

COMPRESSOR DEFINITION

| | |
|---------------------------|----------------|
| Designation | EM YE70CLP |
| Nominal Voltage/Frequency | 220 V 50-60 Hz |
| Engineering Number | 513306559 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|--|-----------------------------------|-----------------------------------|--------------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-600a | | |
| 3 Nominal voltage and frequency | 220 / 50-60 | [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 | RSIR | | |
| 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 | 187 to 242 V | 187 to 242 V |
| 8.2 LBP (43°C Ambient temperature) | Static | 187 to 242 V | 187 to 242 V |
| 8.3 HBP (32°C Ambient temperature) | - | - | - |
| 8.4 HBP (43°C Ambient temperature) | - | - | - |
| 9 Maximum condensing pressures/temperature | | | |
| 9.1 Operating (gauge) | 7.7 | [kgf/cm ²] (109 psig) | / °C - °F |
| 9.2 Peak (gauge) | 9.8 | [kgf/cm ²] (139 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|----------------|----------------------------------|
| 1 Commercial designation | 1/5 | [hp] |
| 2 Displacement | 10.61 | [cm ³] (0.647 cu.in) |
| 2.1 Bore [mm] | 26.000 | |
| 2.2 Stroke [mm] | 20.000 | |
| 3 Lubricant charge | 180 | [ml] (6.09 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ALQUILB / ISO5 | |
| 4 Weight (with oil charge) | 7.74 | [kg] (17.06 lb.) |
| 5 Nitrogen charge | - | [kgf/cm ²] |

C - ELETRICAL DATA

| | | |
|--|-----------------------------------|------------------------------------|
| 1 Nominal Voltage/Frequency/Number of Phases | 220 V 50-60 Hz 1 ~ (Single phase) | |
| 2 Starting device type | PTC | |
| 2.1 Starting device | 7M220MC1/8EA17C1 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | 4TM283NFBYY-53 | |
| 6 Start winding resistance | 14.88 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 11.88 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50/60 Hz) | 8.20/7.76 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50/60 Hz) | 1.43/1.40 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50/60 Hz) | 1.86/1.65 | [A] - Measured according to UL 984 |
| 11 Approval boards certification | IMTRO - TUV | |

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] |
| 603 | 152 | 177 | 135 | 1.10 | 1.89 | 4.46 | 1.12 | 1.31 |

| | | | | | | | | |
|-------------------------------|----------|-----|-----------------------------|-------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS: @220V60Hz | | | 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] |
| 656 | 165 | 192 | 131 | 1.00 | 2.06 | 5.02 | 1.27 | 1.47 |

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) | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -30 (-22) | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -25 (-13) | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -20 (- 4) | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -15 (+ 5) | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -10 (+14) | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -30 (-22) | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -25 (-13) | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -20 (- 4) | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -15 (+ 5) | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -10 (+14) | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

E - PERFORMANCE - CURVES

| 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] |
| -35 | (-31) | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -30 | (-22) | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -25 | (-13) | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -20 | (- 4) | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -15 | (+ 5) | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -10 | (+14) | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| TEST CONDITIONS: @220V60Hz | | 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] |
| -35 | (-31) | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -30 | (-22) | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -25 | (-13) | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -20 | (- 4) | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -15 | (+ 5) | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -10 | (+14) | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| TEST CONDITIONS: @220V60Hz | | 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] |
| -35 | (-31) | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -30 | (-22) | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -25 | (-13) | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -20 | (- 4) | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -15 | (+ 5) | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -10 | (+14) | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| TEST CONDITIONS: @220V60Hz | | 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] |
| -35 | (-31) | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -30 | (-22) | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -25 | (-13) | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -20 | (- 4) | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -15 | (+ 5) | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -10 | (+14) | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|--------------------------------|------|--------------------------|
| 1 Base plate | Universal AMEM | | |
| 2 Tray holder | No | | |
| 3 Connectors | | | |
| 3.1 SUCTION | 6.5 +0.12/-0.08 | [mm] | (0.256" +0.005"/-0.003") |
| 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 parallel BP+24°to Back | | |
| 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 | Slanted 45° up + 45° to Back | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |