Single
Packs

Single Pack NL9CN 220-240V 50Hz CSIR

Single pack code number: **195B4540**

Position	Title	Code	Amount
1	Compressor NL9CN	105H6856	1
2	Starting relay	117U7002	1
3	Starting capacitor (80µF 220V, 6.3mm)	117U5015	1
4	Cord relief	103N1010	1
5	Cover	103N2011	1
6	Bolt joint for one compressor | M6 | ø16mm	118-1917	1

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Model
NL9CN

Sales code:
105H6856

Compressor Data

Refrigerant(s)	**R290**
Refr. charge - tech. limit	**150g / 5.29oz**
Weight	**10.50 kg / 23.15lbs**
Displacement	**8.35 cm3 / 0.51cu.in**
Compressors on pallet	**80**

General – Configurations With NL9CN

–	**Conf. 1**	**Conf. 2**	**Conf. 3**
Motor configuration	RSIR	RSCR	CSIR
Power supply (nominal)	220-240 V/50 Hz	220-240 V/50 Hz	220-240 V/50 Hz
Number of phases	1	1	1
Voltage range	198-254 V	198-254 V	198-254 V
Approvals	VDE, CCC, EAC, CB	VDE, CCC, EAC, CB	VDE, CCC, EAC, CB
Starting torque	LST	LST	HST
Refrigerant	R290	R290	R290
Application	LBP+MBP	LBP+MBP	LBP+MBP
Long interval pull down	OK	OK	OK

Application Notes

- Provision for PE Grounding is located at the PE Stamp on the compressor

Model
NL9CN

Sales code:
105H6856

Compressor Design

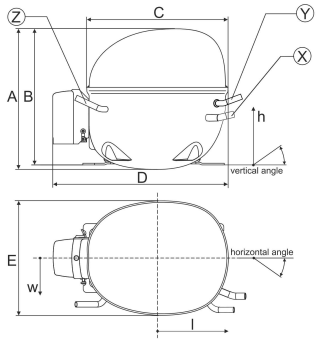
Oil type	**POE**	Winding resistance main	**8.6 Ohm**
Oil viscosity	**32cSt**	Winding resistance aux	**14.7 Ohm**
Oil quantity	**268 / 9.06fl.oz**	Max. winding temp.	**125 °C**
Free gas volume comp.	**2,360 cm3 / 79.80fl.oz**	Max. discharge temp.	**130°C / 266°F**
Motor protection	**internal**		

Compressor Dimensions

Housing

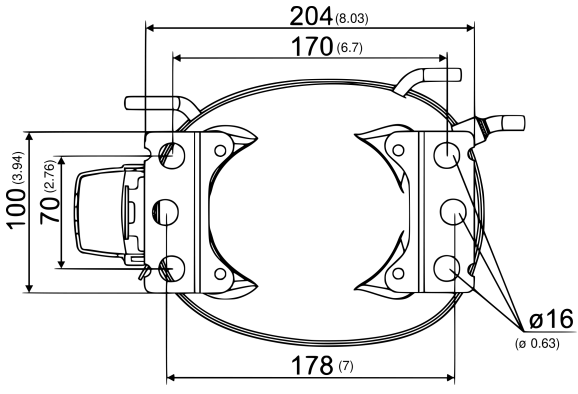
A Height	**203mm / 7.99in**
B Height	**197mm / 7.76in**
C Length shell	**205mm / 8.07in**
D Length w. cover	**254mm / 10.00in**
E Width	**166mm / 6.54in**

