

# Technical Data Sheet

Compressor model **MLY12LGa**  
Voltage **200-220/230V 50/60Hz ~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 10,70 cm<sup>3</sup>  
Diameter 25,40 mm  
Stroke 21,11 mm  
Net Weight 11,06 Kg  
Oil type ISO VG 32 ESTER  
Oil charge 400 cm<sup>3</sup>

## MOTOR

Nominal Power 3/8 hp  
Voltage/Frequency 230V 60Hz  
Voltage range 207-244 V  
Type CSIR  
Phase number 1 PH  
Locked Rotor Amps (LRA) 22,50 A  
Max. Cont. Current (MCC) 4,60 A  
Main W. resist. at 25°C 3,73 Ω  
Start W. resist. at 25°C 17,04 Ω

## NOMINAL PERFORMANCE

|                  | ASHRAE       | CECOMAF      |
|------------------|--------------|--------------|
| Cooling Capacity | 579 kCal/h   | 458 W        |
| COP              | 1,22 W/W     | 0,86 W/W     |
| EER              | 1,05 kCal/Wh | 0,75 kCal/Wh |
| Input Power      | 552 W        | 530 W        |
| Current          | 3,17 A       | 3,09 A       |

## APPROVALS



## TEST CYCLE CONDITIONS

|                                       | ASHRAE<br>LBP (B) | CECOMAF<br>LBP (A) |
|---------------------------------------|-------------------|--------------------|
| Evaporating temp. (T <sub>e</sub> )   | -23,3 °C          | -25,0 °C           |
| Condensing temp. (T <sub>c</sub> )    | 55,0 °C           | 55,0 °C            |
| Liquid temp. (T <sub>liq.</sub> )     | 32,0 °C           | 55,0 °C            |
| Ambient temp. (T <sub>amb.</sub> )    | 32,0 °C           | 32,0 °C            |
| Suction temp. (T <sub>suction</sub> ) | 32,0 °C           | 32,0 °C            |
| Voltage/Frequency                     | 230 V 60 Hz       | 230 V 60 Hz        |

## ELECTRICAL COMPONENTS

|                         |                   |  |  |  |
|-------------------------|-------------------|--|--|--|
| Starting capacitor      | 88-108 µF 330 V   |  |  |  |
| Relay                   | Option 1          |  |  |  |
| Reference               | 2014 170.         |  |  |  |
| Pick-Up                 | 12,10 A           |  |  |  |
| Drop-Out                | 10,30 A           |  |  |  |
| Protector               | Option 1          |  |  |  |
| Reference               | T0267             |  |  |  |
| Current                 | 11,00 A           |  |  |  |
| Time check              | 7,5-14 seg        |  |  |  |
| Disc temp. (Open/Close) | 105,00 / 52,00 °C |  |  |  |

## ASHRAE

| Tc<br>°C | Te<br>°C | Cooling<br>Capacity<br>kCal/h | Consumption<br>W | Current<br>A | COP<br>W/W | EER<br>kCal/Wh |
|----------|----------|-------------------------------|------------------|--------------|------------|----------------|
| 40       | -40      | 414                           | 343              | 2,48         | 1,40       | 1,21           |
| 40       | -35      | 468                           | 403              | 2,66         | 1,35       | 1,16           |
| 40       | -30      | 543                           | 464              | 2,86         | 1,36       | 1,17           |
| 40       | -25      | 640                           | 523              | 3,07         | 1,42       | 1,22           |
| 40       | -23,3    | 677                           | 544              | 3,14         | 1,45       | 1,25           |
| 40       | -20      | 757                           | 583              | 3,28         | 1,51       | 1,30           |
| 40       | -15      | 896                           | 641              | 3,51         | 1,63       | 1,40           |
| 40       | -10      | 1.056                         | 699              | 3,75         | 1,76       | 1,51           |

|    |       |       |     |      |      |      |
|----|-------|-------|-----|------|------|------|
| 45 | -40   | 349   | 340 | 2,47 | 1,19 | 1,03 |
| 45 | -35   | 413   | 403 | 2,66 | 1,19 | 1,03 |
| 45 | -30   | 498   | 464 | 2,86 | 1,25 | 1,07 |
| 45 | -25   | 604   | 526 | 3,07 | 1,34 | 1,15 |
| 45 | -23,3 | 645   | 546 | 3,15 | 1,37 | 1,18 |
| 45 | -20   | 731   | 586 | 3,30 | 1,45 | 1,25 |
| 45 | -15   | 879   | 647 | 3,53 | 1,58 | 1,36 |
| 45 | -10   | 1.048 | 706 | 3,78 | 1,73 | 1,48 |

|    |       |       |     |      |      |      |
|----|-------|-------|-----|------|------|------|
| 50 | -40   | 285   | 338 | 2,47 | 0,98 | 0,84 |
| 50 | -35   | 358   | 402 | 2,66 | 1,04 | 0,89 |
| 50 | -30   | 452   | 465 | 2,86 | 1,13 | 0,97 |
| 50 | -25   | 568   | 528 | 3,08 | 1,25 | 1,08 |
| 50 | -23,3 | 612   | 549 | 3,16 | 1,30 | 1,11 |
| 50 | -20   | 704   | 590 | 3,31 | 1,39 | 1,19 |
| 50 | -15   | 862   | 652 | 3,56 | 1,54 | 1,32 |
| 50 | -10   | 1.041 | 713 | 3,81 | 1,70 | 1,46 |

|    |       |       |     |      |      |      |
|----|-------|-------|-----|------|------|------|
| 55 | -40   | 220   | 335 | 2,46 | 0,76 | 0,66 |
| 55 | -35   | 303   | 401 | 2,66 | 0,88 | 0,76 |
| 55 | -30   | 407   | 466 | 2,87 | 1,02 | 0,87 |
| 55 | -25   | 532   | 530 | 3,09 | 1,17 | 1,00 |
| 55 | -23,3 | 579   | 552 | 3,17 | 1,22 | 1,05 |
| 55 | -20   | 678   | 594 | 3,33 | 1,33 | 1,14 |
| 55 | -15   | 845   | 657 | 3,58 | 1,49 | 1,29 |
| 55 | -10   | 1.033 | 720 | 3,84 | 1,67 | 1,43 |

|    |       |       |     |      |      |      |
|----|-------|-------|-----|------|------|------|
| 60 | -40   | 156   | 333 | 2,45 | 0,54 | 0,47 |
| 60 | -35   | 248   | 400 | 2,65 | 0,72 | 0,62 |
| 60 | -30   | 361   | 466 | 2,87 | 0,90 | 0,77 |
| 60 | -25   | 496   | 532 | 3,10 | 1,08 | 0,93 |
| 60 | -23,3 | 546   | 555 | 3,18 | 1,15 | 0,98 |
| 60 | -20   | 651   | 598 | 3,34 | 1,27 | 1,09 |
| 60 | -15   | 828   | 663 | 3,60 | 1,45 | 1,25 |
| 60 | -10   | 1.026 | 727 | 3,87 | 1,64 | 1,41 |

## CECOMAF

| Tc<br>°C | Te<br>°C | Cooling<br>Capacity<br>W | Consumption<br>W | Current<br>A | COP<br>W/W | EER<br>kCal/Wh |
|----------|----------|--------------------------|------------------|--------------|------------|----------------|
| 40       | -40      | 429                      | 343              | 2,48         | 1,25       | 1,08           |
| 40       | -35      | 501                      | 403              | 2,66         | 1,24       | 1,07           |
| 40       | -30      | 591                      | 464              | 2,86         | 1,27       | 1,10           |
| 40       | -25      | 698                      | 523              | 3,07         | 1,33       | 1,15           |
| 40       | -23,3    | 738                      | 544              | 3,14         | 1,36       | 1,17           |
| 40       | -20      | 823                      | 583              | 3,28         | 1,41       | 1,22           |
| 40       | -15      | 965                      | 641              | 3,51         | 1,51       | 1,30           |
| 40       | -10      | 1.125                    | 699              | 3,75         | 1,61       | 1,39           |

