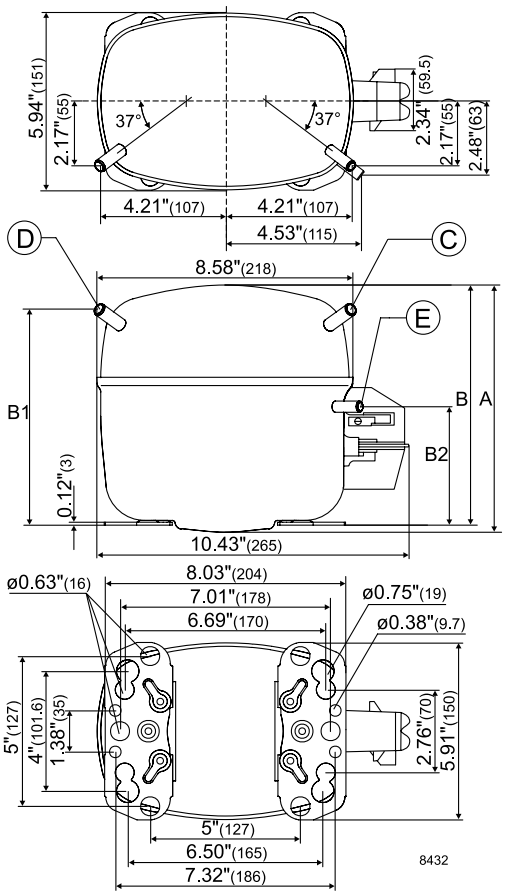
Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]					
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler	alt. connectors available	
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F		
418	0.99	917	1.42	1652	1.98		1/2	10.29	103-127 V, 60 Hz	F2	209	203	8.2	6.5	6.5		X	4 | 10 | 11
418	0.99	917	1.42	1652	1.98		1/2	10.29	103-127 V, 60 Hz	F2	209	203	8.2	6.5	6.5		X	4 | 10 | 11
698	1.11						3/5	12.87	103-127 V, 60 Hz	F2	209	203	8.2	6.5	6.5		X	4
698	1.11						3/5	12.87	103-127 V, 60 Hz	F2	209	203	8.2	6.5	6.5		X	4
725	1.14	1353	1.43				3/4	12.87	103-127 V, 60 Hz	F2	209	203	9.6	6.5	6.5		X	4
725	1.14	1353	1.43				3/4	12.87	103-127 V, 60 Hz	F2	209	203	8.2	6.5	6.5		X	4
725	1.14	1353	1.43				3/4	12.87	103-127 V, 60 Hz	F2	209	203	8.2	6.5	6.5		X	4
882	1.21	1649	1.56			*	5/6	15.28	103-127 V, 60 Hz	F2	219	213	9.6	6.5	6.5			4
1075	1.31	1748	1.56			23.5	1	17.69	103-127 V, 60 Hz	F2	219	213	9.6	6.5	6.5		X	4
1075	1.31	1748	1.56			23.5	1	17.69	103-127 V, 60 Hz	F2	219	213	9.6	6.5	6.5		X	4
1075	1.31	1748	1.56			23.5	1	17.69	103-127 V, 60 Hz	F2	219	213	9.6	6.5	6.5		X	4
685	1.18	1301	1.51	2263	2.04		3/4	12.87	95-135 V, 60 Hz	F2	219	213	8.2	6.5	6.5			10 | 11
791	1.10	1503	1.40	2613	1.91	*	3/4	15.28	95-135 V, 60 Hz	F2	219	213	9.6	6.5	6.5			10 | 11
1033	1.18	1866	1.47	3186	1.99	23.5	1	17.69	103-127 V, 60 Hz	F2	219	213	9.6	6.5	6.5			10 | 11
835	1.23	1517	1.50	2597	2.01	23.5	3/4	15.28	103-127 V, 60 Hz	F2	219	213	9.6	6.5	6.5			10 | 11

SC



SC (ext. protector)



WITH MORE THAN 60 YEARS OF EXPERIENCE IN COMPRESSOR TECHNOLOGY AND HIGHLY DEDICATED EMPLOYEES, OUR FOCUS IS ON DEVELOPING AND APPLYING ADVANCED COMPRESSOR TECHNOLOGIES TO ACHIEVE STANDARD SETTING PERFORMANCE FOR LEADING PRODUCTS AND BUSINESSES AROUND THE WORLD.

R290

115 V | 60 Hz

Chemical formula
C_3H_8

Typelabel
Typelabel stripe colour: Red
Typelabel colour: Green

Applications
LBP: Low Back Pressure
MBP: Medium Back Pressure
HBP: High Back Pressure

Motor types
RSIR: Resistant Start Induction Run
RSCR: Resistant Start Capacitor Run
CSIR: Capacitor Start Induction Run
CSR: Capacitor Start Run

Compressor cooling
S = Static cooling normally sufficient
O = Oil cooling
F_1 = Fan cooling 1.5 m/s (compressor compartment temp. equal to ambient temperature)
F_2 = Fan cooling 3.0 m/s necessary

Starting devices
LST: Low Starting Torque
LST is used with capillary tube control and pressure equalizing. (Pressure equalizing may exceed 10 minutes). The PTC starting device requires 5 minutes cooling before each start.
To fulfil the requirements of EN 60355-2-34 the protection screen 103N0476 must be applied to the PTC starting device.
HST: High Starting Torque
HST consisting of relay and starting capacitor is used for expansion valve control or for capillary tube control without pressure equalizing.
ePTC: Electronically controlled PTC
- Compressor restart possible after a few seconds
- Operational wattage loss reduced by 2 watt
- PTC protection screen not needed (surface temp. < 82 °C)
- Temperature resistant up to min. +60 °C
- Additonal information, code numbers: refer to page 18

Test conditons
Electrical equipment being used is listed in our data sheets

1 Watt = 0.86 kcal/h
1 Watt = 3.41 Btu/h

R290 • 115 V • 60 Hz • T-Series

Compressor	Code number	Application	EN 12900 Capacity [W] Tc=45°C, Tliq=45°C, Tsuc=32°C Evaporating temperature [°C]						EN 12900						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -35°C / 40°C		MBP rating point -10°C / 45°C		HBP rating point 5°C / 50°C							
			-35	-15	-5	0	10	15	Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]						
TL4.0CNX.2	102H3490	L/MBP	112	292	438	530			111	0.81	319	1.57	517	2.07	107	310	467	566		
TL4.0CNX.2	102H3491	L/MBP	112	292	438	530			111	0.81	319	1.57	517	2.07	107	310	467	566		
TL4.8CNX.2	102H3590	L/MBP	141	356	521	621			141	0.90	384	1.57	601	1.96	137	380	560	668		
TL4.8CNX.2	102H3591	L/MBP	141	356	521	621			141	0.90	384	1.57	601	1.96	137	380	560	668		

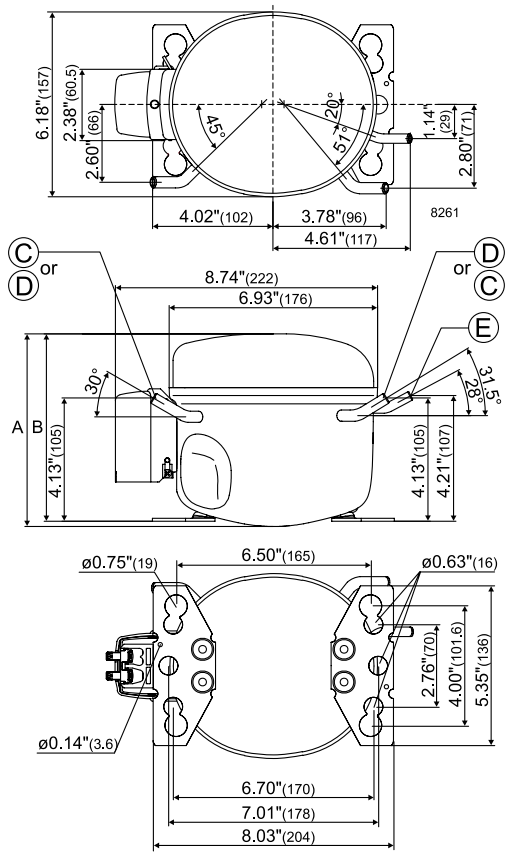
R290 • 115 V • 60 Hz • T-Series • Electrical Equipment

Compressor * pre-assembled start equipment	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		Protector (external)	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
TL4.0CNX.2	102H3490								117U7005	117U5023			103N1010	103N2011
TL4.0CNX.2 *	102H3491								117U7005	17U5023			103N1010	103N2011
TL4.8CNX.2	102H3590								117U7005	117U5023			103N1010	103N2011
TL4.8CNX.2 *	102H3591								117U7005	117U5023			103N1010	103N2011

Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]				alt. connectors available	
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP								Suction	Process	Dis-charge	Oil cooler		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]			A	B	C	D	E	F		
212	1.27	399	1.85	671	2.69		1/5	4.01	95-135 V, 60 Hz	F2	173	169	6.5	6.5	5.0		X	3|4|5|7|10|11
212	1.27	399	1.85	671	2.69		1/5	4.01	95-135 V, 60 Hz	F2	173	169	6.5	6.5	5.0		X	3|4|5|7|10|11
263	1.34	479	1.86	772	2.52		1/4	4.78	95-135 V, 60 Hz	F2	173	169	6.5	6.5	5.0		X	3|4|5|7|10|11
263	1.34	479	1.86	772	2.52		1/4	4.78	95-135 V, 60 Hz	F2	173	169	6.5	6.5	5.0		X	3|4|5|7|10|11

TL



R290 • 115 V • 60 Hz • D-Series

Compressor	Code number	Application	EN 12900 Capacity [W] Tc=45°C, Tliq=45°C, Tsuc=32°C Evaporating temperature [°C]						EN 12900						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -35°C / 40°C		MBP rating point -10°C / 45°C		HBP rating point 5°C / 50°C							
			-35	-15	-5	0	10	15	Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]						
DLE4CN	102H3482	L/MBP	126	315	464	555			132	1.16	369	2.06	585	2.68	128	331	494	594		
DLE4CN	102H3483	L/MBP	126	315	464	555			132	1.16	369	2.06	585	2.68	128	331	494	594		
DLE4CN	102H3484	L/MBP	126	315	464	555			132	1.16	369	2.06	585	2.68	128	331	494	594		
DLE4CN	102H3485	L/MBP	126	315	464	555			132	1.16	369	2.06	585	2.68	128	331	494	594		
DLE4CN	102H3489	L/MBP	126	315	464	555			132	1.16	369	2.06	585	2.68	128	331	494	594		
DLE4.8CN	102H3582	L/MBP	160	384	563	672			169	1.13	449	1.99	705	2.60	154	408	599	716		
DLE4.8CN	102H3583	L/MBP	160	384	563	672			169	1.13	449	1.99	705	2.60	154	408	599	716		
DLE4.8CN	102H3584	L/MBP	160	384	563	672			169	1.13	449	1.99	705	2.60	154	408	599	716		
DLE4.8CN	102H3585	L/MBP	160	384	563	672			169	1.13	449	1.99	705	2.60	154	408	599	716		
DLE4.8CN	102H3587	L/MBP	160	384	563	672			169	1.13	449	1.99	705	2.60	154	408	599	716		
DLE5.7CN	102H3682	L/MBP	190	463	673	801			199	1.16	539	1.98	840	2.48	193	495	723	863		
DLE5.7CN	102H3683	L/MBP	190	463	673	801			199	1.16	539	1.98	840	2.48	193	495	723	863		
DLE6.5CN	102H3792	L/MBP	202	507	746	897			213	1.15	592	1.98	954	2.47	204	537	798	965		
DLE6.5CN	102H3793	L/MBP	202	507	746	897			213	1.15	592	1.98	954	2.47	204	537	798	965		

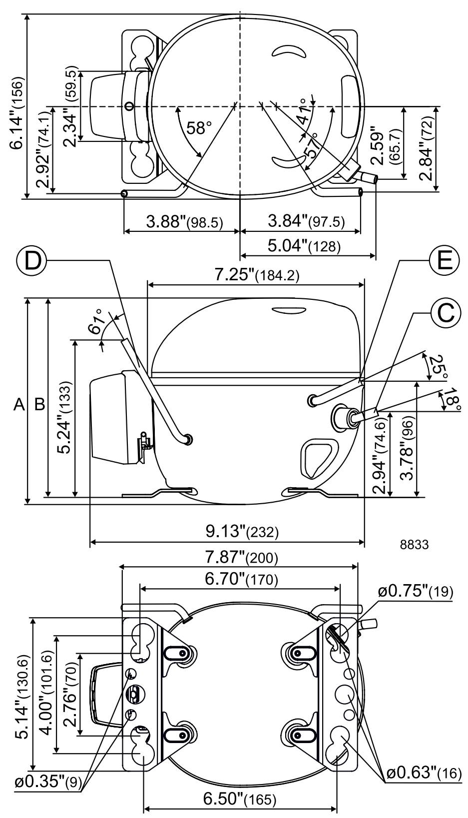
R290 • 115 V • 60 Hz • D-Series • Electrical Equipment

Compressor * pre-assembled start equipment	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		ePTC	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
DLE4CN	102H3482						117-7118	117-7120	117U7022	117U5023			103N1010	103N0492
DLE4CN *	102H3483								117U7022	117U5023			103N1010	103N0492
DLE4CN *	102H3484												103N1010	103N0492
DLE4CN *	102H3485						117-7148						103N1010	103N0492
DLE4CN	102H3489						117-7118	117-7120	117U7022	117U5023			103N1010	103N0492
DLE4.8CN	102H3582						117-7118	117-7120	117U7011	117U5023			103N1010	103N0492
DLE4.8CN *	102H3583								117U7011	117U5023			103N1010	103N0492
DLE4.8CN *	102H3584												103N1010	103N0492
DLE4.8CN *	102H3585						117-7148						103N1010	103N0492
DLE4.8CN	102H3587						117-7118	117-7120	117U7011	117U5023			103N1010	103N0492
DLE5.7CN	102H3682						117-7118	117-7120	117U7011	117U5023			103N1010	103N0492
DLE5.7CN *	102H3683								117U7011	117U5023			103N1010	103N0492
DLE6.5CN	102H3792						117-7118		117U7013	117U5023			103N1010	103N0492
DLE6.5CN *	102H3793								117U7013	117U5023			103N1010	103N0492

Refrigerators = 1 | Freezers = 2 | Beverage coolers = 3 | Commercial freezers = 4 | Minibars = 5 | Ice cream cabinets = 6
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions						alt. connectors available	Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]					
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP						A	B	Suction C	Process D	Dis-charge E	Oil cooler F		
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]										
230	1.50	414	2.03	685	2.91	*	1/5	4.00	95-135 V, 60 Hz	F2	175	169	8.2	6.5	6.5		X	3|4|6|10|11
230	1.50	414	2.03	685	2.91		1/5	4.00	95-135 V, 60 Hz	F2	175	169	8.2	6.5	6.5		X	3|4|6|10|11
230	1.50	414	2.03	685	2.91		1/5	4.00	95-135 V, 60 Hz	F2	175	169	8.2	6.5	6.5		X	3|4|6|10|11
230	1.50	414	2.03	685	2.91		1/5	4.00	95-135 V, 60 Hz	F2	175	169	8.2	6.5	6.5		X	3|4|6|10|11
230	1.50	414	2.03	685	2.91	*	1/5	4.00	95-135 V, 60 Hz	F2	175	169	8.2	6.5	6.5		X	3|4|6|10|11
285	1.47	504	2.00	818	2.87	*	1/4	4.80	95-135 V, 60 Hz	F2	175	169	8.2	6.5	6.5		X	3|4|6|10|11
285	1.47	504	2.00	818	2.87		1/4	4.80	95-135 V, 60 Hz	F2	175	169	8.2	6.5	6.5		X	3|4|6|10|11
285	1.47	504	2.00	818	2.87		1/4	4.80	95-135 V, 60 Hz	F2	175	169	8.2	6.5	6.5		X	3|4|6|10|11
285	1.47	504	2.00	818	2.87		1/4	4.80	95-135 V, 60 Hz	F2	175	169	8.2	6.5	6.5		X	3|4|6|10|11
285	1.47	504	2.00	818	2.87	*	1/4	4.80	95-135 V, 60 Hz	F2	175	169	8.2	6.5	6.5		X	3|4|6|10|11
348	1.50	609	1.96	981	2.70	*	3/10	5.70	95-135 V, 60 Hz	F2	175	169	8.2	6.5	6.5		X	3|4|6|10|11
348	1.50	609	1.96	981	2.70		3/10	5.70	95-135 V, 60 Hz	F2	175	169	8.2	6.5	6.5		X	3|4|6|10|11
376	1.50	669	1.96	1125	2.69	*	1/3	6.50	95-135 V, 60 Hz	F2	175	169	8.2	6.5	6.5		X	3|4|6|10|11
376	1.50	669	1.96	1125	2.69		1/3	6.50	95-135 V, 60 Hz	F2	175	169	8.2	6.5	6.5		X	3|4|6|10|11

DLE



R290 • 115 V • 60 Hz • N-Series

Compressor	Code number	Application	EN 12900 Capacity [W] Tc=45°C, Tliq=45°C, Tsuc=32°C Evaporating temperature [°C]						EN 12900						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -35°C /40°C		MBP rating point -10°C / 45°C		HBP rating point 5°C / 50°C							
			-35	-15	-5	0	10	15	Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]						
NL8.4CNX.2	105H6090	L/MBP	263	664	976	1167			274	1.12	777	1.95	1229	2.42	266	698	1037	1248		
NL8.4CNX.2	105H6092	L/MBP	263	664	976	1167			274	1.12	777	1.95	1229	2.42	266	698	1037	1248		
NLE8.0CN	105H6093	L/MBP	252	616	902	1081			268	1.24	718	2.10	1144	2.67	243	649	961	1158		
NLE8.8CN	105H6094	L/MBP	289	696	1004	1185			304	1.26	808	2.08	1247	2.35	295	737	1087	1296		
NLE8.0CN	105H6095	L/MBP	252	616	902	1081			268	1.24	718	2.10	1144	2.67	243	649	961	1158		
NLE8.8CN	105H6096	L/MBP	289	696	1004	1185			304	1.26	808	2.08	1247	2.35	295	737	1087	1296		
NLE8.0CN	105H6097	L/MBP	252	616	902	1081			268	1.24	718	2.10	1144	2.67	243	649	961	1158		
NLE8.0CN	105H6098	L/MBP	252	616	902	1081			268	1.24	718	2.10	1144	2.67	243	649	961	1158		
NLE10CN	105H6194	L/MBP	339	807	1158	1365			362	1.26	934	2.04	1439	2.46	347	868	1268	1507		
NLE10CN	105H6195	L/MBP	339	807	1158	1365			362	1.26	934	2.04	1439	2.46	347	868	1268	1507		
NLE11CNL	105H5981	LBP	367	902					384	1.29	1046	2.08			382	966				
NLE11CNL	105H5983	LBP	367	902					384	1.29	1046	2.08			382	966				
NLE11MN	105H5980	MBP		912	1316	1559	2139				1058	2.04	1640	2.52		976	1426	1696	2345	
NLE11MN	105H5982	MBP		912	1316	1559	2139				1058	2.04	1640	2.52		976	1426	1696	2345	
NLY10CN	105H6164	L/MBP	325	805	1159	1360			340	1.23	935	2.14	1438	2.61	359	856	1270	1513		
NLY10CN	105H6165	L/MBP	325	805	1159	1360			340	1.23	935	2.14	1438	2.61	359	856	1270	1513		

R290 • 115 V • 60 Hz • N-Series • Electrical Equipment

Compressor * pre-assembled start equipment	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		Protector (external)	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
NL8.4CNX.2	105H6090								117U7013	117U5035			103N1010	103N2011
NL8.4CNX.2	105H6092								117U7013	117U5035			103N1010	103N2011
NLE8.0CN	105H6093					117L0586	117-7147		117U7013	117U5023			103N1010	103N2011
NLE8.8CN	105H6094					117L0533	117-7114		117U7014	117U5025			103N1010	103N2011
NLE8.0CN *	105H6095					117L0586			117U7013	117U5023			103N1010	103N2011
NLE8.8CN *	105H6096					117L0533			117U7014	117U5025			103N1010	103N2011
NLE8.0CN *	105H6097					117L0586							103N1010	103N2011
NLE8.0CN *	105H6098					117L0586	117-7149						103N1010	103N2011
NLE10CN	105H6194					117L0534	117-7118	117-7120	117U7018	117U5025			103N1010	103N2011
NLE10CN *	105H6195					117L0534			117U7018	117U5025			103N1010	103N2011
NLE11CNL	105H5981					117L0534	117-7114		117U7020	117U5039			103N1010	
NLE11CNL *	105H5983					117L0534			117U7020	117U5039			103N1010	
NLE11MN	105H5980					117L0533	117-7114		117U7020	117U5023			103N1010	
NLE11MN *	105H5982					117L0533			117U7020	117U5023			103N1010	
NLY10CN	105H6164					117L0533	117-7118	117-7120	117U7020	117U5035			103N1010	103N2011
NLY10CN *	105H6165					117L0533			117U7020	117U5035			103N1010	103N2011

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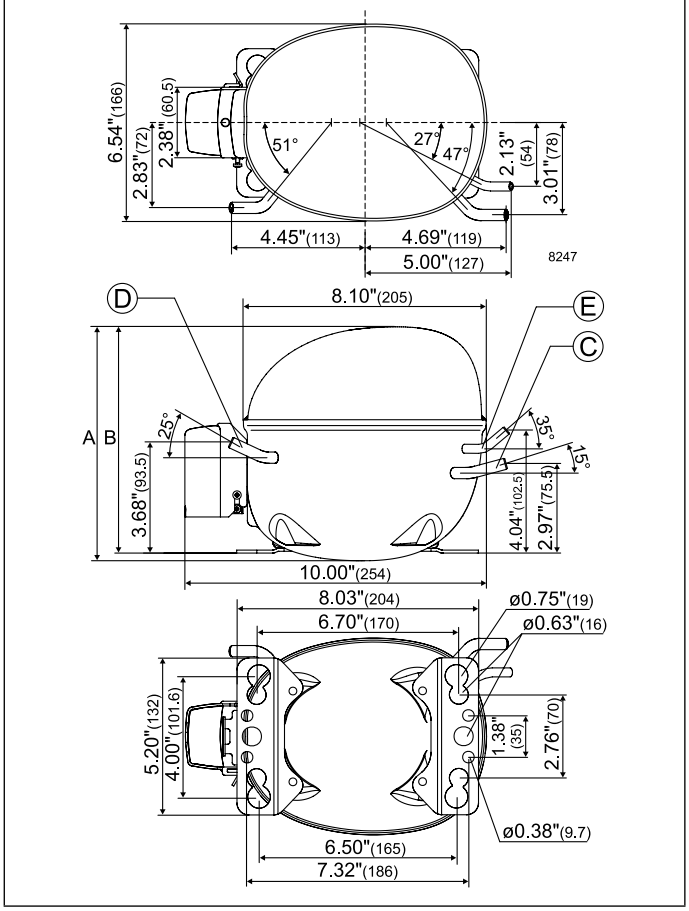
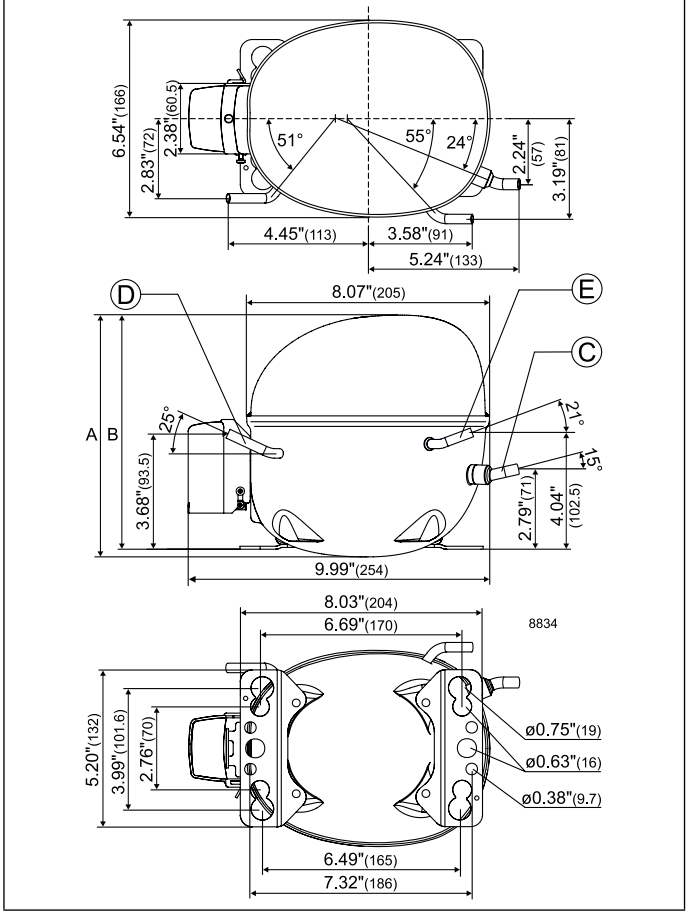
Water coolers = 7 | Heat pumps = 8 | Wine coolers = 9 | Display cabinets = 10 | Ice makers = 11

ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]					
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP						A	B	Suction C	Process D	Dis-charge E	Oil cooler F	alt. connectors available	
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]										
486	1.47	870	1.92	1436	2.63		1/2	8.35	95-135 V, 60 Hz	F2	203	197	8.2	6.5	6.5		X	3|4|5|7|10|11
486	1.47	870	1.92	1436	2.63		1/2	8.35	95-135 V, 60 Hz	F2	203	197	8.2	6.5	6.5		X	3|4|5|7|10|11
454	1.57	806	2.07	1340	2.90	*	2/5	7.96	95-135 V, 60 Hz	F2	203	197	8.2	6.5	6.5		X	3|4|5|7|10|11
514	1.58	914	2.08	1464	2.58	*	1/2	8.76	95-135 V, 60 Hz	F2	203	197	8.2	6.5	6.5		X	3|4|5|7|10|11
454	1.57	806	2.07	1340	2.90		2/5	7.96	95-135 V, 60 Hz	F2	203	197	8.2	6.5	6.5		X	3|4|5|7|10|11
514	1.58	914	2.08	1464	2.58		1/2	8.76	95-135 V, 60 Hz	F2	203	197	8.2	6.5	6.5		X	3|4|5|7|10|11
454	1.57	806	2.07	1340	2.90		2/5	7.96	95-135 V, 60 Hz	F2	203	197	8.2	6.5	6.5		X	3|4|5|7|10|11
454	1.57	806	2.07	1340	2.90		2/5	7.96	95-135 V, 60 Hz	F2	203	197	8.2	6.5	6.5		X	3|4|5|7|10|11
608	1.52	1068	2.05	1696	2.67	*	3/5	10.09	103-127 V, 60 Hz	F2	203	197	8.2	6.5	6.5		X	3|4|5|7|10|11
608	1.52	1068	2.05	1696	2.67		3/5	10.09	103-127 V, 60 Hz	F2	203	197	8.2	6.5	6.5		X	3|4|5|7|10|11
672	1.62					*	3/5	11.15	95-135 V, 60 Hz	F2	203	197	8.2	6.5	6.5		X	4 | 6 | 10
672	1.62						3/5	11.15	95-135 V, 60 Hz	F2	203	197	8.2	6.5	6.5		X	4 | 6 | 10
673	1.54	1201	2.04	1919	2.75	*	3/5	11.15	95-127 V, 60 Hz	F2	203	197	8.2	6.5	6.5		X	3|4|5|7|10|11
673	1.54	1201	2.04	1919	2.75		3/5	11.15	95-127 V, 60 Hz	F2	203	197	8.2	6.5	6.5		X	3|4|5|7|10|11
594	1.60	1067	2.15	1702	2.85	*	3/5	10.09	95-135 V, 60 Hz	F2	203	197	8.2	6.5	6.5		X	3|4|5|7|10|11
594	1.60	1067	2.15	1702	2.85		3/5	10.09	95-135 V. 60 Hz	F2	203	197	8.2	6.5	6.5		X	3|4|5|7|10|11

NL



NLE / NLY



R290 • 115 V • 60 Hz • S-Series

Compressor	Code number	Application	EN 12900 Capacity [W] Tc=45°C, Tliq=45°C, Tsuc=32°C Evaporating temperature [°C]						EN 12900						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -35°C / 40°C		MBP rating point -10°C / 45°C		HBP rating point 5°C / 50°C							
			-35	-15	-5	0	10	15	Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]						
SC10CNX.2	104H7070	L/MBP	209	712	1093	1323			241	0.85	855	1.83	1415	2.61	156	727	1161	1426		
SC12CNX.2	104H7270	L/MBP	308	881	1315	1577			335	0.97	1041	1.88	1682	2.43	282	929	1421	1721		
SC12CNX.2	104H7271	L/MBP	308	881	1315	1577			335	0.97	1041	1.88	1682	2.43	282	929	1421	1721		
SC15MNX	104H7570	MBP		1065	1532	1845					1230	1.76	1971	2.30		1156	1661	1976		
SC18MNX	104H7870	MBP		1250	1807	2179					1443	1.83	2301	2.37		1293	1888	2279		
SCE15CNLX	104H7578	LBP	348	1161	1717				403	1.18	1366	2.21			284	1221	1837			
SCE15CNLX	104H7588	LBP	347	1157	1711				402	1.12	1361	2.09			283	1216	1829			
SCE18CNLX	104H7878	LBP	404	1361	2056				466	1.17	1611	2.19			368	1413	2182			
SCE18CNLX	104H7888	LBP	401	1351	2041				462	1.10	1600	2.05			366	1403	2166			
SCE21CNLX	104H7178	LBP	597	1531	2258				648	1.28	1792	2.14			474	1620	2438			
SCE15MNX	104H7579	MBP		1148	1718	2050					1361	2.07	2157	2.62		1193	1832	2207		
SCE18MNX	104H7889	MBP		1349	1988	2372					1584	2.02	2487	2.57		1412	2121	2538		
SCE18MNX	104H7879	MBP		1359	2002	2390					1596	2.16	2506	2.75		1422	2137	2557		

