Q1 Design and Manufacturing is a dedicated division within the HyPOWER group, set up to be a central engineering and fabrication division for all HyPOWER branches. Q1 provides a concentrated technical group specializing in hydraulic, pneumatic, filtration and lubrication systems design and supply.

At Q1 Design & Manufacturing our goal is to produce the highest quality, most cost effective hydraulic power units while continuously improving manufacturing methods to reduce lead times in production. Quality is priority one in developing world-class solutions for the challenges faced by industry today.

We offer:
- Custom design and engineering
- CAD schematics and general arrangement drawings
- Turnkey systems
- Machine start-up and commissioning
- Centralized lubrication and filtration systems
- Training and maintenance programs
- Field installation,
- System flushing and oil analysis
- Test reports and full maintenance documentation

“For your application ...we have a solution!”

Contact your nearest HyPOWER location and a HyPOWER technical representative will be pleased to meet with you and discuss your system requirements.

www.hypower.com

“Concept to Completion”
It all starts with an idea...

Q1 Design employ Certified Fluid Power Specialists as project managers, with the education and experience to meet your technical challenges. Our shop personnel are highly skilled journeymen with many years experience in the fluid power industry.

We take pride in what we build!

“Concept to Completion”

Vision
To be the national leader in our industry as recognized by our people, customers and suppliers.

Mission
To be the leader in the supply and service of mechanical and fluid power technical solutions in Canada. We provide quality products and service in the pursuit of profitable and responsible commercial success of our customers and our business. A.I.T. is committed to a safe, respectful and productive workplace where employees are trained and given the opportunity to develop within the company.
300 Gallon Vertical Hydraulic Power Unit
Lumber Drying Kiln
Lumber drying press application utilizing innovative air over hydraulic pressure holding mode.

**Features:**
- 60 horsepower
- Pressure compensated 29 GPM in-tank pump
- 6000 PSI remote controlled
- Proportional direction control valves.
- Custom steel manifold assembly.

---

400 Gallon Log Ladder
Hydraulic Power Unit

**Features:**
- 400 gallon custom reservoir & base assembly.
- Vickers 62 GPM pressure compensated piston pumps.
- 60 horsepower electric motors.
- Custom steel pressure header assembly.
- Greer bladder type accumulator.
- 30 GPM / 5 horsepower cooling loop assembly.
- Dual fan air/hydraulic cooler.

---

Lathe Deck Hydraulic Power Unit

High production, close tolerance electro-hydraulic log peeling application.

**Features:**
- 3000 gallon reinforced “one-piece” design reservoir.
- 870 total input horsepower.
- Variable displacement vane pumps.
- Pall filtration.
- Custom pressure and return headers.
**Chip Truck Dumper**

*Hydraulic Power Unit*

High flow, low hydraulic shock, electronic closed-loop computer controlled chip processing system.

**Features:**
- 1200 gallon custom reservoir and base assembly.
- 75 and 100 horsepower motors.
- Pressure compensated piston pumps.
- Hydrostatic reclaim pump with electronic displacement control.
- Vickers manifold mounted proportional cartridge valves (750 GPM).

---

**Wood Chip Stoker**

*Hydraulic Power Unit*

**Features:**
- 300 gallon custom reservoir & base assembly.
- Vickers 20 GPM pressure compensated piston pumps.
- 40 horsepower electric motors.
- Custom pressure header.
- Water/oil cooling loop.
- Hedland flow meters.

---

**Waste Wood Grinder / Reclaimer**

*Hydraulic Power Unit*

**Features:**
- Custom 150 gallon reservoir and base assembly.
- Multi-pump closed loop rotor system.
- 125 horsepower electric motors.
- Closed loop pumps with electronic displacement controller, charge pump and pump filter.
- Vickers pressure compensated conveyor drive pump system.
- Pressure filtration.
**Marine & Off-Shore**

### Stainless Steel Hydraulic Power Units

**Not a Problem!**

### Oil Platform Positioning System

**Features:**
- Classification Society approved.
- Explosion proof.
- Failsafe circuitry.
- Epoxy coated.
- 6000 PSI.

### Marine Hydraulic Power Unit

Marine hydraulic steering system power units supplied to customers worldwide.

**Features:**
- ABS, DNV, USCG, and Lloyds Register compliant.
- Bang-Bang or proportional control.
- Fixed and variable displacement pumps.
- Custom manifolds.
Self Contained Diesel Drive Power Unit

Features:
- HyPOWER Systems 300 gallon custom reservoir & base assembly.
- CASE 165 horsepower diesel engine
- 100 gallon double walled certified diesel fuel tank.
- 33 GPM, 5000 PSI pressure compensated piston pumps.
- Industrial muffler for noise reduction.
- Automatic start/stop and speed controlling governor.

Bearing Glycol Cooling Hydraulic Power Unit

Features:
- Enclosure for outside service, designed for limited space requirements.
- Gear pump.
- 1½ horsepower, single phase electric motor.
- Visual flow monitoring.
- Air/hydraulic cooler.
- Wired complete with an electric motor starter.

Knife Gate Valve Actuator Power Unit

Used in various large pipe line systems eg. oil production, municipal water, mining slurry systems

Features:
- Cold weather hot oil recirculating circuit.
- Leak proof load holding.
- Accumulator power loss back-up.
- AC or DC prime mover.
Custom Flushing Units

Custom designed flushing systems for a wide variety of fluid types, viscosities, and cleanliness levels.

**Typical Features:**
- 150 gallon standard JIC reservoir on castors.
- Vickers double vane pump (90 GPM & 45 GPM).
- Output flow 135 GPM at 450 PSI system pressure
- High pressure and return line filters with electrical indicators.
- 460 or 230 volt electric motors available.

**Features:**
- ¾ horsepower single phase motor with thermal overload.
- Quiet gear pump with 7.5 GPM flow.
- Safety bypass.
- Standard spin-on filters with a micron rating of 10, 5, or 3.
- Pressure filters and water removal elements available.
- 1” suction line, ¾” pressure line complete with 30 ft. of pressure line.
- 40” suction wand.
- Weatherproof on/off switch.
- Drip tray.
- Built-in hose rack.

**We can design and build a custom unit for you.**

**Our solutions are only limited by your imagination!”**
Test Equipment

Heavy Duty Multi-Function Custom Test Benches

HyPOWER test benches are capable of testing a variety of industrial and mobile components including; motors, valves, and cylinders.

Features:
- Dual pump / motor test cells with infinite positioning and flange adapters.
- Electric motor, diesel and gas engine drives.
- 6000 PSI load capable.
- Vickers pressure compensated open circuit drive.
- D03 to D10 inclusive; valve test stations.
- Custom test bench panel.
- Optional overhead crane.
- 12V to 220V/1Ph/60Hz auxiliary power supply.
- Digital and/or analog monitoring of pressure, temperature, and flow.
- Auxiliary outlet ports.
- Integral test cylinder.
- Computer generated test reporting available

Our test benches are custom designed and fabricated to suit your individual requirements
Repair Equipment

Cylinder Hones

Features:

➤ Custom built hone frame and cylinder bench assembly.
➤ 2” to 12” bore by 20 ft. long capable.
➤ Hydraulic power unit includes 15 horsepower electric motor and 20 GPM pump.
➤ Custom control panel
➤ All electrical components are pre-wired.
➤ End plate capable of mounting cylinder head removal assembly.
Single or Dual-Sided Hydraulic Trainer Board Units

“HyPOWER Systems is dedicated to raising the quality of education in the fluid power industry.”

These custom boards are capable of duplicating a multitude of hydraulic circuits.

Features:

➤ The dual sided version will allow two groups to operate circuits from either side of the board simultaneously.

➤ Modular design permits fast, convenient valve removal, additions and replacements, depending on circuit requirements.

➤ Hydraulic actuators include: cylinder with vertical weight, cylinder with rod cam and multi position deceleration plunger valve, and hydraulic motor with belt, sheave, and motor guard.

➤ “No-Leak” quick disconnect fittings.

➤ Multi port pressure, drain, and tank manifold block.

➤ “Turn key” design complete with on / off main electrical box. Each side of the trainer board has its own emergency safety shut off button.

➤ Additional board space for future hydraulic, electro-hydraulic, or pneumatic component add-ons.

➤ Each board comes with component / tool storage drawers.

➤ Rugged, light weight customized construction and heavy duty casters allow the trainer board units to be mobile for classroom and laboratory use.