

# Technical Data Sheet

Compressor model **L30CL**  
 Voltage **220-240V 50/60Hz ~1**  
 Refrigerant **R600a**

## APPLICATION

Application Low Back Pressure  
 Refrigerant R600a  
 Evaporating Temp. -35,0 °C to -15,0 °C  
 Expansion Capillar  
 Comp. Cooling Static  
 Max. ambient temp. 43,0 °C

## COMPRESSOR

Displacement 3,10 cm<sup>3</sup>  
 Diameter 17,20 mm  
 Stroke 13,40 mm  
 Net Weight 3,80 Kg  
 Oil type ISO VG 10 MINER  
 Oil charge 110 cm<sup>3</sup>

## MOTOR

Nominal Power 1/16 hp  
 Voltage/Frequency 220-240V 50Hz  
 Voltage range 187-255 V  
 Type RSIR  
 Phase number 1 PH  
 Locked Rotor Amps (LRA) 1,85 A  
 Max. Cont. Current (MCC) 0,53 A  
 Main W. resist. at 25°C 60,50 Ω  
 Start W. resist. at 25°C 18,20 Ω

## NOMINAL PERFORMANCE

|                  | ASHRAE       | CECOMAF      |
|------------------|--------------|--------------|
| Cooling Capacity | 41 kCal/h    | 36 W         |
| COP              | 0,99 W/W     | 0,78 W/W     |
| EER              | 0,85 kCal/Wh | 0,67 kCal/Wh |
| Input Power      | 48 W         | 46 W         |
| Current          | 0,42 A       | 0,41 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                     | 220 V 50 Hz       | 220 V 50 Hz        |

## ELECTRICAL COMPONENTS

|                         |                   |                   |                   |  |
|-------------------------|-------------------|-------------------|-------------------|--|
| Relay                   | Option 1          | Option 2          |                   |  |
| Reference               | QP2-15            | JPQII-15          |                   |  |
| Voltage                 | 220-240 V         | 220-240 V         |                   |  |
| Resistance              | Ω                 | Ω                 |                   |  |
| Protector               | Option 1          | Option 2          | Option 3          |  |
| Reference               | BT18-105A64D3     | DRB10K61A1 094    | BT18-105          |  |
| Current                 |                   | 2,00 A            | 2,00 A            |  |
| Time check              |                   | 7-16 seg          | 7-16 seg          |  |
| Disc temp. (Open/Close) | 135,00 / 61,00 °C | 135,00 / 61,00 °C | 120,00 / 61,00 °C |  |

This product is approved for R290 and R600a regarding explosion safety according to standard EN 60335-1 and EN 60335-2-34

## 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       | -35      | 26                            | 35               | 0,34         | 0,86       | 0,74           |
| 40       | -30      | 34                            | 39               | 0,37         | 1,00       | 0,86           |
| 40       | -25      | 44                            | 44               | 0,40         | 1,14       | 0,98           |
| 40       | -23,3    | 47                            | 46               | 0,41         | 1,20       | 1,03           |
| 40       | -20      | 56                            | 50               | 0,43         | 1,30       | 1,11           |
| 40       | -15      | 70                            | 56               | 0,46         | 1,44       | 1,24           |
| 40       | -10      | 86                            | 63               | 0,49         | 1,59       | 1,37           |

|    |       |    |    |      |      |      |
|----|-------|----|----|------|------|------|
| 45 | -35   | 24 | 35 | 0,34 | 0,81 | 0,70 |
| 45 | -30   | 32 | 40 | 0,37 | 0,94 | 0,80 |
| 45 | -25   | 41 | 45 | 0,40 | 1,08 | 0,93 |
| 45 | -23,3 | 45 | 47 | 0,41 | 1,13 | 0,97 |
| 45 | -20   | 53 | 51 | 0,43 | 1,22 | 1,05 |
| 45 | -15   | 67 | 57 | 0,47 | 1,37 | 1,18 |
| 45 | -10   | 83 | 64 | 0,50 | 1,51 | 1,30 |

|    |       |    |    |      |      |      |
|----|-------|----|----|------|------|------|
| 50 | -35   | 23 | 35 | 0,34 | 0,75 | 0,65 |
| 50 | -30   | 30 | 40 | 0,37 | 0,87 | 0,75 |
| 50 | -25   | 39 | 45 | 0,40 | 1,01 | 0,87 |
| 50 | -23,3 | 43 | 47 | 0,42 | 1,06 | 0,91 |
| 50 | -20   | 51 | 51 | 0,44 | 1,15 | 0,99 |
| 50 | -15   | 65 | 58 | 0,47 | 1,29 | 1,11 |
| 50 | -10   | 81 | 66 | 0,50 | 1,43 | 1,23 |

|    |       |    |    |      |      |      |
|----|-------|----|----|------|------|------|
| 55 | -35   | 21 | 35 | 0,34 | 0,70 | 0,60 |
| 55 | -30   | 28 | 40 | 0,37 | 0,81 | 0,70 |
| 55 | -25   | 37 | 46 | 0,41 | 0,95 | 0,81 |
| 55 | -23,3 | 41 | 48 | 0,42 | 0,99 | 0,85 |
| 55 | -20   | 49 | 52 | 0,44 | 1,08 | 0,93 |
| 55 | -15   | 62 | 59 | 0,48 | 1,22 | 1,05 |
| 55 | -10   | 78 | 67 | 0,51 | 1,35 | 1,16 |

|    |       |    |    |      |      |      |
|----|-------|----|----|------|------|------|
| 60 | -35   | 19 | 35 | 0,34 | 0,64 | 0,55 |
| 60 | -30   | 26 | 40 | 0,38 | 0,76 | 0,65 |
| 60 | -25   | 35 | 46 | 0,41 | 0,88 | 0,76 |
| 60 | -23,3 | 39 | 49 | 0,42 | 0,93 | 0,80 |
| 60 | -20   | 46 | 53 | 0,45 | 1,02 | 0,88 |
| 60 | -15   | 60 | 60 | 0,48 | 1,15 | 0,99 |
| 60 | -10   | 75 | 68 | 0,52 | 1,28 | 1,10 |

## 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       | -35      | 28                       | 35               | 0,34         | 0,81       | 0,70           |
| 40       | -30      | 37                       | 39               | 0,37         | 0,95       | 0,82           |
| 40       | -25      | 49                       | 44               | 0,40         | 1,10       | 0,95           |
| 40       | -23,3    | 53                       | 46               | 0,41         | 1,14       | 0,99           |
| 40       | -20      | 62                       | 50               | 0,43         | 1,24       | 1,07           |
| 40       | -15      | 77                       | 56               | 0,46         | 1,37       | 1,18           |
| 40       | -10      | 94                       | 63               | 0,49         | 1,49       | 1,29           |

|    |       |    |    |      |      |      |
|----|-------|----|----|------|------|------|
| 45 | -35   | 26 | 35 | 0,34 | 0,73 | 0,63 |
| 45 | -30   | 34 | 40 | 0,37 | 0,86 | 0,74 |
| 45 | -25   | 44 | 45 | 0,40 | 0,99 | 0,85 |
| 45 | -23,3 | 48 | 47 | 0,41 | 1,03 | 0,89 |
| 45 | -20   | 57 | 51 | 0,43 | 1,12 | 0,97 |
| 45 | -15   | 71 | 57 | 0,47 | 1,24 | 1,07 |
| 45 | -10   | 88 | 64 | 0,50 | 1,36 | 1,18 |

|    |       |    |    |      |      |      |
|----|-------|----|----|------|------|------|
| 50 | -35   | 23 | 35 | 0,34 | 0,65 | 0,57 |
| 50 | -30   | 30 | 40 | 0,37 | 0,76 | 0,66 |
| 50 | -25   | 40 | 45 | 0,40 | 0,88 | 0,76 |
| 50 | -23,3 | 44 | 47 | 0,42 | 0,92 | 0,80 |
| 50 | -20   | 52 | 51 | 0,44 | 1,00 | 0,87 |
| 50 | -15   | 65 | 58 | 0,47 | 1,12 | 0,97 |
| 50 | -10   | 81 | 66 | 0,50 | 1,24 | 1,07 |

|    |       |    |    |      |      |      |
|----|-------|----|----|------|------|------|
| 55 | -35   | 20 | 35 | 0,34 | 0,58 | 0,50 |
| 55 | -30   | 27 | 40 | 0,37 | 0,67 | 0,58 |
| 55 | -25   | 36 | 46 | 0,41 | 0,78 | 0,67 |
| 55 | -23,3 | 39 | 48 | 0,42 | 0,82 | 0,71 |
| 55 | -20   | 47 | 52 | 0,44 | 0,89 | 0,77 |
| 55 | -15   | 60 | 59 | 0,48 | 1,01 | 0,87 |
| 55 | -10   | 75 | 67 | 0,51 | 1,11 | 0,96 |

