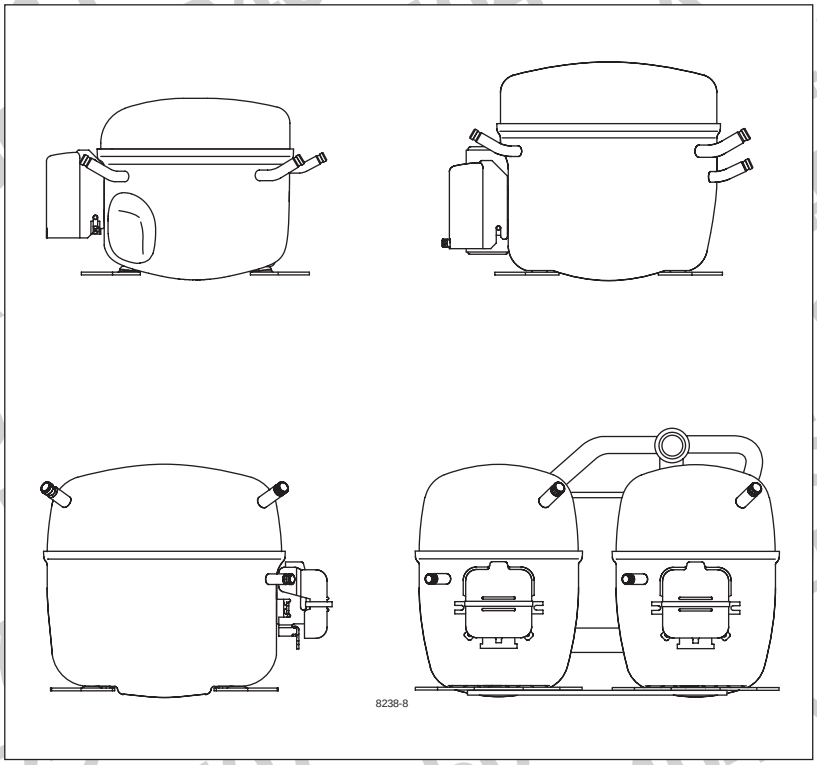
Collection of Datasheets

Compressors

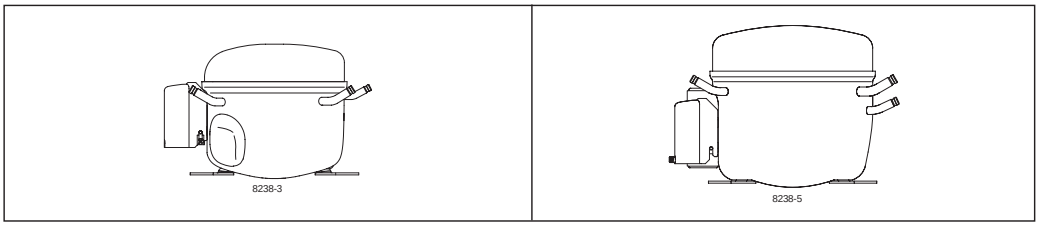
Compressors for R404A/R507
220-240V 50Hz



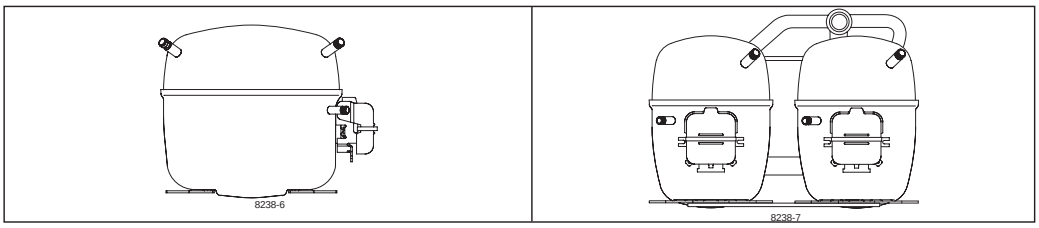
1. General

This collection of datasheets contains information on Danfoss hermetic refrigeration compressors for 220-240V especially designed for refrigeration systems using refrigerant R404A (CHF_2CF_3 / CH_3CF_3 / CH_2FCF_3) / R507 (CHF_2CF_3/CH_3CF_3).

The programme consists of the basic types TL, FR, SC and SC Twin.



TL FR



SC SC Twin

1.1 Compressor designations

The compressor designations are built up according to the following system:

Compressor design	Optimization-level	Compressor size	Application range
TL	Blank Standard energy level	Nominal displacement in cm^3	CL R404A/R507 LBP DL R404A/R507 HBP
FR			
SC (Twin)			

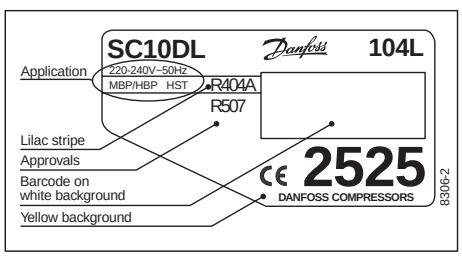
Example

TL		4	CL
FR		6	DL

1.2 Design

All Danfoss compressors for R404A/R507 from the TL, FR, and SC range are standard efficiency types.

1.3 Type label



All compressors have a yellow label with the type designation. This label has a lilac stripe and the text ”R404A/R507“.
The country of origin indicated on the compressor paper label and on the compressor cover varies depending on the manufacturing place. Information can be found on our technical information sheet ”Country of Origin“.

1.4 Data stamping

The compressor type and production date are stamped on the side of the compressor. The information may be as follows,

L-4CL-2071
F-208E2207

The first line states the model designation and the code no.

L-	= last letter (or last two letters) of the compressor type
4CL	= nominal displacement and application
2071	= 4 last digits in the code no.
(-	= position mark)

The second line states the date of manufacture and internal Danfoss codes.

F	= manufacturing place (F = Germany, AL = Slovenia, AM = Mexico)
20	= week 20
8	= 1998
E	= Friday (A = Monday etc.)
220	= nominal voltage
7	= internal Danfoss code

1.5 Compressor dimensions

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

2. Application range

CL Compressors with denominations ending with **CL** are designed for low evaporating temperatures (LBP **L**ow **B**ack **P**ressure) for use in commercial refrigerators, freezers and similar applications in regions with normal supply voltage.

DL Compressors with denominations ending with **DL** are primarily designed for high evaporation temperatures (HBP **H**igh **B**ack **P**ressure) for use in commercial refrigerators, liquid coolers, dehumidifiers, refrigerated display counters, vending machines, heat pumps, and similar applications.

The following table shows the normally recommended applications as regards voltage/ frequency, ambient temperature, evaporating temperature and necessary compressor cooling. The recommendations must be regarded as a guideline only as they presuppose a proper dimensioning of the refrigeration system.

Compressor		Mains	Ambient temperature			
			32°C		38°C	
			LBP	HBP	LBP	HBP
CL	**TL4CL**	198 - 254 /50	F_2		F_2	
	FR6 - 8.5CL	198 - 254 /50	F_2		F_2	
	SC10 - 12 - 15 -18 - 21CL	198 - 254 /50	F_2		F_2	
DL	**TL4DL**	198 - 254 /50		F_2		F_2
	FR6DL	198 - 254 /50		F_2		F_2
	SC10 - 12 - 15DL	198 - 254 /50		F_2		F_2

S = Static cooling normally sufficient
O = Oil cooling
F_1 = Fan cooling 1.5 m/s (compressor compartment temperature equal to ambient temperature)
F_2 = Fan cooling 3.0 m/s necessary
▭ = Outside application range, not recommended
* = Run capacitor compulsory
** = Not applicable below -25°C evaporating temperature in 43°C ambient temperature above 240V

The application limits regarding evaporating temperatures and motor systems are specified in the individual compressor datasheets.

2.1 Design limits

In order to secure a satisfying lifetime of the compressor, and to protect the compressor against overload, 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 has to start and work properly through pressure peaks obtained in the highest ambient temperature and lowest working voltage. At peak load the condensing temperature must not exceed 60°C. The winding temperature must not exceed 135°C.

Condensing temperature
Winding temperature

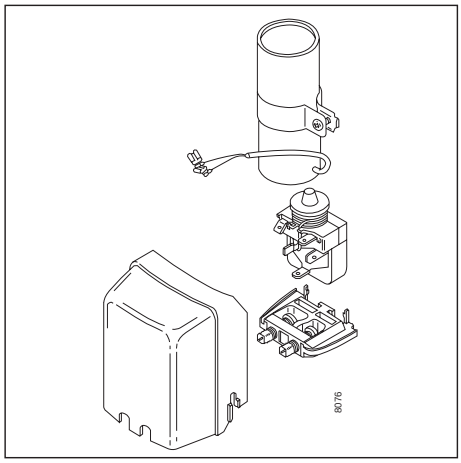
At stable operation conditions the condensing temperature must not exceed 50°C. The winding temperature must not exceed 125°C.
These limitations ensure a protection of valves, gaskets, oil, and motor insulation.

3. Electrical equipment

The compressors are equipped with a single-phase AC motor and **H**igh **S**tarting **T**orque (HST) starting characteristics.
The electrical equipments are classified as ”normal tight“ (IP20)
The motor protector is built into the motor (winding protector).
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.

The compressors can be supplied with the following motor systems:

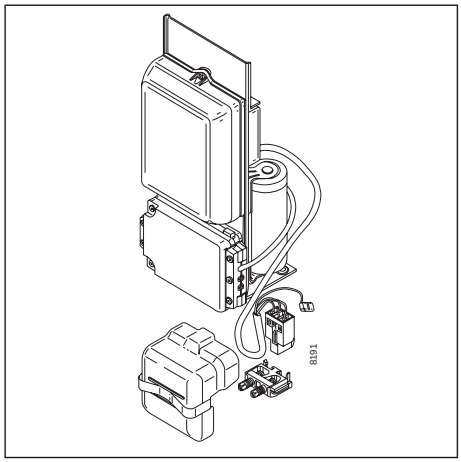
3.1 HST (CSIR)



TL, FR

Compressors with the motor type **C**apacitor **S**tart **I**nduction **R**un (CSIR) have a starting device for **H**igh **S**tarting **T**orque (HST). This starting device consists of a starting relay and a starting capacitor and is used for compressors with the denominations TL, FR, and SC. 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 the 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 a duration of max. 6 seconds (normally shorter than 1 sec.).

3.2 HST (CSR)



SC

Compressors with the motor type **C**apacitor **S**tart **R**un (CSR) have a starting device for **H**igh **S**tarting **T**orque (HST). This starting device consists of a starting relay, a starting capacitor, a run capacitor, a terminal board, a cord relief, and a cover. The starting device is mandatory for some of the biggest SC compressors. 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.

For further information on which starting device to use on individual compressors, please refer to the actual datasheets.

3.3 Connections

The power supply must be connected as shown in the wiring diagrams for the chosen electrical equipment given in the actual datasheets.

3.4 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 datasheets. Approval markings appear on the compressor labels.

4. 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.

5. Max. refrigerant charge

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.
The refrigerant amount may be critical as regards oil foaming and liquid hammer after long standstill periods. Because of this, limitations of refrigerant charges have been introduced. The maximum refrigerant charge is specified in the individual datasheets.
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.

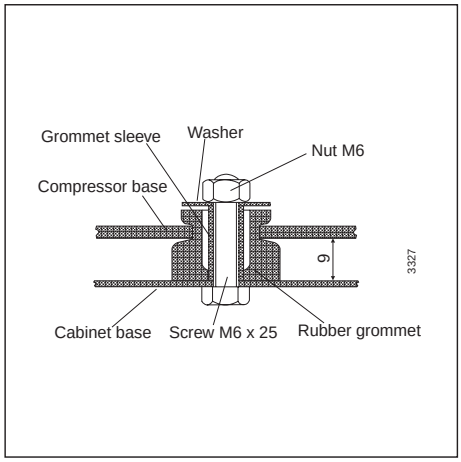
6. Oil charge

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 oil pockets and with sufficient gas velocity. The compressors use polyolester oils and are approved only for these oils and R404A/R507.
The oil charge is specified in the individual datasheets.

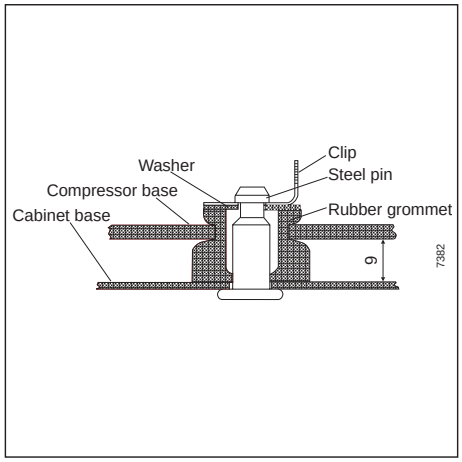
7. Mounting

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

7.1 Mounting accessories



Bolt joint



Snap-on joint

The mounting accessories for the compressors are available in two versions, with bolt joint or snap-on joint.
The rubber grommets are designed for the 16 mm holes of the baseplate.

Bolt joint for one compressor in a bag	118-1917
Bolt joint in quantities	118-1918
Snap-on in quantities	118-1919

8. Condition at delivery

The compressors are delivered without mounted starting devices on pallets with the dimensions 1144 x 800 mm. Quantities per pallets are specified in the individual datasheets. 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).

9. Twin compressors

The Twin version consists of two SC compressors mounted on a common baseplate. 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).
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.

10. Conversion from R502/R22 to R404A/R507

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

A drier with 3Å 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.

11. Warnings

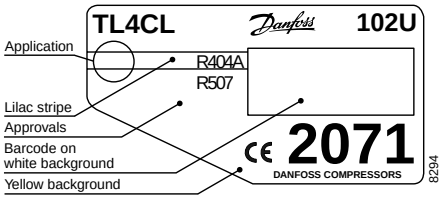
No high potential test nor start tests must be carried out while the compressor is under vacuum.
No attempt must be made to start the compressor without a complete starting device.
Allow the compressor to assume a temperature above 10°C before starting the first time in order to avoid starting problems.
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.

TL-CL
LBP/MBP Compressor
R404A/R507
220-240V 50Hz

Data Sheet (Replaces CD.51.A4.02)

General

Compressor	TL4CL
Code number	102U2071



Application

Application		LBP/MBP
Evaporating temperature range	°C	-45 to -5
Voltage range	V/Hz	198 - 254 /50
Motor type		CSIR
Max. ambient temperature	°C	38
Comp. cooling at ambient temp.	32°C	F_2
	38°C	F_2

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

Design

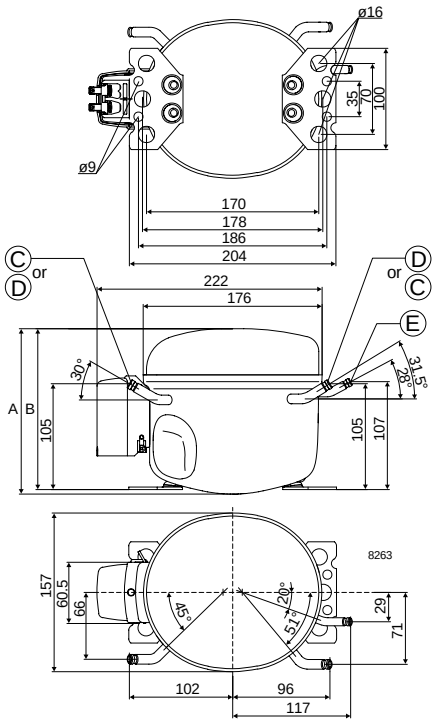
Displacement	cm^3	3.86
Oil quantity	cm^3	280
Maximum refrigerant charge	g	600
Free gas vol. in compressor	cm^3	1690
Weight without electrical equipment	kg	7.6

Motor

Motor size	watt	140
LRA (rated after 4 sec. UL984) HST	A	5.7
Cut-in current HST	A	5.7
Resistance, main and start winding (25°C)	Ω	14.8/14.5
Approvals		EN60 335-1/335-2-34 §19.3

Dimensions

Height	mm	A	173
		B	169
Suction connector	location/I.D. mm	C	6.2 ±0.09
Process connector	location/I.D. mm	D	6.2 ±0.09
Discharge connector	location/I.D. mm	E	5.0 +0.12/+0.20
Compressors on a pallet	pcs.		125



Capacity (CECOMAF) **watt**

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
TL4CL	52	65	84	110	142	155	182	230	286	352

Capacity (ASHRAE) **watt**

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
TL4CL	60	76	98	128	166	180	212	268	334	411

Power consumption **watt**

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
TL4CL	81	91	105	121	140	147	160	179	198	215

Current consumption **A**

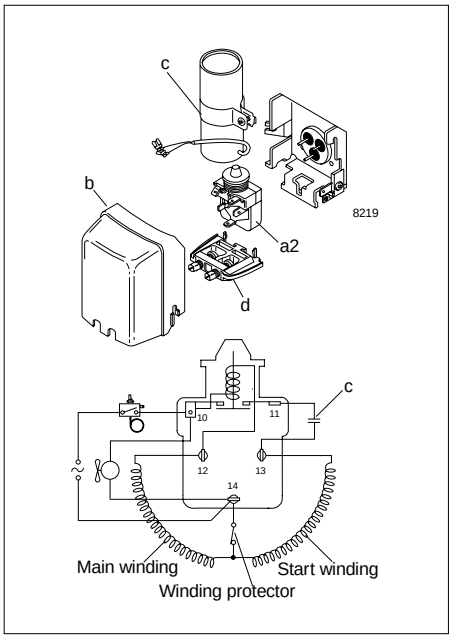
Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
TL4CL	0.89	0.79	0.80	0.88	1.01	1.05	1.14	1.25	1.28	1.31

COP (CECOMAF) **W/W**

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
TL4CL	0.64	0.72	0.81	0.90	1.02	1.06	1.14	1.28	1.45	1.64

COP (ASHRAE) **W/W**

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
TL4CL	0.74	0.83	0.94	1.05	1.18	1.23	1.33	1.50	1.69	1.92



Test conditions	CECOMAF	ASHRAE
Condensing temperature	45°C	45°C
Ambient and suction gas temperature	32°C	32°C
Liuqid temperature	45°C	32°C

Fan cooling F_2, 220V 50Hz

Accessories

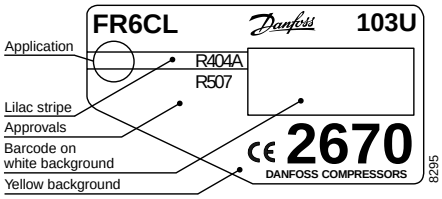
Devices	Fig.	TL4CL
Starting relay	a2	117U6000
Cover	b	103N2010
Starting capacitor 60 µF	c	117U5014
Cord relief	d	103N1010
Mounting accessories		
Bolt joint for one compressor		118-1917
Bolt joint in quantities		118-1918
Snap-on in quantities		118-1919

FR-CL
LBP/MBP Compressor
R404A/R507
220-240V 50Hz

Data Sheet (Replaces CD.53.A3.02)

General

Compressor	FR6CL
Code number	103U2670



Application

Application		LBP/MBP
Evaporating temperature range	°C	-45 to -5
Voltage range	V/Hz	198 - 254 /50
Motor type		CSIR
Max. ambient temperature	°C	38
Comp. cooling at ambient temp.	32°C	F_2
	38°C	F_2

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

Design

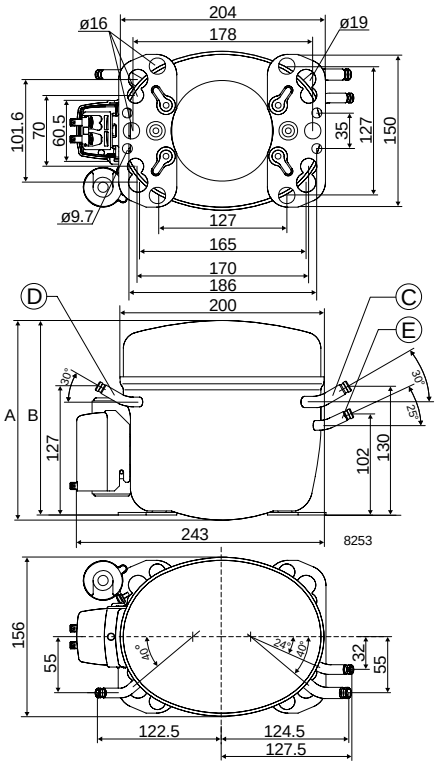
Displacement	cm^3	6.23
Oil quantity	cm^3	450
Maximum refrigerant charge	g	850
Free gas vol. in compressor	cm^3	1350
Weight without electrical equipment	kg	10.5

Motor

Motor size	watt	215
LRA (rated after 4 sec. UL984) HST	A	8.2
Cut-in current HST	A	8.2
Resistance, main and start winding (25°C)	Ω	8.9/12.0
Approvals		EN60 335-1/335-2-34 §19.3

Dimensions

Height	mm	A	196
		B	191
Suction connector	location/I.D. mm	C	8.2 ±0.09
Process connector	location/I.D. mm	D	6.2 ±0.09
Discharge connector	location/I.D. mm	E	6.2 ±0.09
Compressors on a pallet	pcs.		80



Capacity (CECOMAF) watt

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
FR6CL	77	108	145	189	243	263	307	383	473	578

Capacity (ASHRAE) watt

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
FR6CL	90	125	168	220	283	307	358	447	553	676

Power consumption watt

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
FR6CL	126	152	180	210	242	253	276	313	353	395

Current consumption A

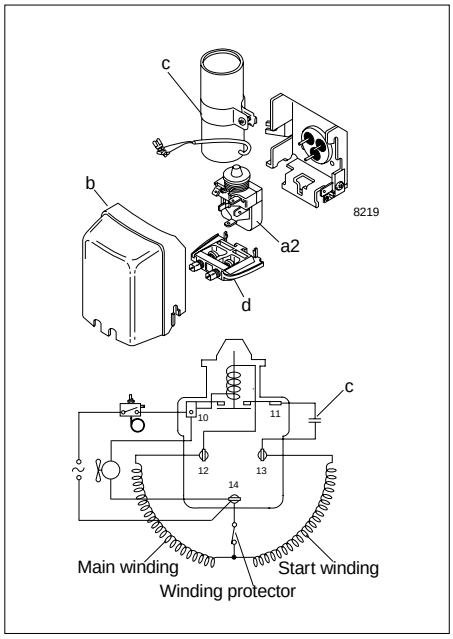
Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
FR6CL	1.13	1.18	1.26	1.35	1.46	1.51	1.60	1.75	1.91	2.09

COP (CECOMAF) W/W

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
FR6CL	0.61	0.71	0.80	0.90	1.00	1.04	1.11	1.22	1.34	1.47

COP (ASHRAE) W/W

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
FR6CL	0.71	0.82	0.94	1.05	1.17	1.21	1.29	1.43	1.57	1.71



Test conditions	CECOMAF	ASHRAE
Condensing temperature	45°C	45°C
Ambient and suction gas temperature	32°C	32°C
Liquid temperature	45°C	32°C

Fan cooling F_2, 220V 50Hz

Accessories

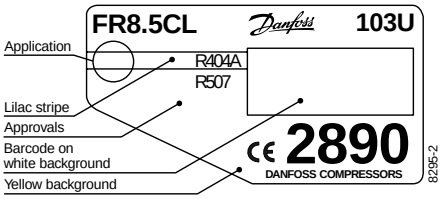
Devices	Fig.	FR6CL
Starting relay	a2	117U6015
Cover	b	103N2010
Starting capacitor 80 µF	c	117U5015
Cord relief	d	103N1010
Mounting accessories		
Bolt joint for one compressor		118-1917
Bolt joint in quantities		118-1918
Snap-on in quantities		118-1919

FR-CL
LBP Compressor
R404A/R507
220-240V 50Hz

Data Sheet

General

Compressor	**FR8.5CL**
Code number	103U2890



Application

Application		LBP
Evaporating temperature range	°C	-45 to -10
Voltage range	V/Hz	198 - 254 /50
Motor type		CSIR
Max. ambient temperature	°C	38
Comp. cooling at ambient temp.	32°C	F_2
	38°C	F_2

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

Design

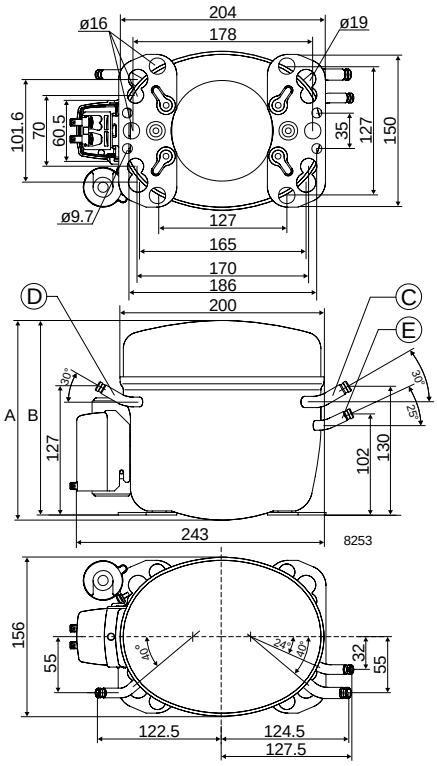
Displacement	cm^3	7.95
Oil quantity	cm^3	450
Maximum refrigerant charge	g	850
Free gas vol. in compressor	cm^3	1350
Weight without electrical equipment	kg	10.6

Motor

Motor size	watt	275
LRA (rated after 4 sec. UL984) HST	A	10.0
Cut-in current HST	A	10.0
Resistance, main and start winding (25°C)	Ω	7.3/12.0
Approvals		EN60 335-1/335-2-34 §19.3

Dimensions

Height	mm	A	196
		B	191
Suction connector	location/I.D. mm	C	8.2 ±0.09
Process connector	location/I.D. mm	D	6.2 ±0.09
Discharge connector	location/I.D. mm	E	6.2 ±0.09
Compressors on a pallet	pcs.		80



Capacity (CECOMAF) watt

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10
FR8.5CL	99	126	168	222	290	317	372	468	577

Capacity (ASHRAE) watt

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10
FR8.5CL	115	147	195	259	338	369	434	546	674

Power consumption watt

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10
FR8.5CL	171	198	231	271	315	331	364	417	472

Current consumption A

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10
FR8.5CL	1.61	1.64	1.72	1.83	1.97	2.03	2.15	2.35	2.57

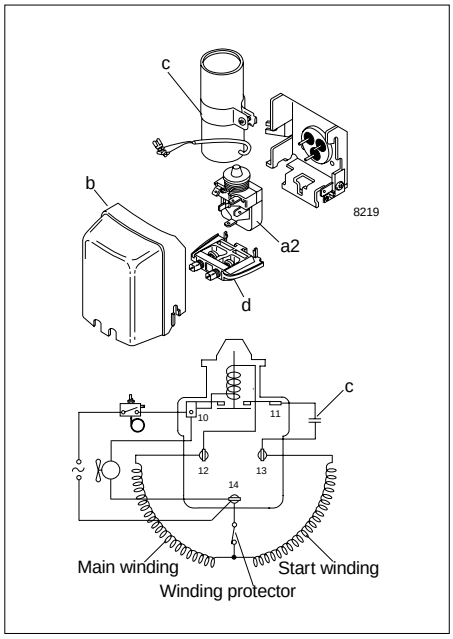
COP (CECOMAF) W/W

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10
FR8.5CL	0.58	0.64	0.72	0.82	0.92	0.96	1.02	1.12	1.22

COP (ASHRAE) W/W

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10
FR8.5CL	0.67	0.74	0.84	0.96	1.07	1.11	1.19	1.31	1.43

Test conditions	CECOMAF	ASHRAE
Condensing temperature	45°C	45°C
Ambient and suction gas temperature	32°C	32°C
Liquid temperature	45°C	32°C
Fan cooling F_2, 220V 50Hz		



Accessories

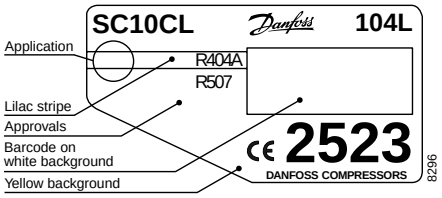
Devices	Fig.	FR8.5CL
Starting relay	a2	117U6010
Cover	b	103N2010
Starting capacitor 80 µF	c	117U5015
Cord relief	d	103N1010
Mounting accessories		
Bolt joint for one compressor		118-1917
Bolt joint in quantities		118-1918
Snap-on in quantities		118-1919

SC-CL
LBP/MBP Compressor
R404A/R507
220-240V 50Hz

Data Sheet (Replaces CD.54.B4.02)

General

Compressor	**SC10CL**
Code number	104L2523



Application

Application		LBP/MBP
Evaporating temperature range	°C	-35 to -5
Voltage range	V/Hz	198 - 254 /50
Motor type		CSIR
Max. ambient temperature	°C	38
Comp. cooling at ambient temp.	32°C	F_2
	38°C	F_2

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

Design

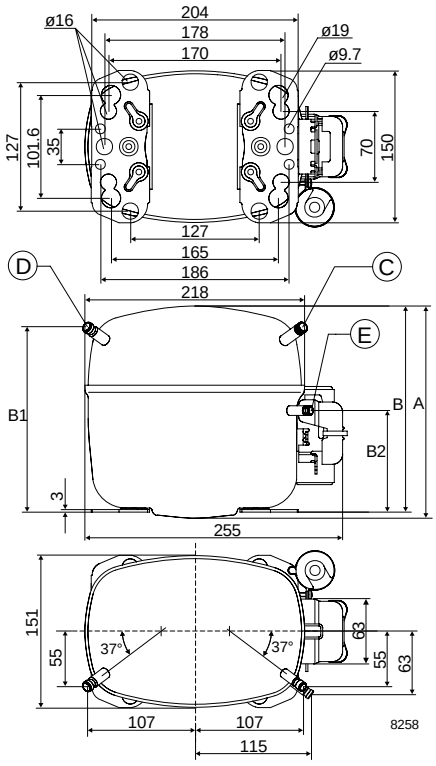
Displacement	cm^3	10.29
Oil quantity	cm^3	600
Maximum refrigerant charge	g	1300
Free gas vol. in compressor	cm^3	1410
Weight without electrical equipment	kg	13.1

Motor

Motor size	watt	315
LRA (rated after 4 sec. UL984) HST	A	12.6
Cut-in current HST	A	12.6
Resistance, main and start winding (25°C)	Ω	6.7/11.8
Approvals		EN60 335-1/335-2-34 §19.3

Dimensions

Height	mm	A	209
		B	203
		B1	183
		B2	100
Suction connector	location/I.D. mm	C	8.2 ±0.09
Process connector	location/I.D. mm	D	6.2 ±0.09
Discharge connector	location/I.D. mm	E	6.2 ±0.09
Compressors on a pallet	pcs.		80



Capacity (CECOMAF) **watt**

Comp.\°C	-35	-30	-25	-23.3	-20	-15	-10	-5
SC10CL	159	241	341	379	459	595	749	921

Capacity (ASHRAE) **watt**

Comp.\°C	-35	-30	-25	-23.3	-20	-15	-10	-5
SC10CL	185	280	397	442	535	694	875	1077

Power consumption **watt**

Comp.\°C	-35	-30	-25	-23.3	-20	-15	-10	-5
SC10CL	241	290	340	356	389	438	487	536

Current consumption **A**

Comp.\°C	-35	-30	-25	-23.3	-20	-15	-10	-5
SC10CL	1.84	1.99	2.15	2.20	2.32	2.50	2.70	2.90

COP (CECOMAF) **W/W**

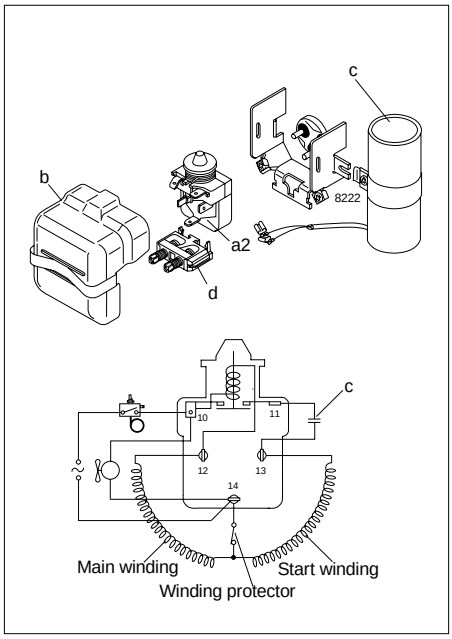
Comp.\°C	-35	-30	-25	-23.3	-20	-15	-10	-5
SC10CL	0.66	0.83	1.00	1.06	1.18	1.36	1.54	1.72

COP (ASHRAE) **W/W**

Comp.\°C	-35	-30	-25	-23.3	-20	-15	-10	-5
SC10CL	0.77	0.97	1.17	1.24	1.37	1.58	1.80	2.01

Test conditions	CECOMAF	ASHRAE
Condensing temperature	45°C	45°C
Ambient and suction gas temperature	32°C	32°C
Liquid temperature	45°C	32°C

Fan cooling F_2, 220V 50Hz



Accessories

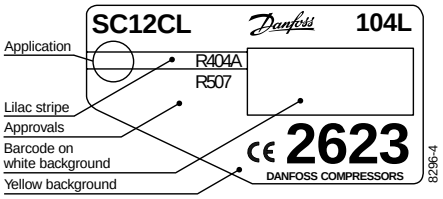
Devices	Fig.	SC10CL
Starting relay	a2	117U6003
Cover	b	103N2002
Starting capacitor 80 µF	c	117U5017
Cord relief	d	103N1004
Mounting accessories		
Bolt joint for one compressor		118-1917
Bolt joint in quantities		118-1918
Snap-on in quantities		118-1919

SC-CL
LBP/MBP Compressor
R404A/R507
220-240V 50Hz

Data Sheet

General

Compressor	SC12CL
Code number	104L2623



Application

Application		LBP/MBP
Evaporating temperature range	°C	-45 to -5
Voltage range	V/Hz	198 - 254 /50
Motor type		CSIR
Max. ambient temperature	°C	38
Comp. cooling at ambient temp.	32°C	F_2
	38°C	F_2

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

Design

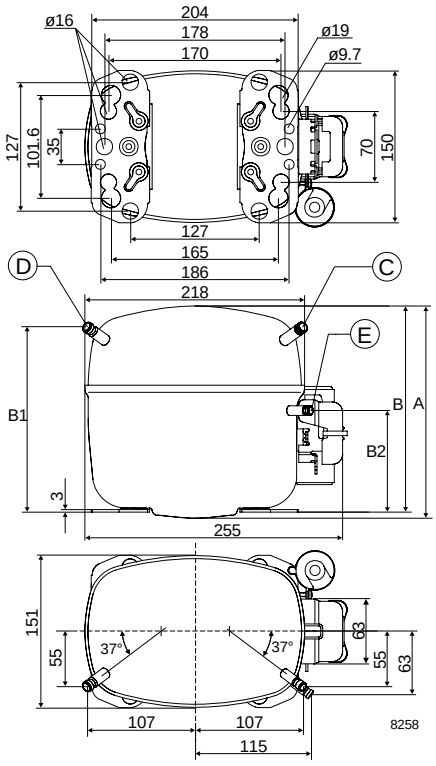
Displacement	cm^3	12.87
Oil quantity	cm^3	600
Maximum refrigerant charge	g	1300
Free gas vol. in compressor	cm^3	1410
Weight without electrical equipment	kg	12.5

Motor

Motor size	watt	385
LRA (rated after 4 sec. UL984) HST	A	14.8
Cut-in current HST	A	14.8
Resistance, main and start winding (25°C)	Ω	5.0/13.7
Approvals		EN60 335-1/335-2-34 §19.3

Dimensions

Height	mm	A	209
		B	203
		B1	183
		B2	100
Suction connector	location/I.D. mm	C	8.2 ±0.09
Process connector	location/I.D. mm	D	6.2 ±0.09
Discharge connector	location/I.D. mm	E	6.2 ±0.09
Compressors on a pallet	pcs.		80



Capacity (CECOMAF) watt

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
SC12CL	75	148	239	348	475	522	619	781	961	1159

Capacity (ASHRAE) watt

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
SC12CL	87	172	278	405	553	608	722	912	1123	1356

Power consumption watt

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
SC12CL	195	254	313	372	431	451	491	551	612	673

Current consumption A

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
SC12CL	2.02	2.21	2.38	2.55	2.72	2.78	2.91	3.11	3.36	3.64

COP (CECOMAF) W/W

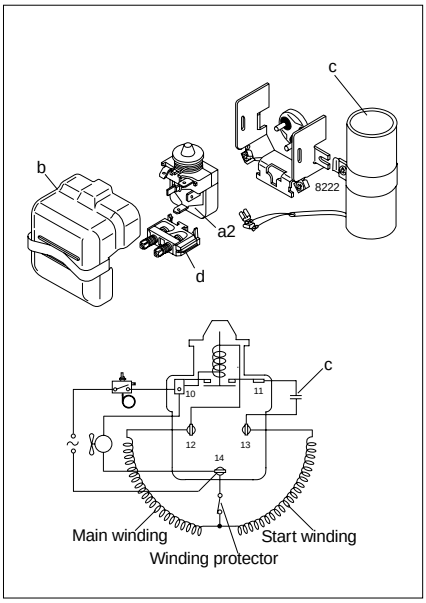
Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
SC12CL	0.38	0.58	0.77	0.94	1.10	1.16	1.26	1.42	1.57	1.72

COP (ASHRAE) W/W

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
SC12CL	0.45	0.68	0.89	1.09	1.28	1.35	1.47	1.65	1.84	2.01

Test conditions	CECOMAF	ASHRAE
Condensing temperature	45°C	45°C
Ambient and suction gas temperature	32°C	32°C
Liquid temperature	45°C	32°C

Fan cooling F_2, 220V 50Hz



Accessories

Devices	Fig.	SC12CL
Starting relay	a2	117U6005
Cover	b	103N2002
Starting capacitor 80 µF	c	117U5017
Cord relief	d	103N1004
Mounting accessories		
Bolt joint for one compressor		118-1917
Bolt joint in quantities		118-1918
Snap-on in quantities		118-1919

SC-CL
LBP/MBP Compressor
R404A/R507
220-240V 50Hz

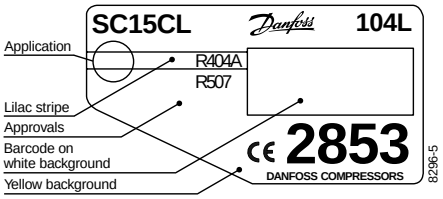
Data Sheet

General

Compressor	**SC15CL**
Code number	104L2853

Application

Application		LBP/MBP
Evaporating temperature range	°C	-45 to -5
Voltage range	V/Hz	198 - 254 /50
Motor type		CSIR
Max. ambient temperature	°C	38
Comp. cooling at ambient temp.	32°C	F_2
	38°C	F_2



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

Design

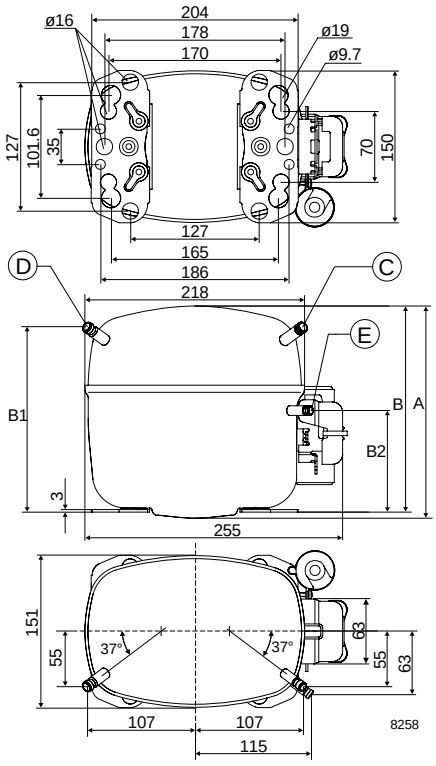
Displacement	cm^3	15.28
Oil quantity	cm^3	600
Maximum refrigerant charge	g	1300
Free gas vol. in compressor	cm^3	1460
Weight without electrical equipment	kg	13.8

Motor

Motor size	watt	495
LRA (rated after 4 sec. UL984) HST	A	18.6
Cut-in current HST	A	18.6
Resistance, main and start winding (25°C)	Ω	3.7/14.1
Approvals		EN60 335-1/335-2-34 §19.3

Dimensions

Height	mm	A	219
		B	213
		B1	193
		B2	110
Suction connector	location/I.D. mm	C	10.2 ±0.09
Process connector	location/I.D. mm	D	6.2 ±0.09
Discharge connector	location/I.D. mm	E	6.2 ±0.09
Compressors on a pallet	pcs.		80



Capacity (CECOMAF) **watt**

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
SC15CL	130	211	313	438	585	639	753	943	1155	1389

Capacity (ASHRAE) **watt**

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
SC15CL	151	245	364	510	681	745	878	1101	1350	1625

Power consumption **watt**

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
SC15CL	251	315	379	445	512	535	580	649	719	791

Current consumption **A**

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
SC15CL	2.39	2.53	2.69	2.88	3.09	3.17	3.33	3.59	3.87	4.17

COP (CECOMAF) **W/W**

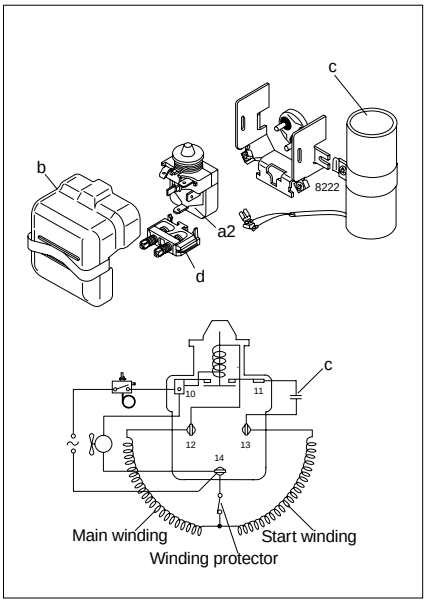
Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
SC15CL	0.52	0.67	0.83	0.98	1.14	1.20	1.30	1.45	1.61	1.76

COP (ASHRAE) **W/W**

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
SC15CL	0.60	0.78	0.96	1.15	1.33	1.39	1.51	1.70	1.88	2.05

Test conditions	CECOMAF	ASHRAE
Condensing temperature	45°C	45°C
Ambient and suction gas temperature	32°C	32°C
Liquid temperature	45°C	32°C

Fan cooling F_2, 220V 50Hz



Accessories

Devices	Fig.	SC15CL
Starting relay	a2	117U6019
Cover	b	103N2002
Starting capacitor 80 µF	c	117U5017
Cord relief	d	103N1004
Mounting accessories		
Bolt joint for one compressor		118-1917
Bolt joint in quantities		118-1918
Snap-on in quantities		118-1919

SC-CL
LBP/MBP Compressor
R404A/R507
220-240V 50Hz

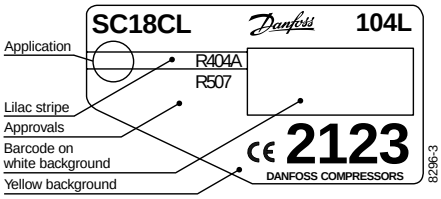
Data Sheet (Replaces CD.54.I2.02)

General

Compressor	**SC18CL**
Code number	104L2123

Application

Application		LBP/MBP
Evaporating temperature range	°C	-45 to -5
Voltage range	V/Hz	198 - 254 /50
Motor type		CSR
Max. ambient temperature	°C	38
Comp. cooling at ambient temp.	32°C	F_2
	38°C	F_2



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

Design

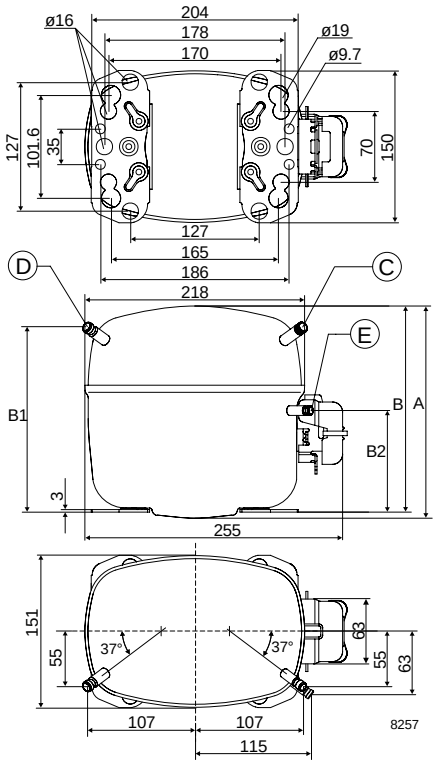
Displacement	cm^3	17.69
Oil quantity	cm^3	600
Maximum refrigerant charge	g	1300
Free gas vol. in compressor	cm^3	1460
Weight without electrical equipment	kg	13.7

Motor

Motor size	watt	495
LRA (rated after 4 sec. UL984) HST	A	20.0
Cut-in current HST	A	20.0
Resistance, main and start winding (25°C)	Ω	3.7/14.1
Approvals		EN60 335-1/335-2-34 §19.3

Dimensions

Height	mm	A	219
		B	213
		B1	193
		B2	110
Suction connector	location/I.D. mm	C	10.2 ±0.09
Process connector	location/I.D. mm	D	6.2 ±0.09
Discharge connector	location/I.D. mm	E	6.2 ±0.09
Compressors on a pallet	pcs.		80



Capacity (CECOMAF) watt

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
SC18CL	166	262	382	525	691	753	881	1095	1332	1593

Capacity (ASHRAE) watt

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
SC18CL	193	305	444	611	805	878	1027	1277	1556	1863

Power consumption watt

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
SC18CL	317	378	446	521	603	632	692	789	893	1005

Current consumption A

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
SC18CL	2.53	2.65	2.85	3.10	3.41	3.52	3.76	4.17	4.61	5.08

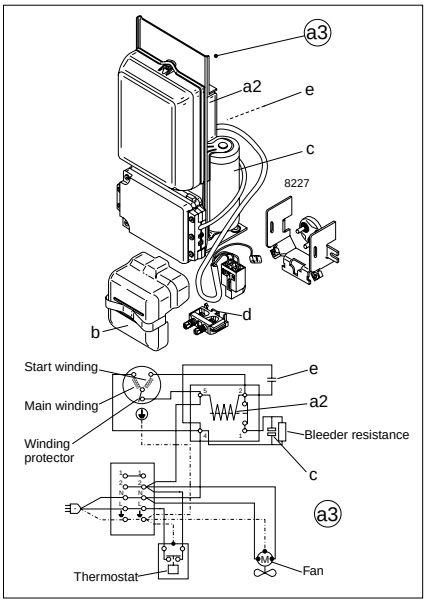
COP (CECOMAF) W/W

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
SC18CL	0.52	0.69	0.86	1.01	1.15	1.19	1.27	1.39	1.49	1.59

COP (ASHRAE) W/W

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
SC18CL	0.61	0.81	1.00	1.17	1.34	1.39	1.48	1.62	1.74	1.85

Test conditions	CECOMAF	ASHRAE
Condensing temperature	45°C	45°C
Ambient and suction gas temperature	32°C	32°C
Liquid temperature	45°C	32°C
Fan cooling F_2, 220V 50Hz		



Accessories

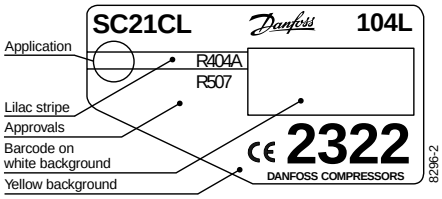
Devices	Fig.	SC18CL
Starting device	a3	117-7012 (470 mm cable length) 117-7027 (550 mm cable length) 117-7040 (1000 mm cable length)
Cover	b	103N2002
Starting relay	a2	Components of starting device
Starting capacitor 80 µF	c	
Run capacitor	e	
Cord relief	d	103N1004
Mounting accessories Bolt joint for one compressor Bolt joint in quantities Snap-on in quantities		118-1917 118-1918 118-1919

SC-CL
LBP Compressor
R404A/R507
220-240V 50Hz

Data Sheet

General

Compressor	**SC21CL**
Code number	104L2322



Application

Application		LBP
Evaporating temperature range	°C	-45 to -10
Voltage range	V/Hz	198 - 254 /50
Motor type		CSR
Max. ambient temperature	°C	38
Comp. cooling at ambient temp.	32°C	F_2
	38°C	F_2

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

Design

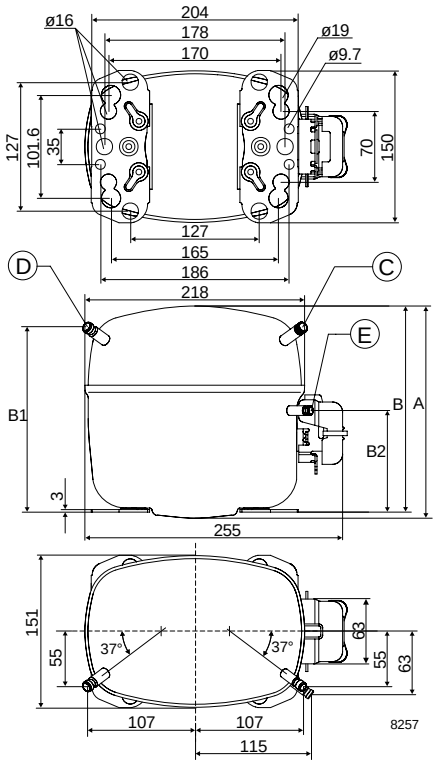
Displacement	cm^3	20.95
Oil quantity	cm^3	600
Maximum refrigerant charge	g	1300
Free gas vol. in compressor	cm^3	1460
Weight without electrical equipment	kg	14.0

Motor

Motor size	watt	590
LRA (rated after 4 sec. UL984) HST	A	23.4
Cut-in current HST	A	23.4
Resistance, main and start winding (25°C)	Ω	3.4/14.4
Approvals		EN60 335-1/335-2-34 §19.3

Dimensions

Height	mm	A	219
		B	213
		B1	193
		B2	110
Suction connector	location/I.D. mm	C	10.2 ±0.09
Process connector	location/I.D. mm	D	6.2 ±0.09
Discharge connector	location/I.D. mm	E	6.2 ±0.09
Compressors on a pallet	pcs.		80



Capacity (CECOMAF) **watt**

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10
SC21CL	226	325	455	617	813	887	1042	1306	1606

Capacity (ASHRAE) **watt**

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10
SC21CL	263	378	529	719	947	1033	1215	1524	1876

Power consumption **watt**

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10
SC21CL	400	462	534	615	702	733	795	891	989

Current consumption **A**

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10
SC21CL	2.40	2.63	2.94	3.31	3.71	3.86	4.14	4.58	5.00

COP (CECOMAF) **W/W**

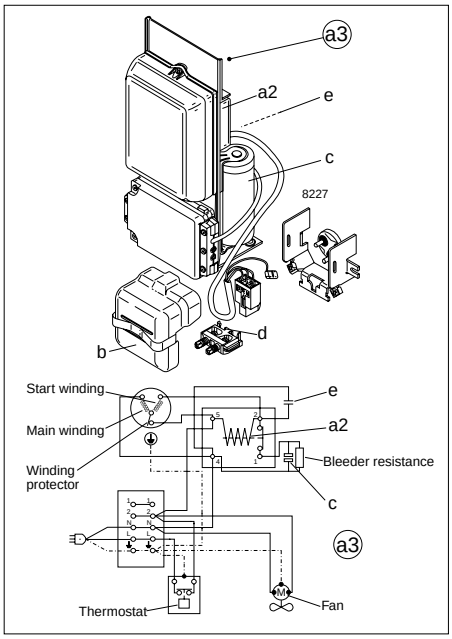
Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10
SC21CL	0.57	0.70	0.85	1.00	1.16	1.21	1.31	1.47	1.62

COP (ASHRAE) **W/W**

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10
SC21CL	0.66	0.82	0.99	1.17	1.35	1.41	1.53	1.71	1.90

Test conditions	CECOMAF	ASHRAE
Condensing temperature	45°C	45°C
Ambient and suction gas temperature	32°C	32°C
Liquid temperature	45°C	32°C

Fan cooling F_2, 220V 50Hz



Accessories

Devices	Fig.	SC21CL
Starting device	a3	117-7012 (470 mm cable length) 117-7027 (550 mm cable length) 117-7040 (1000 mm cable length)
Cover	b	103N2002
Starting relay	a2	Components of starting device
Starting capacitor 80 µF	c	
Run capacitor	e	
Cord relief	d	103N1004
Mounting accessories Bolt joint for one compressor Bolt joint in quantities Snap-on in quantities		118-1917 118-1918 118-1919

SC-CL
LBP/MBP Twin Compressor
R404A/R507
220-240V 50Hz

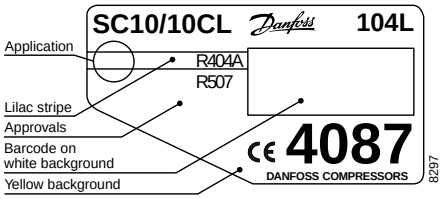
Data Sheet (Replaces CD.54.C2.02)

General

Compressor	**SC10/10CL**
Code number	104L4087

Application

Application		LBP/MBP
Evaporating temperature range	°C	-35 to -5
Voltage range	V/Hz	198 - 254 /50
Motor type		CSIR
Max. ambient temperature	°C	38
Comp. cooling at ambient temp.	32°C	F_2
	38°C	F_2



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

Design

Displacement	cm^3	2 x 10.29
Oil quantity	cm^3	1220
Maximum refrigerant charge	g	2200
Free gas vol. in compressor	cm^3	2820
Weight without electrical equipment	kg	26.3

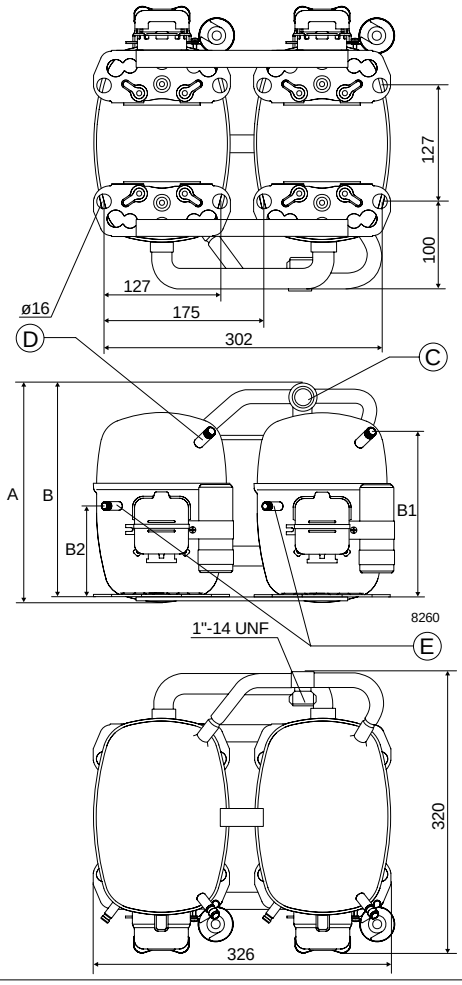
Motor

Motor size	watt	2 x 315
LRA (rated after 4 sec. UL984) HST*	A	12.6
Cut-in current HST*	A	12.6
Resistance, main and start winding (25°C)	Ω	6.7/11.8
Approvals		EN60 335-1/335-2-34 §19.3

* Operational current for the second compressor time-delayed.

Dimensions

Height	mm	A	249
		B	244
		B1	183
		B2	100
Suction connector			
Service valve	location/I.D. mm	C	12
Solder connector	location/I.D. mm	C	12
Process connector	location/I.D. mm	D	6.2 ±0.09
Discharge connector	location/I.D. mm	E	6.2 ±0.09
Compressors on a pallet	pcs.		18



Capacity (CECOMAF) watt

Comp.\°C	-35	-30	-25	-23.3	-20	-15	-10	-5
SC10/10CL	318	482	682	758	918	1190	1498	1842

Capacity (ASHRAE) watt

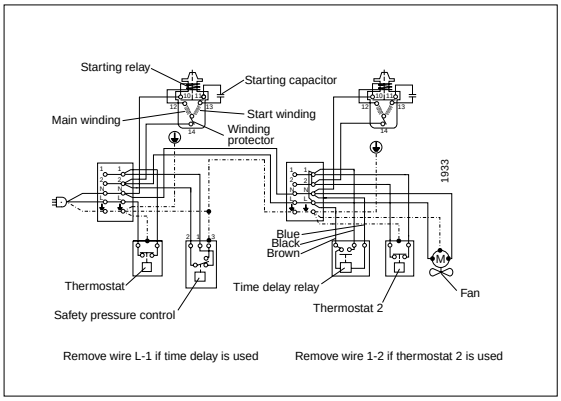
Comp.\°C	-35	-30	-25	-23.3	-20	-15	-10	-5
SC10/10CL	370	561	794	883	1070	1388	1750	2155

Power consumption watt

Comp.\°C	-35	-30	-25	-23.3	-20	-15	-10	-5
SC10/10CL	482	580	679	713	778	877	975	1072

Current consumption A

Comp.\°C	-35	-30	-25	-23.3	-20	-15	-10	-5
SC10/10CL	3.68	3.97	4.29	4.41	4.64	5.01	5.40	5.80



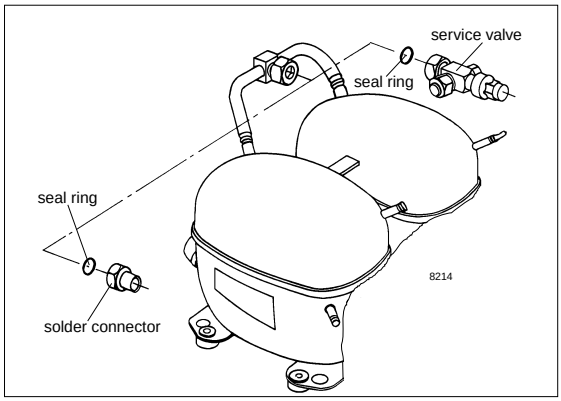
COP (CECOMAF) W/W

Comp.\°C	-35	-30	-25	-23.3	-20	-15	-10	-5
SC10/10CL	0.66	0.83	1.00	1.06	1.18	1.36	1.54	1.72

COP (ASHRAE) W/W

Comp.\°C	-35	-30	-25	-23.3	-20	-15	-10	-5
SC10/10CL	0.77	0.97	1.17	1.24	1.37	1.58	1.80	2.01

Test conditions	CECOMAF	ASHRAE
Condensing temperature	45°C	45°C
Ambient and suction gas temperature	32°C	32°C
Liquid temperature	45°C	32°C
Fan cooling F_2, 220V 50Hz		



Accessories

Devices	pcs.	SC10/10CL
Starting relay	2	117U6003
Starting capacitor 80 µF	2	117U5017
Cover	2	103N2002
Cord relief	2	103N1004
Time-delay relay Check valve (to be used with time-delay relay)	1 2	117N0001 020-1014
Service valve	1	118-7350 (12 mm)
Solder connector	1	104B0584 (12 mm)
Seal ring for service valve and solder connector	1	118-3638
Mounting accessories Bolt joint for one compressor Bolt joint in quantities	2	 118-1917 118-1918

SC-CL
LBP/MBP Twin Compressor
R404A/R507
220-240V 50Hz

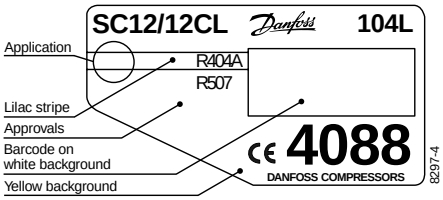
Data Sheet

General

Compressor	**SC12/12CL**
Code number	104L4088

Application

Application		LBP/MBP
Evaporating temperature range	°C	-45 to -5
Voltage range	V/Hz	198 - 254 /50
Motor type		CSIR
Max. ambient temperature	°C	38
Comp. cooling at ambient temp.	32°C	F_2
	38°C	F_2



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

Design

Displacement	cm^3	2 x 12.87
Oil quantity	cm^3	1220
Maximum refrigerant charge	g	2200
Free gas vol. in compressor	cm^3	2820
Weight without electrical equipment	kg	27.3

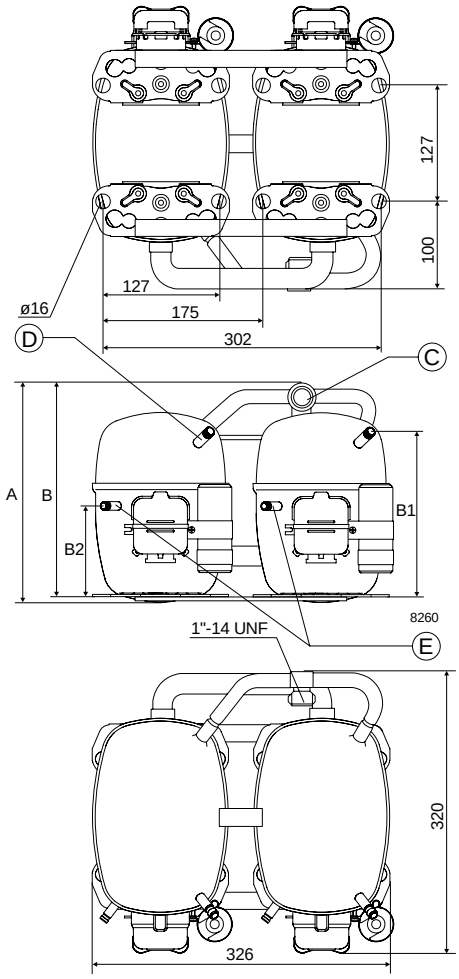
Motor

Motor size	watt	2 x 385
LRA (rated after 4 sec. UL984) HST*	A	14.8
Cut-in current HST*	A	14.8
Resistance, main and start winding (25°C)	Ω	5.0/13.7
Approvals		EN60 335-1/335-2-34 §19.3

***** Operational current for the second compressor time-delayed.

Dimensions

Height	mm	A	249
		B	244
		B1	183
		B2	100
Suction connector			
Service valve	location/I.D. mm	C	12
Solder connector	location/I.D. mm	C	12
Process connector	location/I.D. mm	D	6.2 ±0.09
Discharge connector	location/I.D. mm	E	6.2 ±0.09
Compressors on a pallet	pcs.		18



Capacity (CECOMAF) **watt**

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
SC12/12CL	150	297	479	696	950	1044	1238	1563	1922	2318

Capacity (ASHRAE) **watt**

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
SC12/12CL	174	345	557	811	1106	1216	1444	1823	2246	2711

Power consumption **watt**

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
SC12/12CL	390	508	625	743	862	903	982	1102	1224	1346

Current consumption **A**

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
SC12/12CL	4.04	4.42	4.76	5.10	5.44	5.56	5.81	6.23	6.71	7.28

COP (CECOMAF) **W/W**

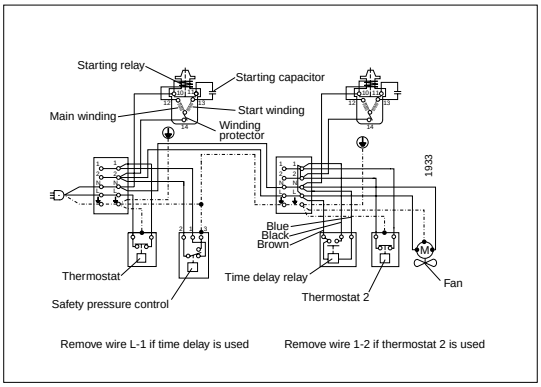
Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
SC12/12CL	0.38	0.58	0.77	0.94	1.10	1.16	1.26	1.42	1.57	1.72

COP (ASHRAE) **W/W**

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
SC12/12CL	0.45	0.68	0.89	1.09	1.28	1.35	1.47	1.65	1.84	2.01

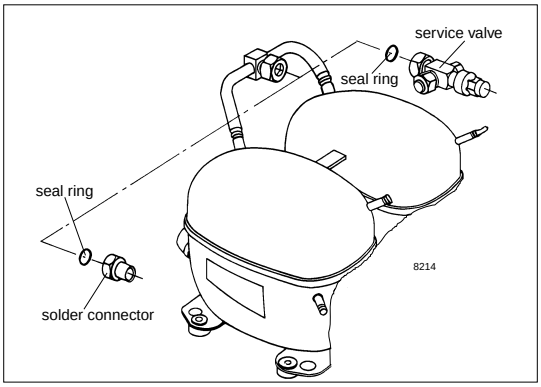
Test conditions	CECOMAF	ASHRAE
Condensing temperature	45°C	45°C
Ambient and suction gas temperature	32°C	32°C
Liquid temperature	45°C	32°C

Fan cooling F_2, 220V 50Hz



Accessories

Devices	pcs.	SC12/12CL
Starting relay	2	117U6005
Starting capacitor 80 µF	2	117U5017
Cover	2	103N2002
Cord relief	2	103N1004
Time-delay relay Check valve (to be used with time-delay relay)	1 2	117N0001 020-1014
Service valve	1	118-7350 (12 mm)
Solder connector	1	104B0584 (12 mm)
Seal ring for service valve and solder connector	1	118-3638
Mounting accessories Bolt joint for one compressor Bolt joint in quantities	2	 118-1917 118-1918



SC-CL
LBP/MBP Twin Compressor
R404A/R507
220-240V 50Hz

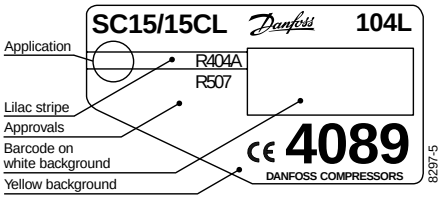
Data Sheet

General

Compressor	**SC15/15CL**
Code number	104L4089

Application

Application		LBP/MBP
Evaporating temperature range	°C	-45 to -5
Voltage range	V/Hz	198 - 254 /50
Motor type		CSIR
Max. ambient temperature	°C	38
Comp. cooling at ambient temp.	32°C	F_2
	38°C	F_2



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

Design

Displacement	cm^3	2 x 15.28
Oil quantity	cm^3	1220
Maximum refrigerant charge	g	2200
Free gas vol. in compressor	cm^3	2920
Weight without electrical equipment	kg	29.1

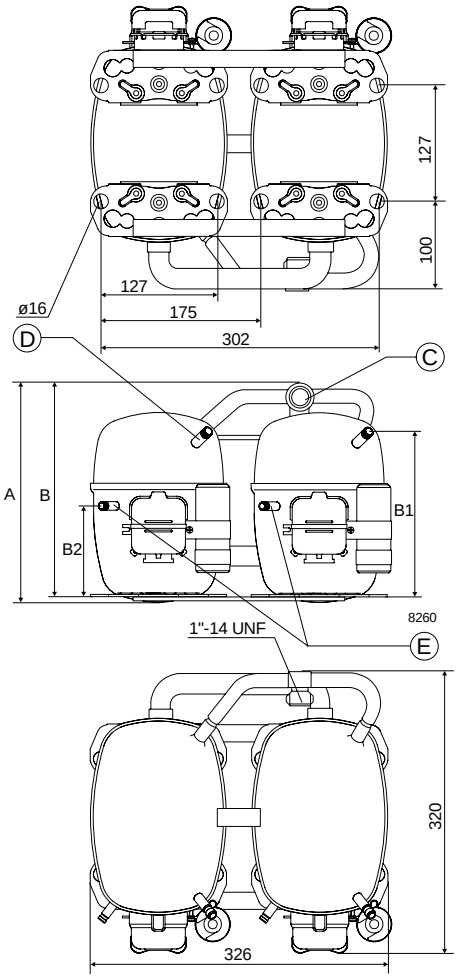
Motor

Motor size	watt	2 x 495
LRA (rated after 4 sec. UL984) HST*	A	18.6
Cut-in current HST*	A	18.6
Resistance, main and start winding (25°C)	Ω	3.7/14.1
Approvals		EN60 335-1/335-2-34 §19.3

* Operational current for the second compressor time-delayed.

Dimensions

Height	mm	A	259
		B	254
		B1	193
		B2	110
Suction connector			
Service valve	location/I.D. mm	C	12
Solder connector	location/I.D. mm	C	12
Process connector	location/I.D. mm	D	6.2 ±0.09
Discharge connector	location/I.D. mm	E	6.2 ±0.09
Compressors on a pallet	pcs.		18



Capacity (CECOMAF) **watt**

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
SC15/15CL	260	421	627	876	1169	1279	1506	1886	2310	2778

Capacity (ASHRAE) **watt**

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
SC15/15CL	302	490	729	1019	1326	1490	1756	2201	2699	3249

Power consumption **watt**

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
SC15/15CL	502	629	758	890	1023	1069	1159	1298	1439	1582

Current consumption **A**

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
SC15/15CL	4.78	5.05	5.38	5.76	6.19	6.35	6.66	7.19	7.75	8.34

COP (CECOMAF) **W/W**

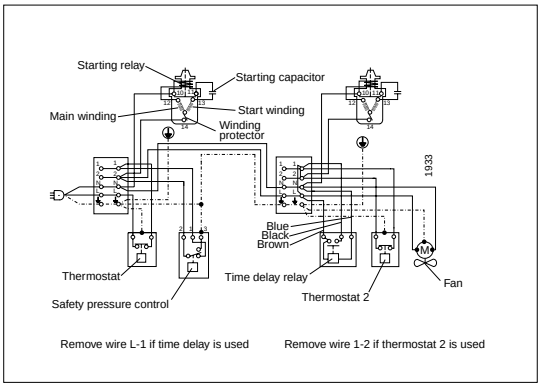
Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
SC15/15CL	0.52	0.67	0.83	0.98	1.14	1.20	1.30	1.45	1.61	1.76

COP (ASHRAE) **W/W**

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
SC15/15CL	0.60	0.78	0.96	1.15	1.33	1.39	1.51	1.70	1.88	2.05

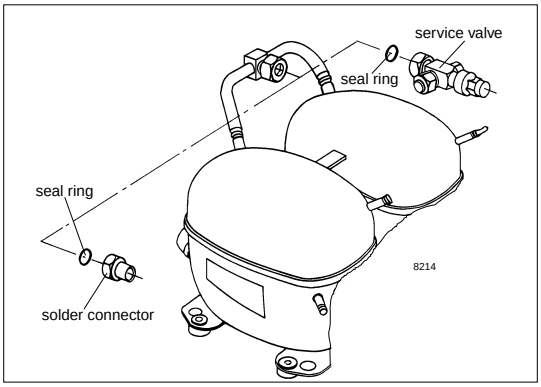
Test conditions	CECOMAF	ASHRAE
Condensing temperature	45°C	45°C
Ambient and suction gas temperature	32°C	32°C
Liquid temperature	45°C	32°C

Fan cooling F_2, 220V 50Hz



Accessories

Devices	pcs.	SC15/15CL
Starting relay	2	117U6019
Starting capacitor 80 µF	2	117U5017
Cover	2	103N2002
Cord relief	2	103N1004
Time-delay relay Check valve (to be used with time-delay relay)	1 2	117N0001 020-1014
Service valve	1	118-7350 (12 mm)
Solder connector	1	104B0584 (12 mm)
Seal ring for service valve and solder connector	1	118-3638
Mounting accessories Bolt joint for one compressor Bolt joint in quantities	2	 118-1917 118-1918



SC-CL
LBP/MBP Twin Compressor
R404A/R507
220-240V 50Hz

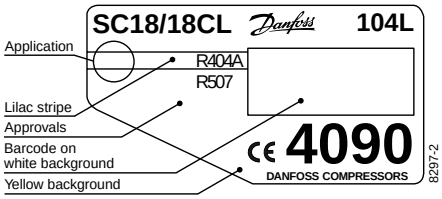
Data Sheet (Replaces CD.54.F3.02)

General

Compressor	SC18/18CL
Code number	104L4090

Application

Application		LBP/MBP
Evaporating temperature range	°C	-45 to -5
Voltage range	V/Hz	198 - 254 /50
Motor type		CSR
Max. ambient temperature	°C	38
Comp. cooling at ambient temp.	32°C	F_2
	38°C	F_2



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

Design

Displacement	cm^3	2 x 17.69
Oil quantity	cm^3	1220
Maximum refrigerant charge	g	2200
Free gas vol. in compressor	cm^3	2920
Weight without electrical equipment	kg	29.1

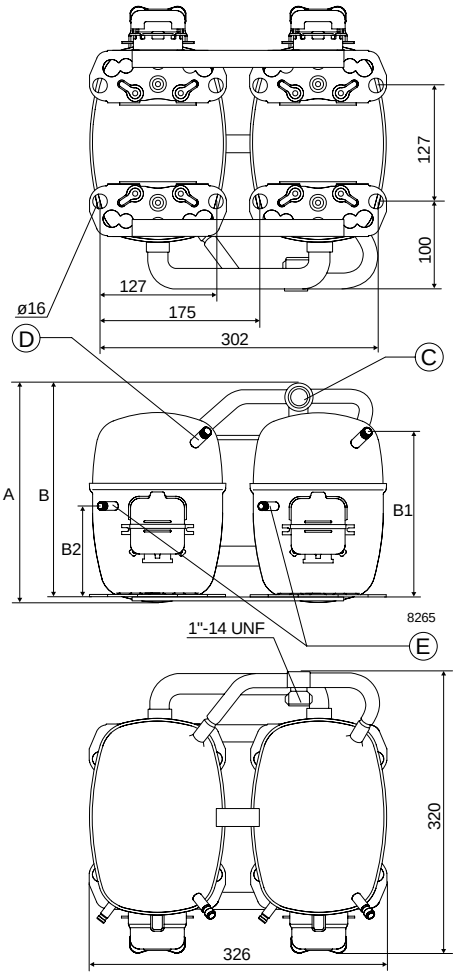
Motor

Motor size	watt	2 x 495
LRA (rated after 4 sec. UL984) HST*	A	20.0
Cut-in current HST*	A	20.0
Resistance, main and start winding (25°C)	Ω	3.7/14.1
Approvals		EN60 335-1/335-2-34 §19.3

* Operational current for the second compressor time-delayed.

Dimensions

Height	mm	A	259
		B	254
		B1	193
		B2	110
Suction connector			
Service valve	location/I.D. mm	C	16
Solder connector	location/I.D. mm	C	16
Process connector	location/I.D. mm	D	6.2 ±0.09
Discharge connector	location/I.D. mm	E	6.2 ±0.09
Compressors on a pallet	pcs.		18



Capacity (CECOMAF) watt

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
SC18/18CL	332	525	764	1050	1383	1507	1763	2189	2664	3186

Capacity (ASHRAE) watt

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
SC18/18CL	386	610	889	1222	1611	1755	2055	2555	3112	3727

Power consumption watt

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
SC18/18CL	634	755	891	1041	1205	1265	1384	1578	1786	2010

Current consumption A

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
SC18/18CL	5.06	5.31	5.69	6.20	6.81	7.05	7.53	8.33	9.21	10.16

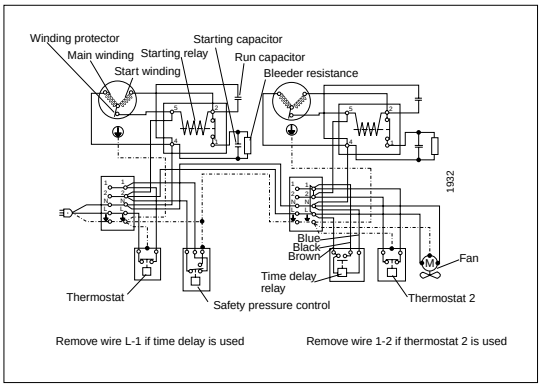
COP (CECOMAF) W/W

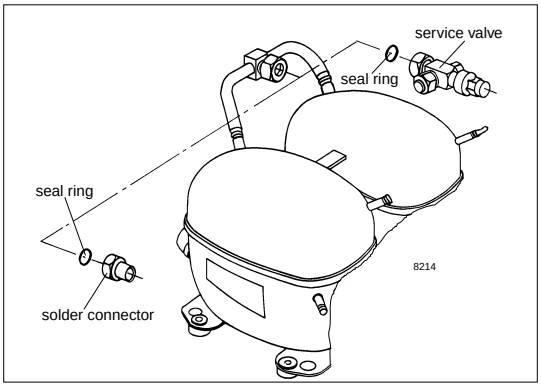
Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
SC18/18CL	0.52	0.69	0.86	1.01	1.15	1.19	1.27	1.39	1.49	1.59

COP (ASHRAE) W/W

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5
SC18/18CL	0.61	0.81	1.00	1.17	1.34	1.39	1.48	1.62	1.74	1.85

Test conditions	CECOMAF	ASHRAE
Condensing temperature	45°C	45°C
Ambient and suction gas temperature	32°C	32°C
Liquid temperature	45°C	32°C
Fan cooling F_2, 220V 50Hz		





Accessories

Devices	pcs.	SC18/18CL
Starting device	2	117-7012 (470 mm cable length) 117-7027 (550 mm cable length)
Cover	2	103N2002
Cord relief	2	103N1004
Time-delay relay Check valve (to be used with time-delay relay)	1 2	117N0001 020-1014
Service valve	1	118-7351 (16 mm)
Solder connector	1	118-7405 (16 mm)
Seal ring for service valve and solder connector	1	118-3638
Mounting accessories Bolt joint for one compressor Bolt joint in quantities	2	 118-1917 118-1918

SC-CL
LBP Twin Compressor
R404A/R507
220-240V 50Hz

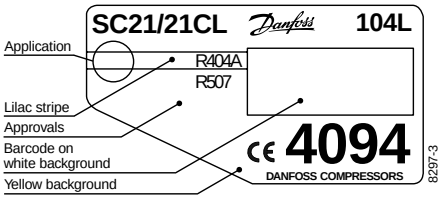
Data Sheet

General

Compressor	**SC21/21CL**
Code number	104L4094

Application

Application		LBP
Evaporating temperature range	°C	-45 to -10
Voltage range	V/Hz	198 - 254 /50
Motor type		CSR
Max. ambient temperature	°C	38
Comp. cooling at ambient temp.	32°C	F_2
	38°C	F_2



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

Design

Displacement	cm^3	2 x 20.95
Oil quantity	cm^3	1220
Maximum refrigerant charge	g	2200
Free gas vol. in compressor	cm^3	2920
Weight without electrical equipment	kg	29.1

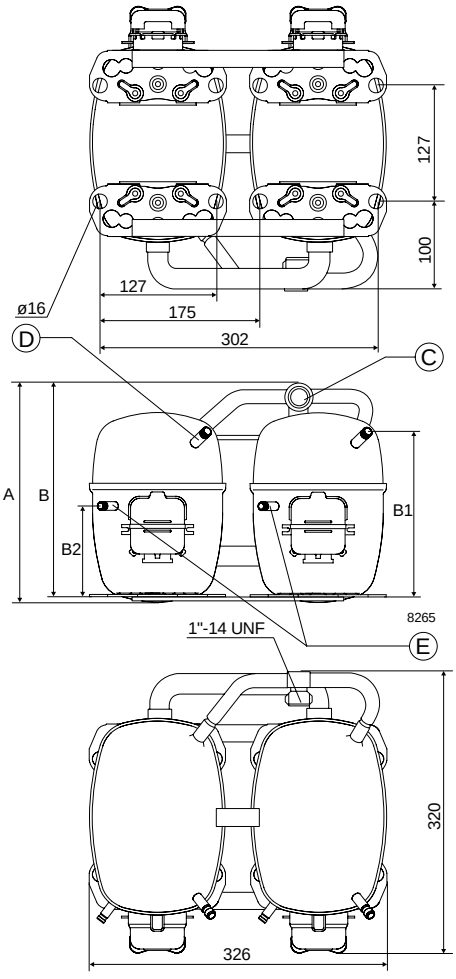
Motor

Motor size	watt	2 x 590
LRA (rated after 4 sec. UL984) HST*	A	23.4
Cut-in current HST*	A	23.4
Resistance, main and start winding (25°C)	Ω	3.4/14.4
Approvals		EN60 335-1, EN60 335-2-34 §19.3

***** Operational current for the second compressor time-delayed.

Dimensions

Height	mm	A	259
		B	254
		B1	193
		B2	110
Suction connector			
Service valve	location/I.D. mm	C	16
Solder connector	location/I.D. mm	C	16
Process connector	location/I.D. mm	D	6.2 ±0.09
Discharge connector	location/I.D. mm	E	6.2 ±0.09
Compressors on a pallet	pcs.		18



Capacity (CECOMAF) **watt**

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10
SC21/21CL	452	650	910	1235	1626	1774	2084	2613	3213

Capacity (ASHRAE) **watt**

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10
SC21/21CL	525	755	1059	1437	1893	2068	2430	3049	3753

Power consumption **watt**

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10
SC21/21CL	799	924	1068	1230	1404	1466	1589	1782	1978

Current consumption **A**

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10
SC21/21CL	4.80	5.27	5.88	6.61	7.42	7.71	8.28	9.15	9.99

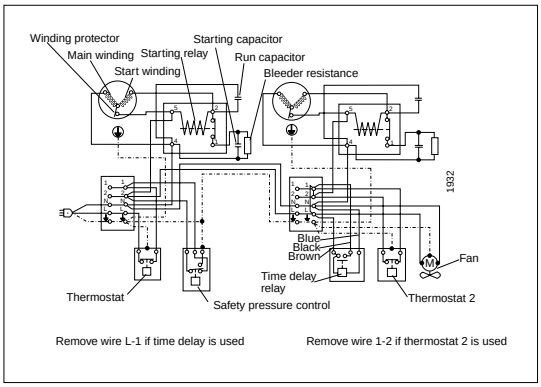
COP (CECOMAF) **W/W**

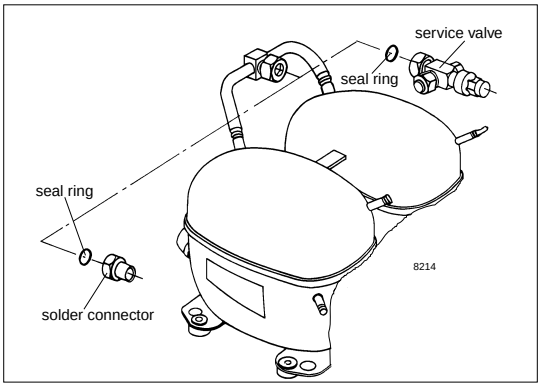
Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10
SC21/21CL	0.57	0.70	0.85	1.00	1.16	1.21	1.31	1.47	1.62

COP (ASHRAE) **W/W**

Comp.\°C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10
SC21/21CL	0.66	0.82	0.99	1.17	1.35	1.41	1.53	1.71	1.90

Test conditions	CECOMAF	ASHRAE
Condensing temperature	45°C	45°C
Ambient and suction gas temperature	32°C	32°C
Liquid temperature	45°C	32°C
Fan cooling F_2, 220V 50Hz		





Accessories

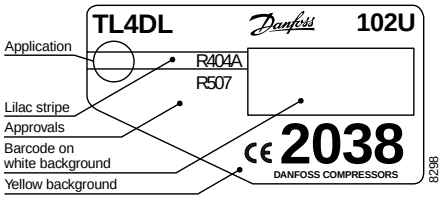
Devices	pcs.	SC21/21CL
Starting device	2	117-7012 (470 mm cable length) 117-7027 (550 mm cable length)
Cover	2	103N2002
Cord relief	2	103N1004
Time-delay relay Check valve (to be used with time-delay relay)	1 2	117N0001 020-1014
Service valve	1	118-7351 (16 mm)
Solder connector	1	118-7405 (16 mm)
Seal ring for service valve and solder connector	1	118-3638
Mounting accessories Bolt joint for one compressor Bolt joint in quantities	2	 118-1917 118-1918

TL-DL
MBP/HBP Compressor
R404A/R507
220-240V 50Hz

Data Sheet (Replaces CD.51.C3.02)

General

Compressor	TL4DL
Code number	102U2038



Application

Application		MBP/HBP
Evaporating temperature range	°C	-20 to 10
Voltage range	V/Hz	198 - 254 /50
Motor type		CSIR
Max. ambient temperature	°C	38
Comp. cooling at ambient temp.	32°C	F_2
	38°C	F_2

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

Design

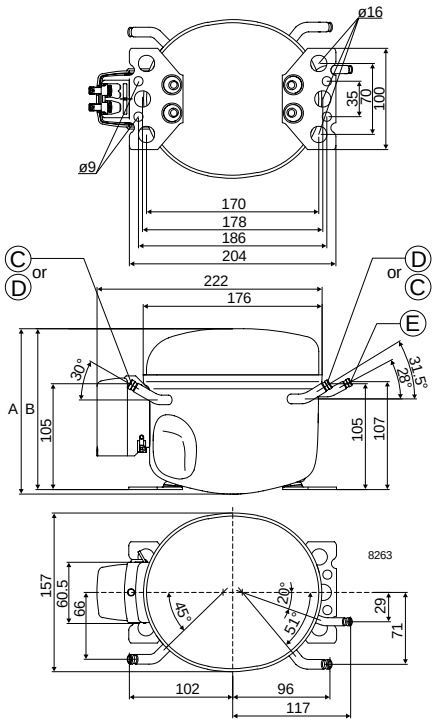
Displacement	cm^3	3.86
Oil quantity	cm^3	280
Maximum refrigerant charge	g	600
Free gas vol. in compressor	cm^3	1690
Weight without electrical equipment	kg	7.5

Motor

Motor size	watt	175
LRA (rated after 4 sec. UL984) HST	A	7.5
Cut-in current HST	A	7.5
Resistance, main and start winding (25°C)	Ω	12.0/20.0
Approvals		EN60 335-1/335-2-34 §19.3

Dimensions

Height	mm	A	173
		B	169
Suction connector	location/I.D. mm	C	6.2 ±0.09
Process connector	location/I.D. mm	D	6.2 ±0.09
Discharge connector	location/I.D. mm	E	5.0 +0.12/+0.20
Compressors on a pallet	pcs.		125



Capacity (CECOMAF) watt

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
TL4DL	196	229	281	349	432	527	572	631

Capacity (ASHRAE) watt

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
TL4DL	229	267	328	409	506	619	672	742

Power consumption watt

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
TL4DL	169	186	203	221	239	256	263	272

Current consumption A

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
TL4DL	1.22	1.28	1.34	1.41	1.47	1.54	1.56	1.60

COP (CECOMAF) W/W

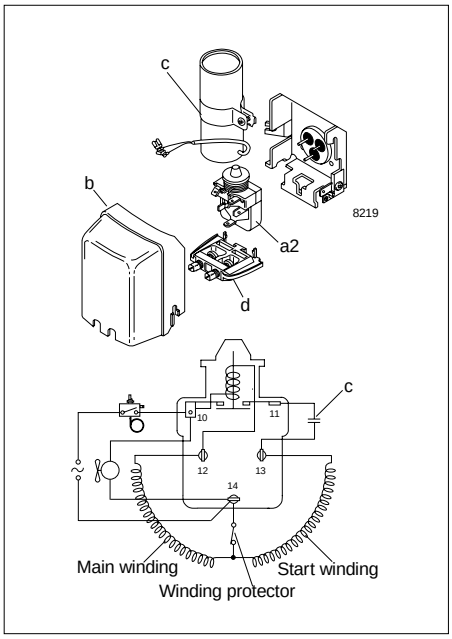
Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
TL4DL	1.16	1.23	1.38	1.58	1.81	2.06	2.17	2.32

COP (ASHRAE) W/W

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
TL4DL	1.36	1.44	1.61	1.85	2.12	2.42	2.55	2.73

Test conditions	CECOMAF	ASHRAE
Condensing temperature	45°C	45°C
Ambient and suction gas temperature	32°C	32°C
Liquid temperature	45°C	32°C

Fan cooling F_2, 220V 50Hz



Accessories

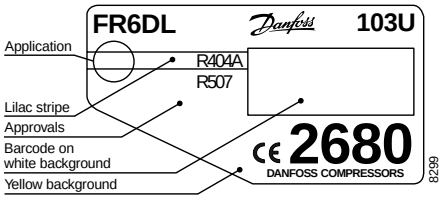
Devices	Fig.	TL4DL
Starting relay	a2	117U6001
Cover	b	103N2010
Starting capacitor 60 µF	c	117U5014
Cord relief	d	103N1010
Mounting accessories Bolt joint for one compressor Bolt joint in quantities Snap-on in quantities		 118-1917 118-1918 118-1919

FR-DL
MBP/HBP Compressor
R404A/R507
220-240V 50Hz

Data Sheet (Replaces CD.53.B4.02)

General

Compressor	FR6DL
Code number	103U2680



Application

Application		MBP/HBP
Evaporating temperature range	°C	-20 to 15
Voltage range	V/Hz	198 - 254 /50
Motor type		CSIR
Max. ambient temperature	°C	38
Comp. cooling at ambient temp.	32°C	F_2
	38°C	F_2

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

Design

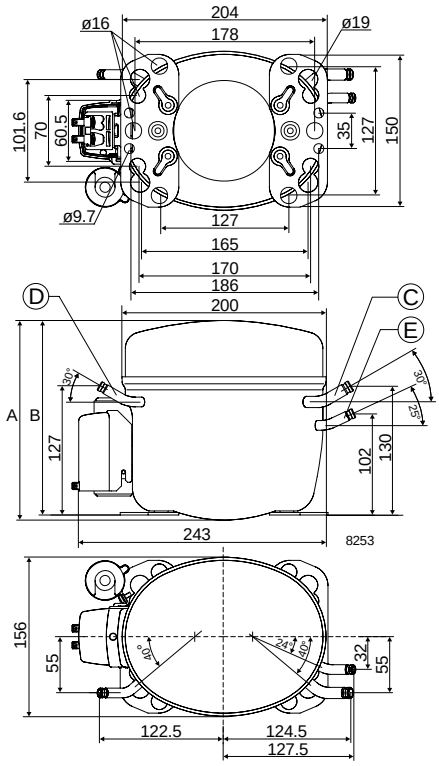
Displacement	cm^3	6.23
Oil quantity	cm^3	450
Maximum refrigerant charge	g	850
Free gas vol. in compressor	cm^3	1350
Weight without electrical equipment	kg	10.5

Motor

Motor size	watt	275
LRA (rated after 4 sec. UL984) HST	A	10.0
Cut-in current HST	A	10.0
Resistance, main and start winding (25°C)	Ω	7.3/12.0
Approvals		EN60 335-1/335-2-34 §19.3

Dimensions

Height	mm	A	196
		B	191
Suction connector	location/I.D. mm	C	8.2 ±0.09
Process connector	location/I.D. mm	D	6.2 ±0.09
Discharge connector	location/I.D. mm	E	6.2 ±0.09
Compressors on a pallet	pcs.		80



Capacity (CECOMAF) watt

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10	15
FR6DL	317	385	471	576	698	840	907	999	1177

Capacity (ASHRAE) watt

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10	15
FR6DL	370	449	550	673	818	986	1065	1176	1389

Power consumption watt

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10	15
FR6DL	290	321	354	388	423	456	469	485	509

Current consumption A

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10	15
FR6DL	1.91	1.99	2.10	2.23	2.37	2.51	2.56	2.62	2.70

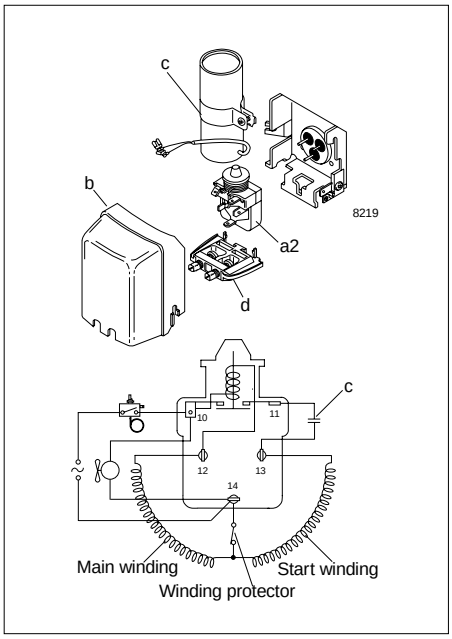
COP (CECOMAF) W/W

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10	15
FR6DL	1.09	1.20	1.33	1.48	1.65	1.84	1.93	2.06	2.31

COP (ASHRAE) W/W

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10	15
FR6DL	1.27	1.40	1.56	1.73	1.94	2.16	2.27	2.42	2.73

Test conditions	CECOMAF	ASHRAE
Condensing temperature	45°C	45°C
Ambient and suction gas temperature	32°C	32°C
Liquid temperature	45°C	32°C
Fan cooling F_2, 220V 50Hz		



Accessories

Devices	Fig.	FR6DL
Starting relay	a2	117U6010
Cover	b	103N2010
Starting capacitor 80 µF	c	117U5015
Cord relief	d	103N1010
Mounting accessories Bolt joint for one compressor Bolt joint in quantities Snap-on in quantities		 118-1917 118-1918 118-1919

SC-DL
MBP/HBP Compressor
R404A/R507
220-240V 50Hz

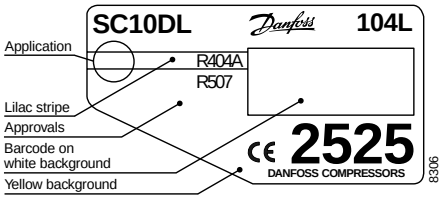
Data Sheet (Replaces CD.54.A3.02)

General

Compressor	**SC10DL**
Code number	104L2525

Application

Application		MBP/HBP
Evaporating temperature range	°C	-20 to 10
Voltage range	V/Hz	198 - 254 /50
Motor type		CSIR
Max. ambient temperature	°C	38
Comp. cooling at ambient temp.	32°C	F_2
	38°C	F_2



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

Design

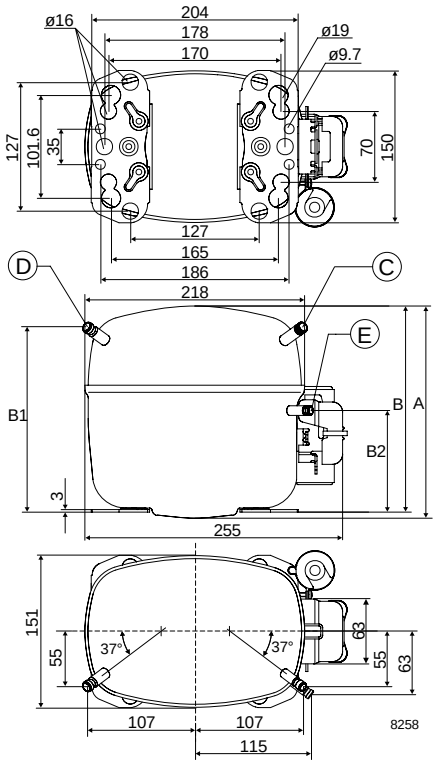
Displacement	cm^3	10.29
Oil quantity	cm^3	600
Maximum refrigerant charge	g	1300
Free gas vol. in compressor	cm^3	1410
Weight without electrical equipment	kg	13.1

