



Product Overview/Applications

The MTBDR16 is designed for high-end plant physiology research where tight performance is critical to ensure a consistent plant canopy temperature throughout the chamber. To achieve a tight performance, this unit employs a constant temperature lamp bank, cooled by the refrigeration system, which results in a constant light intensity output regardless of operating temperature. With 65" (1650mm) of growth height and 16.2ft² (1.5 m²) of growth area, the MTBDR16 accommodates tall plants to maturity. Please consult Meditech regarding specific requirements.

Lighting

The MTBDR16 utilizes an innovative lamp bank design that maintains a constant temperature within the barriered lamp canopy. This results in a constant light intensity output that is unaffected by the temperature within the chamber. Standard lighting for the MTBDR16 combines T8 fluorescent and halogen incandescent with 3 light levels per lamp type, resulting in a broad based spectrum ideally suited for plant growth. Lamp replacement is easily achieved from outside the growth area by raising the hinged, counter-balanced canopy. Standard lighting intensity is 800 micromoles/m²/s which is measured by a quantum light meter and then transmitted to the controller's status screen for User readout. Higher light intensities are available.

Airflow

Airflow is distributed uniformly in a downward direction. The unit includes fresh air intake and exhaust ports which are adjustable to allow up to 30ft³/min (0.84m³/min) of air exchange.

Refrigeration

Cooling is provided by a self-contained water-cooled condensing unit with hot gas bypass for continuous compressor operation. An electronic modulating valve provides tight temperature control while ensuring quiet operation. Pressure transducers are included for monitoring the status of the refrigeration system. Consult the factory for heat rejection information and alternative refrigeration methods

Experiment Protection

User programmable "set and forget" alarms track the chamber's operation versus user-defined set points. This allows for exceptionally accurate monitoring without the need for adjustment every time the set point is redefined. Backup "high/low" alarms provide a further level of protection while visual and audible notification is provided when any alarm is activated. Contacts for connection to a building management system are also included.

Key Product Attributes

- High performance chamber that delivers tight environmental control and uniformity
- Specular aluminum interior for improved light uniformity
- 65" (1650mm) usable growth height allows the growth of tall plant species to maturity
- Product certifications/ markings ,CE



| Temperature Range (°C) | Interior Capacity | Growth Area | Growth Height | Exterior Dimensions (WxDxH) | Light Intensities (6in. from lamp) | Electrical Service | Weight |
|--------------------------|----------------------|----------------------|---------------|-----------------------------|------------------------------------|--------------------|----------|
| -2°C to +40°C Lights Off | 88.5 ft ³ | 16.2 ft ² | 65" | 105" x 36" x 89" | 800 μmoles/m ² /s | 120-1Ø-60Hz | 1360 lb. |
| +5°C to +45°C Lights On | 2500 L | 1.5 m ² | 1650 mm | 2675 x 915 x 2260 (mm) | @ 25°C | 220-1Ø-50Hz | 617 kg |

Plant Growth Chamber MTBDR16

NOTES:

1. STANDARD REFRIGERATION SYSTEM IS WATER COOLED (1/2"Ø (13mmØ) CONNECTION).
2. REQUIRE A MINIMUM OF 5" (130mm) FROM REAR OF CHAMBER TO BACK WALL.
3. CASTER OPTION ADDS 2" (51mm) TO OVERALL HEIGHT OF CHAMBER.
4. DEPTH DIMENSION IS CHAMBER SIZE ONLY. DIMENSION DOES NOT INCLUDE DOOR LATCH OR PIPING ON BACK WALL.
5. LENGTH AND WIDTH DIMENSIONS ±1/4 (6mm). HEIGHT DIMENSION ±1" (25mm).

