

COMPRESSOR DEFINITION

Designation	NE U6181U
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	861JA51

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-290		
2.1 Max Refrigerant Charge	150 [g]		
3 Nominal voltage and frequency	220-240 / 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	CSIR		
6 Starting torque	HST - Hight starting torque		
7 Expantion 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)	19,1	[kgf/cm²] (272 psig)	/ °C - °F
9.2 Peak (gauge)	21,2	[kgf/cm²] (301 psig)	
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/3	[hp]
2 Displacement	7,28	[cm ³] (0.444 cu.in)
2.1 Bore [mm]	26,497	
2.2 Stroke [mm]	13,200	
3 Lubricant charge	350	[ml] (11.84 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	10	[kg] (22.05 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	Current Relay	
2.1 Starting device	MTRPH-0025-59	
3 Start capacitor	43-53(330)	[μF(VAC minimum)]
4 Run capacitor	-	[μF(VAC minimum)]
5 Motor protection	T0866/G6	
6 Start winding resistance	[Ω at 25°C (77°F)] +/- 8%	
7 Run winding resistance	[Ω at 25°C (77°F)] +/- 8%	
8 LRA - Locked rotor amperage (50 Hz)	13.00	[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)	-	[A] - Measured according to UL 984
11 Approval boards certification	VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			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]
3413	860	1000	370	2,18	11,68	9,22	2,32	2,70

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		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)	1556	392	456	218	1,66	4,39	7,12	1,79	2,09
-15	(+ 5)	1936	488	567	235	1,75	5,49	8,21	2,07	2,41
-10	(+14)	2381	600	698	249	1,79	6,78	9,55	2,41	2,80
-5	(+23)	2894	729	848	260	1,81	8,27	11,14	2,81	3,27
0	(+32)	3472	875	1018	267	1,82	9,98	13,02	3,28	3,81
+5	(+41)	4119	1038	1207	272	1,83	11,91	15,19	3,83	4,45
+10	(+50)	4833	1218	1416	273	1,85	14,08	17,66	4,45	5,17

TEST CONDITIONS: @220V50Hz		ASHRAE46 Fan				(Condensing temperature 45°C (+113°F))				
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-20	(- 4)	1338	337	392	232	1,72	4,08	5,79	1,46	1,70
-15	(+ 5)	1668	420	489	255	1,79	5,11	6,54	1,65	1,92
-10	(+14)	2063	520	605	275	1,84	6,35	7,47	1,88	2,19
-5	(+23)	2523	636	739	292	1,88	7,80	8,59	2,16	2,52
0	(+32)	3048	768	893	306	1,92	9,48	9,92	2,50	2,91
+5	(+41)	3638	917	1066	317	1,99	11,40	11,46	2,89	3,36
+10	(+50)	4295	1082	1258	325	2,08	13,57	13,25	3,34	3,88

TEST CONDITIONS: @220V50Hz		ASHRAE46 Fan			(Condensing temperature 55°C (+131°F))					
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-20	(- 4)	1162	293	340	245	1,75	3,87	4,71	1,19	1,38
-15	(+ 5)	1434	361	420	274	1,83	4,80	5,26	1,32	1,54
-10	(+14)	1768	446	518	301	1,91	5,94	5,91	1,49	1,73
-5	(+23)	2165	546	635	325	1,99	7,32	6,68	1,68	1,96
0	(+32)	2627	662	770	346	2,10	8,94	7,59	1,91	2,22
+5	(+41)	3152	794	924	364	2,24	10,81	8,65	2,18	2,53
+10	(+50)	3742	943	1096	379	2,43	12,94	9,88	2,49	2,89

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	8,1 +0.10/+0.00	[mm]	(0.319" +0.004"/+0.000")
3.1.1 Material	Copper		
3.1.2 Shape	Vertical		
3.2 DISCHARGE	6,1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.2.1 Material	Copper		
3.2.2 Shape	Vertical		
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	Vertical		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		