



S10H
REACH-IN
PLANT GROWTH

DATA SHEET

S10H REACH-IN



PLANT GROWTH

Product Overview/Applications

The S10H plant growth chamber offers a wide-range humidity control. Plant pathology, entomology, and plant physiology are prime examples of the type of research and teaching programs that are suitable with the S10H and that can benefit from its humidity control capabilities. The S10H accommodates tall plants, with its generous 59" (1500mm) growth height, and offers 10ft² (0.93 m³) of growth area. Barrired and ventilated canopies reduce the load on the refrigeration system thereby lowering operating costs. Please consult Conviron for your specific requirements.

Lighting

The standard lighting system on the S10H provides a broad based light spectrum for plant growth by employing a combination of T8 fluorescent and halogen incandescent lamps. The lamps are housed within a barrired canopy which reduces heat transfer to the growth area. Excess heat in the canopy is ventilated to ambient. Standard light intensity is 500 micromoles/m²/s which is measured by a quantum light meter and transmitted to the controller for user readout. Standard lighting control provides four levels per lamp type.

Airflow

Airflow for the S10H is distributed uniformly upward using Conviron's innovative *Unifloor*® air distribution plenum. The unit includes fresh air intake and exhaust which are adjustable up to 10ft³/min (0.28m³/min.) which also helps to ensure adequate ambient gas exchange.

Refrigeration

Cooling is provided by a self-contained air-cooled condensing unit with hot gas bypass for continuous compressor operation. This results in extended compressor life and close temperature control. 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

- Wide-range humidity control as a standard feature
- Barrired and ventilated canopies reduce refrigeration system load and operating costs.
- Shipped fully assembled – fits through standard doorways
- 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
10 – 45 lights ON	49ft ³	10ft ²	59"	79.5" x 33.25" x 79"	500 μmoles/m ² /s	120/208-3Ø-60Hz	1000lb.
4 – 40 lights OFF	1380L	0.93m ²	1500mm	2020 x 845 x 2010 (mm)	@ 25°C	220/380-3Ø-50Hz	454kg

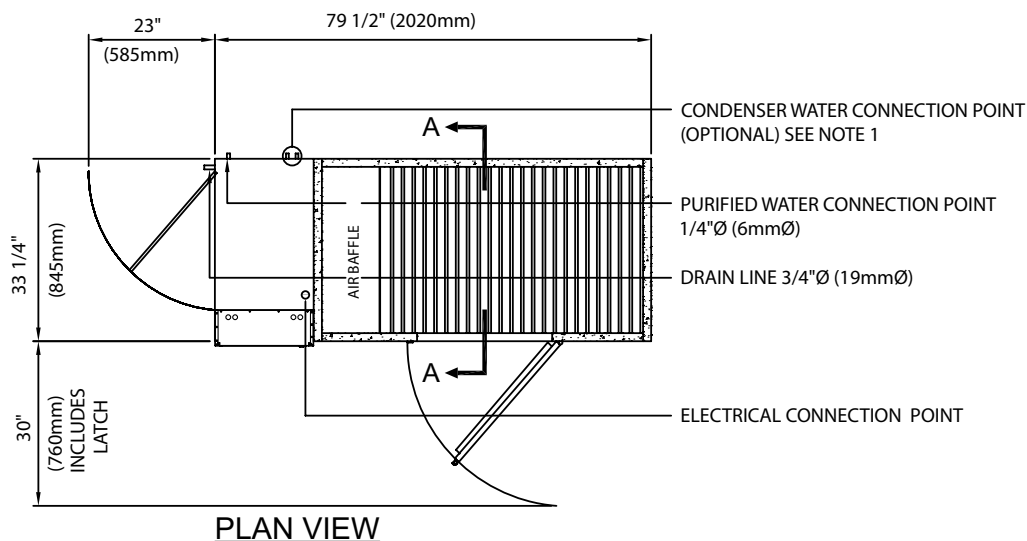
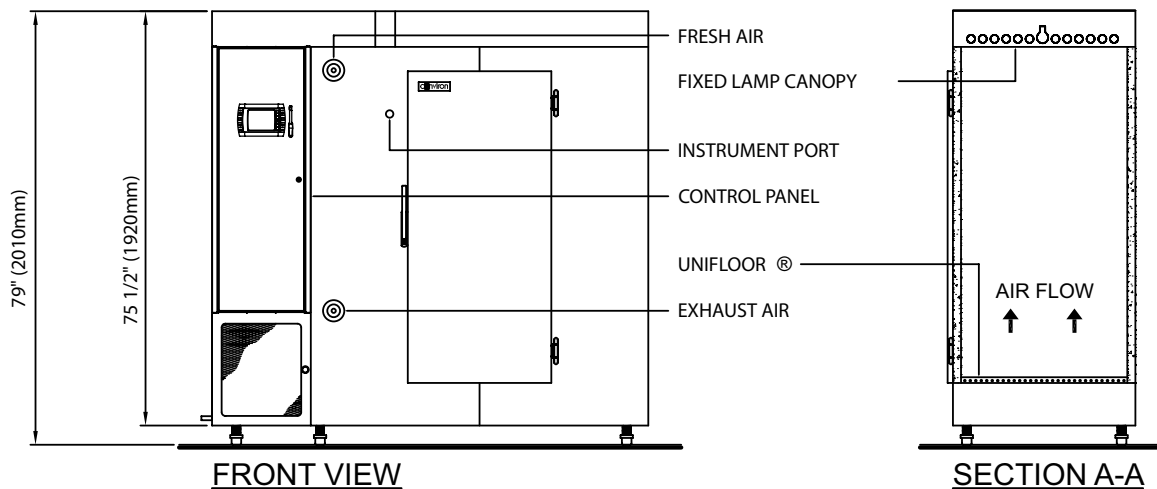
CONVIRON MODEL S10H

PLANT GROWTH CHAMBER



NOTES:

1. STANDARD REFRIGERATION SYSTEM IS SELF-CONTAINED AIR-COOLED. WATER COOLED REFRIGERATION (1/2"Ø (13mmØ) CONNECTION) IS OPTIONAL.
2. REQUIRE A MINIMUM OF 2" (51mm) FROM REAR OF CHAMBER TO BACK WALL.
3. DEPTH DIMENSION IS CHAMBER SIZE ONLY. DIMENSION DOES NOT INCLUDE DOOR LATCH OR PIPING ON BACK WALL.
4. LENGTH AND WIDTH DIMENSIONS ±1/4 (6mm). HEIGHT DIMENSION ±1" (25mm). DO NOT SCALE DRAWING.



S10H PLANT GROWTH CHAMBER

DRAWING NO. 231168

DATE ISSUED: 05/25/09

