



BDW Series

WALK-IN

PLANT GROWTH

CONVIRON®

BDW SERIES

WALK-IN

PLANT GROWTH

Product Overview/Applications

The BDW series walk-in chamber is based on a modular platform available in increments of 40ft² (3.7m²). These units offer a precise chamber environment typical of research involving C4 high-light plants grown to maturity. Unique is the top-down airflow pattern which ensures consistent plant canopy temperatures throughout the chamber. Spectral aluminum on the interior walls produces unparalleled light uniformity, while the discreet lamp loft area uses a separate cooling system to mitigate heat produced by the lighting system.

Lighting

The standard lighting package for the BDW series chamber generates moderate to high level light intensity and incorporates metal halide and halogen incandescent lamps. The result is a broad based light spectrum ideally suited for plant growth. The optional lighting packages available include higher intensities as well as programmable closed-loop lighting control.

Airflow

Utilizing an innovative design, a top-down airflow pattern uniformly disperses conditioned air from the top of each plenum and returns the air through conditioning coils located at the bottom of the chamber area. Using an independent ventilation and conditioning system for the lamp loft helps to reduce heat transfer to the chamber area. Filtered and adjustable fresh air intake and exhaust openings enable researchers to manage exchange air to the chamber.

Refrigeration

Cooling for the BDW series 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. Alternative refrigeration methods are available depending on site-specific and/or user-defined requirements. Consult the factory for heat rejection information and other refrigeration options.

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 light availability with unparalleled light uniformity
- Discrete lamp loft mitigates heat transfer to chamber area
- Top down airflow for uniform plant canopy temperatures
- Extended height for growth of large plants to maturity
- Modular design to accommodate larger sizes
- Product certifications/markings; _cCSA_{US} (NRTL), CE



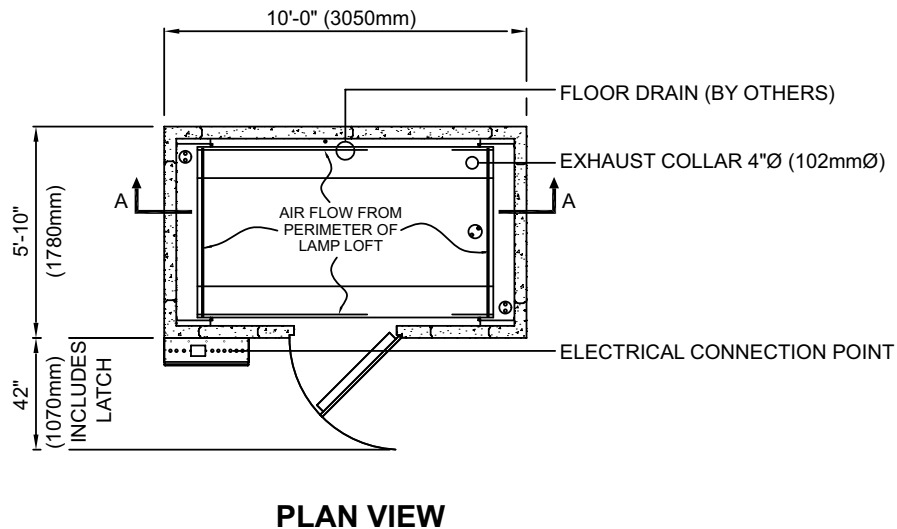
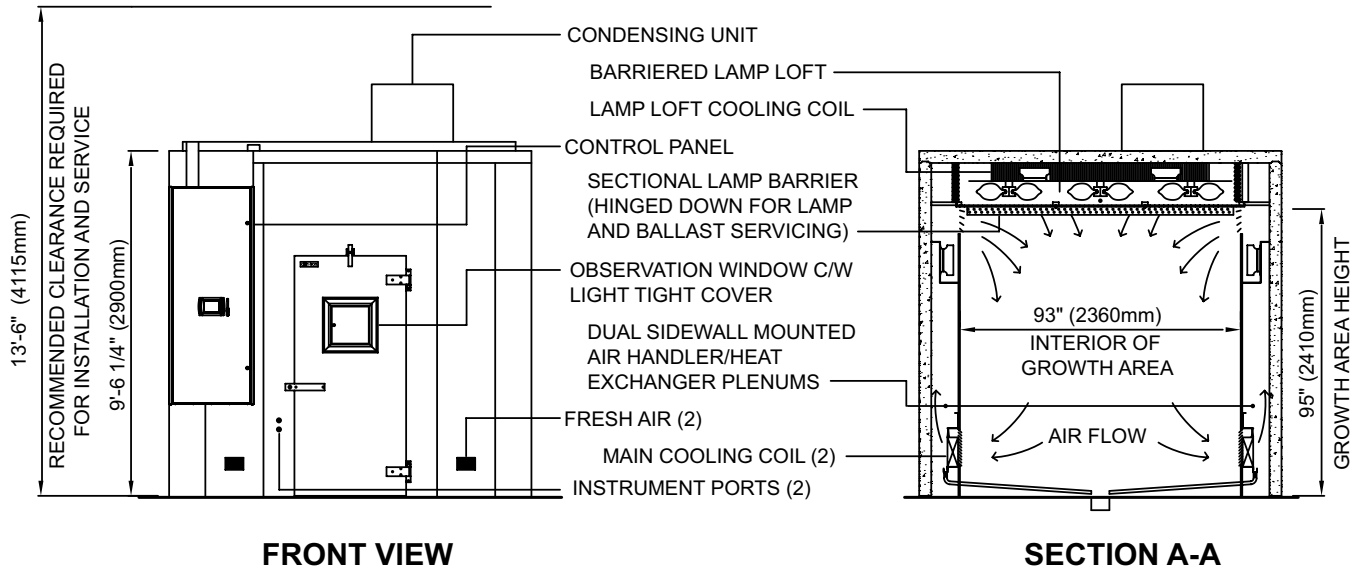
Performance Data

	Temperature Range (°C)	Interior Capacity	Growth Area	Growth Height	Exterior Dimensions (WxDxH)	Light Intensities (6in. from lamp)	Electrical Service	Weight
BDW40	10 – 40 lights on	316 ft ³	40 ft ²	95"	120" x 70" x 114.25"	1000 µmoles/m ² /s	120/208-3Ø-60Hz	2485lb.
	4 – 40 lights off	(8920 L)	(3.7 m ²)	(2415 mm)	3050 x 1780 x 2900 (mm)	@ 25°C	230/400-3Ø-50Hz	(1127kg)
BDW80	10 – 40 lights on	640 ft ³	80.9 ft ²	95"	120" x 133.25" x 114.25"	1100 µmoles/m ² /s	120/208-3Ø-60Hz	3860lb.
	4 – 40 lights off	(18120 L)	(7.5 m ²)	(2415 mm)	3050 x 3385 x 2900 (mm)	@ 25°C	230/400-3Ø-50Hz	(1751kg)
BDW120	10 – 40 lights on	964 ft ³	121.7 ft ²	95"	120" x 196.5" x 114.25"	1100 µmoles/m ² /s	120/208-3Ø-60Hz	5240lb.
	4 – 40 lights off	(27130 L)	(11.3 m ²)	(2415 mm)	3050 x 4991 x 2900 (mm)	@ 25°	230/400-3Ø-50Hz	(2377kg)
BDW160	10 – 40 lights on	1285 ft ³	162.2 ft ²	95"	120" x 259.75" x 114.25"	1100 µmoles/m ² /s	120/208-3Ø-60Hz	5240lb.
	4 – 40 lights off	(36385 L)	(15.1 m ²)	(2415 mm)	3050 x 6595 x 2900 (mm)	@ 25°	230/400-3Ø-50Hz	(2377kg)

CONVIRON MODEL BDW SERIES

PLANT GROWTH CHAMBER

1. STANDARD REFRIGERATION SYSTEM IS WATER COOLED (3/4"Ø (19mmØ) CONNECTION).
2. DEPTH DIMENSION IS CHAMBER SIZE ONLY. DIMENSION DOES NOT INCLUDE DOOR LATCH.
3. LENGTH AND WIDTH DIMENSIONS ±1/4 (6mm). HEIGHT DIMENSION ±1" (25mm).



BDW40 PLANT GROWTH CHAMBER

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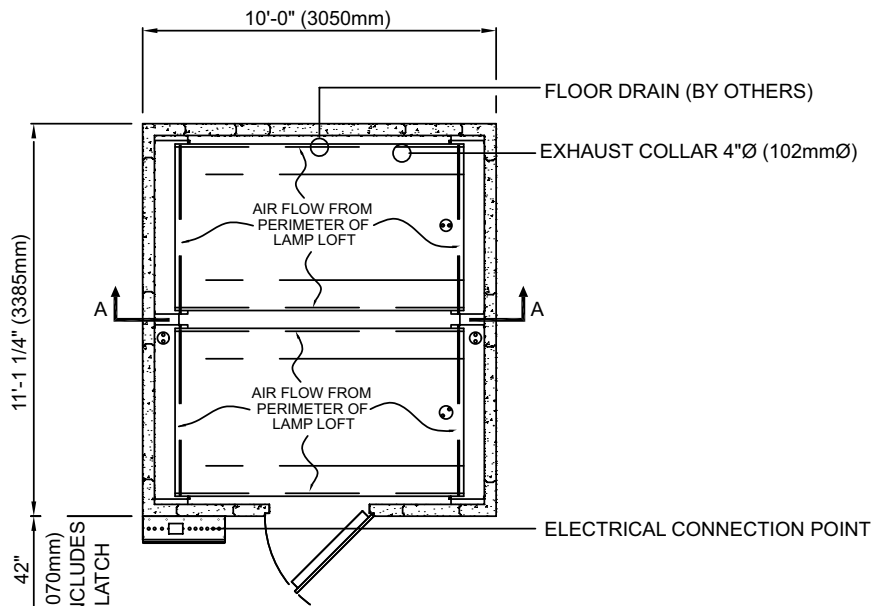
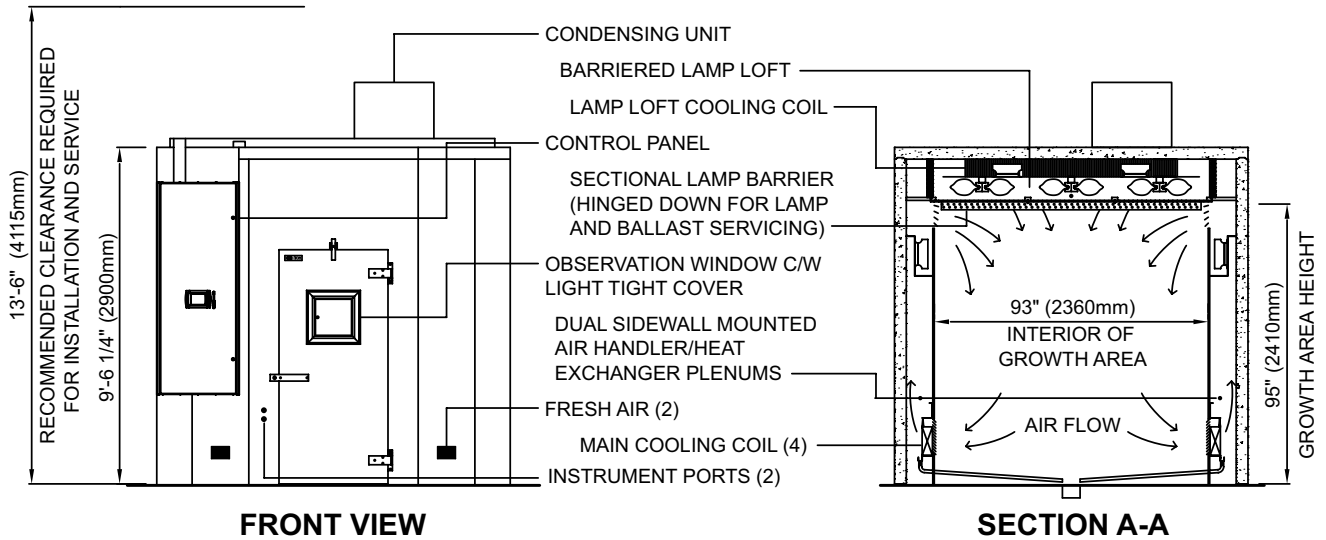
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CONVIRON MODEL BDW SERIES

PLANT GROWTH CHAMBER

1. STANDARD REFRIGERATION SYSTEM IS WATER COOLED (3/4"Ø (19mmØ) CONNECTION).
2. CONDENSING UNIT REQUIRES SEPERATE ELECTRICAL SERVICE (60HZ APPLICATION ONLY).
3. DEPTH DIMENSION IS CHAMBER SIZE ONLY. DIMENSION DOES NOT INCLUDE DOOR LATCH.
4. LENGTH AND WIDTH DIMENSIONS ±1/4 (6mm), HEIGHT DIMENSION ±1" (25mm).



BDW80 PLANT GROWTH CHAMBER

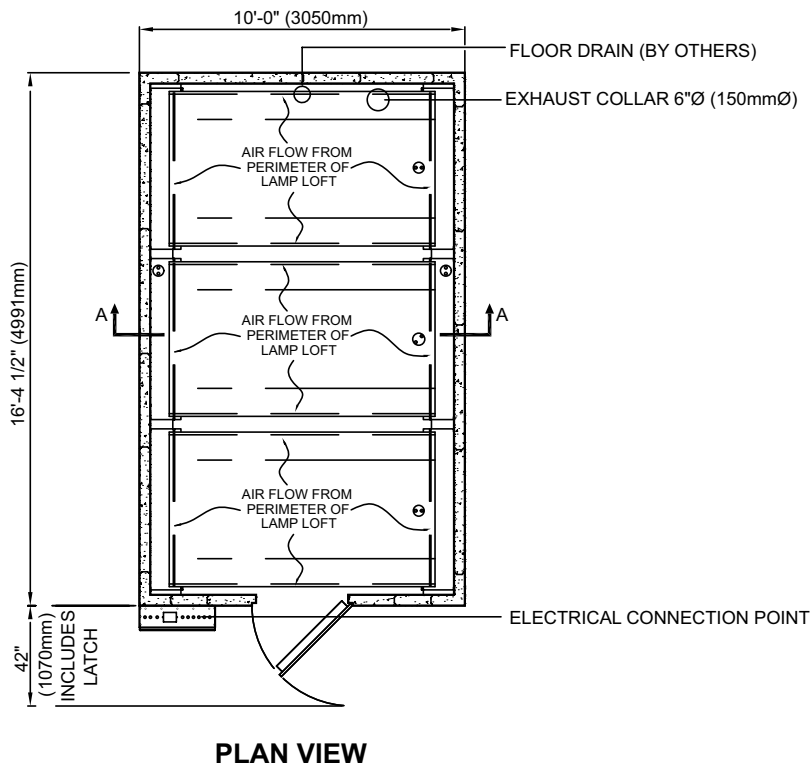
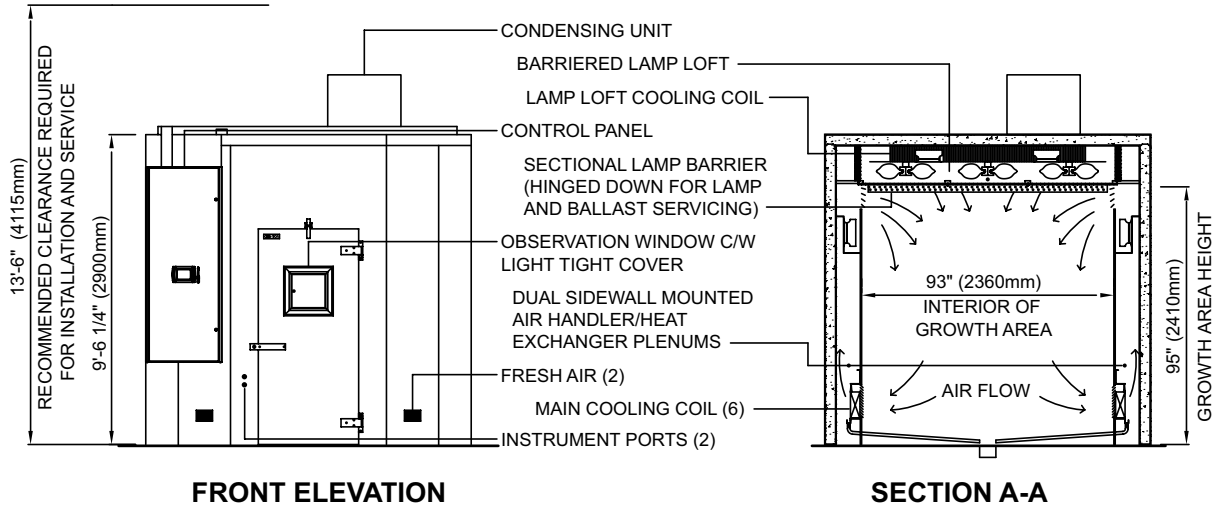
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CONVIRON MODEL BDW SERIES

PLANT GROWTH CHAMBER

1. STANDARD REFRIGERATION SYSTEM IS WATER COOLED (3/4"Ø (19mmØ) CONNECTION).
2. CONDENSING UNIT REQUIRES SEPERATE ELECTRICAL SERVICE (60HZ APPLICATION ONLY).
3. DEPTH DIMENSION IS CHAMBER SIZE ONLY. DIMENSION DOES NOT INCLUDE DOOR LATCH.
4. LENGTH AND WIDTH DIMENSIONS ±1/4 (6mm). HEIGHT DIMENSION ±1" (25mm).



BDW120 PLANT GROWTH CHAMBER

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