

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM T1121U |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 872AA92 |

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 R290 | | |
| 4.1 Evaporating temperature range | -40°C to -10°C | (-40°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) | - | - | - |
| 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 | 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 | 5.56 | [cm ³] (0.339 cu.in) |
| 2.1 Bore [mm] | 22.500 | |
| 2.2 Stroke [mm] | 14.000 | |
| 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 - 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 | 5(440) | [μF(VAC minimum)] |
| 5 Motor protection | T0933/07 | |
| 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 | | | EN12900LBP_HH Static | | Evaporating temperature (Condensing temperature | | -35°C (-31°F) 40°C (104°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] |
| 541 | 136 | 159 | 128 | 0.68 | 1.71 | 4.23 | 1.07 | 1.24 |

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] |
| -40 | (-40) | 448 | 113 | 131 | 112 | 0.63 | 1.35 | 3.99 | 1.01 | 1.17 |
| -35 | (-31) | 580 | 146 | 170 | 125 | 0.68 | 1.76 | 4.66 | 1.17 | 1.36 |
| -30 | (-22) | 742 | 187 | 217 | 137 | 0.73 | 2.25 | 5.42 | 1.37 | 1.59 |
| -25 | (-13) | 934 | 235 | 274 | 149 | 0.78 | 2.84 | 6.29 | 1.58 | 1.84 |
| -20 | (- 4) | 1155 | 291 | 339 | 160 | 0.82 | 3.53 | 7.22 | 1.82 | 2.12 |
| -15 | (+ 5) | 1407 | 355 | 412 | 171 | 0.87 | 4.32 | 8.23 | 2.07 | 2.41 |
| -10 | (+14) | 1688 | 425 | 495 | 181 | 0.93 | 5.20 | 9.29 | 2.34 | 2.72 |

| 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] |
| -40 | (-40) | 378 | 95 | 111 | 114 | 0.63 | 1.25 | 3.33 | 0.84 | 0.97 |
| -35 | (-31) | 495 | 125 | 145 | 129 | 0.69 | 1.64 | 3.84 | 0.97 | 1.13 |
| -30 | (-22) | 640 | 161 | 188 | 144 | 0.75 | 2.12 | 4.44 | 1.12 | 1.30 |
| -25 | (-13) | 813 | 205 | 238 | 159 | 0.81 | 2.70 | 5.11 | 1.29 | 1.50 |
| -20 | (- 4) | 1014 | 256 | 297 | 174 | 0.87 | 3.38 | 5.83 | 1.47 | 1.71 |
| -15 | (+ 5) | 1244 | 314 | 365 | 189 | 0.94 | 4.17 | 6.60 | 1.66 | 1.93 |
| -10 | (+14) | 1502 | 379 | 440 | 203 | 1.00 | 5.06 | 7.40 | 1.87 | 2.17 |

| 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] |
| -40 | (-40) | 312 | 79 | 92 | 115 | 0.63 | 1.14 | 2.71 | 0.68 | 0.79 |
| -35 | (-31) | 409 | 103 | 120 | 132 | 0.70 | 1.50 | 3.11 | 0.78 | 0.91 |
| -30 | (-22) | 533 | 134 | 156 | 149 | 0.77 | 1.95 | 3.57 | 0.90 | 1.05 |
| -25 | (-13) | 683 | 172 | 200 | 168 | 0.85 | 2.51 | 4.08 | 1.03 | 1.19 |
| -20 | (- 4) | 859 | 217 | 252 | 186 | 0.93 | 3.17 | 4.62 | 1.16 | 1.35 |
| -15 | (+ 5) | 1063 | 268 | 311 | 205 | 1.01 | 3.94 | 5.19 | 1.31 | 1.52 |
| -10 | (+14) | 1293 | 326 | 379 | 224 | 1.09 | 4.82 | 5.76 | 1.45 | 1.69 |

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 +0.08/-0.08 | [mm] | (0.236" +0.003"/-0.003") |
| 3.3.1 Material | Copper(OD) | | |
| 3.3.2 Shape | Slanted 42° | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |