

## CL034 CLEANROOM CHAMBER

### CL Series Overview

The CL series chambers are used for a variety of research applications. These units are specifically made for a clean room environment. The CL series cleanroom chambers include heating and cooling capabilities. These units have lower temperature capabilities than our thermoelectrically cooled units, have associated greater heat removal capabilities, and are ideal for locations where the ambient conditions cannot be controlled very well. These units will also outperform our thermoelectric units where specifications call for fast "open door" recovery times.

### CL034

The CL034 is a single-door chamber designed for maximum capacity while still allowing passage through most commercial doorways.



### Performance

Darwin Chambers CL034 model comes standard with a temperature range of 4° C to 37° C with a temperature control of  $\pm 0.2^{\circ}$  C and superior temperature uniformity of  $\pm 1^{\circ}$  C. Quick recovery via forced air plenum/ refrigeration system.

### Control System

All CL series models come standard with a Fuji PXF4 (PID - Fuzzy Logic) controller providing a readout of actual and set-point values. This chamber comes with audible and visual alarms, remote monitoring and a numeric password protection. Chamber has cleanable solid front face with control panel section guarded by clean plastic enclosure. Plenty of alternative customized options are available.

### Services and Warranties

Darwin Chambers Company offers 24 hour technical support throughout the lifetime of your chamber. In addition to standard warranties, we also offer extended warranties for cooling components, parts and labor. We also provide qualifications, validations and preventive maintenance services at an additional cost. Please ask for a quote.

### Construction

Darwin Chambers CL034 model is constructed of grade 304 stainless steel 18 gauge, #4 finish, interior and exterior.

- 3 grade 304 stainless steel shelves
- 2" access port
- Fully welded and sealed door with magnetic gaskets, which ensures secure closure after door opening
- Heavy duty grade 304 stainless steel latch with rubber handle
- Engineered frame structure for rigidity
- Covered top for placement in cleanroom - refer to drawing for header spacing
- Dual, swivel locking casters. Chamber has matching stainless steel sheet metal skirts to cover the casters and to seal the space between floor and chambers.
- Integrated drain system in plenum for quick condensate removal

See chart on next page for exact dimensions

### Options

All CL series offer endless customized options. Common upgrades include more stainless steel shelving, various lighting options including LED, fluorescent, dimming options and microprocessor control of lights. More options include water cooled conditioning unit, door lock, full swinging interior glass door, heated glass door, chart recorder, and humidity control. Chamber controls can be turned around making it serviceable from non-clean room side. There is also the option to upgrade the controller.

## CL034 Cleanroom Chamber Specifications (ambient 21° C)

Performance	Standard	Customized Option
Temperature Range	4° C to 37° C	-5° C to 70° C
Ambient Temperature	21° C ± 3° C	Low Temp. and High Temp. Ambient Available
Temperature Control	± 0.2° C	Available
Temperature Uniformity	± 1° C	Available
Control Resolution	0.1° C	Available
Temperature Sensor	NIST Traceable PT100 RTD Class A	Available

Control System	Standard	Customized Option
Controller	Fuji PXF4 (PID - Fuzzy Logic)	West EC-44, Future Design Touchpad, Watlow, Allen Bradley
Control Readout	Actual and Set-Point Values	Trending, Duty Cycle
Calibration Correction Capability	Standard 0.1 Resolution	Available
Uniformity Off Set	N/A	N/A
Alarm	Audible and Visual	Text, Email, Web Server, Remote Access
Alarm Type	Deviation in 0.1° C or 0.1% RH with Delay	Absolute 0.1 Resolution with Delay
Remote Monitoring	Dry Alarm Contact, RS 485 & Analog Output	Ethernet
Password Protection	Numeric	Numeric, Alpha Numeric
Audit Trail	N/A	Available
Uninterrupted Power Supply (Monitoring)	N/A	Available

Construction	Standard	Customized Option
Exterior	18 gauge 304 Grade Stainless Steel, #4 finish	316 Grade Stainless Steel 18-gauge, #4 finish
Interior	18 gauge 304 Grade Stainless Steel, #4 finish	316 Grade Stainless Steel -18 gauge, #4 finish
Shelving	3; 304 grade Stainless Steel Shelves, Supports Up to 100 lbs of Evenly Distributed Weight	Custom sheet metal shelf per customer specification
Legs/ Casters	2.75". Total Weight Capacity is 300 lbs per Caster (not including the weight of the chamber).	Chamber can be placed directly on floor without casters
Panel Insulation	Minimum 2" thick insulation; closed cell polyisocyanurate (polyiso) foam core and polyurethane insulation.	
Doors	18 gauge 304 Grade Stainless Steel, #4 finish welded seams. Door is installed with 2 left hinges. Door is reversible- please specify swing direction. * refer to drawing for standard door location	
Access Port	2" I.D access port, cover and installed plug.	Customizable access port size and location available.

Capacity & Dimensions	US Standard	Metric
Interior Capacity	29.58 ft <sup>3</sup>	837.6 liters
External Dimensions	34"W x 35"D x 80.5"H	86.36cm W x 88.9cm D x 204cm H
Internal Dimensions	29.5" W x 29.75" D x 58.25" H	74.93cm W x 76.2cm D x 160.973cm H
Shelf Dimensions	28.75" W x 26" D	54.61 cm W x 66.68 cm D
Crated Weight	745 lbs	338 kg

Utilities	US Standard	International
Voltage (dedicated circuit required)	115 / 60 / 1	230 / 50 / 1
RLA	8	2.74m
Cord Length	9 ft long cord with NEMA 5-15P Plug	4 With Step Down Transformer
Drain Line	Chambers are equipped with 1/2" polytube. Floor drain or sink required adjacent to chamber	Condensate pump option available, if floor drain is not available nearby



## CL034 Incubator Technical Drawings

