

COMPRESSOR DEFINITION

Designation	EH X2155U
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513307504

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-290		
3 Nominal voltage and frequency	115-127 / 60	[V / Hz]	
4 Application type	Low Back Pressure R290		
4.1 Evaporating temperature range	-40°C to -10°C	(-40°F to 14°F)	
5 Motor type	CSIR		
6 Starting torque	LST/HST - Low/High starting torque		
7 Expansion 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)	Fan	-	-
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		[hp]
2 Displacement	12.21	[cm ³] (0.745 cu.in)
2.1 Bore [mm]	26.000	
2.2 Stroke [mm]	23.000	
3 Lubricant charge	270	[ml] (9.13 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO22	
4 Weight (with oil charge)	9.8	[kg] (21.60 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELECTRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	115-127 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	213515050	
3 Start capacitor	243-292(250)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	5TM811KFBZZ-53	
6 Start winding resistance	3.34	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	1.10	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	39.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	CCC - UL	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @115V60Hz			ASHRAELBP32 Fan		Evaporating temperature (Condensing temperature		-23.3°C (-9.94°F) 54.4°C (129.92°F)	
Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
2455	619	719	441	4.80	7.31	5.57	1.40	1.63

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz			ASHRAE32 Fan		(Condensing temperature 35°C (+95°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	1249	315	366	263	3.47	3.69	4.73	1.19	1.39
-35	(-31)	1593	401	467	301	3.72	4.71	5.30	1.34	1.55
-30	(-22)	1995	503	585	339	4.03	5.92	5.89	1.49	1.73
-25	(-13)	2470	622	724	379	4.36	7.34	6.53	1.65	1.91
-20	(- 4)	3029	763	888	420	4.70	9.04	7.22	1.82	2.12
-15	(+ 5)	3686	929	1080	461	5.03	11.04	7.98	2.01	2.34
-10	(+14)	4454	1122	1305	504	5.33	13.40	8.83	2.22	2.59

TEST CONDITIONS: @115V60Hz			ASHRAE32 Fan		(Condensing temperature 45°C (+113°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	1145	288	335	272	3.55	3.38	4.23	1.07	1.24
-35	(-31)	1500	378	440	313	3.80	4.44	4.79	1.21	1.40
-30	(-22)	1913	482	560	357	4.13	5.67	5.35	1.35	1.57
-25	(-13)	2396	604	702	403	4.50	7.12	5.93	1.49	1.74
-20	(- 4)	2962	746	868	452	4.90	8.84	6.54	1.65	1.92
-15	(+ 5)	3625	914	1062	503	5.31	10.86	7.21	1.82	2.11
-10	(+14)	4398	1108	1289	556	5.71	13.23	7.93	2.00	2.32

TEST CONDITIONS: @115V60Hz			ASHRAE32 Fan		(Condensing temperature 55°C (+131°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	1066	269	312	282	3.65	3.15	3.78	0.95	1.11
-35	(-31)	1403	354	411	326	3.90	4.15	4.31	1.08	1.26
-30	(-22)	1797	453	526	374	4.23	5.33	4.81	1.21	1.41
-25	(-13)	2259	569	662	426	4.63	6.72	5.32	1.34	1.56
-20	(- 4)	2804	707	822	481	5.08	8.36	5.83	1.47	1.71
-15	(+ 5)	3444	868	1009	540	5.56	10.31	6.38	1.61	1.87
-10	(+14)	4192	1056	1228	602	6.05	12.61	6.96	1.75	2.04

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal AMEM		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	8.2 +0.12/-0.08	[mm]	(0.323" +0.005"/-0.003")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted 40° up + 45° to Back		
3.2 DISCHARGE	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.2.1 Material	Copper		
3.2.2 Shape	Slanted 0° up + 24° to Back		
3.3 PROCESS	6.2 +0.05/+0.05	[mm]	(0.244" +0.002"/+0.002")
3.3.1 Material	Copper		
3.3.2 Shape	Slanted 40° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		