

Technical Data Sheet

Compressor model **NUY90RAb**
 Voltage **220-240V 50Hz ~1**
 Refrigerant **R290**
 Compressor status

APPLICATION

Application High Back Pressure
 Refrigerant R290
 Evaporating Temp. -15,0 °C to 10,0 °C
 Expansion Capillar/Valve
 Comp. Cooling Fan cooled
 Max. ambient temp. 43,0 °C

COMPRESSOR

Displacement 8,90 cm³
 Diameter 24,30 mm
 Stroke 19,00 mm
 Net Weight 9,85 Kg
 Oil type ISO VG 32 ESTER
 Oil charge 200 cm³
 HP 3/8 hp

MOTOR

Voltage/Frequency 220-240V 50Hz
 Voltage range 187-255 V
 Type CSR
 Phase number 1 PH
 Locked Rotor Amps (LRA) 17,50 A
 Max. Cont. Current (MCC) 3,65 A
 Main W. resist. at 25°C 6,73 Ω
 Start W. resist. at 25°C 12,64 Ω

NOMINAL PERFORMANCE

| | ASHRAE | CECOMAF |
|------------------|--------------|--------------|
| Cooling Capacity | 1.072 kCal/h | 1.050 W |
| COP | 2,70 W/W | 2,31 W/W |
| EER | 2,33 kCal/Wh | 1,99 kCal/Wh |
| Input Power | 461 W | 455 W |
| Current | 2,38 A | 2,35 A |

APPROVALS



TEST CYCLE CONDITIONS

| | ASHRAE HBP (D) | CECOMAF HBP (C) |
|---------------------------------------|-------------------|--------------------|
| Evaporating temp. (T _e) | 7,2 °C | 5,0 °C |
| Condensing temp. (T _c) | 55,0 °C | 55,0 °C |
| Liquid temp. (T _{liq.}) | 46,0 °C | 55,0 °C |
| Ambient temp. (T _{amb.}) | 35,0 °C | 32,0 °C |
| Suction temp. (T _{suction}) | 35,0 °C | 32,0 °C |
| Voltage/Frequency | 220 V 50 Hz | 220 V 50 Hz |

ELECTRICAL COMPONENTS

| | | | |
|-------------------------|---------------------|--------------------|--|
| Starting capacitor | 60-61 µF 330 V | | |
| Run capacitor | 10 µF 450 V | | |
| Relay | Option 1 | Option 2 | |
| Reference | 2014 149. + NTC15İ© | QLZ 7.8A + NTC15İ© | |
| Pick-Up | 7,80 A | 7,80 A | |
| Drop-Out | 6,50 A | 6,65 A | |
| Protector | Option 1 | | |
| Reference | B100-105 | | |
| Current | 10,50 A | | |
| Time check | 7,5-16 seg | | |
| Disc temp. (Open/Close) | 105,00 / 61,00 °C | | |

This product is approved for R290 and R600a regarding explosion safety according to standard EN 60335-1 and EN 60335-2-34

ASHRAE

| Tc | Te | Cooling Capacity | Consumption | Current | COP | EER |
|----|-----|------------------|-------------|---------|------|---------|
| °C | °C | kCal/h | W | A | W/W | kCal/Wh |
| 40 | -15 | 571 | 315 | 1,83 | 2,11 | 1,81 |
| 40 | -10 | 704 | 336 | 1,90 | 2,44 | 2,10 |
| 40 | -5 | 852 | 354 | 1,96 | 2,80 | 2,41 |
| 40 | 0 | 1.015 | 370 | 2,02 | 3,19 | 2,75 |
| 40 | 5 | 1.192 | 383 | 2,06 | 3,62 | 3,12 |
| 40 | 7,2 | 1.275 | 388 | 2,08 | 3,83 | 3,29 |
| 40 | 10 | 1.384 | 393 | 2,10 | 4,10 | 3,52 |

| | | | | | | |
|----|-----|-------|-----|------|------|------|
| 45 | -15 | 533 | 326 | 1,87 | 1,90 | 1,63 |
| 45 | -10 | 660 | 350 | 1,95 | 2,19 | 1,89 |
| 45 | -5 | 801 | 371 | 2,02 | 2,51 | 2,16 |
| 45 | 0 | 957 | 390 | 2,09 | 2,86 | 2,46 |
| 45 | 5 | 1.127 | 406 | 2,15 | 3,23 | 2,78 |
| 45 | 7,2 | 1.207 | 412 | 2,18 | 3,41 | 2,93 |
| 45 | 10 | 1.312 | 419 | 2,21 | 3,64 | 3,13 |

| | | | | | | |
|----|-----|-------|-----|------|------|------|
| 50 | -15 | 495 | 337 | 1,90 | 1,71 | 1,47 |
| 50 | -10 | 615 | 364 | 2,00 | 1,97 | 1,69 |
| 50 | -5 | 750 | 388 | 2,09 | 2,25 | 1,93 |
| 50 | 0 | 899 | 410 | 2,17 | 2,55 | 2,19 |
| 50 | 5 | 1.063 | 429 | 2,25 | 2,88 | 2,48 |
| 50 | 7,2 | 1.140 | 437 | 2,28 | 3,04 | 2,61 |
| 50 | 10 | 1.241 | 445 | 2,31 | 3,24 | 2,79 |

| | | | | | | |
|----|-----|-------|-----|------|------|------|
| 55 | -15 | 457 | 348 | 1,94 | 1,53 | 1,31 |
| 55 | -10 | 570 | 378 | 2,05 | 1,76 | 1,51 |
| 55 | -5 | 698 | 405 | 2,15 | 2,00 | 1,72 |
| 55 | 0 | 841 | 430 | 2,25 | 2,27 | 1,96 |
| 55 | 5 | 998 | 452 | 2,34 | 2,57 | 2,21 |
| 55 | 7,2 | 1.072 | 461 | 2,38 | 2,70 | 2,33 |
| 55 | 10 | 1.170 | 472 | 2,43 | 2,89 | 2,48 |

| | | | | | | |
|----|-----|-------|-----|------|------|------|
| 60 | -15 | 419 | 359 | 1,98 | 1,36 | 1,17 |
| 60 | -10 | 526 | 392 | 2,10 | 1,56 | 1,34 |
| 60 | -5 | 647 | 422 | 2,22 | 1,78 | 1,53 |
| 60 | 0 | 783 | 450 | 2,33 | 2,02 | 1,74 |
| 60 | 5 | 934 | 475 | 2,44 | 2,28 | 1,96 |
| 60 | 7,2 | 1.005 | 486 | 2,49 | 2,41 | 2,07 |
| 60 | 10 | 1.099 | 498 | 2,54 | 2,57 | 2,21 |

CECOMAF

| Tc | Te | Cooling Capacity | Consumption | Current | COP | EER |
|----|-----|------------------|-------------|---------|------|---------|
| °C | °C | W | W | A | W/W | kCal/Wh |
| 40 | -15 | 614 | 317 | 1,83 | 1,94 | 1,67 |
| 40 | -10 | 758 | 338 | 1,90 | 2,24 | 1,94 |
| 40 | -5 | 917 | 356 | 1,97 | 2,58 | 2,23 |
| 40 | 0 | 1.092 | 372 | 2,03 | 2,94 | 2,54 |
| 40 | 5 | 1.281 | 385 | 2,07 | 3,33 | 2,87 |
| 40 | 7,2 | 1.370 | 390 | 2,09 | 3,51 | 3,03 |
| 40 | 10 | 1.486 | 396 | 2,11 | 3,76 | 3,24 |

| | | | | | | |
|----|-----|-------|-----|------|------|------|
| 45 | -15 | 570 | 328 | 1,87 | 1,74 | 1,50 |
| 45 | -10 | 706 | 352 | 1,95 | 2,01 | 1,73 |
| 45 | -5 | 857 | 373 | 2,03 | 2,29 | 1,98 |
| 45 | 0 | 1.023 | 392 | 2,10 | 2,61 | 2,25 |
| 45 | 5 | 1.204 | 408 | 2,16 | 2,95 | 2,55 |
| 45 | 7,2 | 1.289 | 415 | 2,19 | 3,11 | 2,68 |
| 45 | 10 | 1.401 | 422 | 2,22 | 3,32 | 2,87 |

| | | | | | | |
|----|-----|-------|-----|------|------|------|
| 50 | -15 | 526 | 339 | 1,91 | 1,55 | 1,34 |
| 50 | -10 | 653 | 366 | 2,00 | 1,78 | 1,54 |
| 50 | -5 | 796 | 391 | 2,09 | 2,04 | 1,76 |
| 50 | 0 | 954 | 412 | 2,18 | 2,31 | 2,00 |
| 50 | 5 | 1.127 | 432 | 2,26 | 2,61 | 2,26 |
| 50 | 7,2 | 1.208 | 439 | 2,29 | 2,75 | 2,38 |
| 50 | 10 | 1.315 | 448 | 2,33 | 2,93 | 2,53 |

| | | | | | | |
|----|-----|-------|-----|------|------|------|
| 55 | -15 | 482 | 350 | 1,95 | 1,38 | 1,19 |
| 55 | -10 | 601 | 380 | 2,06 | 1,58 | 1,37 |
| 55 | -5 | 735 | 408 | 2,16 | 1,80 | 1,56 |
| 55 | 0 | 885 | 433 | 2,26 | 2,05 | 1,77 |
| 55 | 5 | 1.050 | 455 | 2,35 | 2,31 | 1,99 |
| 55 | 7,2 | 1.127 | 464 | 2,39 | 2,43 | 2,10 |
| 55 | 10 | 1.230 | 475 | 2,44 | 2,59 | 2,24 |

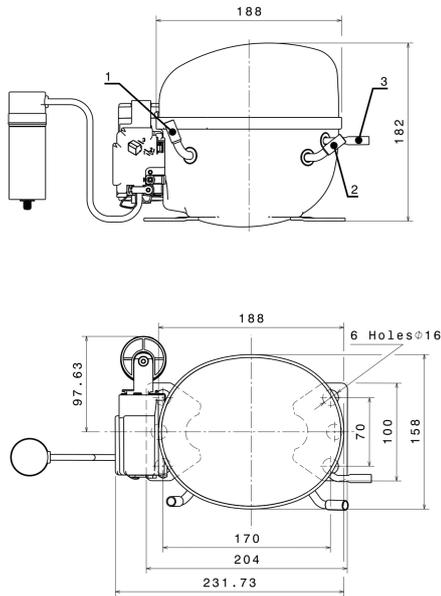
| | | | | | | |
|----|-----|-------|-----|------|------|------|
| 60 | -15 | 437 | 361 | 1,99 | 1,21 | 1,05 |
| 60 | -10 | 548 | 394 | 2,11 | 1,39 | 1,20 |
| 60 | -5 | 675 | 425 | 2,23 | 1,59 | 1,37 |
| 60 | 0 | 816 | 453 | 2,35 | 1,80 | 1,56 |
| 60 | 5 | 973 | 478 | 2,46 | 2,03 | 1,76 |
| 60 | 7,2 | 1.046 | 489 | 2,50 | 2,14 | 1,85 |
| 60 | 10 | 1.144 | 501 | 2,56 | 2,28 | 1,97 |

EN12900

| X | Cooling Capacity (W) | Consumption (W) | Current (A) | Mass Flow (kg/h) |
|---|----------------------|-----------------|---------------|---------------------|
| 1 | 1.646,2486491868 | 215,2884159479 | 1,3685474330 | 14,527700072227 |
| 2 | 50,0681111963 | -1,9853404812 | -0,0132288522 | 0,46048316563833 |
| 3 | -14,2809755231 | 4,1648302367 | 0,0171049760 | -0,045505375159219 |
| 4 | 0,3004288278 | -0,0501578873 | -0,0001035459 | 0,00527806894366 |
| 5 | -0,3519553910 | 0,1266061283 | 0,0006155950 | -9,3443041196861E-5 |

| | |
|----------|---|
| Equation | $x_1 + x_2Te + x_3Tc + x_4Te^2 + x_5TeTc$ |
|----------|---|

COMPRESSOR DIMENSIONS

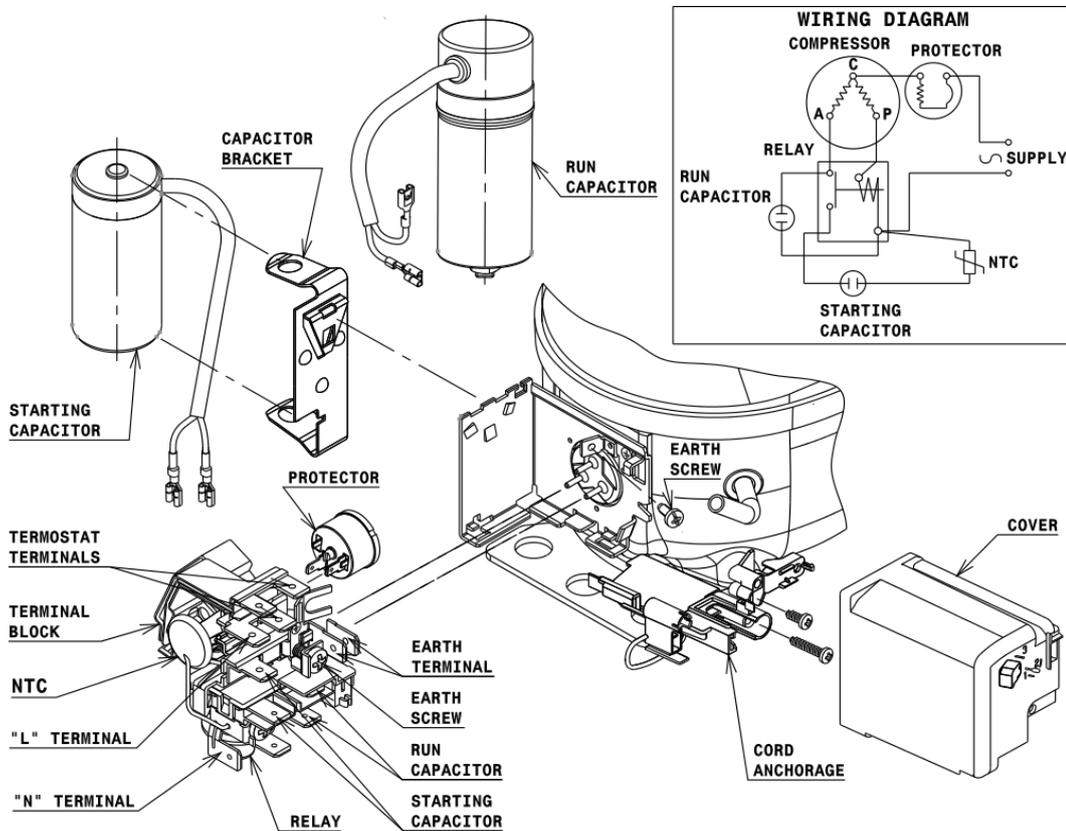


DESIGNATION INTERNAL DIAM.

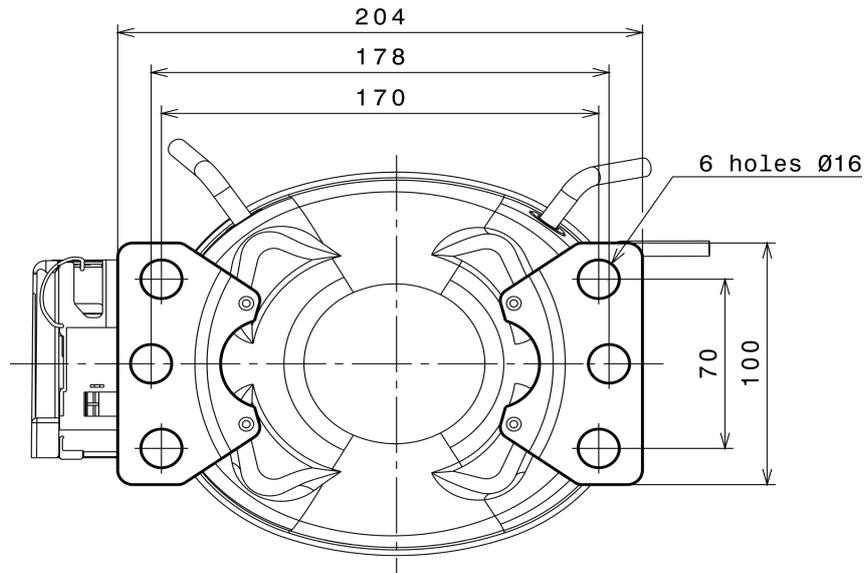
| | | |
|---|-----------|--------|
| 1 | Service | 6,2 mm |
| 2 | Suction | 6,2 mm |
| 3 | Discharge | 4,9 mm |

WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

CSR CONNECTION (CURRENT RELAY + NTC) (U range)



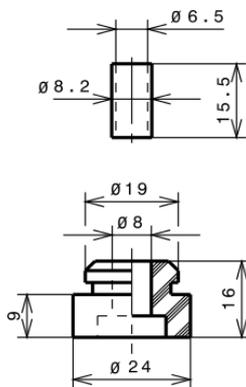
FIXINGS



SILENT BLOCKS (MOUNTING ACCESSORIES)

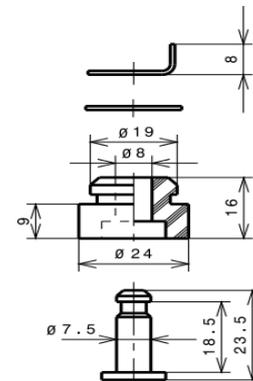
STANDARD

Ø16 holes (170x70 net)



SNAP-ON

Ø16 holes (170x70 net)



SOA

SOA R290 HBP

