ABOUT US

Perfect Bore Manufacturing Ltd specialises in the gundrilling, deep-hole boring, honing, CNC turning, CNC cylindrical grinding and superfinishing of billets up to 900mm diameter and 3 metres in length. The company continues to increase its machining capabilities to facilitate the specialised drilling techniques required when working with high-temperature corrosion resistant alloys such as Inconel, Monel, Hastelloy and stainless steels.

Perfect Bore works with major OEMs and sub-tier companies operating in various market sectors such as aerospace, oil & gas, nuclear, scientific instruments/medical, automotive and power generation industries. Bore solutions supplied by Perfect Bore can be found in components manufactured by major OEMs such as Airbus, BAe, Goodrich Actuation Systems, Boeing, Moog and Rolls Royce, supporting projects including B787 Dreamliner, A400M and A350. These industries require the production of bores in components to extreme tolerances and in some cases to sub-micro geometrical tolerances combined with specific surface finish requirements. It also offers Research & Development for one-off prototypes and has a dedicated manufacturing facility to produce high quality parts to exacting tolerances. The company has worked to ensure that their name is renowned for quality and on-time delivery, with 'just-in-time' schedules forming a regular part of production. The development of processes through lean manufacturing initiatives also enables the company to offer cost effective solutions to its clients.

Perfect Bore operates a fully accredited integrated management system that is compliant to AS9100 Rev. D/ISO 9001:2015, ISO 14001:2015 and BS OHSAS 18001:2007. It is a bronze-awarded signatory to SC21, and is also a signatory to both Fit For Nuclear (F4N) and the NDA's Supply Chain Charter for Nuclear Decommissioning Sites.

Based in Andover, Perfect Bore was formed in 1988 specialising in honing and superfinishing. After two years of rapid growth, it expanded into gundrilling, consolidating its position in the market by acquisition in 1993 before moving to larger premises in 1994. Further investment led to Perfect Bore manufacturing cylinder liners and pistons predominantly for high-end performance Motorsport markets. Following continued growth, Perfect Bore was sold in 2001 to the Dover Corporation Inc, a US Conglomerate. 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 acquired all the units on Sterling Park and it now operates out of a fully-secured industrial park and has a manufacturing footprint of 32,000 square feet.

Perfect Bore Manufacturing Ltd invests heavily in the development of machining capabilities and continually undertakes pure research on new techniques around its core deep hole processing services. Along with the intention of stretching achievable boundaries, it allows the company to offer true value for money to its customers, with reduced cutting times enabling parts to be manufactured to an acceptable budget. PBML's technical engineers have extensive experience of international markets and keep themselves up to date with advances in tooling, exploiting years of embedded knowledge to fully utilise the latest deep hole boring techniques. Adapted machinery contributes to making the machining of parts quicker, easier, and in some cases, possible.

PERFECT BORE
MANUFACTURING LTD

GUNDRILLING

HONING

CNC TURNING

DEEP HOLE BORING

CNC GRINDING

SUPER FINISHING

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PERFECT BORE
MANUFACTURING LTD

THE BORE PRODUCING SPECIALISTS

APPROVALS:
Airbus
AgustaWestland
Bae
GE Aviation
Honeywell
Messier
Moog Actuation
Rolls Royce Sabre
Rolls Royce Nuclear
Rolls Royce Deutschland
Spirit Aviation
Triumph Actuation
UTC Aerospace

GUNDRILLING

HONING

CNC TURNING

DEEP HOLE BORING

CNC GRINDING

SUPER FINISHING

MARKETS:
Aerospace
Automotive
Commercial
Defence
Nuclear
Oil & Gas
Power Generation
Renewables
Scientific Instruments

TRUSTED PRECISION

Supply Chain Charter for Nuclear Decommissioning Sites Signatory

F4N Fit For Nuclear

ISO 9001 Registered Quality Management

UKAS Management 015

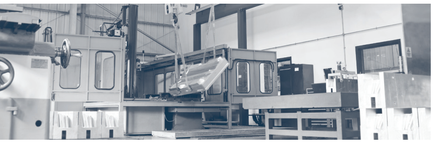
AS 9100 Registered Aviation Space and Defence

UKAS Management 015

ISO 14001 OHSAS 18001 Registered

UKAS Management 015

ADS SC21 21st century supply chains Bronze Award



GUNDRILLING

Producing precisions bores 1.8mm to 40.00mm diameter up to 3 Metres in length with a lifting capability of 5 tonnes and fully supported toolroom and inspection facilities:

BLOCKWORK: DRO MULTI-POSITIONAL GUNDRILLING CAPABILITIES

Type	From	To	Depth
Large	4mm	40mm	1500mm
Mid	3mm	32mm	1000mm
Small	1.8mm	25mm	750mm
CNC	3mm	25mm	1500mm

CENTRELINE DRILLING

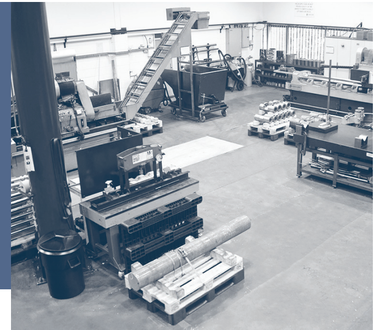
Type	From	To	Depth
Twin Spindles (x2)	4mm	30mm	1000mm
Single Spindles (x4)	4mm	30mm	3000mm
Twin Spindles (x2)	1.8mm	4mm	500mm
Single Spindles (x4)	1.8mm	4mm	250mm

DEEP HOLE BORING

Bespoke designed and built Deep Hole Boring/STS Drilling machines that produce bores from 25mm to 160mm diameter up to 2.8M in length with a 5.0 tonne lifting capability with fully supported toolroom & Inspection facilities:

BTA / SINGLE TUBE SYSTEM (STS)

	From	To	Depth
Mid	25mm	90mm	2000mm
Large	40mm	150mm	3000mm



HONING

Perfect Bore are proud to have Sunnen & Delapena Horizontal Honing, Vertical & CNC Tube Honing machines. The horizontal honing division is Temperature controlled, producing bores from 1.5mm to 165mm diameter up to a depth of 300mm and match hone to 0.0015mm, working down to Geometry within 0.001mm, Roundness within 0.001mm and Surface finish within 0.01Ra (0.4CLA):

HORIZONTAL HONING (TEMPERATURE CONTROLLED HORIZONTAL HONING BAY WITH THE FOLLOWING MACHINES)

	ID From	ID To	Depth
Powerstroke EC 3500s (x3)	1.5mm	165mm	300mm
Hand Lapping Honing Machines (x3)	1.5mm	165mm	300mm
Horizontal Honing Machines (x4)	1.5mm	165mm	300mm

TUBE/VERTICAL HONING

	ID From	ID To	O/L
Tube Hone (x3)	25mm	340mm	4000mm
Beamstroker	12mm	250mm	800mm
CV 616 Cylinder King	20mm	150mm	230mm
Hydraulic Vertical Hone (x3)	20mm	120mm	1500mm

CNC GRINDING

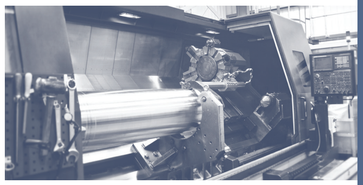
A fully managed, supported & temperature controlled CNC Division with Studer Grinding Machines. Machines will hold parts from 3-300mm diameter up to 1000mm in length. Ideally suited for machining parts such as spools, valves, rotor shafts, turbine shafts, turbine wheels, etc in all materials from mild steel to inconel. Manufacturing features include:

Parallel grinding down to 3 microns

- Face grinding to sub 3 microns squareness to face
- Producing radii from 0.2mm to 30mm
- angle approaches from -8.5 ° to +8.5°
- producing grooves from 1mm to 50mm
- profile grinding

Measuring Equipment including:

- Opticline C310 (automatic optical non-contact measuring system)
- 2D vision shadow projector for measuring radii
- Passometer measuring roundness and diameter



SUPERFINISHING

Superfinishing parts from 10mm to 340mm diameter up to 1M in length with fully supported Toolroom & Inspection facilities.

CNC TURNING

The CNC division includes 4 Doosan Puma turning centres that can machine diameters up to 900mm diameter and up to 3.2M in length with a 5 tonne lifting capability. With our processes and machinery we can control the surface finish on challenging diameter to length ratio bores, with the ability to control thin wall sections and allow for rapid stock removal:

	Max Dia	To Length
Puma 600L (x2)	900mm	3200mm
Puma 400L (x2)	400mm	2100mm
Doosan Dooturn	350mm	550mm
Hardinge T42	150mm	325mm
Harrison Lathe Hardinge T42	250mm	1000mm

INSPECTION & LOGISTICS FACILITIES

Perfect Bore provides itself on producing 100% inspection reports when required and had a fully controlled logistics division to ensure customers parts are 100% traceable when at our facilities. Inspection equipment includes:

- Opticline C310 (automatic optical non-contact measuring system)
- 2D vision shadow projector for measuring radii
- Passometer measuring roundness and diameter
- Bore sizing & Geometry Measurement: mechanical, air & electric gauging to measure accuracy within 0.001mm
- Portable Faro Arms
- Roundness Measurement: Talyrond TR 252 to measure accuracy within 0.0002mm
- Surface Finish Measurement: Surtronic 3+ (20,000 magnification surface finish analysis software) to measure accuracy 0.01 Ra (0.4 CLA)
- Concentricity & Wall Thickness Measurement: Ultrasonic wall thickness to measure accuratly within 0.050mm