

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM 2X1125U |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 513304067 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|------------------------------------|-----------------------------------|-----------------------------------|-----------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-290 | | |
| 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/Fan | 198 to 255 V | - |
| 8.2 LBP (43°C Ambient temperature) | Static/Fan | 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 | 18.4 | [kgf/cm ²] (262 psig) | / °C - °F |
| 9.2 Peak | 20.6 | [kgf/cm ²] (293 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|---------------|--|
| 1 Commercial designation | 1/3+ | [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) | 8.03 | [kg] (17.70 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 | TSD | |
| 2.1 Starting device | TSD2-220V/TSD2-D-220V | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 5(350) | [µF(VAC minimum)] |
| 5 Motor protection | 4TM283KFBYY-53 | |
| 6 Start winding resistance | 12.60 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 12.10 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 8.40 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | 2.45 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50 Hz) | 3.00 | [A] - Measured according to UL 984 |
| 11 Approval boards certification | CCC - CE - IRAM - UKCA - 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] |
| 1029 | 259 | 302 | 171 | 0.86 | 3.06 | 6.02 | 1.52 | 1.76 |

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) | 641 | 162 | 188 | 115 | 0.63 | 1.90 | 5.55 | 1.40 | 1.63 |
| -30 | (-22) | 828 | 209 | 242 | 129 | 0.69 | 2.46 | 6.45 | 1.62 | 1.89 |
| -25 | (-13) | 1052 | 265 | 308 | 140 | 0.75 | 3.13 | 7.52 | 1.90 | 2.20 |
| -20 | (- 4) | 1310 | 330 | 384 | 151 | 0.81 | 3.91 | 8.68 | 2.19 | 2.54 |
| -15 | (+ 5) | 1596 | 402 | 468 | 163 | 0.86 | 4.78 | 9.82 | 2.47 | 2.88 |
| -10 | (+14) | 1908 | 481 | 559 | 176 | 0.89 | 5.74 | 10.83 | 2.73 | 3.17 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|----------|-----|--------------------------------|---|----------------------------|---------------------------|-----------|-------|
| 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) | 598 | 151 | 175 | 122 | 0.66 | 1.77 | 4.90 | 1.23 | 1.44 |
| -30 | (-22) | 773 | 195 | 227 | 137 | 0.72 | 2.29 | 5.64 | 1.42 | 1.65 |
| -25 | (-13) | 989 | 249 | 290 | 151 | 0.79 | 2.94 | 6.57 | 1.65 | 1.92 |
| -20 | (- 4) | 1242 | 313 | 364 | 164 | 0.85 | 3.71 | 7.59 | 1.91 | 2.22 |
| -15 | (+ 5) | 1528 | 385 | 448 | 178 | 0.90 | 4.58 | 8.60 | 2.17 | 2.52 |
| -10 | (+14) | 1842 | 464 | 540 | 194 | 0.94 | 5.54 | 9.50 | 2.40 | 2.78 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|----------|-----|--------------------------------|---|----------------------------|---------------------------|-----------|-------|
| 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) | 540 | 136 | 158 | 126 | 0.69 | 1.60 | 4.32 | 1.09 | 1.27 |
| -30 | (-22) | 702 | 177 | 206 | 142 | 0.76 | 2.08 | 4.94 | 1.24 | 1.45 |
| -25 | (-13) | 909 | 229 | 266 | 158 | 0.83 | 2.70 | 5.76 | 1.45 | 1.69 |
| -20 | (- 4) | 1157 | 292 | 339 | 173 | 0.89 | 3.45 | 6.68 | 1.68 | 1.96 |
| -15 | (+ 5) | 1441 | 363 | 422 | 190 | 0.95 | 4.32 | 7.60 | 1.92 | 2.23 |
| -10 | (+14) | 1757 | 443 | 515 | 209 | 0.99 | 5.28 | 8.43 | 2.12 | 2.47 |

E - PERFORMANCE - CURVES

| 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) | 477 | 120 | 140 | 130 | 0.72 | 1.41 | 3.68 | 0.93 | 1.08 |
| -30 | (-22) | 626 | 158 | 183 | 148 | 0.79 | 1.86 | 4.22 | 1.06 | 1.24 |
| -25 | (-13) | 824 | 208 | 241 | 165 | 0.86 | 2.45 | 4.96 | 1.25 | 1.45 |
| -20 | (- 4) | 1065 | 268 | 312 | 183 | 0.93 | 3.18 | 5.82 | 1.47 | 1.71 |
| -15 | (+ 5) | 1346 | 339 | 394 | 202 | 0.99 | 4.03 | 6.69 | 1.68 | 1.96 |
| -10 | (+14) | 1663 | 419 | 487 | 224 | 1.03 | 5.00 | 7.46 | 1.88 | 2.19 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|-----------------|------|--------------------------|
| 1 Base plate | Universal EUEM | | |
| 2 Tray holder | No | | |
| 3 Connectors | | | |
| 3.1 SUCTION | 8.2 +0.12/-0.08 | [mm] | (0.323" +0.005"/-0.003") |
| 3.1.1 Material | Copper | | |
| 3.1.2 Shape | Straight | | |
| 3.2 DISCHARGE | 6.5 +0.12/-0.08 | [mm] | (0.256" +0.005"/-0.003") |
| 3.2.1 Material | Copper | | |
| 3.2.2 Shape | Straight | | |
| 3.3 PROCESS | 6.5 +0.12/-0.08 | [mm] | (0.256" +0.005"/-0.003") |
| 3.3.1 Material | Copper | | |
| 3.3.2 Shape | Straight | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |