Single
Packs

Single Pack NF7MLX 220-240V 50Hz / 208-230V 60Hz CSIR

Single pack code number: **195B4082**

Position	Title	Code	Amount
1	Compressor NF7MLX	105F3720	1
2	Starting relay (overload protector MRP56EN-6)	117U4139	1
3	Starting capacitor (125µF 220V, 6.3mm)	117U5018	1
4	Cord relief	117U0349	2
5	Cover	117U1021	1
6	Bolt joint for one compressor | M6 | ø16mm	118-1917	1

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Model
NF7MLX

Sales code:
105F3720

Compressor Data

Refrigerant(s)	**R404A / R452A**
Refr. charge - tech. limit	**400g / 14.11oz**
Weight	**10.50 kg / 23.15lbs**
Displacement	**7.27 cm3 / 0.44cu.in**
Compressors on pallet	**80**

General – Configurations With NF7MLX

–	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, CCC, EAC, KC	VDE, CCC, EAC, KC	VDE, CCC, EAC, KC	VDE, CCC, EAC, KC
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
NF7MLX

Sales code:
105F3720

Compressor Design

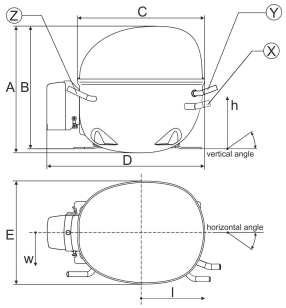
Oil type	**POE**	Winding resistance main	**4.6 Ohm**
Oil viscosity	**32cSt**	Winding resistance aux	**12.8 Ohm**
Oil quantity	**300 / 10.14fl.oz**	Max. winding temp.	**125 °C**
Free gas volume comp.	**2,310 cm3 / 78.11fl.oz**	Max. discharge temp.	**130°C / 266°F**
Motor protection	**external**		

Compressor Dimensions

Housing

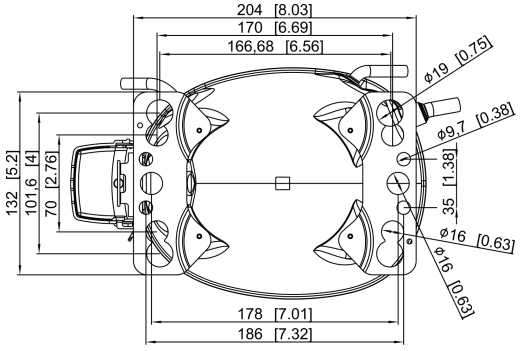
A Height	**203mm / 7.99in**
B Height	**197mm / 7.76in**
C Length shell	**205mm / 8.07in**
D Length w. cover	**254mm / 10.00in**
E Width	**166mm / 6.54in**

Find 3D Model here



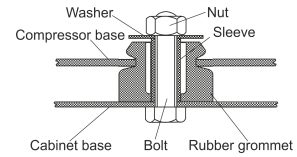
Connectors	Suction X	Discharge Y	Process Z
Diameter [mm]	øi 9.61–9.79 / 0.38–0.39in	øi 6.41–6.59 / 0.25–0.26in	øi 6.41–6.59 / 0.25–0.26in
Material	CU	CU	CU
Horizontal angle ±2°	0°	0°	0°
Vertical angle ±2°	15°	35°	155°
Position l/h/w [mm]	125.5/75.5/78 / 4.94/2.97/3.07in	133/102.5/54 / 5.24/4.04/2.13in	-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

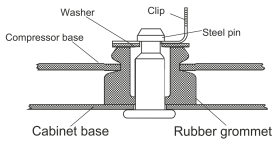


Dimensions in mm [in]

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
NF7MLX Configuration 1

Sales code:
105F3720

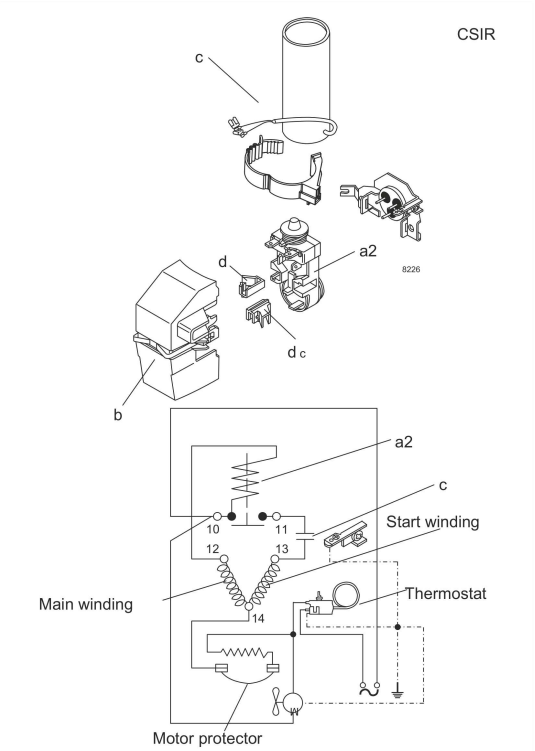
Configuration

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, CCC, EAC, KC**
Starting device type	**relay**
Run capacitor	**-/-**
Start capacitor	**125 µF**
LRA (locked rotor amps / 4s/ U(N))	**20 A**
RLA (rated load amps / 1s/ U(N))	**3.7 A**
Cut in current (U(N))	**20 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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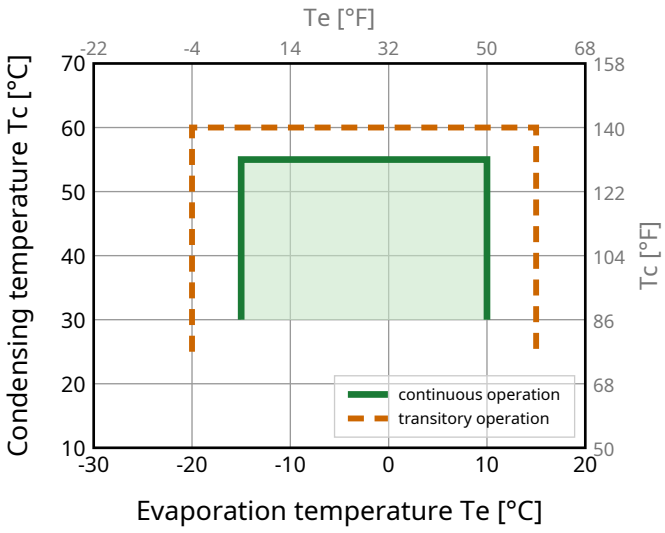
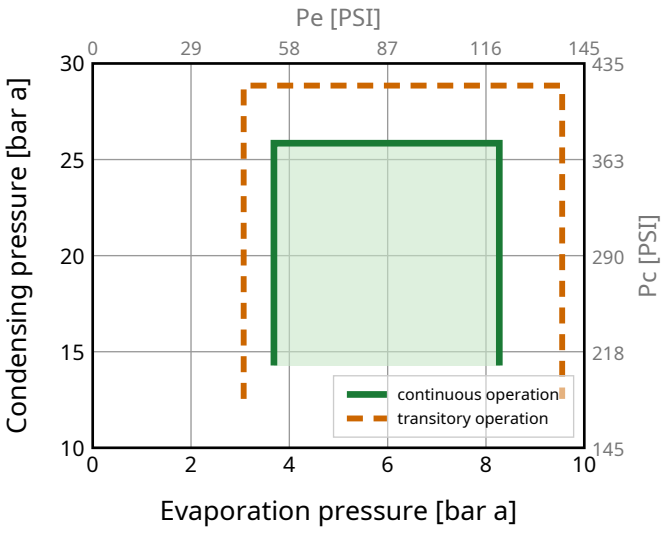
Components
a2 relay (protector: TI MRP56EN-6) 117U4139
c start capacitor 117U5018
b plastic cover + clamp 117U1021
d/dc cord relief 117U0349

Alternative components
a2 relay (protector: TI MRP56EN-6) 117U4139
d cord relief 117U0317

Operation Pressure Range





Model
NF7MLX Configuration 1

Sales code:
105F3720

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	**681**	2325	586	**1.49**	5.07	458	3.24	18.72	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**507**	1729	436	**1.16**	3.96	436	3.17	16.20	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**598**	2041	515	**1.48**	5.03	406	3.10	17.99	**EN12900 MBP**
-6.7 20	48.8 119.8	18.3 64.9	48.8 119.8	**623**	2126	536	**1.42**	4.86	438	3.20	20.31	**ARI540 MBP**
-10 14	45 113	32 89.6	45 113	**635**	2166	546	**1.56**	5.34	406	3.10	17.45	**opt MBP 1**
-25 -13	45 113	32 89.6	45 113	**312**	1064	268	**1.02**	3.49	304	2.84	8.39	**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]
-15	5	**511**	1744	440	**1.37**	4.67	374	3.01	13.94
-10	14	**635**	2166	546	**1.56**	5.34	406	3.10	17.45
-5	23	**777**	2651	668	**1.78**	6.09	435	3.20	21.57
0	32	**940**	3207	808	**2.03**	6.93	463	3.29	26.39
5	41	**1125**	3840	968	**2.31**	7.87	488	3.39	32.03
10	50	**1336**	4558	1149	**2.62**	8.93	511	3.49	38.64

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

-15	5	**404**	1377	347	**1.01**	3.45	399	3.06	12.77
-10	14	**507**	1729	436	**1.16**	3.96	436	3.17	16.20
-5	23	**625**	2134	538	**1.32**	4.51	473	3.29	20.21
0	32	**761**	2596	654	**1.50**	5.12	507	3.40	24.93
5	41	**916**	3125	788	**1.70**	5.80	539	3.52	30.48
10	50	**1092**	3726	939	**1.92**	6.55	569	3.65	37.03

Model
NF7MLX Configuration 2

Sales code:
105F3720

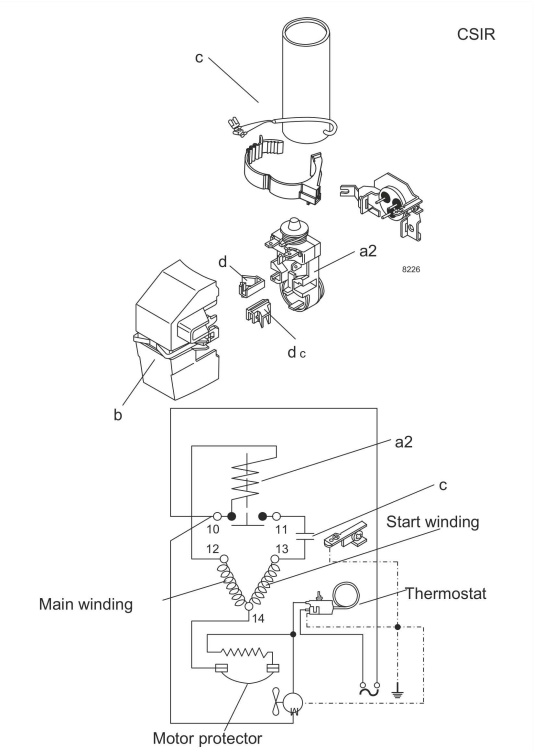
Configuration

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, CCC, EAC, KC**
Starting device type	**relay**
Run capacitor	**-/-**
Start capacitor	**125 µF**
LRA (locked rotor amps / 4s/ U(N))	**20 A**
RLA (rated load amps / 1s/ U(N))	**3.7 A**
Cut in current (U(N))	**20 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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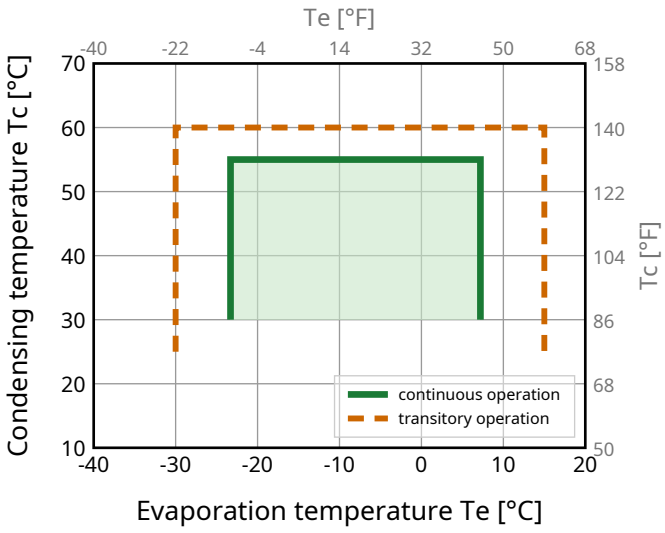
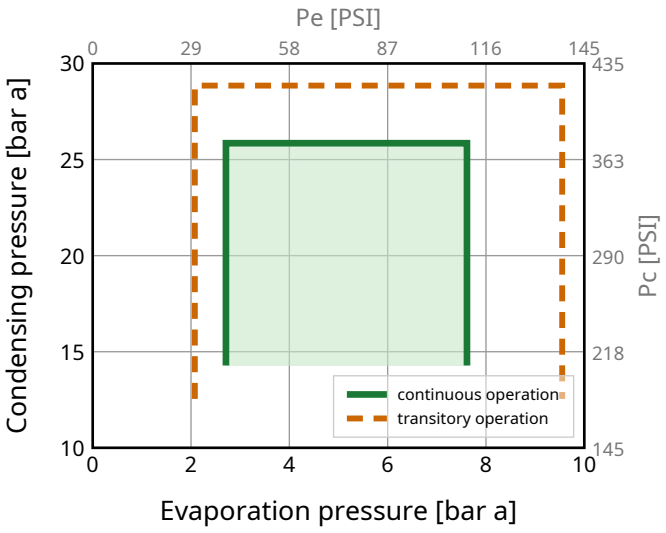
Components
a2 relay (protector: TI MRP56EN-6) 117U4139
c start capacitor 117U5018
b plastic cover + clamp 117U1021
d/dc cord relief 117U0349

Alternative components
a2 relay (protector: TI MRP56EN-6) 117U4139
d cord relief 117U0317

Operation Pressure Range





Model

NF7MLX Configuration 2

Sales code:

105F3720

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	**824**	2813	709	**1.56**	5.32	529	3.02	22.65	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**613**	2092	527	**1.24**	4.22	496	2.90	19.60	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**724**	2470	623	**1.53**	5.22	473	2.78	21.77	**EN12900 MBP**
-6.7 20	48.8 119.8	18.3 64.9	48.8 119.8	**754**	2573	649	**1.46**	5.00	515	2.94	24.57	**ARI540 MBP**
-10 14	45 113	32 89.6	45 113	**768**	2620	660	**1.62**	5.54	473	2.78	21.11	**opt MBP 1**
-25 -13	45 113	32 89.6	45 113	**377**	1287	324	**1.09**	3.73	345	2.32	10.15	**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	**413**	1411	356	**1.15**	3.93	358	2.37	11.15
-20	-4	**489**	1668	421	**1.27**	4.33	385	2.47	13.24
-15	5	**618**	2110	532	**1.45**	4.93	428	2.62	16.86
-10	14	**768**	2620	660	**1.62**	5.54	473	2.78	21.11
-5	23	**940**	3207	808	**1.80**	6.16	521	2.94	26.10
0	32	**1137**	3880	978	**1.99**	6.77	573	3.11	31.93
5	41	**1362**	4646	1171	**2.16**	7.38	629	3.28	38.76
7.2	45	**1470**	5016	1264	**2.24**	7.65	656	3.35	42.12

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

-23.3	-10	**314**	1073	270	**0.85**	2.91	368	2.38	9.83
-20	-4	**379**	1293	326	**0.95**	3.24	399	2.51	11.90
-15	5	**488**	1666	420	**1.09**	3.74	446	2.70	15.46
-10	14	**613**	2092	527	**1.24**	4.22	496	2.90	19.60
-5	23	**757**	2582	651	**1.38**	4.71	548	3.10	24.46
0	32	**921**	3141	792	**1.52**	5.20	604	3.30	30.16
5	41	**1108**	3781	953	**1.67**	5.68	665	3.51	36.88
7.2	45	**1199**	4090	1031	**1.73**	5.90	693	3.60	40.21

Model
NF7MLX Configuration 3

Sales code:
105F3720

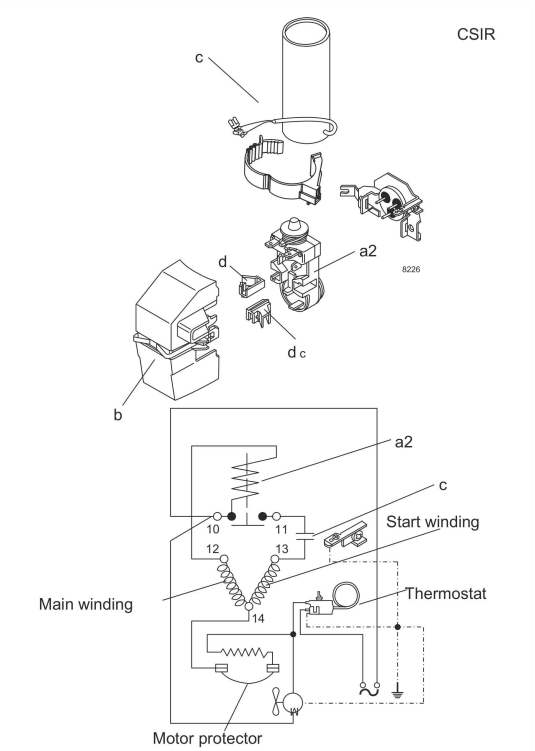
Configuration

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, CCC, EAC, KC**
Starting device type	**relay**
Run capacitor	**-/-**
Start capacitor	**125 µF**
LRA (locked rotor amps / 4s/ U(N))	**20 A**
RLA (rated load amps / 1s/ U(N))	**3.7 A**
Cut in current (U(N))	**20 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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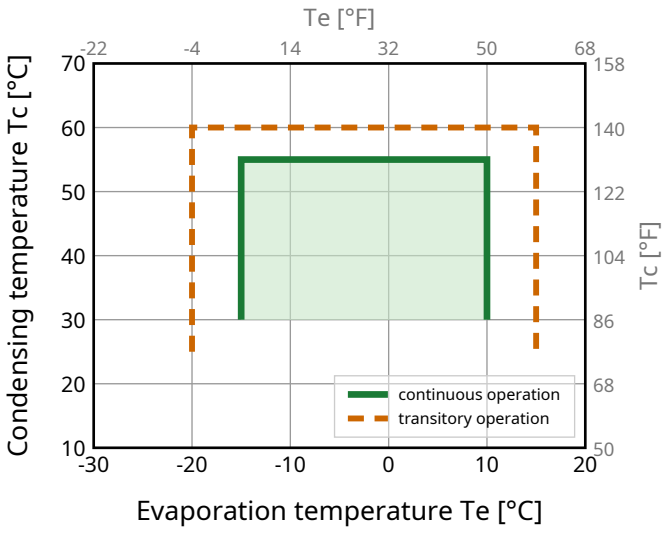
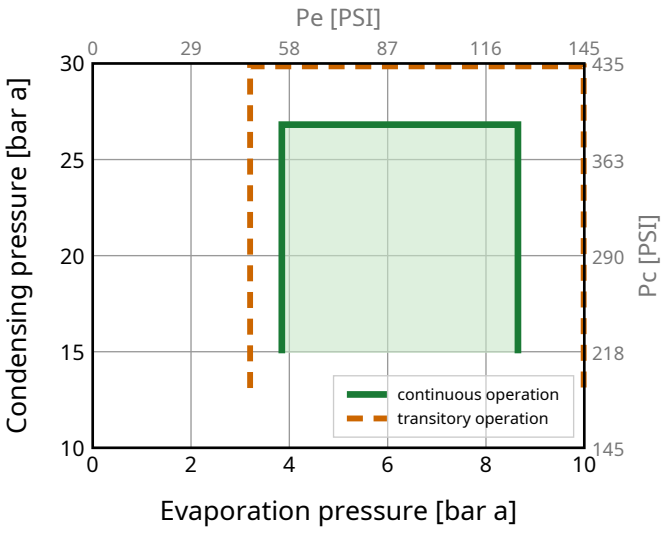
Components
a2 relay (protector: TI MRP56EN-6) 117U4139
c start capacitor 117U5018
b plastic cover + clamp 117U1021
d/dc cord relief 117U0349

Alternative components
a2 relay (protector: TI MRP56EN-6) 117U4139
d cord relief 117U0317

Operation Pressure Range





Model
NF7MLX Configuration 3

Sales code:
105F3720

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	**646**	2206	556	**1.50**	5.10	432	3.21	18.44	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**480**	1639	413	**1.17**	4.00	410	3.14	15.88	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**565**	1927	486	**1.48**	5.05	382	3.06	17.62	**EN12900 MBP**
-6.7 20	48.8 119.8	18.3 64.9	48.8 119.8	**592**	2021	509	**1.43**	4.88	414	3.15	19.99	**ARI540 MBP**
-10 14	45 113	32 89.6	45 113	**599**	2042	515	**1.57**	5.35	382	3.06	17.09	**opt MBP 1**
-25 -13	45 113	32 89.6	45 113	**287**	980	247	**1.02**	3.48	281	2.77	8.03	**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]
-15	5	**479**	1634	412	**1.37**	4.67	350	2.97	13.56
-10	14	**599**	2042	515	**1.57**	5.35	382	3.06	17.09
-5	23	**737**	2515	634	**1.79**	6.10	412	3.15	21.25
0	32	**896**	3059	771	**2.03**	6.94	441	3.23	26.14
5	41	**1079**	3681	928	**2.31**	7.87	468	3.31	31.88
10	50	**1286**	4388	1106	**2.61**	8.92	492	3.38	38.62

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

-15	5	**380**	1295	326	**1.02**	3.48	372	3.03	12.43
-10	14	**480**	1639	413	**1.17**	4.00	410	3.14	15.88
-5	23	**597**	2037	513	**1.34**	4.56	447	3.25	19.95
0	32	**731**	2495	629	**1.52**	5.18	482	3.35	24.76
5	41	**885**	3020	761	**1.72**	5.86	515	3.44	30.44
10	50	**1061**	3619	912	**1.94**	6.62	547	3.54	37.18

Model
NF7MLX Configuration 4

Sales code:
105F3720

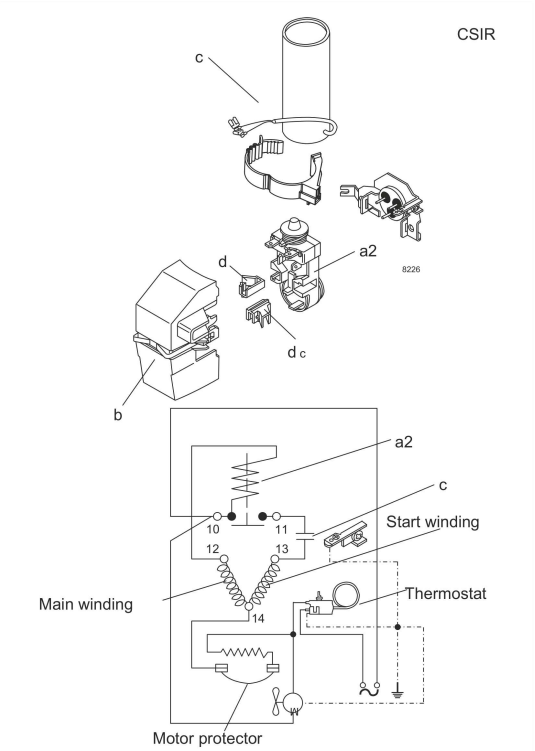
Configuration

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, CCC, EAC, KC**
Starting device type	**relay**
Run capacitor	**-/-**
Start capacitor	**125 µF**
LRA (locked rotor amps / 4s/ U(N))	**20 A**
RLA (rated load amps / 1s/ U(N))	**3.7 A**
Cut in current (U(N))	**20 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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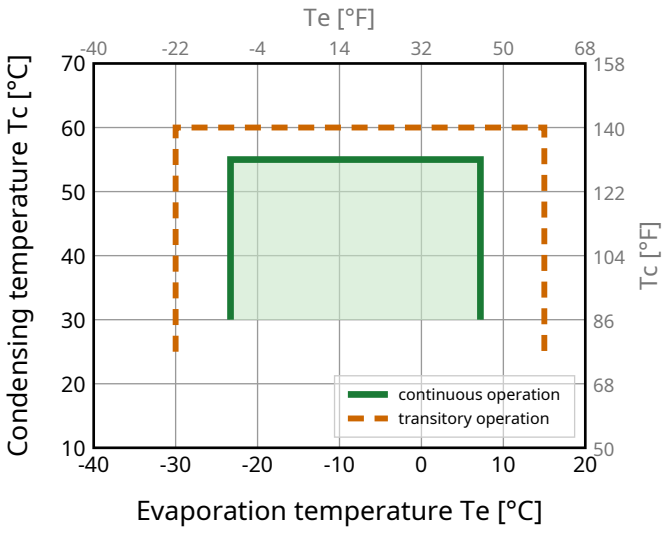
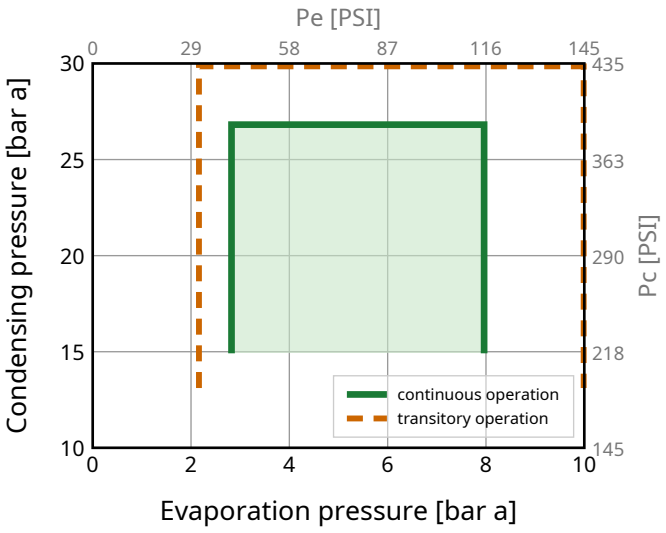
Components
a2 relay (protector: TI MRP56EN-6) 117U4139
c start capacitor 117U5018
b plastic cover + clamp 117U1021
d/dc cord relief 117U0349

Alternative components
a2 relay (protector: TI MRP56EN-6) 117U4139
d cord relief 117U0317

Operation Pressure Range





Model
NF7MLX Configuration 4

Sales code:
105F3720

Standard Conditions

R452A, 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	**781**	2664	672	**1.56**	5.32	501	2.89	22.27	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**580**	1981	499	**1.24**	4.23	468	2.77	19.19	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**683**	2329	587	**1.53**	5.22	447	2.70	21.30	**EN12900 MBP**
-6.7 20	48.8 119.8	18.3 64.9	48.8 119.8	**716**	2442	616	**1.47**	5.01	488	2.84	24.16	**ARI540 MBP**
-10 14	45 113	32 89.6	45 113	**724**	2469	622	**1.62**	5.53	447	2.70	20.66	**opt MBP 1**
-25 -13	45 113	32 89.6	45 113	**347**	1185	299	**1.08**	3.70	320	2.25	9.71	**opt MBP 2**

Performance Tables

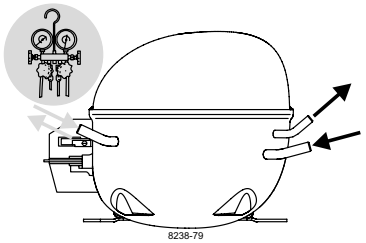
R452A, 230 V/60 Hz, CSIR, fan 3m/s

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	**382**	1303	328	**1.15**	3.91	333	2.30	10.69
-20	-4	**454**	1550	391	**1.26**	4.31	360	2.39	12.77
-15	5	**579**	1975	498	**1.44**	4.91	402	2.54	16.39
-10	14	**724**	2469	622	**1.62**	5.53	447	2.70	20.66
-5	23	**891**	3040	766	**1.80**	6.15	495	2.87	25.69
0	32	**1084**	3699	932	**1.98**	6.77	546	3.05	31.61
5	41	**1305**	4453	1122	**2.17**	7.39	603	3.24	38.56
7.2	45	**1412**	4817	1214	**2.24**	7.66	629	3.33	42.00

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

-23.3	-10	**291**	993	250	**0.85**	2.91	341	2.33	9.40
-20	-4	**353**	1204	304	**0.95**	3.24	371	2.43	11.46
-15	5	**459**	1565	394	**1.10**	3.74	418	2.60	15.02
-10	14	**580**	1981	499	**1.24**	4.23	468	2.77	19.19
-5	23	**721**	2461	620	**1.39**	4.73	520	2.96	24.11
0	32	**884**	3015	760	**1.53**	5.23	577	3.15	29.92
5	41	**1070**	3650	920	**1.68**	5.73	637	3.36	36.80
7.2	45	**1160**	3958	998	**1.74**	5.95	665	3.46	40.22



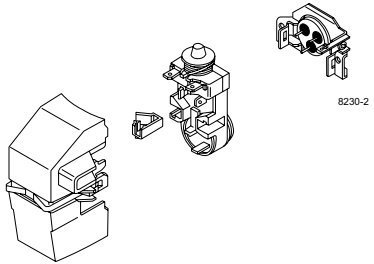
NF Compressors

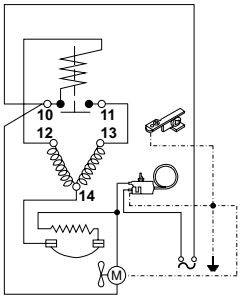
SECOP

Keep electrical equipment clear from oil, chemicals, and water

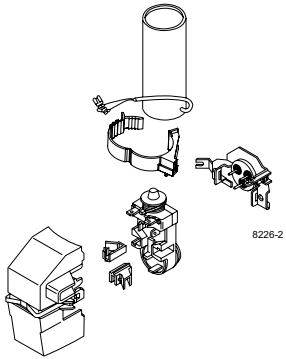
When operated with a flammable refrigerant, only spark-proof starting equipment is allowed.

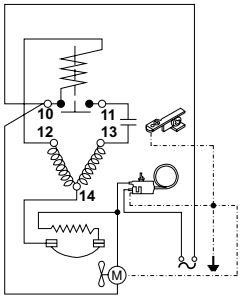
RSIR





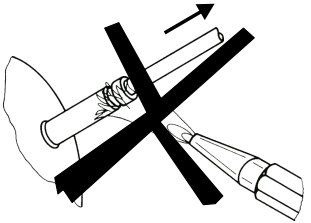
CSIR

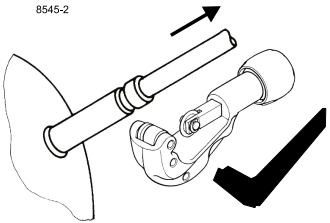


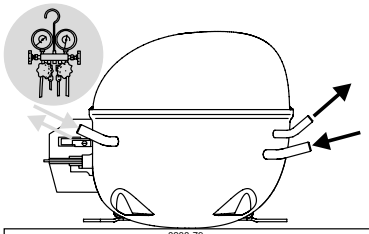


Service/Repair – R1234yf

(applies to all flammable refrigerants)







NF Compressors

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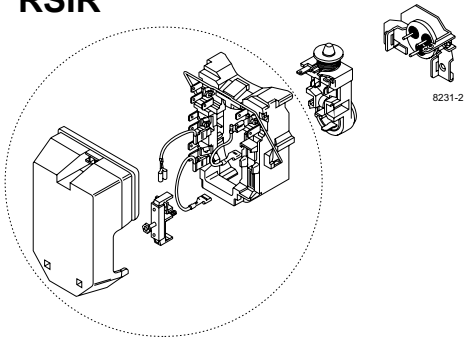
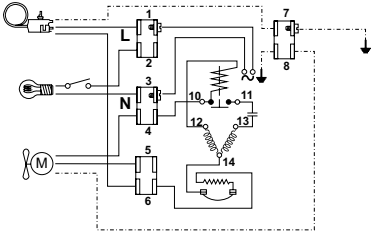
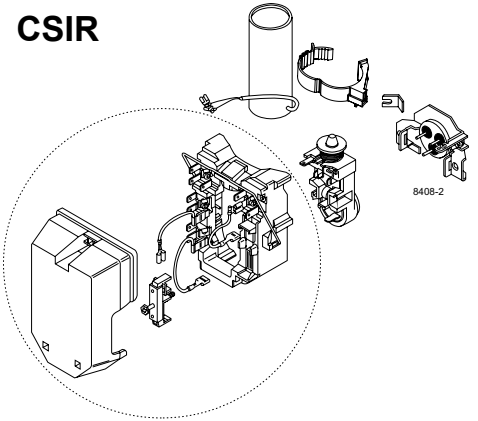
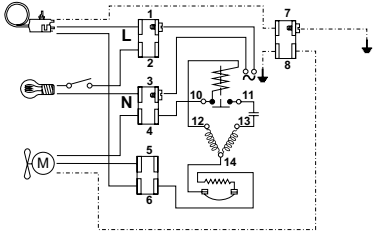
RSIR





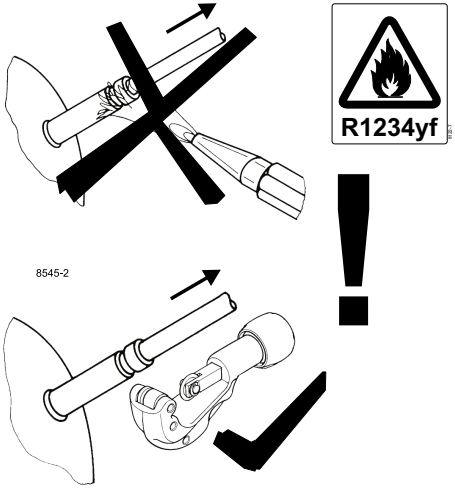
CSIR





Service/Repair – R1234yf

(applies to all flammable refrigerants)



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**