

# Technical Data Sheet

Compressor model **GL80AAa**  
 Voltage **220-240V 50Hz ~1**  
 Refrigerant **R134a**

## APPLICATION

Application Low Back Pressure  
 Refrigerant R134a  
 Evaporating Temp. -35,0 °C to -10,0 °C  
 Expansion Capillar  
 Comp. Cooling Static  
 Max. ambient temp. 43,0 °C  
 Compatible refriger. R1234yf

## COMPRESSOR

Displacement 8,10 cm<sup>3</sup>  
 Diameter 24,29 mm  
 Stroke 17,47 mm  
 Net Weight 8,98 Kg  
 Oil type ISO VG 32 ESTER  
 Oil charge 295 cm<sup>3</sup>

## MOTOR

Nominal Power 1/5 hp  
 Voltage/Frequency 220-240V 50Hz  
 Voltage range 187-264 V  
 Type RSIR  
 Phase number 1 PH  
 Locked Rotor Amps (LRA) 11,50 A  
 Max. Cont. Current (MCC) 1,50 A  
 Main W. resist. at 25°C 13,58 Ω  
 Start W. resist. at 25°C 23,01 Ω

## NOMINAL PERFORMANCE

|                  | ASHRAE       | CECOMAF      |
|------------------|--------------|--------------|
| Cooling Capacity | 170 kCal/h   | 144 W        |
| COP              | 1,15 W/W     | 0,89 W/W     |
| EER              | 0,99 kCal/Wh | 0,77 kCal/Wh |
| Input Power      | 172 W        | 162 W        |
| Current          | 1,11 A       | 1,08 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

|                         |                   |                   |                   |                   |
|-------------------------|-------------------|-------------------|-------------------|-------------------|
| Relay                   | Option 1          |                   |                   |                   |
| Reference               | PTC K100          |                   |                   |                   |
| Voltage                 | 200-240 V         |                   |                   |                   |
| Resistance              | 14.00 Ω           |                   |                   |                   |
| Protector               | Option 1          | Option 2          | Option 3          | Option 4          |
| Reference               | MRP304LZ          | 4TM308NFBYY       | T0502             | AE15BW            |
| Current                 | 9,40 A            | 11,00 A           | 9,00 A            | 8,20 A            |
| Time check              | 7,5-14 seg        | 5-15 seg          | 7,5-14 seg        | 7,5-14 seg        |
| Disc temp. (Open/Close) | 120,00 / 61,00 °C | 120,00 / 61,00 °C | 130,00 / 62,00 °C | 130,00 / 62,00 °C |

## 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       | -35      | 95                            | 117              | 0,95         | 0,94       | 0,81           |
| 40       | -30      | 132                           | 136              | 1,00         | 1,12       | 0,97           |
| 40       | -25      | 178                           | 158              | 1,06         | 1,31       | 1,13           |
| 40       | -23,3    | 196                           | 165              | 1,09         | 1,38       | 1,18           |
| 40       | -20      | 234                           | 182              | 1,14         | 1,50       | 1,29           |
| 40       | -15      | 300                           | 208              | 1,24         | 1,67       | 1,44           |
| 40       | -10      | 375                           | 237              | 1,35         | 1,84       | 1,58           |

|    |       |     |     |      |      |      |
|----|-------|-----|-----|------|------|------|
| 45 | -35   | 87  | 115 | 0,94 | 0,89 | 0,76 |
| 45 | -30   | 124 | 136 | 1,00 | 1,06 | 0,91 |
| 45 | -25   | 169 | 159 | 1,07 | 1,24 | 1,06 |
| 45 | -23,3 | 187 | 168 | 1,10 | 1,30 | 1,12 |
| 45 | -20   | 225 | 185 | 1,15 | 1,41 | 1,22 |
| 45 | -15   | 290 | 213 | 1,26 | 1,58 | 1,36 |
| 45 | -10   | 365 | 244 | 1,39 | 1,74 | 1,50 |

|    |       |     |     |      |      |      |
|----|-------|-----|-----|------|------|------|
| 50 | -35   | 80  | 112 | 0,94 | 0,82 | 0,71 |
| 50 | -30   | 115 | 135 | 1,00 | 0,99 | 0,85 |
| 50 | -25   | 161 | 161 | 1,07 | 1,17 | 1,00 |
| 50 | -23,3 | 179 | 170 | 1,10 | 1,22 | 1,05 |
| 50 | -20   | 216 | 188 | 1,17 | 1,33 | 1,15 |
| 50 | -15   | 281 | 219 | 1,28 | 1,49 | 1,28 |
| 50 | -10   | 356 | 252 | 1,42 | 1,64 | 1,41 |

|    |       |     |     |      |      |      |
|----|-------|-----|-----|------|------|------|
| 55 | -35   | 72  | 110 | 0,93 | 0,76 | 0,65 |
| 55 | -30   | 107 | 135 | 1,00 | 0,93 | 0,80 |
| 55 | -25   | 152 | 162 | 1,08 | 1,09 | 0,94 |
| 55 | -23,3 | 170 | 172 | 1,11 | 1,15 | 0,99 |
| 55 | -20   | 207 | 192 | 1,18 | 1,26 | 1,08 |
| 55 | -15   | 272 | 224 | 1,30 | 1,41 | 1,21 |
| 55 | -10   | 346 | 259 | 1,45 | 1,55 | 1,34 |

|    |       |     |     |      |      |      |
|----|-------|-----|-----|------|------|------|
| 60 | -35   | 64  | 108 | 0,92 | 0,69 | 0,60 |
| 60 | -30   | 99  | 134 | 0,99 | 0,86 | 0,74 |
| 60 | -25   | 144 | 164 | 1,08 | 1,02 | 0,88 |
| 60 | -23,3 | 161 | 174 | 1,12 | 1,08 | 0,93 |
| 60 | -20   | 198 | 195 | 1,19 | 1,18 | 1,02 |
| 60 | -15   | 263 | 230 | 1,32 | 1,33 | 1,14 |
| 60 | -10   | 336 | 266 | 1,48 | 1,47 | 1,26 |

|    |       |     |     |      |      |      |
|----|-------|-----|-----|------|------|------|
| 65 | -35   | 57  | 105 | 0,92 | 0,63 | 0,54 |
| 65 | -30   | 91  | 134 | 0,99 | 0,79 | 0,68 |
| 65 | -25   | 136 | 165 | 1,09 | 0,95 | 0,82 |
| 65 | -23,3 | 153 | 176 | 1,12 | 1,01 | 0,87 |
| 65 | -20   | 190 | 199 | 1,20 | 1,11 | 0,95 |
| 65 | -15   | 253 | 235 | 1,35 | 1,25 | 1,08 |
| 65 | -10   | 327 | 274 | 1,52 | 1,39 | 1,19 |

## 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       | -35      | 103                      | 117              | 0,95         | 0,88       | 0,76           |
| 40       | -30      | 146                      | 136              | 1,00         | 1,08       | 0,93           |
| 40       | -25      | 198                      | 158              | 1,06         | 1,26       | 1,09           |
| 40       | -23,3    | 218                      | 165              | 1,09         | 1,32       | 1,14           |
| 40       | -20      | 259                      | 182              | 1,14         | 1,43       | 1,23           |
| 40       | -15      | 329                      | 208              | 1,24         | 1,58       | 1,37           |
| 40       | -10      | 408                      | 237              | 1,35         | 1,72       | 1,49           |

|    |       |     |     |      |      |      |
|----|-------|-----|-----|------|------|------|
| 45 | -35   | 92  | 115 | 0,94 | 0,80 | 0,69 |
| 45 | -30   | 131 | 136 | 1,00 | 0,97 | 0,84 |
| 45 | -25   | 180 | 159 | 1,07 | 1,13 | 0,98 |
| 45 | -23,3 | 199 | 168 | 1,10 | 1,19 | 1,02 |
| 45 | -20   | 238 | 185 | 1,15 | 1,29 | 1,11 |
| 45 | -15   | 305 | 213 | 1,26 | 1,43 | 1,23 |
| 45 | -10   | 381 | 244 | 1,39 | 1,56 | 1,35 |

|    |       |     |     |      |      |      |
|----|-------|-----|-----|------|------|------|
| 50 | -35   | 80  | 112 | 0,94 | 0,71 | 0,61 |
| 50 | -30   | 116 | 135 | 1,00 | 0,86 | 0,74 |
| 50 | -25   | 162 | 161 | 1,07 | 1,01 | 0,87 |
| 50 | -23,3 | 180 | 170 | 1,10 | 1,06 | 0,91 |
| 50 | -20   | 217 | 188 | 1,17 | 1,15 | 0,99 |
| 50 | -15   | 281 | 219 | 1,28 | 1,28 | 1,11 |
| 50 | -10   | 354 | 252 | 1,42 | 1,40 | 1,21 |

|    |       |     |     |      |      |      |
|----|-------|-----|-----|------|------|------|
| 55 | -35   | 68  | 110 | 0,93 | 0,62 | 0,53 |
| 55 | -30   | 102 | 135 | 1,00 | 0,75 | 0,65 |
| 55 | -25   | 144 | 162 | 1,08 | 0,89 | 0,77 |
| 55 | -23,3 | 161 | 172 | 1,11 | 0,93 | 0,81 |
| 55 | -20   | 196 | 192 | 1,18 | 1,02 | 0,88 |
| 55 | -15   | 256 | 224 | 1,30 | 1,14 | 0,99 |
| 55 | -10   | 326 | 259 | 1,45 | 1,26 | 1,09 |

|    |       |     |     |      |      |      |
|----|-------|-----|-----|------|------|------|
| 60 | -35   | 56  | 108 | 0,92 | 0,52 | 0,45 |
| 60 | -30   | 87  | 134 | 0,99 | 0,64 | 0,56 |
| 60 | -25   | 126 | 164 | 1,08 | 0,77 | 0,67 |
| 60 | -23,3 | 142 | 174 | 1,12 | 0,81 | 0,70 |
| 60 | -20   | 175 | 195 | 1,19 | 0,89 | 0,77 |
| 60 | -15   | 232 | 230 | 1,32 | 1,01 | 0,87 |
| 60 | -10   | 299 | 266 | 1,48 | 1,12 | 0,97 |

|    |       |     |     |      |      |      |
|----|-------|-----|-----|------|------|------|
| 65 | -35   | 44  | 105 | 0,92 | 0,42 | 0,36 |
| 65 | -30   | 72  | 134 | 0,99 | 0,53 | 0,46 |
| 65 | -25   | 108 | 165 | 1,09 | 0,65 | 0,56 |
| 65 | -23,3 | 122 | 176 | 1,12 | 0,69 | 0,60 |
| 65 | -20   | 153 | 199 | 1,20 | 0,77 | 0,67 |
| 65 | -15   | 208 | 235 | 1,35 | 0,88 | 0,76 |
| 65 | -10   | 272 | 274 | 1,52 | 0,99 | 0,86 |

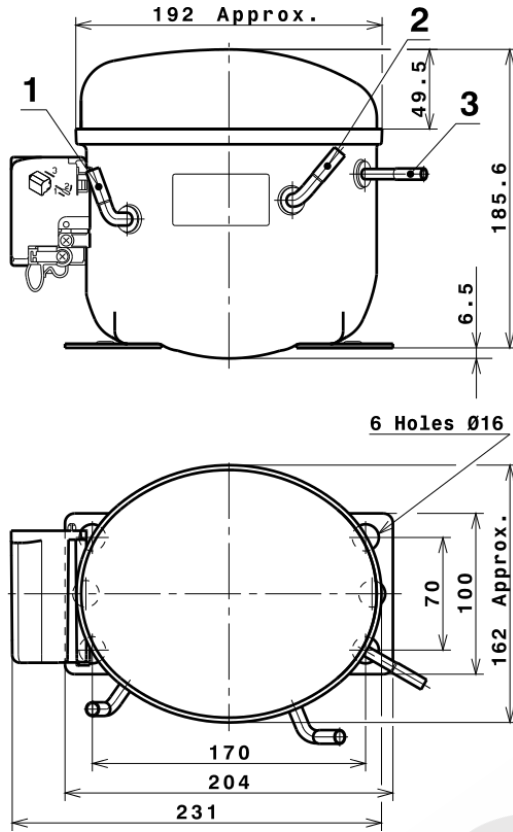
## EN12900

| X | Cooling Capacity (W) | Consumption (W) | Current (A)  | Mass Flow (kg/h)     |
|---|----------------------|-----------------|--------------|----------------------|
| 1 | 859,3903967516       | 218,3002184369  | 1,3064541738 | 15,308786739059      |
| 2 | 25,1723742473        | 4,0877119471    | 0,0236891872 | 0,50135313241795     |
| 3 | -6,8854991891        | 2,2930807063    | 0,0097950383 | -0,050191027109402   |
| 4 | 0,1777703630         | 0,0517172135    | 0,0004292572 | 0,0048158038357466   |
| 5 | -0,1292609230        | 0,0791366296    | 0,0003147969 | -0,00040795059677713 |

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

# Technical Data Sheet

## COMPRESSOR DIMENSIONS

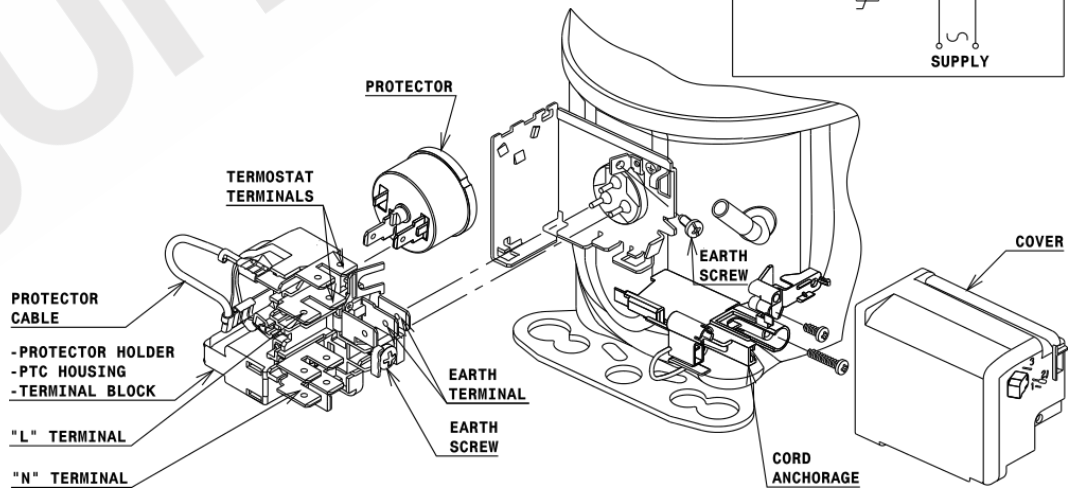
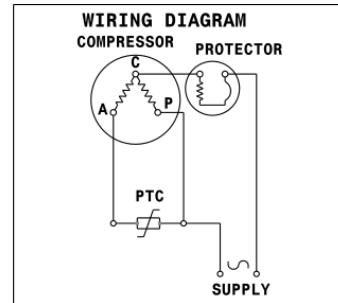


## DESIGNATION INTERNAL DIAM.

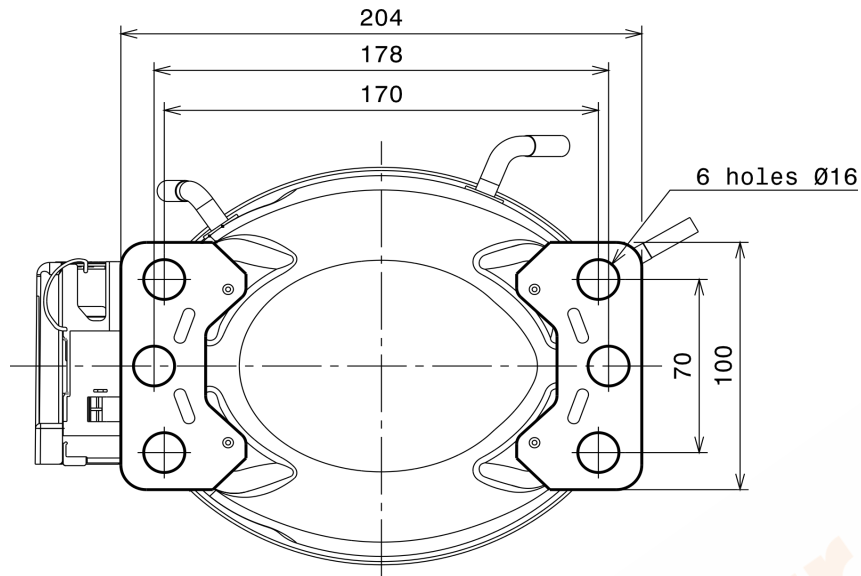
| DESIGNATION | INTERNAL DIAM. |
|-------------|----------------|
| 1 Suction   | 6,5 mm         |
| 2 Service   | 6,5 mm         |
| 3 Discharge | 4,9 mm         |

## WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

### RSIR CONNECTION (PTC) (L, P ranges)



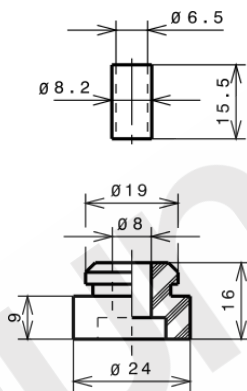
## FIXINGS



## SILENT BLOCKS (MOUNTING ACCESSORIES)

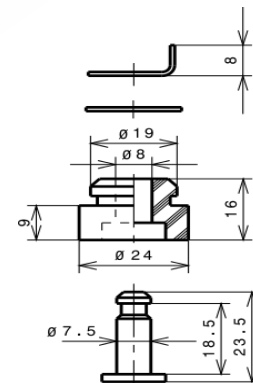
### STANDARD

Ø16 holes (170x70 net)



### SNAP-ON

Ø16 holes (170x70 net)



### SOA

SOA R134a LBP

