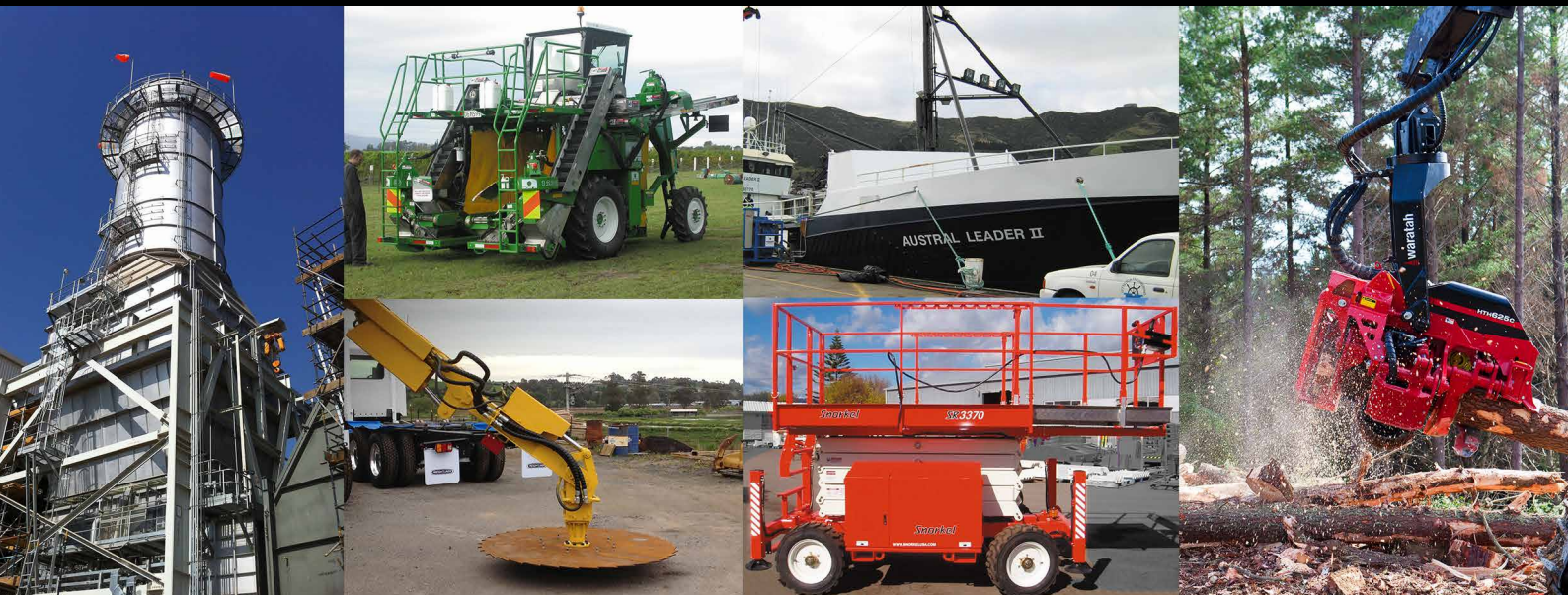


Powering Business Nationwide





Company Profile

Hyspecs is a hydraulic engineering company, founded in 1972, with branches in Melbourne, Auckland, Christchurch and locally based representatives in Brisbane and Taupo. We specialise in hydraulic system design, specification and component selection, hydraulic servicing and maintenance of existing hydraulic plant and equipment.

- Hydraulic Servicing, Sales, Design, Installation, Certification, Preventative Maintenance & Fault Finding
- Australia and Worldwide shipping
- Nation wide coverage with 24x7 backup

How Can We Help?

- Industrial, mobile and marine system design and component application
- The manufacture of reservoirs and power packs to general specification or your specific requirements
- Integrated manifold design, application and manufacture
- Hydrostatic drive calculation, design and component application
- Repairing hydraulic machinery, cylinders/rams, pumps, motors, valves, accumulators; you name it, if its hydraulic related – we can help you
- Certification, preventative maintenance, fault finding
- Inspection to assess failure cause and the best solution
- The manufacture of hydraulic cylinders to general specification or your specific requirements
- Installation of steel and stainless steel tubing and hydraulic lines
- Commissioning and maintenance of all hydraulic systems
- Designing maintenance programmes and oil condition monitoring

Why Choose Hyspecs?

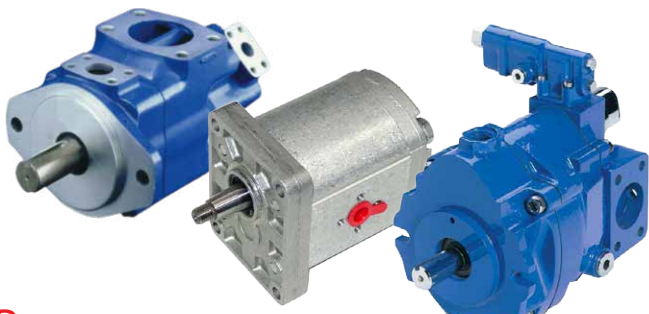
- Average over 15 years of hydraulic experience per staff member - give us your hydraulic problems and we will provide you with the solution
- National coverage - sales and service engineers on the road, supported by qualified internal staff and product specialists
- Manufacture, assembly and service centre in Melbourne.
- We can deliver to most parts of the country – overnight
- Large hydraulic stock holding and 24/7 technical sales and service backup – right part on time
- Hydraulic and electric test bench facilities
- Dedicated service division
- Order parts after hours; Online shopping at <http://www.hyspecs.com.au/products/category>.
- Hydraulic training seminars for customers and bi-weekly technical internal training for staff
- Hyspecs can draw on sister company Hytech to manufacture custom hydraulic manifolds to your specification

Seminars:

Hyspecs offers a two day hydraulic training seminar for customers and interested parties. The course covers hydraulic principles, fault finding/diagnosing, system design and component selection. For more information visit our website www.hyspecs.com.au/services/seminars.

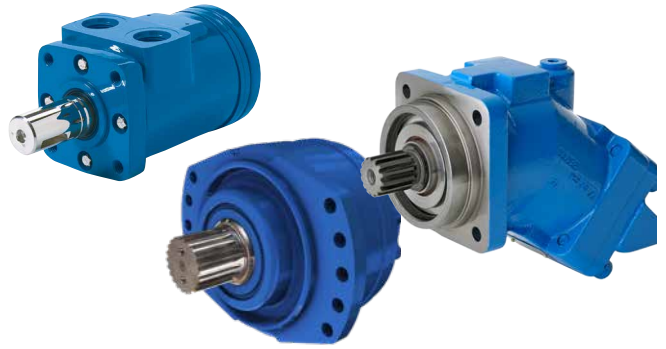
"It has given me a much greater understanding of hydraulic systems"
- Marine and General Engineering

Hyspecs stocks more than 10,000 products, we can deliver to most parts of the country overnight, with forecasting to make sure we have the right stock for customers.



Pumps

Hyspecs stocks an extensive range of gear, vane and piston pumps. Standard frame sizes are stocked in both Euro and SAE mounts. Pumps can be stacked into multiple units and field reversed.



Motors

Stocked motors include gear, geroter, geroler, vane and piston. Frame sizes to suit your speed and power requirements.



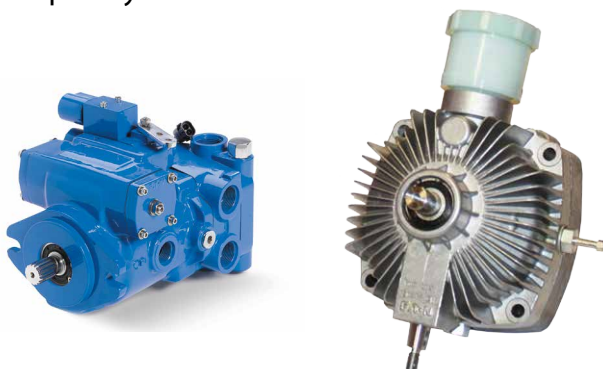
Powerpacks

Hydraulic Powerpacks designed and built to your specifications. Standard "off the shelf" powerpacks are also available. Power pack accessories include Hyspecs tanks, flexible couplings, gauges, bell housings, and filler breathers to name a few. All that is required to complete your machine.



Control Valves

Extensive range of directional manual control valves, electro-proportional load sensing valves, flow controls, cetop valves and accessories.



Hydrostatics

Light, medium and heavy duty piston pump and motor products from Eaton. Variable displacement open and closed loop piston pumps along with fixed and variable piston motors. Included are the light duty close coupled transmissions and transaxles.



Cartridge Valving & Manifolds

Cartridge manifolds and valves can be incorporated into a convenient "Hydraulic Integrated Circuit". If you can think of it, we can make it. Custom designed and manufactured by Hyspecs in the minimum possible time.



Filtration

A full compliment of filters to suit even the most demanding and complex systems. This includes the new generation of electro proportional based circuits. Suction, return and high pressure versions ex stock.



Drive Accessories

Comer planetary reduction gear boxes, PTO gearboxes, over-hung load adaptors, electro-magnetic and manual clutches. All designed to directly interface with our standard Euro or SAE mount pumps and motors.



Excavator Valving

Custom designed cartridge valve manifolds, designed specifically to control excavator attachments. Quickhitch, tilt, thumb, pilot control and Safex™ Valve.



Hydraulic Accessories

Oil Coolers, accumulators, gauges, flow dividers, hydraulic remotes, test points and hoses, tank flanges. Everything you need to finish a hydraulic system.



Power Steering

Off highway steering components from Eaton to suit open and closed centre, power beyond and load sense systems. Displacement and port options mean that an extensive range of machines can be catered for by "off the shelf" steering control units.



Electronic Controls

Kar-Tech & Magnetek radio remote controls. Specifically designed and manufactured for the wireless control of hydraulic equipment. Hydraforce Programmable Valve Drivers - Coil & Remote Mounted.

Order online www.hyspecs.com.au. It's easy to use and you can either search by category, brand or by using the built in search engine, you can find a product directly by part number or description. The site is available 24/7 so if you've run out of time during the day to order that part, you can always logon after hours, place the order and we'll get it dispatched first thing the following morning.

*".....another year has passed with continued excellent service from the team at Hydraulic Specialties."
Garth, TRT*



Power Generation Hydraulics

For large power generation projects based in the Middle East, Hyspecs has supplied 33 hydraulic powerunits with interconnecting pipework and assisted our customer to pass factory acceptance tests. Design + Supply + Commission + ongoing support.



OZ Spread

Hyspecs has worked closely with Ozspread to improve spreading rates and performance, while reducing heat generation in the hydraulic system, eliminating the need for a cooler.



Staging Hydraulics

Clifton Productions approached Hyspecs to help them improve the way they were assembling stages onsite. Clifton had developed a way to assemble the stage and lighting rig on the ground, Hyspecs provided the knowhow and equipment to raise them into the air. Several years later the concept has proven itself time and time again with a number of stage sizes and shapes now available.

"This email is to show our appreciation for the Hyspecs afterhours service we experienced over Easter weekend. Hydralada had an urgent call out for a Poclairn wheel motor failure on Sunday night and had to have the machine running again by the next day (Easter Monday)... - From the team at Hydralada."



Snorkel

"Hyspecs has been a supplier to Snorkel for over 25 years ... Over the years Snorkel has relied on Hyspecs to provide hydraulic solutions for a variety of our products from the design stage right through to the finished product."



Marine Industry

Hyspecs work with boat builders to design hydraulic systems that meet the harsh marine environment. One such project - Hyspecs designed & supplied all the hydraulic components to power: Winches, A frame and a Palfinger crane.



Nairns Harvesters Ltd

Machine Requirements: 4-wheel drive system, anti-skid | Harvesting at a speed of 6km/hr on a gradient of up to 30% | The machine would be able to climb a gradient of nearly 33% | Under ideal harvesting conditions it is capable of removing up to 28,000kg of grapes off the vine per hour | Top road speed of 32km/h | Design + Supply + Commission.

Rules-Of-Thumb

- For every 1 kW of drive, the equivalent of 5 lpm @ 100 Bar can be produced
- To idle a pump when it is unloaded will require about 5% of its full rated power.

Fluid Power Formulas

- For a pump/motor,
Torque (Nm) = Power (kW) x 9549 / Speed (rpm)
- Force developed by a cylinder,
Force (N) = Bore Area (cm²) x Pressure (Bar) x 10

Conversions

- 1 U.S. gallon = 231 in³ = 3.785 L
- 1 L = 0.2642 U.S. gallon = 61.0303 in³
- 1 in³ = 16.387 cc
- 1 Imperial gallon = 1.2 U.S. gallon
- 1 Bar at sea level = 14.504 PSI
- 1 HP = 0.746 kW
- 1 Atmosphere = 1.013 Bar
- 1 km/h = 0.62 mph
- 1 m = 3.28 ft = 39.37 in
- 1 Nm = 0.7376 foot-lbs

Some Common Fluid Power Symbols



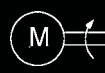
Fixed Pump



Var. Displ. Pump



Fixed Motor



Prime Mover



3-Position, 4-way valve



* Closed



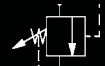
*Tandem



*Open



*Float



Relief Valve



Pressure Reducing Valve



Fixed orifice



Needle Valve



Flow control



Check valve



Accumulator



Gauge



Filter



Melbourne



Auckland



Christchurch

HYSPECS Are Suppliers Of:

- ASA • Ausco • Brand Hydraulics • Char-Lynn • CMG • Comer Planetary Drives • Command Controls
- Donaldson FBO • Eaton • Emmegi • EPE • Fairfield • Galtech • Gresen • Hydr-App • HydraForce • IFM • Kar-Tech
- KVT-Koenig • Magnetek • MICO • OMT • Poclair • Tognella • Transducers Direct • Vickers • Walvoil • Zinga

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