

Technical Data Sheet

Compressor model **GL90TC**
 Voltage **100V 50/60Hz ~1**
 Refrigerant **R134a**

APPLICATION

COMPRESSOR

MOTOR

| | | | | | |
|----------------------|---------------------------|--------------|----------------------|--------------------------|-----------|
| Application | High-Medium Back Pressure | Displacement | 8,85 cm ³ | Nominal Power | 1/4 hp |
| Refrigerant | R134a | Diameter | 25,40 mm | Voltage/Frequency | 100V 60Hz |
| Evaporating Temp. | -25,0 °C to 10,0 °C | Stroke | 17,47 mm | Voltage range | 85-110 V |
| Expansion | Capillar/Valve | Net Weight | 11,48 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 ³ | Locked Rotor Amps (LRA) | 29,00 A |
| Compatible refriger. | R1234yf | | | Max. Cont. Current (MCC) | 9,00 A |
| | | | | Main W. resist. at 25°C | 1,17 Ω |
| | | | | Start W. resist. at 25°C | 5,05 Ω |

NOMINAL PERFORMANCE

APPROVALS

| | ASHRAE | CECOMAF |
|------------------|--------------|--------------|
| Cooling Capacity | 796 kCal/h | 773 W |
| COP | 2,10 W/W | 1,82 W/W |
| EER | 1,81 kCal/Wh | 1,57 kCal/Wh |
| Input Power | 440 W | 424 W |
| Current | 5,50 A | 5,33 A |

TEST CYCLE CONDITIONS

| | ASHRAE HMBP (D) | CECOMAF HMBP (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 | 100 V 60 Hz | 100 V 60 Hz |

ELECTRICAL COMPONENTS

| | | | | |
|-------------------------|-------------------|------------------|--|--|
| Starting capacitor | 170 µF 160 V | | | |
| Relay | Option 1 | | | |
| Reference | 2014 170. | | | |
| Pick-Up | 12,10 A | | | |
| Drop-Out | 10,30 A | | | |
| Protector | Option 1 | Option 2 | | |
| Reference | MRT00ALK | T0435 | | |
| Current | 17,00 A | 31,00 A | | |
| Time check | 7,5-14 seg | 7,5-14 seg | | |
| Disc temp. (Open/Close) | 105,00 / 61,00 °C | 95,00 / 57,00 °C | | |

ASHRAE

| Tc | Te | Cooling Capacity | Consumption | Current | COP | EER |
|----|-----|------------------|-------------|---------|------|---------|
| °C | °C | kCal/h | W | A | W/W | kCal/Wh |
| 40 | -25 | 205 | 190 | 3,20 | 1,25 | 1,08 |
| 40 | -20 | 283 | 216 | 3,39 | 1,52 | 1,31 |
| 40 | -15 | 377 | 244 | 3,60 | 1,80 | 1,55 |
| 40 | -10 | 486 | 272 | 3,84 | 2,08 | 1,79 |
| 40 | -5 | 611 | 301 | 4,09 | 2,36 | 2,03 |
| 40 | 0 | 752 | 331 | 4,36 | 2,65 | 2,28 |
| 40 | 5 | 909 | 361 | 4,66 | 2,93 | 2,52 |
| 40 | 7,2 | 983 | 375 | 4,80 | 3,05 | 2,62 |
| 40 | 10 | 1.081 | 393 | 4,98 | 3,20 | 2,75 |

| | | | | | | |
|----|-----|-------|-----|------|------|------|
| 45 | -25 | 189 | 190 | 3,20 | 1,16 | 1,00 |
| 45 | -20 | 260 | 220 | 3,42 | 1,38 | 1,18 |
| 45 | -15 | 347 | 250 | 3,66 | 1,61 | 1,38 |
| 45 | -10 | 449 | 282 | 3,92 | 1,85 | 1,59 |
| 45 | -5 | 567 | 314 | 4,21 | 2,10 | 1,80 |
| 45 | 0 | 700 | 347 | 4,52 | 2,35 | 2,02 |
| 45 | 5 | 850 | 381 | 4,87 | 2,59 | 2,23 |
| 45 | 7,2 | 921 | 397 | 5,03 | 2,70 | 2,32 |
| 45 | 10 | 1.015 | 416 | 5,24 | 2,84 | 2,44 |

| | | | | | | |
|----|-----|-----|-----|------|------|------|
| 50 | -25 | 174 | 190 | 3,20 | 1,06 | 0,91 |
| 50 | -20 | 237 | 223 | 3,44 | 1,24 | 1,06 |
| 50 | -15 | 316 | 257 | 3,71 | 1,43 | 1,23 |
| 50 | -10 | 411 | 292 | 4,01 | 1,64 | 1,41 |
| 50 | -5 | 522 | 328 | 4,34 | 1,85 | 1,59 |
| 50 | 0 | 649 | 364 | 4,69 | 2,07 | 1,78 |
| 50 | 5 | 791 | 402 | 5,08 | 2,29 | 1,97 |
| 50 | 7,2 | 858 | 418 | 5,26 | 2,39 | 2,05 |
| 50 | 10 | 949 | 440 | 5,50 | 2,51 | 2,16 |

| | | | | | | |
|----|-----|-----|-----|------|------|------|
| 55 | -25 | 158 | 190 | 3,20 | 0,97 | 0,83 |
| 55 | -20 | 214 | 226 | 3,47 | 1,10 | 0,95 |
| 55 | -15 | 286 | 264 | 3,77 | 1,26 | 1,09 |
| 55 | -10 | 374 | 302 | 4,10 | 1,44 | 1,24 |
| 55 | -5 | 477 | 341 | 4,46 | 1,63 | 1,40 |
| 55 | 0 | 597 | 381 | 4,86 | 1,82 | 1,57 |
| 55 | 5 | 732 | 422 | 5,30 | 2,02 | 1,73 |
| 55 | 7,2 | 796 | 440 | 5,50 | 2,10 | 1,81 |
| 55 | 10 | 882 | 463 | 5,77 | 2,21 | 1,90 |

| | | | | | | |
|----|-----|-----|-----|------|------|------|
| 60 | -25 | 142 | 190 | 3,20 | 0,87 | 0,75 |
| 60 | -20 | 191 | 230 | 3,50 | 0,97 | 0,83 |
| 60 | -15 | 256 | 271 | 3,83 | 1,10 | 0,95 |
| 60 | -10 | 337 | 312 | 4,19 | 1,25 | 1,08 |
| 60 | -5 | 433 | 355 | 4,59 | 1,42 | 1,22 |
| 60 | 0 | 545 | 398 | 5,04 | 1,59 | 1,37 |
| 60 | 5 | 672 | 442 | 5,52 | 1,77 | 1,52 |
| 60 | 7,2 | 734 | 462 | 5,75 | 1,85 | 1,59 |
| 60 | 10 | 816 | 487 | 6,05 | 1,95 | 1,68 |

| | | | | | | |
|----|-----|-----|-----|------|------|------|
| 65 | -25 | 127 | 190 | 3,20 | 0,78 | 0,67 |
| 65 | -20 | 168 | 233 | 3,52 | 0,84 | 0,72 |
| 65 | -15 | 226 | 277 | 3,88 | 0,95 | 0,81 |
| 65 | -10 | 299 | 322 | 4,28 | 1,08 | 0,93 |
| 65 | -5 | 388 | 368 | 4,73 | 1,23 | 1,05 |
| 65 | 0 | 493 | 415 | 5,22 | 1,38 | 1,19 |
| 65 | 5 | 613 | 462 | 5,75 | 1,54 | 1,33 |
| 65 | 7,2 | 671 | 483 | 6,01 | 1,62 | 1,39 |
| 65 | 10 | 750 | 511 | 6,34 | 1,71 | 1,47 |

CECOMAF

| Tc | Te | Cooling Capacity | Consumption | Current | COP | EER |
|----|-----|------------------|-------------|---------|------|---------|
| °C | °C | W | W | A | W/W | kCal/Wh |
| 40 | -25 | 221 | 191 | 3,21 | 1,16 | 1,00 |
| 40 | -20 | 306 | 218 | 3,40 | 1,41 | 1,21 |
| 40 | -15 | 407 | 245 | 3,61 | 1,66 | 1,44 |
| 40 | -10 | 525 | 273 | 3,85 | 1,92 | 1,66 |
| 40 | -5 | 660 | 302 | 4,10 | 2,18 | 1,89 |
| 40 | 0 | 811 | 333 | 4,38 | 2,44 | 2,11 |
| 40 | 5 | 979 | 363 | 4,68 | 2,69 | 2,33 |
| 40 | 7,2 | 1.058 | 377 | 4,83 | 2,80 | 2,42 |
| 40 | 10 | 1.163 | 395 | 5,01 | 2,94 | 2,54 |

| | | | | | | |
|----|-----|-------|-----|------|------|------|
| 45 | -25 | 203 | 191 | 3,21 | 1,06 | 0,92 |
| 45 | -20 | 279 | 221 | 3,43 | 1,26 | 1,09 |
| 45 | -15 | 372 | 252 | 3,67 | 1,48 | 1,28 |
| 45 | -10 | 482 | 283 | 3,94 | 1,70 | 1,47 |
| 45 | -5 | 608 | 316 | 4,23 | 1,92 | 1,66 |
| 45 | 0 | 751 | 349 | 4,55 | 2,15 | 1,86 |
| 45 | 5 | 910 | 384 | 4,89 | 2,37 | 2,05 |
| 45 | 7,2 | 985 | 399 | 5,05 | 2,47 | 2,13 |
| 45 | 10 | 1.086 | 419 | 5,27 | 2,59 | 2,24 |

| | | | | | | |
|----|-----|-------|-----|------|------|------|
| 50 | -25 | 185 | 191 | 3,21 | 0,97 | 0,84 |
| 50 | -20 | 253 | 224 | 3,45 | 1,13 | 0,97 |
| 50 | -15 | 338 | 258 | 3,73 | 1,31 | 1,13 |
| 50 | -10 | 439 | 294 | 4,02 | 1,49 | 1,29 |
| 50 | -5 | 556 | 330 | 4,35 | 1,69 | 1,46 |
| 50 | 0 | 691 | 366 | 4,71 | 1,89 | 1,63 |
| 50 | 5 | 842 | 404 | 5,11 | 2,08 | 1,80 |
| 50 | 7,2 | 913 | 421 | 5,29 | 2,17 | 1,87 |
| 50 | 10 | 1.009 | 443 | 5,53 | 2,28 | 1,97 |

| | | | | | | |
|----|-----|-----|-----|------|------|------|
| 55 | -25 | 167 | 191 | 3,21 | 0,88 | 0,76 |
| 55 | -20 | 227 | 228 | 3,48 | 1,00 | 0,86 |
| 55 | -15 | 303 | 265 | 3,78 | 1,14 | 0,99 |
| 55 | -10 | 396 | 304 | 4,12 | 1,30 | 1,13 |
| 55 | -5 | 505 | 343 | 4,48 | 1,47 | 1,27 |
| 55 | 0 | 631 | 383 | 4,89 | 1,64 | 1,42 |
| 55 | 5 | 773 | 424 | 5,33 | 1,82 | 1,57 |
| 55 | 7,2 | 841 | 443 | 5,53 | 1,90 | 1,64 |
| 55 | 10 | 932 | 466 | 5,81 | 2,00 | 1,73 |

| | | | | | | |
|----|-----|-----|-----|------|------|------|
| 60 | -25 | 149 | 191 | 3,21 | 0,78 | 0,68 |
| 60 | -20 | 200 | 231 | 3,51 | 0,87 | 0,75 |
| 60 | -15 | 268 | 272 | 3,84 | 0,99 | 0,85 |
| 60 | -10 | 352 | 314 | 4,21 | 1,12 | 0,97 |
| 60 | -5 | 453 | 357 | 4,62 | 1,27 | 1,10 |
| 60 | 0 | 570 | 400 | 5,06 | 1,42 | 1,23 |
| 60 | 5 | 704 | 445 | 5,55 | 1,58 | 1,37 |
| 60 | 7,2 | 768 | 465 | 5,78 | 1,65 | 1,43 |
| 60 | 10 | 855 | 490 | 6,09 | 1,74 | 1,51 |

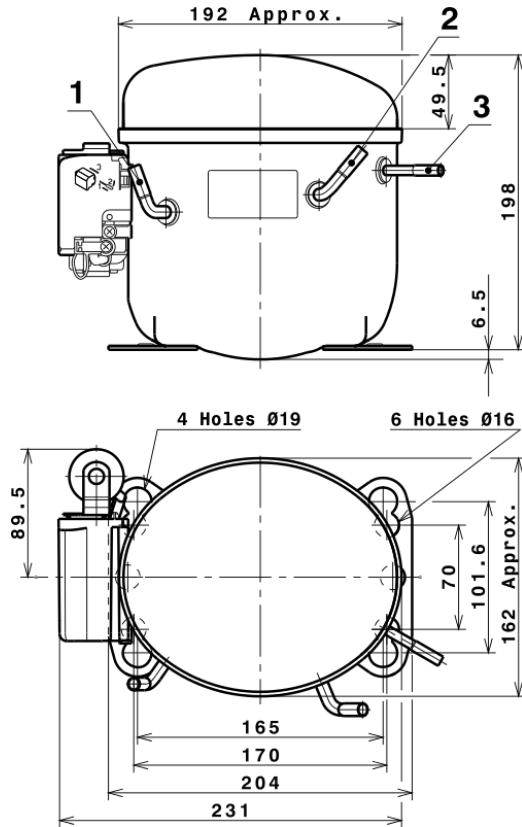
| | | | | | | |
|----|-----|-----|-----|------|------|------|
| 65 | -25 | 131 | 191 | 3,21 | 0,69 | 0,59 |
| 65 | -20 | 174 | 234 | 3,53 | 0,74 | 0,64 |
| 65 | -15 | 233 | 279 | 3,90 | 0,84 | 0,72 |
| 65 | -10 | 309 | 324 | 4,30 | 0,95 | 0,82 |
| 65 | -5 | 401 | 370 | 4,75 | 1,08 | 0,94 |
| 65 | 0 | 510 | 417 | 5,25 | 1,22 | 1,06 |
| 65 | 5 | 635 | 465 | 5,79 | 1,37 | 1,18 |
| 65 | 7,2 | 696 | 486 | 6,04 | 1,43 | 1,24 |
| 65 | 10 | 777 | 514 | 6,38 | 1,51 | 1,31 |

EN12900

| X | Cooling Capacity (W) | Consumption (W) | Current (A) | Mass Flow (kg/h) |
|---|----------------------|-----------------|--------------|---------------------|
| 1 | 1.295,8804366377 | 201,9130310242 | 2,8902741372 | 22,126179369728 |
| 2 | 45,4991233929 | 0,7870014686 | 0,0046416703 | 0,86445385541761 |
| 3 | -12,3771628391 | 3,4810520657 | 0,0382889609 | -0,10726174157057 |
| 4 | 0,3253920037 | 0,0208367030 | 0,0007412885 | 0,0093979048813084 |
| 5 | -0,3503601710 | 0,1392420826 | 0,0015315584 | -0,0026727655382162 |

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

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

CSIR CONNECTION (L, P ranges)



Technical Data Sheet

FIXINGS



SILENT BLOCKS (MOUNTING ACCESSORIES)

STANDARD

$\varnothing 16$ holes (170x70 net)



AMERICAN FEET

$\varnothing 19$ holes (165x101.6 net)



SNAP-ON

$\varnothing 16$ holes (170x70 net)



SOA

SOA R134a HMBP

