

Model

Designation	GS21MLX	220-240V/50Hz 1~	Sales code:	107B0502
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Compressor design

Oil type	Polyolester	Refrigerant(s)	R404A, R452A, R507
Oil viscosity	32,5cST	Displacement	21,2cm ³ / 1,29cu.in
Oil quantity	902cm ³ / 30,5fl.oz	Compressors on pallet	48
Refr. charge - tech. limit	2000g / 70,5oz		
Free gas volume comp.	3350cm ³ / 113,3fl.oz		
Weight	19,1kg / 42,1lbs		
Motor protection	1# internal		
Winding resistance main	2,5Ω (at 25°C)		
Winding resistance aux	6,7Ω (at 25°C)		
Max. winding temp.			
Max. discharge temp.	120°C / 248°F		



General - Configurations with GS21MLX

	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Motorconfiguration	CSCR	CSCR	CSCR	CSCR
Power supply (nominal)	220-240V/50Hz	220-240V/50Hz	220-240V/50Hz	220-240V/50Hz
Number of phases	1	1	1	1
Voltage range	198-254V	198-254V	198-254V	198-254V
Approvals	VDE, CCC	VDE, CCC		
Starting torque	HST	HST	HST	HST
Note	Cover, clamp, gasket: pre-assembled to compressor.			

Applications with GS21MLX

	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Refrigerant	R404A	R452A	R448A	R449A
Application	MBP	MBP	MBP	MBP
System cooling	fan 3m/s	fan 3m/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 GS21MLX

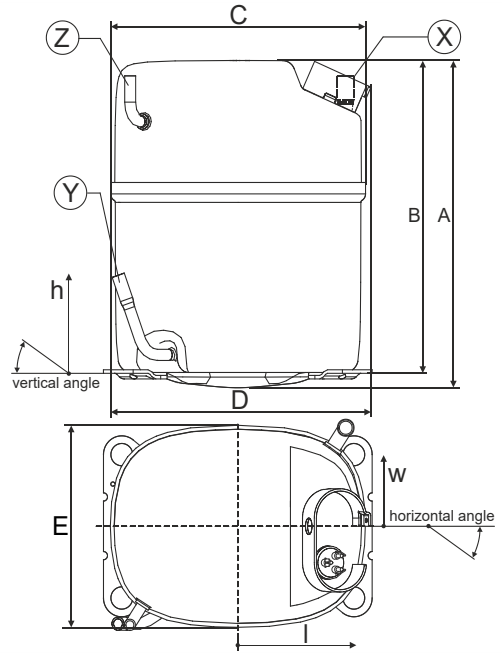
	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Starting device type	relay	relay	relay	relay
Run capacitor	20μF	20μF	20μF	20μF
Start capacitor	80μF	80μF	80μF	80μF
LRA (locked rotor amps / 4s)	24A	24A	24A	24A
RLA (rated load amps / 1s)	4,7A	4,7A	4,7A	4,7A
Cut in current	24A	24A	24A	24A

Model

Designation **GS21MLX** 220-240V/50Hz 1~ Sales code: **107B0502**

Compressor dimensions

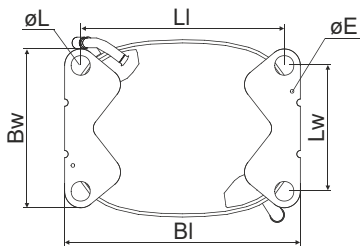
Housing	A Height	259mm / 10,2in
	B Height	247mm / 9,72in
	C Length shell	224mm / 8,82in
	D Length w. cover	232mm / 9,13in
	E Width	173mm / 6,81in



		Suction	Discharge	Process
		X	Y	Z
Diameter	[mm]	øi 12,75-13,05	øi 8,15-8,25	øi 6,4-6,6
	(i:inside, o:outside) [in]	øi 0,5-0,51	øi 0,32-0,32	øi 0,25-0,26
Material		copper	copper	copper
Horizontal angle	±2°	0°	0°	0°
Vertical angle	±2°	90°	71°	90°
Position l/h/w	[mm]	-95/234/-84	-105/84/-84	95/234/84
	[in]	-3,7/9,2/-3,3	-4,1/3,3/-3,3	3,7/9,2/3,3
Straight tube l.	[mm]	18	23	15
	[in]	0,7	0,9	0,6

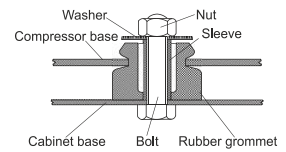
Compressor fixation

Bolt joint



Baseplate	[mm]	[inch]
BI	235	9.25
Bw	154	6.06
øE	ø 3.6	ø 0.14

Large holes	[mm]	[inch]
LI	203	7.99
LW	122	4.80
øL	ø 19	ø 0.75



Mounting accessories

one comp.

Bolt joint | M8 | ø19mm

107B9150

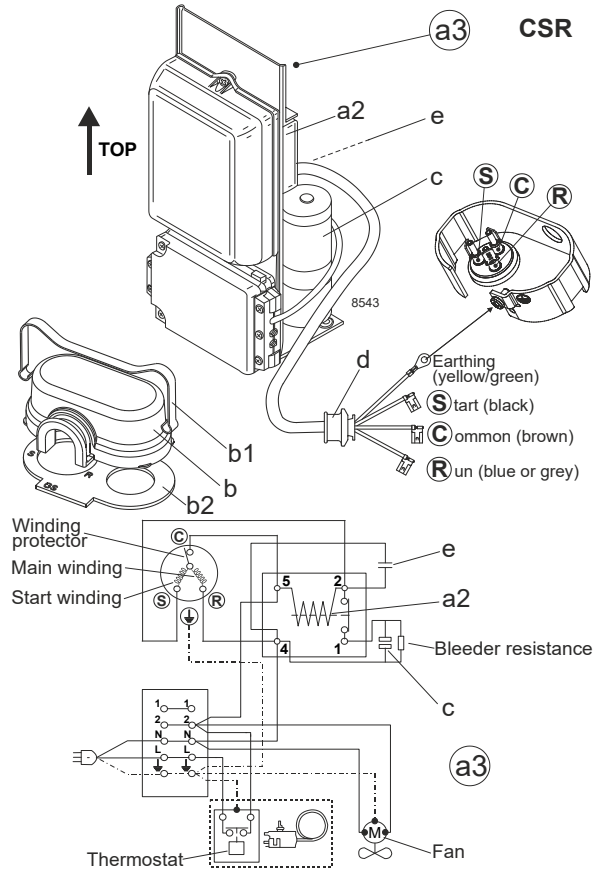
Model

Designation	GS21MLX	220-240V/50Hz	Conf. 1	Sales code:	107B0502
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Configuration

Motorconfiguration	CSCR
Power supply (nominal)	220-240V/50Hz 1~
Refrigerant	R404A
Application	MBP
Voltage range	198-254V
Starting torque	HST
Approvals	VDE CCC

Electrical accessories / wiring diagram



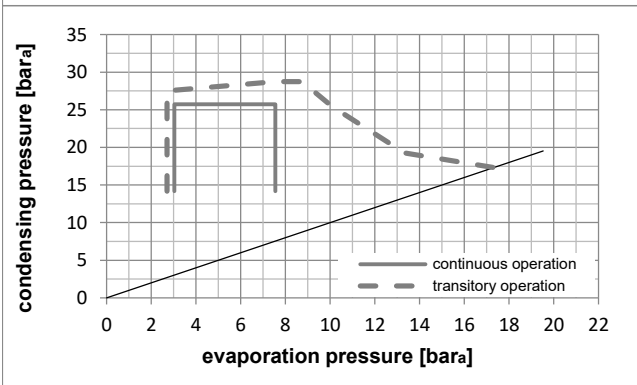
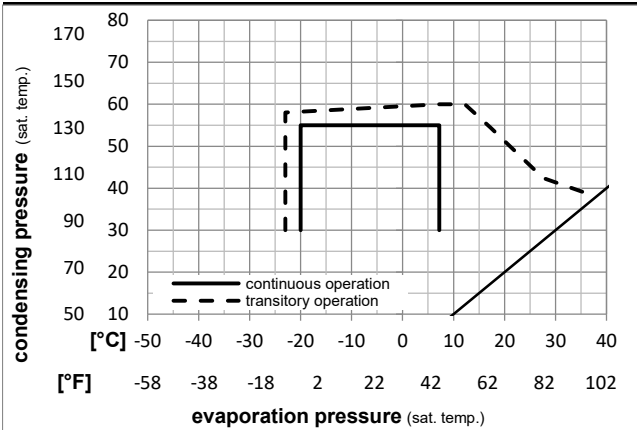
Ambient temperatures / system cooling

Ambient temperature min.:	10°C / 50°F
Ambient temperature max.:	38°C / 101°F

System cooling (n/a: outside limits)

T ambient	LBP	MBP	HBP
32°C / 90°F	n/a	fan 3m/s	n/a
38°C / 100°F	n/a	fan 3m/s	n/a
43°C / 110°F	n/a	n/a	n/a

