

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM YS46CLP |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 513300429 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|------------------------------------|-----------------------------------|-----------------------------------|-----------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-600a | | |
| 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 | 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 255 V | - |
| 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 | 6.9 | [kgf/cm ²] (98 psig) | / °C - °F |
| 9.2 Peak | 7.8 | [kgf/cm ²] (111 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|----------------|--------------------------------------------|
| 1 Commercial designation | | [hp] |
| 2 Displacement | 8.23 | [cm ³] (0.502 cu.in) |
| 2.1 Bore [mm] | 24.000 | |
| 2.2 Stroke [mm] | 18.200 | |
| 3 Lubricant charge | 150 | [ml] (5.07 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ALQUILB / ISO5 | |
| 4 Weight (with oil charge) | 6.97 | [kg] (15.37 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 | PTC | |
| 2.1 Starting device | QP2-20A | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | 4TM189KFBYY-53 | |
| 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) | - | [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 | CCC | |

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] |
| 471 | 119 | 138 | 85 | 0.59 | 1.48 | 5.55 | 1.40 | 1.63 |

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) | 280 | 70 | 82 | 187 | 0.51 | 0.87 | 1.49 | 0.37 | 0.44 |
| -30 | (-22) | 378 | 95 | 111 | 220 | 0.53 | 1.19 | 1.72 | 0.43 | 0.50 |
| -25 | (-13) | 496 | 125 | 145 | 253 | 0.56 | 1.56 | 1.97 | 0.50 | 0.58 |
| -20 | (- 4) | 636 | 160 | 186 | 285 | 0.59 | 2.00 | 2.24 | 0.56 | 0.66 |
| -15 | (+ 5) | 800 | 202 | 234 | 317 | 0.62 | 2.52 | 2.53 | 0.64 | 0.74 |
| -10 | (+14) | 991 | 250 | 290 | 349 | 0.64 | 3.13 | 2.84 | 0.72 | 0.83 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|----------|-----|--------------------------------|----------------------------------------|----------------------------|---------------------------|-----------|-------|
| 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) | 257 | 65 | 75 | 191 | 0.51 | 0.81 | 1.35 | 0.34 | 0.40 |
| -30 | (-22) | 354 | 89 | 104 | 226 | 0.54 | 1.11 | 1.56 | 0.39 | 0.46 |
| -25 | (-13) | 469 | 118 | 138 | 263 | 0.57 | 1.47 | 1.78 | 0.45 | 0.52 |
| -20 | (- 4) | 606 | 153 | 178 | 302 | 0.60 | 1.91 | 2.00 | 0.51 | 0.59 |
| -15 | (+ 5) | 768 | 193 | 225 | 342 | 0.64 | 2.42 | 2.24 | 0.56 | 0.66 |
| -10 | (+14) | 956 | 241 | 280 | 383 | 0.68 | 3.02 | 2.49 | 0.63 | 0.73 |

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|-------------------------------|-------|----------------------------|----------|-----|--------------------------------|----------------------------------------|----------------------------|---------------------------|-----------|-------|
| 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) | 223 | 56 | 65 | 189 | 0.51 | 0.70 | 1.18 | 0.30 | 0.35 |
| -30 | (-22) | 317 | 80 | 93 | 229 | 0.54 | 0.99 | 1.39 | 0.35 | 0.41 |
| -25 | (-13) | 430 | 108 | 126 | 271 | 0.57 | 1.35 | 1.59 | 0.40 | 0.47 |
| -20 | (- 4) | 565 | 142 | 165 | 317 | 0.61 | 1.77 | 1.78 | 0.45 | 0.52 |
| -15 | (+ 5) | 723 | 182 | 212 | 366 | 0.66 | 2.28 | 1.97 | 0.50 | 0.58 |
| -10 | (+14) | 908 | 229 | 266 | 418 | 0.71 | 2.87 | 2.17 | 0.55 | 0.64 |

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) | 177 | 45 | 52 | 179 | 0.51 | 0.55 | 0.98 | 0.25 | 0.29 |
| -30 | (-22) | 269 | 68 | 79 | 223 | 0.53 | 0.84 | 1.19 | 0.30 | 0.35 |
| -25 | (-13) | 379 | 96 | 111 | 273 | 0.57 | 1.19 | 1.39 | 0.35 | 0.41 |
| -20 | (- 4) | 511 | 129 | 150 | 327 | 0.62 | 1.61 | 1.56 | 0.39 | 0.46 |
| -15 | (+ 5) | 666 | 168 | 195 | 387 | 0.68 | 2.10 | 1.73 | 0.44 | 0.51 |
| -10 | (+14) | 848 | 214 | 248 | 451 | 0.75 | 2.68 | 1.88 | 0.47 | 0.55 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|------------------------------|------|--------------------------|
| 1 Base plate | European Standard EUEM | | |
| 2 Tray holder | Yes | | |
| 3 Connectors | | | |
| 3.1 SUCTION | 6.2 +0.05/+0.05 | [mm] | (0.244" +0.002"/+0.002") |
| 3.1.1 Material | Copper | | |
| 3.1.2 Shape | Slanted 40° up + 45° to Back | | |
| 3.2 DISCHARGE | 4.2 +0.10/-0.05 | [mm] | (0.165" +0.004"/-0.002") |
| 3.2.1 Material | Copper | | |
| 3.2.2 Shape | Slanted 0° up + 24° to Back | | |
| 3.3 PROCESS | 6.2 +0.05/+0.05 | [mm] | (0.244" +0.002"/+0.002") |
| 3.3.1 Material | Copper | | |
| 3.3.2 Shape | Slanted 40° up + 45° to Back | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |