

COMPRESSOR DEFINITION

Designation	NJ X6244US
Nominal Voltage/Frequency	400 V 50 Hz / 440 V 60 Hz
Engineering Number	887BS21

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-290		
3 Nominal voltage and frequency	400 / 50	[V / Hz]	
4 Application type	Medium Back Pressure (Commercial Compressors)		
4.1 Evaporating temperature range	-20°C to 10°C	(-4°F to 50°F)	
5 Motor type	3PHASE		
6 Starting torque	HST - Hight 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 temperature			
9.1 Operating	18.4	[kgf/cm ²] (262 psig)	/ °C - °F
9.2 Peak	20.6	[kgf/cm ²] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1 3/4	[hp]
2 Displacement	37.88	[cm ³] (2.312 cu.in)
2.1 Bore [mm]	44.980	
2.2 Stroke [mm]	23.850	
3 Lubricant charge	750	[ml] (25.36 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	21.7	[kg] (47.84 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	400 V 50 Hz / 440 V 60 Hz 3 ~ (Three phase)	
2 Starting device type	3PHASE	
2.1 Starting device		
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	34HM294-50	
6 Start winding resistance	7.77	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	7.77	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	23.00/23.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	-	[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	UL - VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @440V60Hz			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]	
20375	5135	5970	2410	3.97	69.73	8.45	2.13	2.48	

E - PERFORMANCE - CURVES

TEST CONDITIONS: @440V50Hz		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]
-20	(- 4)	7955	2005	2331	1042	2.57	22.45	7.64	1.92	2.24
-15	(+ 5)	9827	2476	2880	1120	2.71	27.85	8.77	2.21	2.57
-10	(+14)	12062	3040	3535	1203	2.82	34.32	10.02	2.53	2.94
-5	(+23)	14661	3695	4296	1287	2.90	41.90	11.39	2.87	3.34
0	(+32)	17623	4441	5164	1371	2.96	50.64	12.86	3.24	3.77
+5	(+41)	20948	5279	6138	1455	3.00	60.60	14.41	3.63	4.22
+10	(+50)	24636	6208	7219	1536	3.02	71.80	16.04	4.04	4.70

TEST CONDITIONS: @440V50Hz		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]
-20	(- 4)	6881	1734	2016	1117	2.58	21.01	6.17	1.56	1.81
-15	(+ 5)	8534	2151	2501	1223	2.74	26.14	6.98	1.76	2.05
-10	(+14)	10546	2658	3090	1330	2.88	32.44	7.92	2.00	2.32
-5	(+23)	12918	3255	3785	1437	3.01	39.94	8.98	2.26	2.63
0	(+32)	15650	3944	4586	1543	3.14	48.68	10.14	2.56	2.97
+5	(+41)	18741	4723	5492	1646	3.25	58.72	11.39	2.87	3.34
+10	(+50)	22192	5592	6503	1744	3.35	70.11	12.72	3.20	3.73

TEST CONDITIONS: @440V50Hz		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]
-20	(- 4)	6045	1523	1771	1200	2.63	20.13	5.03	1.27	1.47
-15	(+ 5)	7412	1868	2172	1335	2.81	24.80	5.55	1.40	1.63
-10	(+14)	9135	2302	2677	1470	2.99	30.72	6.21	1.57	1.82
-5	(+23)	11213	2826	3286	1603	3.16	37.92	6.99	1.76	2.05
0	(+32)	13648	3439	3999	1732	3.34	46.46	7.88	1.99	2.31
+5	(+41)	16438	4142	4817	1856	3.52	56.39	8.86	2.23	2.60
+10	(+50)	19584	4935	5739	1974	3.70	67.74	9.92	2.50	2.91

E - PERFORMANCE - CURVES

TEST CONDITIONS: @440V60Hz		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]
-20	(- 4)	9299	2343	2725	1236	2.38	26.24	7.52	1.90	2.20
-15	(+ 5)	11711	2951	3432	1361	2.54	33.19	8.60	2.17	2.52
-10	(+14)	14456	3643	4236	1490	2.69	41.13	9.69	2.44	2.84
-5	(+23)	17534	4419	5138	1624	2.85	50.11	10.79	2.72	3.16
0	(+32)	20946	5278	6138	1762	3.02	60.20	11.89	3.00	3.48
+5	(+41)	24692	6222	7235	1905	3.20	71.42	12.97	3.27	3.80
+10	(+50)	28771	7250	8430	2052	3.41	83.85	14.02	3.53	4.11

TEST CONDITIONS: @440V60Hz		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]
-20	(- 4)	8068	2033	2364	1334	2.50	24.63	6.06	1.53	1.78
-15	(+ 5)	10178	2565	2982	1480	2.68	31.18	6.88	1.73	2.02
-10	(+14)	12628	3182	3700	1631	2.86	38.84	7.74	1.95	2.27
-5	(+23)	15418	3885	4518	1786	3.04	47.67	8.63	2.17	2.53
0	(+32)	18549	4674	5435	1946	3.23	57.70	9.53	2.40	2.79
+5	(+41)	22020	5549	6452	2110	3.44	69.00	10.43	2.63	3.06
+10	(+50)	25831	6509	7569	2279	3.66	81.61	11.33	2.86	3.32

TEST CONDITIONS: @440V60Hz		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]
-20	(- 4)	7043	1775	2064	1435	2.60	23.45	4.90	1.23	1.44
-15	(+ 5)	8791	2215	2576	1606	2.82	29.42	5.48	1.38	1.61
-10	(+14)	10886	2743	3190	1781	3.03	36.61	6.11	1.54	1.79
-5	(+23)	13329	3359	3906	1961	3.24	45.08	6.79	1.71	1.99
0	(+32)	16119	4062	4723	2145	3.47	54.88	7.51	1.89	2.20
+5	(+41)	19256	4853	5642	2334	3.72	66.06	8.25	2.08	2.42
+10	(+50)	22740	5731	6663	2527	3.98	78.66	9.00	2.27	2.64

F - EXTERNAL CHARACTERISTICS

1 Base plate	American Standard		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	12.81 +0.04/-0.04	[mm]	(0.504" +0.002"/-0.002")
3.1.1 Material	Copper		
3.1.2 Shape	Vertical		
3.2 DISCHARGE	8.04 +0.04/-0.04	[mm]	(0.317" +0.002"/-0.002")
3.2.1 Material	Copper		
3.2.2 Shape	Slanted J		
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	Vertical		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		