

Hydraulic Cylinders
Large Capacity
Machining

SHEPCOTE
engineering



Hydraulic Cylinders – Design, Manufacture and Repair

Large Capacity Specialist Machining – Deep Hole Boring, Honing and Turning

Shepcote Engineering began life in 1990 providing hydraulic cylinder repairs and general maintenance and sub contract machining services to local industry, predominantly steel works and foundries.

Having become the leading hydraulic cylinder manufacturer and repairer in the South Yorkshire area the company added further to its expertise in the design and manufacture of cylinders for offshore and other arduous and hazardous conditions.

In 2000, a significant expansion of the business bought Phoenix Honing of Chesterfield and acquired the large machining capability of H & H Bishops a company specialising in large cylinder manufacture, deep hole boring, honing and turning. New premises were needed to house the extra capacity and additional workforce.

With this extra capacity we had the largest workshop and machining facility in the UK dedicated to the manufacture and repair of hydraulic cylinders, and, this new capability to turn, deep hole bore and hone larger than anyone else in the country expanded our involvement with the oil and gas sector.

Further increase in business and staff saw us move to our current location, a much larger premise within the new Davy Business Park in Sheffield



Our involvement with the oil and gas, nuclear and renewable energy sectors has grown year on year. Shepcote engineering has become a leading player for the finish machining of tubular's. We are particularly experienced in finish machining of special Riser joints for the offshore industry.

As an established and respected provider of cylinders to the offshore and marine sectors we regularly produce cylinders to comply with the requirements of such bodies as Lloyds Register, DNV•GL, ABS Bureau VERITAS etc.

Hydraulic cylinder repairs

Special purpose hydraulic cylinders

With over 30 years experience providing hydraulic solutions to industries worldwide, we produce bespoke designs to meet your exact requirements. We regularly design and supply cylinders for use in the most arduous and exacting environments.

Manufacturing and Testing Capacities

Our in house manufacturing capability is the largest in the UK dedicated to the manufacture of hydraulic cylinders. With over 25,000 sq ft of production floor and 50 tonnes lifting capacity our skilled workforce manufacture cylinders from 40mm to 1600mm bore with strokes up to 20metres.

We have the capability to test cylinders up to 800 BAR, Hydrostatic testing of components up to 1,000 BAR.

Quality

Cylinders manufactured by Shepcote Engineering will always meet the highest quality standards. All our work is completed in accordance with ISO 9001: 2015 standards and procedures. Lloyds, ABS and DNV•GL etc frequently approve and witness the testing of our products.

Our hydraulic pressure test rig is equipped with off line filtering system to provide oil cleanliness standards to NAS6 or better.

Design

Utilising the latest Solidworks CAD systems to offer a full design service, we can also provide full calculations to satisfy the requirements of all the accrediting bodies.

TYPICAL APPLICATIONS:

OFFSHORE AND SHIPBOARD: Cable handling carousels, 'A' frames, heave compensators, cable tensioning and subsea ploughs, lifeboat davits, steering and stabilizer gear, luffing cylinders for offshore cranes and telescopic rams for jack up barges

DOCKSIDE: Linkspans, passenger lift towers, lock gates and cranes

INDUSTRIAL: Steel manufacturing, melting and extrusion, materials handling, waste compacting and mobile plant

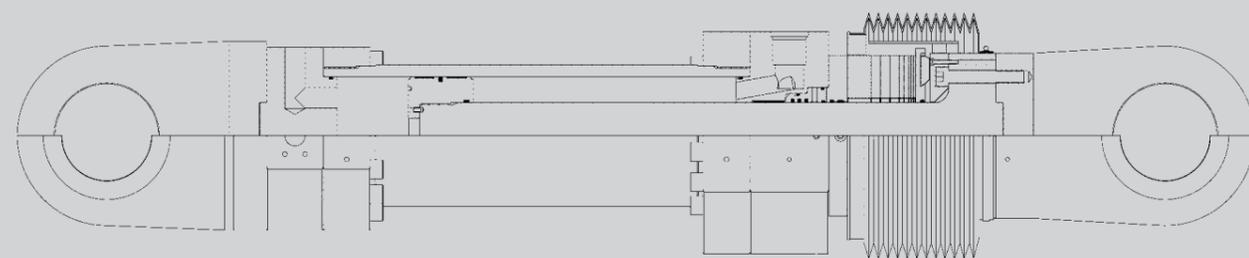
CONSTRUCTION AND MINING: Bridge jacking/lifting. Tunnelling and piling equipment

MINING: Coal handling and coal cutting equipment, conveyors and roof supports



Our specialities include:

- single acting cylinders
- double acting cylinders
- telescopic cylinders
- multi-stage synchronised cylinders
- rotary distributors
- sliding piston accumulators
- stainless steel piston rods
- special piston rod coatings
- special paint finishes
- integral load holding valves
- specially selected materials for low temperature operation
- position sensing and proximity switches can be supplied as required.



We are the UK's leading repairer of standard and special purpose hydraulic and pneumatic cylinders, sliding piston accumulators and rotary distributors.

Housed in 25,000 sq ft premises and with 50 tonnes lifting capacity, Shepcote Engineering's Sheffield repair facility is the largest and best equipped in the UK. With over 30 years experience providing hydraulic solutions to industry we provide the best and most comprehensive repair service available.



Our aim is to minimise your downtime and save you money by providing a speedy, reliable, comprehensive and cost effective service.



We offer:

- Quick and cost effective repairs of all types of cylinders with bore sizes up to 1600mm and strokes of 20 metres, back to or exceeding manufacturer's standards.
- On-site advice on repairs and modifications to your existing cylinders.
- On-site removal, refitting and commissioning of cylinders.
- Fully equipped machine shop providing repairs to all types of plant and equipment.
- Welding and fabrication services.
- Grinding and recoating of piston rods.
- Hydraulic testing up to 800 bar.
- Hydrostatic testing up to 1,000 bar.
- Collection and delivery service.





Large Capacity Machining

Deep hole boring and turning

Manufacturing Capacities

Deep hole boring

Manufacturer	Type	Capacity
Gehring	Deep Hole Borer	Holding capacity: 1220 mm Dia x 11 m between centres. Boring capacity up to 1168 mm id. By Ejector, BTA and Trepanning

Turning

Manufacturer	Max Dia	Between Ctrs	Machine Details
VDF	1500 mm	13 metres	Twin saddles, metric and imperial screw cutting
Binns & Berry Data 90	1160 mm	12 metres	Fagor CNC control Turn through steadies
Binns & Berry Data 90	1160 mm	9 metres	Fagor CNC control Turn through steadies

Large Capacity Machining Services

Shepcote Engineering has some of the largest deep hole boring, honing and turning capacity available in the UK.

Our machines are particularly suited to the finish machining of tubes and manufacture of large shafts. Our skilled machinists have considerable experience in meeting the demands of our customers.

Quality

Quality and value for money are our priority. Irrespective of the application, Shepcote machining services will always meet the highest quality standards.

All our work is carried out in accordance with ISO 9001: 2015 standards and procedures. Inspection by accredited bodies and customers is actively encouraged.

Large Capacity Machining

Honing

Capacities

Manufacturer	Dia	Length	Machine Details
Fulmer	63-152 mm	1.22 m	Vertical
Fulmer	100-305 mm	1.52 m	Vertical
Barnes Drill	100-300 mm	9.15 m	Horizontal
Delapena	100-400 mm	10.00 m	Horizontal
Bishop	400-1600 mm	32.00 m	With counter rotation of component
Sunnen CNC	38-160 mm	6.00 m	Horizontal



TYPICAL APPLICATIONS:

OFFSHORE INDUSTRY:

The honing of tools and equipment for 'down the hole' applications, wellhead components and riser joints. Offset and blind bores can be accommodated in all types of materials including stainless, inconel, duplex and 718

PAPER INDUSTRY:

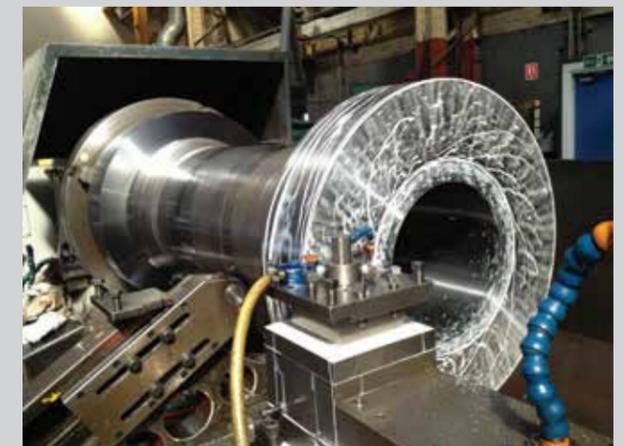
Honing of C.C. roll shells and tubes in all grades of cast iron, stainless, mild steel and bronze

