Li'I 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.

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**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.

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**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, TEF
- 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

Optional Equipment

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

Options are available for Compressing

- Hydrogen
- Ethylene
- Other gases

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.

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.
## Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Discharge Pressure</th>
<th>Power</th>
<th>Weight</th>
<th>Reservoir</th>
<th>Inlet Connection</th>
<th>Discharge Connection</th>
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<td>hp kW</td>
<td>lb kg</td>
<td>gal liter</td>
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<td>SF250CX 1/4 x .109 HP</td>
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### Two-Stage

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Capacity curves and operating envelopes are available upon request.

## Dimensions

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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.