

COMPRESSOR DEFINITION

Designation	EM U32CLC
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	893BA78

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-Medium Back Pressure		
4.1 Evaporating temperature range	-35°C to -5°C	(-31°F to 23°F)	
5 Motor type	RSIR		
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	198 to 254 V	-
8.2 LBP (43°C Ambient temperature)	Static	198 to 254 V	-
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	7.7	[kgf/cm ²] (109 psig)	/ °C - °F
9.2 Peak (gauge)	9.8	[kgf/cm ²] (139 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation		[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	180	[ml] (6.09 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	MINERAL / ISO7	
4 Weight (with oil charge)	7.04	[kg] (15.52 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220-240 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	MSDA3	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM110NFBYY-53	
6 Start winding resistance	28.30	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	38.90	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	2.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	0.44	[A]
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A]
11 Approval boards certification	VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			CECOMAFLBP Static		Evaporating temperature (Condensing temperature		-25°C (-13°F) 55°C (131°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]
248	62	73	67	0.43	0.95	3.68	0.93	1.08

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		CECOMAF 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)	195	49	57	50	0.38	0.62	3.84	0.97	1.12
-30	(-22)	260	65	76	56	0.40	0.83	4.62	1.16	1.35
-25	(-13)	339	85	99	62	0.41	1.09	5.44	1.37	1.59
-20	(- 4)	433	109	127	69	0.43	1.39	6.31	1.59	1.85
-15	(+ 5)	545	137	160	76	0.45	1.75	7.24	1.82	2.12
-10	(+14)	675	170	198	82	0.47	2.18	8.23	2.07	2.41
-5	(+23)	825	208	242	88	0.50	2.67	9.29	2.34	2.72

TEST CONDITIONS: @220V50Hz		CECOMAF 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)	163	41	48	51	0.38	0.57	3.19	0.80	0.93
-30	(-22)	224	56	66	58	0.40	0.78	3.85	0.97	1.13
-25	(-13)	297	75	87	65	0.42	1.03	4.52	1.14	1.32
-20	(- 4)	383	97	112	73	0.44	1.34	5.20	1.31	1.53
-15	(+ 5)	485	122	142	82	0.47	1.70	5.92	1.49	1.73
-10	(+14)	604	152	177	91	0.50	2.11	6.67	1.68	1.95
-5	(+23)	741	187	217	100	0.54	2.60	7.46	1.88	2.19

TEST CONDITIONS: @220V50Hz		CECOMAF 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)	129	33	38	51	0.38	0.49	2.56	0.65	0.75
-30	(-22)	184	46	54	58	0.40	0.70	3.14	0.79	0.92
-25	(-13)	249	63	73	67	0.43	0.95	3.70	0.93	1.08
-20	(- 4)	326	82	96	77	0.46	1.25	4.24	1.07	1.24
-15	(+ 5)	417	105	122	87	0.49	1.60	4.78	1.20	1.40
-10	(+14)	523	132	153	98	0.53	2.01	5.32	1.34	1.56
-5	(+23)	646	163	189	110	0.58	2.48	5.88	1.48	1.72

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		CECOMAF 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)	97	24	28	49	0.37	0.41	1.97	0.50	0.58
-30	(-22)	144	36	42	57	0.40	0.61	2.50	0.63	0.73
-25	(-13)	201	51	59	67	0.43	0.85	2.98	0.75	0.87
-20	(- 4)	267	67	78	79	0.47	1.13	3.42	0.86	1.00
-15	(+ 5)	346	87	101	91	0.51	1.47	3.82	0.96	1.12
-10	(+14)	438	110	128	105	0.56	1.87	4.20	1.06	1.23
-5	(+23)	544	137	159	119	0.62	2.33	4.56	1.15	1.34

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted 42°		
3.2 DISCHARGE	5.1 +0.10/+0.00	[mm]	(0.201" +0.004"/+0.000")
3.2.1 Material	Copper		
3.2.2 Shape	Slanted parallel to Base Plate		
3.3 PROCESS	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.3.1 Material	Copper		
3.3.2 Shape	Slanted 42°		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		