

Technical Data Sheet

ENGINEERING
TOMORROW



Compressor model **MS34TG_V**
Voltage **200-220/230V 50/60Hz ~1**
Refrigerant **R404A**

APPLICATION

COMPRESSOR

MOTOR

| | | | | | |
|--------------------|---------------------|--------------|-----------------------|--------------------------|-----------|
| Application | High Back Pressure | Displacement | 34,42 cm ³ | Nominal Power | 1 5/8 hp |
| Refrigerant | R404A | Diameter | 42,86 mm | Voltage/Frequency | 230V 60Hz |
| Evaporating Temp. | -15,0 °C to 10,0 °C | Stroke | 23,85 mm | Voltage range | 196-253 V |
| Expansion | Capillar/Valve | Net Weight | 22,33 Kg | Type | CSR |
| Comp. Cooling | Fan cooled | Oil type | ISO VG 46 ESTER | Phase number | 1 PH |
| Max. ambient temp. | 43,0 °C | Oil charge | 700 cm ³ | Locked Rotor Amps (LRA) | 53,00 A |
| | | | | Max. Cont. Current (MCC) | 17,30 A |
| | | | | Main W. resist. at 25°C | 0,99 Ω |
| | | | | Start W. resist. at 25°C | 4,35 Ω |

NOMINAL PERFORMANCE

| | ASHRAE | CECOMAF |
|------------------|--------------|--------------|
| Cooling Capacity | 5.320 kCal/h | 4.917 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 | 13,76 A | 12,82 A |

APPROVALS



TEST CYCLE CONDITIONS

| | ASHRAE HBP (D) | CECOMAF HBP (C) |
|---------------------------------------|-------------------|--------------------|
| Evaporating temp. (T _e) | 7,2 °C | 5,0 °C |
| Condensing temp. (T _c) | 55,0 °C | 55,0 °C |
| Liquid temp. (T _{liq.}) | 46,0 °C | 55,0 °C |
| Ambient temp. (T _{amb.}) | 35,0 °C | 32,0 °C |
| Suction temp. (T _{suction}) | 35,0 °C | 32,0 °C |
| Voltage/Frequency | 230 V 60 Hz | 230 V 60 Hz |

ELECTRICAL COMPONENTS

| | | | |
|-------------------------|-------------------|-----------|--|
| Starting capacitor | 88-108 μF 330 V | | |
| Run capacitor | 30 μF 420 V | | |
| Relay | Option 1 | Option 2 | |
| Reference | 3ARR3 10S3 | RVA 3AG.. | |
| Pick-Up | 180-195 V | 180-195 V | |
| Drop-Out | 40-105 V | 40-105 V | |
| Protector | Option 1 | | |
| Reference | GA3LMV81 | | |
| Current | 49,00 A | | |
| Time check | 6,0-16 seg | | |
| Disc temp. (Open/Close) | 120,00 / 57,00 °C | | |

Technical Data Sheet

ENGINEERING
TOMORROW



ASHRAE

| Tc | Te | Cooling Capacity | Consumption | Current | COP | EER |
|----|-----|------------------|-------------|---------|------|---------|
| °C | °C | kCal/h | W | A | W/W | kCal/Wh |
| 40 | -15 | 2.735 | 1.563 | 6,66 | 2,04 | 1,75 |
| 40 | -10 | 3.534 | 1.820 | 6,24 | 2,26 | 1,94 |
| 40 | -5 | 4.400 | 2.062 | 6,57 | 2,48 | 2,13 |
| 40 | 0 | 5.332 | 2.290 | 7,53 | 2,71 | 2,33 |
| 40 | 5 | 6.330 | 2.503 | 8,99 | 2,94 | 2,53 |
| 40 | 7,2 | 6.790 | 2.593 | 9,77 | 3,05 | 2,62 |
| 40 | 10 | 7.394 | 2.702 | 10,85 | 3,18 | 2,74 |

| | | | | | | |
|----|-----|-------|-------|-------|------|------|
| 45 | -15 | 2.544 | 1.666 | 6,39 | 1,78 | 1,53 |
| 45 | -10 | 3.276 | 1.926 | 6,30 | 1,98 | 1,70 |
| 45 | -5 | 4.074 | 2.172 | 6,96 | 2,18 | 1,88 |
| 45 | 0 | 4.939 | 2.403 | 8,24 | 2,39 | 2,06 |
| 45 | 5 | 5.869 | 2.619 | 10,02 | 2,61 | 2,24 |
| 45 | 7,2 | 6.300 | 2.710 | 10,93 | 2,70 | 2,32 |
| 45 | 10 | 6.866 | 2.821 | 12,19 | 2,83 | 2,43 |

| | | | | | | |
|----|-----|-------|-------|-------|------|------|
| 50 | -15 | 2.354 | 1.770 | 6,26 | 1,55 | 1,33 |
| 50 | -10 | 3.018 | 2.033 | 6,49 | 1,73 | 1,48 |
| 50 | -5 | 3.749 | 2.282 | 7,48 | 1,91 | 1,64 |
| 50 | 0 | 4.546 | 2.516 | 9,10 | 2,10 | 1,81 |
| 50 | 5 | 5.409 | 2.736 | 11,21 | 2,30 | 1,98 |
| 50 | 7,2 | 5.810 | 2.828 | 12,26 | 2,39 | 2,05 |
| 50 | 10 | 6.339 | 2.940 | 13,70 | 2,51 | 2,16 |

| | | | | | | |
|----|-----|-------|-------|-------|------|------|
| 55 | -15 | 2.163 | 1.873 | 6,25 | 1,34 | 1,15 |
| 55 | -10 | 2.760 | 2.140 | 6,83 | 1,50 | 1,29 |
| 55 | -5 | 3.423 | 2.392 | 8,16 | 1,66 | 1,43 |
| 55 | 0 | 4.153 | 2.629 | 10,11 | 1,84 | 1,58 |
| 55 | 5 | 4.949 | 2.852 | 12,56 | 2,02 | 1,74 |
| 55 | 7,2 | 5.320 | 2.945 | 13,76 | 2,10 | 1,81 |
| 55 | 10 | 5.811 | 3.060 | 15,38 | 2,21 | 1,90 |

| | | | | | | |
|----|-----|-------|-------|-------|------|------|
| 60 | -15 | 1.973 | 1.977 | 6,37 | 1,16 | 1,00 |
| 60 | -10 | 2.502 | 2.246 | 7,30 | 1,30 | 1,11 |
| 60 | -5 | 3.098 | 2.501 | 8,98 | 1,44 | 1,24 |
| 60 | 0 | 3.760 | 2.742 | 11,28 | 1,59 | 1,37 |
| 60 | 5 | 4.489 | 2.968 | 14,07 | 1,76 | 1,51 |
| 60 | 7,2 | 4.830 | 3.063 | 15,42 | 1,83 | 1,58 |
| 60 | 10 | 5.283 | 3.179 | 17,24 | 1,93 | 1,66 |

CECOMAF

| Tc | Te | Cooling Capacity | Consumption | Current | COP | EER |
|----|-----|------------------|-------------|---------|------|---------|
| °C | °C | W | W | A | W/W | kCal/Wh |
| 40 | -15 | 2.865 | 1.572 | 6,63 | 1,82 | 1,58 |
| 40 | -10 | 3.710 | 1.831 | 6,24 | 2,03 | 1,75 |
| 40 | -5 | 4.617 | 2.076 | 6,61 | 2,22 | 1,92 |
| 40 | 0 | 5.586 | 2.306 | 7,62 | 2,42 | 2,09 |
| 40 | 5 | 6.618 | 2.522 | 9,15 | 2,62 | 2,27 |
| 40 | 7,2 | 7.092 | 2.612 | 9,95 | 2,71 | 2,35 |
| 40 | 10 | 7.713 | 2.724 | 11,08 | 2,83 | 2,45 |

| | | | | | | |
|----|-----|-------|-------|-------|------|------|
| 45 | -15 | 2.631 | 1.676 | 6,37 | 1,57 | 1,36 |
| 45 | -10 | 3.393 | 1.938 | 6,31 | 1,75 | 1,51 |
| 45 | -5 | 4.216 | 2.186 | 7,02 | 1,93 | 1,67 |
| 45 | 0 | 5.103 | 2.420 | 8,35 | 2,11 | 1,82 |
| 45 | 5 | 6.051 | 2.639 | 10,21 | 2,29 | 1,98 |
| 45 | 7,2 | 6.489 | 2.731 | 11,15 | 2,38 | 2,05 |
| 45 | 10 | 7.063 | 2.844 | 12,46 | 2,48 | 2,15 |

| | | | | | | |
|----|-----|-------|-------|-------|------|------|
| 50 | -15 | 2.397 | 1.780 | 6,25 | 1,35 | 1,16 |
| 50 | -10 | 3.075 | 2.046 | 6,53 | 1,50 | 1,30 |
| 50 | -5 | 3.816 | 2.297 | 7,57 | 1,66 | 1,44 |
| 50 | 0 | 4.619 | 2.533 | 9,24 | 1,82 | 1,58 |
| 50 | 5 | 5.484 | 2.756 | 11,43 | 1,99 | 1,72 |
| 50 | 7,2 | 5.885 | 2.849 | 12,53 | 2,07 | 1,78 |
| 50 | 10 | 6.412 | 2.964 | 14,02 | 2,16 | 1,87 |

| | | | | | | |
|----|-----|-------|-------|-------|------|------|
| 55 | -15 | 2.163 | 1.884 | 6,26 | 1,15 | 0,99 |
| 55 | -10 | 2.758 | 2.153 | 6,88 | 1,28 | 1,11 |
| 55 | -5 | 3.415 | 2.407 | 8,27 | 1,42 | 1,23 |
| 55 | 0 | 4.135 | 2.647 | 10,29 | 1,56 | 1,35 |
| 55 | 5 | 4.917 | 2.873 | 12,82 | 1,71 | 1,48 |
| 55 | 7,2 | 5.282 | 2.968 | 14,07 | 1,78 | 1,54 |
| 55 | 10 | 5.762 | 3.084 | 15,75 | 1,87 | 1,61 |

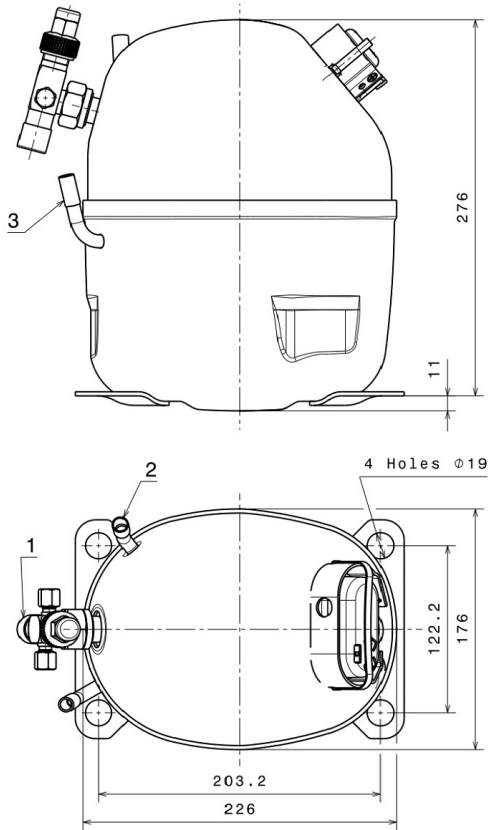
| | | | | | | |
|----|-----|-------|-------|-------|------|------|
| 60 | -15 | 1.929 | 1.988 | 6,39 | 0,97 | 0,84 |
| 60 | -10 | 2.440 | 2.260 | 7,37 | 1,08 | 0,93 |
| 60 | -5 | 3.015 | 2.518 | 9,11 | 1,20 | 1,03 |
| 60 | 0 | 3.651 | 2.761 | 11,49 | 1,32 | 1,14 |
| 60 | 5 | 4.351 | 2.990 | 14,38 | 1,46 | 1,26 |
| 60 | 7,2 | 4.678 | 3.086 | 15,78 | 1,52 | 1,31 |
| 60 | 10 | 5.112 | 3.204 | 17,65 | 1,60 | 1,38 |

EN12900

| X | Cooling Capacity (W) | Consumption (W) | Current (A) | Mass Flow (kg/h) |
|---|----------------------|------------------|---------------|--------------------|
| 1 | 9.456,6386934372 | 1.436,7412195769 | -1,1388581505 | 184,59001134236 |
| 2 | 334,6091353780 | 41,4788151303 | -0,3004889086 | 7,2846087171718 |
| 3 | -100,6126378922 | 23,4773484858 | 0,2229666549 | -0,74799954231829 |
| 4 | 1,1810708215 | -0,2515999732 | 0,0130745383 | 0,069305400853017 |
| 5 | -3,4950320876 | 0,1410999039 | 0,0148707687 | -0,026816407745086 |

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

COMPRESSOR DIMENSIONS

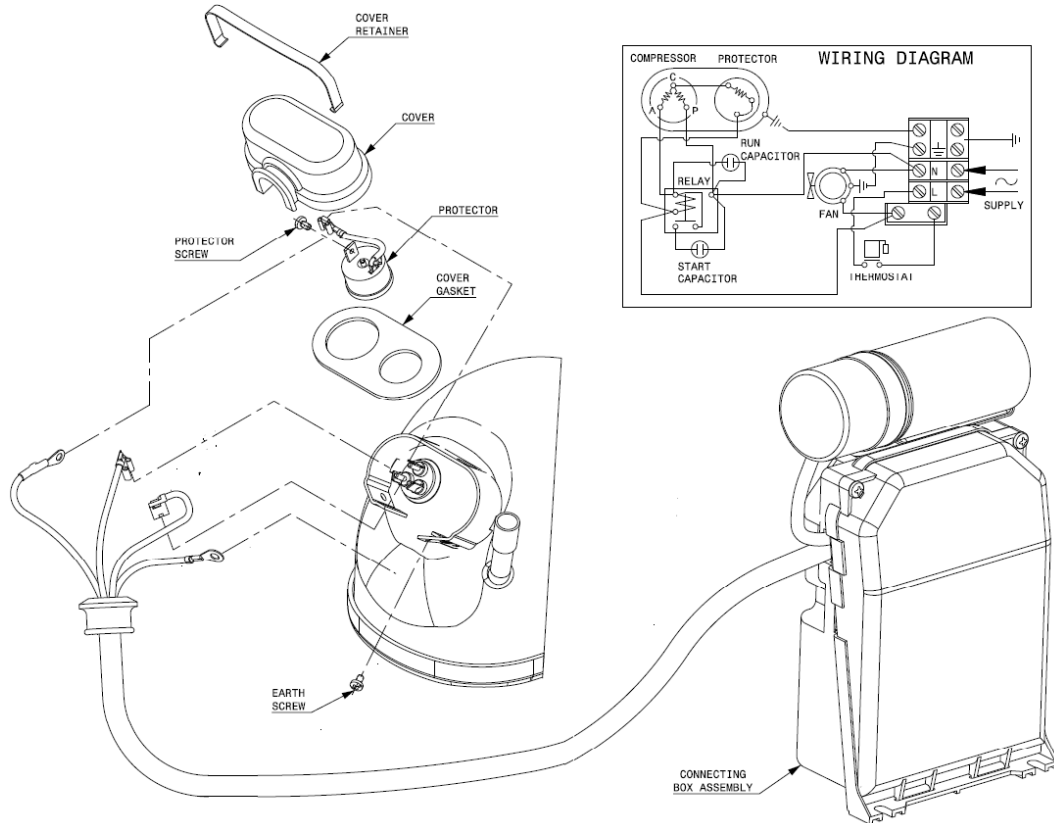


DESIGNATION INTERNAL DIAM.

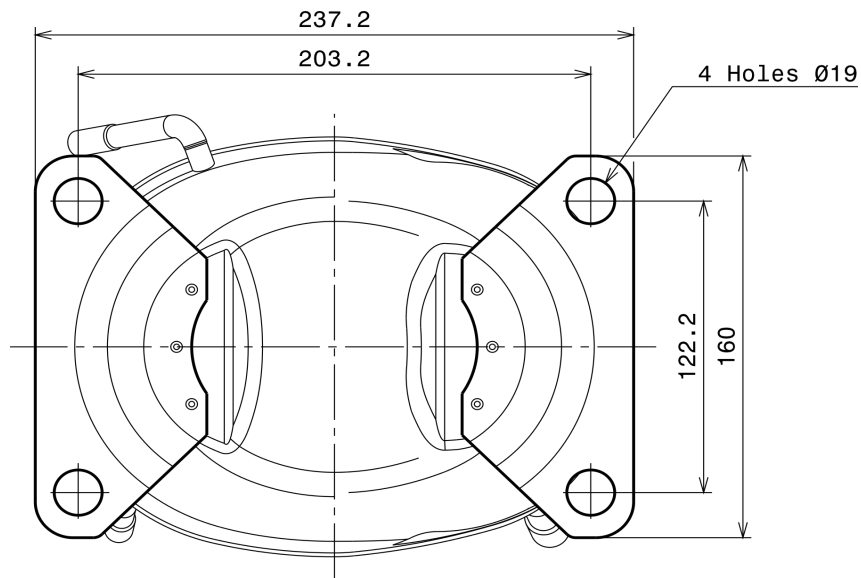
| | | |
|---|---------------|----------|
| 1 | Service Valve | 5/8" SAE |
| 2 | Service | 9,7 mm |
| 3 | Discharge | 8,0 mm |

WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

CSR CONNECTION (EXTERNAL CONNECTING BOX) (NS Range)



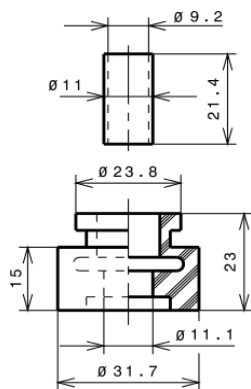
FIXINGS



SILENT BLOCKS (MOUNTING ACCESSORIES)

STANDARD

Ø19 holes (203.2x122.2 net)



SOA

SOA R404A HBP

