

INSTALLATION

for Environmental Chambers

Required Utilities

All models will require electrical power. Depending on the chamber, it may require cooling water for the condenser, purified water for the humidity system, and oil-free compressed air. Your Thermotron Application Engineer will be happy to assist you with the specific requirements.

Chamber Placement

Self-contained air-cooled chambers require an unobstructed flow of air and should be placed no closer than 12-18 inches from walls or any other obstructions. It is also very important that chambers are not placed in a manner in which the warm air exiting the condenser is drawn back into the chamber. This may cause high refrigeration system pressures and test profile shut downs.

Heat Load

Be sure the new location is able to handle the heat dissipation from the equipment. If the chamber is air-cooled, it will dissipate between 12,000 and 15,000 BTUs per hour, per high stage compressor horsepower. Example: an air-cooled SE-300-3-3 will dissipate approximately 36,000 BTUs per hour into the room, under full-load conditions. If the same chamber is watercooled it will dissipate 200 BTUs per hour, per *total* horsepower into the room. In this case, 1,200 BTUs.

Remote Refrigeration or Remote Air-Cooled Condenser

If the chamber has a remote refrigeration section or remote air-cooled condenser, determine where these components will be located. Is there unobstructed space for interconnect routing? Routing of refrigeration and electrical interconnect above drop ceilings and through an obstructed area increases installation costs and decreases efficiency. Try to locate the equipment in an area with open access for interconnecting the components.

Condenser Water Requirements

Condenser water requires a minimum difference in pressure of 30 PSIG, between the inlet and outlet, as measured at the chamber. Example: If the water inlet pressure is 60 PSIG, then the outlet must be 30 PSIG or less.

For humidity water requirements, [click here](#).

Service Access

It is preferable to allow 30-inches of space, for immovable chambers, on all sides of chambers and associated equipment for servicing. Always consult local codes for minimum requirements.

Panel Walk-In Chambers

Facility floor quality is very important when installing a panel Walk-In Chamber. The floor must be level to a minimum standard of 1/8" per 10 feet in any direction. Leveling the building's floor prior to installation promotes a proper seal throughout the chamber and ensures the best possible lifespan for the panel structure. *NOTE: Leveling the floor does not need to be a daunting task. Products such as self-leveling epoxy can adequately even out the area under the chamber.*