

COMPRESSOR DEFINITION

Designation	EH S2155U
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513307510

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 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/Hight starting sorque		
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)	Fan	187 to 255 V	-
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	265	[ml] (8.96 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	9.5	[kg] (20.94 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	Current Relay	
2.1 Starting device	213515055	
3 Start capacitor	88-108(330)	[μF(VAC minimum)]
4 Run capacitor	-	[μF(VAC minimum)]
5 Motor protection	DRB230N61A2F	
6 Start winding resistance	15.67	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	4.30	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	22.00	[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	CCC - 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]
2030	512	595	378		6.04	5.38	1.36	1.58

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)	1017	256	298	231	2.05	3.00	4.57	1.15	1.34
-35	(-31)	1309	330	384	273	2.11	3.87	3.23	0.81	0.95
-30	(-22)	1660	418	487	297	2.19	4.92	4.87	1.23	1.43
-25	(-13)	2077	523	609	313	2.28	6.18	7.72	1.95	2.26
-20	(- 4)	2565	646	752	334	2.37	7.66	10.01	2.52	2.93
-15	(+ 5)	3131	789	917	371	2.47	9.38	9.95	2.51	2.92
-10	(+14)	3780	952	1108	435	2.58	11.37	5.80	1.46	1.70

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)	942	237	276	206	2.07	2.78	8.88	2.24	2.60
-35	(-31)	1229	310	360	286	2.15	3.64	2.71	0.68	0.79
-30	(-22)	1573	396	461	334	2.24	4.66	1.41	0.35	0.41
-25	(-13)	1980	499	580	363	2.35	5.89	3.19	0.80	0.94
-20	(- 4)	2457	619	720	383	2.47	7.33	6.30	1.59	1.85
-15	(+ 5)	3009	758	882	406	2.60	9.01	8.96	2.26	2.63
-10	(+14)	3642	918	1067	446	2.74	10.96	9.41	2.37	2.76

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)	869	219	255	75	2.09	2.56	28.12	7.09	8.24
-35	(-31)	1146	289	336	216	2.18	3.39	13.70	3.45	4.01
-30	(-22)	1479	373	433	313	2.29	4.39	6.04	1.52	1.77
-25	(-13)	1874	472	549	378	2.42	5.57	3.35	0.84	0.98
-20	(- 4)	2335	588	684	422	2.57	6.97	3.87	0.98	1.13
-15	(+ 5)	2870	723	841	456	2.73	8.60	5.83	1.47	1.71
-10	(+14)	3484	878	1021	494	2.90	10.48	7.45	1.88	2.18

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal EUEM		
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 79° up + 12° to Front		
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 10° 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		