|    |       |       |     |      |      |      |
|----|-------|-------|-----|------|------|------|
| 45 | -40   | 349   | 340 | 2,47 | 1,03 | 0,89 |
| 45 | -35   | 421   | 403 | 2,66 | 1,05 | 0,90 |
| 45 | -30   | 511   | 464 | 2,86 | 1,10 | 0,95 |
| 45 | -25   | 618   | 526 | 3,07 | 1,18 | 1,02 |
| 45 | -23,3 | 658   | 546 | 3,15 | 1,20 | 1,04 |
| 45 | -20   | 743   | 586 | 3,30 | 1,27 | 1,09 |
| 45 | -15   | 885   | 647 | 3,53 | 1,37 | 1,18 |
| 45 | -10   | 1.045 | 706 | 3,78 | 1,48 | 1,28 |

|    |       |     |     |      |      |      |
|----|-------|-----|-----|------|------|------|
| 50 | -40   | 270 | 338 | 2,47 | 0,80 | 0,69 |
| 50 | -35   | 342 | 402 | 2,66 | 0,85 | 0,74 |
| 50 | -30   | 431 | 465 | 2,86 | 0,93 | 0,80 |
| 50 | -25   | 538 | 528 | 3,08 | 1,02 | 0,88 |
| 50 | -23,3 | 578 | 549 | 3,16 | 1,05 | 0,91 |
| 50 | -20   | 663 | 590 | 3,31 | 1,12 | 0,97 |
| 50 | -15   | 805 | 652 | 3,56 | 1,23 | 1,07 |
| 50 | -10   | 964 | 713 | 3,81 | 1,35 | 1,17 |

|    |       |     |     |      |      |      |
|----|-------|-----|-----|------|------|------|
| 55 | -40   | 190 | 335 | 2,46 | 0,57 | 0,49 |
| 55 | -35   | 262 | 401 | 2,66 | 0,65 | 0,56 |
| 55 | -30   | 351 | 466 | 2,87 | 0,75 | 0,65 |
| 55 | -25   | 458 | 530 | 3,09 | 0,86 | 0,75 |
| 55 | -23,3 | 498 | 552 | 3,17 | 0,90 | 0,78 |
| 55 | -20   | 582 | 594 | 3,33 | 0,98 | 0,85 |
| 55 | -15   | 724 | 657 | 3,58 | 1,10 | 0,95 |
| 55 | -10   | 884 | 720 | 3,84 | 1,23 | 1,06 |

|    |       |     |     |      |      |      |
|----|-------|-----|-----|------|------|------|
| 60 | -40   | 111 | 333 | 2,45 | 0,33 | 0,29 |
| 60 | -35   | 182 | 400 | 2,65 | 0,46 | 0,39 |
| 60 | -30   | 271 | 466 | 2,87 | 0,58 | 0,50 |
| 60 | -25   | 378 | 532 | 3,10 | 0,71 | 0,61 |
| 60 | -23,3 | 418 | 555 | 3,18 | 0,75 | 0,65 |
| 60 | -20   | 502 | 598 | 3,34 | 0,84 | 0,73 |
| 60 | -15   | 644 | 663 | 3,60 | 0,97 | 0,84 |
| 60 | -10   | 804 | 727 | 3,87 | 1,11 | 0,96 |

