

COMPRESSOR DEFINITION

Designation	ER US60HLP
Nominal Voltage/Frequency	200-240 V 50 Hz
Engineering Number	513300683

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	200-240 / 50	[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 Expansion device	Capillary tube		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	Static	-	-
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	14.2	[kgf/cm ²] (202 psig)	/ °C - °F
9.2 Peak	15.9	[kgf/cm ²] (226 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation		[hp]
2 Displacement	5.19	[cm ³] (0.317 cu.in)
2.1 Bore [mm]	21.000	
2.2 Stroke [mm]	15.000	
3 Lubricant charge	180	[ml] (6.09 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	7.2	[kg] (15.87 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	200-240 V 50 Hz ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	8M220MD3/QPS2-A22MD3 091	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	5(400)	[µF(VAC minimum)]
5 Motor protection	4TM232NFBYY-53	
6 Start winding resistance		[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance		[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	EAC	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			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]
529	133	155	109	0.54	3.01	4.84	1.22	1.42

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		ASHRAE32 Static				(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]
-35 (-31)	306	77	90	74	0.39	1.73	4.13	1.04	1.21
-30 (-22)	417	105	122	84	0.43	2.36	4.97	1.25	1.46
-25 (-13)	544	137	159	94	0.47	3.09	5.81	1.46	1.70
-20 (- 4)	697	176	204	104	0.52	3.97	6.70	1.69	1.96
-15 (+ 5)	886	223	259	115	0.56	5.06	7.71	1.94	2.26
-10 (+14)	1119	282	328	126	0.61	6.41	8.88	2.24	2.60

TEST CONDITIONS: @220V50Hz		ASHRAE32 Static				(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]
-35 (-31)	289	73	85	76	0.41	1.63	3.77	0.95	1.10
-30 (-22)	398	100	117	87	0.45	2.26	4.53	1.14	1.33
-25 (-13)	522	131	153	99	0.50	2.96	5.25	1.32	1.54
-20 (- 4)	668	168	196	112	0.55	3.80	5.99	1.51	1.75
-15 (+ 5)	848	214	249	125	0.61	4.84	6.80	1.71	1.99
-10 (+14)	1070	270	314	138	0.67	6.13	7.74	1.95	2.27

TEST CONDITIONS: @220V50Hz		ASHRAE32 Static				(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]
-35 (-31)	237	60	69	76	0.40	1.34	3.20	0.81	0.94
-30 (-22)	348	88	102	89	0.45	1.97	3.93	0.99	1.15
-25 (-13)	471	119	138	103	0.51	2.68	4.59	1.16	1.35
-20 (- 4)	615	155	180	118	0.58	3.50	5.23	1.32	1.53
-15 (+ 5)	790	199	231	134	0.64	4.51	5.90	1.49	1.73
-10 (+14)	1004	253	294	150	0.72	5.75	6.66	1.68	1.95

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		ASHRAE32 Static			(Condensing temperature 65°C (+149°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]
-35	(-31)	205	52	60	72	0.39	1.16	2.81	0.71	0.82
-30	(-22)	321	81	94	88	0.45	1.82	3.57	0.90	1.05
-25	(-13)	447	113	131	105	0.52	2.54	4.22	1.06	1.24
-20	(- 4)	591	149	173	123	0.60	3.37	4.81	1.21	1.41
-15	(+ 5)	764	192	224	142	0.68	4.36	5.40	1.36	1.58
-10	(+14)	973	245	285	161	0.77	5.58	6.04	1.52	1.77

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard 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 40° up + 45° to Back		
3.2 DISCHARGE	4.9 +0.10/-0.05	[mm]	(0.193" +0.004"/-0.002")
3.2.1 Material	Copper		
3.2.2 Shape	Slanted 0° 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 40° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		