

Single Pack NF10FX 220-240V 50Hz / 208-230V 60Hz CSIR

Single pack code number: **195B4479**

Position	Title	Code	Amount
1	Compressor NF10FX	105G6846	1
2	Starting relay (overload protector MRP56EN-6)	117U4139	1
3	Starting capacitor (125µF 220V, 6.3mm)	117U5018	1
4	Cord relief	117U0317	1
5	Cord relief	117U0349	1
6	Cover	117U1021	1
7	Bolt joint for one compressor M6 ø16mm	118-1917	1

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Model

Designation	NF10FX	220-240V/50Hz 1~ 208-230V/60Hz 1~	Sales code:	105G6846
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Compressor design

Oil type	Polyolester	Refrigerant(s)	R134a, R513A, 0
Oil viscosity	32cST	Displacement	10,09cm ³ / 0,62cu.in
Oil quantity	298cm ³ / 10,1fl.oz	Compressors on pallet	80
Refr. charge - tech. limit	460g / 16,2oz		
Free gas volume comp.	2360cm ³ / 79,8fl.oz		
Weight	10,5kg / 23,1lbs		
Motor protection	external		
Winding resistance main	4,5Ω (at 25°C)		
Winding resistance aux	12,8Ω (at 25°C)		
Max. winding temp.	125°C / 257°F		
Max. discharge temp.	110°C / 230°F		



General - Configurations with NF10FX

	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Motorconfiguration	CSIR	CSIR	CSIR	CSIR
Power supply (nominal)	220-240V/50Hz	220-240V/50Hz	208-230V/60Hz	208-230V/60Hz
Number of phases	1	1	1	1
Voltage range	198-242V	198-242V	198-242V	198-242V
Approvals	UL, VDE, CCC, EAC	UL, VDE, CCC, EAC	UL, VDE, CCC, EAC	UL, VDE, CCC, EAC
Starting torque	HST	HST	HST	HST
Note	- / -			

Applications with NF10FX

	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Refrigerant	R134a	R513A	R134a	R513A
Application	LBP+MBP	LBP+MBP	LBP+MBP	LBP+MBP
System cooling	fan 1,5m/s	fan 1,5m/s	fan 3m/s	fan 3m/s
Hot gas defrost	OK	OK	OK	OK
Long interval pull down	OK	OK	OK	OK

Electrical data - Configurations with NF10FX

	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Starting device type	relay	relay	relay	relay
Run capacitor	- / -	- / -	- / -	- / -
Start capacitor	125μF	125μF	125μF	125μF
LRA (locked rotor amps / 4s/ U(N))	20A	20A	19,4A	19,4A
RLA (rated load amps / 1s/ U(N))	3,7A	3,7A	3,24A	3,24A
Cut in current (U(N))	20A	20A	19,4A	19,4A

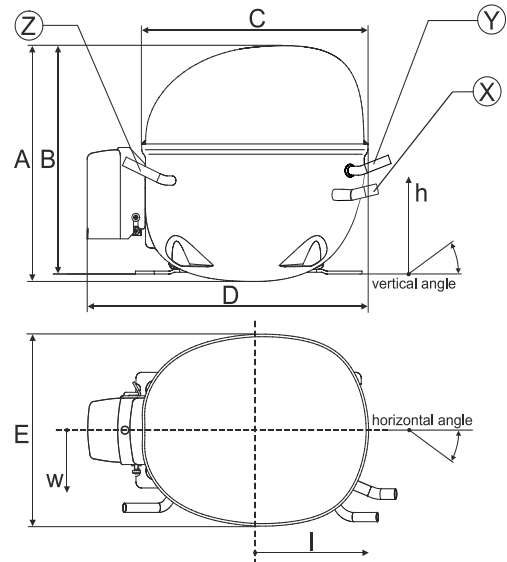
Model

Designation	NF10FX	220-240V/50Hz 1~ 208-230V/60Hz 1~	Sales code:	105G6846
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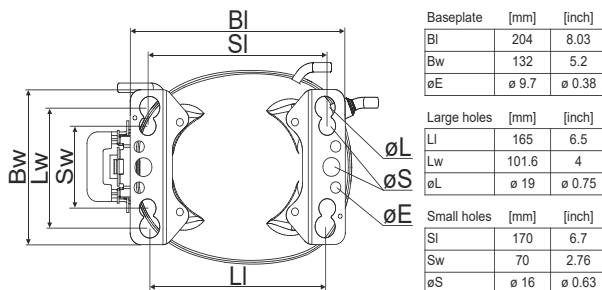
Compressor dimensions

