

# Technical Data Sheet

Compressor model **NUY60RAb**  
Voltage **220-240V 50Hz ~1**  
Refrigerant **R290**  
Compressor status

## APPLICATION

## COMPRESSOR

## MOTOR

|                    |                           |              |                      |                          |               |
|--------------------|---------------------------|--------------|----------------------|--------------------------|---------------|
| Application        | High-Medium Back Pressure | Displacement | 6,00 cm <sup>3</sup> | Voltage/Frequency        | 220-240V 50Hz |
| Refrigerant        | R290                      | Diameter     | 21,99 mm             | Voltage range            | 198-255 V     |
| Evaporating Temp.  | -25,0 °C to 10,0 °C       | Stroke       | 16,00 mm             | Type                     | CSR           |
| Expansion          | Capillar/Valve            | Net Weight   | 9,48 Kg              | Phase number             | 1 PH          |
| Comp. Cooling      | Fan cooled                | Oil type     | ISO VG 32 ESTER      | Locked Rotor Amps (LRA)  | 13,70 A       |
| Max. ambient temp. | 43,0 °C                   | Oil charge   | 200 cm <sup>3</sup>  | Max. Cont. Current (MCC) | 3,10 A        |
|                    |                           | HP           | 1/4 hp               | Main W. resist. at 25°C  | 8,16 Ω        |
|                    |                           |              |                      | Start W. resist. at 25°C | 30,79 Ω       |

## NOMINAL PERFORMANCE

|                  | ASHRAE       | CECOMAF      |
|------------------|--------------|--------------|
| Cooling Capacity | 731 kCal/h   | 716 W        |
| COP              | 2,83 W/W     | 2,42 W/W     |
| EER              | 2,44 kCal/Wh | 2,09 kCal/Wh |
| Input Power      | 300 W        | 296 W        |
| Current          | 1,64 A       | 1,62 A       |

## APPROVALS



## TEST CYCLE CONDITIONS

|                                       | ASHRAE<br>HMBP (D) | CECOMAF<br>HMBP (C) |
|---------------------------------------|--------------------|---------------------|
| Evaporating temp. (T <sub>e</sub> )   | 7,2 °C             | 5,0 °C              |
| Condensing temp. (T <sub>c</sub> )    | 55,0 °C            | 55,0 °C             |
| Liquid temp. (T <sub>liq.</sub> )     | 46,0 °C            | 55,0 °C             |
| Ambient temp. (T <sub>amb.</sub> )    | 35,0 °C            | 32,0 °C             |
| Suction temp. (T <sub>suction</sub> ) | 35,0 °C            | 32,0 °C             |
| Voltage/Frequency                     | 220 V 50 Hz        | 220 V 50 Hz         |

## ELECTRICAL COMPONENTS

|                         |                     |                   |  |  |
|-------------------------|---------------------|-------------------|--|--|
| Starting capacitor      | 47- 56 µF 330 V     |                   |  |  |
| Run capacitor           | 5 µF 400 V          |                   |  |  |
| Relay                   | Option 1            | Option 2          |  |  |
| Reference               | 2014 118. + NTC15Î© | QLZ-3.75+NTC15    |  |  |
| Pick-Up                 | 3.8 A               | 3.75 A            |  |  |
| Drop-Out                | 3.25 A              | 3.2 A             |  |  |
| Protector               | Option 1            | Option 2          |  |  |
| Reference               | T0269               | B96-105           |  |  |
| Current                 | 9,60 A              | 9,60 A            |  |  |
| Time check              | 7,5-14 seg          | 7,5-16 seg        |  |  |
| Disc temp. (Open/Close) | 105,00 / 52,00 °C   | 115,00 / 52,00 °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<br>°C | Te<br>°C | Cooling<br>Capacity<br>kCal/h | Consumption<br>W | Current<br>A | COP<br>W/W | EER<br>kCal/Wh |
|----------|----------|-------------------------------|------------------|--------------|------------|----------------|
| 40       | -25      | 254                           | 177              | 1,17         | 1,67       | 1,43           |
| 40       | -20      | 320                           | 190              | 1,21         | 1,95       | 1,68           |
| 40       | -15      | 397                           | 203              | 1,24         | 2,28       | 1,96           |
| 40       | -10      | 486                           | 214              | 1,28         | 2,64       | 2,27           |
| 40       | -5       | 585                           | 225              | 1,32         | 3,03       | 2,60           |
| 40       | 0        | 695                           | 234              | 1,35         | 3,45       | 2,97           |
| 40       | 5        | 817                           | 243              | 1,38         | 3,92       | 3,37           |
| 40       | 7,2      | 874                           | 246              | 1,40         | 4,13       | 3,55           |
| 40       | 10       | 949                           | 250              | 1,41         | 4,41       | 3,79           |

|    |     |     |     |      |      |      |
|----|-----|-----|-----|------|------|------|
| 45 | -25 | 237 | 183 | 1,19 | 1,51 | 1,30 |
| 45 | -20 | 299 | 198 | 1,23 | 1,75 | 1,51 |
| 45 | -15 | 371 | 213 | 1,28 | 2,03 | 1,75 |
| 45 | -10 | 455 | 226 | 1,32 | 2,34 | 2,01 |
| 45 | -5  | 549 | 238 | 1,37 | 2,68 | 2,31 |
| 45 | 0   | 655 | 249 | 1,41 | 3,05 | 2,63 |
| 45 | 5   | 771 | 260 | 1,45 | 3,45 | 2,97 |
| 45 | 7,2 | 826 | 264 | 1,47 | 3,64 | 3,13 |
| 45 | 10  | 899 | 269 | 1,49 | 3,88 | 3,34 |

|    |     |     |     |      |      |      |
|----|-----|-----|-----|------|------|------|
| 50 | -25 | 221 | 189 | 1,20 | 1,36 | 1,17 |
| 50 | -20 | 277 | 206 | 1,25 | 1,57 | 1,35 |
| 50 | -15 | 345 | 222 | 1,31 | 1,81 | 1,55 |
| 50 | -10 | 424 | 237 | 1,36 | 2,08 | 1,79 |
| 50 | -5  | 514 | 252 | 1,42 | 2,37 | 2,04 |
| 50 | 0   | 614 | 265 | 1,48 | 2,70 | 2,32 |
| 50 | 5   | 726 | 277 | 1,53 | 3,05 | 2,62 |
| 50 | 7,2 | 779 | 282 | 1,55 | 3,21 | 2,76 |
| 50 | 10  | 848 | 288 | 1,58 | 3,42 | 2,94 |

|    |     |     |     |      |      |      |
|----|-----|-----|-----|------|------|------|
| 55 | -25 | 204 | 195 | 1,22 | 1,22 | 1,05 |
| 55 | -20 | 256 | 214 | 1,28 | 1,39 | 1,20 |
| 55 | -15 | 319 | 232 | 1,34 | 1,60 | 1,38 |
| 55 | -10 | 393 | 249 | 1,41 | 1,84 | 1,58 |
| 55 | -5  | 478 | 265 | 1,48 | 2,10 | 1,80 |
| 55 | 0   | 574 | 280 | 1,54 | 2,38 | 2,05 |
| 55 | 5   | 681 | 294 | 1,61 | 2,69 | 2,31 |
| 55 | 7,2 | 731 | 300 | 1,64 | 2,83 | 2,44 |
| 55 | 10  | 798 | 307 | 1,68 | 3,02 | 2,60 |

|    |     |     |     |      |      |      |
|----|-----|-----|-----|------|------|------|
| 60 | -25 | 188 | 201 | 1,24 | 1,08 | 0,93 |
| 60 | -20 | 235 | 222 | 1,31 | 1,23 | 1,06 |
| 60 | -15 | 293 | 242 | 1,38 | 1,41 | 1,21 |
| 60 | -10 | 362 | 261 | 1,46 | 1,62 | 1,39 |
| 60 | -5  | 442 | 278 | 1,54 | 1,85 | 1,59 |
| 60 | 0   | 533 | 295 | 1,62 | 2,10 | 1,81 |
| 60 | 5   | 635 | 311 | 1,70 | 2,37 | 2,04 |
| 60 | 7,2 | 684 | 318 | 1,73 | 2,50 | 2,15 |
| 60 | 10  | 748 | 326 | 1,78 | 2,67 | 2,29 |

## CECOMAF

| Tc<br>°C | Te<br>°C | Cooling<br>Capacity<br>W | Consumption<br>W | Current<br>A | COP<br>W/W | EER<br>kCal/Wh |
|----------|----------|--------------------------|------------------|--------------|------------|----------------|
| 40       | -25      | 273                      | 178              | 1,17         | 1,53       | 1,32           |
| 40       | -20      | 345                      | 191              | 1,21         | 1,80       | 1,56           |
| 40       | -15      | 429                      | 204              | 1,25         | 2,10       | 1,82           |
| 40       | -10      | 524                      | 215              | 1,29         | 2,43       | 2,10           |
| 40       | -5       | 631                      | 226              | 1,32         | 2,79       | 2,41           |
| 40       | 0        | 749                      | 236              | 1,36         | 3,18       | 2,75           |
| 40       | 5        | 878                      | 244              | 1,39         | 3,60       | 3,11           |
| 40       | 7,2      | 939                      | 248              | 1,40         | 3,79       | 3,27           |
| 40       | 10       | 1.019                    | 252              | 1,42         | 4,05       | 3,50           |

|    |     |     |     |      |      |      |
|----|-----|-----|-----|------|------|------|
| 45 | -25 | 254 | 184 | 1,19 | 1,38 | 1,19 |
| 45 | -20 | 320 | 199 | 1,23 | 1,61 | 1,39 |
| 45 | -15 | 398 | 214 | 1,28 | 1,86 | 1,61 |
| 45 | -10 | 487 | 227 | 1,33 | 2,15 | 1,85 |
| 45 | -5  | 588 | 240 | 1,37 | 2,45 | 2,12 |
| 45 | 0   | 700 | 251 | 1,42 | 2,79 | 2,41 |
| 45 | 5   | 824 | 261 | 1,46 | 3,15 | 2,72 |
| 45 | 7,2 | 882 | 266 | 1,48 | 3,32 | 2,87 |
| 45 | 10  | 959 | 271 | 1,50 | 3,54 | 3,06 |

|    |     |     |     |      |      |      |
|----|-----|-----|-----|------|------|------|
| 50 | -25 | 234 | 190 | 1,21 | 1,23 | 1,07 |
| 50 | -20 | 295 | 207 | 1,26 | 1,42 | 1,23 |
| 50 | -15 | 367 | 224 | 1,31 | 1,64 | 1,42 |
| 50 | -10 | 451 | 239 | 1,37 | 1,89 | 1,63 |
| 50 | -5  | 546 | 253 | 1,43 | 2,16 | 1,86 |
| 50 | 0   | 652 | 266 | 1,48 | 2,45 | 2,11 |
| 50 | 5   | 770 | 279 | 1,54 | 2,76 | 2,39 |
| 50 | 7,2 | 825 | 284 | 1,56 | 2,91 | 2,51 |
| 50 | 10  | 899 | 290 | 1,59 | 3,10 | 2,68 |

|    |     |     |     |      |      |      |
|----|-----|-----|-----|------|------|------|
| 55 | -25 | 215 | 196 | 1,22 | 1,10 | 0,95 |
| 55 | -20 | 270 | 215 | 1,28 | 1,25 | 1,08 |
| 55 | -15 | 336 | 233 | 1,35 | 1,44 | 1,25 |
| 55 | -10 | 414 | 250 | 1,42 | 1,65 | 1,43 |
| 55 | -5  | 503 | 267 | 1,48 | 1,89 | 1,63 |
| 55 | 0   | 604 | 282 | 1,55 | 2,14 | 1,85 |
| 55 | 5   | 716 | 296 | 1,62 | 2,42 | 2,09 |
| 55 | 7,2 | 769 | 302 | 1,65 | 2,55 | 2,20 |
| 55 | 10  | 839 | 309 | 1,69 | 2,71 | 2,34 |

|    |     |     |     |      |      |      |
|----|-----|-----|-----|------|------|------|
| 60 | -25 | 196 | 202 | 1,24 | 0,97 | 0,84 |
| 60 | -20 | 245 | 223 | 1,31 | 1,10 | 0,95 |
| 60 | -15 | 305 | 243 | 1,39 | 1,26 | 1,09 |
| 60 | -10 | 377 | 262 | 1,46 | 1,44 | 1,24 |
| 60 | -5  | 461 | 280 | 1,54 | 1,64 | 1,42 |
| 60 | 0   | 555 | 297 | 1,63 | 1,87 | 1,61 |
| 60 | 5   | 662 | 313 | 1,71 | 2,11 | 1,82 |
| 60 | 7,2 | 712 | 320 | 1,74 | 2,22 | 1,92 |
| 60 | 10  | 779 | 328 | 1,79 | 2,37 | 2,05 |

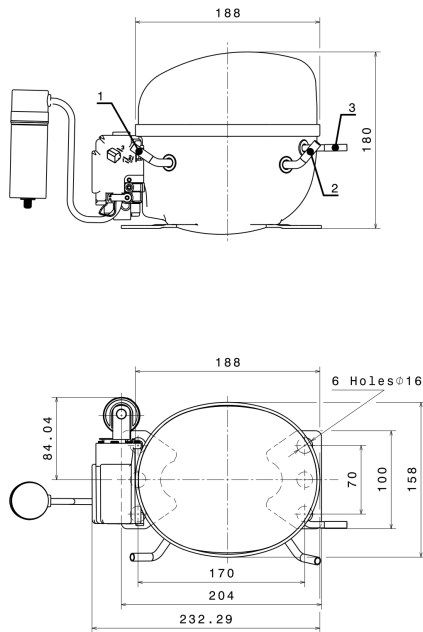
## EN12900

| X | Cooling Capacity (W) | Consumption (W) | Current (A)   | Mass Flow (kg/h)     |
|---|----------------------|-----------------|---------------|----------------------|
| 1 | 1.138,2096795653     | 115,0365511858  | 0,7696043403  | 9,9682606255476      |
| 2 | 34,1866254793        | -1,1675253875   | -0,0096991133 | 0,33528262603563     |
| 3 | -10,0164073978       | 3,1716032681    | 0,0148509195  | -0,031621647566234   |
| 4 | 0,2245655129         | -0,0184893091   | 0,0000343556  | 0,0036013850818824   |
| 5 | -0,2442271613        | 0,0774989707    | 0,0004460934  | -0,00052475103990536 |

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

# Technical Data Sheet

## COMPRESSOR DIMENSIONS

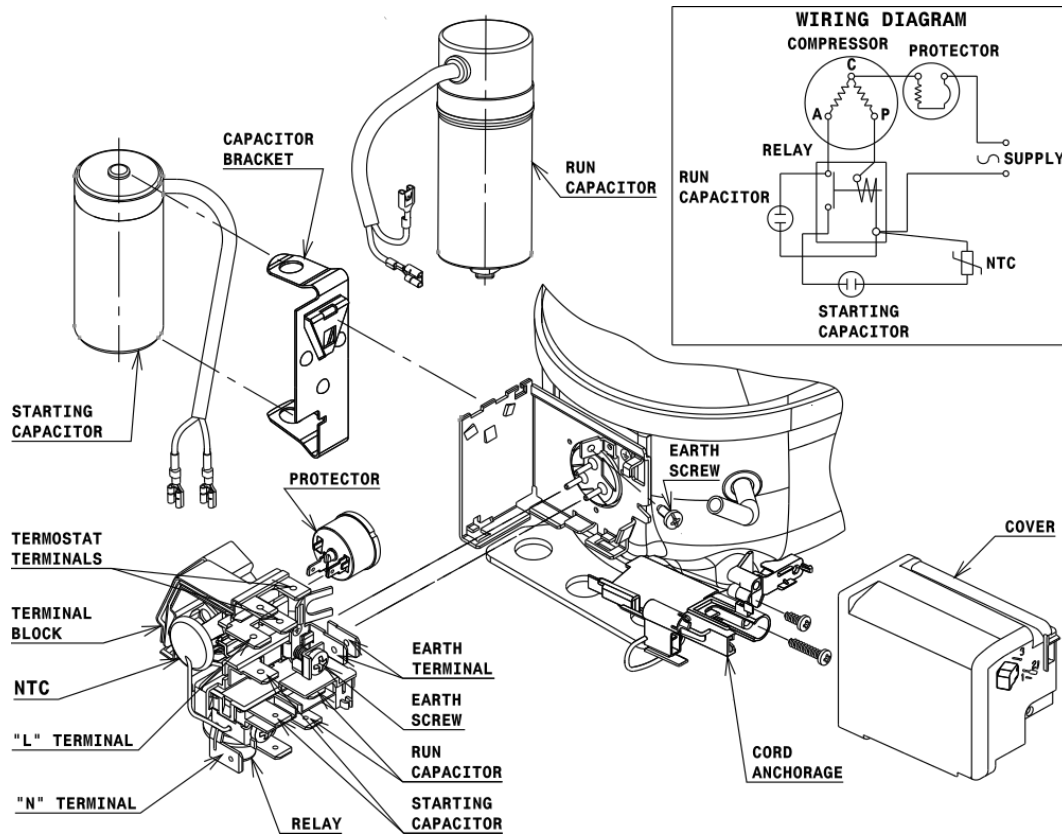


## DESIGNATION INTERNAL DIAM.

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

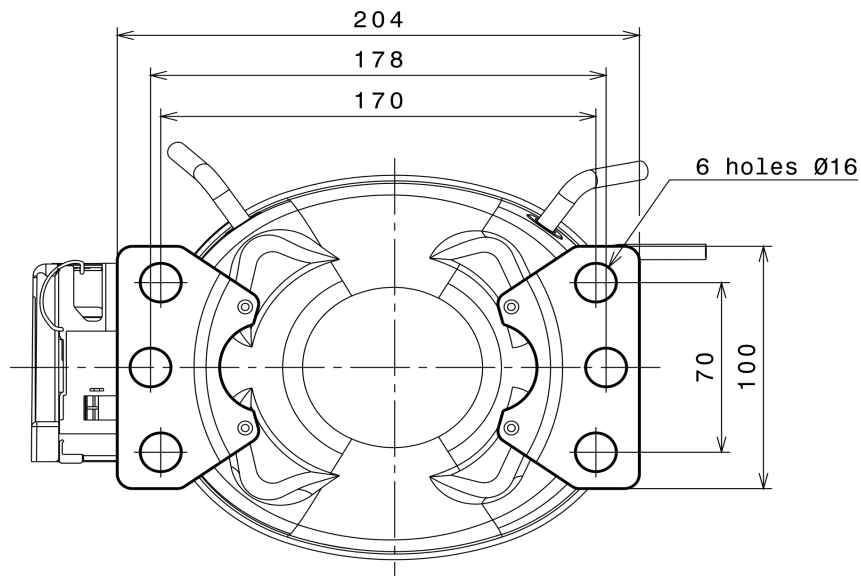
## WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

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



# Technical Data Sheet

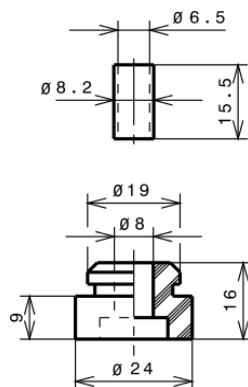
## FIXINGS



## SILENT BLOCKS (MOUNTING ACCESSORIES)

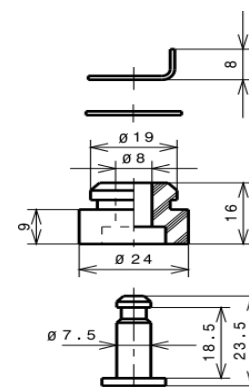
### STANDARD

Ø16 holes (170x70 net)



### SNAP-ON

Ø16 holes (170x70 net)



## SOA

SOA R290 HMBP

