

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EH U2155U |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 513307502 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|------------------------------------|------------------------------------|-----------------------------------|-----------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-290 | | |
| 3 Nominal voltage and frequency | 220-240 / 50 | [V / Hz] | |
| 4 Application type | Low Back Pressure R290 | | |
| 4.1 Evaporating temperature range | -40°C to -10°C | (-40°F to 14°F) | |
| 5 Motor type | CSIR | | |
| 6 Starting torque | LST/HST - Low/High starting torque | | |
| 7 Expansion device | Capillary tube or Expansion valve | | |
| 8 Compressor cooling | Operating voltage range | | |
| | | 50 Hz | 60 Hz |
| 8.1 LBP (32°C Ambient temperature) | - | - | - |
| 8.2 LBP (43°C Ambient temperature) | Fan | 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 | 18.4 | [kgf/cm ²] (262 psig) | / °C - °F |
| 9.2 Peak | 20.6 | [kgf/cm ²] (293 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|-----------------|----------------------------------|
| 1 Commercial designation | 3/4 | [hp] |
| 2 Displacement | 12.21 | [cm ³] (0.745 cu.in) |
| 2.1 Bore [mm] | 26.000 | |
| 2.2 Stroke [mm] | 23.000 | |
| 3 Lubricant charge | 270 | [ml] (9.13 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ALQUILB / ISO22 | |
| 4 Weight (with oil charge) | 9.4 | [kg] (20.72 lb.) |
| 5 Nitrogen charge | - | [kgf/cm ²] |

C - ELECTRICAL DATA

| | | |
|--|------------------------------------|------------------------------------|
| 1 Nominal Voltage/Frequency/Number of Phases | 220-240 V 50 Hz 1 ~ (Single phase) | |
| 2 Starting device type | Current Relay | |
| 2.1 Starting device | 213515047 | |
| 3 Start capacitor | 88-108(330) | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | 4TM757NFBYY-53 | |
| 6 Start winding resistance | 14.95 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 6.56 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 18.80 | [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 - VDE | |

D - PERFORMANCE - CHECK POINT DATA

| | | | | | | | | |
|-------------------------------|----------|-----|-----------------------------|-------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAELBP32 Fan | | 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] |
| 2034 | 513 | 596 | 392 | 2.33 | 6.05 | 5.19 | 1.31 | 1.52 |

E - PERFORMANCE - CURVES

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|-----------------|------|---------------------------------------|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE32 Fan | | (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] |
| -40 | (-40) | 1023 | 258 | 300 | 234 | 1.83 | 3.02 | 4.36 | 1.10 | 1.28 |
| -35 | (-31) | 1317 | 332 | 386 | 265 | 1.91 | 3.90 | 4.96 | 1.25 | 1.45 |
| -30 | (-22) | 1664 | 419 | 488 | 297 | 2.00 | 4.93 | 5.60 | 1.41 | 1.64 |
| -25 | (-13) | 2073 | 522 | 607 | 329 | 2.11 | 6.17 | 6.30 | 1.59 | 1.85 |
| -20 | (- 4) | 2554 | 644 | 748 | 362 | 2.22 | 7.62 | 7.06 | 1.78 | 2.07 |
| -15 | (+ 5) | 3117 | 785 | 913 | 394 | 2.34 | 9.34 | 7.91 | 1.99 | 2.32 |
| -10 | (+14) | 3771 | 950 | 1105 | 425 | 2.46 | 11.35 | 8.87 | 2.23 | 2.60 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|-----------------|------|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE32 Fan | | (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] |
| -40 | (-40) | 961 | 242 | 281 | 244 | 1.85 | 2.84 | 3.95 | 1.00 | 1.16 |
| -35 | (-31) | 1248 | 314 | 366 | 279 | 1.95 | 3.69 | 4.48 | 1.13 | 1.31 |
| -30 | (-22) | 1585 | 399 | 465 | 316 | 2.06 | 4.70 | 5.02 | 1.26 | 1.47 |
| -25 | (-13) | 1982 | 500 | 581 | 354 | 2.19 | 5.89 | 5.59 | 1.41 | 1.64 |
| -20 | (- 4) | 2448 | 617 | 717 | 394 | 2.34 | 7.30 | 6.21 | 1.56 | 1.82 |
| -15 | (+ 5) | 2993 | 754 | 877 | 435 | 2.50 | 8.96 | 6.88 | 1.73 | 2.02 |
| -10 | (+14) | 3626 | 914 | 1062 | 476 | 2.66 | 10.91 | 7.63 | 1.92 | 2.24 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|-----------------|------|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE32 Fan | | (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] |
| -40 | (-40) | 879 | 222 | 258 | 251 | 1.89 | 2.59 | 3.50 | 0.88 | 1.03 |
| -35 | (-31) | 1160 | 292 | 340 | 290 | 1.99 | 3.43 | 3.99 | 1.01 | 1.17 |
| -30 | (-22) | 1487 | 375 | 436 | 333 | 2.13 | 4.41 | 4.47 | 1.13 | 1.31 |
| -25 | (-13) | 1872 | 472 | 548 | 378 | 2.28 | 5.56 | 4.96 | 1.25 | 1.45 |
| -20 | (- 4) | 2322 | 585 | 680 | 425 | 2.46 | 6.93 | 5.46 | 1.38 | 1.60 |
| -15 | (+ 5) | 2849 | 718 | 835 | 475 | 2.65 | 8.53 | 6.00 | 1.51 | 1.76 |
| -10 | (+14) | 3461 | 872 | 1014 | 526 | 2.86 | 10.41 | 6.58 | 1.66 | 1.93 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|------------------------------|------|--------------------------|
| 1 Base plate | European Standard EUEM | | |
| 2 Tray holder | No | | |
| 3 Connectors | | | |
| 3.1 SUCTION | 8.2 +0.12/-0.08 | [mm] | (0.323" +0.005"/-0.003") |
| 3.1.1 Material | Copper | | |
| 3.1.2 Shape | Slanted 40° up + 45° to Back | | |
| 3.2 DISCHARGE | 6.1 +0.10/+0.00 | [mm] | (0.240" +0.004"/+0.000") |
| 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 | | |