

## 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 $\mu$ 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	<b>SC12CLX.2</b>	220-240V/50Hz 1~ 220-240V/60Hz 1~	Sales code:	<b>104L2697</b>
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## Compressor design

Oil type	Polyolester	Refrigerant(s)	<b>R404A, R452A, R507</b>
Oil viscosity	32cST	Displacement	12,87cm <sup>3</sup> / 0,79cu.in
Oil quantity	499cm <sup>3</sup> / 16,9fl.oz	Compressors on pallet	80
Refr. charge - tech. limit	1300g / 45,9oz		
Free gas volume comp.	1510cm <sup>3</sup> / 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

	<b>Conf. 1</b>	<b>Conf. 2</b>	<b>Conf. 3</b>	<b>Conf. 4</b>
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

	<b>Conf. 1</b>	<b>Conf. 2</b>	<b>Conf. 3</b>	<b>Conf. 4</b>
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

	<b>Conf. 1</b>	<b>Conf. 2</b>	<b>Conf. 3</b>	<b>Conf. 4</b>
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

<b>Housing</b>	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

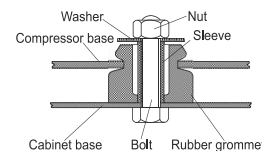
Connectors	Suction X	Discharge Y	Process Z
Diameter [mm]	øi 8,11-8,29	øi 6,11-6,29	øi 6,11-6,29
(i:inside, o:outside) [in]	øi 0,32-0,33	øi 0,24-0,25	øi 0,24-0,25
Material	copper	copper	copper
Horizontal angle ±2°	37°	37°	143°
Vertical angle ±2°	30°	0°	150°
Position l/h/w [mm]	107/193/55	115/110/63	-107/193/55
[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	<b>SC12CLX.2</b>	<b>220-240V/50Hz</b>	<b>Conf. 1</b>	Sales code:	<b>104L2697</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	UL VDE CCC KC EAC

## Electrical accessories / wiring diagram

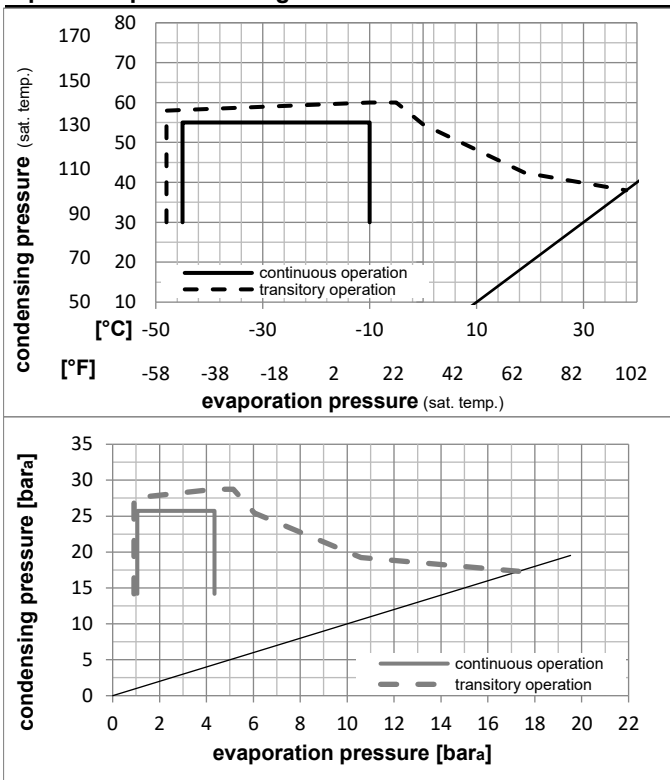


## Ambient/ machine room temperatures minimum /maximum

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]	[Btu/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]	
ASHRAE LBP	-23	54	32	32	591,9	2022	1,15	3,92	0,99	515,6	3,35	13,79	
	[°F]												
	-10	130	90	90									
cecomaf LBP	-25	55	32	55	398,5	1361	0,80	2,75	0,69	495,0	3,28	12,45	
	[°F]												
	-13	131	90	131									
EN12900 LBP	-35	40	20	40	321,6	1098	0,89	3,03	0,76	362,6	3,02	8,74	
	[°F]												
	-31	104	68	104									
ARI540 LBP	-23	49	4,4	49	447,2	1527	0,89	3,04	0,77	503,0	3,35	15,83	
	[°F]												
	-10	120	40	120									
AHAM LBP	-23	41	32	32	684,3	2337	1,41	4,81	1,21	485,6	3,33	15,95	
	[°F]												
	-10	105	90	90									
opt	-35	45	32	45	293,7	1003	0,81	2,75	0,69	364,5	3,00	7,85	
	[°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]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]
[°C / °F]	-45	-49	130,2	445	112,1	0,51	1,76	0,44	253,2	2,77	3,46
cond. pressure	-35	-31	293,7	1003	252,8	0,81	2,75	0,69	364,5	3,00	7,85
pc= 45/113	-30	-22	398,7	1362	343,1	0,95	3,25	0,82	419,5	3,13	10,70
return gas temp.	-25	-13	522,2	1783	449,4	1,10	3,75	0,95	475,5	3,29	14,09
RGT= 32/90	-20	-4	666,4	2276	573,5	1,25	4,27	1,08	533,4	3,46	18,08
liquid temp	-15	5	833,5	2847	717,3	1,40	4,79	1,21	594,4	3,65	22,77
Tliq= 45/113	-10	14	1025,9	3503	882,9	1,56	5,31	1,34	659,4	3,86	28,25
[°C / °F]	-45	-49	62,4	213	53,7	0,27	0,93	0,23	230,3	2,64	1,92
cond. pressure	-35	-31	204,1	697	175,6	0,56	1,91	0,48	364,9	2,93	6,31
pc= 55/131	-30	-22	293,5	1003	252,6	0,68	2,33	0,59	430,0	3,10	9,12
return gas temp	-25	-13	398,5	1361	342,9	0,80	2,75	0,69	495,0	3,28	12,45
RGT= 32/90	-20	-4	521,0	1779	448,4	0,93	3,17	0,80	561,0	3,49	16,39
liquid temp	-15	5	663,4	2266	571,0	1,05	3,60	0,91	629,1	3,71	21,04
Tliq= 55/131	-10	14	828,0	2828	712,6	1,18	4,04	1,02	700,2	3,95	26,51

## Model

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

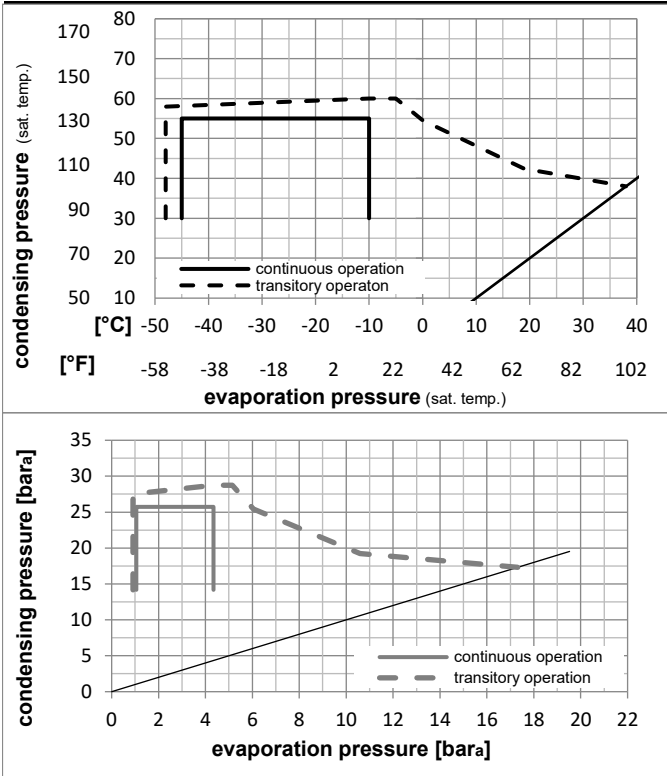


## Ambient/ machine room temperatures minimum /maximum

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

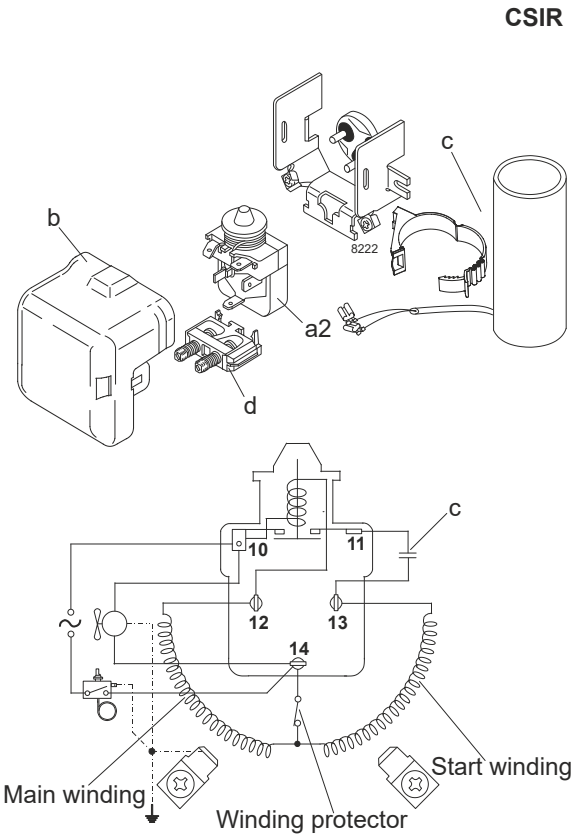
## Model

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

## Electrical accessories / wiring diagram

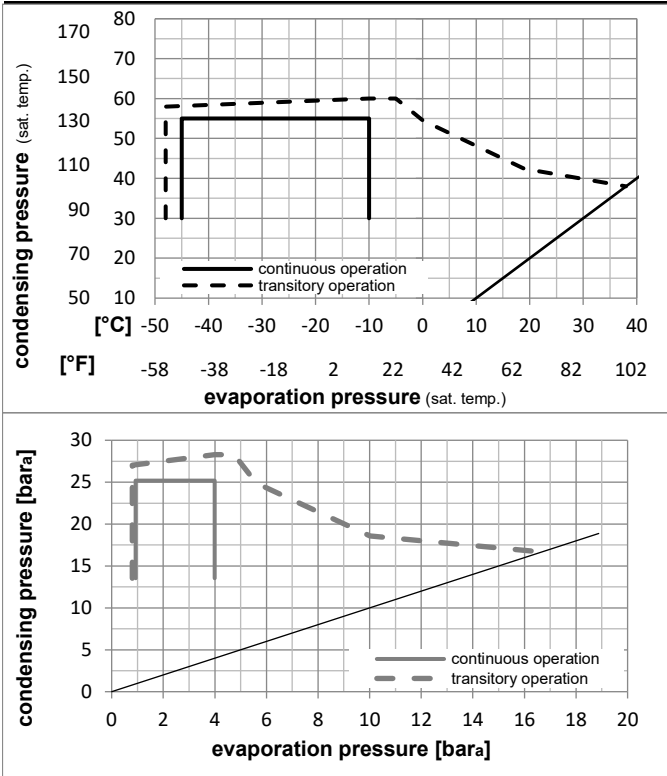


## Ambient/ machine room temperatures minimum /maximum

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				
		Return gas temp.			Liquid temp.		Cooling capacity			COP	EER	Current consumption		Ref. mass flow	
		pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	P1	I	m	
[°C]	[°F]	[°C]	[°F]	[°C]	[°C]							[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

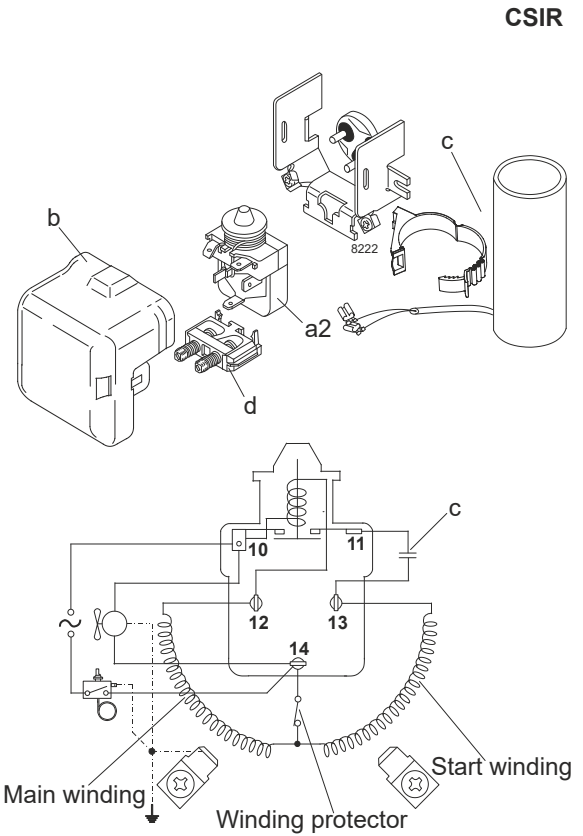
## Model

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

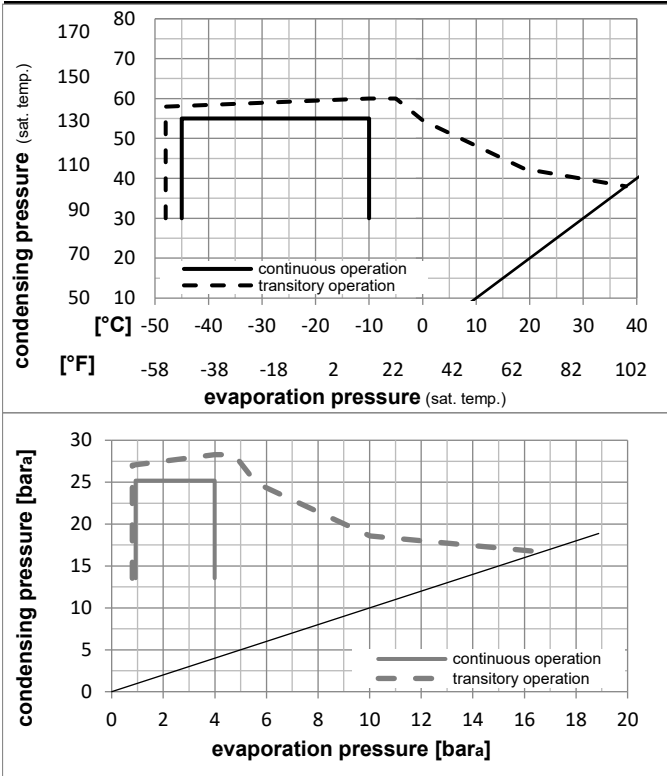


## Ambient/ machine room temperatures minimum /maximum

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

		Evaporating pressure (saturation temperature)				Condensing pressure (saturation temperature)						Power consumption			
		Return gas temp.		Liquid temp.		Cooling capacity			COP	EER		Current consumption		Ref. mass flow	
		pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	P1	I	m	
[°C]	[°F]	[°C]	[°F]	[°C]	[°F]							[W]	[A]	[kg/h]	
-23	54	32	32	643,9	2199	554,2	1,17	3,99	1,00	551,6	3,08	15,48	ASHRAE LBP		
-10	130	90	90												
-25	55	32	55	435,1	1486	374,4	0,83	2,83	0,71	525,3	3,00	13,85	cecomaf LBP		
-13	131	90	131												
-35	40	20	40	340,8	1164	293,3	0,94	3,19	0,80	364,5	2,47	9,52	EN12900 LBP		
-31	104	68	104												
-23	49	4,4	49	497,0	1697	427,7	0,92	3,16	0,80	537,9	3,04	17,86	ARI540 LBP		
-10	120	40	120												
-23	41	32	32	757,5	2587	651,9	1,46	4,99	1,26	518,3	2,98	18,21	AHAM LBP		
-10	105	90	90												
-35	45	32	45	308,1	1052	265,1	0,84	2,88	0,73	365,4	2,47	8,45	opt		
-31	113	90	113												

### Performance tables

R452A, 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	119,5	408	102,8	0,53	1,80	0,45	227,2	2,01	3,26
cond. pressure	-35	-31	308,1	1052	265,1	0,84	2,88	0,73	365,4	2,47	8,45
pc= 45/113	-30	-22	430,5	1470	370,4	0,99	3,39	0,85	434,2	2,70	11,86
return gas temp.	-25	-13	575,5	1965	495,2	1,14	3,90	0,98	504,4	2,93	15,92
RGT= 32/90	-20	-4	746,0	2548	642,0	1,29	4,41	1,11	577,6	3,17	20,74
liquid temp	-15	5	945,0	3227	813,2	1,44	4,93	1,24	655,0	3,43	26,43
Tliq= 45/113	-10	14	1175,3	4014	1011,5	1,59	5,44	1,37	738,1	3,70	33,11
[°C / °F]	-45	-49	44,2	151	38,0	0,23	0,77	0,20	195,0	1,91	1,38
cond. pressure	-35	-31	207,2	708	178,3	0,57	1,95	0,49	362,0	2,46	6,53
pc= 55/131	-30	-22	311,6	1064	268,1	0,70	2,40	0,60	443,4	2,73	9,87
return gas temp	-25	-13	435,1	1486	374,4	0,83	2,83	0,71	525,3	3,00	13,85
RGT= 32/90	-20	-4	580,7	1983	499,7	0,95	3,26	0,82	608,9	3,27	18,59
liquid temp	-15	5	751,2	2565	646,5	1,08	3,69	0,93	695,7	3,56	24,21
Tliq= 55/131	-10	14	949,6	3243	817,3	1,21	4,12	1,04	787,0	3,86	30,86



# SC Compressors





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## Service/Repair – R290



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