

Technical Data Sheet

Compressor model **GL45MG**
 Voltage **230V 50/60Hz ~1**
 Refrigerant **R134a**

APPLICATION

Application High Back Pressure
 Refrigerant R134a
 Evaporating Temp. -15,0 °C to 10,0 °C
 Expansion Capillar/Valve
 Comp. Cooling Static
 Max. ambient temp. 43,0 °C
 Compatible refriger. R1234yf

COMPRESSOR

Displacement 4,56 cm³
 Diameter 19,09 mm
 Stroke 15,93 mm
 Net Weight 9,37 Kg
 Oil type ISO VG 32 ESTER
 Oil charge 295 cm³

MOTOR

Nominal Power 1/6 hp
 Voltage/Frequency 230V 60Hz
 Voltage range 196-253 V
 Type CSIR
 Phase number 1 PH
 Locked Rotor Amps (LRA) 8,50 A
 Max. Cont. Current (MCC) 2,30 A
 Main W. resist. at 25°C 11,47 Ω
 Start W. resist. at 25°C 37,98 Ω

NOMINAL PERFORMANCE

| | ASHRAE | CECOMAF |
|------------------|--------------|--------------|
| Cooling Capacity | 412 kCal/h | 398 W |
| COP | 1,92 W/W | 1,65 W/W |
| EER | 1,65 kCal/Wh | 1,43 kCal/Wh |
| Input Power | 250 W | 241 W |
| Current | 1,45 A | 1,42 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 | 230 V 60 Hz | 230 V 60 Hz |

ELECTRICAL COMPONENTS

| | | | |
|-------------------------|-------------------|-------------------|--|
| Starting capacitor | 47- 56 µF 330 V | | |
| Relay | Option 1 | | |
| Reference | 2014 118. | | |
| Pick-Up | 3,75 A | | |
| Drop-Out | 3,20 A | | |
| Protector | Option 1 | Option 2 | |
| Reference | MRP304AMN | T0071 | |
| Current | 7,70 A | 7,70 A | |
| Time check | 7,5-14 seg | 7,5-14 seg | |
| Disc temp. (Open/Close) | 120,00 / 69,00 °C | 120,00 / 62,00 °C | |

ASHRAE

| Tc °C | Te °C | Cooling Capacity kCal/h | Consumption W | Current A | COP W/W | EER kCal/Wh |
|----------|----------|-------------------------------|------------------|--------------|------------|----------------|
| 40 | -15 | 245 | 171 | 1,13 | 1,67 | 1,43 |
| 40 | -10 | 280 | 178 | 1,16 | 1,83 | 1,57 |
| 40 | -5 | 329 | 188 | 1,20 | 2,04 | 1,75 |
| 40 | 0 | 394 | 203 | 1,26 | 2,26 | 1,95 |
| 40 | 5 | 475 | 221 | 1,34 | 2,50 | 2,15 |
| 40 | 7,2 | 515 | 230 | 1,37 | 2,60 | 2,24 |
| 40 | 10 | 570 | 243 | 1,42 | 2,73 | 2,35 |

| | | | | | | |
|----|-----|-----|-----|------|------|------|
| 45 | -15 | 228 | 174 | 1,14 | 1,52 | 1,31 |
| 45 | -10 | 258 | 182 | 1,18 | 1,66 | 1,42 |
| 45 | -5 | 304 | 193 | 1,22 | 1,84 | 1,58 |
| 45 | 0 | 366 | 208 | 1,29 | 2,04 | 1,76 |
| 45 | 5 | 442 | 227 | 1,36 | 2,26 | 1,95 |
| 45 | 7,2 | 481 | 237 | 1,40 | 2,36 | 2,03 |
| 45 | 10 | 534 | 250 | 1,45 | 2,48 | 2,14 |

| | | | | | | |
|----|-----|-----|-----|------|------|------|
| 50 | -15 | 210 | 177 | 1,16 | 1,38 | 1,19 |
| 50 | -10 | 237 | 185 | 1,19 | 1,49 | 1,28 |
| 50 | -5 | 279 | 198 | 1,24 | 1,65 | 1,41 |
| 50 | 0 | 337 | 214 | 1,31 | 1,83 | 1,58 |
| 50 | 5 | 410 | 233 | 1,39 | 2,04 | 1,75 |
| 50 | 7,2 | 446 | 243 | 1,42 | 2,13 | 1,83 |
| 50 | 10 | 497 | 257 | 1,48 | 2,25 | 1,94 |

| | | | | | | |
|----|-----|-----|-----|------|------|------|
| 55 | -15 | 193 | 180 | 1,17 | 1,25 | 1,07 |
| 55 | -10 | 216 | 189 | 1,21 | 1,33 | 1,14 |
| 55 | -5 | 254 | 202 | 1,26 | 1,46 | 1,26 |
| 55 | 0 | 308 | 219 | 1,33 | 1,64 | 1,41 |
| 55 | 5 | 377 | 240 | 1,41 | 1,83 | 1,57 |
| 55 | 7,2 | 412 | 250 | 1,45 | 1,92 | 1,65 |
| 55 | 10 | 461 | 264 | 1,50 | 2,03 | 1,74 |

| | | | | | | |
|----|-----|-----|-----|------|------|------|
| 60 | -15 | 176 | 183 | 1,18 | 1,12 | 0,96 |
| 60 | -10 | 195 | 193 | 1,22 | 1,17 | 1,01 |
| 60 | -5 | 229 | 207 | 1,28 | 1,29 | 1,11 |
| 60 | 0 | 279 | 224 | 1,35 | 1,45 | 1,24 |
| 60 | 5 | 344 | 246 | 1,43 | 1,63 | 1,40 |
| 60 | 7,2 | 378 | 257 | 1,47 | 1,71 | 1,47 |
| 60 | 10 | 425 | 271 | 1,53 | 1,82 | 1,56 |

| | | | | | | |
|----|-----|-----|-----|------|------|------|
| 65 | -15 | 158 | 186 | 1,20 | 0,99 | 0,85 |
| 65 | -10 | 174 | 197 | 1,24 | 1,03 | 0,88 |
| 65 | -5 | 204 | 211 | 1,30 | 1,12 | 0,97 |
| 65 | 0 | 250 | 230 | 1,37 | 1,27 | 1,09 |
| 65 | 5 | 312 | 252 | 1,46 | 1,44 | 1,23 |
| 65 | 7,2 | 343 | 263 | 1,50 | 1,52 | 1,30 |
| 65 | 10 | 388 | 278 | 1,55 | 1,62 | 1,39 |

CECOMAF

| Tc °C | Te °C | Cooling Capacity W | Consumption W | Current A | COP W/W | EER kCal/Wh |
|----------|----------|--------------------------|------------------|--------------|------------|----------------|
| 40 | -15 | 264 | 172 | 1,14 | 1,53 | 1,33 |
| 40 | -10 | 302 | 179 | 1,16 | 1,69 | 1,46 |
| 40 | -5 | 355 | 189 | 1,21 | 1,88 | 1,62 |
| 40 | 0 | 425 | 204 | 1,27 | 2,09 | 1,80 |
| 40 | 5 | 511 | 222 | 1,34 | 2,30 | 1,99 |
| 40 | 7,2 | 554 | 231 | 1,38 | 2,39 | 2,07 |
| 40 | 10 | 613 | 244 | 1,43 | 2,51 | 2,17 |

| | | | | | | |
|----|-----|-----|-----|------|------|------|
| 45 | -15 | 244 | 175 | 1,15 | 1,39 | 1,20 |
| 45 | -10 | 277 | 183 | 1,18 | 1,52 | 1,31 |
| 45 | -5 | 327 | 194 | 1,23 | 1,68 | 1,45 |
| 45 | 0 | 392 | 209 | 1,29 | 1,87 | 1,62 |
| 45 | 5 | 474 | 229 | 1,37 | 2,07 | 1,79 |
| 45 | 7,2 | 515 | 238 | 1,41 | 2,16 | 1,87 |
| 45 | 10 | 571 | 252 | 1,46 | 2,27 | 1,96 |

| | | | | | | |
|----|-----|-----|-----|------|------|------|
| 50 | -15 | 224 | 178 | 1,16 | 1,26 | 1,09 |
| 50 | -10 | 253 | 186 | 1,20 | 1,36 | 1,17 |
| 50 | -5 | 298 | 199 | 1,25 | 1,50 | 1,30 |
| 50 | 0 | 359 | 215 | 1,31 | 1,67 | 1,44 |
| 50 | 5 | 436 | 235 | 1,39 | 1,86 | 1,60 |
| 50 | 7,2 | 475 | 245 | 1,43 | 1,94 | 1,68 |
| 50 | 10 | 529 | 259 | 1,48 | 2,04 | 1,77 |

| | | | | | | |
|----|-----|-----|-----|------|------|------|
| 55 | -15 | 204 | 181 | 1,17 | 1,13 | 0,97 |
| 55 | -10 | 229 | 190 | 1,21 | 1,20 | 1,04 |
| 55 | -5 | 269 | 203 | 1,27 | 1,32 | 1,14 |
| 55 | 0 | 326 | 220 | 1,34 | 1,48 | 1,28 |
| 55 | 5 | 398 | 241 | 1,42 | 1,65 | 1,43 |
| 55 | 7,2 | 435 | 252 | 1,46 | 1,73 | 1,49 |
| 55 | 10 | 487 | 266 | 1,51 | 1,83 | 1,58 |

| | | | | | | |
|----|-----|-----|-----|------|------|------|
| 60 | -15 | 184 | 184 | 1,19 | 1,00 | 0,87 |
| 60 | -10 | 204 | 194 | 1,23 | 1,05 | 0,91 |
| 60 | -5 | 240 | 208 | 1,29 | 1,15 | 1,00 |
| 60 | 0 | 292 | 226 | 1,36 | 1,29 | 1,12 |
| 60 | 5 | 360 | 248 | 1,44 | 1,46 | 1,26 |
| 60 | 7,2 | 395 | 258 | 1,48 | 1,53 | 1,32 |
| 60 | 10 | 445 | 273 | 1,54 | 1,63 | 1,41 |

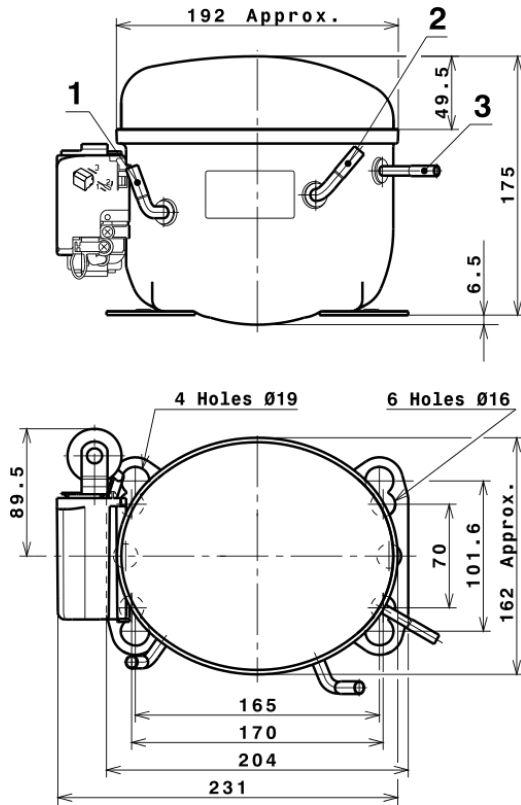
| | | | | | | |
|----|-----|-----|-----|------|------|------|
| 65 | -15 | 164 | 187 | 1,20 | 0,88 | 0,76 |
| 65 | -10 | 180 | 198 | 1,24 | 0,91 | 0,79 |
| 65 | -5 | 211 | 213 | 1,30 | 0,99 | 0,86 |
| 65 | 0 | 259 | 231 | 1,38 | 1,12 | 0,97 |
| 65 | 5 | 323 | 254 | 1,46 | 1,27 | 1,10 |
| 65 | 7,2 | 356 | 265 | 1,51 | 1,34 | 1,16 |
| 65 | 10 | 402 | 280 | 1,56 | 1,44 | 1,24 |

EN12900

| X | Cooling Capacity (W) | Consumption (W) | Current (A) | Mass Flow (kg/h) |
|---|----------------------|-----------------|--------------|---------------------|
| 1 | 692,5940025944 | 163,7660585203 | 1,1175095458 | 11,885576635192 |
| 2 | 22,8141704288 | 2,0560313060 | 0,0088266455 | 0,4342556024869 |
| 3 | -6,8202624182 | 1,1323684057 | 0,0043695448 | -0,064333041449375 |
| 4 | 0,3155998781 | 0,0814667781 | 0,0002813161 | 0,008961324565433 |
| 5 | -0,1849424233 | 0,0343332368 | 0,0001172971 | -0,0015500643171719 |

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

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 (L, P ranges)



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 HBP