Find 3D Model here



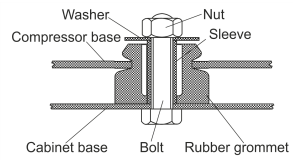
Connectors	Suction X	Discharge Y	Process Z
Diameter [mm]	øi 8.11–8.29 / 0.32–0.33in	øi 6.11–6.29 / 0.24–0.25in	øi 6.11–6.29 / 0.24–0.25in
Material	CU	CU	CU
Horizontal angle ±2°	0°	0°	0°
Vertical angle ±2°	15°	35°	155°
Position l/h/w [mm]	125.5/75.5/78 / 4.94/2.97/3.07in	133/102.5/54 / 5.24/4.04/2.13in	-107/93.5/72 / -4.21/3.68/2.83in
Straight tube l. [mm]	12 / 0.47in	12 / 0.47in	12 / 0.47in

Mounting Accessories

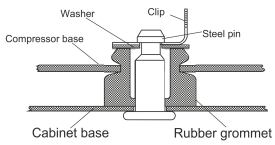


Dimensions in mm [in]

Bolt joint



Snap-on



	one comp.	multi pack
Bolt joint | M6 | ø16mm	118-1917	118-1918
Bolt joint | ø1/4" | ø16mm	118-1946	–
Snap-on | ø7,3 | ø16mm	118-1947	118-1919

Model
NL9CN Configuration 1

Sales code:
105H6856

Configuration

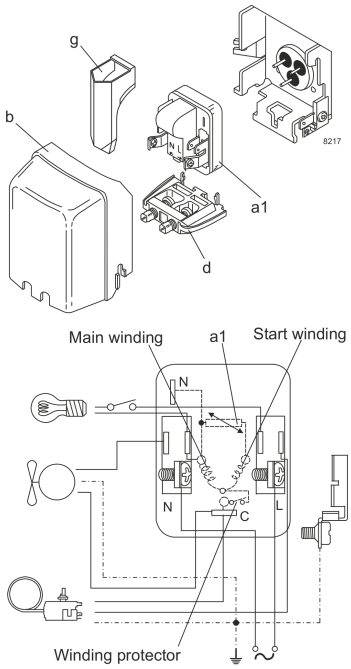
Motor configuration	**RSIR**
Power supply (nominal)	**220-240 V/50 Hz 1~**
Refrigerant	**R290**
Application	**LBP+MBP**
Voltage range	**198-254 V**
Starting torque	**LST**
Approvals	**VDE, CCC, EAC, CB**
Starting device type	**PTC**
Run capacitor	**-/-**
Start capacitor	**-/-**
LRA (locked rotor amps / 4s/ U(N))	**11 A**
RLA (rated load amps / 1s/ U(N))	**1.8 A**
Cut in current (U(N))	**14.5 A**

Ambient/ machine room temperatures minimum /maximum
Ambient temperature range: 10 - 43°C / 50 - 109°F
Machine room temp. compressor: 10 - 48°C / 50 - 118°F

