



CAPABILITY STATEMENT

■ WHO WE ARE

PTE Hydraulics was established in 1967 as Precision Tool Engineering, a jobbing shop that provided high quality precision machining services. In 1985, the decision was taken to focus solely on the production of hydraulic cylinders and we changed our name to PTE Hydraulics in 1990. PTE Hydraulics is now one of the largest specialist manufacturers of hydraulic cylinders in Australia.

The company has a highly qualified and experienced team of people who are committed to delivering outstanding service; building solid, long-term partnerships with customers and suppliers; and developing innovative solutions to deliver high quality, precision engineered hydraulic cylinders.

■ WHAT WE DO

At PTE Hydraulics we design and manufacture high quality hydraulic cylinders for almost any purpose. We offer a large range of standard cylinders and we also have the in-house engineering and development capability to produce customised cylinders for specific applications.

Products

Streamline Cylinders

Streamline is our range of standard welded cylinders that have been proven in the field to be suitable for a wide range of applications. There are four types of cylinder in the range:

Streamline Medium Duty (SLM) is a field proven design suitable for a vast majority of medium duty applications. The internally screwed front cap in conjunction with the ports integrated within each end cap form the basis of the streamline design. These features, coupled with the use of high quality seals makes it a popular option for use within both the mobile and industrial market sectors.

Streamline Heavy Duty (SLH) is a robust design for medium to heavy duty applications. The cylinder has a number of features which allow it to perform under demanding, industrial type loading situations where a medium level of shock loading and pressure spiking may occur.

Streamline Phasing (SLP) is based on the SLH design and benefits from the same design features but is fitted with the patented PTE re-phasing valve. The cylinders are available in a range of sizes developed to form synchronised sets. The unique valve design allows for re-phasing of cylinders at either end of their stroke.

Streamline Heavy Duty Phasing (SHP) is based on the SLP design and benefits from the same design features but is fitted with larger diameter rods for heavy-duty applications. The bore diameters of the SHP cylinders are available in 1/2" increments to form synchronised sets. The unique valve design allows for re-phasing of cylinders at either end of their stroke.

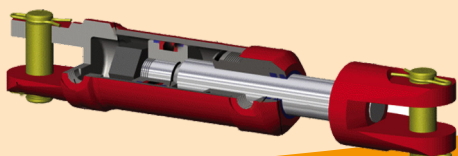
NFPA Tie-Rod Cylinders

The NFPA range of tie-rod cylinders are designed to conform with National Fluid Power Association standards.

NFPA HP is available in 17 different mounting styles and is suitable for 210 bar continuous operation.

Special Cylinders

In addition to our range of standard welded and tie-rod cylinders we can design and manufacture cylinders for special applications and can supply a wide range of cylinders as SAE, NFPA, and ISO replacements. Cylinders can be constructed to your specifications or designed by our engineering staff to suit your requirements.





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We can manufacture:

- Telescopic Cylinders - Constant Velocity and standard
- Displacement Cylinders
- Cushioned Cylinders - Adjustable and Fixed
- Quick Hitch Cylinders
- Double Rod Cylinders
- Integral Cartridge Valve Cylinders

Industry Applications

PTE cylinders are used in a wide variety of applications and markets. We have supplied cylinders for use in:

Materials Handling

Typical applications: Mobile & Static Hoists & Cranes, Conveying Equipment, Lifting Arms & Front End Loaders.

Agricultural

Typical applications: Tillage Bars, Harvester Headers, Spraying Equipment, Seed Drills, Wool Presses, Slashers & Mowers.

Earthmoving

Typical applications: Quick Hitches, Access Ladders, Excavator buckets, Skid Steer Equipment, Road Surfacing Equipment.

Mining

Typical applications: Roof Bolters, Drilling Equipment, Underground Vehicles, Wash Plants, Ball Mills, Access Ladders.

Waste Management

Typical applications: Static & Mobile Compactors, Transfer Stations, Road Sweepers, Liquid Vacuum Trucks.

Manufacturing applications

Typical applications: Bread Making Equipment, Pallet Manufacturing Equipment.

General industry

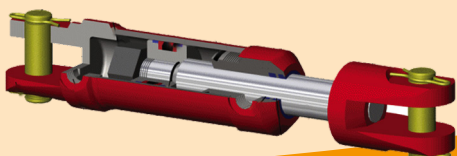
Typical applications: Elevated Work Platforms, Post Hole Digger, Guillotines, Folding Equipment, Lighting Towers, Fork-lift Attachments.

Transport

Typical applications: Trailers: Side Tippers, Car Transporters, Low Loaders, Deck Widening, Tilt Trays.

Research & Development

PTE's design improvements have been targeted at increasing the performance levels and the working life of our cylinders and at simplifying repairs and maintenance. To illustrate our commitment to hydraulic cylinder design, we have successfully completed a three year research and development project in co-operation with the University of Queensland. The close relationship continued with a PhD project titled "The Mechanics of Hydraulic Cylinders". Subsequent research projects in collaboration with both the University of Queensland and Queensland University of Technology include the application of Lean Manufacturing concepts, the automation of the testing process and development of specific welding processes in preparation for the introduction of robot welding. This research effort has ensured that PTE Hydraulics is the Australian hydraulic cylinder market leader in new product and process design.





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■ WHY DEAL WITH US

Customer Service

It is the unique blend of product quality and technical capability coupled with our commitment to client service and the development of long term partnerships that sets us apart as the leading supplier of hydraulic cylinders in Australia and New Zealand.

When asked what differentiates PTE Hydraulics as a cylinder supplier, here are some of the comments that our customers made:

"Back-up service, time from when we place our orders to time of receipt of order there is back-up all the way; stands them out above the rest."

"Service, service, service and service, and quality of the product; true partnership (they know how to spell PARTNERSHIP)".

"They proactively come to us and show us how they can save money for us, ie: work with us to get per unit pricing down"

Technology

We maintain our leading edge manufacturing and design flexibility through a diversity of CNC lathes and machining centres which are linked with a sophisticated (CAD/CAM) system. The design process uses the latest Solid Edge 3D CAD package. Over the last five years, we have spent over \$3 million upgrading our CNC machine tools including six integrated CNC machining cells fed by robotically operated gantry loaders and three CNC machining centres, one incorporating 10 pallets, two with 6 pallets, and three with 2 pallets. An innovative robot welding cell is now in full production using laser technology to measure the work piece and call up the correct welding program automatically. The cell's design allows for up to 5 different components to be welded simultaneously in the one cycle on 5 welding stations without operator intervention. The latest R&D project has led to the successful commissioning of a highly flexible, fully automatic piston rod manufacturing cell.

Quality

Our quality system is based on the requirements of ISO9000:2008 and has second party endorsement from major clients such as Terex, Case New Holland and ADI.

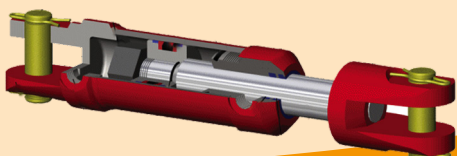
■ EXPERIENCE

We have more than 40 years of experience that we bring to all of our business relationships. It is that experience, together with our technical capability that allows us to provide quality solutions to any hydraulic cylinder applications. Examples include:

Waste Management Industry

In 2009, we were approached by a major manufacturer in the waste management industry to help solve a problem application for them. The existing cylinders that they were using were failing prematurely... the failure rate exceeded 25%.

The inquiry coincided with the arrival of our first robot fed, twin spindle – 9 axis Okuma Mac-Turn 250-W. This allowed us to offer a hydraulic cylinder barrel assembly complete with integral rear mounts and porting machined from a single piece of steel. All this during a single operation, it also included the roller burnishing of the bore.





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The engineering advantage of this design eliminates the distortion caused by welding and more importantly, ensures the correct alignment of the rear mount.

More than 3000 of these cylinders have now been supplied with a negligible amount of in-field issues.

We now have seven of the Okuma multi-axis units within our stable of machines.

Defence Industry

Working closely with Australian Defence Industries we were involved in the development of the hydraulic cylinders used within their HMEV - High-speed Self Deployment Vehicles which have proven to be successful within our own armed forces and in other defence bodies throughout the world.

PTE Hydraulics was involved in every process of the build from inception to final product

All cartridge valving had to be integrated within the envelope of the cylinder. The design also incorporated the use of internally mounted linear transducers.

The uniqueness of the build extended right through to the Mil Spec CARC paint finish commonly used on tactical military equipment.

CONTACT DETAILS

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SUMMARY

PTE Hydraulics has been established for more than 40 years and is one of Australia's leading manufacturers of hydraulic cylinders. Our reputation for customer service is second to none in the industry

We have an ongoing commitment to R&D to ensure that our product designs are world class and that our manufacturing technology is capable of delivering the highest quality product at a competitive price.

Our range of standard cylinders, together with our in-house engineering expertise ensures that we can provide the right cylinder for almost any application.

It is the unique blend of product quality and technical capability coupled with our commitment to customer service and the development of long term partnerships that sets us apart as the leading supplier of hydraulic cylinders in Australia and New Zealand.

