

COMPRESSOR DEFINITION

Designation	EM RS32CLC
Nominal Voltage/Frequency	100 V 50-60 Hz
Engineering Number	513300645

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	100 / 50-60	[V / Hz]	
4 Application type	Low Back Pressure		
4.1 Evaporating temperature range	-35°C to -10°C	(-31°F to 14°F)	
5 Motor type	RSCR		
6 Starting torque	LST - Low Starting Torque		
7 Expansion device	Capillary tube		
8 Compressor cooling	Operating voltage range		
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	Static	85 to 110 V	90 to 110 V
8.2 LBP (43°C Ambient temperature)	Static	85 to 110 V	90 to 110 V
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	6.9	[kgf/cm ²] (98 psig)	/ °C - °F
9.2 Peak	7.8	[kgf/cm ²] (111 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/7	[hp]
2 Displacement	5.96	[cm ³] (0.364 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	15.000	
3 Lubricant charge	150	[ml] (5.07 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO5	
4 Weight (with oil charge)	7.6	[kg] (16.75 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	100 V 50-60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	QP2-4.7	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	12(180)	[µF(VAC minimum)]
5 Motor protection	4TM232NFBYY-53	
6 Start winding resistance	[Ω at 25°C (77°F)] +/- 8%	
7 Run winding resistance	[Ω at 25°C (77°F)] +/- 8%	
8 LRA - Locked rotor amperage (50/60 Hz)	-	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	CCC	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @100V50Hz			ASHRAELBP32 Static		Evaporating temperature (Condensing temperature		-23.3°C (-9.94°F) 54.4°C (129.92°F)	
Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
338	85	99	60	0.73	1.06	5.63	1.42	1.65

TEST CONDITIONS: @100V60Hz			ASHRAELBP32 Static		Evaporating temperature (Condensing temperature		-23.3°C (-9.94°F) 54.4°C (129.92°F)	
Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
392	99	115	67	0.70	1.23	5.82	1.47	1.71

E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V50Hz			ASHRAE32 Static		(Condensing temperature 35°C (+95°F))				
Evaporating temperature	Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35 (-31)	207	52	61	41	0.55	0.65	5.05	1.27	1.48
-30 (-22)	275	69	81	46	0.59	0.86	5.93	1.49	1.74
-25 (-13)	359	90	105	52	0.64	1.13	6.87	1.73	2.01
-20 (- 4)	461	116	135	58	0.70	1.45	7.91	1.99	2.32
-15 (+ 5)	582	147	171	64	0.75	1.83	9.09	2.29	2.66
-10 (+14)	724	183	212	70	0.80	2.28	10.43	2.63	3.06

TEST CONDITIONS: @100V50Hz			ASHRAE32 Static		(Condensing temperature 45°C (+113°F))				
Evaporating temperature	Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35 (-31)	189	48	55	42	0.56	0.59	4.55	1.15	1.33
-30 (-22)	257	65	75	48	0.61	0.80	5.35	1.35	1.57
-25 (-13)	340	86	100	55	0.67	1.07	6.17	1.55	1.81
-20 (- 4)	441	111	129	62	0.73	1.38	7.04	1.78	2.06
-15 (+ 5)	560	141	164	70	0.80	1.76	8.01	2.02	2.35
-10 (+14)	700	176	205	77	0.87	2.21	9.09	2.29	2.66

E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V50Hz		ASHRAE32 Static			(Condensing temperature 55°C (+131°F))					
Evaporating temperature	Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%			
	°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35 (-31)	164	41	48	41	0.55	0.51	3.99	1.01	1.17	
-30 (-22)	231	58	68	48	0.61	0.72	4.76	1.20	1.40	
-25 (-13)	312	79	91	56	0.68	0.98	5.50	1.39	1.61	
-20 (- 4)	410	103	120	65	0.76	1.29	6.26	1.58	1.83	
-15 (+ 5)	527	133	155	74	0.84	1.66	7.05	1.78	2.07	
-10 (+14)	664	167	195	84	0.93	2.10	7.93	2.00	2.32	

TEST CONDITIONS: @100V50Hz		ASHRAE32 Static			(Condensing temperature 65°C (+149°F))					
Evaporating temperature	Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%			
	°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35 (-31)	131	33	38	40	0.54	0.41	3.30	0.83	0.97	
-30 (-22)	195	49	57	48	0.61	0.61	4.08	1.03	1.20	
-25 (-13)	274	69	80	57	0.69	0.86	4.79	1.21	1.40	
-20 (- 4)	369	93	108	68	0.78	1.16	5.46	1.38	1.60	
-15 (+ 5)	483	122	141	79	0.89	1.52	6.14	1.55	1.80	
-10 (+14)	616	155	180	90	0.99	1.94	6.85	1.73	2.01	

TEST CONDITIONS: @100V60Hz		ASHRAE32 Static			(Condensing temperature 35°C (+95°F))					
Evaporating temperature	Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%			
	°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35 (-31)	241	61	71	45	0.49	0.75	5.36	1.35	1.57	
-30 (-22)	324	82	95	52	0.55	1.01	6.25	1.58	1.83	
-25 (-13)	421	106	123	58	0.61	1.32	7.08	1.78	2.07	
-20 (- 4)	539	136	158	64	0.67	1.69	7.97	2.01	2.33	
-15 (+ 5)	685	173	201	72	0.74	2.16	9.04	2.28	2.65	
-10 (+14)	866	218	254	81	0.83	2.73	10.43	2.63	3.06	

TEST CONDITIONS: @100V60Hz		ASHRAE32 Static			(Condensing temperature 45°C (+113°F))					
Evaporating temperature	Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%			
	°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35 (-31)	223	56	65	47	0.51	0.70	4.87	1.23	1.43	
-30 (-22)	311	78	91	58	0.61	0.98	5.88	1.48	1.72	
-25 (-13)	409	103	120	66	0.69	1.28	6.66	1.68	1.95	
-20 (- 4)	521	131	153	73	0.75	1.64	7.32	1.85	2.15	
-15 (+ 5)	656	165	192	80	0.82	2.07	8.01	2.02	2.35	
-10 (+14)	820	207	240	88	0.90	2.59	8.84	2.23	2.59	

E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V60Hz		ASHRAE32 Static			(Condensing temperature 55°C (+131°F))					
Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	167	42	49	38	0.41	0.52	3.62	0.91	1.06
-30	(-22)	273	69	80	55	0.58	0.85	5.08	1.28	1.49
-25	(-13)	381	96	112	69	0.72	1.20	6.13	1.54	1.80
-20	(- 4)	500	126	147	80	0.83	1.57	6.91	1.74	2.02
-15	(+ 5)	635	160	186	90	0.93	2.00	7.53	1.90	2.21
-10	(+14)	793	200	232	99	1.02	2.50	8.13	2.05	2.38

TEST CONDITIONS: @100V60Hz		ASHRAE32 Static			(Condensing temperature 65°C (+149°F))					
Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	22	6	6	6	0.06	0.07	0.49	0.12	0.14
-30	(-22)	156	39	46	33	0.34	0.49	2.72	0.68	0.80
-25	(-13)	288	73	84	55	0.57	0.90	4.38	1.10	1.28
-20	(- 4)	424	107	124	74	0.76	1.33	5.59	1.41	1.64
-15	(+ 5)	571	144	167	90	0.92	1.80	6.48	1.63	1.90
-10	(+14)	736	185	216	105	1.08	2.32	7.18	1.81	2.10

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard EUEM		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted 40° up + 45° to Back		
3.2 DISCHARGE	4.9 +0.10/-0.05	[mm]	(0.193" +0.004"/-0.002")
3.2.1 Material	Copper		
3.2.2 Shape	Slanted 0° up + 24° to Back		
3.3 PROCESS	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.3.1 Material	Copper		
3.3.2 Shape	Slanted 40° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		