

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	2019	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	4(450)	[µF(VAC minimum)]
5 Motor protection	AD37FN10	
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			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]
414	104	121	83	0.39	1.30	4.99	1.26	1.46

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	58	0.29	0.77	4.23	1.07	1.24
-30	(-22)	330	83	97	66	0.32	1.03	5.02	1.26	1.47
-25	(-13)	431	109	126	73	0.35	1.35	5.88	1.48	1.72
-20	(- 4)	552	139	162	81	0.38	1.73	6.82	1.72	2.00
-15	(+ 5)	696	175	204	89	0.41	2.19	7.84	1.98	2.30
-10	(+14)	863	218	253	97	0.44	2.72	8.94	2.25	2.62
-5	(+23)	1058	267	310	104	0.48	3.35	10.13	2.55	2.97

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	59	0.30	0.72	3.89	0.98	1.14
-30	(-22)	311	78	91	68	0.33	0.97	4.59	1.16	1.35
-25	(-13)	409	103	120	76	0.36	1.28	5.35	1.35	1.57
-20	(- 4)	527	133	154	86	0.40	1.66	6.15	1.55	1.80
-15	(+ 5)	667	168	195	95	0.44	2.10	7.01	1.77	2.05
-10	(+14)	831	209	243	105	0.48	2.62	7.93	2.00	2.32
-5	(+23)	1021	257	299	115	0.52	3.23	8.90	2.24	2.61

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)	203	51	59	59	0.30	0.64	3.45	0.87	1.01
-30	(-22)	281	71	82	69	0.33	0.88	4.09	1.03	1.20
-25	(-13)	376	95	110	79	0.37	1.18	4.76	1.20	1.39
-20	(- 4)	489	123	143	90	0.41	1.54	5.45	1.37	1.60
-15	(+ 5)	625	157	183	101	0.46	1.97	6.18	1.56	1.81
-10	(+14)	784	197	230	113	0.51	2.47	6.93	1.75	2.03
-5	(+23)	969	244	284	125	0.57	3.06	7.72	1.95	2.26

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)	176	44	52	58	0.29	0.55	3.01	0.76	0.88
-30	(-22)	250	63	73	69	0.33	0.78	3.62	0.91	1.06
-25	(-13)	341	86	100	81	0.38	1.07	4.23	1.07	1.24
-20	(- 4)	450	113	132	93	0.43	1.41	4.84	1.22	1.42
-15	(+ 5)	580	146	170	107	0.48	1.83	5.45	1.37	1.60
-10	(+14)	733	185	215	121	0.54	2.31	6.07	1.53	1.78
-5	(+23)	912	230	267	136	0.61	2.89	6.70	1.69	1.96

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		