

## Single Pack TL4CL 220-240V 50Hz CSIR

Single pack code number: **195B4130**

Position	Title	Code	Amount
1	Compressor TL4CL	102U2071	1
2	Starting relay	117U6000	1
3	Starting capacitor (60 $\mu$ 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	<b>TL4CL</b>	<b>220-240V/50Hz 1~</b>	Sales code:	<b>102U2071</b>
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**Compressor design**

Oil type	Polyolester	Refrigerant(s)	<b>R404A, R452A, R507</b>
Oil viscosity	32cSt	Displacement	3,86cm <sup>3</sup> / 0,24cu.in
Oil quantity	280cm <sup>3</sup> / 9,5fl.oz	Compressors on pallet	125
Refr. charge - tech. limit	600g / 21,2oz		
Free gas volume comp.	1690cm <sup>3</sup> / 57,1fl.oz		
Weight	7,6kg / 16,8lbs		
Motor protection	1# internal		
Winding resistance main	14,5Ω (at 25°C)		
Winding resistance aux	14,8Ω (at 25°C)		
Max. winding temp.	125°C / 257°F		
Max. discharge temp.	130°C / 266°F		



**General - Configurations with TL4CL**

	<b>Conf. 1</b>	<b>Conf. 2</b>
Motorconfiguration	CSIR	CSIR
Power supply (nominal)	220-240V/50Hz	220-240V/50Hz
Number of phases	1	1
Voltage range	198-254V	198-254V
Approvals	VDE	VDE
Starting torque	HST	HST
Note	- / -	

**Applications with TL4CL**

	<b>Conf. 1</b>	<b>Conf. 2</b>
Refrigerant	R404A	R452A
Application	LBP	LBP
System cooling	fan 3m/s	fan 3m/s
Hot gas defrost	OK	OK
Long interval pull down	- / -	- / -

**Electrical data - Configurations with TL4CL**

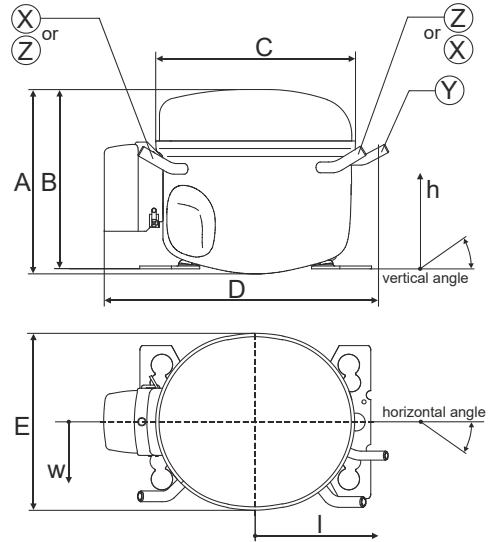
	<b>Conf. 1</b>	<b>Conf. 2</b>
Starting device type	relay	relay
Run capacitor	- / -	- / -
Start capacitor	60μF	60μF
LRA (locked rotor amps / 4s)	5,7A	5,7A
RLA (rated load amps / 1s)	1,1A	1,1A
Cut in current	9,7A	9,7A
IP class	21	21

**Model**

Designation	<b>TL4CL</b>	<b>220-240V/50Hz 1~</b>	Sales code:	<b>102U2071</b>
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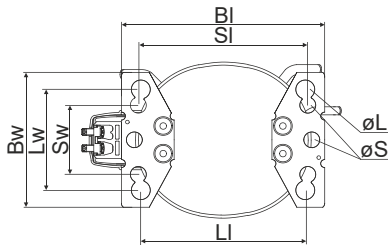
**Compressor dimensions**

<b>Housing</b>	A Height	174mm / 6,85in
	B Height	170mm / 6,69in
	C Length shell	176mm / 6,93in
	D Length w. cover	222mm / 8,74in
	E Width	157mm / 6,18in



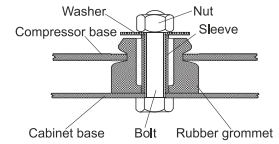
<b>Connectors</b>		<b>Suction</b>	<b>Discharge</b>	<b>Process</b>
		<b>X</b>	<b>Y</b>	<b>Z</b>
Diameter	[mm]	øi 6,11-6,29	øi 5,12-5,22	øi 6,11-6,29
(i:inside, o:outside)	[in]	øi 0,24-0,25	øi 0,2-0,21	øi 0,24-0,25
Material		copper	copper	copper
Horizontal angle	±2°	0°	0°	0°
Vertical angle	±2°	150°	28°	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**

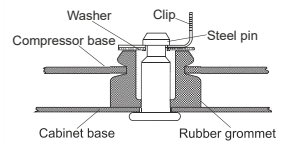


Baseplate	[mm]	[inch]
BI	204	8.03
BW	136	5.35
Large holes		
LI	165	6.5
LW	101.6	4
øL	ø 19	ø 0.75
Small holes		
SI	170	6.7
SW	70	2.76
øS	ø 16	ø 0.63

**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	
Bolt joint   ø1/4"   ø19mm	118-1949	
Snap-on   ø7,3   ø16mm	118-1947	118-1919

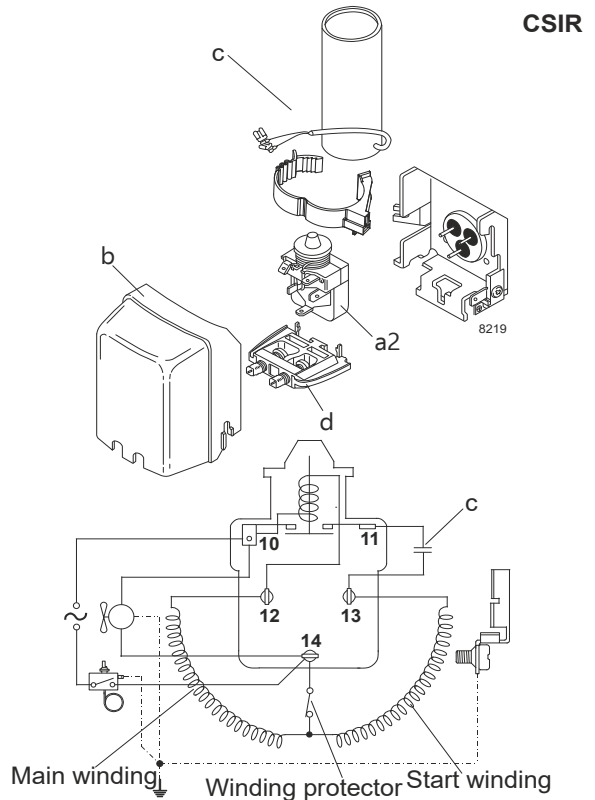
**Model**

Designation	<b>TL4CL</b>	<b>220-240V/50Hz</b>	<b>Conf. 1</b>	Sales code:	<b>102U2071</b>
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**Configuration**

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

**Electrical accessories / wiring diagram**

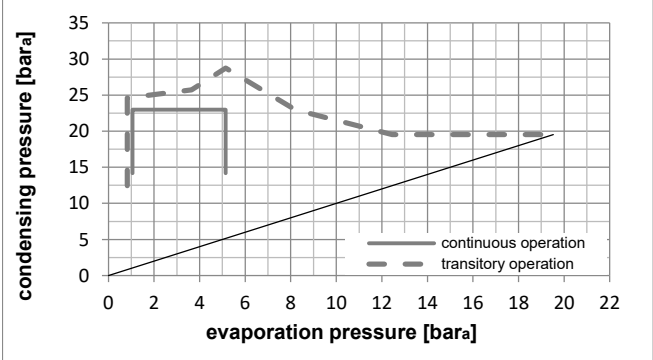
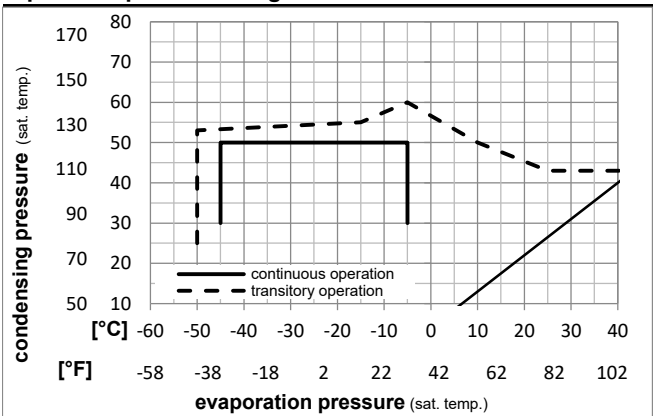


**Ambient temperatures / system cooling**

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	fan 3m/s	n/a	n/a
38°C / 100°F	fan 3m/s	n/a	n/a
43°C / 110°F	n/a	n/a	n/a

**Operation pressure range**



Components

a2	relay	117U6000
c	start capacitor (60µF)	117U5014
d	cord relief	103N1010
b	plastic cover	103N2010

Alternative components

b	plastic cover	103N2011
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**Model**

Designation **TL4CL 220-240V/50Hz** Conf. 1 Sales code: **102U2071**

**Optimization + standard conditions**

220V/50Hz, CSIR, fan 3m/s, VDE

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]	[°C]	[°C]	[°C]	[°C]							[W]	[A]	[kg/h]	
[°F]	-23,3	54,4	32,2	32,2	151,2	516	130,1	1,03	3,50	0,88	147,5	1,12	3,52	ASHRAE LBP
[°F]	-10	130	90	90										
[°C]	-25	55	32	55	101,0	345	86,9	0,72	2,47	0,62	139,6	1,08	3,16	cecomaf LBP
[°F]	-13	131	89,6	131										
[°C]	-35	40	20	40	94,1	321	80,9	0,90	3,07	0,77	104,7	0,90	2,56	EN12900 LBP
[°F]	-31	104	68	104										
[°C]	-6,66	54,4	35	46,1	310,7	1061	267,4	1,39	4,75	1,20	223,5	1,52	8,55	ASHRAE MBP
[°F]	20	130	95	115										
[°C]	-10	55	32	55	227,6	777	195,9	1,09	3,71	0,93	209,6	1,45	7,29	cecomaf MBP
[°F]	14	131	89,6	131										
[°C]	-10	45	20	45	269,7	921	232,1	1,36	4,65	1,17	198,1	1,39	8,12	EN12900 MBP
[°F]	14	113	68	113										

**Performance tables**

220V/50Hz, CSIR, fan 3m/s, VDE

	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]	-45	-49	51,9	177	44,7	0,64	2,18	0,55	81,2	0,80	1,38	
cond. pressure	-35	-31	84,2	288	72,5	0,81	2,75	0,69	104,6	0,91	2,25	
pc= 45/113	-30	-22	109,7	375	94,4	0,90	3,09	0,78	121,3	0,99	2,95	
return gas temp.	-25	-13	142,1	485	122,3	1,02	3,47	0,87	140,0	1,08	3,83	
RGT= 32/90	-20	-4	182,0	622	156,6	1,14	3,89	0,98	159,7	1,19	4,94	
liquid temp	-15	5	229,9	785	197,8	1,28	4,38	1,10	179,4	1,29	6,28	
Tliq= 45/113	-5	23	351,7	1201	302,7	1,64	5,59	1,41	214,8	1,49	9,78	
[°C / °F]	-45	-49	35,8	122	30,8	0,51	1,74	0,44	70,2	0,73	1,10	
cond. pressure	-35	-31	55,4	189	47,7	0,56	1,93	0,49	98,1	0,87	1,71	
pc= 55/131	-30	-22	74,7	255	64,3	0,63	2,17	0,55	117,7	0,97	2,32	
return gas temp	-25	-13	101,0	345	86,9	0,72	2,47	0,62	139,6	1,08	3,16	
RGT= 32/90	-20	-4	134,9	461	116,1	0,83	2,83	0,71	162,9	1,20	4,25	
liquid temp	-15	5	177,0	604	152,3	0,95	3,24	0,82	186,5	1,33	5,61	
Tliq= 55/131	-5	23	287,5	982	247,4	1,24	4,25	1,07	231,0	1,56	9,30	

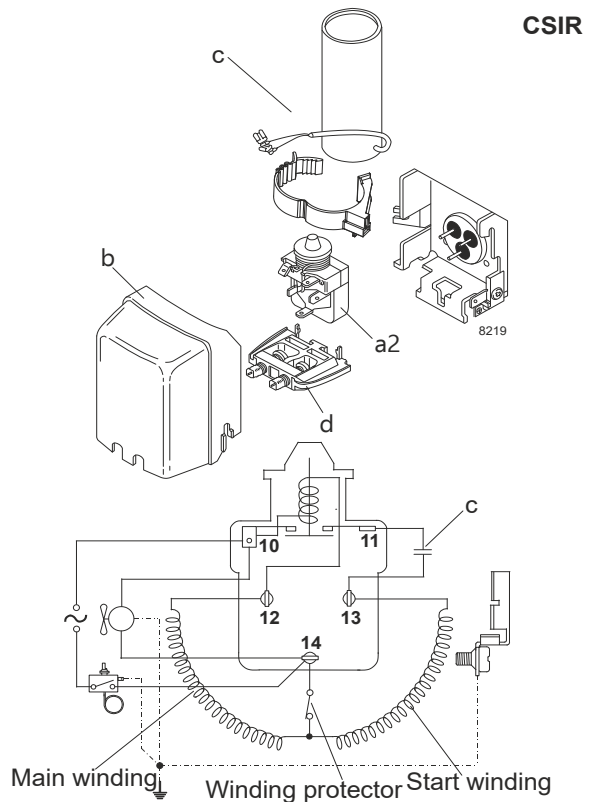
**Model**

Designation	<b>TL4CL</b>	<b>220-240V/50Hz</b>	<b>Conf. 2</b>	Sales code:	<b>102U2071</b>
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**Configuration**

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

**Electrical accessories / wiring diagram**

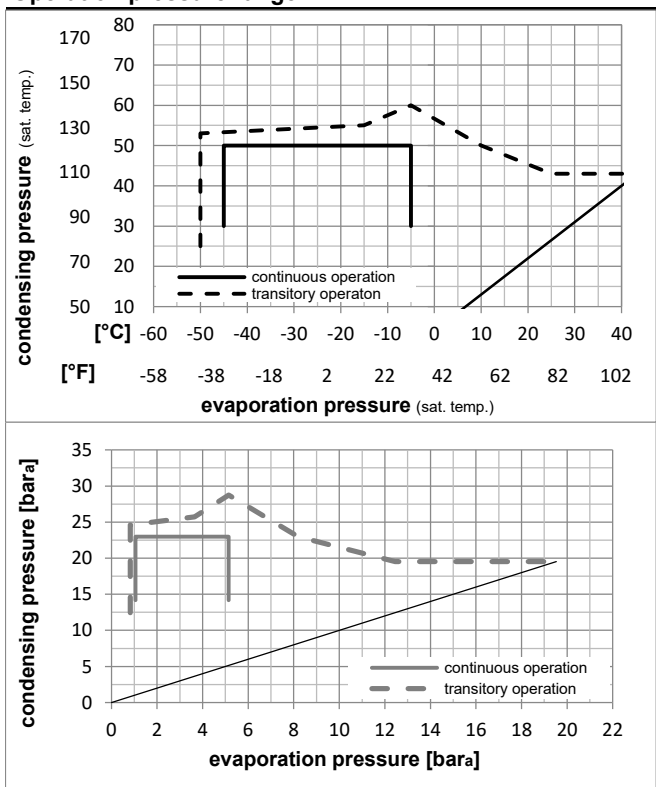


**Ambient temperatures / system cooling**

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	fan 3m/s	n/a	n/a
38°C / 100°F	fan 3m/s	n/a	n/a
43°C / 110°F	n/a	n/a	n/a

**Operation pressure range**



Components

a2	relay	117U6000
c	start capacitor (60µF)	117U5014
d	cord relief	103N1010
b	plastic cover	103N2010

Alternative components

b	plastic cover	103N2011
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**Model**

Designation **TL4CL 220-240V/50Hz** Conf. **2** Sales code: **102U2071**

**Optimization + standard conditions**

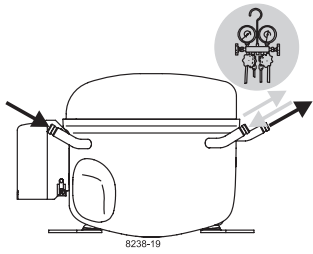
220V/50Hz, CSIR, fan 3m/s, VDE

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]	[°C]	[°C]	[°C]	[°C]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]	
[°F]	-23,3	54,4	32,2	32,2	138,1	472	118,9	1,00	3,43	0,86	137,7	1,08	3,32	ASHRAE LBP
[°F]	-10	130	90	90										
[°C]	-25	55	32	55	93,0	318	80,0	0,72	2,44	0,62	130,0	1,03	2,96	cecomaf LBP
[°F]	-13	131	89,6	131										
[°C]	-35	40	20	40	84,8	290	73,0	0,87	2,99	0,75	96,9	0,86	2,37	EN12900 LBP
[°F]	-31	104	68	104										
[°C]	-6,66	54,4	35	46,1	294,0	1004	253,0	1,38	4,72	1,19	212,9	1,47	8,27	ASHRAE MBP
[°F]	20	130	95	115										
[°C]	-10	55	32	55	215,8	737	185,7	1,09	3,71	0,93	198,8	1,40	7,01	cecomaf MBP
[°F]	14	131	89,6	131										
[°C]	-10	45	20	45	254,7	870	219,2	1,35	4,62	1,17	188,1	1,34	7,83	EN12900 MBP
[°F]	14	113	68	113										

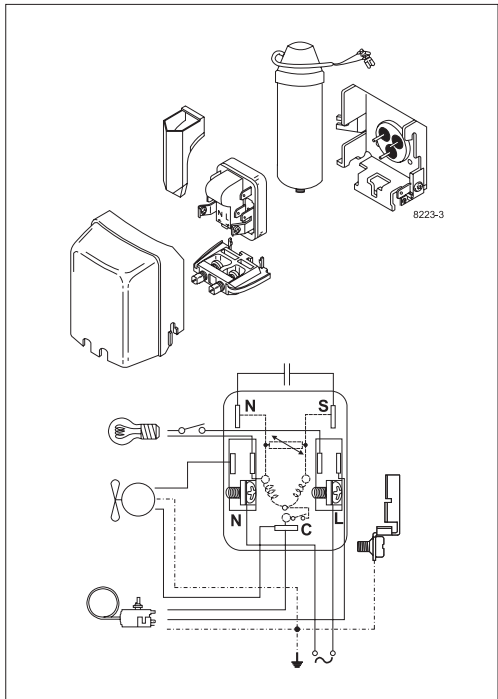
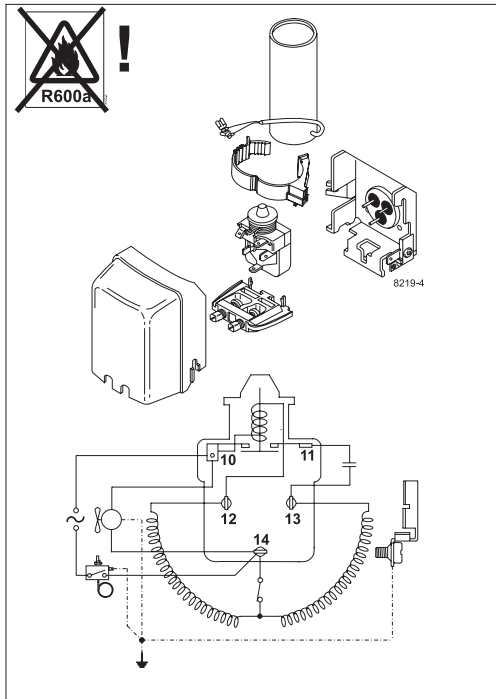
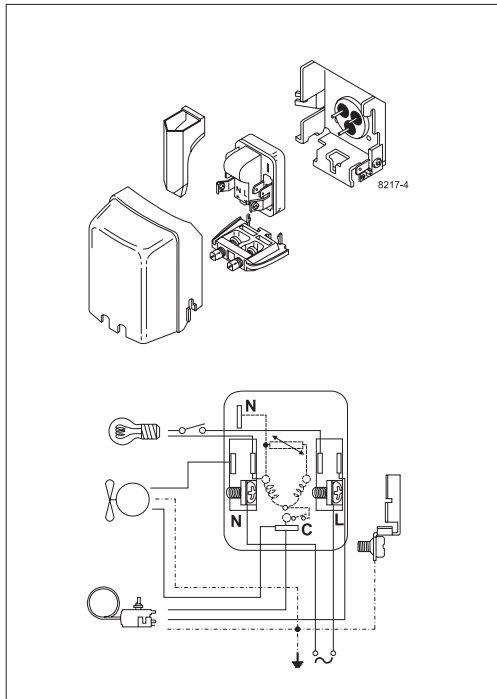
**Performance tables**

220V/50Hz, CSIR, fan 3m/s, VDE

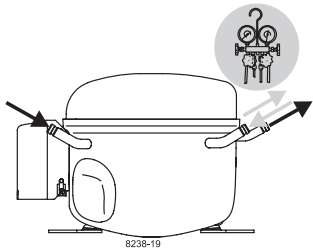
	pe		Cooling capacity			COP		EER		P1	I	m
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]	
[°C / °F]	-45	-49	44,9	153	38,6	0,61	2,08	0,52	73,8	0,74	1,22	
cond. pressure	-35	-31	75,6	258	65,1	0,78	2,68	0,67	96,5	0,86	2,08	
pc= 45/113	-30	-22	99,9	341	86,0	0,89	3,03	0,76	112,7	0,94	2,75	
return gas temp.	-25	-13	130,9	447	112,6	1,00	3,41	0,86	130,9	1,04	3,62	
RGT= 32/90	-20	-4	169,1	578	145,6	1,13	3,85	0,97	150,1	1,14	4,70	
liquid temp	-15	5	215,3	735	185,3	1,27	4,34	1,09	169,5	1,24	6,02	
Tliq= 45/113	-5	23	333,6	1139	287,1	1,63	5,56	1,40	205,1	1,43	9,48	
[°C / °F]	-45	-49	30,7	105	26,4	0,49	1,67	0,42	62,7	0,68	0,96	
cond. pressure	-35	-31	49,3	168	42,4	0,55	1,88	0,47	89,7	0,82	1,56	
pc= 55/131	-30	-22	67,7	231	58,3	0,62	2,13	0,54	108,7	0,92	2,14	
return gas temp	-25	-13	93,0	318	80,0	0,72	2,44	0,62	130,0	1,03	2,96	
RGT= 32/90	-20	-4	125,7	429	108,2	0,82	2,81	0,71	152,7	1,15	4,02	
liquid temp	-15	5	166,4	568	143,2	0,95	3,23	0,81	175,9	1,28	5,36	
Tliq= 55/131	-5	23	274,4	937	236,1	1,25	4,25	1,07	220,3	1,51	9,01	



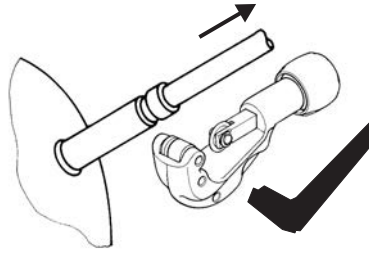
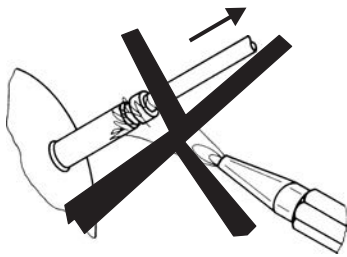
# TL Compressors







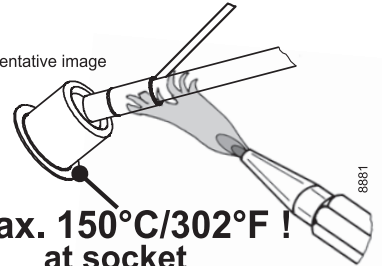
## Service/Repair – R600a, R290



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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