ENGINEERING
TOMORROW

Catalogue

Hermetic Compressors For **AC Voltage**

R134a | R404A | R507 | R407C | R290 | R600a

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1. Secop compressors produced for Danfoss

The Secop compressors produced for Danfoss 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 50 years of reliability and quality.

This catalogue contains information on Secop compressors produced for Danfoss for fixed voltages ranging from 115 V to 240 V.
The Secop compressors produced for Danfoss programme consists of the types P / T / X / D / N / F / S and G-Series compressors and designed for household or light commercial applications. All of the compressor types are designed for refrigeration systems using the designated refrigerants listed below.

P T X D N F S G

Refrigerant	R134a (typelabel stripe colour: blue), chemical formula: CH2FCF3
Voltages & Frequencies	220-240 V, 50 & 60 Hz
	115 V, 60 Hz
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: CHF2CF3 / CH3CF3 / CH2FCF3 chemical formula R507: CHF2CF3 / CH3CF3
Voltages & Frequencies	220-240 V, 50 & 60 Hz
	115 V, 60 Hz
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: CH2F2 / CHF2CF3 / CH2FCF3
Voltage & Frequency	220-240 V, 50 Hz
Basic types	SC, SC Twin

Refrigerant	R290 (typelabel stripe colour: red), chemical formula: C3H8
Voltages & Frequencies	220-240 V, 50 & 60 Hz
	115 V, 60 Hz
Basic types	TL, NL, SC

Refrigerant	R600a (typelabel stripe colour: red), chemical formula: C4H10
Voltage & Frequency	220-240 V, 50 & 60 Hz
Basic types	PL, TL, XV, DL, NL

Note: Direct current compressors and most variable speed compressors (except NLV and BD150F) have a grey label.

1.1 Voltages and frequencies

Secop compressors produced for Danfoss 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

In accordance with the Montreal Protocol the use of CFC refrigerants (chloro-fluoro-carbons) has been discontinued. This also includes refrigerants such as R12 and R502. Within the foreseeable future HCFC refrigerants (partly halogenated chloro-fluoro-carbons) can no longer be used in Europe. In order to observe time limits for abandoning HCFC refrigerants, various refrigerants were developed to replace the old ones.

All new refrigeration units must operate with the remaining refrigerants, i.e. PFC (perfluorcarbons), HFC (hydrofluoro-carbons), hydrocarbons or inorganic refrigerants.

In the case of HFC refrigerant R134a a long-term replacement for the ozone-depleting R12 has been found. R134a has approximately the same thermodynamic properties as R12, which simplifies the conversion of installations. Secop compressors produced for Danfoss can offer a wide range of compressors designed for R134a refrigeration units.

In Germany, the flammable hydrocarbon refrigerants (such as R600a isobutane) have found widespread use in household appliances. Only time will tell whether the propagation of hydrocarbons will continue. In the USA, a similar development cannot be expected.

Until recently, the CFC refrigerant R502 was used in commercial refrigeration. There are some HFC-mixtures which will – in the long run – replace R502. Among these mixtures are R404A and R507. Instead of the HCFC refrigerant R22, R404A and R507 can also be used in commercial applications. CL and DL compressors are designed for use in refrigeration systems working with R404A and R507.

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. Replacement of refrigerant

The best solution for a repair is to select the same refrigerant as used in the same system. Secop compressors produced for Danfoss are supplied, or were supplied, in versions for the refrigerant R12, R22, R502, R134a, R404A/R507/R407C and for the flammable refrigerants R290 and R600a. The refrigerants R12 and R502, which are covered by the regulations in the Montreal Protocol, are only used in very few countries, and will eventually be phased out of production altogether.

For heat pump systems the refrigerant R407C is now used instead of R22 and R502. The more environmentally acceptable R134a has replaced R12, and the refrigerants R404A and R507 have replaced R22 and R502 in many applications.

1.2.4 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. (38g/m^3)	2.1% by vol. (39 g/m^3)
Upper limit	8.5% by vol. (203 g/m^3)	9.5% by vol. (177 g/m^3)
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!

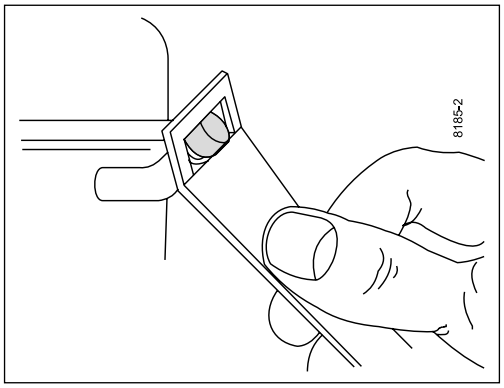
Conversions from refrigerants R12 or R134a to R600a is not permitted, as the refrigerators are not approved for operation with flammable refrigerants, and the electrical safety has not been tested according to existing standards either. The same applies to conversions from refrigerants R22, R502 or R134a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

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

1.3 Connectors

Most compressors are supplied with sealed connectors, which consist of a thick walled copper plated steel tube with great corrosion resistance and good solder ability. The connectors are welded in the compressor housing and thus the welding cannot be destroyed by overheating during soldering 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 soldering 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. Soldering is not allowed on 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, D, T, 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.

1.6 Design

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)

All Secop compressors produced for Danfoss 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.

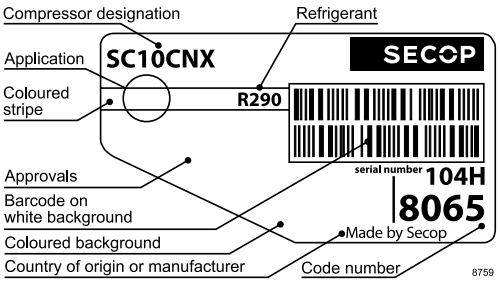
All compressors for R600a are designed with semi direct intake. Using the wrong suction connector will lead to reduced capacity and efficiency. Please note that the suction and process connectors on all TLS, TFS, TLX, TTE, TLES, TTY and TLY compressors have been interchanged as compared with the basic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

1.9 Date code & country of origin

Secop compressors produced for Danfoss have a manufacturing date code stamping on the housing.

The content of the coding (fig. 1) is 2 lines, with 6 and 7 characters each, according to the example below.

H4485C (6 characters)
051D11R (7 characters, 8 characters for BD Micro)

Composition on line 1
H4485: compressor type information (102H4485 = H4485)
C: internal Secop compressors produced for Danfoss code

Composition of line 2
05: production week
1: production year
D: production day
A= Monday, B = Tuesday, C= Wednesday, etc.
11: production hour 00 to 23 or shift code -1, -2, -3
R: Secop compressors produced for Danfoss 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, 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
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 will also be marked on the typelabel, examples:

MADE IN SLOVENIA
- for compressors made in Slovenia (Fig.2)

MADE IN SLOVAKIA
- for compressors made in Slovakia (Fig.3)

Made by Secop compressors produced for Danfoss | optional label "Made in China"
- for compressors made in China (Fig.4)

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

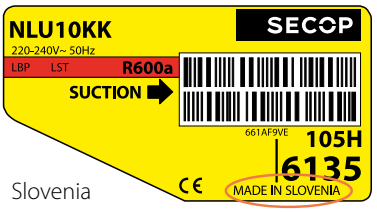


Fig.2 Slovenia

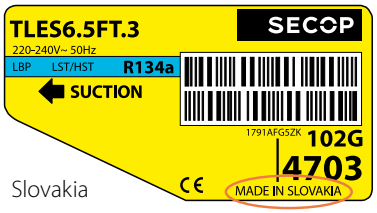


Fig.3 Slovakia

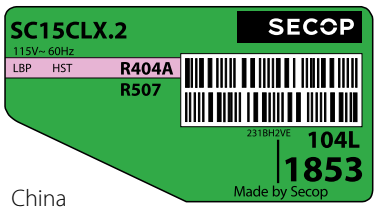


Fig.4 China

1.10 Denomination

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

1	2					3					
Compressor design	Protector location					Optimization level					
	Internal		External								
	PTC LST	Relay HST	PTC	Relay	Variable speed	Standard > High					
P	L		T	F	LV	Blank	Ea)	Always semi-direct intake	Ya)b)	Xa)	Ua)
T								S			
D							Eb)	Semi-direct or direct intake			
N											
F	R										
S	C			C	LV		E				
G	Power supply										
	1 phase			3 phase							
	S			T							

Blank = Standard

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

Key to AC-Compressor Type Designation (X-Series)

1	2					3					
Compressor design	Protector location					Optimization level					
	Internal		External								
	PTC LST	Relay HST	PTC	Relay	Variable speed	Standard > High					
X					**V**	Blank					

1 The first letter of the denomination (P, T, D, N, F, S, G or X) indicates compressor series
2 The second letter indicates motor protection placing. LV or V means variable speed compressors
3 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.
4 A number indicates the displacement in cm3, but for PL compressors the number indicates the nominal capacity.
5 The letter after the displacement indicates which refrigerant must be used as well as the field of application for the compressor.

4		5		6	7
Compressor size		Application range	Refrigerant	Code letter for starting characteristics	Generation
Capacity at rating point	Displacement				
20 30 35 50		C = LBP CL = LBP CM = LBP CN = LBP/MBP CNL = LBP D = HBP DL = HBP F = LBP/(MBP) FT = LBP tropical G = LBP/MBP/HBP GH = Heat pumps GHH = Heat pumps optimized K = LBP/(MBP) KT = LBP/(MBP) tropical MF = MBP MK = MBP ML = MBP MN = MBP S = LBP/HBP (service) ST = LBP tropical (service)	R22 R404A/R507 R22 R290 R290 R22 R404A/R507/R407C R134a R134a R134a R134a R134a R134a R600a R600a R134a R600a R404A/R507 R290 R426A R401A/R401B R409A/R409B R426A R401A/R401B R409A/R409B	Blank > universal (principal rule) K = LST characteristics (capillary tube) X = HST characteristics (expansion valve)	Blank > first generation .1 > updated first generation .2 > second generation .3 > third generation .4 > fourth generation
	2.5, 3, 3.5, 4, 4.5, 4.8 5, 5.7, 6 6.5, 7, 7.5 8, 8.7, 9, 10				
	4, 4.8 5.7, 6.5 7.5, 8.7 9.4, 10				
	5.2, 5.5 5.7, 6, 6.1 7, 7.3, 8.0 8.4, 8.8, 9 9.5, 10, 11, 13, 15				
	6 7.5 8.5 10 11				
	10 12 15 18 21				
	18 21 26 34				

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

4		5		6	7
Compressor size		Application range	Refrigerant	Code letter for starting characteristics	Generation
Capacity at rating point	Displacement				
	5.0 7.2 8.0	K = LBP/(MBP)	R600a	X = LST & HST characteristics (capillary tube & expansion valve)	Blank > first generation

5 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 evapo rating 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 cool ers. 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.

6 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.

7 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

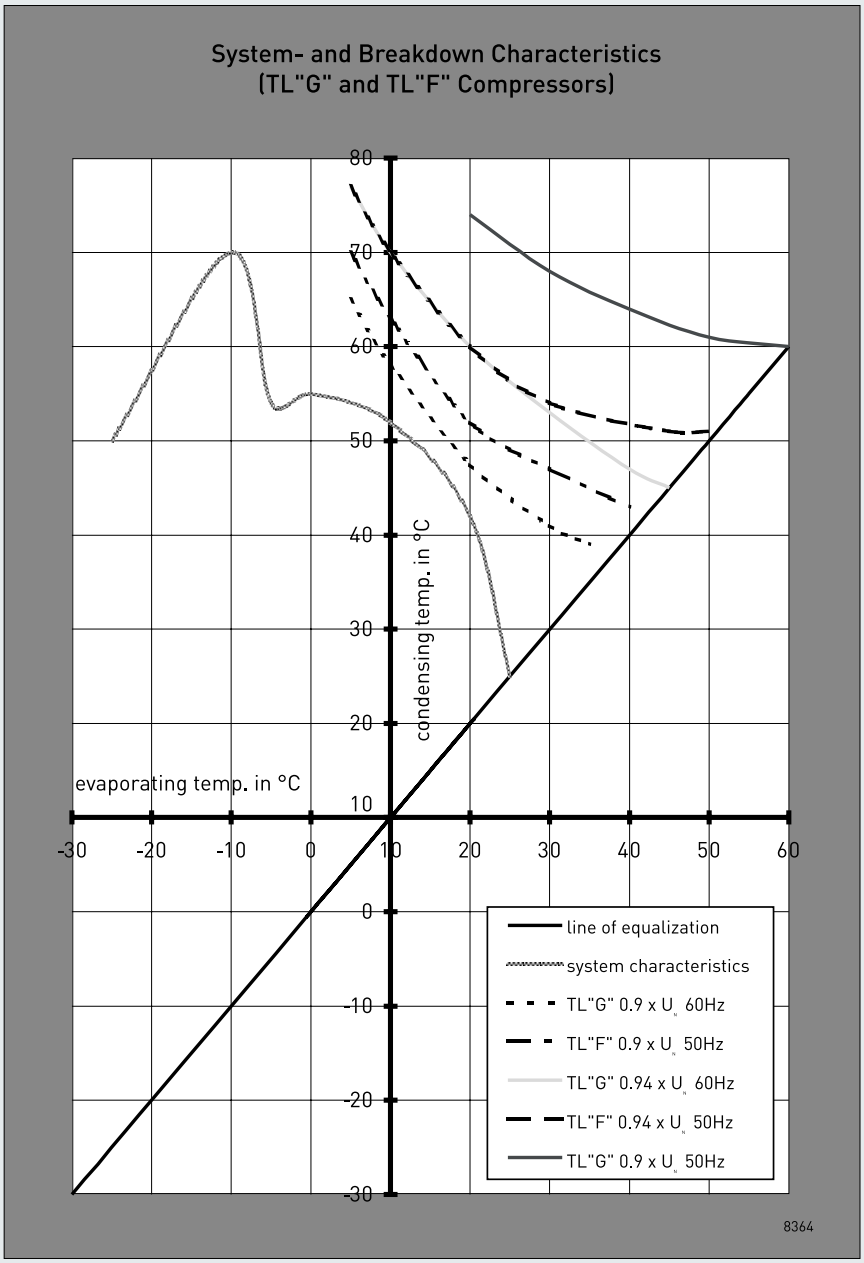


Fig. : Presentation of system and breakdown curves

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 compressors produced for Danfoss 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 compressors produced for Danfoss (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 produced for Danfoss 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 compressors produced for Danfoss 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 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

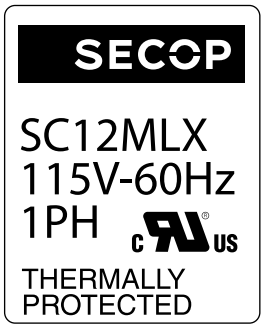
The electrical equipment is equipped with connectors depending on the ordered code number,

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.

6.6 Approvals

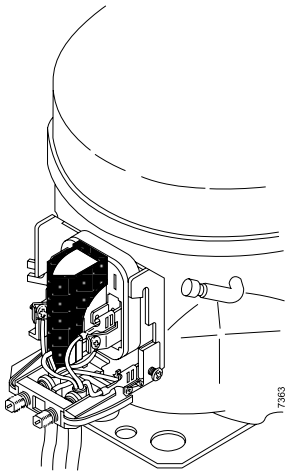
The compressors have been approved in respect of safety by testing authorities in the majority of Western European countries. Actual standards to which the compressors have been approved are specified in the individual data sheets. Approval markings appear on the compressor type labels.



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.

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)	
Code number 25 Ohm	103N0050
Code number 38 Ohm	103N0055
Nominal supply voltage	220 - 240 V, 50/60Hz
Minimal supply voltage	187 V
Maximal supply voltage	254 V
Power consumption	approx. 0.4 W (after 2 s)
Spade connectors	4.8 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 compressors produced for Danfoss 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.

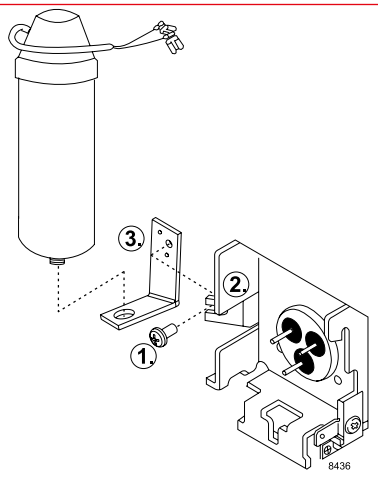
Connection & Terminals
The wiring diagram shows how to make the connections. The two screw terminals marked N and L are for supply voltage. The spade on the L terminal and the spade marked C are for the thermostat. The spade marked S at the top right position is internally connected to the start (or 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 compressors produced for Danfoss 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.

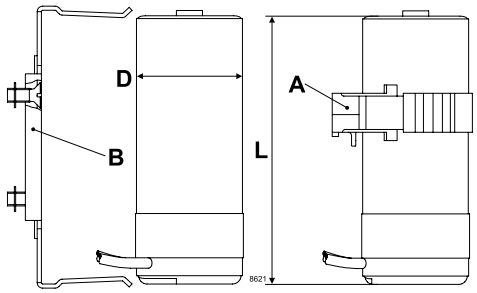
Code numbers:
run capacitor 117-0300
screw M4 x 8 PZD 2 117-0301



6.9 Survey of starting capacitors

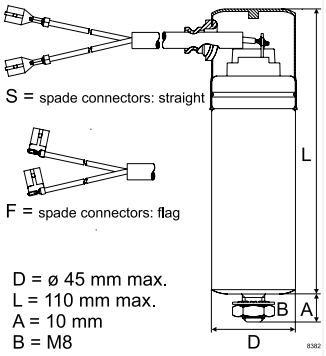
Code No.	Capacity [µF]	Voltage [V]	Stamping IEC	Bleeder Resistor	Mount	Compressor Series	Approvals	Supplier L / D [mm]
117U5012	125	220	220V AB 1.7% ED 300V AB 0.1% ED	no	A	SC	VDE / CQC	KEMET / NGM 121/39 95/39
117U5014	60	220	220V AB 1.7% ED 300V AB 0.1% ED	no	A	PL, TL	VDE / CQC	KEMET / NGM 95/39
117U5015	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[1]	B	SC	CQC	KEMET / NGM 95/39

Note:
1 for use with run capacitor



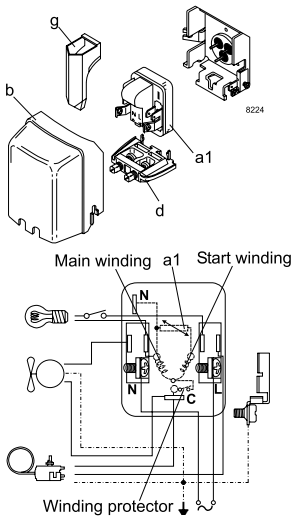
6.10 Survey of run capacitors

Code No.	Capacity [µF]	Voltage [V]	Frequency [Hz]	Connectors [mm] | type	Compressor 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	

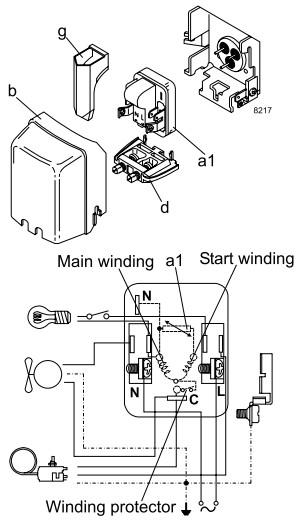


LST - RSIR

PL-DLE

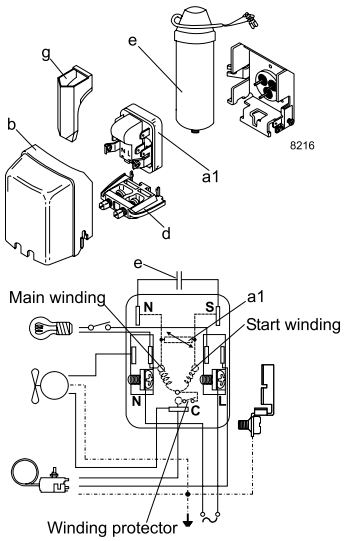


TL/TLES/TLS/TLY - NL/NLE - FR



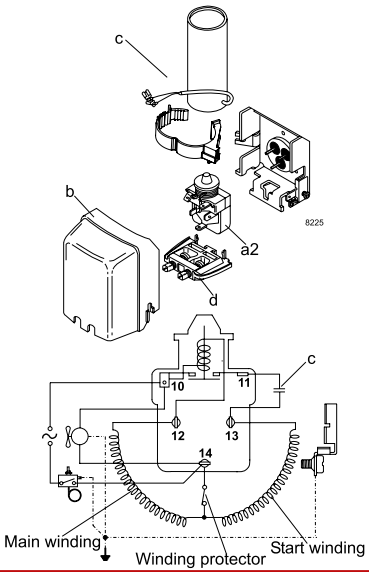
LST - RSCR

PLE -DLX

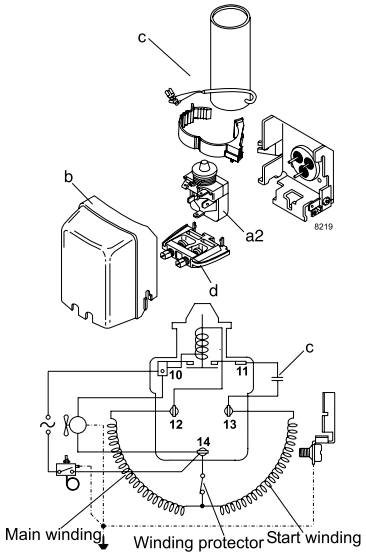


HST - CSIR

PL

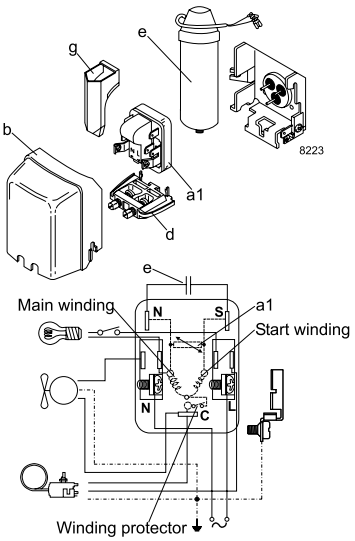


TFS/TL/TLES/TLS - NF/NL/NLE - FF/FR



LST - RSCR

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

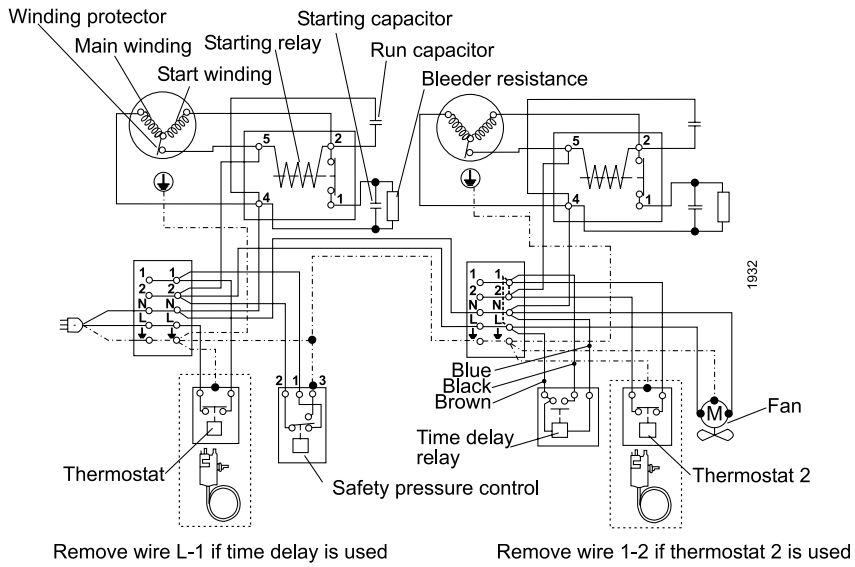


Legend

- **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

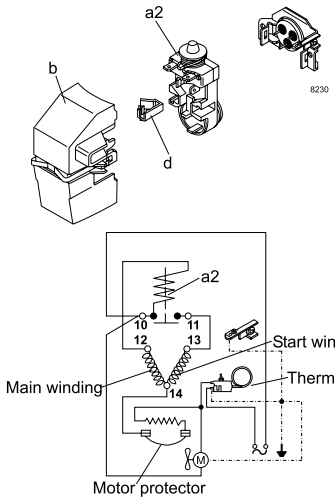
HST - CSIR

SC Twin

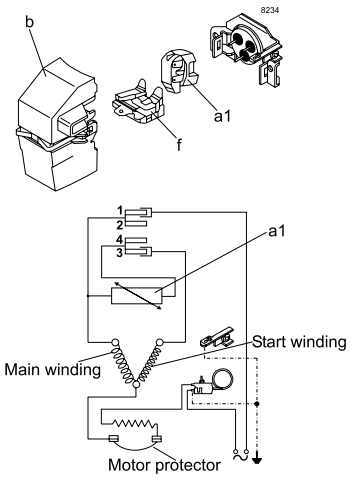


LST - RSIR

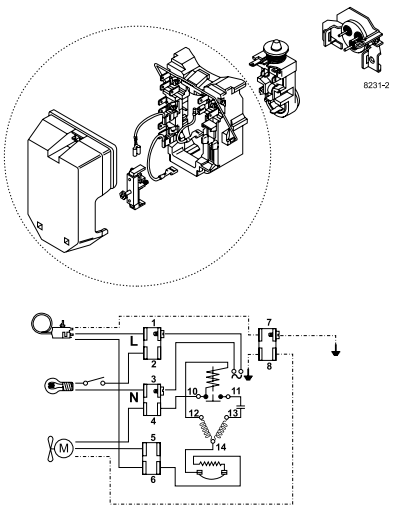
TF/TFS - NF - FF



TT

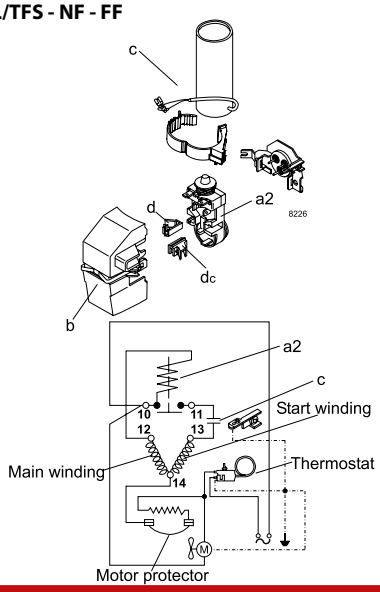


TF - NF - FF

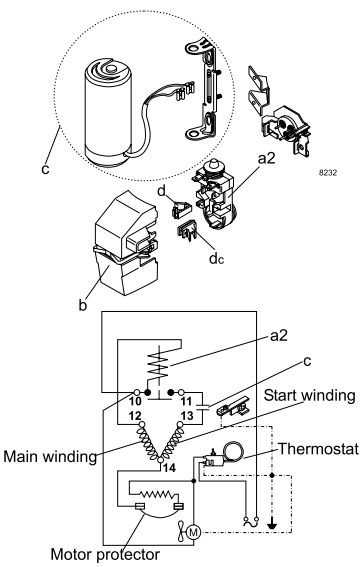


HST - CSIR

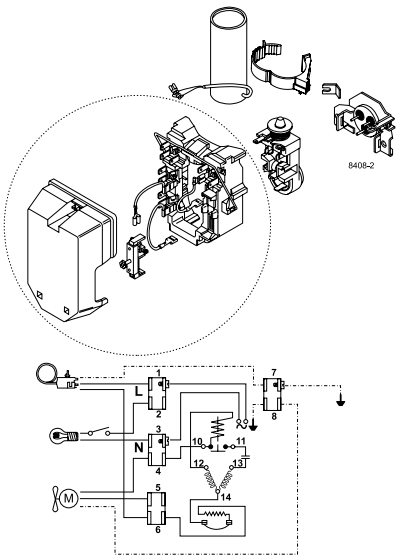
TL/TFS - NF - FF



FF

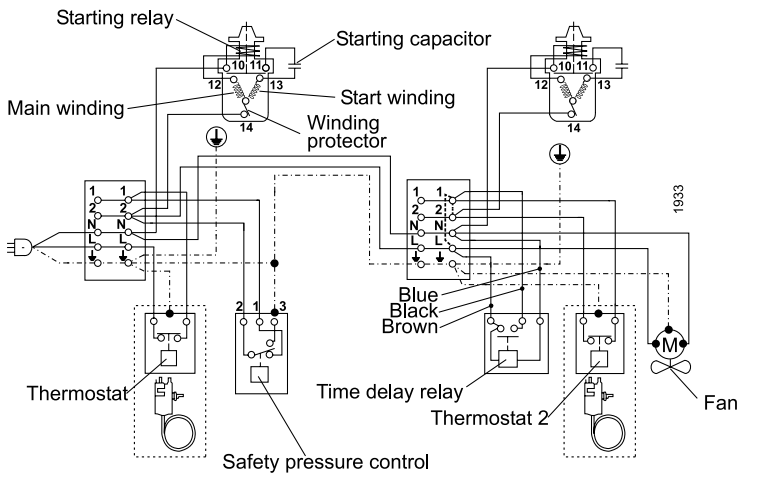


TF - NF - FF



HST - CSR

SC Twin

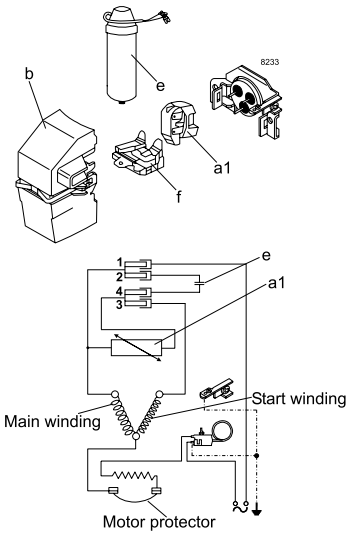


Remove wire L-1 if time delay is used

Remove wire 1-2 if thermostat 2 is used

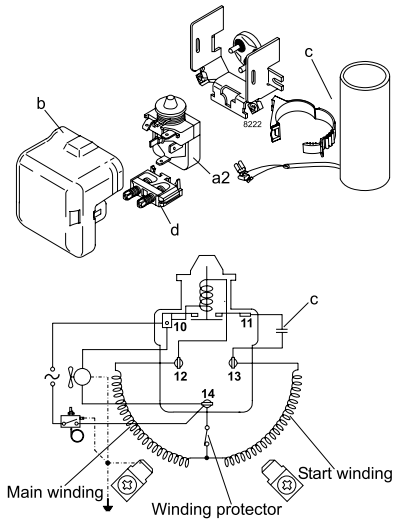
LST - RSCR

TTE/TTY - NTX/NTY

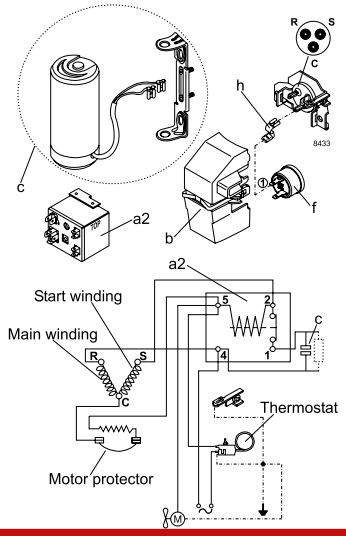


HST - CSIR

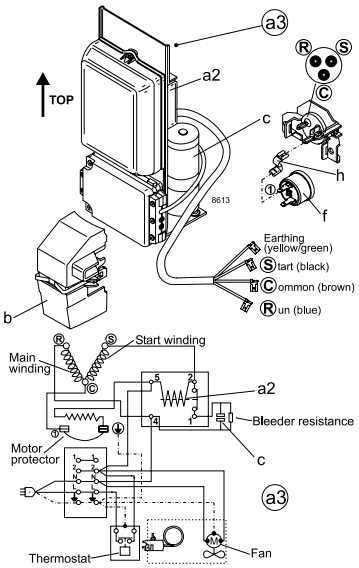
SC



SC

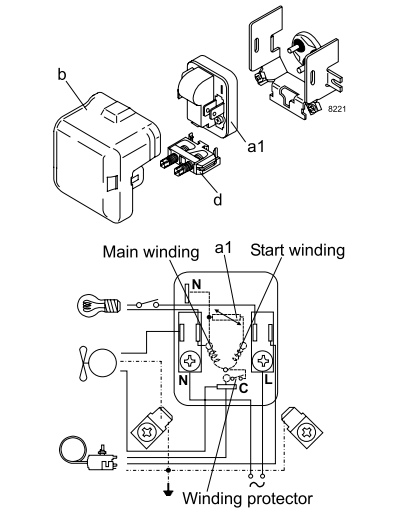


SC



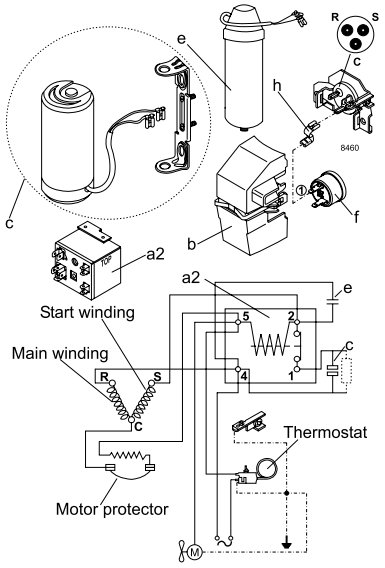
LST - RSIR

SC

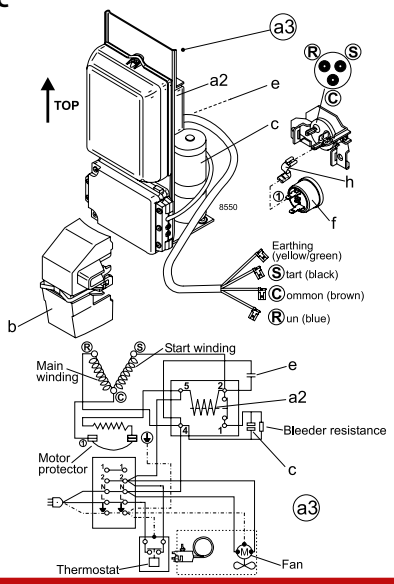


HST - CSR

SC

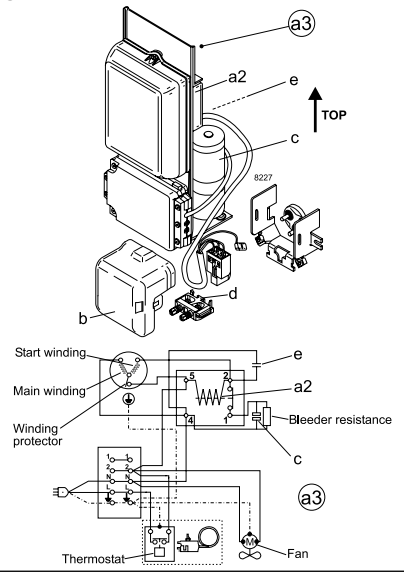


SC

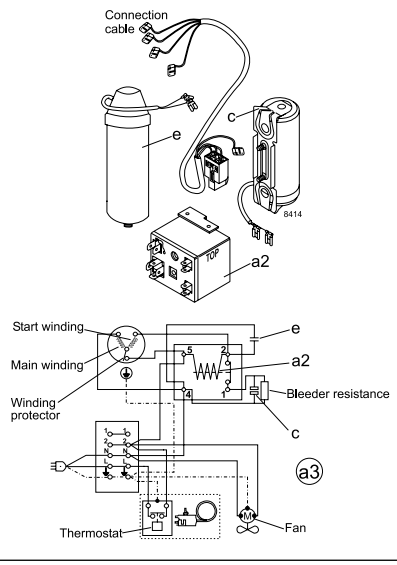


HST - CSR

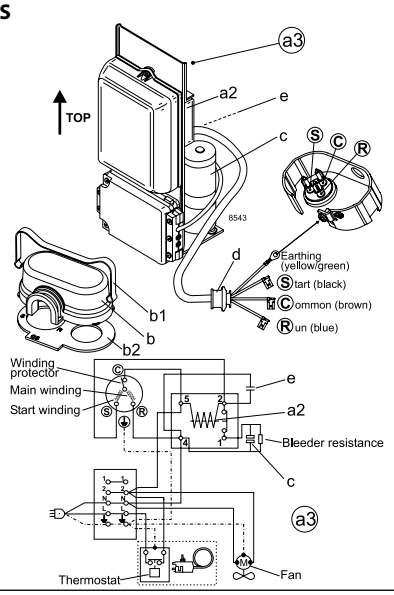
SC



SC (kit)

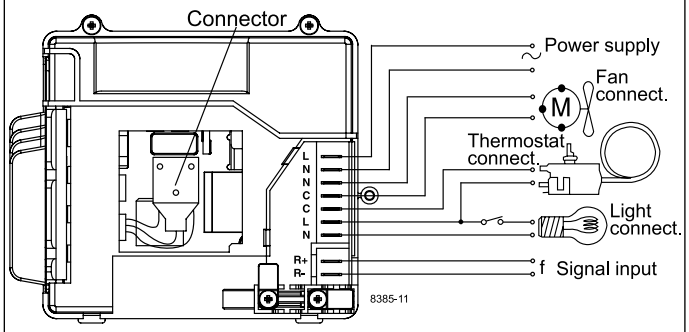


GS



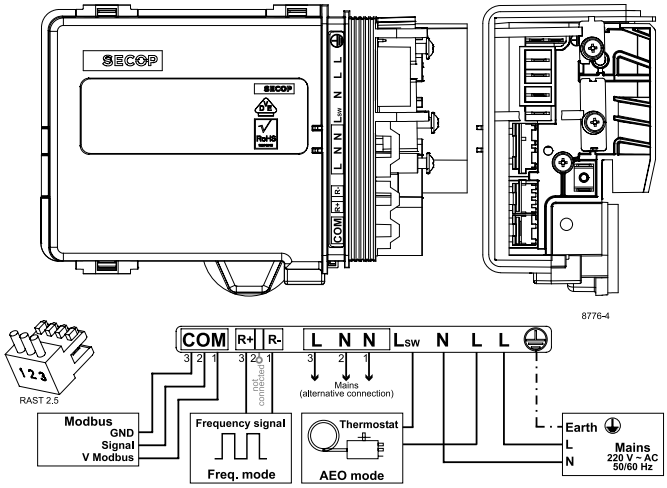
HST - Electronic Unit 105N4220/105N4210/105N4212 (variable speed)

BD150F/NLV



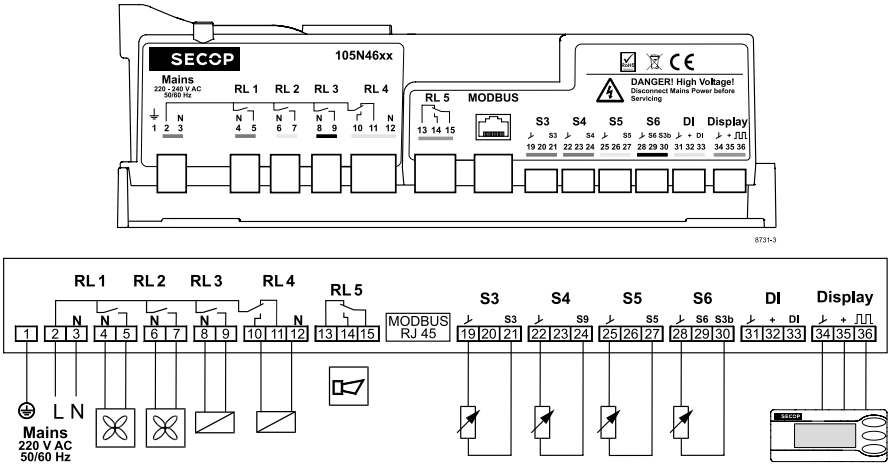
LST / HST - 105N50xx Series Controller (variable speed)

XV - drawings shows electronic unit 105N5020 (attached)



LST - 105N46xx Series Controller (variable speed)

SLV



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

6.11 Electronic units / Controllers (variable speed)

Full load operation is extremely rare in most cooling applications, restricted to a few days per year. That is why Secop compressors produced for Danfoss builds variable speed control into the BD/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, 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. Altogether, substantial energy savings can be obtained.

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

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.

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

The compressors are equipped with permanent magnet rotors (PM motor) and 3 identical stator windings. The electronic unit is mounted directly on the compressor and controls the PM motor.

Connecting the motor to AC mains, by fault, will damage the magnets and lead to drastically reduced efficiency, or even non functioning.

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" and "Instructions".

For further information on the variable speed technology please refer to our Whitepaper "Advantages of adaptable Capacity".

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 compressors produced for Danfoss now offers special accessories, which provide a better IP protection class for a major part of the SC compressor models.
All SC models for 220-440V/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

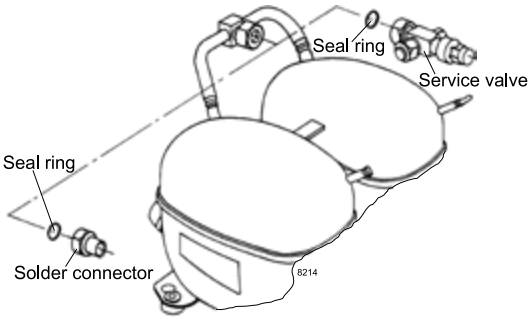
8. Twin compressors

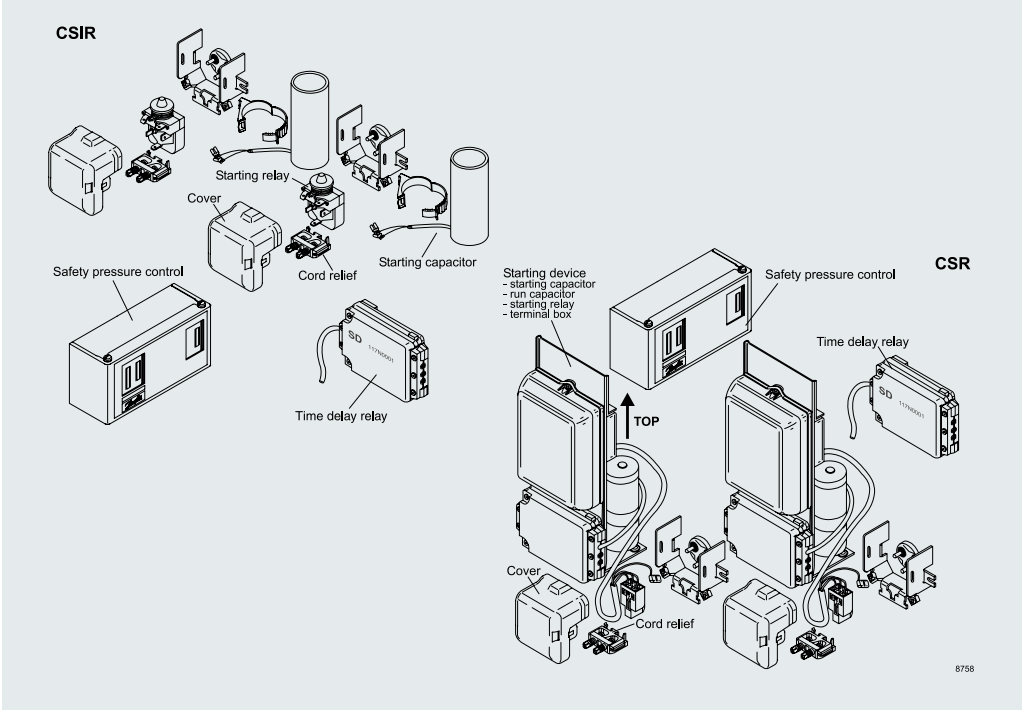
The twin version consists of two SC compressors mounted on a common base plate. The two compressors are joined by an oil-equalizing tube and also have an intake manifold with screw connector for a service valve or a solder connector (these parts are supplied as accessories, please refer to data sheets 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
Solder connector for 12 mm tube	104B0584
SC18/18 and SC21/21:	
Service valve for 16mm tube	118-7351
Solder connector for 16mm tube	118-7405
SC10/10, SC12/12, SC15/15, SC18/18 and SC21/21:	
Seal ring for service valve and solder 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 produced for Danfoss 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	120 g	-	-
T	400 g*	150 g	150 g	600 g
X	-	150 g	-	-
D	-	150 g	-	-
TL-G	600 g			-
N	400 g*	150 g	150 g	400 g
F	900 g	150 g	-	850 g
S	1300 g	-	150 g	1300 g
G	2000 g	-	-	2000 g
SC Twin	2200 g	-	-	2200 g

* 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 produced for Danfoss 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 R12 to alterntaive refrigerant

As long as new or recycled R12 refrigerant is available this should be used. It is impossible to provide R12 and illegal to use it. It should be thoroughly considered whether repair is worth while. It is hardly worth repairing old small refrigeration systems if it involves replacement of the compressor. Another consideration is use of an alternative refrigerant instead of R12.

From R12 to R134a

Normally, the capillary tube shall be adjusted at low evaporating temperatures. Compared to an optimized R12 system with the same evaporator capacity, the R134a system must have an increased resistance defined as approx. 10% less N^2 flow at 10 bar inlet pressure.
The same size of capillary tube as used for R12 can be used at high evaporating temperatures.

- A drier with 3A desiccant of molecular sieves must always be used.
- Rules for dryness and cleanliness of system components (DIN 8964) are transferred to R134a systems.
- The system components must not contain mineral oil or greasy substances.
- The compressors must be soldered into the system no later than 15 minutes after the connector seals have been removed.
- The same evacuation procedure as for R12 systems must be used.
- Max. 1% non – condensable gases.
- The system must not contain any chlorine.
- The charging equipment must only be used for R134a.
- If the same vacuum pump is to be used for R12 and R134a systems, special Ester oil must be used in agreement with the pump supplier.

From R502 / R22 or R404/R507 to R290

Normally, the same system components can be used as were used with R22. However, an adjustment of the charge must be made. Especially the system design must follow safety standards as EN/ IEC 60335-2-24 or IEC 60335-2-89, EN 378 or national standards.

- A drier with 3A desiccant of molecular sieves or a hardcore drier compatible with R290 must always be used.
- Rules for dryness and cleanliness of system components (DIN 8964) are transferred to R290 systems.
- The compressors must be soldered into the system no later than 15 minutes after the connecter seals have been removed.
- The same evacuation procedure as for R22 / R502 / R404A systems must be used.
- Max. 1% non condensable gases.
- The system must not contain chlorine.

From R502 / R22 to R404A/ R507 or R407C

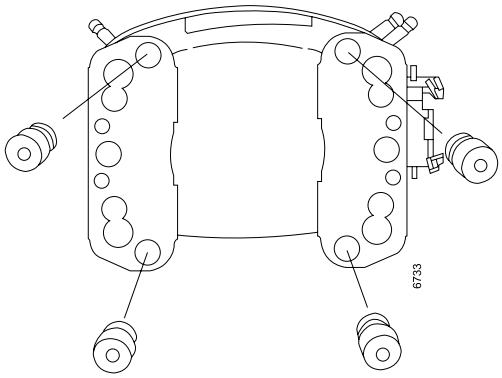
Normally, the same system components can be used as were used with R502. However, an adjustment of the charge must be made.

- A drier with 3A desiccant of Molecular Sieves or a hard core drier compatible with R404A must always be used.
- Rules for dryness and cleanliness of system components (DIN 8964) are transferred to R404A systems.
- The system components must not contain mineral oil or greasy substances.
- The compressors must be soldered into the system no later than 15 minutes after the connector seals have been removed.
- The same evacuation procedure as for R502 / R22 systems must be used.
- Max. 1% non condensable gases.
- The system must not contain any chlorine.
- The charging equipment must only be used for R404A/R507 respectively R407C.

13. Mounting

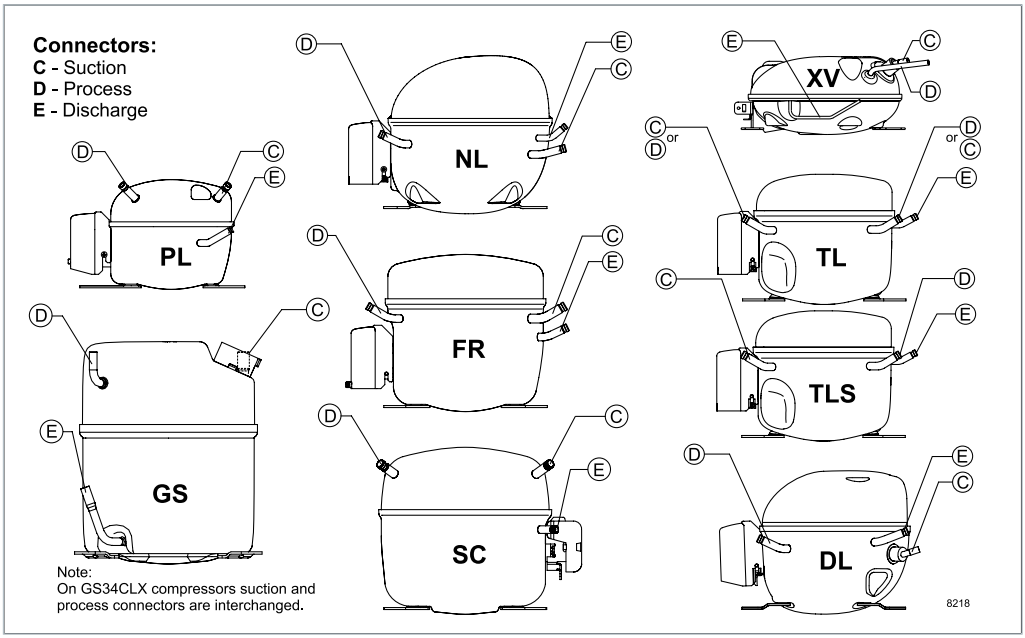
Soldering problems caused by oil in the connectors can be avoided by placing the compressor on its base plate some time before soldering it into the system.
The compressor must never be placed upside down when mounting the rubber grommets in the base plate. Instead place the compressor on its side with
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.

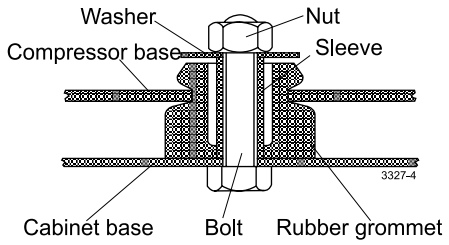
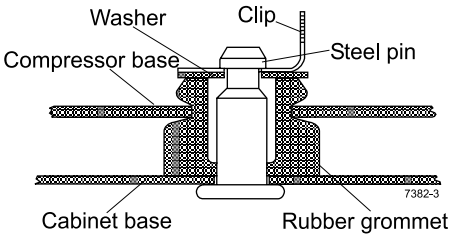


Most Secop compressors produced for Danfoss are equipped with tube connectors of thick-walled, copper-plated steel tube which have a solderability which comes up to that of conventional copper connectors.
The connectors are welded into the compressor housing and weldings cannot be damaged by overheating during soldering.
These copper-plated steel connectors have an aluminium cap sealing which gives a tight sealing. The sealing secures that the compressors have not been opened after leaving Secop compressors produced for Danfoss's production lines. In addition to that, the sealing makes a protecting charge of nitrogen superfluous.

Compressor with copper connectors and are sealed with rubber plugs.
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	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	V

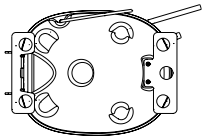
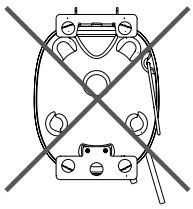
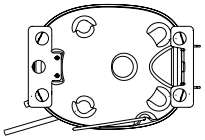
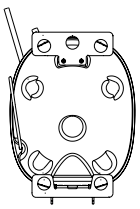
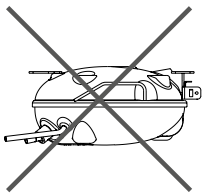
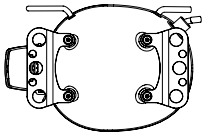
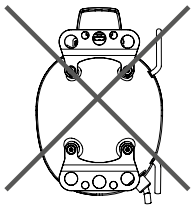
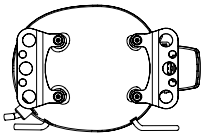
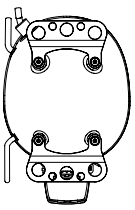
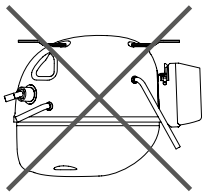
Parts list (4 pcs. per compressor needed)			Symbol drawings
I	Sleeve Ø 8 mm x 6.4 mm x 0.8 mm	112-2052	
	Washer Ø 20 mm x Ø 6.7 mm x 1 mm	112-2053	
	Bolt M6 x 25 mm	681X1130	
	Nut M6	118-3659	
	Rubber grommet 16 mm	118-3661	
II	Sleeve Ø 11 mm x 8.6 mm x 1.2 mm	107B9152	
	Washer Ø 20 mm x Ø 8.8 mm x 1.2 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	

14. Shipment Positions of refrigeration appliances

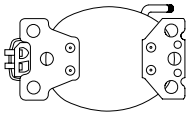
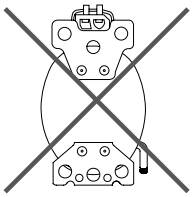
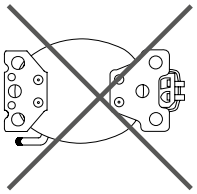
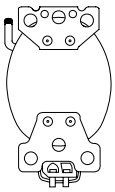
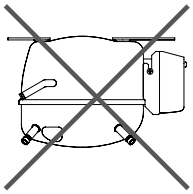
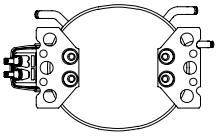
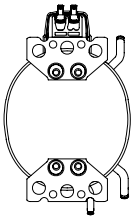
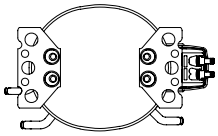
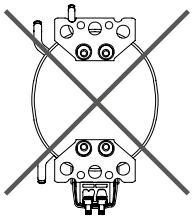
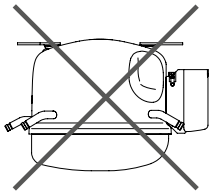
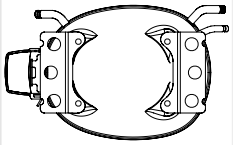
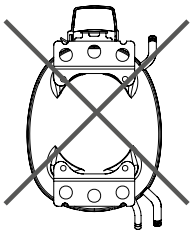
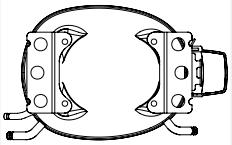
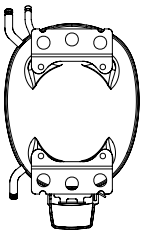
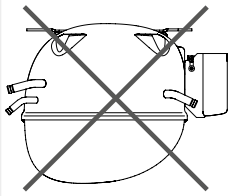
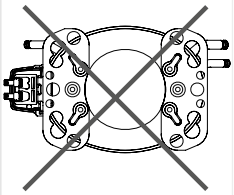
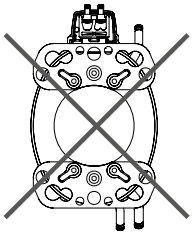
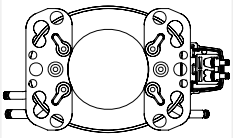
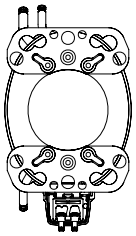
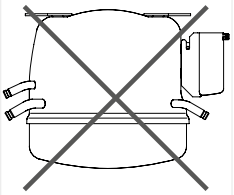
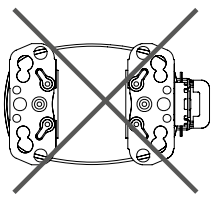
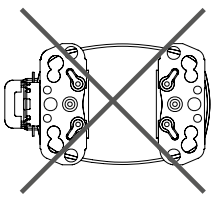
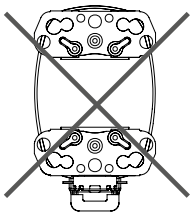
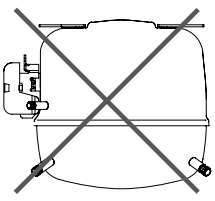
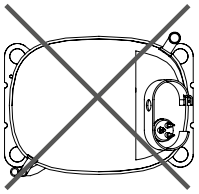
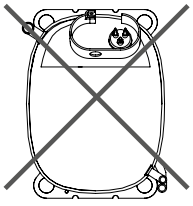
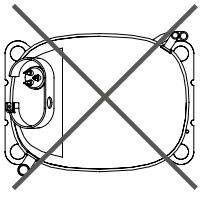
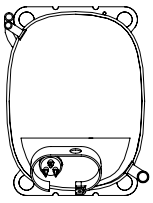
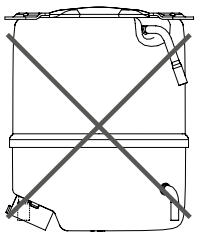
Shipment of refrigeration appliances in horizontal position

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					

Compressors AC voltage **R134a | R404A | R507 | R407C | R290 | R600a**

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					

R134a
220-240 V | 50 Hz

With more than 50 years of experience in compressor technology and highly committed employees, our focus is to develop and apply the advanced compressor technologies to achieve standard setting performance for leading products and businesses around the world.

Chemical formula
CH2FCF3

Typelabel
Typelabel stripe colour: Blue
Typelabel colour: Yellow

Applications
LBP: Low Back Pressure
HBP: High Back Pressure
MBP: Medium 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
F1 = Fan cooling 1.5 m/s (compressor compartment temp. equal to ambient temperature)
F2 = 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	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]						
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	155		
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	148	183		
PL35G	101G0250	M/HBP		53	89	112	172	209	28	0.58	69	1.04	140	1.55		66	110	139	213	258
PLE50F	101G0221	MBP		76	122	150			42	0.81	97	1.31				95	151	186		

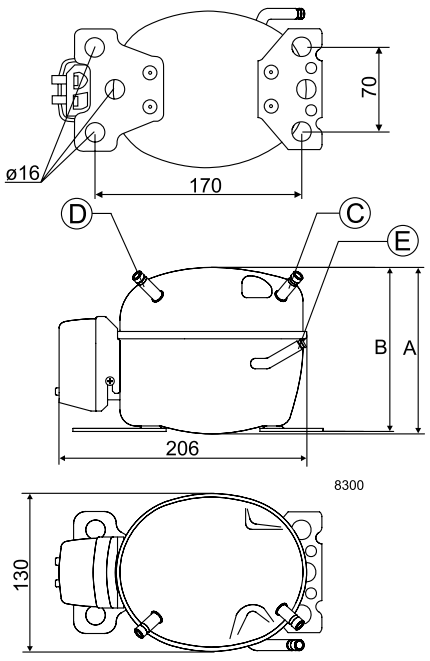
R134a • 220-240 V • 50 Hz • P-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 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

Compressors AC voltage **R134a**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
24	0.55	67	1.09			1/50	1.41	198 to 254 V, 50 Hz	S	129	127	6.2	6.2	5.0		
45	0.86	104	1.35			1/25	2.00	198 to 254 V, 50 Hz	S	134	132	6.2	6.2	5.0		
56	0.89					1/20	2.50	198 to 254 V, 50 Hz	S	137	135	6.2	6.2	5.0		X
56	0.92	124	1.38			1/20	2.50	198 to 254 V, 50 Hz	F1	137	135	6.2	6.2	5.0		X
39	0.79	92	1.28	172	1.84	1/20	2.00	198 to 254 V, 50 Hz	F1	137	135	6.2	6.2	5.0		X
59	1.08	127	1.59			1/20	2.50	198 to 254 V, 50 Hz	S	140	138	6.2	6.2	5.0		

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	169		
TL3F	102G4300	L/MBP		82	138	173			42	0.64	108	1.09				101	171	214		
TL4F	102G4400	LBP	31	107					61	0.75	137	1.12			38	133				
TL5F	102G4501	LBP	43	144					82	0.81	183	1.19			53	178				
TL2.5G	102G4251	L/M/HBP	11	69	116	145	219	264	36	0.60	90	1.08	179	1.58	14	86	144	180	272	328
TL3G	102G4350	L/M/HBP		80	136	170	258	312	41	0.62	106	1.10	211	1.59		100	168	212	320	386
TL4G	102G4452	L/M/HBP		107	180	226	342	413	58	0.70	140	1.19	280	1.82		133	222	279	423	510
TL4G	102G4458	L/M/HBP		107	180	226	342	413	58	0.70	140	1.19	280	1.82		133	222	279	423	510
TL5G	102G4550	L/M/HBP		139	224	278	414	497	79	0.79	178	1.19	341	1.67		172	277	344	511	614
TL4GH	102G4455	HBP		104	182	230	353	429			140	1.16	287	1.81		130	225	285	437	530
TLES3F	102G4310	L/MBP		93	155	193			50	0.81	121	1.31				115	191	239		
TLES4F	102G4410	LBP	33	124					70	0.88	160	1.35			41	154				
TLES5F	102G4510	LBP	50	169					98	0.93	216	1.37			62	210				
TLES6F	102G4610	LBP	58	183					104	0.93	235	1.37			72	227				
TLES5.7FT.3	102G4615	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	282				
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	114				
TLS4FT	102G4424	LBP	27	117					63	0.72	152	1.24			34	145				
TLS5FT	102G4524	LBP	48	170					98	0.86	216	1.30			59	210				
TLY4F	102G4441	LBP	35	126					72	0.99	162	1.49			43	157				
TLY5FK	102G4547	LBP	50	169					98	1.01	216	1.48			62	210				

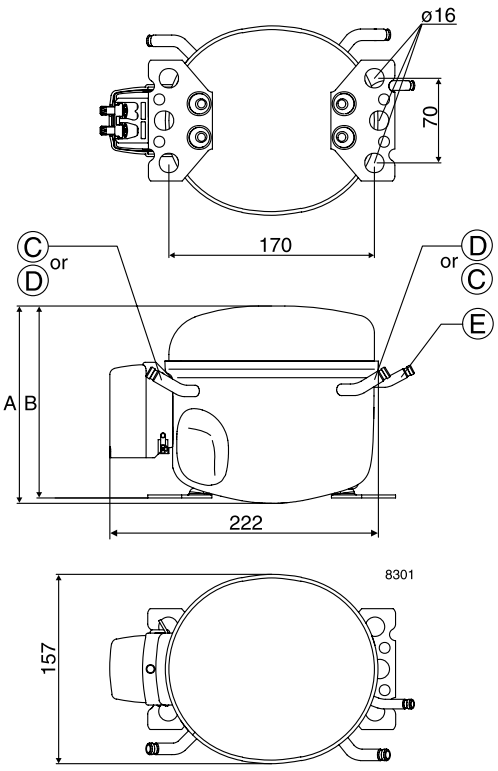
R134a • 220-240 V • 50 Hz • T-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 mm	6.3 mm	6.3 mm		
TL2.5F	102G4200	103N0011	103N0018										103N1010	103N2010
TL3F	102G4300	103N0011	103N0018						117U6007	117U5014			103N1010	103N2010
TL4F	102G4400	103N0011	103N0018						117U6009	117U5014			103N1010	103N2010
TL5F	102G4501	103N0011	103N0018						117U6004	117U5014			103N1010	103N2010
TL2.5G	102G4251	103N0011	103N0018						117U6007	117U5014			103N1010	103N2011
TL3G	102G4350	103N0011	103N0018						117U6009	117U5014			103N1010	103N2010
TL4G	102G4452	103N0011	103N0018						117U6004	117U5014			103N1010	103N2010
TL4G	102G4458	103N0011	103N0018						117U6004	117U5014			103N1010	103N2011
TL5G	102G4550	103N0011	103N0018						117U6000	117U5014			103N1010	103N2010
TL4GH	102G4455								117U6000	117U5014			103N1010	103N2011
TLES3F	102G4310	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
TLES4F	102G4410	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
TLES5F	102G4510	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	102G4615	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119	117U6004	117U5014			103N1010	103N2010
TLES6.5FT.3	102G4703	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119	117U6016	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	102G4424	103N0011	103N0018						117U6004	117U5014			103N1010	103N2010
TLS5FT	102G4524	103N0011	103N0018						117U6000	117U5014			103N1010	103N2010
TLY4F	102G4441	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
TLY5FK	102G4547	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010

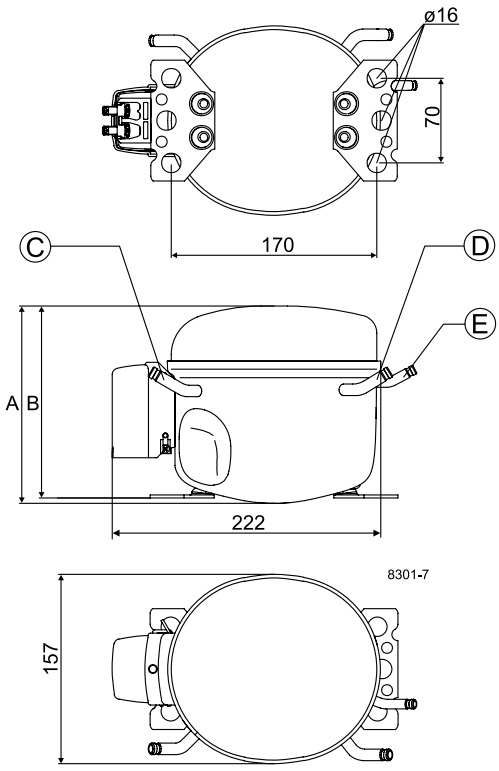
Compressors AC voltage **R134a**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm^3]			A	B	C	D	E	F	
46	0.80	113	1.32			1/10	2.61	198 to 254 V, 50 Hz	S	163	159	6.2	6.2	5.0		X
59	0.85	142	1.33			1/10	3.13	198 to 254 V, 50 Hz	S	163	159	6.2	6.2	5.0		X
84	0.98					1/10	3.86	198 to 254 V, 50 Hz	S	163	159	6.2	6.2	5.0		X
113	1.06					1/10	5.08	198 to 254 V, 50 Hz	S	173	169	6.2	6.2	5.0		X
51	0.82	119	1.33	220	1.87	1/10	2.61	187 to 254 V, 50 Hz *	S	163	159	6.2	6.2	5.0		X
59	0.85	140	1.35	259	1.88	1/10	3.13	187 to 254 V, 50 Hz *	S	163	159	6.2	6.2	5.0		X
81	0.94	185	1.48	342	2.17	1/10	3.86	187 to 254 V, 50 Hz *	S	173	169	6.2	6.2	5.0		X
81	0.94	185	1.48	342	2.17	1/10	3.86	187 to 254 V, 50 Hz *	S	173	169	6.5	6.5	5.0		X
109	1.04	232	1.44	415	1.96	1/4	5.08	187 to 254 V, 50 Hz *	S	173	169	6.2	6.2	5.0		X
		186	1.45	352	2.15	1/10	3.86	198 to 254 V, 50 Hz *	F2	173	169	6.2	6.2	5.0		X
70	1.07	159	1.59			1/10	3.13	198 to 254 V, 50 Hz	S	173	169	6.2	6.2	5.0		
97	1.16					1/10	3.86	198 to 254 V, 50 Hz	S	173	169	6.2	6.2	5.0		X
134	1.22					1/4	5.08	198 to 254 V, 50 Hz	S	173	169	6.2	6.2	5.0		X
143	1.20					1/4	5.70	198 to 254 V, 50 Hz	S	173	169	6.2	6.2	5.0		X
163	1.30					1/4	5.70	187 to 254 V, 50 Hz	S	173	169	6.2	6.2	5.0		X
183	1.33					1/4	6.49	187 to 254 V, 50 Hz	S	173	169	6.2	6.2	5.0		X
134	1.15					1/4	5.08	198 to 254 V, 50 Hz	S	173	169	6.2	6.2	5.0		
143	1.14					1/4	5.70	198 to 254 V, 50 Hz	S	173	169	6.2	6.2	5.0		X
165	1.15					1/4	6.49	198 to 254 V, 50 Hz	S	173	169	6.2	6.2	5.0		
69	1.07					1/10	3.13	187 to 254 V, 50 Hz	S	173	169	6.2	6.2	5.0		
88	0.97					1/10	3.86	187 to 254 V, 50 Hz	S	173	169	6.2	6.2	5.0		
134	1.12					1/4	5.08	187 to 254 V, 50 Hz	S	173	169	6.2	6.2	5.0		X
99	1.30					1/10	3.86	198 to 254 V, 50 Hz	S	173	169	6.2	6.2	5.0		X
134	1.32					1/4	5.08	198 to 254 V, 50 Hz	S	173	169	6.2	6.2	5.0		

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 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
NF7FX	105G6743	L/MBP		262	422	522			150	0.85	336	1.36	636	2.01		324	521	644		
NF9FX	105G6841	L/MBP		288	464	577			168	0.84	369	1.31	709	1.94		356	573	713		
NF10FX	105G6846	L/MBP		339	543	673			196	0.72	433	1.17	823	1.76		418	670	829		
NF11FX	105G6944	L/MBP		368	585	725			216	0,74	467	1.17	887	1.72		454	723	894		
NL6F	105G6606	LBP	52	200					110	0.93	258	1.39			64	247				
NL7F	105G6706	LBP	71	238					136	0.93	303	1.31			88	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			127	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	105G6728	LBP	71	235					136	0.94	299	1.36			88	290				
NL7.3FT	105G6731	LBP	71	235					136	0.94	299	1.36			88	290				
NL8.4FT	105G6865	LBP	87	275					162	0.95	350	1.39			107	340				
NL8.4FT	105G6866	LBP	87	275					162	0.95	350	1.39			107	340				
NL9FT	105G6828	LBP	87	275					162	0.95	350	1.39			107	340				
NL10FT	105G6829	LBP	115	352					210	0.98	444	1.40			141	433				
NL10FT	105G6839	LBP	115	352					210	0.98	444	1.40			141	433				
NL6.1MF	105G6660	MBP		189	312	390	588	709			245	1.31	482	1.98		234	387	484	727	877
NL7.3MF	105G6772	MBP		236	385	480	719	867			304	1.34	591	1.98		293	476	594	889	1071
NL8.4MF	105G6879	MBP		277	445	553	825	994			353	1.36	679	1.94		342	550	683	1021	1229
NL10MF	105G6885	MBP		346	554	687	1023	1231			441	1.37	843	1.94		428	685	849	1264	1520
NL11MF	105G6151	M/HBP		380	609	756	1125	1354			485	1.35	927	1.87		471	754	934	1390	1672
NLE10MF	105G6888	MBP	88	343	554	688			194	0.98	440	1.43	845	1.98	110	425	685	851		

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

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 mm	6.3 mm	6.3 mm		
NF7FX	105G6743								117U4140	117U5018			117U0349	117U1023
NF9FX	105G6841								117U4140	117U5018			117U0349	117U1021
NF10FX	105G6846								117U4139	117U5018			117U0349	117U1023
NF11FX	105G6944								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	105G6900	103N0011	103N0018						117U6002	117U5015			103N1010	103N2010
NL6FT	105G6628	103N0011	103N0018						117U6000	117U5015			103N1010	103N2010
NL6.1FT	105G6620	103N0011	103N0018						117U6017	117U5015			103N1010	103N2010
NL7FT	105G6728	103N0011	103N0018						117U6001	117U5015			103N1010	103N2010
NL7.3FT	105G6731	103N0011	103N0018						117U6001	117U5015			103N1010	103N2010
NL8.4FT	105G6865	103N0011	103N0018						117U6001	117U5015			103N1010	103N2010
NL8.4FT	105G6866	103N0011	103N0018						117U6001	117U5015			103N1010	103N2010
NL9FT	105G6828	103N0011	103N0018						117U6015	117U5015			103N1010	103N2010
NL10FT	105G6829	103N0011	103N0018						117U6002	117U5015			103N1010	103N2010
NL10FT	105G6839	103N0011	103N0018						117U6002	117U5015			103N1010	103N2010
NL6.1MF	105G6660	103N0011	103N0018						117U6015	117U5015			103N1010	103N2011
NL7.3MF	105G6772	103N0011	103N0018						117U6016	117U5015			103N1010	103N2011
NL8.4MF	105G6879	103N0011	103N0018						117U6016	117U5018			103N1010	103N2011
NL10MF	105G6885	103N0011	103N0018						117U6022	117U5038			103N1010	103N2011
NL11MF	105G6151	103N0011	103N0018						117U6022	117U5018			103N1010	103N2011
NLE10MF	105G6888	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010

Compressors AC voltage **R134a**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
206	1.12	436	1.67	771	2.37	1/5	7.27	198 to 242 V, 50 Hz *	S	203	197	8.2	6.5	6.5		X
229	1.10	479	1.61	863	2.30	1/5	8.34	198 to 242 V, 50 Hz	F1	203	197	8.2	6.5	6.5		X
267	0.94	560	1.43	998	2.08	1/4	10.09	198 to 242 V, 50 Hz *	F1	203	197	8.2	6.5	6.5		X
294	0.97	605	1.43	1078	2.03	1/4	11.15	198 to 242 V, 50 Hz	F2	203	197	8.2	6.5	6.5		X
152	1.22					1/4	6.13	198 to 254 V, 50 Hz	S	188	181	6.2	6.2	5.0		
187	1.21					1/4	7.27	198 to 254 V, 50 Hz	S	190	183	6.2	6.2	5.0		
201	1.25					1/4	7.95	198 to 254 V, 50 Hz	S	197	191	6.2	6.2	5.0		
213	1.21					1/4	8.35	198 to 254 V, 50 Hz	S	197	191	8.2	6.2	6.2		
274	1.22					1/4	11.15	198 to 254 V, 50 Hz	F2	203	197	8.2	6.2	6.2		X
157	1.21					1/4	6.13	187 to 254 V, 50 Hz *	S	197	191	6.2	6.2	5.0		X
157	1.21					1/4	6.13	187 to 254 V, 50 Hz	S	188	182	6.2	6.2	5.0		
186	1.22					1/4	7.27	187 to 254 V, 50 Hz	S	197	191	6.2	6.2	5.0		
186	1.22					1/4	7.27	187 to 254 V, 50 Hz	S	188	182	6.2	6.2	5.0	5.0	
220	1.23					1/4	8.35	187 to 254 V, 50 Hz	F1	190	184	6.2	6.2	5.0		X
220	1.23					1/4	8.35	187 to 254 V, 50 Hz	F1	190	184	6.2	6.2	5.0	5.0	X
220	1.23					1/4	8.35	187 to 254 V, 50 Hz	S	197	191	6.2	6.2	5.0		X
284	1.25					1/4	10.09	187 to 254 V, 50 Hz	S	203	197	8.2	6.2	6.2		X
284	1.25					1/4	10.09	187 to 254 V, 50 Hz	S	203	197	8.2	6.2	6.2	6.2	X
		322	1.62	589	2.35	1/4	6.13	187 to 254 V, 50 Hz *	S	190	184	8.2	6.2	6.2		X
		397	1.65	721	2.34	1/4	7.27	187 to 254 V, 50 Hz *	F1	197	191	8.2	6.2	6.2		X
		460	1.65	828	2.29	1/4	8.35	187 to 254 V, 50 Hz *	F1	197	191	8.2	6.2	6.2		X
		573	1.66	1027	2.29	1/2	10.09	187 to 254 V, 50 Hz *	F1	203	197	8.2	6.2	6.2		X
		630	1.62	1130	2.21	1/2	11.15	187 to 254 V, 50 Hz	F2	203	197	8.2	6.2	6.2		X
268	1.28	572	1.72	1031	2.34	1/2	10.09	198 to 254 V, 50 Hz	F1	203	197	8.2	6.2	6.2		

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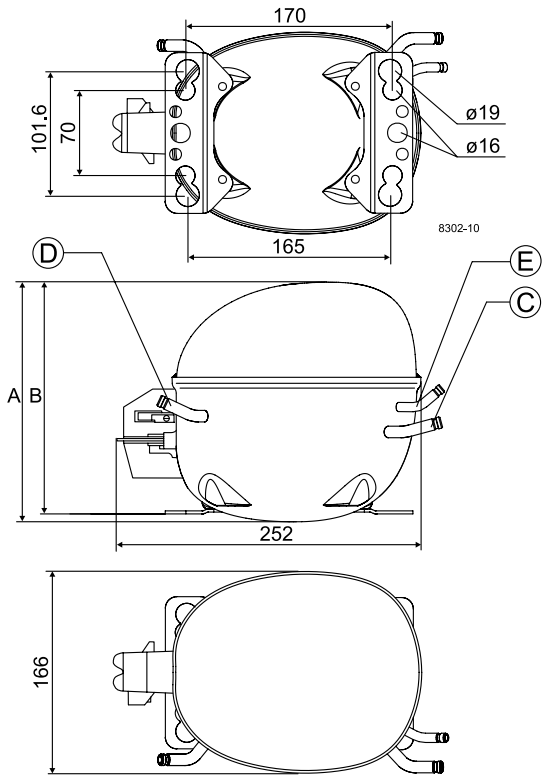
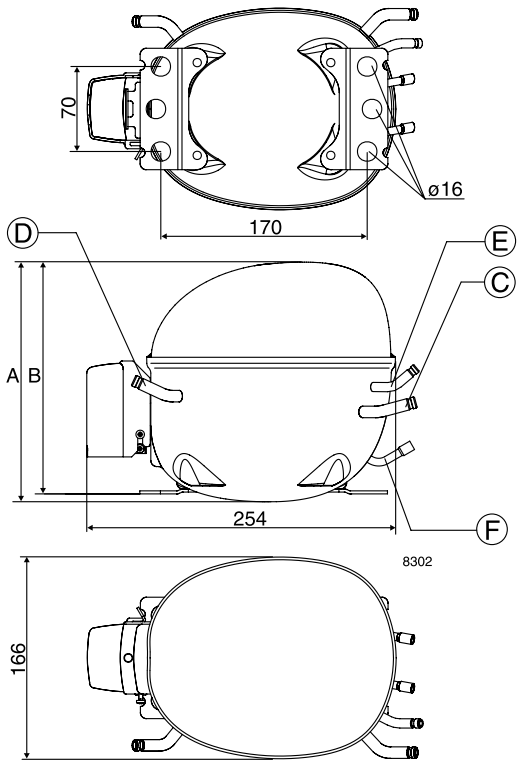


NL / NLE



Compressors AC voltage **R134a**

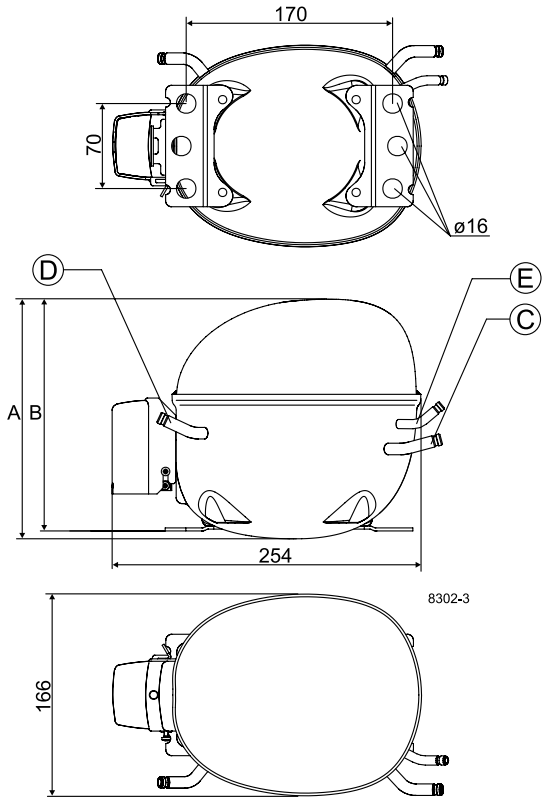
R134a • 220-240 V • 50 Hz • N-Series																			
Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54,4°C, Tliq=32,2°C, Tsuc=32,2°C Evaporating temperature [°C]					
									LBP rating point -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	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]						
NLY6F	105G6630	LBP	80	235					138	1.17	299	1.65			99	291				
NLY7F	105G6730	LBP	94	265					158	1.18	334	1.67			115	327				
NLY7F	105G6735	LBP	94	265					158	1.18	334	1.67			115	327				
NLY9FK	105G6814	LBP	92	291					171	1.13	372	1.60			115	360				
NLY9FK	105G6830	LBP	94	297					175	1.15	380	1.63			117	368				

R134a • 220-240 V • 50 Hz • N-Series • Electrical Equipment																
Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 mm	6.3 mm	6.3 mm		
NLY6F	105G6630			103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
NLY7F	105G6730			103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
NLY7F	105G6735			103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
NLY9FK	105G6814			103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
NLY9FK	105G6830			103N0016	103N0021		117-7117	117-7119					103N1010	103N2010

Compressors AC voltage **R134a**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
188	1.51					1/4	6.70	198 to 254 V, 50 Hz	S	203	197	6.2	6.2	5.0		X
214	1.53					1/4	7.27	198 to 254 V, 50 Hz	S	203	197	6.2	6.2	5.0		X
214	1.53					1/4	7.27	198 to 254 V, 50 Hz	S	203	197	6.5	6.5	5.0		X
233	1.47					1/4	8.35	198 to 254 V, 50 Hz	S	203	197	6.5	6.5	4.9		X
238	1.50					1/4	8.35	198 to 254 V, 50 Hz	S	203	197	8.2	6.2	6.2		X

NLY



Compressors AC voltage **R134a**

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 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
FR6G	103G6660	L/M/HBP		171	290	365	552		83	0.76	226	1.32	452	1.88		212	359	451	682	
FR7.5G	103G6680	L/M/HBP		193	325	408	618		99	0.79	254	1.30	505	1.86		240	402	504	764	
FR7.5G	103G6690	L/M/HBP		193	325	408	618		99	0.79	254	1.30	505	1.86		240	402	504	764	
FR8.5G	103G6780	L/M/HBP		228	381	478	722		123	0.82	298	1.29	592	1.84		283	471	591	892	
FR8.5G	103G6790	L/M/HBP		228	381	478	722		123	0.82	298	1.29	592	1.84		283	471	591	892	
FR10G	103G6880	L/M/HBP		250	412	516	779		136	0.76	324	1.22	638	1.76		309	509	638	962	
FR10G	103G6890	L/M/HBP		250	412	516	779		136	0.76	324	1.22	638	1.76		309	509	638	962	
FR7GH	103G6683	HBP		199	327	417	655	807			255	1.33	525	2.04		246	406	517	811	999
FR7GH	103G6692	HBP		199	327	417	655	807			255	1.33	525	2.04		246	406	517	811	999

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

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 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	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	103G6890	103N0011	103N0018						117U6010	117U5015			103N1010	103N2010
FR7GH	103G6683								117U6016	117U5015			103N1010	103N2011
FR7GH	103G6692								117U6016	117U5015			103N1010	103N2011

Compressors AC voltage **R134a**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
121	1.04	298	1.61	552	2.22	1/4	6.23	187 to 254 V, 50 Hz *	F1	196	191	8.2	6.2	6.2		X
140	1.06	334	1.59	618	2.19	1/4	6.93	187 to 254 V, 50 Hz *	F1	196	191	8.2	6.2	6.2		X
140	1.06	334	1.59	618	2.19	1/4	6.93	187 to 254 V, 50 Hz *	F1	196	191	8.2	6.2	6.2	6.2	X
172	1.08	392	1.57	723	2.17	1/4	7.95	187 to 254 V, 50 Hz *	F1	196	191	8.2	6.2	6.2		X
172	1.08	392	1.57	723	2.17	1/4	7.95	187 to 254 V, 50 Hz *	F1	196	191	8.2	6.2	6.2	6.2	X
189	1.01	424	1.49	779	2.08	1/4	9.05	187 to 254 V, 50 Hz *	F1	196	191	8.2	6.2	6.2		X
189	1.01	424	1.49	779	2.08	1/4	9.05	187 to 254 V, 50 Hz *	F1	196	191	8.2	6.2	6.2	6.2	X
		337	1.61	650	2.46	1/4	6.93	198 to 254 V, 50 Hz *	F2	196	191	8.2	6.2	8.2		X
		337	1.61	650	2.46	1/4	6.93	198 to 254 V, 50 Hz *	F2	196	191	8.2	6.2	8.2	8.2	X

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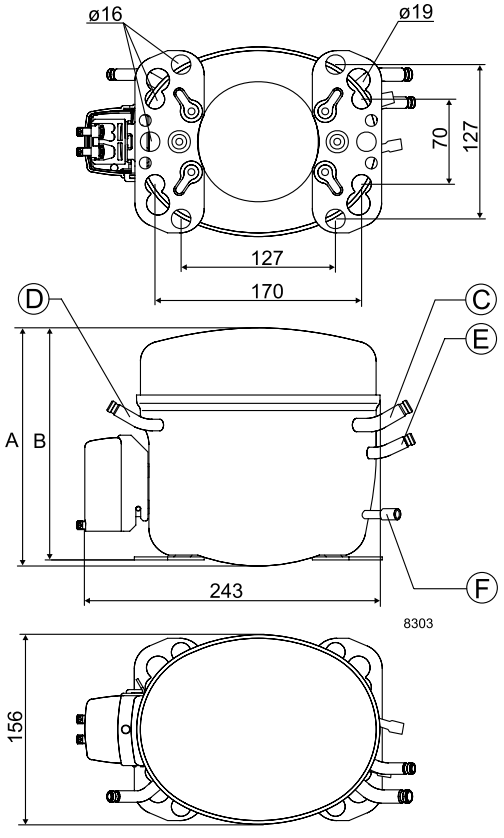


R134a • 220-240 V • 50 Hz • S-Series

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
SC15F	104G8500	LBP	100	439	726				230	0.84	573	1.33			126	545	899			
SC18F	104G8800	LBP	129	518	842				280	0.90	669	1.36			159	640	1038			
SC21F	104G8100	LBP	186	602	987				335	0.88	780	1.30			228	741	1215			
SC21F	104G8110	LBP	186	602	987				335	0.88	780	1.30			228	741	1215			
SC12FT	104G8205	LBP	103	408	645				233	0.88	517	1.36			129	505	800			
SC12FT	104G8215	LBP	103	408	645				233	0.88	517	1.36			129	505	800			
SC15FT	104G8505	LBP	126	489	772				280	0.90	620	1.38			158	606	956			
SC18FTX	104G8805	LBP	144	567	896				325	0.89	719	1.39			181	702	1110			
SC21FTX	104G8105	LBP	192	713	1119				415	0.97	901	1.47			241	884	1387			
SC10G	104G8000	L/M/HBP	23	268	486	618	925	1100	113	0.63	369	1.27	764	2.00	30	333	601	763	1141	1356
SC12G	104G8240	L/M/HBP	65	348	603	768	1182	1437	175	0.77	464	1.31	960	1.95	81	432	747	950	1461	1775
SC12G	104G8250	L/M/HBP	65	348	603	768	1182	1437	175	0.77	464	1.31	960	1.95	81	432	747	950	1461	1775
SC15G	104G8520	L/M/HBP		424	728	908	1340	1600	164	0.71	568	1.29	1110	1.87		527	902	1123	1658	1980
SC18G	104G8820	L/M/HBP		532	873	1087	1619	1942	286	0.88	689	1.31	1335	1.89		657	1079	1343	1997	2396
SC18G	104G8830	L/M/HBP		532	873	1087	1619	1942	286	0.88	689	1.31	1335	1.89		657	1079	1343	1997	2396
SC21G	104G8140	L/M/HBP		606	1013	1269	1889	2254	333	0.96	793	1.39	1561	2.04		755	1258	1573	2336	2786
SC10GH	104G8041	HBP		233	478	613	927	1113			352	1.25	762	1.93		289	591	758	1148	1380
SC12GH	104G8261	HBP		302	577	752	1196	1471			429	1.20	957	1.97		377	716	932	1479	1819
SC15GH	104G8561	HBP		417	723	915	1398	1698			559	1.32	1139	2.02		517	896	1133	1729	2099
SC18GH	104G8860	HBP		539	855	1077	1645	1990			676	1.36	1340	1.92		666	1059	1333	2034	2460
SC18GH	104G8861	HBP		485	825	1047	1618	1976			639	1.42	1310	2.17		602	1022	1297	2002	2443
SC10GHH	104G8071	HBP		259	467	604	942	1144			352	1.35	762	2.21		321	579	747	1165	1413
SC15GHH	104G8571	HBP		435	726	911	1405	1731			570	1.51	1135	2.25		533	895	1124	1734	2135

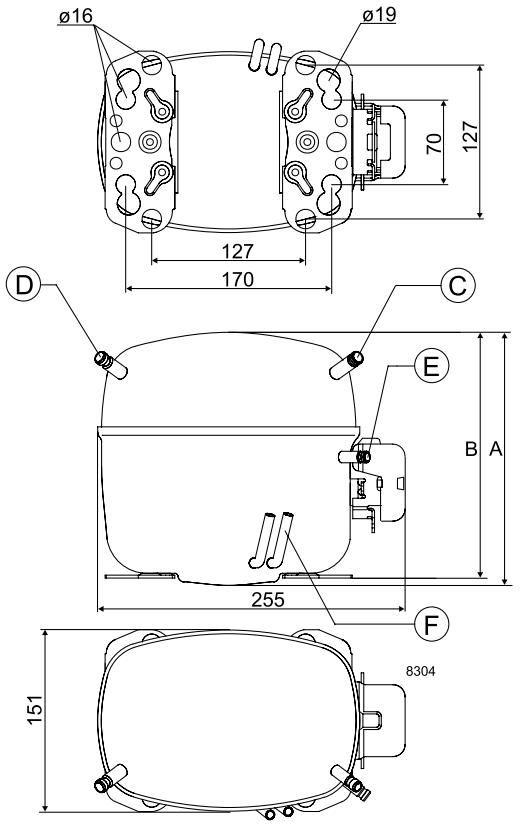
R134a • 220-240 V • 50 Hz • S-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 mm	6.3 mm	6.3 mm		
SC15F	104G8500	103N0011							117U6003	117U5017			103N1004	103N2009
SC18F	104G8800								117U6005	117U5017			103N1004	103N2009
SC21F	104G8100								117U6019	117U5017			103N1004	103N2009
SC21F	104G8110								117U6019	117U5017			103N1004	103N2009
SC12FT	104G8205	103N0011							117U6003	117U5017			103N1004	103N2009
SC12FT	104G8215	103N0011							117U6003	117U5017			103N1004	103N2009
SC15FT	104G8505	103N0011							117U6005	117U5017			103N1004	103N2009
SC18FTX	104G8805								117U6019	117U5017			103N1004	103N2009
SC21FTX	104G8105								117U6019	117U5017			103N1004	103N2009
SC10G	104G8000	103N0011							117U6002	117U5017			103N1004	103N2009
SC12G	104G8240	103N0011							117U6003	117U5017			103N1004	103N2008
SC12G	104G8250	103N0011							117U6003	117U5017			103N1004	103N2009
SC15G	104G8520								117U6005	117U5017			103N1004	103N2009
SC18G	104G8820								117U6019	117U5017			103N1004	103N2009
SC18G	104G8830								117U6019	117U5017			103N1004	103N2009
SC21G	104G8140									117U5373	117-7029		103N1004	103N2009
SC10GH	104G8041								117U6005	117U5017			103N1004	103N2008
SC12GH	104G8261								117U6011	117U5017			103N1004	103N2008
SC15GH	104G8561								117U6011	117U5017			103N1004	103N2008
SC18GH	104G8860								117U6019	117U5017			103N1004	103N2009
SC18GH	104G8861									117U5373	117-7039		103N1004	103N2008
SC10GHH	104G8071									117U5372	117-7025		103N1004	103N2009
SC15GHH	104G8571									117U5373	117-7027		103N1004	103N2009

Compressors AC voltage **R134a**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
324	1.11	751	1.60			1/2	15.28	198 to 254 V, 50 Hz	F1	209	203	8.2	6.2	6.2		
389	1.17	869	1.63			1/2	17.69	198 to 254 V, 50 Hz	F1	209	203	10.2	6.2	6.2		
458	1.14	1014	1.55			1/2	20.95	198 to 254 V, 50 Hz	F1	219	213	10.2	6.2	6.2		
458	1.14	1014	1.55			1/2	20.95	198 to 254 V, 50 Hz	F1	219	213	10.2	6.2	6.2	6.2	
321	1.16	671	1.65			1/2	12.87	187 to 254 V, 50 Hz *	F1	209	203	8.2	6.2	6.2		X
321	1.16	671	1.65			1/2	12.87	187 to 254 V, 50 Hz *	F1	209	203	8.2	6.2	6.2	6.2	X
386	1.18	802	1.66			1/2	15.28	187 to 254 V, 50 Hz *	F2	209	203	10.2	6.2	6.2		X
448	1.17	931	1.69			1/2	17.69	187 to 254 V, 50 Hz *	F2	219	213	10.2	6.2	6.2		X
570	1.27	1164	1.78			1/2	20.95	187 to 254 V, 50 Hz	F2	219	213	10.2	6.2	6.2		X
169	0.87	497	1.60	930	2.36	1/2	10.29	187 to 254 V, 50 Hz *	F2	199	193	8.2	6.2	6.2		X
248	1.03	619	1.61	1179	2.30	1/2	12.87	187 to 254 V, 50 Hz *	F2	209	203	8.2	6.2	6.2		X
248	1.03	619	1.61	1179	2.30	1/2	12.87	187 to 254 V, 50 Hz *	F2	209	203	8.2	6.2	6.2	6.2	X
261	1.01	751	1.58	1351	2.21	1/2	15.28	187 to 254 V, 50 Hz *	F2	209	203	10.2	6.2	6.2		X
398	1.13	900	1.59	1624	2.23	1/2	17.69	187 to 254 V, 50 Hz *	F2	219	213	10.2	6.2	6.2		X
398	1.13	900	1.59	1624	2.23	1/2	17.69	187 to 254 V, 50 Hz *	F2	219	213	10.2	6.2	6.2	6.2	X
462	1.23	1047	1.70	1903	2.42	3/4	20.95	187 to 254 V, 50 Hz *	F2	219	213	10.2	6.2	6.2		X
		484	1.57	932	2.29	1/2	10.29	198 to 254 V, 50 Hz *	F2	209	203	10.2	6.2	8.2		X
		587	1.53	1184	2.36	1/2	12.87	198 to 254 V, 50 Hz *	F2	209	203	10.2	6.2	8.2		X
		742	1.62	1397	2.42	1/2	15.28	198 to 254 V, 50 Hz *	F2	209	203	10.2	6.2	8.2		X
		882	1.63	1644	2.29	1/2	17.69	198 to 254 V, 50 Hz	F2	219	213	10.2	6.2	8.2		X
		848	1.75	1611	2.59	1/2	17.69	198 to 254 V, 50 Hz *	F2	219	213	10.2	6.2	8.2		X
		476	1.71	938	2.64	1/2	10.29	198 to 254 V, 50 Hz	F1	209	203	10.2	6.2	8.2	8.2	
		745	1.85	1392	2.68	1/2	15.28	198 to 254 V, 50 Hz	F1	209	203	10.2	6.2	8.2	8.2	X

SC



R134a • 220-240 V • 50 Hz • S-Series

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	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]						
SC15MFX	104G8501	MBP		458	767	954	1405		226	0.81	602	1.38	1166	1.97		568	949	1180	1737	
SC18MFX	104G8804	MBP		553	894	1113	1670				709	1.34	1370	1.94		684	1105	1375	2062	
SC21MFX	104G8120	MBP		662	1052	1303	1936				840	1.37	1596	1.96		819	1301	1610	2392	
SC12/12G	104G8280	L/M/HBP	129	696	1206	1535	2364	2875	350	0.77	928	1.31	1920	1.95	163	864	1495	1900	2923	3551
SC15/15G	104G8580	L/M/HBP		847	1457	1815	2679	3201	328	0.71	1137	1.29	2220	1.87		1053	1804	2246	3315	3961
SC18/18G	104G8880	L/M/HBP		1053	1740	2174	3248	3900	566	0.86	1369	1.35	2674	1.92		1297	2144	2678	3999	4800
SC21/21G	104G8180	L/M/HBP		1212	2026	2538	3778	4510	665	0.86	1584	1.37	3121	1.97		1507	2513	3144	4672	5572

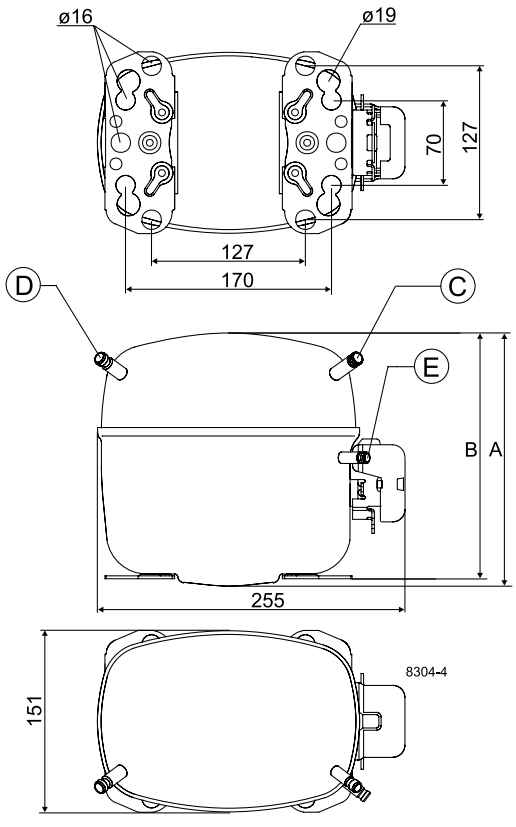
R134a • 220-240 V • 50 Hz • S-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 mm	6.3 mm	6.3 mm		
SC15MFX	104G8501								117U6005	117U5017			103N1004	103N2008
SC18MFX	104G8804								117U6019	117U5017	117-7027		103N1004	103N2008
SC21MFX	104G8120								117U6019	117U5017	117-7039		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

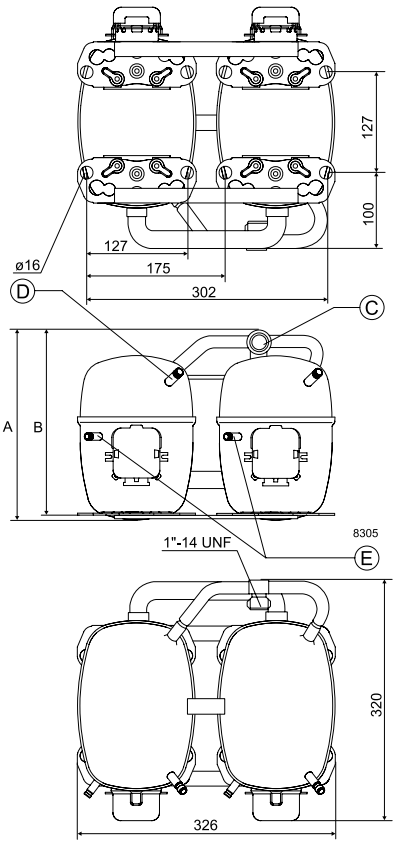
Compressors AC voltage **R134a**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
326	1.10	791	1.68	1418	2.32	1/2	15.28	198 to 254 V, 50 Hz	F2	209	203	10.2	6.2	6.2		X
434	1.15	923	1.64	1672	2.30	1/2	17.69	187 to 254 V, 50 Hz	F2	219	213	10.2	6.2	6.2		X
532	1.21	1089	1.66	1944	2.32	3/4	20.95	187 to 254 V, 50 Hz	F2	219	213	10.2	6.2	6.2		X
497	1.03	1237	1.61	2357	2.30	3/4	25.74	187 to 254 V, 50 Hz	F2	249	244	12.0	6.2	6.2		
521	1.01	1502	1.58	2703	2.21	3/4	30.56	187 to 254 V, 50 Hz	F2	249	244	12.0	6.2	6.2		
783	1.12	1787	1.64	3249	2.26	1	35.38	187 to 254 V, 50 Hz	F2	259	254	16.0	6.2	6.2		
922	1.13	2092	1.69	3806	2.31	1 1/4	41.90	187 to 254 V, 50 Hz	F2	259	254	16.0	6.2	6.2		

SC



SC-Twin



Compressors AC voltage **R134a**

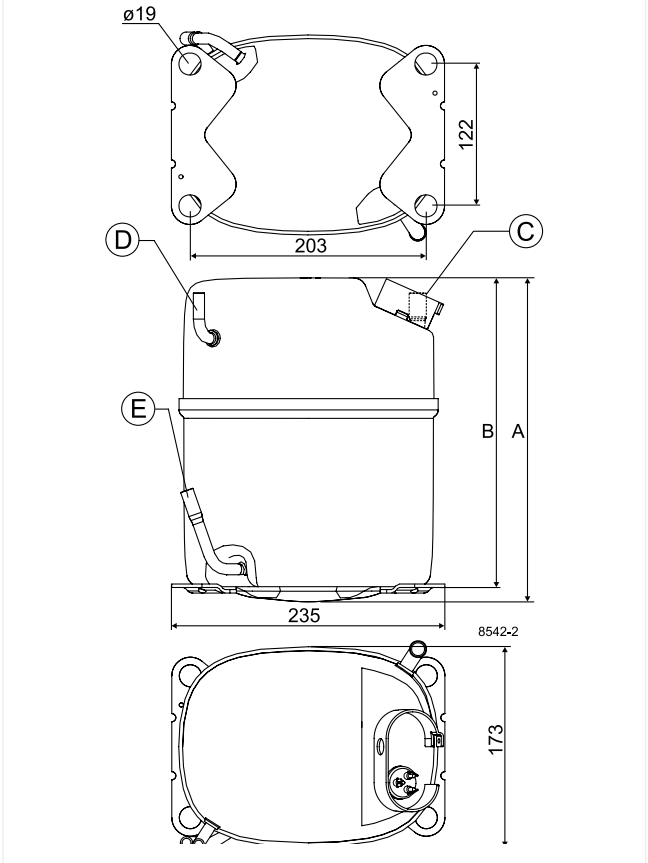
R134a • 220-240 V • 50 Hz • G-Series																			
Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -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	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]						
GS26MFX	107B0700	MBP		895	1445	1790					1152	1.57	2207	2.13		1108	1789	2216		
GS34MFX	107B0701	MBP		1162	1890	2352					1500	1.53	2911	2.16		1439	2338	2908		
GS26GHX	107B0702	HBP		877	1407	1749	2624	3173			1119	1.48	2152	2.13		1086	1741	2164	3246	3925

R134a • 220-240 V • 50 Hz • G-Series • Electrical Equipment															
Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 mm	6.3 mm	6.3 mm			
GS26MFX	107B0700										117-7055			107B9101	
GS34MFX	107B0701										117-7056			107B9101	
GS26GHX	107B0702										117-7070			107B9101	

Compressors AC voltage **R134a**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
		1501	1.89			3/4	26.30	198 to 254 V, 50 Hz	F2	259	247	12.9	6.5	8.2		
		1959	1.86	3552	2.54	1	33.80	198 to 254 V, 50 Hz	F2	259	247	12.9	6.5	8.2		
		1455	1.80	2630	2.52	3/4	26.30	198 to 254 V, 50 Hz	F2	259	247	12.9	6.5	8.2		

GS



R600a
220-240 V | 50 Hz

With more than 50 years of experience in compressor technology and highly committed employees, our focus is to develop and apply the advanced compressor technologies to achieve standard setting performance for leading products and businesses around the world.

Chemical formula
C4H10

Typelabel
Typelabel stripe colour: Red
Typelabel colour: Yellow

Applications
LBP: Low Back Pressure
HBP: High Back Pressure
MBP: Medium 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
F1 = Fan cooling 1.5 m/s (compressor compartment temp. equal to ambient temperature)
F2 = 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

Compressors AC voltage **R600a**

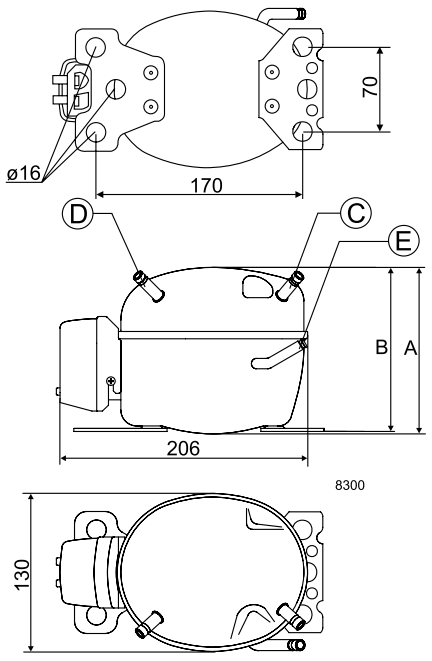
R600a • 220-240 V • 50 Hz • P-Series																					
Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating 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 ePTC code no.					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 compulso-ry (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	4.8 mm	6.3 mm	6.3 mm		
PLE35K	101H0360			103N0016	103N0021		117-7117	117-7119					103N1010	103N0491

Compressors AC voltage **R600a**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm^3]			A	B	C	D	E	F	
38	0.91	89	1.57			1/10	2.50	198 to 254 V, 50 Hz	S	137	135	6.2	6.2	5.0		X

PLE



Compressors AC voltage **R600a**

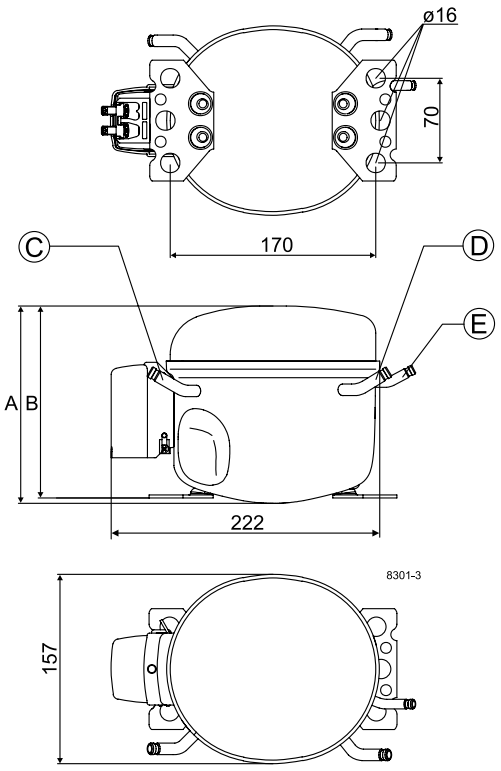
R600a • 220-240 V • 50 Hz • T-Series																			
Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C. Tliq=55°C. Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -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	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]						
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				
TLES10KK.3	102H4038	LBP	73	205					126	0.98	255	1.43			89	249				
TLES4KTK	102H4436	LBP	18	74	123	154			40	0.83	96	1.49			22	91	150	188		
TLES5KTK	102H4536	LBP	28	99	159	196			57	0.93	126	1.49			34	121	194	239		
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	249				
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				

R600a • 220-240 V • 50 Hz • T-Series • Electrical Equipment																
Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 mm	6.3 mm	6.3 mm		
TLES4KK.3	102H4438	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
TLES4.8KK.3	102H4538	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
TLES5.7KK.3	102H4638	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
TLES6.5KK.3	102H4738	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
TLES7.5KK.3	102H4838	103N0011	103N0018	103N0016	103N0021		117-7131	117-7132					103N1010	103N2010
TLES8.7KK.3	102H4938	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
TLES10KK.3	102H4038	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
TLES4KTK	102H4436	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
TLES5KTK	102H4536	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
TLES6KTK	102H4636	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
TLES7KTK	102H4736	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
TLES8KTK	102H4836	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
TLES8.7KTK.3	102H4834	103N0011	103N0018										103N1010	103N2010
TLES10KTK.3	102H4050	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
TLX4KK.3	102H4447			103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
TLX5.7KK.3	102H4647			103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
TLX6.5KK.3	102H4747			103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
TLX7.5KK.3	102H4847			103N0016	103N0021		117-7131	117-7132					103N1010	103N2010
TLX8.7KK.3	102H4947			103N0016	103N0021		117-7117	117-7119					103N1010	103N2010

Compressors AC voltage **R600a**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
57	1.18					1/10	4.01	198 to 254 V, 50 Hz	S	163	159	6.2	6.2	5.0		X
74	1.30					1/10	4.78	198 to 254 V, 50 Hz	S	163	159	6.2	6.2	5.0		X
91	1.32					1/10	5.70	198 to 254 V, 50 Hz	S	163	159	6.2	6.2	5.0		X
108	1.31					1/10	6.49	198 to 254 V, 50 Hz	S	163	159	6.2	6.2	5.0		X
126	1.31					1/10	7.48	198 to 254 V, 50 Hz	S	163	159	6.2	6.2	5.0		X
147	1.33					1/4	8.67	198 to 254 V, 50 Hz	S	163	159	6.2	6.2	5.0		X
168	1.26					1/4	10.13	198 to 254 V, 50 Hz	S	173	169	6.2	6.2	5.0		
55	1.10	126	1.83			1/10	3.86	187 to 254 V, 50 Hz	S	173	169	6.2	6.2	5.0		
77	1.22	163	1.79			1/10	5.08	187 to 254 V, 50 Hz	S	173	169	6.2	6.2	5.0		
89	1.23					1/10	5.70	187 to 254 V, 50 Hz	S	173	169	6.2	6.2	5.0		
103	1.22					1/10	6.49	187 to 254 V, 50 Hz	S	173	169	6.2	6.2	5.0		
119	1.22					1/10	7.76	187 to 254 V, 50 Hz	S	173	169	6.2	6.2	5.0		
143	1.27					1/4	8.67	187 to 254 V, 50 Hz	S	173	169	6.2	6.2	5.0		
168	1.36					1/6	10.13	187 to 254 V, 50 Hz	S	173	169	6.2	6.2	5.0		
60	1.49					1/10	4.01	198 to 254 V, 50 Hz	S	173	169	6.2	6.2	5.0		X
94	1.65					1/10	5.70	198 to 254 V, 50 Hz	S	173	169	6.2	6.2	5.0		X
110	1.66					1/10	6.49	198 to 254 V, 50 Hz	S	173	169	6.2	6.2	5.0		X
130	1.69					1/4	7.48	198 to 254 V, 50 Hz	S	173	169	6.2	6.2	5.0		X
153	1.67					1/4	8.67	198 to 254 V, 50 Hz	S	173	169	6.2	6.2	5.0		X

TLES / TLX



Compressors AC voltage **R600a**

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 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
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				
TLY7.5KK.3	102H4842	LBP	53	155					94	1.09	194	1.62			64	189				
TLY8.7KK.3	102H4942	LBP	65	182					112	1.16	227	1.69			79	222				
TLY10KK.3	102H4042	LBP	74	208					128	1.21	260	1.74			90	253				

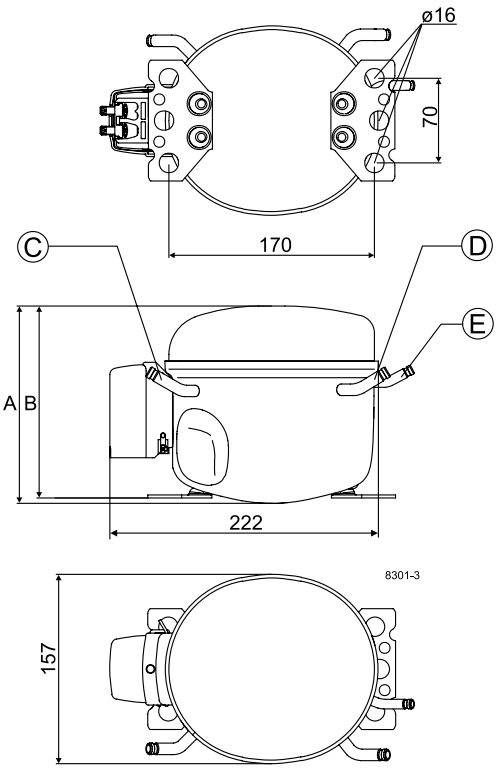
R600a • 220-240 V • 50 Hz • T-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 mm	6.3 mm	6.3 mm		
TLY4KK.3	102H4442	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
TLY4.8KK.3	102H4542	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
TLY5.7KK.3	102H4642	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
TLY6.5KK.3	102H4742	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
TLY7.5KK.3	102H4842	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
TLY8.7KK.3	102H4942	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
TLY10KK.3	102H4042	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010

Compressors AC voltage **R600a**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
57	1.29					1/10	4.01	198 to 254 V, 50 Hz	S	163	159	6.2	6.2	5.0		X
74	1.37					1/10	4.78	198 to 254 V, 50 Hz	S	163	159	6.2	6.2	5.0		X
91	1.37					1/10	5.70	198 to 254 V, 50 Hz	S	163	159	6.2	6.2	5.0		X
110	1.42					1/10	6.49	198 to 254 V, 50 Hz	S	163	159	6.2	6.2	5.0		X
126	1.41					1/10	7.48	198 to 254 V, 50 Hz	S	163	159	6.2	6.2	5.0		X
149	1.49					1/4	8.67	198 to 254 V, 50 Hz	S	163	159	6.2	6.2	5.0		X
170	1.55					1/4	10.13	198 to 254 V, 50 Hz	S	173	169	6.2	6.2	5.0		X

TLY



Compressors AC voltage **R600a**

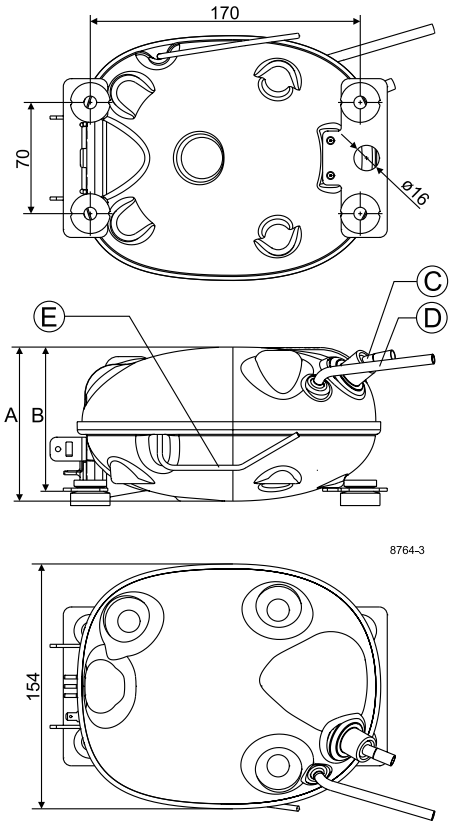
R600a • 220-240 V • 50 Hz • X-Series																			
Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -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	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]						
XV5.0KX 1600 rpm	108H5100	LBP	12	54	88	110			29	1.24	69	1.98								
XV5.0KX 4000 rpm	108H5100	LBP	33	126					70	1.26	1.70	1.93								
XV7.2KX 1600 rpm	108H7100	LBP	25	85	136	167			50	1.45	109	2.07								
XV7.2KX 4000 rpm	108H7100	LBP	59	196					115	1.38	248	1.93								

R600a • 220-240 V • 50 Hz • X-Series • Electrical Equipment																
Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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 compulso-ry (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	4.8 mm	6.3 mm	6.3 mm		
XV5.0KX	108H5100	Electronic unit 105N5020 (attached) - XV-AEO/Freq., inputs: Modbus, thermostat, frequency signal Electronic unit 105N5050 (detached) - XV-Frequency, input: frequency signal												
XV7.2KX	108H7100													

Compressors AC voltage **R600a**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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	Oil cooler	
[W]	[W/W]	[W]	[W/W]	[W]	[W/W]	[HP]	[cm^3]			A	B	C (I.D.)	D (O.D.)	E (O.D.)	F	
40	1.63					1/10	5.00	160 to 264 V, 50 Hz *	S	97	91	6.2	6.0	3.2		
96	1.63					1/10	5.00	160 to 264 V, 50 Hz *	S	97	91	6.2	6.0	3.2		
67	1.85					1/10	7.20	160 to 264 V, 50 Hz *	S	97	91	6.2	6.0	3.2		
155	1.76					1/4	7.20	160 to 264 V, 50 Hz *	S	97	91	6.2	6.0	3.2		

XV



Compressors AC voltage **R600a**

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 [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
DLE5.7KK	102H4696	LBP	42	124	186				75	1.24	154	1.73			51	151	227			
DLE7.5KK	102H4890	LBP	53	153					96	1.25	189	1.69			65	186				
DLE8.7KK	102H4950	LBP	63	179					112	1.23	226	1.68			77	218				
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				
DLY7.5KK	102H4891	LBP	55	156					96	1.39	195	1.96			67	190				
DLY8.7KK	102H4951	LBP	66	183					114	1.37	226	1.93			81	223				
DLY9.4KK	102H4953	LBP	73	201					125	1.36	249	1.90			89	245				
DLY10KK	102H4083	LBP	74	217					133	1.32	274	1.78			91	265				
DLX4KK.1	102H3459	LBP	23	79					46	1.44	101	2.19			28	97				
DLX4.8KK.1	102H3559	LBP	30	104					60	1.47	131	2.20			36	127				
DLX5.7KK.1	102H3659	LBP	41	123					75	1.47	154	2.08			51	151				
DLX6.5KK.1	102H3759	LBP	44	131					80	1.49	164	2.11			54	160				
DLX7.5KK.1	102H4859	LBP	52	156					95	1.49	195	2.10			64	191				
DLX8.7KK.1	102H4959	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	252				
DLX10KK.1	102H4059	LBP	76	227					138	1.47	284	2.07			93	277				

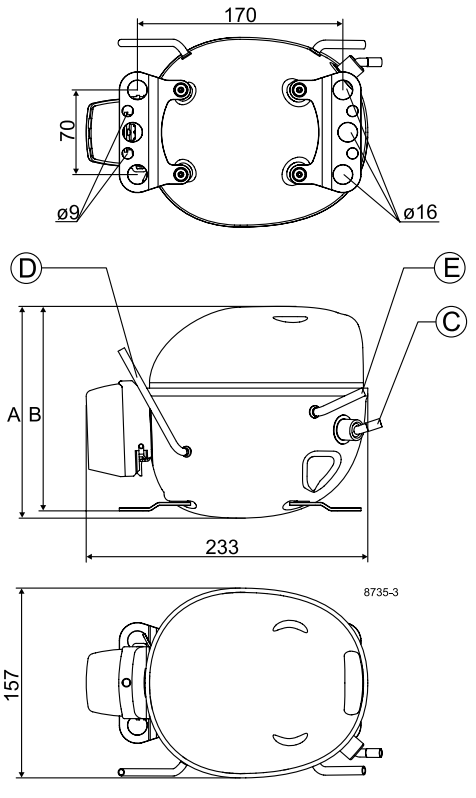
R600a • 220-240 V • 50 Hz • D-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 mm	6.3 mm	6.3 mm		
DLE5.7KK	102H4696			103N0016	103N0021			117-7119					103N1010	103N0491
DLE9.4KK	102H4890			103N0016	103N0021			117-7119					103N1010	103N0491
DLE8.7KK	102H4950			103N0016	103N0021			117-7119					103N1010	103N0491
DLE9.4KK	102H4952			103N0016	103N0021			117-7119					103N1010	103N0491
DLE10KK	102H4082			103N0016	103N0021			117-7119					103N1010	103N0491
DLY7.5KK	102H4891			103N0016	103N0021			117-7119					103N1010	103N0491
DLY8.7KK	102H4951			103N0016	103N0021			117-7119					103N1010	103N0491
DLY9.4KK	102H4953			103N0016	103N0021			117-7119					103N1010	103N0491
DLY10KK	102H4083			103N0016	103N0021			117-7119					103N1010	103N0491
DLX4KK.1	102H3459			103N0016	103N0021			117-7136					103N1010	103N0491
DLX4.8KK.1	102H3559			103N0016	103N0021			117-7136					103N1010	103N0491
DLX5.7KK.1	102H3659			103N0016	103N0021			117-7136					103N1010	103N0491
DLX6.5KK.1	102H3759			103N0016	103N0021			117-7136					103N1010	103N0491
DLX7.5KK.1	102H4859			103N0016	103N0021			117-7139					103N1010	103N0491
DLX8.7KK.1	102H4959			103N0016	103N0021			117-7139					103N1010	103N0491
DLX9.4KK.1	102H4159			103N0016	103N0021			117-7140					103N1010	103N0491
DLX10KK.1	102H4059			103N0016	103N0021			117-7132					103N1010	103N0491

Compressors AC voltage **R600a**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
101	1.59	194	2.05			1/10	5.70	198 to 254 V, 50 Hz	S	175	169	6.2	4.5	5.0		
128	1.58					1/10	7.48	198 to 254 V, 50 Hz	S	175	169	6.2	4.5	5.0		
148	1.56					1/7	8.67	198 to 254 V, 50 Hz	S	175	169	6.2	4.5	5.0		
162	1.55					1/7	9.38	198 to 254 V, 50 Hz	S	175	169	6.2	4.5	5.0		
182	1.56					1/6	10.14	198 to 254 V, 50 Hz	S	175	169	6.2	4.5	5.0		
128	1.77					1/10	7.48	198 to 254 V, 50 Hz	S	175	169	6.2	4.5	5.0		
151	1.75					1/7	8.67	198 to 254 V, 50 Hz	S	175	169	6.2	4.5	5.0		
167	1.73					1/7	9.38	198 to 254 V, 50 Hz	S	175	169	6.2	4.5	5.0		
177	1,67					1/6	10.14	198 to 254 V, 50 Hz	S	175	169	6.2	4.5	5.0		
62	1.86					1/10	4.01	198 to 254 V, 50 Hz	S	175	169	6.2	4.5	5.0		
81	1.90					1/10	4.78	198 to 254 V, 50 Hz	S	175	169	6.2	4.5	5.0		
100	1.89					1/10	5.70	198 to 254 V, 50 Hz	S	175	169	6.2	4.5	5.0		
107	1.91					1/10	6.49	198 to 254 V, 50 Hz	S	175	169	6.2	4.5	5.0		
127	1.90					1/10	7.48	198 to 254 V, 50 Hz	S	175	169	6.2	4.5	5.0		
151	1.90					1/4	8.67	198 to 254 V, 50 Hz	S	175	169	6.2	4.5	5.0		
168	1.89					1/4	9.38	198 to 254 V, 50 Hz	S	175	169	6.2	4.5	5.0		
185	1.88					1/4	10.14	198 to 254 V, 50 Hz	S	175	169	6.2	4.5	5.0		

DLE / DLY / DLX



Compressors AC voltage **R600a**

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 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	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]						
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				
NLE13KK.4	105H6959	LBP	99	274					170	1.18	340	1.59			121	334				
NLE15KK.4	105H6968	LBP	110	307					190	1.20	382	1.63			134	374				
NLE9KTK	105H6848	LBP	54	166					98	1.03	211	1.57			66	202				
NLE11KTK	105H6948	LBP	73	206					127	1.03	261	1.47			88	251				
NLE15KTK	105H6946	LBP	93	280					169	1.00	351	1.49			114	341				
NLE11KTK.2	105H6173	LBP	84	242					149	1.18	302	1.72			102	295				
NLE13KTK.2	105H6929	LBP	96	277					171	1.18	345	1.73			117	338				
NLE15KTK.2	105H6966	LBP	106	314					190	1.19	395	1.72			129	383				
NLE15MKK	105H6533	MBP	106	314	490	601			190	1.19	395	1.72			129	383	598	732		
NLU8.0KK.1	105H6008	LBP	51	158					95	1.52	198	2.12			63	193				
NLU10KK.1	105H6131	LBP	71	219					131	1.55	274	2.16			86	266				
NLU11KK.1	105H6132	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				
NLU15KK.1	105H6553	LBP	105	320					194	1.54	400	2.13			129	390				
NLU11KTK.1	105H6133	LBP	83	253					153	1.45	317	2.02			102	309				
NLU13KTK.1	105H6381	LBP	95	285					173	1.46	356	2.02			116	347				
NLU15KTK.1	105H6554	LBP	106	321					195	1.45	401	2.00			130	391				

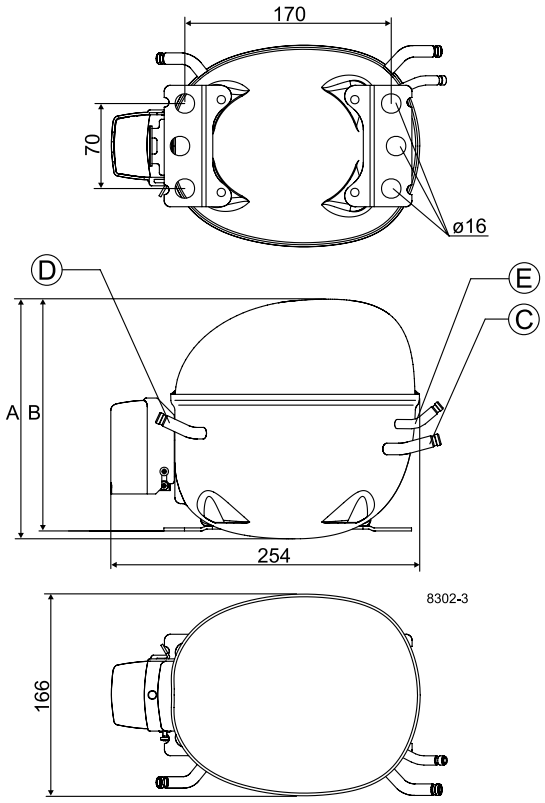
R600a • 220-240 V • 50 Hz • N-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 mm	6.3 mm	6.3 mm		
NLE10KK.4	105H6867	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
NLE11KK.4	105H6952	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
NLE13KK.4	105H6959	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
NLE15KK.4	105H6968	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
NLE15KTK	105H6946	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
NLE11KTK.2	105H6173	103N0011	103N0018	103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
NLE13KTK.2	105H6929	103N0011	103N0018	103N0016	103N0021		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		117-7117	117-7119					103N1010	103N2010
NLU8.0KK.1	105H6008				103N0021			117-7139					103N1010	103N2010
NLU10KK.1	105H6131				103N0021			117-7139					103N1010	103N2010
NLU11KK.1	105H6132				103N0021			117-7139					103N1010	103N2010
NLU13KK.1	105H6372				103N0021			117-7132					103N1010	103N2010
NLU15KK.1	105H6553				103N0021			117-7132					103N1010	103N2010
NLU11KTK.1	105H6133				103N0021			117-7132					103N1010	103N2010
NLU13KTK.1	105H6381				103N0021			117-7129					103N1010	103N2010
NLU15KTK.1	105H6554				103N0021			117-7119					103N1010	103N2010

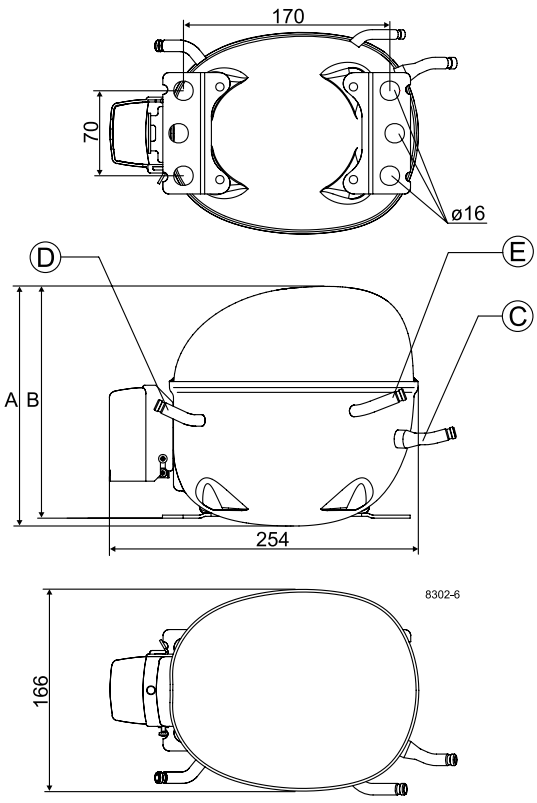
Compressors AC voltage **R600a**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
170	1.51					1/4	10.09	198 to 254 V, 50 Hz	S	190	183	6.2	6.2	5.0		X
190	1.52					1/4	11.15	198 to 254 V, 50 Hz	S	190	183	6.2	6.2	5.0		X
226	1.50					1/4	13.25	198 to 254 V, 50 Hz	S	190	183	6.2	6.2	5.0		X
253	1.53					1/4	14.65	198 to 254 V, 50 Hz	S	197	190	6.2	6.2	5.0		X
131	1.33					1/4	8.35	187 to 254 V, 50 Hz	S	197	190	6.2	6.2	5.0		
168	1.31					1/4	11.15	187 to 254 V, 50 Hz	S	197	190	6.2	6.2	5.0		X
226	1.28					1/4	14.65	187 to 254 V, 50 Hz	S	197	190	6.2	6.2	5.0		
199	1.51					1/6	11.15	187 to 254 V, 50 Hz	S	203	197	6.2	6.2	5.0		
227	1.52					1/4	13.25	187 to 254 V, 50 Hz	S	203	197	6.2	6.2	5.0		
254	1.52					1/4	14.65	187 to 254 V, 50 Hz	S	203	197	6.2	6.2	5.0		X
254	1.52	505	2.05			1/4	14.65	187 to 254 V, 50 Hz	S	203	197	6.2	6.2	5.0		
127	1.94					1/10	8.05	198 to 254 V, 50 Hz	S	203	197	6.2	6.2	5.0		X
176	1.98					1/4	10.09	198 to 254 V, 50 Hz	S	203	197	6.2	6.2	5.0		X
200	1.97					1/4	11.15	198 to 254 V, 50 Hz	S	203	197	6.2	6.2	5.0		X
230	1.98					1/4	13.25	198 to 254 V, 50 Hz	S	203	197	6.2	6.2	5.0		
259	1.96					1/4	14.65	198 to 254 V, 50 Hz	S	203	197	6.2	6.2	5.0		
205	1.85					1/5	11.15	187 to 254 V, 50 Hz	S	203	197	6.2	6.2	5.0		
231	1.87					1/5	13.25	187 to 254 V, 50 Hz	S	203	197	6.2	6.2	5.0		
260	1.85					1/4	14.65	187 to 254 V, 50 Hz	S	203	197	6.2	6.2	5.0		

NLE



NLU



Compressors AC voltage **R600a**

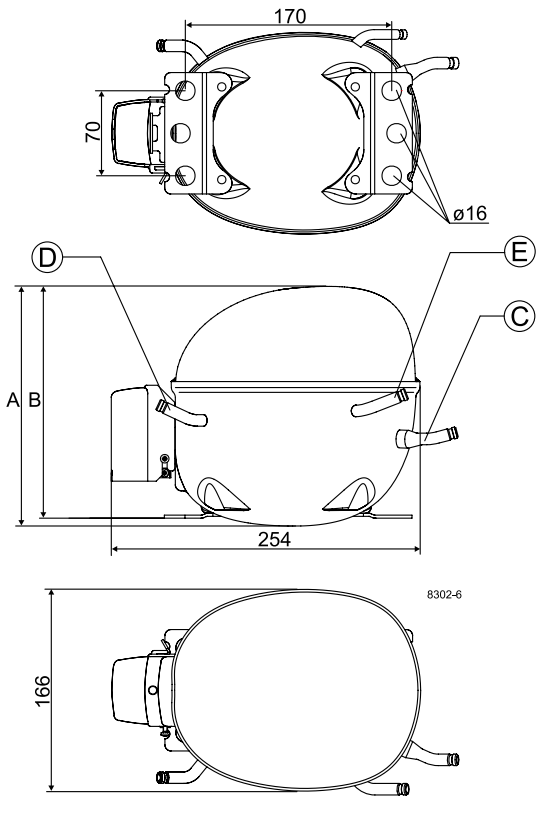
R600a • 220-240 V • 50 Hz • N-Series																						
Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]							
									LBP rating 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]								
NLX10KK.1	105H6104	LBP	67	215					128	1.36	270	1.93			82	262						
NLX13KK.1	105H6304	LBP	91	276					167	1.37	345	1.91			111	336						
NLX15KK.1	105H6502	LBP	99	308					185	1.34	387	1.87			121	376						
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.2	105H6101	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						
NLX13KK.2	105H6300	LBP	93	271					167	1.47	338	1.99			115	331						
NLX15KK.2	105H6977	LBP	110	309					192	1.48	384	1.99			135	377						
NLX10KK.3	105H6106	LBP	73	216					131	1.47	269	2.00			88	263						
NLX11KK.3	105H6184	LBP	79	237					147	1.47	300	2.00			97	288						
NLX13KK.3	105H6306	LBP	93	283					168	1.45	356	1.99			113	345						
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 ePTC code no.					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	4.8 mm	6.3 mm	6.3 mm		
NLX10KK.1	105H6104			103N0016	103N0021		117-7131	117-7132					103N1010	103N2010
NLX13KK.1	105H6304			103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
NLX15KK.1	105H6502			103N0016	103N0021			117-7136					103N1010	103N2010
NLX8.0KK.2	105H6010			103N0016	103N0021			117-7132					103N1010	103N2010
NLX8.8KK.2	105H6011			103N0016	103N0021			117-7136					103N1010	103N2010
NLX10KK.2	105H6101			103N0016	103N0021			117-7136					103N1010	103N2010
NLX11KK.2	105H6970			103N0016	103N0021			117-7136					103N1010	103N2010
NLX13KK.2	105H6300			103N0016	103N0021			117-7132					103N1010	103N2010
NLX15KK.2	105H6977			103N0016	103N0021		117-7117	117-7119					103N1010	103N2010
NLX10KK.3	105H6106				103N0021			117-7140					103N1010	103N2010
NLX11KK.3	105H6184				103N0021			117-7119					103N1010	103N2010
NLX13KK.3	105H6306				103N0021			117-7119					103N1010	103N2010
NLX15KK.3	105H6506				103N0021			117-7140					103N1010	103N2010

Compressors AC voltage **R600a**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
172	1.74					1/4	10.09	198 to 254 V, 50 Hz	S	203	197	6.2	6.2	5.0		
224	1.75					1/4	13.25	198 to 254 V, 50 Hz	S	203	197	6.2	6.2	5.0		
248	1.71					1/4	14.65	198 to 254 V, 50 Hz	S	203	197	6.2	6.2	5.0		X
133	1.88					1/4	8.05	198 to 254 V, 50 Hz	S	203	197	6.2	6.2	5.0		
151	189					1/7	8.76	198 to 254 V, 50 Hz	S	203	197	6.2	6.2	5.0		X
178	1.89					1/4	10.09	198 to 254 V, 50 Hz	S	203	197	6.2	6.2	5.0		X
198	1.88					1/4	11.15	198 to 254 V, 50 Hz	S	203	197	6.2	6.2	5.0		X
222	1.87					1/4	13.25	198 to 254 V, 50 Hz	S	203	197	6.2	6.2	5.0		X
255	1.88					1/4	14.65	198 to 254 V, 50 Hz	S	203	197	8.2	6.2	6.2		X
175	1.87					1/4	10.09	198 to 254 V, 50 Hz	S	203	197	6.2	6.2	5.0		X
195	1.86					1/6	11.15	198 to 254 V, 50 Hz	S	203	197	6.2	6.2	5.0		X
225	1.85					1/5	13.25	198 to 254 V, 50 Hz	S	203	197	6.2	6.2	5.0		X
254	1.85					1/4	14.65	198 to 254 V, 50 Hz	S	203	197	6.2	6.2	5.0		X

NLX



R404A/R507
220-240 V | 50 Hz

With more than 50 years of experience in compressor technology and highly committed employees, our focus is to develop and apply the advanced compressor technologies to achieve standard setting performance for leading products and businesses around the world.

Chemical formula
R404A: CHF2CF3 / CH3CF3 / CH2FCF3
R507: CHF2CF3 / CH3CF3

Typelabel
Typelabel stripe colour: Lilac
Typelabel colour: Yellow

Applications
LBP: Low Back Pressure
HBP: High Back Pressure
MBP: Medium 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
F1 = Fan cooling 1.5 m/s (compressor compartment temp. equal to ambient temperature)
F2 = 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

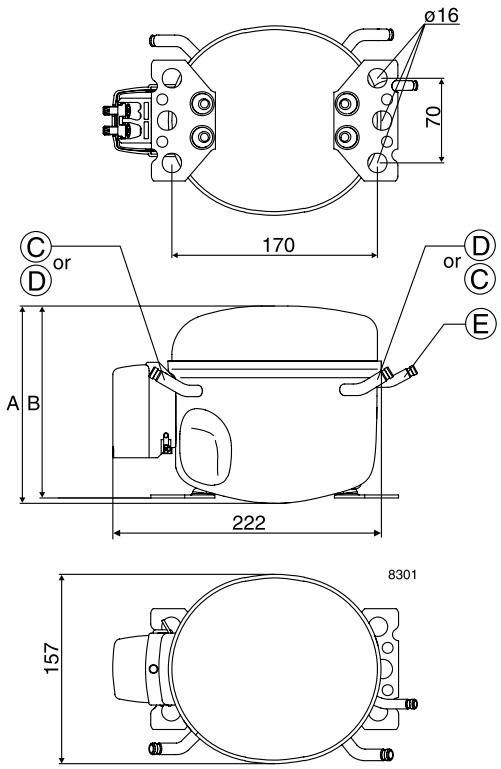
R404A/R507 • 220-240 V • 50 Hz • T-Series																			
Compressor	Code number	Application	EN 12900 Capacity [W] Tc=45°C, Tliq=45°C, Tsuc=32°C Evaporating temperature [°C]						EN 12900						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating 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	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]						
TL4CL	102U2071	LBP	84	230	352				91	0.87	262	1.32			76	239	387			
TL4.5CLX	102U2111	LBP	106	294					111	0.80	335	1.33			102	300				
TL4DL	102U2038	M/HBP		229	349	432	631				256	1.26	421	1.57		226	359	449	657	

R404A/R507 • 220-240 V • 50 Hz • T-Series • Electrical Equipment																
Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 mm	6.3 mm	6.3 mm		
TL4CL	102U2071								117U6000	117U5014			103N1010	103N2010
TL4.5CLX	102U2111								117U6001	117U5014			103N1010	103N2010
TL4DL	102U2038								117U6001	117U5014			103N1010	103N2010

Compressors AC voltage **R404A | R507**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
152	1.03	313	1.40			1/4	3.86	198 to 254 V, 50 Hz	F2	173	169	6.2	6.2	5.0		
198	1.05					1/4	4.63	198 to 254 V, 50 Hz	F2	173	169	6.2	6.2	5.0		
		289	1.27	523	1.83	1/4	3.86	198 to 254 V, 50 Hz	F2	173	169	6.2	6.2	5.0		

TL



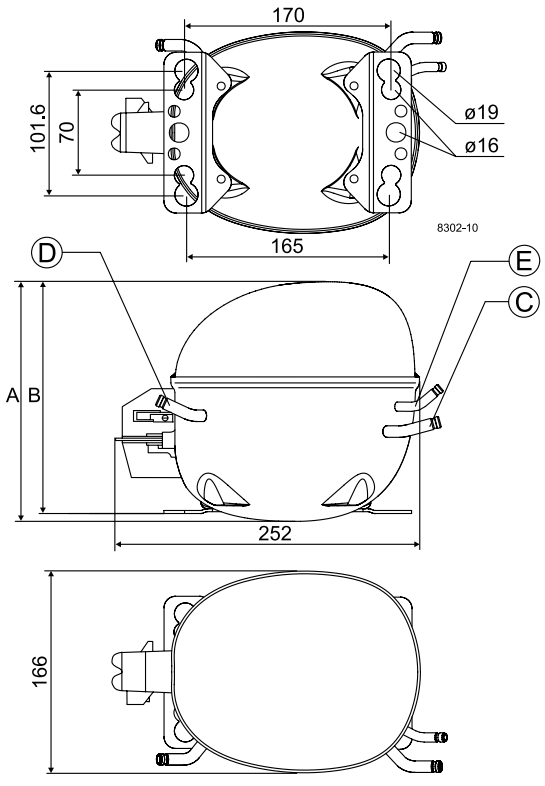
R404A/R507 • 220-240 V • 50 Hz • N-Series																			
Compressor	Code number	Application	EN 12900 Capacity [W] Tc=45°C, Tliq=45°C, Tsuc=32°C Evaporating temperature [°C]						EN 12900						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating 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	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]						
NF7MLX	105F3721	MBP		618	940	1137					702	1.48	1110	1.71		546	844	1027	1473	
NL7CLX	105F3710	LBP	199	536	796				204	0.97	600	1.57			201	574	869			
NL8.4CLX	105F3800	LBP	216	583	866				221	0.95	653	1.53			219	625	945			
NL6.1MLX	105F3611	MBP		507	771	932					575	1.57	910	1.87		453	705	859		

R404A/R507 • 220-240 V • 50 Hz • N-Series • Electrical Equipment															
Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 mm	6.3 mm	6.3 mm			
NF7MLX	105F3721								117U4139	117U5018			117U0349	117U1021	
NL7CLX	105F3710								117U6002	117U5015			103N1010	103N2010	
NL8.4CLX	105F3800								117U6002	117U5015			103N1010	103N2010	
NL6.1MLX	105F3611								117U6022	117U5015			103N1010	103N2011	

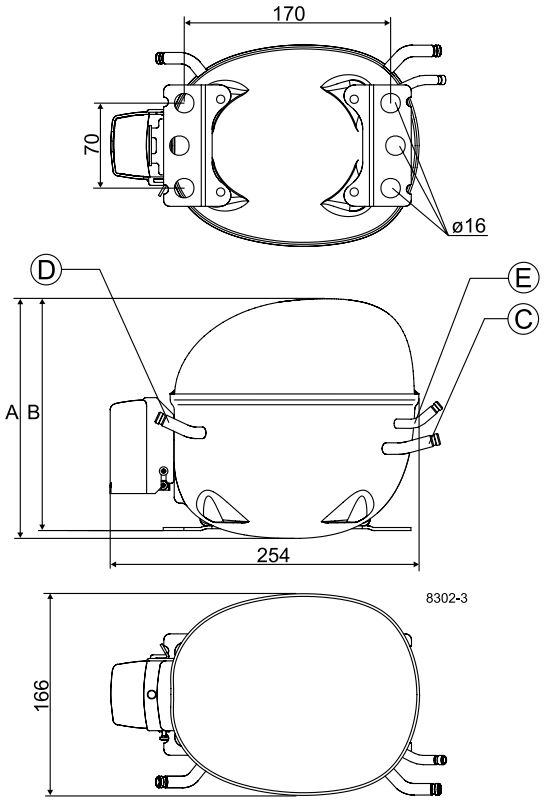
Compressors AC voltage **R404A | R507**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
		687	1.50	1173	2.14	1/2	7.27	187 to 254 V, 50 Hz *	F2	203	197	9.7	6.5	6.5		X
388	1.31	709	1.61			1/2	7.27	198 to 254 V, 50 Hz	F2	203	197	8.2	6.2	6.2		X
423	1.28	771	1.56			1/2	7.27	198 to 254 V, 50 Hz	F2	203	197	8.2	6.2	6.2		
291	1.14	573	1.63	983	2.33	1/2	6.13	187 to 254 V, 50 Hz *	F2	203	197	8.2	6.5	6.5		X

NF



NL



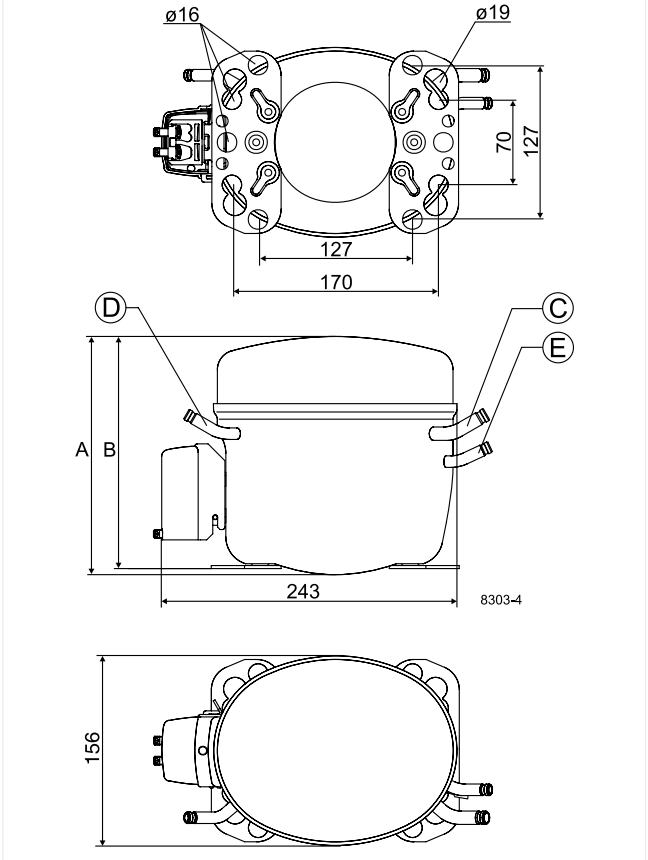
R404A/R507 • 220-240 V • 50 Hz • F-Series																			
Compressor	Code number	Application	EN 12900 Capacity [W] Tc=45°C, Tliq=45°C, Tsuc=32°C Evaporating temperature [°C]						EN 12900						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating 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	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]						
FR6CL	103U2670	LBP	145	383	578				150	0.82	432	1.23			150	392	600			
FR7.5CL	103U2790	LBP	154	417	627				162	0.83	470	1.19			158	431	652			
FR8.5CL	103U2890	LBP	168	468					180	0.80	528	1.12			171	490				
FR6DL	103U2680	M/HBP		385	576	698	999				430	1.22	666	1.38		402	594	721	1036	

R404A/R507 • 220-240 V • 50 Hz • F-Series • Electrical Equipment																
Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 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

Compressors AC voltage **R404A | R507**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
268	1.04	488	1.20			1/4	6.23	198 to 254 V, 50 Hz	F2	196	191	8.2	6.2	6.2		X
294	1.03	532	1.16			1/4	6.93	198 to 254 V, 50 Hz	F2	196	191	8.2	6.2	6.2		
332	0.98					1/2	7.95	198 to 254 V, 50 Hz	F2	196	191	8.2	6.2	6.2		X
		485	1.21	825	1.58	1/4	6.23	198 to 254 V, 50 Hz	F2	196	191	8.2	6.2	6.2		

FR



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				191	0.76	732	1.38			132	661	1070			
SC12CL	104L2623	LBP	237	835	1292				273	0.85	958	1.46			166	855	1385			
SC15CL	104L2853	LBP	299	988	1458				343	0.83	1105	1.40			181	1097	1664			
SC18CL	104L2123	LBP	395	1154	1735				422	0.94	1302	1.46			375	1216	1866			
SC21CL	104L2322	LBP	455	1306					493	0.95	1468	1.48			443	1382				
SC10CLX	104L2533	L/MBP	166	625	977	1190			188	0.71	722	1.42	1168	1.74	131	652	1055	1300		
SC12CLX.2	104L2697	LBP	294	834					311	0.86	938	1.42			279	896				
SC15CLX.2	104L2896	LBP	358	1017					380	0.88	1144	1.46			340	1094				
SC18CLX.2	104L2197	LBP	439	1245					465	0.90	1400	1.48			416	1339				
SC10DL	104L2525	M/HBP		611	968	1192	1747	2085			709	1.48	1172	1.86		642	1043	1285	1877	2235
SC12DL	104L2625	M/HBP		806	1279	1565	2258	2674			939	1.51	1536	1.93		862	1395	1708	2457	2905
SC15DL	104L2856	M/HBP		964	1493	1825	2652	3156			1103	1.53	1792	1.94		1031	1627	1988	2868	3400
SC15DLX.2	104L2871	M/HBP		983	1504	1824	2604	3071			1120	1.52	1779	1.93		1052	1632	1985	2848	3367
SC10MLX	104L2506	MBP		687	1051	1278					782	1.51	1238	1.87		720	1118	1364		
SC12MLX	104L2606	MBP		838	1272	1542					949	1.53	1493	1.87		883	1357	1651		
SC15MLX	104L2869	MBP		1038	1574	1909					1174	1.51	1867	1.83		1114	1703	2077		
SC18MLX	104L2139	MBP		1210	1832	2220					1368	1.59	2170	1.93		1302	1985	2418		
SC18MLX.3	104L2146	MBP		1266	1898	2292					1423	1.62	2247	1.94		1380	2080	2522		
SC10/10CL	104L4087	LBP	336	1268	1981				381	0.76	1463	1.38			265	1323	2139			
SC12/12CL	104L4088	LBP	475	1670	2583				547	0.85	1916	1.46			331	1709	2771			
SC15/15CL	104L4089	LBP	599	1976	2916				686	0.83	2209	1.40			361	2195	3328			
SC18/18CL	104L4090	LBP	789	2307	3469				844	0.94	2604	1.46			750	2432	3731			
SC21/21CL	104L4094	LBP	910	2613					986	0.95	2936	1.48			886	2764				

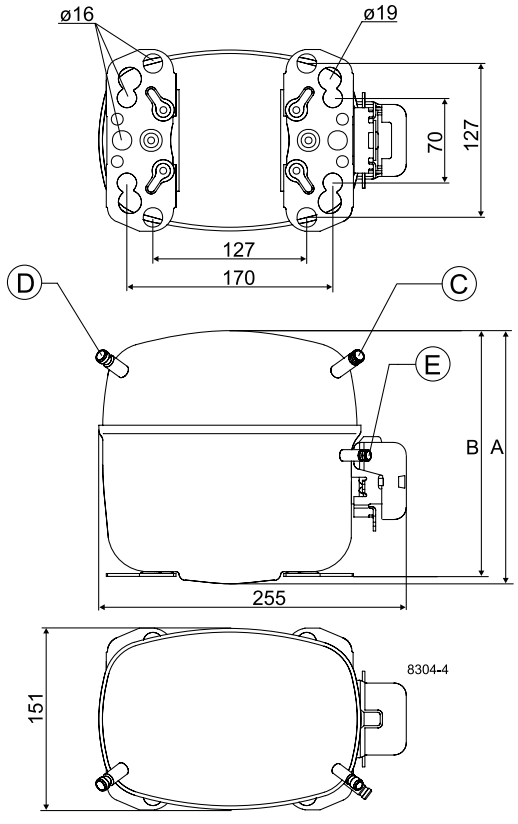
R404A/R507 • 220-240 V • 50 Hz • S-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 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
SC18CL	104L2123									117U5373	117-7027		103N1004	103N2009
SC21CL	104L2322									117U5373	117-7027		103N1004	103N2009
SC10CLX	104L2533								117U6005	117U5017			103N1004	103N2008
SC12CLX.2	104L2697								117U6019	117U5017			103N1004	103N2008
SC15CLX.2	104L2896								117U6019	117U5017			103N1004	103N2009
SC18CLX.2	104L2197								117U6013	117U5012			103N1004	103N2009
SC10DL	104L2525								117U6005	117U5017			103N1004	103N2009
SC12DL	104L2625								117U6019	117U5017			103N1004	103N2009
SC15DL	104L2856									117U5373	117-7029		103N1004	103N2009
SC15DLX.2	104L2871								117U6019	117U5017			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
SC18MLX3	104L2146										117-7027		103N1004	103N2009
SC10/10CL	104L4087								117U6003	117U5017			103N1004	103N2009
SC12/12CL	104L4088								117U6005	117U5017			103N1004	103N2009
SC15/15CL	104L4089								117U6019	117U5017			103N1004	103N2009
SC18/18CL	104L4090										117-7027		103N1004	103N2009
SC21/21CL	104L4094									117U5373	117-7027		103N1004	103N2009

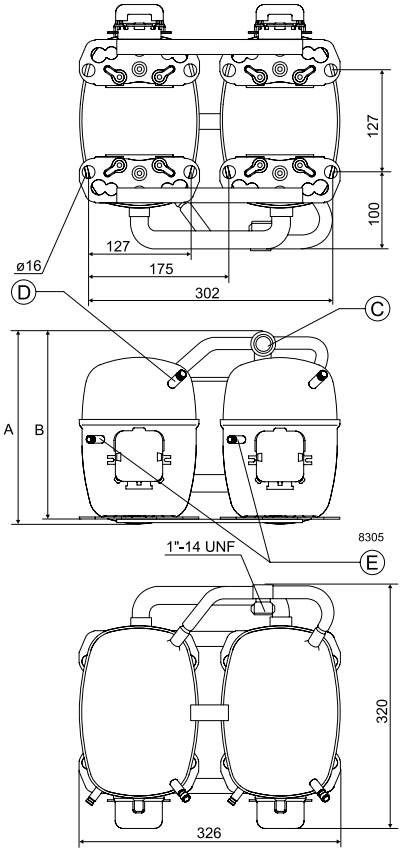
Compressors AC voltage **R404A | R507**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
402	1.13	865	1.46			1/2	10.29	198 to 254 V, 50 Hz	F2	209	203	8.2	6.2	6.2		X
516	1.10	1120	1.51			1/2	12.87	198 to 254 V, 50 Hz	F2	209	203	8.2	6.2	6.2		X
698	1.20	1360	1.51			3/4	15.28	198 to 254 V, 50 Hz	F2	219	213	10.2	6.2	6.2		
803	1.22	1519	1.51			3/4	17.69	198 to 254 V, 50 Hz	F2	219	213	10.2	6.2	6.2		X
906	1.18					1	20.95	198 to 254 V, 50 Hz	F2	219	213	10.2	6.2	6.2		X
396	1.11	853	1.52			1/2	10.29	198 to 254 V, 50 Hz *	F2	209	203	8.2	6.2	6.2		X
594	1.15					1/2	12.87	198 to 254 V, 50 Hz *	F2	219	213	8.2	6.2	6.2		X
724	1.18					3/4	15.28	198 to 254 V, 50 Hz	F2	219	213	10.2	6.2	6.2		X
887	1.20					3/4	17.69	198 to 254 V, 50 Hz	F2	219	213	10.2	6.2	6.2		X
		843	1.52	1489	2.17	1/2	10.29	198 to 254 V, 50 Hz	F2	209	203	8.2	6.2	6.2		X
		1131	1.58	1957	2.28	3/4	12.87	198 to 254 V, 50 Hz	F2	219	213	10.2	6.2	6.2		X
		1321	1.57	2282	2.27	3/4	15.28	198 to 254 V, 50 Hz	F2	219	213	10.2	6.2	6.2		X
		1327	1.61	2269	2.29	3/4	15.28	198 to 254 V, 50 Hz	F2	219	213	10.2	6.2	8.2		
		909	1.55	1564	2.20	1/2	10.29	187 to 254 V, 50 Hz *	F2	209	203	8.2	6.5	6.5		X
584	1.15	1105	1.57	1887	2.19	3/4	12.87	187 to 254 V, 50 Hz *	F2	219	213	8.2	6.5	6.5		X
762	1.20	1385	1.57	2388	2.17	3/4	15.28	198 to 254 V, 50 Hz	F2	219	213	10.2	6.2	6.2		X
894	1.27	1615	1.66	2777	2.29	1	17.69	198 to 254 V, 50 Hz	F2	219	213	10.2	6.2	6.2		X
959	1.34	1695	1.68	2883	2.30	1	17,68	198 to 254 V, 50 Hz	F2	219	213	10.2	6.2	6.2		X
803	1.13	1730	1.46			3/4	20.58	198 to 254 V, 50 Hz	F2	249	244	12.0	6.2	6.2		
1033	1.10	2241	1.51			1	25.74	198 to 254 V, 50 Hz	F2	249	244	12.0	6.2	6.2		
1395	1.20	2719	1.51			1 1/4	30.56	198 to 254 V, 50 Hz	F2	259	254	12.0	6.2	6.2		
1606	1.22	3038	1.51			1 1/2	35.38	198 to 254 V, 50 Hz	F2	259	254	16.0	6.2	6.2		
1811	1.18					1 3/4	41.90	198 to 254 V, 50 Hz	F2	259	254	16.0	6.2	6.2		

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 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
SC10/10DL	104L4091	M/HBP		1222	1935	2383	3494	4169			1417	1.48	2343	1.86		1284	2085	2570	3753	4469
SC12/12DL	104L4092	M/HBP		1612	2559	3130	4516	5348			1879	1.51	3072	1.93		1724	2790	3416	4914	5811
SC15/15DL	104L4093	M/HBP		1928	2985	3651	5304	6311			2207	1.53	3584	1.94		2062	3254	3976	5736	6800
SCE18CLX.2	104L2196	LBP	439	1245					465	1.02	1400	1.58			416	1339				
SLV12CLK.2, 2000 rpm	104L2603	LBP	196	572					209	0.94	645	1.57			179	621				
SLV12CLK.2, 2500 rpm	104L2603	LBP	243	742					265	0.97	832	1.61			202	801				
SLV12CLK.2, 3000 rpm	104L2603	LBP	283	895					314	0.98	999	1.63			217	961				
SLV12CLK.2, 4000 rpm	104L2603	LBP	370	1114					404	0.95	1224	1.67			335	1223				

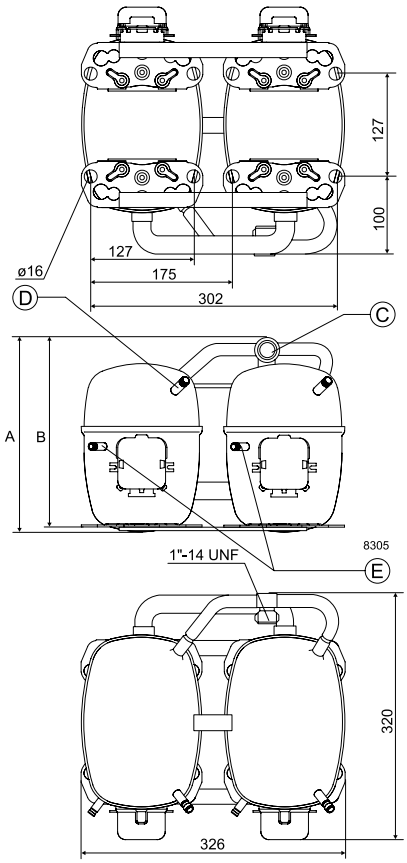
R404A/R507 • 220-240 V • 50 Hz • S-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 mm	6.3 mm	6.3 mm		
SC10/10DL	104L4091								117U6005	117U5017			103N1004	103N2009
SC12/12DL	104L4092								117U6019	117U5017			103N1004	103N2009
SC15/15DL	104L4093									117U5373	117-7029		103N1004	103N2009
SCE18CLX.2	104L2196									117U5373	117-7027		103N1004	103N2009
SLV12CLK.2	104L2603	105N46xx series controller												103N2008

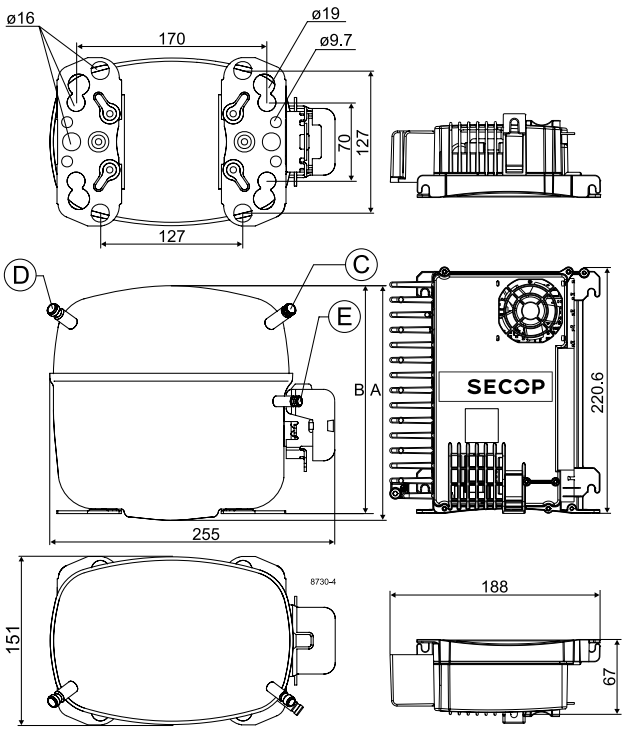
Compressors AC voltage **R404A | R507**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
		1686	1.52	2977	2.17	1	20.58	198 to 254 V, 50 Hz	F2	249	244	12.0	6.2	6.2		X
		2261	1.58	3914	2.28	1 1/4	25.74	198 to 254 V, 50 Hz	F2	259	254	12.0	6.2	6.2		X
		2642	1.57	4563	2.26	1 1/2	30.56	198 to 254 V, 50 Hz	F2	259	254	16.0	6.2	6.2		X
887	1.31					3/4	17.69	198 to 254 V, 50 Hz	F2	219	213	10.2	6.2	6.2		
405	1.19					1/2	12.87	180 to 254 V, 50 Hz *	F2	199	193	10.2	6.2	6.2		
512	1.27					1/2	12.87	180 to 254 V, 50 Hz *	F2	199	193	10.2	6.2	6.2		
604	1.32					3/4	12.87	180 to 254 V, 50 Hz *	F2	199	193	10.2	6.2	6.2		
843	1.33					3/4	12.87	180 to 254 V, 50 Hz *	F2	199	193	10.2	6.2	6.2		

SC-Twin



SLV



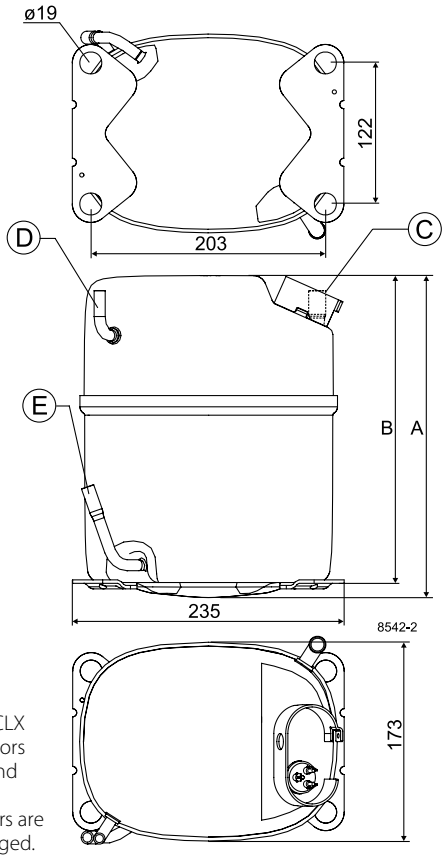
R404A/R507 • 220-240 V • 50 Hz • G-Series																			
Compressor	Code number	Application	EN 12900 Capacity [W] Tc=45°C, Tliq=45°C, Tsuc=32°C Evaporating temperature [°C]						EN 12900						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating 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	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]						
GS26CLX	107B0500	LBP	660	1931					703	1.05	2191	1.65			636	2063				
GS34CLX	107B0501	LBP	966	2671	3980				1003	1.09	3014	1.69			977	2940	4463			
GS21MLX	107B0502	MBP		1517	2356	2884					1748	1.81	2858	2.23		1614	2514	3083		
GS26MLX	107B0503	MBP		1971	3009	3647					2254	1.86	3615	2.24		2116	3266	3971		
GS34MLX	107B0504	MBP		2621	3891	4662					2953	1.71	4580	1.97		2829	4227	5074		

R404A/R507 • 220-240 V • 50 Hz • G-Series • Electrical Equipment																
Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 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		

Compressors AC voltage **R404A | R507**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
1363	1.39					1 1/4	26.30	198 to 254 V, 50 Hz	F2	259	247	12.9	6.5	8.2		
1975	1.49	3670	1.81			1 3/4	33.80	198 to 254 V, 50 Hz	F2	279	267	12.9	6.5	8.2		X
		2058	1.86	3646	2.62	1 1/4	21.20	198 to 254 V, 50 Hz	F2	259	247	16.1	6.5	9.7		
		2680	1.93	4635	2.65	1 1/2	26.30	198 to 254 V, 50 Hz	F2	279	267	16.1	6.5	9.7		
		3485	1.78	5837	2.33	1 3/4	33.80	198 to 254 V, 50 Hz	F2	279	267	16.1	6.5	9.7		

GS



Note:
On GS34CLX compressors suction and process connectors are interchanged.

R290
220-240 V | 50 Hz

With more than 50 years of experience in compressor technology and highly committed employees, our focus is to develop and apply the advanced compressor technologies to achieve standard setting performance for leading products and businesses around the world.

Chemical formula
C3H8

Typelabel
Typelabel stripe colour: Red
Typelabel colour: Yellow

Applications
LBP: Low Back Pressure
HBP: High Back Pressure
MBP: Medium 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
F1 = Fan cooling 1.5 m/s (compressor compartment temp. equal to ambient temperature)
F2 = 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

Compressors AC voltage **R290**

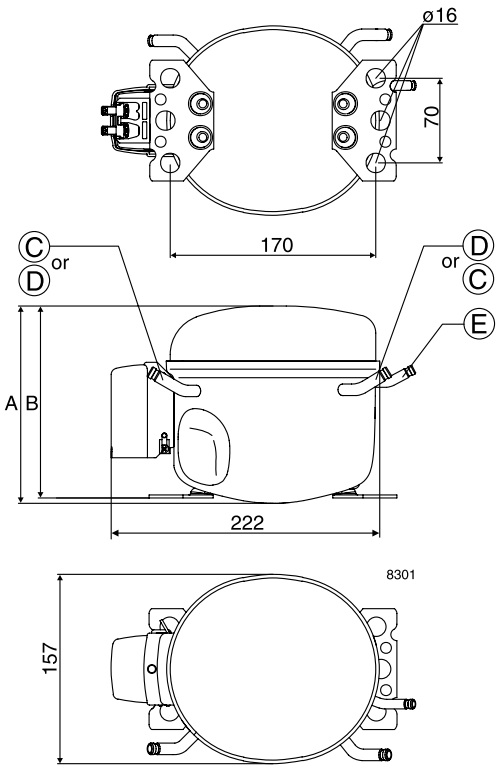
R290 • 220-240 V • 50 Hz • T-Series																							
Compressor	Code number	Application	EN 12900 Capacity [W] Tc=45°C, Tliq=45°C, Tsuc=32°C Evaporating temperature [°C]						EN 12900						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]									
									LBP 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	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15				
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]										
TL3CN	102H4380	L/MBP	54	161	244	294			58	0.65	186	1.38	298	1.75	49	160	248	302						
TL4CN	102H4490	L/MBP	78	205	302	360			81	0.81	233	1.44	364	1.82	76	212	315	377						
TL5CN	102H4590	L/MBP	109	283	416	496			112	0.87	322	1.52	500	1.80	109	295	435	519						

R290 • 220-240 V • 50 Hz • T-Series • Electrical Equipment																		
Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 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

Compressors AC voltage **R290**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
105	0.91	209	1.39			1/10	3.13	198 to 254 V, 50 Hz	F1	163	159	6.2	6.2	5.1		
146	1.07	267	1.47			1/4	3.86	198 to 254 V, 50 Hz	F1	173	169	6.2	6.2	5.1		X
205	1.18	369	1.55			1/4	5.08	198 to 254 V, 50 Hz	F1	173	169	6.2	6.2	5.0		X

TL



Compressors AC voltage **R290**

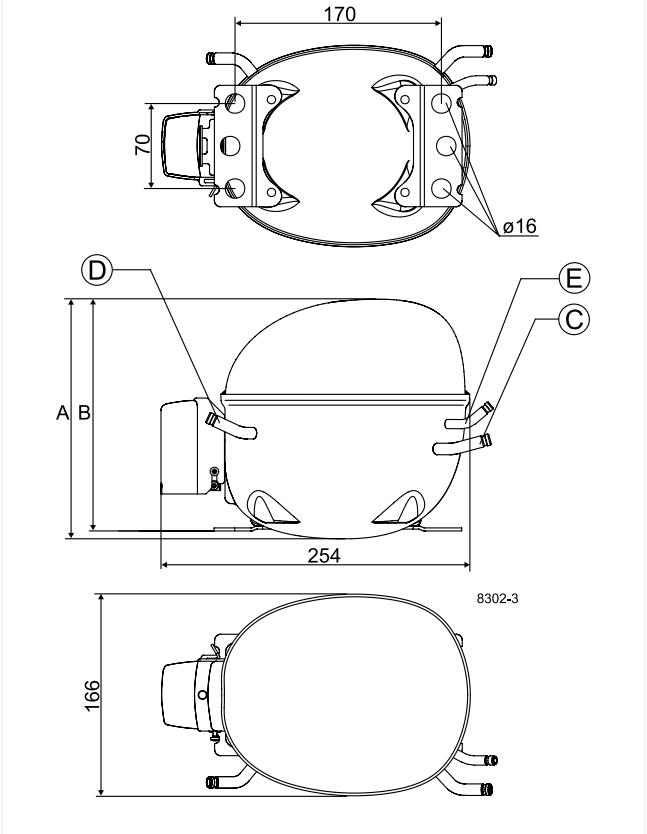
R290 • 220-240 V • 50 Hz • N-Series																			
Compressor	Code number	Application	EN 12900 Capacity [W] Tc=45°C, Tliq=45°C, Tsuc=32°C Evaporating temperature [°C]						EN 12900						ASHRAE Capacity [W] Tc=54,4°C, Tliq=32,2°C, Tsuc=32,2°C Evaporating temperature [°C]					
									LBP rating point -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	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]						
NL7CN	105H6756	L/MBP	166	458	679	814			173	1.00	523	1.80	828	2.13	175	474	710	855		
NL9CN	105H6856	L/MBP	194	526	778	930			200	1.03	599	1.79	942	2.10	206	548	812	974		

R290 • 220-240 V • 50 Hz • N-Series • Electrical Equipment																
Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 mm	6.3 mm	6.3 mm		
NL7CN	105H6756	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

Compressors AC voltage **R290**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
325	1.35	601	1.82			1/2	7.27	198 to 254 V, 50 Hz	F1	203	197	8.2	6.2	6.2		X
380	1.39	689	1.81			1/2	8.35	198 to 254 V, 50 Hz	F1	203	197	8.2	6.2	6.2		X

NL



Compressors AC voltage **R290**

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			191	0.90	615	1.70	1008	2.26	176	546	850	1037		
SC12CNX	104H8265	L/MBP	250	678	1050	1293			262	0.97	789	1.73	1354	2.24	227	710	1106	1365		
SC15CNX	104H8565	L/MBP	297	887	1328	1594			324	1.00	1018	1.82	1639	2.16	252	917	1410	1708		
SC18CNX	104H8865	L/MBP	341	1033	1543	1849			367	0.97	1186	1.68	1911	1.92	316	1105	1678	2021		
SC12CNX.2	104H8266	LBP	258	725					271	0.93	834	1.66			231	741				
SC15CNX.2	104H8566	LBP	332	900					341	0.96	1043	1.71			346	927				
SC18CNX.2	104H8866	LBP	384	1057					416	0.98	1186	1.74			343	1192				
SC21CNX.2	104H8166	LBP	492	1233					524	1.06	1370	1.60			463	1397				
SC10MNX	104H8075	MBP		567	883	1074					666	1.66	1104	2.29		574	917	1126		
SC12MNX	104H8275	MBP		741	1127	1361					858	1.73	1407	2.30		756	1190	1453		
SC15MNX	104H8575	MBP		887	1322	1586					1015	1.72	1600	2.19		966	1404	1670		
SC18MNX	104H8875	MBP		1035	1506	1798					1168	1.64	1848	2.07		1107	1616	1933		
SLV15CNK.2 2000 rpm	104H8541	LBP	236	638					244	1.08	733	1.82			232	664				
SLV15CNK.2 2500 rpm	104H8541	LBP	297	805					309	1.10	922	1.87			291	840				
SLV15CNK.2 3000 rpm	104H8541	LBP	353	941					365	1.11	1072	1.88			360	978				
SLV15CNK.2 4000 rpm	104H8541	LBP	236	638					244	1.08	733	1.82			439	1296				

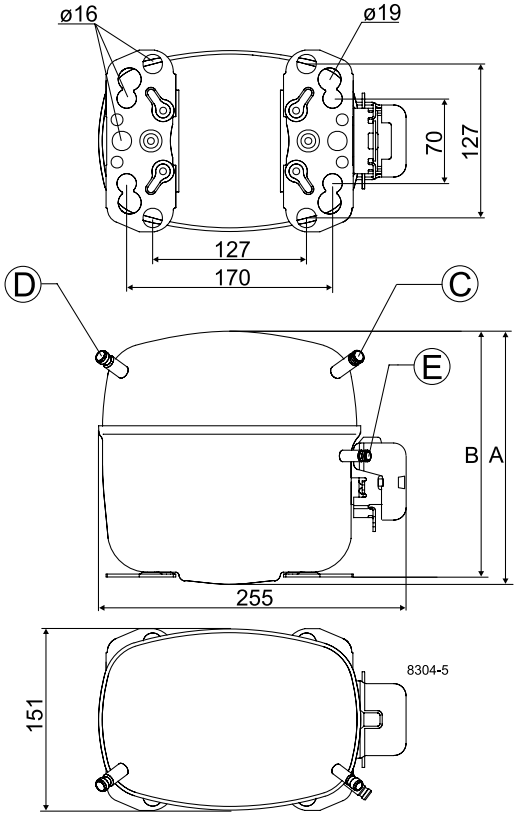
R290 • 220-240 V • 50 Hz • S-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 mm	6.3 mm	6.3 mm		
SC10CNX	104H8065									117U5372	117-7025	117-9719	103N1004	103N2009
SC12CNX	104H8265									117U5372	117-7025	117-9719	103N1004	103N2009
SC15CNX	104H8565									117U5373	117-7031	117-9711	103N1004	103N2009
SC18CNX	104H8865									117U5373	117-7052	117-9718	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	104H8166								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
SLV15CNK.2	104H8541	105N46xx series controller												103N2008

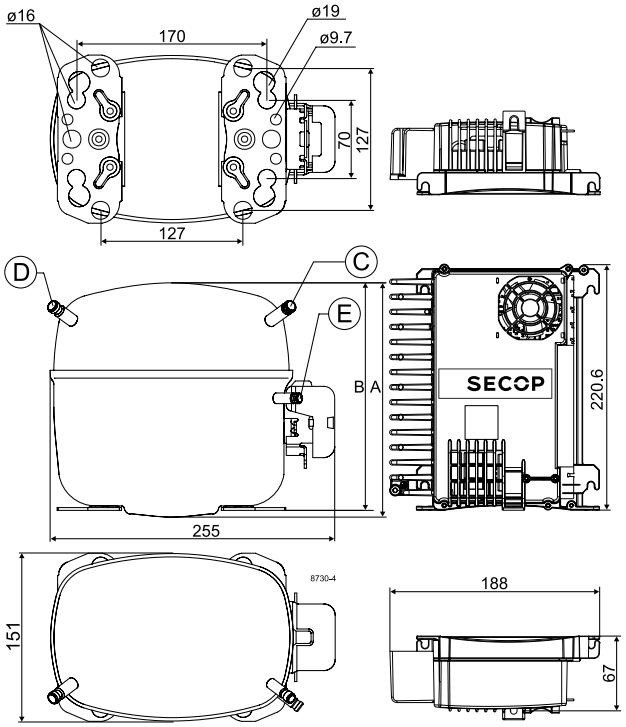
Compressors AC voltage **R290**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
358	1.27	716	1.80			1/2	10.29	198 to 254 V, 50 Hz	F2	209	203	8.2	6.2	6.2		
475	1.31	930	1.81			1/2	12.87	198 to 254 V, 50 Hz	F2	209	203	8.2	6.2	6.2		X
597	1.35	1192	1.84			1/2	15.28	198 to 254 V, 50 Hz	F2	209	203	10.2	6.2	6.2		X
728	1.36	1421	1.75			3/4	17.69	198 to 254 V, 50 Hz	F2	209	203	10.2	6.2	6.2		X
491	1.20					1/2	12.87	198 to 254 V, 50 Hz	F2	209	203	8.2	6.2	6.2		X
624	1.32					3/4	15.28	198 to 254 V, 50 Hz	F2	209	203	10.2	6.2	6.2		
797	1.31					3/4	17.69	198 to 254 V, 50 Hz	F2	219	213	10.2	6.2	6.2		
963	1.45					1	20.95	198 to 254 V, 50 Hz	F2	219	213	10.2	6.2	6.2		
352	1.19	771	1.71	1339	2.59	1/2	10.29	198 to 254 V, 50 Hz	F2	209	203	8.2	6.2	6.2		
474	1.13	1003	1.79	1720	2.63	1/2	12.87	198 to 254 V, 50 Hz	F2	219	213	8.2	6.2	6.2		
681	1.51	1195	1.76	1921	2.41	3/4	15.28	198 to 254 V, 50 Hz	F2	219	213	8.2	6.2	6.2		
777	1.31	1374	1.72	2254	2.35	3/4	17.69	198 to 254 V, 50 Hz	F2	219	213	10.2	6.2	6.2		
446	1.32					1/2	15.28	180 to 254 V, 50 Hz *	F2	199	193	10.2	6.2	6.2		
566	1.43					1/2	15.28	180 to 254 V, 50 Hz *	F2	199	193	10.2	6.2	6.2		
674	1.44					3/4	15.28	180 to 254 V, 50 Hz *	F2	199	193	10.2	6.2	6.2		
888	1.42					3/4	15.28	180 to 254 V, 50 Hz *	F2	199	193	10.2	6.2	6.2		

SC



SLV



R407C
220-240 V | 50 Hz

With more than 50 years of experience in compressor technology and highly committed employees, our focus is to develop and apply the advanced compressor technologies to achieve standard setting performance for leading products and businesses around the world.

Chemical formula
CH2F2 / CHF2CF3 / CH2FCF3

Typelabel
Typelabel stripe colour: Red
Typelabel colour: Yellow

Applications
LBP: Low Back Pressure
HBP: High Back Pressure
MBP: Medium 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
F1 = Fan cooling 1.5 m/s (compressor compartment temp. equal to ambient temperature)
F2 = 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

Compressors AC voltage **R407C**

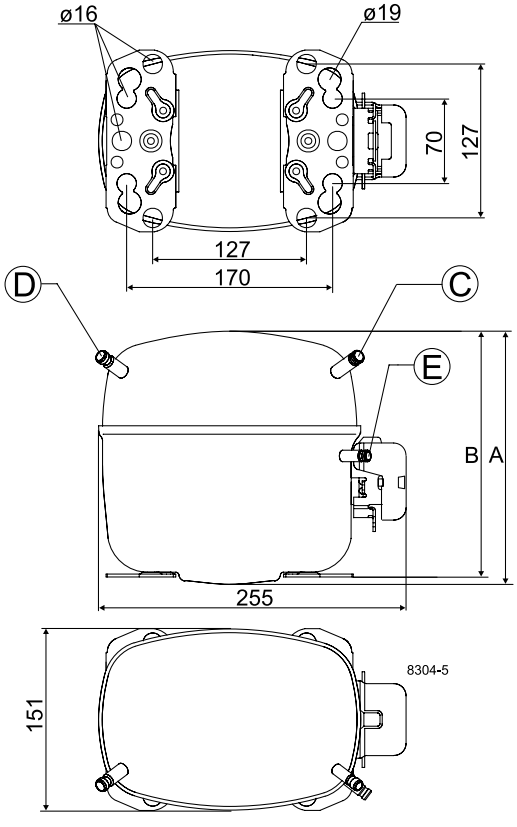
R407C • 220-240 V • 50 Hz • S-Series																			
Compressor	Code number	Application	EN 12900 Capacity [W] Tc=45°C, Tliq=45°C, Tsuc=32°C Evaporating temperature [°C]						EN 12900						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating 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	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]						
SC10DL	104L2525	M/HBP		480	821	1039	1588	1927			596	1.51	1088	2.05		468	838	1066	1633	1981
SC12DL	104L2625	M/HBP		632	1065	1340	2031	2456			778	1.52	1404	2.09		619	1081	1375	2117	2578
SC15DL	104L2856	M/HBP		777	1293	1629	2483	3014			947	1.61	1713	2.27		780	1345	1697	2580	3123
SC10/10DL	104L4091	M/HBP		961	1642	2077	3176	3855			1192	1.51	2176	2.05		936	1676	2133	3266	3962
SC12/12DL	104L4092	M/HBP		1263	2130	2680	4062	4913			1556	1.52	2808	2.09		1239	2163	2750	4234	5156
SC15/15DL	104L4093	M/HBP		1554	2586	3257	4966	6027			1894	1.61	3426	2.27		1560	2689	3395	5159	6247

R407C • 220-240 V • 50 Hz • S-Series • Electrical Equipment																
Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 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

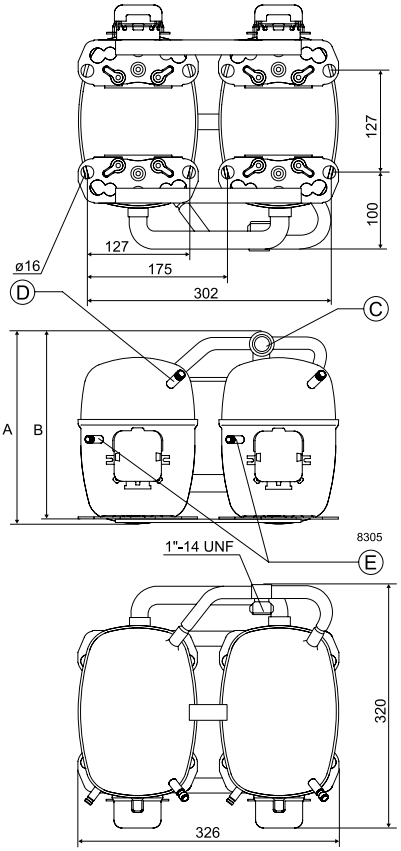
Compressors AC voltage **R407C**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
		691	1.58	1317	2.33	1/2	10.29	198 to 254 V, 50 Hz	F2	209	203	8.2	6.2	6.2		X
		892	1.59	1704	2.40	1/2	12.87	198 to 254 V, 50 Hz	F2	219	213	10.2	6.2	6.2		X
		1112	1.71	2084	2.61	3/4	15.28	198 to 254 V, 50 Hz	F2	219	213	10.2	6.2	6.2		X
		1381	1.58	2635	2.33	3/4	20.58	198 to 254 V, 50 Hz	F2	249	244	12.0	6.2	6.2		X
		1785	1.59	3409	2.40	1	25.74	198 to 254 V, 50 Hz	F2	259	254	12.0	6.2	6.2		X
		2225	1.71	4168	2.61	1 1/4	30.56	198 to 254 V, 50 Hz	F2	259	254	16.0	6.2	6.2		X

SC



SC-Twin



R134a
220-240 V | 60 Hz

With more than 50 years of experience in compressor technology and highly committed employees, our focus is to develop and apply the advanced compressor technologies to achieve standard setting performance for leading products and businesses around the world.

Chemical formula
CH2FCF3

Typelabel
Typelabel stripe colour: Blue
Typelabel colour: Yellow

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

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

Compressor cooling
S = Static cooling normally sufficient
O = Oil cooling
F1 = Fan cooling 1.5 m/s (compressor compartment temp. equal to ambient temperature)
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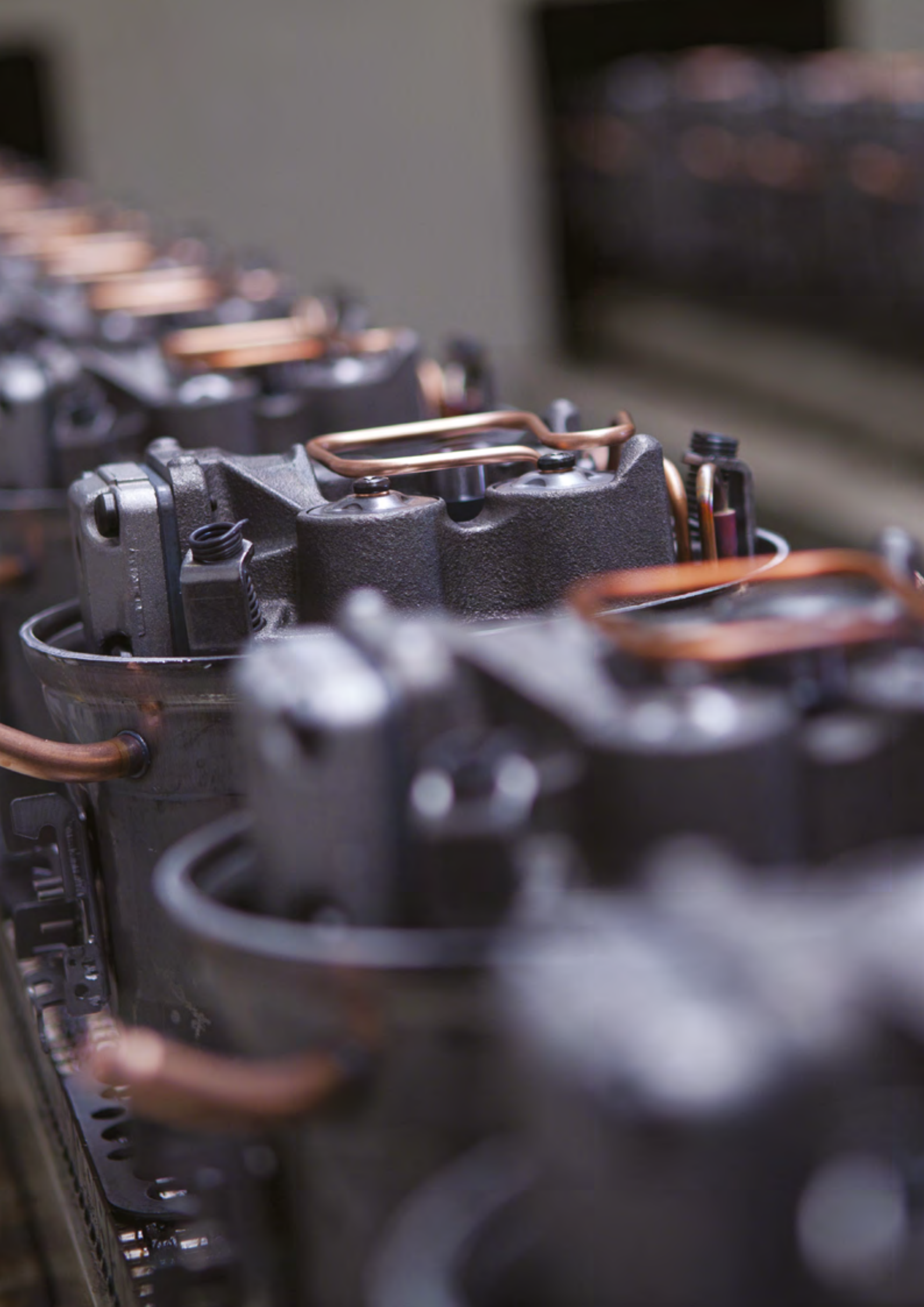
Starting devices
LST: Low Starting Torque
LST is used with capillary tube control and pressure equalizing. (Pressure equalizing may exceed 10 minutes). The PTC starting device requires 5 minutes cooling before each start.
To fulfil the requirements of EN 60355-2-34 the protection screen 103N0476 must 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 • 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]						
TL2.5G	102G4251	L/M/HBP	14	80	134	168	253	306	42	0.62	105	1.09	208	1.58	18	100	167	209	314	379
TL3G	102G4350	L/M/HBP		95	161				47	0.68	125	1.13				118	199			
TL4G	102G4452	L/M/HBP		127	211				70	0.80	166	1.23				158	260			
TL4G	102G4458	L/M/HBP		127	211				70	0.80	166	1.23				158	260			
TL5G	102G4550	L/M/HBP		162	260				91	0.87	207	1.22				200	321			
TL4GH	102G4455	HBP		118	208	264	403	489			160	1.15	328	1.70		148	259	328	499	605

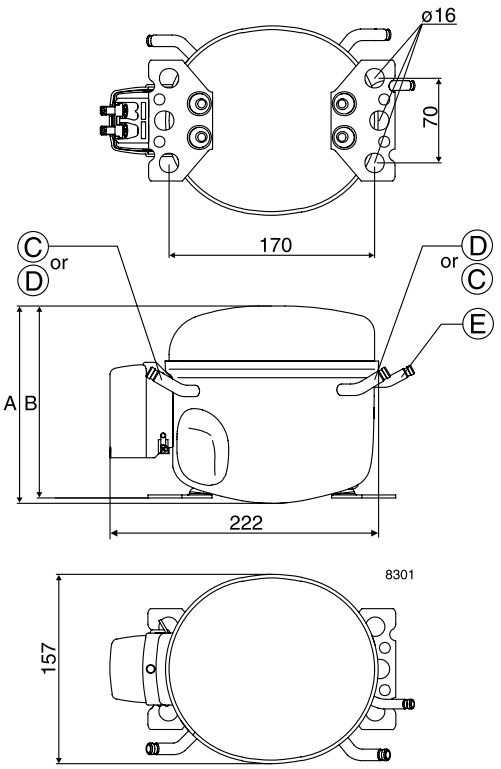
R134a • 220-240 V • 60 Hz • T-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 mm	6.3 mm	6.3 mm		
TL2.5G	102G4251	103N0011	103N0018						117U6007	117U5014			103N1010	103N2011
TL3G	102G4350	103N0011	103N0018						117U6009	117U5014			103N1010	103N2010
TL4G	102G4452	103N0011	103N0018						117U6004	117U5014			103N1010	103N2010
TL4G	102G4458	103N0011	103N0018						117U6004	117U5014			103N1010	103N2011
TL5G	102G4550	103N0011	103N0018						117U6000	117U5014			103N1010	103N2010
TL4GH	102G4455								117U6000	117U5014			103N1010	103N2011

Compressors AC voltage **R134a**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
59	0.85	139	1.34	255	1.87	1/10	2.61	198 to 254 V, 60 Hz *	S	163	159	6.2	6.2	5.0		X
68	0.93	166	1.36			1/10	3.13	198 to 254 V, 60 Hz *	S	163	159	6.2	6.2	5.0		X
97	1.06	217	1.49			1/10	3.86	198 to 254 V, 60 Hz *	S	173	169	6.2	6.2	5.0		X
97	1.06	217	1.49			1/10	3.86	198 to 254 V, 60 Hz *	S	173	169	6.5	6.5	5.0		X
126	1.13	269	1.46			1/10	5.08	198 to 254 V, 60 Hz *	S	173	169	6.2	6.2	5.0		X
		215	1.43	404	2.01	1/4	3.86	198 to 254 V, 60 Hz *	F2	173	169	6.2	6.2	5.0		X

TL



Compressors AC voltage **R134a**

R134a • 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 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	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]						
NF7FX	105G6743	L/MBP		313	489	602			187	0.91	393	1.35	734	1.96		386	604	743		
NF10FX	105G6846	L/MBP		363	569	706			223	0.89	456	1.28	870	1.79		447	703	872		
NL6FT	105G6628	LBP	59	199					119	0.94	251	1.40			73	246				
NL6.1MF	105G6660	MBP	43	223	374	470			117	0.89	292	1.34	581	1.90	55	277	464	582		
NL7.3MF	105G6772	MBP	73	283	458	570			159	0.92	363	1.32	700	1.85	92	351	568	706		
NL8.4MF	105G6879	MBP	77	325	532	664			179	0.95	420	1.35	818	1.87	97	403	660	823		
NL10MF	105G6885	MBP	109	406	650	807			233	1.00	518	1.39	989	1.91	136	502	804	997		

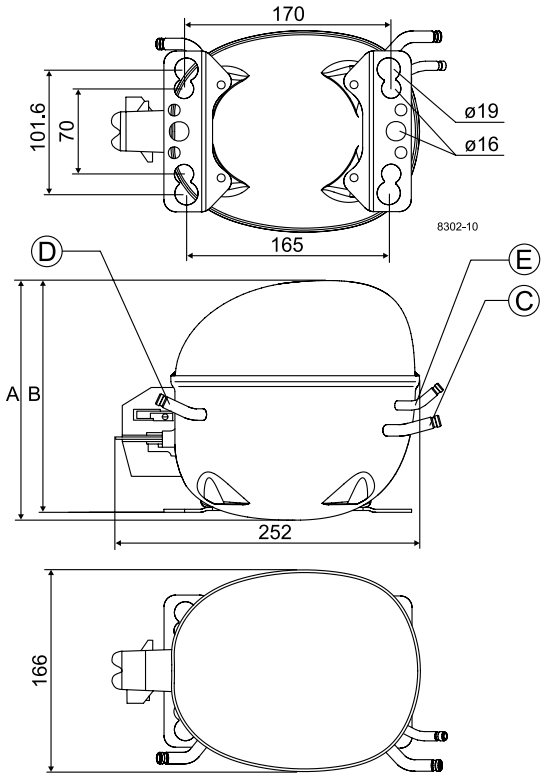
R134a • 220-240 V • 60 Hz • N-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 mm	6.3 mm	6.3 mm		
NF7FX	105G6743								117U4140	117U5018			117U0349	117U1023
NF10FX	105G6846								117U4139	117U5018			117U0349	117U1023
NL6FT	105G6628	103N0011	103N0018						117U6000	117U5015			103N1010	103N2010
NL6.1MF	105G6660	103N0011	103N0018						117U6015	117U5015			103N1010	103N2011
NL7.3MF	105G6772	103N0011	103N0018						117U6016	117U5015			103N1010	103N2011
NL8.4MF	105G6879	103N0011	103N0018						117U6016	117U5018			103N1010	103N2011
NL10MF	105G6885	103N0011	103N0018						117U6022	117U5038			103N1010	103N2011

Compressors AC voltage **R134a**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
254	1.18	507	1.64	892	2.31	1/4	7.27	198 to 242 V, 60 Hz *	F1	203	197	8.2	6.5	6.5		X
300	1.14	588	1.54	1064	2.10	1/3	10.09	198 to 242 V, 60 Hz *	F2	203	197	8.2	6.5	6.5		X
162	1.22	0	0.00	0	0.00	1/7	6.13	198 to 254 V, 60 Hz *	S	197	191	6.2	6.2	5.0		X
165	1.17	386	1.63	712	2.25	1/4	6.13	187 to 254 V, 60 Hz *	S	190	184	8.2	6.2	6.2		X
221	1.19	474	1.60	854	2.18	1/4	7.27	187 to 254 V, 60 Hz *	F1	197	191	8.2	6.2	6.2		X
249	1.23	550	1.63	1000	2.21	1/2	8.35	187 to 254 V, 60 Hz *	F1	197	191	8.2	6.2	6.2		X
320	1.29	673	1.67	1206	2.25	1/2	10.09	187 to 254 V, 60 Hz *	F1	203	197	8.2	6.2	6.2		X

NF



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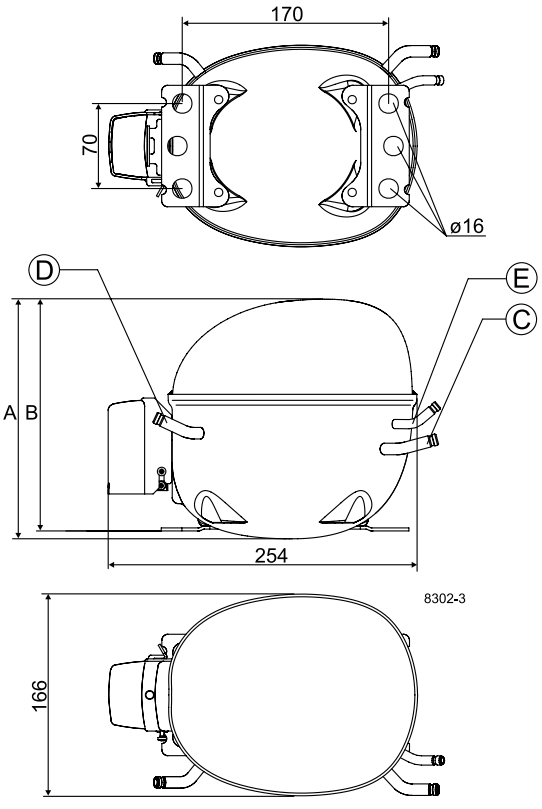


R134a • 220-240 V • 60 Hz • F-Series

Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF 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	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		199	345				92	0.78	266	1.35				246	426			
FR7.5G	103G6680	L/M/HBP		228	385				112	0.81	300	1.31				282	475			
FR7.5G	103G6690	L/M/HBP		228	385				112	0.81	300	1.31				282	475			
FR8.5G	103G6780	L/M/HBP		263	441				138	0.85	345	1.26				326	545			
FR8.5G	103G6790	L/M/HBP		263	441				138	0.85	345	1.26				326	545			
FR10G	103G6880	L/M/HBP		292	486				153	0.79	381	1.21				361	600			
FR10G	103G6890	L/M/HBP		292	486				153	0.79	381	1.21				361	600			
FR7GH	103G6683	HBP		225	379	482	753	924			294	1.35	607	1.91		279	469	597	932	1143
FR7GH	103G6692	HBP		225	379	482	753	924			294	1.35	607	1.91		279	469	597	932	1143

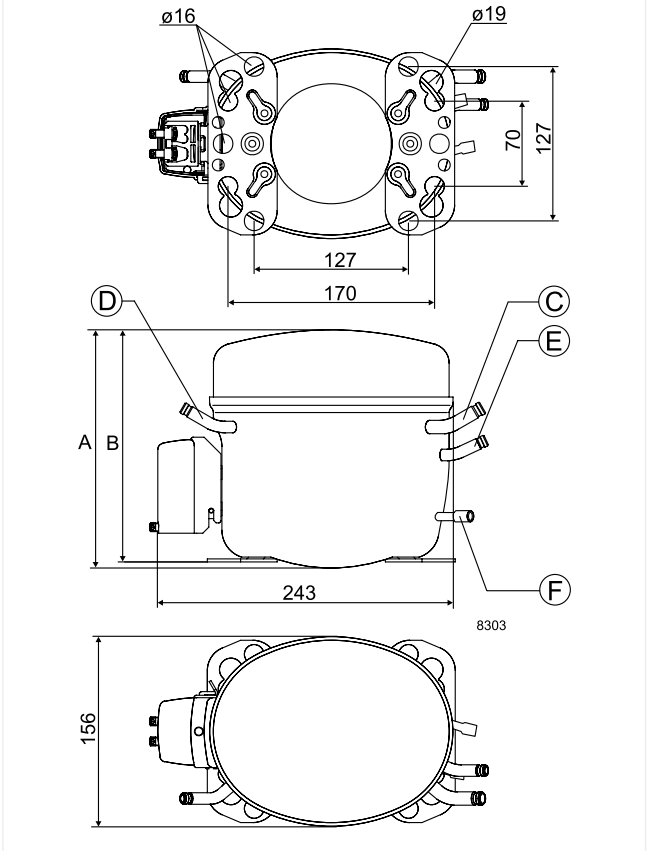
R134a • 220-240 V • 60 Hz • F-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 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	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	103G6890	103N0011	103N0018						117U6010	117U5015			103N1010	103N2010
FR7GH	103G6683								117U6016	117U5015			103N1010	103N2011
FR7GH	103G6692								117U6016	117U5015			103N1010	103N2011

Compressors AC voltage **R134a**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
135	1.06	353	1.65			1/4	6.23	198 to 254 V. 60 Hz *	F1	196	191	8.2	6.2	6.2		X
161	1.09	395	1.59			1/4	6.93	198 to 254 V. 60 Hz *	F1	196	191	8.2	6.2	6.2		X
161	1.09	395	1.59			1/4	6.93	198 to 254 V. 60 Hz *	F1	196	191	8.2	6.2	6.2	6.2	X
194	1.11	454	1.51			1/4	7.95	198 to 254 V. 60 Hz *	F1	196	191	8.2	6.2	6.2		X
194	1.11	454	1.51			1/4	7.95	198 to 254 V. 60 Hz *	F1	196	191	8.2	6.2	6.2	6.2	X
215	1.05	500	1.45			1/4	9.05	198 to 254 V. 60 Hz *	F1	196	191	8.2	6.2	6.2		X
215	1.05	500	1.45			1/4	9.05	198 to 254 V. 60 Hz *	F1	196	191	8.2	6.2	6.2	6.2	X
		389	1.63	748	2.27	1/4	6.93	198 to 254 V. 60 Hz *	F2	196	191	8.2	6.2	8.2		X
		389	1.63	748	2.27	1/4	6.93	198 to 254 V. 60 Hz *	F2	196	191	8.2	6.2	8.2	8.2	X

FR



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 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
SC12FT	104G8205	LBP	125	477	761				272	0.91	608	1.33			156	591	943			
SC12FT	104G8215	LBP	125	477	761				272	0.91	608	1.33			156	591	943			
SC15FT	104G8505	LBP	154	571	904				330	0.92	724	1.35			192	708	1120			
SC18FTX	104G8805	LBP	187	675	1071				390	0.93	857	1.38			234	836	1328			
SC21FTX	104G8106	LBP	240	800	1262				470	0.99	1012	1.43			298	989	1559			
SC10G	104G8000	L/M/HBP	27	314	569				132	n/a	432	n/a			35	389	703			
SC12G	104G8240	L/M/HBP	74	406	704				203	0.77	542	1.31			93	504	873			
SC12G	104G8245	MBP		370	696	907	1449				519	1.34	1157	2.07		460	863	1124	1793	
SC12G	104G8250	L/M/HBP	74	406	704				203	0.77	542	1.31			93	504	873			
SC15G	104G8520	L/M/HBP		515	863				262	0.79	677	1.34				639	1067			
SC15G	104G8526	MBP		468	834	1049	1567				641	1.37	1292	2.01		582	1033	1298	1940	
SC18G	104G8823	MBP		573	955	1207	1858				745	1.46	1506	2.13		710	1183	1495	2299	
SC18G	104G8830	L/M/HBP		616	1018				331	n/a	801	n/a				759	1254			
SC21G	104G8140	L/M/HBP		655	1145				303	0.80	880	1.36				814	1416			
SC10GH	104G8041	HBP		318	541	683	1042	1265			421	1.24	849	1.71		399	674	849	1294	1570
SC12GH	104G8261	HBP		371	680	880	1393	1714			511	1.31	1116	2.01		461	842	1090	1723	2119
SC15GH	104G8561	HBP		425	776	1012	1629	2019			582	1.37	1295	2.03		524	960	1253	2015	2497
SC18GH	104G8861	HBP		573	955	1207	1858	2268			745	1.46	1506	2.13		710	1183	1495	2299	2805

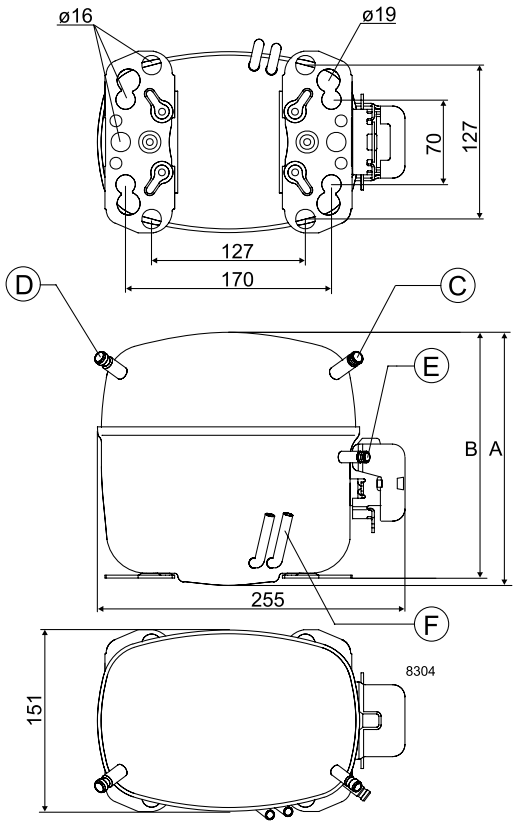
R134a • 220-240 V • 60 Hz • S-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 mm	6.3 mm	6.3 mm		
SC12FT	104G8205	103N0011							117U6003	117U5017			103N1004	103N2009
SC12FT	104G8215	103N0011							117U6003	117U5017			103N1004	103N2009
SC15FT	104G8505	103N0011							117U6005	117U5017			103N1004	103N2009
SC18FTX	104G8805								117U6019	117U5017			103N1004	103N2009
SC21FTX	104G8106									117U5373	117-7039		103N1004	103N2008
SC10G	104G8000	103N0011							117U6002	117U5017			103N1004	103N2009
SC12G	104G8240	103N0011							117U6003	117U5017			103N1004	103N2008
SC12G	104G8245								117U6011	117U5017			103N1004	103N2008
SC12G	104G8250	103N0011							117U6003	117U5017			103N1004	103N2009
SC15G	104G8520								117U6005	117U5017			103N1004	103N2009
SC15G	104G8526								117U6011	117U5017			103N1004	103N2008
SC18G	104G8823									117U5373	117-7039		103N1004	103N2008
SC18G	104G8830								117U6019	117U5017			103N1004	103N2009
SC21G	104G8140									117U5373	117-7029		103N1004	103N2009
SC10GH	104G8041								117U6005	117U5017			103N1004	103N2008
SC12GH	104G8261								117U6011	117U5017			103N1004	103N2008
SC15GH	104G8561								117U6011	117U5017			103N1004	103N2008
SC18GH	104G8861									117U5373	117-7039		103N1004	103N2008

Compressors AC voltage **R134a**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
375	1.19	790	1.61			1/2	12.87	198 to 254 V, 60 Hz *	F1	209	203	8.2	6.2	6.2		X
375	1.19	790	1.61			1/2	12.87	198 to 254 V, 60 Hz *	F1	209	203	8.2	6.2	6.2	6.2	X
453	1.20	939	1.63			1/2	15.28	198 to 254 V, 60 Hz *	F2	209	203	10.2	6.2	6.2		X
535	1.21	1112	1.68			1/2	17.69	198 to 254 V, 60 Hz *	F2	219	213	10.2	6.2	6.2		X
641	1.29	1307	1.70			3/4	20.95	187 to 254 V, 60 Hz	F2	219	213	10.2	6.2	6.2		X
197	n/a	581	n/a			1/4	10.29	198 to 254 V, 60 Hz *	F2	199	193	8.2	6.2	6.2		X
289	1.03	722	1.61			1/4	12.87	198 to 254 V, 60 Hz *	F2	209	203	8.2	6.2	6.2		X
		707	1.67	1433	2.47	1/2	12.87	187 to 254 V, 60 Hz	F2	209	203	10.2	6.5	6.5		X
289	1.03	722	1.61			1/4	12.87	198 to 254 V, 60 Hz *	F2	209	203	8.2	6.2	6.2	6.2	X
371	1.07	890	1.65			1/2	15.28	198 to 254 V, 60 Hz *	F2	209	203	10.2	6.2	6.2		X
		856	1.68	1577	2.39	1/2	15.28	187 to 254 V, 60 Hz	F2	209	203	10.2	6.5	6.5		X
		983	1.78	1852	2.53	3/4	17.69	187 to 254 V, 60 Hz	F2	219	213	10.2	6.5	6.5		X
458	n/a	1045	n/a			1/2	17.69	198 to 254 V, 60 Hz *	F2	219	213	10.2	6.2	6.2	6.2	X
446	1.08	1173	1.68			1/2	20.95	198 to 254 V, 60 Hz *	F2	219	213	10.2	6.2	6.2		X
		560	1.50	1045	2.03	1/2	10.29	198 to 254 V, 60 Hz *	F2	209	203	10.2	6.2	8.2		X
		692	1.63	1380	2.40	1/2	12.87	198 to 254 V, 60 Hz *	F2	209	203	10.2	6.2	8.2		X
		787	1.68	1606	2.41	1/2	15.28	198 to 254 V, 60 Hz *	F2	209	203	10.2	6.2	8.2		X
		983	1.78	1852	2.53	3/4	17.69	198 to 254 V, 60 Hz *	F2	219	213	10.2	6.2	8.2		X

SC



R404A/R507
220-240 V | 60 Hz

With more than 50 years of experience in compressor technology and highly committed employees, our focus is to develop and apply the advanced compressor technologies to achieve standard setting performance for leading products and businesses around the world.

Chemical formula
R404A: CHF2CF3 / CH3CF3 / CH2FCF3
R507: CHF2CF3 / CH3CF3

Typelabel
Typelabel stripe colour: Lilac
Typelabel colour: Yellow

Applications
LBP: Low Back Pressure
HBP: High Back Pressure
MBP: Medium 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
F1 = Fan cooling 1.5 m/s (compressor compartment temp. equal to ambient temperature)
F2 = 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

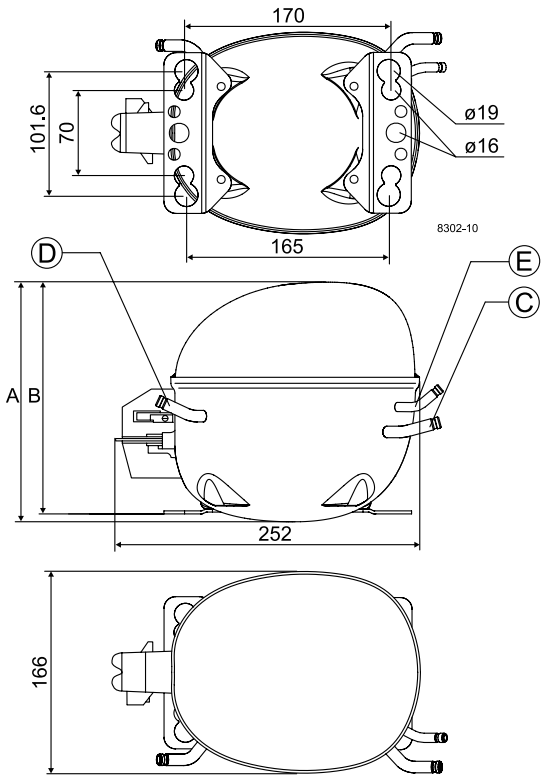
R404A/R507 • 220-240 V • 60 Hz • N-Series																					
Compressor	Code number	Application	EN 12900 Capacity [W] Tc=45°C, Tliq=45°C, Tsuc=32°C Evaporating temperature [°C]						EN 12900						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]							
									LBP 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	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15		
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]								
NF7MLX	105F3721	MBP		618	940	1137					702	1.48	1110	1.71		660	1021	1242				
NL6.1MLX	105F3611	MBP		507	771	932					575	1.57	910	1.87		541	837	1019				

R404A/R507 • 220-240 V • 60 Hz • N-Series • Electrical Equipment																
Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 mm	6.3 mm	6.3 mm		
NF7MLX	105F3721								117U4139	117U5018			117U0349	117U1021
NL6.1MLX	105F3611								117U6022	117U5015			103N1010	103N2011

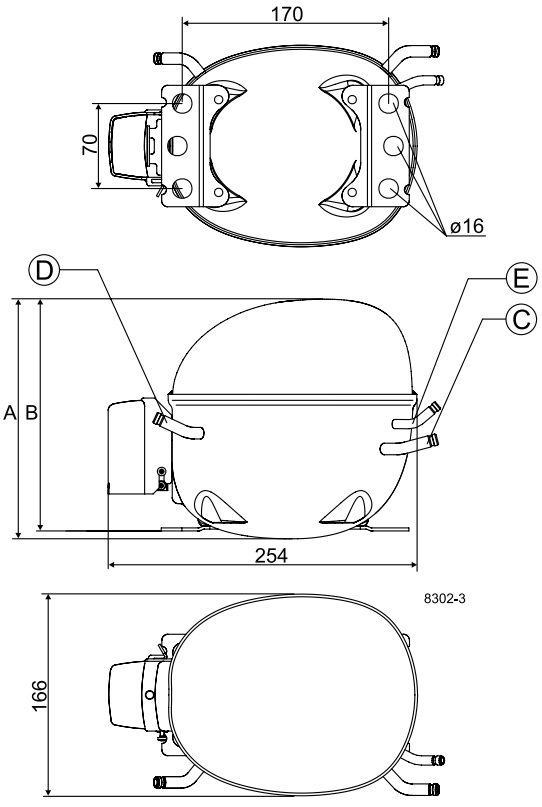
Compressors AC voltage **R404A | R507**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
427	1.16	831	1.57	1420	2.05	1/2	7.27	187 to 254 V, 60 Hz *	F2	203	197	9.7	6.5	6.5		X
350	1.24	681	1.63	1164	2.22	1/2	6.13	187 to 254 V, 60 Hz *	F2	203	197	8.2	6.5	6.5		X

NF



NL



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 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
SC10CLX	104L2533	L/MBP	224	738					255	0.78	828	1.33			156	814				
SC12CLX	104L2695	LBP	282	972					316	0.80	1097	1.40			227	1093				
SC15CLX	104L2854	LBP	351	1158					407	0.92	1295	1.50			236	1210				
SC12CLX.2	104L2697	LBP	294	834					311	0.86	938	1.42			318	1082				
SC12CLX.2	104L2699	LBP	343	1011					366	0.92	1141	1.62			318	1082				
SC15CLX.2	104L2897	LBP	437	1239					463	0.99	1394	1.64			414	1333				
SC18CLX.2	104L2195	LBP	542	1410					571	1.00	1561	1.58			522	1549				
SC10MLX	104L2506	MBP		687	1051	1278					782	1.51	1238	1.87		840	1321	1615		
SC12MLX	104L2606	MBP		838	1272	1542					949	1.53	1493	1.87		1006	1561	1900		
SC18MLX	104L2138	MBP		1412	2106	2538					1583	1.40	2491	1.67		1516	2309	2805		
SC15MLX.2	104L2803	MBP		1145	1737	2107					1296	1.51	2060	1.83		1229	1880	2292		
SC12/12CLX	104L4034	LBP	561	1935					628	0.80	2183	1.39			451	2175				

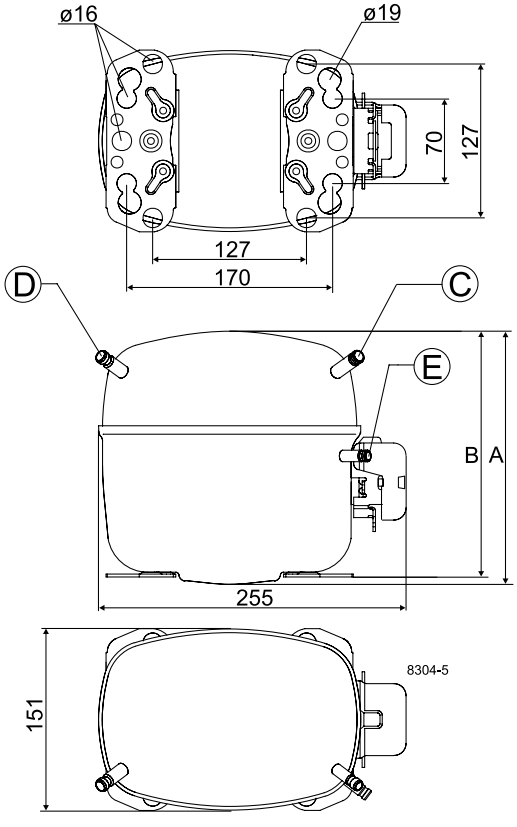
R404A/R507 • 220-240 V • 60 Hz • S-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 mm	6.3 mm	6.3 mm		
SC10CLX	104L2533								117U6005	117U5017			103N1004	103N2008
SC12CLX	104L2695								117U6019	117U5017			103N1004	103N2008
SC15CLX	104L2854									117U5373	117-7039		103N1004	103N2008
SC12CLX.2	104L2697								117U6019	117U5017			103N1004	103N2008
SC12CLX.2	104L2699										117-7027		103N1004	103N2008
SC15CLX.2	104L2897									117U5373	117-7039		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

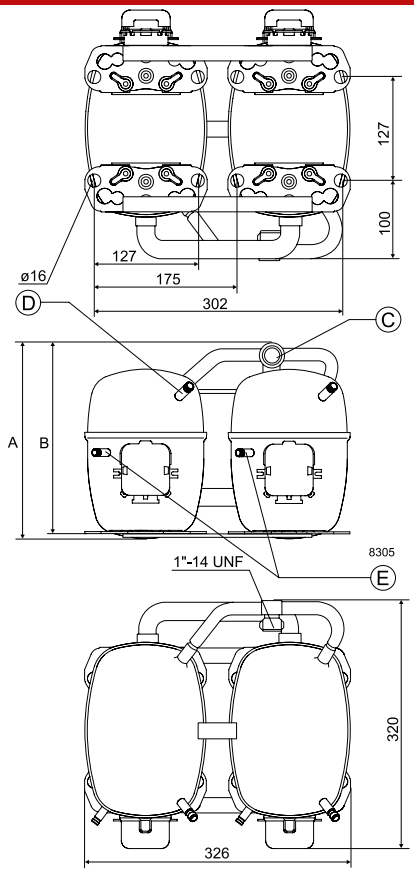
Compressors AC voltage **R404A | R507**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
518	1.16					1/2	10.29	198 to 254 V, 60 Hz *	F2	209	203	8.2	6.2	6.2		X
699	1.23					3/4	12.87	198 to 254 V, 60 Hz	F2	219	213	8.2	6.2	6.2		
775	1.23					3/4	15.28	198 to 254 V, 60 Hz	F2	219	213	10.2	6.2	6.2		
707	1.19					3/4	12.87	198 to 254 V, 60 Hz *	F2	219	213	8.2	6.2	6.2		X
707	1.27					3/4	12.87	187 to 254 V, 60 Hz	F2	219	213	9.63	6.5	6.5		X
883	1.33					3/4	15.28	187 to 254 V, 60 Hz	F2	219	213	9.63	6.5	6.5		X
1114	1.40					1	17.69	187 to 254 V, 60 Hz	F2	219	213	9.63	6.5	6.5		X
531	1.15	1072	1.54	1856	2.03	3/4	10.29	187 to 254 V, 60 Hz *	F2	209	203	8.2	6.5	6.5		X
650	1.18	1269	1.53	2173	1.99	3/4	12.87	187 to 254 V, 60 Hz *	F2	219	213	8.2	6.5	6.5		X
1033	1.18	1880	1.48	3209	2.00	1	17.69	187 to 254 V, 60 Hz	F2	219	213	9.63	6.5	6.5		X
841	1.20	1529	1.57	2636	2.17	3/4	15.28	187 to 254 V, 60 Hz	F2	219	213	10.2	6.5	6.5		X
1390	1.23					1 1/4	25.74	198 to 254 V, 60 Hz	F2	259	254	12.0	6.2	6.2		

SC



SC-Twin



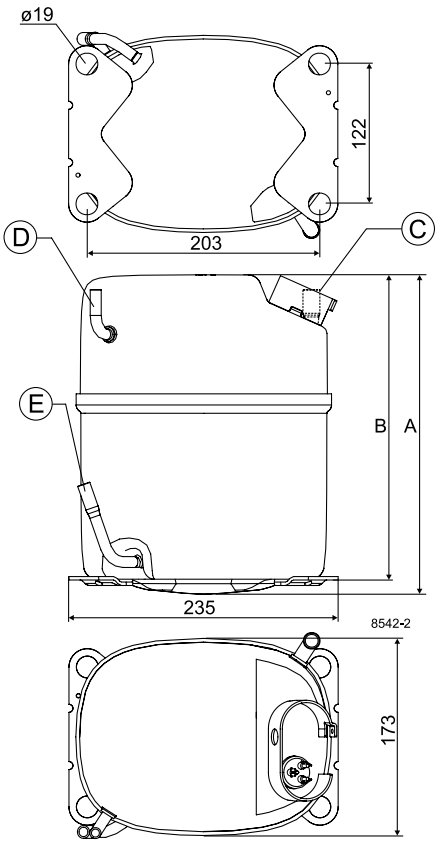
R404A/R507 • 220-240 V • 60 Hz • G-Series																					
Compressor	Code number	Application	EN 12900 Capacity [W] Tc=45°C, Tliq=45°C, Tsuc=32°C Evaporating temperature [°C]						EN 12900						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP 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	COP	Cooling capacity	COP	Cooling capacity	COP	-35	-15	-5	0	10	15
									[W]	[W/W]	[W]	[W/W]	[W]	[W/W]						
GS21CLX	107B0506	LBP	628	1837					669	1.05	2084	1.65			605	1962				
GS26CLX	107B0505	LBP	755	2001					808	0.97	2249	1.41			721	2108				

R404A/R507 • 220-240 V • 60 Hz • G-Series • Electrical Equipment																
Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 mm	6.3 mm	6.3 mm				
GS21CLX	107B0506										117-7056			107B9101		
GS26CLX	107B0505										117-7073			107B9101		

Compressors AC voltage **R404A | R507**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm^3]			A	B	C	D	E	F	
1297	1.39					1 1/4	21.20	187 to 254 V, 60 Hz	F2	259	247	12.9	6.5	8.2		
1425	1.21					1 1/4	26.30	187 to 254 V, 60 Hz	F2	259	247	12.9	6.5	8.2		

GS



R134a
115 V | 60 Hz

With more than 50 years of experience in compressor technology and highly committed employees, our focus is to develop and apply the advanced compressor technologies to achieve standard setting performance for leading products and businesses around the world.

Chemical formula
CH2FCF3

Typelabel
Typelabel stripe colour: Blue
Typelabel colour: Green

Applications
LBP: Low Back Pressure
HBP: High Back Pressure
MBP: Medium 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
F1 = Fan cooling 1.5 m/s (compressor compartment temp. equal to ambient temperature)
F2 = 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

Compressors AC voltage **R134a**

R134a • 115 V • 50 - 60 Hz • P-Series

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	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		38	66	85	132	161	18	0.36	51	0.81	107	1.35		47	82	105	163	200
PL50Fz	101G9202	L/MBP		69	111	138			37	0.59	88	1.05				85	138	171		

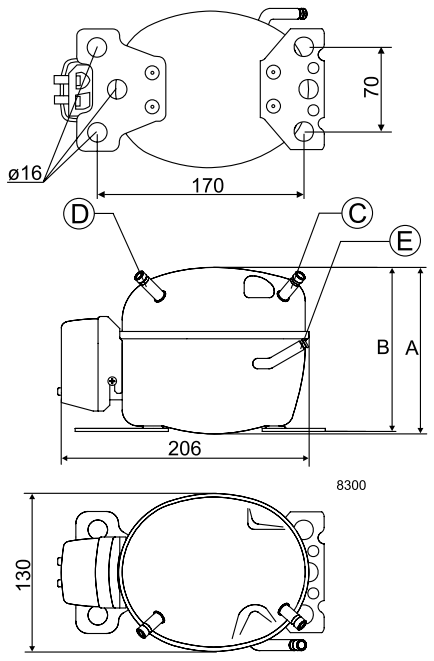
R134a • 115 V • 50 - 60 Hz • P-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 mm	6.3 mm	6.3 mm		
PL30F	101G9100	103N0026	103N0023						117U6000	117U5015			103N1010	103N0492
PL50F	101G9202	103N0026	103N0023						117U6000	117U5015			103N1010	103N0492

Compressors AC voltage **R134a**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm^3]			A	B	C	D	E	F	
26	0.51	68	1.03	131	1.61	1/10	1.41	90 to 127 V, 50 Hz	S	134	132	6.5	6.5	5.0		
52	0.79	115	1.30			1/10	2.00	103 to 127 V, 60 Hz	S	134	132	6.5	6.5	5.0		

PL



Compressors AC voltage **R134a**

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 [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	Cooling capacity [W]	COP [W/W]	-35	-15	-5	0	10	15
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	359	442		
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	166			
TL3F	102G3300	LBP		97	163				54	0.75	127	1.11				120	203			
TL4F	102G3402	LBP	42	120					66	0.77	159	1.21			52	149				
TL2.5G	102G3255	L/M/HBP		79	144	186	289	350	39	0.57	108	1.14	234	1.85		98	178	230	357	432
TL4G	102G3460	L/M/HBP		103	176	223	340	411	54	0.59	136	1.00	277	1.46		153	262	331	504	609
TLS4.5F	102G3420	LBP	56	180	290				102	0.83	231	1.26			70	223	359			
TT2.5F	102G3248	LBP		80	134				43	0.70	105	1.11				99	166			
TTE4F	102G3444	LBP	36	152					84	0.94	195	1.46			45	188				
TTE4.6FK	102G3448	LBP	50	184					106	1.06	235	1.57			62	228				
TTY5F	102G3546	LBP	62	224					126	1.05	289	1.59			77	277				

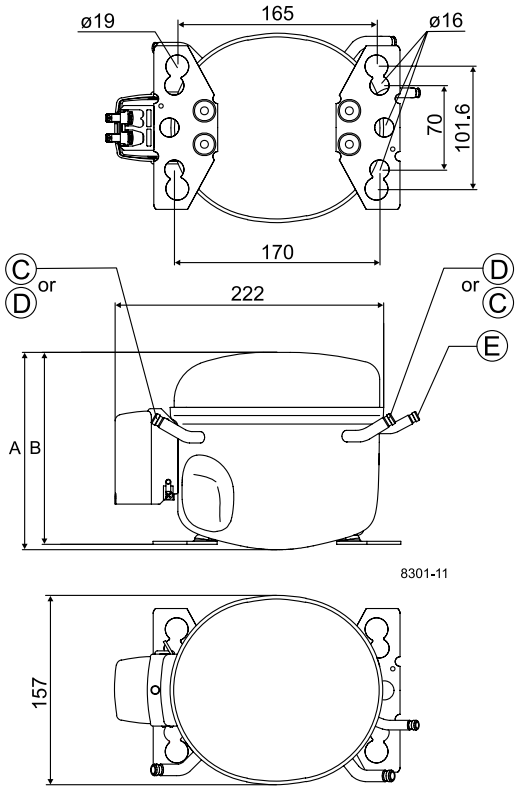
R134a • 115 V • 60 Hz • T-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 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
TL4F	102G3402	103N0026	103N0023										103N1010	103N2011
TL2.5G	102G3255	103N0026	103N0023										103N1010	103N2011
TL4G	102G3460	103N0026	103N0023						117U6003	117U5023			103N1010	103N2011
TLS4.5F	102G3420	103N0026	103N0023						117U6003	117U5023			103N1010	103N2011
TT2.5F	102G3248	117U6102				117U3301								117U1026
TTE4F	102G3444			117U6102		117U3304	117-7118							117U1026
TTE4.6FK	102G3448			117U6106		117U3302	117-7118							117U1026
TTY5F	102G3546			117U6102		117U3302	117-7118							117U1026

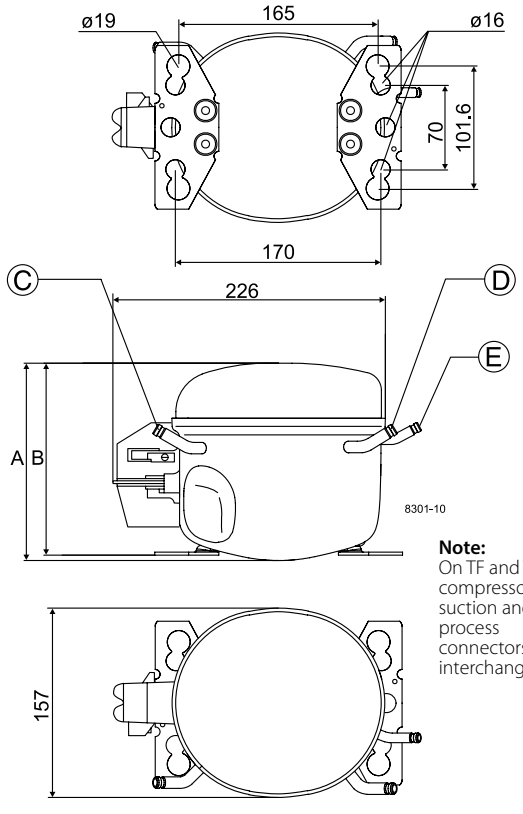
Compressors AC voltage **R134a**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
89	0.96					1/10	3.59	95 to 135 V, 60 Hz	S	173	169	6.5	6.5	5.0		
105	1.07					1/10	3.86	95 to 135 V, 60 Hz	S	173	169	6.5	6.5	5.0		
140	1.10	300	1.52	525	1.95	1/4	4.63	95 to 135 V, 60 Hz	S	173	169	6.5	6.5	4.9		X
140	1.10					1/10	4.63	95 to 135 V, 60 Hz	S	173	169	6.5	6.5	5.0		X
59	0.91	139	1.33			1/10	2.61	103 to 127 V, 60 Hz	S	163	159	6.5	6.5	5.0		
74	0.97	168	1.35			1/10	3.13	103 to 127 V, 60 Hz	S	163	159	6.5	6.5	5.0		
91	1.00	212	1.49			1/10	3.86	103 to 127 V, 60 Hz	S	163	159	6.5	6.5	5.0		X
56	0.78	147	1.45	288	2.20	1/10	2.61	103 to 127 V, 60 Hz	S	163	159	6.5	6.5	5.0		X
90	0.94	217	1.47	408	2.07	1/4	3.86	90 to 135 V, 60 Hz *	S	173	169	6.5	6.5	5.0		X
140	1.08	300	1.51			1/10	4.63	103 to 127 V, 60 Hz	S	163	159	6.5	6.5	5.0		
59	0.91	139	1.33			1/10	2.61	103 to 127 V, 60 Hz	S	158	152	6.5	6.5	4.9		
117	1.24					1/10	3.86	103 to 127 V, 60 Hz	S	173	169	6.5	6.5	5.0		
145	1.38					1/8	4.63	103 to 127 V, 60 Hz	S	173	169	6.5	6.5	5.0		
174	1.38					1/4	5.54	103 to 127 V, 60 Hz	S	173	169	6.5	6.5	4.9		

TL



TF/TT TFS / TTE / TTY



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

Compressors AC voltage **R134a**

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 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	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	491	607		
NF7FK	105G5728	L/MBP	91	302	473	583			180	0.93	380	1.33	711	1.90	112	373	585	720		
NF5.5FX	105G5623	L/MBP	66	260	414	511			148	0.93	330	1.38	624	2.02	83	321	512	632		
NF7FX	105G5723	L/MBP	93	311	488	601			186	0.90	392	1.34	733	1.95	116	385	603	743		
NF7FX	105G5733	L/MBP	93	311	488	601			186	0.90	392	1.34	733	1.95	116	385	603	743		
NF9FX	105G5920	L/MBP		344	548	677			202	0.86	437	1.34	826	1.90		425	677	836		
NF10FX	105G5941	L/MBP		386	610	752			227	0.91	488	1.34	919	1.86		475	753	929		
NF11FX	105G5945	MBP	114	410	653	808			237	0.84	521	1.27	988	1.77	140	505	806	998		
NF6.1FX.2	105G5631	L/MBP	69	274	442	547			153	0.90	352	1.47	666	2.11	86	340	547	676		
NF7.3FX.2	105G5722	L/MBP	91	334	532	656			190	0.88	426	1.40	796	2.00	114	414	658	810		
NF8.4FX.2	105G5918	L/MBP		381	603	741			221	0.94	484	1.43	899	2.00		472	746	916		
NF11FX.2	105G5916	MBP		485	772	950					618	1.36	1154	1.91		601	955	1174		
NLV6.1F 2000	105G5660	L/MBP	43	158	257	319			89	1.16	204	1.78	392	2.61	53	196	318	395		
NLV6.1F 3000	105G5660	L/MBP	70	236	378	468			137	1.14	301	1.74	572	2.48	87	292	467	578		
NLV6.1F 3500	105G5660	L/MBP	88	285	453	560			167	1.12	362	1.66	683	2.33	109	352	560	691		
NLV6.1F 4000	105G5660	L/MBP	93	314	502	622			182	1.07	400	1.61	761	2.30	115	388	621	768		
NLV8.4F 2000	105G5960	L/MBP	68	219	348	430			129	1.18	278	1.69	525	2.32	84	271	430	531		
NLV8.4F 3000	105G5960	L/MBP	104	335	532	656			197	1.13	425	1.64	801	2.27	129	414	656	810		
NLV8.4F 3500	105G5960	L/MBP	119	382	607	749			225	1.11	485	1.60	914	2.21	148	472	749	925		
NLV8.4F 4000	105G5960	L/MBP	133	427	678	838			251	1.10	542	1.59	1022	2.20	165	528	838	1034		
NTY5.5FK	105G5620	LBP	90	256					151	1.14	329	1.59			111	318				
NTY9FK	105G5921	LBP	129	369					221	1.18	469	1.61			159	457				

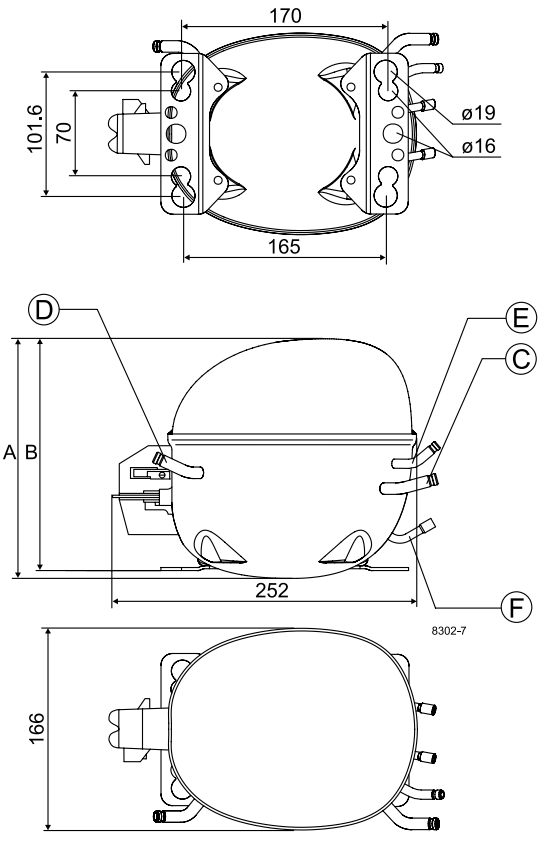
R134a • 115 V • 60 Hz • N-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 mm	6.3 mm	6.3 mm		
NF6FK	105G5628								117U4132	117U5022			117U0349	117U1021
NF7FK	105G5728								117U4132	117U5022			117U0349	117U1021
NF5.5FX	105G5623								117U4127	117U5025			117U0349	117U1021
NF7FX	105G5723								117U4061	117U5025			117U0349	117U1021
NF7FX	105G5733								117U4061	117U5025			117U0349	117U1021
NF9FX	105G5920								117U4129	117U5025			117U0349	117U1021
NF10FX	105G5941								117U4129	117U5022			117U0349	117U1021
NF11FX	105G5945								117U4123	117U5028			117U0349	117U1021
NF6.1FX.2	105G5631								117U4127	117U5025			117U0349	117U1021
NF7.3FX.2	105G5722								117U4061	117U5025			117U0349	117U1021
NF8.4FX.2	105G5918								117U4129	117U5025			117U0349	117U1021
NF11FX.2	105G5916								117U4151	117U5028			117U0349	117U1021
NLV6.1F	105G5660	Electronic unit 105N4212												
NLV8.4F	105G5960													
NTY5.5FK	105G5620			117U6102		117U3306	117-7118							117U1026
NTY9FK	105G5921			117U6102		117U3310	117-7118							117U1026

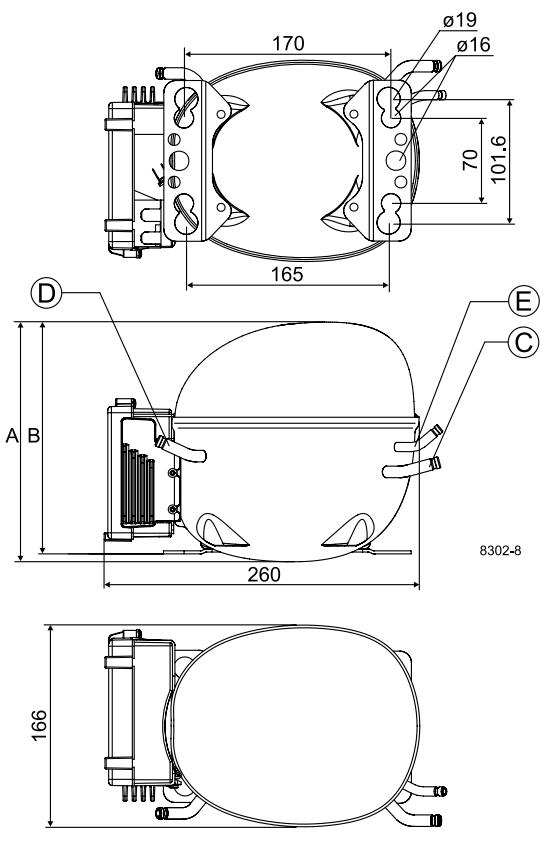
Compressors AC voltage **R134a**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
196	1.14	411	1.59	730	2.26	1/4	6.13	95 to 135 V, 60 Hz	F2	203	197	8.2	6.5	6.5		X
245	1.20	491	1.62	865	2.25	1/4	7.27	95 to 135 V, 60 Hz	F2	203	197	8.2	6.5	6.5		
205	1.21	428	1.68	760	2.40	1/4	6.13	95 to 135 V, 60 Hz	F2	197	191	8.2	6.5	6.5		X
252	1.17	506	1.63	892	2.30	1/4	7.27	95 to 135 V, 60 Hz	F2	197	191	8.2	6.5	6.5		X
252	1.17	506	1.63	892	2.30	1/4	7.27	95 to 135 V, 60 Hz	F2	197	191	8.2	6.5	6.5	6.5	
275	1.12	566	1.63	1004	2.22	1/2	8.35	95 to 135 V, 60 Hz	F2	197	191	8.2	6.5	6.5		X
308	1.18	631	1.62	1118	2.19	1/2	10.09	95 to 135 V, 60 Hz	F2	197	191	8.2	6.5	6.5		X
323	1.09	675	1.53	1203	2.08	1/2	11.15	95 to 135 V, 60 Hz	F2	203	197	8.2	6.5	6.5		X
212	1.19	458	1.80	808	2.47	1/4	6.13	95 to 135 V, 60 Hz	F1	197	191	8.2	6.5	6.5		
262	1.16	552	1.71	965	2.34	1/2	7.27	95 to 135 V, 60 Hz	F1	197	191	8.2	6.5	6.5		
303	1.22	626	1.73	1088	2.33	1/2	8.35	95 to 135 V, 60 Hz	F1	197	191	8.2	6.5	6.5		
		801	1.66	1398	2.23	1/2	11.25	95 to 135 V, 60 Hz	F2	203	197	9.7	6.5	6.5		X
123	1.52	265	2.17	477	3.10	1/4	8.35	80 to 140 V, 60 Hz *	F2	203	197	8.2	6.5	6.5		X
187	1.49	390	2.11	695	2.93	1/4	8.35	80 to 140 V, 60 Hz *	F2	203	197	8.2	6.5	6.5		X
228	1.45	469	2.01	829	2.74	1/4	8.35	80 to 140 V, 60 Hz *	F2	203	197	8.2	6.5	6.5		X
249	1.39	519	1.95	925	2.71	1/2	8.35	80 to 140 V, 60 Hz *	F2	203	197	8.2	6.5	6.5		X
176	1.52	360	2.03	637	2.71	1/4	8.35	80 to 140 V, 60 Hz *	F2	203	197	8.2	6.5	6.5		X
268	1.46	550	1.98	973	2.66	1/2	8.35	80 to 140 V, 60 Hz *	F2	203	197	8.2	6.5	6.5		X
306	1.43	628	1.93	1110	2.59	1/2	8.35	80 to 140 V, 60 Hz *	F2	203	197	8.2	6.5	6.5		X
342	1.42	702	1.92	1241	2.58	1/2	8.35	80 to 140 V, 60 Hz *	F2	203	197	8.2	6.5	6.5		X
205	1.47					1/4	6.13	103 to 127 V, 60 Hz	S	203	197	8.2	6.5	6.5		
299	1.53					1/4	8.35	103 to 127 V, 60 Hz	S	203	197	8.2	6.5	6.5		

NF/NTY



NLV



Compressors AC voltage **R134a**

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		233	428	550	845	
FF7.5GK	103G5780	L/M/HBP		221	391	498	753		106	0.77	299	1.30	618	1.89		274	483	614	928	
FF8.5GX	103G5880	L/M/HBP		268	454	569	841		139	0.70	354	1.18	698	1.73		332	561	702	1036	
FF10GX	103G5980	L/M/HBP		291	498	625	931		149	0.68	386	1.16	770	1.71		361	616	774	1150	

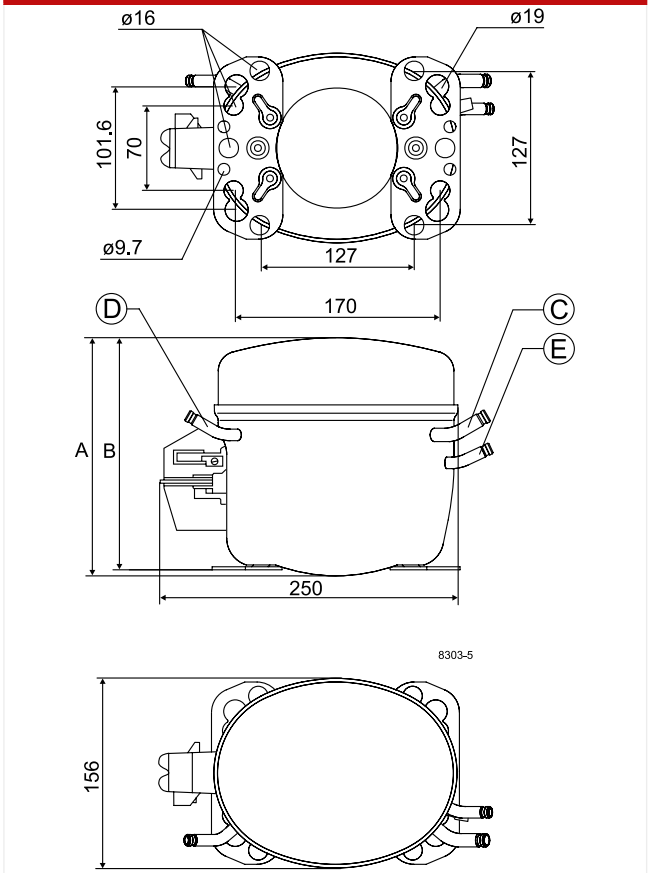
R134a • 115 V • 60 Hz • F-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 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

Compressors AC voltage **R134a**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
122	0.93	352	1.59	684	2.32	1/4	6.23	103 to 127 V, 60 Hz	F1	196	191	8.2	6.5	6.5		
152	1.02	400	1.60	753	2.21	1/4	6.93	103 to 127 V, 60 Hz	F1	196	191	8.2	6.5	6.5		
194	0.93	467	1.46	846	2.03	1/4	7.95	103 to 127 V, 60 Hz	F2	196	191	8.2	6.5	6.5		
210	0.91	512	1.43	937	2.00	1/2	9.05	103 to 127 V, 60 Hz	F2	196	191	8.2	6.5	6.5		

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 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
SC15FTX	104G7505	LBP	135	488	768				284	0.75	617	1.05			170	603	948			
SC12G	104G7250	L/M/HBP	43	422	729	924	1414		202	0.73	563	1.27	1151	1.90	60	527	906	1146	1750	
SC12G	104G7260	L/M/HBP	43	422	729	924	1414		202	0.73	563	1.27	1151	1.90	60	527	906	1146	1750	
SC15G	104G7550	L/M/HBP		502	876	1099	1639		190	0.67	679	1.24	1352	1.78		624	1083	1357	2022	
SC18G	104G7800	L/M/HBP		592	995	1238	1829	2187	264	0.71	782	1.23	1514	1.72		739	1235	1534	2263	2707
SC15MFX	104G7520	MBP		532	916	1142	1666				713	1.37	1392	1.96		663	1136	1415	2062	

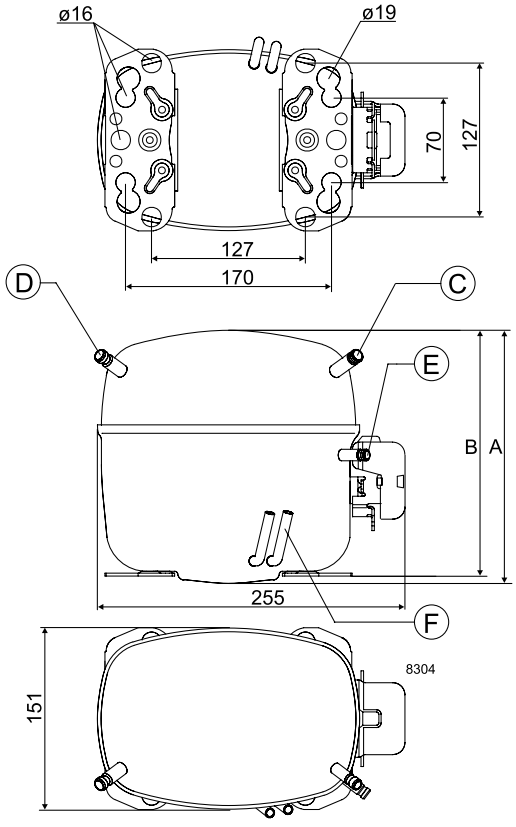
R134a • 115 V • 60 Hz • S-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 mm	6.3 mm	6.3 mm		
SC15FTX	104G7505								117U6020	117U5023			103N1004	103N2008
SC12G	104G7250								117U6020	117U5023			103N1004	103N2008
SC12G	104G7260								117U6020	117U5023			103N1004	103N2008
SC15G	104G7550								117U6020	117U5023			103N1004	103N2008
SC18G	104G7800								117-7441	117U5042	117-7053			117U1021
SC15MFX	104G7520								117U6020	117U5023			103N1004	103N2008

Compressors AC voltage **R134a**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
456	1.12	931	1.47			1/2	15.28	90 to 135 V, 60 Hz *	F2	209	203	8.2	6.5	6.5		X
296	0.99	751	1.57	1414	2.25	1/2	12.87	103 to 127 V, 60 Hz	F1	209	203	8.2	6.5	6.5		X
296	0.99	751	1.57	1414	2.25	1/2	12.87	103 to 127 V, 60 Hz	F1	209	203	8.2	6.5	6.5	6.5	
304	0.95	900	1.52	1644	2.10	3/4	15.28	103 to 127 V, 60 Hz	F1	209	203	8.2	6.5	6.5		X
399	0.99	1030	1.49	1845	2.02	3/4	17.69	95 to 135 V, 60 Hz	F2	219	213	9.63	6.5	6.5		
357	1.03	945	1.68	1691	2.31	3/4	15.28	95 to 135 V, 60 Hz	F2	209	203	9.6	6.5	6.5		

SC



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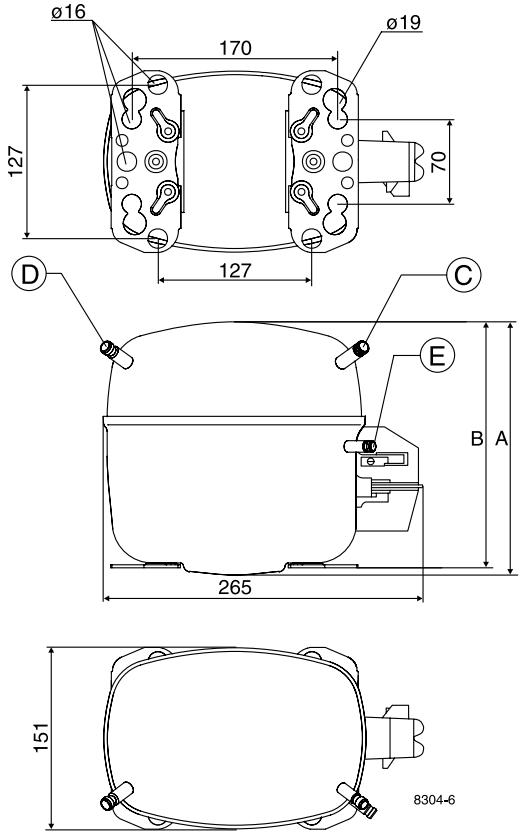


R600a
115 V | 60 Hz

With more than 50 years of experience in compressor technology and highly committed employees, our focus is to develop and apply the advanced compressor technologies to achieve standard setting performance for leading products and businesses around the world.

Chemical formula
C4H10

Typelabel
Typelabel stripe colour: Red
Typelabel colour: Green

Applications
LBP: Low Back Pressure
HBP: High Back Pressure
MBP: Medium 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
F1 = Fan cooling 1.5 m/s (compressor compartment temp. equal to ambient temperature)
F2 = 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

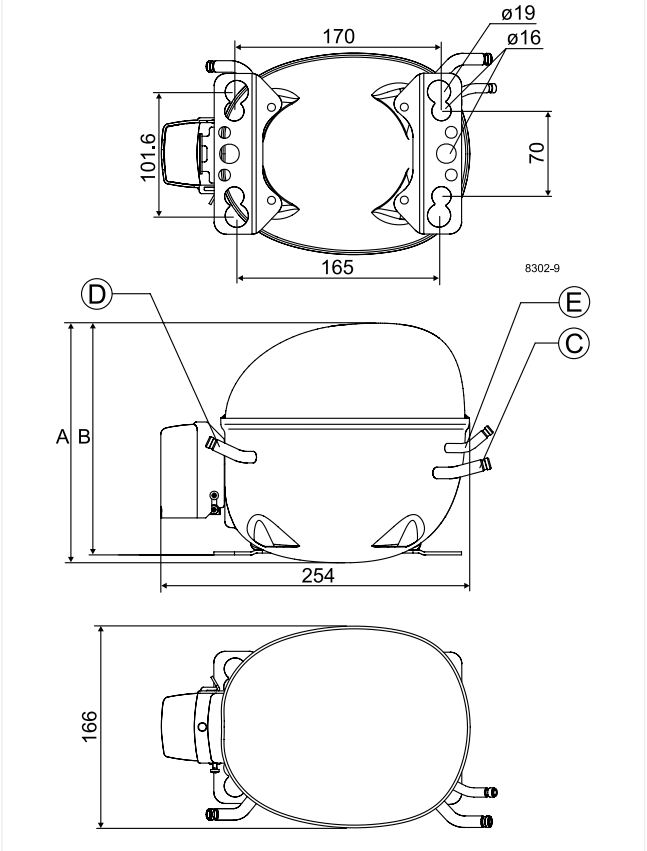
R600a • 115 V • 60 Hz • N-Series																			
Compressor	Code number	Application	CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C]						CECOMAF						ASHRAE Capacity [W] Tc=54,4°C, Tliq=32,2°C, Tsuc=32,2°C Evaporating temperature [°C]					
									LBP rating point -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	481	573		
NLE13KTK	105H5949	L/MBP	100	284	441	535			170	0.95	357	1.37	638	1.78	122	346	537	651		

R600a • 115 V • 60 Hz • N-Series • Electrical Equipment																
Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 mm	6.3 mm	6.3 mm		
NLE11KTK	105H5942	103N0026	103N0023	103N0027	103N0024		117-7118	117-7120					103N1010	103N2010
NLE13KTK	105H5949	103N0026	103N0023	103N0027	103N0024		117-7118	117-7120					103N1010	103N2010

Compressors AC voltage **R600a**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
195	1.23	410	1.68			1/4	11.15	95 to 135 V, 60 Hz	F1	197	191	8.2	6.5	6.5		
227	1.21	455	1.63			1/4	13.25	95 to 135 V, 60 Hz	F1	197	191	8.2	6.5	6.5		

NLE



R404A/R507
115 V | 60 Hz

With more than 50 years of experience in compressor technology and highly committed employees, our focus is to develop and apply the advanced compressor technologies to achieve standard setting performance for leading products and businesses around the world.

Chemical formula
R404A: CHF2CF3 / CH3CF3 / CH2FCF3
R507: CHF2CF3 / CH3CF3

Typelabel
Typelabel stripe colour: Lilac
Typelabel colour: Gre

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

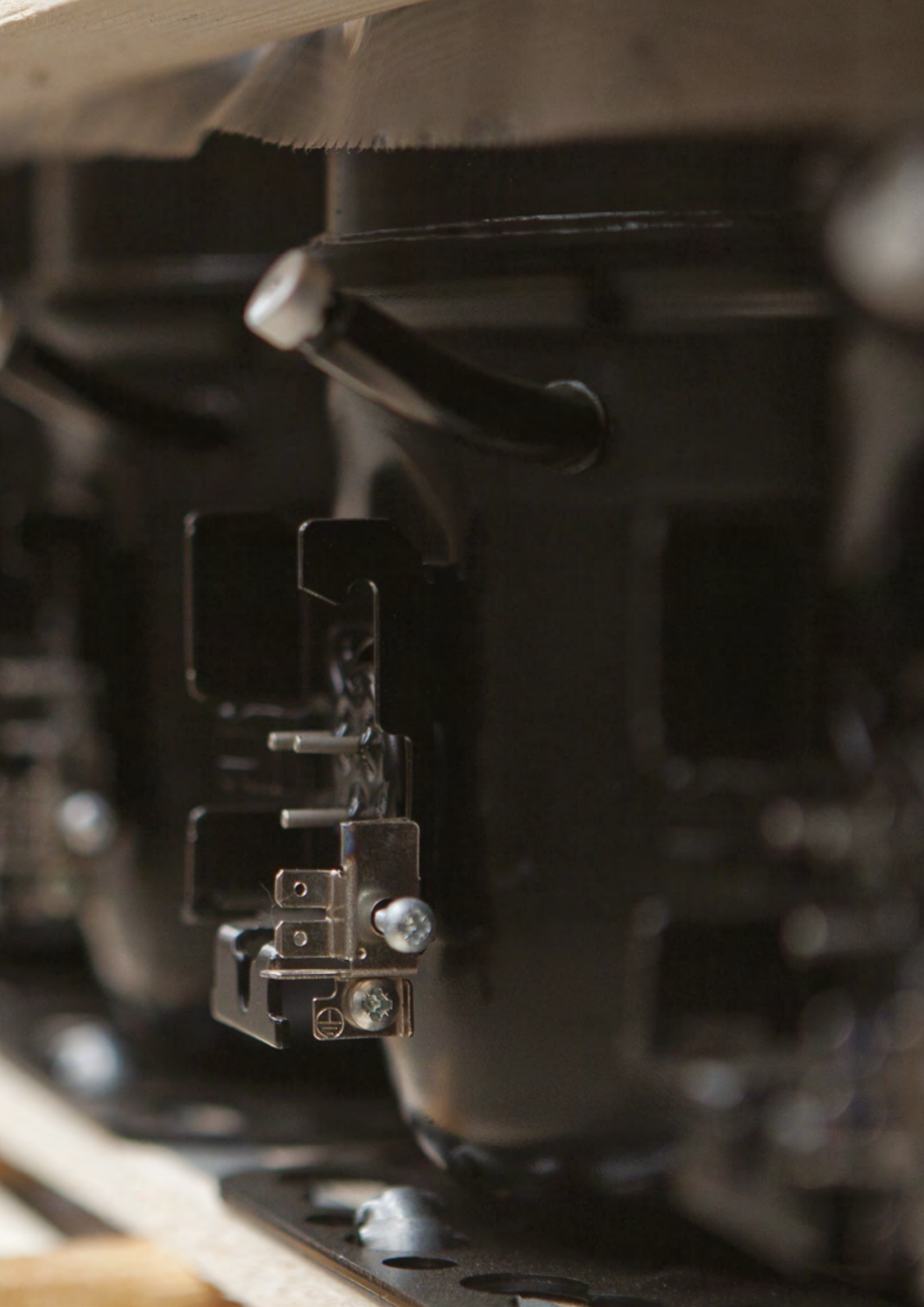
Motor types
RSIR: Resistant Start Induction Run
RSCR: Resistant Start Capacitor Run
CSIR: Capacitor Start Induction Run
CSR: Capacitor Start Run

Compressor cooling
S = Static cooling normally sufficient
O = Oil cooling
F1 = Fan cooling 1.5 m/s (compressor compartment temp. equal to ambient temperature)
F2 = 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

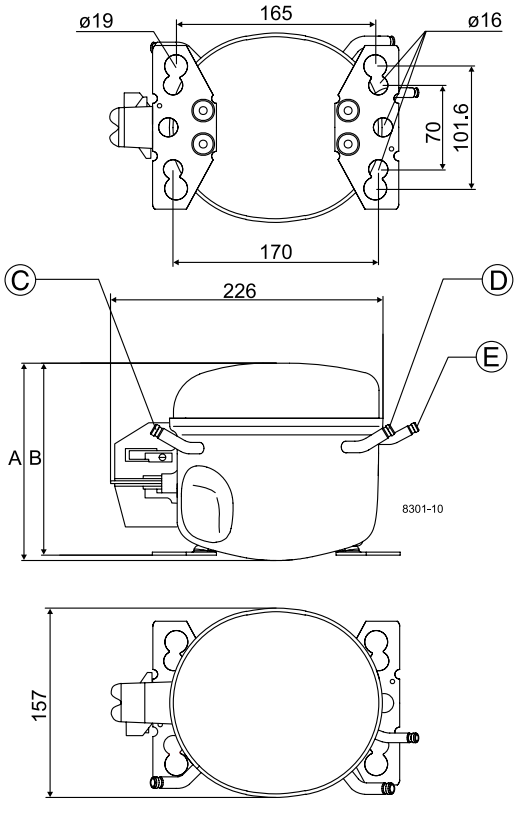


R404A/R507 • 115 V • 60 Hz • T-Series																			
Compressor	Code number	Application	EN 12900 Capacity [W] Tc=45°C, Tliq=45°C, Tsuc=32°C Evaporating temperature [°C]						EN 12900						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating 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			106	0.78	321	1.34	501	1.40	100	309	471	569		
TFS4.5CLX	102U2103	LBP	137	366					143	0.91	409	1.32			140	400				

R404A/R507 • 115 V • 60 Hz • T-Series • Electrical Equipment																
Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 mm	6.3 mm	6.3 mm		
TF4CLX	102U2102								117U4148	117U5025			117U0349	117U1021
TFS4.5CLX	102U2103								117U4148	117U5025			117U0349	117U1021

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
206	1.12	384	1.41	644	1.67	1/4	3.86	103 to 135 V, 60 Hz	F2	173	169	6.5	6.5	5.0		
272	1.19	490	1.36			1/4	4.63	103 to 135 V, 60 Hz	F2	173	169	6.5	6.5	5.0		

TL



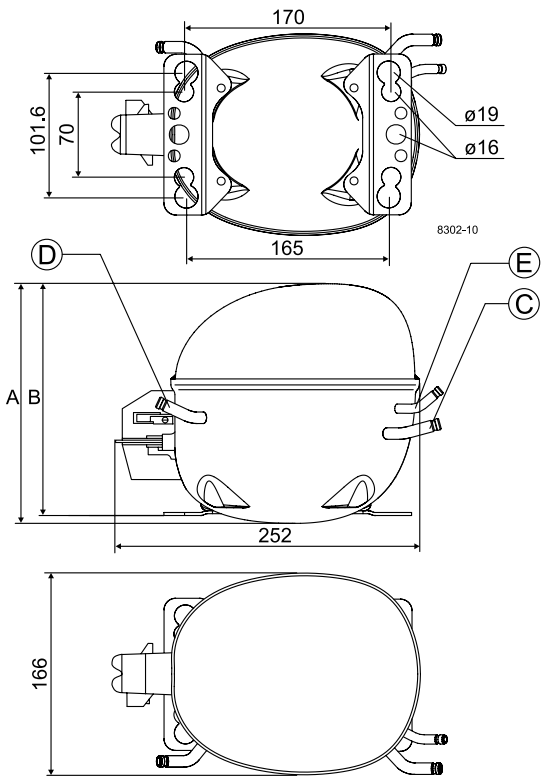
R404A/R507 • 115 V • 60 Hz • N-Series																						
Compressor	Code number	Application	EN 12900 Capacity [W] Tc=45°C, Tliq=45°C, Tsuc=32°C Evaporating temperature [°C]						EN 12900						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating 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	105F1621	L/MBP	190	495	728	869			197	0.92	552	1.44	852	1.63	192	536	806	971				
NF7CLX	105F1721	L/MBP	230	623	923	1105			240	0.90	698	1.48	1084	1.67	228	672	1019	1231				

R404A/R507 • 115 V • 60 Hz • N-Series • Electrical Equipment																
Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 mm	6.3 mm	6.3 mm				
NF5.5CLX	105F1621								117U4061	117U5025			117U0349	117U1021		
NF7CLX	105F1721								117U4129	117U5022			117U0349	117U1021		

Compressors AC voltage **R404A | R507**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
366	1.23	658	1.54	1097	1.96	1/2	6.13	95 to 135 V, 60 Hz	F2	197	191	8.2	6.5	6.5		X
453	1.23	831	1.57	1395	2.02	1/2	7.27	95 to 135 V, 60 Hz	F2	197	191	8.2	6.5	6.5		X

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 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
SC10CL	104L1503	L/MBP	172	729	1148	1401			207	0.72	845	1.43	1344	1.70	130	698	1146	1423		
SC12CL	104L1603	LBP	282	972					316	0.72	1097	1.26			227	1093				
SC12CLX.2	104L1696	LBP	334	997					360	0.81	1119	1.32			305	1101				
SC15CLX.2	104L1853	LBP	437	1239					463	0.90	1394	1.50			414	1333				
SC18CLX.2	104L2198	LBP	523	1360					551	0.94	1507	1.48			503	1495				
SC12MLX	104L1606	MBP		978	1484	1799					1107	1.45	1769	1.73		1037	1615	1977		
SC15MLX	104L1805	MBP		1129	1714	2078					1278	1.35	2043	1.61		1198	1865	2283		
SC18MLX	104L2105	MBP		1412	2106	2538					1583	1.40	2491	1.67		1516	2309	2805		
SC15MLX.2	104L1807	MBP		1147	1715	2069					1288	1.44	2030	1.70		1230	1878	2285		

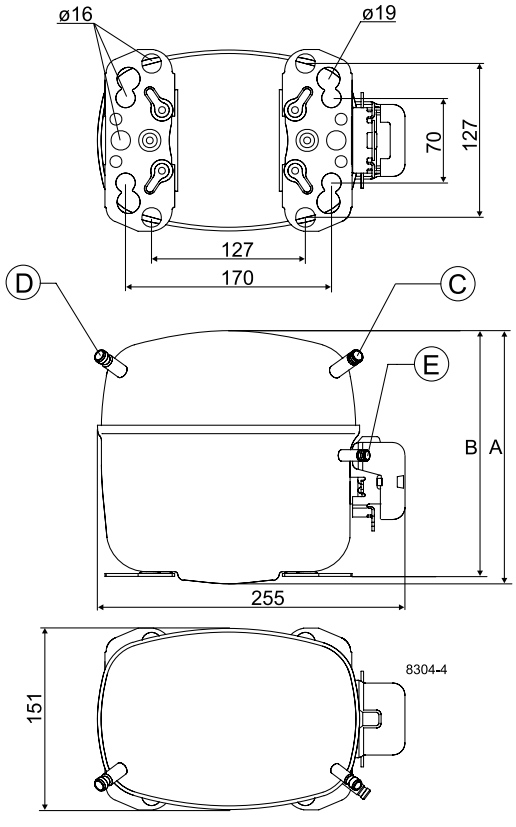
R404A/R507 • 115 V • 60 Hz • S-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 mm	6.3 mm	6.3 mm		
SC10CL	104L1503								117U6020	117U5023			103N1004	103N2008
SC12CL	104L1603								117U6020	117U5023			103N1004	103N2008
SC12CLX.2	104L1696								117U6020	117U5023			103N1004	103N2008
SC15CLX.2	104L1853						117-7114		117-7441	117U5043	117-7045			117U1021
SC18CLX.2	104L2198						117-7114		117-7441	117U5043	117-7045			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

Compressors AC voltage **R404A | R507**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
418	0.99	924	1.43	1664	1.99	1/2	10.29	103 to 127 V, 60 Hz	F2	209	203	8.2	6.5	6.5		
699	1.11					3/4	12.87	103 to 127 V, 60 Hz	F2	209	203	8.2	6.5	6.5		
725	1.14	1363	1.44			3/4	12.87	103 to 127 V, 60 Hz	F2	209	203	8.2	6.5	6.5		
883	1.21	1661	1.57			3/4	15.28	103 to 127 V, 60 Hz	F2	219	213	9.63	6.5	6.5		
1075	1.31	1761	1.57			1	17.69	103 to 127 V, 60 Hz	F2	219	213	9.63	6.5	6.5		X
685	1.18	1311	1.52	2280	2.06	3/4	12.87	95 to 135 V, 60 Hz	F2	219	213	8.2	6.5	6.5		X
791	1.10	1514	1.42	2633	1.92	3/4	15.28	95 to 135 V, 60 Hz	F2	219	213	9.63	6.5	6.5		
1033	1.18	1880	1.48	3209	2.00	1	17.69	103 to 127 V, 60 Hz	F2	219	213	9.63	6.5	6.5		
835	1.23	1529	1.52	2616	2.02	3/4	15.28	103 to 127 V, 60 Hz	F2	219	213	9.63	6.5	6.5		X

SC



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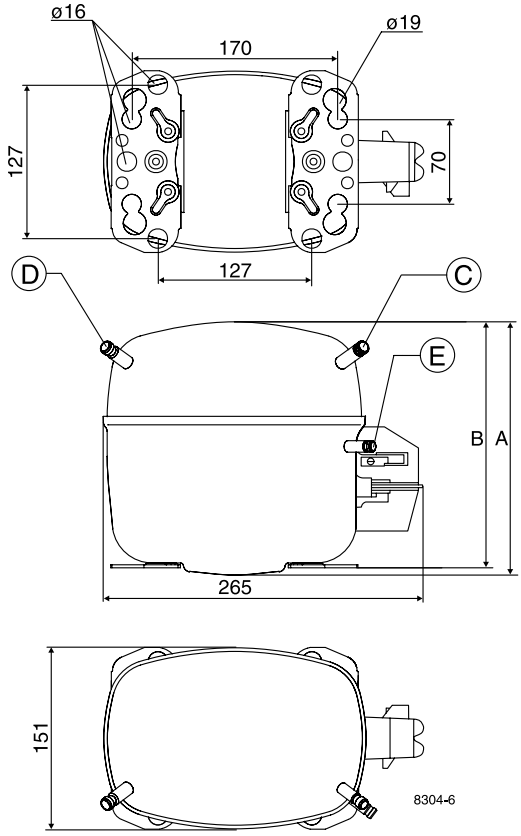


R290
115 V | 60 Hz

With more than 50 years of experience in compressor technology and highly committed employees, our focus is to develop and apply the advanced compressor technologies to achieve standard setting performance for leading products and businesses around the world.

Chemical formula
C3H8

Typelabel
Typelabel stripe colour: Red
Typelabel colour: Green

Applications
LBP: Low Back Pressure
HBP: High Back Pressure
MBP: Medium 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
F1 = Fan cooling 1.5 m/s (compressor compartment temp. equal to ambient temperature)
F2 = 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

Compressors AC voltage **R290**

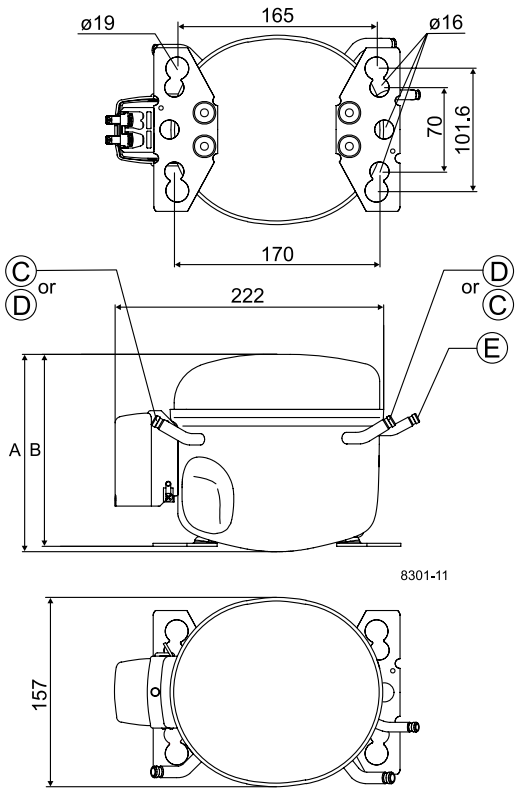
R290 • 115 V • 60 Hz • T-Series																			
Compressor	Code number	Application	EN 12900 Capacity [W] Tc=45°C, Tliq=45°C, Tsuc=32°C Evaporating temperature [°C]						EN 12900						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -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]						
TL4CNX.2	102H3490	L/MBP	112	292	438	530			116	0.89	335	1.73	547	2.31	107	310	465	562		
TL4.8CNX.2	102H3590	L/MBP	141	356	521	621			147	0.98	403	1.74	636	2.19	137	379	557	663		

R290 • 115 V • 60 Hz • T-Series • Electrical Equipment																
Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 mm	6.3 mm	6.3 mm		
TL4CNX.2	102H3490								117U7005	117U5023			103N1010	103N2011
TL4.8CNX.2	102H3590								117U7005	117U5023			103N1010	103N2011

Compressors AC voltage **R290**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
212	1.26	394	1.80	661	2.62	1/4	4.01	95 to 135 V, 60 Hz	F2	173	169	6.5	6.5	5.0		
263	1.34	474	1.81	762	2.45	1/4	4.78	95 to 135 V, 60 Hz	F2	173	169	6.5	6.5	5.0		

TL



Compressors AC voltage **R290**

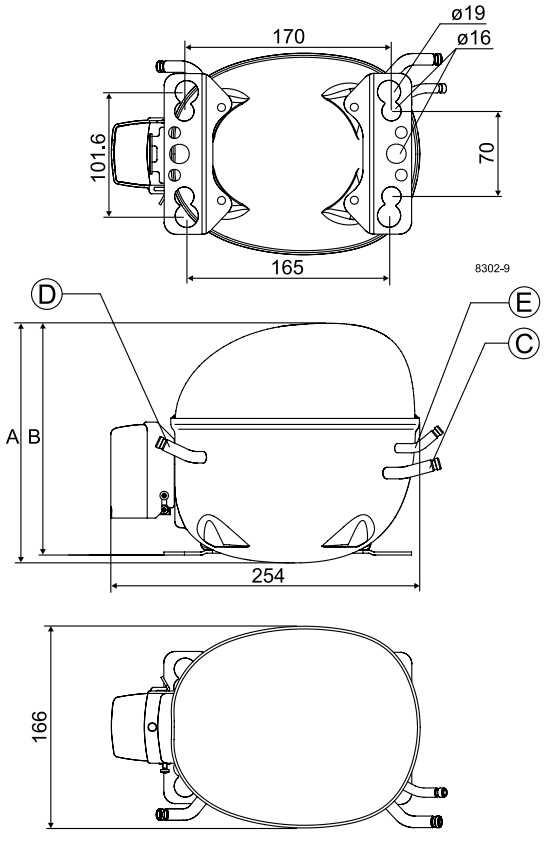
R290 • 115 V • 60 Hz • N-Series																			
Compressor	Code number	Application	EN 12900 Capacity [W] Tc=45°C, Tliq=45°C, Tsuc=32°C Evaporating temperature [°C]						EN 12900						ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C]					
									LBP rating point -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]						
NL7.3CNX.2	105H6790	L/MBP	223	613	910	1090			232	1.11	700	1.99	1109	2.37	234	635	951	1145		
NL8.4CNX.2	105H6090	L/MBP	263	664	976	1167			265	1.08	754	1.89	1192	2.35	267	698	1033	1241		

R290 • 115 V • 60 Hz • N-Series • Electrical Equipment																
Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 mm	6.3 mm	6.3 mm		
NL7.3CNX.2	105H6790								117U7013	117U5035			103N1010	103N2011
NL8.4CNX.2	105H6090								117U7013	117U5035			103N1010	103N2011

Compressors AC voltage **R290**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm³]			A	B	C	D	E	F	
436	1.50	806	2.02	1337	2.65	1/2	7.27	95 to 135 V, 60 Hz	F2	203	197	8.2	6.5	6.5		
487	1.47	877	1.93	1447	2.65	1/2	8.35	95 to 135 V, 60 Hz	F2	203	197	8.2	6.5	6.5		

NL



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			234	0.82	829	1.78	1373	2.53	156	726	1157	1418		
SC12CNX.2	104H7270	L/MBP	308	881	1315	1577			324	0.94	1010	1.83	1632	2.36	282	928	1416	1712		

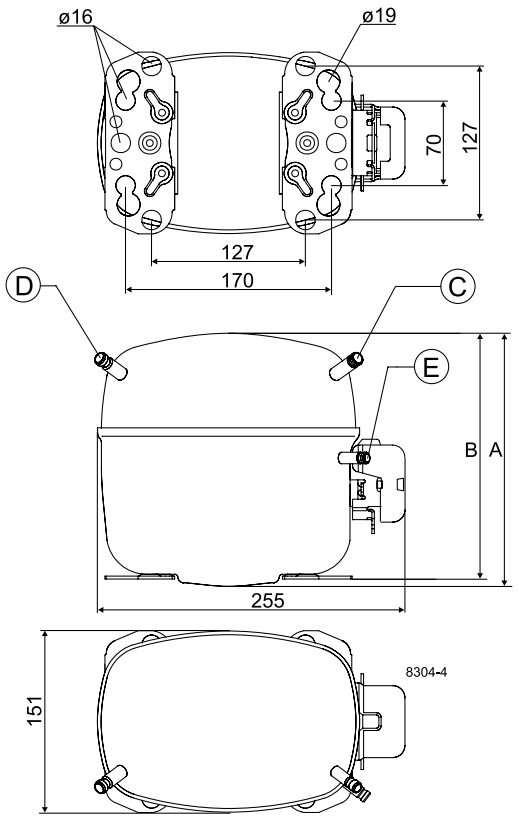
R290 • 115 V • 60 Hz • S-Series • Electrical Equipment

Compressor	Code number	LST (RSIR & RSCR) - refer to data sheet for ePTC code no.					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	4.8 mm	6.3 mm	6.3 mm		
SC10CNX.2	104H7070								117U7020	117U5023			103N1004	103N2008
SC12CNX.2	104H7270								117U7020	117U5023			103N1004	103N2008

Compressors AC voltage **R290**

ASHRAE						Power	Displacement	Voltage and frequencies (* dual frequency type)	Compressor cooling (refer to data sheet for details)	Dimensions						
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]	[HP]	[cm^3]			A	B	C	D	E	F	
448	1.17	973	1.88			1/2	10.29	95 to 135 V, 60 Hz	F2	209	203	9.63	6.5	6.5		
613	1.29	1198	1.89			3/4	12.87	95 to 135 V, 60 Hz	F2	209	203	9.63	6.5	6.5		

SC



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Danfoss Inverter Scrolls

Danfoss Scrolls

Danfoss Optyma Condensing Units

Danfoss Maneurop Reciprocating Compressors

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Our products can be found in a variety of applications such as rooftops, chillers, residential air conditioners, heatpumps, coldrooms, supermarkets, milk tank cooling and industrial cooling processes.

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Danfoss Commercial Compressors, BP 331, 01603 Trévoux Cedex, France | +334 74 00 28 29

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