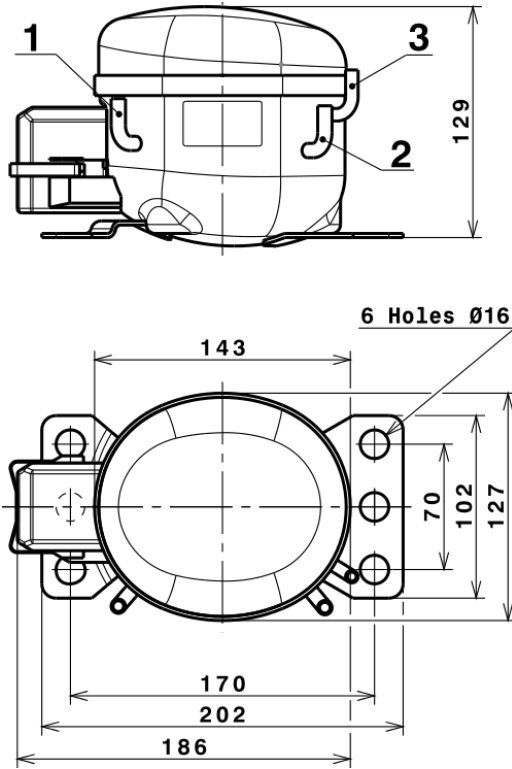
|    |       |    |    |      |      |      |
|----|-------|----|----|------|------|------|
| 60 | -35   | 17 | 35 | 0,34 | 0,50 | 0,43 |
| 60 | -30   | 23 | 40 | 0,38 | 0,58 | 0,50 |
| 60 | -25   | 32 | 46 | 0,41 | 0,68 | 0,59 |
| 60 | -23,3 | 35 | 49 | 0,42 | 0,72 | 0,62 |
| 60 | -20   | 42 | 53 | 0,45 | 0,79 | 0,68 |
| 60 | -15   | 54 | 60 | 0,48 | 0,89 | 0,77 |
| 60 | -10   | 68 | 68 | 0,52 | 1,00 | 0,86 |

## EN12900

| X | Cooling Capacity (W) | Consumption (W) | Current (A)   | Mass Flow (kg/h)     |
|---|----------------------|-----------------|---------------|----------------------|
| 1 | 195,7526617387       | 65,2018634985   | 0,4994157207  | 1,9681790434914      |
| 2 | 5,5571017318         | 1,3001387903    | 0,0042240792  | 0,061782533596051    |
| 3 | -1,6100362455        | 0,3817274464    | 0,0015052235  | -0,008062564066408   |
| 4 | 0,0396636706         | 0,0130953252    | -0,0000054086 | 0,00057552843101251  |
| 5 | -0,0302156021        | 0,0109064985    | 0,0000430064  | -0,00010667551191675 |

