

Single Pack SC12CLX.2 220-240V 50/60Hz CSIR

Single pack code number: **195B4020**

Position	Title	Code	Amount
1	Compressor SC12CLX.2	104L2697	1
2	Starting relay	117U6019	1
3	Starting capacitor (80 μ F 220V, 6.3mm)	117U5017	1
4	Cord relief	103N1004	1
5	Cover	103N2008	1
6	Bolt joint for one compressor M6 \varnothing 16mm	118-1917	1

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Model

Designation	SC12CLX.2	220-240V/50Hz 1~ 220-240V/60Hz 1~	Sales code:	104L2697
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Compressor design

Oil type	Polyolester	Refrigerant(s)	R404A, R452A, R507
Oil viscosity	32cST	Displacement	12,87cm ³ / 0,79cu.in
Oil quantity	499cm 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	13,7kg / 30,2lbs		
Motor protection	1# internal		
Winding resistance main	3,7Ω (at 25°C)		
Winding resistance aux	14Ω (at 25°C)		
Max. winding temp.	125°C / 257°F		
Max. discharge temp.	130°C / 266°F		



General - Configurations with SC12CLX.2

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

Applications with SC12CLX.2

	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Refrigerant	R404A	R404A	R452A	R452A
Application	LBP	LBP	LBP	LBP
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 SC12CLX.2

	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Starting device type	relay	relay	relay	relay
Run capacitor	- / -	- / -	- / -	- / -
Start capacitor	80μF	80μF	80μF	80μF
LRA (locked rotor amps / 4s)	23,4A	23,4A	23,4A	23,4A
RLA (rated load amps / 1s)	4,3A	4,3A	4,3A	4,3A
Cut in current	23,4A	23,4A	23,4A	23,4A

Model

Designation

SC12CLX.2

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

Sales code:

104L2697

Compressor dimensions

Housing	A Height	219mm / 8,62in
	B Height	213mm / 8,39in
	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 6,11-6,29	øi 6,11-6,29
(i:inside, o:outside) [in]	øi 0,32-0,33	øi 0,24-0,25	øi 0,24-0,25
Material	copper	copper	copper
Horizontal angle ±2°	37°	37°	143°
Vertical angle ±2°	30°	0°	150°
Position l/h/w [mm]	107/193/55	115/110/63	-107/193/55
[in]	4,2/7,6/2,2	4,5/4,3/2,5	-4,2/7,6/2,2
Straight tube l. [mm]	12	12	12
[in]	0,5	0,5	0,5



Compressor fixation



Bolt joint



Snap-on



Mounting accessories

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

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

Provision for PE Grounding is located at the PE Stamp on the compressor

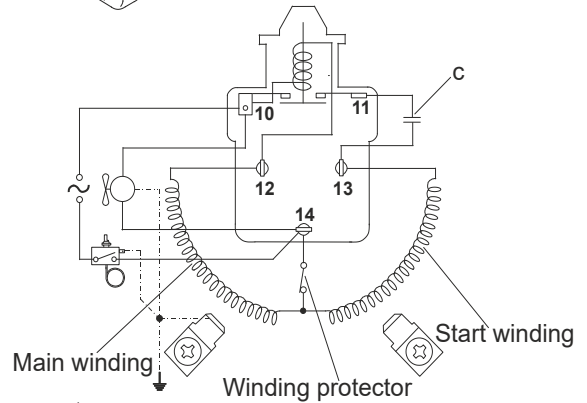
Model

Designation	SC12CLX.2	220-240V/50Hz	Conf. 1	Sales code:	104L2697
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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	UL VDE CCC KC EAC