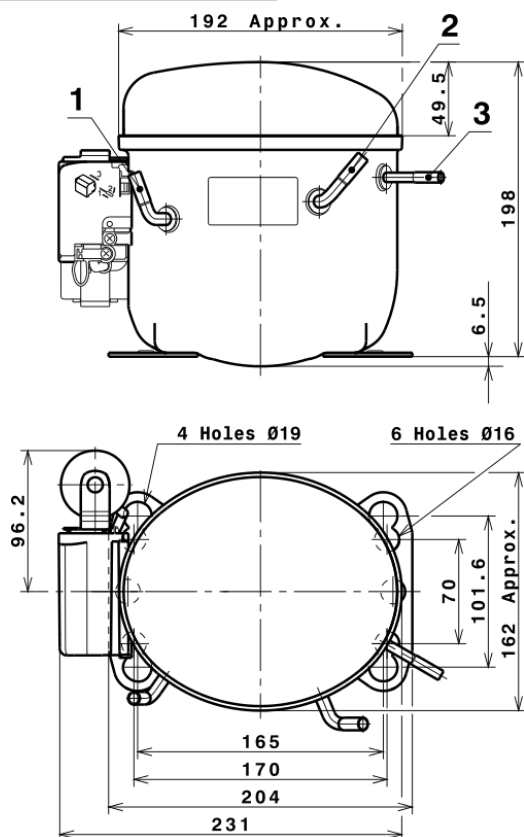
## EN12900

| X | Cooling Capacity (W) | Consumption (W) | Current (A)  | Mass Flow (kg/h)  |
|---|----------------------|-----------------|--------------|-------------------|
| 1 | 2.135,0410343295     | 753,3847461261  | 4,0366596932 | 39,944230171115   |
| 2 | 40,7543558413        | 9,2259939752    | 0,0485798956 | 0,88239601201864  |
| 3 | -17,1547293181       | 2,0871335696    | 0,0088248488 | 0,054120862835584 |
| 4 | 0,3328305898         | -0,0086367893   | 0,0002934861 | 0,013263948109699 |
| 5 | -0,0394357859        | 0,0649551021    | 0,0002577417 | 0,01034039425726  |