Motor

Motor size	watt	385
LRA (rated after 4 sec. UL984) HST	A	14.8
Cut-in current HST	A	14.8
Resistance, main and start winding (25°C)	Ω	5.0/13.7
Approvals		EN60 335-1/335-2-34 §19.3

Dimensions

Height	mm	A	209
		B	203
		B1	183
		B2	100
Suction connector	location/I.D. mm	C	8.2 ±0.09
Process connector	location/I.D. mm	D	6.2 ±0.09
Discharge connector	location/I.D. mm	E	6.2 ±0.09
Compressors on a pallet	pcs.		80



Capacity (CECOMAF) **watt**

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
SC10DL	488	622	782	969	1183	1423	1537	1689

Capacity (ASHRAE) **watt**

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
SC10DL	569	726	914	1134	1386	1670	1806	1988

Power consumption **watt**

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
SC10DL	394	451	502	547	586	619	631	645

Current consumption **A**

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
SC10DL	2.55	2.77	2.97	3.14	3.30	3.43	3.49	3.55

COP (CECOMAF) **W/W**

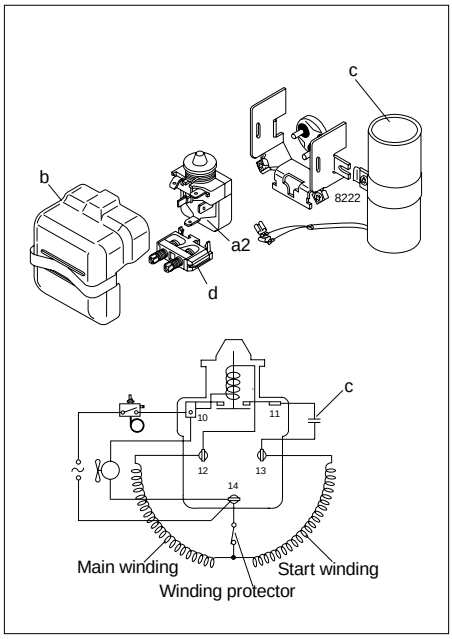
Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
SC10DL	1.24	1.38	1.56	1.77	2.02	2.30	2.44	2.62

COP (ASHRAE) **W/W**

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
SC10DL	1.44	1.61	1.82	2.07	2.36	2.70	2.86	3.08

Test conditions	CECOMAF	ASHRAE
Condensing temperature	45°C	45°C
Ambient and suction gas temperature	32°C	32°C
Liquid temperature	45°C	32°C

Fan cooling F_2, 220V 50Hz



Accessories

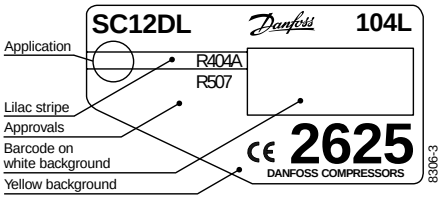
Devices	Fig.	SC10DL
Starting relay	a2	117U6005
Cover	b	103N2002
Starting capacitor 80 µF	c	117U5017
Cord relief	d	103N1004
Mounting accessories		
Bolt joint for one compressor		118-1917
Bolt joint in quantities		118-1918
Snap-on in quantities		118-1919

SC-DL
MBP/HBP Compressor
R404A/R507
220-240V 50Hz

Data Sheet

General

Compressor	SC12DL
Code number	104L2625



Application

Application		MBP/HBP
Evaporating temperature range	°C	-20 to 10
Voltage range	V/Hz	198 - 254 /50
Motor type		CSIR
Max. ambient temperature	°C	38
Comp. cooling at ambient temp.	32°C	F_2
	38°C	F_2

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

Design

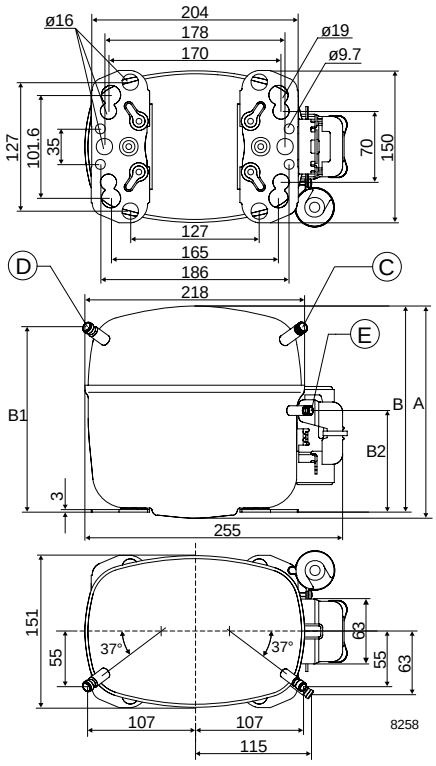
Displacement	cm^3	12.87
Oil quantity	cm^3	600
Maximum refrigerant charge	g	1300
Free gas vol. in compressor	cm^3	1460
Weight without electrical equipment	kg	13.6

Motor

Motor size	watt	495
LRA (rated after 4 sec. UL984) HST	A	18.6
Cut-in current HST	A	18.6
Resistance, main and start winding (25°C)	Ω	3.7/14.1
Approvals		EN60 335-1/335-2-34 §19.3

Dimensions

Height	mm	A	219
		B	213
		B1	193
		B2	110
Suction connector	location/I.D. mm	C	10.2 ±0.09
Process connector	location/I.D. mm	D	6.2 ±0.09
Discharge connector	location/I.D. mm	E	6.2 ±0.09
Compressors on a pallet	pcs.		80



Capacity (CECOMAF) **watt**

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
SC12DL	565	738	942	1176	1440	1734	1873	2058

Capacity (ASHRAE) **watt**

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
SC12DL	659	861	1100	1375	1687	2036	2201	2422

Power consumption **watt**

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
SC12DL	485	541	596	650	703	755	777	805

Current consumption **A**

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
SC12DL	3.22	3.44	3.66	3.88	4.09	4.28	4.35	4.44

COP (CECOMAF) **W/W**

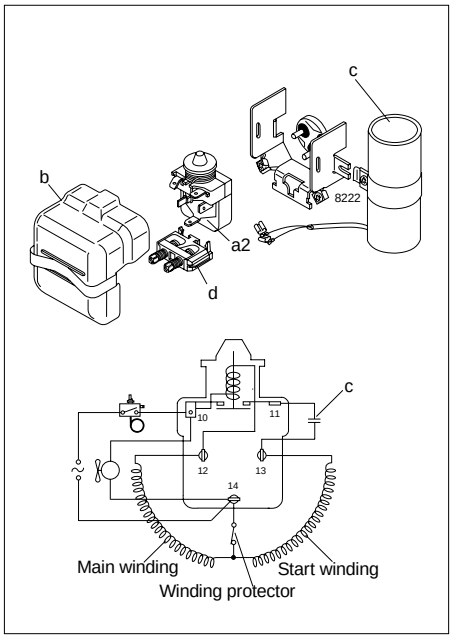
Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
SC12DL	1.16	1.36	1.58	1.81	2.05	2.30	2.41	2.56

COP (ASHRAE) **W/W**

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
SC12DL	1.36	1.59	1.85	2.12	2.40	2.70	2.83	3.01

Test conditions	CECOMAF	ASHRAE
Condensing temperature	45°C	45°C
Ambient and suction gas temperature	32°C	32°C
Liquid temperature	45°C	32°C

Fan cooling F_2, 220V 50Hz



Accessories

Devices	Fig.	SC12DL
Starting relay	a2	117U6019
Cover	b	103N2002
Starting capacitor 80 µF	c	117U5017
Cord relief	d	103N1004
Mounting accessories		
Bolt joint for one compressor		118-1917
Bolt joint in quantities		118-1918
Snap-on in quantities		118-1919

SC-DL
MBP/HBP Compressor
R404A/R507
220-240V 50Hz

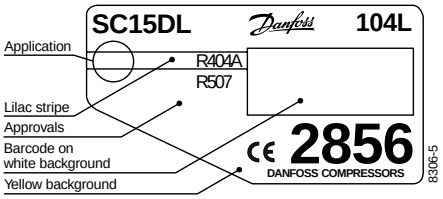
Data Sheet

General

Compressor	**SC15DL**
Code number	104L2856

Application

Application		MBP/HBP
Evaporating temperature range	°C	-20 to 10
Voltage range	V/Hz	198 - 254 /50
Motor type		CSR
Max. ambient temperature	°C	38
Comp. cooling at ambient temp.	32°C	F_2
	38°C	F_2



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

Design

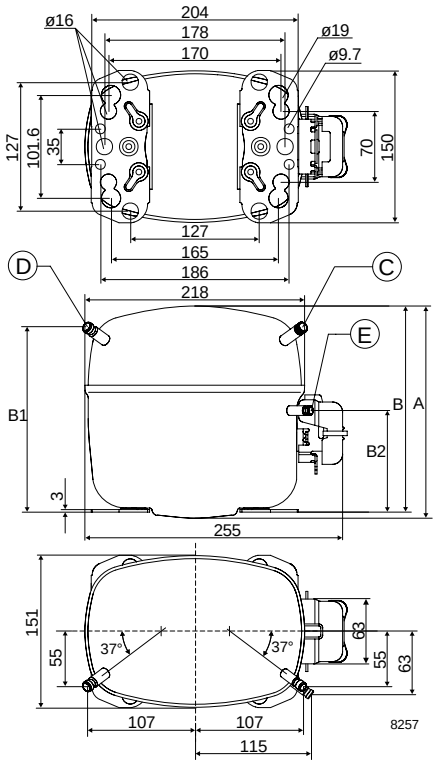
Displacement	cm^3	15.28
Oil quantity	cm^3	600
Maximum refrigerant charge	g	1300
Free gas vol. in compressor	cm^3	1460
Weight without electrical equipment	kg	13.5

Motor

Motor size	watt	550
LRA (rated after 4 sec. UL984) HST	A	21.8
Cut-in current HST	A	21.8
Resistance, main and start winding (25°C)	Ω	3.5/12.2
Approvals		EN60 335-1/335-2-34 §19.3

Dimensions

Height	mm	A	219
		B	213
		B1	193
		B2	110
Suction connector	location/I.D. mm	C	10.2 ±0.09
Process connector	location/I.D. mm	D	6.2 ±0.09
Discharge connector	location/I.D. mm	E	6.2 ±0.09
Compressors on a pallet	pcs.		80



Capacity (CECOMAF) watt

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
SC15DL	683	903	1151	1427	1731	2062	2217	2421

Capacity (ASHRAE) watt

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
SC15DL	796	1054	1345	1669	2028	2421	2605	2849

Power consumption watt

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
SC15DL	524	609	685	751	807	853	870	888

Current consumption A

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
SC15DL	3.07	3.35	3.62	3.88	4.13	4.37	4.47	4.59

COP (CECOMAF) W/W

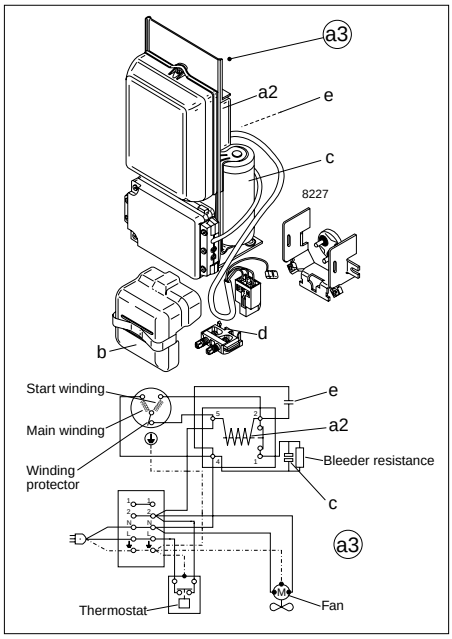
Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
SC15DL	1.30	1.48	1.68	1.90	2.14	2.42	2.55	2.73

COP (ASHRAE) W/W

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
SC15DL	1.52	1.73	1.96	2.22	2.51	2.84	3.00	3.21

Test conditions	CECOMAF	ASHRAE
Condensing temperature	45°C	45°C
Ambient and suction gas temperature	32°C	32°C
Liquid temperature	45°C	32°C

Fan cooling F_2, 220V 50Hz



Accessories

Devices	Fig.	SC15DL
Starting device	a3	117-7028 (470 mm cable length) 117-7029 (550 mm cable length) 117-7032 (650 mm cable length)
Cover	b	103N2002
Starting relay	a2	Components of starting device
Starting capacitor 80 µF	c	
Run capacitor	e	
Cord relief	d	103N1004
Mounting accessories Bolt joint for one compressor Bolt joint in quantities Snap-on in quantities		118-1917 118-1918 118-1919

SC-DL
MBP/HBP Twin Compressor
R404A/R507
220-240V 50Hz

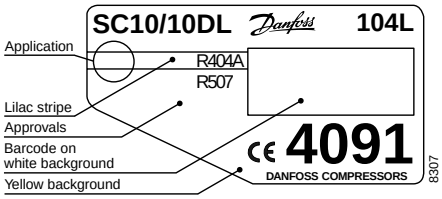
Data Sheet (Replaces CD.54.E2.02)

General

Compressor	SC10/10DL
Code number	104L4091

Application

Application		MBP/HBP
Evaporating temperature range	°C	-20 to 10
Voltage range	V/Hz	198 - 254 /50
Motor type		CSIR
Max. ambient temperature	°C	38
Comp. cooling at ambient temp.	32°C	F_2
	38°C	F_2



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

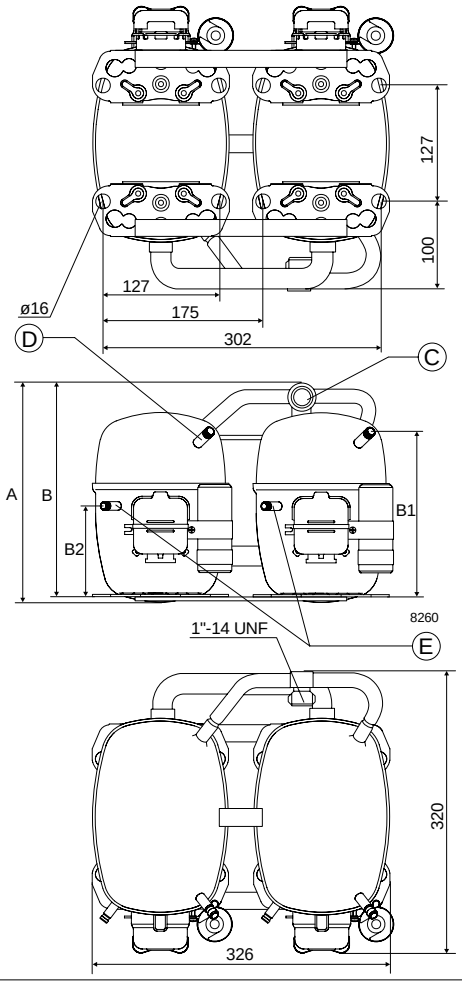
Design

Displacement	cm^3	2 x 10.29
Oil quantity	cm^3	1220
Maximum refrigerant charge	g	2200
Free gas vol. in compressor	cm^3	2820
Weight without electrical equipment	kg	26.8

Motor

Motor size	watt	2 x 385
LRA (rated after 4 sec. UL984) HST*	A	14.8
Cut-in current HST*	A	14.8
Resistance, main and start winding (25°C)	Ω	5.0/13.7
Approvals		EN60 335-1/335-2-34 §19.3

* Operational current for the second compressor time-delayed.



Dimensions

Height	mm	A	249
		B	244
		B1	183
		B2	100
Suction connector			
Service valve	location/I.D. mm	C	12
Solder connector	location/I.D. mm	C	12
Process connector	location/I.D. mm	D	6.2 ±0.09
Discharge connector	location/I.D. mm	E	6.2 ±0.09
Compressors on a pallet	pcs.		18

Capacity (CECOMAF) watt

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
SC10/10DL	977	1244	1565	1938	2365	2845	3073	3378

Capacity (ASHRAE) watt

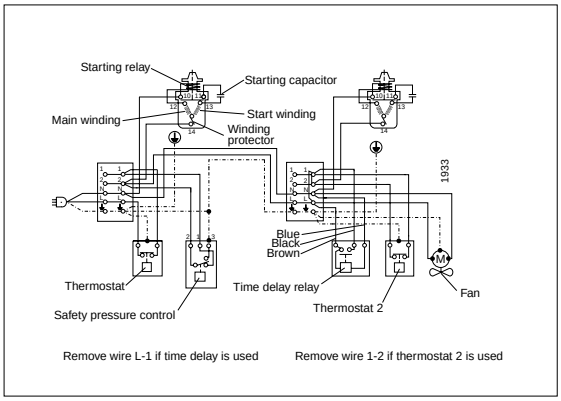
Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
SC10/10DL	1138	1452	1828	2268	2771	3340	3612	3976

Power consumption watt

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
SC10/10DL	788	902	1004	1094	1172	1237	1262	1290

Current consumption A

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
SC10/10DL	5.11	5.54	5.93	6.28	6.60	6.87	6.98	7.10



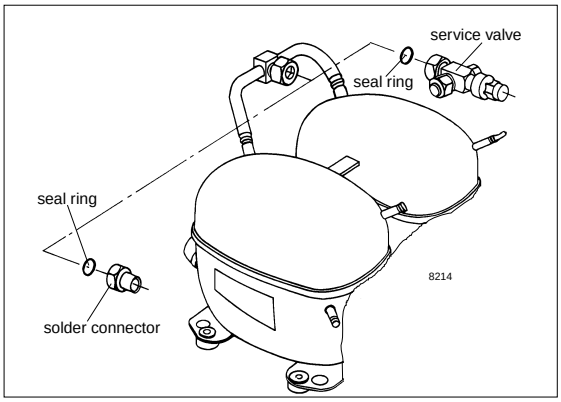
COP (CECOMAF) W/W

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
SC10/10DL	1.24	1.38	1.56	1.77	2.02	2.30	2.44	2.62

COP (ASHRAE) W/W

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
SC10/10DL	1.44	1.61	1.82	2.07	2.36	2.70	2.86	3.08

Test conditions	CECOMAF	ASHRAE
Condensing temperature	45°C	45°C
Ambient and suction gas temperature	32°C	32°C
Liquid temperature	45°C	32°C
Fan cooling F_2, 220V 50Hz		



Accessories

Devices	pcs.	SC10/10DL
Starting relay	2	117U6005
Starting capacitor 80 µF	2	117U5017
Cover	2	103N2002
Cord relief	2	103N1004
Time-delay relay Check valve (to be used with time-delay relay)	1 2	117N0001 020-1014
Service valve	1	118-7350 (12 mm)
Solder connector	1	104B0584 (12 mm)
Seal ring for service valve and solder connector	1	118-3638
Mounting accessories Bolt joint for one compressor Bolt joint in quantities	2	 118-1917 118-1918

SC-DL
MBP/HBP Twin Compressor
R404A/R507
220-240V 50Hz

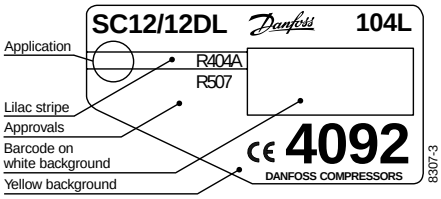
Data Sheet

General

Compressor	**SC12/12DL**
Code number	104L4092

Application

Application		MBP/HBP
Evaporating temperature range	°C	-20 to 10
Voltage range	V/Hz	198 - 254 /50
Motor type		CSIR
Max. ambient temperature	°C	38
Comp. cooling at ambient temp.	32°C	F_2
	38°C	F_2



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

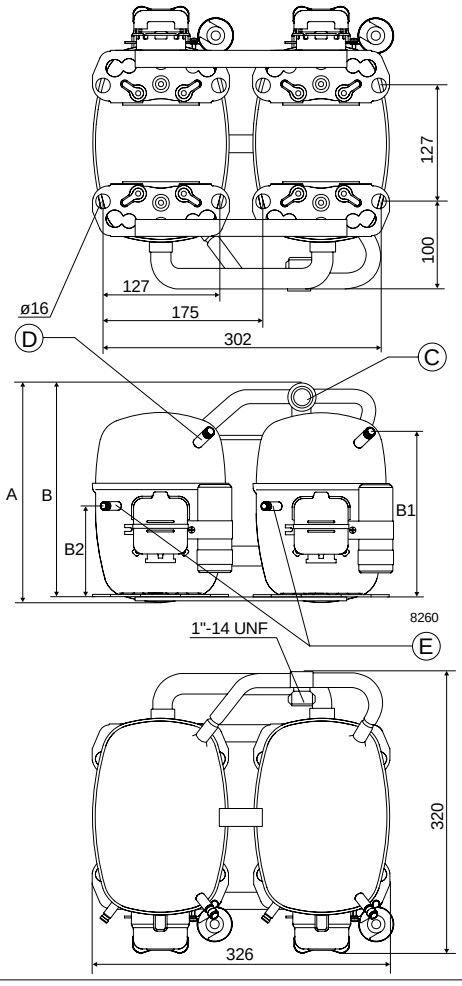
Design

Displacement	cm^3	2 x 12.87
Oil quantity	cm^3	1220
Maximum refrigerant charge	g	2200
Free gas vol. in compressor	cm^3	2920
Weight without electrical equipment	kg	27.8

Motor

Motor size	watt	2 x 495
LRA (rated after 4 sec. UL984) HST*	A	18.6
Cut-in current HST*	A	18.6
Resistance, main and start winding (25°C)	Ω	3.7/14.1
Approvals		EN60 335-1/335-2-34 §19.3

* Operational current for the second compressor time-delayed.



Dimensions

Height	mm	A	249
		B	244
		B1	183
		B2	100
Suction connector			
Service valve	location/I.D. mm	C	12
Solder connector	location/I.D. mm	C	12
Process connector	location/I.D. mm	D	6.2 ±0.09
Discharge connector	location/I.D. mm	E	6.2 ±0.09
Compressors on a pallet	pcs.		18

Capacity (CECOMAF) watt

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
SC12/12DL	1131	1476	1883	2351	2880	3468	3746	4116

Capacity (ASHRAE) watt

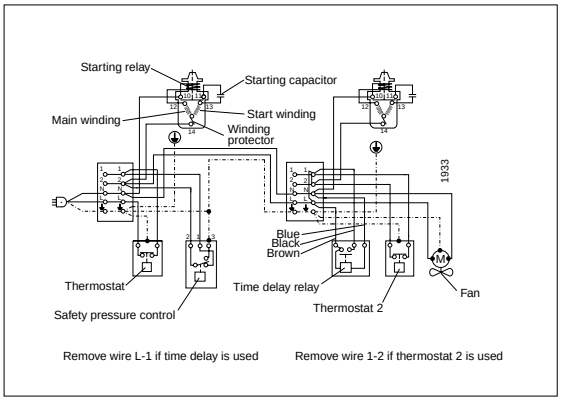
Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
SC12/12DL	1318	1723	2200	2751	3375	4072	4403	4844

Power consumption watt

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
SC12/12DL	971	1082	1192	1300	1406	1509	1554	1610

Current consumption A

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
SC12/12DL	6.44	6.88	7.33	7.76	8.18	8.55	8.71	8.88



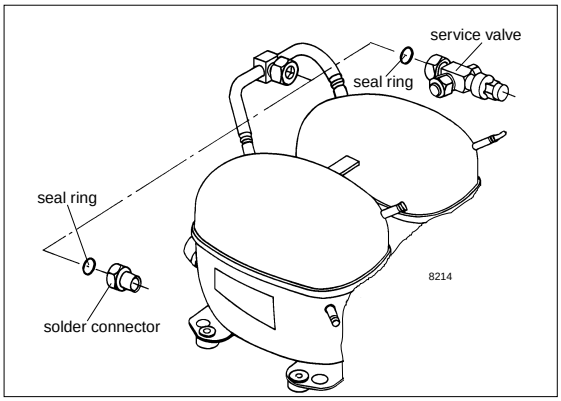
COP (CECOMAF) W/W

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
SC12/12DL	1.16	1.36	1.58	1.81	2.05	2.30	2.41	2.56

COP (ASHRAE) W/W

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
SC12/12DL	1.36	1.59	1.85	2.12	2.40	2.70	2.83	3.01

Test conditions	CECOMAF	ASHRAE
Condensing temperature	45°C	45°C
Ambient and suction gas temperature	32°C	32°C
Liquid temperature	45°C	32°C
Fan cooling F_2, 220V 50Hz		



Accessories

Devices	pcs.	SC12/12DL
Starting relay	2	117U6019
Starting capacitor 80 µF	2	117U5017
Cover	2	103N2002
Cord relief	2	103N1004
Time-delay relay Check valve (to be used with time-delay relay)	1 2	117N0001 020-1014
Service valve	1	118-7350 (12 mm)
Solder connector	1	104B0584 (12 mm)
Seal ring for service valve and solder connector	1	118-3638
Mounting accessories Bolt joint for one compressor Bolt joint in quantities	2	 118-1917 118-1918

SC-DL
MBP/HBP Twin Compressor
R404A/R507
220-240V 50Hz

Data Sheet (Replaces CD.54.G1.02)

General

Compressor	**SC15/15DL**
Code number	104L4093

Application

Application		MBP/HBP
Evaporating temperature range	°C	-20 to 10
Voltage range	V/Hz	198 - 254 /50
Motor type		CSR
Max. ambient temperature	°C	38
Comp. cooling at ambient temp.	32°C	F_2
	38°C	F_2

Design

Displacement	cm^3	2 x 15.28
Oil quantity	cm^3	1220
Maximum refrigerant charge	g	2200
Free gas vol. in compressor	cm^3	2920
Weight without electrical equipment	kg	28.0

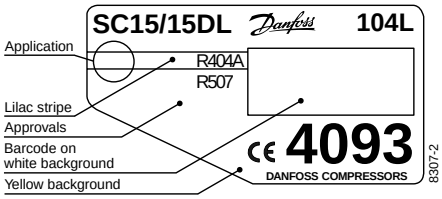
Motor

Motor size	watt	2 x 550
LRA (rated after 4 sec. UL984) HST*	A	21.8
Cut-in current HST*	A	21.8
Resistance, main and start winding (25°C)	Ω	3.5/12.1
Approvals		EN60 335-1/335-2-34 §19.3

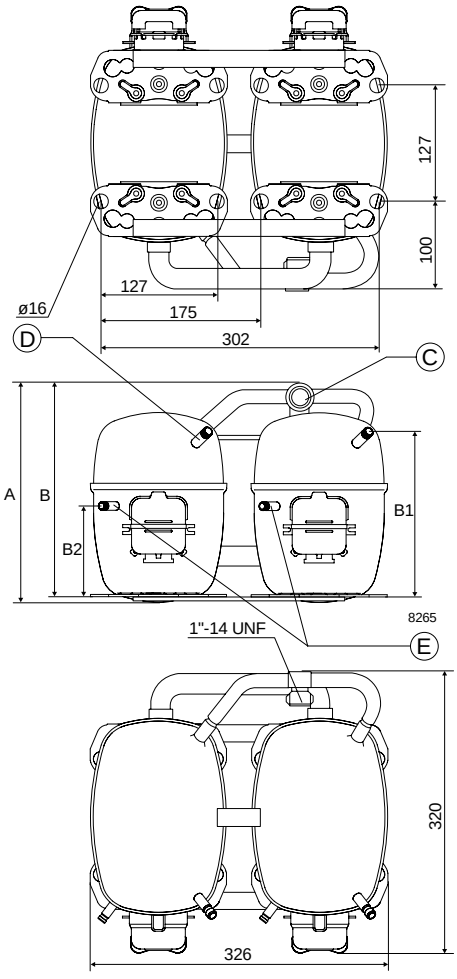
***** Operational current for the second compressor time-delayed.

Dimensions

Height	mm	A	259
		B	254
		B1	193
		B2	110
Suction connector			
Service valve	location/I.D. mm	C	16
Solder connector	location/I.D. mm	C	16
Process connector	location/I.D. mm	D	6.2 ±0.09
Discharge connector	location/I.D. mm	E	6.2 ±0.09
Compressors on a pallet	pcs.		18



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



Capacity (CECOMAF) watt

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
SC15/15DL	1366	1806	2302	2854	3462	4124	4433	4842

Capacity (ASHRAE) watt

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
SC15/15DL	1592	2107	2690	3339	4056	4842	5210	5699

Power consumption watt

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
SC15/15DL	1048	1218	1370	1502	1614	1706	1739	1776

Current consumption A

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
SC15/15DL	6.02	6.68	7.26	7.79	8.28	8.73	8.92	9.16

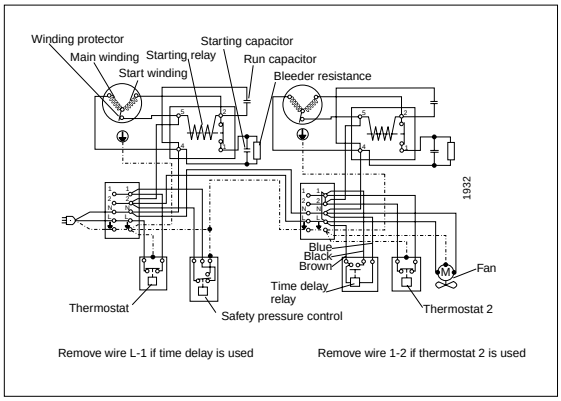
COP (CECOMAF) W/W

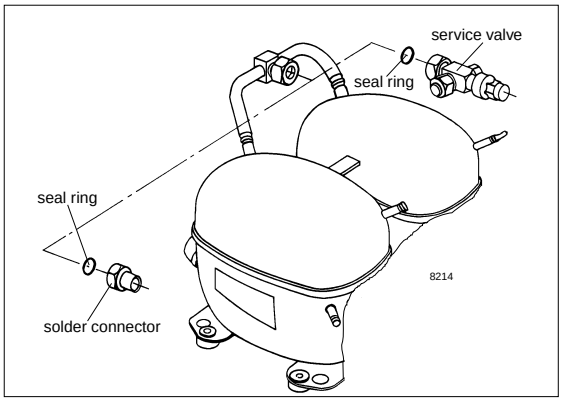
Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
SC15/15DL	1.30	1.48	1.68	1.90	2.14	2.42	2.55	2.73

COP (ASHRAE) W/W

Comp.\°C	-20	-15	-10	-5	0	5	7.2	10
SC15/15DL	1.52	1.73	1.96	2.22	2.51	2.84	3.00	3.21

Test conditions	CECOMAF	ASHRAE
Condensing temperature	45°C	45°C
Ambient and suction gas temperature	32°C	32°C
Liquid temperature	45°C	32°C
Fan cooling F_2, 220V 50Hz		





Accessories

Devices	pcs.	SC15/15DL
Starting device	2	117-7028 (470 mm cable length) 117-7029 (550 mm cable length) 117-7032 (650 mm cable length)
Cover	2	103N2002
Cord relief	2	103N1004
Time-delay relay Check valve (to be used with time-delay relay)	1 2	117N0001 020-1014
Service valve	1	118-7351 (16 mm)
Solder connector	1	118-7405 (16 mm)
Seal ring for service valve and solder connector	1	118-3638
Mounting accessories Bolt joint for one compressor Bolt joint in quantities	2	 118-1917 118-1918

LBP/MBP Compressors

MBP/HBP Compressors

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