System Cooling
fan 1,5m/s

Electrical Accessories / Wiring Diagram

RSIR



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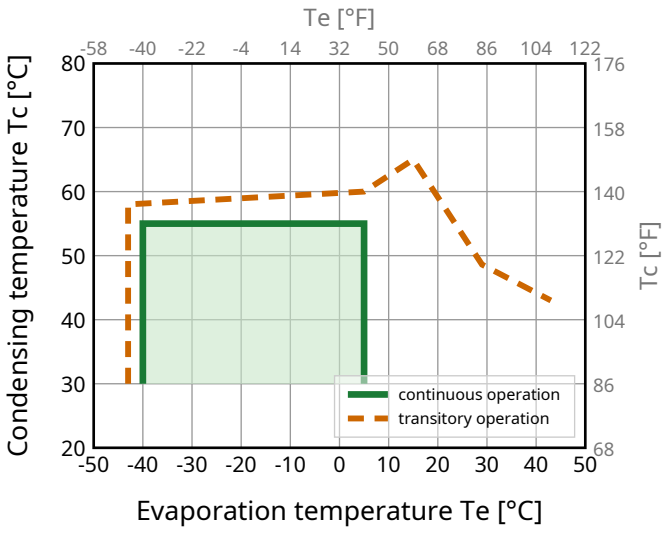
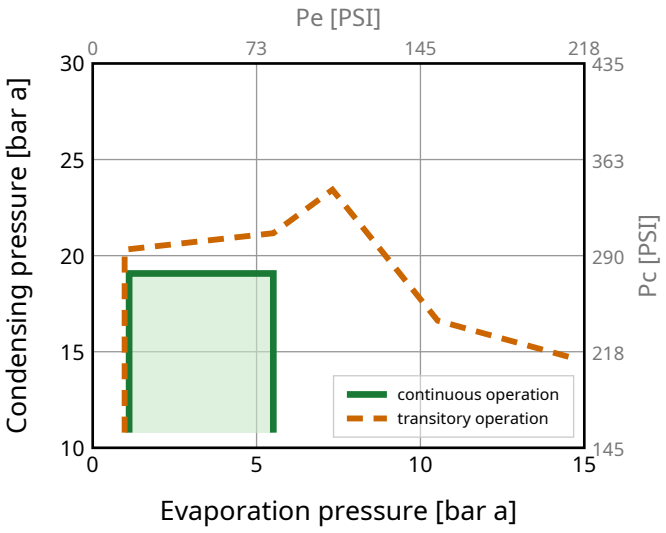
Components
a1 PTC starter (220V, 25Ohm, 4.8mm) 103N0018
b plastic cover 103N2010
d cord relief 103N1010
g protection screen for PTC 103N0476

Alternative components
a1 PTC starter (220V, 25Ohm, 6.3mm) 103N0011
b plastic cover 103N2011

Operation Pressure Range





Model Sales code:

NL9CN Configuration 1 **105H6856**

Standard Conditions

R290, 220 V/50 Hz, RSIR, fan 1,5m/s

pe	pc	RGT	Tliq	Cooling capacity			COP	EER	P	I	ṁ	
[°C] [°F]	[°C] [°F]	[°C] [°F]	[°C] [°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]	
-23.3 -10	54.4 129.9	32.2 90	32.2 90	**381**	1300	328	**1.39**	4.75	273	1.72	3.87	**ASHRAE LBP**
-25 -13	55 131	32 89.6	55 131	**284**	968	244	**1.07**	3.66	264	1.69	3.56	**CECOMAF LBP**
-35 -31	40 104	20 68	40 104	**207**	706	178	**1.06**	3.63	195	1.51	2.38	**EN12900 LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**685**	2337	589	**1.80**	6.15	380	2.14	7.84	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**542**	1851	466	**1.51**	5.15	359	2.05	6.90	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**619**	2111	532	**1.85**	6.31	334	1.95	7.62	**EN12900 MBP**

Performance Tables

R290, 220 V/50 Hz, RSIR, fan 1,5m/s

pc= 45/113 | RGT= 32/89.6 | Tliq= 45/113 | °C/°F

pe		Cooling capacity			COP	EER	P	I	ṁ
[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]
-40	-40	**138**	469	118	**0.81**	2.77	169	1.44	1.55
-30	-22	**259**	883	223	**1.16**	3.96	223	1.56	2.92
-20	-4	**424**	1445	364	**1.53**	5.21	278	1.73	4.82
-10	14	**643**	2195	553	**1.92**	6.56	334	1.95	7.39
0	32	**930**	3174	800	**2.35**	8.03	396	2.21	10.81
5	41	**1102**	3761	948	**2.58**	8.79	428	2.36	12.92

pc= 55/131 | RGT= 32/89.6 | Tliq= 55/131 | °C/°F

-40	-40	**121**	413	104	**0.68**	2.32	178	1.43	1.50
-30	-22	**221**	753	190	**0.94**	3.21	235	1.59	2.76
-20	-4	**357**	1219	307	**1.21**	4.14	295	1.80	4.50
-10	14	**542**	1851	466	**1.51**	5.15	359	2.05	6.90
0	32	**788**	2688	678	**1.83**	6.26	430	2.36	10.16
5	41	**937**	3197	806	**2.00**	6.83	468	2.53	12.19

Model
NL9CN Configuration 2

Sales code:
105H6856

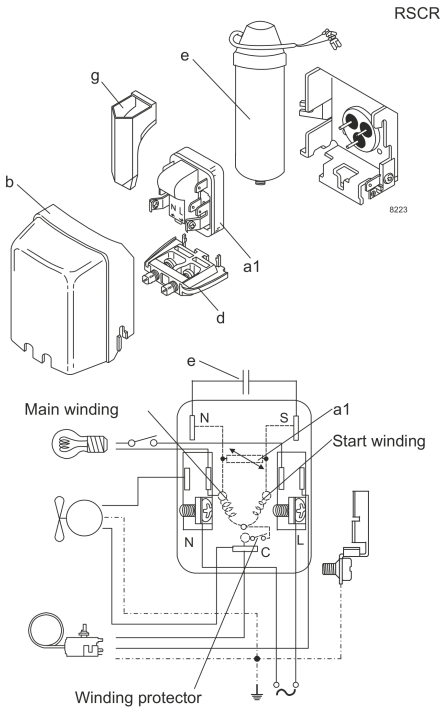
Configuration

Motor configuration	**RSCR**
Power supply (nominal)	**220-240 V/50 Hz 1~**
Refrigerant	**R290**
Application	**LBP+MBP**
Voltage range	**198-254 V**
Starting torque	**LST**
Approvals	**VDE, CCC, EAC, CB**
Starting device type	**PTC**
Run capacitor	**4 µF**
Start capacitor	**-/-**
LRA (locked rotor amps / 4s/ U(N))	**11 A**
RLA (rated load amps / 1s/ U(N))	**1.8 A**
Cut in current (U(N))	**14.5 A**

Ambient/ machine room temperatures minimum /maximum
Ambient temperature range: 10 - 43°C / 50 - 109°F
Machine room temp. compressor: 10 - 48°C / 50 - 118°F

System Cooling
fan 1,5m/s

Electrical Accessories / Wiring Diagram



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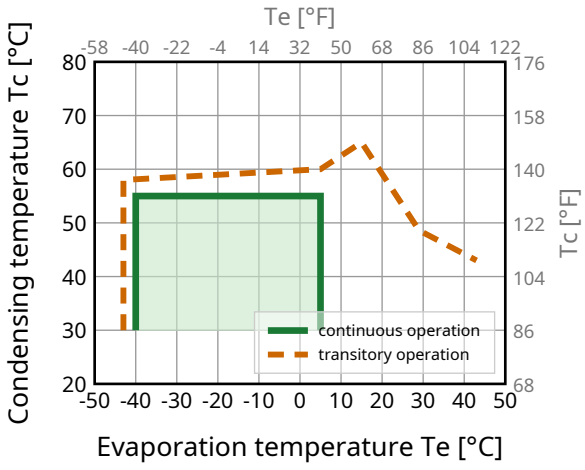
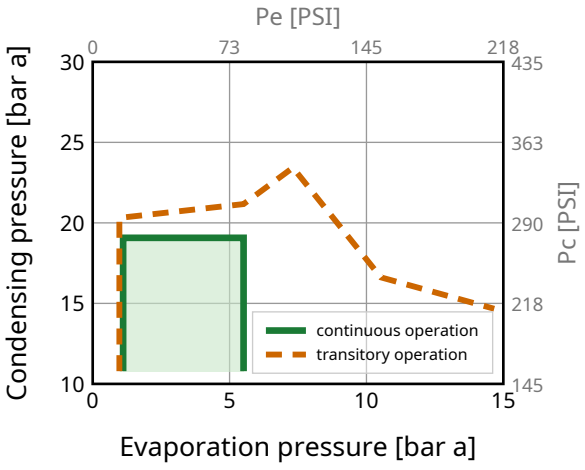
Components
a1 PTC starter (220V, 25Ohm, 4.8mm) 103N0021
e run capacitor (4µF, 4.8mm) 117-7119
b plastic cover 103N2010
d cord relief 103N1010
g protection screen for PTC 103N0476
bracket for run capacitor 117-0300

