



# Pin Closure Cold Isostatic Presses

Cold isostatic pressing (CIP) is a compaction process for powders enclosed in an elastomer mold. The mold is placed in a pressure chamber, a liquid medium is pumped in, and high pressure is applied uniformly from all sides.

### CIP Applications

CIP is used with powdered metallurgy, cemented carbides, refractory materials, graphite, ceramics, plastics, and other materials (see reverse).

### Process Benefits

- High compaction and uniform density provides predictable shrinkage during the subsequent sintering process.
- Ability to process large, complicated, and near-net shapes saves time and cost in after-treatment.
- Capability to produce large aspect ratio parts (>2:1) with uniform densities.
- Green strength allows in-process handling and treatment, and lowers production costs.

**Capacities:** Threadless pin closure models for mid-range production applications have work zone diameters from 16 to 30 inches, lengths to 10 feet and operating pressures from 5,000 to 60,000 psi.

**Operation:** These models utilize a cover that fits into the vessel body and a pin that is inserted through both the body and cover to secure the closure. Opening and closing the vessel cover is fast and automated, thus reducing overall cycle time and adding efficiency to the production operation.

**Design:** The threadless pin closure offers advantages over threaded type closures: Its quick and simple straight-line movement helps to cut cycle time, and is not subject to thread galling or uneven stress distribution.

**System components:** pressure vessel, cover, locking pin, pressure valve system, electronic control system with PLC, integral fluid reservoir, and pressurizing pump.

### Options:

- Product basket attached to cover
- Automated product handling with conveyors
- Dual filter with dirt alarm and filter pumps
- Faster cycling



**Model CP2036**  
Footprint: 100" x 48".  
Height to top of vessel: 100"  
Height to top of lifting device: 160"

### Standard Models (Other pressures and sizes available on request)

Model	Operating Pressure (psi)	Vessel Size (in.)	
		Inside Dia.	Height
CP1636	15,000-30,000	16	36
CP2028	15,000-30,000	20	28
CP2036	15,000-30,000	20	36
CP2048	15,000-30,000	20	48
CP2472	15,000-30,000	24	72
CP3098	To 10,000	30	98

Contact factory for ASME code stamping, CE mark, PED, or other national code requirements.

# CIP Applications

Cold isostatic applications include cemented carbide rolls and wear parts, nozzles, blocks, and crucibles for the refractory industry, isotropic graphite, ceramic insulators, tubes for chemical applications, ferrites, metal filters, preforms, and plastic tubes and rods.



*Cemented carbide products*



*Parts produced from isostatically pressed graphite*



*Long refractory nozzles and stoppers*



*Metal filters produced to net shape*



*High voltage ceramic insulators*



*Molybdenum billets weighing approx. 1000 kg*



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