

Technical Data Sheet

Compressor model **MPT14RF**
 Voltage **208-230V 60Hz ~1**
 Refrigerant **R404A**

APPLICATION

COMPRESSOR

MOTOR

| | | | | | |
|--------------------|---------------------|--------------|-----------------------|--------------------------|-----------|
| Application | High Back Pressure | Displacement | 14,32 cm ³ | Nominal Power | 1/2 hp |
| Refrigerant | R404A | Diameter | 29,37 mm | Voltage/Frequency | 230V 60Hz |
| Evaporating Temp. | -15,0 °C to 10,0 °C | Stroke | 21,13 mm | Voltage range | 187-253 V |
| Expansion | Capillar/Valve | Net Weight | 12,67 Kg | Type | CSR |
| Comp. Cooling | Fan cooled | Oil type | ISO VG 32 ESTER | Phase number | 1 PH |
| Max. ambient temp. | 43,0 °C | Oil charge | 400 cm ³ | Locked Rotor Amps (LRA) | 34,00 A |
| | | | | Max. Cont. Current (MCC) | 8,70 A |
| | | | | Main W. resist. at 25°C | 1,88 Ω |
| | | | | Start W. resist. at 25°C | 6,73 Ω |

NOMINAL PERFORMANCE

APPROVALS

| | ASHRAE | CECOMAF |
|------------------|--------------|--------------|
| Cooling Capacity | 2.160 kCal/h | 1.990 W |
| COP | 1,91 W/W | 1,56 W/W |
| EER | 1,64 kCal/Wh | 1,35 kCal/Wh |
| Input Power | 1.314 W | 1.274 W |
| Current | 6,19 A | 6,02 A |

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 | 72- 88 μF 330 V | | | |
| Run capacitor | 20 μF 450 V | | | |
| Relay | Option 1 | | | |
| Reference | 2014 170. + NTC15Ω | | | |
| Pick-Up | 12,10 A | | | |
| Drop-Out | 10,30 A | | | |
| Protector | Option 1 | | | |
| Reference | T0534 | | | |
| Current | 20,00 A | | | |
| Time check | 7,5-14 seg | | | |
| Disc temp. (Open/Close) | 105,00 / 52,00 °C | | | |

ASHRAE

| Tc °C | Te °C | Cooling Capacity kCal/h | Consumption W | Current A | COP W/W | EER kCal/Wh |
|----------|----------|-------------------------------|------------------|--------------|------------|----------------|
| 40 | -15 | 1.166 | 835 | 4,26 | 1,62 | 1,40 |
| 40 | -10 | 1.429 | 902 | 4,52 | 1,84 | 1,58 |
| 40 | -5 | 1.732 | 978 | 4,81 | 2,06 | 1,77 |
| 40 | 0 | 2.075 | 1.062 | 5,15 | 2,27 | 1,95 |
| 40 | 5 | 2.458 | 1.155 | 5,52 | 2,47 | 2,13 |
| 40 | 7,2 | 2.639 | 1.199 | 5,70 | 2,56 | 2,20 |
| 40 | 10 | 2.880 | 1.256 | 5,94 | 2,67 | 2,29 |

| | | | | | | |
|----|-----|-------|-------|------|------|------|
| 45 | -15 | 1.087 | 854 | 4,34 | 1,48 | 1,27 |
| 45 | -10 | 1.332 | 926 | 4,61 | 1,67 | 1,44 |
| 45 | -5 | 1.617 | 1.006 | 4,92 | 1,87 | 1,61 |
| 45 | 0 | 1.942 | 1.095 | 5,28 | 2,06 | 1,77 |
| 45 | 5 | 2.306 | 1.192 | 5,67 | 2,25 | 1,94 |
| 45 | 7,2 | 2.479 | 1.237 | 5,86 | 2,33 | 2,00 |
| 45 | 10 | 2.710 | 1.297 | 6,12 | 2,43 | 2,09 |