Housing	A Height	203mm / 7,99in
	B Height	197mm / 7,76in
	C Length shell	205mm / 8,07in
	D Length w. cover	254mm / 10in
	E Width	166mm / 6,54in

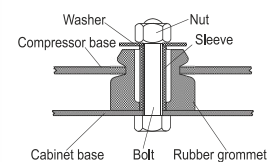
Connectors		Suction	Discharge	Process
		X	Y	Z
Diameter	[mm]	øi 8,11-8,29	øi 6,41-6,59	øi 6,41-6,59
(i:inside, o:outside)	[in]	øi 0,32-0,33	øi 0,25-0,26	øi 0,25-0,26
Material		copper	copper	copper
Horizontal angle	±2°	0°	0°	0°
Vertical angle	±2°	15°	35°	155°
Position l/h/w	[mm]	126/76/78	133/103/54	-107/94/72
	[in]	4,9/3/3,1	5,2/4/2,1	-4,2/3,7/2,8
Straight tube l.	[mm]	12	12	12
	[in]	0,5	0,5	0,5



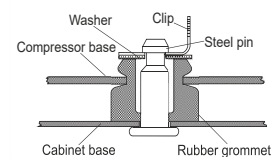
Compressor fixation



Bolt joint



Snap-on



Mounting accessories	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

Application notes

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

Model

Designation	NF10FX	220-240V/50Hz	Conf. 1	Sales code:	105G6846
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Configuration

Motor configuration	CSIR	
Power supply (nominal)	220-240V/50Hz 1~	
Refrigerant	R134a	
Application	LBP+MBP	
Voltage range	198-242V	
Starting torque	HST	
Approvals	UL	SA3693
	VDE	
	CCC	
	EAC	

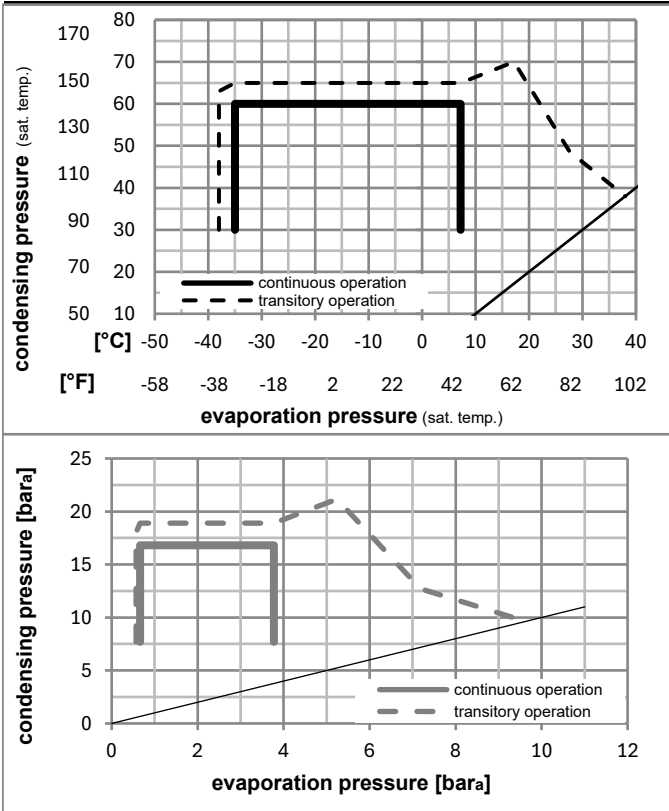
Electrical accessories / wiring diagram



Ambient/ machine room temperatures minimum /maximum

Ambient temperature range:	10 - 38°C / 50 - 101°F
Machine room temperature range:	10 - 43°C / 50 - 110°F
Compressor cooling:	fan 1,5m/s

Operation pressure range



Components

a2	relay (protector: TI MRP56EN-6)	117U4139
c	start capacitor	117U5018
b	plastic cover	117U1021
d/dc	cord relief	117U0349
d/dc	cord relief	117U0349

Alternative components

a2	relay (protector: TI MRP56EN-6)	117U4139
c	start capacitor	117U5018
b	plastic cover	117U1021
d/dc	cord relief	117U0349
d	cord relief	117U0317

Model

Designation **NF10FX** **220-240V/50Hz** Conf. 1 Sales code: **105G6846**

Optimization + standard conditions

R134a, 220V/50Hz, CSIR, fan 1,5m/s, UL, VDE, CCC, EAC

	Evaporating pressure (saturation temperature)				Cooling capacity			COP	EER	P1	Power consumption		ASHRAE LBP	
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]				I	m		
[°C]											[A]	[kg/h]		
[°F]														
	-23	54	32	32	266,5	910	229,4	0,94	3,22	0,81	282,7	2,75	5,18	ASHRAE LBP
	-10	130	90	90										
	-25	55	32	55	196,4	671	169,0	0,72	2,47	0,62	271,1	2,73	4,70	cecomaf LBP
	-13	131	90	131										
	-35	40	20	40	137,8	471	118,6	0,65	2,24	0,56	210,6	2,67	3,02	EN12900 LBP
	-31	104	68	104										
	-7	54	35	46	556,9	1902	479,3	1,42	4,86	1,23	391,1	2,96	12,15	ASHRAE MBP
	20	130	95	115										
	-10	55	32	55	432,5	1477	372,2	1,17	4,01	1,01	368,4	2,91	10,46	cecomaf MBP
	14	131	90	131										
	-10	45	20	45	479,1	1636	412,3	1,34	4,58	1,15	357,3	2,85	11,21	EN12900 MBP
	14	113	68	113										

Performance tables

R134a, 220V/50Hz, CSIR, fan 1,5m/s, UL, VDE, CCC, EAC

	pe		Cooling capacity			COP	EER	P1	I	m	
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]						
[°C / °F]	-35	-31	128,4	439	110,5	0,60	2,05	0,52	213,8	2,67	2,77
cond. pressure	-23	-10	254,9	870	219,3	0,91	3,11	0,78	279,6	2,74	5,53
pc= 45/113	-15	5	392,2	1340	337,6	1,20	4,08	1,03	328,2	2,81	8,55
return gas temp.	-9	15	509,8	1741	438,7	1,41	4,83	1,22	360,5	2,86	11,16
RGT= 32/90	-4	25	650,6	2222	559,9	1,66	5,67	1,43	392,2	2,92	14,32
liquid temp	0	32	764,2	2610	657,7	1,85	6,31	1,59	413,8	2,96	16,90
Tliq= 45/113	7,2	45	1010,7	3452	869,9	2,24	7,63	1,92	452,2	3,05	22,58
[°C / °F]	-35	-31	103,5	353	89,0	0,49	1,67	0,42	211,0	2,65	2,46
cond. pressure	-23	-10	216,4	739	186,2	0,77	2,62	0,66	281,6	2,74	5,18
pc= 55/131	-15	5	338,8	1157	291,6	1,01	3,45	0,87	335,4	2,84	8,16
return gas temp	-9	15	443,9	1516	382,1	1,19	4,08	1,03	372,1	2,92	10,74
RGT= 32/90	-4	25	570,4	1948	490,9	1,40	4,77	1,20	408,8	3,01	13,88
liquid temp	0	32	672,8	2298	579,0	1,55	5,29	1,33	434,3	3,07	16,46
Tliq= 55/131	7,2	45	896,1	3060	771,2	1,86	6,36	1,60	480,8	3,21	22,16

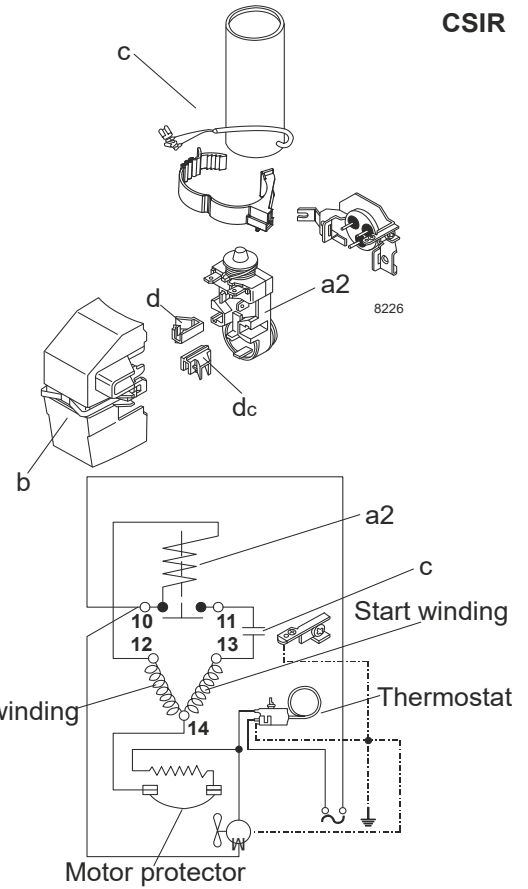
Model

Designation	NF10FX	220-240V/50Hz	Conf. 2	Sales code:	105G6846
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Configuration

Motor configuration	CSIR	
Power supply (nominal)	220-240V/50Hz 1~	
Refrigerant	R513A	
Application	LBP+MBP	
Voltage range	198-242V	
Starting torque	HST	
Approvals	UL	SA3693
	VDE	
	CCC	
	EAC	

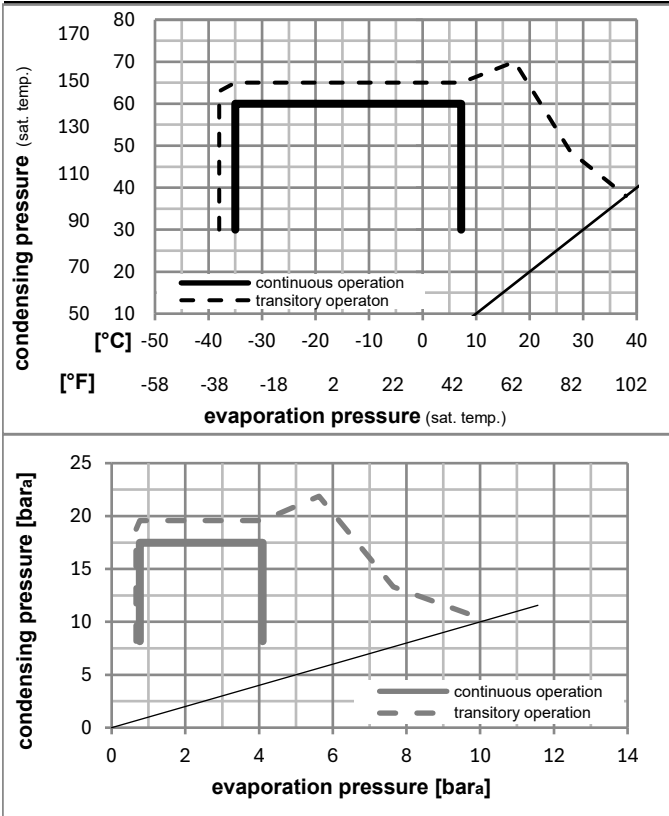
Electrical accessories / wiring diagram



Ambient/ machine room temperatures minimum /maximum

Ambient temperature range:	10 - 38°C / 50 - 101°F
Machine room temperature range:	10 - 43°C / 50 - 110°F
Compressor cooling:	fan 1,5m/s

Operation pressure range



Components

a2	relay (protector: TI MRP56EN-6)	117U4139
c	start capacitor	117U5018
b	plastic cover	117U1021
d/dc	cord relief	117U0349
d/dc	cord relief	117U0349

Alternative components

a2	relay (protector: TI MRP56EN-6)	117U4139
c	start capacitor	117U5018
b	plastic cover	117U1021
d/dc	cord relief	117U0349
d	cord relief	117U0317

Model

Designation **NF10FX** **220-240V/50Hz** Conf. **2** Sales code: **105G6846**

Optimization + standard conditions

R513A, 220V/50Hz, CSIR, fan 1,5m/s, UL, VDE, CCC, EAC

	Evaporating pressure (saturation temperature)				Cooling capacity			COP	EER			Power consumption			ASHRAE LBP
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]		[W/W]	[Btu/Wh]	[kcal/Wh]	P1	I	m	
[°C]	-23	54	32	32	294,2	1005	253,2	0,95	3,25	0,82	309,2	2,77	6,33		
[°F]	-10	130	90	90											
[°C]	-25	55	32	55	211,0	721	181,6	0,71	2,42	0,61	297,7	2,75	5,78	cecomaf LBP	
[°F]	-13	131	90	131											
[°C]	-35	40	20	40	153,1	523	131,8	0,65	2,23	0,56	234,3	2,62	3,79	EN12900 LBP	
[°F]	-31	104	68	104											
[°C]	-7	54	35	46	583,4	1992	502,1	1,40	4,78	1,21	416,4	2,98	14,29	ASHRAE MBP	
[°F]	20	130	95	115											
[°C]	-10	55	32	55	447,7	1529	385,3	1,14	3,88	0,98	393,9	2,94	12,38	cecomaf MBP	
[°F]	14	131	90	131											
[°C]	-10	45	20	45	499,9	1707	430,2	1,31	4,48	1,13	381,3	2,91	13,25	EN12900 MBP	
[°F]	14	113	68	113											

Performance tables

R513A, 220V/50Hz, CSIR, fan 1,5m/s, UL, VDE, CCC, EAC

	pe		Cooling capacity			COP			EER			P1			I			m		
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]	[W]	[A]	[kg/h]	[W]	[A]	[kg/h]			
[°C / °F]	-35	-31	143,8	491	123,8	0,60	2,05	0,52	239,0	2,63	3,49									
cond. pressure	-23	-10	275,5	941	237,1	0,91	3,09	0,78	304,3	2,76	6,72									
pc= 45/113	-15	5	416,3	1422	358,3	1,18	4,03	1,02	352,5	2,86	10,20									
return gas temp.	-9	15	535,6	1829	461,0	1,39	4,76	1,20	384,5	2,92	13,17									
RGT= 32/90	-4	25	677,5	2314	583,1	1,63	5,57	1,40	415,7	2,98	16,74									
liquid temp	0	32	791,3	2703	681,0	1,81	6,19	1,56	436,9	3,02	19,63									
Tliq= 45/113	7,2	45	1037,0	3542	892,5	2,19	7,47	1,88	474,2	3,10	25,94									
[°C / °F]	-35	-31	116,0	396	99,8	0,49	1,66	0,42	238,4	2,63	3,16									
cond. pressure	-23	-10	231,2	790	199,0	0,75	2,56	0,65	308,1	2,77	6,34									
pc= 55/131	-15	5	354,3	1210	305,0	0,98	3,35	0,84	361,4	2,87	9,76									
return gas temp	-9	15	459,1	1568	395,1	1,15	3,94	0,99	397,6	2,95	12,70									
RGT= 32/90	-4	25	584,3	1995	502,8	1,35	4,60	1,16	433,8	3,02	16,25									
liquid temp	0	32	685,1	2340	589,6	1,49	5,10	1,28	458,9	3,07	19,13									
Tliq= 55/131	7,2	45	903,8	3087	777,8	1,79	6,12	1,54	504,3	3,16	25,48									

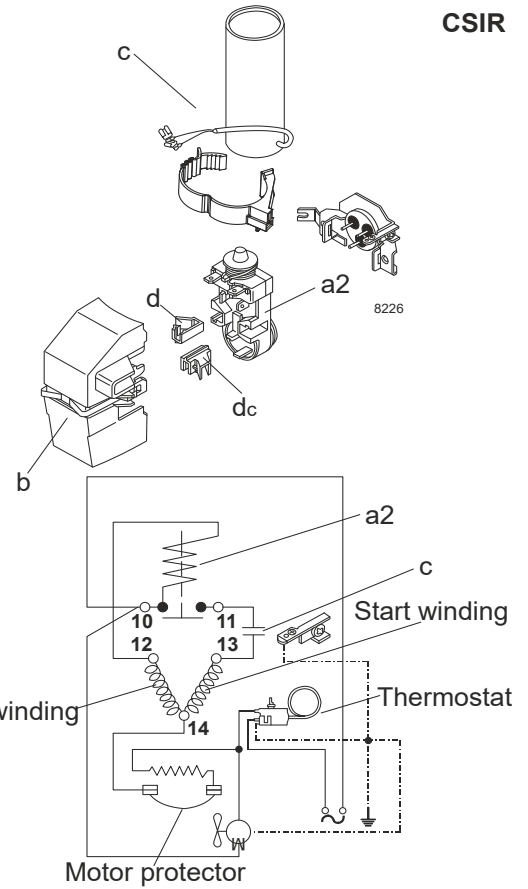
Model

Designation	NF10FX	208-230V/60Hz	Conf. 3	Sales code:	105G6846
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Configuration

Motor configuration	CSIR	
Power supply (nominal)	208-230V/60Hz 1~	
Refrigerant	R134a	
Application	LBP+MBP	
Voltage range	198-242V	
Starting torque	HST	
Approvals	UL	SA3693
	VDE	
	CCC	
	EAC	

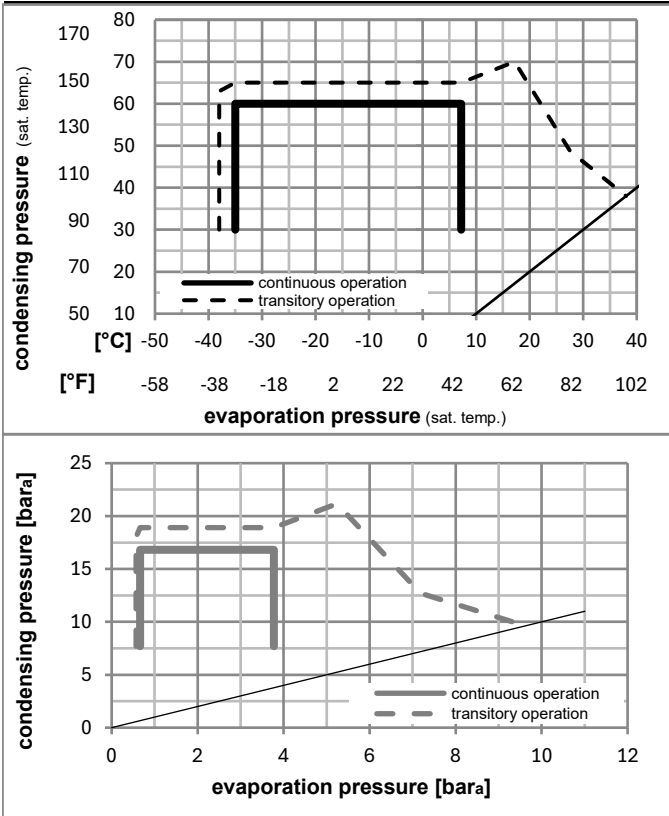
Electrical accessories / wiring diagram



Ambient/ machine room temperatures minimum /maximum

Ambient temperature range:	10 - 38°C / 50 - 101°F
Machine room temperature range:	10 - 43°C / 50 - 110°F
Compressor cooling:	fan 3m/s

Operation pressure range



Components

a2	relay (protector: TI MRP56EN-6)	117U4139
c	start capacitor	117U5018
b	plastic cover	117U1021
d/dc	cord relief	117U0349
d/dc	cord relief	117U0349

Alternative components

a2	relay (protector: TI MRP56EN-6)	117U4139
c	start capacitor	117U5018
b	plastic cover	117U1021
d/dc	cord relief	117U0349
d	cord relief	117U0317

Model

Designation **NF10FX** **208-230V/60Hz** Conf. **3** Sales code: **105G6846**

Optimization + standard conditions

R134a, 230V/60Hz, CSIR, fan 3m/s, UL, VDE, CCC, EAC

	Evaporating pressure (saturation temperature)				Cooling capacity			COP	EER			Power consumption			ASHRAE LBP
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]		[W/W]	[Btu/Wh]	[kcal/Wh]	P1	I	Ref. mass flow	
	[°C]	[°C]	[°C]	[°C]							[W]	[A]	[kg/h]		
	-23	54	32	32	299,0	1021	257,4	1,14	3,90	0,98	262,0	1,86	5,81		
	[°F]														
	-10	130	90	90											
	[°C]	-25	55	32	55	223,1	762	192,0	0,89	3,03	0,76	251,1	1,82	5,33	cecomaf LBP
	[°F]	-13	131	90	131										
	[°C]	-35	40	20	40	157,5	538	135,5	0,92	3,14	0,79	171,0	1,67	3,46	EN12900 LBP
	[°F]	-31	104	68	104										
	[°C]	-7	54	35	46	584,8	1997	503,3	1,53	5,23	1,32	381,6	2,27	12,76	ASHRAE MBP
	[°F]	20	130	95	115										
	[°C]	-10	55	32	55	455,7	1556	392,2	1,28	4,37	1,10	356,6	2,18	11,02	cecomaf MBP
	[°F]	14	131	90	131										
	[°C]	-10	45	20	45	505,0	1725	434,6	1,48	5,07	1,28	340,3	2,12	11,82	EN12900 MBP
	[°F]	14	113	68	113										

Performance tables

R134a, 230V/60Hz, CSIR, fan 3m/s, UL, VDE, CCC, EAC

	pe		Cooling capacity			COP			EER			P1			I			m		
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]	[W]	[A]	[kg/h]	[W]	[A]	[kg/h]	[W]	[A]	[kg/h]
[°C / °F]	-35	-31	144,8	495	124,6	0,83	2,83	0,71	174,7	1,66	3,12									
cond. pressure	-23	-10	276,5	944	238,0	1,08	3,70	0,93	255,5	1,84	6,00									
pc= 45/113	-15	5	415,1	1418	357,3	1,35	4,60	1,16	308,5	2,01	9,05									
return gas temp.	-9	15	537,4	1835	462,5	1,56	5,34	1,34	343,9	2,13	11,77									
RGT= 32/90	-4	25	689,2	2354	593,2	1,81	6,18	1,56	381,0	2,26	15,17									
liquid temp	0	32	815,7	2786	702,0	2,00	6,82	1,72	408,5	2,36	18,04									
Tliq= 45/113	7,2	45	1100,9	3760	947,4	2,37	8,09	2,04	465,0	2,56	24,59									
[°C / °F]	-35	-31	121,9	416	104,9	0,67	2,28	0,57	182,6	1,62	2,90									
cond. pressure	-23	-10	242,9	830	209,1	0,93	3,16	0,80	262,3	1,86	5,81									
pc= 55/131	-15	5	362,7	1239	312,1	1,13	3,87	0,98	319,8	2,05	8,73									
return gas temp	-9	15	467,3	1596	402,1	1,30	4,42	1,11	360,8	2,20	11,30									
RGT= 32/90	-4	25	597,2	2040	514,0	1,47	5,03	1,27	405,3	2,35	14,54									
liquid temp	0	32	705,9	2411	607,5	1,61	5,49	1,38	439,3	2,47	17,27									
Tliq= 55/131	7,2	45	952,7	3254	819,9	1,87	6,38	1,61	510,2	2,70	23,56									

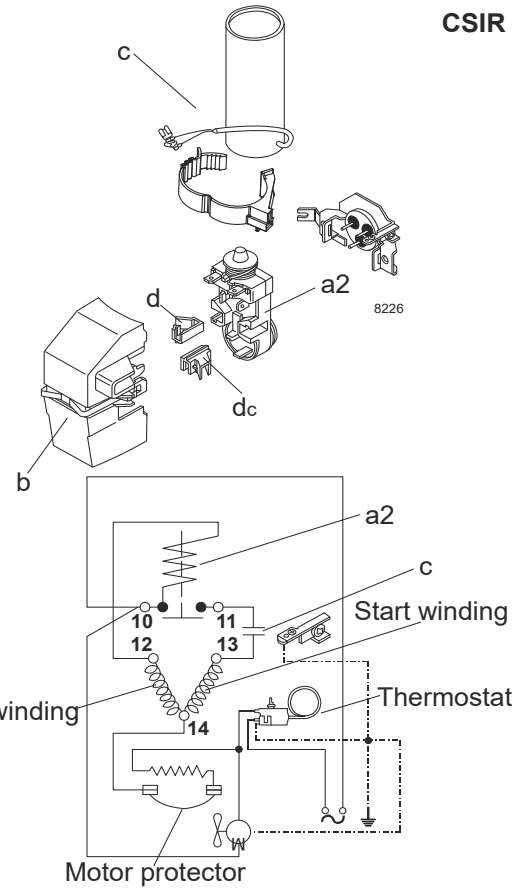
Model

Designation	NF10FX	208-230V/60Hz	Conf. 4	Sales code:	105G6846
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Configuration

Motor configuration	CSIR	
Power supply (nominal)	208-230V/60Hz 1~	
Refrigerant	R513A	
Application	LBP+MBP	
Voltage range	198-242V	
Starting torque	HST	
Approvals	UL	SA3693
	VDE	
	CCC	
	EAC	

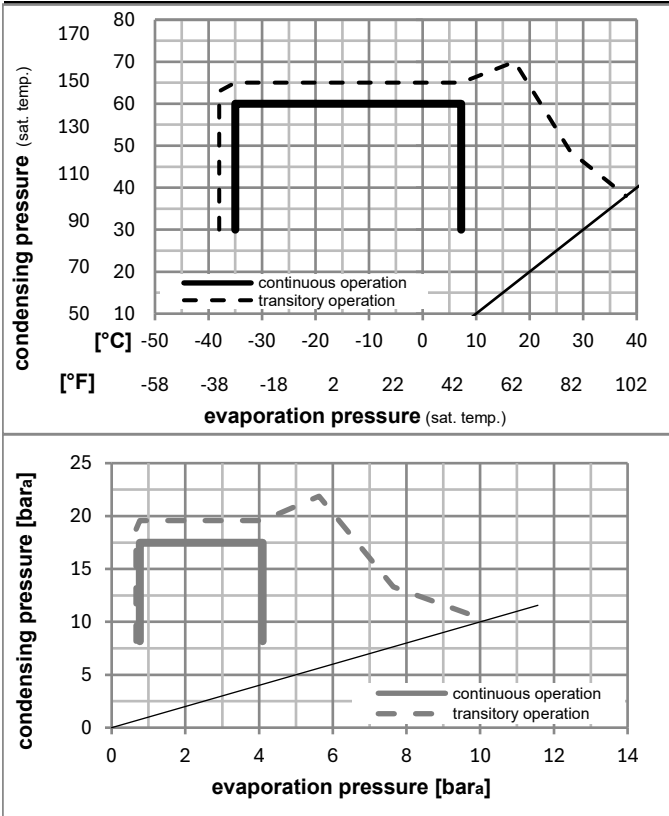
Electrical accessories / wiring diagram



Ambient/ machine room temperatures minimum /maximum

Ambient temperature range:	10 - 38°C / 50 - 101°F
Machine room temperature range:	10 - 43°C / 50 - 110°F
Compressor cooling:	fan 3m/s

Operation pressure range



Components

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c	start capacitor	117U5018
b	plastic cover	117U1021
d/dc	cord relief	117U0349
d/dc	cord relief	117U0349

Alternative components

a2	relay (protector: TI MRP56EN-6)	117U4139
c	start capacitor	117U5018
b	plastic cover	117U1021
d/dc	cord relief	117U0349
d	cord relief	117U0317

Model

Designation **NF10FX** **208-230V/60Hz** Conf. 4 Sales code: **105G6846**

Optimization + standard conditions

R513A, 230V/60Hz, CSIR, fan 3m/s, UL, VDE, CCC, EAC

	Evaporating pressure (saturation temperature)				Condensing pressure (saturation temperature)			Return gas temp.	Liquid temp.	Cooling capacity	COP	EER	Power consumption			Ref. mass flow
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]						P1	I	m	
[°C]																
[°F]																
	-23	54	32	32	330,1	1127	284,1	1,15	3,94	0,99	286,4	1,95	7,10	ASHRAE LBP		
	-10	130	90	90												
	-25	55	32	55	239,6	818	206,2	0,87	2,97	0,75	275,6	1,91	6,56	cecomaf LBP		
	-13	131	90	131												
	-35	40	20	40	176,3	602	151,7	0,93	3,18	0,80	189,6	1,63	4,36	EN12900 LBP		
	-31	104	68	104												
	-7	54	35	46	613,1	2094	527,7	1,51	5,15	1,30	406,4	2,34	15,02	ASHRAE MBP		
	20	130	95	115												
	-10	55	32	55	472,3	1613	406,4	1,24	4,23	1,07	381,4	2,26	13,06	cecomaf MBP		
	14	131	90	131												
	-10	45	20	45	527,3	1801	453,8	1,45	4,96	1,25	363,2	2,20	13,98	EN12900 MBP		
	14	113	68	113												

Performance tables

R513A, 230V/60Hz, CSIR, fan 3m/s, UL, VDE, CCC, EAC

	pe		Cooling capacity			COP	EER	P1	I	m	
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]
[°C / °F]	-35	-31	163,6	559	140,8	0,84	2,87	0,72	194,6	1,64	3,97
cond. pressure	-23	-10	299,1	1021	257,4	1,08	3,68	0,93	277,7	1,92	7,30
pc= 45/113	-15	5	440,9	1506	379,4	1,33	4,55	1,15	331,3	2,10	10,80
return gas temp.	-9	15	565,1	1930	486,3	1,54	5,26	1,33	366,8	2,21	13,90
RGT= 32/90	-4	25	718,2	2453	618,1	1,78	6,07	1,53	403,9	2,33	17,75
liquid temp	0	32	845,2	2886	727,4	1,96	6,69	1,69	431,5	2,43	20,96
Tliq= 45/113	7,2	45	1130,0	3859	972,5	2,32	7,91	1,99	488,0	2,61	28,26
[°C / °F]	-35	-31	137,5	469	118,3	0,67	2,28	0,57	206,0	1,68	3,75
cond. pressure	-23	-10	259,6	887	223,4	0,90	3,09	0,78	286,9	1,95	7,12
pc= 55/131	-15	5	379,7	1297	326,8	1,10	3,76	0,95	344,6	2,14	10,46
return gas temp	-9	15	483,7	1652	416,3	1,25	4,28	1,08	385,7	2,27	13,38
RGT= 32/90	-4	25	612,2	2091	526,9	1,42	4,86	1,22	430,4	2,42	17,02
liquid temp	0	32	719,2	2456	619,0	1,55	5,29	1,33	464,6	2,54	20,09
Tliq= 55/131	7,2	45	961,2	3283	827,2	1,79	6,12	1,54	536,1	2,77	27,10



8238-23

NF Compressors



8230-2



8226-2



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