

DEW FORMATION

I-36D & I-36DL Dew Formation Chamber



I-36DL chamber shown

Applications These chambers have been frequently used for (but are not limited to) plant pathology research studies. Dew chambers employ technology to simulate the actions of natural elements. Dew forms on plants by having the plants radiate energy to the chamber heat sink so that the plant is maintained below the dew point of the air.

For other plant applications that don't require dew please refer to other plant growth chambers.

Many other applications exist for this product. Please compare your requirements to the specifications.

Controller Percival's Intellus controller utilizes three channels for controlling temperature and cold plates, indicating %RH and indicating temperature of air. Furthermore, it controls fluorescent lamps via two independent timers and incandescent lamps via an additional timer. The Standard Intellus Control System is a single-board electronic solid-state design with vacuum fluorescent display and ten-key membrane touch pad control. Programs are created and run in real time with up to 96 steps, non-ramping, or diurnal programming. The Advanced Intellus controller (optional) provides Ethernet connectivity, ramping, multiple programs, program linking and additional outputs.

Air Flow Natural air flow provides temperature uniformity during the dew deposition period.

| Model | Temp Range | Interior Space | | Work Area | | Maximum Growing Height | | Exterior Dimensions | | | Light Intensity | # Ties |
|--------|----------------------|-----------------|----------------|-----------------|----------------|------------------------|------|---------------------|------------|-----------|--|--------|
| | (with all lights on) | (volume) | | | | | | (W) | (D) | (H) | (6' from lamps unless otherwise noted) | |
| | ° C | ft ³ | m ³ | ft ² | m ² | in. | cm | | | | μmoles/m ² /s | |
| I-36D | 10-32±0.75 | 29.6 | 0.8 | 19.5 | 1.8 | 10.5 | 26.7 | 33.5(85.1) | 33.6(85.3) | 77(195.6) | No Light | 4 |
| I-36DL | 12-32±1.0 | 29.6 | 0.8 | 19.5 | 1.8 | 10.5 | 26.7 | 33.5(85.1) | 36(91.4) | 77(195.6) | 600 | 4 |

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Cabinet Construction Interior is constructed of stainless-steel and aluminum with non-corrosive features that will resist chemical cleaning and disinfecting. Walls are covered with stainless-steel cooling plates to absorb radiated heat from plants. The false ceiling is tapered to prohibit drops of water from settling on plants on the top shelf. Chamber also contains caster assembly and adjustable leveling legs to compensate for floor unevenness in the lab.

Insulation Woodless construction using CFC free insulation. Overall wall thickness is 2" (5.1cm), ample insulation for maintenance of stated temperature range.

Door One door opening 29 3/16" x 57 1/2" (74 cm x 146 cm) provides full access to the chamber interior. A magnetic gasket provides a tight seal to door frame.

Interior Space 29.6 ft³ (0.8 m³) with a work area 19.5 ft² (1.8 m²) provided on four shelves.

Shelving Total shelf area of 19.5 ft² (1.8 m²) on four shelves measuring 27.5" D x 25.5" W (69.85 cm x 64.77 cm). When shelves are not mounted on rail assemblies they are vertically adjustable in 1/2" increments. The maximum growing height is 43" (109.2 cm) with only one shelf installed.

Finish Exterior painted with highly reflective, environmentally friendly, high temperature baked white powder coating.

Refrigeration

Temperature Range 10° - 32° C lights off (\pm 0.75° C) and 12° - 32° C lights on (\pm 1.0° C).

Temperature Safety Limit Controls

(Experiment Protection) Adjustable high and low temperature controls, audible alarms and visual indicators are provided. The controls shutdown all the power to the chamber and activates alarms. When the temperature returns to the normal range the system will automatically reset.

Electrical Service Requirements

Model I-36D: 115/1/60. 11 amps, one power cord with grounded plug provided.

Model I-36DL: 115/1/60. Two power cords with grounded plugs provided. (1) 8 amp cord, (1) 10 amp cord.

Consult factory for electrical services when adding accessories to the chamber



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