

COMPRESSOR DEFINITION

Designation	NE U6181U
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	861JE92

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-290		
3 Nominal voltage and frequency	115-127 / 60	[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 - 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 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	[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	AB / ISO32	
4 Weight (with oil charge)	10.1	[kg] (22.27 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	115-127 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	MTRPH-60-59	
3 Start capacitor	189-227(250)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	MSP26AHK-3265	
6 Start winding resistance	7.19	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	1.57	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	30.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	5.00	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	CCC - UL	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @127V60Hz			ARIMBP Fan		Evaporating temperature (Condensing temperature		-6.7°C (19.94°F) 48.9°C (120.02°F)	
Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
2160	544	633	368	4.58	9.03	5.87	1.48	1.72

E - PERFORMANCE - CURVES

TEST CONDITIONS: @127V60Hz			ARI4 Fan		(Condensing temperature 35°C (+95°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-20	(- 4)	1580	398	463	277	4.11	5.58	5.71	1.44	1.67
-15	(+ 5)	1969	496	577	298	4.21	7.00	6.60	1.66	1.93
-10	(+14)	2427	612	711	317	4.30	8.70	7.67	1.93	2.25
-5	(+23)	2954	744	866	331	4.38	10.69	8.92	2.25	2.62
0	(+32)	3550	895	1040	343	4.45	12.99	10.37	2.61	3.04
+5	(+41)	4216	1062	1235	351	4.52	15.62	12.02	3.03	3.52
+10	(+50)	4950	1248	1451	356	4.58	18.58	13.88	3.50	4.07

TEST CONDITIONS: @127V60Hz			ARI4 Fan		(Condensing temperature 45°C (+113°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-20	(- 4)	1325	334	388	297	4.24	5.18	4.47	1.13	1.31
-15	(+ 5)	1662	419	487	322	4.34	6.54	5.16	1.30	1.51
-10	(+14)	2064	520	605	344	4.42	8.19	5.98	1.51	1.75
-5	(+23)	2531	638	742	364	4.51	10.15	6.95	1.75	2.04
0	(+32)	3063	772	897	380	4.58	12.44	8.05	2.03	2.36
+5	(+41)	3659	922	1072	394	4.65	15.07	9.30	2.34	2.72
+10	(+50)	4319	1088	1266	405	4.71	18.05	10.70	2.70	3.13

TEST CONDITIONS: @127V60Hz			ARI4 Fan		(Condensing temperature 55°C (+131°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-20	(- 4)	1082	273	317	304	4.25	4.76	3.55	0.90	1.04
-15	(+ 5)	1356	342	397	337	4.40	6.00	4.04	1.02	1.18
-10	(+14)	1690	426	495	367	4.56	7.56	4.61	1.16	1.35
-5	(+23)	2084	525	611	395	4.70	9.44	5.27	1.33	1.54
0	(+32)	2539	640	744	421	4.84	11.67	6.01	1.51	1.76
+5	(+41)	3054	770	895	445	4.98	14.25	6.85	1.73	2.01
+10	(+50)	3629	914	1063	467	5.11	17.21	7.79	1.96	2.28

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
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	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		