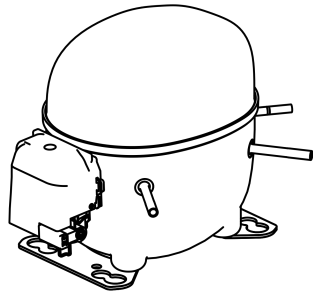


VNEU213U



ENGINEERING CODE
860DX71



REFRIGERANT
R-290



POWER SUPPLY
220-240 V 50-60
Hz



APPLICATION
LBP



MOTOR TYPE
BPM



STANDARD
EN12900



**COOLING CAPACITY
(4500 RPM)**
558 W



**EFFICIENCY
(4500 RPM)**
1.2 W/W

DATA

GENERAL DATA

| | |
|------------------------|-----------------------------------|
| Model | VNEU213U |
| Type | Hermetic Reciprocating |
| Technology | VCC |
| Compressor Application | LBP |
| Expansion Device | Capillary Tube or Expansion Valve |
| Compressor Cooling | Fan/220 |
| Starting Torque | HST |
| Plant | SLOVAKIA |

ELECTRICAL DATA

| | |
|--------------------------|----------------|
| Start Winding Resistance | 3.82 Ω at 25°C |
| Run Winding Resistance | 2.53 Ω at 25°C |

MECHANICAL DATA

| | |
|---------------|-----------------------|
| Displacement | 13.54 cm ³ |
| Oil Charge | 500 ml |
| Oil Type | ESTER |
| Oil Viscosity | ISO22 |
| Weight | 11.4 Kg |

ELECTRICAL COMPONENTS

| | |
|-----------------------------|----------------|
| CSR CSIR BOX | No |
| Starting Device Type | INVERTER |
| Starting Device Description | VCCHP2456XXXXX |
| Overload Protection | T0606/07 |
| Inverter | VCCHP2456XXXXX |
| Inverter Description | VCCHP2456XXXXX |

PERFORMANCE

TESTED CONDITIONS

| | |
|-------------------------|---------|
| Tested Refrigerant | R-290 |
| Tested Application | LBP |
| Tested Standard | EN12900 |
| Tested Cooling | Fan |
| Tested Voltage | 220 V |
| Refrigerant Temperature | Dew |

Performance on Compressor Speed: 2000 RPM

RATED POINTS

| Condensing Temperature °C | Evaporating Temperature °C | Cooling Capacity W | Efficiency W/W | Power Consumption W | Current A | Gas Flow Rate kg/h |
|---------------------------|----------------------------|--------------------|----------------|---------------------|-----------|--------------------|
| 40 | -35 | 269 | 1.28 | 210 | - | 3.09 |

Test Condition: Subcooling 0 K, Return Gas 20 °C. Data are an indication of performance based simulation.

PERFORMANCE CURVE

Condensing Temperature 35°C

| Evaporating Temperature °C | Cooling Capacity W | Efficiency W/W | Power Consumption W | Current A | Gas Flow Rate kg/h |
|----------------------------|--------------------|----------------|---------------------|-----------|--------------------|
| -40 | 220 | 1.23 | 179 | - | 2.41 |
| -35 | 288 | 1.42 | 203 | - | 3.16 |
| -30 | 373 | 1.63 | 229 | - | 4.10 |
| -25 | 476 | 1.87 | 255 | - | 5.25 |
| -20 | 597 | 2.14 | 279 | - | 6.61 |
| -15 | 736 | 2.45 | 300 | - | 8.20 |
| -10 | 895 | 2.81 | 318 | - | 10.02 |

Test Condition: Subcooling 0 K, Return Gas 20 °C. Data are an indication of performance based simulation.

PERFORMANCE CURVE

Condensing Temperature 45°C

| Evaporating Temperature °C | Cooling Capacity W | Efficiency W/W | Power Consumption W | Current A | Gas Flow Rate kg/h |
|----------------------------|--------------------|----------------|---------------------|-----------|--------------------|
| -40 | 187 | 0.99 | 189 | - | 2.24 |
| -35 | 248 | 1.15 | 216 | - | 2.98 |
| -30 | 323 | 1.31 | 246 | - | 3.90 |
| -25 | 413 | 1.49 | 277 | - | 5.00 |
| -20 | 517 | 1.68 | 308 | - | 6.30 |
| -15 | 638 | 1.89 | 338 | - | 7.80 |
| -10 | 775 | 2.11 | 366 | - | 9.53 |

Test Condition: Subcooling 0 K, Return Gas 20 °C. Data are an indication of performance based simulation.

PERFORMANCE CURVE

Condensing Temperature 55°C

| Evaporating Temperature °C | Cooling Capacity W | Efficiency W/W | Power Consumption W | Current A | Gas Flow Rate kg/h |
|----------------------------|--------------------|----------------|---------------------|-----------|--------------------|
| -30 | 265 | 1.03 | 257 | - | 3.56 |
| -25 | 342 | 1.17 | 293 | - | 4.62 |
| -20 | 432 | 1.31 | 330 | - | 5.87 |
| -15 | 535 | 1.45 | 368 | - | 7.30 |
| -10 | 651 | 1.61 | 405 | - | 8.94 |

Test Condition: Subcooling 0 K, Return Gas 20 °C. Data are an indication of performance based simulation.

Performance on Compressor Speed: 2400 RPM

RATED POINTS

| Condensing Temperature °C | Evaporating Temperature °C | Cooling Capacity W | Efficiency W/W | Power Consumption W | Current A | Gas Flow Rate kg/h |
|---------------------------|----------------------------|--------------------|----------------|---------------------|-----------|--------------------|
| 40 | -35 | 297 | 1.25 | 237 | - | 3.41 |

Test Condition: Subcooling 0 K, Return Gas 20 °C. Data are an indication of performance based simulation.

PERFORMANCE CURVE

Condensing Temperature 35°C

| Evaporating Temperature °C | Cooling Capacity W | Efficiency W/W | Power Consumption W | Current A | Gas Flow Rate kg/h |
|----------------------------|--------------------|----------------|---------------------|-----------|--------------------|
| -40 | 242 | 1.19 | 203 | - | 2.65 |
| -35 | 320 | 1.39 | 230 | - | 3.51 |
| -30 | 415 | 1.61 | 258 | - | 4.57 |
| -25 | 529 | 1.85 | 286 | - | 5.84 |
| -20 | 661 | 2.12 | 312 | - | 7.33 |
| -15 | 812 | 2.41 | 337 | - | 9.05 |
| -10 | 983 | 2.75 | 358 | - | 11.01 |

Test Condition: Subcooling 0 K, Return Gas 20 °C. Data are an indication of performance based simulation.

PERFORMANCE CURVE

Condensing Temperature 45°C

| Evaporating Temperature °C | Cooling Capacity W | Efficiency W/W | Power Consumption W | Current A | Gas Flow Rate kg/h |
|----------------------------|--------------------|----------------|---------------------|-----------|--------------------|
| -40 | 211 | 1.00 | 211 | - | 2.54 |
| -35 | 277 | 1.14 | 242 | - | 3.33 |
| -30 | 359 | 1.30 | 276 | - | 4.33 |
| -25 | 459 | 1.48 | 310 | - | 5.56 |
| -20 | 577 | 1.67 | 345 | - | 7.03 |
| -15 | 714 | 1.88 | 379 | - | 8.74 |
| -10 | 869 | 2.11 | 412 | - | 10.71 |

Test Condition: Subcooling 0 K, Return Gas 20 °C. Data are an indication of performance based simulation.

PERFORMANCE CURVE

Condensing Temperature 55°C

| Evaporating Temperature °C | Cooling Capacity W | Efficiency W/W | Power Consumption W | Current A | Gas Flow Rate kg/h |
|----------------------------|--------------------|----------------|---------------------|-----------|--------------------|
| -30 | 309 | 1.08 | 287 | - | 4.16 |
| -25 | 394 | 1.20 | 327 | - | 5.32 |
| -20 | 496 | 1.34 | 369 | - | 6.73 |
| -15 | 616 | 1.50 | 412 | - | 8.41 |
| -10 | 755 | 1.66 | 455 | - | 10.36 |

Test Condition: Subcooling 0 K, Return Gas 20 °C. Data are an indication of performance based simulation.

Performance on Compressor Speed: 3000 RPM

RATED POINTS

| Condensing Temperature °C | Evaporating Temperature °C | Cooling Capacity W | Efficiency W/W | Power Consumption W | Current A | Gas Flow Rate kg/h |
|---------------------------|----------------------------|--------------------|----------------|---------------------|-----------|--------------------|
| 40 | -35 | 370 | 1.24 | 299 | - | 4.24 |

Test Condition: Subcooling 0 K, Return Gas 20 °C. Data are an indication of performance based simulation.

PERFORMANCE CURVE

Condensing Temperature 35°C

| Evaporating Temperature °C | Cooling Capacity W | Efficiency W/W | Power Consumption W | Current A | Gas Flow Rate kg/h |
|----------------------------|--------------------|----------------|---------------------|-----------|--------------------|
| -40 | 301 | 1.18 | 256 | - | 3.30 |
| -35 | 398 | 1.37 | 290 | - | 4.37 |
| -30 | 516 | 1.58 | 327 | - | 5.68 |
| -25 | 658 | 1.81 | 363 | - | 7.26 |
| -20 | 824 | 2.06 | 399 | - | 9.13 |
| -15 | 1016 | 2.35 | 432 | - | 11.31 |
| -10 | 1235 | 2.68 | 460 | - | 13.83 |

Test Condition: Subcooling 0 K, Return Gas 20 °C. Data are an indication of performance based simulation.

PERFORMANCE CURVE

Condensing Temperature 45°C

| Evaporating Temperature °C | Cooling Capacity W | Efficiency W/W | Power Consumption W | Current A | Gas Flow Rate kg/h |
|----------------------------|--------------------|----------------|---------------------|-----------|--------------------|
| -40 | 258 | 0.97 | 267 | - | 3.10 |
| -35 | 342 | 1.12 | 306 | - | 4.12 |
| -30 | 446 | 1.28 | 348 | - | 5.39 |
| -25 | 572 | 1.45 | 393 | - | 6.93 |
| -20 | 720 | 1.64 | 439 | - | 8.76 |
| -15 | 893 | 1.85 | 483 | - | 10.92 |
| -10 | 1091 | 2.08 | 525 | - | 13.43 |

Test Condition: Subcooling 0 K, Return Gas 20 °C. Data are an indication of performance based simulation.

PERFORMANCE CURVE

Condensing Temperature 55°C

| Evaporating Temperature °C | Cooling Capacity W | Efficiency W/W | Power Consumption W | Current A | Gas Flow Rate kg/h |
|----------------------------|--------------------|----------------|---------------------|-----------|--------------------|
| -30 | 379 | 1.05 | 360 | - | 5.09 |
| -25 | 487 | 1.18 | 412 | - | 6.58 |
| -20 | 616 | 1.32 | 466 | - | 8.37 |
| -15 | 768 | 1.48 | 520 | - | 10.49 |
| -10 | 944 | 1.64 | 575 | - | 12.96 |

Test Condition: Subcooling 0 K, Return Gas 20 °C. Data are an indication of performance based simulation.

Performance on Compressor Speed: 3600 RPM

RATED POINTS

| Condensing Temperature °C | Evaporating Temperature °C | Cooling Capacity W | Efficiency W/W | Power Consumption W | Current A | Gas Flow Rate kg/h |
|---------------------------|----------------------------|--------------------|----------------|---------------------|-----------|--------------------|
| 40 | -35 | 446 | 1.22 | 365 | - | 5.12 |

Test Condition: Subcooling 0 K, Return Gas 20 °C. Data are an indication of performance based simulation.

PERFORMANCE CURVE

Condensing Temperature 35°C

| Evaporating Temperature °C | Cooling Capacity W | Efficiency W/W | Power Consumption W | Current A | Gas Flow Rate kg/h |
|----------------------------|--------------------|----------------|---------------------|-----------|--------------------|
| -40 | 365 | 1.17 | 312 | - | 3.99 |
| -35 | 482 | 1.36 | 355 | - | 5.29 |
| -30 | 625 | 1.56 | 401 | - | 6.88 |
| -25 | 795 | 1.78 | 448 | - | 8.78 |
| -20 | 994 | 2.01 | 494 | - | 11.02 |
| -15 | 1223 | 2.29 | 535 | - | 13.62 |
| -10 | 1483 | 2.60 | 570 | - | 16.61 |

Test Condition: Subcooling 0 K, Return Gas 20 °C. Data are an indication of performance based simulation.

PERFORMANCE CURVE

Condensing Temperature 45°C

| Evaporating Temperature °C | Cooling Capacity W | Efficiency W/W | Power Consumption W | Current A | Gas Flow Rate kg/h |
|----------------------------|--------------------|----------------|---------------------|-----------|--------------------|
| -40 | 309 | 0.95 | 325 | - | 3.71 |
| -35 | 411 | 1.10 | 372 | - | 4.94 |
| -30 | 536 | 1.26 | 424 | - | 6.47 |
| -25 | 687 | 1.43 | 480 | - | 8.32 |
| -20 | 864 | 1.61 | 537 | - | 10.51 |
| -15 | 1068 | 1.80 | 592 | - | 13.07 |
| -10 | 1301 | 2.02 | 643 | - | 16.01 |

Test Condition: Subcooling 0 K, Return Gas 20 °C. Data are an indication of performance based simulation.

PERFORMANCE CURVE

Condensing Temperature 55°C

| Evaporating Temperature °C | Cooling Capacity W | Efficiency W/W | Power Consumption W | Current A | Gas Flow Rate kg/h |
|----------------------------|--------------------|----------------|---------------------|-----------|--------------------|
| -30 | 448 | 1.03 | 434 | - | 6.02 |
| -25 | 578 | 1.16 | 497 | - | 7.80 |
| -20 | 731 | 1.30 | 563 | - | 9.93 |
| -15 | 910 | 1.44 | 630 | - | 12.42 |
| -10 | 1115 | 1.60 | 695 | - | 15.30 |

Test Condition: Subcooling 0 K, Return Gas 20 °C. Data are an indication of performance based simulation.

Performance on Compressor Speed: 4500 RPM

RATED POINTS

| Condensing Temperature °C | Evaporating Temperature °C | Cooling Capacity W | Efficiency W/W | Power Consumption W | Current A | Gas Flow Rate kg/h |
|---------------------------|----------------------------|--------------------|----------------|---------------------|-----------|--------------------|
| 40 | -35 | 558 | 1.2 | 464 | - | 6.41 |

Test Condition: Subcooling 0 K, Return Gas 20 °C. Data are an indication of performance based simulation.

PERFORMANCE CURVE

Condensing Temperature 35°C

| Evaporating Temperature °C | Cooling Capacity W | Efficiency W/W | Power Consumption W | Current A | Gas Flow Rate kg/h |
|----------------------------|--------------------|----------------|---------------------|-----------|--------------------|
| -40 | 457 | 1.16 | 395 | - | 5.01 |
| -35 | 600 | 1.33 | 452 | - | 6.59 |
| -30 | 766 | 1.49 | 513 | - | 8.43 |
| -25 | 959 | 1.67 | 574 | - | 10.59 |
| -20 | 1183 | 1.87 | 634 | - | 13.11 |
| -15 | 1441 | 2.09 | 688 | - | 16.05 |
| -10 | 1736 | 2.36 | 735 | - | 19.45 |

Test Condition: Subcooling 0 K, Return Gas 20 °C. Data are an indication of performance based simulation.

PERFORMANCE CURVE

Condensing Temperature 45°C

| Evaporating Temperature °C | Cooling Capacity W | Efficiency W/W | Power Consumption W | Current A | Gas Flow Rate kg/h |
|----------------------------|--------------------|----------------|---------------------|-----------|--------------------|
| -40 | 380 | 0.93 | 409 | - | 4.56 |
| -35 | 514 | 1.09 | 472 | - | 6.19 |
| -30 | 669 | 1.23 | 542 | - | 8.08 |
| -25 | 847 | 1.38 | 615 | - | 10.26 |
| -20 | 1051 | 1.53 | 688 | - | 12.80 |
| -15 | 1286 | 1.69 | 759 | - | 15.74 |
| -10 | 1555 | 1.89 | 824 | - | 19.14 |

Test Condition: Subcooling 0 K, Return Gas 20 °C. Data are an indication of performance based simulation.

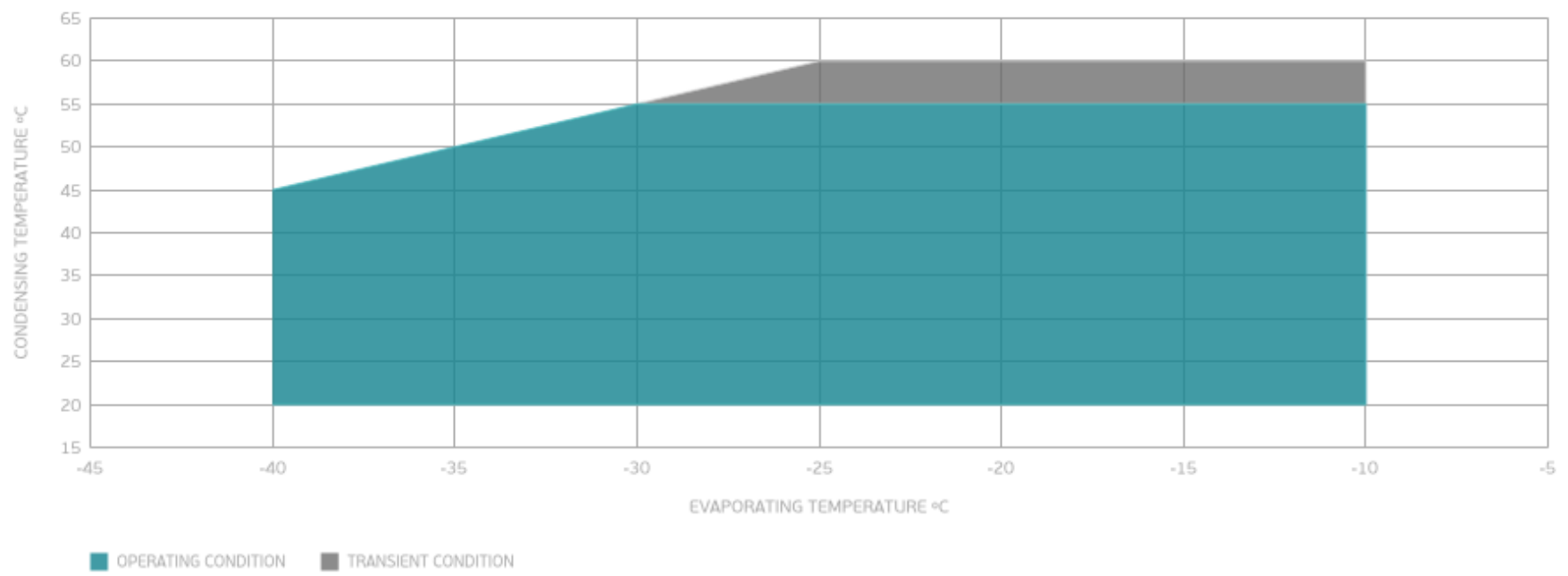
PERFORMANCE CURVE

Condensing Temperature 55°C

| Evaporating Temperature °C | Cooling Capacity W | Efficiency W/W | Power Consumption W | Current A | Gas Flow Rate kg/h |
|----------------------------|--------------------|----------------|---------------------|-----------|--------------------|
| -30 | 564 | 1.02 | 554 | - | 7.58 |
| -25 | 727 | 1.14 | 636 | - | 9.81 |
| -20 | 912 | 1.26 | 722 | - | 12.38 |
| -15 | 1124 | 1.39 | 808 | - | 15.35 |
| -10 | 1367 | 1.54 | 890 | - | 18.76 |

Test Condition: Subcooling 0 K, Return Gas 20 °C. Data are an indication of performance based simulation.

ENVELOPE



External

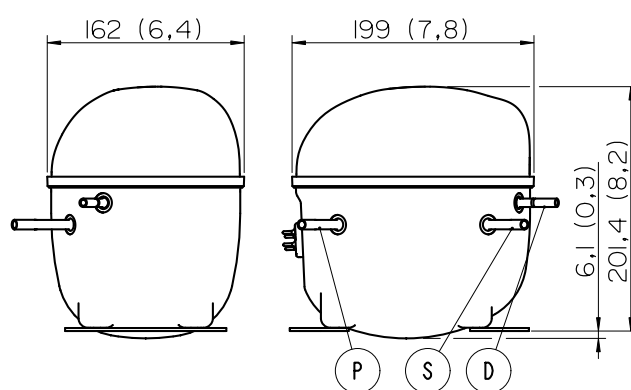
EXTERNAL CHARACTERISTICS

| | |
|-------------|-----|
| Base Plate | UNI |
| Tray Holder | NO |

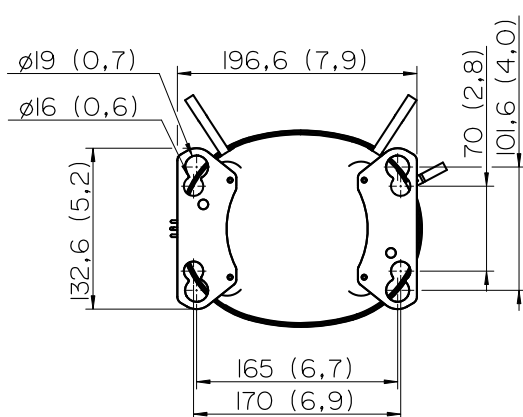
| Connector | Internal Diameter | Shape | Material |
|-----------|-------------------|--------------------------------|----------|
| Suction | 8.1 mm | SLANTED 42° | COPPER |
| Discharge | 6.45 mm | SLANTED PARALLEL TO BASE PLATE | COPPER |
| Process | 6.45 mm | SLANTED 42° | COPPER |

EXTERNAL DIMENSIONS

SHELL



BASE



FENCE

