

COMPRESSOR DEFINITION

Designation	NE U2140GK
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	958JA51

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-404A		
3 Nominal voltage and frequency	220-240 / 50	[V / Hz]	
4 Application type	Low Back Pressure R404A		
4.1 Evaporating temperature range	-40°C to -10°C	(-40°F to 14°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)	25,7	[kgf/cm ²] (365 psig)	/ °C - °F
9.2 Peak (gauge)	28,7	[kgf/cm ²] (408 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/2	[hp]
2 Displacement	8,77	[cm ³] (0.535 cu.in)
2.1 Bore [mm]	26,497	
2.2 Stroke [mm]	15,920	
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)	10,6	[kg] (23.37 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-0025-65	
3 Start capacitor	64-77(330)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	MST38AMK-3259	
6 Start winding resistance	24.26	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	7.79	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	13.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	2.63	[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			ASHRAELBP32 Fan		Evaporating temperature (Condensing temperature		-23,3°C (-9,94°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]
1660	418	486	357	2,06	11,25	4,65	1,17	1,36

TEST CONDITIONS: @220V50Hz			EN12900LBP_HH Fan		Evaporating temperature (Condensing temperature		-35°C (-31°F) 40°C (104°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]
938	236	275	243	1,63	6,90	3,86	0,97	1,13

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			ASHRAE32 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]
-40 (-40)	799	201	234	205	1,52	5,37	3,89	0,98	1,14
-35 (-31)	1049	264	307	238	1,61	7,08	4,42	1,11	1,29
-30 (-22)	1368	345	401	272	1,72	9,26	5,04	1,27	1,48
-25 (-13)	1755	442	514	305	1,83	11,92	5,75	1,45	1,69
-20 (- 4)	2210	557	648	339	1,95	15,09	6,53	1,65	1,91
-15 (+ 5)	2733	689	801	371	2,07	18,78	7,36	1,86	2,16
-10 (+14)	3323	837	974	403	2,20	22,99	8,23	2,07	2,41

TEST CONDITIONS: @220V50Hz			ASHRAE32 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]
-40 (-40)	728	183	213	209	1,52	4,88	3,48	0,88	1,02
-35 (-31)	971	245	285	246	1,63	6,54	3,96	1,00	1,16
-30 (-22)	1281	323	375	284	1,76	8,65	4,50	1,13	1,32
-25 (-13)	1655	417	485	325	1,90	11,22	5,09	1,28	1,49
-20 (- 4)	2095	528	614	367	2,06	14,28	5,71	1,44	1,67
-15 (+ 5)	2600	655	762	410	2,23	17,83	6,34	1,60	1,86
-10 (+14)	3169	799	929	455	2,41	21,88	6,98	1,76	2,05

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		ASHRAE32 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]
-40 (-40)	637	160	187	209	1,52	4,26	3,04	0,77	0,89	
-35 (-31)	869	219	255	249	1,64	5,84	3,49	0,88	1,02	
-30 (-22)	1165	294	341	293	1,79	7,85	3,97	1,00	1,16	
-25 (-13)	1523	384	446	341	1,96	10,30	4,46	1,13	1,31	
-20 (- 4)	1943	490	569	393	2,16	13,21	4,95	1,25	1,45	
-15 (+ 5)	2425	611	711	448	2,38	16,59	5,42	1,37	1,59	
-10 (+14)	2970	748	870	506	2,63	20,46	5,86	1,48	1,72	

TEST CONDITIONS: @220V50Hz		EN12900HH 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]
-40 (-40)	778	196	228	205	1,52	5,39	3,78	0,95	1,11	
-35 (-31)	1023	258	300	238	1,61	7,12	4,31	1,09	1,26	
-30 (-22)	1334	336	391	271	1,72	9,32	4,93	1,24	1,44	
-25 (-13)	1711	431	501	305	1,83	12,00	5,62	1,42	1,65	
-20 (- 4)	2154	543	631	338	1,95	15,18	6,37	1,61	1,87	
-15 (+ 5)	2663	671	780	371	2,07	18,89	7,17	1,81	2,10	
-10 (+14)	3238	816	949	404	2,21	23,13	8,02	2,02	2,35	

TEST CONDITIONS: @220V50Hz		EN12900HH 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]
-40 (-40)	625	158	183	208	1,52	4,87	3,02	0,76	0,88	
-35 (-31)	841	212	246	245	1,63	6,58	3,44	0,87	1,01	
-30 (-22)	1111	280	326	284	1,76	8,72	3,91	0,98	1,14	
-25 (-13)	1435	362	421	324	1,90	11,32	4,41	1,11	1,29	
-20 (- 4)	1814	457	531	367	2,05	14,39	4,94	1,24	1,45	
-15 (+ 5)	2246	566	658	411	2,23	17,95	5,48	1,38	1,60	
-10 (+14)	2733	689	801	455	2,41	22,01	6,01	1,52	1,76	

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		EN12900HH 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]
-40	(-40)	470	118	138	208	1,52	4,23	2,26	0,57	0,66
-35	(-31)	657	165	192	248	1,64	5,94	2,64	0,66	0,77
-30	(-22)	886	223	260	293	1,79	8,05	3,02	0,76	0,89
-25	(-13)	1158	292	339	341	1,96	10,58	3,40	0,86	1,00
-20	(- 4)	1473	371	432	392	2,15	13,55	3,77	0,95	1,11
-15	(+ 5)	1831	461	536	446	2,37	16,98	4,11	1,04	1,20
-10	(+14)	2231	562	654	504	2,61	20,88	4,41	1,11	1,29

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	Slanted 42°		
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	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		