

COMPRESSOR DEFINITION

Designation	EH U6214U
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513307534

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	Medium-High Back pressure (Commercial Compressors)		
4.1 Evaporating temperature range	-20°C to 10°C	(-4°F to 50°F)	
5 Motor type	CSCR		
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)	-	-	-
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	Fan	187 to 255 V	-
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	1/2	[hp]
2 Displacement	12.74	[cm ³] (0.777 cu.in)
2.1 Bore [mm]	26.000	
2.2 Stroke [mm]	24.000	
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)	9.1	[kg] (20.06 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELECTRICAL 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		
3 Start capacitor	88-108(330)	[µF(VAC minimum)]
4 Run capacitor	10(450)	[µF(VAC minimum)]
5 Motor protection	DRB210N52A*F	
6 Start winding resistance	11.95	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	6.20	[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	CCC - EAC - VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			ASHRAEHBP46 Fan		Evaporating temperature (Condensing temperature		7.2°C (44.96°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]
5974	1505	1750	642	3.14	20.45	9.30	2.34	2.73

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			ASHRAE46 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]
-20	(- 4)	2636	664	772	359	1.95	7.43	7.35	1.85	2.15
-15	(+ 5)	3240	816	949	386	2.05	9.19	8.37	2.11	2.45
-10	(+14)	3930	990	1152	412	2.16	11.19	9.53	2.40	2.79
-5	(+23)	4725	1191	1385	435	2.26	13.50	10.87	2.74	3.19
0	(+32)	5644	1422	1654	456	2.35	16.21	12.41	3.13	3.64
+5	(+41)	6705	1690	1965	473	2.43	19.39	14.18	3.57	4.16
+10	(+50)	7928	1998	2323	488	2.48	23.11	16.22	4.09	4.75

TEST CONDITIONS: @220V50Hz			ASHRAE46 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]
-20	(- 4)	2519	635	738	391	2.08	7.69	6.48	1.63	1.90
-15	(+ 5)	3093	779	906	426	2.21	9.48	7.27	1.83	2.13
-10	(+14)	3750	945	1099	460	2.35	11.54	8.15	2.05	2.39
-5	(+23)	4508	1136	1321	491	2.48	13.93	9.16	2.31	2.68
0	(+32)	5386	1357	1578	521	2.61	16.75	10.33	2.60	3.03
+5	(+41)	6403	1614	1876	548	2.73	20.06	11.69	2.95	3.42
+10	(+50)	7579	1910	2221	572	2.83	23.95	13.26	3.34	3.89

TEST CONDITIONS: @220V50Hz			ASHRAE46 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]
-20	(- 4)	2414	608	707	416	2.21	8.04	5.79	1.46	1.70
-15	(+ 5)	2962	746	868	460	2.37	9.91	6.43	1.62	1.89
-10	(+14)	3589	904	1052	504	2.53	12.07	7.13	1.80	2.09
-5	(+23)	4313	1087	1264	545	2.71	14.59	7.91	1.99	2.32
0	(+32)	5155	1299	1510	585	2.88	17.55	8.81	2.22	2.58
+5	(+41)	6132	1545	1797	623	3.04	21.04	9.84	2.48	2.88
+10	(+50)	7264	1830	2128	658	3.20	25.12	11.04	2.78	3.24

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard 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 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		