| | | | | | | |
|----|-----|-------|-------|------|------|------|
| 50 | -15 | 1.008 | 873 | 4,41 | 1,34 | 1,15 |
| 50 | -10 | 1.235 | 949 | 4,70 | 1,51 | 1,30 |
| 50 | -5 | 1.502 | 1.034 | 5,03 | 1,69 | 1,45 |
| 50 | 0 | 1.808 | 1.127 | 5,41 | 1,87 | 1,60 |
| 50 | 5 | 2.155 | 1.228 | 5,83 | 2,04 | 1,75 |
| 50 | 7,2 | 2.320 | 1.276 | 6,03 | 2,12 | 1,82 |
| 50 | 10 | 2.540 | 1.338 | 6,29 | 2,21 | 1,90 |

| | | | | | | |
|----|-----|-------|-------|------|------|------|
| 55 | -15 | 929 | 892 | 4,48 | 1,21 | 1,04 |
| 55 | -10 | 1.138 | 973 | 4,79 | 1,36 | 1,17 |
| 55 | -5 | 1.387 | 1.062 | 5,14 | 1,52 | 1,31 |
| 55 | 0 | 1.675 | 1.159 | 5,54 | 1,68 | 1,45 |
| 55 | 5 | 2.003 | 1.265 | 5,98 | 1,84 | 1,58 |
| 55 | 7,2 | 2.160 | 1.314 | 6,19 | 1,91 | 1,64 |
| 55 | 10 | 2.371 | 1.379 | 6,47 | 2,00 | 1,72 |

| | | | | | | |
|----|-----|-------|-------|------|------|------|
| 60 | -15 | 850 | 911 | 4,55 | 1,09 | 0,93 |
| 60 | -10 | 1.041 | 996 | 4,88 | 1,22 | 1,05 |
| 60 | -5 | 1.271 | 1.089 | 5,26 | 1,36 | 1,17 |
| 60 | 0 | 1.542 | 1.191 | 5,67 | 1,51 | 1,29 |
| 60 | 5 | 1.852 | 1.301 | 6,14 | 1,65 | 1,42 |
| 60 | 7,2 | 2.001 | 1.353 | 6,36 | 1,72 | 1,48 |
| 60 | 10 | 2.201 | 1.420 | 6,65 | 1,80 | 1,55 |

CECOMAF

| Tc °C | Te °C | Cooling Capacity W | Consumption W | Current A | COP W/W | EER kCal/Wh |
|----------|----------|--------------------------|------------------|--------------|------------|----------------|
| 40 | -15 | 1.222 | 840 | 4,28 | 1,45 | 1,26 |
| 40 | -10 | 1.502 | 908 | 4,54 | 1,65 | 1,43 |
| 40 | -5 | 1.821 | 985 | 4,84 | 1,85 | 1,60 |
| 40 | 0 | 2.177 | 1.070 | 5,18 | 2,04 | 1,76 |
| 40 | 5 | 2.572 | 1.164 | 5,56 | 2,21 | 1,91 |
| 40 | 7,2 | 2.758 | 1.208 | 5,74 | 2,28 | 1,97 |
| 40 | 10 | 3.005 | 1.266 | 5,99 | 2,37 | 2,05 |

| | | | | | | |
|----|-----|-------|-------|------|------|------|
| 45 | -15 | 1.124 | 859 | 4,35 | 1,31 | 1,13 |
| 45 | -10 | 1.380 | 932 | 4,63 | 1,48 | 1,28 |
| 45 | -5 | 1.675 | 1.013 | 4,95 | 1,65 | 1,43 |
| 45 | 0 | 2.007 | 1.102 | 5,31 | 1,82 | 1,57 |
| 45 | 5 | 2.378 | 1.201 | 5,71 | 1,98 | 1,71 |
| 45 | 7,2 | 2.553 | 1.246 | 5,90 | 2,05 | 1,77 |
| 45 | 10 | 2.787 | 1.307 | 6,16 | 2,13 | 1,84 |

| | | | | | | |
|----|-----|-------|-------|------|------|------|
| 50 | -15 | 1.027 | 878 | 4,43 | 1,17 | 1,01 |
| 50 | -10 | 1.259 | 955 | 4,72 | 1,32 | 1,14 |
| 50 | -5 | 1.529 | 1.041 | 5,06 | 1,47 | 1,27 |
| 50 | 0 | 1.838 | 1.135 | 5,44 | 1,62 | 1,40 |
| 50 | 5 | 2.184 | 1.237 | 5,87 | 1,77 | 1,53 |
| 50 | 7,2 | 2.349 | 1.285 | 6,07 | 1,83 | 1,58 |
| 50 | 10 | 2.569 | 1.349 | 6,34 | 1,90 | 1,65 |

| | | | | | | |
|----|-----|-------|-------|------|------|------|
| 55 | -15 | 929 | 897 | 4,50 | 1,04 | 0,89 |
| 55 | -10 | 1.137 | 979 | 4,82 | 1,16 | 1,00 |
| 55 | -5 | 1.383 | 1.069 | 5,17 | 1,29 | 1,12 |
| 55 | 0 | 1.668 | 1.167 | 5,57 | 1,43 | 1,23 |
| 55 | 5 | 1.990 | 1.274 | 6,02 | 1,56 | 1,35 |
| 55 | 7,2 | 2.144 | 1.324 | 6,23 | 1,62 | 1,40 |
| 55 | 10 | 2.351 | 1.390 | 6,52 | 1,69 | 1,46 |

| | | | | | | |
|----|-----|-------|-------|------|------|------|
| 60 | -15 | 831 | 916 | 4,57 | 0,91 | 0,78 |
| 60 | -10 | 1.015 | 1.002 | 4,91 | 1,01 | 0,88 |
| 60 | -5 | 1.238 | 1.097 | 5,29 | 1,13 | 0,98 |
| 60 | 0 | 1.498 | 1.199 | 5,71 | 1,25 | 1,08 |
| 60 | 5 | 1.797 | 1.311 | 6,18 | 1,37 | 1,18 |
| 60 | 7,2 | 1.940 | 1.363 | 6,40 | 1,42 | 1,23 |
| 60 | 10 | 2.133 | 1.431 | 6,70 | 1,49 | 1,29 |

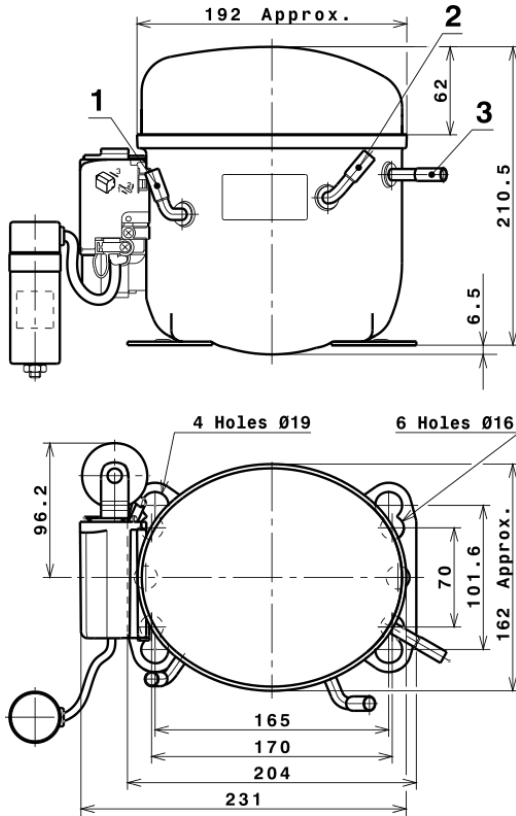
EN12900

| X | Cooling Capacity (W) | Consumption (W) | Current (A) | Mass Flow (kg/h) |
|---|----------------------|-----------------|--------------|---------------------|
| 1 | 3.547,4805202780 | 834,4513165521 | 4,1719307322 | 65,179322094137 |
| 2 | 114,7214497911 | 11,5951330265 | 0,0429060859 | 2,3551280993604 |
| 3 | -35,7321369219 | 6,6943818355 | 0,0281547528 | -0,13313886344845 |
| 4 | 0,7220813936 | 0,1968023731 | 0,0010371737 | 0,036784642603189 |
| 5 | -1,0398472310 | 0,1848710927 | 0,0008736448 | -8,9294954092356E-5 |

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

Technical Data Sheet

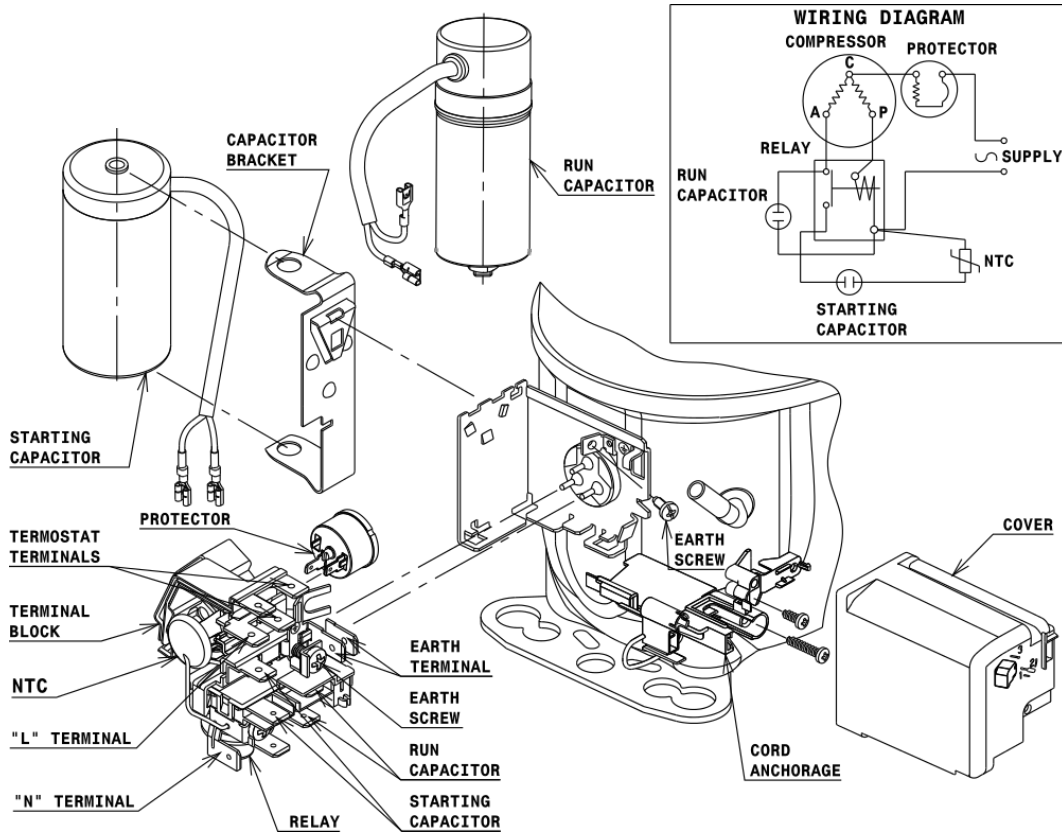
COMPRESSOR DIMENSIONS



| | DESIGNATION | INTERNAL DIAM. |
|---|-------------|----------------|
| 1 | Suction | 8,1 mm |
| 2 | Service | 8,1 mm |
| 3 | Discharge | 6,5 mm |

WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

CSR CONNECTION (CURRENT RELAY + NTC) (L, P ranges)



Technical Data Sheet

FIXINGS



SILENT BLOCKS (MOUNTING ACCESSORIES)

STANDARD

Ø16 holes (170x70 net)



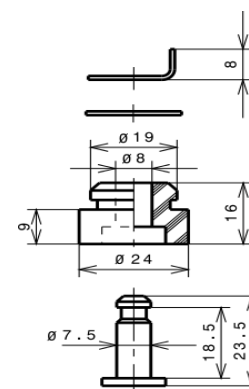
AMERICAN FEET

Ø19 holes (165x101.6 net)



SNAP-ON

Ø16 holes (170x70 net)



SOA

SOA R404A HBP

