

Rapid Freeze

Moderate Ambient Air Cooled

60 hz Condensing Units

COOL SOLUTIONS SINCE 1912

HOWE Proven. Best Choice.



MA4002-A-R404A-1 shown.

Howe's high ambient condensing units are sized and configured to match Howe Rapid Freeze ice flakers. These units are designed for unexcelled quality, reliability, and long life. They are durable, energy efficient and they provide a high degree of flexibility to a wide diversity of industrial applications.

STANDARD FEATURES

- High efficiency Copeland scroll compressors with POE Oil.
- Thermally protected permanently lubricated ball bearing condenser fan motors.
- Electrical controls in weatherproof control box with compressor contactor and fused control circuit.
- Head pressure control system
- Suction & liquid vibration eliminators.
- Liquid line filter-drier and sight glass.
- Hail Guard included

SPECIAL FEATURES

- Pump down toggle switch
- Suction Accumulator
- Oil Separator with oil return line.
- Separate high pressure, low pressure control switches
- Oversized condensing units rated for 95°F ambient conditions.

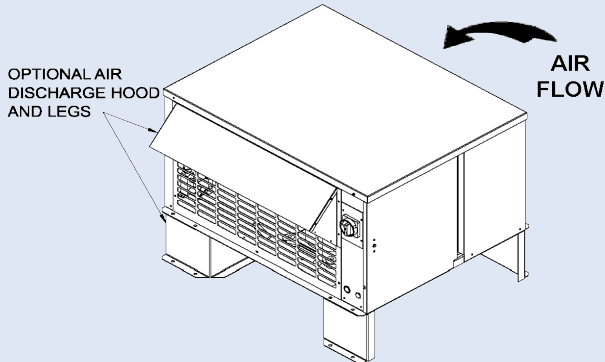
OPTIONAL FEATURES

- Coated condenser coils for harsh environments.
- Oversized condensing units rated for 110°F ambient conditions. (See high ambient spec sheet)
- Cold Ambient units available for low temperature climates. (See low ambient condensing unit spec sheet).

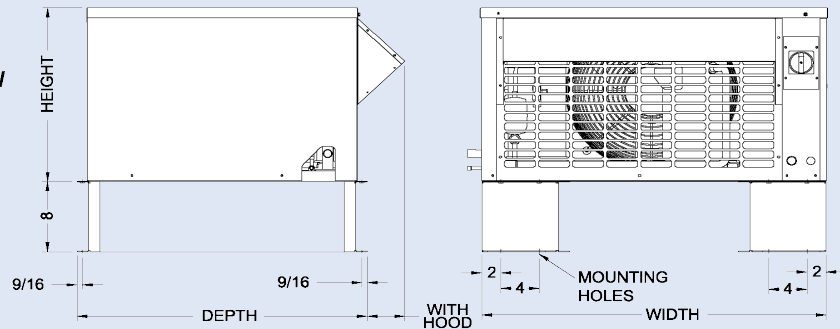
Moderate Ambient - 60 Hz

AC Condensing Units

SIDE VIEW



END VIEW



CONDENSING UNIT

| MODEL | DIMENSIONS IN | | | DIMENSIONS CM | | | CONDENSING UNIT CONNECTION SIZES | | REQUIRED RUN LINE SIZES | | SHIPPING WEIGHT | | REC. CAP. 90% LBS. |
|------------------|------------------|--------|--------|------------------|-------|--------|-------------------------------------|--------|----------------------------|--------|-----------------|-----|--------------------------|
| | W | D | H | W | D | H | SUCTION | LIQUID | SUCTION | LIQUID | LBS | KG | |
| MA1002-A-R4xxA-* | 24-3/8 | 30-3/8 | 19-3/8 | 95.89 | 71.75 | 43.82 | 7/8 | 3/8 | 7/8 | 3/8 | 315 | 143 | 11 |
| MA2002-A-R4xxA-* | 43-7/8 | 32-7/8 | 30-3/8 | 111.44 | 83.5 | 77.15 | 1-1/8 | 1/2 | 1-1/8 | 1/2 | 435 | 197 | 22 |
| MA3002-A-R4xxA-* | 43-7/8 | 32-7/8 | 30-3/8 | 111.44 | 83.5 | 77.15 | 1-1/8 | 1/2 | 1-3/8 | 1/2 | 485 | 220 | 22 |
| MA4002-A-R4xxA-* | 43-7/8 | 32-7/8 | 30-3/8 | 111.44 | 83.5 | 77.15 | 1-3/8 | 5/8 | 1-3/8 | 1/2 | 525 | 238 | 30 |
| MA6002-A-R4xxA-* | 65-1/8 | 35-7/8 | 41-7/8 | 165.42 | 91.12 | 106.36 | 1-3/8 | 5/8 | 1-5/8 | 5/8 | 725 | 329 | 54 |

* = 1 for 230/3/60, 3 for 460/3/60, 4 for 575/3/60, 5 for 230/1/60 xx = 04 for R404a, 48 for R448A, 49 for R449A,

ELECTRICAL

| VOLTAGE | MODEL | COMPRESSOR | | CONDENSER FAN MOTORS | | | UNIT | | |
|--------------|------------------|------------|------|----------------------|------|------------|------------|------|-----|
| | | RLA | LRA | QNT. | WATT | FLA (EACH) | FLA (EACH) | MCA | MOP |
| 208-230/3/60 | MA1002-A-R4xxA-1 | 8.6 | 58 | 1 | 130 | .5 | 9.1 | 11.2 | 20 |
| | MA2002-A-R4xxA-1 | 13.8 | 99 | 1 | 400 | 2.1 | 15.9 | 19.4 | 30 |
| | MA3002-A-R4xxA-1 | 21.8 | 156 | 1 | 400 | 2.1 | 23.9 | 29.4 | 50 |
| | MA4002-A-R4xxA-1 | 30.4 | 199 | 1 | 400 | 2.1 | 32.5 | 40.1 | 70 |
| | MA6002-A-R4xxA-1 | 42.1 | 248 | 2 | 400 | 2.1 | 46.3 | 56.8 | 90 |
| 460/3/60 | MA2002-A-R4xxA-3 | 7.1 | 49.5 | 1 | 400 | 1.1 | 8.2 | 10 | 15 |
| | MA3002-A-R4xxA-3 | 9 | 75 | 1 | 400 | 1.1 | 10.1 | 12.4 | 20 |
| | MA4002-A-R4xxA-3 | 14.4 | 121 | 1 | 400 | 1.1 | 15.5 | 19.1 | 30 |
| | MA6002-A-R4xxA-3 | 19.3 | 125 | 2 | 400 | 1.1 | 21.5 | 26.3 | 45 |
| 575/3/60 | MA2002-A-R4xxA-4 | 7.1 | 40 | 1 | 400 | .9 | 8 | 9.8 | 15 |
| | MA3002-A-R4xxA-4 | 7.9 | 54 | 1 | 400 | .9 | 8.8 | 10.8 | 15 |
| | MA4002-A-R4xxA-4 | 11.4 | 68.9 | 1 | 400 | .9 | 12.3 | 15.2 | 25 |
| | MA6002-A-R4xxA-4 | 15.6 | 100 | 2 | 800 | .9 | 17.4 | 21.3 | 35 |
| 230/1/60 | MA1002-A-R4xxA-5 | 13.9 | 75 | 1 | 130 | .5 | 14.4 | 17.9 | 30 |
| | MA2002-A-R4xxA-5 | 25 | 129 | 1 | 400 | 2.1 | 27.1 | 33.4 | 50 |

¹ = Receiver capacity is based on R404A refrigerant. Multiply R404A value by the appropriate value below for alternate refrigerants:

| R407A | R407C | R448A | R449A | R507 | R22 |
|-------|-------|-------|-------|------|------|
| 1.10 | 1.10 | 1.05 | 1.05 | 1.0 | 1.15 |