HYDRAULICS INDUSTRY:

Re-hones and refurbishment of worn bores for cylinder manufacturers and repairers. Mobile plant operators and earth moving equipment

FOUNDRIES AND STEEL PRODUCTION:

Honing of dies, moulds and castings. Mechanical handling equipment



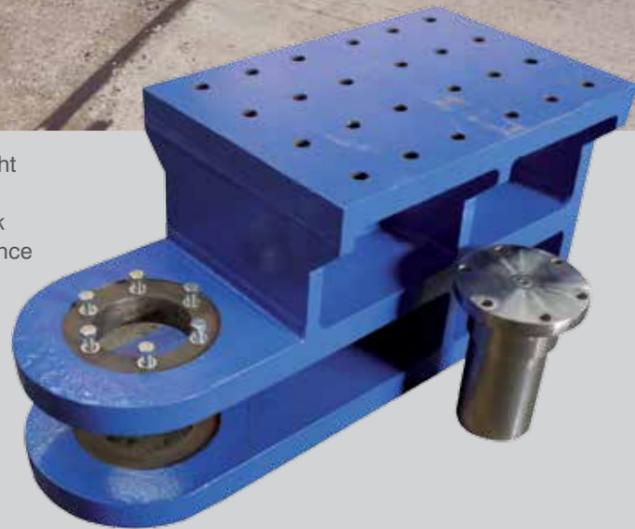


General engineering

As an engineering service provider, we work continuously closing only for bank holidays. Shift patterns are not fixed but are client determined and offer a flexible solution to panic or emergency situations.

Machine refurbishment, plant overhaul, Hydraulic engineering, light fabrications and weld reclamation techniques are services readily undertaken in our factory. We pride ourselves in our ability to work collaboratively with engineers, specifically focussing on maintenance or production difficulties. Where these working relationships have been established, they have proved to be highly successful. As a consequence, our multi-skilled team's depth of experience is fundamental to any submission made for retro-fit or reverse engineering solutions. In-house OHC capacity of 50, 40, 25 and 2 tonnes adequately supports all our workshop activities.

We have a varied client and industry list including companies such as: BP, Total, Krohne Oil & Gas, Cameron, Contitech, Dunlop, Subsae7, Pirelli, Associated British Ports, Tata Steels, Speciality Steels, Sheffield Forgemasters, Davy Markham and Rolls Royce.



Adjustable vertical guide rollers

Quality

Our ISO 9001: 2015 quality accreditation evokes the level of confidence needed in today's competitive environment. Lloyds, DNV•GL and ABS frequently approve and witness the testing of our products.



A 3 tonne adjustable hydraulic cable tensioner



Bar manipulator



Machining capacities

Turning

Manufacturer	Max Dia	Between Centres	Machine Details
VDF	1500 mm	13 m	Twin saddles, metric and imperial screw cutting
Binns & Berry Data 90	1160 mm	12 m	Fagor CNC control
Binns & Berry Data 90	1160 mm	9 m	Fagor CNC control
Ajax SU630	630 mm	5 m	2-axis digital read out fitted
Ajax Premier 310 CNC Lathe	300 mm	2.25 m	Manual semi-programmable and CNC facility
Mostana 1M	635 mm	3 m	2-axis digital read out fitted
Harrison M 500	610 mm	2 m	2-axis digital read out fitted
Churchill Denham	600 mm	1.5 m	Digital read out fitted
Colchester Triumph	200 mm	1.2 m	Taper turning attachment 2-axis digital readout fitted
BSA	380 mm	2 m	2-axis digital read out fitted
Foremost	380 mm	2 m	2-axis digital read out fitted

Honing

Manufacturer	Dia	Length	Machine Details
Fulmer	63-152 mm	1.22 m	Vertical
Fulmer	100-305 mm	1.52 m	Vertical
Barnes Drill	100-300 mm	9.15 m	Horizontal
Delapena	100-400 mm	10.00 m	Horizontal
Sunnen CNC	38-160 mm	6.00 m	Horizontal CNC Hone
Bishop	400-1600 mm	32.00 m	With counter rotation of component

