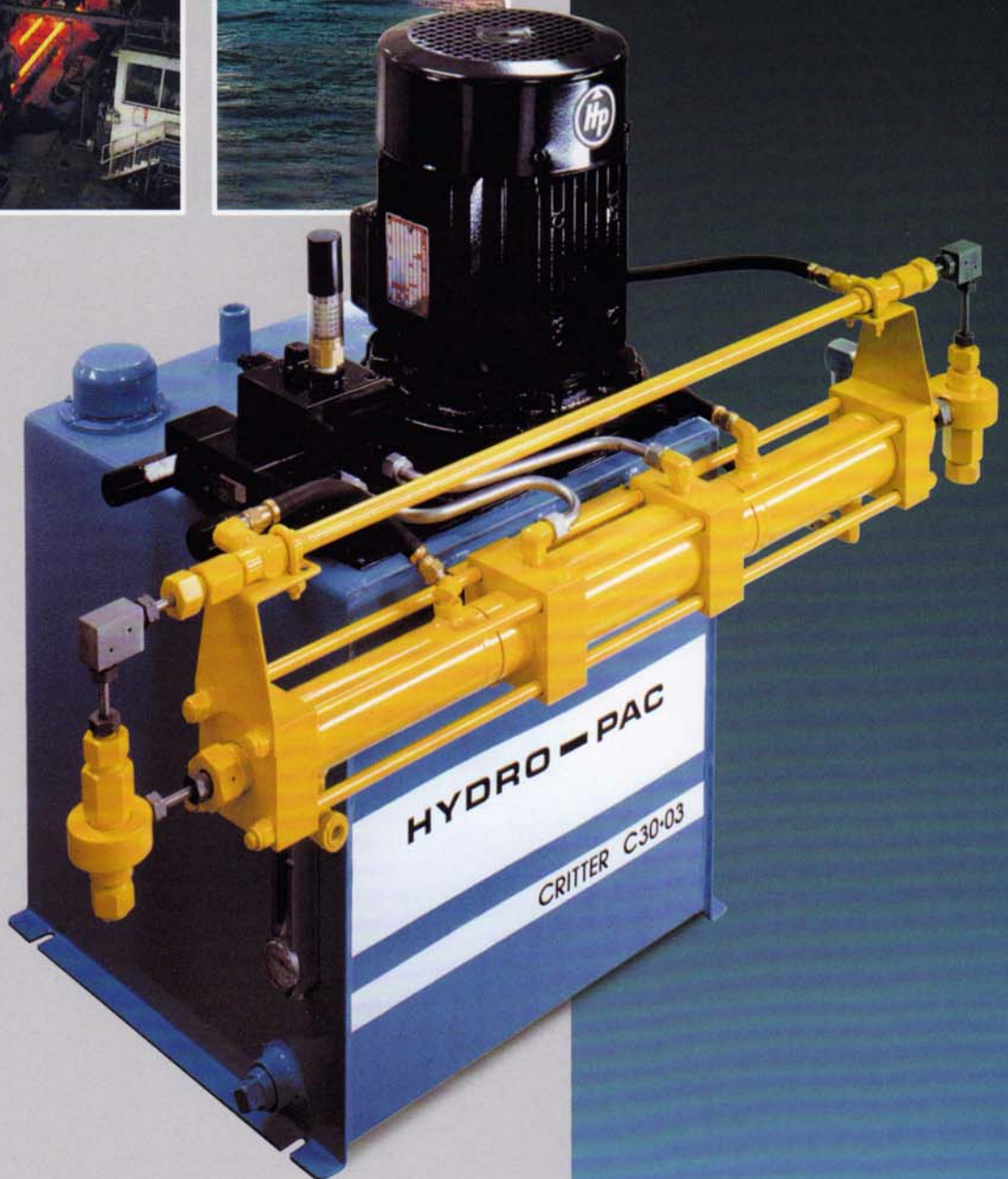




HYDRO-PAC INC.



**Li'l CRITTER™
High-Pressure Gas
Compressors**



Li'l CRITTER™ High-Pressure Gas Compressors



HYDRO-PAC

Li'l CRITTER™ High-Pressure Gas

Compressors were designed by Hydro-Pac to offer big compressor reliability and service life in smaller machines.

These tough "little brothers" of Hydro-Pac's FLEXI-POWER™ compressors are well suited for laboratory and production applications. They are offered in sizes of 3, 5 and 7.5 hp for pressures to 45,000 psi.

Li'l CRITTER™ compressors are available for a variety of industrial gases, and are offered as single or two-stage units.

Features

Hydro-Pac Li'l CRITTER™ High-Pressure Gas Compressors feature:

- Oil-free nonlubricated gas cylinders minimize the chance of contamination.
- Long slow stroke results in longer packing and check valve life.
- Reversible valve seats allow use of both sides prior to seat replacement.
- Efficient operation does not require plant air.
- Li'l CRITTER™ compressors may be started under full load.
- Water-cooled cylinders and interstage cooler lower operating and gas temperatures and increase seal life.
- Pressure compensated gas piston seals adjust automatically for wear.
- Compact self-contained machine requires minimum space.
- Auto-Shift design ensures smooth and reliable cycling of the intensifier without electrical switches.
- ***The 7.5 hp Li'l CRITTER™ Compressor incorporates an advanced hydraulic system. Flow is adjusted according to load resulting in greater overall capacity.***



Patented Free-Piston Design

Li'l CRITTER™ Compressors

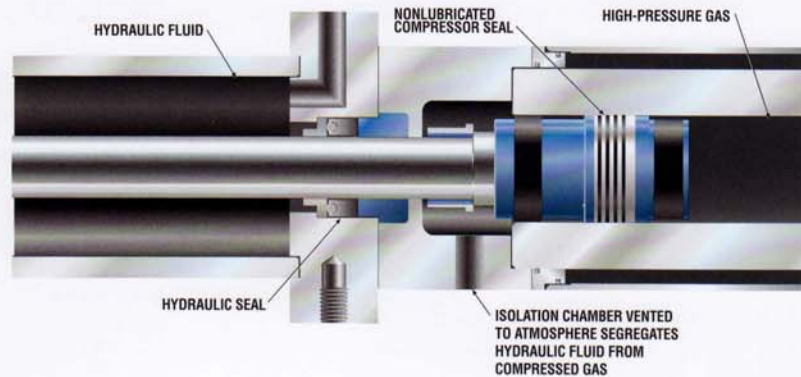
feature Hydro-Pac's patented free-piston design. This exclusive feature allows replacement of all high-pressure seals in just a few minutes without major disassembly of the intensifier.



Freedom from Contamination

An isolation chamber ensures segregation of the compressed gas from the hydraulic fluid.

For applications requiring ultra-pure gas, optional full-length isolation spacers are available that do not allow entry of the oil wetted portion of the plunger rod into the gas cylinder.



Applications

Li'l CRITTER™ High-Pressure Gas Compressors are ideally suited for:

- Hot isostatic pressing
- Pneumatic testing
- Chemical processing
- Supercritical extraction
- Gas circulation
- Instrument calibration
- Many other applications that require clean gas

Standard Equipment

Hydro-Pac Li'l CRITTER™ High-Pressure Gas Compressors are furnished as complete units.

- Gas intensifier with inlet, interstage and discharge check valves
- Electric motor 230/460 v, 3 ph, 60 Hz, TEFC
- Hydraulic power unit with pump, directional control valve and filters
- Interstage over-pressure protection device
- Instruction manual

Standard Gases

- Argon
- Nitrogen
- Helium
- Carbon dioxide
- Dry air
- Mixtures of 20% oxygen and other inert gas
- Methane
- Other inert gases

Options are available for Compressing

- Hydrogen
- Ethylene
- Other gases

Optional Equipment

- Spare-parts kit
- Motor starter
- Pressure gauges for suction, interstage and discharge
- Aftercooler
- Coolant-flow sensor
- Oil reservoir heater
- Explosion-proof motor

Utilities

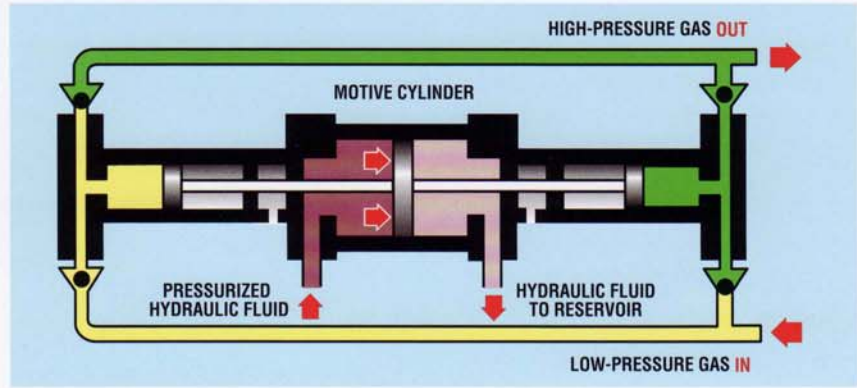
- Electrical:
230/460 v, 3 ph, 60 Hz
(Other voltages available)
- Coolant:
90 F maximum, 0.25 gpm/hp
(30 C maximum, 1.25 lpm/kW)

How Li'l CRITTER™ Compressors Work

Single-Stage Compressors

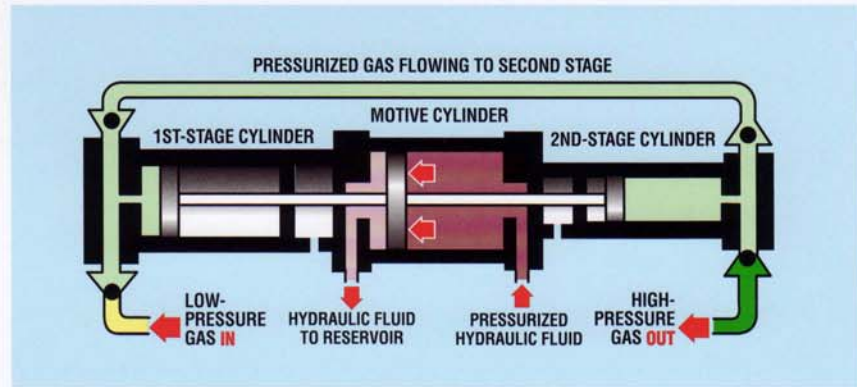
discharge gas with every stroke. As one cylinder displaces gas, the cylinder on the opposite side fills with gas. At the end of the stroke, the gas pistons reverse direction and strokes in the opposite direction.

The cycle repeats automatically.



Two-Stage Compressors

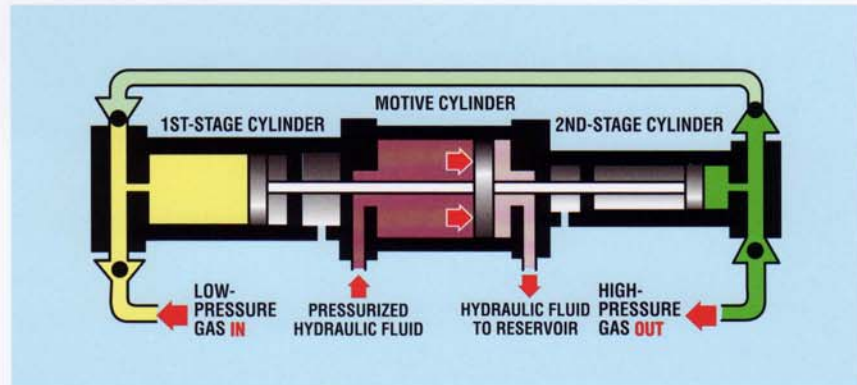
compress the gas in a two-step process. The larger diameter first-stage cylinder pumps gas to an intermediate pressure in the smaller diameter second-stage cylinder.



STAGE I COMPRESSION

The second-stage cylinder then pumps the gas out of the intensifier to the final pressure. During this portion of the compression process, the first-stage cylinder fills with gas at inlet conditions.

The cycle repeats automatically.



STAGE II COMPRESSION



Specifications

Model Single-Stage	Discharge Pressure		Power		Weight		Reservoir		Inlet Connection	Discharge Connection	
	psi	MPa	hp	kW	lb	kg	gal	liter			
C10-03-1CX	10,000	70	3	2,25	200	90	10	40	3/8 FNPT	SF250CX	1/4 x .109 HP
C10-05-1CX	10,000	70	5	3,75	200	90	10	40			
C12-03-1CX	12,000	80	3	2,25	200	90	10	40	1/4 FNPT	SF250CX	1/4 x .109 HP
C12-05-1CX	12,000	80	5	3,75	200	90	10	40			
C15-03-1CX	15,000	105	3	2,25	200	90	10	40	3/8 FNPT	SF250CX	1/4 x .109 HP
C15-05-1CX	15,000	105	5	3,75	200	90	10	40			
C15-7.5-1CX	15,000	105	7.5	5,6	800	365	20	75	1/2 FNPT	SF375CX	3/8 x .203 HP
C30-03-1CX	30,000	210	3	2,25	200	90	10	40	1/4 FNPT	FC250C	1/4 x .083 HP
C30-05-1CX	30,000	210	5	3,75	200	90	10	40			
C30-7.5-1CX	30,000	210	7.5	5,6	800	365	20	75	1/2 FNPT	FC375C	3/8 x .125 HP

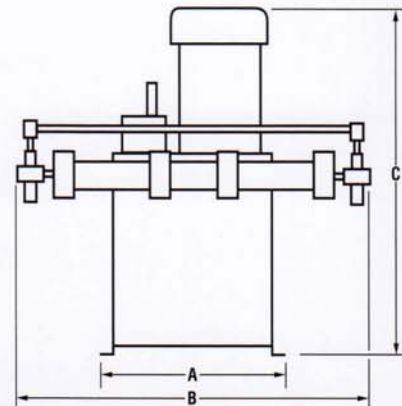
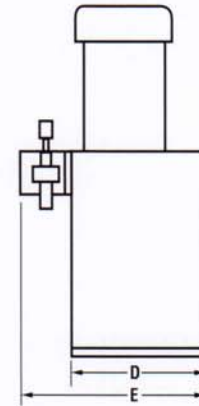
Two-Stage

C15-03-2CX	15,000	105	3	2,25	200	90	10	40	3/8 FNPT	SF250CX	1/4 x .109 HP
C15-05-2CX	15,000	105	5	3,75	200	90	10	40			
C15-7.5-2CX	15,000	105	7.5	5,6	800	365	20	75	1/2 FNPT	SF375CX	3/8 x .203 HP
C30-03-2CX	30,000	210	3	2,25	200	90	10	40	1/4 FNPT	FC250C	1/4 x .083 HP
C30-05-2CX	30,000	210	5	3,75	200	90	10	40			
C30-7.5-2CX	30,000	210	7.5	5,6	800	365	20	75	1/2 FNPT	FC375C	3/8 x .125 HP
C45-03-2CX	45,000	310	3	2,25	200	90	10	40	1/4 FNPT	FC250C	1/4 x .083 HP
C45-05-2CX	45,000	310	5	3,75	200	90	10	40			
C45-7.5-2CX	45,000	310	7.5	5,6	800	365	20	75	1/2 FNPT	FC375	3/8 x .125 HP

Capacity curves and operating envelopes are available upon request.

Dimensions

Model	A		B		C		D		E	
	in	mm	in	mm	in	mm	in	mm	in	mm
C10-03-1CX C10-05-1CX	16.75	425	40	1015	31	790	15	380	19	485
C12-03-1CX C12-05-1CX	16.75	425	36.75	935	31	790	15	380	19	485
C15-03-1CX C15-05-1CX	16.75	425	39	990	31	790	15	380	19	485
C15-7.5-1CX	33.0	840	45.5	1155	31	790	17	430	24	610
C30-03-1CX C30-05-1CX	16.75	425	33.5	850	31	790	15	380	19	485
C30-7.5-1CX	33.0	840	45.5	1155	31	790	17	430	24	610
C15-03-2CX C15-05-2CX	16.75	425	39.5	1000	31	790	15	380	19	485
C15-7.5-2CX	33.0	840	45.5	1155	31	790	17	430	24	610
C30-03-2CX C30-05-2CX	16.75	425	36.75	935	31	790	15	380	19	485
C30-7.5-2CX	33.0	840	45.5	1155	31	790	17	430	24	610
C45-03-2CX C45-05-2CX	16.75	425	38.5	980	35	890	15	380	20	510
C45-7.5-2CX	33.0	840	64	1625	31	790	17	430	24.5	625



**When ordering or inquiring
about Li'l CRITTER™
Compressors please specify:**

- Type of gas
- Inlet and discharge pressures
- Capacity
- Utilities: voltage and hertz, minimum and maximum coolant temperatures
- Installation: indoor or outdoor
- Ambient temperature (outdoor installations)
- Options
- Model number (if known)

Other Products

Hydro-Pac designs and manufactures equipment to generate, control and monitor high-pressure fluids and gases.

- Low-pressure gas compressors 1000 to 10,000 psi, 3 to 40 hp.
- Large high-pressure gas compressors 2000 to 100,000 psi through 200 hp.
- High-pressure pumps 10,000 to over 100,000 psi, 1/2 to 400 hp.
- Large port valves, fittings and tubing for high-flow requirements at 40,000 to 100,000 psi.

- Electrical power and thermocouple glands to operate furnaces and electronic equipment in pressurized environments to 60,000 psi.
- Large high-pressure vessels designed and manufactured in accordance with ASME Code Section VIII, Divisions 1, 2 and 3.
- Complete high-pressure systems.

**Call or write Hydro-Pac Inc.
for your pressure equipment
requirements. Our complete
Product Catalog is available
upon request.**



HYDRO - PAC INC.

P.O. Box 921
7470 Market Road
Fairview, PA 16415 USA

800-394-1511

814-474-1511 • Fax 814-474-3421
www.hydropac.com
e-mail: hydropac@hydropac.com