## Equation

$$x_1 + x_2 Te + x_3 Tc + x_4 Te^2 + x_5 Te Tc$$

## COMPRESSOR DIMENSIONS

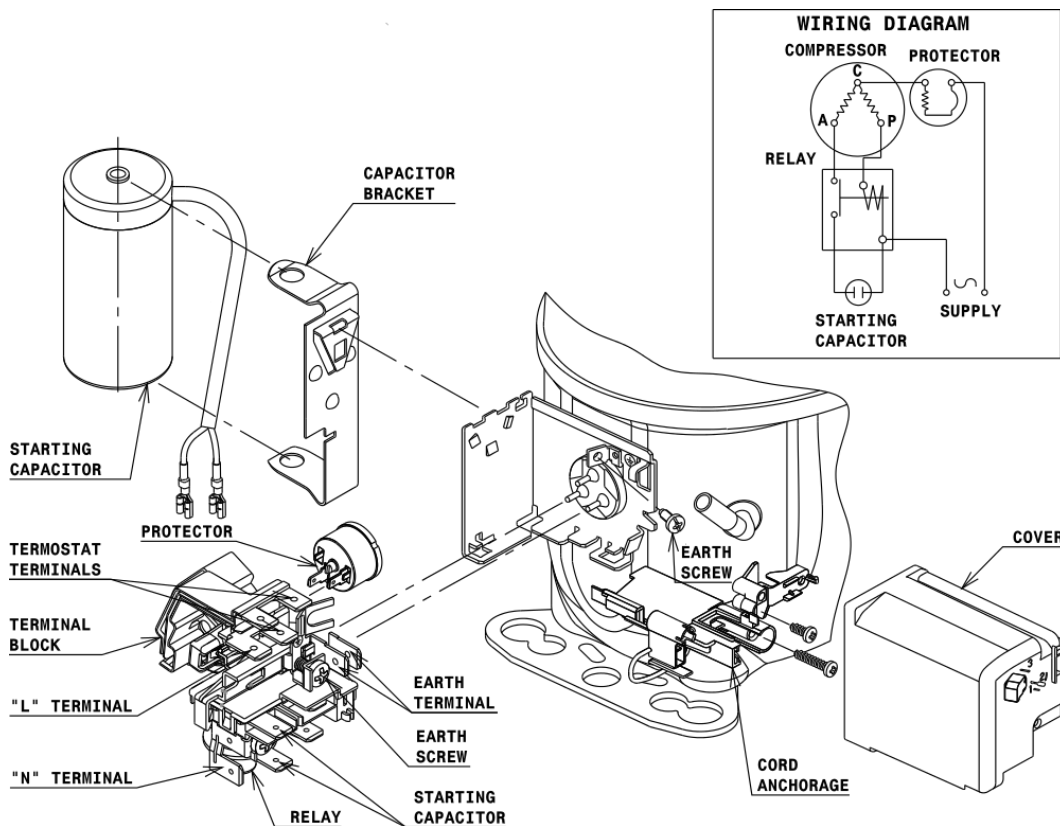


## DESIGNATION INTERNAL DIAM.

|   |           |        |
|---|-----------|--------|
| 1 | Suction   | 8,1 mm |
| 2 | Service   | 8,1 mm |
| 3 | Discharge | 6,5 mm |

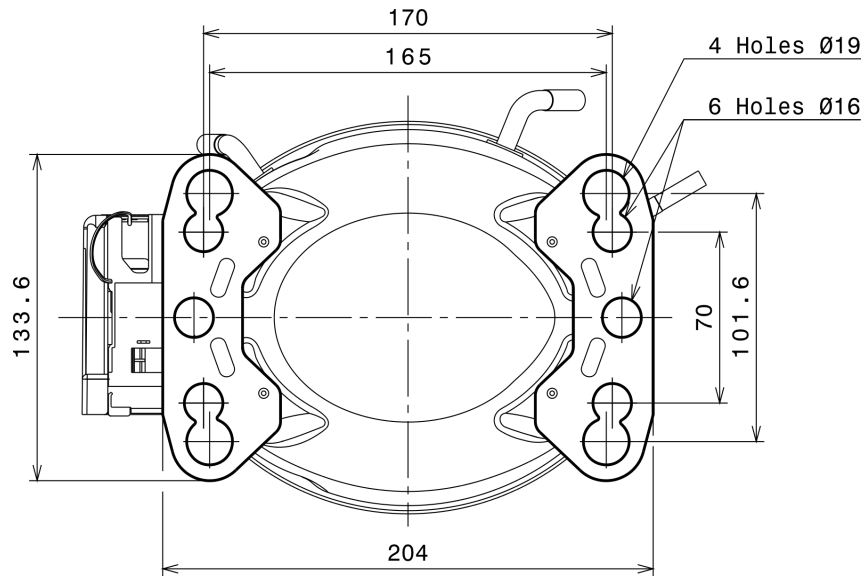
## WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

### CSIR CONNECTION (L, P ranges)



# Technical Data Sheet

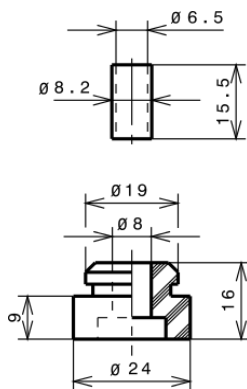
## FIXINGS



## SILENT BLOCKS (MOUNTING ACCESSORIES)

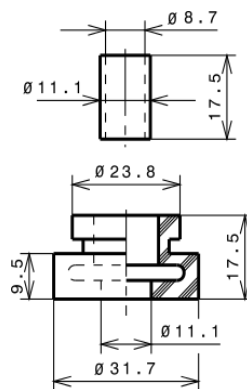
### STANDARD

Ø16 holes (170x70 net)



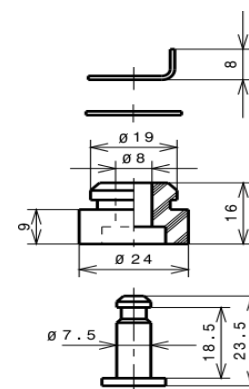
### AMERICAN FEET

Ø19 holes (165x101.6 net)



### SNAP-ON

Ø16 holes (170x70 net)



## SOA

SOA R404A LBP

