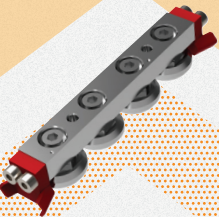
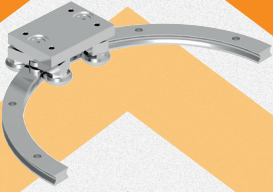


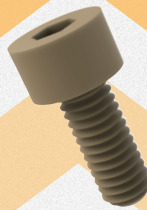


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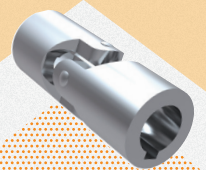
LINEAR



MECHANICAL



LINKAGES | ROTARY



Powered by  
**Automation**

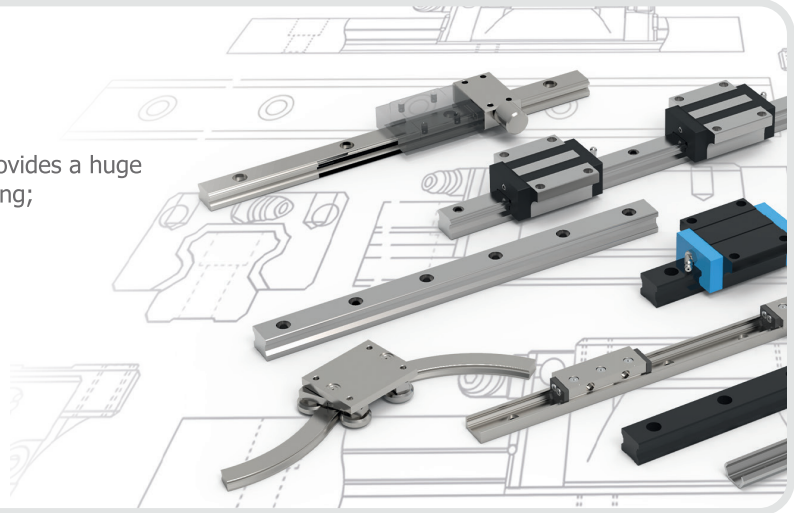
Engineered for  
motion, built for  
performance

Automation Components have a wide product range supplying design engineers with linear, rotary, linkages and mechanical components. With **large stock holdings** and **free CAD models** available to download from our website, [automationcomponents.co.uk](http://automationcomponents.co.uk).

## Linear Components

Our linear motion range is extensive and provides a huge variety of linear motion components, including;

- Linear Guideways & Rails
- Linear Bearings & Shafts
- Telescopic Rails
- Lead Screws & Ball Screws
- Linear Tables, Positioning Stages & Crossed Roller Sets



## Mechanical Components

Automation Components are leading UK manufacturers of specialist fasteners. Including a range of mechanical components;

- Shoulder Screws, Captive Screws & Sealing Screws
- Lifting Pins, Lifting Bolts & Swing Bolts
- Blanking Plugs and Spring & Tolerance Rings
- Standard Fasteners
- Pins & Spacers
- Anti-Vibration, Levelling Feet & Materials Handling
- Thread Inserts & Specialist Screws



## Linkages & Rotary Components

With over 50 years' experience and large volumes of high quality linkage components in stock, Automation Components is ready to help you find the perfect linkage for your application today. Our range includes;

- Universal Joints & Rod Ends
- Couplings
- Pivot Bearings, Air Motors & Cylinders
- Clevis Joints, Turnbuckles & Ball & Socket Joints
- Gears, Gear Boxes & Belts



Who are

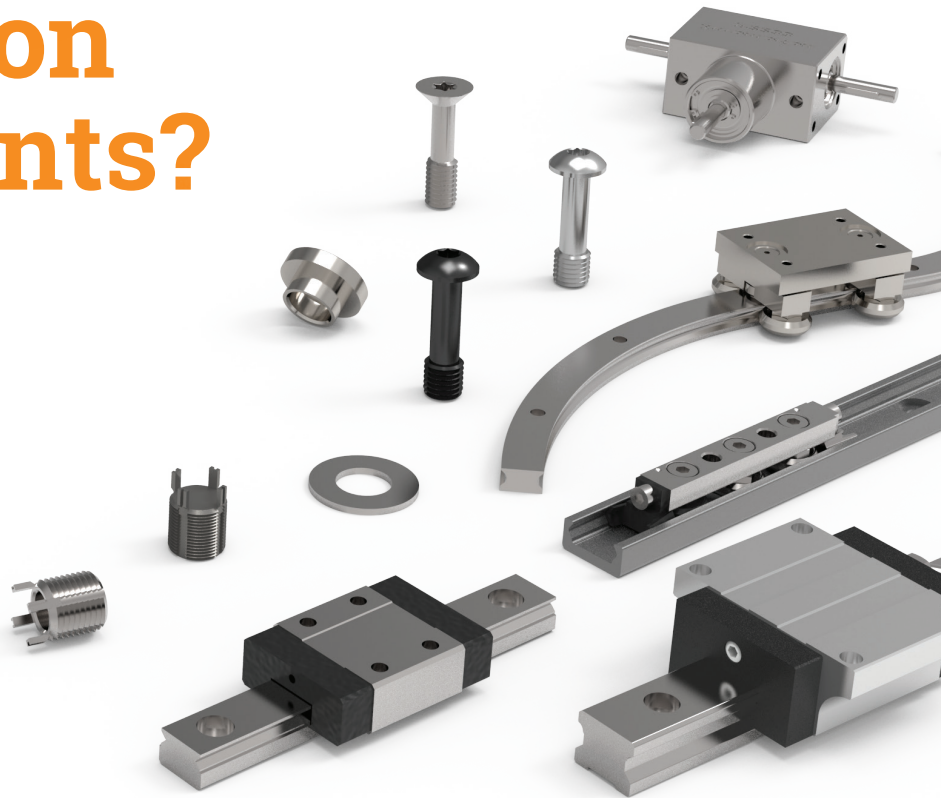
# Automotion Components?

Automotion Components, part of the Wixroyd Group, is your trusted partner in supplying precision-engineered solutions to power the world's most demanding industrial applications.

With in-house manufacturing capabilities, deep stock availability, and an expanding CAD library, we simplify sourcing and speed up your design process.

## Trusted across many industries including:

- Material handling & conveyor systems
- Packaging & labelling machinery
- Automated assembly machines
- Special purpose machinery
- Premium aircraft seating
- Oil, gas & energy sectors
- Defence & aerospace projects
- Robotics & motion control systems
- Semiconductor & electronic equipment
- Medical



Automotion's website and dedication to the continual expansion of our free 3D CAD library means we are always focusing on delivering the latest information in easy-to-use formats.

Available directly from our website, we offer a wide range of CAD models in popular formats: **SolidWorks, ProE, Sat, Step, Parasolid and Iges.**



## Three companies one family

The Wixroyd Group, part of Essentra PLC, is made up of three of the strongest UK brands in the world of industrial components: Wixroyd, Automotion Components and Teknipart. Together we manufacture and supply innovative specialist components to provide solutions to product design and engineering challenges. With a reputation for high-quality products and technical support for businesses across multiple industries, we focus on **Delivering A Range of Endless Possibilities.**



Follow us  
@wixroydgroup

Our three companies each specialise in specific products and services and now you can place **one** purchase order containing any items across our **three** brands.



- ▶ DESIGN ELEMENTS
- ▶ ACCESS COMPONENTS
- ▶ WORKHOLDING



- ▶ LINEAR COMPONENTS
- ▶ MECHANICAL COMPONENTS
- ▶ LINKAGES & ROTARY



- ▶ THREAD INSERTS
- ▶ SCREWS & WASHERS
- ▶ QUICK RELEASE PINS



# In-House Manufacturing Capabilities

Our range of precision fasteners; sealing, captive, shoulder and vented screws benefit from being manufactured in-house at our Chichester site. Our CNC lathes are working day and night to produce our wide selection of shoulder screws, captive screws, vented screws and more in many different sizes and materials!

To ensure we are running as efficiently as possible, we have written custom software that works with our warehouse and ordering system to reduce the average lead time significantly. Our system means that we can offer bespoke variations on our existing products with no hassle, and at lower minimum quantities.



## Sealing Screws

A wide range of head types, drives and o-ring materials.



## Captive Screws

Our popular range of captive screws and mounting fittings are ideal for panel applications.



## Vented Screws

The highest quality vented fasteners, made in Chichester for your vacuum system.



## Shoulder Screws

A vast line-up of shoulder screws in different styles, materials and head styles.

# Bespoke parts made in-house to meet customer requirements

We can custom make special executions of our standard fasteners; varying thread length, thread size and material with an extremely efficient production time.

Get in touch with our technical team to discuss your ideas and see how we can help you with your project. ▼

[sales@automotioncomponents.com](mailto:sales@automotioncomponents.com)  
0333 207 4498



## High Stock Levels

With a high commitment to stock holding, we can offer next day delivery on most products. We deliver what you need, whenever you need it.



## Streamline Ordering Process

Whether you're an account holder or choose to shop as a guest, our online ordering system is reliable and easy to use.



## Made in Britain

Established in 1951, the Wixroyd Group supply innovative engineering products with free online CAD models and in-house technical expertise.



## High Quality Production

Trusted by some of the best known design & manufacturing companies, we pride ourselves on producing the highest quality components at the best value.



## Technical Sales Support

Available via telephone, email or our live web chat service, we work to find a solution for your application.



## Bespoke Capabilities

Our in-house manufacturing can make your idea a reality. Call our technical team on **0333 207 4498** to discuss.

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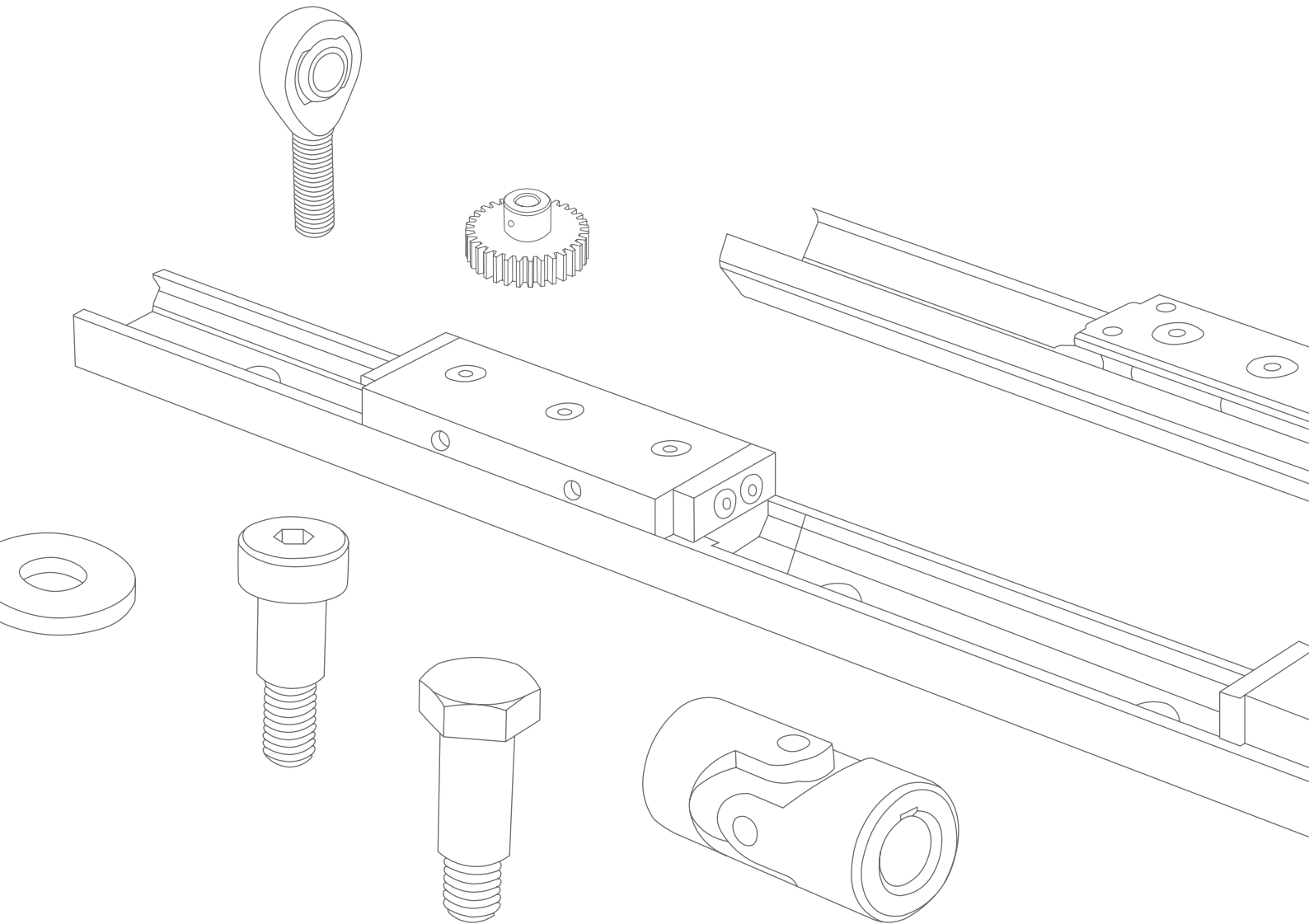
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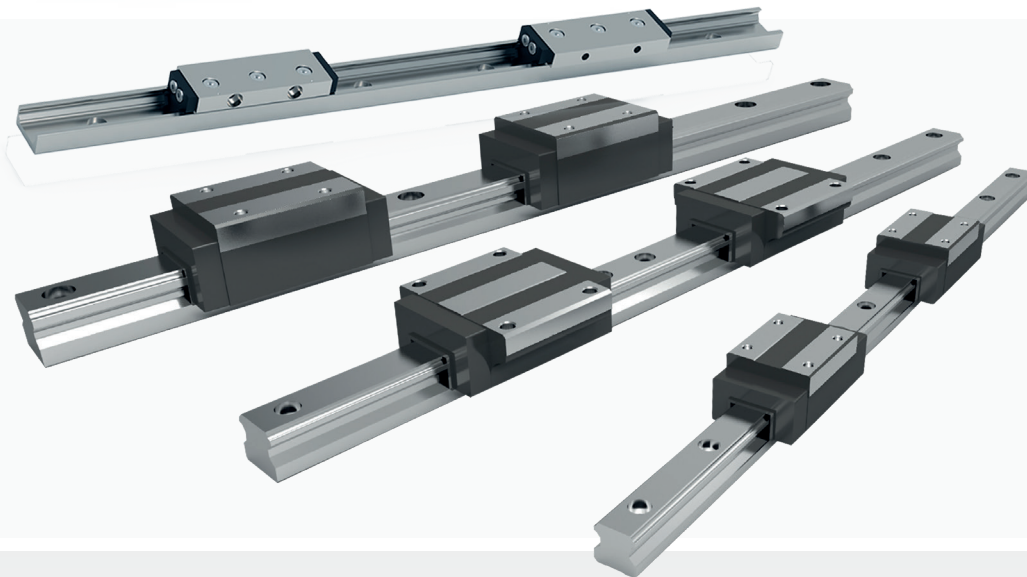
VIEW THE FULL RANGE

Linear Components ▶ Linear Guideways & Rails

# Linear Rails

A linear rail is a system which facilitates linear movement and supporting of the load of a piece of equipment, either vertically or horizontally. As specialists in linear motion systems, we offer you a choice of materials and sizes. Whether your application requires lightweight aluminium rails

for aviation purposes or stainless steel components for resistance against water and corrosive chemicals, our range caters to diverse needs. Our knowledgeable technical engineers are always on hand to provide assistance.



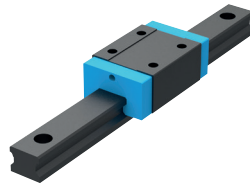
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### L1010.C - Miniature Rail Carriages

Standard rail width. Miniature linear guideways are for precise, repeatable linear positioning. Space saving and cost efficient

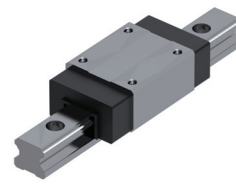
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### L1016.U-BC - Unflanged Carriages - Standard

Blackened. Ball chain linear guideways. Very accurate and can handle high load capacities, providing smooth, consistent linear motion

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### L1016.UL - Unflanged Carriages - Low

With retained ball cage. Ball chain linear guideways. Very accurate and can handle high load capacities, providing smooth, consistent linear motion

# An overview of **Linear Guides**

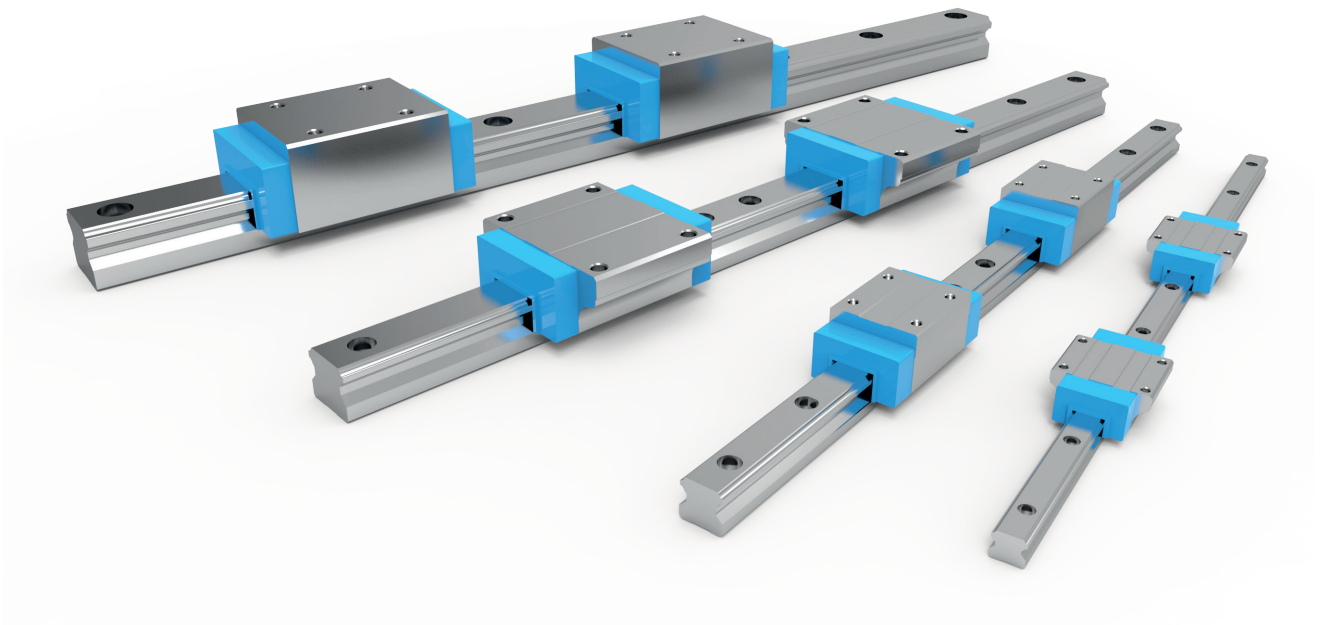


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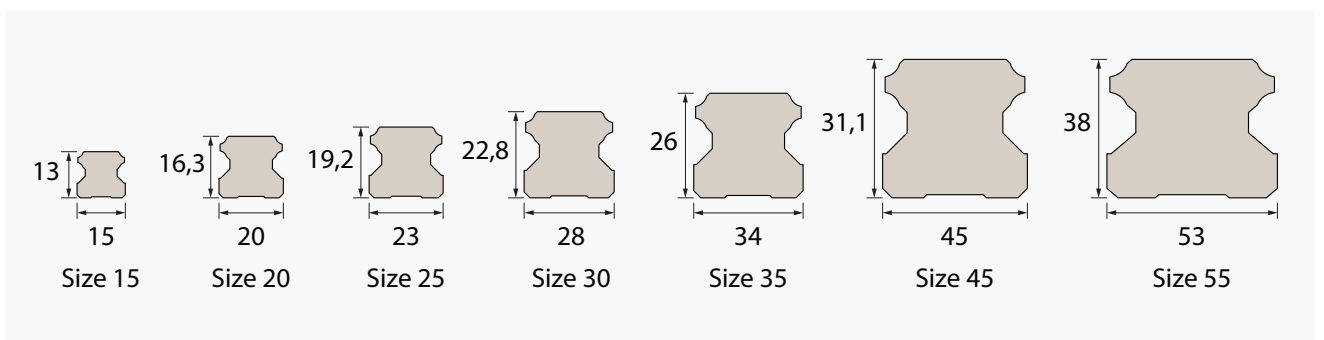
## Why use this product?

- For their rigidity, precision and high load capacity.
- We stock seven rail profiles of up to 4 metres length with multiple slider options.
- Same day despatch available.
- Cost effective solution compared to other linear guides.
- The system is interchangeable with other manufacturers such as THK, HIWIN, INA, Bosch etc.

## LINEAR GUIDES : L1016



## Rail sizes



# An overview of Miniature Linear Guides

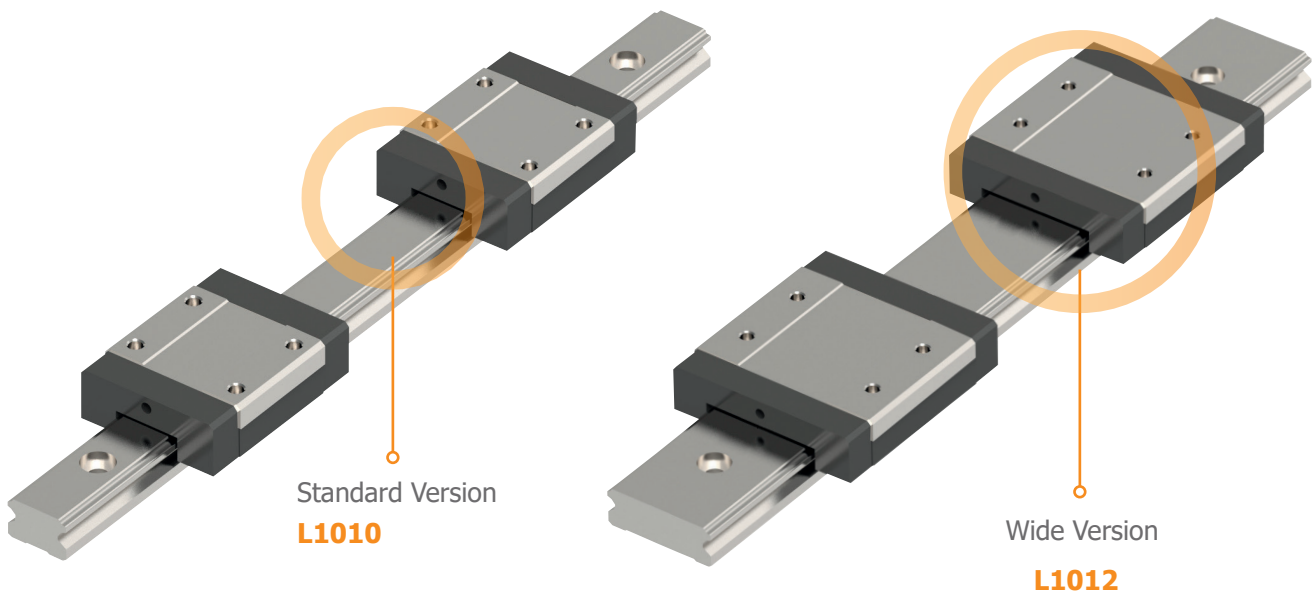


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## Why use this product?