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

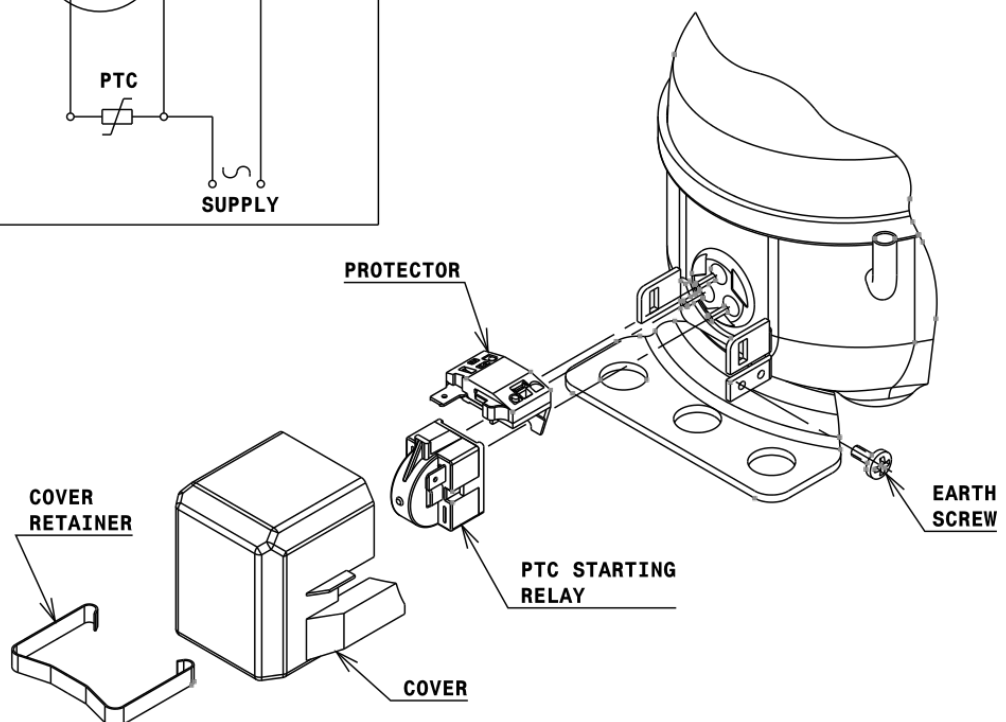
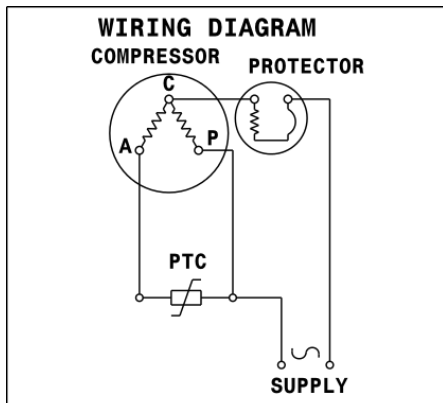
## COMPRESSOR DIMENSIONS



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

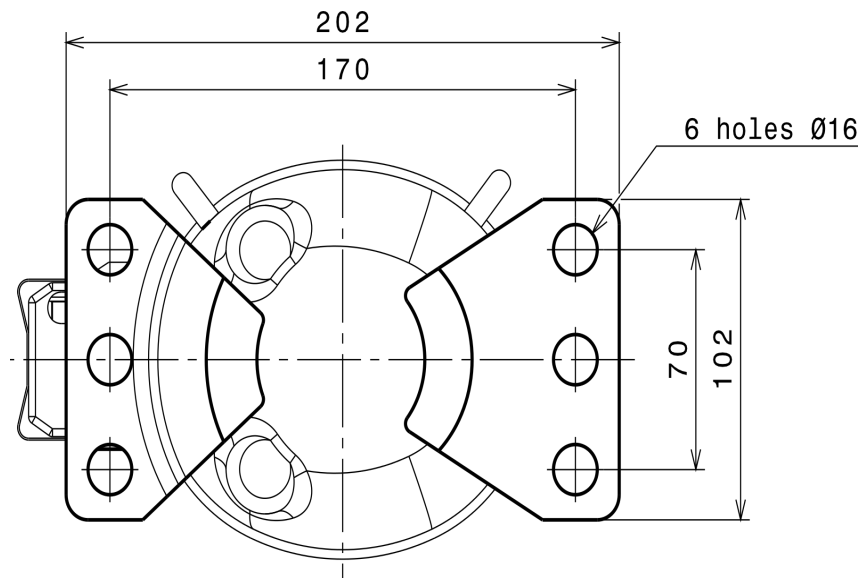
## WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

### RSIR CONNECTION (PTC) (B, Small L ranges)



# Technical Data Sheet

## FIXINGS



## SILENT BLOCKS (MOUNTING ACCESSORIES)

### STANDARD

Ø16 holes (170x70 net)



### SOA

SOA R600a LBP

