

Integrated Cabinet Systems AC and DC Power Systems



Industrial Grade Cabinets

Completely configured and pre-wired AC test systems

Heavy Duty Rack Slides

All system units are mounted using rack slides for easy access and removal

Common Input Circuit Breaker

Suitably rated input circuit breaker provides system level protection and single shut-off

Properly Ventilated Cooling

Sufficient Clearance provided for increased airflow through system

Rear Connections

Clearly labeled AC input and output terminal blocks are provided at the bottom rear of each cabinet for easy access

Anti-tilt Pontoon Base

Wide base prevents accidental tipping, even if all units are pulled out on rack slides

Easy Mobility

Heavy Duty ball-bearing casters allow cabinets to be moved around easily

Fast Setup

California Instruments cabinet systems are carefully designed and manufactured to provide maximum system performance and reduce installation cost. The various elements that make up an integrated high power AC test system are carefully assembled in a high quality 19 inch cabinet. All input and output wiring is properly sized and routed for optimal performance and safety. Configuration problems or wiring mistakes are eliminated when ordering a cabinet based multi-box power system like the 15003iX or a three phase compliance test system like the 30003iX-CTS. This translates into faster setup time and reduced installation hassles upon receipt of your power system.

Rack Slides

AC power sources can be rather heavy when compared to typical 19 inch test instruments. This makes it more difficult to mount them in a cabinet unless they are properly supported. CI cabinet systems use heavy duty rack slides that can easily handle the weight of the AC source. The use of rack slides over angle brackets allows each unit to be installed and removed easily should there ever be a need to remove or replace an individual unit. Adjustments can be made by simply pulling a unit forward on its slides.

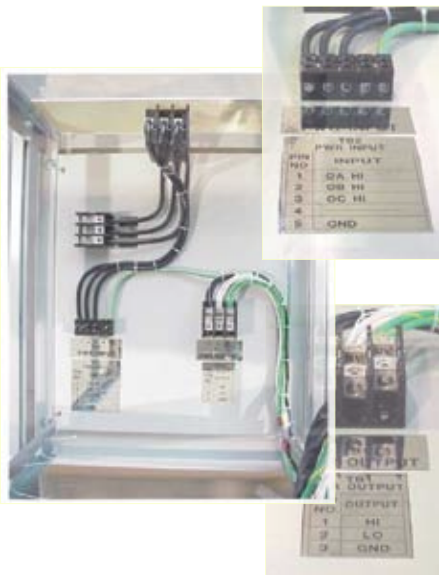
Stops prevent any unit from being pulled too far forward. Wiring to the power sources is done with adequate service loops to allow units to remain connected as they are pulled to a forward position.

Single or Multi-chassis Design

Many of our higher power solutions involve several products connected in parallel to achieve the required power. Also, some custom configurations feature additional chassis for more sophisticated control, precision power impedance matching, or electronic drop-out switching. Cabinet systems are usually shipped as fully assembled, wired, and tested solutions.



System Configurations & Options



Wiring

Connections for AC input and output are provided at the rear bottom of each cabinet system. All wiring is carefully routed and tied down for optimal safety and ease of maintenance. A suitably sized input terminal compression block allows quick connection of the required 3 phase WYE or Delta input power and protective earth ground. Input power is then routed to a three pole circuit breaker that can be operated from the front of the cabinet. This circuit breaker is typically located on a panel at the bottom of the cabinet. From there, input power is distributed to all components of the power system.

Each AC power source has an individual circuit breaker for added protection. The master breaker may be used to quickly shut down the entire cabinet system.

Connection of the EUT can be accomplished through an output terminal compression block, also located at the lower rear of the cabinet.

Inputs and outputs are clearly marked to minimize connection errors. Finally, strain reliefs are provided for both input and output wiring.

Cooling

To ensure long-term durability, careful attention is dedicated to proper airflow in the cabinet. Sufficient clearance is provided on the sides and at the back of the power sources. A rear panel screen protects the user from accidental access to the inside of the cabinet while at the same time allowing sufficient ventilation.

The side panels of the cabinet are louvered to ensure adequate air intake capacity.



Dimensions

Cabinet systems are available in different heights to accommodate various power systems. Standard available rack heights are shown below. For special requirements, contact the factory.

Model	Height Outside	Height Inside	Depth w/o base	Depth w base	Width
C1	28.6" 726 mm	17.6" 447 mm	28.75" 730 mm	37" 940 mm	24.75" 629 mm
C4	54.8" 1392 mm	43.8" 1113 mm	28.75" 730 mm	37" 940 mm	24.75" 629 mm
C5	63.6" 1615 mm	52.6" 1336 mm	28.75" 730 mm	37" 940 mm	24.75" 629 mm
C6	72.3" 1836 mm	61.3" 1557 mm	28.75" 730 mm	37" 940 mm	24.75" 629 mm
C7	54.8" 1392 mm	43.8" 1113 mm	28.75" 730 mm	37" 940 mm	49.5" 1257 mm

Note: Specifications are subject to change without notice. Specifications are warranted over an ambient temperature range of 25 \pm 5 $^{\circ}$ C. Unless otherwise noted, specifications are per phase for a sinewave with a resistive load and apply after a 30 minute warm-up period. Noise: 0.1Vrms / 0.2Vrms. For three phase configurations, all specifications are for L-N. Phase angle specifications are valid under balanced load conditions only.



Mechanical Construction

California Instruments cabinets are designed for heavy duty use. They are constructed of tubular steel with all sections welded on all sides. Both side panels and the rear screen can be removed for easy access.

Since the weight of each individual AC power source can be as high as 180 lbs., a solid pontoon base is used to avoid tip-over. This is especially important in view of the fact that the power sources are mounted on rack slides and their weight shifts forward when pulled out from the front. The wide heavy base prevents the cabinet from toppling over, thus avoiding potential accidents.

At the same time, smooth rolling casters on all four corners allow the cabinet system to be moved around easily as needed. This means the cabinet system can easily be deployed in different locations on the same floor.

Packaging

All cabinets are packaged in custom wooden crates to prevent shipping damage. These crates are reusable and can be retained should the cabinet system ever have to be shipped elsewhere. On request, US domestic deliveries can be made by air-ride van, in which case the crate is not provided. For international shipments, the crate is mandatory. These crates are treated in accordance with prevailing regulations for import to various countries.

Ordering Information

Cabinet systems may be ordered by specifying the letter "C" prefix to any AC power source model. For example, a 30003iX-CTS-LR4 compliance test system may be ordered as a cabinet system by ordering model:

C6-30003iX-CTS-LR4