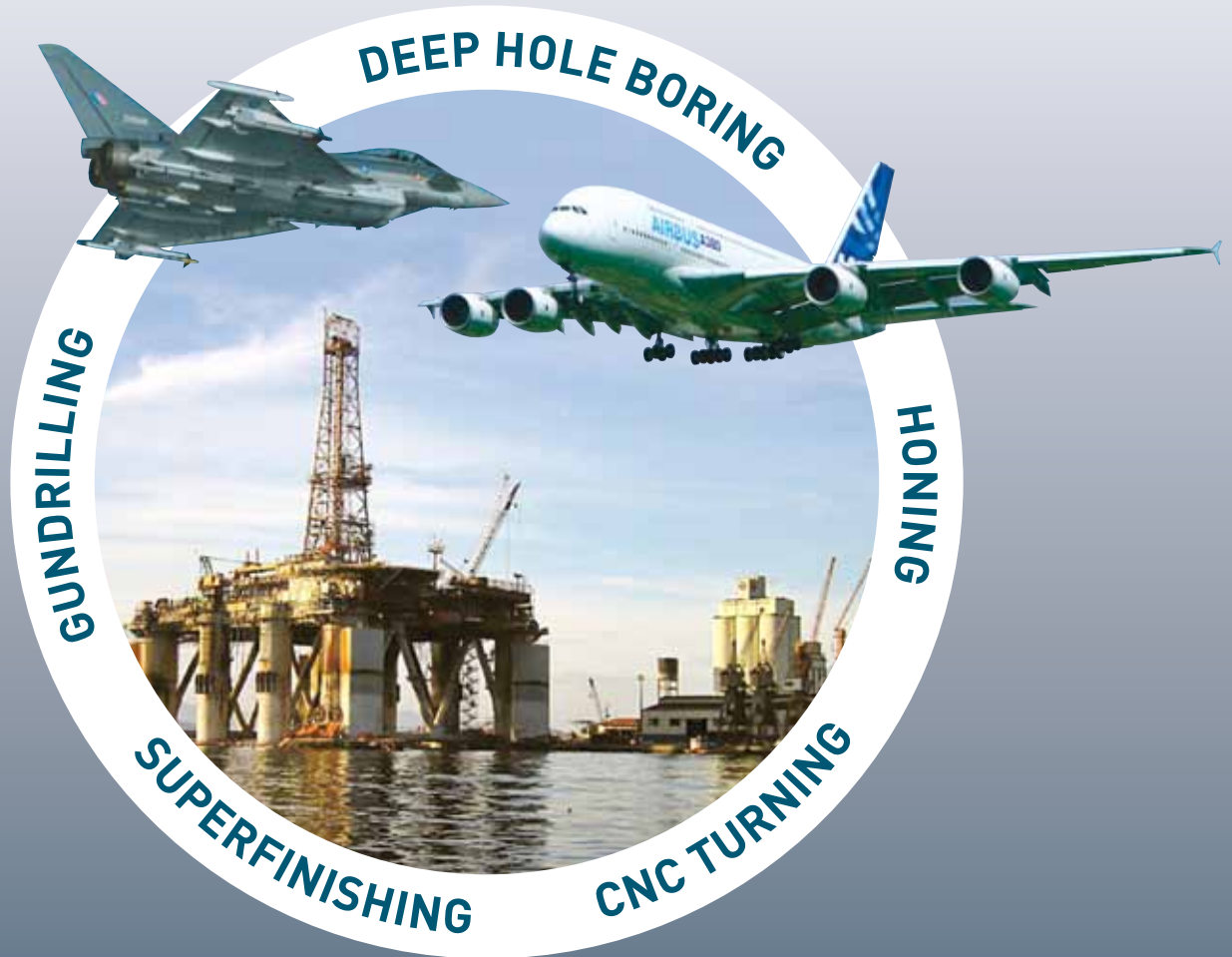




PERFECT BORE
MANUFACTURING LTD



An AS9100/ISO 9001:2008 Bore Production and Finishing Specialist Sub-Contract Engineering Company

> Overview

The Aerospace, Oil & Gas, Defence and Medical industries require the production of bores in components to extreme tolerances and in some cases to sub-micron geometrical tolerances combined with specific surface finish requirements. Over the past two decades, Perfect Bore has prided itself on servicing these industries and providing these bores to customers such as Airbus, Rolls Royce, Messier Dowty, GE Aviation & BAe.

Perfect Bore provides singular and turn-key solutions to both internal and external surface machining operations through its gundrilling, deep-hole boring, honing, superfinishing and CNC turning capabilities. The company is a signatory to SC21 and is committed to providing aerospace, defence, nuclear and oil and gas markets with bore solutions to highly critical parts. The development of its processes through lean manufacturing initiatives also enables the company to offer cost effective solutions to its clients.

Mission

Perfect Bore is a bore producing specialist. It is committed to continuous improvement through on-going investment in its plant, processes & people and forging long-term relationships with its customers.

History

Andover-based Perfect Bore was formed in 1988 specialising in honing and superfinishing. Following two years of rapid growth, it expanded into gundrilling and consolidated its position in this market in 1993 by acquisition, before moving to larger premises in 1994. Further investment led to Perfect Bore manufacturing cylinder liners and pistons predominately for high-end performance Motorsport markets. Perfect Bore was sold to the Dover Corporation Inc, a US Conglomerate in 2001 following its continued growth. In February 2004 the gundrilling and honing engineering division reverted to private ownership when it was acquired by one of its former owners.

Since 2004 the company has invested heavily in machinery, management infrastructure and employees which has enabled

it to increase its manufacturing footprint from 6,000 sq ft to 15,000 sq ft to meet the ever increasing demands placed on it by its customers and provide additional services to allow the company to produce the complete preparatory turning operations, boring and honing of billets up to 150 mm diameter and 3metres in length.

We have operated a fully documented Quality System since 1994 and are fully AS9100/ISO 9001:2001 approved. Whilst recognised as market leaders in gundrilling, deep-hole boring and honing, Perfect Bore also offers research and development into one-off prototypes and has a dedicated manufacturing facility to produce high quality volume parts to exacting tolerances if required.



Aerospace

In the field of major Aerospace component manufacturers, Perfect Bore's name is renowned for quality and on-time delivery. Continual investment gives our customers the confidence to off-load components that have critical geometric ID and OD requirements.

The company is proud to be supporting current aerospace programs such as Dreamliner, A400M, A350, Rolls Royce trent engine, etc developing parts such as anti-thrust reverser rods, cargo door actuators & trent engine shafts.

Oil & Gas

This field typically involves machining corrosion resistant high temperature alloys such as Inconel, Monel, Hastelloy, Titanium and Stainless steels. These alloys require specialised drilling techniques and as such Perfect Bore continues to increase its machining capabilities.

Typical components include many variants of downhole wireline monitoring equipment and subsea manifold parts.

Defence

Defence projects often involve prototypes and as such, extensive research & development work is often undertaken to produce critical forms that can be replicated on the outside giving perfect wall thickness to various classified military applications.

By working with Perfect Bore our clients have seen the benefits of manufacturing prototypes in a cost effective manner.

Medical

The needs of today's advanced surgical techniques are met by Perfect Bore's ability to Gundrill exotic materials with bores of 2.00 mm diameter or less.

Typical components include cannulated billets with extreme ID to length ratios.

Alternative Energy

The company has developed relationships with NAMRC to provide technological assistance on providing bores over extreme lengths and diameters that have not previously been manufactured. It is also keen to develop partnerships with other alternative energy companies providing bore solutions for other renewable, wind, nuclear etc applications.

Commercial

Perfect Bore also provides components to support customers in other specialised markets including Commercial hydraulics, Large marine and automotive diesel engine, Mining & Rail industries.

> Services & Capability

Gundrilling

Blockwork:

DRO multi-positional gundrilling capabilities:

	From	To	Depth	Weight (max)
Large	4mm	32mm	1500mm	1.5 tonne
Mid	3mm	32mm	1000mm	1.0 tonne
Small	1.8mm	25mm	750mm	1.0 tonne

Centreline Drilling:

	From	To	Depth
Twin spindles (x 2)	3mm	20mm	1000mm
Single spindles (x 4)	4mm	30mm	1500mm

Small Holes:

	From	To	Depth
Twin spindles (x 2)	1.8mm	4mm	500mm
Single spindles (x 2)	1.8mm	4mm	250mm

BTA Single Tube Drilling

	From	To	Depth	Weight (max)
Mid	25mm	90mm	2000mm	4.0 tonne
Large	40mm	150mm	3000mm	5.0 tonne

Honing

Horizontal Honing

Temperature controlled horizontal honing bay with the following machines:

	ID from	ID to	Depth
Powerstroke EC 3500's (x 3)	1.5mm	165mm	300mm
Hand lapping honing machines (x 3)	1.5mm	165mm	300mm
Horizontal honing machines (x 4)	1.5mm	165mm	300mm

Large Tube Honing

	ID from	ID to	O/L	Weight (max)
Tube Hone (x 3)	25mm	340mm	2500mm	3.0 tonne

Superfinishing (Cylindrical)

Roundness	Finish	OD from	OD to
25mm	340mm	6mm	100mm

CNC Turning

	Max diameter	Length	Weight (max)
Puma 600L	900mm	3200mm	5.0 tonne
Puma 400L x2	550mm	2100mm	2.0 tonne
Doosan Dooturn	350mm	550mm	
Hardinge T42	150mm	325mm	
Harrison lathe	250mm	1000mm	
XYZ Protturn	300mm	2000mm	

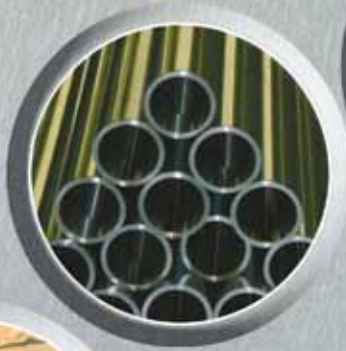
Perfect Bore also has a range of manual lathes & mills for bespoke and one-off requirements.

Inspection Facilities

Within a fully temperature controlled facility:

- Bore Sizing & Geometry Measurement: Mechanical, air & electronic gauging to measure accuracy within 0.001mm
- Roundness Measurement: Talyrond TR 252 to measure accuracy within 0.0002mm
- Surface Finish Measurement: Surtronic 3+ (20,000 x magnification surface finish analysis software) to measure accuracy 0.01 Ra (0.4 CLA)
- Concentricity & Wall Thickness Measurement: Ultrasonic wall thickness to measure accuracy within 0.050mm





Approvals Held include:

ASO 9100 & BS EN ISO 9001:2008

Airbus (UK) Ltd/AUK/SA/10267

Goodrich Actuation Systems Limited 006604

Rolls Royce Sabre 05275

Rolls Royce Nuclear Sector Submarines

Rolls Royce Deutschland Ltd & Co KG

Messier Dowty PRIDE

Smiths Aerospace Actuation Systems

Aerostructures Hamble Ltd

BAe/AG/QC/SC/pt 1 10172 Aero

Claverham Limited FHL 100079

Wyman Gordon PM8018 Rev 1

Honeywell NGL/QM/2018



Whatever your bore generating or finishing requirement Perfect Bore has the answer. We can now also offer a 'one stop shop' approach for all your engineering requirements.

Please view our company profile and feel free to arrange a visit or Quality Audit of our works in Andover.

Alternatively, our technical sales team would be pleased to visit your site to discuss your requirements. E-Mail facilities are available so your drawings can be read electronically.



Perfect Bore Manufacturing Limited

Unit 3 Hunstrete House
Sterling Park
East Portway Industrial Estate
Andover
Hants
SP10 3TZ

Sales Enquiries: sales@pbm-ltd.com

Technical Enquiries: steve.amey@pbm-ltd.com

Telephone: 01264 360800

Fax: 01264 360809