R290 • 115 V • 60 Hz • S-Series • Electrical Equipment

Compressor * pre-assembled start equipment	Code number	LST (RSIR & RSCR) - refer to data sheet for more info					Run capacitor (RC)		HST (CSIR & CSR) - * alt. cable lengths avail.				LST/HST	
		PTC starting device		PTC starting device with RC connector		Protector (external)	optional or compulsory (refer to data sheet)		Starting relay	Starting capacitor	Starting device *	Starting kit *	Cord relief	Cover
		Spades		Spades		Spades	Spades		Spades		Spades			
		6.3 mm	4.8 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
SC10CNX.2	104H7070								117U7020	117U5023			103N1004	103N2008
SC12CNX.2	104H7270								117U7020	117U5023			103N1004	103N2008
SC12CNX.2 *	104H7271								117U7020	117U5023			103N1004	103N2008
SC15MNX	104H7570						117-7114		117-7441	117U5043	117-7053			117U1021
SC18MNX	104H7870										117-7053			117U1021
SCE15CNLX	104H7578							117-7133	117-7441	117U5350	117-7801			117U1021
SCE15CNLX	104H7588									117U5350				117U1021
SCE18CNLX	104H7878							117-7133	117-7441	117U5350	117-7801			117U1021
SCE18CNLX	104H7888									117U5350				117U1021
SCE21CNLX	104H7178							117-7133	117-7443	117U5379	117-7805			117U1021
SCE15MNX	104H7579							117-7133	117-7441	117U5350	117-7801			117U1021
SCE18MNX	104H7889									117U5379				117U1021
SCE18MNX	104H7879							117-7133	117-7443	117U5379	117-7805			117U1021

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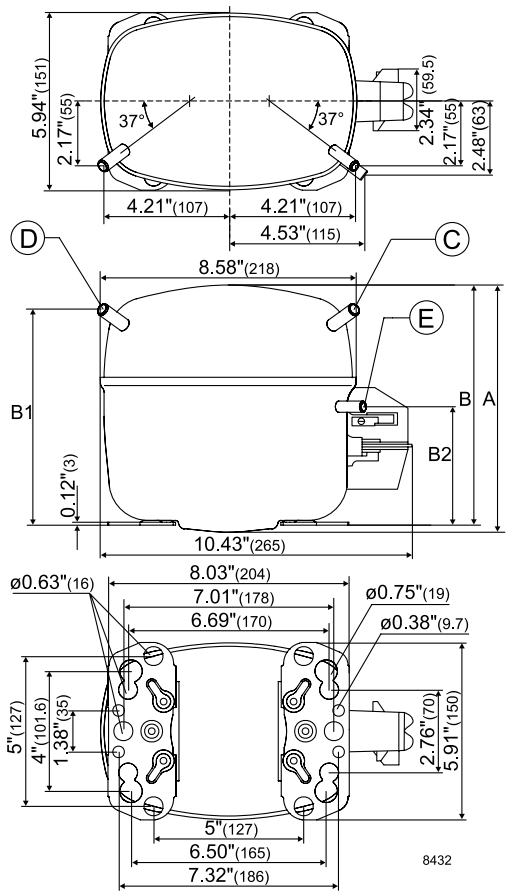
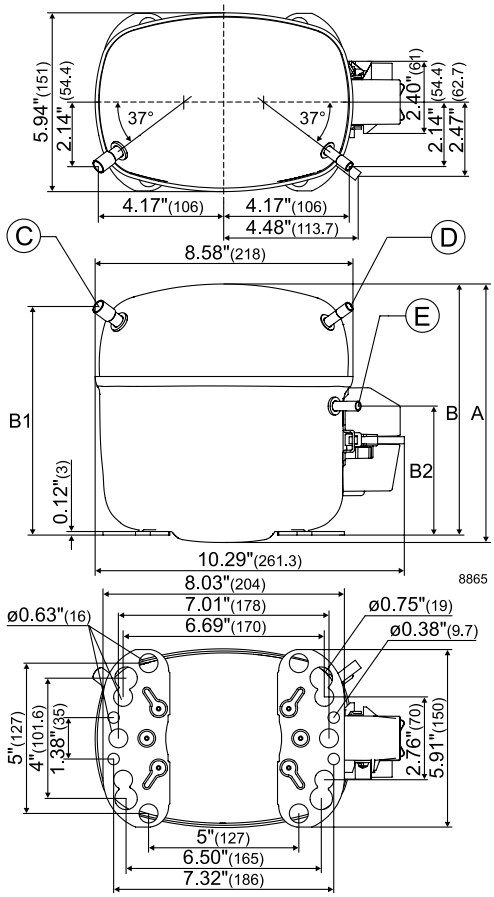
ASHRAE						Run capacitor (* optional)	Power	Displacement	Voltage and frequencies (* dual frequency type with 50/60 Hz)	Compressor cooling (refer to data sheet)	Dimensions							Application
LBP rating point -23.3°C / 54.4°C		MBP rating point -6.7°C / 54.4°C		HBP rating point 7.2°C / 54.4°C							Height [mm]		Connectors location/I.D. [mm]					
Cooling capacity	COP	Cooling capacity	COP	Cooling capacity	COP						A	B	Suction C	Process D	Dis-charge E	Oil cooler F	alt. connectors available	
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	µF	[HP]	[cm³]										
448	1.17	966	1.87				2/5	10.29	95-135 V, 60 Hz	F2	209	203	9.6	6.5	6.5			3|4|7|10|11
613	1.29	1189	1.87				3/5	12.87	95-135 V, 60 Hz	F2	209	203	9.6	6.5	6.5		X	3|4|7|10|11
613	1.29	1189	1.87				3/5	12.87	95-135 V, 60 Hz	F2	209	203	9.6	6.5	6.5		X	3|4|7|10|11
714	1.25	1403	1.77	2311	2.51	*	3/4	15.28	100-127 V, 60 Hz	F2	219	213	9.6	6.5	6.5			3 | 7 | 10 | 11
907	1.36	1585	1.82	2681	2.59	23.5 *	5/6	17.69	103-127 V, 60 Hz	F2	219	213	9.6	6.5	6.5			3 | 7 | 10 | 11
802	1.58	1541	2.15			23.5	3/4	15.28	95-135 V, 60 Hz	F2	219	213	9.6	6.5	6.5			4 | 6
799	1.50	1534	2.04				3/4	15.28	95-135 V, 60 Hz	F2	219	213	9.6	6.5	6.5			4 | 6
946	1.63	1817	2.15			23.5	5/6	17.68	95-135 V, 60 Hz	F2	219	213	9.6	6.5	6.5		X	4 | 6
939	1.53	1804	2.02				5/6	17.68	95-135 V, 60 Hz	F2	219	213	9.6	6.5	6.5		X	4 | 6
1092	1.61	2042	2.09			23.5	1	20.95	103-127 V, 60 Hz	F2	219	213	9.6	6.5	6.5			4
779	1.49	1533	2.05	2513	2.88	*	3/4	15.28	103-127 V, 60 Hz	F2	219	213	9.6	6.5	6.5			3 | 7 | 10 | 11
		1782	1.98				5/6	17.68	95-135 V, 60 Hz	F2	219	213	9.6	6.5	6.5			3 | 7 | 10 | 11
917	1.56	1795	2.13	2910	2.96	23.5	5/6	17.68	95-135 V, 60 Hz	F2	219	213	9.6	6.5	6.5			3 | 7 | 10 | 11

