

COMPRESSOR DEFINITION

Designation	T 2170U
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	836HA63

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 Back Pressuure R290		
4.1 Evaporating temperature range	-40°C to -10°C	(-40°F to 14°F)	
5 Motor type	CSCR		
6 Starting torque	HST - Hight starting torque		
7 Expantion device	Capillary tube or Expansion valve		
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 pressures/temperature			
9.1 Operating (gauge)	19.1	[kgf/cm ²] (272 psig)	/ °C - °F
9.2 Peak (gauge)	21.2	[kgf/cm ²] (301 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	3/4	[hp]
2 Displacement	22.37	[cm ³] (1.365 cu.in)
2.1 Bore [mm]	36.990	
2.2 Stroke [mm]	20.830	
3 Lubricant charge	550	[ml] (18.60 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	17.2	[kg] (37.92 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	Voltage Relay	
2.1 Starting device	3ARR3B10AA3	
3 Start capacitor	88-108(330)	[µF(VAC minimum)]
4 Run capacitor	15(440)	[µF(VAC minimum)]
5 Motor protection	3HM179-105	
6 Start winding resistance	6.80	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	3.45	[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] - 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			ASHRAELBP32 Fan		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]
2754	694	807	586	2.76	8.20	4.70	1.18	1.38

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			ASHRAE32 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]
-40	(-40)	1354	341	397	383	1.86	4.00	3.56	0.90	1.04
-35	(-31)	1911	482	560	456	2.18	5.66	4.16	1.05	1.22
-30	(-22)	2575	649	755	525	2.49	7.64	4.87	1.23	1.43
-25	(-13)	3342	842	979	591	2.78	9.94	5.66	1.43	1.66
-20	(- 4)	4210	1061	1234	651	3.05	12.56	6.51	1.64	1.91
-15	(+ 5)	5175	1304	1516	704	3.30	15.50	7.38	1.86	2.16
-10	(+14)	6235	1571	1827	750	3.53	18.76	8.27	2.08	2.42

TEST CONDITIONS: @220V50Hz			ASHRAE32 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]
-40	(-40)	1246	314	365	381	1.82	3.68	3.29	0.83	0.96
-35	(-31)	1659	418	486	440	2.09	4.91	3.78	0.95	1.11
-30	(-22)	2222	560	651	506	2.39	6.59	4.38	1.10	1.28
-25	(-13)	2931	739	859	578	2.72	8.72	5.05	1.27	1.48
-20	(- 4)	3785	954	1109	655	3.07	11.29	5.76	1.45	1.69
-15	(+ 5)	4779	1204	1400	736	3.44	14.32	6.50	1.64	1.90
-10	(+14)	5912	1490	1732	819	3.85	17.79	7.23	1.82	2.12

TEST CONDITIONS: @220V50Hz			ASHRAE32 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]
-40	(-40)	1139	287	334	379	1.78	3.36	2.95	0.74	0.87
-35	(-31)	1407	355	412	424	2.00	4.16	3.37	0.85	0.99
-30	(-22)	1869	471	548	486	2.29	5.54	3.88	0.98	1.14
-25	(-13)	2520	635	739	565	2.65	7.49	4.46	1.12	1.31
-20	(- 4)	3360	847	984	659	3.08	10.02	5.07	1.28	1.48
-15	(+ 5)	4384	1105	1285	768	3.59	13.13	5.69	1.43	1.67
-10	(+14)	5590	1409	1638	889	4.16	16.81	6.31	1.59	1.85

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	9.6 +0.07/+0.00	[mm]	(0.378" +0.003"/+0.000")
3.1.1 Material	Copper		
3.1.2 Shape	Vertical		
3.2 DISCHARGE	6.42 +0.08/+0.00	[mm]	(0.253" +0.003"/+0.000")
3.2.1 Material	Copper		
3.2.2 Shape	Vertical		
3.3 PROCESS	9.6 +0.07/+0.00	[mm]	(0.378" +0.003"/+0.000")
3.3.1 Material	Copper		
3.3.2 Shape	Vertical		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		