

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM U65HLP |
| Nominal Voltage/Frequency | 200-230 V 50 Hz |
| Engineering Number | 513300241 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|------------------------------------|-----------------------------------|-----------------------------------|-----------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-134a | | |
| 3 Nominal voltage and frequency | 200-230 / 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 | 167 to 255 V | - |
| 8.2 LBP (43°C Ambient temperature) | Static | 167 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 | 5.96 | [cm ³] (0.364 cu.in) |
| 2.1 Bore [mm] | 22.500 | |
| 2.2 Stroke [mm] | 15.000 | |
| 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) | 8 | [kg] (17.64 lb.) |
| 5 Nitrogen charge | - | [kgf/cm ²] |

C - ELETRICAL DATA

| | | |
|--|--------------------------------------|------------------------------------|
| 1 Nominal Voltage/Frequency/Number of Phases | 200-230V 50Hz 1 ~ (Single phase) | |
| 2 Starting device type | PTC | |
| 2.1 Starting device | 7M220MC1/8EA17B1/8EA17C1/QPS2-A22MG1 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | 4TM283NFBYY-53 | |
| 6 Start winding resistance | 22.30 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 13.05 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 7.50 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | 1.32 | [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 - 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] |
| 631 | 159 | 185 | 128 | 0.93 | 3.59 | 4.95 | 1.25 | 1.45 |

E - PERFORMANCE - CURVES

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 412 | 104 | 121 | 96 | 0.82 | 2.33 | 4.27 | 1.08 | 1.25 |
| -30 (-22) | 500 | 126 | 147 | 108 | 0.86 | 2.83 | 4.69 | 1.18 | 1.37 |
| -25 (-13) | 633 | 160 | 186 | 121 | 0.91 | 3.59 | 5.28 | 1.33 | 1.55 |
| -20 (- 4) | 811 | 204 | 238 | 135 | 0.95 | 4.62 | 6.01 | 1.51 | 1.76 |
| -15 (+ 5) | 1035 | 261 | 303 | 151 | 1.00 | 5.91 | 6.85 | 1.73 | 2.01 |
| -10 (+14) | 1304 | 328 | 382 | 167 | 1.05 | 7.47 | 7.78 | 1.96 | 2.28 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 304 | 77 | 89 | 88 | 0.83 | 1.72 | 3.47 | 0.87 | 1.02 |
| -30 (-22) | 412 | 104 | 121 | 104 | 0.87 | 2.33 | 3.96 | 1.00 | 1.16 |
| -25 (-13) | 560 | 141 | 164 | 122 | 0.91 | 3.18 | 4.58 | 1.15 | 1.34 |
| -20 (- 4) | 749 | 189 | 219 | 141 | 0.97 | 4.26 | 5.28 | 1.33 | 1.55 |
| -15 (+ 5) | 978 | 246 | 287 | 161 | 1.03 | 5.58 | 6.05 | 1.52 | 1.77 |
| -10 (+14) | 1247 | 314 | 365 | 182 | 1.10 | 7.15 | 6.85 | 1.73 | 2.01 |

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|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 244 | 61 | 71 | 84 | 0.82 | 1.38 | 2.90 | 0.73 | 0.85 |
| -30 (-22) | 352 | 89 | 103 | 102 | 0.86 | 1.99 | 3.43 | 0.87 | 1.01 |
| -25 (-13) | 495 | 125 | 145 | 123 | 0.91 | 2.81 | 4.03 | 1.02 | 1.18 |
| -20 (- 4) | 673 | 170 | 197 | 145 | 0.97 | 3.83 | 4.67 | 1.18 | 1.37 |
| -15 (+ 5) | 886 | 223 | 260 | 167 | 1.04 | 5.06 | 5.33 | 1.34 | 1.56 |
| -10 (+14) | 1136 | 286 | 333 | 191 | 1.13 | 6.50 | 5.97 | 1.51 | 1.75 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|------------------------------|------|--------------------------|
| 1 Base plate | European Standard | | |
| 2 Tray holder | Yes | | |
| 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 40° up + 45° to Back | | |
| 3.2 DISCHARGE | 4.9 +0.10/-0.05 | [mm] | (0.193" +0.004"/-0.002") |
| 3.2.1 Material | Copper | | |
| 3.2.2 Shape | Slanted 0° up + 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 40° up + 45° to Back | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |