COMPRESSOR DEFINITION

Designation	**EM 2U30HLP**
Nominal Voltage/Frequency	**220 V 60 Hz**
Engineering Number	**513305528**

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	220 / 60	[V / Hz]	
4 Application type	Low Back Pressure		
4.1 Evaporating temperature range	-35°C to -10°C	(-31°F to 14°F)	
5 Motor type	RSCR		
6 Starting torque	LST - Low Starting Torque		
7 Expantion device	Capillary tube		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32ºC Ambient temperature)	Static	-	198 to 242 V
8.2 LBP (43ºC Ambient temperature)	Static	-	198 to 242 V
8.3 HBP (32ºC Ambient temperature)	-	-	-
8.4 HBP (43ºC Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	14.2	[kgf/cm²] (202 psig)	/ ºC - ºF
9.2 Peak	15.9	[kgf/cm²] (226 psig)	/ ºC - ºF
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/10	[hp]
2 Displacement	3.00	[cm³] (0.183 cu.in)
2.1 Bore [mm]	19.000	
2.2 Stroke [mm]	10.600	
3 Lubricant charge	150	[ml] (5.07 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO10	
4 Weight (with oil charge)	7.24	[kg] (15.96 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm²] (2.84 to 4.27 psig)

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	8EA17C3/8EA17E63/QPS2-A22MD3/QPS2-A22MD3 091/QPS2	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	5(300)	[µF(VAC minimum)]
5 Motor protection	DRB21K61A*	
6 Start winding resistance	22.60	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	36.70	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	3.30	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	0.80	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	0.85	[A] - Measured according to UL 984
11 Approval boards certification	CE - IMTRO - TUV - UKCA	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: **@220V60Hz**			**ASHRAELBP32** **Static**		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]
322	81	94	71	0.36	1.83	4.55	1.15	1.33

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **35ºC (+95ºF))**
@220V60Hz **Static**

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]
-35	**(-31)**	188	47	55	51	0.25	1.06	3.70	0.93	1.08
-30	**(-22)**	265	67	78	59	0.27	1.50	4.48	1.13	1.31
-25	**(-13)**	369	93	108	67	0.30	2.10	5.46	1.38	1.60
-20	**(- 4)**	496	125	145	75	0.33	2.82	6.58	1.66	1.93
-15	**(+ 5)**	642	162	188	83	0.36	3.66	7.79	1.96	2.28
-10	**(+14)**	804	203	236	89	0.38	4.61	9.04	2.28	2.65

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **45ºC (+113ºF))**
@220V60Hz **Static**

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]
-35	**(-31)**	159	40	47	52	0.25	0.90	3.06	0.77	0.90
-30	**(-22)**	227	57	67	60	0.27	1.29	3.81	0.96	1.12
-25	**(-13)**	324	82	95	69	0.30	1.84	4.70	1.19	1.38
-20	**(- 4)**	445	112	130	78	0.34	2.53	5.70	1.44	1.67
-15	**(+ 5)**	588	148	172	87	0.37	3.36	6.75	1.70	1.98
-10	**(+14)**	749	189	220	96	0.41	4.29	7.80	1.97	2.29

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **55ºC (+131ºF))**
@220V60Hz **Static**

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]
-35	**(-31)**	122	31	36	49	0.24	0.69	2.48	0.63	0.73
-30	**(-22)**	182	46	53	57	0.26	1.03	3.23	0.81	0.95
-25	**(-13)**	273	69	80	67	0.30	1.55	4.09	1.03	1.20
-20	**(- 4)**	390	98	114	78	0.34	2.22	5.01	1.26	1.47
-15	**(+ 5)**	531	134	156	89	0.38	3.03	5.94	1.50	1.74
-10	**(+14)**	692	174	203	101	0.43	3.96	6.83	1.72	2.00

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **65ºC (+149ºF))**
@220V60Hz **Static**

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]
-35	**(-31)**	78	20	23	44	0.22	0.44	1.76	0.44	0.52
-30	**(-22)**	131	33	39	53	0.25	0.74	2.55	0.64	0.75
-25	**(-13)**	217	55	64	64	0.29	1.23	3.42	0.86	1.00
-20	**(- 4)**	331	83	97	77	0.34	1.89	4.30	1.08	1.26
-15	**(+ 5)**	471	119	138	91	0.39	2.69	5.16	1.30	1.51
-10	**(+14)**	633	159	185	107	0.44	3.62	5.95	1.50	1.74

F - EXTERNAL CHARACTERISTICS

1 Base plate	New Base Plate EUEM		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted 42º up + 45° to Back		
3.2 DISCHARGE	4.94 +0.08/-0.08	[mm]	(0.194" +0.003"/-0.003")
3.2.1 Material	Copper		
3.2.2 Shape	Slanted 30° up + 24° to Back		
3.3 PROCESS	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.3.1 Material	Copper		
3.3.2 Shape	Slanted 45° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		