

**COMPRESSOR DEFINITION**

Designation	<b>EH X2155U</b>
Nominal Voltage/Frequency	<b>220-240 V 50 Hz</b>
Engineering Number	<b>513307503</b>

**A - APPLICATION / LIMIT WORKING CONDITIONS**

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-290		
2.1 Max Refrigerant Charge	150 [g]		
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	HST - 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)	-	-	-
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating (gauge)	[55]	[ °C ]	
9.2 Peak (gauge)	[60]	[ °C ]	
10 Maximum winding temperature	130	[ °C ]	

**B - MECHANICAL DATA**

1 Commercial designation	3/4	[hp]
2 Displacement	12.21	[cm <sup>3</sup> ]
2.1 Bore [mm]	26.0	
2.2 Stroke [mm]	23.0	
3 Lubricant charge	270	[ml]
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	10.6	[kg]
5 Nitrogen charge	-	[kgf/cm <sup>2</sup> ]

**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	QL2 - 9.1	
3 Start capacitor	88-108(330)	[μF(VAC minimum)]
4 Run capacitor	-	[μF(VAC minimum)]
5 Motor protection	4TM 757NFBYY-53	
6 Start winding resistance	14.83	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	4.65	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	18.4	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	2.6	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	2.9	[A] - Measured according to UL 984
11 Approval boards certification	VDE - CCC	

**D - PERFORMANCE - CHECK POINT DATA**

TEST CONDITIONS: @220V50Hz			EN12900LBP Fan		Evaporating temperature (Condensing temperature		-35°C 40°C	
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]
1185	299	347	259	1.82	3.96	4.57	1.15	1.34

TEST CONDITIONS: @220V50Hz			ASHRAELBP32 Fan		Evaporating temperature (Condensing temperature		-23.3°C 54.4°C	
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]
2105	530	617	377	2.24	6.27	5.58	1.41	1.64

**E - PERFORMANCE - CURVES**

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 35°C)					
@220V50Hz		Fan								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%			
°C	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-40	1053	265	309	223	1.70	3.11	4.73	1.19	1.39	
-35	1370	345	401	253	1.79	4.05	5.42	1.36	1.59	
-30	1732	436	507	284	1.89	5.13	6.11	1.54	1.79	
-25	2072	522	607	307	1.97	6.16	6.74	1.70	1.98	
-20	2567	647	752	337	2.08	7.65	7.61	1.92	2.23	
-15	3128	788	916	368	2.20	9.36	8.51	2.14	2.49	
-10	3783	953	1109	398	2.32	11.37	9.50	2.39	2.78	

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 45°C)					
@220V50Hz		Fan								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%			
°C	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-40	972	245	285	228	1.71	2.87	4.27	1.08	1.25	
-35	1272	320	373	262	1.82	3.76	4.85	1.22	1.42	
-30	1613	406	472	298	1.94	4.78	5.40	1.36	1.58	
-25	2050	516	601	339	2.08	6.09	6.05	1.53	1.77	
-20	2555	644	749	378	2.24	7.62	6.76	1.70	1.98	
-15	3111	784	911	416	2.39	9.31	7.48	1.89	2.19	
-10	3732	940	1094	451	2.54	11.22	8.27	2.08	2.42	

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 55°C)					
@220V50Hz		Fan								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%			
°C	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-40	894	225	262	234	1.74	2.64	3.82	0.96	1.12	
-35	1193	300	349	274	1.86	3.53	4.36	1.10	1.28	
-30	1548	390	454	316	2.01	4.59	4.90	1.24	1.44	
-25	1969	496	577	361	2.17	5.85	5.45	1.37	1.60	
-20	2451	617	718	408	2.36	7.30	6.01	1.51	1.76	
-15	2994	754	877	454	2.56	8.96	6.59	1.66	1.93	
-10	3619	912	1060	501	2.76	10.88	7.23	1.82	2.12	

**F - EXTERNAL CHARACTERISTICS**

1 Base plate	European Standard EUEM	
2 Tray holder	No - Yes	
3 Connectors		
3.1 SUCTION	8.2 (+0.12/-0.08)	[mm]
3.1.1 Material	Copper	
3.1.2 Shape		
3.2 DISCHARGE	6.1 (+0.10/+0.00)	[mm]
3.2.1 Material	Copper	
3.2.2 Shape		
3.3 PROCESS	6.2 (+0.05/+0.05)	[mm]
3.3.1 Material	Copper	
3.3.2 Shape		
3.4 Oil cooler (Copper)	No	[mm]
3.5 Connector sealing	Rubber Plugs	