TCR Series

CONVIRON®

A Zealquest Group Company

Zealquest Asia

TCR Series Walk-in Growth Room

Product Overview

The TCR walk-in room provides a multi-tier modular platform available in increments of 60 ft². This makes the TCR chamber suitable for research involving plant tissue culture and is often used within large micropropagation programs. The solid side wall plenums transfer air to individual air shelves ensuring upward airflow from each individual shelf, which is essential to mitigating condensation within media dishes.

Lighting

The standard lighting package for the TCR model generates low to moderate light intensities and incorporates fluorescent lamps. Intensities are ideally suited for tissue culture research. Multiple lighting levels can be programmed with the CMP6060 control system while higher light intensities are available as an option.

Airflow

A center column conditioning coil directs air through pressurized sidewall plenums which is then directed into each individual air shelf. Uniform vertical airflow from each shelf ensures that a precise volume of air is directed upward around the media containers. Filtered and adjustable fresh air intake and exhaust openings enable researchers to manage exchange air to the chamber.

Refrigeration

The standard refrigeration system for the TCR incorporates a water-cooled condensing unit for heat exchange while an electronic modulating valve provides tight temperature control for ensuring quiet operation. Pressure transducers are included for monitoring the status of the refrigeration system. Alternative refrigeration methods are available for this equipment platform depending on site-specific and/or user-defined requirements. Consult the factory for heat rejection information and other options for cooling.

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

- Multi-tier design maximizes tissue culture area
- Pressurized sidewall plenums deliver uniform vertical airflow to mitigate or eliminate condensation
- Product certifications/markings; $_c$CSA$_{US}$ (NRTL), CE

	Temperature Range (°C)	Interior Capacity	Growth Area	Growth Height	Exterior Dimensions (WxDxH)	Light Intensities (6in. from lamp)	Electrical Service
TCR60	15 - 40 lights ON 5 - 40 lights OFF	99 ft² (2803l)	60 ft² (5.6m²)	20" (510 mm)	10'75" x 5'10" x 9'1.56" 3240 x 1780 x 2785 (mm)	200 µmoles/m²/s @ 25°C	120/208-3Ø-60Hz 230/400-3Ø-50Hz
TCR120	15 - 40 lights ON 5 - 40 lights OFF	190 ft² (5380l)	120 ft² (11.2 m²)	20" (510 mm)	10'75" x 10'7.5" x 9'1.56" 3240 x 3240 x 2785 (mm)	200 µmoles/m²/s @ 25°C	120/208-3Ø-60Hz 230/400-3Ø-50Hz
TCR180	15 - 40 lights ON 5 - 40 lights OFF	290 ft² (8211l)	180 ft² (16.7 m²)	20" (510 mm)	10'75" x 15'5" x 9'1.56" 3240 x 4700 x 2785 (mm)	200 µmoles/m²/s @ 25°C	120/208-3Ø-60Hz 230/400-3Ø-50Hz

The TCR series is available in increments of 60 ft² and is ideally suited for large micropropagation programs.

Uniform vertical airflow ensures a precise volume of air is directed upward to avoid condensate buildup on petri dishes.

Control & Monitoring

The MTPS Series comes equipped with Conviron's most advanced controller - the CMP6060

Intuitive Interface
7" full-color, high resolution touchscreen with intuitive graphic interface for easy navigation.

At-a-Glance Monitoring
Historical trend graphs, vibrant alarm status, and easy-to-track alarm history.

Easy Programming
Extended visibility of multiple timelines and processes.

Remote Connect
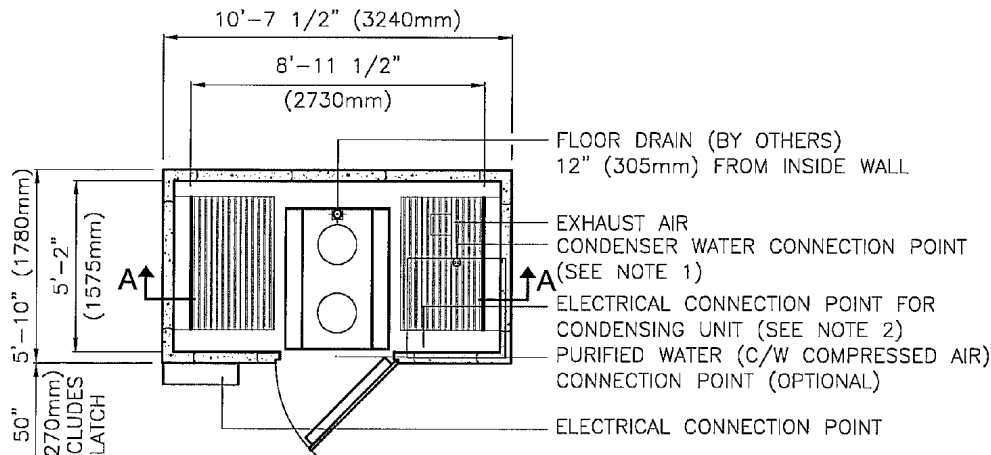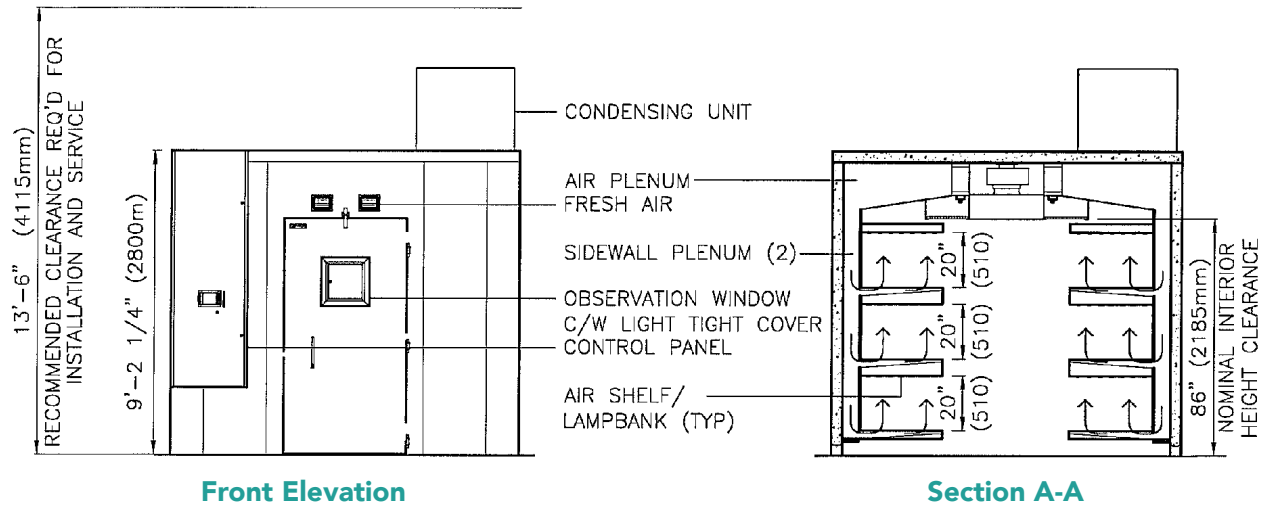Connect from anywhere on your laptop or any LAN connected device with Conviron*Direct*.

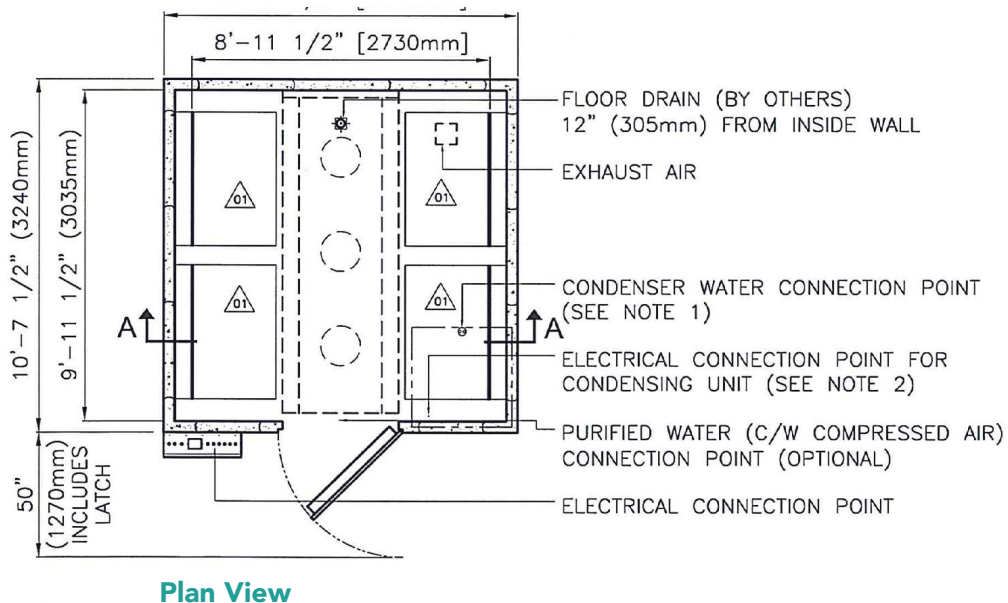*With Conviron*Direct *I always have access to my chamber —from anywhere.*

NOTES:
1. STANDARD REFRIGERATION SYSTEM IS WATER COOLED (3/4"∅ (19mm∅) CONNECTION).
2. CONDENSING UNIT REQUIRES A SEPERATE ELECTRICAL SERVICE.
3. LENGTH AND WIDTH DIMENSIONS ±1/4 (6mm). HEIGHT DIMENSION ±1" (25mm). DO NOT SCALE DRAWING.

Front Elevation

CONDENSING UNIT

AIR PLENUM
FRESH AIR

SIDEWALL PLENUM (2)

OBSERVATION WINDOW
C/W LIGHT TIGHT COVER
CONTROL PANEL

AIR SHELF/
LAMPBANK (TYP)

13'-6" (4115mm)
RECOMMENDED CLEARANCE REQ'D FOR INSTALLATION AND SERVICE

9'-2 1/4" (2800m)

Section A-A

20" (510)

20" (510)

20" (510)

86" (2185mm)
NOMINAL INTERIOR HEIGHT CLEARANCE

10'-7 1/2" (3240mm)

8'-11 1/2" (2730mm)

5'-10" (1780mm)

5'-2" (1575mm)

50" (270mm) ICLUDES LATCH

FLOOR DRAIN (BY OTHERS)
12" (305mm) FROM INSIDE WALL

EXHAUST AIR
CONDENSER WATER CONNECTION POINT
(SEE NOTE 1)

ELECTRICAL CONNECTION POINT FOR
CONDENSING UNIT (SEE NOTE 2)
PURIFIED WATER (C/W COMPRESSED AIR)
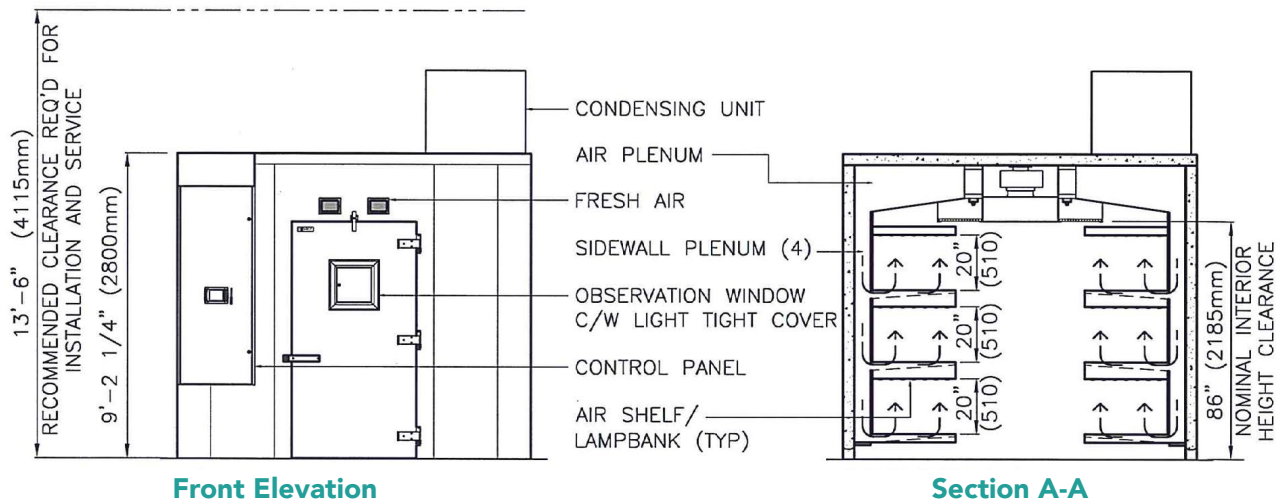CONNECTION POINT (OPTIONAL)

ELECTRICAL CONNECTION POINT

A

A

NOTES:
1. STANDARD REFRIGERATION SYSTEM IS WATER COOLED. (3/4"∅ (19mm∅) 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).

Front Elevation

- CONDENSING UNIT
- AIR PLENUM
- FRESH AIR
- SIDEWALL PLENUM (4)
- OBSERVATION WINDOW C/W LIGHT TIGHT COVER
- CONTROL PANEL
- AIR SHELF/ LAMPBANK (TYP)

Section A-A

13'-6" (4115mm) RECOMMENDED CLEARANCE REQ'D FOR INSTALLATION AND SERVICE
9'-2 1/4" (2800mm)
20" (510)
86" (2185mm) NOMINAL INTERIOR HEIGHT CLEARANCE

Plan View

8'-11 1/2" [2730mm]
10'-7 1/2" (3240mm)
9'-11 1/2" (3035mm)
50" (1270mm) INCLUDES LATCH

- FLOOR DRAIN (BY OTHERS) 12" (305mm) FROM INSIDE WALL
- EXHAUST AIR
- CONDENSER WATER CONNECTION POINT (SEE NOTE 1)
- ELECTRICAL CONNECTION POINT FOR CONDENSING UNIT (SEE NOTE 2)
- PURIFIED WATER (C/W COMPRESSED AIR) CONNECTION POINT (OPTIONAL)
- ELECTRICAL CONNECTION POINT
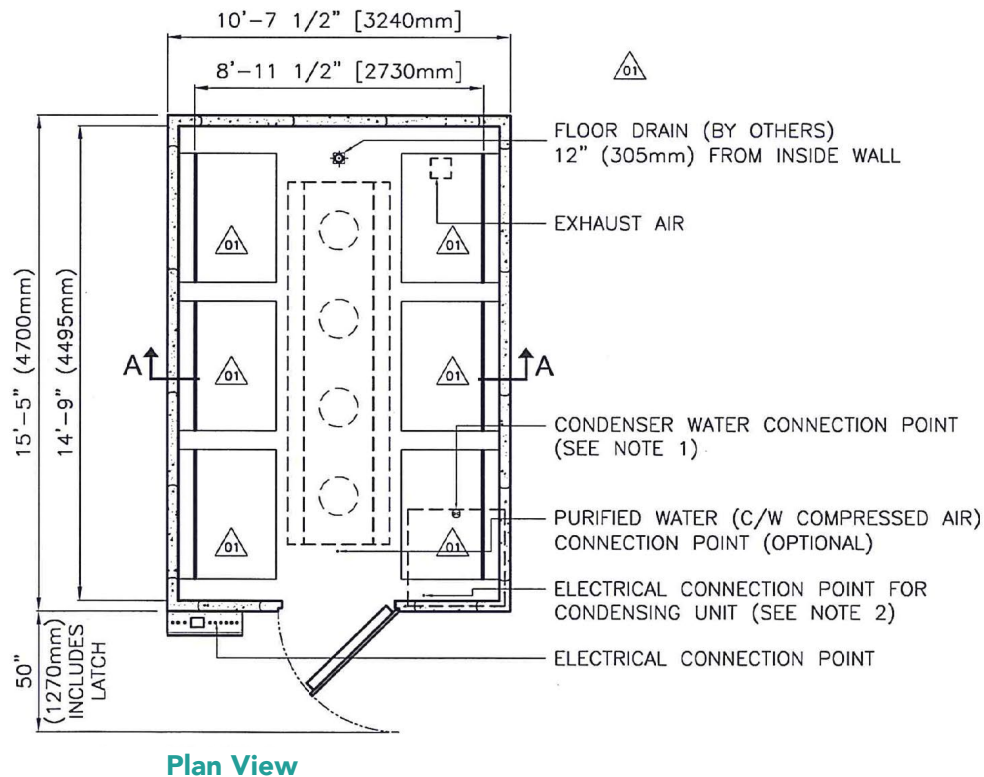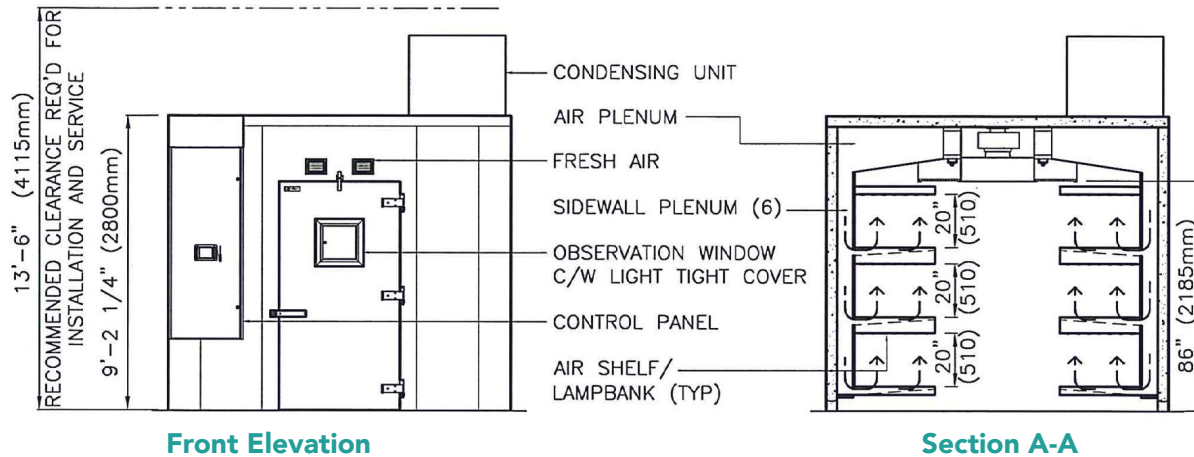
TCR180 Walk-in Growth Room

NOTES:

1. STANDARD REFRIGERATION SYSTEM IS WATER COOLED. (3/4"∅ (19mm∅) CONNECTION)
2. CONDENSING UNIT REQUIRES SEPERATE ELECTRICAL SERVICE. (60HZ APPLICATIONS 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).

Front Elevation

Labels: RECOMMENDED CLEARANCE REQ'D FOR INSTALLATION AND SERVICE — 13'-6" (4115mm); 9'-2 1/4" (2800mm)

Section A-A

Labels: CONDENSING UNIT; AIR PLENUM; FRESH AIR; SIDEWALL PLENUM (6); OBSERVATION WINDOW C/W LIGHT TIGHT COVER; CONTROL PANEL; AIR SHELF/ LAMPBANK (TYP); 20" (510); 86" (2185mm)

Plan View

Labels: 10'-7 1/2" [3240mm]; 8'-11 1/2" [2730mm]; 15'-5" (4700mm); 14'-9" (4495mm); 50" (1270mm) INCLUDES LATCH; FLOOR DRAIN (BY OTHERS) 12" (305mm) FROM INSIDE WALL; EXHAUST AIR; CONDENSER WATER CONNECTION POINT (SEE NOTE 1); PURIFIED WATER (C/W COMPRESSED AIR) CONNECTION POINT (OPTIONAL); ELECTRICAL CONNECTION POINT FOR CONDENSING UNIT (SEE NOTE 2); ELECTRICAL CONNECTION POINT