

Model

Designation	NL9CN	220-240V/50Hz 1~	Sales code:	105H6856
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Compressor design

Oil type	Polyolester	Refrigerant(s)	R290
Oil viscosity	32cSt	Displacement	8,35cm ³ / 0,51cu.in
Oil quantity	268cm ³ / 9,1fl.oz	Compressors on pallet	80
Refr. charge - tech. limit	150g / 5,3oz		
Free gas volume comp.	2360cm ³ / 79,8fl.oz		
Weight	10,5kg / 23,1lbs		
Motor protection	1# internal		
Winding resistance main	8,6Ω (at 25°C)		
Winding resistance aux	14,7Ω (at 25°C)		
Max. winding temp.	125°C / 257°F		
Max. discharge temp.	130°C / 266°F		



General - Configurations with NL9CN

	Conf. 1	Conf. 2	Conf. 3
Motor configuration	RSIR	RSCR	CSIR
Power supply (nominal)	220-240V/50Hz	220-240V/50Hz	220-240V/50Hz
Number of phases	1	1	1
Voltage range	198-254V	198-254V	198-254V
Approvals	VDE, CCC, EAC, CB	VDE, CCC, EAC, CB	VDE, CCC, EAC, CB
Starting torque	LST	LST	HST
Note	- / -		

Applications with NL9CN

	Conf. 1	Conf. 2	Conf. 3
Refrigerant	R290	R290	R290
Application	LBP+MBP	LBP+MBP	LBP+MBP
System cooling	fan 1,5m/s	fan 1,5m/s	fan 1,5m/s
Hot gas defrost	-/-	-/-	-/-
Long interval pull down	OK	OK	OK

Electrical data - Configurations with NL9CN

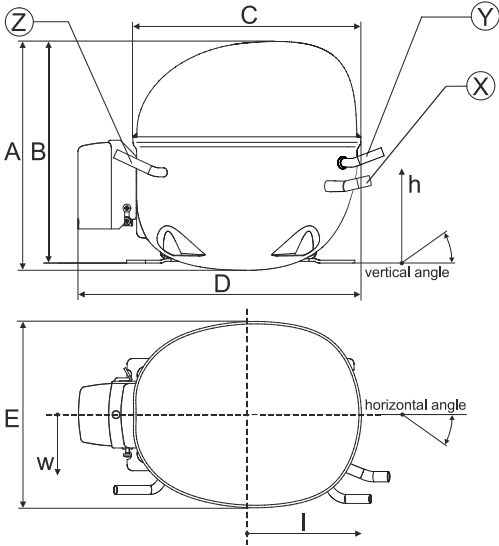
	Conf. 1	Conf. 2	Conf. 3
Starting device type	PTC	PTC	relay
Run capacitor	-/-	4μF	-/-
Start capacitor	-/-	-/-	80μF
LRA (locked rotor amps / 4s/ U(N))	11A	11A	11A
RLA (rated load amps / 1s/ U(N))	1,8A	1,8A	1,8A
Cut in current (U(N))	14,5A	14,5A	14,5A

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Compressor dimensions

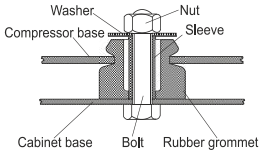
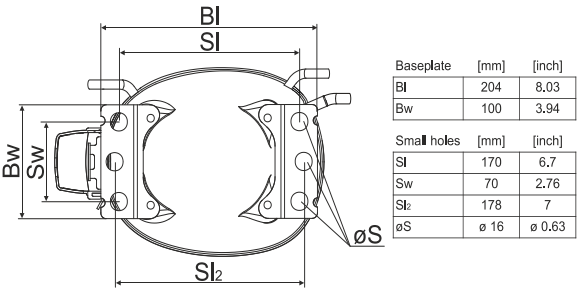
Housing	A Height	203mm / 7,99in
	B Height	197mm / 7,76in
	C Length shell	205mm / 8,07in
	D Length w. cover	254mm / 10in
	E Width	166mm / 6,54in

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° 0°	0°	0°
Vertical angle		±2° 15°	35°	155°
Position l/h/w	[mm]	126/76/78	133/103/54	-107/94/72
	[in]	4,9/3/3,1	5,2/4/2,1	-4,2/3,7/2,8
Straight tube l.	[mm]	12	12	12
	[in]	0,5	0,5	0,5

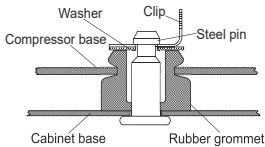


Compressor fixation

Bolt joint



Snap-on



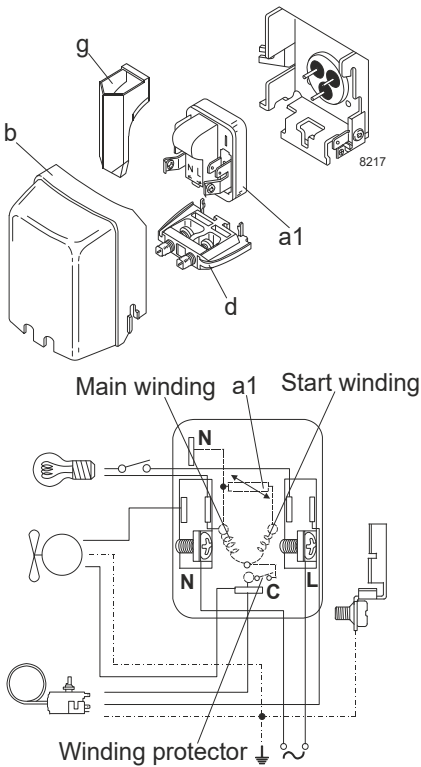
Mounting accessories	one comp.	multi pack
Bolt joint M6 ø16mm	118-1917	118-1918
Bolt joint ø1/4" ø16mm	118-1946	
Snap-on ø7,3 ø16mm	118-1947	118-1919

Application notes

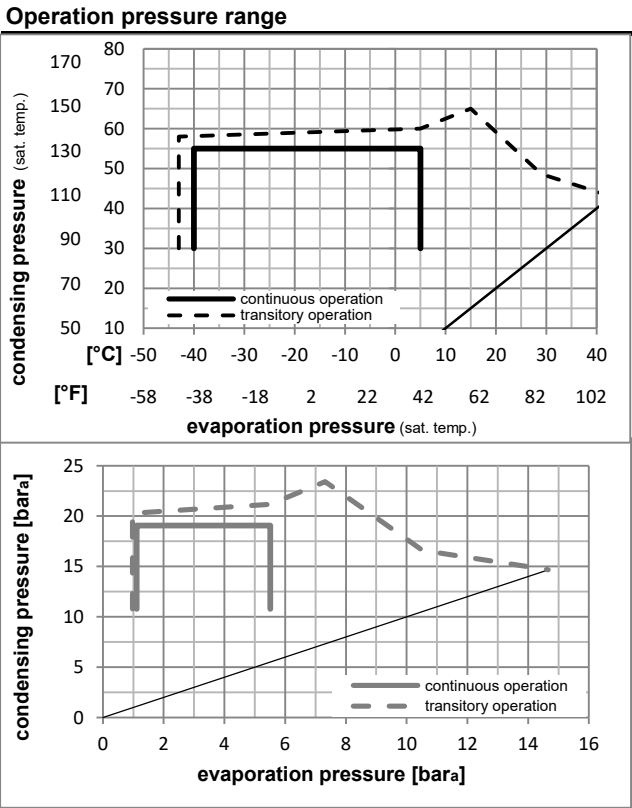
Provision for PE Grounding is located at the PE Stamp on the compressor

Model					
Designation	NL9CN	220-240V/50Hz	Conf. 1	Sales code:	105H6856

Configuration		Electrical accessories / wiring diagram			
Motor configuration	RSIR	RSIR			
Power supply (nominal)	220-240V/50Hz 1~				
Refrigerant	R290				
Application	LBP+MBP				
Voltage range	198-254V				
Starting torque	LST				
Approvals	VDE				
	CCC				
	EAC				
	CB				



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 1,5m/s



Components		
a1	PTC starter (220V, 25Ohm, 4.8mm)	103N0018
b	plastic cover	103N2010
d	cord relief	103N1010
g	protection screen for PTC	103N0476

Alternative components		
a1	PTC starter (220V, 25Ohm, 6.3mm)	103N0011
b	plastic cover	103N2011
d	cord relief	103N1010
g	protection screen for PTC	103N0476

Model

Designation **NL9CN** **220-240V/50Hz** Conf. 1 Sales code: **105H6856**

Optimization + standard conditions

R290, 220V/50Hz, RSIR, fan 1,5m/s, VDE, CCC, EAC, CB

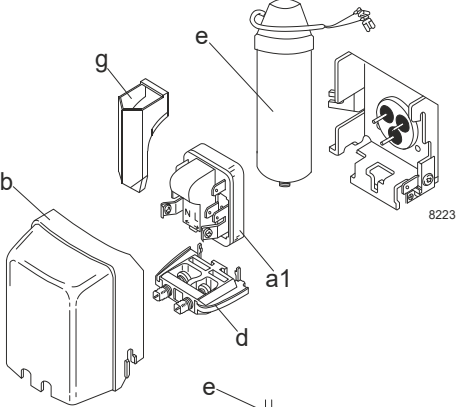
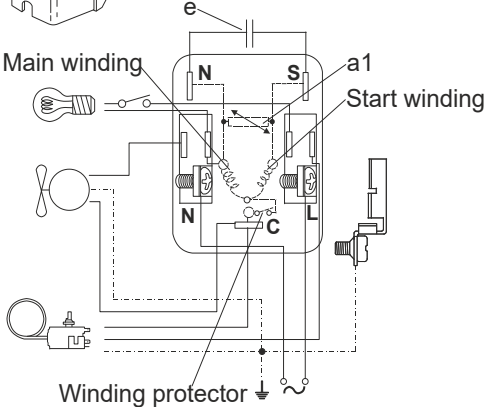
Evaporating pressure (saturation temperature)					Condensing pressure (saturation temperature)						Power consumption			
Return gas temp.					Liquid temp.						Current consumption			
Cooling capacity					COP		EER		P1		I		Ref. mass flow	
pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]		
[°C]	-23	54	32	32	378,9	1294	326,1	1,39	4,74	1,19	273,3	1,72	3,84	ASHRAE LBP
[°F]	-10	130	90	90										
[°C]	-25	55	32	55	283,7	969	244,2	1,07	3,67	0,92	264,4	1,69	3,53	cecomaf LBP
[°F]	-13	131	90	131										
[°C]	-35	40	20	40	206,9	707	178,1	1,06	3,63	0,91	194,7	1,51	2,36	EN12900 LBP
[°F]	-31	104	68	104										
[°C]	-7	54	35	46	685,0	2340	589,6	1,80	6,15	1,55	380,2	2,14	7,81	ASHRAE MBP
[°F]	20	130	95	115										
[°C]	-10	55	32	55	542,4	1852	466,8	1,51	5,16	1,30	359,2	2,05	6,86	cecomaf MBP
[°F]	14	131	90	131										
[°C]	-10	45	20	45	617,9	2110	531,8	1,85	6,31	1,59	334,5	1,95	7,59	EN12900 MBP
[°F]	14	113	68	113										

Performance tables

R290, 220V/50Hz, RSIR, fan 1,5m/s, VDE, CCC, EAC, CB

	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]	-40	-40	137,6	470	118,4	0,81	2,78	0,70	169,2	1,44	1,54
cond. pressure	-35	-31	193,5	661	166,6	0,99	3,37	0,85	196,1	1,50	2,17
pc= 45/113	-30	-22	258,8	884	222,8	1,16	3,97	1,00	223,0	1,56	2,91
return gas temp.	-25	-13	335,0	1144	288,3	1,34	4,58	1,15	250,0	1,64	3,78
RGT= 32/90	-15	5	525,7	1795	452,4	1,72	5,87	1,48	305,6	1,83	5,98
liquid temp	-5	23	777,6	2656	669,2	2,13	7,29	1,84	364,4	2,08	8,95
Tliq= 45/113	5	41	1102,4	3765	948,7	2,58	8,80	2,22	428,0	2,36	12,90
[°C / °F]	-40	-40	121,1	414	104,2	0,68	2,32	0,59	178,0	1,43	1,49
cond. pressure	-35	-31	167,1	571	143,8	0,81	2,77	0,70	206,2	1,50	2,07
pc= 55/131	-30	-22	220,8	754	190,1	0,94	3,21	0,81	234,9	1,59	2,74
return gas temp	-25	-13	283,7	969	244,2	1,07	3,67	0,92	264,4	1,69	3,53
RGT= 32/90	-15	5	443,0	1513	381,3	1,36	4,64	1,17	326,3	1,92	5,57
liquid temp	-5	23	656,8	2243	565,3	1,67	5,70	1,44	393,6	2,20	8,37
Tliq= 55/131	5	41	937,0	3200	806,4	2,00	6,84	1,72	467,8	2,53	12,15

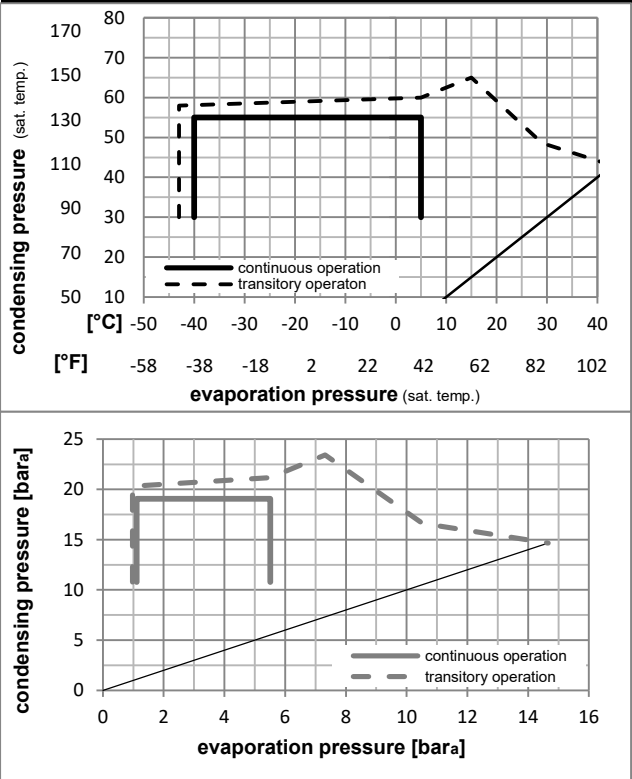
Model					
Designation	NL9CN	220-240V/50Hz	Conf. 2	Sales code:	105H6856

Configuration		Electrical accessories / wiring diagram			
Motor configuration	RSCR	 			
Power supply (nominal)	220-240V/50Hz 1~				
Refrigerant	R290				
Application	LBP+MBP				
Voltage range	198-254V				
Starting torque	LST				
Approvals	VDE CCC EAC CB				

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 1,5m/s

Operation pressure range



Components		
a1	PTC starter (220V, 250hm, 4.8mm)	103N0021
e	run capacitor (4μF, 4.8mm)	117-7119
b	plastic cover	103N2010
d	cord relief	103N1010
g	protection screen for PTC	103N0476
	bracket for run capacitor	117-0300
Alternative components		
a1	PTC starter (220V, 250hm, 6.3mm)	103N0016
e	run capacitor (4μF, 6.3mm)	117-7117
b	plastic cover	103N2011
	screw M4x8mm	117-0301

Model

Designation **NL9CN** **220-240V/50Hz** Conf. 2 Sales code: **105H6856**

Optimization + standard conditions

R290, 220V/50Hz, RSCR, fan 1,5m/s, VDE, CCC, EAC, CB

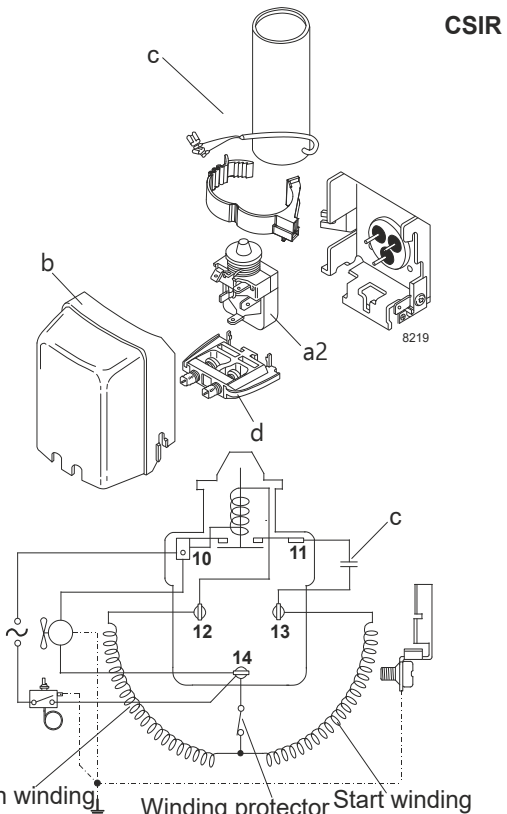
Evaporating pressure (saturation temperature)					Condensing pressure (saturation temperature)						Power consumption																																																					
Return gas temp.					Current consumption						Ref. mass flow																																																					
Liquid temp.					Cooling capacity						COP				EER				P1				I				m																																					
pe					pc					RGT					Tliq					[W]					[Btu/h]					[kcal/h]					[W/W]					[Btu/Wh]					[kcal/Wh]					[W]					[A]					[kg/h]				
[°C]					-23	54	32	32	382,7					1307					329,3					1,44					4,93					1,24					265,1					1,67					3,88					ASHRAE LBP										
[°F]					-10	130	90	90																																																								
[°C]					-25	55	32	55	286,6					979					246,6					1,12					3,82					0,96					256,5					1,63					3,57					cecomaf LBP										
[°F]					-13	131	90	131																																																								
[°C]					-35	40	20	40	209,0					714					179,8					1,11					3,78					0,95					188,9					1,46					2,39					EN12900 LBP										
[°F]					-31	104	68	104																																																								
[°C]					-7	54	35	46	691,9					2363					595,5					1,88					6,41					1,61					368,8					2,08					7,89					ASHRAE MBP										
[°F]					20	130	95	115																																																								
[°C]					-10	55	32	55	547,8					1871					471,4					1,57					5,37					1,35					348,4					1,99					6,93					cecomaf MBP										
[°F]					14	131	90	131																																																								
[°C]					-10	45	20	45	624,1					2131					537,1					1,92					6,57					1,66					324,5					1,89					7,66					EN12900 MBP										
[°F]					14	113	68	113																																																								

