

Single Pack TL3G 220-240V 50Hz / 208-230V 60Hz CSIR

Single pack code number: **195B4242**

Position	Title	Code	Amount
1	Compressor TL3G	102G4350	1
2	Starting relay	117U6009	1
3	Starting capacitor (60 μ F 220V, 6.3mm)	117U5014	1
4	Cord relief	103N1010	1
5	Cover	103N2010	1
6	Bolt joint for one compressor M6 \varnothing 16mm	118-1917	1

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Model

Designation	TL3G	220-240V/50Hz 1~ 208-230V/60Hz 1~	Sales code:	102G4350
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Compressor design

Oil type	Polyolester	Refrigerant(s)	R134a, R513A
Oil viscosity	15cST	Displacement	3,13cm ³ / 0,19cu.in
Oil quantity	285cm ³ / 9,7fl.oz	Compressors on pallet	125
Refr. charge - tech. limit	400g / 14,1oz		
Free gas volume comp.	1500cm ³ / 50,7fl.oz		
Weight	6,8kg / 15lbs		
Motor protection	1# internal		
Winding resistance main	24,6Ω (at 25°C)		
Winding resistance aux	15,8Ω (at 25°C)		
Max. winding temp.	125°C / 257°F		
Max. discharge temp.	130°C / 266°F		



General - Configurations with TL3G

	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Motorconfiguration	CSIR	RSIR	CSIR	RSIR
Power supply (nominal)	220-240V/50Hz	220-240V/50Hz	208-230V/60Hz	208-230V/60Hz
Number of phases	1	1	1	1
Voltage range	187-254V	187-254V	198-254V	198-254V
Approvals	CCC, EAC, UL, EN 60335-2-34	CCC, EAC, UL, EN 60335-2-34	CCC, EAC, UL, EN 60335-2-34	CCC, EAC, UL, EN 60335-2-34
Starting torque	HST	LST	HST	LST
Note	- / -			

Applications with TL3G

	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Refrigerant	R134a	R134a	R134a	R134a
Application	LBP+MBP+HBP	LBP+MBP+HBP	LBP	LBP
System cooling	static	static	static	static
Hot gas defrost	OK	OK	OK	OK
Long interval pull down	OK	OK	OK	OK

Electrical data - Configurations with TL3G

	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Starting device type	relay	PTC	relay	PTC
Run capacitor	-/-	-/-	-/-	-/-
Start capacitor	60μF	-/-	60μF	-/-
LRA (locked rotor amps / 4s)	4,8A	3,4A	-A	-A
RLA (rated load amps / 1s)	0,8A	0,8A	-A	-A
Cut in current	8,3A	8,3A	-A	-A

Model

Designation

TL3G

220-240V/50Hz 1~ 208-230V/60Hz 1~

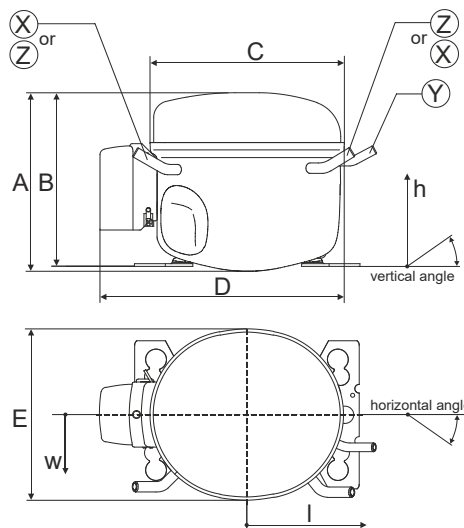
Sales code:

102G4350

Compressor dimensions

Housing	A Height	163mm / 6,42in
	B Height	159mm / 6,26in
	C Length shell	176mm / 6,93in
	D Length w. cover	222mm / 8,74in
	E Width	157mm / 6,18in

Connectors		Suction	Discharge	Process
		X	Y	Z
Diameter	[mm]	øi 6,11-6,29	øi 5,12-5,22	øi 6,11-6,29
	(i:inside, o:outside) [in]	øi 0,24-0,25	øi 0,2-0,21	øi 0,24-0,25
Material		copper	copper	copper
Horizontal angle	±2°	0°	0°	0°
Vertical angle	±2°	150°	28°	31,5°
Position l/h/w	[mm]	-102/105/66	117/108/30	96/105/71
	[in]	-4/4,1/2,6	4,6/4,3/1,2	3,8/4,1/2,8
Straight tube l.	[mm]	12	12	12
	[in]	0,5	0,5	0,5



Compressor fixation



Baseplate	[mm]	[inch]
BI	204	8.03
Bw	136	5.35
Large holes		
LI	165	6.5
Lw	101.6	4
øL	ø 19	ø 0.75
Small holes		
SI	170	6.7
Sw	70	2.76
øS	ø 16	ø 0.63

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	
Snap-on ø7,3 ø16mm	118-1947	118-1919

Application notes

LRA value on compressor label and datasheet may differ due to different test conditions for UL approval.

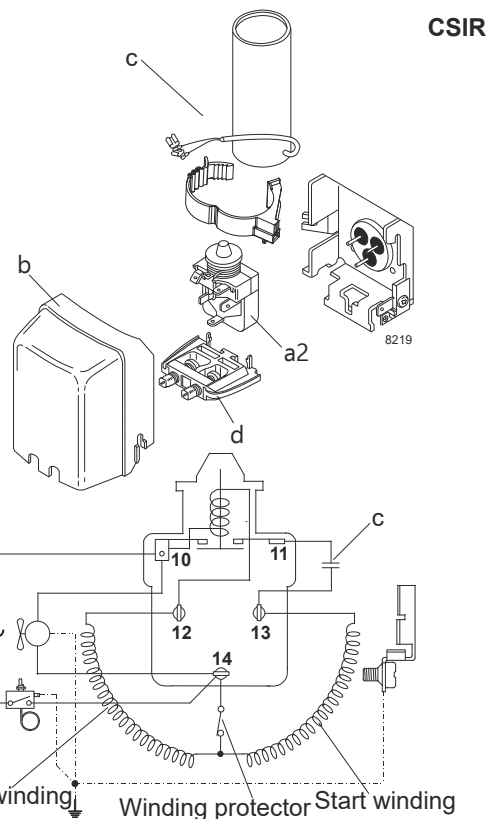
Model

Designation	TL3G	220-240V/50Hz	Conf. 1	Sales code:	102G4350
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Configuration

Motorconfiguration	CSIR
Power supply (nominal)	220-240V/50Hz 1~
Refrigerant	R134a
Application	LBP+MBP+HBP
Voltage range	187-254V
Starting torque	HST
Approvals	CCC EAC UL EN 60335-2-34

Electrical accessories / wiring diagram

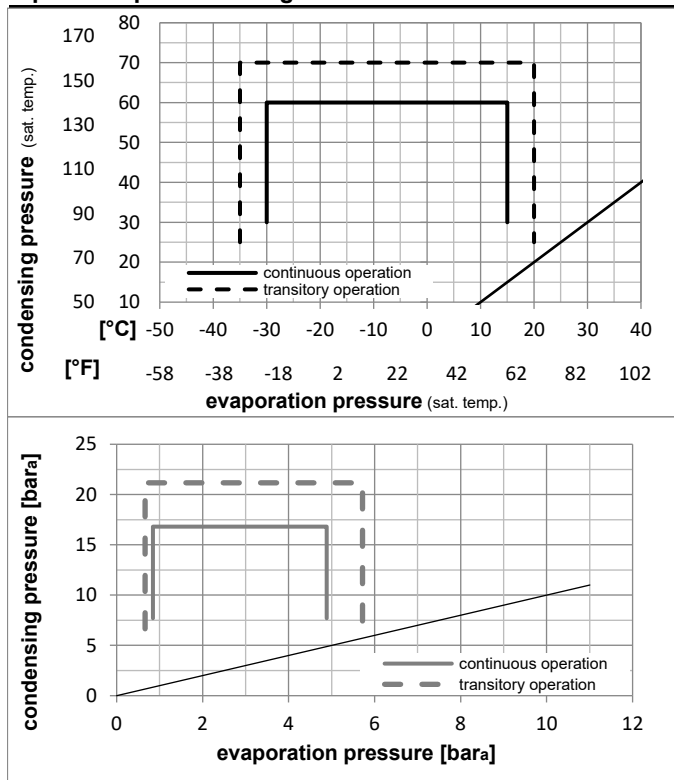


Ambient temperatures / system cooling

Ambient temperature min.:	10°C / 50°F
Ambient temperature max.:	43°C / 110°F

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

Operation pressure range



Components

a2	assy. relay	117U6009
c	start capacitor (60μF)	117U5014
b	plastic cover	103N2010
d	cord relief	103N1010

Alternative components

b	plastic cover	103N2011
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Model

Designation	TL3G	220-240V/50Hz	Conf. 1	Sales code:	102G4350
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Optimization + standard conditions

R134a, 220V/50Hz, CSIR, static, CCC, EAC, UL, EN 60335-2-34

	Evaporating pressure (saturation temperature)				Condensing pressure (saturation temperature)			Return gas temp.	Liquid temp.	Cooling capacity	COP	EER	Power consumption			ASHRAE / EN
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]						P1	I	Ref. mass flow	
	[°C]	[°F]	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]			
	-23	54	32	32	58,3	199	50,1	0,85	2,90	0,73	68,6	0,70	1,13	ASHRAE LBP		
	-10	130	90	90												
	-7	54	35	46	139,2	475	119,8	1,34	4,59	1,16	103,6	0,79	3,04	ASHRAE MBP		
	20	130	95	115												
	7,2	54	35	46	257,1	878	221,3	1,86	6,36	1,60	138,0	0,89	5,70	ASHRAE HBP		
	45	130	95	115												
	-35	40	20	40	30,0	102	25,8	0,59	2,02	0,51	50,7	0,67	0,66	EN12900 LBP		
	-31	104	68	104												
	-10	45	20	45	126,8	433	109,2	1,36	4,66	1,17	93,0	0,75	2,97	EN12900 MBP		
	14	113	68	113												
	5	50	20	50	223,6	764	192,5	1,74	5,95	1,50	128,4	0,86	5,64	EN12900 HBP		
	41	122	68	122												

Performance tables

R134a, 220V/50Hz, CSIR, static, CCC, EAC, UL, EN 60335-2-34

	pe		Cooling capacity			COP	EER	P1	I	m	
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]						
[°C / °F]	-30	-22	39,1	133	33,6	0,68	2,34	0,59	57,1	0,68	0,84
cond. pressure	-25	-13	56,2	192	48,4	0,86	2,95	0,74	65,0	0,69	1,22
pc= 45/113	-15	5	101,9	348	87,7	1,23	4,19	1,06	83,1	0,73	2,22
return gas temp.	-10	14	131,6	449	113,3	1,41	4,83	1,22	93,0	0,75	2,88
RGT= 32/90	0	32	207,9	710	178,9	1,82	6,23	1,57	113,9	0,81	4,60
liquid temp	5	41	255,7	873	220,0	2,05	7,00	1,76	124,7	0,85	5,69
Tliq= 45/113	15	59	373,7	1276	321,6	2,55	8,73	2,20	146,3	0,93	8,46
[°C / °F]	-30	-22	25,3	87	21,8	0,44	1,50	0,38	57,7	0,68	0,60
cond. pressure	-25	-13	40,9	140	35,2	0,62	2,12	0,53	65,8	0,70	0,98
pc= 55/131	-15	5	80,5	275	69,3	0,95	3,23	0,81	85,2	0,74	1,94
return gas temp	-10	14	105,8	361	91,0	1,10	3,76	0,95	96,2	0,77	2,56
RGT= 32/90	0	32	170,4	582	146,7	1,42	4,85	1,22	120,1	0,84	4,17
liquid temp	5	41	211,0	721	181,6	1,59	5,42	1,37	132,8	0,88	5,20
Tliq= 55/131	15	59	311,7	1065	268,3	1,96	6,69	1,69	159,1	0,97	7,83

Model

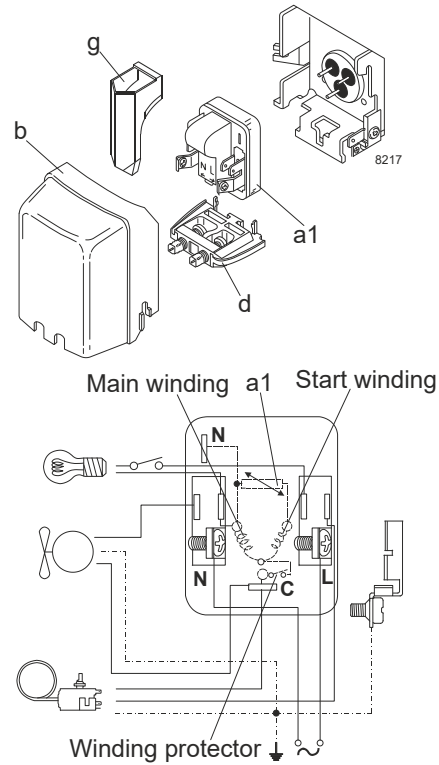
Designation	TL3G	220-240V/50Hz	Conf. 2	Sales code:	102G4350
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Configuration

Motorconfiguration	RSIR
Power supply (nominal)	220-240V/50Hz 1~
Refrigerant	R134a
Application	LBP+MBP+HBP
Voltage range	187-254V
Starting torque	LST
Approvals	CCC EAC UL EN 60335-2-34

Electrical accessories / wiring diagram

RSIR

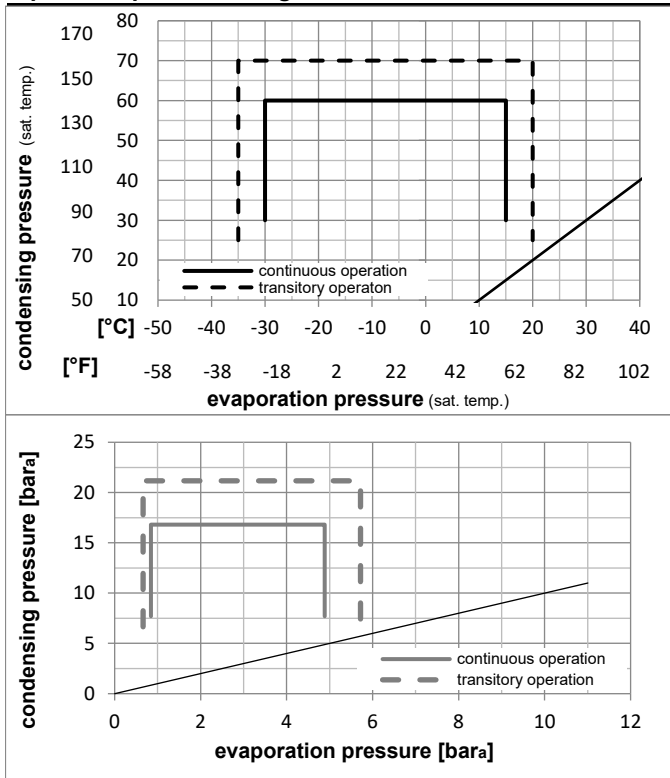


Ambient temperatures / system cooling

Ambient temperature min.:	10°C / 50°F
Ambient temperature max.:	43°C / 110°F

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

Operation pressure range



Components

a1	PTC starter (220V, 250hm, 4.8mm)	103N0018
b	plastic cover	103N2010
d	cord relief	103N1010
g	protection screen for PTC	103N0476

