Single
Packs

Single Pack NL6.1MLX 220-240V 50Hz / 208-230V 60Hz CSIR

Single pack code number: **195B4148**

Position	Title	Code	Amount
1	Compressor NL6.1MLX	105F3611	1
2	Starting relay	117U6022	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
NL6.1MLX

Sales code:
105F3611

Compressor Data

Refrigerant(s)	**R404A / R452A**
Refr. charge - tech. limit	**400g / 14.11oz**
Weight	**10.50 kg / 23.15lbs**
Displacement	**6.13 cm3 / 0.37cu.in**
Compressors on pallet	**80**

General – Configurations With NL6.1MLX

–	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Motor configuration	CSIR	CSIR	CSIR	CSIR
Power supply (nominal)	220-240 V/50 Hz	208-230 V/60 Hz	220-240 V/50 Hz	208-230 V/60 Hz
Number of phases	1	1	1	1
Voltage range	187-254 V	187-254 V	187-254 V	187-254 V
Approvals	VDE, UL, CCC	VDE, UL, CCC	VDE, UL, CCC	VDE, UL, CCC
Starting torque	HST	HST	HST	HST
Refrigerant	R404A	R404A	R452A	R452A
Application	MBP	MBP	MBP	MBP
Long interval pull down	OK	OK	OK	OK

Application Notes

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

Model
NL6.1MLX

Sales code:
105F3611

Compressor Design

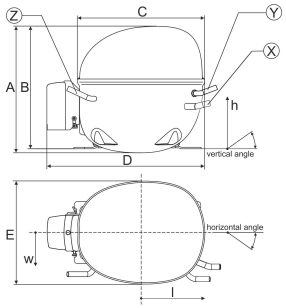
Oil type	**POE**	Winding resistance main	**6.1 Ohm**
Oil viscosity	**32cSt**	Winding resistance aux	**18.35 Ohm**
Oil quantity	**298 / 10.08fl.oz**	Max. winding temp.	**125 °C**
Free gas volume comp.	**2,310 cm3 / 78.11fl.oz**	Max. discharge temp.	**130°C / 266°F**
Motor protection	**internal**		

Compressor Dimensions

Housing

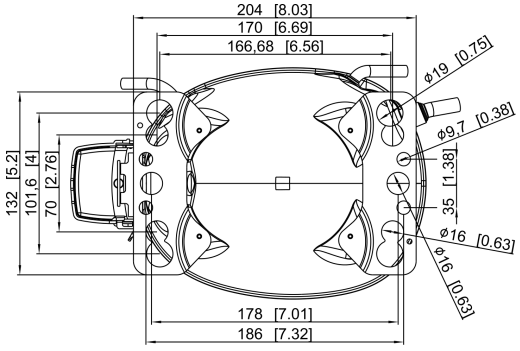
A Height	**203mm / 7.99in**
B Height	**197mm / 7.76in**
C Length shell	**205mm / 8.07in**
D Length w. cover	**254mm / 10.00in**
E Width	**166mm / 6.54in**

Find 3D Model here



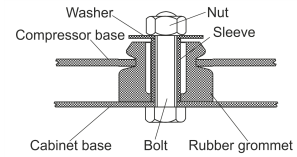
Connectors	Suction X	Discharge Y	Process Z
Diameter [mm]	øi 8.11–8.29 / 0.32–0.33in	øi 6.41–6.59 / 0.25–0.26in	øi 6.41–6.59 / 0.25–0.26in
Material	CU	CU	CU
Horizontal angle ±2°	0°	0°	0°
Vertical angle ±2°	15°	35°	155°
Position l/h/w [mm]	125.5/75.5/78 / 4.94/2.97/3.07in	133/102.5/54 / 5.24/4.04/2.13in	-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

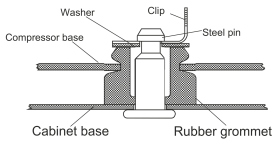


Dimensions in mm [in]

Bolt joint



Snap-on



	one comp.	multi pack
Bolt joint | M6 | ø16mm	118-1917	118-1918
Bolt joint | ø1/4" | ø16mm	118-1946	–
Bolt joint | ø1/4" | ø19mm	118-1949	–
Snap-on | ø7,3 | ø16mm	118-1947	118-1919

Model

NL6.1MLX Configuration 1

Sales code:

