

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM Y6210U |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 721PA80 |

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 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 | 9.04 | [cm ³] (0.552 cu.in) |
| 2.1 Bore [mm] | 24.000 | |
| 2.2 Stroke [mm] | 20.000 | |
| 3 Lubricant charge | 150 | [ml] (5.07 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 | Current Relay | |
| 2.1 Starting device | MTRPH-0025-77 | |
| 3 Start capacitor | 88-108(330) | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | DRB30N61AY | |
| 6 Start winding resistance | 14.30 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 11.20 | [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 | | |

D - PERFORMANCE - CHECK POINT DATA

| | | | | | | | | |
|-------------------------------|----------|------|-----------------------------|-------------------------------|--|---------------------------|--------------------------------------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAEHBP46 Fan | | Evaporating temperature (Condensing temperature | | 7.2°C (44.96°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] |
| 4232 | 1066 | 1240 | 514 | 2.72 | 14.48 | 8.23 | 2.07 | 2.41 |

E - PERFORMANCE - CURVES

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|-----------------|------|---------------------------------------|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE46 Fan | | (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) | 1995 | 503 | 585 | 290 | 1.92 | 5.63 | 6.87 | 1.73 | 2.01 |
| -15 | (+ 5) | 2427 | 612 | 711 | 310 | 1.98 | 6.88 | 7.82 | 1.97 | 2.29 |
| -10 | (+14) | 2949 | 743 | 864 | 327 | 2.03 | 8.39 | 9.02 | 2.27 | 2.64 |
| -5 | (+23) | 3562 | 898 | 1044 | 341 | 2.08 | 10.18 | 10.46 | 2.64 | 3.06 |
| 0 | (+32) | 4267 | 1075 | 1250 | 352 | 2.12 | 12.26 | 12.14 | 3.06 | 3.56 |
| +5 | (+41) | 5062 | 1276 | 1483 | 361 | 2.17 | 14.64 | 14.05 | 3.54 | 4.12 |
| +10 | (+50) | 5947 | 1499 | 1743 | 366 | 2.21 | 17.33 | 16.21 | 4.08 | 4.75 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|-----------------|------|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE46 Fan | | (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) | 1725 | 435 | 505 | 316 | 2.00 | 5.26 | 5.50 | 1.38 | 1.61 |
| -15 | (+ 5) | 2112 | 532 | 619 | 343 | 2.09 | 6.47 | 6.16 | 1.55 | 1.81 |
| -10 | (+14) | 2579 | 650 | 756 | 368 | 2.17 | 7.94 | 6.99 | 1.76 | 2.05 |
| -5 | (+23) | 3126 | 788 | 916 | 390 | 2.25 | 9.67 | 7.98 | 2.01 | 2.34 |
| 0 | (+32) | 3752 | 945 | 1099 | 410 | 2.33 | 11.67 | 9.12 | 2.30 | 2.67 |
| +5 | (+41) | 4457 | 1123 | 1306 | 428 | 2.41 | 13.96 | 10.41 | 2.62 | 3.05 |
| +10 | (+50) | 5241 | 1321 | 1536 | 444 | 2.49 | 16.55 | 11.85 | 2.99 | 3.47 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|-----------------|------|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE46 Fan | | (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) | 1473 | 371 | 432 | 337 | 2.04 | 4.91 | 4.34 | 1.09 | 1.27 |
| -15 | (+ 5) | 1809 | 456 | 530 | 374 | 2.17 | 6.06 | 4.84 | 1.22 | 1.42 |
| -10 | (+14) | 2214 | 558 | 649 | 410 | 2.30 | 7.44 | 5.42 | 1.37 | 1.59 |
| -5 | (+23) | 2687 | 677 | 787 | 444 | 2.43 | 9.08 | 6.07 | 1.53 | 1.78 |
| 0 | (+32) | 3227 | 813 | 946 | 476 | 2.56 | 10.98 | 6.79 | 1.71 | 1.99 |
| +5 | (+41) | 3835 | 966 | 1124 | 506 | 2.69 | 13.16 | 7.57 | 1.91 | 2.22 |
| +10 | (+50) | 4511 | 1137 | 1322 | 535 | 2.82 | 15.61 | 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° up + 45° to Back | | |
| 3.2 DISCHARGE | 6.1 +0.10/+0.00 | [mm] | (0.240" +0.004"/+0.000") |
| 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 | | |