

Technical Data Sheet

ENGINEERING
TOMORROW



Compressor model **GLY12RAa**
Voltage **220-240V 50Hz ~1**
Refrigerant **R134a**

APPLICATION

COMPRESSOR

MOTOR

| | | | | | |
|----------------------|---------------------|--------------|-----------------------|--------------------------|---------------|
| Application | High Back Pressure | Displacement | 10,70 cm ³ | Nominal Power | 3/8 hp |
| Refrigerant | R134a | Diameter | 25,40 mm | Voltage/Frequency | 220-240V 50Hz |
| Evaporating Temp. | -15,0 °C to 10,0 °C | Stroke | 21,12 mm | Voltage range | 198-255 V |
| Expansion | Capillar/Valve | Net Weight | 10,23 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 | 345 cm ³ | Locked Rotor Amps (LRA) | 14,80 A |
| Compatible refriger. | R1234yf | | | Max. Cont. Current (MCC) | 3,60 A |
| | | | | Main W. resist. at 25°C | 8,43 Ω |
| | | | | Start W. resist. at 25°C | 31,30 Ω |

NOMINAL PERFORMANCE

| | ASHRAE | CECOMAF |
|------------------|--------------|--------------|
| Cooling Capacity | 900 kCal/h | 867 W |
| COP | 2,30 W/W | 1,97 W/W |
| EER | 1,98 kCal/Wh | 1,70 kCal/Wh |
| Input Power | 455 W | 441 W |
| Current | 2,56 A | 2,51 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 | 220 V 50 Hz | 220 V 50 Hz |

ELECTRICAL COMPONENTS

| Starting capacitor | 47- 56 µF 330 V | | | |
|-------------------------|-------------------|-------------------|--|--|
| Relay | Option 1 | Option 2 | | |
| Reference | 2014 138. | QLZ-6.1A | | |
| Pick-Up | 6,10 A | 6.10 A | | |
| Drop-Out | 5,20 A | 5.20 A | | |
| Protector | Option 1 | Option 2 | | |
| Reference | T0181 | AE39FS | | |
| Current | 11,10 A | 11,00 A | | |
| Time check | 7,5-14 seg | 7,5-14 seg | | |
| Disc temp. (Open/Close) | 105,00 / 61,00 °C | 110,00 / 62,00 °C | | |



ASHRAE

| Tc °C | Te °C | Cooling Capacity kCal/h | Consumption W | Current A | COP W/W | EER kCal/Wh |
|----------|----------|-------------------------------|------------------|--------------|------------|----------------|
| 40 | -15 | 408 | 263 | 1,89 | 1,80 | 1,55 |
| 40 | -10 | 512 | 293 | 1,98 | 2,04 | 1,75 |
| 40 | -5 | 642 | 322 | 2,08 | 2,32 | 1,99 |
| 40 | 0 | 797 | 351 | 2,18 | 2,64 | 2,27 |
| 40 | 5 | 977 | 380 | 2,28 | 3,00 | 2,58 |
| 40 | 7,2 | 1.065 | 392 | 2,32 | 3,16 | 2,72 |
| 40 | 10 | 1.184 | 408 | 2,38 | 3,38 | 2,90 |

| | | | | | | |
|----|-----|-------|-----|------|------|------|
| 45 | -15 | 382 | 269 | 1,90 | 1,65 | 1,42 |
| 45 | -10 | 480 | 302 | 2,01 | 1,85 | 1,59 |
| 45 | -5 | 603 | 335 | 2,12 | 2,10 | 1,80 |
| 45 | 0 | 751 | 367 | 2,23 | 2,38 | 2,05 |
| 45 | 5 | 925 | 399 | 2,35 | 2,70 | 2,32 |
| 45 | 7,2 | 1.010 | 413 | 2,40 | 2,84 | 2,45 |
| 45 | 10 | 1.125 | 431 | 2,47 | 3,04 | 2,61 |

| | | | | | | |
|----|-----|-------|-----|------|------|------|
| 50 | -15 | 356 | 274 | 1,92 | 1,51 | 1,30 |
| 50 | -10 | 447 | 311 | 2,04 | 1,67 | 1,44 |
| 50 | -5 | 564 | 347 | 2,17 | 1,89 | 1,62 |
| 50 | 0 | 706 | 383 | 2,29 | 2,14 | 1,84 |
| 50 | 5 | 873 | 418 | 2,42 | 2,43 | 2,09 |
| 50 | 7,2 | 955 | 434 | 2,48 | 2,56 | 2,20 |
| 50 | 10 | 1.066 | 454 | 2,55 | 2,73 | 2,35 |

| | | | | | | |
|----|-----|-------|-----|------|------|------|
| 55 | -15 | 330 | 280 | 1,94 | 1,37 | 1,18 |
| 55 | -10 | 414 | 320 | 2,07 | 1,51 | 1,30 |
| 55 | -5 | 524 | 360 | 2,21 | 1,70 | 1,46 |
| 55 | 0 | 660 | 399 | 2,35 | 1,92 | 1,65 |
| 55 | 5 | 821 | 438 | 2,49 | 2,18 | 1,87 |
| 55 | 7,2 | 900 | 455 | 2,56 | 2,30 | 1,98 |
| 55 | 10 | 1.008 | 477 | 2,64 | 2,46 | 2,11 |

| | | | | | | |
|----|-----|-----|-----|------|------|------|
| 60 | -15 | 304 | 286 | 1,96 | 1,24 | 1,06 |
| 60 | -10 | 382 | 329 | 2,10 | 1,35 | 1,16 |
| 60 | -5 | 485 | 372 | 2,25 | 1,52 | 1,30 |
| 60 | 0 | 614 | 415 | 2,41 | 1,72 | 1,48 |
| 60 | 5 | 769 | 457 | 2,57 | 1,95 | 1,68 |
| 60 | 7,2 | 845 | 476 | 2,64 | 2,06 | 1,78 |
| 60 | 10 | 949 | 500 | 2,73 | 2,21 | 1,90 |

| | | | | | | |
|----|-----|-----|-----|------|------|------|
| 65 | -15 | 278 | 291 | 1,98 | 1,11 | 0,95 |
| 65 | -10 | 349 | 338 | 2,13 | 1,20 | 1,03 |
| 65 | -5 | 446 | 385 | 2,30 | 1,35 | 1,16 |
| 65 | 0 | 569 | 431 | 2,47 | 1,53 | 1,32 |
| 65 | 5 | 717 | 477 | 2,65 | 1,75 | 1,50 |
| 65 | 7,2 | 790 | 497 | 2,72 | 1,85 | 1,59 |
| 65 | 10 | 890 | 522 | 2,83 | 1,98 | 1,70 |

CECOMAF

| Tc °C | Te °C | Cooling Capacity W | Consumption W | Current A | COP W/W | EER kCal/Wh |
|----------|----------|--------------------------|------------------|--------------|------------|----------------|
| 40 | -15 | 439 | 264 | 1,89 | 1,66 | 1,44 |
| 40 | -10 | 552 | 294 | 1,99 | 1,88 | 1,62 |
| 40 | -5 | 692 | 324 | 2,09 | 2,14 | 1,85 |
| 40 | 0 | 859 | 353 | 2,19 | 2,43 | 2,10 |
| 40 | 5 | 1.052 | 382 | 2,29 | 2,76 | 2,38 |
| 40 | 7,2 | 1.146 | 395 | 2,33 | 2,91 | 2,51 |
| 40 | 10 | 1.273 | 410 | 2,39 | 3,10 | 2,68 |

| | | | | | | |
|----|-----|-------|-----|------|------|------|
| 45 | -15 | 409 | 270 | 1,91 | 1,52 | 1,31 |
| 45 | -10 | 514 | 303 | 2,02 | 1,70 | 1,46 |
| 45 | -5 | 646 | 336 | 2,13 | 1,92 | 1,66 |
| 45 | 0 | 805 | 369 | 2,24 | 2,18 | 1,88 |
| 45 | 5 | 991 | 402 | 2,36 | 2,47 | 2,13 |
| 45 | 7,2 | 1.081 | 416 | 2,41 | 2,60 | 2,25 |
| 45 | 10 | 1.203 | 434 | 2,48 | 2,78 | 2,40 |

| | | | | | | |
|----|-----|-------|-----|------|------|------|
| 50 | -15 | 379 | 276 | 1,93 | 1,37 | 1,19 |
| 50 | -10 | 476 | 313 | 2,05 | 1,52 | 1,32 |
| 50 | -5 | 600 | 349 | 2,17 | 1,72 | 1,49 |
| 50 | 0 | 751 | 385 | 2,30 | 1,95 | 1,68 |
| 50 | 5 | 929 | 421 | 2,43 | 2,21 | 1,91 |
| 50 | 7,2 | 1.016 | 437 | 2,49 | 2,33 | 2,01 |
| 50 | 10 | 1.134 | 457 | 2,57 | 2,48 | 2,14 |

| | | | | | | |
|----|-----|-------|-----|------|------|------|
| 55 | -15 | 349 | 282 | 1,94 | 1,24 | 1,07 |
| 55 | -10 | 438 | 322 | 2,08 | 1,36 | 1,18 |
| 55 | -5 | 555 | 362 | 2,22 | 1,53 | 1,32 |
| 55 | 0 | 698 | 401 | 2,36 | 1,74 | 1,50 |
| 55 | 5 | 867 | 441 | 2,51 | 1,97 | 1,70 |
| 55 | 7,2 | 951 | 458 | 2,57 | 2,08 | 1,79 |
| 55 | 10 | 1.064 | 480 | 2,66 | 2,22 | 1,92 |

| | | | | | | |
|----|-----|-----|-----|------|------|------|
| 60 | -15 | 319 | 287 | 1,96 | 1,11 | 0,96 |
| 60 | -10 | 400 | 331 | 2,11 | 1,21 | 1,05 |
| 60 | -5 | 509 | 374 | 2,26 | 1,36 | 1,17 |
| 60 | 0 | 644 | 418 | 2,42 | 1,54 | 1,33 |
| 60 | 5 | 806 | 460 | 2,58 | 1,75 | 1,51 |
| 60 | 7,2 | 885 | 479 | 2,65 | 1,85 | 1,60 |
| 60 | 10 | 994 | 503 | 2,75 | 1,98 | 1,71 |

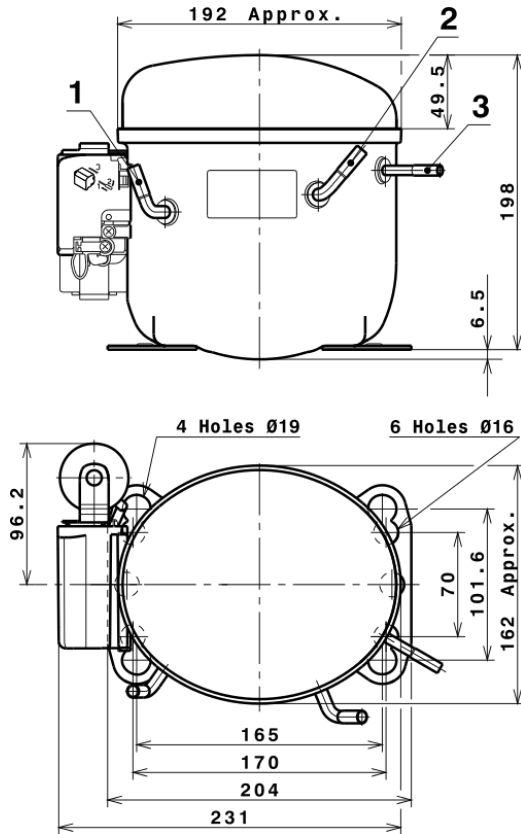
| | | | | | | |
|----|-----|-----|-----|------|------|------|
| 65 | -15 | 289 | 293 | 1,98 | 0,99 | 0,85 |
| 65 | -10 | 362 | 340 | 2,14 | 1,07 | 0,92 |
| 65 | -5 | 463 | 387 | 2,31 | 1,20 | 1,03 |
| 65 | 0 | 590 | 434 | 2,48 | 1,36 | 1,18 |
| 65 | 5 | 744 | 480 | 2,66 | 1,55 | 1,34 |
| 65 | 7,2 | 820 | 500 | 2,74 | 1,64 | 1,42 |
| 65 | 10 | 925 | 526 | 2,84 | 1,76 | 1,52 |

EN12900

| X | Cooling Capacity (W) | Consumption (W) | Current (A) | Mass Flow (kg/h) |
|---|----------------------|-----------------|---------------|----------------------|
| 1 | 1.293,8096317008 | 229,5430318710 | 1,7179750937 | 21,36866466094 |
| 2 | 48,9700441985 | 0,3292808100 | -0,0011113183 | 0,87719174519458 |
| 3 | -11,1544776051 | 3,3144506462 | 0,0123491307 | -0,06330327868686 |
| 4 | 0,5283064870 | -0,0028255838 | 0,0001074127 | 0,015482000001125 |
| 5 | -0,3337922414 | 0,1432205060 | 0,0005716989 | -0,00067445432764572 |

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

COMPRESSOR DIMENSIONS

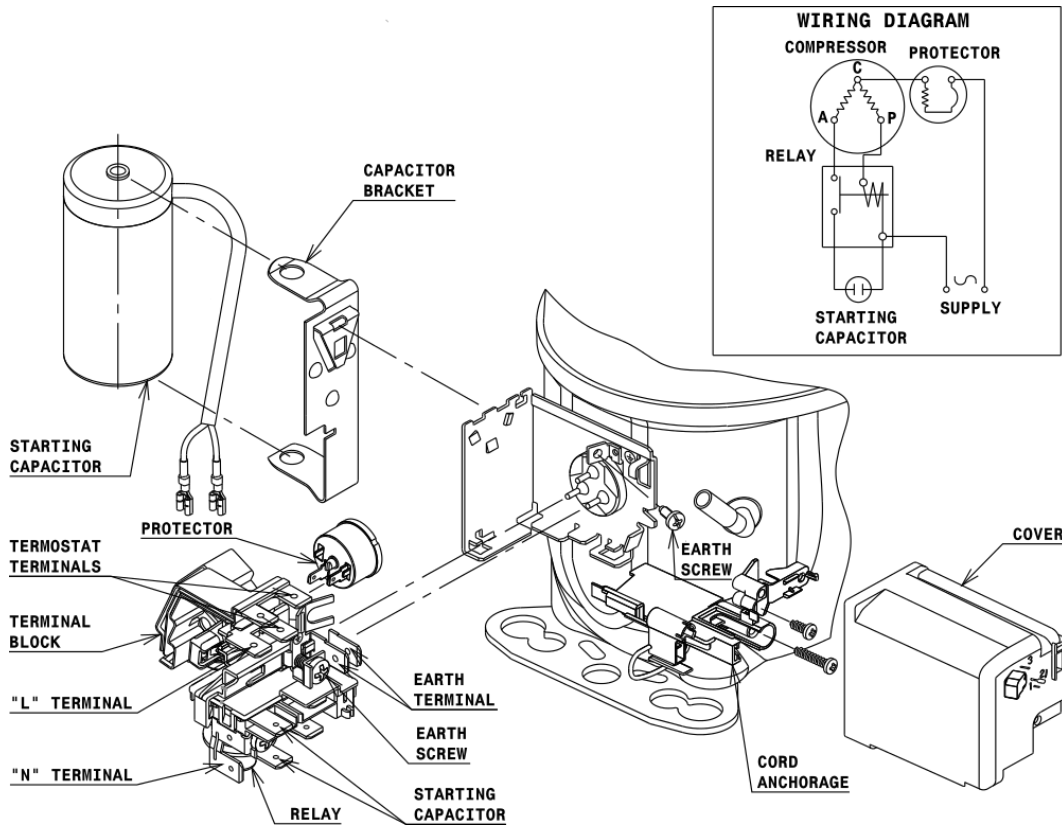


DESIGNATION INTERNAL DIAM.

| DESIGNATION | INTERNAL DIAM. |
|-------------|----------------|
| 1 Suction | 8,1 mm |
| 2 Service | 8,1 mm |
| 3 Discharge | 6,5 mm |

WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

CSIR CONNECTION (L, P ranges)



FIXINGS



SILENT BLOCKS (MOUNTING ACCESSORIES)

STANDARD

Ø16 holes (170x70 net)



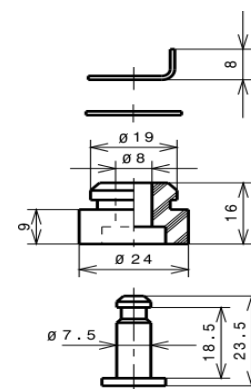
AMERICAN FEET

Ø19 holes (165x101.6 net)



SNAP-ON

Ø16 holes (170x70 net)



SOA

SOA R134a HBP

