

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM U32CLC |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 893BA52 |

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-Medium Back Pressure | | |
| 4.1 Evaporating temperature range | -35°C to -5°C | (-31°F to 23°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 254 V | - |
| 8.2 LBP (43°C Ambient temperature) | Static | 198 to 254 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 | | [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 | MINERAL / ISO7 | |
| 4 Weight (with oil charge) | 7.1 | [kg] (15.65 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 | PTC | |
| 2.1 Starting device | 2019 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 4(450) | [µF(VAC minimum)] |
| 5 Motor protection | AD24AHN10 | |
| 6 Start winding resistance | 28.30 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 38.90 | [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] |
| 10 FLA - Full Load Amperage HBP (50 Hz) | - | [A] |
| 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] |
| 330 | 83 | 97 | 68 | 0.32 | 1.04 | 4.89 | 1.23 | 1.43 |

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) | 200 | 50 | 59 | 52 | 0.25 | 0.63 | 3.86 | 0.97 | 1.13 |
| -30 | (-22) | 266 | 67 | 78 | 56 | 0.27 | 0.83 | 4.71 | 1.19 | 1.38 |
| -25 | (-13) | 346 | 87 | 101 | 62 | 0.29 | 1.09 | 5.61 | 1.41 | 1.64 |
| -20 | (- 4) | 442 | 111 | 130 | 67 | 0.31 | 1.39 | 6.57 | 1.66 | 1.93 |
| -15 | (+ 5) | 556 | 140 | 163 | 73 | 0.34 | 1.75 | 7.61 | 1.92 | 2.23 |
| -10 | (+14) | 689 | 174 | 202 | 79 | 0.37 | 2.17 | 8.75 | 2.21 | 2.56 |
| -5 | (+23) | 843 | 212 | 247 | 84 | 0.39 | 2.66 | 10.00 | 2.52 | 2.93 |

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|-------------------------------|-------|----------------------------|--------------------|-----|--|----------------------------------|----------------------------|---------------------------|-----------|-------|
| 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) | 180 | 45 | 53 | 52 | 0.25 | 0.56 | 3.49 | 0.88 | 1.02 |
| -30 | (-22) | 247 | 62 | 72 | 58 | 0.27 | 0.77 | 4.29 | 1.08 | 1.26 |
| -25 | (-13) | 328 | 83 | 96 | 64 | 0.30 | 1.03 | 5.11 | 1.29 | 1.50 |
| -20 | (- 4) | 425 | 107 | 124 | 71 | 0.33 | 1.33 | 5.96 | 1.50 | 1.75 |
| -15 | (+ 5) | 538 | 136 | 158 | 78 | 0.36 | 1.69 | 6.86 | 1.73 | 2.01 |
| -10 | (+14) | 670 | 169 | 196 | 86 | 0.39 | 2.11 | 7.83 | 1.97 | 2.29 |
| -5 | (+23) | 822 | 207 | 241 | 93 | 0.42 | 2.60 | 8.87 | 2.24 | 2.60 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|--------------------|-----|--|----------------------------------|----------------------------|---------------------------|-----------|-------|
| 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) | 156 | 39 | 46 | 51 | 0.25 | 0.49 | 3.06 | 0.77 | 0.90 |
| -30 | (-22) | 223 | 56 | 65 | 58 | 0.28 | 0.70 | 3.83 | 0.97 | 1.12 |
| -25 | (-13) | 303 | 76 | 89 | 66 | 0.31 | 0.95 | 4.59 | 1.16 | 1.35 |
| -20 | (- 4) | 397 | 100 | 116 | 74 | 0.34 | 1.25 | 5.35 | 1.35 | 1.57 |
| -15 | (+ 5) | 508 | 128 | 149 | 83 | 0.38 | 1.60 | 6.12 | 1.54 | 1.79 |
| -10 | (+14) | 637 | 161 | 187 | 92 | 0.42 | 2.01 | 6.93 | 1.75 | 2.03 |
| -5 | (+23) | 786 | 198 | 230 | 101 | 0.46 | 2.49 | 7.79 | 1.96 | 2.28 |

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) | 129 | 33 | 38 | 49 | 0.24 | 0.41 | 2.62 | 0.66 | 0.77 |
| -30 | (-22) | 193 | 49 | 57 | 57 | 0.27 | 0.61 | 3.38 | 0.85 | 0.99 |
| -25 | (-13) | 270 | 68 | 79 | 66 | 0.31 | 0.85 | 4.09 | 1.03 | 1.20 |
| -20 | (- 4) | 360 | 91 | 106 | 76 | 0.35 | 1.13 | 4.77 | 1.20 | 1.40 |
| -15 | (+ 5) | 467 | 118 | 137 | 86 | 0.40 | 1.47 | 5.43 | 1.37 | 1.59 |
| -10 | (+14) | 591 | 149 | 173 | 97 | 0.44 | 1.86 | 6.10 | 1.54 | 1.79 |
| -5 | (+23) | 734 | 185 | 215 | 108 | 0.49 | 2.32 | 6.79 | 1.71 | 1.99 |

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° | | |
| 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 | 6.1 +0.10/+0.00 | [mm] | (0.240" +0.004"/+0.000") |
| 3.3.1 Material | Copper | | |
| 3.3.2 Shape | Slanted 42° | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |