Cold Isostatic Presses

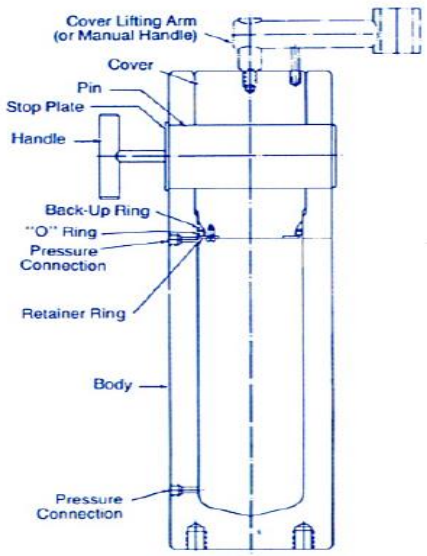
The CIP Process

Cold Isostatic Pressing (CIP) is a compaction process that adds strength and durability to a variety of powder materials. They are then placed in a pressure chamber filled with a liquid medium, and high pressure is then applied uniformly from all sides.

Quintus Technologies offers a full line of research-scale CIP (described at right) and mid –range production CIPSs (see reverse). Each unit is pressure tested to well in excess of its maximum rating, and cycle tested to ensure reliable operation. All models feature the patented threadless pin closure described below.

Threadless Pin Closure

This uncomplicated design offers speed, performance, and safety advantages over conventional threaded, interrupted thread, or clamping type vessels. It cuts cycle time by reducing the opening and closing time of the vessel to just a few seconds. It eliminates time-consuming makeup, as well as the hazards of thread galling and uneven stress distribution. Its reliability has been proven in hundreds of cycles.



Research-Scale CIPs

These compact, self-contained units are fast, convenient, and inexpensive systems. They are used for basic research, feasibility, and prototyping studies of Cold Isostatic Pressing. ***More Quintus Technologies CIPs are used in industrial, government, and university laboratories than any other isostatic press.*** Many are also used in small-batch production operations.

Research CIPs include pressure vessel, pressurization system, fluid reservoir, all instrumentation controls. They are delivered ready for connection to air and electricity. Most units are equipped with a convenient air-actuated cover lifting device.

The standard line includes six models with maximum operating pressures from 30,000 to 60,000 psi. Working chamber diameters range from 2” to 6”, with lengths of 22” and 23”.

Model CIP42260

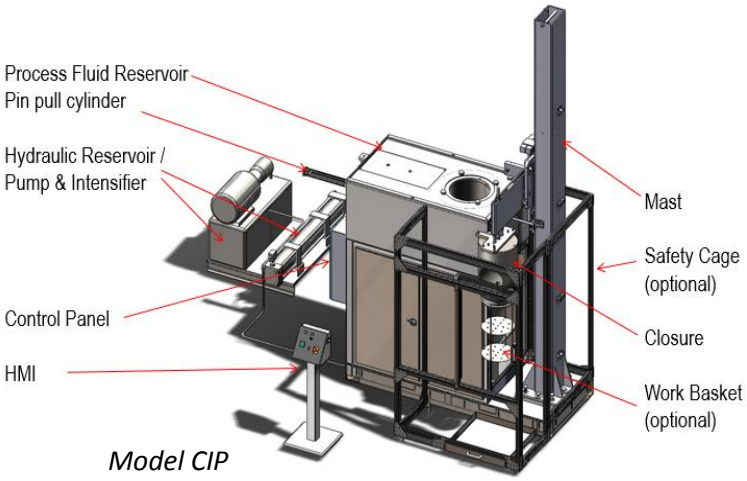
Standard Models (Other pressures and sizes available upon request)

Model Number	Maximum Working Pressure	Working Chamber Size		Cover Lifting Mechanism		Approximate Unit Weight
		I. D.	Length	Pneumatic Actuator	Manual Lifting Handle	
CIP32330	30,000 psi (2070 bar)	3” (76mm)	23” (584mm)		•	700 lbs. (318 kg)
CIP4.52230	30,000 psi (2070 bar)	4.5” (114mm)	22” (559mm)	•		1100 lbs. (500 kg)
CIP62330	30,000 psi (2070 bar)	6” (152mm)	23” (584mm)	•		1600 lbs. (725 kg)
CIP22260	60,000 psi (4140 bar)	2” (51mm)	22” (559mm)		•	700 lbs. (318 kg)
CIP32260	60,000 psi (4140 bar)	3” (76mm)	22” (559mm)	•		1100 lbs. (500 kg)
CIP42260	60,000 psi (4140 bar)	4” (102mm)	22” (559mm)	•		1700 lbs. (770 kg)

Pilot Plant/Production CIPs

For higher volume production applications, Quintus Technologies offers a full line of CIPs with totally automated vessel operation. A touch of a button activates the entry and removal of the cover and basket, threadless pin closure, water filling, draining, controlled pressurization and depressurization. This design provides the fastest available means for Isostatic Processing of production components.

Standard models are available up to 60,000 psi working pressure, with working chambers from 6” to 16” I.D. and lengths from 24” to 60”. Other sizes are available on special order. A variety of high-pressure pumps are available.



Model CIP

Process Module

Standard Models (Other pressures and sizes available upon request)

Model Number	Maximum Working Pressure	Working Chamber Size		Approximate Unit Weight
		I. D.	Length	
CP163818	16,300 psi (1124 bar)	16” (406mm)	38” (965mm)	16,000 lbs. (7,300 kg)
CP143625	22,700 psi (1566 bar)	14” (355mm)	36” (914mm)	16,000 lbs. (7,300 kg)
CP92433	30,000 psi (2070 bar)	9” (228mm)	24” (610mm)	9,000 lbs. (4,100 kg)
CP123633	30,000 psi (2070 bar)	12” (305mm)	36” (914mm)	16,000 lbs. (7,300 kg)
CP62466	60,000 psi (4140 bar)	6” (152mm)	24” (610mm)	9,000 lbs. (4,100 kg)
CP83666	60,000 psi (4140 bar)	8” (203mm)	36” (914mm)	16,000 lbs. (7,300 kg)

Contact factory for CE, PED, and other national code requirements. ASME code stamping available as an option.

Quintus TECHNOLOGIES

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CE