Performance tables

R290, 220V/50Hz, RSCR, fan 1,5m/s, VDE, CCC, EAC, CB

	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]	-40	-40	139,0	475	119,6	0,85	2,89	0,73	164,1	1,40	1,55		
cond. pressure	-35	-31	195,5	668	168,2	1,03	3,51	0,88	190,2	1,45	2,19		
pc= 45/113	-30	-22	261,4	893	225,0	1,21	4,13	1,04	216,3	1,52	2,94		
return gas temp.	-25	-13	338,3	1155	291,2	1,40	4,76	1,20	242,5	1,59	3,82		
RGT= 32/90	-15	5	531,0	1813	457,0	1,79	6,12	1,54	296,4	1,78	6,04		
liquid temp	-5	23	785,3	2682	675,9	2,22	7,59	1,91	353,4	2,01	9,04		
Tliq= 45/113	5	41	1113,4	3802	958,2	2,68	9,16	2,31	415,1	2,29	13,03		
[°C / °F]	-40	-40	122,3	418	105,3	0,71	2,42	0,61	172,7	1,38	1,51		
cond. pressure	-35	-31	168,8	576	145,3	0,84	2,88	0,73	200,0	1,46	2,09		
pc= 55/131	-30	-22	223,0	762	192,0	0,98	3,34	0,84	227,9	1,54	2,77		
return gas temp	-25	-13	286,6	979	246,6	1,12	3,82	0,96	256,5	1,63	3,57		
RGT= 32/90	-15	5	447,5	1528	385,1	1,41	4,83	1,22	316,5	1,86	5,63		
liquid temp	-5	23	663,4	2266	570,9	1,74	5,93	1,50	381,7	2,13	8,45		
Tliq= 55/131	5	41	946,4	3232	814,5	2,09	7,12	1,79	453,7	2,45	12,27		

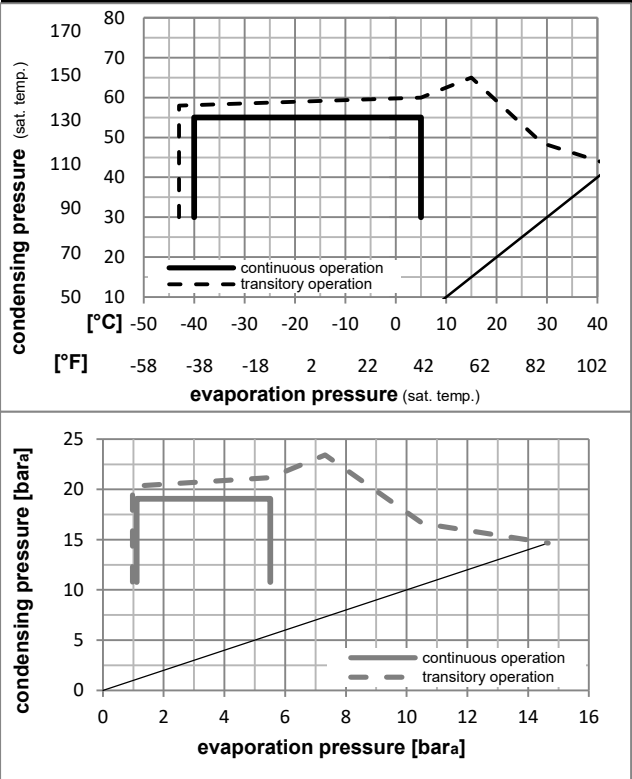
Model				
Designation	NL9CN	220-240V/50Hz	Conf. 3	Sales code: 105H6856

Configuration		Electrical accessories / wiring diagram		
Motor configuration	CSIR	CSIR 		
Power supply (nominal)	220-240V/50Hz 1~			
Refrigerant	R290			
Application	LBP+MBP			
Voltage range	198-254V			
Starting torque	HST			
Approvals	VDE CCC EAC CB			

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 1,5m/s

Operation pressure range



Components

a2	relay	117U7002
c	start capacitor (80µF)	117U5015
b	plastic cover	103N2010
d	cord relief	103N1010

Alternative components

b	plastic cover	103N2011
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Model

Designation **NL9CN** **220-240V/50Hz** Conf. 3 Sales code: **105H6856**

Optimization + standard conditions

R290, 220V/50Hz, CSIR, fan 1,5m/s, VDE, CCC, EAC, CB

Evaporating pressure (saturation temperature)					Condensing pressure (saturation temperature)						Power consumption																																																					
Return gas temp.					Current consumption						Ref. mass flow																																																					
Liquid temp.					Cooling capacity						COP				EER				P1				I				m																																					
pe					pc					RGT					Tliq					[W]					[Btu/h]					[kcal/h]					[W/W]					[Btu/Wh]					[kcal/Wh]					[W]					[A]					[kg/h]				
[°C]					-23	54	32	32	378,9					1294					326,1					1,39					4,74					1,19					273,3					1,72					3,84					ASHRAE LBP										
[°F]					-10	130	90	90																																																								
[°C]					-25	55	32	55	283,7					969					244,2					1,07					3,67					0,92					264,4					1,69					3,53					cecomaf LBP										
[°F]					-13	131	90	131																																																								
[°C]					-35	40	20	40	206,9					707					178,1					1,06					3,63					0,91					194,7					1,51					2,36					EN12900 LBP										
[°F]					-31	104	68	104																																																								
[°C]					-7	54	35	46	685,0					2340					589,6					1,80					6,15					1,55					380,2					2,14					7,81					ASHRAE MBP										
[°F]					20	130	95	115																																																								
[°C]					-10	55	32	55	542,4					1852					466,8					1,51					5,16					1,30					359,2					2,05					6,86					cecomaf MBP										
[°F]					14	131	90	131																																																								
[°C]					-10	45	20	45	617,9					2110					531,8					1,85					6,31					1,59					334,5					1,95					7,59					EN12900 MBP										
[°F]					14	113	68	113																																																								

Performance tables

R290, 220V/50Hz, CSIR, fan 1,5m/s, VDE, CCC, EAC, CB

	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]	-40	-40	137,6	470	118,4	0,81	2,78	0,70	169,2	1,44	1,54		
cond. pressure	-35	-31	193,5	661	166,6	0,99	3,37	0,85	196,1	1,50	2,17		
pc= 45/113	-30	-22	258,8	884	222,8	1,16	3,97	1,00	223,0	1,56	2,91		
return gas temp.	-25	-13	335,0	1144	288,3	1,34	4,58	1,15	250,0	1,64	3,78		
RGT= 32/90	-15	5	525,7	1795	452,4	1,72	5,87	1,48	305,6	1,83	5,98		
liquid temp	-5	23	777,6	2656	669,2	2,13	7,29	1,84	364,4	2,08	8,95		
Tliq= 45/113	5	41	1102,4	3765	948,7	2,58	8,80	2,22	428,0	2,36	12,90		
[°C / °F]	-40	-40	121,1	414	104,2	0,68	2,32	0,59	178,0	1,43	1,49		
cond. pressure	-35	-31	167,1	571	143,8	0,81	2,77	0,70	206,2	1,50	2,07		
pc= 55/131	-30	-22	220,8	754	190,1	0,94	3,21	0,81	234,9	1,59	2,74		
return gas temp	-25	-13	283,7	969	244,2	1,07	3,67	0,92	264,4	1,69	3,53		
RGT= 32/90	-15	5	443,0	1513	381,3	1,36	4,64	1,17	326,3	1,92	5,57		
liquid temp	-5	23	656,8	2243	565,3	1,67	5,70	1,44	393,6	2,20	8,37		
Tliq= 55/131	5	41	937,0	3200	806,4	2,00	6,84	1,72	467,8	2,53	12,15		