Deep Hole Boring

Manufacturer	Type	Capacity
Gehring	Deep Hole Borer	Holding capacity: 1220 mm dia x 11 m between centres Boring capacity up to 1168 mm id. By Ejector, BTA and Trepanning

Horizontal Boring

Manufacturer	Spindle Dia	Table Size	Facing Dia	Traverse		
				Vertical	Longitudinal	Cross
Union BFT 100/4	100 mm	1250 x 1450 mm	1250 mm	1525 mm	18250 mm	1525 mm
Digital readout fitted						

Milling and Drilling

Manufacturer	Type	Table Size	Traverse		Details
			Cross	Vertical	
BOKO WF3	Universal	1300 x 800 mm	1500mm	1000mm	Digital readout
Ajax AJT 3	Turret	1500 x 250 mm	1400 x 220 mm	500 mm	Digital readout
Ajax NO 2	Vertical	1400 x 280 mm	1400 x 230 mm	330 mm	Swivel head digital readout
Asquith	Drill	1067 mm	Asquith radial arm drill with box table		
Dividing head and rotary tables available					

Slotting

Manufacturer	Size			Details
Ormerod	305 mm stroke	450 mm throat	600 mm dia	Compound rotary table

Welding

450 Amp MIG	380 Amp MIG	180 Amp Arc	180 Amp TIG
Coded Welders to EN 287, ASME IX			

Hydraulic Testing

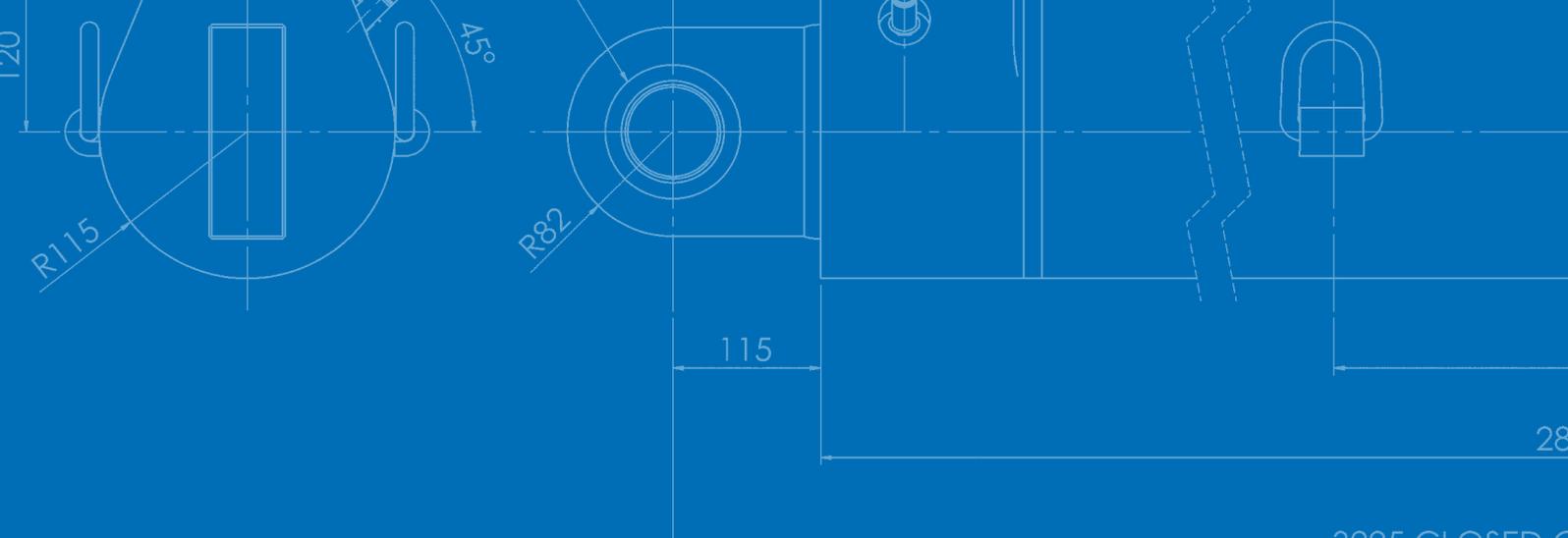
Pressure testing of cylinders	800 BAR
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Hydrostatic Testing

Pressure testing of components for the Offshore Industry	1000 BAR
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Cranes

1 x 50 Tonnes OHTC	1 x 40 Tonnes OHTC	1 x 25 Tonnes OHTC
3 x 5 Tonnes OHTC	1 x 2 Tonnes OHTC	



TELESCOPIC SINGLE ACTING DISPLACEMENT CYLINDER

OUTER STAGE ϕ 200 BORE x ϕ 179 ROD x 2200 STROKE

INNER STAGE ϕ 160 BORE x ϕ 120 ROD x 1840 STROKE

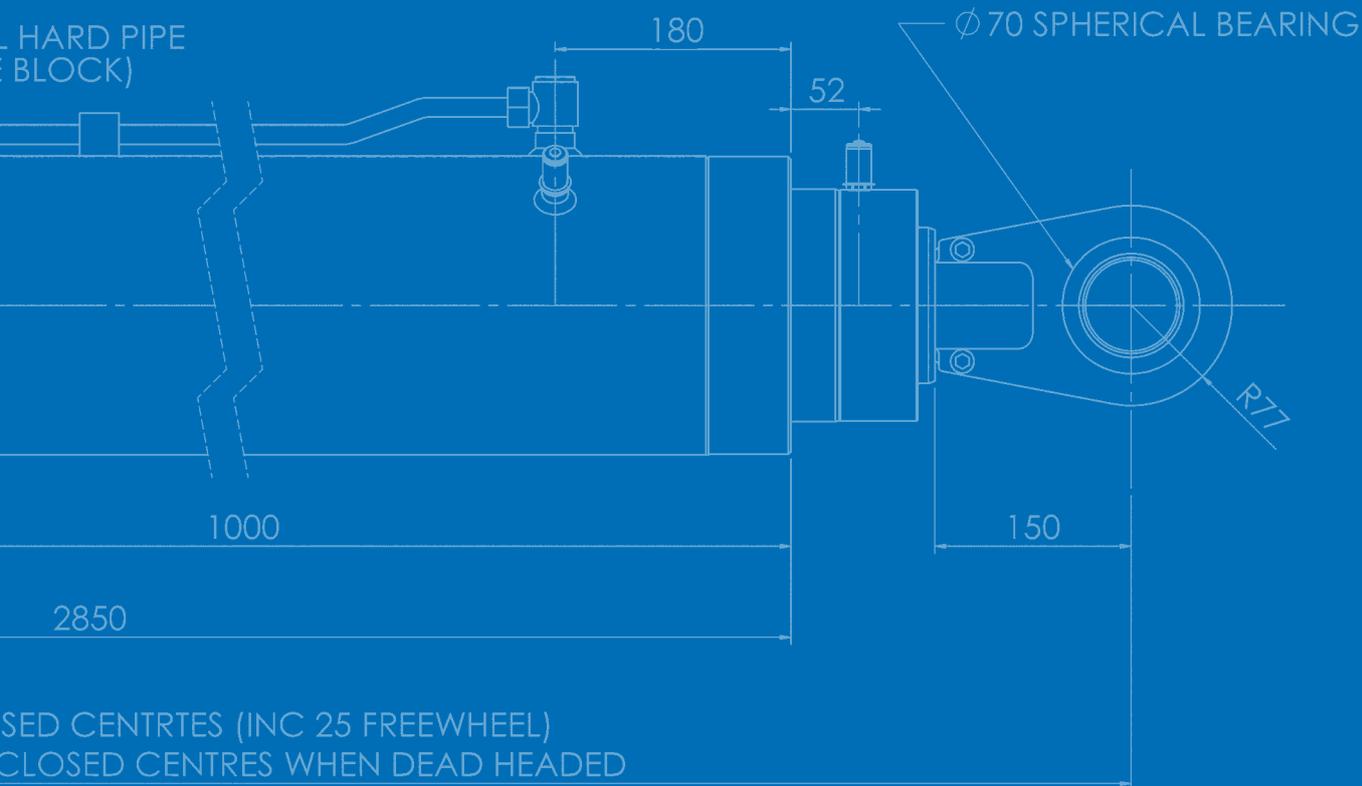
WORKING PRESSURE 180 BAR

TEST PRESSURE 270 BAR

200kN PUSH FORCE @ 180 BAR

APPROX DRY WEIGHT 725ka

3225 CLOSED C
3200 ACTUAL CLOS



CLOSED CENTRES (INC 25 FREEWHEEL)
CLOSED CENTRES WHEN DEAD HEADED



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