

# Haskel®

INTERNATIONAL, INC.

▶▶▶ HIGH PRESSURE SYSTEMS TECHNOLOGY ▶▶▶▶▶



WORLDWIDE INDUSTRIAL TECHNOLOGY  
COMPONENTS AND HIGH PRESSURE SYSTEMS

**HOSE TEST RIGS**

Hose Test Rigs for testing to Automotive, Industrial and Gas industry specifications that include:

- Mandrel extraction
- Proof
- Pulse
- Leak
- Burst

They can be supplied with optional features such as:

- Vibration
- Temperature control and Environmental Chambers
- Flushing to cleanliness standards
- Automatic PLC sequence control
- Quick clamping mechanism

Typical hoses being tested include:

- Automotive hoses such as:
  - Power Steering
  - Air Conditioning
  - Radiator
  - Brake
- Aerospace hose and pipework
- Industrial hydraulic and gas hoses



Temperature controlled burst and impulse test rig with environmental chamber. 240 bar, -40°C to +125°C



2 station combined hose mandrel extraction and pressure test rig



Air leak and decay test rig for power steering hoses in the automotive industry. 7 bar, 3cc/min leak rate

Multiple station hose test rig for hose assembly facilities up to 30,000 psi



## VALVE TEST RIGS

Valve Test Rigs for testing all types of Process Control and Safety Relief Valves to confirm:

- The pressure containing capability of the valve shell
- The degree of tightness and pressure retaining capabilities of the valve seat(s) and/or closure mechanism
- The opening pressure of a relief/safety valve

Tests include:

- Shell test - pressure inside the assembled valve to 1.5 times working pressure
- Back seat test - pressure inside with seat fully opened and closed to 1.1 times working pressure
- High pressure closure test - pressure applied to each side of the closed valve to 1.1 times working pressure
- Low pressure closure test - same as high pressure but with air at 100 psi (7 bar), detected by air bubbles in a water column
- Relief valve test - opening pressure using a 'Pop' test and to 90-95% of set pressure



Relief valve 'pop and flow' test rig

Test rigs can be supplied with a range of clamp benches:

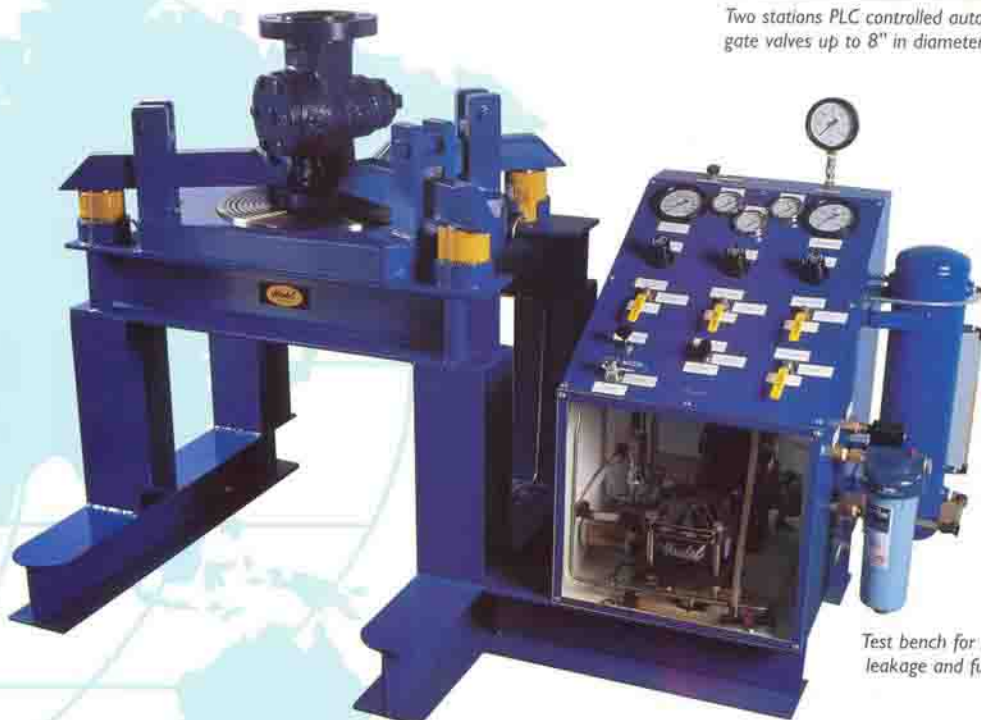
- Manual clamping
- Hydraulic clamping
- Automatic PLC proportional control hydraulic clamping

Other features:

- Hydrostatic, air and/or gas pressure generation
- Sizes up to 20", class 1500



Two stations PLC controlled automatic valve test rig for gate valves up to 8" in diameter



Test bench for hydraulic or gas pressure leakage and functional testing of valves

**CYLINDER & CONTAINER TEST RIGS**

Pressurized Gas Cylinder and Container Test Rigs for Testing:

- Industrial Gas Cylinders
- Fire Extinguisher Bodies
- Air bag inflators
- CO2 cylinders
- Air receivers
- NGV cylinders

Test includes:

- Proof
- Volumetric Stretch
- Pulse
- Burst
- Autofrettage
- Leak



*Gas cylinder stretch test rig complete with moveable burrettes*



*Two station air receiver water test rig*

**PORTABLE PRESSURE TEST SYSTEMS**

Haskel offers a wide range of small portable test systems, commonly called Testpacs, suitable for a variety of pressure testing applications.

Uses include pressure testing of:

- Heat exchangers
- Pipelines
- Fire extinguishers
- Wellhead valves
- Pumps
- Boilers
- Accumulators
- Filter housings
- Regulators

Haskel Testpacs are also commonly used for testing the integrity of hydraulic and pneumatic circuits in the aerospace, mobile and industrial markets.



*Testpac 200*



*Portable hydro-proofer*

## GAS PRESSURIZATION AND TRANSFER

Haskel are specialists in the design, manufacture, test and commissioning of standard and customized systems in a wide range of industries and applications.

Our experience in high pressure gas pressurization and transfer has enabled us to develop our reputation for high pressure gas control technology.

### TYPICAL GASES -

Haskel air and hydraulically driven gas boosters routinely handle the following:

- Nitrogen
- Nitrous Oxide
- Argon
- Carbon Monoxide
- Ethylene
- Breathing Air
- Methane
- Sulfur Hexafluoride
- Helium
- Carbon Dioxide
- Oxygen
- Hydrogen
- Deuterium
- Neon
- Natural Gas



Air service cart - 5500 psig



CNG Refueling Booster System -  
automotive alternative fuel



Non-magnetic oxygen charging system used in Naval minehunters



Argon charging unit used in defense industry



Hydraulic drive  
gas booster unit -  
plastic injection molding  
machine manufacturers

## **GAS AND LIQUEFIED GAS**

Haskel gas booster systems have also long been employed in a variety of industries where the need for transfer and pressurization of "liquefied" gas exists.

These specialty gases include carbon dioxide, sulfur hexafluoride, freon, halon, propane, ISO-butane and ISO-pentane, to name a few.

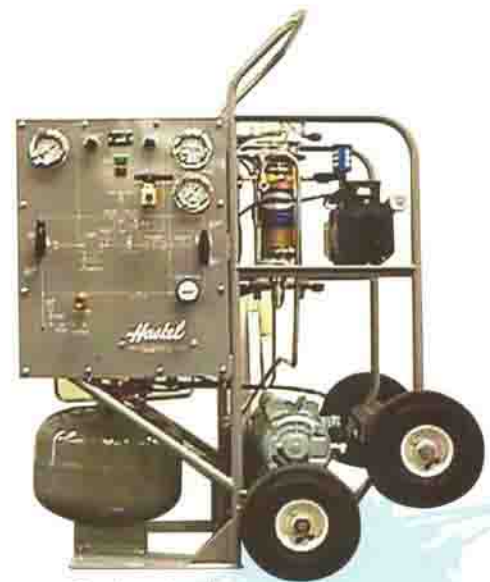
Benefits offered by Haskel for these applications include the ability to pump these gases in both their liquid and gaseous states.



*Gas charging cart - defense industry*



*SF6 cart for reclaim, recovery & recharge in power generation*



*SF6 recovery & recharge handcart*



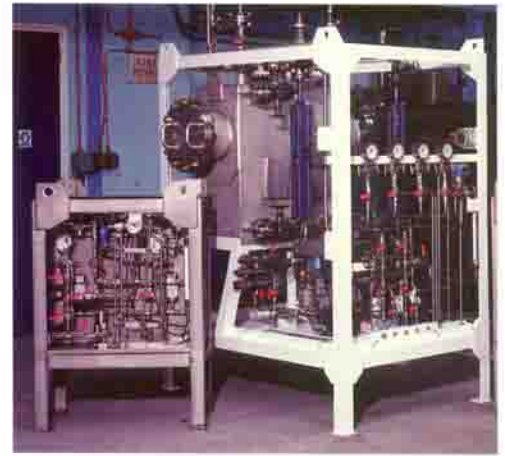
*Portable liquefied gas transfer unit for halon, etc*



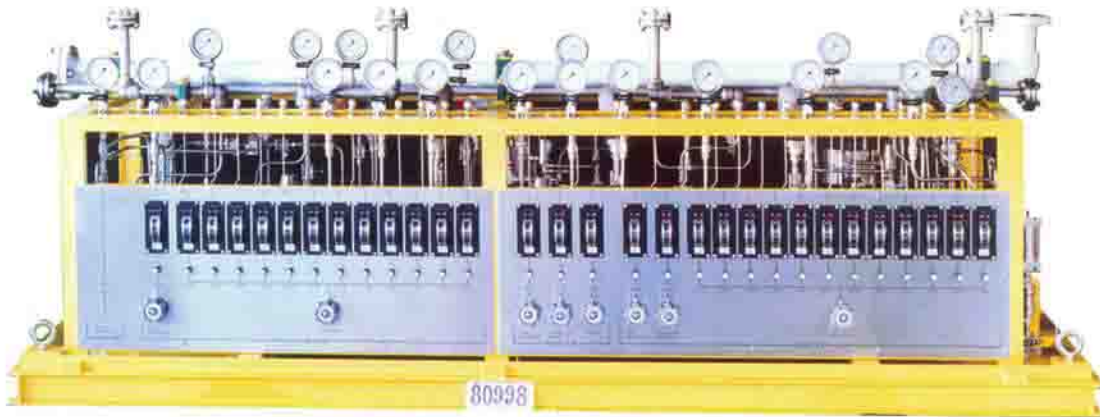
*CO2 liquefied gas pumping system - pharmaceutical & biotech industry*

## CHEMICAL INJECTION SKIDS

Supplying the majority of the world's oil exploration and production companies, Haskel specializes in air/gas driven systems used for the injection, dosing and metering of chemicals into oil and gas wells, pipelines, etc.



Chemical injection skid - corrosion inhibitor



Chemical injection skid - demulsifiers

## HYDRAULIC SYSTEMS

Haskel is a leading supplier of high pressure hydraulic systems to the fluid power industry. Whether it be systems for powering hydraulic jacks in aircraft ground support, clamping in the machine tool industry, hydraulic presses in the automotive and tire manufacturing industry, or valve actuation in the energy market, Haskel systems can provide that total solution for these applications.



Valve actuator unit for geothermal plant



Hydraulic power systems for aircraft jacks

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For further information on Haskel products, visit our website at:

[www.haskel.com](http://www.haskel.com)