Alternative components
a1 PTC starter (220V, 25Ohm, 6.3mm) 103N0016
e run capacitor (4µF, 6.3mm) 117-7117
b plastic cover 103N2011
screw M4x8mm 117-0301

Operation Pressure Range





Model

NL9CN Configuration 2

Sales code:

105H6856

Standard Conditions

R290, 220 V/50 Hz, RSCR, fan 1,5m/s

pe	pc	RGT	Tliq	Cooling capacity			COP	EER	P	I	ṁ	
[°C] [°F]	[°C] [°F]	[°C] [°F]	[°C] [°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]	
-23.3 -10	54.4 129.9	32.2 90	32.2 90	**385**	1313	331	**1.45**	4.95	265	1.67	3.91	**ASHRAE LBP**
-25 -13	55 131	32 89.6	55 131	**287**	978	246	**1.12**	3.81	256	1.64	3.59	**CECOMAF LBP**
-35 -31	40 104	20 68	40 104	**209**	713	180	**1.11**	3.78	189	1.46	2.40	**EN12900 LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**692**	2360	595	**1.88**	6.41	368	2.08	7.92	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**548**	1869	471	**1.57**	5.36	348	1.99	6.97	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**625**	2132	537	**1.93**	6.57	324	1.89	7.69	**EN12900 MBP**

Performance Tables

R290, 220 V/50 Hz, RSCR, fan 1,5m/s

pc= 45/113 | RGT= 32/89.6 | Tliq= 45/113 | °C/°F

pe		Cooling capacity			COP	EER	P	I	ṁ
[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]
-40	-40	**139**	474	120	**0.85**	2.89	164	1.40	1.56
-30	-22	**261**	892	225	**1.21**	4.13	216	1.52	2.95
-20	-4	**428**	1459	368	**1.59**	5.42	269	1.68	4.87
-10	14	**650**	2217	559	**2.00**	6.83	324	1.89	7.46
0	32	**939**	3205	808	**2.45**	8.36	384	2.15	10.92
5	41	**1113**	3799	958	**2.68**	9.15	415	2.29	13.05

pc= 55/131 | RGT= 32/89.6 | Tliq= 55/131 | °C/°F

-40	-40	**122**	417	105	**0.71**	2.42	173	1.38	1.52
-30	-22	**223**	761	192	**0.98**	3.34	228	1.54	2.79
-20	-4	**361**	1231	310	**1.26**	4.31	286	1.74	4.54
-10	14	**548**	1869	471	**1.57**	5.36	348	1.99	6.97
0	32	**796**	2715	684	**1.91**	6.51	417	2.29	10.26
5	41	**946**	3229	814	**2.09**	7.12	454	2.45	12.31

Model
NL9CN Configuration 3

Sales code:
105H6856

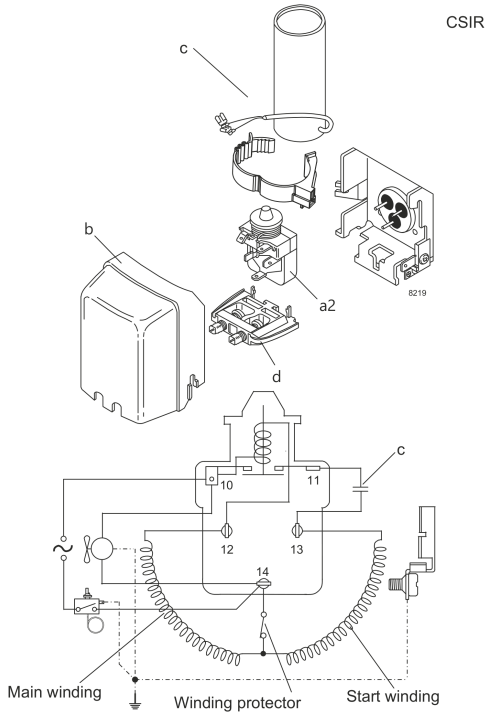
Configuration

Motor configuration	**CSIR**
Power supply (nominal)	**220-240 V/50 Hz 1~**
Refrigerant	**R290**
Application	**LBP+MBP**
Voltage range	**198-254 V**
Starting torque	**HST**
Approvals	**VDE, CCC, EAC, CB**
Starting device type	**relay**
Run capacitor	**-/-**
Start capacitor	**80 µF**
LRA (locked rotor amps / 4s/ U(N))	**11 A**
RLA (rated load amps / 1s/ U(N))	**1.8 A**
Cut in current (U(N))	**14.5 A**

Ambient/ machine room temperatures minimum /maximum
Ambient temperature range: 10 - 43°C / 50 - 109°F
Machine room temp. compressor: 10 - 48°C / 50 - 118°F

System Cooling
fan 1,5m/s

Electrical Accessories / Wiring Diagram



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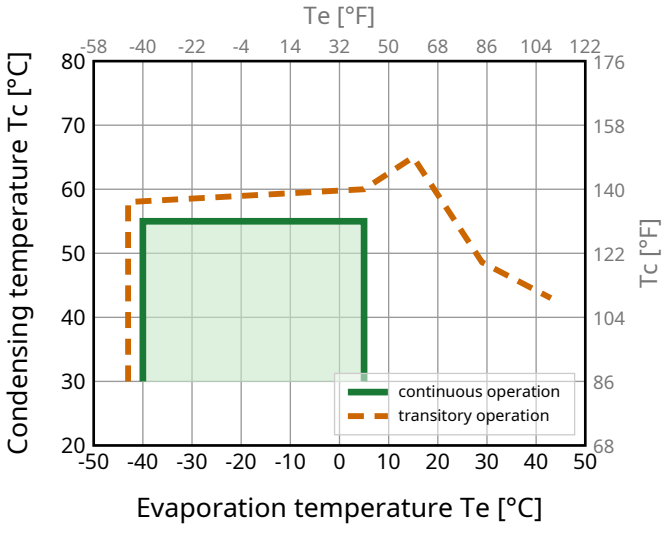
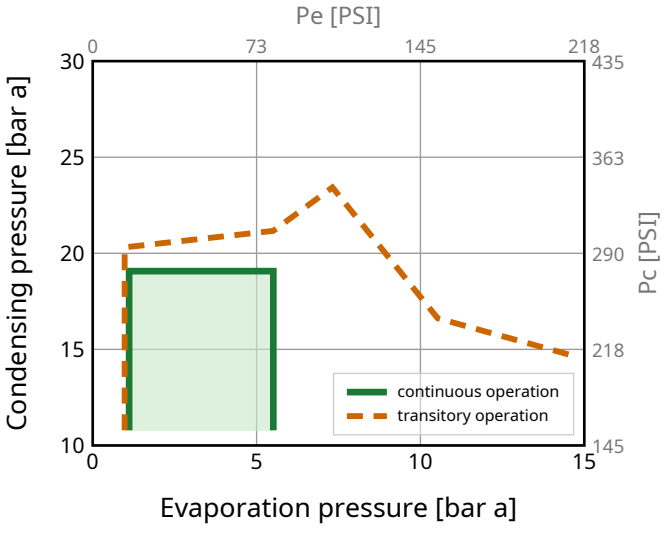
Components
a2 relay 117U7002
c start capacitor (80µF) 117U5015
b plastic cover 103N2010
d cord relief 103N1010

Alternative components
b plastic cover 103N2011

Operation Pressure Range





Model
NL9CN Configuration 3

Sales code:
105H6856

Standard Conditions

R290, 220 V/50 Hz, CSIR, fan 1,5m/s

pe	pc	RGT	Tliq	Cooling capacity			COP	EER	P	I	ṁ	
[°C] [°F]	[°C] [°F]	[°C] [°F]	[°C] [°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]	
-23.3 -10	54.4 129.9	32.2 90	32.2 90	**381**	1300	328	**1.39**	4.75	273	1.72	3.87	**ASHRAE LBP**
-25 -13	55 131	32 89.6	55 131	**284**	968	244	**1.07**	3.66	264	1.69	3.56	**CECOMAF LBP**
-35 -31	40 104	20 68	40 104	**207**	706	178	**1.06**	3.63	195	1.51	2.38	**EN12900 LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**685**	2337	589	**1.80**	6.15	380	2.14	7.84	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**542**	1851	466	**1.51**	5.15	359	2.05	6.90	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**619**	2111	532	**1.85**	6.31	334	1.95	7.62	**EN12900 MBP**

Performance Tables

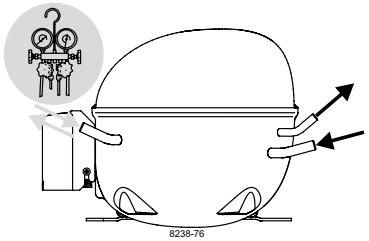
R290, 220 V/50 Hz, CSIR, fan 1,5m/s

pc= 45/113 | RGT= 32/89.6 | Tliq= 45/113 | °C/°F

pe		Cooling capacity			COP	EER	P	I	ṁ
[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]
-40	-40	**138**	469	118	**0.81**	2.77	169	1.44	1.55
-30	-22	**259**	883	223	**1.16**	3.96	223	1.56	2.92
-20	-4	**424**	1445	364	**1.53**	5.21	278	1.73	4.82
-10	14	**643**	2195	553	**1.92**	6.56	334	1.95	7.39
0	32	**930**	3174	800	**2.35**	8.03	396	2.21	10.81
5	41	**1102**	3761	948	**2.58**	8.79	428	2.36	12.92

pc= 55/131 | RGT= 32/89.6 | Tliq= 55/131 | °C/°F

-40	-40	**121**	413	104	**0.68**	2.32	178	1.43	1.50
-30	-22	**221**	753	190	**0.94**	3.21	235	1.59	2.76
-20	-4	**357**	1219	307	**1.21**	4.14	295	1.80	4.50
-10	14	**542**	1851	466	**1.51**	5.15	359	2.05	6.90
0	32	**788**	2688	678	**1.83**	6.26	430	2.36	10.16
5	41	**937**	3197	806	**2.00**	6.83	468	2.53	12.19



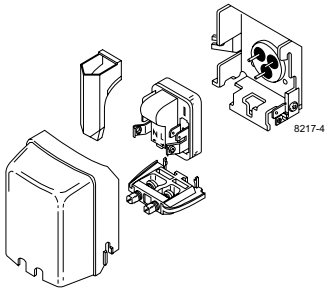
NL Compressors

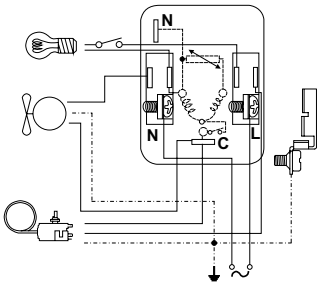
SECOP

Keep electrical equipment clear from oil, chemicals, and water

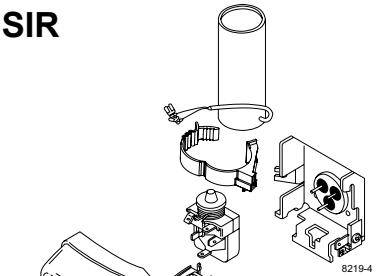
When operated with a flammable refrigerant, only spark-proof starting equipment is allowed.

