

# Technical Data Sheet

Compressor model **MS34T3\_T**  
Voltage **400/440V 50/60Hz ~3**  
Refrigerant **R404A**

## APPLICATION

## COMPRESSOR

## MOTOR

|                    |                           |              |                       |                          |           |
|--------------------|---------------------------|--------------|-----------------------|--------------------------|-----------|
| Application        | High-Medium Back Pressure | Displacement | 34,42 cm <sup>3</sup> | Nominal Power            | 1 5/8 hp  |
| Refrigerant        | R404A                     | Diameter     | 42,86 mm              | Voltage/Frequency        | 440V 60Hz |
| Evaporating Temp.  | -25,0 °C to 10,0 °C       | Stroke       | 23,85 mm              | Voltage range            | 374-484 V |
| Expansion          | Capillar/Valve            | Net Weight   | 22,80 Kg              | Type                     | 3PHASE    |
| Comp. Cooling      | Fan cooled                | Oil type     | ISO VG 46 ESTER       | Phase number             | 3 PH      |
| Max. ambient temp. | 43,0 °C                   | Oil charge   | 887 cm <sup>3</sup>   | Locked Rotor Amps (LRA)  | 21,50 A   |
|                    |                           |              |                       | Max. Cont. Current (MCC) | 6,40 A    |
|                    |                           |              |                       | Main W. resist. at 25°C  | 7,40 Ω    |
|                    |                           |              |                       | Start W. resist. at 25°C | 10,10 Ω   |

## NOMINAL PERFORMANCE

|                  | ASHRAE       | CECOMAF      |
|------------------|--------------|--------------|
| Cooling Capacity | 5.320 kCal/h | 4.916 W      |
| COP              | 2,10 W/W     | 1,71 W/W     |
| EER              | 1,81 kCal/Wh | 1,48 kCal/Wh |
| Input Power      | 2.945 W      | 2.873 W      |
| Current          | 4,70 A       | 4,58 A       |

## APPROVALS



## TEST CYCLE CONDITIONS

|                                       | ASHRAE<br>HMBP (D) | CECOMAF<br>HMBP (C) |
|---------------------------------------|--------------------|---------------------|
| Evaporating temp. (T <sub>e</sub> )   | 7,2 °C             | 5,0 °C              |
| Condensing temp. (T <sub>c</sub> )    | 55,0 °C            | 55,0 °C             |
| Liquid temp. (T <sub>liq.</sub> )     | 46,0 °C            | 55,0 °C             |
| Ambient temp. (T <sub>amb.</sub> )    | 35,0 °C            | 32,0 °C             |
| Suction temp. (T <sub>suction</sub> ) | 35,0 °C            | 32,0 °C             |
| Voltage/Frequency                     | 440 V 60 Hz        | 440 V 60 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       | -25      | 1.335                         | 1.003            | 2,30         | 1,55       | 1,33           |
| 40       | -20      | 2.001                         | 1.290            | 2,54         | 1,80       | 1,55           |
| 40       | -15      | 2.734                         | 1.562            | 2,82         | 2,04       | 1,75           |
| 40       | -10      | 3.533                         | 1.820            | 3,10         | 2,26       | 1,94           |
| 40       | -5       | 4.399                         | 2.062            | 3,40         | 2,48       | 2,13           |
| 40       | 0        | 5.331                         | 2.290            | 3,70         | 2,71       | 2,33           |
| 40       | 5        | 6.329                         | 2.503            | 4,01         | 2,94       | 2,53           |
| 40       | 7,2      | 6.790                         | 2.593            | 4,14         | 3,05       | 2,62           |
| 40       | 10       | 7.395                         | 2.702            | 4,31         | 3,18       | 2,74           |

|    |     |       |       |      |      |      |
|----|-----|-------|-------|------|------|------|
| 45 | -25 | 1.280 | 1.100 | 2,38 | 1,35 | 1,16 |
| 45 | -20 | 1.879 | 1.390 | 2,64 | 1,57 | 1,35 |
| 45 | -15 | 2.544 | 1.666 | 2,93 | 1,78 | 1,53 |
| 45 | -10 | 3.275 | 1.926 | 3,23 | 1,98 | 1,70 |
| 45 | -5  | 4.073 | 2.172 | 3,54 | 2,18 | 1,88 |
| 45 | 0   | 4.938 | 2.403 | 3,86 | 2,39 | 2,05 |
| 45 | 5   | 5.869 | 2.620 | 4,18 | 2,61 | 2,24 |
| 45 | 7,2 | 6.300 | 2.710 | 4,32 | 2,70 | 2,32 |
| 45 | 10  | 6.867 | 2.821 | 4,50 | 2,83 | 2,43 |

|    |     |       |       |      |      |      |
|----|-----|-------|-------|------|------|------|
| 50 | -25 | 1.225 | 1.198 | 2,46 | 1,19 | 1,02 |
| 50 | -20 | 1.756 | 1.491 | 2,74 | 1,37 | 1,18 |
| 50 | -15 | 2.354 | 1.769 | 3,04 | 1,55 | 1,33 |
| 50 | -10 | 3.018 | 2.033 | 3,36 | 1,73 | 1,48 |
| 50 | -5  | 3.748 | 2.282 | 3,69 | 1,91 | 1,64 |
| 50 | 0   | 4.545 | 2.516 | 4,03 | 2,10 | 1,81 |
| 50 | 5   | 5.409 | 2.736 | 4,36 | 2,30 | 1,98 |
| 50 | 7,2 | 5.810 | 2.828 | 4,51 | 2,39 | 2,05 |
| 50 | 10  | 6.339 | 2.940 | 4,69 | 2,51 | 2,16 |

|    |     |       |       |      |      |      |
|----|-----|-------|-------|------|------|------|
| 55 | -25 | 1.170 | 1.295 | 2,55 | 1,05 | 0,90 |
| 55 | -20 | 1.633 | 1.591 | 2,85 | 1,19 | 1,03 |
| 55 | -15 | 2.163 | 1.873 | 3,17 | 1,34 | 1,16 |
| 55 | -10 | 2.760 | 2.140 | 3,50 | 1,50 | 1,29 |
| 55 | -5  | 3.423 | 2.392 | 3,84 | 1,66 | 1,43 |
| 55 | 0   | 4.153 | 2.629 | 4,20 | 1,84 | 1,58 |
| 55 | 5   | 4.949 | 2.852 | 4,55 | 2,02 | 1,74 |
| 55 | 7,2 | 5.320 | 2.945 | 4,70 | 2,10 | 1,81 |
| 55 | 10  | 5.811 | 3.059 | 4,89 | 2,21 | 1,90 |

|    |     |       |       |      |      |      |
|----|-----|-------|-------|------|------|------|
| 60 | -25 | 1.115 | 1.393 | 2,64 | 0,93 | 0,80 |
| 60 | -20 | 1.511 | 1.692 | 2,96 | 1,04 | 0,89 |
| 60 | -15 | 1.973 | 1.977 | 3,29 | 1,16 | 1,00 |
| 60 | -10 | 2.502 | 2.247 | 3,64 | 1,30 | 1,11 |
| 60 | -5  | 3.098 | 2.502 | 4,00 | 1,44 | 1,24 |
| 60 | 0   | 3.760 | 2.742 | 4,37 | 1,59 | 1,37 |
| 60 | 5   | 4.488 | 2.968 | 4,74 | 1,76 | 1,51 |
| 60 | 7,2 | 4.830 | 3.063 | 4,90 | 1,83 | 1,58 |
| 60 | 10  | 5.283 | 3.179 | 5,10 | 1,93 | 1,66 |

## 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       | -25      | 1.402                    | 1.008            | 2,30         | 1,39       | 1,20           |
| 40       | -20      | 2.112                    | 1.297            | 2,55         | 1,63       | 1,41           |
| 40       | -15      | 2.885                    | 1.571            | 2,83         | 1,84       | 1,59           |
| 40       | -10      | 3.723                    | 1.831            | 3,12         | 2,03       | 1,76           |
| 40       | -5       | 4.624                    | 2.076            | 3,42         | 2,23       | 1,92           |
| 40       | 0        | 5.590                    | 2.306            | 3,72         | 2,42       | 2,09           |
| 40       | 5        | 6.619                    | 2.522            | 4,03         | 2,62       | 2,27           |
| 40       | 7,2      | 7.092                    | 2.612            | 4,17         | 2,71       | 2,35           |
| 40       | 10       | 7.712                    | 2.723            | 4,34         | 2,83       | 2,45           |

|    |     |       |       |      |      |      |
|----|-----|-------|-------|------|------|------|
| 45 | -25 | 1.325 | 1.106 | 2,38 | 1,20 | 1,04 |
| 45 | -20 | 1.953 | 1.398 | 2,65 | 1,40 | 1,21 |
| 45 | -15 | 2.645 | 1.676 | 2,94 | 1,58 | 1,36 |
| 45 | -10 | 3.401 | 1.938 | 3,24 | 1,75 | 1,52 |
| 45 | -5  | 4.220 | 2.187 | 3,56 | 1,93 | 1,67 |
| 45 | 0   | 5.104 | 2.420 | 3,88 | 2,11 | 1,82 |
| 45 | 5   | 6.051 | 2.639 | 4,21 | 2,29 | 1,98 |
| 45 | 7,2 | 6.489 | 2.731 | 4,35 | 2,38 | 2,05 |
| 45 | 10  | 7.063 | 2.843 | 4,53 | 2,48 | 2,15 |

|    |     |       |       |      |      |      |
|----|-----|-------|-------|------|------|------|
| 50 | -25 | 1.249 | 1.204 | 2,47 | 1,04 | 0,90 |
| 50 | -20 | 1.795 | 1.499 | 2,75 | 1,20 | 1,03 |
| 50 | -15 | 2.405 | 1.780 | 3,06 | 1,35 | 1,17 |
| 50 | -10 | 3.079 | 2.046 | 3,38 | 1,50 | 1,30 |
| 50 | -5  | 3.816 | 2.297 | 3,71 | 1,66 | 1,44 |
| 50 | 0   | 4.618 | 2.534 | 4,05 | 1,82 | 1,57 |
| 50 | 5   | 5.484 | 2.756 | 4,39 | 1,99 | 1,72 |
| 50 | 7,2 | 5.885 | 2.849 | 4,54 | 2,07 | 1,78 |
| 50 | 10  | 6.414 | 2.964 | 4,73 | 2,16 | 1,87 |

|    |     |       |       |      |      |      |
|----|-----|-------|-------|------|------|------|
| 55 | -25 | 1.172 | 1.302 | 2,56 | 0,90 | 0,78 |
| 55 | -20 | 1.636 | 1.601 | 2,86 | 1,02 | 0,88 |
| 55 | -15 | 2.164 | 1.884 | 3,18 | 1,15 | 0,99 |
| 55 | -10 | 2.756 | 2.153 | 3,52 | 1,28 | 1,11 |
| 55 | -5  | 3.412 | 2.408 | 3,87 | 1,42 | 1,22 |
| 55 | 0   | 4.132 | 2.648 | 4,22 | 1,56 | 1,35 |
| 55 | 5   | 4.916 | 2.873 | 4,58 | 1,71 | 1,48 |
| 55 | 7,2 | 5.282 | 2.968 | 4,74 | 1,78 | 1,54 |
| 55 | 10  | 5.764 | 3.084 | 4,94 | 1,87 | 1,61 |

|    |     |       |       |      |      |      |
|----|-----|-------|-------|------|------|------|
| 60 | -25 | 1.095 | 1.400 | 2,65 | 0,78 | 0,68 |
| 60 | -20 | 1.478 | 1.702 | 2,97 | 0,87 | 0,75 |
| 60 | -15 | 1.924 | 1.989 | 3,31 | 0,97 | 0,84 |
| 60 | -10 | 2.434 | 2.261 | 3,66 | 1,08 | 0,93 |
| 60 | -5  | 3.009 | 2.519 | 4,03 | 1,19 | 1,03 |
| 60 | 0   | 3.647 | 2.762 | 4,40 | 1,32 | 1,14 |
| 60 | 5   | 4.349 | 2.990 | 4,78 | 1,45 | 1,26 |
| 60 | 7,2 | 4.678 | 3.086 | 4,94 | 1,52 | 1,31 |
| 60 | 10  | 5.115 | 3.204 | 5,15 | 1,60 | 1,38 |

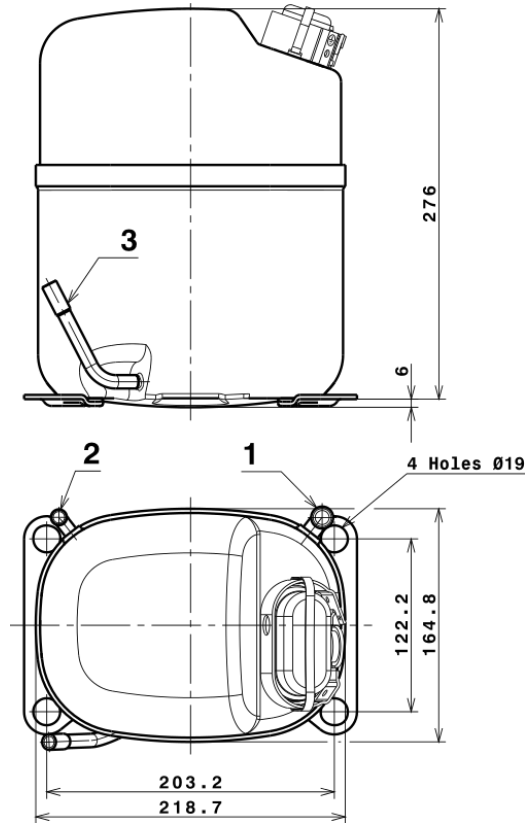
## EN12900

| X | Cooling Capacity (W) | Consumption (W)  | Current (A)  | Mass Flow (kg/h)   |
|---|----------------------|------------------|--------------|--------------------|
| 1 | 9.492,2728511672     | 1.436,8632708913 | 2,3679886192 | 183,30919854502    |
| 2 | 329,4578194266       | 41,5867179633    | 0,0386308529 | 7,5234489507309    |
| 3 | -101,3064245931      | 23,5062411308    | 0,0358457457 | -0,71028995933366  |
| 4 | 1,2091440684         | -0,2689408627    | 0,0002882705 | 0,060840183177724  |
| 5 | -3,3986728236        | 0,1370870365     | 0,0007036770 | -0,032053849826285 |

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

# Technical Data Sheet

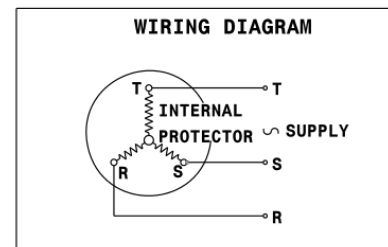
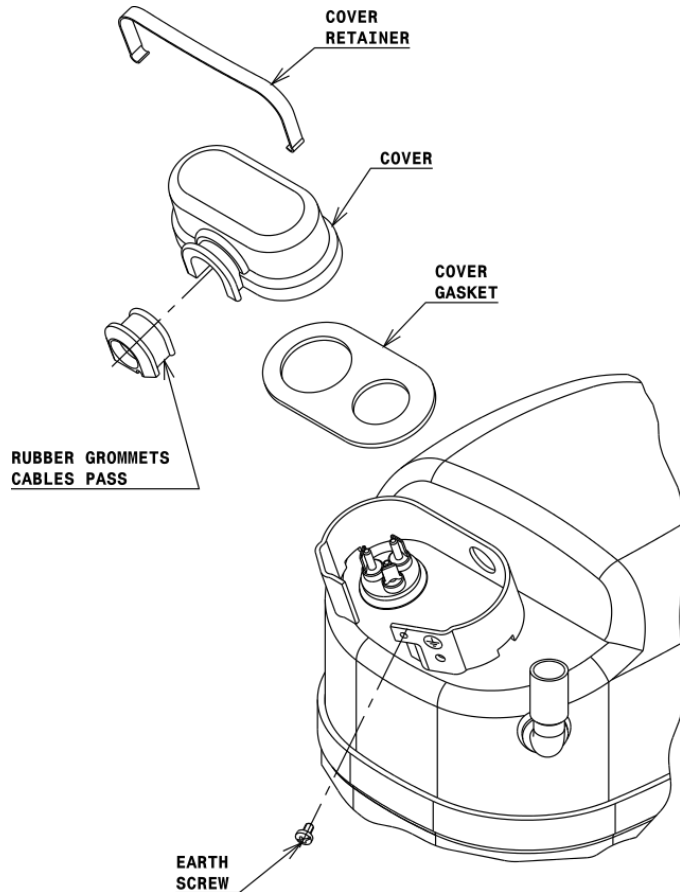
## COMPRESSOR DIMENSIONS



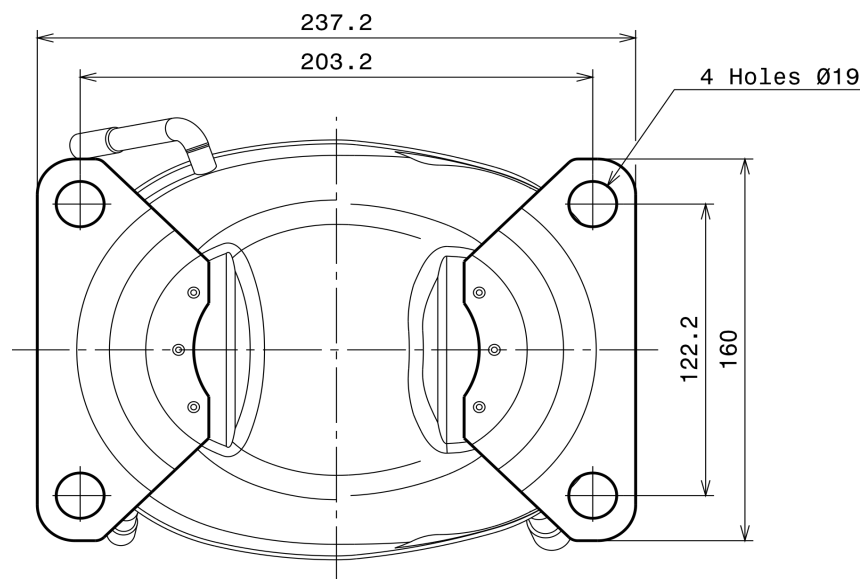
| DESIGNATION | INTERNAL DIAM. |
|-------------|----------------|
| 1 Suction   | 12,7 mm        |
| 2 Service   | 9,7 mm         |
| 3 Discharge | 8,0 mm         |

## WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

### 3PH CONNECTION (S range)



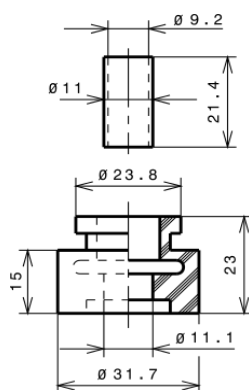
## FIXINGS



## SILENT BLOCKS (MOUNTING ACCESSORIES)

### STANDARD

Ø19 holes (203.2x122.2 net)



## SOA

SOA R404A HMBP

