

Precision Component Solutions



Mechanical Product Range

Turning Challenges into Solutions

For your industrial needs

Established in 1985, Drive Lines specialise in the supply of power transmission solutions and precision components.

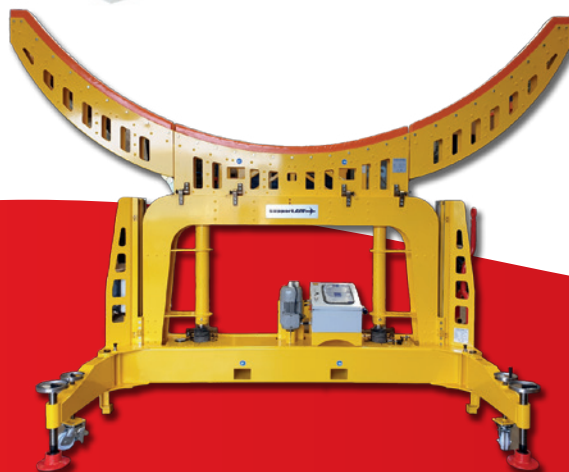
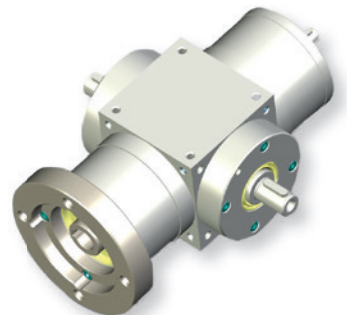
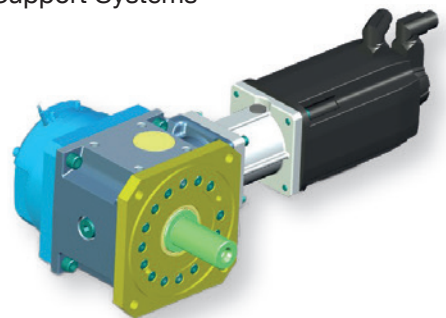
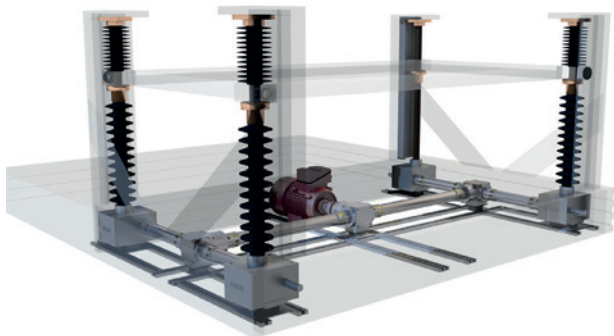
We proudly serve market leaders in many machinery disciplines from a wide range of industries, and work with your designers to specify and provide all the key components required for your drive train, lifting, lowering, linear and slewing applications.

Our strong customer service ethos and product excellence are at the core of our success.

We are proudly a division of RARUK Holdings Ltd. Approved to BS EN ISO 9001:2015 quality standards, we represent a number of world class manufacturers in the United Kingdom and Ireland.

Industries in which we have specific application experience include:

- Automation and Mechanical Handling
- Machine Tools
- Infrastructure Equipment
- Automotive, Rail, Marine and Aerospace Support Systems
- Printing and Packaging
- Nuclear and Defence



Screw Jacks

Cubic; single face; trapezoidal spindle; ball screw spindle; high speed

A comprehensive range of screw jacks supplied singly or as full motorized systems. Compact cubic jacks up to 500 kN offer a highly flexible and aesthetically pleasing solution for controlled lifting, lowering and slewing and are available with many accessories to achieve a truly customised package.

For higher loads our classic single face jacks up to 2000 kN offer plenty of scope.

For higher speeds and efficiencies, we offer 3000rpm oil filled jacks with optional ball screw spindles for servo motor applications.

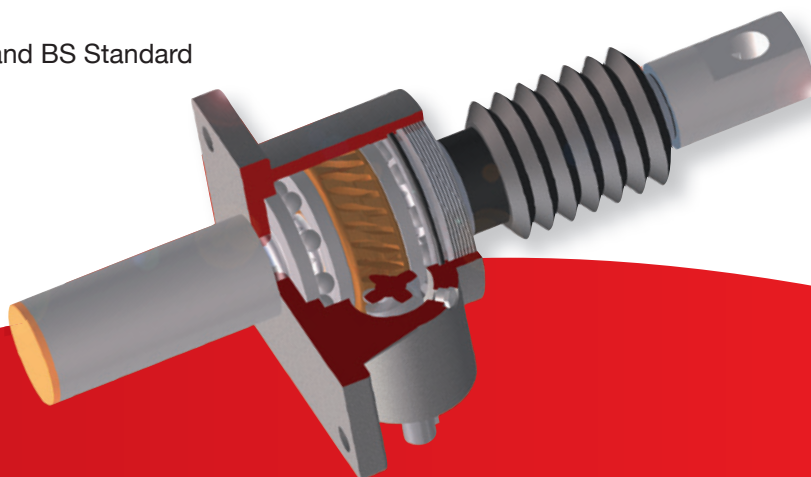
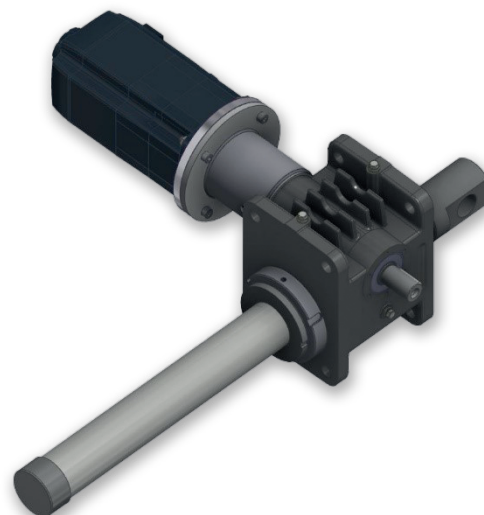
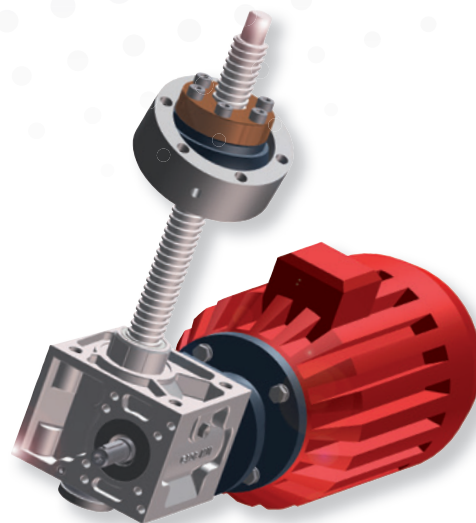
Alternative materials, surface treatments and paint systems are available for use in harsh environments.

- Rotating screw version with travelling nut
- Translating screw version with rotation prevention
- Cubic or single face designs
- High duty and speed options including ball screw spindle and high speed jacks for servo motors
- Worm and wheel or spiral bevel gear sets
- CAD files available
- Wide range of accessories
- Unique worm wheel encoder for absolute positioning
- Hard coat anodize coating and stainless for food processing
- Special Lithogrease available to order with purchase

Standard IEC Motors; Control Systems;

- Bespoke control systems built to specification
- Also available 3 phase IE2 - IE4, Single phase and ATEX explosion proof motors
- Built to ISO 9001, IEC, DIN, EN and BS Standard

GROB

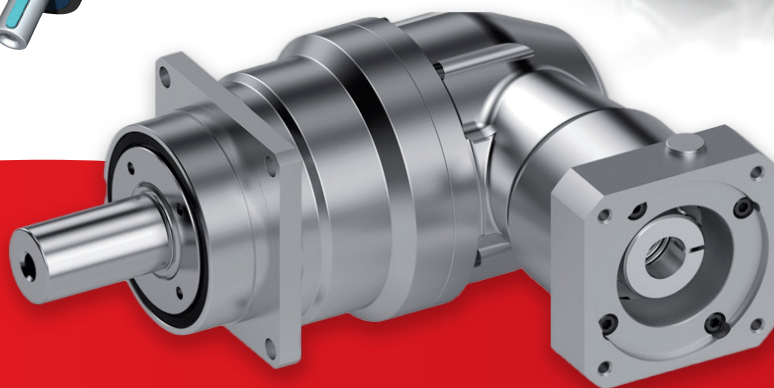
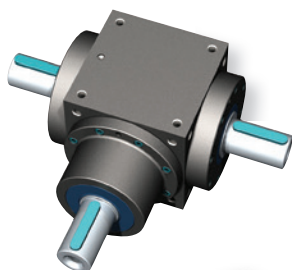
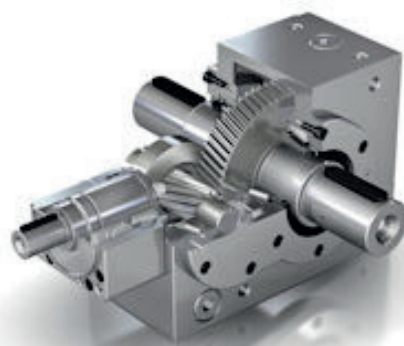
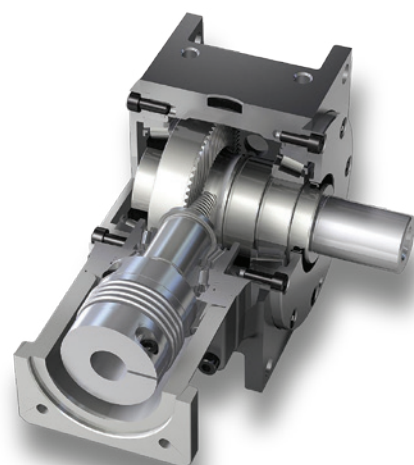


Bevel Gearboxes

Spiral; hypoid and zerol bevel gears; bevel/helical; miniature gearboxes; custom design gearboxes; GearSystems

Our bevel gearbox range from Nidec Graessner comprises compact, durable right angle gearboxes for virtually any application. Bespoke designs and customised versions of standard products ensure these are the most versatile bevel gearboxes available:

- The PowerGear spiral bevel range offers the highest torque within the smallest footprint. Reinforced, high-speed, miniature, food-safe, ATEX versions of the PowerGear are available with various solid and hollow shaft configurations
- The DynaGear servo bevel hypoid gearbox can be supplied for use with most common servo motors, giving a highly efficient solution with reduction ratios up to 150:1. Economy, food-safe and ATEX versions are available in several shaft configurations
- The KS TwinGear bevel helical gearbox is the ideal solution for high torque, high reduction performance for the most compact of spaces thanks to its two stage design. Food safe and ATEX versions available
- EvoGear confidently combines all the advantages of a high-performance right angle gearbox with planetary high ratio options up to 100:1 in an easy-to-clean design
- BevelGear standard gear-sets can be supplied for customers wishing to incorporate them into their own systems
- DesignGear is the name given to Nidec Graessners customised solutions to customers own designs



Planetary and Servo Worm Gearboxes

Servo planetary; servo worm; 2 speed spindle drive and general purpose planetary

Our Nidec Graessner PlanetGear range of servo gearboxes are interchangeable with many popular European brands:

- The VRS planetary range offers high performance and precision for the most demanding positioning accuracy and duty and speed requirements
- The VRL planetary range is an all-round, cost effective gearbox in a wide variety of frame sizes and ratios
- The PRE/PRF series is the cost effective high performer in the planetary gearbox marketplace

Our ZF Servoplan range comprises precision gearboxes for servo drive applications and are supplied ready to fit to most common servo motors:

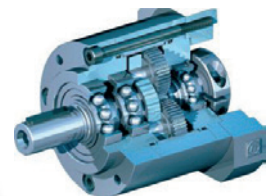
- The PG planetary range offers high precision backlash reduction up to 3000Nm
- The PGE planetary range is a cost effective servo gearbox with reduction ratios from 3:1 to 100:1
- SWG precision worm gearboxes are available in a variety of configurations for space saving applications
- All of the Servoplan range are offered with different backlash settings and various input/output options

The ZF Duoplan 2 speed spindle drive gearbox allows the performance of machine tools to be used in an optimal and energy efficient way:

- Various application and installation positions
- Power range from 19 to 120kW
- Direct or indirect drive input/output options
- Compact and highly efficient

Our IMS general purpose planetary gearboxes are available in literally thousands of torque, size and speed combinations:

- Torque capacity up to 300Nm; standard ratios from 4:1 to 393:1
- Low noise operation option
- IMS.baseline – standard gearboxes for small and medium volume applications
- IMS.techline – customised gearboxes for high volume series
- IMS.SDline – specific optimised solutions for special applications



IMS:GEAR



Couplings/ Torque Limiters Precision Range

**Bellows; miniature bellows; elastomer;
line shafts; safety couplings**

Metal bellows couplings offer precise transmission of motion and torque. They are designed for highly dynamic servo applications to compensate for shaft misalignment and are torsionally stiff and maintenance free.

Servomax elastomer couplings eliminate vibrations, are electrically insulating and provide a cost effective, easy to use solution to shaft misalignment.

Fixed and adjustable length line shafts are available up to 6m in length. Ideal for transmitting torque over long distances such as in screw jack lift systems.

Compact bellows and elastomer safety couplings provide precise overload protection for direct and indirect drives:

- Backlash free
- Compensation for shaft misalignment
- Speeds up to 120,000rpm with balancing grade G2.5
- Low moment of inertia
- Various shaft connections
- Easy assembly/dis-assembly
- Special materials and ATEX versions available

R+W
COUPLING TECHNOLOGY



Couplings/ Torque Limiters Industrial Range

**Bellows; elastomer; high torque safety
couplings; disc pack couplings; flexible
gear couplings**

The high torque safety coupling range includes the rugged Torqset series which are supplied with individual torque modules, the number of which can be varied at a later date to alter the torque range.

At the top end of the torque range, the Flexible Gear couplings offer torque transfer of over 2,000,000Nm!

The Disc Pack coupling series are designed for very high torsional stiffness in both single and double flex versions.

A range of high capacity bellows and elastomer couplings complete the industrial line-up:

- Backlash free
- Compensation for shaft misalignment
- High torque overload protection for the most demanding applications
- Torque in excess of 2,000kNm
- ATEX versions available
- Bespoke solutions



Separating Stops

Pneumatically or electrically operated, damped or undamped separating stops, index cylinders and anti-bounce stops and acceleration units

Worner products perform key tasks within automated production systems:

- They accumulate pallets and release them individually for downstream transportation
- They stop the pallets at assembly stations and position them precisely for subsequent processing
- Once processed the pallets are released for transportation to the next station

A wide range of products are available depending on the speed, shape, weight and robustness of the workpiece and the type of production process.

Worner products are high quality, low maintenance and highly durable:

- Undamped separating stops are the robust, low-cost, basic version, used when one or multiple pallets must be placed in a defined position
- Damped separating stops are recommended for shock-sensitive, fragile workpieces. The damping force is adjustable to decelerate the pallet to a smooth, controlled and vibration free stop
- Angle dampers bring the pallet to a controlled stop for a change of direction on a conveyor line
- Index cylinders assure precise vertical lifting of pallets, ideal for rapid positioning
- Anti-bounce stops are normally used with undamped separating stops to hold the pallet in exactly the required position
- Acceleration units quickly accelerate the workpiece carrier to the conveyor speed after completion of the work cycle, resulting in a significant reduction in cycle time

Wörner



Linear Actuators

Standard industrial light and heavy duty ranges; bespoke actuators for hydraulic steelwork applications

The standard range covers everything from light duty actuators for building technology to heavy duty cylinders for industrial applications up to 100 tonne.

Highly flexible linear actuators can be mounted in any attitude independent of other equipment and have a wide range of configurations.

A specialist area of application is the supply of actuators for navigation channels and sluice gate operations under the 'Hydraulic Steelwork' umbrella. The solution is widely used in mainland Europe due to the many environmental advantages:

- Bespoke solutions for waterway management applications
- Wide range of configurations
- Environmentally friendly alternative to hydraulic actuators
- Low maintenance and operating costs
- Long lifespan
- Low noise



Linear Actuators

MINI actuators for a wide range of applications

The MINI range of linear actuators are characterised by their especially compact size for actuators in their performance class. Subsequently they can be used in applications where there is a limited amount of space available. The MINI drives cover a wide range of uses thanks to a variety of mounting options and accessories. Despite its compact and lightweight design, it is extremely durable and long-lasting:

- 5 sizes with lifting forces up to 26,000N
- High performance capacity in a compact design
- Efficient operation giving low operating costs
- Integrated thermal protection
- Lubricated for life
- Standard protection IP45, optional IP65
- Stroke speed up to 136mm/sec



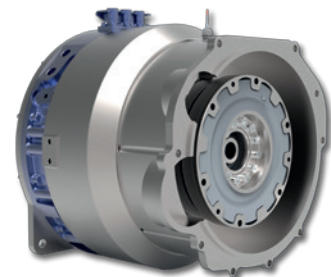
Brakes and Clutches

Electromagnetic, hydraulic and pneumatic clutches and brakes to cover practically all areas of industrial applications.

HEID Antriebstechnik has over 130 years of experience and is a specialist in the production of clutches and brakes in various designs, adapted to the requirements of customers.

With precision and safety at the core of each design, the Heid Antriebstechnik product range includes:

- Multi-plate clutches are diverse in their design and technical conception, universally suitable for drive solutions
- Multi-disc brakes are generally used to hold or decelerate loads in drive systems
- Single-surface systems enable economical drive solutions in mechanical engineering, from the drive switching of systems with non-uniform loads to the precise control of work cycles with a high switching frequency



Drive Solutions

Drive solutions from Heid Antriebstechnik are installed in various applications around the world.

Preferred in industries where it is necessary to consider special requirements like small built-in dimensions, special functionalities, or integration into existing systems.

With the latest technology and decades of experience, Heid Antriebstechnik is able to produce customised drive solutions for:

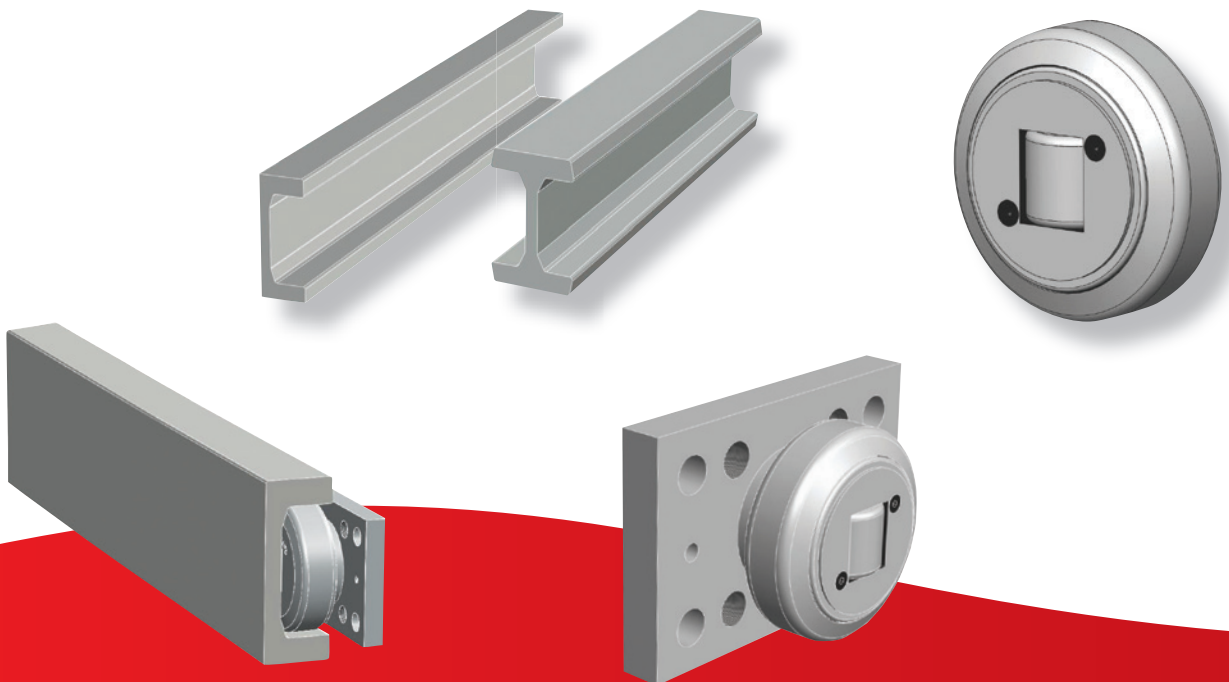
- Marine Applications
- E-mobility and Hybrid Systems
- Powerplants
- Electronic Systems
- Vehicle Construction, Automotive and Tyre Industry
- Test Benches
- Machine Tools

Combined Bearing and Rails

For mechanical handling and heavy load applications

Drive Lines combined bearings provide a cost effective guidance solution to lift systems, platforms and cantilever loads. The system combines a radial bearing to take out high moment loads and a smaller axial roller to eliminate side movement:

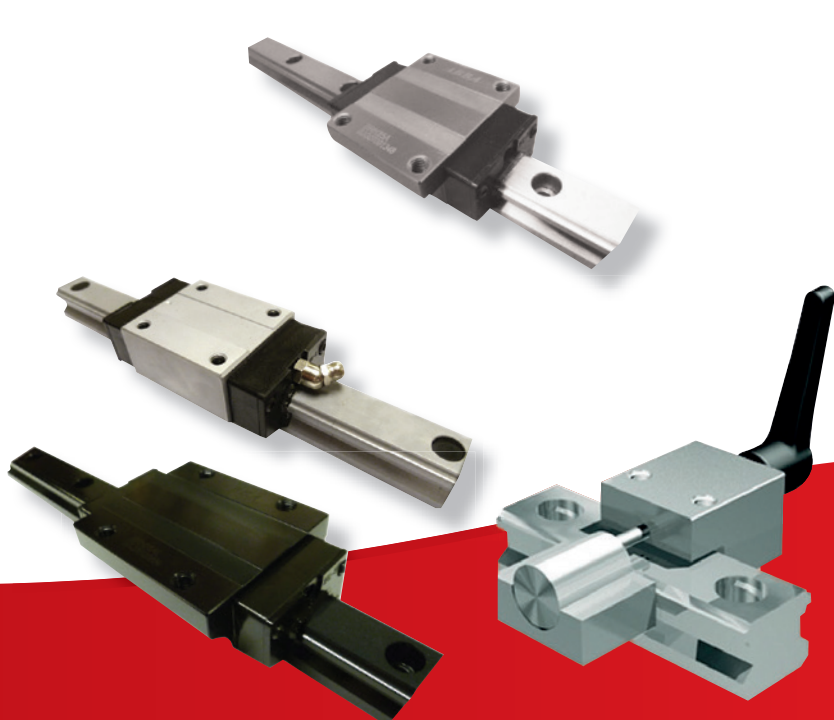
- A wide range of combined bearings with hardened steel roller bearings and axial side rollers. Lubricated and sealed with re-lubrication ports on larger sizes
- Combined bearing and welded flange plate assemblies are supplied with chemi-black steel flange plates with through and tapped holes for a choice of mounting
- I and U section profile rails are available in lengths up to 12m. Standard material rolled steel 18 MnNb6. Sections can be butt jointed to form longer lengths
- Corrosion resistant coatings are offered such as Armoloy TDC coating for the bearings and hot dip galvanising for the rails
- Industry standard sizes for ease of interchange
- Load capacity up to 40kN per bearing
- 2D and 3D CAD models available to download
- Precision machined rails and bearings are available with reduced running tolerances for precise guidance
- Combined bearings can be supplied with an eccentric pin to adjust the gap between the axial roller and the rail
- Bespoke machining of rails can be offered to supply ready with mounting holes for swift installation
- Special materials and profiles can be supplied subject to minimum order quantities
- Mill certificates and ultrasonic testing on request
- Quick delivery



Linear Ball Guides

Drive Lines Linear ball guides provide high precision, high capacity linear motion at cost-effective prices. Ideal solutions for automation, tooling and machine tool linear guidance:

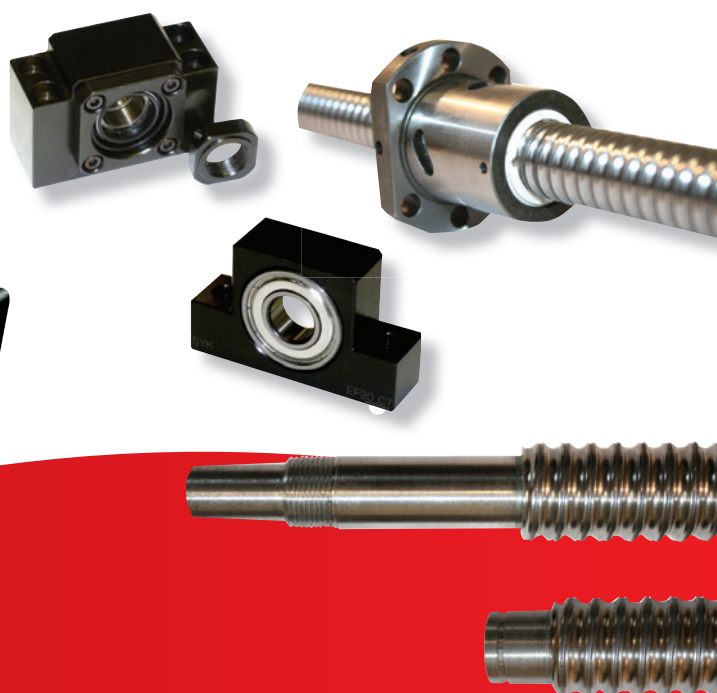
- Flanged and non-flanged bearings to international standard height or compact low profile sizes. Available in long and short length with through-hole (flanged) or blind (non-flanged) mounting
- Optional wash down and FDA approved Armoloy TDC coating for pharmaceutical and food processing applications. A cost effective and quick alternative to special order 440C stainless steel
- For light corrosion environments rails and bearings can be supplied with chemi-black coating
- A range of miniature stainless steel ball guides in sizes 3-15mm are available in wide or standard designs
- To supplement our ball guides, Drive Lines offer a wide range of manual, pneumatic or hydraulic clamps to allow the ball carriages to be locked in position
- Drive Lines ball guides are size interchangeable with other brands
- 2D and 3D CAD models available to download



Ball Screws

Drive Lines range of precision ball screws enables cost effective high speed and high precision actuation for automation and industrial applications. With a number of styles and size options coupled with short lead times and complete machining to your requirements:

- Flanged and non-flange nuts to international sizes and DIN specification to suit all applications. SFS, DFS, SFI, DFI, SFU and DFU single and double length flange nuts or SCI non-flange compact nuts
- Standard size fixed and floating end support bearings. FF and FK flange style and BK, BF, EK and EF base mounted support units. Complete with locking nuts and thrust bearings for ready installation. Drive couplings also available
- Drive Lines can provide economic and precise machining of the ball screw ends to suit our end supports or to your own design
- Choose from a wide range of accuracy classes C5-C10
- Pre-load and axial play options P0-P2 grade
- Rolled and precision ground screws
- Sizes from 12-80mm diameter
- 2D and 3D CAD models available to download



Application Advice

Contact us if you would like to discuss an application with a sales engineer or would like a site visit.

We represent the following manufacturers in the UK and Ireland:

- ADE-Werk GmbH
- Grob Antriebstechnik GmbH
- Heid Antriebstechnik GmbH
- Heynau Gears Production Service GmbH
- IMS Gear GmbH
- Nidec Graessner GmbH & Co KG
- R+W Antriebselemente GmbH
- Wörner Automatisierungstechnik GmbH
- Zimmer Group GmbH
- ZF Maschinenantriebe GmbH

DriveLines

A division of RARUK Holdings Ltd.

14 Old Bridge Way,
Shefford,
Bedfordshire,
SG17 5HQ
United Kingdom

Tel: +44 (0)1234 360689

Email: sales@drivelines.co.uk



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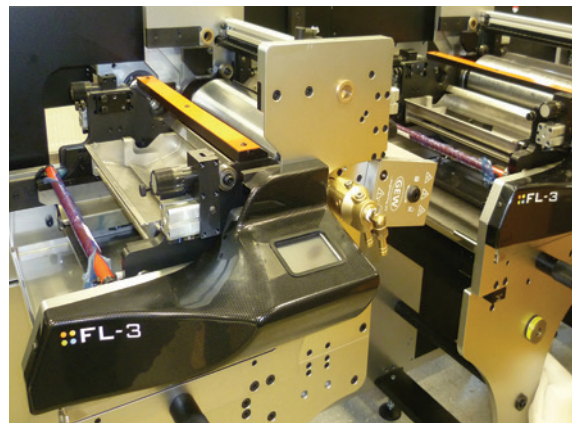
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Component Application Examples



Rexroth Vertical Personnel Platform **GROB R+W**
Bosch Group



edale Flexographic Printing Press **ZF G R+W**



Ipswich Flood Defence



See our website www.drivelines.co.uk for further information on these applications