

COMPRESSOR DEFINITION

Designation	NB Y5170Y
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	812CA44

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	220-240 / 50	[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	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)	-	-	-
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	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	14.28	[cm ³] (0.871 cu.in)
2.1 Bore [mm]	30.157	
2.2 Stroke [mm]	20.000	
3 Lubricant charge	350	[ml] (11.84 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO5	
4 Weight (with oil charge)	10.8	[kg] (23.81 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220-240 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	V230	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	8(400)	[µF(VAC minimum)]
5 Motor protection	AE19BU8	
6 Start winding resistance	17.65	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	14.15	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	15.00	[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)	1.32	[A] - Measured according to UL 984
11 Approval boards certification	VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			ASHRAEHBP46 Static		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]
2874	724	842	272	1.25	10.12	10.57	2.66	3.10

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		ASHRAE46 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]
-15	(+5)	1350	340	396	151	0.70	4.04	8.96	2.26	2.62
-10	(+14)	1733	437	508	167	0.77	5.19	10.39	2.62	3.04
-5	(+23)	2183	550	640	182	0.84	6.56	12.02	3.03	3.52
0	(+32)	2694	679	789	195	0.90	8.11	13.80	3.48	4.05
+5	(+41)	3256	821	954	208	0.97	9.83	15.67	3.95	4.59
+10	(+50)	3864	974	1132	220	1.03	11.71	17.57	4.43	5.15

TEST CONDITIONS: @220V50Hz		ASHRAE46 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]
-15	(+5)	1169	295	343	162	0.75	3.76	7.22	1.82	2.11
-10	(+14)	1524	384	447	183	0.84	4.92	8.35	2.10	2.45
-5	(+23)	1944	490	570	201	0.92	6.28	9.65	2.43	2.83
0	(+32)	2421	610	709	218	1.00	7.85	11.07	2.79	3.24
+5	(+41)	2948	743	864	235	1.08	9.59	12.56	3.16	3.68
+10	(+50)	3517	886	1030	251	1.16	11.48	14.04	3.54	4.11

TEST CONDITIONS: @220V50Hz		ASHRAE46 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]
-15	(+5)	1061	267	311	173	0.81	3.71	6.12	1.54	1.79
-10	(+14)	1369	345	401	198	0.91	4.79	6.93	1.75	2.03
-5	(+23)	1739	438	510	220	1.01	6.10	7.89	1.99	2.31
0	(+32)	2164	545	634	242	1.11	7.62	8.94	2.25	2.62
+5	(+41)	2636	664	772	263	1.21	9.31	10.03	2.53	2.94
+10	(+50)	3148	793	922	284	1.32	11.16	11.09	2.79	3.25

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted 42°		
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	6.1 +0.10/+0.00	[mm]	(0.240" +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		