

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EH X2155U |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 513307503 |

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/Hight starting sorque | | |
| 7 Expantion 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 | | [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 | ESTER / ISO22 | |
| 4 Weight (with oil charge) | 9.8 | [kg] (21.60 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 | 213515054 | |
| 3 Start capacitor | 88-108(330) | [μF(VAC minimum)] |
| 4 Run capacitor | - | [μF(VAC minimum)] |
| 5 Motor protection | 4TM757NFBYY-53 | |
| 6 Start winding resistance | 14.97 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 4.67 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 18.40 | [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] | |
| 2105 | 530 | 617 | 377 | 2.24 | 6.27 | 5.58 | 1.41 | 1.64 | |

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) | 1069 | 269 | 313 | 224 | 1.70 | 3.16 | 4.74 | 1.20 | 1.39 |
| -35 | (-31) | 1358 | 342 | 398 | 252 | 1.79 | 4.02 | 5.39 | 1.36 | 1.58 |
| -30 | (-22) | 1699 | 428 | 498 | 280 | 1.88 | 5.04 | 6.07 | 1.53 | 1.78 |
| -25 | (-13) | 2100 | 529 | 615 | 310 | 1.98 | 6.25 | 6.80 | 1.71 | 1.99 |
| -20 | (- 4) | 2574 | 649 | 754 | 339 | 2.09 | 7.68 | 7.60 | 1.91 | 2.23 |
| -15 | (+ 5) | 3129 | 788 | 917 | 368 | 2.20 | 9.37 | 8.49 | 2.14 | 2.49 |
| -10 | (+14) | 3777 | 952 | 1107 | 396 | 2.31 | 11.37 | 9.51 | 2.40 | 2.79 |

| 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) | 960 | 242 | 281 | 228 | 1.71 | 2.83 | 4.24 | 1.07 | 1.24 |
| -35 | (-31) | 1275 | 321 | 374 | 263 | 1.82 | 3.77 | 4.85 | 1.22 | 1.42 |
| -30 | (-22) | 1637 | 412 | 480 | 300 | 1.94 | 4.85 | 5.45 | 1.37 | 1.60 |
| -25 | (-13) | 2054 | 518 | 602 | 338 | 2.08 | 6.11 | 6.07 | 1.53 | 1.78 |
| -20 | (- 4) | 2537 | 639 | 743 | 376 | 2.23 | 7.57 | 6.73 | 1.70 | 1.97 |
| -15 | (+ 5) | 3097 | 781 | 908 | 415 | 2.39 | 9.28 | 7.46 | 1.88 | 2.19 |
| -10 | (+14) | 3745 | 944 | 1097 | 453 | 2.55 | 11.27 | 8.28 | 2.09 | 2.43 |

| 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) | 891 | 225 | 261 | 233 | 1.74 | 2.63 | 3.82 | 0.96 | 1.12 |
| -35 | (-31) | 1211 | 305 | 355 | 274 | 1.86 | 3.58 | 4.41 | 1.11 | 1.29 |
| -30 | (-22) | 1571 | 396 | 460 | 317 | 2.01 | 4.66 | 4.95 | 1.25 | 1.45 |
| -25 | (-13) | 1981 | 499 | 580 | 362 | 2.18 | 5.89 | 5.49 | 1.38 | 1.61 |
| -20 | (- 4) | 2452 | 618 | 718 | 407 | 2.36 | 7.31 | 6.02 | 1.52 | 1.77 |
| -15 | (+ 5) | 2994 | 755 | 877 | 454 | 2.55 | 8.97 | 6.59 | 1.66 | 1.93 |
| -10 | (+14) | 3618 | 912 | 1060 | 501 | 2.76 | 10.88 | 7.22 | 1.82 | 2.12 |

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 | | |