

COMPRESSOR DEFINITION

Designation	EM SS40CLP
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513300398

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	220-240 / 50	[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	176 to 255 V	-
8.2 LBP (43°C Ambient temperature)	Static	176 to 255 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		[hp]
2 Displacement	7.51	[cm ³] (0.458 cu.in)
2.1 Bore [mm]	24.000	
2.2 Stroke [mm]	16.600	
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)	7.5	[kg] (16.53 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm ²] (2.84 to 4.27 psig)

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220-240 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	TSD	
2.1 Starting device	TY-QZ003	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	4(350)	[µF(VAC minimum)]
5 Motor protection	BT53-105	
6 Start winding resistance	17.31	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	26.19	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	5.08	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	0.91	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	0.98	[A] - Measured according to UL 984
11 Approval boards certification	CCC	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			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]
416	105	122	70	0.34	1.31	5.97	1.50	1.75

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		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)	247	62	72	48	0.24	0.77	5.15	1.30	1.51
-30	(-22)	330	83	97	56	0.27	1.03	5.95	1.50	1.74
-25	(-13)	436	110	128	64	0.31	1.37	6.87	1.73	2.01
-20	(- 4)	567	143	166	72	0.34	1.78	7.90	1.99	2.32
-15	(+ 5)	722	182	212	80	0.38	2.27	9.06	2.28	2.66
-10	(+14)	904	228	265	87	0.41	2.85	10.35	2.61	3.03

TEST CONDITIONS: @220V50Hz		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)	230	58	67	48	0.24	0.72	4.74	1.19	1.39
-30	(-22)	313	79	92	56	0.27	0.98	5.53	1.39	1.62
-25	(-13)	420	106	123	65	0.31	1.32	6.38	1.61	1.87
-20	(- 4)	551	139	162	75	0.35	1.73	7.31	1.84	2.14
-15	(+ 5)	708	178	207	85	0.40	2.23	8.32	2.10	2.44
-10	(+14)	889	224	261	95	0.44	2.81	9.40	2.37	2.76

TEST CONDITIONS: @220V50Hz		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)	200	51	59	49	0.25	0.63	4.11	1.03	1.20
-30	(-22)	281	71	82	57	0.28	0.88	4.89	1.23	1.43
-25	(-13)	384	97	113	67	0.32	1.21	5.69	1.43	1.67
-20	(- 4)	512	129	150	78	0.37	1.61	6.53	1.64	1.91
-15	(+ 5)	665	168	195	90	0.42	2.09	7.39	1.86	2.17
-10	(+14)	843	212	247	102	0.48	2.66	8.28	2.09	2.43

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		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)	177	44	52	49	0.24	0.55	3.58	0.90	1.05
-30	(-22)	250	63	73	57	0.28	0.78	4.37	1.10	1.28
-25	(-13)	346	87	101	68	0.33	1.09	5.14	1.30	1.51
-20	(- 4)	467	118	137	80	0.38	1.47	5.89	1.48	1.73
-15	(+ 5)	612	154	179	93	0.44	1.93	6.62	1.67	1.94
-10	(+14)	782	197	229	107	0.50	2.47	7.34	1.85	2.15

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
2 Tray holder	Yes		
3 Connectors			
3.1 SUCTION	6.2 +0.05/+0.05	[mm]	(0.244" +0.002"/+0.002")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted 42° 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	6.2 +0.05/+0.05	[mm]	(0.244" +0.002"/+0.002")
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		