

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM 55NP |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 513302020 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|------------------------------------|-----------------------------------|-----------------------------------|-----------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | Blend | | |
| 3 Nominal voltage and frequency | 220-240 / 50 | [V / Hz] | |
| 4 Application type | Low Back Pressure | | |
| 4.1 Evaporating temperature range | -35°C to -10°C | (-31°F to 14°F) | |
| 5 Motor type | RSCR | | |
| 6 Starting torque | LST - Low Starting Torque | | |
| 7 Expansion device | Capillary tube | | |
| 8 Compressor cooling | Operating voltage range | | |
| | | 50 Hz | 60 Hz |
| 8.1 LBP (32°C Ambient temperature) | Static | 198 to 255 V | - |
| 8.2 LBP (43°C Ambient temperature) | Static | 198 to 255 V | - |
| 8.3 HBP (32°C Ambient temperature) | - | - | - |
| 8.4 HBP (43°C Ambient temperature) | - | - | - |
| 9 Maximum condensing temperature | | | |
| 9.1 Operating | 14.5 | [kgf/cm ²] (206 psig) | / °C - °F |
| 9.2 Peak | 18.2 | [kgf/cm ²] (259 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|-----------------|--|
| 1 Commercial designation | 1/6 | [hp] |
| 2 Displacement | 4.99 | [cm ³] (0.305 cu.in) |
| 2.1 Bore [mm] | 21.000 | |
| 2.2 Stroke [mm] | 14.400 | |
| 3 Lubricant charge | 170 | [ml] (5.75 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ALQUILB / ISO32 | |
| 4 Weight (with oil charge) | 6.97 | [kg] (15.37 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 | PTC | |
| 2.1 Starting device | 8EA17C3/8EA5B3/QPS2-A22MD3 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 4(300) | [µF(VAC minimum)] |
| 5 Motor protection | 4TM189RHBYY-53 | |
| 6 Start winding resistance | 27.50 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 21.50 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | - | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | 0.70 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50 Hz) | - | [A] - Measured according to UL 984 |
| 11 Approval boards certification | CE - IRAM - UKCA | |

D - PERFORMANCE - CHECK POINT DATA

| | | | | | | | | |
|-------------------------------|----------|-----|-----------------------------|-------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAELBP32 Static | | 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] |
| 470 | 118 | 138 | 121 | 0.54 | 3.44 | 3.90 | 0.98 | 1.14 |

E - PERFORMANCE - CURVES

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE32 Static | | (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) | 267 | 67 | 78 | 83 | 0.46 | 1.95 | 3.22 | 0.81 | 0.94 |
| -30 (-22) | 359 | 91 | 105 | 100 | 0.49 | 2.62 | 3.58 | 0.90 | 1.05 |
| -25 (-13) | 477 | 120 | 140 | 116 | 0.53 | 3.49 | 4.11 | 1.04 | 1.21 |
| -20 (- 4) | 619 | 156 | 181 | 130 | 0.57 | 4.53 | 4.75 | 1.20 | 1.39 |
| -15 (+ 5) | 783 | 197 | 229 | 144 | 0.61 | 5.75 | 5.41 | 1.36 | 1.59 |
| -10 (+14) | 968 | 244 | 284 | 161 | 0.66 | 7.14 | 6.04 | 1.52 | 1.77 |

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|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE32 Static | | (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) | 240 | 60 | 70 | 83 | 0.46 | 1.75 | 2.89 | 0.73 | 0.85 |
| -30 (-22) | 318 | 80 | 93 | 100 | 0.49 | 2.32 | 3.19 | 0.80 | 0.94 |
| -25 (-13) | 422 | 106 | 124 | 116 | 0.53 | 3.09 | 3.68 | 0.93 | 1.08 |
| -20 (- 4) | 552 | 139 | 162 | 130 | 0.57 | 4.05 | 4.27 | 1.08 | 1.25 |
| -15 (+ 5) | 705 | 178 | 207 | 144 | 0.61 | 5.18 | 4.90 | 1.23 | 1.43 |
| -10 (+14) | 881 | 222 | 258 | 161 | 0.66 | 6.50 | 5.49 | 1.38 | 1.61 |

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|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE32 Static | | (Condensing temperature 65°C (+149°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) | 194 | 49 | 57 | 83 | 0.46 | 1.41 | 2.36 | 0.59 | 0.69 |
| -30 (-22) | 274 | 69 | 80 | 100 | 0.49 | 2.00 | 2.73 | 0.69 | 0.80 |
| -25 (-13) | 382 | 96 | 112 | 116 | 0.53 | 2.79 | 3.28 | 0.83 | 0.96 |
| -20 (- 4) | 516 | 130 | 151 | 130 | 0.57 | 3.78 | 3.95 | 1.00 | 1.16 |
| -15 (+ 5) | 675 | 170 | 198 | 144 | 0.61 | 4.96 | 4.66 | 1.17 | 1.37 |
| -10 (+14) | 857 | 216 | 251 | 161 | 0.66 | 6.32 | 5.34 | 1.35 | 1.57 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|-------------------------------|------|--------------------------|
| 1 Base plate | Universal EG/F/AMEM version 2 | | |
| 2 Tray holder | Yes | | |
| 3 Connectors | | | |
| 3.1 SUCTION | 6.1 +0.10/+0.00 | [mm] | (0.240" +0.004"/+0.000") |
| 3.1.1 Material | Copper plated steel | | |
| 3.1.2 Shape | Straight | | |
| 3.2 DISCHARGE | 5 +0.18/-0.06 | [mm] | (0.197" +0.007"/-0.002") |
| 3.2.1 Material | Copper plated steel | | |
| 3.2.2 Shape | Slanted | | |
| 3.3 PROCESS | 6.1 +0.10/+0.00 | [mm] | (0.240" +0.004"/+0.000") |
| 3.3.1 Material | Copper plated steel | | |
| 3.3.2 Shape | Straight | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |