

# Technical Data Sheet

Compressor model **NUT55CAb**  
Voltage **220-240V 50Hz ~1**  
Refrigerant **R290**  
Compressor status

## APPLICATION

|                    |                      |
|--------------------|----------------------|
| Application        | Low Back Pressure    |
| Refrigerant        | R290                 |
| Evaporating Temp.  | -40,0 °C to -10,0 °C |
| Expansion          | Capillar             |
| Comp. Cooling      | Fan cooled           |
| Max. ambient temp. | 43,0 °C              |

## COMPRESSOR

|              |                      |
|--------------|----------------------|
| Displacement | 5,50 cm <sup>3</sup> |
| Diameter     | 21,99 mm             |
| Stroke       | 14,50 mm             |
| Net Weight   | 9,21 Kg              |
| Oil type     | ISO VG 10 ESTER      |
| Oil charge   | 200 cm <sup>3</sup>  |
| HP           | 1/5 hp               |

## MOTOR

|                          |               |
|--------------------------|---------------|
| Voltage/Frequency        | 220-240V 50Hz |
| Voltage range            | 187-255 V     |
| Type                     | RSCR          |
| Phase number             | 1 PH          |
| Locked Rotor Amps (LRA)  | 5,90 A        |
| Max. Cont. Current (MCC) | 1,55 A        |
| Main W. resist. at 25°C  | 16,70 Ω       |
| Start W. resist. at 25°C | 17,40 Ω       |

## NOMINAL PERFORMANCE

|                  | ASHRAE       | CECOMAF      |
|------------------|--------------|--------------|
| Cooling Capacity | 227 kCal/h   | 196 W        |
| COP              | 1,80 W/W     | 1,39 W/W     |
| EER              | 1,54 kCal/Wh | 1,20 kCal/Wh |
| Input Power      | 147 W        | 141 W        |
| Current          | 0,70 A       | 0,67 A       |

## APPROVALS



## TEST CYCLE CONDITIONS

|                                       | ASHRAE<br>LBP (B) | CECOMAF<br>LBP (A) |
|---------------------------------------|-------------------|--------------------|
| Evaporating temp. (T <sub>e</sub> )   | -23,3 °C          | -25,0 °C           |
| Condensing temp. (T <sub>c</sub> )    | 55,0 °C           | 55,0 °C            |
| Liquid temp. (T <sub>liq.</sub> )     | 32,0 °C           | 55,0 °C            |
| Ambient temp. (T <sub>amb.</sub> )    | 32,0 °C           | 32,0 °C            |
| Suction temp. (T <sub>suction</sub> ) | 32,0 °C           | 32,0 °C            |
| Voltage/Frequency                     | 220 V 50 Hz       | 220 V 50 Hz        |

## ELECTRICAL COMPONENTS

|                         |                   |                   |  |  |
|-------------------------|-------------------|-------------------|--|--|
| Run capacitor           | 5 µF 400 V        |                   |  |  |
| Relay                   | Option 1          |                   |  |  |
| Reference               | PTC K100          |                   |  |  |
| Voltage                 | 200-240 V         |                   |  |  |
| Resistance              | 14 Ω              |                   |  |  |
| Protector               | Option 1          | Option 2          |  |  |
| Reference               | AE18FU            | B65-135           |  |  |
| Current                 | 6,30 A            | 6,50 A            |  |  |
| Time check              | 7,5-14 seg        | 7,5-16 seg        |  |  |
| Disc temp. (Open/Close) | 120,00 / 62,00 °C | 135,00 / 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<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       | -40      | 113                           | 94               | 0,46         | 1,39       | 1,20           |
| 40       | -35      | 145                           | 105              | 0,51         | 1,61       | 1,38           |
| 40       | -30      | 187                           | 116              | 0,56         | 1,87       | 1,61           |
| 40       | -25      | 238                           | 129              | 0,62         | 2,15       | 1,85           |
| 40       | -23,3    | 257                           | 133              | 0,63         | 2,25       | 1,94           |
| 40       | -20      | 298                           | 141              | 0,67         | 2,45       | 2,11           |
| 40       | -15      | 367                           | 155              | 0,74         | 2,76       | 2,38           |
| 40       | -10      | 446                           | 169              | 0,80         | 3,08       | 2,65           |

|    |       |     |     |      |      |      |
|----|-------|-----|-----|------|------|------|
| 45 | -40   | 106 | 94  | 0,46 | 1,31 | 1,13 |
| 45 | -35   | 138 | 106 | 0,52 | 1,50 | 1,29 |
| 45 | -30   | 178 | 119 | 0,57 | 1,74 | 1,49 |
| 45 | -25   | 228 | 133 | 0,63 | 2,00 | 1,72 |
| 45 | -23,3 | 247 | 138 | 0,66 | 2,09 | 1,80 |
| 45 | -20   | 287 | 147 | 0,70 | 2,27 | 1,96 |
| 45 | -15   | 356 | 162 | 0,77 | 2,56 | 2,20 |
| 45 | -10   | 433 | 177 | 0,84 | 2,85 | 2,45 |

|    |       |     |     |      |      |      |
|----|-------|-----|-----|------|------|------|
| 50 | -40   | 100 | 94  | 0,46 | 1,23 | 1,06 |
| 50 | -35   | 130 | 108 | 0,52 | 1,40 | 1,21 |
| 50 | -30   | 170 | 122 | 0,59 | 1,62 | 1,39 |
| 50 | -25   | 218 | 137 | 0,65 | 1,85 | 1,59 |
| 50 | -23,3 | 237 | 142 | 0,68 | 1,94 | 1,67 |
| 50 | -20   | 276 | 153 | 0,73 | 2,11 | 1,81 |
| 50 | -15   | 344 | 169 | 0,80 | 2,37 | 2,04 |
| 50 | -10   | 420 | 186 | 0,88 | 2,63 | 2,26 |

|    |       |     |     |      |      |      |
|----|-------|-----|-----|------|------|------|
| 55 | -40   | 93  | 94  | 0,46 | 1,15 | 0,99 |
| 55 | -35   | 122 | 109 | 0,53 | 1,30 | 1,12 |
| 55 | -30   | 161 | 125 | 0,60 | 1,50 | 1,29 |
| 55 | -25   | 209 | 141 | 0,67 | 1,72 | 1,48 |
| 55 | -23,3 | 227 | 147 | 0,70 | 1,80 | 1,54 |
| 55 | -20   | 266 | 158 | 0,75 | 1,95 | 1,68 |
| 55 | -15   | 332 | 176 | 0,83 | 2,19 | 1,89 |
| 55 | -10   | 407 | 194 | 0,92 | 2,44 | 2,10 |

|    |       |     |     |      |      |      |
|----|-------|-----|-----|------|------|------|
| 60 | -40   | 87  | 94  | 0,46 | 1,07 | 0,92 |
| 60 | -35   | 115 | 111 | 0,53 | 1,21 | 1,04 |
| 60 | -30   | 152 | 128 | 0,61 | 1,39 | 1,19 |
| 60 | -25   | 199 | 146 | 0,69 | 1,59 | 1,37 |
| 60 | -23,3 | 217 | 152 | 0,72 | 1,66 | 1,43 |
| 60 | -20   | 255 | 164 | 0,78 | 1,81 | 1,55 |
| 60 | -15   | 320 | 183 | 0,87 | 2,03 | 1,75 |
| 60 | -10   | 394 | 203 | 0,96 | 2,26 | 1,95 |

## 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       | -40      | 122                      | 94               | 0,46         | 1,30       | 1,12           |
| 40       | -35      | 161                      | 105              | 0,51         | 1,53       | 1,32           |
| 40       | -30      | 208                      | 116              | 0,56         | 1,79       | 1,55           |
| 40       | -25      | 264                      | 129              | 0,62         | 2,06       | 1,78           |
| 40       | -23,3    | 285                      | 133              | 0,63         | 2,15       | 1,86           |
| 40       | -20      | 329                      | 141              | 0,67         | 2,33       | 2,01           |
| 40       | -15      | 402                      | 155              | 0,74         | 2,60       | 2,25           |
| 40       | -10      | 484                      | 169              | 0,80         | 2,87       | 2,48           |

|    |       |     |     |      |      |      |
|----|-------|-----|-----|------|------|------|
| 45 | -40   | 110 | 94  | 0,46 | 1,17 | 1,01 |
| 45 | -35   | 146 | 106 | 0,52 | 1,37 | 1,18 |
| 45 | -30   | 189 | 119 | 0,57 | 1,59 | 1,37 |
| 45 | -25   | 242 | 133 | 0,63 | 1,82 | 1,57 |
| 45 | -23,3 | 261 | 138 | 0,66 | 1,90 | 1,64 |
| 45 | -20   | 303 | 147 | 0,70 | 2,06 | 1,78 |
| 45 | -15   | 372 | 162 | 0,77 | 2,30 | 1,99 |
| 45 | -10   | 450 | 177 | 0,84 | 2,54 | 2,20 |

|    |       |     |     |      |      |      |
|----|-------|-----|-----|------|------|------|
| 50 | -40   | 99  | 94  | 0,46 | 1,05 | 0,91 |
| 50 | -35   | 130 | 108 | 0,52 | 1,21 | 1,05 |
| 50 | -30   | 170 | 122 | 0,59 | 1,40 | 1,21 |
| 50 | -25   | 219 | 137 | 0,65 | 1,60 | 1,38 |
| 50 | -23,3 | 237 | 142 | 0,68 | 1,67 | 1,44 |
| 50 | -20   | 276 | 153 | 0,73 | 1,81 | 1,56 |
| 50 | -15   | 342 | 169 | 0,80 | 2,02 | 1,75 |
| 50 | -10   | 416 | 186 | 0,88 | 2,24 | 1,94 |

|    |       |     |     |      |      |      |
|----|-------|-----|-----|------|------|------|
| 55 | -40   | 88  | 94  | 0,46 | 0,93 | 0,81 |
| 55 | -35   | 115 | 109 | 0,53 | 1,06 | 0,91 |
| 55 | -30   | 152 | 125 | 0,60 | 1,21 | 1,05 |
| 55 | -25   | 196 | 141 | 0,67 | 1,39 | 1,20 |
| 55 | -23,3 | 213 | 147 | 0,70 | 1,45 | 1,25 |
| 55 | -20   | 250 | 158 | 0,75 | 1,58 | 1,36 |
| 55 | -15   | 311 | 176 | 0,83 | 1,77 | 1,53 |
| 55 | -10   | 382 | 194 | 0,92 | 1,97 | 1,70 |

|    |       |     |     |      |      |      |
|----|-------|-----|-----|------|------|------|
| 60 | -40   | 76  | 94  | 0,46 | 0,81 | 0,70 |
| 60 | -35   | 100 | 111 | 0,53 | 0,91 | 0,78 |
| 60 | -30   | 133 | 128 | 0,61 | 1,04 | 0,90 |
| 60 | -25   | 174 | 146 | 0,69 | 1,19 | 1,03 |
| 60 | -23,3 | 189 | 152 | 0,72 | 1,25 | 1,08 |
| 60 | -20   | 223 | 164 | 0,78 | 1,36 | 1,18 |
| 60 | -15   | 281 | 183 | 0,87 | 1,54 | 1,33 |
| 60 | -10   | 348 | 203 | 0,96 | 1,72 | 1,48 |

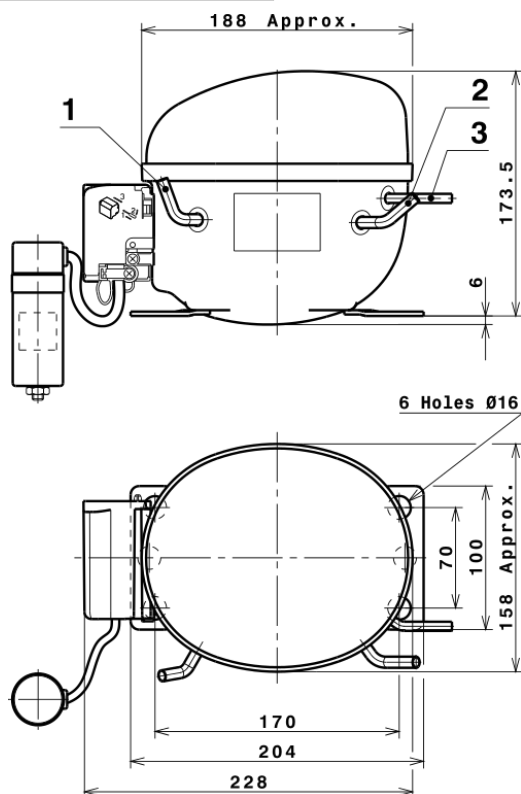
## EN12900

| X | Cooling Capacity (W) | Consumption (W) | Current (A)  | Mass Flow (kg/h)     |
|---|----------------------|-----------------|--------------|----------------------|
| 1 | 1.001,0923131970     | 110,4603700041  | 0,5261613245 | 9,4827562516485      |
| 2 | 26,4129288607        | 0,8766508147    | 0,0045294962 | 0,28357930801283     |
| 3 | -8,5169319134        | 2,3226912402    | 0,0110109604 | -0,038209166302409   |
| 4 | 0,1662960705         | 0,0129016887    | 0,0000775528 | 0,0024190262415613   |
| 5 | -0,1558113371        | 0,0580672810    | 0,0002752740 | -0,00055781862954746 |

## Equation

$$x_1 + x_2 Te + x_3 Tc + x_4 Te^2 + x_5 Te Tc$$

## COMPRESSOR DIMENSIONS

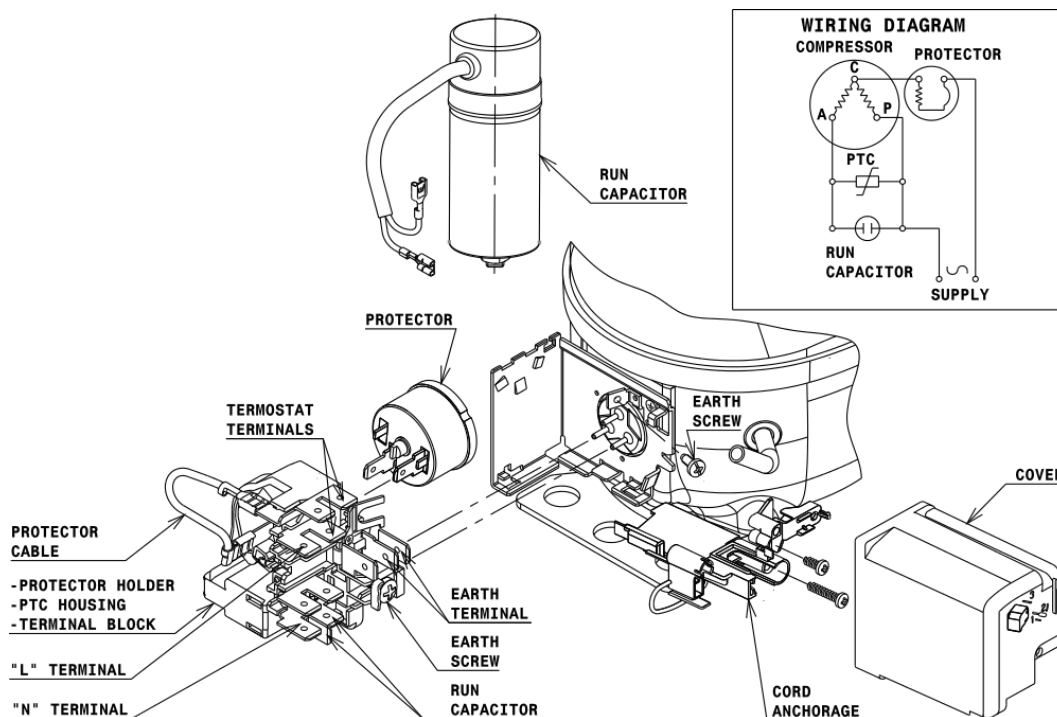


## DESIGNATION INTERNAL DIAM.

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

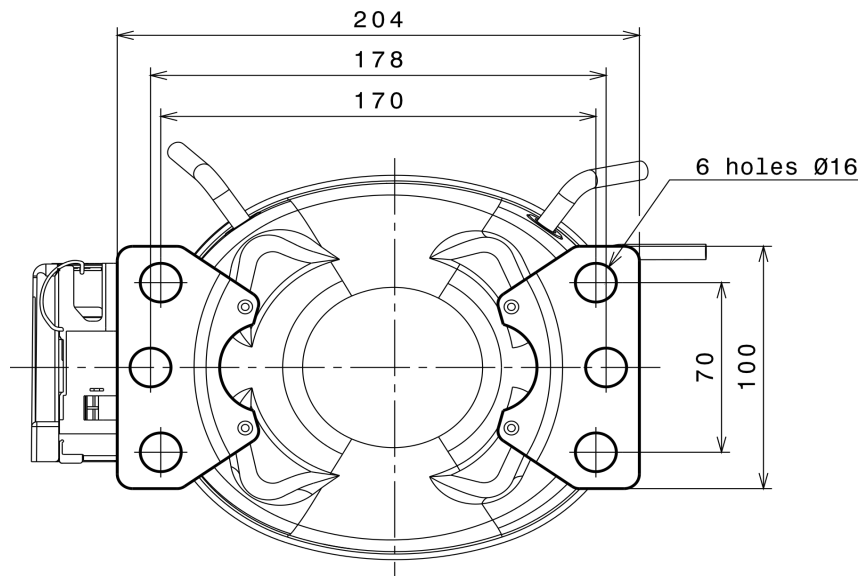
## WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

### RSCR CONNECTION (U range)



# Technical Data Sheet

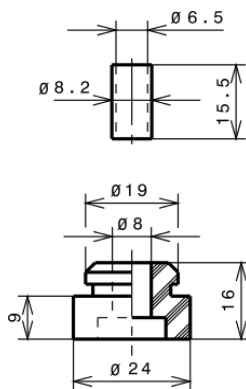
## FIXINGS



## SILENT BLOCKS (MOUNTING ACCESSORIES)

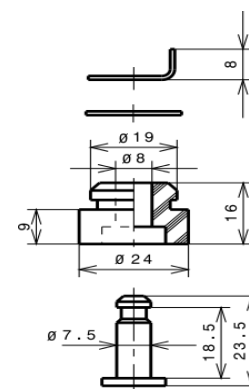
### STANDARD

Ø16 holes (170x70 net)



### SNAP-ON

Ø16 holes (170x70 net)



## SOA

SOA R290 LBP

