

Technical Data Sheet

Compressor model **MLY80LAa**
 Voltage **220-240V 50Hz ~1**
 Refrigerant **R404A**

APPLICATION

Application Low Back Pressure
 Refrigerant R404A
 Evaporating Temp. -40,0 °C to -10,0 °C
 Expansion Capillar/Valve
 Comp. Cooling Fan cooled
 Max. ambient temp. 43,0 °C

COMPRESSOR

Displacement 8,10 cm³
 Diameter 24,29 mm
 Stroke 17,47 mm
 Net Weight 9,59 Kg
 Oil type ISO VG 32 ESTER
 Oil charge 350 cm³

MOTOR

Nominal Power 1/4 hp
 Voltage/Frequency 220-240V 50Hz
 Voltage range 198-255 V
 Type CSIR
 Phase number 1 PH
 Locked Rotor Amps (LRA) 13,00 A
 Max. Cont. Current (MCC) 3,00 A
 Main W. resist. at 25°C 8,60 Ω
 Start W. resist. at 25°C 27,80 Ω

NOMINAL PERFORMANCE

| | ASHRAE | CECOMAF |
|------------------|--------------|--------------|
| Cooling Capacity | 350 kCal/h | 275 W |
| COP | 1,28 W/W | 0,91 W/W |
| EER | 1,10 kCal/Wh | 0,78 kCal/Wh |
| Input Power | 318 W | 303 W |
| Current | 1,95 A | 1,90 A |

APPROVALS



TEST CYCLE CONDITIONS

| | ASHRAE LBP (B) | CECOMAF LBP (A) |
|---------------------------------------|-------------------|--------------------|
| Evaporating temp. (T _e) | -23,3 °C | -25,0 °C |
| Condensing temp. (T _c) | 55,0 °C | 55,0 °C |
| Liquid temp. (T _{liq.}) | 32,0 °C | 55,0 °C |
| Ambient temp. (T _{amb.}) | 32,0 °C | 32,0 °C |
| Suction temp. (T _{suction}) | 32,0 °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 135. | | | |
| Pick-Up | 5,80 A | | | |
| Drop-Out | 4,95 A | | | |
| Protector | Option 1 | | | |
| Reference | T0102 | | | |
| Current | 9,80 A | | | |
| Time check | 7,5-14 seg | | | |
| Disc temp. (Open/Close) | 95,00 / 62,00 °C | | | |

ASHRAE

| Tc °C | Te °C | Cooling Capacity kCal/h | Consumption W | Current A | COP W/W | EER kCal/Wh |
|----------|----------|-------------------------------|------------------|--------------|------------|----------------|
| 40 | -40 | 150 | 190 | 1,54 | 0,92 | 0,79 |
| 40 | -35 | 212 | 225 | 1,64 | 1,10 | 0,94 |
| 40 | -30 | 287 | 260 | 1,75 | 1,28 | 1,10 |
| 40 | -25 | 376 | 296 | 1,87 | 1,48 | 1,27 |
| 40 | -23,3 | 409 | 308 | 1,91 | 1,55 | 1,33 |
| 40 | -20 | 478 | 332 | 2,00 | 1,68 | 1,44 |
| 40 | -15 | 594 | 368 | 2,15 | 1,88 | 1,61 |
| 40 | -10 | 723 | 405 | 2,31 | 2,07 | 1,78 |

| | | | | | | |
|----|-------|-----|-----|------|------|------|
| 45 | -40 | 140 | 185 | 1,53 | 0,88 | 0,76 |
| 45 | -35 | 199 | 222 | 1,63 | 1,04 | 0,90 |
| 45 | -30 | 271 | 260 | 1,75 | 1,21 | 1,04 |
| 45 | -25 | 357 | 298 | 1,88 | 1,39 | 1,20 |
| 45 | -23,3 | 389 | 311 | 1,92 | 1,46 | 1,25 |
| 45 | -20 | 456 | 337 | 2,02 | 1,58 | 1,36 |
| 45 | -15 | 569 | 376 | 2,18 | 1,76 | 1,51 |
| 45 | -10 | 695 | 415 | 2,36 | 1,95 | 1,67 |

| | | | | | | |
|----|-------|-----|-----|------|------|------|
| 50 | -40 | 130 | 180 | 1,51 | 0,84 | 0,72 |
| 50 | -35 | 186 | 220 | 1,62 | 0,98 | 0,85 |
| 50 | -30 | 256 | 260 | 1,75 | 1,14 | 0,98 |
| 50 | -25 | 339 | 301 | 1,89 | 1,31 | 1,13 |
| 50 | -23,3 | 370 | 315 | 1,94 | 1,37 | 1,18 |
| 50 | -20 | 435 | 342 | 2,04 | 1,48 | 1,27 |
| 50 | -15 | 544 | 383 | 2,21 | 1,65 | 1,42 |
| 50 | -10 | 668 | 425 | 2,40 | 1,83 | 1,57 |

| | | | | | | |
|----|-------|-----|-----|------|------|------|
| 55 | -40 | 120 | 175 | 1,50 | 0,80 | 0,69 |
| 55 | -35 | 173 | 217 | 1,61 | 0,93 | 0,80 |
| 55 | -30 | 240 | 260 | 1,75 | 1,07 | 0,92 |
| 55 | -25 | 320 | 303 | 1,90 | 1,23 | 1,05 |
| 55 | -23,3 | 350 | 318 | 1,95 | 1,28 | 1,10 |
| 55 | -20 | 413 | 347 | 2,06 | 1,39 | 1,19 |
| 55 | -15 | 520 | 391 | 2,25 | 1,55 | 1,33 |
| 55 | -10 | 640 | 435 | 2,45 | 1,71 | 1,47 |

| | | | | | | |
|----|-------|-----|-----|------|------|------|
| 60 | -40 | 110 | 170 | 1,49 | 0,75 | 0,65 |
| 60 | -35 | 160 | 215 | 1,61 | 0,87 | 0,75 |
| 60 | -30 | 224 | 260 | 1,75 | 1,00 | 0,86 |
| 60 | -25 | 301 | 306 | 1,90 | 1,15 | 0,98 |
| 60 | -23,3 | 330 | 321 | 1,96 | 1,20 | 1,03 |
| 60 | -20 | 391 | 352 | 2,08 | 1,29 | 1,11 |
| 60 | -15 | 495 | 398 | 2,28 | 1,45 | 1,24 |
| 60 | -10 | 613 | 445 | 2,50 | 1,60 | 1,38 |

CECOMAF

| Tc °C | Te °C | Cooling Capacity W | Consumption W | Current A | COP W/W | EER kCal/Wh |
|----------|----------|--------------------------|------------------|--------------|------------|----------------|
| 40 | -40 | 158 | 190 | 1,54 | 0,83 | 0,72 |
| 40 | -35 | 232 | 225 | 1,64 | 1,03 | 0,89 |
| 40 | -30 | 316 | 260 | 1,75 | 1,21 | 1,05 |
| 40 | -25 | 412 | 296 | 1,87 | 1,39 | 1,20 |
| 40 | -23,3 | 447 | 308 | 1,91 | 1,45 | 1,25 |
| 40 | -20 | 518 | 332 | 2,00 | 1,56 | 1,35 |
| 40 | -15 | 636 | 368 | 2,15 | 1,73 | 1,49 |
| 40 | -10 | 765 | 405 | 2,31 | 1,89 | 1,63 |

| | | | | | | |
|----|-------|-----|-----|------|------|------|
| 45 | -40 | 140 | 185 | 1,53 | 0,76 | 0,65 |
| 45 | -35 | 204 | 222 | 1,63 | 0,92 | 0,79 |
| 45 | -30 | 280 | 260 | 1,75 | 1,08 | 0,93 |
| 45 | -25 | 366 | 298 | 1,88 | 1,23 | 1,06 |
| 45 | -23,3 | 398 | 311 | 1,92 | 1,28 | 1,11 |
| 45 | -20 | 464 | 337 | 2,02 | 1,38 | 1,19 |
| 45 | -15 | 573 | 376 | 2,18 | 1,52 | 1,32 |
| 45 | -10 | 693 | 415 | 2,36 | 1,67 | 1,44 |

| | | | | | | |
|----|-------|-----|-----|------|------|------|
| 50 | -40 | 122 | 180 | 1,51 | 0,68 | 0,59 |
| 50 | -35 | 177 | 220 | 1,62 | 0,81 | 0,70 |
| 50 | -30 | 243 | 260 | 1,75 | 0,94 | 0,81 |
| 50 | -25 | 321 | 301 | 1,89 | 1,07 | 0,92 |
| 50 | -23,3 | 350 | 315 | 1,94 | 1,11 | 0,96 |
| 50 | -20 | 409 | 342 | 2,04 | 1,20 | 1,04 |
| 50 | -15 | 509 | 383 | 2,21 | 1,33 | 1,15 |
| 50 | -10 | 620 | 425 | 2,40 | 1,46 | 1,26 |

| | | | | | | |
|----|-------|-----|-----|------|------|------|
| 55 | -40 | 104 | 175 | 1,50 | 0,59 | 0,51 |
| 55 | -35 | 150 | 217 | 1,61 | 0,69 | 0,60 |
| 55 | -30 | 207 | 260 | 1,75 | 0,80 | 0,69 |
| 55 | -25 | 275 | 303 | 1,90 | 0,91 | 0,78 |
| 55 | -23,3 | 301 | 318 | 1,95 | 0,95 | 0,82 |
| 55 | -20 | 355 | 347 | 2,06 | 1,02 | 0,88 |
| 55 | -15 | 446 | 391 | 2,25 | 1,14 | 0,99 |
| 55 | -10 | 548 | 435 | 2,45 | 1,26 | 1,09 |

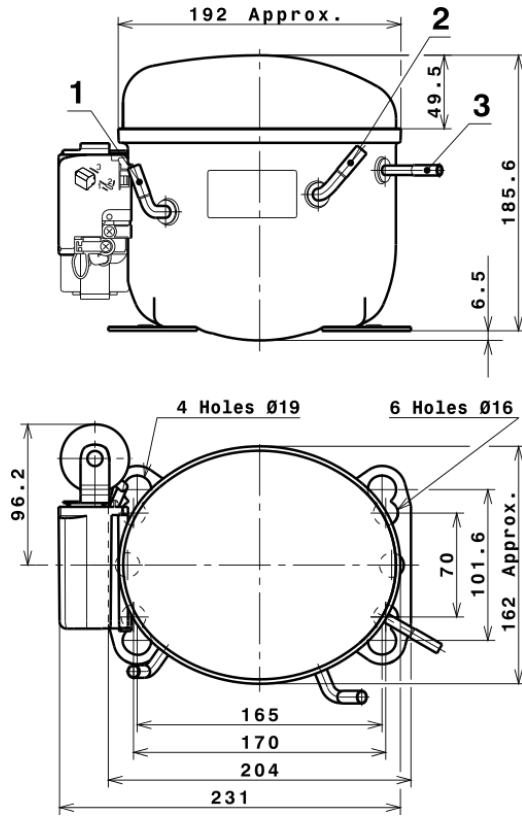
| | | | | | | |
|----|-------|-----|-----|------|------|------|
| 60 | -40 | 86 | 170 | 1,49 | 0,50 | 0,43 |
| 60 | -35 | 123 | 215 | 1,61 | 0,57 | 0,49 |
| 60 | -30 | 171 | 260 | 1,75 | 0,66 | 0,57 |
| 60 | -25 | 230 | 306 | 1,90 | 0,75 | 0,65 |
| 60 | -23,3 | 253 | 321 | 1,96 | 0,79 | 0,68 |
| 60 | -20 | 301 | 352 | 2,08 | 0,85 | 0,74 |
| 60 | -15 | 382 | 398 | 2,28 | 0,96 | 0,83 |
| 60 | -10 | 475 | 445 | 2,50 | 1,07 | 0,92 |

EN12900

| X | Cooling Capacity (W) | Consumption (W) | Current (A) | Mass Flow (kg/h) |
|---|----------------------|-----------------|--------------|---------------------|
| 1 | 1.761,4824065196 | 370,7432338101 | 2,2220198450 | 37,701021931611 |
| 2 | 45,02933366889 | 3,8054051928 | 0,0295464534 | 1,1189638982893 |
| 3 | -18,4845833223 | 3,0789661501 | 0,0140112275 | -0,1977610568487 |
| 4 | 0,2115813099 | 0,0103533821 | 0,0003850915 | 0,0084219903960873 |
| 5 | -0,3710665162 | 0,1025276796 | 0,0004168493 | -0,0035389340064935 |

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

COMPRESSOR DIMENSIONS

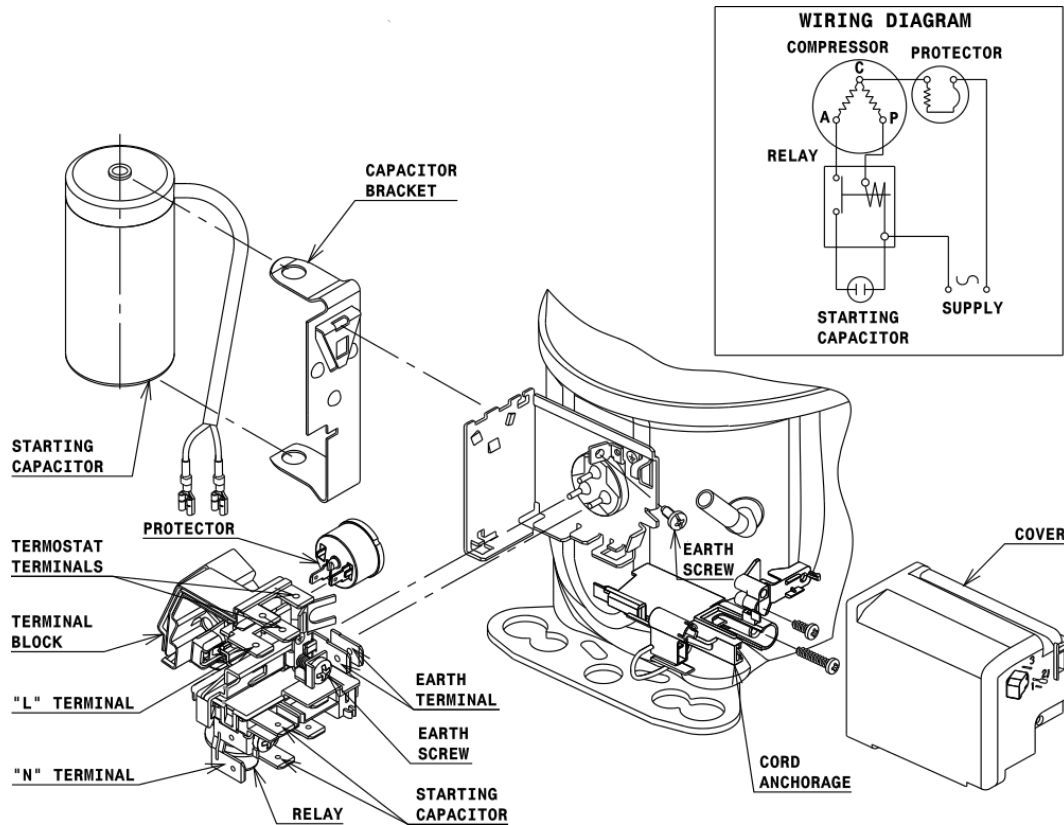


DESIGNATION INTERNAL DIAM.

| 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)



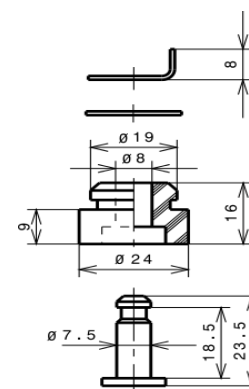
AMERICAN FEET

Ø19 holes (165x101.6 net)



SNAP-ON

Ø16 holes (170x70 net)



SOA

SOA R404A LBP

