

COMPRESSOR DEFINITION

Designation	EG YS90CLP
Nominal Voltage/Frequency	220-240 V 50-60 Hz
Engineering Number	513701429

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	220-240 / 50-60	[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	RSIR		
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 255 V	198 to 255 V
8.2 LBP (43°C Ambient temperature)	Static	198 to 255 V	198 to 255 V
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	6.9	[kgf/cm ²] (98 psig)	/ °C - °F
9.2 Peak	7.8	[kgf/cm ²] (111 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/4+	[hp]
2 Displacement	12.21	[cm ³] (0.745 cu.in)
2.1 Bore [mm]	26.000	
2.2 Stroke [mm]	23.000	
3 Lubricant charge	280	[ml] (9.47 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO5	
4 Weight (with oil charge)	11.22	[kg] (24.74 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220-240 V 50-60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	7M220MC1/8EA17C1/8M220MC1/QPS2-A22MG1/QPS2-A22MG	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM319KFBYY-53	
6 Start winding resistance	23.31	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	11.64	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	8.80/8.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	1.55/1.40	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	IMTRO - TUV - VDE	

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]
741	187	217	127	0.97	2.33	5.84	1.47	1.71

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]
905	228	265	159	0.98	2.84	5.70	1.44	1.67

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)	415	105	122	84	0.87	1.30	4.96	1.25	1.45
-30 (-22)	562	142	165	96	0.89	1.76	5.86	1.48	1.72
-25 (-13)	733	185	215	108	0.92	2.30	6.82	1.72	2.00
-20 (- 4)	940	237	275	120	0.95	2.95	7.85	1.98	2.30
-15 (+ 5)	1193	301	350	133	0.99	3.75	8.98	2.26	2.63
-10 (+14)	1505	379	441	147	1.04	4.75	10.21	2.57	2.99

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)	399	101	117	88	0.87	1.25	4.55	1.15	1.33
-30 (-22)	544	137	159	102	0.90	1.70	5.32	1.34	1.56
-25 (-13)	709	179	208	116	0.94	2.22	6.13	1.54	1.80
-20 (- 4)	906	228	266	130	0.98	2.85	6.98	1.76	2.05
-15 (+ 5)	1147	289	336	145	1.03	3.61	7.90	1.99	2.32
-10 (+14)	1443	364	423	162	1.09	4.55	8.91	2.24	2.61

E - PERFORMANCE - CURVES

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)	368	93	108	88	0.88	1.15	4.17	1.05	1.22	
-30 (-22)	512	129	150	105	0.91	1.61	4.86	1.22	1.42	
-25 (-13)	673	170	197	121	0.95	2.11	5.56	1.40	1.63	
-20 (- 4)	862	217	253	137	1.00	2.71	6.28	1.58	1.84	
-15 (+ 5)	1091	275	320	155	1.06	3.43	7.04	1.78	2.06	
-10 (+14)	1371	346	402	174	1.13	4.33	7.87	1.98	2.31	

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)	323	81	95	86	0.87	1.01	3.74	0.94	1.10	
-30 (-22)	467	118	137	105	0.91	1.46	4.39	1.11	1.29	
-25 (-13)	624	157	183	123	0.96	1.96	5.03	1.27	1.47	
-20 (- 4)	806	203	236	142	1.02	2.53	5.67	1.43	1.66	
-15 (+ 5)	1024	258	300	162	1.09	3.23	6.33	1.60	1.86	
-10 (+14)	1291	325	378	184	1.16	4.07	7.03	1.77	2.06	

TEST CONDITIONS: @220V60Hz		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)	520	131	152	95	0.76	1.63	5.47	1.38	1.60	
-30 (-22)	682	172	200	113	0.82	2.14	6.09	1.53	1.78	
-25 (-13)	878	221	257	128	0.87	2.75	6.90	1.74	2.02	
-20 (- 4)	1115	281	327	142	0.92	3.50	7.87	1.98	2.31	
-15 (+ 5)	1402	353	411	156	0.97	4.41	8.96	2.26	2.63	
-10 (+14)	1747	440	512	172	1.03	5.51	10.14	2.55	2.97	

TEST CONDITIONS: @220V60Hz		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)	503	127	147	105	0.80	1.57	4.80	1.21	1.41	
-30 (-22)	669	169	196	125	0.86	2.10	5.34	1.35	1.56	
-25 (-13)	866	218	254	144	0.92	2.72	6.05	1.52	1.77	
-20 (- 4)	1102	278	323	160	0.98	3.46	6.90	1.74	2.02	
-15 (+ 5)	1385	349	406	177	1.05	4.36	7.84	1.98	2.30	
-10 (+14)	1724	434	505	194	1.13	5.44	8.85	2.23	2.59	

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V60Hz		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)	446	112	131	103	0.79	1.40	4.34	1.09	1.27
-30	(-22)	621	157	182	128	0.87	1.95	4.82	1.21	1.41
-25	(-13)	825	208	242	151	0.95	2.59	5.45	1.37	1.60
-20	(- 4)	1065	268	312	172	1.03	3.35	6.20	1.56	1.82
-15	(+ 5)	1350	340	396	193	1.11	4.25	7.02	1.77	2.06
-10	(+14)	1688	425	495	215	1.21	5.33	7.88	1.98	2.31

TEST CONDITIONS: @220V60Hz		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)	350	88	103	89	0.75	1.10	3.97	1.00	1.16
-30	(-22)	540	136	158	121	0.85	1.69	4.41	1.11	1.29
-25	(-13)	755	190	221	151	0.95	2.37	4.98	1.25	1.46
-20	(- 4)	1005	253	294	178	1.05	3.16	5.64	1.42	1.65
-15	(+ 5)	1297	327	380	205	1.16	4.08	6.35	1.60	1.86
-10	(+14)	1639	413	480	232	1.28	5.17	7.08	1.78	2.07

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal EG/F		
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	Straight		
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	Straight		
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	Straight		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		