SC (ext. protector) SC w/o ext. protector similar



SCE (ext. protector)



NOTES

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OUR IDENTITY

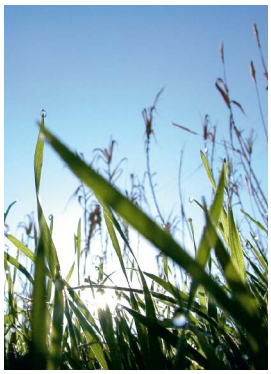
At Secop we are committed to our industry and are genuinely passionate about the difference we are able to make for our customers. We understand their business and objectives and the challenges of today's world of refrigeration and cooling systems.

We work in a straightforward way, being open, direct and honest because we want to make things clear and easy. Our people are committed to increasing value for our customers and constantly strive for better performance, knowing that our own progression and success is dependent on theirs.

A NEWCOMER WITH 60 YEARS OF EXPERIENCE

Formerly known as Danfoss Compressors, Secop is one of the founding fathers of modern compressor technology with an experience that goes back to the beginning of the 1950s.

For more than 25 years, Secop has been setting the standard in compressor technology by developing highly efficient variable speed compressors and by compressors working with hydrocarbons.



OUR JOURNEY SO FAR

1956
Production facility and headquarters in Flensburg, Germany founded.

1958
Start of production for PW compressors.

1970
Introduction of SC compressors.
The birth of a standard-setting platform in the light commercial market.

1972
Introduction of FR compressors.

1977
Introduction TL and BD compressors.

1990
Introduction of NL compressors.

1992
Introduction of PL compressors.

1993
Start of production with natural refrigerant R600a (isobutane).
Production facility in Crnomelj, Slovenia founded.

1999
Start of production with natural refrigerant R290 (propane).

2002
Production facility in Zlate Moravce, Slovakia founded.

2005
Introduction of GS compressors.

2008
Production facility in Wuqing, China founded.

2010
Introduction SLV-CNK.2 and SLV-CLK.2 variable speed compressors.
Introduction BD1.4F Micro DC compressor.
Introduction of DLX and NLU compressors.

2013
Introduction of the XV compressor - opening a new chapter in refrigeration history.
Secop acquires ACC Fürstenfeld, Austria.

2015
New generation of energy-efficient propane compressors.
New variable speed platforms for household and light commercial applications.

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