

COMPRESSOR DEFINITION

Designation	ER UE70HLP
Nominal Voltage/Frequency	220 V 50 Hz
Engineering Number	513306588

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	220 / 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	198 to 242 V	-
8.2 LBP (43°C Ambient temperature)	Static	198 to 242 V	-
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	16,2	[kgf/cm ²] (230 psig)	/ °C - °F
9.2 Peak (gauge)	20,6	[kgf/cm ²] (293 psig)	
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/5	[hp]
2 Displacement	5,96	[cm ³] (0.364 cu.in)
2.1 Bore [mm]	22,500	
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 / ISO10	
4 Weight (with oil charge)	7,49	[kg] (16.51 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm ²] (2.84 to 4.27 psig)

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	7M220MD3/8EA17C3/8EA17E63/8M220MD3/QPS2-A22MD3/Q	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	5(300)	[µF(VAC minimum)]
5 Motor protection	4TM232KFBYY-53	
6 Start winding resistance	18.88	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	19.62	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	5.80	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	1.40	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	1.58	[A] - Measured according to UL 984
11 Approval boards certification	IRAM	

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]
567	143	166	118	0,65	3,22	4,83	1,22	1,42

E - PERFORMANCE - CURVES

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)	293	74	86	79	0,52	1,66	3,68	0,93	1,08
-30 (-22)	413	104	121	94	0,57	2,34	4,42	1,11	1,30
-25 (-13)	566	143	166	109	0,62	3,21	5,22	1,32	1,53
-20 (- 4)	753	190	221	124	0,67	4,28	6,08	1,53	1,78
-15 (+ 5)	974	245	285	140	0,73	5,56	6,98	1,76	2,05
-10 (+14)	1231	310	361	156	0,79	7,05	7,92	2,00	2,32

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)	230	58	67	79	0,52	1,30	2,96	0,75	0,87
-30 (-22)	351	89	103	94	0,57	1,99	3,74	0,94	1,10
-25 (-13)	508	128	149	110	0,62	2,89	4,56	1,15	1,34
-20 (- 4)	701	177	205	128	0,69	3,99	5,41	1,36	1,58
-15 (+ 5)	931	235	273	147	0,76	5,32	6,28	1,58	1,84
-10 (+14)	1199	302	351	168	0,84	6,87	7,16	1,80	2,10

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)	207	52	61	76	0,51	1,17	2,70	0,68	0,79
-30 (-22)	303	76	89	90	0,55	1,72	3,39	0,85	0,99
-25 (-13)	437	110	128	108	0,61	2,48	4,08	1,03	1,20
-20 (- 4)	609	153	178	128	0,68	3,47	4,78	1,21	1,40
-15 (+ 5)	821	207	241	150	0,77	4,69	5,48	1,38	1,61
-10 (+14)	1074	271	315	174	0,87	6,15	6,16	1,55	1,81

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		CECOMAF 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)	263	66	77	79	0,52	1,66	3,30	0,83	0,97
-30	(-22)	370	93	108	94	0,57	2,34	3,96	1,00	1,16
-25	(-13)	507	128	149	109	0,62	3,21	4,68	1,18	1,37
-20	(- 4)	674	170	197	124	0,67	4,28	5,44	1,37	1,60
-15	(+ 5)	872	220	255	140	0,73	5,56	6,25	1,57	1,83
-10	(+14)	1102	278	323	156	0,79	7,05	7,09	1,79	2,08

TEST CONDITIONS: @220V50Hz		CECOMAF 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)	187	47	55	79	0,52	1,30	2,41	0,61	0,71
-30	(-22)	286	72	84	94	0,57	1,99	3,04	0,77	0,89
-25	(-13)	413	104	121	110	0,62	2,89	3,70	0,93	1,08
-20	(- 4)	570	144	167	128	0,69	3,99	4,39	1,11	1,29
-15	(+ 5)	756	190	221	147	0,76	5,32	5,09	1,28	1,49
-10	(+14)	972	245	285	168	0,84	6,87	5,80	1,46	1,70

TEST CONDITIONS: @220V50Hz		CECOMAF 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)	150	38	44	76	0,51	1,17	1,96	0,49	0,57
-30	(-22)	220	55	64	90	0,55	1,72	2,46	0,62	0,72
-25	(-13)	316	80	93	108	0,61	2,48	2,96	0,75	0,87
-20	(- 4)	441	111	129	128	0,68	3,47	3,47	0,87	1,02
-15	(+ 5)	593	150	174	150	0,77	4,69	3,97	1,00	1,16
-10	(+14)	775	195	227	174	0,87	6,15	4,45	1,12	1,30

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal 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 42° 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		