Operation pressure range



Components (cover, clamp, gasket: pre assembled)

a3	GS starter kit (600mm)	117-7070
b	cover	107B9101
b2	gasket	107B9100
b1	clamp	107B9104

Model

Designation **GS21MLX 220-240V/50Hz** Conf. 1 Sales code: **107B0502**

Optimization + standard conditions

R404A, 220V/50Hz, CSCR, fan 3m/s, VDE, CCC

		Evaporating pressure (saturation temperature)				Condensing pressure (saturation temperature)					Power consumption						
						Return gas temp.					Current consumption						
						Liquid temp.					Ref. mass flow						
		Cooling capacity					COP		EER		P1		I		m		
		pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]			
[°C]	-6,66	54,4	35	46,1	1986,2	6783	1709,4	1,79	6,12	1,54	1109,1	5,21	54,65		ASHRAE MBP		
[°F]	20	130	95	115													
[°C]	-10	55	32	55	1466,5	5008	1262,1	1,40	4,79	1,21	1045,9	4,91	46,95		cecomaf MBP		
[°F]	14	131	89,6	131													
[°C]	-10	45	20	45	1747,6	5968	1504,0	1,81	6,18	1,56	965,1	4,56	52,64		EN12900 MBP		
[°F]	14	113	68	113													
[°C]	-6,66	48,9	18,3	48,9	1824,3	6230	1570,0	1,73	5,91	1,49	1054,7	4,98	59,61		ARI540 MBP		
[°F]	20	120	65	120													
[°C]	-10	45	32	45	1856,4	6340	1597,7	1,92	6,57	1,66	965,1	4,56	51,12		opt		
[°F]	14	113	89,6	113													
[°C]	-25	45	32	45	895,6	3059	770,8	1,27	4,34	1,09	704,4	3,40	24,16		opt		
[°F]	-13	113	89,6	113													

Performance tables

R404A, 220V/50Hz, CSCR, fan 3m/s, VDE, CCC

		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]	-20	-4	1159,6	3960	998,0	1,46	4,97	1,25	796,8	3,79	31,46	
cond. pressure	-15	5	1477,3	5045	1271,4	1,67	5,71	1,44	882,9	4,17	40,36	
pc= 45/113	-10	14	1856,4	6340	1597,7	1,92	6,57	1,66	965,1	4,56	51,12	
return gas temp.	-6,7	20	2144,0	7322	1845,2	2,11	7,19	1,81	1018,4	4,82	59,40	
RGT= 32/90	-5	23	2304,8	7871	1983,5	2,20	7,53	1,90	1045,9	4,95	64,07	
liquid temp	0	32	2830,9	9668	2436,3	2,51	8,57	2,16	1127,6	5,34	79,58	
Tliq= 45/113	7,2	45	3744,1	12787	3222,2	2,99	10,22	2,57	1251,5	5,91	107,36	
[°C / °F]	-20	-4	909,1	3105	782,3	1,10	3,75	0,95	827,0	3,97	28,60	
cond. pressure	-15	5	1164,1	3976	1001,9	1,24	4,23	1,07	939,4	4,44	36,92	
pc= 55/131	-10	14	1466,5	5008	1262,1	1,40	4,79	1,21	1045,9	4,91	46,95	
return gas temp	-6,7	20	1695,9	5792	1459,5	1,52	5,20	1,31	1114,0	5,23	54,68	
RGT= 32/90	-5	23	1824,3	6230	1570,0	1,59	5,42	1,37	1148,7	5,39	59,05	
liquid temp	0	32	2245,9	7670	1932,9	1,80	6,13	1,55	1250,4	5,87	73,65	
Tliq= 55/131	7,2	45	2985,0	10194	2568,9	2,13	7,28	1,84	1399,5	6,56	100,18	

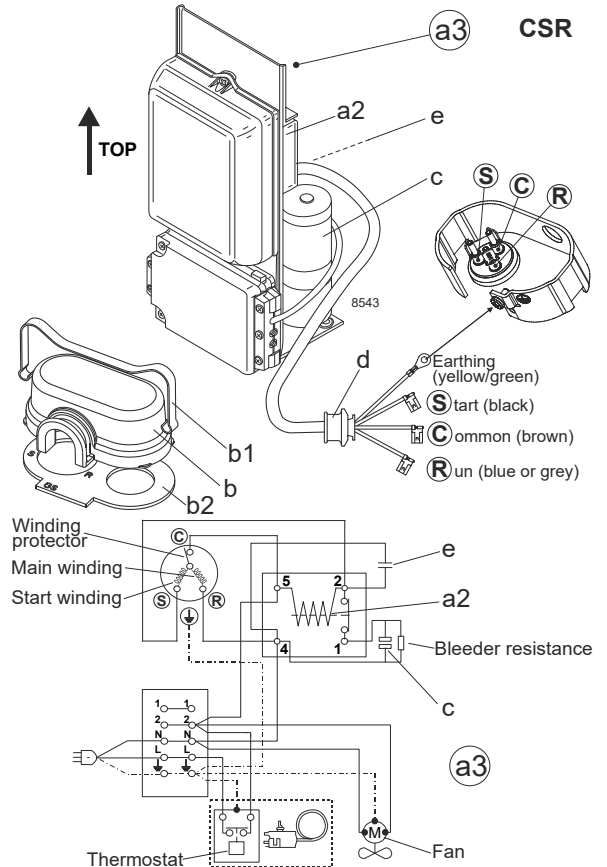
Model

Designation	GS21MLX	220-240V/50Hz	Conf. 2	Sales code:	107B0502
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Configuration

Motorconfiguration	CSCR
Power supply (nominal)	220-240V/50Hz 1~
Refrigerant	R452A
Application	MBP
Voltage range	198-254V
Starting torque	HST
Approvals	VDE CCC

Electrical accessories / wiring diagram



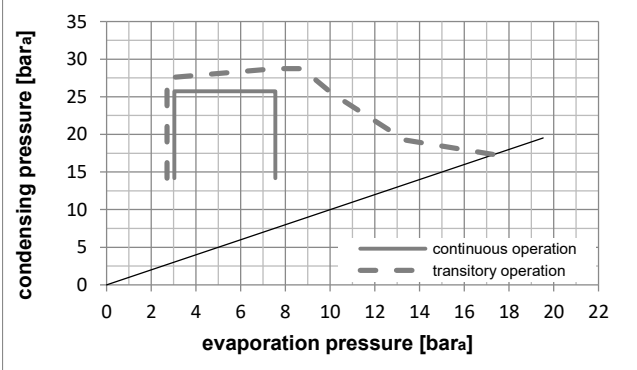
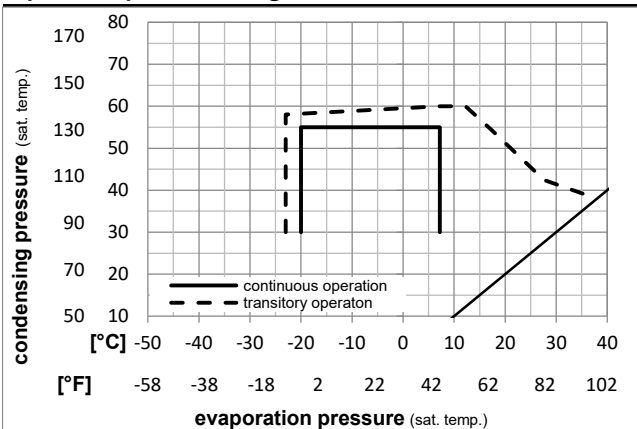
Ambient temperatures / system cooling

Ambient temperature min.:	10°C / 50°F
Ambient temperature max.:	38°C / 101°F

System cooling (n/a: outside limits)

T ambient	LBP	MBP	HBP
32°C / 90°F	n/a	fan 3m/s	n/a
38°C / 100°F	n/a	fan 3m/s	n/a
43°C / 110°F	n/a	n/a	n/a

Operation pressure range



Components (cover, clamp, gasket: pre assembled)

a3	GS starter kit (600mm)	117-7070
b	cover	107B9101
b2	gasket	107B9100
b1	clamp	107B9104

Model

Designation **GS21MLX 220-240V/50Hz** Conf. 2 Sales code: **107B0502**

Optimization + standard conditions

R452A, 220V/50Hz, CSCR, fan 3m/s, VDE, CCC

Evaporating pressure (saturation temperature)					Condensing pressure (saturation temperature)						Power consumption			ASHRAE MBP
Return gas temp.					Liquid temp.						Current consumption		Ref. mass flow ṁ	
Cooling capacity					COP		EER		P1	I				
pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]		
[°C]	-6,7	54,4	35	46,1	2019,3	6896	1737,8	1,92	6,55	1,65	1052,4	5,89	56,81	ASHRAE MBP
[°F]	20	130	95	115										
[°C]	-10	55	32	55	1491,9	5095	1284,0	1,51	5,16	1,30	988,1	5,61	48,49	cecomaf MBP
[°F]	14	131	89,6	131										
[°C]	-10	45	20	45	1746,1	5963	1502,7	1,91	6,52	1,64	914,0	5,29	53,65	EN12900 MBP
[°F]	14	113	68	113										
[°C]	-6,7	48,9	18,3	48,9	1847,4	6309	1589,9	1,84	6,30	1,59	1002,1	5,67	61,29	ARI540 MBP
[°F]	20	120	65	120										
[°C]	-10	45	32	45	1852,0	6325	1593,8	2,03	6,92	1,74	914,0	5,29	52,18	opt
[°F]	14	113	89,6	113										
[°C]	-25	45	32	45	869,8	2970	748,5	1,33	4,53	1,14	655,1	4,18	24,06	opt
[°F]	-13	113	89,6	113										

Performance tables

R452A, 220V/50Hz, CSCR, fan 3m/s, VDE, CCC

	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]	-20	-4	1137,4	3884	978,8	1,53	5,21	1,31	745,7	4,57	31,63	
cond. pressure	-15	5	1461,6	4991	1257,8	1,76	6,00	1,51	831,3	4,94	40,89	
pc= 45/113	-10	14	1852,0	6325	1593,8	2,03	6,92	1,74	914,0	5,29	52,18	
return gas temp.	-6,7	20	2150,8	7345	1851,0	2,22	7,59	1,91	968,1	5,53	60,93	
RGT= 32/90	-5	23	2318,7	7919	1995,5	2,33	7,95	2,00	996,0	5,65	65,89	
liquid temp	0	32	2872,5	9810	2472,1	2,66	9,09	2,29	1079,7	6,01	82,44	
Tliq= 45/113	7,2	45	3846,6	13137	3310,4	3,19	10,88	2,74	1207,7	6,56	112,38	
[°C / °F]	-20	-4	905,8	3094	779,6	1,17	4,01	1,01	771,3	4,68	29,00	
cond. pressure	-15	5	1172,2	4003	1008,8	1,33	4,54	1,14	882,0	5,16	37,79	
pc= 55/131	-10	14	1491,9	5095	1284,0	1,51	5,16	1,30	988,1	5,61	48,49	
return gas temp	-6,7	20	1737,0	5932	1494,9	1,64	5,61	1,41	1056,8	5,91	56,81	
RGT= 32/90	-5	23	1875,1	6404	1613,7	1,72	5,86	1,48	1092,0	6,06	61,54	
liquid temp	0	32	2332,7	7967	2007,6	1,95	6,66	1,68	1195,9	6,51	77,45	
Tliq= 55/131	7,2	45	3146,7	10747	2708,1	2,33	7,96	2,01	1349,9	7,17	106,65	

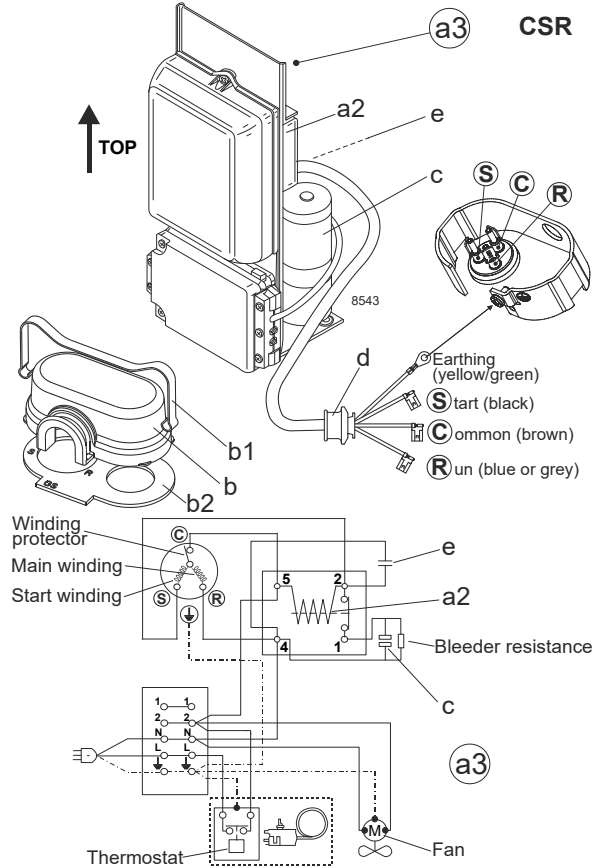
Model

Designation	GS21MLX	220-240V/50Hz	Conf. 3	Sales code:	107B0502
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Configuration

Motorconfiguration	CSCR
Power supply (nominal)	220-240V/50Hz 1~
Refrigerant	R448A
Application	MBP
Voltage range	198-254V
Starting torque	HST
Approvals	

Electrical accessories / wiring diagram

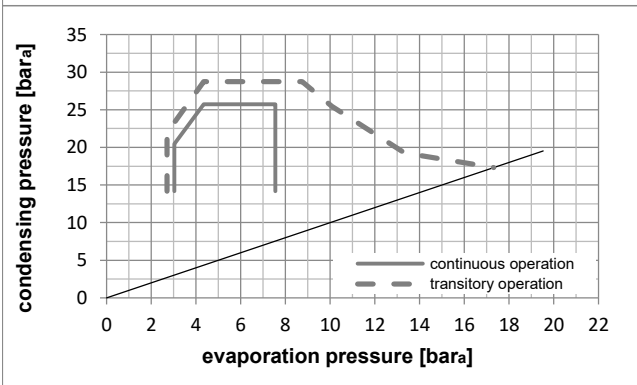
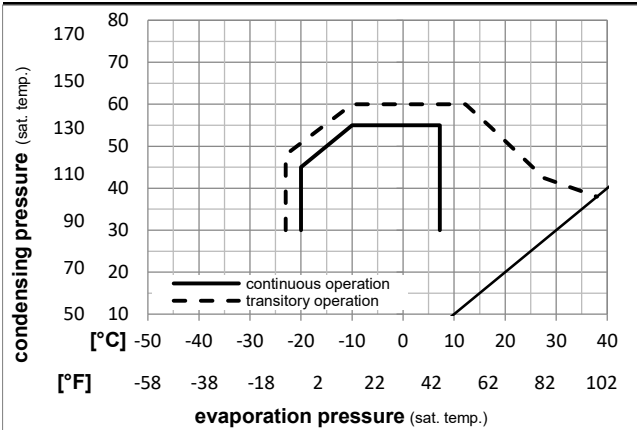


Ambient temperatures / system cooling

Ambient temperature min.:	10°C / 50°F
Ambient temperature max.:	38°C / 101°F

System cooling (n/a: outside limits)			
T ambient	LBP	MBP	HBP
32°C / 90°F	n/a	fan 3m/s	n/a
38°C / 100°F	n/a	fan 3m/s	n/a
43°C / 110°F	n/a	n/a	n/a

Operation pressure range



Components (cover, clamp, gasket: pre assembled)

a3	GS starter kit (600mm)	117-7070
b	cover	107B9101
b2	gasket	107B9100
b1	clamp	107B9104

Model

Designation **GS21MLX 220-240V/50Hz** Conf. 3 Sales code: **107B0502**

Optimization + standard conditions

R448A, 220V/50Hz, CSCR, fan 3m/s,

		Evaporating pressure (saturation temperature)				Condensing pressure (saturation temperature)					Power consumption				
		Return gas temp.				Liquid temp.					Current consumption		Ref. mass flow		
		Cooling capacity					COP	EER	P1	I	m				
		pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]	
[°C]	-6,66	54,4	35	46,1	1895,3	6473	1631,2	1,89	6,46	1,63	1001,9	4,73	41,40	ASHRAE MBP	
[°F]	20	130	95	115											
[°C]	-10	55	32	55	1435,4	4902	1235,3	1,53	5,23	1,32	938,1	4,45	35,15	cecomaf MBP	
[°F]	14	131	89,6	131											
[°C]	-10	45	20	45	1672,2	5711	1439,1	1,93	6,59	1,66	867,1	4,14	39,12	EN12900 MBP	
[°F]	14	113	68	113											
[°C]	-6,66	48,9	18,3	48,9	1800,8	6150	1549,8	1,89	6,45	1,63	953,5	4,52	44,79	ARI540 MBP	
[°F]	20	120	65	120											
[°C]	-10	45	32	45	1741,6	5948	1498,9	2,01	6,86	1,73	867,1	4,14	38,06	opt	
[°F]	14	113	89,6	113											
[°C]	-25	45	32	45	795,5	2717	684,6	1,30	4,44	1,12	612,3	3,02	17,11	opt	
[°F]	-13	113	89,6	113											

Performance tables

R448A, 220V/50Hz, CSCR, fan 3m/s,

		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]	-20	-4	1051,0	3590	904,5	1,50	5,12	1,29	701,2	3,41	22,70	
cond. pressure	-15	5	1363,1	4655	1173,1	1,74	5,93	1,49	785,4	3,78	29,60	
pc= 45/113	-10	14	1741,6	5948	1498,9	2,01	6,86	1,73	867,1	4,14	38,06	
return gas temp.	-6,7	20	2032,9	6943	1749,5	2,21	7,54	1,90	920,8	4,38	44,63	
RGT= 32/90	-5	23	2197,0	7503	1890,8	2,32	7,91	1,99	948,6	4,50	48,36	
liquid temp	0	32	2740,1	9358	2358,2	2,66	9,07	2,29	1032,0	4,87	60,85	
Tliq= 45/113	7,2	45	3700,1	12637	3184,4	3,19	10,89	2,74	1160,1	5,43	83,46	
[°C / °F]	-20	-4	854,3	2918	735,2	1,18	4,02	1,01	725,3	3,52	20,65	
cond. pressure	-15	5	1117,2	3815	961,5	1,34	4,58	1,15	833,6	3,99	27,17	
pc= 55/131	-10	14	1435,4	4902	1235,3	1,53	5,23	1,32	938,1	4,45	35,15	
return gas temp	-6,7	20	1680,7	5740	1446,4	1,67	5,70	1,44	1006,1	4,75	41,38	
RGT= 32/90	-5	23	1819,3	6213	1565,7	1,75	5,97	1,50	1041,1	4,91	44,93	
liquid temp	0	32	2279,8	7786	1962,0	1,99	6,80	1,71	1144,9	5,36	56,86	
Tliq= 55/131	7,2	45	3101,8	10593	2669,5	2,39	8,15	2,05	1300,1	6,05	78,73	

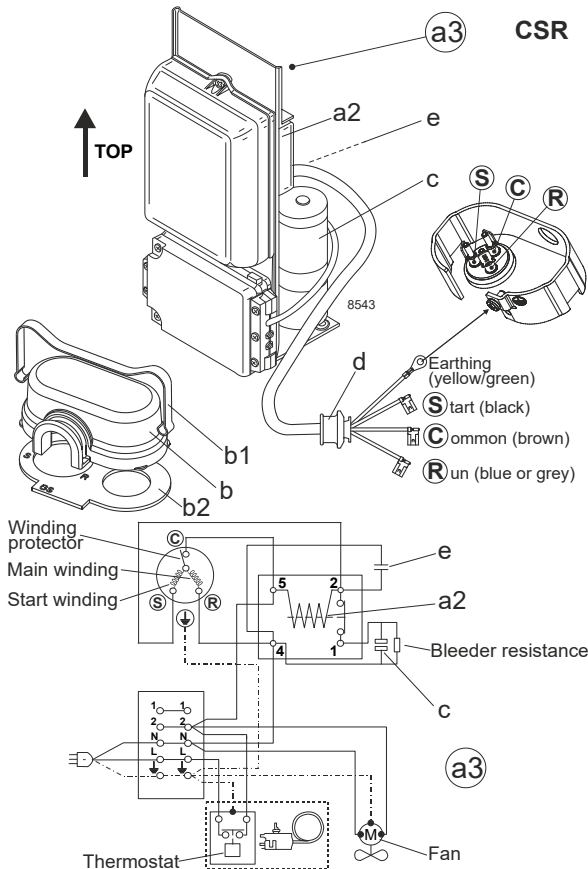
Model

Designation	GS21MLX	220-240V/50Hz	Conf. 4	Sales code:	107B0502
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Configuration

Motorconfiguration	CSCR
Power supply (nominal)	220-240V/50Hz 1~
Refrigerant	R449A
Application	MBP
Voltage range	198-254V
Starting torque	HST
Approvals	

Electrical accessories / wiring diagram

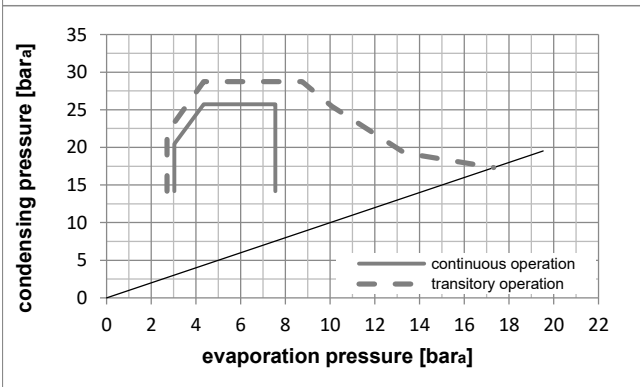
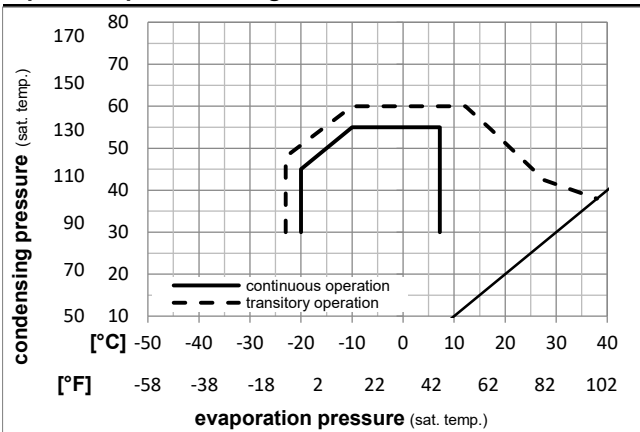


Ambient temperatures / system cooling

Ambient temperature min.:	10°C / 50°F
Ambient temperature max.:	38°C / 101°F

System cooling (n/a: outside limits)			
T ambient	LBP	MBP	HBP
32°C / 90°F	n/a	fan 3m/s	n/a
38°C / 100°F	n/a	fan 3m/s	n/a
43°C / 110°F	n/a	n/a	n/a

Operation pressure range



Components (cover, clamp, gasket: pre assembled)

a3	GS starter kit (600mm)	117-7070
b	cover	107B9101
b2	gasket	107B9100
b1	clamp	107B9104

Model

Designation **GS21MLX 220-240V/50Hz** Conf. 4 Sales code: **107B0502**

Optimization + standard conditions

R449A, 220V/50Hz, CSCR, fan 3m/s,

Evaporating pressure (saturation temperature)														
Condensing pressure (saturation temperature)														
Return gas temp.														
Liquid temp.														
Cooling capacity														
COP														
EER														
Power consumption														
Current consumption														
Ref. mass flow														
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	P1	I	m	
[°C]	-6,66	54,4	35	46,1	1888,0	6448	1624,8	1,90	6,47	1,63	996,3	4,71	42,06	ASHRAE MBP
[°F]	20	130	95	115										
[°C]	-10	55	32	55	1428,1	4877	1229,0	1,53	5,23	1,32	933,3	4,43	35,72	cecomaf MBP
[°F]	14	131	89,6	131										
[°C]	-10	45	20	45	1663,3	5680	1431,4	1,93	6,58	1,66	863,3	4,12	39,72	EN12900 MBP
[°F]	14	113	68	113										
[°C]	-6,66	48,9	18,3	48,9	1789,8	6112	1540,3	1,89	6,44	1,62	948,6	4,50	45,49	ARI540 MBP
[°F]	20	120	65	120										
[°C]	-10	45	32	45	1734,2	5923	1492,5	2,01	6,86	1,73	863,3	4,12	38,65	opt
[°F]	14	113	89,6	113										
[°C]	-25	45	32	45	793,3	2709	682,7	1,30	4,44	1,12	610,5	3,01	17,39	opt
[°F]	-13	113	89,6	113										

Performance tables

R449A, 220V/50Hz, CSCR, fan 3m/s,

	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]	-20	-4	1047,5	3577	901,5	1,50	5,12	1,29	698,8	3,40	23,07
cond. pressure	-15	5	1357,9	4637	1168,6	1,74	5,93	1,49	782,3	3,77	30,07
pc= 45/113	-10	14	1734,2	5923	1492,5	2,01	6,86	1,73	863,3	4,12	38,65
return gas temp.	-6,7	20	2023,8	6911	1741,7	2,21	7,54	1,90	916,4	4,36	45,32
RGT= 32/90	-5	23	2186,9	7469	1882,0	2,32	7,91	1,99	943,8	4,48	49,10
liquid temp	0	32	2726,6	9312	2346,5	2,66	9,07	2,29	1026,2	4,84	61,77
Tliq= 45/113	7,2	45	3680,3	12569	3167,3	3,19	10,91	2,75	1152,3	5,39	84,69
[°C / °F]	-20	-4	850,8	2906	732,2	1,18	4,02	1,01	722,6	3,50	21,00
cond. pressure	-15	5	1112,0	3798	957,0	1,34	4,58	1,15	829,9	3,98	27,61
pc= 55/131	-10	14	1428,1	4877	1229,0	1,53	5,23	1,32	933,3	4,43	35,72
return gas temp	-6,7	20	1671,8	5710	1438,8	1,67	5,71	1,44	1000,5	4,73	42,04
RGT= 32/90	-5	23	1809,4	6180	1557,2	1,75	5,97	1,50	1035,0	4,88	45,64
liquid temp	0	32	2266,9	7742	1950,9	1,99	6,81	1,72	1137,1	5,33	57,75
Tliq= 55/131	7,2	45	3083,0	10529	2653,2	2,39	8,17	2,06	1289,3	6,00	79,94