

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM T6144U |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 872HA62 |

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 | Medium Back Pressure (Commercial Compressors) | | |
| 4.1 Evaporating temperature range | -20°C to 10°C | (-4°F to 50°F) | |
| 5 Motor type | CSIR | | |
| 6 Starting torque | HST - High 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) | 19.1 | [kgf/cm ²] (272 psig) | / °C - °F |
| 9.2 Peak (gauge) | 21.2 | [kgf/cm ²] (301 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|---------------|----------------------------------|
| 1 Commercial designation | 1/4- | [hp] |
| 2 Displacement | 4.50 | [cm ³] (0.275 cu.in) |
| 2.1 Bore [mm] | 21.000 | |
| 2.2 Stroke [mm] | 13.000 | |
| 3 Lubricant charge | 180 | [ml] (6.09 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ESTER / ISO22 | |
| 4 Weight (with oil charge) | 7.8 | [kg] (17.20 lb.) |
| 5 Nitrogen charge | - | [kgf/cm ²] |

C - ELECTRICAL 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 | MTRP-0015 | |
| 3 Start capacitor | 43-53(330) | [μF(VAC minimum)] |
| 4 Run capacitor | - | [μF(VAC minimum)] |
| 5 Motor protection | T0765/G6 | |
| 6 Start winding resistance | [Ω at 25°C (77°F)] +/- 8% | |
| 7 Run winding resistance | [Ω at 25°C (77°F)] +/- 8% | |
| 8 LRA - Locked rotor amperage (50 Hz) | 7.70 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | - | [A] |
| 10 FLA - Full Load Amperage HBP (50 Hz) | - | [A] |
| 11 Approval boards certification | VDE | |

D - PERFORMANCE - CHECK POINT DATA

| TEST CONDITIONS: @220V50Hz | | | EN12900MBP_HH Static | | Evaporating temperature (Condensing temperature | | -10°C (14°F) 45°C (113°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] |
| 1170 | 295 | 343 | 171 | 1.11 | 3.94 | 6.83 | 1.72 | 2.00 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @220V50Hz | | | EN12900HH 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] |
| -20 | (- 4) | 894 | 225 | 262 | 138 | 0.99 | 2.73 | 6.50 | 1.64 | 1.90 |
| -15 | (+ 5) | 1100 | 277 | 322 | 146 | 1.03 | 3.37 | 7.54 | 1.90 | 2.21 |
| -10 | (+14) | 1344 | 339 | 394 | 153 | 1.06 | 4.14 | 8.76 | 2.21 | 2.57 |
| -5 | (+23) | 1629 | 411 | 477 | 160 | 1.09 | 5.05 | 10.17 | 2.56 | 2.98 |
| 0 | (+32) | 1954 | 493 | 573 | 166 | 1.11 | 6.09 | 11.79 | 2.97 | 3.45 |
| +5 | (+41) | 2321 | 585 | 680 | 171 | 1.12 | 7.29 | 13.62 | 3.43 | 3.99 |
| +10 | (+50) | 2729 | 688 | 800 | 174 | 1.13 | 8.64 | 15.67 | 3.95 | 4.59 |

| TEST CONDITIONS: @220V50Hz | | | EN12900HH 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] |
| -20 | (- 4) | 778 | 196 | 228 | 150 | 1.01 | 2.60 | 5.21 | 1.31 | 1.53 |
| -15 | (+ 5) | 955 | 241 | 280 | 161 | 1.06 | 3.20 | 5.95 | 1.50 | 1.74 |
| -10 | (+14) | 1169 | 295 | 343 | 171 | 1.11 | 3.94 | 6.81 | 1.72 | 2.00 |
| -5 | (+23) | 1421 | 358 | 416 | 181 | 1.15 | 4.81 | 7.81 | 1.97 | 2.29 |
| 0 | (+32) | 1710 | 431 | 501 | 191 | 1.19 | 5.83 | 8.95 | 2.25 | 2.62 |
| +5 | (+41) | 2038 | 514 | 597 | 199 | 1.22 | 7.01 | 10.24 | 2.58 | 3.00 |
| +10 | (+50) | 2405 | 606 | 705 | 206 | 1.25 | 8.35 | 11.69 | 2.95 | 3.43 |

| TEST CONDITIONS: @220V50Hz | | | EN12900HH 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] |
| -20 | (- 4) | 667 | 168 | 195 | 159 | 1.06 | 2.46 | 4.16 | 1.05 | 1.22 |
| -15 | (+ 5) | 812 | 205 | 238 | 174 | 1.12 | 3.01 | 4.69 | 1.18 | 1.37 |
| -10 | (+14) | 991 | 250 | 291 | 188 | 1.17 | 3.70 | 5.29 | 1.33 | 1.55 |
| -5 | (+23) | 1206 | 304 | 353 | 202 | 1.23 | 4.53 | 5.97 | 1.50 | 1.75 |
| 0 | (+32) | 1455 | 367 | 426 | 216 | 1.28 | 5.51 | 6.73 | 1.70 | 1.97 |
| +5 | (+41) | 1740 | 438 | 510 | 229 | 1.33 | 6.65 | 7.58 | 1.91 | 2.22 |
| +10 | (+50) | 2061 | 519 | 604 | 241 | 1.37 | 7.95 | 8.54 | 2.15 | 2.50 |

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 42° | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |