

COMPRESSOR DEFINITION

Designation	EM C3134U
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	721SA50

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-290		
3 Nominal voltage and frequency	220-240 / 50	[V / Hz]	
4 Application type	Low-Medium Back Pressure (Commercial Compressors)		
4.1 Evaporating temperature range	-35°C to 0°C	(-31°F to 32°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)	-	-	-
8.2 LBP (43°C Ambient temperature)	-	-	-
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	18.4	[kgf/cm ²] (262 psig)	/ °C - °F
9.2 Peak	20.6	[kgf/cm ²] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/3	[hp]
2 Displacement	7.95	[cm ³] (0.485 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	20.000	
3 Lubricant charge	150	[ml] (5.07 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO10	
4 Weight (with oil charge)	8.2	[kg] (18.08 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	MI2021/V230	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	8(350)	[µF(VAC minimum)]
5 Motor protection	T0480/07	
6 Start winding resistance	13.30	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	9.25	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	10.30	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			EN12900LBP Fan		Evaporating temperature (Condensing temperature		-35°C (-31°F) 40°C (104°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]
819	206	240	172	0.86	2.74	4.77	1.20	1.40

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			EN12900 Fan		(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)	876	221	257	168	0.85	2.81	5.19	1.31	1.52
-30	(-22)	1093	276	320	186	0.93	3.52	5.88	1.48	1.72
-25	(-13)	1365	344	400	204	1.00	4.41	6.71	1.69	1.97
-20	(- 4)	1692	426	496	220	1.07	5.48	7.69	1.94	2.25
-15	(+ 5)	2072	522	607	235	1.14	6.75	8.80	2.22	2.58
-10	(+14)	2507	632	734	250	1.20	8.22	10.03	2.53	2.94
-5	(+23)	2995	755	878	264	1.26	9.89	11.36	2.86	3.33
0	(+32)	3539	892	1037	277	1.32	11.78	12.78	3.22	3.75

TEST CONDITIONS: @220V50Hz			EN12900 Fan		(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)	746	188	218	176	0.88	2.62	4.25	1.07	1.24
-30	(-22)	940	237	275	198	0.97	3.32	4.77	1.20	1.40
-25	(-13)	1180	297	346	218	1.06	4.18	5.40	1.36	1.58
-20	(- 4)	1467	370	430	239	1.15	5.22	6.13	1.54	1.80
-15	(+ 5)	1799	453	527	258	1.24	6.43	6.95	1.75	2.04
-10	(+14)	2178	549	638	277	1.33	7.84	7.85	1.98	2.30
-5	(+23)	2603	656	763	296	1.41	9.44	8.81	2.22	2.58
0	(+32)	3074	775	901	313	1.49	11.25	9.82	2.48	2.88

TEST CONDITIONS: @220V50Hz			EN12900 Fan		(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)	604	152	177	180	0.90	2.36	3.35	0.84	0.98
-30	(-22)	775	195	227	205	1.01	3.03	3.77	0.95	1.11
-25	(-13)	983	248	288	230	1.12	3.87	4.27	1.08	1.25
-20	(- 4)	1230	310	360	255	1.23	4.86	4.83	1.22	1.41
-15	(+ 5)	1514	382	444	279	1.34	6.02	5.43	1.37	1.59
-10	(+14)	1837	463	538	303	1.44	7.36	6.07	1.53	1.78
-5	(+23)	2197	554	644	327	1.54	8.89	6.73	1.70	1.97
0	(+32)	2596	654	761	350	1.64	10.61	7.41	1.87	2.17

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
2 Tray holder	Yes		
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° up + 45° to Back		
3.2 DISCHARGE	4.94 +0.08/-0.08	[mm]	(0.194" +0.003"/-0.003")
3.2.1 Material	Copper		
3.2.2 Shape	Slanted 0° up + 45° to Back		
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 43° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		