105F3611

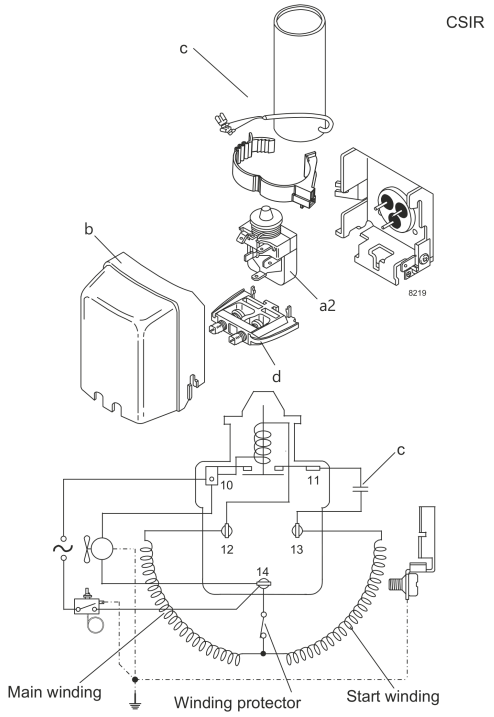
Configuration

Motor configuration	**CSIR**
Power supply (nominal)	**220-240 V/50 Hz 1~**
Refrigerant	**R404A**
Application	**MBP**
Voltage range	**187-254 V**
Starting torque	**HST**
Approvals	**VDE, UL, CCC**
Starting device type	**relay**
Run capacitor	**-/-**
Start capacitor	**80 µF**
LRA (locked rotor amps / 4s/ U(N))	**16.6 A**
RLA (rated load amps / 1s/ U(N))	**2.8 A**
Cut in current (U(N))	**17 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 3m/s

Electrical Accessories / Wiring Diagram



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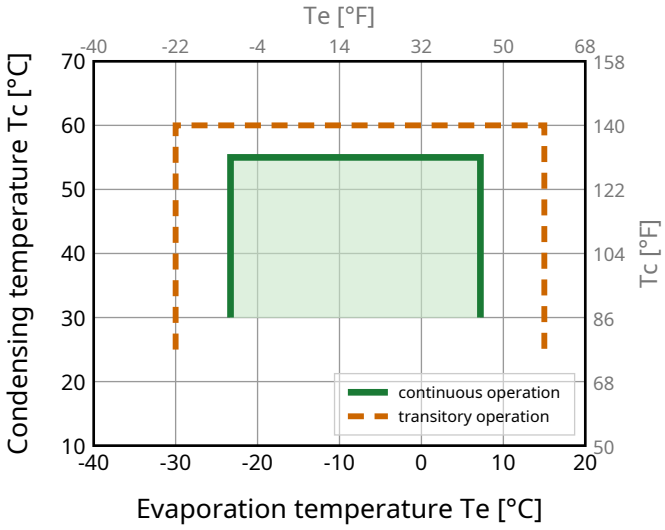
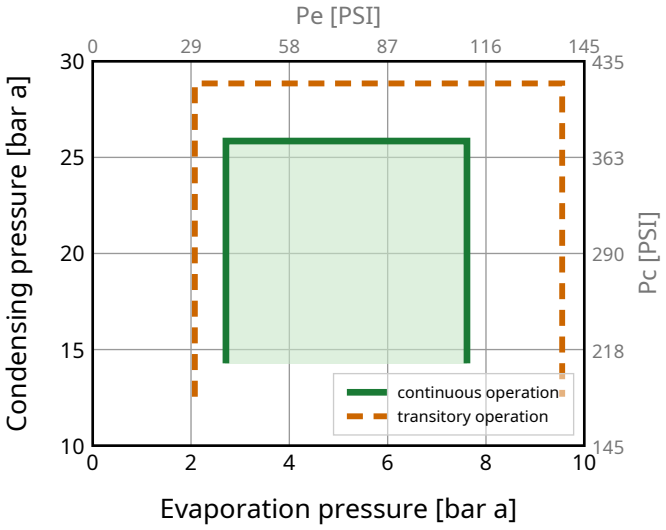
Components
a2 relay 117U6022
c start capacitor (80µF) 117U5015
b plastic cover 103N2011
d cord relief 103N1010

Operation Pressure Range





Model

NL6.1MLX Configuration 1

Sales code:

105F3611

Standard Conditions

R404A, 220 V/50 Hz, CSIR, fan 3m/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]	
-6.7 20	54.4 129.9	35 95	46.1 115	**569**	1940	489	**1.61**	5.50	352	2.43	15.62	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**422**	1441	363	**1.26**	4.29	336	2.38	13.50	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**500**	1704	430	**1.60**	5.46	312	2.29	15.02	**EN12900 MBP**
-6.7 20	48.8 119.8	18.3 64.9	48.8 119.8	**521**	1776	448	**1.54**	5.27	337	2.37	16.96	**ARI540 MBP**
-10 14	45 113	32 89.6	45 113	**530**	1808	456	**1.70**	5.80	312	2.29	14.57	**opt MBP 1**
-25 -13	45 113	32 89.6	45 113	**256**	874	220	**1.09**	3.73	234	2.10	6.89	**opt MBP 2**

Performance Tables

R404A, 220 V/50 Hz, CSIR, fan 3m/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]
-23.3	-10	**281**	960	242	**1.16**	3.94	244	2.12	7.59
-20	-4	**334**	1141	288	**1.28**	4.36	262	2.16	9.05
-15	5	**425**	1450	366	**1.48**	5.05	287	2.22	11.59
-10	14	**530**	1808	456	**1.70**	5.80	312	2.29	14.57
-5	23	**650**	2220	559	**1.94**	6.63	335	2.36	18.06
0	32	**789**	2691	678	**2.21**	7.56	356	2.43	22.14
5	41	**946**	3228	814	**2.52**	8.60	375	2.50	26.93
7.2	45	**1022**	3487	879	**2.67**	9.10	383	2.54	29.28

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

-23.3	-10	**214**	732	184	**0.84**	2.87	255	2.18	6.70
-20	-4	**260**	885	223	**0.94**	3.21	276	2.23	8.15
-15	5	**335**	1144	288	**1.09**	3.73	307	2.31	10.62
-10	14	**422**	1441	363	**1.26**	4.29	336	2.38	13.50
-5	23	**522**	1781	449	**1.44**	4.90	364	2.47	16.88
0	32	**636**	2171	547	**1.63**	5.57	390	2.56	20.84
5	41	**766**	2615	659	**1.85**	6.31	414	2.65	25.51
7.2	45	**829**	2830	713	**1.95**	6.66	425	2.69	27.82

Model
NL6.1MLX Configuration 2

Sales code:
105F3611

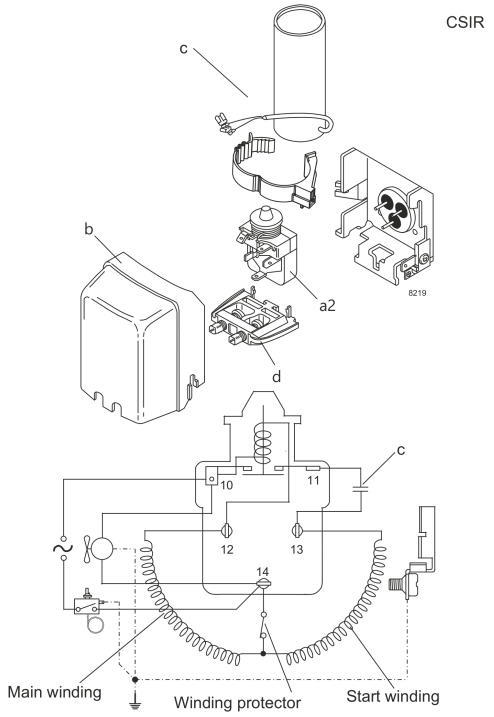
Configuration

Motor configuration	**CSIR**
Power supply (nominal)	**208-230 V/60 Hz 1~**
Refrigerant	**R404A**
Application	**MBP**
Voltage range	**187-254 V**
Starting torque	**HST**
Approvals	**VDE, UL, CCC**
Starting device type	**relay**
Run capacitor	**-/-**
Start capacitor	**80 µF**
LRA (locked rotor amps / 4s/ U(N))	**16.6 A**
RLA (rated load amps / 1s/ U(N))	**2.8 A**
Cut in current (U(N))	**17 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 3m/s

Electrical Accessories / Wiring Diagram



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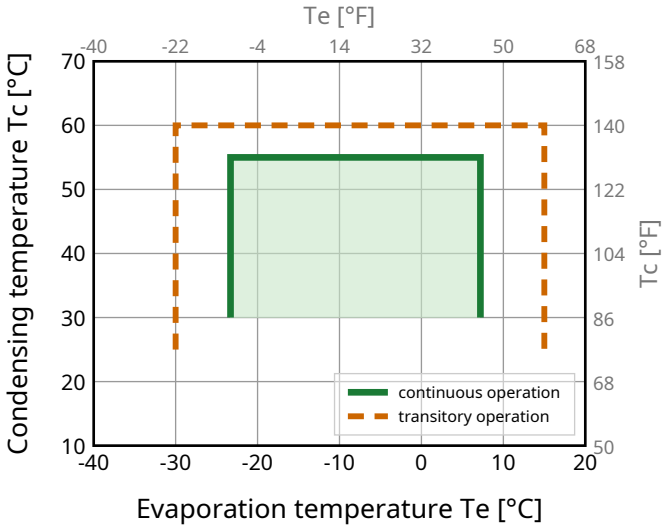
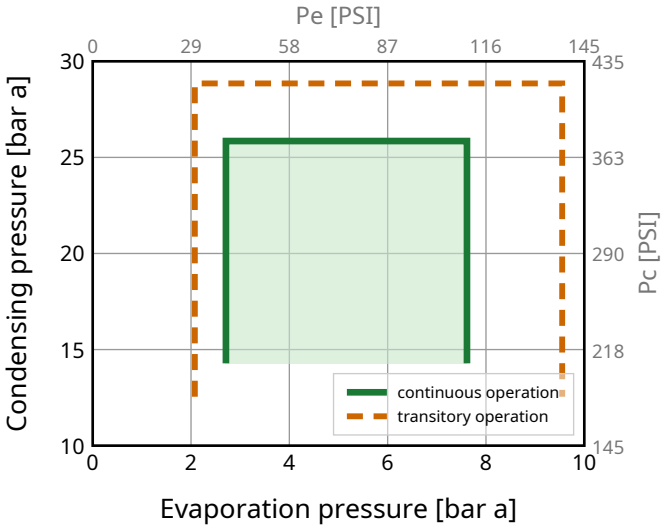
Components
a2 relay 117U6022
c start capacitor (80µF) 117U5015
b plastic cover 103N2011
d cord relief 103N1010

Operation Pressure Range





Model

NL6.1MLX Configuration 2

Sales code:

105F3611

Standard Conditions

R404A, 230 V/60 Hz, CSIR, fan 3m/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]	
-6.7 20	54.4 129.9	35 95	46.1 115	**676**	2307	581	**1.61**	5.51	419	2.39	18.57	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**503**	1716	432	**1.28**	4.35	394	2.29	16.07	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**594**	2025	510	**1.61**	5.51	368	2.20	17.84	**EN12900 MBP**
-6.7 20	48.8 119.8	18.3 64.9	48.8 119.8	**618**	2109	532	**1.54**	5.27	400	2.33	20.15	**ARI540 MBP**
-10 14	45 113	32 89.6	45 113	**630**	2148	541	**1.71**	5.84	368	2.20	17.31	**opt MBP 1**
-25 -13	45 113	32 89.6	45 113	**309**	1055	266	**1.17**	3.99	264	1.84	8.32	**opt MBP 2**

Performance Tables

R404A, 230 V/60 Hz, CSIR, fan 3m/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]
-23.3	-10	**339**	1156	291	**1.23**	4.18	276	1.88	9.14
-20	-4	**401**	1368	345	**1.34**	4.56	300	1.96	10.86
-15	5	**507**	1730	436	**1.52**	5.18	334	2.08	13.82
-10	14	**630**	2148	541	**1.71**	5.84	368	2.20	17.31
-5	23	**771**	2630	663	**1.93**	6.57	400	2.33	21.39
0	32	**932**	3181	802	**2.16**	7.37	432	2.46	26.18
5	41	**1116**	3809	960	**2.42**	8.24	462	2.60	31.78
7.2	45	**1205**	4112	1036	**2.53**	8.65	476	2.66	34.53

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

-23.3	-10	**258**	880	222	**0.91**	3.12	282	1.89	8.06
-20	-4	**311**	1060	267	**1.00**	3.41	311	1.99	9.76
-15	5	**400**	1366	344	**1.13**	3.87	353	2.14	12.67
-10	14	**503**	1716	432	**1.28**	4.35	394	2.29	16.07
-5	23	**620**	2116	533	**1.43**	4.88	434	2.45	20.05
0	32	**755**	2575	649	**1.59**	5.44	473	2.62	24.73
5	41	**908**	3100	781	**1.77**	6.06	512	2.78	30.24
7.2	45	**983**	3353	845	**1.86**	6.35	528	2.85	32.96

