

# Technical Data Sheet

Compressor model **GL80TB**  
Voltage **220-240V 50Hz ~1**  
Refrigerant **R134a**

## APPLICATION

## COMPRESSOR

## MOTOR

|                    |                           |              |                      |                          |               |
|--------------------|---------------------------|--------------|----------------------|--------------------------|---------------|
| Application        | High-Medium Back Pressure | Displacement | 7,57 cm <sup>3</sup> | Nominal Power            | 1/5 hp        |
| Refrigerant        | R134a                     | Diameter     | 25,40 mm             | Voltage/Frequency        | 220-240V 50Hz |
| Evaporating Temp.  | -25,0 °C to 10,0 °C       | Stroke       | 14,92 mm             | Voltage range            | 187-264 V     |
| Expansion          | Capillar/Valve            | Net Weight   | 9,19 Kg              | Type                     | CSIR          |
| Comp. Cooling      | Fan cooled                | Oil type     | ISO VG 32 ESTER      | Phase number             | 1 PH          |
| Max. ambient temp. | 43,0 °C                   | Oil charge   | 300 cm <sup>3</sup>  | Locked Rotor Amps (LRA)  | 9,80 A        |
|                    |                           |              |                      | Max. Cont. Current (MCC) | 2,90 A        |
|                    |                           |              |                      | Main W. resist. at 25°C  | 12,00 Ω       |
|                    |                           |              |                      | Start W. resist. at 25°C | 34,50 Ω       |

## NOMINAL PERFORMANCE

|                  | ASHRAE       | CECOMAF      |
|------------------|--------------|--------------|
| Cooling Capacity | 570 kCal/h   | 553 W        |
| COP              | 2,10 W/W     | 1,81 W/W     |
| EER              | 1,81 kCal/Wh | 1,57 kCal/Wh |
| Input Power      | 315 W        | 305 W        |
| Current          | 1,85 A       | 1,81 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   |                   |                   |  |
| Relay                   | Option 1          |                   |                   |  |
| Reference               | 2014 127.         |                   |                   |  |
| Pick-Up                 | 4,80 A            |                   |                   |  |
| Drop-Out                | 4,10 A            |                   |                   |  |
| Protector               | Option 1          | Option 2          | Option 3          |  |
| Reference               | MRT40AMK          | T0137             | AE39FHS           |  |
| Current                 | 9,50 A            | 9,50 A            | 9,20 A            |  |
| Time check              | 7,5-14 seg        | 7,5-14 seg        | 7,5-14 seg        |  |
| Disc temp. (Open/Close) | 105,00 / 61,00 °C | 110,00 / 61,00 °C | 105,00 / 62,00 °C |  |

## ASHRAE

| Tc | Te  | Cooling            | Consumption | Current | COP  | EER     |
|----|-----|--------------------|-------------|---------|------|---------|
| °C | °C  | Capacity<br>kCal/h | W           | A       | W/W  | kCal/Wh |
| 40 | -25 | 150                | 150         | 1,30    | 1,16 | 1,00    |
| 40 | -20 | 206                | 167         | 1,34    | 1,44 | 1,24    |
| 40 | -15 | 274                | 184         | 1,38    | 1,73 | 1,49    |
| 40 | -10 | 352                | 202         | 1,43    | 2,03 | 1,74    |
| 40 | -5  | 441                | 220         | 1,48    | 2,34 | 2,01    |
| 40 | 0   | 541                | 238         | 1,54    | 2,65 | 2,27    |
| 40 | 5   | 653                | 257         | 1,61    | 2,96 | 2,54    |
| 40 | 7,2 | 705                | 265         | 1,64    | 3,09 | 2,66    |
| 40 | 10  | 775                | 276         | 1,68    | 3,27 | 2,81    |

|    |     |     |     |      |      |      |
|----|-----|-----|-----|------|------|------|
| 45 | -25 | 135 | 150 | 1,30 | 1,05 | 0,90 |
| 45 | -20 | 187 | 169 | 1,34 | 1,28 | 1,10 |
| 45 | -15 | 249 | 189 | 1,39 | 1,53 | 1,32 |
| 45 | -10 | 323 | 209 | 1,45 | 1,79 | 1,54 |
| 45 | -5  | 408 | 230 | 1,52 | 2,06 | 1,77 |
| 45 | 0   | 503 | 251 | 1,59 | 2,33 | 2,01 |
| 45 | 5   | 610 | 272 | 1,67 | 2,60 | 2,24 |
| 45 | 7,2 | 660 | 282 | 1,71 | 2,73 | 2,34 |
| 45 | 10  | 727 | 294 | 1,76 | 2,88 | 2,47 |

|    |     |     |     |      |      |      |
|----|-----|-----|-----|------|------|------|
| 50 | -25 | 120 | 150 | 1,30 | 0,93 | 0,80 |
| 50 | -20 | 167 | 172 | 1,35 | 1,13 | 0,97 |
| 50 | -15 | 225 | 194 | 1,41 | 1,35 | 1,16 |
| 50 | -10 | 294 | 217 | 1,48 | 1,57 | 1,35 |
| 50 | -5  | 374 | 240 | 1,55 | 1,81 | 1,56 |
| 50 | 0   | 465 | 264 | 1,64 | 2,05 | 1,76 |
| 50 | 5   | 567 | 288 | 1,73 | 2,29 | 1,97 |
| 50 | 7,2 | 615 | 298 | 1,78 | 2,40 | 2,06 |
| 50 | 10  | 680 | 312 | 1,84 | 2,53 | 2,18 |

|    |     |     |     |      |      |      |
|----|-----|-----|-----|------|------|------|
| 55 | -25 | 105 | 150 | 1,30 | 0,81 | 0,70 |
| 55 | -20 | 147 | 175 | 1,36 | 0,98 | 0,84 |
| 55 | -15 | 201 | 200 | 1,42 | 1,17 | 1,01 |
| 55 | -10 | 265 | 225 | 1,50 | 1,37 | 1,18 |
| 55 | -5  | 340 | 251 | 1,59 | 1,58 | 1,36 |
| 55 | 0   | 427 | 277 | 1,69 | 1,79 | 1,54 |
| 55 | 5   | 524 | 303 | 1,80 | 2,01 | 1,73 |
| 55 | 7,2 | 570 | 315 | 1,85 | 2,10 | 1,81 |
| 55 | 10  | 632 | 330 | 1,92 | 2,23 | 1,91 |

|    |     |     |     |      |      |      |
|----|-----|-----|-----|------|------|------|
| 60 | -25 | 90  | 150 | 1,30 | 0,70 | 0,60 |
| 60 | -20 | 128 | 177 | 1,36 | 0,84 | 0,72 |
| 60 | -15 | 176 | 205 | 1,44 | 1,00 | 0,86 |
| 60 | -10 | 236 | 233 | 1,53 | 1,18 | 1,01 |
| 60 | -5  | 307 | 261 | 1,63 | 1,37 | 1,17 |
| 60 | 0   | 388 | 290 | 1,74 | 1,56 | 1,34 |
| 60 | 5   | 481 | 319 | 1,87 | 1,75 | 1,51 |
| 60 | 7,2 | 525 | 332 | 1,93 | 1,84 | 1,58 |
| 60 | 10  | 584 | 348 | 2,01 | 1,95 | 1,68 |

|    |     |     |     |      |      |      |
|----|-----|-----|-----|------|------|------|
| 65 | -25 | 75  | 150 | 1,30 | 0,58 | 0,50 |
| 65 | -20 | 108 | 180 | 1,37 | 0,70 | 0,60 |
| 65 | -15 | 152 | 210 | 1,45 | 0,84 | 0,72 |
| 65 | -10 | 207 | 241 | 1,55 | 1,00 | 0,86 |
| 65 | -5  | 273 | 271 | 1,67 | 1,17 | 1,01 |
| 65 | 0   | 350 | 303 | 1,80 | 1,34 | 1,16 |
| 65 | 5   | 438 | 334 | 1,94 | 1,52 | 1,31 |
| 65 | 7,2 | 480 | 348 | 2,01 | 1,60 | 1,38 |
| 65 | 10  | 537 | 366 | 2,10 | 1,70 | 1,47 |

## CECOMAF

| Tc | Te  | Cooling       | Consumption | Current | COP  | EER     |
|----|-----|---------------|-------------|---------|------|---------|
| °C | °C  | Capacity<br>W | W           | A       | W/W  | kCal/Wh |
| 40 | -25 | 162           | 151         | 1,30    | 1,07 | 0,93    |
| 40 | -20 | 223           | 168         | 1,34    | 1,33 | 1,15    |
| 40 | -15 | 296           | 185         | 1,38    | 1,60 | 1,38    |
| 40 | -10 | 380           | 203         | 1,43    | 1,87 | 1,62    |
| 40 | -5  | 476           | 221         | 1,49    | 2,16 | 1,86    |
| 40 | 0   | 584           | 239         | 1,55    | 2,44 | 2,11    |
| 40 | 5   | 703           | 258         | 1,62    | 2,72 | 2,35    |
| 40 | 7,2 | 759           | 267         | 1,65    | 2,84 | 2,46    |
| 40 | 10  | 833           | 278         | 1,69    | 3,00 | 2,59    |

|    |     |     |     |      |      |      |
|----|-----|-----|-----|------|------|------|
| 45 | -25 | 145 | 151 | 1,30 | 0,96 | 0,83 |
| 45 | -20 | 201 | 170 | 1,35 | 1,18 | 1,02 |
| 45 | -15 | 268 | 190 | 1,40 | 1,41 | 1,22 |
| 45 | -10 | 347 | 211 | 1,46 | 1,65 | 1,42 |
| 45 | -5  | 437 | 231 | 1,52 | 1,89 | 1,63 |
| 45 | 0   | 539 | 252 | 1,59 | 2,14 | 1,85 |
| 45 | 5   | 653 | 274 | 1,68 | 2,38 | 2,06 |
| 45 | 7,2 | 706 | 283 | 1,71 | 2,49 | 2,15 |
| 45 | 10  | 778 | 296 | 1,77 | 2,63 | 2,27 |

|    |     |     |     |      |      |      |
|----|-----|-----|-----|------|------|------|
| 50 | -25 | 128 | 151 | 1,30 | 0,85 | 0,73 |
| 50 | -20 | 178 | 173 | 1,35 | 1,03 | 0,89 |
| 50 | -15 | 240 | 196 | 1,41 | 1,23 | 1,06 |
| 50 | -10 | 314 | 218 | 1,48 | 1,44 | 1,24 |
| 50 | -5  | 399 | 242 | 1,56 | 1,65 | 1,42 |
| 50 | 0   | 495 | 265 | 1,64 | 1,86 | 1,61 |
| 50 | 5   | 603 | 290 | 1,74 | 2,08 | 1,80 |
| 50 | 7,2 | 654 | 300 | 1,78 | 2,18 | 1,88 |
| 50 | 10  | 723 | 314 | 1,85 | 2,30 | 1,99 |

|    |     |     |     |      |      |      |
|----|-----|-----|-----|------|------|------|
| 55 | -25 | 111 | 151 | 1,30 | 0,74 | 0,64 |
| 55 | -20 | 156 | 176 | 1,36 | 0,89 | 0,77 |
| 55 | -15 | 212 | 201 | 1,43 | 1,06 | 0,91 |
| 55 | -10 | 280 | 226 | 1,50 | 1,24 | 1,07 |
| 55 | -5  | 360 | 252 | 1,59 | 1,43 | 1,23 |
| 55 | 0   | 451 | 278 | 1,69 | 1,62 | 1,40 |
| 55 | 5   | 553 | 305 | 1,81 | 1,81 | 1,57 |
| 55 | 7,2 | 602 | 317 | 1,86 | 1,90 | 1,64 |
| 55 | 10  | 667 | 332 | 1,93 | 2,01 | 1,74 |

|    |     |     |     |      |      |      |
|----|-----|-----|-----|------|------|------|
| 60 | -25 | 94  | 151 | 1,30 | 0,63 | 0,54 |
| 60 | -20 | 134 | 178 | 1,37 | 0,75 | 0,65 |
| 60 | -15 | 185 | 206 | 1,44 | 0,90 | 0,77 |
| 60 | -10 | 247 | 234 | 1,53 | 1,05 | 0,91 |
| 60 | -5  | 321 | 263 | 1,63 | 1,22 | 1,06 |
| 60 | 0   | 406 | 292 | 1,75 | 1,39 | 1,20 |
| 60 | 5   | 503 | 321 | 1,88 | 1,57 | 1,36 |
| 60 | 7,2 | 550 | 334 | 1,94 | 1,65 | 1,42 |
| 60 | 10  | 612 | 350 | 2,02 | 1,75 | 1,51 |

|    |     |     |     |      |      |      |
|----|-----|-----|-----|------|------|------|
| 65 | -25 | 77  | 151 | 1,30 | 0,51 | 0,44 |
| 65 | -20 | 111 | 181 | 1,37 | 0,62 | 0,53 |
| 65 | -15 | 157 | 211 | 1,46 | 0,74 | 0,64 |
| 65 | -10 | 214 | 242 | 1,56 | 0,88 | 0,76 |
| 65 | -5  | 282 | 273 | 1,67 | 1,03 | 0,89 |
| 65 | 0   | 362 | 305 | 1,80 | 1,19 | 1,03 |
| 65 | 5   | 454 | 336 | 1,95 | 1,35 | 1,16 |
| 65 | 7,2 | 498 | 351 | 2,02 | 1,42 | 1,23 |
| 65 | 10  | 557 | 369 | 2,12 | 1,51 | 1,30 |

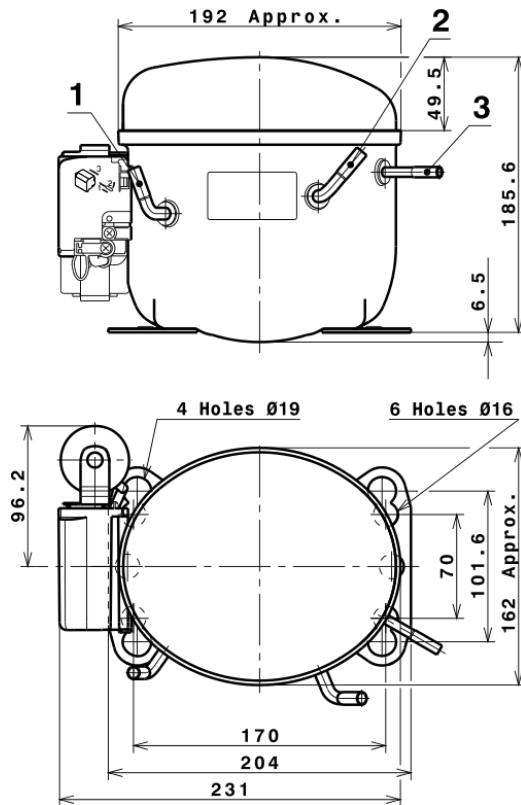
## EN12900

| X | Cooling Capacity (W) | Consumption (W) | Current (A)   | Mass Flow (kg/h)    |
|---|----------------------|-----------------|---------------|---------------------|
| 1 | 940,1441880266       | 138,5205230160  | 1,0863292902  | 16,135945297925     |
| 2 | 31,5234680327        | -0,3865664156   | -0,0028355849 | 0,59305115752632    |
| 3 | -9,0987251294        | 2,6777323582    | 0,0116057275  | -0,082486066001972  |
| 4 | 0,2268823639         | 0,0095498965    | 0,0002426833  | 0,0065768526334814  |
| 5 | -0,2289041953        | 0,1071092943    | 0,0004642291  | -0,0013700868554833 |

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

# Technical Data Sheet

## COMPRESSOR DIMENSIONS

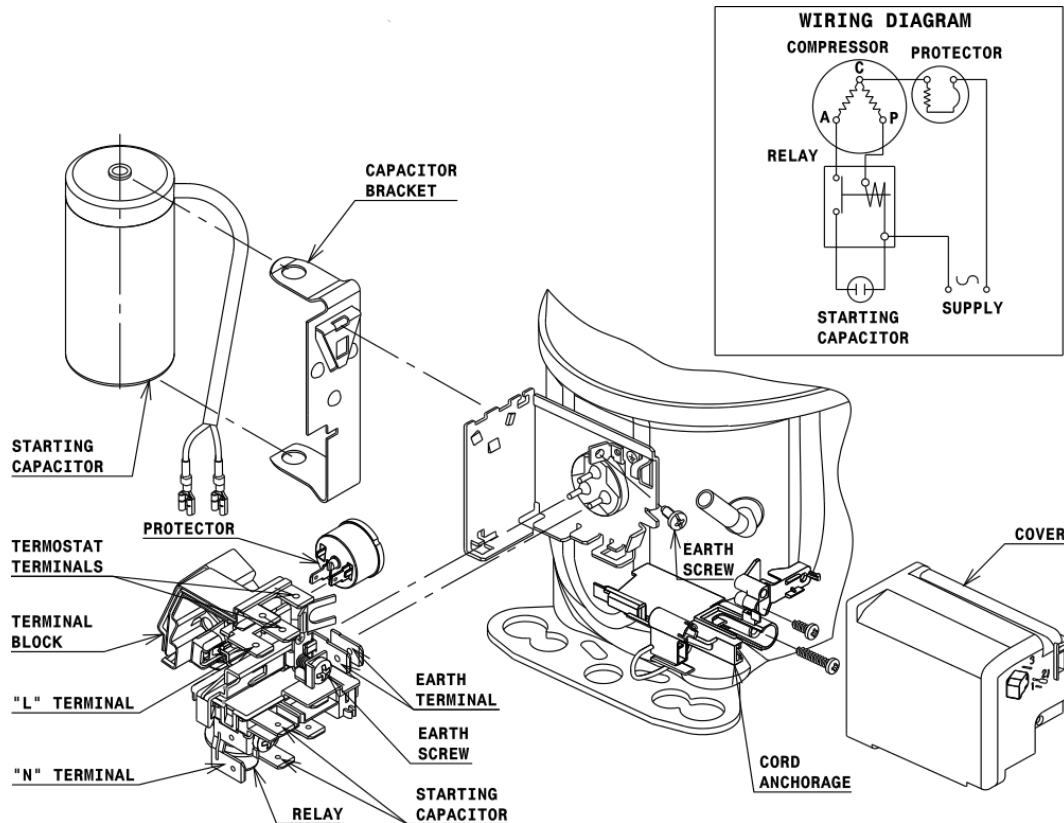


## DESIGNATION INTERNAL DIAM.

|   |           |        |
|---|-----------|--------|
| 1 | Suction   | 6,5 mm |
| 2 | Service   | 6,5 mm |
| 3 | Discharge | 4,9 mm |

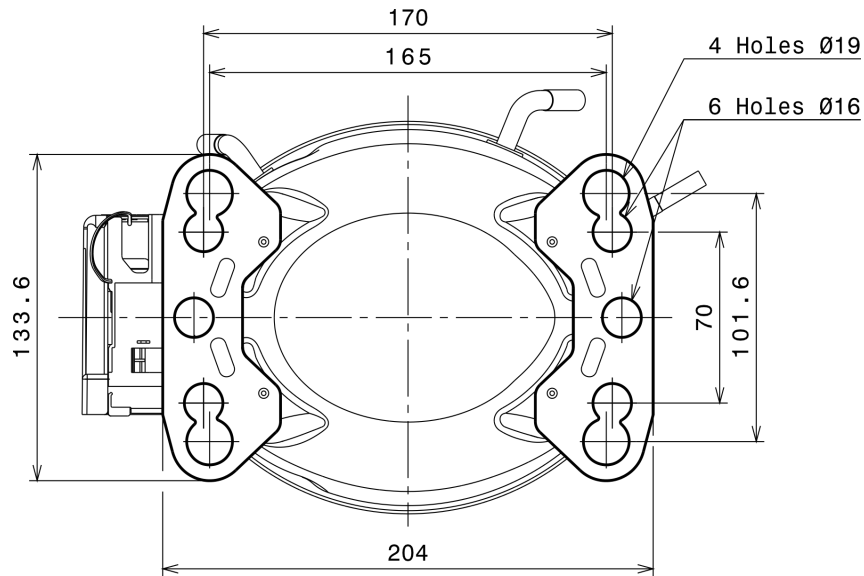
## WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

### CSIR CONNECTION



# Technical Data Sheet

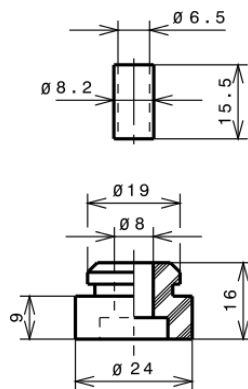
## FIXINGS



## SILENT BLOCKS (MOUNTING ACCESSORIES)

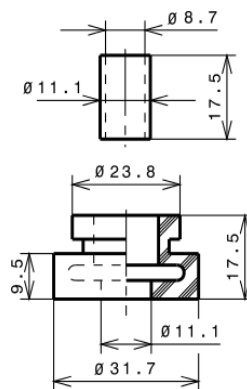
### STANDARD

Ø16 holes (170x70 net)



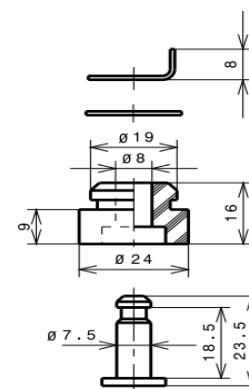
### AMERICAN FEET

Ø19 holes (165x101.6 net)



### SNAP-ON

Ø16 holes (170x70 net)



## SOA

SOA R134a HMBP

