

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EG X90HLC |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 513703050 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|------------------------------------|-----------------------------------|-----------------------------------|-----------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-134a | | |
| 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 | 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) | Static | 198 to 255 V | - |
| 8.2 LBP (43°C Ambient temperature) | Static | 198 to 255 V | - |
| 8.3 HBP (32°C Ambient temperature) | - | - | - |
| 8.4 HBP (43°C Ambient temperature) | - | - | - |
| 9 Maximum condensing temperature | | | |
| 9.1 Operating | 14.2 | [kgf/cm ²] (202 psig) | / °C - °F |
| 9.2 Peak | 15.9 | [kgf/cm ²] (226 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|---------------|--|
| 1 Commercial designation | 1/4+ | [hp] |
| 2 Displacement | 7.15 | [cm ³] (0.436 cu.in) |
| 2.1 Bore [mm] | 22.500 | |
| 2.2 Stroke [mm] | 18.000 | |
| 3 Lubricant charge | 230 | [ml] (7.78 fl.oz) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ESTER / ISO10 | |
| 4 Weight (with oil charge) | 11.3 | [kg] (24.91 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 | MI2021X | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 4(350) | [µF(VAC minimum)] |
| 5 Motor protection | AD58FYX | |
| 6 Start winding resistance | 20.62 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 16.42 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 5.83 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | 0.98 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50 Hz) | 1.19 | [A] - Measured according to UL 984 |
| 11 Approval boards certification | VDE | |

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] |
| 763 | 192 | 224 | 128 | 0.60 | 4.34 | 5.97 | 1.50 | 1.75 |

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) | 434 | 109 | 127 | 80 | 0.39 | 2.46 | 5.42 | 1.36 | 1.59 |
| -30 | (-22) | 572 | 144 | 167 | 92 | 0.45 | 3.24 | 6.24 | 1.57 | 1.83 |
| -25 | (-13) | 746 | 188 | 219 | 104 | 0.50 | 4.24 | 7.19 | 1.81 | 2.11 |
| -20 | (- 4) | 967 | 244 | 283 | 117 | 0.55 | 5.50 | 8.27 | 2.08 | 2.42 |
| -15 | (+ 5) | 1242 | 313 | 364 | 130 | 0.61 | 7.09 | 9.50 | 2.39 | 2.78 |
| -10 | (+14) | 1581 | 398 | 463 | 145 | 0.67 | 9.06 | 10.88 | 2.74 | 3.19 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|----------|-----|-----------------------------|---|-------------------------|---------------------------|-----------|-------|
| 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) | 410 | 103 | 120 | 85 | 0.41 | 2.32 | 4.84 | 1.22 | 1.42 |
| -30 | (-22) | 553 | 139 | 162 | 100 | 0.48 | 3.14 | 5.58 | 1.41 | 1.63 |
| -25 | (-13) | 727 | 183 | 213 | 114 | 0.54 | 4.13 | 6.38 | 1.61 | 1.87 |
| -20 | (- 4) | 939 | 237 | 275 | 129 | 0.61 | 5.35 | 7.25 | 1.83 | 2.13 |
| -15 | (+ 5) | 1199 | 302 | 351 | 145 | 0.68 | 6.84 | 8.22 | 2.07 | 2.41 |
| -10 | (+14) | 1515 | 382 | 444 | 163 | 0.76 | 8.68 | 9.29 | 2.34 | 2.72 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|----------|-----|-----------------------------|---|-------------------------|---------------------------|-----------|-------|
| 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) | 358 | 90 | 105 | 84 | 0.40 | 2.03 | 4.25 | 1.07 | 1.25 |
| -30 | (-22) | 510 | 129 | 150 | 103 | 0.49 | 2.89 | 4.92 | 1.24 | 1.44 |
| -25 | (-13) | 685 | 173 | 201 | 122 | 0.57 | 3.89 | 5.60 | 1.41 | 1.64 |
| -20 | (- 4) | 891 | 225 | 261 | 141 | 0.66 | 5.07 | 6.30 | 1.59 | 1.84 |
| -15 | (+ 5) | 1137 | 287 | 333 | 162 | 0.75 | 6.49 | 7.03 | 1.77 | 2.06 |
| -10 | (+14) | 1433 | 361 | 420 | 184 | 0.85 | 8.21 | 7.81 | 1.97 | 2.29 |

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) | 280 | 71 | 82 | 77 | 0.37 | 1.58 | 3.63 | 0.91 | 1.06 |
| -30 | (-22) | 442 | 111 | 130 | 102 | 0.48 | 2.51 | 4.25 | 1.07 | 1.25 |
| -25 | (-13) | 620 | 156 | 182 | 127 | 0.60 | 3.52 | 4.84 | 1.22 | 1.42 |
| -20 | (- 4) | 822 | 207 | 241 | 153 | 0.72 | 4.68 | 5.38 | 1.36 | 1.58 |
| -15 | (+ 5) | 1057 | 266 | 310 | 180 | 0.84 | 6.03 | 5.91 | 1.49 | 1.73 |
| -10 | (+14) | 1334 | 336 | 391 | 209 | 0.97 | 7.64 | 6.42 | 1.62 | 1.88 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|-------------------------------|------|--------------------------|
| 1 Base plate | Universal EG/F/AMEM version 2 | | |
| 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 | Straight | | |
| 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 | 6.5 +0.12/-0.08 | [mm] | (0.256" +0.005"/-0.003") |
| 3.3.1 Material | Copper | | |
| 3.3.2 Shape | Straight | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |