

Technical Data Sheet

Compressor model **ML80TG**
 Voltage **200-240/220-230V 50/60Hz ~1**
 Refrigerant **R404A**

APPLICATION

COMPRESSOR

MOTOR

| | | | | | |
|--------------------|---------------------------|--------------|----------------------|--------------------------|---------------|
| Application | High-Medium Back Pressure | Displacement | 7,57 cm ³ | Nominal Power | 3/8 hp |
| Refrigerant | R404A | Diameter | 25,40 mm | Voltage/Frequency | 200-240V 50Hz |
| Evaporating Temp. | -25,0 °C to 10,0 °C | Stroke | 14,92 mm | Voltage range | 170-255 V |
| Expansion | Capillar/Valve | Net Weight | 11,81 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 | 295 cm ³ | Locked Rotor Amps (LRA) | 14,00 A |
| | | | | Max. Cont. Current (MCC) | 5,50 A |
| | | | | Main W. resist. at 25°C | 4,38 Ω |
| | | | | Start W. resist. at 25°C | 21,00 Ω |

NOMINAL PERFORMANCE

| | ASHRAE | CECOMAF |
|------------------|--------------|--------------|
| Cooling Capacity | 950 kCal/h | 875 W |
| COP | 1,99 W/W | 1,61 W/W |
| EER | 1,71 kCal/Wh | 1,39 kCal/Wh |
| Input Power | 555 W | 543 W |
| Current | 3,40 A | 3,34 A |

APPROVALS



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 | 200 V 50 Hz | 200 V 50 Hz |



ELECTRICAL COMPONENTS

| | | | | |
|-------------------------|-------------------|-------------------|--|--|
| Starting capacitor | 47- 56 µF 330 V | | | |
| Relay | Option 1 | | | |
| Reference | 2014 149. | | | |
| Pick-Up | 7,80 A | | | |
| Drop-Out | 6,65 A | | | |
| Protector | Option 1 | Option 2 | | |
| Reference | MRP00AMK | T0425 | | |
| Current | 11,70 A | 11,50 A | | |
| Time check | 7,5-14 seg | 7,5-14 seg | | |
| Disc temp. (Open/Close) | 105,00 / 61,00 °C | 105,00 / 61,00 °C | | |

ASHRAE

| Tc °C | Te °C | Cooling Capacity kCal/h | Consumption W | Current A | COP W/W | EER kCal/Wh |
|----------|----------|-------------------------------|------------------|--------------|------------|----------------|
| 40 | -25 | 315 | 284 | 2,33 | 1,29 | 1,11 |
| 40 | -20 | 419 | 316 | 2,43 | 1,55 | 1,33 |
| 40 | -15 | 538 | 346 | 2,53 | 1,81 | 1,56 |
| 40 | -10 | 673 | 375 | 2,63 | 2,09 | 1,79 |
| 40 | -5 | 822 | 403 | 2,73 | 2,38 | 2,04 |
| 40 | 0 | 987 | 429 | 2,84 | 2,67 | 2,30 |
| 40 | 5 | 1.166 | 454 | 2,94 | 2,99 | 2,57 |
| 40 | 7,2 | 1.250 | 465 | 2,98 | 3,13 | 2,69 |
| 40 | 10 | 1.361 | 478 | 3,04 | 3,31 | 2,85 |

| | | | | | | |
|----|-----|-------|-----|------|------|------|
| 45 | -25 | 285 | 286 | 2,34 | 1,16 | 1,00 |
| 45 | -20 | 378 | 322 | 2,45 | 1,37 | 1,18 |
| 45 | -15 | 487 | 357 | 2,56 | 1,59 | 1,37 |
| 45 | -10 | 610 | 390 | 2,68 | 1,82 | 1,57 |
| 45 | -5 | 749 | 422 | 2,81 | 2,06 | 1,77 |
| 45 | 0 | 902 | 453 | 2,93 | 2,32 | 1,99 |
| 45 | 5 | 1.071 | 482 | 3,06 | 2,58 | 2,22 |
| 45 | 7,2 | 1.150 | 495 | 3,12 | 2,70 | 2,32 |
| 45 | 10 | 1.255 | 511 | 3,19 | 2,86 | 2,46 |

| | | | | | | |
|----|-----|-------|-----|------|------|------|
| 50 | -25 | 255 | 288 | 2,34 | 1,03 | 0,89 |
| 50 | -20 | 337 | 328 | 2,47 | 1,20 | 1,03 |
| 50 | -15 | 435 | 367 | 2,60 | 1,38 | 1,18 |
| 50 | -10 | 548 | 405 | 2,74 | 1,57 | 1,35 |
| 50 | -5 | 675 | 441 | 2,89 | 1,78 | 1,53 |
| 50 | 0 | 818 | 477 | 3,04 | 2,00 | 1,72 |
| 50 | 5 | 976 | 510 | 3,19 | 2,22 | 1,91 |
| 50 | 7,2 | 1.050 | 525 | 3,25 | 2,33 | 2,00 |
| 50 | 10 | 1.149 | 543 | 3,34 | 2,46 | 2,11 |

