



HRS Precision Components

Company Overview and General Information



Welcome to HRS

This company overview is designed to provide our customers with the essential information typically requested when working with HRS.

HRS values transparency and continuous communications when working with our customers and suppliers. Open and continuous communication provides a level of confidence in final results for both parties in our fast-moving and demanding industry.

We strive to establish close working relationships, working as a team and forming partnership agreements. Our target is to consistently exceed our customers' expectations by providing exceptional service at a fair price while meeting all agreed deadlines and budgets.

HRS is a customer driven business. If any unforeseen issues arise preventing us from offering the outstanding service for which we are renowned, please let us know and together we will work for a successful resolution.

For further information, clarification or assistance, please contact a member of our team.



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Introduction

HRS is one of Europe's largest manufacturers of precision engineered gear racks and pinions, lead and power screws, nuts and subcontracted machining to customer specifications. We are a diverse engineering business of approximately 40 employees established in 1953 based in Brighouse, West Yorkshire UK.

Over the past 10+ years, after making large investments in equipment and increased machining capability, we have become a sophisticated high level machine shop capable of supporting a diverse range of piece part CNC machined and precision metal parts.

HRS is an ISO 9001:2015 accredited organisation, serving a wide range of industry sectors and providing precision engineering, machining and manufacturing solutions.

Mission Statement

HRS' focus is on complete customer satisfaction. We strive to establish close working relationships with our customers. Working as a team and forming partnership agreements enables an intimate understanding of the client's business needs and allows for a more direct response to our customers' requirements.



Services & Capabilities

HRS offers a variety of engineering and manufacturing services in support of our clients needs. We manufacture precision gear racks, pinions, lead screws, nuts and other precision cut metal parts to suit most industrial requirements.

- **Gear Rack Production**
- **Screw and Nut Production**
- **Milling, Turning and Drilling**
- **3, 4 and 5 Axis CNC Machining and Wire EDM**
- **Precision Engineering**

Gear Rack Production:

We manufacture straight, full depth and stub tooth forms together with spur and helical tooth forms up to 45-degree helix, working to BS/ISO, DIN and AGMA specifications for 14½, 20 and 25-degree pressure angles. We also supply mating spur or helical gear pinions to custom requirements. The standard cumulative pitch quality is to BS436 (ISO1328) latest versions Grade 8, AGMA Quality 8 (0.10mm per 300mm), up to precision BS (ISO) Grade 5 and AGMA Quality 5 (0.03mm per 300mm).

Screw and Nut Production:

An extensive range of lead screws and nuts are manufactured using various thread whirling, turning and milling techniques. Thread multi starts are also provided including internal thread cutting. Anti-backlash assemblies: Archimedean, reverse traverse, level wind screws and followers are also available. Custom screw cutting is complimented by our range of stock trapezoidal steel screws and phosphor bronze nuts.

Milling, Turning and Drilling:

HRS is able to offer a custom heavy machining service with crane facility of five tonnes. The turning of large stock to 7.5 metres in length and the vertical milling of two tonnes provides our clients with an extensive range of machining options.

3, 4 and 5 Axis CNC Machining and Wire EDM:

Advanced CNC milling and turning as well as wire EDM machining equipment allows HRS to produce complex parts with minimum set-up. This reduces machining time, improves tolerances and enhances component consistency. The variety and flexibility of available machine capability gives HRS the ability to handle complex profiles, large structural parts and high detailed precision components.

Precision Engineering:

HRS offers volume production machining combined with our high standards of quality and competitive pricing. We provide cost effective solutions in the CNC precision machining process. Our extensive machine shop is capable of CNC turning to 800mm diameter and 3-4 axis vertical milling of two- and five-tonne stock, respectively. CNC drilling on parts up to five metres long is also available.

HRS stays at the forefront of technological advances by utilizing the latest CAD CAM software. We are able to support all common file types, allowing efficient programming of complex assemblies.

Inspection:

HRS is equipped to meet all modern engineering quality control practices and standards from goods received, through all manufacturing stages and finished goods to final despatch. The equipment and gauges are calibrated and recorded on a regular basis to traceable national standards.

Our workforce:

Approximately 40 people are employed at our purpose-built premises in Brighouse, West Yorkshire, United Kingdom. We take pride in our experienced workforce being highly trained and totally committed to quality and continuous investment in training, modern plant and equipment.

Machining Capabilities

The following facilities are available at our Brighouse factory. We are constantly adding machines to our machine shop and our equipment list is frequently updated. A current full-plant equipment list is available on request.

Gear Rack Production:

- Six CNC Kesel machines including 4- 4.2-metre CNC rack milling machines and 2- 2.1-metre CNC rack milling machines.
- Capacity ranges from 0.5 module (64 DP) up to 40 module (0.7 DP), 450mm (17 ¾ inch) maximum face width and a maximum overall width of 580mm (22 ¾ inch). Capability of cutting to a maximum depth of 450mm (17 ¾ inch) and a maximum practical length of 12 metres (39 feet) which is re-indexed after 4.1 metres (13 ½ feet).
- HRS can manufacture straight, full depth and stub tooth forms together with spur and helical tooth forms up to 45-degree helix to working to BS/ISO, DIN and AGMA specifications for 14.5, 20 and 25-degree pressure angles.
- Standard cumulative pitch quality is to BS436(ISO1328) latest versions Grade 8, AGMA Quality 8 (0.10mm per 300mm), up to precision BS (ISO) Grade 5 and AGMA Quality 5 (0.03mm per 300mm).
- Supplementary CNC machining facilities for ending, drilling, profiling, slotting etc.
- Also capable of supplying mating spur or helical gear pinions to custom design requirements.

Screw and Nut Production:

- Thread whirling of lead screws up to 120mm (4 ¾ inch) diameter, with 6 metre (20 feet) of thread length and a maximum 25mm (1 inch) pitch.
- Thread milling up to:
 - 250mm (10 inch) diameter with a maximum 5-metre (16 ½ feet) length and a 25 mm (1 inch) pitch;
 - 90mm (3 ½ inch) diameter with a maximum 7.5-metre (24 ½ feet) length with a 25mm (1 inch) pitch;
 - Multi starts up to 250mm (10 inch) lead.
 - Screw cutting to 240mm (9 ¾ inch) diameter by 5-metre (16 ½ feet) length

- Anti-backlash and nut assemblies are manufactured to customer's requirements.
- Archimedean, reverse traverse, level wind screws and followers are also manufactured to customer's requirements.
- Internal thread nut cutting up to 250mm (10 inch) diameter, 25mm (1 inch) pitch, with multi-starts available.

Custom screw cutting is complimented with a range of stock trapezoidal steel screws and phosphor bronze nuts which can be plain, cylindrical or flanged. Sizes manufactured are trapezoidal 12x3 up to trapezoidal 60x9.

3, 4 and 5 Axis Machining, Milling, Turning, Drilling, Grinding and Wire EDM:

- CNC Turning:
 - Doosan PUMA 800 XLY with live tooling and Y-axis for long shaft machining. 800mm (31 ½ inch) maximum diameter to a maximum length of 6000mm (236 inch) and longer if below 200mm diameter (8 inch).
 - 9 total CNC turning machines with various capacities.
 - Diameter ranging from a minimum of 6 mm (1/4 inch) to maximum 350mm (13 ¾ inch) to 840mm (33 inch) depending on machine.
 - Maximum length ranging from 500mm (19 ½ inch) to 2100mm (82 ¾ inch) depending on machine.
- Vertical Milling:
 - 915mm (36 inch) maximum height with a 915mm (36 inch) maximum width with a maximum length of 2 metres (6 ½ feet). This facility has a capacity of two tonnes.
- CNC Milling/Drilling:
 - A 4-axis 700mm (28 inch) maximum height with a 600mm (24 inch) maximum width and a maximum length of 6.6 metres (21 ½ feet). This facility has a capacity of five tonnes. This machine can also operate in 3-axis with a 780mm (31 inch) maximum height with a 1016mm (40 inch) maximum width and a maximum length of 2134mm (84 inch).
 - A 4-axis 700mm (28 inch) maximum height with a 600mm (24 inch) maximum width and a maximum length of 7.6 metres (25 feet). This facility has a capacity of five tonnes. This machine can also operate in 3-axis with a

- 780mm (31 inch) maximum height with a 1016mm (40 inch) maximum width and a maximum length of 2134mm (84 inch).
 - A 3-axis 700mm (28 inch) maximum height with a 600mm (24 inch) maximum width and a maximum length of 5.0 metres (16 ½ feet). This facility has a capacity of five tonnes and can also operate in 3-axis with a 780mm (31 inch) maximum height with a 1016mm (40 inch) maximum width and a maximum length of 2134mm (84 inch).
 - DMU 65 FD Monoblock 5- Axis milling and turning with high-speed spindle and FD table.
 - Ibarria ZV4/ZV5/ZV6. 4-axis machine with rotary tables, large format structural machining up to 6 metres in length.
 - Haas VF6-50.
 - Haas VF12-50. 4-axis machine.
 - Haas VF1. 4-axis machine.
 - A 3-axis 300mm (12 inch) maximum height with a 500mm (20 inch) maximum width and a maximum length of 5.6 metres (18 ½ feet). This facility has a capacity of two tonnes.
- EDM
 - Wire EDM 500mm (20 inch) x 350 mm (14 inch) x 300 mm (12 inch)

Crane Facilities: HRS has crane facilities to a maximum of five tonnes.

Inspection:

HRS is equipped to fulfil all modern engineering quality control practices and standards from goods received, through all manufacturing stages, finished goods to final despatch. The equipment and gauges are calibrated and recorded on a regular basis to traceable national standards.

Quality Assurance

HRS operates to a fully integrated and audited quality management system that satisfies the standard required for ISO 9001:2015 Certification.

We apply the same high standards of good engineering practice and manufacturing quality to the supply of all our services. We carry out frequent internal audits as required by

ISO9001 to ensure the necessary standards are maintained and are pleased to support customers that apply their own audit processes in addition to our internal procedures.

Our Quality Policy

HRS performs and expects top level quality and customer service. By applying a companywide principle of total commitment to quality including investment in training, a modern facility and state of the art equipment for the supply of mechanical power transmission components. We aim to exceed the expectations of all our customers.

It is our policy to supply products and services that fully and consistently meet the agreed individual requirements of our customers, ensuring they comply with defined standards and regulatory requirements, are fit for purpose and provide complete customer satisfaction.

We will continue to assess our activities with respect to the impact on quality, safety and the environment by incorporating those controls necessary to achieve continual improvement of the effectiveness of the quality management system.

Customer Service

By applying a continual improvement process and analyzing customer feedback, we aim for complete satisfaction in all the services and products we deliver.

All our customers are encouraged to review our quotations to ensure the following points meet their expectations:

- Was the quotation received within an acceptable timeframe?
- Is the quoted price fair and does it reflect the services required?
- Are the delivery/lead times consistent with your requirements?
- Do the material, finishes and treatment specifications meet your requirements?
- Have we received the correct drawing pack for the work quoted?

If you have any questions or comments regarding a proposal or quotation you have received from HRS, please do not hesitate to contact sales@halifaxrs.com.

After Sales Service

HRS takes great pride in the services we provide and welcome feedback on the services or products you have received. It is fundamental for our continuous improvement programme to obtain feedback from our customers allowing us to continually refine the service we provide.

We are committed to servicing our current and past customers by keeping them up-to-date with any changes in our products, terms, services, facilities or way of operating through regular communications, newsletters and updating our company overview.

Our Policies

Health & Safety:

HRS is committed to achieving high standards for all of our activities and subsequently operating a continuous improvement process to ensure the standards match those required within our industry and market. The management of Health and Safety forms an integral part of this commitment, with the contribution of each and every employee being an essential part of improving health and safety performance. Copies of our Health and Safety policy documentation can be made available upon request.

Equal Opportunities:

HRS incorporates an equal opportunities policy in accordance with the UK Equality Act 2010. We apply this policy across all our business activities.

Copies of our equal opportunities policy documentation can be made available upon request.