

COMPRESSOR DEFINITION

Designation	J 2152Z
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	164LA01

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	220-240 / 50	[V / Hz]	
4 Application type	Low Back Pressure R134a		
4.1 Evaporating temperature range	-30°C to -5°C	(-22°F to 23°F)	
5 Motor type	CSIR		
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 pressures/temperature			
9.1 Operating (gauge)	16.2	[kgf/cm ²] (230 psig)	/ °C - °F
9.2 Peak (gauge)	20.6	[kgf/cm ²] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1-	[hp]
2 Displacement	27.16	[cm ³] (1.657 cu.in)
2.1 Bore [mm]	38.087	
2.2 Stroke [mm]	23.850	
3 Lubricant charge	890	[ml] (30.10 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	20	[kg] (44.09 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm ²] (2.84 to 4.27 psig)

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	3ARR2KCP176S	
3 Start capacitor	64-77(250)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	MRP24LK-3074	
6 Start winding resistance	24.82	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	3.15	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	24.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	3.00	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	IMQ - 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]
1800	454	527	438	2.93	10.23	4.11	1.04	1.20

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]
-35	(-31)	1132	285	332	304	2.56	6.39	3.56	0.90	1.04
-30	(-22)	1617	408	474	379	2.78	9.16	4.25	1.07	1.25
-25	(-13)	2238	564	656	452	3.00	12.71	4.97	1.25	1.46
-20	(- 4)	2994	754	877	524	3.23	17.04	5.73	1.44	1.68
-15	(+ 5)	3884	979	1138	593	3.47	22.17	6.54	1.65	1.92
-10	(+14)	4908	1237	1438	660	3.71	28.12	7.42	1.87	2.18
-5	(+23)	6067	1529	1778	724	3.97	34.90	8.40	2.12	2.46

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]
-35	(-31)	700	176	205	244	2.41	3.95	2.86	0.72	0.84
-30	(-22)	1234	311	362	335	2.65	6.99	3.68	0.93	1.08
-25	(-13)	1888	476	553	426	2.91	10.72	4.44	1.12	1.30
-20	(- 4)	2662	671	780	517	3.20	15.15	5.15	1.30	1.51
-15	(+ 5)	3555	896	1042	608	3.51	20.29	5.85	1.47	1.71
-10	(+14)	4567	1151	1338	699	3.86	26.16	6.53	1.65	1.91
-5	(+23)	5698	1436	1670	789	4.24	32.78	7.22	1.82	2.12

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]
-35	(-31)	268	67	78	187	2.28	1.50	1.91	0.48	0.56
-30	(-22)	851	214	249	293	2.53	4.82	2.93	0.74	0.86
-25	(-13)	1538	388	451	401	2.82	8.73	3.80	0.96	1.11
-20	(- 4)	2330	587	683	511	3.17	13.26	4.55	1.15	1.33
-15	(+ 5)	3226	813	945	623	3.56	18.41	5.20	1.31	1.52
-10	(+14)	4226	1065	1238	737	4.00	24.21	5.75	1.45	1.69
-5	(+23)	5329	1343	1562	852	4.50	30.65	6.24	1.57	1.83

F - EXTERNAL CHARACTERISTICS

1 Base plate	American Standard		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	9.6 +0.07/+0.00	[mm]	(0.378" +0.003"/+0.000")
3.1.1 Material	Copper		
3.1.2 Shape	Vertical		
3.2 DISCHARGE	8 +0.07/+0.00	[mm]	(0.315" +0.003"/+0.000")
3.2.1 Material	Copper		
3.2.2 Shape	Slanted J		
3.3 PROCESS	9.6 +0.07/+0.00	[mm]	(0.378" +0.003"/+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		