

HIGH AND MEDIUM TEMPERATURE COMPRESSOR

GS34MLX

SECOPI

Smart, sustainable and energy efficient refrigeration compressors for a wide range of commercial applications such as cold rooms, display cases, ice making machines, cooling of merchandise, process cooling and more. They reduce running costs and their compact, lightweight design makes them ideal for small spaces. They feature variable speed/inverter options for increased efficiency and more precise control of temperature and humidity. Suitable for natural and low-level refrigerants.

Qualified to work with low and ultra-low GWP refrigerants such as:

Class A1 refrigerants: R448A, R449A, R513A, R452A - and traditional HFCs such as R134a, R404A/R507, R407A/C/F, R22.

Class A2L refrigerants: R454C, R455A, R1234y - the latter refrigerant only for our light commercial / fractional ranges.

Natural refrigerants: R290, R600a - for our light commercial/fractional ranges.

COMPRESSOR DESIGN

Oil type	Polyolester
Oil viscosity	46cST
Oil quantity	906cm ³ / 30,6fl.oz
Refr. charge - tech. limit	2000g / 70,5oz
Free gas volume comp.	3540cm ³ / 119,7fl.oz
Weight	22,3kg / 49,2lbs
Motor protection	1# internal
Winding resistance main	1,5Ω (at 25°C)
Winding resistance aux	5,8Ω (at 25°C)
Max. winding temp.	
Max. discharge temp.	120°C / 248°F
Refrigerant(s)	R404A, R452A, R507
Displacement	33,8cm ³ / 2,06cu.in
Compressors on pallet	48



Code: MF09167

GENERAL - CONFIGURATIONS WITH GS34MLX

	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, EAC	VDE, CCC, EAC		
Starting torque	HST	HST	HST	HST
Note	Cover, clamp, gasket: pre-assembled to compressor.			

APPLICATIONS WITH GS34MLX

	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

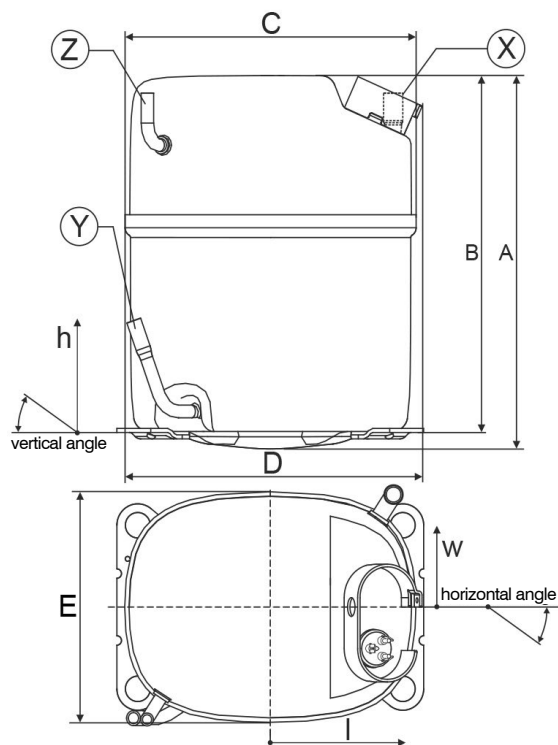
ELECTRICAL DATA - CONFIGURATIONS WITH GS34MLX

	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Starting device type	relay	relay	relay	relay
Run capacitor	20μF	20μF	20μF	20μF
Start capacitor	100μF	100μF	100μF	100μF
LRA (locked rotor amps / 4s)	46A	46A	46A	46A
RLA (rated load amps / 1s)	9,3A	9,3A	9,3A	9,3A
Cut in current	46A	46A	46A	46A

COMPRESSOR DIMENSIONS

Housing	A Height	279mm / 10,98in
	B Height	267mm / 10,51in
	C Length shell	224mm / 8,82in
	D Length w. cover	232mm / 9,13in
	E Width	173mm / 6,81in

Connectors		Suction X	Discharge Y	Process Z
Diameter	[mm]	øi 16,03-16,13	øi 6,45-6,55	øi 6,4-6,6
(i:inside, o:outside)	[in]	øi 0,63-0,64	øi 0,25-0,26	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	19	15
	[in]	0,7	0,7	0,6



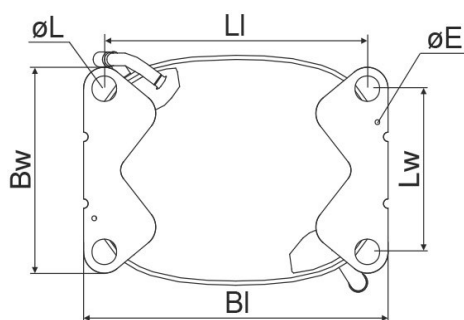
COMPRESSOR FIXATION

Baseplate [mm] [inch]

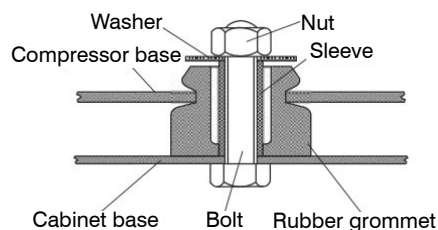
BI	235	9.25
Bw	154	6.06
øE	Ø3.6	Ø0.14

Large holes [mm] [inch]

LI	203	7.99
Lw	122	4.80
øL	Ø19	Ø0.75



BOLT JOINT



CONFIGURATION

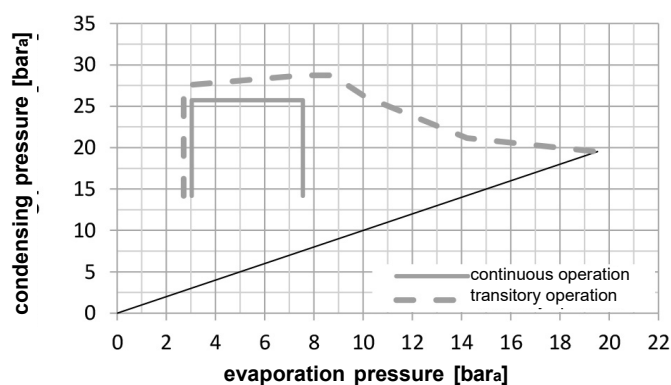
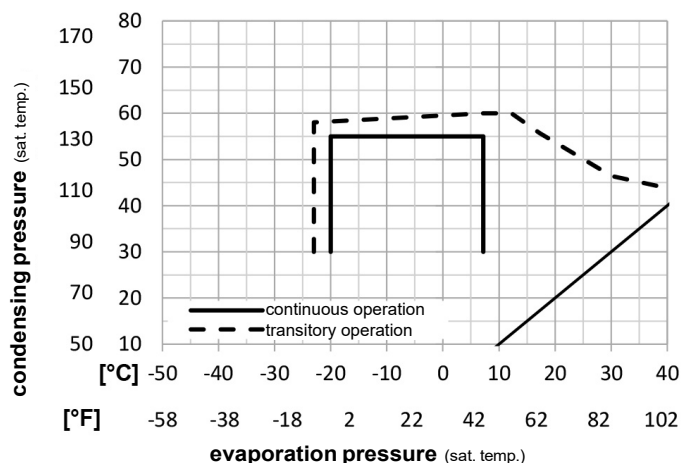
Motorconfiguration	CSCR
Power supply (nominal)	220-240V/50Hz 1~
Refrigerant	R404A
Application	MBP
Voltage range	198-254V
Starting torque	HST
Approvals	VDE CCC EAC

AMBIENT TEMPERATURES / SYSTEM COOLING

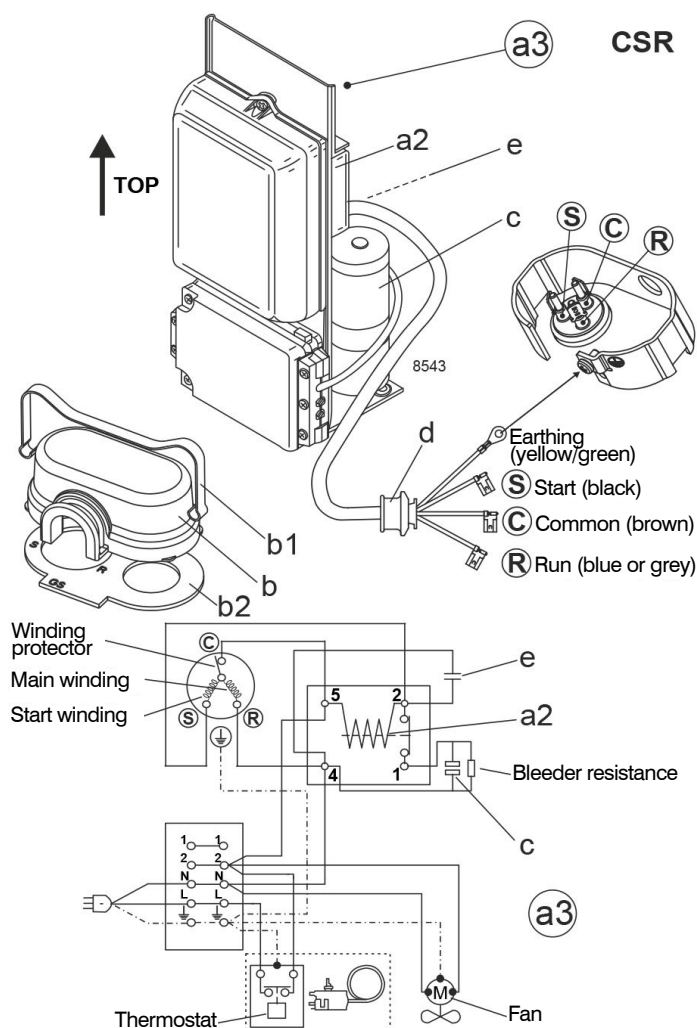
Ambient temperature min.:	10°C / 50°F
Ambient temperature max.:	38°C / 101°F

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	fan 3m/s	n/a

OPERATING PRESSURE RANGE



Electrical accessories / wiring diagram



Components (cover, clamp, gasket: pre assembled)

a3	GS starter kit (600mm)	117-7056
b	cover	107B9101
b2	gasket	107B9100
b1	clamp	107B9104

OPTIMIZATION + STANDARD CONDITIONS

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

pe Evaporating pressure (saturation temperature)

P1 Power consumption

pc Condensing pressure (saturation temperature)

I Current consumption

RGT Return gas temp.

m Ref. mass flow

Tliq Liquid temp.

	pe	pc	RGT	Tliq	Cooling capacity			COP	EER		P1	I	m	
					[W]	[Btu/h]	[kcal/h]		[Btu/Wh]	[kcal/Wh]				
[°C] [°F]	-6,66 20	54,4 130	35 95	46,1 115	3363,0	11485	2894,3	1,71	5,85	1,47	1962,8	10,21	92,53	ASHRAE MBP
[°C] [°F]	-10 14	55 131	32 89,6	55 131	2521,0	8610	2169,6	1,36	4,66	1,17	1848,1	9,74	80,70	cecomaf MBP
[°C] [°F]	-10 14	45 113	20 68	45 113	2953,1	10085	2541,5	1,71	5,85	1,47	1725,3	9,28	88,95	EN12900 MBP
[°C] [°F]	-6,66 20	48,9 120	18,3 65	48,9 120	3061,9	10457	2635,1	1,63	5,55	1,40	1883,4	9,92	100,05	ARI540 MBP
[°C] [°F]	-10 14	45 113	32 89,6	45 113	3136,9	10713	2699,7	1,82	6,21	1,56	1725,3	9,28	86,38	opt
[°C] [°F]	-25 -13	45 113	32 89,6	45 113	1591,9	5437	1370,0	1,26	4,31	1,09	1260,4	7,64	42,94	opt

PERFORMANCE TABLES

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

	pe		Cooling capacity			COP	EER		P1	I	m
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]		[Btu/Wh]	[kcal/Wh]		[A]	[kg/h]
[°C/°F]	-20	-4	2041,7	6973	1757,1	1,44	4,92	1,24	1417,2	8,13	55,39
cond. pressure	-15	5	2552,7	8718	2196,9	1,63	5,55	1,40	1570,8	8,68	69,73
pc = 45/113	-10	14	3136,9	10713	2699,7	1,82	6,21	1,56	1725,3	9,28	86,38
return gas temp.	-6,7	20	3568,6	12188	3071,2	1,95	6,66	1,68	1829,8	9,72	98,87
RGT = 32/90	-5	23	3806,8	13001	3276,2	2,02	6,90	1,74	1884,8	9,95	105,83
liquid temp.	0	32	4575,6	15627	3937,8	2,23	7,61	1,92	2053,2	10,67	128,64
Tliq. 45/113	7,2	45	5886,2	20102	5065,7	2,54	8,67	2,18	2319,5	11,82	168,79
[°C/°F]	-20	-4	1618,9	5529	1393,3	1,09	3,74	0,94	1479,7	8,38	50,94
cond. pressure	-15	5	2041,8	6973	1757,2	1,23	4,19	1,06	1665,1	9,03	64,75
pc = 55/131	-10	14	2521,0	8610	2169,6	1,36	4,66	1,17	1848,1	9,74	80,70
return gas temp.	-6,7	20	2874,2	9816	2473,5	1,46	4,98	1,26	1969,6	10,24	92,66
RGT = 32/90	-5	23	3069,0	10481	2641,2	1,51	5,16	1,30	2032,9	10,50	99,34
liquid temp.	0	32	3699,5	12634	3183,8	1,66	5,68	1,43	2223,4	11,33	121,32
Tliq. 55/131	7,2	45	4782,4	16333	4115,7	1,90	6,49	1,64	2515,9	12,62	160,50

CONFIGURATION

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

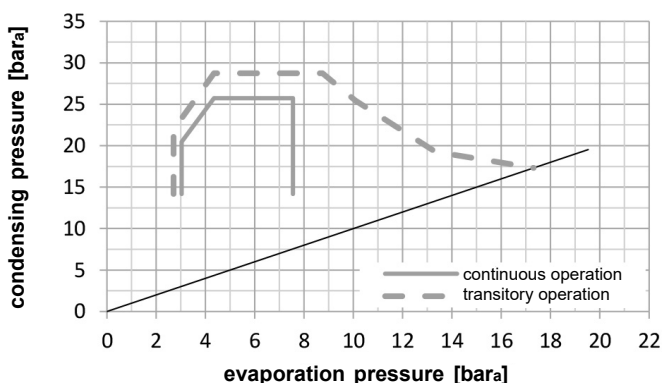
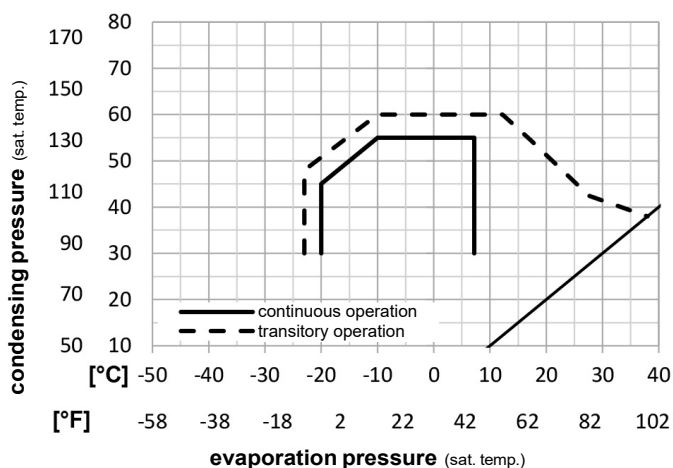
AMBIENT TEMPERATURES / SYSTEM COOLING

Ambient temperature min.: 10°C / 50°F

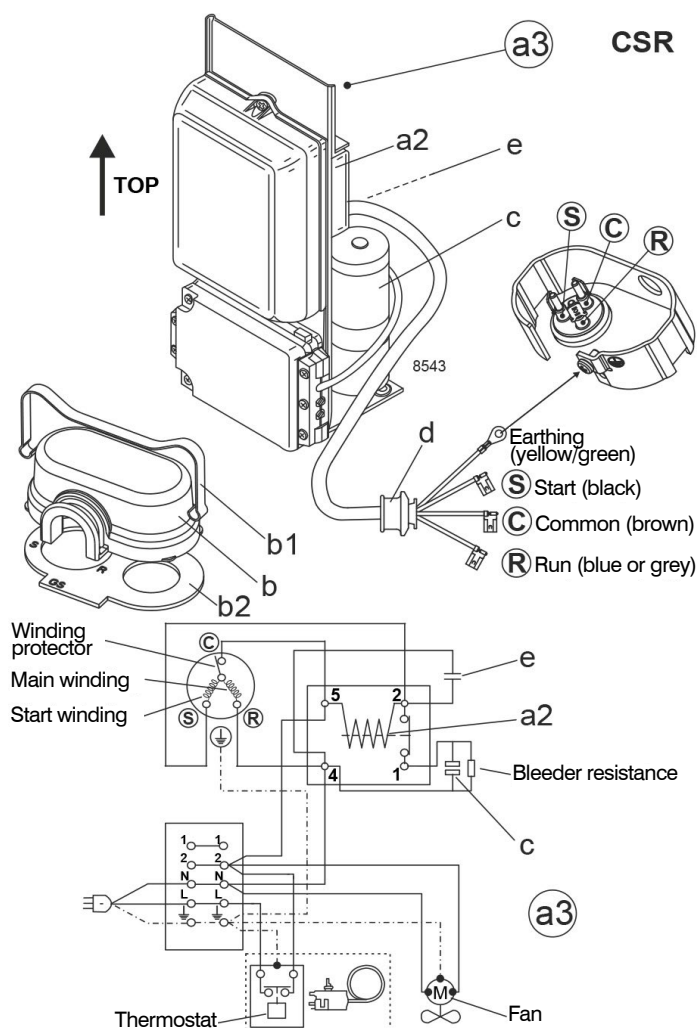
Ambient temperature max.: 38°C / 101°F

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

OPERATING PRESSURE RANGE



Electrical accessories / wiring diagram



Components (cover, clamp, gasket: pre assembled)

a3	GS starter kit (600mm)	117-7056
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b1	clamp	107B9104

OPTIMIZATION + STANDARD CONDITIONS

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

pe Evaporating pressure (saturation temperature)

P1 Power consumption

pc Condensing pressure (saturation temperature)

I Current consumption

RGT Return gas temp.

m Ref. mass flow

Tliq Liquid temp.

					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] [°F]	-6,66 20	54,4 130	35 95	46,1 115	3205,3	10947	2758,5	1,83	6,26	1,58	1749,7	9,52	71,40	ASHRAE MBP
[°C] [°F]	-10 14	55 131	32 89,6	55 131	2460,8	8404	2117,8	1,50	5,13	1,29	1637,1	9,09	61,55	cecomaf MBP
[°C] [°F]	-10 14	45 113	20 68	45 113	2817,1	9621	2424,4	1,84	6,28	1,58	1532,5	8,69	67,28	EN12900 MBP
[°C] [°F]	-6,66 20	48,9 120	18,3 65	48,9 120	3012,0	10286	2592,1	1,79	6,12	1,54	1681,0	9,26	76,55	ARI540 MBP
[°C] [°F]	-10 14	45 113	32 89,6	45 113	2937,2	10031	2527,8	1,92	6,55	1,65	1532,5	8,69	65,45	opt
[°C] [°F]	-25 -13	45 113	32 89,6	45 113	1411,4	4820	1214,7	1,30	4,43	1,12	1086,9	7,00	30,95	opt

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	1847,0	6308	1589,5	1,49	5,10	1,29	1236,4	7,57	40,68
cond. pressure	-15	5	2350,5	8027	2022,9	1,70	5,80	1,46	1383,6	8,13	52,05
pc = 45/113	-10	14	2937,2	10031	2527,8	1,92	6,55	1,65	1532,5	8,69	65,45
return gas temp.	-6,7	20	3377,6	11535	2906,8	2,07	7,06	1,78	1633,7	9,08	75,63
RGT = 32/90	-5	23	3622,7	12372	3117,7	2,15	7,33	1,85	1687,2	9,28	81,34
liquid. temp.	0	32	4423,2	15106	3806,6	2,39	8,16	2,06	1851,6	9,90	100,20
Tliq. 45/113	7,2	45	5813,5	19854	5003,1	2,75	9,39	2,37	2113,6	10,90	133,78
[°C/°F]	-20	-4	1518,2	5185	1306,6	1,18	4,04	1,02	1284,2	7,75	37,48
cond. pressure	-15	5	1954,6	6675	1682,1	1,34	4,57	1,15	1460,7	8,42	48,54
pc = 55/131	-10	14	2460,8	8404	2117,8	1,50	5,13	1,29	1637,1	9,09	61,55
return gas temp.	-6,7	20	2840,9	9702	2444,9	1,62	5,53	1,39	1755,4	9,54	71,44
RGT = 32/90	-5	23	3052,7	10426	2627,2	1,68	5,74	1,45	1817,4	9,77	77,00
liquid. temp.	0	32	3746,8	12796	3224,6	1,87	6,38	1,61	2005,6	10,49	95,45
Tliq. 55/131	7,2	45	4961,8	16946	4270,2	2,16	7,37	1,86	2298,8	11,60	128,66