

COMPRESSOR DEFINITION

Designation	NB 6165E
Nominal Voltage/Frequency	115 V 60 Hz
Engineering Number	294NG71

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-22		
3 Nominal voltage and frequency	115 / 60	[V / Hz]	
4 Application type	High Back Pressure (Commercial Compressors)		
4.1 Evaporating temperature range	-15°C to 10°C	(5°F to 50°F)	
5 Motor type	CSIR		
6 Starting torque	HST - 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)	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	21.7	[kgf/cm ²] (309 psig)	/ °C - °F
9.2 Peak (gauge)	24.2	[kgf/cm ²] (344 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/4	[hp]
2 Displacement	6.05	[cm ³] (0.369 cu.in)
2.1 Bore [mm]	21.996	
2.2 Stroke [mm]	15.920	
3 Lubricant charge	350	[ml] (11.84 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO46	
4 Weight (with oil charge)	10	[kg] (22.05 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm ²] (2.84 to 4.27 psig)

C - ELECTRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	115 V 60 Hz 1~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	MTRPH-0018	
3 Start capacitor	130-156(330)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0538/G9	
6 Start winding resistance	7.26	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	1.36	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	29.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	5.00	[A] - Measured according to UL 984
11 Approval boards certification	UL	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @100V50Hz			ASHRAEHBP46 Fan		Evaporating temperature (Condensing temperature		7.2°C (44.96°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]
2580	650	756	446	5.30	15.93	5.78	1.46	1.69

E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V50Hz			ASHRAE46 Fan		(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]
-15	(+5)	1496	377	438	275	4.05	7.86	5.44	1.37	1.59
-10	(+14)	1819	458	533	298	4.18	9.59	6.10	1.54	1.79
-5	(+23)	2199	554	644	321	4.31	11.65	6.85	1.73	2.01
0	(+32)	2636	664	773	343	4.44	14.04	7.69	1.94	2.25
+5	(+41)	3132	789	918	365	4.57	16.79	8.58	2.16	2.52
+10	(+50)	3685	929	1080	386	4.70	19.91	9.54	2.40	2.80

TEST CONDITIONS: @100V50Hz			ASHRAE46 Fan		(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]
-15	(+5)	1287	324	377	286	4.10	7.21	4.51	1.14	1.32
-10	(+14)	1578	398	462	313	4.27	8.89	5.04	1.27	1.48
-5	(+23)	1922	484	563	341	4.45	10.88	5.63	1.42	1.65
0	(+32)	2319	584	679	369	4.62	13.21	6.28	1.58	1.84
+5	(+41)	2768	697	811	397	4.80	15.88	6.97	1.76	2.04
+10	(+50)	3269	824	958	425	4.97	18.90	7.70	1.94	2.26

TEST CONDITIONS: @100V50Hz			ASHRAE46 Fan		(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]
-15	(+5)	1068	269	313	297	4.13	6.45	3.59	0.90	1.05
-10	(+14)	1328	335	389	330	4.35	8.05	4.03	1.02	1.18
-5	(+23)	1634	412	479	363	4.58	9.96	4.51	1.14	1.32
0	(+32)	1988	501	582	396	4.80	12.20	5.02	1.26	1.47
+5	(+41)	2388	602	700	431	5.03	14.77	5.54	1.40	1.62
+10	(+50)	2836	715	831	466	5.25	17.69	6.08	1.53	1.78

E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V60Hz		ASHRAE46 Fan			(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]
-15	(+5)	1751	441	513	321	4.89	9.19	5.45	1.37	1.60
-10	(+14)	2128	536	623	348	5.05	11.22	6.11	1.54	1.79
-5	(+23)	2572	648	754	375	5.20	13.63	6.86	1.73	2.01
0	(+32)	3084	777	904	401	5.35	16.43	7.69	1.94	2.25
+5	(+41)	3664	923	1074	426	5.50	19.65	8.60	2.17	2.52
+10	(+50)	4312	1087	1263	451	5.66	23.30	9.56	2.41	2.80

TEST CONDITIONS: @100V60Hz		ASHRAE46 Fan			(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]
-15	(+5)	1505	379	441	334	4.94	8.44	4.51	1.14	1.32
-10	(+14)	1846	465	541	367	5.15	10.40	5.04	1.27	1.48
-5	(+23)	2249	567	659	399	5.36	12.73	5.63	1.42	1.65
0	(+32)	2713	684	795	432	5.57	15.45	6.27	1.58	1.84
+5	(+41)	3238	816	949	465	5.78	18.58	6.97	1.76	2.04
+10	(+50)	3825	964	1121	497	5.99	22.12	7.70	1.94	2.26

TEST CONDITIONS: @100V60Hz		ASHRAE46 Fan			(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]
-15	(+5)	1250	315	366	348	4.98	7.54	3.59	0.90	1.05
-10	(+14)	1553	391	455	386	5.25	9.42	4.03	1.01	1.18
-5	(+23)	1912	482	560	424	5.52	11.66	4.51	1.14	1.32
0	(+32)	2326	586	682	464	5.79	14.27	5.02	1.26	1.47
+5	(+41)	2795	704	819	504	6.06	17.28	5.55	1.40	1.63
+10	(+50)	3319	836	973	545	6.33	20.70	6.09	1.53	1.78

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	8.03 +0.07/+0.00	[mm]	(0.316" +0.003"/+0.000")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted 42°		
3.2 DISCHARGE	6.45 +0.10/+0.00	[mm]	(0.254" +0.004"/+0.000")
3.2.1 Material	Copper		
3.2.2 Shape	Straight		
3.3 PROCESS	6.45 +0.10/+0.00	[mm]	(0.254" +0.004"/+0.000")
3.3.1 Material	Copper		
3.3.2 Shape	Slanted 42°		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		