

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM Y3118Y |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 711CA90 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|------------------------------------|---|-----------------------------------|-----------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-600a | | |
| 3 Nominal voltage and frequency | 220-240 / 50 | [V / Hz] | |
| 4 Application type | Low-Medium Back Pressure (Commercial Compressors) | | |
| 4.1 Evaporating temperature range | -35°C to 0°C | (-31°F to 32°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) | - | - | - |
| 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 | 6.9 | [kgf/cm ²] (98 psig) | / °C - °F |
| 9.2 Peak | 7.8 | [kgf/cm ²] (111 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|----------------|----------------------------------|
| 1 Commercial designation | 1/4 - | [hp] |
| 2 Displacement | 12.21 | [cm ³] (0.745 cu.in) |
| 2.1 Bore [mm] | 26.000 | |
| 2.2 Stroke [mm] | 23.000 | |
| 3 Lubricant charge | 150 | [ml] (5.07 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ALQUILB / ISO5 | |
| 4 Weight (with oil charge) | 7.7 | [kg] (16.98 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 | MI2021/V230 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 5(350) | [µF(VAC minimum)] |
| 5 Motor protection | AE19BU | |
| 6 Start winding resistance | 15.23 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 15.03 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 8.20 | [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 | | | ASHRAE LBP-NOFAN 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] |
| 721 | 182 | 211 | 135 | 0.76 | 2.26 | 5.34 | 1.35 | 1.56 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @220V50Hz | | ASHRAE32-NOFAN 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) | 396 | 100 | 116 | 96 | 0.67 | 1.24 | 4.13 | 1.04 | 1.21 |
| -30 | (-22) | 522 | 131 | 153 | 110 | 0.71 | 1.64 | 4.76 | 1.20 | 1.40 |
| -25 | (-13) | 690 | 174 | 202 | 126 | 0.76 | 2.17 | 5.50 | 1.39 | 1.61 |
| -20 | (- 4) | 900 | 227 | 264 | 143 | 0.82 | 2.83 | 6.31 | 1.59 | 1.85 |
| -15 | (+ 5) | 1148 | 289 | 336 | 160 | 0.88 | 3.61 | 7.17 | 1.81 | 2.10 |
| -10 | (+14) | 1432 | 361 | 419 | 178 | 0.95 | 4.52 | 8.05 | 2.03 | 2.36 |
| -5 | (+23) | 1748 | 441 | 512 | 196 | 1.03 | 5.53 | 8.94 | 2.25 | 2.62 |
| 0 | (+32) | 2095 | 528 | 614 | 214 | 1.10 | 6.64 | 9.80 | 2.47 | 2.87 |

| TEST CONDITIONS: @220V50Hz | | ASHRAE32-NOFAN 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) | 366 | 92 | 107 | 97 | 0.67 | 1.15 | 3.79 | 0.96 | 1.11 |
| -30 | (-22) | 487 | 123 | 143 | 112 | 0.71 | 1.53 | 4.37 | 1.10 | 1.28 |
| -25 | (-13) | 651 | 164 | 191 | 130 | 0.77 | 2.04 | 5.03 | 1.27 | 1.47 |
| -20 | (- 4) | 856 | 216 | 251 | 148 | 0.84 | 2.69 | 5.75 | 1.45 | 1.69 |
| -15 | (+ 5) | 1099 | 277 | 322 | 168 | 0.91 | 3.46 | 6.50 | 1.64 | 1.91 |
| -10 | (+14) | 1377 | 347 | 404 | 189 | 1.00 | 4.35 | 7.26 | 1.83 | 2.13 |
| -5 | (+23) | 1688 | 425 | 495 | 211 | 1.09 | 5.34 | 8.00 | 2.02 | 2.35 |
| 0 | (+32) | 2030 | 511 | 595 | 233 | 1.18 | 6.44 | 8.70 | 2.19 | 2.55 |

| TEST CONDITIONS: @220V50Hz | | ASHRAE32-NOFAN 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) | 336 | 85 | 98 | 98 | 0.67 | 1.05 | 3.43 | 0.86 | 1.00 |
| -30 | (-22) | 449 | 113 | 132 | 114 | 0.72 | 1.41 | 3.97 | 1.00 | 1.16 |
| -25 | (-13) | 606 | 153 | 178 | 133 | 0.78 | 1.90 | 4.57 | 1.15 | 1.34 |
| -20 | (- 4) | 803 | 202 | 235 | 154 | 0.86 | 2.52 | 5.22 | 1.32 | 1.53 |
| -15 | (+ 5) | 1038 | 261 | 304 | 176 | 0.95 | 3.27 | 5.88 | 1.48 | 1.72 |
| -10 | (+14) | 1308 | 330 | 383 | 200 | 1.04 | 4.13 | 6.53 | 1.65 | 1.91 |
| -5 | (+23) | 1610 | 406 | 472 | 226 | 1.15 | 5.09 | 7.14 | 1.80 | 2.09 |
| 0 | (+32) | 1943 | 490 | 569 | 252 | 1.26 | 6.16 | 7.70 | 1.94 | 2.26 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|------------------------------|------|--------------------------|
| 1 Base plate | European Standard | | |
| 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 | | |
| 3.1.2 Shape | Slanted 42° up + 45° to Back | | |
| 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 | Slanted 0° up + 45° to Back | | |
| 3.3 PROCESS | 6 +0.08/-0.08 | [mm] | (0.236" +0.003"/-0.003") |
| 3.3.1 Material | Copper(OD) | | |
| 3.3.2 Shape | Slanted 43° up + 45° to Back | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |