

## MAGNUM® Features and Options - From -35°C to +30 °C

### Description:

- The Thermo King MAGNUM is a one-piece, integral front wall, all-electric automatic cooling and heating unit for ISO sea-going containers. It is suitable for operation on trailer on flat car (TOFC), container on flat car (COFC), and aboard ship.

**Refrigeration Capacity:** Scroll with R404A Zer-O system net cooling capacities at 37.8 degrees C (100 degrees F) ambient and 60 Hz electric power.

Degrees C	Degrees F	Watts	KCal/hr	Btu/hr
21	70	15,822	13,608	54,000
2	35	12,309	10,584	42,000
-18	0	7,327	6,300	25,000
-29	-20	5,070	4,360	17,300
-35	-31	4,099	3,528	14,000

**Heating Capacity:** System net heating capacity (including fan heat) with 60Hz electric power.

- 5880 Watts (4984 KCal/hr, 19800 Btu/hr)

Evaporator Fan Airflow: High Speed	m <sup>3</sup> /hr	cfm
60Hz: 12.7 mm (0.50 in) WG	5,603	3,300
60Hz: 19.0 mm (0.75 in) WG	5,094	3,000
Weight: (with reciprocating compressor)	lbs	kg
Unit	926	420

Dimensions:	Height		Width		Depth	
Unit	88 in	2235 mm	79.8 in	2026 mm	16.5 in	420 mm

Specifications are subject to change without notice.

### Standard Features:

- R-404A refrigerant
- Compressor Scroll: Exclusive Copeland® Digital Scroll™ compressor with Digital Valve for capacity modulation, economizer circuit, ambient compensated internal overload and high temperature protection.
  - Type: Compliant Scroll (one stationary and one orbiting), with radial and axial compliance allowing tolerance to liquid refrigerant and debris
  - Rating: 6hp motor, 380/460V, 50/60 Hz
  - Construction: steel shell with rigid internal mount of scroll and motor
  - Oil: polyol ester
  - Finish: thermal sprayed aluminum
- Microprocessor controller: The MP-3000 microprocessor controller provides thermostat, digital thermometer programming keypad, mode indicators, and a digital status readout window for displaying electronically recorded trip and cargo information
  - MP-3000 includes PTI programs, manual test, self-diagnostic test, advanced service information and service help functions
  - An optional USDA-approved data recorder records operating conditions up to 365 days
  - The controller contains the following basic features and components:
    - Backlit LCD digital display
    - Mode indication LEDs
    - Alarm indicator functions
    - Demand & timed

### Options:

- AFAM+ Advanced Fresh Air Exchange Management
- Water-cooled condenser
- 4-pin remote monitoring receptacle
- Thermo King electronic chart recorder
- Partlow temperature recorder
- Saginomiya temperature recorder
- Remote monitoring
- Transfresh provision
- 10/4 power cable
- Dual voltage transformer

- defrost
    - Defrost cycle control
    - Internal self-checking/diagnostics
    - Pre-trip testing for reefer unit
    - Remote monitoring and data retrieval interface ports
    - Data recording
  - Electronic phase selection
  - 3-phase current monitoring & protection
  - Power consumption control to limit total unit power consumption
- Proportional-integrated differential(PID) refrigeration capacity control system
- Non-corrosive sea-going construction includes marine-treated aluminum alloy frame, non-corrosive fittings, all stainless steel hardware, condenser coil with epoxy e-coat and polyurethane top coat for UV protection, hydrophilic coating on evaporator coil, and a marine duty protective coating on the compressor
- Condenser and evaporator fan motors include stainless steel shafts and internal thermal overload protection
- CFC-free foamed-in-place insulation
- Fresh air exchange adjustable from 0-285 m<sup>3</sup>/hr (0-150 ft<sup>3</sup>/min)
- Unit wired for 380/460V, 3-phase, 50/60 Hz power supply with an 18 meter (60 ft) 1 1/4 power cable with CEE-17 plug
- Bottom air discharge
- Automatic electronic phase correction system
- 29 Vac control system
- Demand defrost and supplemental timed defrost with selectable intervals
- Manual defrost initiation via MP-3000 keypad
- Cool, Modulation Cool, Null, Heat, Defrost, In-Range and alarm

- indicator lights
- Time delay start sequence
  - ABS certification
  - Composite condenser and evaporator fans
  - Conforms to ISO classifications and specification for thermal containers including racking and end loading standards, **TIR** specifications, **ATP** refrigeration standards, **ARI** standards for rating refrigeration capacity, **UIC** international Union of Railways, **Australian Electrical Certification, British Standard 3755 Requirement (TAINT), USDA** requirements for "Insect Cold" treatment, and **Agrotechnological Research Institute (ATO-DLO)** for flower bulb transportation
  - Auxiliary battery and charger
  - USDA "Cold Treatment" provision
  - Dehumidification on control
  - Bulb mode

Specifications are subject to change without notice.