Alternative components

a1	PTC starter (220V, 250hm, 6.3mm)	103N0011
b	plastic cover	103N2011
d	cord relief	103N1010
g	protection screen for PTC	103N0476

Model

Designation	TL3G	220-240V/50Hz	Conf. 2	Sales code:	102G4350
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Optimization + standard conditions

R134a, 220V/50Hz, RSIR, static, CCC, EAC, UL, EN 60335-2-34

	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	58,3	199	50,1	0,85	2,90	0,73	68,6	0,70	1,13	ASHRAE LBP		
	-10	130	90	90												
	-7	54	35	46	139,2	475	119,8	1,34	4,59	1,16	103,6	0,79	3,04	ASHRAE MBP		
	20	130	95	115												
	7,2	54	35	46	257,1	878	221,3	1,86	6,36	1,60	138,0	0,89	5,70	ASHRAE HBP		
	45	130	95	115												
	-35	40	20	40	30,0	102	25,8	0,59	2,02	0,51	50,7	0,67	0,66	EN12900 LBP		
	-31	104	68	104												
	-10	45	20	45	126,8	433	109,2	1,36	4,66	1,17	93,0	0,75	2,97	EN12900 MBP		
	14	113	68	113												
	5	50	20	50	223,6	764	192,5	1,74	5,95	1,50	128,4	0,86	5,64	EN12900 HBP		
	41	122	68	122												

Performance tables

R134a, 220V/50Hz, RSIR, static, CCC, EAC, UL, EN 60335-2-34

	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]	-30	-22	39,1	133	33,6	0,68	2,34	0,59	57,1	0,68	0,84
cond. pressure	-25	-13	56,2	192	48,4	0,86	2,95	0,74	65,0	0,69	1,22
pc= 45/113	-15	5	101,9	348	87,7	1,23	4,19	1,06	83,1	0,73	2,22
return gas temp.	-10	14	131,6	449	113,3	1,41	4,83	1,22	93,0	0,75	2,88
RGT= 32/90	0	32	207,9	710	178,9	1,82	6,23	1,57	113,9	0,81	4,60
liquid temp	5	41	255,7	873	220,0	2,05	7,00	1,76	124,7	0,85	5,69
Tliq= 45/113	15	59	373,7	1276	321,6	2,55	8,73	2,20	146,3	0,93	8,46
[°C / °F]	-30	-22	25,3	87	21,8	0,44	1,50	0,38	57,7	0,68	0,60
cond. pressure	-25	-13	40,9	140	35,2	0,62	2,12	0,53	65,8	0,70	0,98
pc= 55/131	-15	5	80,5	275	69,3	0,95	3,23	0,81	85,2	0,74	1,94
return gas temp	-10	14	105,8	361	91,0	1,10	3,76	0,95	96,2	0,77	2,56
RGT= 32/90	0	32	170,4	582	146,7	1,42	4,85	1,22	120,1	0,84	4,17
liquid temp	5	41	211,0	721	181,6	1,59	5,42	1,37	132,8	0,88	5,20
Tliq= 55/131	15	59	311,7	1065	268,3	1,96	6,69	1,69	159,1	0,97	7,83

Model

Designation	TL3G	208-230V/60Hz	Conf. 3	Sales code:	102G4350
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Configuration

Motorconfiguration	CSIR
Power supply (nominal)	208-230V/60Hz 1~
Refrigerant	R134a
Application	LBP
Voltage range	198-254V
Starting torque	HST
Approvals	CCC EAC UL EN 60335-2-34

Electrical accessories / wiring diagram

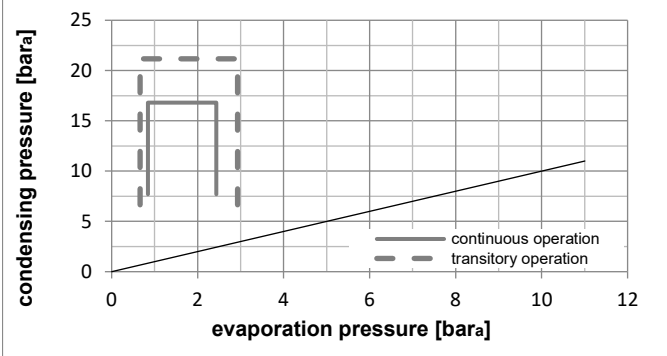
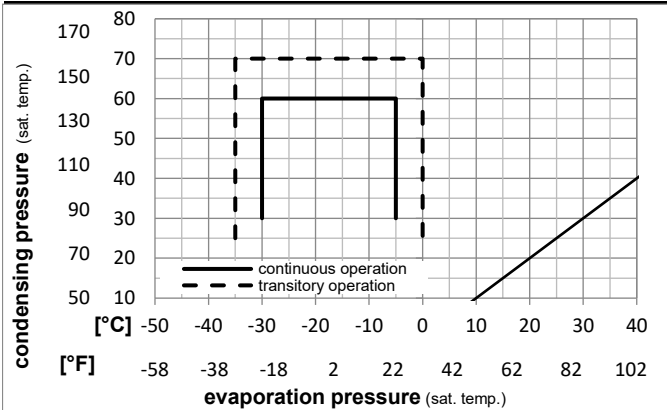


Ambient temperatures / system cooling

Ambient temperature min.:	10°C / 50°F
Ambient temperature max.:	43°C / 110°F

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

Operation pressure range



Components

a2	assy. relay	117U6009
c	start capacitor (60μF)	117U5014
b	plastic cover	103N2010
d	cord relief	103N1010

Alternative components

b	plastic cover	103N2011
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Model

Designation	TL3G	208-230V/60Hz	Conf. 3	Sales code:	102G4350
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Optimization + standard conditions

R134a, 220V/60Hz, CSIR, static, CCC, EAC, UL, EN 60335-2-34

	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]	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]				
ASHRAE LBP	-23	-10	54	130	32	90	32	90	67,5	231	58,1	0,92	3,15	0,79	73,2	0,64	1,31
ASHRAE MBP	-7	20	54	130	35	95	46	115	164,6	562	141,6	1,35	4,59	1,16	122,3	0,77	3,59
ASHRAE HBP	7,2	45	54	130	35	95	46	115	304,4	1040	262,0	1,67	5,71	1,44	182,1	0,91	6,75
EN12900 LBP	-35	-31	40	104	20	68	40	104	34,9	119	30,1	0,65	2,22	0,56	53,8	0,57	0,77
EN12900 MBP	-10	14	45	113	20	68	45	113	145,5	497	125,2	1,38	4,72	1,19	105,2	0,73	3,41
EN12900 HBP	5	41	50	122	20	68	50	122	258,1	882	222,1	1,58	5,38	1,36	163,9	0,88	6,50

Performance tables

R134a, 220V/60Hz, CSIR, static, CCC, EAC, UL, EN 60335-2-34

	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]	-30	-22	45,3	155	38,9	0,75	2,58	0,65	60,0	0,60	0,98
cond. pressure	-25	-13	65,1	222	56,0	0,94	3,22	0,81	68,9	0,62	1,41
pc= 45/113	-23	-10	72,7	248	62,6	1,00	3,43	0,86	72,3	0,63	1,58
return gas temp.	-20	-4	88,9	304	76,5	1,12	3,82	0,96	79,4	0,66	1,93
RGT= 32/90	-15	5	117,4	401	101,0	1,28	4,38	1,10	91,5	0,69	2,56
liquid temp	-10	14	151,0	516	129,9	1,44	4,90	1,24	105,2	0,73	3,30
Tliq= 45/113	-5	23	190,3	650	163,8	1,58	5,39	1,36	120,7	0,78	4,19
[°C / °F]	-30	-22	29,5	101	25,4	0,49	1,68	0,42	60,0	0,60	0,70
cond. pressure	-25	-13	47,4	162	40,8	0,68	2,32	0,58	69,7	0,63	1,13
pc= 55/131	-23	-10	54,3	185	46,7	0,74	2,52	0,64	73,5	0,64	1,30
return gas temp	-20	-4	68,9	235	59,3	0,85	2,89	0,73	81,4	0,66	1,65
RGT= 32/90	-15	5	94,6	323	81,4	0,99	3,39	0,86	95,2	0,70	2,28
liquid temp	-10	14	125,1	427	107,7	1,13	3,85	0,97	111,1	0,74	3,03
Tliq= 55/131	-5	23	160,9	550	138,5	1,25	4,25	1,07	129,2	0,79	3,91

Model

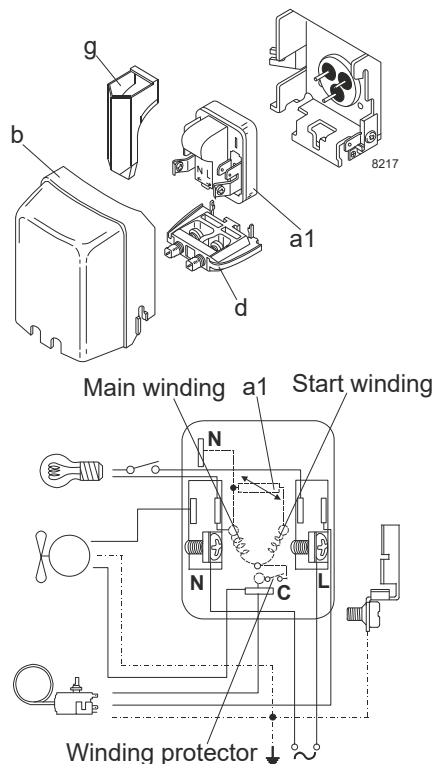
Designation	TL3G	208-230V/60Hz	Conf. 4	Sales code:	102G4350
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Configuration

Motorconfiguration	RSIR
Power supply (nominal)	208-230V/60Hz 1~
Refrigerant	R134a
Application	LBP
Voltage range	198-254V
Starting torque	LST
Approvals	CCC EAC UL EN 60335-2-34

Electrical accessories / wiring diagram

RSIR

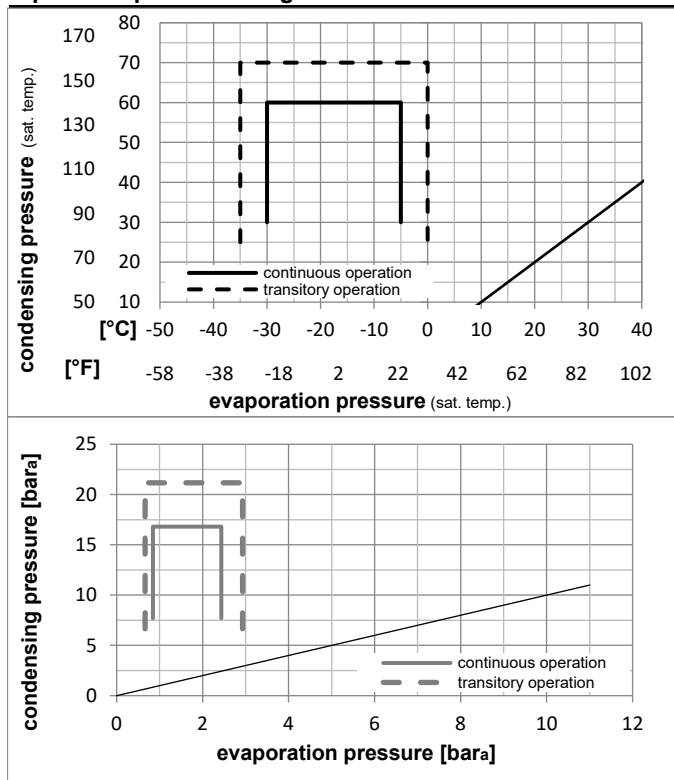


Ambient temperatures / system cooling

Ambient temperature min.:	10°C / 50°F
Ambient temperature max.:	43°C / 110°F

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

Operation pressure range



Components

a1	PTC starter (220V, 250hm, 4.8mm)	103N0018
b	plastic cover	103N2010
d	cord relief	103N1010
g	protection screen for PTC	103N0476

Alternative components

a1	PTC starter (220V, 250hm, 6.3mm)	103N0011
b	plastic cover	103N2011
d	cord relief	103N1010
g	protection screen for PTC	103N0476

Model

Designation	TL3G	208-230V/60Hz	Conf. 4	Sales code:	102G4350
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Optimization + standard conditions

R134a, 220V/60Hz, RSIR, static, CCC, EAC, UL, EN 60335-2-34

	Evaporating pressure (saturation temperature)				Condensing pressure (saturation temperature)			Return gas temp.	Liquid temp.	Cooling capacity	COP	EER	Power consumption			ASHRAE
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]						P1	I	m	
	[°C]	[°F]	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]			
	-23	54	32	32	67,5	231	58,1	0,92	3,15	0,79	73,2	0,64	1,31	ASHRAE LBP		
	-10	130	90	90												
	-7	54	35	46	164,6	562	141,6	1,35	4,59	1,16	122,3	0,77	3,59	ASHRAE MBP		
	20	130	95	115												
	7,2	54	35	46	304,4	1040	262,0	1,67	5,71	1,44	182,1	0,91	6,75	ASHRAE HBP		
	45	130	95	115												
	-35	40	20	40	34,9	119	30,1	0,65	2,22	0,56	53,8	0,57	0,77	EN12900 LBP		
	-31	104	68	104												
	-10	45	20	45	145,5	497	125,2	1,38	4,72	1,19	105,2	0,73	3,41	EN12900 MBP		
	14	113	68	113												
	5	50	20	50	258,1	882	222,1	1,58	5,38	1,36	163,9	0,88	6,50	EN12900 HBP		
	41	122	68	122												

Performance tables

R134a, 220V/60Hz, RSIR, static, CCC, EAC, UL, EN 60335-2-34

	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]	-30	-22	45,3	155	38,9	0,75	2,58	0,65	60,0	0,60	0,98
cond. pressure	-25	-13	65,1	222	56,0	0,94	3,22	0,81	68,9	0,62	1,41
pc= 45/113	-23	-10	72,7	248	62,6	1,00	3,43	0,86	72,3	0,63	1,58
return gas temp.	-20	-4	88,9	304	76,5	1,12	3,82	0,96	79,4	0,66	1,93
RGT= 32/90	-15	5	117,4	401	101,0	1,28	4,38	1,10	91,5	0,69	2,56
liquid temp	-10	14	151,0	516	129,9	1,44	4,90	1,24	105,2	0,73	3,30
Tliq= 45/113	-5	23	190,3	650	163,8	1,58	5,39	1,36	120,7	0,78	4,19
[°C / °F]	-30	-22	29,5	101	25,4	0,49	1,68	0,42	60,0	0,60	0,70
cond. pressure	-25	-13	47,4	162	40,8	0,68	2,32	0,58	69,7	0,63	1,13
pc= 55/131	-23	-10	54,3	185	46,7	0,74	2,52	0,64	73,5	0,64	1,30
return gas temp	-20	-4	68,9	235	59,3	0,85	2,89	0,73	81,4	0,66	1,65
RGT= 32/90	-15	5	94,6	323	81,4	0,99	3,39	0,86	95,2	0,70	2,28
liquid temp	-10	14	125,1	427	107,7	1,13	3,85	0,97	111,1	0,74	3,03
Tliq= 55/131	-5	23	160,9	550	138,5	1,25	4,25	1,07	129,2	0,79	3,91



TL Compressors





Service/Repair – R600a, R290



8545

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)**

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