Electrical accessories / wiring diagram

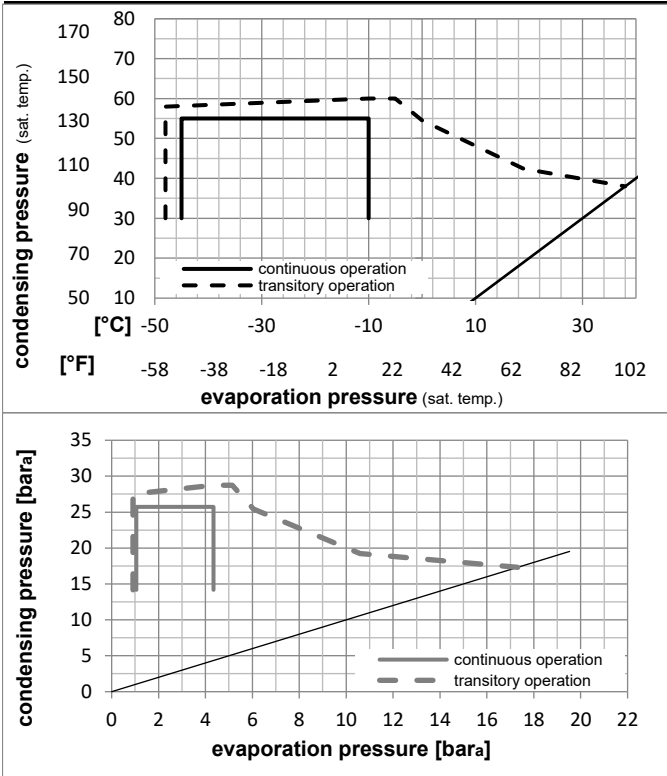


Ambient/ machine room temperatures minimum /maximum

Ambient temperature range:	10 - 38°C / 50 - 101°F
Machine room temperature range:	10 - 43°C / 50 - 110°F
Compressor cooling:	fan 3m/s

Operation Limits

Operation pressure range



Components

a2	relay	117U6019
c	start capacitor (80μF)	117U5017
d	cord relief	103N1004
b	plastic cover	103N2008

Alternative components

a2	relay	117U6019
c	start capacitor i-pack 40# (80μF)	117U5067
d	cord relief	103N1004
b	plastic cover	103N2008

Model

Designation **SC12CLX.2** **220-240V/50Hz** Conf. 1 Sales code: **104L2697**

Optimization + standard conditions

R404A, 220V/50Hz, CSIR, fan 3m/s, UL, VDE, CCC, KC, EAC

	pe	pc	RGT	Tliq	Cooling capacity	COP	EER	P1	I	Ref. mass flow	
	[°C]	[°C]	[°C]	[°C]	[W]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]	
	-23	54	32	32	591,9	1,15	3,92	515,6	3,35	13,79	ASHRAE LBP
	[°F]										
	-10	130	90	90							
	-25	55	32	55	398,5	0,80	2,75	495,0	3,28	12,45	cecomaf LBP
	[°F]										
	-13	131	90	131							
	-35	40	20	40	321,6	0,89	3,03	362,6	3,02	8,74	EN12900 LBP
	[°F]										
	-31	104	68	104							
	-23	49	4,4	49	447,2	0,89	3,04	503,0	3,35	15,83	ARI540 LBP
	[°F]										
	-10	120	40	120							
	-23	41	32	32	684,3	1,41	4,81	485,6	3,33	15,95	AHAM LBP
	[°F]										
	-10	105	90	90							
	-35	45	32	45	293,7	0,81	2,75	364,5	3,00	7,85	opt
	[°F]										
	-31	113	90	113							

Performance tables

R404A, 220V/50Hz, CSIR, fan 3m/s, UL, VDE, CCC, KC, EAC

	pe	Cooling capacity			COP	EER	P1	I	m
	[°C]	[°F]	[W]	[Btu/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]
[°C / °F]	-45	-49	130,2	445	0,51	1,76	253,2	2,77	3,46
cond. pressure	-35	-31	293,7	1003	0,81	2,75	364,5	3,00	7,85
pc= 45/113	-30	-22	398,7	1362	0,95	3,25	419,5	3,13	10,70
return gas temp.	-25	-13	522,2	1783	1,10	3,75	475,5	3,29	14,09
RGT= 32/90	-20	-4	666,4	2276	1,25	4,27	533,4	3,46	18,08
liquid temp	-15	5	833,5	2847	1,40	4,79	594,4	3,65	22,77
Tliq= 45/113	-10	14	1025,9	3503	1,56	5,31	659,4	3,86	28,25
[°C / °F]	-45	-49	62,4	213	0,27	0,93	230,3	2,64	1,92
cond. pressure	-35	-31	204,1	697	0,56	1,91	364,9	2,93	6,31
pc= 55/131	-30	-22	293,5	1003	0,68	2,33	430,0	3,10	9,12
return gas temp	-25	-13	398,5	1361	0,80	2,75	495,0	3,28	12,45
RGT= 32/90	-20	-4	521,0	1779	0,93	3,17	561,0	3,49	16,39
liquid temp	-15	5	663,4	2266	1,05	3,60	629,1	3,71	21,04
Tliq= 55/131	-10	14	828,0	2828	1,18	4,04	700,2	3,95	26,51

Model

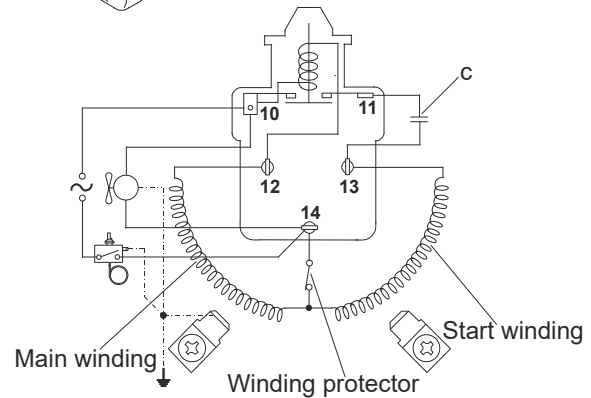
Designation	SC12CLX.2	208-230V/60Hz	Conf. 2	Sales code:	104L2697
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Configuration

Motorconfiguration	CSIR
Power supply (nominal)	208-230V/60Hz 1~
Refrigerant	R404A
Application	LBP
Voltage range	198-254V
Starting torque	HST
Approvals	UL VDE CCC KC EAC

Electrical accessories / wiring diagram

CSIR

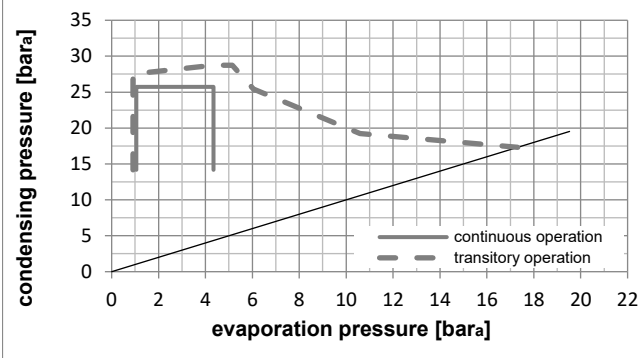
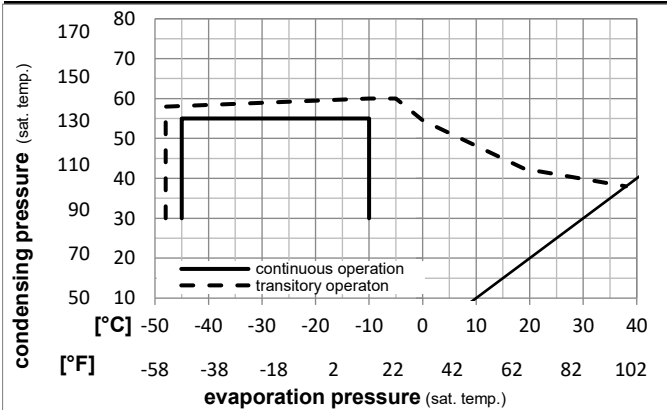


Ambient/ machine room temperatures minimum /maximum

Ambient temperature range:	10 - 38°C / 50 - 101°F
Machine room temperature range:	10 - 43°C / 50 - 110°F
Compressor cooling:	fan 3m/s

Operation Limits

Operation pressure range



Components

a2	relay	117U6019
c	start capacitor (80μF)	117U5017
d	cord relief	103N1004
b	plastic cover	103N2008

Alternative components

a2	relay	117U6019
c	start capacitor i-pack 40# (80μF)	117U5067
d	cord relief	103N1004
b	plastic cover	103N2008

Model

Designation **SC12CLX.2** **208-230V/60Hz** Conf. 2 Sales code: **104L2697**

Optimization + standard conditions

R404A, 220V/60Hz, CSIR, fan 3m/s, UL, VDE, CCC, KC, EAC

	Evaporating pressure (saturation temperature)				Cooling capacity						Power consumption			ASHRAE LBP
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	COP [W/W]	EER [Btu/Wh]	[kcal/Wh]	P1 [W]	I [A]	m [kg/h]	
[°C]	-23	54	32	32	705,2	2408	606,9	1,19	4,07	1,03	592,0	3,09	16,43	ASHRAE LBP
[°F]	-10	130	90	90										
[°C]	-25	55	32	55	472,6	1614	406,7	0,84	2,85	0,72	565,6	3,00	14,77	cecomaf LBP
[°F]	-13	131	90	131										
[°C]	-35	40	20	40	378,5	1293	325,7	0,96	3,27	0,82	395,7	2,62	10,28	EN12900 LBP
[°F]	-31	104	68	104										
[°C]	-23	49	4,4	49	535,6	1829	461,0	0,93	3,18	0,80	575,8	3,09	18,96	ARI540 LBP
[°F]	-10	120	40	120										
[°C]	-23	41	32	32	824,1	2814	709,2	1,49	5,08	1,28	553,5	3,07	19,20	AHAM LBP
[°F]	-10	105	90	90										
[°C]	-35	45	32	45	343,1	1172	295,3	0,86	2,94	0,74	398,1	2,60	9,17	opt
[°F]	-31	113	90	113										

Performance tables

R404A, 220V/60Hz, CSIR, fan 3m/s, UL, VDE, CCC, KC, EAC

	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	141,0	482	121,3	0,55	1,89	0,48	255,2	2,28	3,75
cond. pressure	-35	-31	343,1	1172	295,3	0,86	2,94	0,74	398,1	2,60	9,17
pc= 45/113	-30	-22	472,9	1615	407,0	1,01	3,45	0,87	468,7	2,79	12,70
return gas temp.	-25	-13	625,6	2137	538,4	1,16	3,95	1,00	540,6	3,01	16,88
RGT= 32/90	-20	-4	803,9	2745	691,8	1,31	4,46	1,12	615,0	3,25	21,81
liquid temp	-15	5	1010,5	3451	869,7	1,46	4,98	1,25	693,2	3,52	27,60
Tliq= 45/113	-10	14	1248,3	4263	1074,3	1,61	5,49	1,38	776,8	3,81	34,38
[°C / °F]	-45	-49	57,1	195	49,2	0,25	0,86	0,22	225,7	2,10	1,75
cond. pressure	-35	-31	232,3	793	199,9	0,58	1,99	0,50	398,5	2,50	7,18
pc= 55/131	-30	-22	342,9	1171	295,1	0,71	2,43	0,61	482,1	2,74	10,66
return gas temp	-25	-13	472,6	1614	406,7	0,84	2,85	0,72	565,6	3,00	14,77
RGT= 32/90	-20	-4	624,1	2132	537,1	0,96	3,28	0,83	650,4	3,28	19,64
liquid temp	-15	5	800,2	2733	688,7	1,08	3,70	0,93	737,8	3,59	25,38
Tliq= 55/131	-10	14	1003,7	3428	863,8	1,21	4,13	1,04	829,1	3,92	32,13

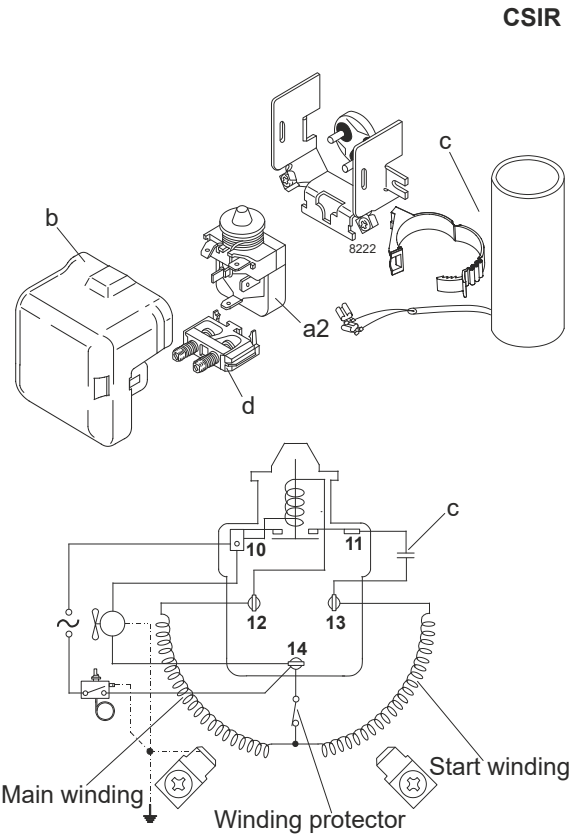
Model

Designation	SC12CLX.2	220-240V/50Hz	Conf. 3	Sales code:	104L2697
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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	UL VDE CCC KC EAC

Electrical accessories / wiring diagram

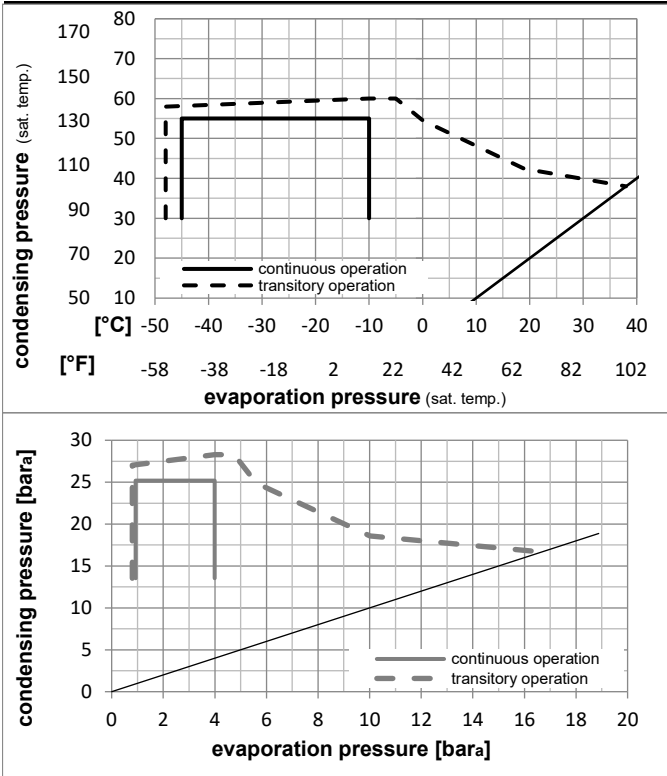


Ambient/ machine room temperatures minimum /maximum

Ambient temperature range:	10 - 38°C / 50 - 101°F
Machine room temperature range:	10 - 43°C / 50 - 110°F
Compressor cooling:	fan 3m/s

Operation Limits

Operation pressure range



Components

a2	relay	117U6019
c	start capacitor (80μF)	117U5017
d	cord relief	103N1004
b	plastic cover	103N2008

Alternative components

a2	relay	117U6019
c	start capacitor i-pack 40# (80μF)	117U5067
d	cord relief	103N1004
b	plastic cover	103N2008

Model

Designation **SC12CLX.2** **220-240V/50Hz** Conf. 3 Sales code: **104L2697**

Optimization + standard conditions

R452A, 220V/50Hz, CSIR, fan 3m/s, UL, VDE, CCC, KC, EAC

	Evaporating pressure (saturation temperature)				Condensing pressure (saturation temperature)						Power consumption			ASHRAE LBP
	pe	pc	RGT	Tliq	Cooling capacity	COP	EER	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	541,3	1849	465,8	1,13	3,87	0,97	477,9	3,31	13,01	ASHRAE LBP
	[-10]	[130]	[90]	[90]										
	-25	55	32	55	367,3	1254	316,1	0,80	2,74	0,69	457,2	3,25	11,69	cecomaf LBP
	[-13]	[131]	[90]	[131]										
	-35	40	20	40	290,0	990	249,6	0,88	2,99	0,75	331,3	2,87	8,10	EN12900 LBP
	[-31]	[104]	[68]	[104]										
	-23	49	4,4	49	415,5	1419	357,6	0,89	3,04	0,76	467,5	3,28	14,93	ARI540 LBP
	[-10]	[120]	[40]	[120]										
	-23	41	32	32	629,7	2151	542,0	1,39	4,75	1,20	452,6	3,24	15,14	AHAM LBP
	[-10]	[105]	[90]	[90]										
	-35	45	32	45	264,1	902	227,3	0,80	2,72	0,69	331,7	2,88	7,25	opt
	[-31]	[113]	[90]	[113]										

Performance tables

R452A, 220V/50Hz, CSIR, fan 3m/s, UL, VDE, CCC, KC, EAC

	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	110,7	378	95,3	0,50	1,71	0,43	221,3	2,55	3,02
cond. pressure	-35	-31	264,1	902	227,3	0,80	2,72	0,69	331,7	2,88	7,25
pc= 45/113	-30	-22	363,4	1241	312,7	0,94	3,21	0,81	386,1	3,04	10,01
return gas temp.	-25	-13	480,9	1643	413,9	1,09	3,72	0,94	441,5	3,21	13,30
RGT= 32/90	-20	-4	619,2	2115	532,9	1,24	4,24	1,07	498,9	3,38	17,22
liquid temp	-15	5	780,5	2666	671,7	1,40	4,77	1,20	559,4	3,56	21,83
Tliq= 45/113	-10	14	967,3	3304	832,5	1,55	5,29	1,33	624,1	3,75	27,25
[°C / °F]	-45	-49	49,2	168	42,3	0,25	0,86	0,22	195,0	2,47	1,54
cond. pressure	-35	-31	182,2	622	156,8	0,56	1,90	0,48	328,2	2,87	5,75
pc= 55/131	-30	-22	267,0	912	229,8	0,68	2,32	0,59	392,7	3,06	8,46
return gas temp	-25	-13	367,3	1254	316,1	0,80	2,74	0,69	457,2	3,25	11,69
RGT= 32/90	-20	-4	485,4	1658	417,8	0,93	3,17	0,80	522,8	3,45	15,54
liquid temp	-15	5	623,8	2130	536,9	1,06	3,61	0,91	590,7	3,65	20,11
Tliq= 55/131	-10	14	784,8	2680	675,4	1,19	4,05	1,02	661,8	3,87	25,51

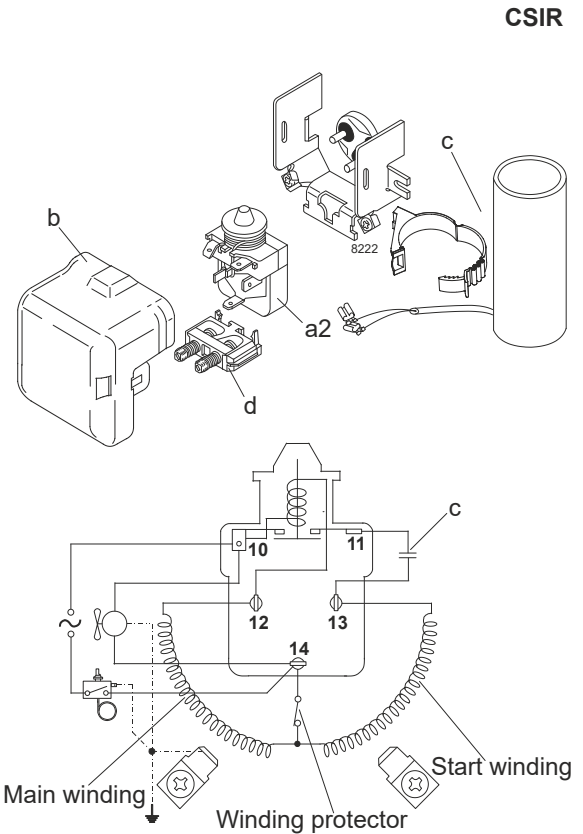
Model

Designation	SC12CLX.2	208-230V/60Hz	Conf. 4	Sales code:	104L2697
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Configuration

Motorconfiguration	CSIR
Power supply (nominal)	208-230V/60Hz 1~
Refrigerant	R452A
Application	LBP
Voltage range	198-254V
Starting torque	HST
Approvals	UL VDE CCC KC EAC

Electrical accessories / wiring diagram

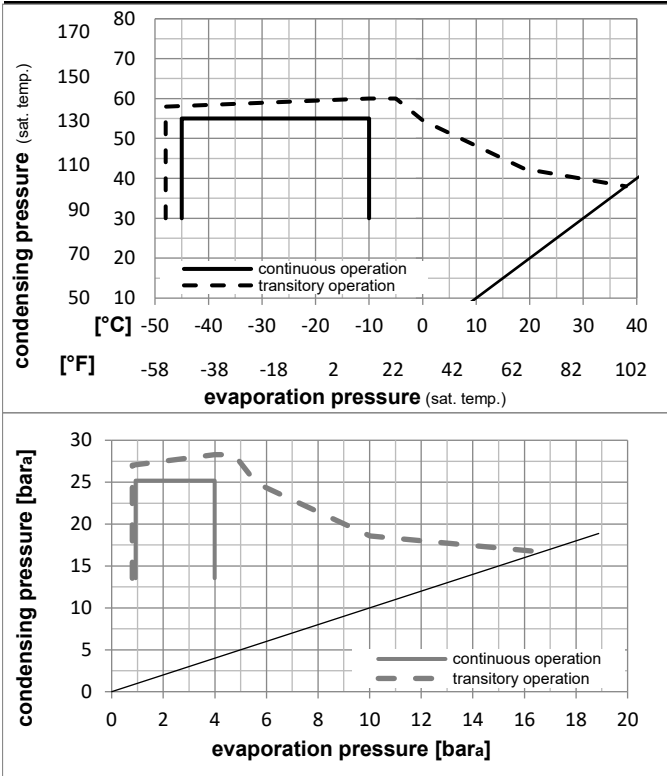


Ambient/ machine room temperatures minimum /maximum

Ambient temperature range:	10 - 38°C / 50 - 101°F
Machine room temperature range:	10 - 43°C / 50 - 110°F
Compressor cooling:	fan 3m/s

Operation Limits

Operation pressure range



Components

a2	relay	117U6019
c	start capacitor (80µF)	117U5017
d	cord relief	103N1004
b	plastic cover	103N2008

Alternative components

a2	relay	117U6019
c	start capacitor i-pack 40# (80µF)	117U5067
d	cord relief	103N1004
b	plastic cover	103N2008

Model

Designation **SC12CLX.2** **208-230V/60Hz** Conf. 4 Sales code: **104L2697**

Optimization + standard conditions

R452A, 220V/60Hz, CSIR, fan 3m/s, UL, VDE, CCC, KC, EAC

	pe	pc	RGT	Tliq	Cooling capacity	COP	EER	P1	I	Ref. mass flow	
	[°C]	[°C]	[°C]	[°C]	[W]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]	
	[°F]	[°F]	[°F]	[°F]	[Btu/h]	[kcal/h]	[kcal/Wh]	[W]	[A]	[kg/h]	
ASHRAE LBP	-23	54	32	32	643,9	1,17	3,99	551,6	3,08	15,48	
	-10	130	90	90			1,00				
cecomaf LBP	-25	55	32	55	435,1	0,83	2,83	525,3	3,00	13,85	
	-13	131	90	131			0,71				
EN12900 LBP	-35	40	20	40	340,8	0,94	3,19	364,5	2,47	9,52	
	-31	104	68	104			0,80				
ARI540 LBP	-23	49	4,4	49	497,0	0,92	3,16	537,9	3,04	17,86	
	-10	120	40	120			0,80				
AHAM LBP	-23	41	32	32	757,5	1,46	4,99	518,3	2,98	18,21	
	-10	105	90	90			1,26				
opt	-35	45	32	45	308,1	0,84	2,88	365,4	2,47	8,45	
	-31	113	90	113			0,73				

Performance tables

R452A, 220V/60Hz, CSIR, fan 3m/s, UL, VDE, CCC, KC, EAC

	pe	Cooling capacity	COP	EER	P1	I	m
	[°C]	[W]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]
	[°F]	[Btu/h]	[kcal/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]
[°C / °F]	-45	119,5	0,53	1,80	227,2	2,01	3,26
	-49	408	1,80	0,45	227,2	2,01	3,26
cond. pressure	-35	308,1	0,84	2,88	365,4	2,47	8,45
pc= 45/113	-31	1052	0,73	0,73	365,4	2,47	8,45
return gas temp.	-30	430,5	0,99	3,39	434,2	2,70	11,86
RGT= 32/90	-22	1470	1,14	3,90	504,4	2,93	15,92
liquid temp	-25	575,5	1,29	4,41	577,6	3,17	20,74
Tliq= 45/113	-4	746,0	1,44	4,93	655,0	3,43	26,43
	-15	945,0	1,59	5,44	738,1	3,70	33,11
	5	3227	1,21	4,12	787,0	3,86	30,86
	-10	1175,3	1,04	1,04	787,0	3,86	30,86
[°C / °F]	-45	44,2	0,23	0,77	195,0	1,91	1,38
	-49	151	0,77	0,20	195,0	1,91	1,38
cond. pressure	-35	207,2	0,57	1,95	362,0	2,46	6,53
pc= 55/131	-31	708	0,49	0,49	362,0	2,46	6,53
return gas temp.	-30	311,6	0,70	2,40	443,4	2,73	9,87
RGT= 32/90	-22	1064	0,83	2,83	525,3	3,00	13,85
liquid temp	-25	435,1	0,95	3,26	608,9	3,27	18,59
Tliq= 55/131	-4	580,7	1,08	3,69	695,7	3,56	24,21
	-15	751,2	1,21	4,12	787,0	3,86	30,86
	5	2565	1,04	1,04	787,0	3,86	30,86
	-10	949,6	1,04	1,04	787,0	3,86	30,86



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