Model
NL6.1MLX Configuration 3

Sales code:
105F3611

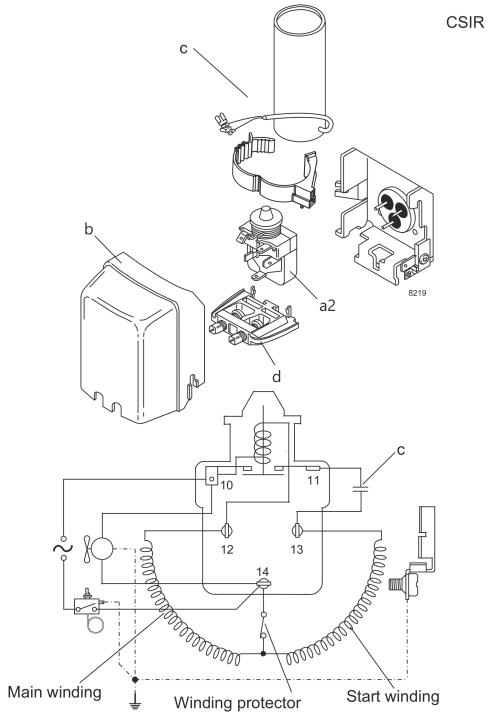
Configuration

Motor configuration	**CSIR**
Power supply (nominal)	**220-240 V/50 Hz 1~**
Refrigerant	**R452A**
Application	**MBP**
Voltage range	**187-254 V**
Starting torque	**HST**
Approvals	**VDE, UL, CCC**
Starting device type	**relay**
Run capacitor	**-/-**
Start capacitor	**80 µF**
LRA (locked rotor amps / 4s/ U(N))	**16.6 A**
RLA (rated load amps / 1s/ U(N))	**2.8 A**
Cut in current (U(N))	**17 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 3m/s

Electrical Accessories / Wiring Diagram



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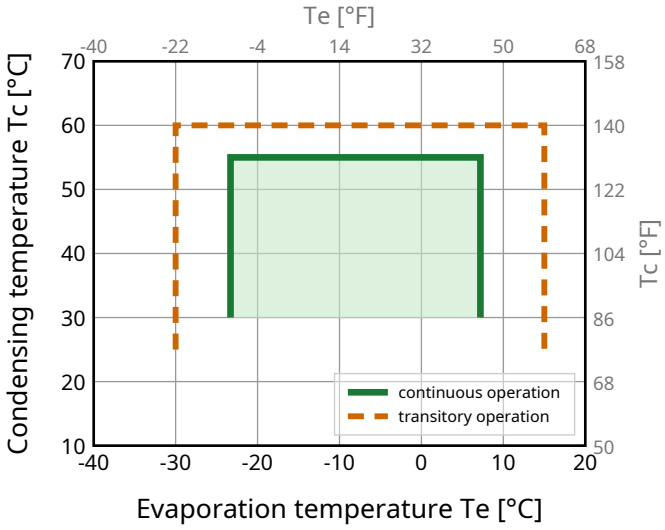
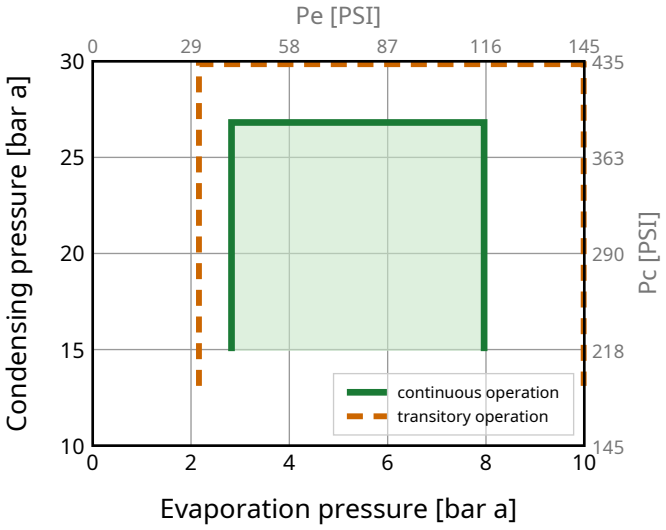
Components
a2 relay 117U6022
c start capacitor (80µF) 117U5015
b plastic cover 103N2011
d cord relief 103N1010

Operation Pressure Range





Model
NL6.1MLX Configuration 3

Sales code:
105F3611

Standard Conditions

R452A, 220 V/50 Hz, CSIR, fan 3m/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]	
-6.7 20	54.4 129.9	35 95	46.1 115	**538**	1837	463	**1.61**	5.48	335	2.39	15.36	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**400**	1364	344	**1.26**	4.29	318	2.34	13.21	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**471**	1607	405	**1.59**	5.43	296	2.28	14.69	**EN12900 MBP**
-6.7 20	48.8 119.8	18.3 64.9	48.8 119.8	**494**	1685	425	**1.54**	5.26	321	2.35	16.67	**ARI540 MBP**
-10 14	45 113	32 89.6	45 113	**499**	1703	429	**1.69**	5.76	296	2.28	14.25	**opt MBP 1**
-25 -13	45 113	32 89.6	45 113	**236**	804	203	**1.08**	3.69	218	2.05	6.59	**opt MBP 2**

Performance Tables

R452A, 220 V/50 Hz, CSIR, fan 3m/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]
-23.3	-10	**260**	886	223	**1.14**	3.90	227	2.08	7.28
-20	-4	**310**	1059	267	**1.27**	4.32	245	2.13	8.73
-15	5	**398**	1357	342	**1.47**	5.01	271	2.20	11.26
-10	14	**499**	1703	429	**1.69**	5.76	296	2.28	14.25
-5	23	**616**	2102	530	**1.93**	6.59	319	2.34	17.76
0	32	**751**	2562	646	**2.20**	7.51	341	2.41	21.90
5	41	**905**	3089	779	**2.50**	8.53	362	2.47	26.75
7.2	45	**980**	3343	843	**2.64**	9.02	371	2.49	29.15

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

-23.3	-10	**198**	677	171	**0.84**	2.85	237	2.11	6.41
-20	-4	**242**	824	208	**0.94**	3.20	258	2.17	7.84
-15	5	**315**	1075	271	**1.09**	3.73	288	2.25	10.31
-10	14	**400**	1364	344	**1.26**	4.29	318	2.34	13.21
-5	23	**497**	1697	428	**1.44**	4.90	346	2.42	16.62
0	32	**610**	2081	525	**1.63**	5.56	374	2.50	20.65
5	41	**739**	2521	635	**1.85**	6.30	400	2.58	25.42
7.2	45	**801**	2734	689	**1.95**	6.65	411	2.61	27.78

Model
NL6.1MLX Configuration 4

Sales code:
105F3611

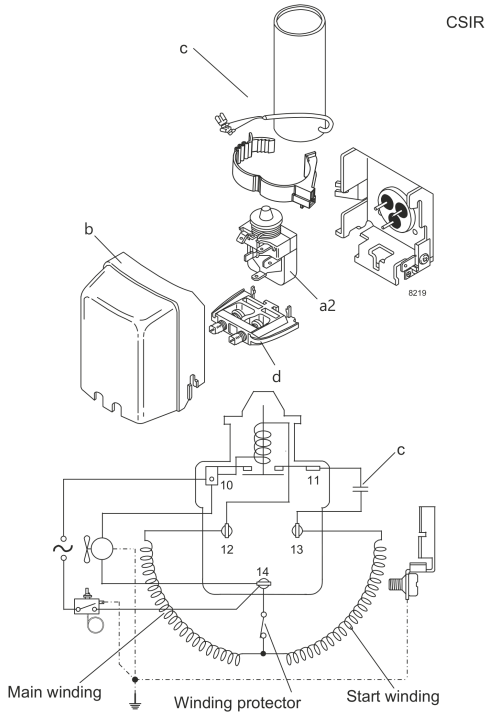
Configuration

Motor configuration	**CSIR**
Power supply (nominal)	**208-230 V/60 Hz 1~**
Refrigerant	**R452A**
Application	**MBP**
Voltage range	**187-254 V**
Starting torque	**HST**
Approvals	**VDE, UL, CCC**
Starting device type	**relay**
Run capacitor	**-/-**
Start capacitor	**80 µF**
LRA (locked rotor amps / 4s/ U(N))	**16.6 A**
RLA (rated load amps / 1s/ U(N))	**2.8 A**
Cut in current (U(N))	**17 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 3m/s

Electrical Accessories / Wiring Diagram



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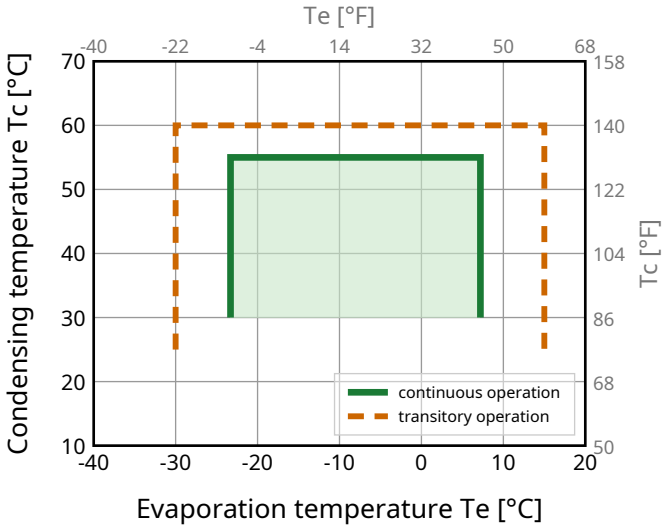
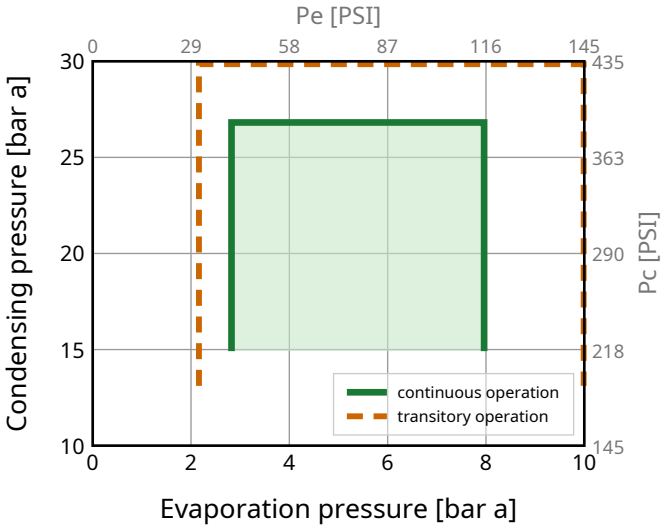
Components
a2 relay 117U6022
c start capacitor (80µF) 117U5015
b plastic cover 103N2011
d cord relief 103N1010

Operation Pressure Range





Model

NL6.1MLX Configuration 4

Sales code:

105F3611

Standard Conditions

R452A, 220 V/60 Hz, CSIR, fan 3m/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]	
-6.7 20	54.4 129.9	35 95	46.1 115	**640**	2182	550	**1.60**	5.47	399	2.31	18.24	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**476**	1622	409	**1.27**	4.34	374	2.22	15.72	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**559**	1908	481	**1.60**	5.46	349	2.13	17.44	**EN12900 MBP**
-6.7 20	48.8 119.8	18.3 64.9	48.8 119.8	**586**	2000	504	**1.54**	5.24	382	2.25	19.79	**ARI540 MBP**
-10 14	45 113	32 89.6	45 113	**593**	2022	510	**1.70**	5.79	349	2.13	16.92	**opt MBP 1**
-25 -13	45 113	32 89.6	45 113	**284**	970	245	**1.15**	3.93	247	1.75	7.95	**opt MBP 2**

Performance Tables

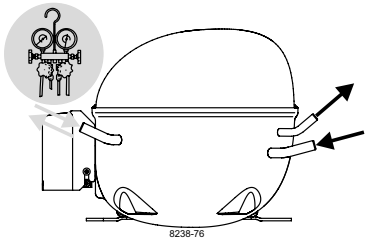
R452A, 220 V/60 Hz, CSIR, fan 3m/s

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]
-23.3	-10	**313**	1067	269	**1.21**	4.13	259	1.79	8.76
-20	-4	**372**	1270	320	**1.32**	4.51	282	1.88	10.46
-15	5	**474**	1618	408	**1.50**	5.12	316	2.00	13.43
-10	14	**593**	2022	510	**1.70**	5.79	349	2.13	16.92
-5	23	**730**	2489	627	**1.91**	6.52	382	2.25	21.03
0	32	**887**	3028	763	**2.14**	7.31	414	2.37	25.87
5	41	**1068**	3644	918	**2.39**	8.16	446	2.49	31.56
7.2	45	**1155**	3941	993	**2.51**	8.56	460	2.54	34.36

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

-23.3	-10	**238**	813	205	**0.91**	3.09	263	1.81	7.70
-20	-4	**289**	986	249	**0.99**	3.39	291	1.91	9.39
-15	5	**376**	1282	323	**1.13**	3.85	333	2.07	12.30
-10	14	**476**	1622	409	**1.27**	4.34	374	2.22	15.72
-5	23	**591**	2015	508	**1.43**	4.86	414	2.37	19.74
0	32	**723**	2468	622	**1.59**	5.43	455	2.52	24.49
5	41	**875**	2987	753	**1.77**	6.04	494	2.67	30.11
7.2	45	**949**	3238	816	**1.85**	6.32	512	2.73	32.90



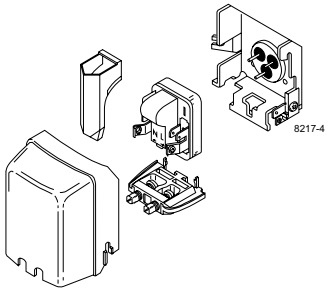
NL Compressors

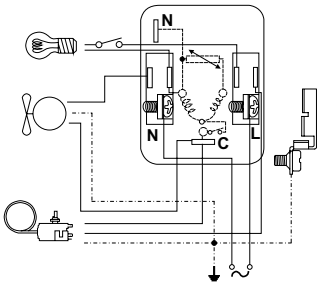
SECOP

Keep electrical equipment clear from oil, chemicals, and water

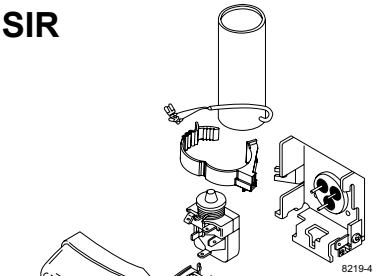
When operated with a flammable refrigerant, only spark-proof starting equipment is allowed.

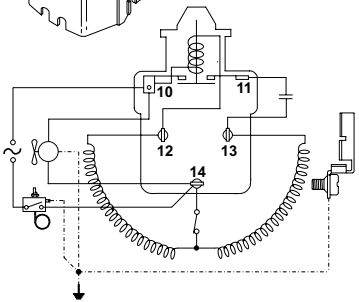
RSIR



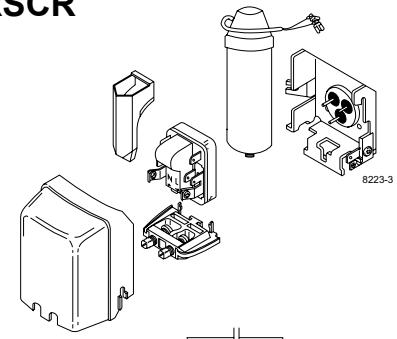


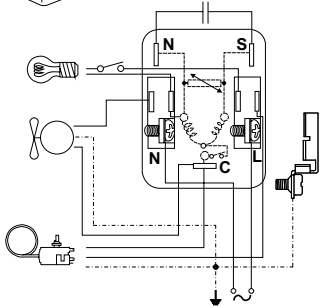
CSIR

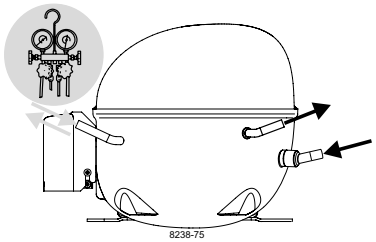




RSCR







NL Compressors

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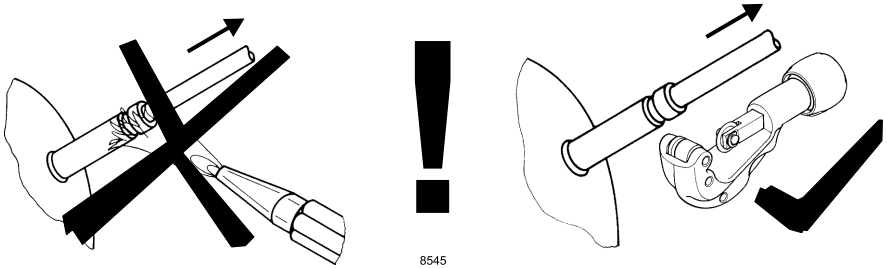
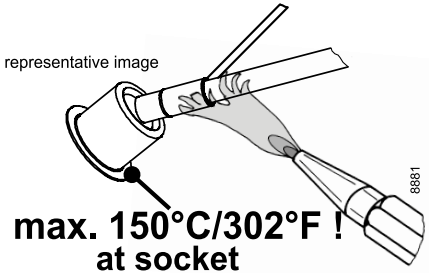
Service/Repair – R290, R600a, R170, R1270, R1234yf

(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**