

COMPRESSOR DEFINITION

| | |
|---------------------------|------------------------|
| Designation | EM Y3115Z |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 171AA72 |

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-Medium Back Pressure (Light Commercial) | | |
| 4.1 Evaporating temperature range | -35°C to 0°C | (-31°F to 32°F) | |
| 5 Motor type | RSIR | | |
| 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) | - | - | - |
| 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) | |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|---------------|----------------------------------|
| 1 Commercial designation | 1/6 | [hp] |
| 2 Displacement | 6,09 | [cm ³] (0.372 cu.in) |
| 2.1 Bore [mm] | 21,000 | |
| 2.2 Stroke [mm] | 17,600 | |
| 3 Lubricant charge | 150 | [ml] (5.07 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ESTER / ISO10 | |
| 4 Weight (with oil charge) | 7,6 | [kg] (16.75 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 | PTC | |
| 2.1 Starting device | V230 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | AE19BU8 | |
| 6 Start winding resistance | 16.25 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 17.60 | [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) | - | [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 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] |
| 555 | 140 | 163 | 117 | 0,90 | 3,15 | 4,74 | 1,19 | 1,39 |

E - PERFORMANCE - CURVES

| | | | | | | | | | |
|--------------------------------------|----------------------------|----------|----------------------------------|-----------------------------|---|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE32 Static | | (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) | 304 | 77 | 89 | 80 | 0,84 | 1,72 | 3,83 | 0,97 | 1,12 |
| -30 (-22) | 448 | 113 | 131 | 94 | 0,86 | 2,54 | 4,76 | 1,20 | 1,39 |
| -25 (-13) | 610 | 154 | 179 | 107 | 0,88 | 3,46 | 5,69 | 1,43 | 1,67 |
| -20 (- 4) | 797 | 201 | 233 | 120 | 0,91 | 4,53 | 6,65 | 1,68 | 1,95 |
| -15 (+ 5) | 1016 | 256 | 298 | 132 | 0,94 | 5,80 | 7,69 | 1,94 | 2,25 |
| -10 (+14) | 1276 | 321 | 374 | 145 | 0,97 | 7,31 | 8,83 | 2,22 | 2,59 |
| -5 (+23) | 1582 | 399 | 464 | 156 | 1,01 | 9,10 | 10,10 | 2,55 | 2,96 |
| 0 (+32) | 1942 | 489 | 569 | 168 | 1,05 | 11,23 | 11,54 | 2,91 | 3,38 |

| | | | | | | | | | |
|--------------------------------------|----------------------------|----------|----------------------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 317 | 80 | 93 | 82 | 0,84 | 1,79 | 3,78 | 0,95 | 1,11 |
| -30 (-22) | 444 | 112 | 130 | 96 | 0,86 | 2,52 | 4,56 | 1,15 | 1,34 |
| -25 (-13) | 592 | 149 | 173 | 111 | 0,89 | 3,36 | 5,32 | 1,34 | 1,56 |
| -20 (- 4) | 766 | 193 | 224 | 126 | 0,92 | 4,36 | 6,09 | 1,53 | 1,78 |
| -15 (+ 5) | 974 | 246 | 285 | 141 | 0,96 | 5,56 | 6,90 | 1,74 | 2,02 |
| -10 (+14) | 1224 | 308 | 359 | 157 | 1,01 | 7,01 | 7,79 | 1,96 | 2,28 |
| -5 (+23) | 1522 | 384 | 446 | 173 | 1,06 | 8,76 | 8,78 | 2,21 | 2,57 |
| 0 (+32) | 1877 | 473 | 550 | 190 | 1,12 | 10,85 | 9,92 | 2,50 | 2,91 |

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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) | 246 | 62 | 72 | 82 | 0,83 | 1,39 | 3,01 | 0,76 | 0,88 |
| -30 (-22) | 364 | 92 | 107 | 97 | 0,86 | 2,06 | 3,77 | 0,95 | 1,11 |
| -25 (-13) | 503 | 127 | 147 | 113 | 0,89 | 2,85 | 4,48 | 1,13 | 1,31 |
| -20 (- 4) | 671 | 169 | 196 | 130 | 0,93 | 3,82 | 5,17 | 1,30 | 1,52 |
| -15 (+ 5) | 874 | 220 | 256 | 149 | 0,99 | 4,99 | 5,88 | 1,48 | 1,72 |
| -10 (+14) | 1121 | 282 | 328 | 168 | 1,05 | 6,42 | 6,64 | 1,67 | 1,94 |
| -5 (+23) | 1418 | 357 | 415 | 189 | 1,11 | 8,16 | 7,47 | 1,88 | 2,19 |
| 0 (+32) | 1772 | 447 | 519 | 211 | 1,19 | 10,24 | 8,42 | 2,12 | 2,47 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|-------------------|------|--------------------------|
| 1 Base plate | European Standard | | |
| 2 Tray holder | No | | |
| 3 Connectors | | | |
| 3.1 SUCTION | 6,1 +0.10/+0.00 | [mm] | (0.240" +0.004"/+0.000") |
| 3.1.1 Material | Copper | | |
| 3.1.2 Shape | Slanted 42° | | |
| 3.2 DISCHARGE | 4,94 +0.08/-0.08 | [mm] | (0.194" +0.003"/-0.003") |
| 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 46° | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |