



Halifax Rack & Screw Cutting Co. Ltd.

Connecting • Constructing • Energizing • Strengthening • Raising
Lifting • Fueling • Feeding • Protecting • Changing • Driving • Building
Turning • Navigating • Watering • Powering

The World!

Company Overview and General Information



Certificate No. 7409

Welcome to Halifax Rack & Screw

This company overview has been designed to provide our customers with all the essential information necessary when working with Halifax Rack & Screw.

Halifax Rack & Screw operates to a business transparency policy when working with our customers, providing the level of confidence required in such a demanding industry.

We strive to establish close working relationships with our customers, 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, on time and to budget.

Halifax Rack & Screw 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.



Contents

Section	page
Introduction	4
Mission Statement	4
Services and Capabilities	5
Gear Rack Production	5
Screw and Nut Production	5
Milling, Turning, Drilling and Grinding	5
Precision Engineering	6
Inspection	6
Our workforce	6
Machining Capabilities	9
Crane facilities	9
Quality Assurance	10
Our Quality Policy	10
Customer Services	11
After Sales Service	11
Our Policies	12
Health & Safety	12
Environmental	12
Equal Opportunities	12
Contact Details	13
Business Details	14
Appendices	14

Introduction

Halifax Rack & Screw is one of Europe's largest manufacturers of precision gear racks, pinions, lead screws and nuts. We are a diverse engineering business of over 40 employees, with a number of consultancy staff used for offshore work as required, established in 1953 and based in Brighouse West Yorkshire.

Predominantly renowned for our gear racks, pinions, trapezoidal power screws, jack screws, Acme feed screws and nuts, with a rapidly expanding piece part production CNC machining element.



HRS is an ISO 9001:2008 accredited organization, serving a wide range of industry sectors and providing precision engineering, machining and manufacturing solutions.

Mission Statement

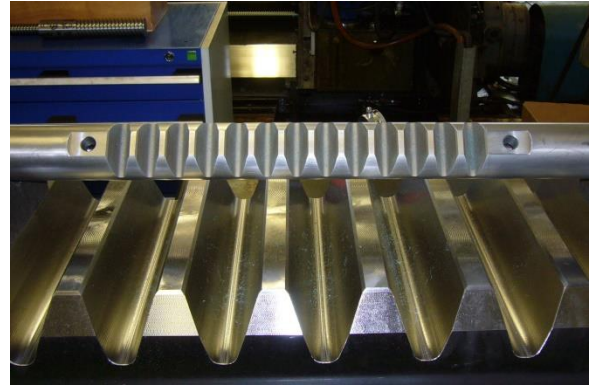
Halifax Rack & Screw's main priority is complete customer satisfaction. We strive to establish close working relationships with our customers. Working as a team and forming partnership agreements enables an intimate understanding of the client's business needs and allows for a more direct response to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



Services & Capabilities

Halifax Rack & Screw offers a variety of engineering services in support of our clients' needs. We manufacture precision gear racks, pinions, lead screws and nuts to suit most industrial requirements.

- **Gear Rack Production**
- **Screw and Nut Production**
- **Milling, Turning, Drilling and Grinding**
- **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 14.1/2, 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 BS436:1970 (ISO1328:1975) 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 provided using various thread whirling 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, Drilling and Grinding:

Halifax Rack & Screw are able to offer a custom heavy machining service with crane facility of five tons. The turning of large stock to 7.5 meters in length and the vertical milling of two tons provides our clients with an extensive range of machining options. Cylindrical grinding of stock to 3.2 meters between centers is also available.

Precision Engineering:

Halifax Rack & Screw offers volume production machining combined with our high standards of quality and competitive pricing. We provide a cost effective solution to the CNC precision machining process. Our extensive factory machine shop is capable of CNC turning to 400mm diameter and 3 - 4 axis vertical milling of two and five ton stock, respectively. CNC drilling to five meters is also available.

Halifax Rack & Screw 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 fulfill all modern engineering quality control practices and standards from goods received, through all manufacturing stages and finished goods to final dispatch. The equipment and gauges are calibrated and recorded on a regular basis to traceable national standards.

Our workforce:

Over 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 are totally committed to quality and continuous investment in training, modern plant and equipment.



Machining Capabilities

The following facilities are available at our Brighthouse factory. We are constantly adding to our machine shop and as new equipment is commissioned we will ensure you are notified. A full plant list is available on request.

Gear Rack Production:

- Seven CNC Kesel machines . This includes 5- 4.2 meter CNC rack milling machines and 2- 2.1 meter CNC rack milling machines. The latest machine was installed in Q3 2016.
- Our capacity ranges from 0.5 module (64 DP) up to 40 module (0.7 DP). We can cut up to 450mm (17 ¾ inch) maximum face width with a maximum overall width of 580mm (22 ¾ inch). We can cut to a maximum depth of 450mm (17 ¾ inch) and achieve a maximum practicable length of 12 meters (39 feet) which is re-indexed after 4.1 meters (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.
- The standard cumulative pitch quality is to BS436:1970 (ISO1328:1975) Grade 8, AGMA Quality 8 (0.10mm per 300mm), up to precision BS (ISO) Grade 5 and AGMA Quality 5 (0.03mm per 300mm).
- HRS also has supplementary CNC machining facilities for ending, drilling, profiling, slotting etc.
- We can supply mating spur or helical gear pinions to custom requirements.

Screw and Nut Production:

HRS can manufacture a wide range of lead screws and nuts using the following production processes:

- Thread whirling of lead screws up to 160mm (6 ¼ inch) diameter, with 12.2 meter (40 feet) of thread length, to a maximum 25mm (1 inch) pitch.
- Thread milling up to:
 - o 250mm (10 inch) diameter with a maximum 5 meter (16 ½ feet) length with a 25 mm pitch;
 - o 90mm (3 ½ inch) diameter with a maximum 7.5 meter (24 ½ feet) length with a 25mm pitch (1 inch);

- o Multi starts up to 250mm (10 inch) lead.
- Internal thread nut cutting up to 250mm (10 inch) diameter, 25mm (1 inch) pitch, with multi-starts available.
- 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.

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.

Milling, Turning, Drilling and Grinding:

- HRS is also able to offer the following machining facilities:
- Turning:
 - o 250mm (10 inch) maximum diameter to a maximum of 7.5 meters (24 ½ feet) between centers.
- CNC Turning:
 - o 800mm (31 ½ inch) maximum diameter to a maximum length of 6000mm (236 inch) (longer if below 200mm diameter)
 - o 100mm (4 inch) maximum diameter with bar feed facilities.
 - o Haas TL25 Big Bore with Full C axis, Sub Spindle and Live Tooling. This machine was commissioned in Feb 2010
 - o Haas ST35 Big Bore and Tail Stock. This machine was commissioned in May 2016
 - o DMG NLX 2500/700 with live tooling. This machine was commissioned February 2016.
 - o MAZAK QUICKTURN NEXUS 350-11 MY. This machine was commissioned February 2016.
 - o MCM Model ATL Heavy Big Bore 400x6000. This machine commissioned in January 2015
- Vertical Milling:
 - o 915mm (36 inch) maximum height with a 915mm (36 inch) maximum width with a maximum length of 2 meters (6 ½ feet). This facility has a capacity of two tons.
- CNC Vertical Milling. HRS has the following capabilities:
 - o A 4-axis 700mm (28 inch) maximum height with a 600mm (24 inch) maximum width and a maximum length of 6.6 meters (21 ½ feet). This facility has a capacity of five tons. 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). This machine was commissioned in March 2008.
 - o A 4-axis 700mm (28 inch) maximum height with a 600mm (24 inch) maximum width and a maximum length of 7.6 meters (25 feet). This facility

has a capacity of five tons. 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). This machine was commissioned in June 2012.

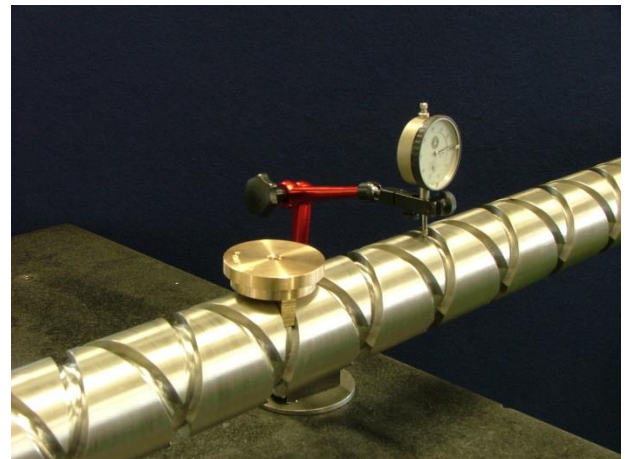
- A 3-axis 700mm (28 inch) maximum height with a 600mm (24 inch) maximum width and a maximum length of 5.0 meters (16 ½ feet). This facility has a capacity of five tons. This machine can also operate in 3-axis with a 780mm (31 inch) maximum height with a 1016mm (40 inch) maximum width and a maximum length of 2134mm (84 inch). This machine was commissioned in June 2012.
- Haas VF6-50. This machine was commissioned in March 2011
- Haas VF12-50. 4-axis machine was commissioned in June 2016
- Haas VF1. 4-axis machine was commissioned in March 2016
- A 3-axis 300mm (12 inch) maximum height with a 500mm (20 inch) maximum width and a maximum length of 5.6 meters (18 ½ feet). This facility has a capacity of two tons.
- CNC Drilling: HRS can CNC drill up to the following maximum dimensions:
 - 5 meter (16 ½ feet) length and a 56mm (2 ¼ inch) maximum drill diameter.
- Cylindrical Grinding: HRS can grind up to the following maximum dimensions:
 - 300mm (12 inch) maximum diameter.
 - 150mm (6 inch) maximum diameter between 3.2 meter (10 ½ feet) centers.

Crane Facilities:

- HRS has crane facilities to a maximum of five tons.

Inspection:

- HRS is equipped to fulfil all modern engineering quality control practices and standards from goods received, through all manufacturing stages and finished goods to final dispatch. 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 9001:2008 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

Halifax Rack & Screw operates to high levels of quality and customer service. By applying the principles of total commitment to quality, investment in training, modern plant and equipment in 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 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 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 us for clarification.

After Sales Service

Halifax Rack & Screw 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 program 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 services, facilities or way of operating.

Our Policies

Health & Safety:

Halifax Rack & Screw 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 chosen 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:

Halifax Rack & Screw incorporates an equal opportunities policy in accordance with the EO Act 2010. We apply this policy across all our business activities.

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



Contact Details

Operations Director:

Mark Robinson – Mark.Robinson@hrs-ccl.co.uk

Financial Director:

Colin Jones – Colin.Jones@hrs-ccl.co.uk

Sales Manager (North America):

Rich Easley- reasley@halifaxrs.com

Quality Manager:

Dale Norman – Dale.Norman@hrs-ccl.co.uk

Production Control / I.T.:

Mary Mitchell – Mary.Mitchell@hrs-ccl.co.uk

For all North America General Inquiries:

Email – reasley@halifaxrs.com

Telephone switchboard: (513) 449-4296

Website: www.halifaxrs.com

The Halifax Rack & Screw manufacturing and engineering facilities are located at:

**CORONATION WORKS,
ARMYTAGE ROAD, BRIGHOUSE
WEST YORKSHIRE,
HD6 1QA.
ENGLAND.**

Business Details

Registered Name:	Halifax Rack & Screw Ltd
Registered Office:	Coronation Works, Armytage Road, Brighouse, West Yorkshire, HD6 1QA
Company Registration No:	05202733
VAT Registration No:	854 4867 84
Status:	Limited
ISO9001:2008 Certificate no.	7409
Employers Liability Insurance:	£10 million
Public Liability Insurance:	£10 million