

COMPRESSOR DEFINITION

Designation	EM U40CLC
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	893DA76

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	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)	7.4	[kg] (16.31 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	PTC	
2.1 Starting device	MSDA3	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[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)	3.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	0.62	[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]
310	78	91	83	0.56	1.18	3.75	0.95	1.10

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	60	0.50	0.76	4.01	1.01	1.17
-30	(-22)	323	81	95	67	0.52	1.04	4.78	1.21	1.40
-25	(-13)	423	107	124	76	0.53	1.36	5.59	1.41	1.64
-20	(- 4)	542	136	159	84	0.56	1.74	6.45	1.62	1.89
-15	(+ 5)	681	172	200	93	0.58	2.19	7.35	1.85	2.15
-10	(+14)	845	213	248	101	0.61	2.72	8.33	2.10	2.44
-5	(+23)	1035	261	303	110	0.65	3.35	9.38	2.36	2.75

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	61	0.50	0.72	3.41	0.86	1.00
-30	(-22)	282	71	83	70	0.52	0.98	4.02	1.01	1.18
-25	(-13)	370	93	109	80	0.55	1.29	4.64	1.17	1.36
-20	(- 4)	476	120	139	90	0.57	1.66	5.28	1.33	1.55
-15	(+ 5)	601	151	176	101	0.61	2.10	5.96	1.50	1.75
-10	(+14)	748	188	219	112	0.65	2.62	6.68	1.68	1.96
-5	(+23)	919	232	269	123	0.69	3.23	7.47	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)	169	43	50	61	0.50	0.64	2.80	0.70	0.82
-30	(-22)	234	59	68	71	0.52	0.89	3.29	0.83	0.96
-25	(-13)	311	78	91	83	0.55	1.18	3.77	0.95	1.10
-20	(- 4)	404	102	118	95	0.58	1.54	4.26	1.07	1.25
-15	(+ 5)	514	130	151	108	0.63	1.97	4.76	1.20	1.40
-10	(+14)	645	163	189	122	0.68	2.48	5.29	1.33	1.55
-5	(+23)	800	201	234	136	0.74	3.08	5.86	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)	131	33	38	60	0.50	0.55	2.16	0.54	0.63
-30	(-22)	187	47	55	72	0.53	0.79	2.59	0.65	0.76
-25	(-13)	254	64	74	85	0.56	1.07	2.99	0.75	0.88
-20	(- 4)	335	84	98	99	0.60	1.42	3.38	0.85	0.99
-15	(+ 5)	432	109	126	115	0.66	1.84	3.77	0.95	1.10
-10	(+14)	548	138	160	132	0.72	2.34	4.16	1.05	1.22
-5	(+23)	685	173	201	150	0.80	2.93	4.57	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	5.02 +0.02/-0.02	[mm]	(0.198" +0.001"/-0.001")
3.2.1 Material	Copper		
3.2.2 Shape	Straight		
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		