

Model

Designation	SC12CL	115V/60Hz 1~	Sales code:	104L1603
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Compressor design

Oil type	Polyolester	Refrigerant(s)	R404A, R507
Oil viscosity	32cSt	Displacement	12,87cm ³ / 0,79cu.in
Oil quantity	500cm ³ / 16,9fl.oz	Compressors on pallet	80
Refr. charge - tech. limit	1300g / 45,9oz		
Free gas volume comp.	1510cm ³ / 51,1fl.oz		
Weight	13,1kg / 28,9lbs		
Motor protection	1# internal		
Winding resistance main	1Ω (at 25°C)		
Winding resistance aux	4,2Ω (at 25°C)		
Max. winding temp.	125°C / 257°F		
Max. discharge temp.	135°C / 275°F		



General - Configurations with SC12CL

Conf. 1

Motor configuration	CSIR
Power supply (nominal)	115V/60Hz
Number of phases	1
Voltage range	103-127V
Approvals	UL
Starting torque	HST
Note	- / -

Applications with SC12CL

Conf. 1

Refrigerant	R404A
Application	LBP
System cooling	fan 3m/s
Hot gas defrost	OK
Long interval pull down	OK

Electrical data - Configurations with SC12CL

Conf. 1

Starting device type	relay
Run capacitor	-/-
Start capacitor	240μF
LRA (locked rotor amps / 4s/ U(N))	23,4A
RLA (rated load amps / 1s/ U(N))	4,3A
Cut in current (U(N))	23,4A

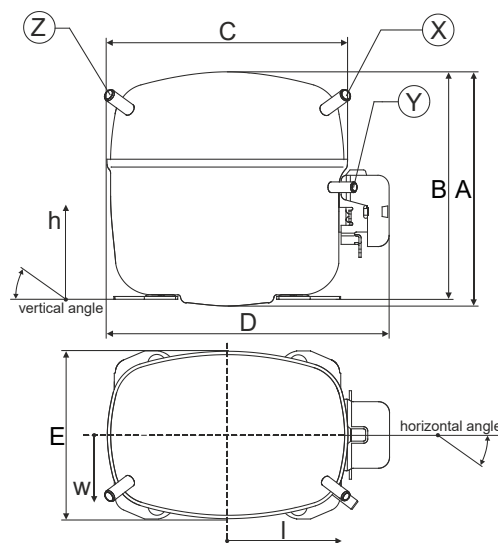
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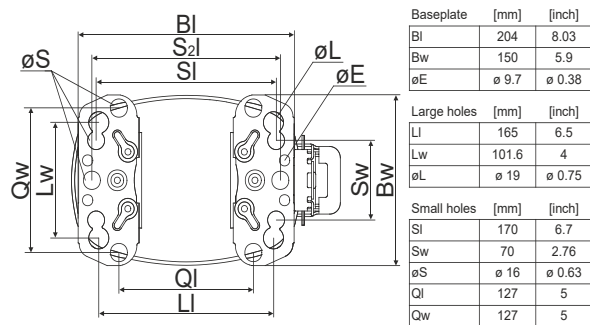
Compressor dimensions

Housing	A Height	209mm / 8,23in
	B Height	203mm / 7,99in
	C Length shell	218mm / 8,58in
	D Length w. cover	255mm / 10,04in
	E Width	151mm / 5,94in

Connectors	Suction X	Discharge Y	Process 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° 37°	37°	143°
Vertical angle	±2° 30°	0°	150°
Position l/h/w [mm]	107/183/55	115/100/63	-107/183/55
	[in] 4,2/7,2/2,2	4,5/3,9/2,5	-4,2/7,2/2,2
Straight tube l.	[mm] 12	12	12
	[in] 0,5	0,5	0,5

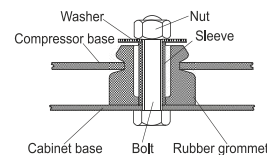


Compressor fixation

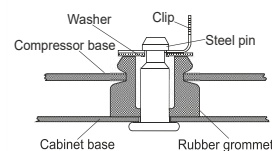


Baseplate	[mm]	[inch]
BI	204	8.03
Bw	150	5.9
øE	ø 9.7	ø 0.38
Large holes	[mm]	[inch]
LI	165	6.5
Lw	101.6	4
øL	ø 19	ø 0.75
Small holes	[mm]	[inch]
SI	170	6.7
Sw	70	2.76
øS	ø 16	ø 0.63
QI	127	5
Qw	127	5

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

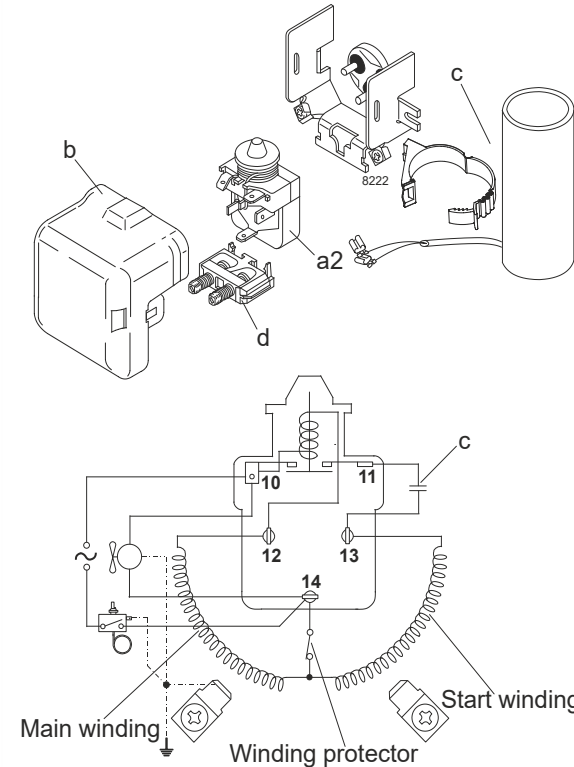
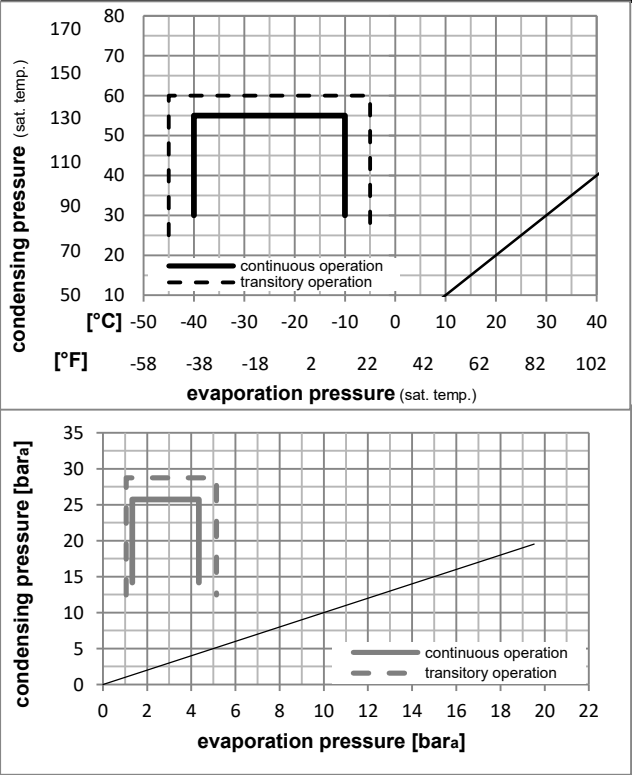
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Configuration		Electrical accessories / wiring diagram		
Motor configuration	CSIR	CSIR		
Power supply (nominal)	115V/60Hz 1~			
Refrigerant	R404A			
Application	LBP			
Voltage range	103-127V			
Starting torque	HST			
Approvals	UL			

Ambient/ machine room temperatures minimum /maximum

Ambient temperature range:	10 - 43°C / 50 - 110°F
Machine room temperature range:	10 - 48°C / 50 - 119°F
Compressor cooling:	fan 3m/s

Operation pressure range



Components		
a2	relay	117U6020
c	start capacitor (240μF)	117U5023
d	cord relief	103N1004
b	plastic cover	103N2008

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Optimization + standard conditions

R404A, 115V/60Hz, CSIR, fan 3m/s, UL

Evaporating pressure (saturation temperature)					Condensing pressure (saturation temperature)						Power consumption			
Return gas temp.					Liquid temp.						Current consumption			
Cooling capacity					COP		EER		P1		I		Ref. mass flow	
pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	ṁ		
[°C]	[°C]											[kg/h]		
[°C]	-23	54	32	32	696,4	2378	599,4	1,11	3,78	0,95	629,0	6,84	16,23	ASHRAE LBP
[°F]	-10	130	90	90										
[°C]	-25	55	32	55	462,5	1579	398,0	0,78	2,66	0,67	594,1	6,60	14,45	cecomaf LBP
[°F]	-13	131	90	131										
[°C]	-35	40	20	40	326,1	1114	280,7	0,75	2,55	0,64	437,3	5,74	8,86	EN12900 LBP
[°F]	-31	104	68	104										
[°C]	-23	49	4,4	49	514,1	1756	442,4	0,82	2,79	0,70	629,6	6,80	18,20	ARI540 LBP
[°F]	-10	120	40	120										
[°C]	-23	41	32	32	774,4	2645	666,5	1,24	4,24	1,07	623,1	6,78	18,04	AHAM LBP
[°F]	-10	105	90	90										
[°C]	-35	45	32	45	281,8	962	242,5	0,68	2,31	0,58	417,3	5,60	7,53	opt
[°F]	-31	113	90	113										

Performance tables

R404A, 115V/60Hz, CSIR, fan 3m/s, UL

	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]	-34	-30	297,5	1016	256,0	0,69	2,37	0,60	428,5	5,64	7,96
cond. pressure	-34	-30	297,5	1016	256,0	0,69	2,37	0,60	428,5	5,64	7,96
pc= 45/113	-29	-20	463,0	1581	398,5	0,87	2,97	0,75	532,7	6,15	12,44
return gas temp.	-23	-10	647,8	2212	557,5	1,03	3,52	0,89	628,2	6,79	17,51
RGT= 32/90	-21	-5	749,0	2558	644,6	1,11	3,79	0,95	675,3	7,15	20,31
liquid temp	-15	5	972,2	3320	836,7	1,26	4,29	1,08	773,2	7,97	26,56
Tliq= 45/113	-10	14	1200,2	4099	1032,9	1,38	4,71	1,19	871,2	8,82	33,05
[°C / °F]	-34	-30	179,9	614	154,8	0,49	1,66	0,42	369,5	5,43	5,57
cond. pressure	-34	-30	179,9	614	154,8	0,49	1,66	0,42	369,5	5,43	5,57
pc= 55/131	-29	-20	341,9	1168	294,3	0,67	2,30	0,58	508,1	6,07	10,64
return gas temp	-23	-10	516,4	1764	444,4	0,82	2,80	0,71	629,0	6,84	16,17
RGT= 32/90	-21	-5	609,9	2083	524,9	0,89	3,04	0,77	685,2	7,28	19,17
liquid temp	-15	5	812,5	2775	699,3	1,02	3,49	0,88	794,6	8,23	25,77
Tliq= 55/131	-10	14	1016,2	3471	874,6	1,14	3,88	0,98	895,0	9,20	32,53