

COMPRESSOR DEFINITION

Designation	EM U40CLC
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	893DA73

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	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	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	7.23	[cm ³] (0.441 cu.in)
2.1 Bore [mm]	24.000	
2.2 Stroke [mm]	16.000	
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)	7.65	[kg] (16.87 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	4(450)	[µF(VAC minimum)]
5 Motor protection	4TM142NFBYY-53	
6 Start winding resistance	30.42	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	28.11	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	-	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	-	[A]
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A]
11 Approval boards certification	VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			CECOMAFBP 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]
310	78	91	78	0.37	1.18	3.96	1.00	1.16

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)	239	60	70	58	0.29	0.76	4.11	1.04	1.20
-30	(-22)	323	81	95	65	0.32	1.04	4.95	1.25	1.45
-25	(-13)	423	107	124	73	0.35	1.36	5.85	1.47	1.71
-20	(- 4)	542	136	159	80	0.38	1.74	6.79	1.71	1.99
-15	(+ 5)	681	172	200	88	0.41	2.19	7.78	1.96	2.28
-10	(+14)	845	213	248	96	0.44	2.72	8.84	2.23	2.59
-5	(+23)	1035	261	303	104	0.48	3.35	9.95	2.51	2.91

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)	208	53	61	59	0.30	0.72	3.51	0.88	1.03
-30	(-22)	282	71	83	68	0.33	0.98	4.17	1.05	1.22
-25	(-13)	370	93	109	76	0.36	1.29	4.87	1.23	1.43
-20	(- 4)	476	120	139	85	0.40	1.66	5.60	1.41	1.64
-15	(+ 5)	601	151	176	94	0.44	2.10	6.36	1.60	1.87
-10	(+14)	748	188	219	104	0.48	2.62	7.17	1.81	2.10
-5	(+23)	919	232	269	115	0.52	3.23	8.01	2.02	2.35

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)	169	43	50	59	0.30	0.64	2.88	0.72	0.84
-30	(-22)	234	59	68	69	0.33	0.89	3.42	0.86	1.00
-25	(-13)	311	78	91	78	0.37	1.18	3.97	1.00	1.16
-20	(- 4)	404	102	118	89	0.41	1.54	4.54	1.14	1.33
-15	(+ 5)	514	130	151	100	0.46	1.97	5.13	1.29	1.50
-10	(+14)	645	163	189	112	0.51	2.48	5.74	1.45	1.68
-5	(+23)	800	201	234	125	0.57	3.08	6.37	1.61	1.87

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)	131	33	38	58	0.29	0.55	2.25	0.57	0.66
-30	(-22)	187	47	55	69	0.33	0.79	2.71	0.68	0.80
-25	(-13)	254	64	74	80	0.38	1.07	3.18	0.80	0.93
-20	(- 4)	335	84	98	92	0.43	1.42	3.64	0.92	1.07
-15	(+ 5)	432	109	126	106	0.48	1.84	4.10	1.03	1.20
-10	(+14)	548	138	160	120	0.54	2.34	4.57	1.15	1.34
-5	(+23)	685	173	201	136	0.61	2.93	5.04	1.27	1.48

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	4.95 +0.05/+0.05	[mm]	(0.195" +0.002"/+0.002")
3.2.1 Material	Copper		
3.2.2 Shape	Vertical		
3.3 PROCESS	6 +0.08/-0.08	[mm]	(0.236" +0.003"/-0.003")
3.3.1 Material	Copper(OD)		
3.3.2 Shape	Slanted 42°		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		