| | | | | | | |
|----|-----|-------|-----|------|------|------|
| 55 | -25 | 225 | 290 | 2,35 | 0,90 | 0,78 |
| 55 | -20 | 297 | 335 | 2,49 | 1,03 | 0,89 |
| 55 | -15 | 383 | 378 | 2,64 | 1,18 | 1,01 |
| 55 | -10 | 485 | 420 | 2,80 | 1,34 | 1,15 |
| 55 | -5 | 602 | 461 | 2,97 | 1,52 | 1,31 |
| 55 | 0 | 734 | 500 | 3,14 | 1,71 | 1,47 |
| 55 | 5 | 881 | 539 | 3,32 | 1,90 | 1,64 |
| 55 | 7,2 | 950 | 555 | 3,40 | 1,99 | 1,71 |
| 55 | 10 | 1.043 | 576 | 3,50 | 2,11 | 1,81 |

| | | | | | | |
|----|-----|-----|-----|------|------|------|
| 60 | -25 | 195 | 292 | 2,36 | 0,78 | 0,67 |
| 60 | -20 | 256 | 341 | 2,51 | 0,87 | 0,75 |
| 60 | -15 | 332 | 389 | 2,68 | 0,99 | 0,85 |
| 60 | -10 | 422 | 435 | 2,86 | 1,13 | 0,97 |
| 60 | -5 | 528 | 480 | 3,05 | 1,28 | 1,10 |
| 60 | 0 | 649 | 524 | 3,25 | 1,44 | 1,24 |
| 60 | 5 | 785 | 567 | 3,46 | 1,61 | 1,39 |
| 60 | 7,2 | 850 | 585 | 3,55 | 1,69 | 1,45 |
| 60 | 10 | 936 | 608 | 3,67 | 1,79 | 1,54 |

CECOMAF

| Tc °C | Te °C | Cooling Capacity W | Consumption W | Current A | COP W/W | EER kCal/Wh |
|----------|----------|--------------------------|------------------|--------------|------------|----------------|
| 40 | -25 | 330 | 286 | 2,34 | 1,16 | 1,00 |
| 40 | -20 | 442 | 317 | 2,43 | 1,39 | 1,20 |
| 40 | -15 | 568 | 348 | 2,53 | 1,63 | 1,41 |
| 40 | -10 | 709 | 377 | 2,64 | 1,88 | 1,62 |
| 40 | -5 | 864 | 405 | 2,74 | 2,13 | 1,84 |
| 40 | 0 | 1.034 | 432 | 2,85 | 2,39 | 2,07 |
| 40 | 5 | 1.219 | 458 | 2,95 | 2,66 | 2,30 |
| 40 | 7,2 | 1.305 | 469 | 3,00 | 2,79 | 2,41 |
| 40 | 10 | 1.418 | 482 | 3,06 | 2,94 | 2,54 |

| | | | | | | |
|----|-----|-------|-----|------|------|------|
| 45 | -25 | 295 | 288 | 2,34 | 1,03 | 0,89 |
| 45 | -20 | 393 | 324 | 2,45 | 1,22 | 1,05 |
| 45 | -15 | 506 | 359 | 2,57 | 1,41 | 1,22 |
| 45 | -10 | 634 | 392 | 2,69 | 1,62 | 1,40 |
| 45 | -5 | 776 | 425 | 2,82 | 1,83 | 1,58 |
| 45 | 0 | 933 | 456 | 2,95 | 2,05 | 1,77 |
| 45 | 5 | 1.104 | 486 | 3,08 | 2,27 | 1,96 |
| 45 | 7,2 | 1.184 | 499 | 3,13 | 2,37 | 2,05 |
| 45 | 10 | 1.290 | 515 | 3,21 | 2,51 | 2,17 |

| | | | | | | |
|----|-----|-------|-----|------|------|------|
| 50 | -25 | 260 | 290 | 2,35 | 0,90 | 0,78 |
| 50 | -20 | 345 | 330 | 2,48 | 1,05 | 0,90 |
| 50 | -15 | 445 | 369 | 2,61 | 1,20 | 1,04 |
| 50 | -10 | 559 | 407 | 2,75 | 1,37 | 1,19 |
| 50 | -5 | 688 | 444 | 2,90 | 1,55 | 1,34 |
| 50 | 0 | 832 | 480 | 3,05 | 1,73 | 1,50 |
| 50 | 5 | 990 | 514 | 3,20 | 1,92 | 1,66 |
| 50 | 7,2 | 1.064 | 529 | 3,27 | 2,01 | 1,74 |
| 50 | 10 | 1.162 | 547 | 3,36 | 2,12 | 1,83 |

| | | | | | | |
|----|-----|-------|-----|------|------|------|
| 55 | -25 | 225 | 292 | 2,35 | 0,77 | 0,67 |
| 55 | -20 | 297 | 337 | 2,50 | 0,88 | 0,76 |
| 55 | -15 | 383 | 380 | 2,65 | 1,01 | 0,87 |
| 55 | -10 | 484 | 423 | 2,81 | 1,15 | 0,99 |
| 55 | -5 | 600 | 464 | 2,98 | 1,29 | 1,12 |
| 55 | 0 | 730 | 504 | 3,16 | 1,45 | 1,25 |
| 55 | 5 | 875 | 543 | 3,34 | 1,61 | 1,39 |
| 55 | 7,2 | 943 | 559 | 3,42 | 1,69 | 1,46 |
| 55 | 10 | 1.034 | 580 | 3,53 | 1,78 | 1,54 |

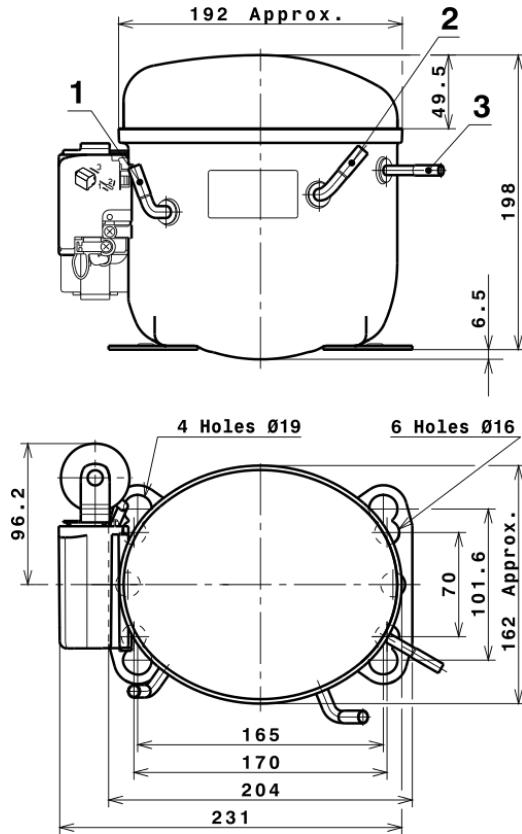
| | | | | | | |
|----|-----|-----|-----|------|------|------|
| 60 | -25 | 191 | 294 | 2,36 | 0,65 | 0,56 |
| 60 | -20 | 249 | 343 | 2,52 | 0,73 | 0,63 |
| 60 | -15 | 322 | 391 | 2,69 | 0,82 | 0,71 |
| 60 | -10 | 410 | 438 | 2,87 | 0,94 | 0,81 |
| 60 | -5 | 512 | 483 | 3,06 | 1,06 | 0,91 |
| 60 | 0 | 629 | 528 | 3,27 | 1,19 | 1,03 |
| 60 | 5 | 760 | 571 | 3,48 | 1,33 | 1,15 |
| 60 | 7,2 | 822 | 589 | 3,57 | 1,40 | 1,21 |
| 60 | 10 | 906 | 613 | 3,70 | 1,48 | 1,28 |

EN12900

| X | Cooling Capacity (W) | Consumption (W) | Current (A) | Mass Flow (kg/h) |
|---|----------------------|-----------------|---------------|---------------------|
| 1 | 1.844,1654358994 | 247,3131646163 | 1,9060553889 | 37,209712793919 |
| 2 | 56,6828614829 | -1,6368084797 | -0,0110258278 | 1,3076743535973 |
| 3 | -20,9375463317 | 4,9473767289 | 0,0240077571 | -0,21299060786709 |
| 4 | 0,2764332705 | -0,0196399069 | 0,0002010209 | 0,012975409746254 |
| 5 | -0,5568819630 | 0,1814199387 | 0,0009104242 | -0,0046865142132231 |

| | |
|----------|---|
| 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)

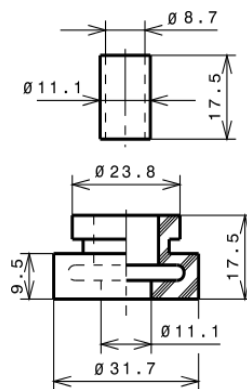
STANDARD

Ø16 holes (170x70 net)



AMERICAN FEET

Ø19 holes (165x101.6 net)



SNAP-ON

Ø16 holes (170x70 net)



SOA

SOA R404A HMBP

