

COMPRESSOR DEFINITION

Designation	EM U46CLC
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	894EA73

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	7.96	[cm ³] (0.486 cu.in)
2.1 Bore [mm]	24.000	
2.2 Stroke [mm]	17.600	
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)	7.7	[kg] (16.98 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	2019	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	4(450)	[µF(VAC minimum)]
5 Motor protection	AD37FN10	
6 Start winding resistance	24.40	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	24.60	[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			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]
348	88	102	89	0.42	1.33	3.92	0.99	1.15

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)	270	68	79	64	0.32	0.86	4.23	1.06	1.24
-30	(-22)	357	90	105	72	0.35	1.15	4.98	1.25	1.46
-25	(-13)	464	117	136	80	0.38	1.49	5.79	1.46	1.70
-20	(- 4)	592	149	174	89	0.42	1.90	6.65	1.68	1.95
-15	(+ 5)	744	187	218	98	0.46	2.39	7.57	1.91	2.22
-10	(+14)	922	232	270	108	0.50	2.97	8.53	2.15	2.50
-5	(+23)	1129	285	331	118	0.54	3.65	9.54	2.40	2.80

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)	232	58	68	66	0.32	0.81	3.53	0.89	1.03
-30	(-22)	312	79	91	75	0.36	1.08	4.14	1.04	1.21
-25	(-13)	407	103	119	85	0.40	1.42	4.80	1.21	1.41
-20	(- 4)	522	132	153	95	0.44	1.82	5.48	1.38	1.61
-15	(+ 5)	658	166	193	106	0.49	2.30	6.20	1.56	1.82
-10	(+14)	817	206	239	118	0.54	2.86	6.95	1.75	2.04
-5	(+23)	1003	253	294	130	0.59	3.52	7.72	1.94	2.26

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)	190	48	56	67	0.33	0.72	2.87	0.72	0.84
-30	(-22)	262	66	77	77	0.37	1.00	3.38	0.85	0.99
-25	(-13)	347	87	102	88	0.42	1.32	3.91	0.99	1.15
-20	(- 4)	448	113	131	100	0.47	1.71	4.46	1.12	1.31
-15	(+ 5)	568	143	166	113	0.52	2.18	5.01	1.26	1.47
-10	(+14)	709	179	208	127	0.58	2.72	5.57	1.40	1.63
-5	(+23)	874	220	256	142	0.65	3.36	6.14	1.55	1.80

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)	150	38	44	67	0.33	0.63	2.24	0.57	0.66
-30	(-22)	213	54	62	79	0.38	0.90	2.69	0.68	0.79
-25	(-13)	288	73	84	92	0.43	1.22	3.13	0.79	0.92
-20	(- 4)	376	95	110	106	0.49	1.59	3.56	0.90	1.04
-15	(+ 5)	480	121	141	121	0.55	2.04	3.99	1.00	1.17
-10	(+14)	603	152	177	138	0.62	2.57	4.40	1.11	1.29
-5	(+23)	747	188	219	155	0.70	3.19	4.80	1.21	1.41

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		