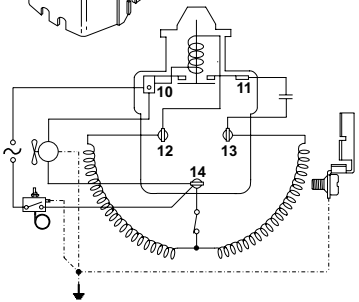
RSIR



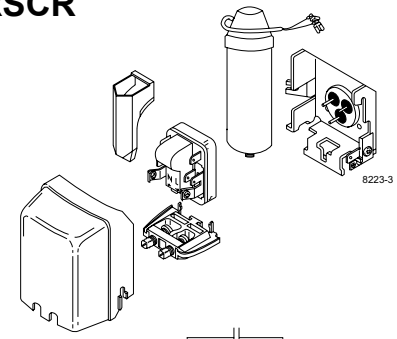


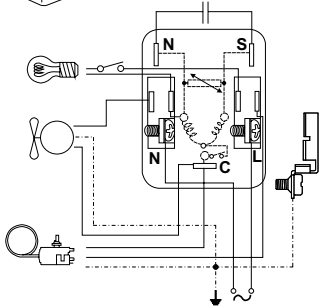
CSIR

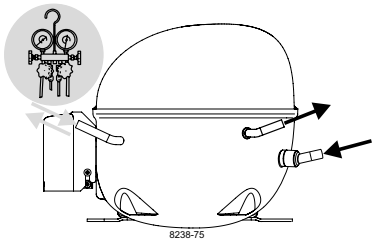




RSCR







NL Compressors

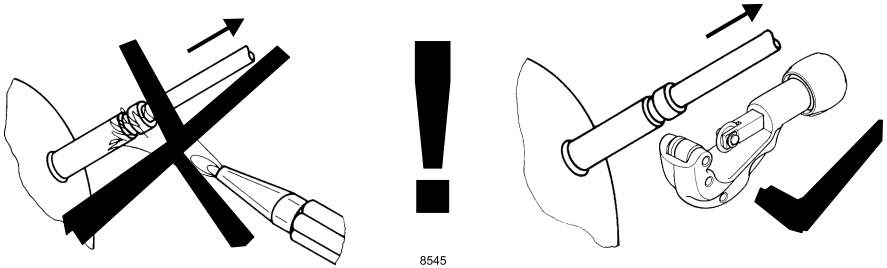
SECOP

Keep electrical equipment clear from oil, chemicals, and water

When operated with a flammable refrigerant, only spark-proof starting equipment is allowed.

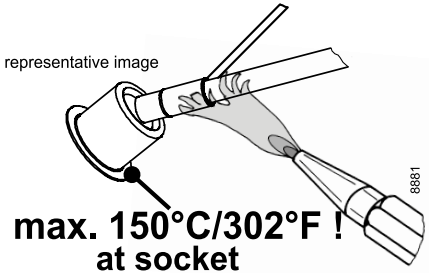
Service/Repair – R290, R600a, R170, R1270, R1234yf

(applies to all flammable refrigerants)



Brazing on Suction Connectors (Direct Intake)

representative image



! max. 150°C/302°F ! at socket

brazing solder: phosphor (LP7) or silver

Refer to Product Bulletin:
Brazing on Suction Connectors (Compressors with Direct Suction Intake)

Dismantling, recycling, disposal: At the end of a compressor's lifecycle, proceed by separating and storing components according to their environmental impact. Parts that may cause pollution must be clearly identified and handled separately, ensuring appropriate disposal. Refrigerant gas must not be released into the environment and should be recovered by qualified operators. Compressor oil must also be collected separately. The compressor should be disposed of at specialized disposal centers in accordance with the applicable regulations. **Subject to modifications/alterations. www.secop.com**