

COMPRESSOR DEFINITION

| | |
|---------------------------|------------------------|
| Designation | EH S2155U |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 513307511 |

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 | 187 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 | | [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 | 265 | [ml] (8.96 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ALQUILB / ISO22 | |
| 4 Weight (with oil charge) | 9.5 | [kg] (20.94 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 | Current Relay | |
| 2.1 Starting device | 213515055 | |
| 3 Start capacitor | 88-108(330) | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | 4TM762NFBZZ-53 | |
| 6 Start winding resistance | 15.67 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 4.30 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 22.00 | [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] |
| 2030 | 512 | 595 | 378 | | 6.04 | 5.38 | 1.36 | 1.58 |

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) | 1017 | 256 | 298 | 231 | 2.05 | 3.00 | 4.57 | 1.15 | 1.34 |
| -35 | (-31) | 1309 | 330 | 384 | 273 | 2.11 | 3.87 | 3.23 | 0.81 | 0.95 |
| -30 | (-22) | 1660 | 418 | 487 | 297 | 2.19 | 4.92 | 4.87 | 1.23 | 1.43 |
| -25 | (-13) | 2077 | 523 | 609 | 313 | 2.28 | 6.18 | 7.72 | 1.95 | 2.26 |
| -20 | (- 4) | 2565 | 646 | 752 | 334 | 2.37 | 7.66 | 10.01 | 2.52 | 2.93 |
| -15 | (+ 5) | 3131 | 789 | 917 | 371 | 2.47 | 9.38 | 9.95 | 2.51 | 2.92 |
| -10 | (+14) | 3780 | 952 | 1108 | 435 | 2.58 | 11.37 | 5.80 | 1.46 | 1.70 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|-----------------|------|--|----------------------------------|----------------------------|---------------------------|-----------|-------|
| 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) | 942 | 237 | 276 | 206 | 2.07 | 2.78 | 8.88 | 2.24 | 2.60 |
| -35 | (-31) | 1229 | 310 | 360 | 286 | 2.15 | 3.64 | 2.71 | 0.68 | 0.79 |
| -30 | (-22) | 1573 | 396 | 461 | 334 | 2.24 | 4.66 | 1.41 | 0.35 | 0.41 |
| -25 | (-13) | 1980 | 499 | 580 | 363 | 2.35 | 5.89 | 3.19 | 0.80 | 0.94 |
| -20 | (- 4) | 2457 | 619 | 720 | 383 | 2.47 | 7.33 | 6.30 | 1.59 | 1.85 |
| -15 | (+ 5) | 3009 | 758 | 882 | 406 | 2.60 | 9.01 | 8.96 | 2.26 | 2.63 |
| -10 | (+14) | 3642 | 918 | 1067 | 446 | 2.74 | 10.96 | 9.41 | 2.37 | 2.76 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|-----------------|------|--|----------------------------------|----------------------------|---------------------------|-----------|-------|
| 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) | 869 | 219 | 255 | 75 | 2.09 | 2.56 | 28.12 | 7.09 | 8.24 |
| -35 | (-31) | 1146 | 289 | 336 | 216 | 2.18 | 3.39 | 13.70 | 3.45 | 4.01 |
| -30 | (-22) | 1479 | 373 | 433 | 313 | 2.29 | 4.39 | 6.04 | 1.52 | 1.77 |
| -25 | (-13) | 1874 | 472 | 549 | 378 | 2.42 | 5.57 | 3.35 | 0.84 | 0.98 |
| -20 | (- 4) | 2335 | 588 | 684 | 422 | 2.57 | 6.97 | 3.87 | 0.98 | 1.13 |
| -15 | (+ 5) | 2870 | 723 | 841 | 456 | 2.73 | 8.60 | 5.83 | 1.47 | 1.71 |
| -10 | (+14) | 3484 | 878 | 1021 | 494 | 2.90 | 10.48 | 7.45 | 1.88 | 2.18 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|------------------------------|------|--------------------------|
| 1 Base plate | Universal EUEM | | |
| 2 Tray holder | No | | |
| 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 | 4.9 +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 | 6.2 +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 | | |