

# Technical Data Sheet

Compressor model **MS34F3\_T**  
 Voltage **400/440V 50/60Hz ~3**  
 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 34,42 cm<sup>3</sup>  
 Diameter 42,86 mm  
 Stroke 23,85 mm  
 Net Weight 22,90 Kg  
 Oil type ISO VG 46 ESTER  
 Oil charge 887 cm<sup>3</sup>

## MOTOR

Nominal Power 1 hp  
 Voltage/Frequency 400V 50Hz  
 Voltage range 340-440 V  
 Type 3PHASE  
 Phase number 3 PH  
 Locked Rotor Amps (LRA) 15,70 A  
 Max. Cont. Current (MCC) 3,60 A  
 Main W. resist. at 25°C 10,18 Ω  
 Start W. resist. at 25°C 14,03 Ω

## NOMINAL PERFORMANCE

|                  | ASHRAE       | CECOMAF      |
|------------------|--------------|--------------|
| Cooling Capacity | 1.400 kCal/h | 1.085 W      |
| COP              | 1,40 W/W     | 0,99 W/W     |
| EER              | 1,21 kCal/Wh | 0,86 kCal/Wh |
| Input Power      | 1.160 W      | 1.094 W      |
| Current          | 2,40 A       | 2,31 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                     | 400 V 50 Hz       | 400 V 50 Hz        |

## ELECTRICAL COMPONENTS

|                         |          |  |  |  |
|-------------------------|----------|--|--|--|
| Relay                   |          |  |  |  |
| Reference               |          |  |  |  |
| Voltage                 |          |  |  |  |
| Resistance              |          |  |  |  |
| Protector               | Option 1 |  |  |  |
| Reference               | INTERNAL |  |  |  |
| Current                 |          |  |  |  |
| Time check              |          |  |  |  |
| Disc temp. (Open/Close) |          |  |  |  |

## 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      | 520                           | 585              | 1,74         | 1,03       | 0,89           |
| 40       | -35      | 831                           | 736              | 1,90         | 1,31       | 1,13           |
| 40       | -30      | 1.192                         | 893              | 2,07         | 1,55       | 1,33           |
| 40       | -25      | 1.605                         | 1.056            | 2,27         | 1,77       | 1,52           |
| 40       | -23,3    | 1.757                         | 1.113            | 2,34         | 1,84       | 1,58           |
| 40       | -20      | 2.069                         | 1.225            | 2,49         | 1,96       | 1,69           |
| 40       | -15      | 2.584                         | 1.400            | 2,73         | 2,15       | 1,85           |
| 40       | -10      | 3.150                         | 1.580            | 3,01         | 2,32       | 1,99           |

|    |       |       |       |      |      |      |
|----|-------|-------|-------|------|------|------|
| 45 | -40   | 440   | 570   | 1,73 | 0,90 | 0,77 |
| 45 | -35   | 739   | 731   | 1,89 | 1,18 | 1,01 |
| 45 | -30   | 1.089 | 897   | 2,07 | 1,41 | 1,21 |
| 45 | -25   | 1.490 | 1.069 | 2,28 | 1,62 | 1,39 |
| 45 | -23,3 | 1.638 | 1.129 | 2,36 | 1,69 | 1,45 |
| 45 | -20   | 1.942 | 1.247 | 2,52 | 1,81 | 1,56 |
| 45 | -15   | 2.446 | 1.431 | 2,78 | 1,99 | 1,71 |
| 45 | -10   | 3.000 | 1.620 | 3,07 | 2,15 | 1,85 |

|    |       |       |       |      |      |      |
|----|-------|-------|-------|------|------|------|
| 50 | -40   | 360   | 555   | 1,71 | 0,75 | 0,65 |
| 50 | -35   | 647   | 725   | 1,88 | 1,04 | 0,89 |
| 50 | -30   | 985   | 900   | 2,08 | 1,27 | 1,09 |
| 50 | -25   | 1.375 | 1.081 | 2,30 | 1,48 | 1,27 |
| 50 | -23,3 | 1.519 | 1.144 | 2,38 | 1,54 | 1,33 |
| 50 | -20   | 1.815 | 1.268 | 2,55 | 1,66 | 1,43 |
| 50 | -15   | 2.307 | 1.461 | 2,82 | 1,84 | 1,58 |
| 50 | -10   | 2.850 | 1.660 | 3,13 | 2,00 | 1,72 |

|    |       |       |       |      |      |      |
|----|-------|-------|-------|------|------|------|
| 55 | -40   | 280   | 540   | 1,70 | 0,60 | 0,52 |
| 55 | -35   | 556   | 719   | 1,88 | 0,90 | 0,77 |
| 55 | -30   | 882   | 903   | 2,08 | 1,14 | 0,98 |
| 55 | -25   | 1.260 | 1.094 | 2,31 | 1,34 | 1,15 |
| 55 | -23,3 | 1.400 | 1.160 | 2,40 | 1,40 | 1,21 |
| 55 | -20   | 1.689 | 1.290 | 2,58 | 1,52 | 1,31 |
| 55 | -15   | 2.169 | 1.492 | 2,87 | 1,69 | 1,45 |
| 55 | -10   | 2.700 | 1.700 | 3,20 | 1,85 | 1,59 |

|    |       |       |       |      |      |      |
|----|-------|-------|-------|------|------|------|
| 60 | -40   | 200   | 525   | 1,69 | 0,44 | 0,38 |
| 60 | -35   | 464   | 713   | 1,87 | 0,76 | 0,65 |
| 60 | -30   | 779   | 907   | 2,09 | 1,00 | 0,86 |
| 60 | -25   | 1.145 | 1.106 | 2,33 | 1,20 | 1,03 |
| 60 | -23,3 | 1.281 | 1.176 | 2,42 | 1,27 | 1,09 |
| 60 | -20   | 1.562 | 1.312 | 2,61 | 1,38 | 1,19 |
| 60 | -15   | 2.031 | 1.523 | 2,92 | 1,55 | 1,33 |
| 60 | -10   | 2.550 | 1.740 | 3,27 | 1,70 | 1,47 |

## 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      | 540                      | 585              | 1,74         | 0,92       | 0,80           |
| 40       | -35      | 899                      | 736              | 1,90         | 1,22       | 1,05           |
| 40       | -30      | 1.300                    | 893              | 2,07         | 1,46       | 1,26           |
| 40       | -25      | 1.744                    | 1.056            | 2,27         | 1,65       | 1,43           |
| 40       | -23,3    | 1.904                    | 1.113            | 2,34         | 1,71       | 1,48           |
| 40       | -20      | 2.230                    | 1.225            | 2,49         | 1,82       | 1,57           |
| 40       | -15      | 2.759                    | 1.400            | 2,73         | 1,97       | 1,70           |
| 40       | -10      | 3.330                    | 1.580            | 3,01         | 2,11       | 1,82           |

|    |       |       |       |      |      |      |
|----|-------|-------|-------|------|------|------|
| 45 | -40   | 441   | 570   | 1,73 | 0,77 | 0,67 |
| 45 | -35   | 759   | 731   | 1,89 | 1,04 | 0,90 |
| 45 | -30   | 1.121 | 897   | 2,07 | 1,25 | 1,08 |
| 45 | -25   | 1.524 | 1.069 | 2,28 | 1,43 | 1,23 |
| 45 | -23,3 | 1.671 | 1.129 | 2,36 | 1,48 | 1,28 |
| 45 | -20   | 1.970 | 1.247 | 2,52 | 1,58 | 1,37 |
| 45 | -15   | 2.459 | 1.431 | 2,78 | 1,72 | 1,49 |
| 45 | -10   | 2.990 | 1.620 | 3,07 | 1,85 | 1,59 |

|    |       |       |       |      |      |      |
|----|-------|-------|-------|------|------|------|
| 50 | -40   | 341   | 555   | 1,71 | 0,62 | 0,53 |
| 50 | -35   | 620   | 725   | 1,88 | 0,86 | 0,74 |
| 50 | -30   | 941   | 900   | 2,08 | 1,05 | 0,90 |
| 50 | -25   | 1.305 | 1.081 | 2,30 | 1,21 | 1,04 |
| 50 | -23,3 | 1.438 | 1.144 | 2,38 | 1,26 | 1,09 |
| 50 | -20   | 1.711 | 1.268 | 2,55 | 1,35 | 1,17 |
| 50 | -15   | 2.159 | 1.461 | 2,82 | 1,48 | 1,28 |
| 50 | -10   | 2.650 | 1.660 | 3,13 | 1,60 | 1,38 |

|    |       |       |       |      |      |      |
|----|-------|-------|-------|------|------|------|
| 55 | -40   | 242   | 540   | 1,70 | 0,45 | 0,39 |
| 55 | -35   | 481   | 719   | 1,88 | 0,67 | 0,58 |
| 55 | -30   | 762   | 903   | 2,08 | 0,84 | 0,73 |
| 55 | -25   | 1.085 | 1.094 | 2,31 | 0,99 | 0,86 |
| 55 | -23,3 | 1.205 | 1.160 | 2,40 | 1,04 | 0,90 |
| 55 | -20   | 1.451 | 1.290 | 2,58 | 1,12 | 0,97 |
| 55 | -15   | 1.860 | 1.492 | 2,87 | 1,25 | 1,08 |
| 55 | -10   | 2.311 | 1.700 | 3,20 | 1,36 | 1,17 |

|    |       |       |       |      |      |      |
|----|-------|-------|-------|------|------|------|
| 60 | -40   | 143   | 525   | 1,69 | 0,27 | 0,23 |
| 60 | -35   | 341   | 713   | 1,87 | 0,48 | 0,41 |
| 60 | -30   | 582   | 907   | 2,09 | 0,64 | 0,55 |
| 60 | -25   | 866   | 1.106 | 2,33 | 0,78 | 0,68 |
| 60 | -23,3 | 972   | 1.176 | 2,42 | 0,83 | 0,71 |
| 60 | -20   | 1.192 | 1.312 | 2,61 | 0,91 | 0,78 |
| 60 | -15   | 1.560 | 1.523 | 2,92 | 1,02 | 0,88 |
| 60 | -10   | 1.971 | 1.740 | 3,27 | 1,13 | 0,98 |

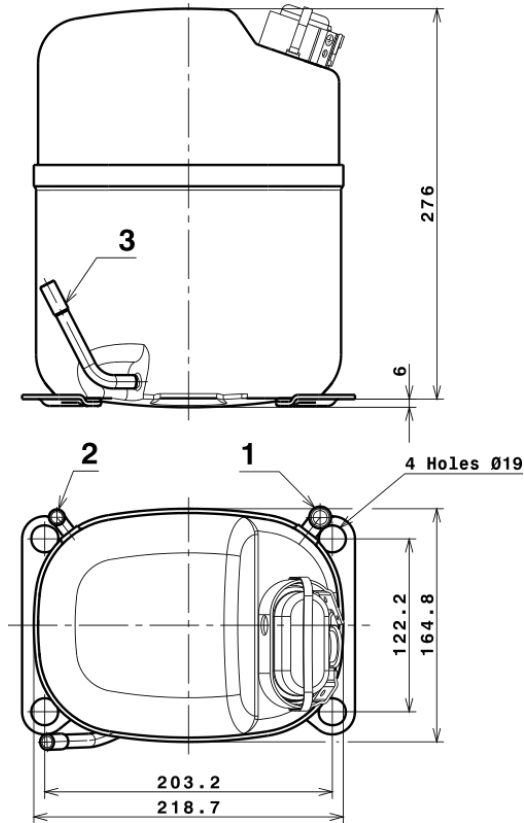
## EN12900

| X | Cooling Capacity (W) | Consumption (W)  | Current (A)  | Mass Flow (kg/h)   |
|---|----------------------|------------------|--------------|--------------------|
| 1 | 7.861,8677329691     | 1.536,2670538409 | 3,0118238288 | 170,56745256564    |
| 2 | 196,2330980202       | 25,5285545245    | 0,0546178438 | 4,7658916367332    |
| 3 | -85,3332911288       | 11,9751509228    | 0,0190325504 | -1,0261018992897   |
| 4 | 0,8035045463         | 0,1284278469     | 0,0006535131 | 0,032722340264668  |
| 5 | -1,6477686049        | 0,3760393505     | 0,0005491961 | -0,014504446980782 |

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

# Technical Data Sheet

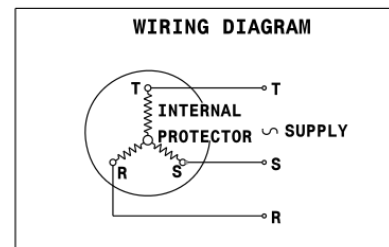
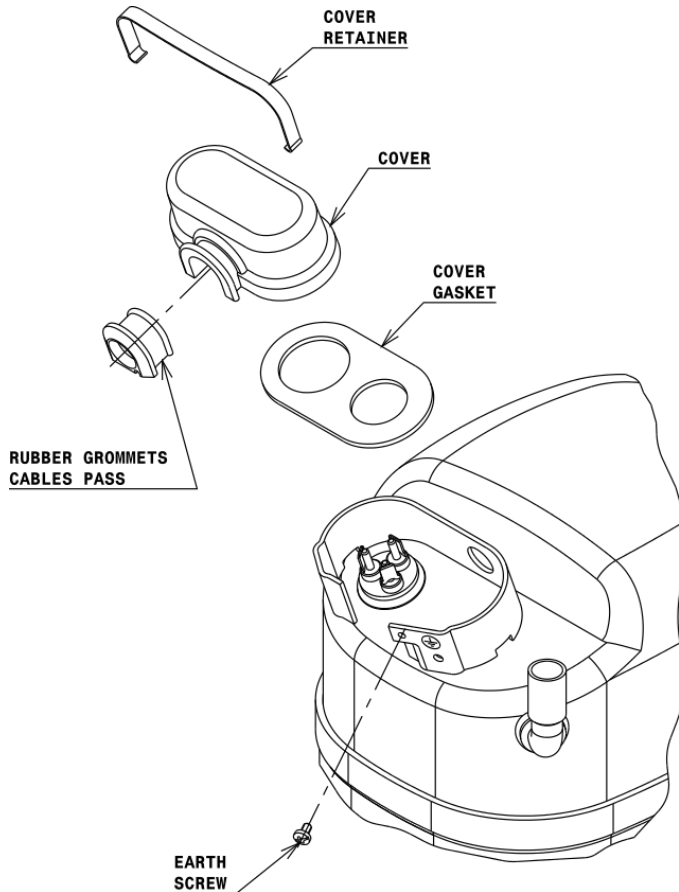
## COMPRESSOR DIMENSIONS



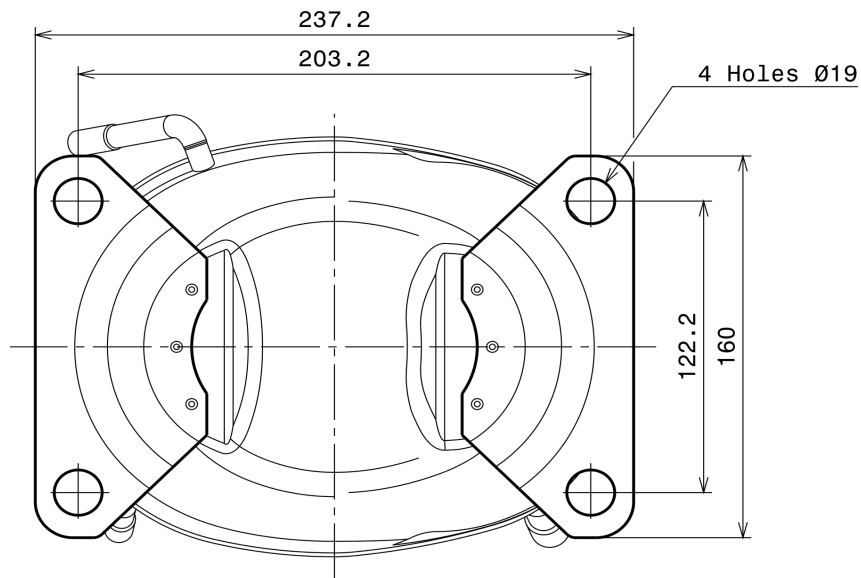
|   | DESIGNATION | INTERNAL DIAM. |
|---|-------------|----------------|
| 1 | Suction     | 12,7 mm        |
| 2 | Service     | 9,7 mm         |
| 3 | Discharge   | 8,0 mm         |

## WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

### 3PH CONNECTION (S range)



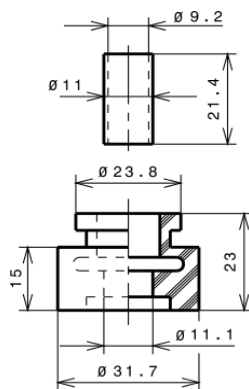
## FIXINGS



## SILENT BLOCKS (MOUNTING ACCESSORIES)

### STANDARD

Ø19 holes (203.2x122.2 net)



## SOA

SOA R404A LBP