- Higher load ratings and precision for the size of the product.
- Ideal product for applications requiring a small or low profile linear guide.
- High level of corrosion resistance as manufactured for 440c stainless steel.
- Same day despatch available.

## LINEAR GUIDES : L1010 - L1012

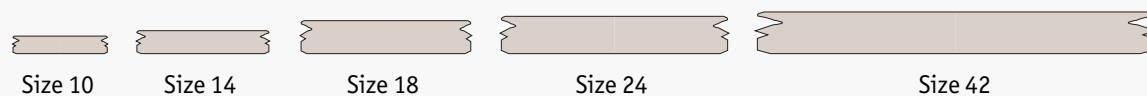


## Rail sizes

### L1010 STANDARD VERSION



### L1012 WIDE VERSION



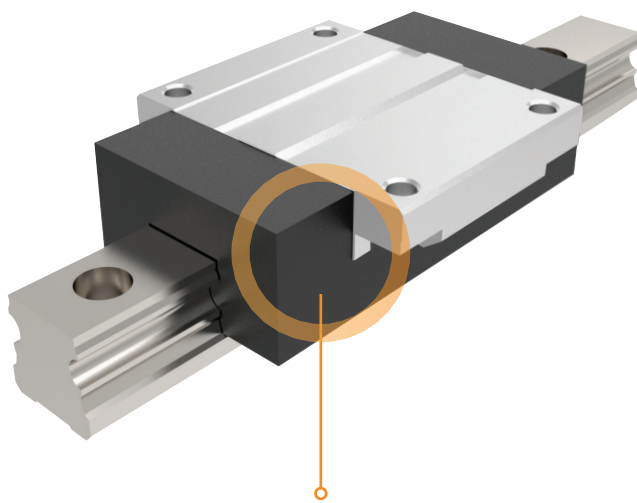
# An overview of Aluminium Linear Guides



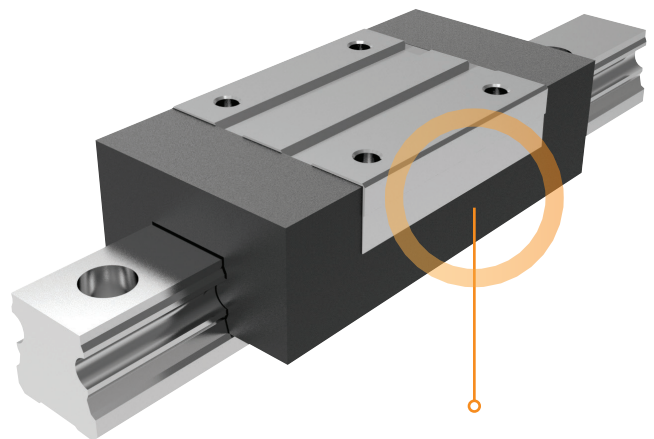
## Why use this product?

- Compact and lightweight. These weigh approximately 60% less than comparatively sized steel rails.
- Corrosion resistant material. Hardened stainless balls and rail strips to prevent wear.

## LINEAR GUIDES : L1018

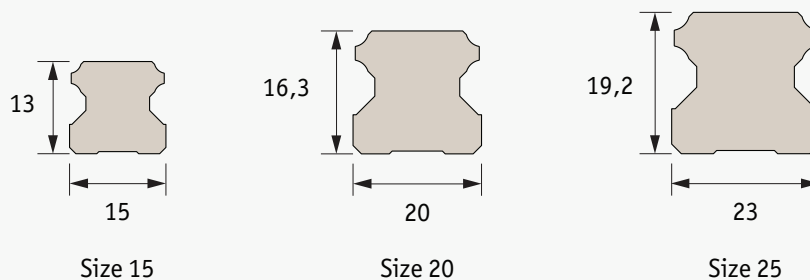


Flanged Carriages



Unflanged Carriages

## Rail sizes



# An overview of Needle Roller Linear Guides

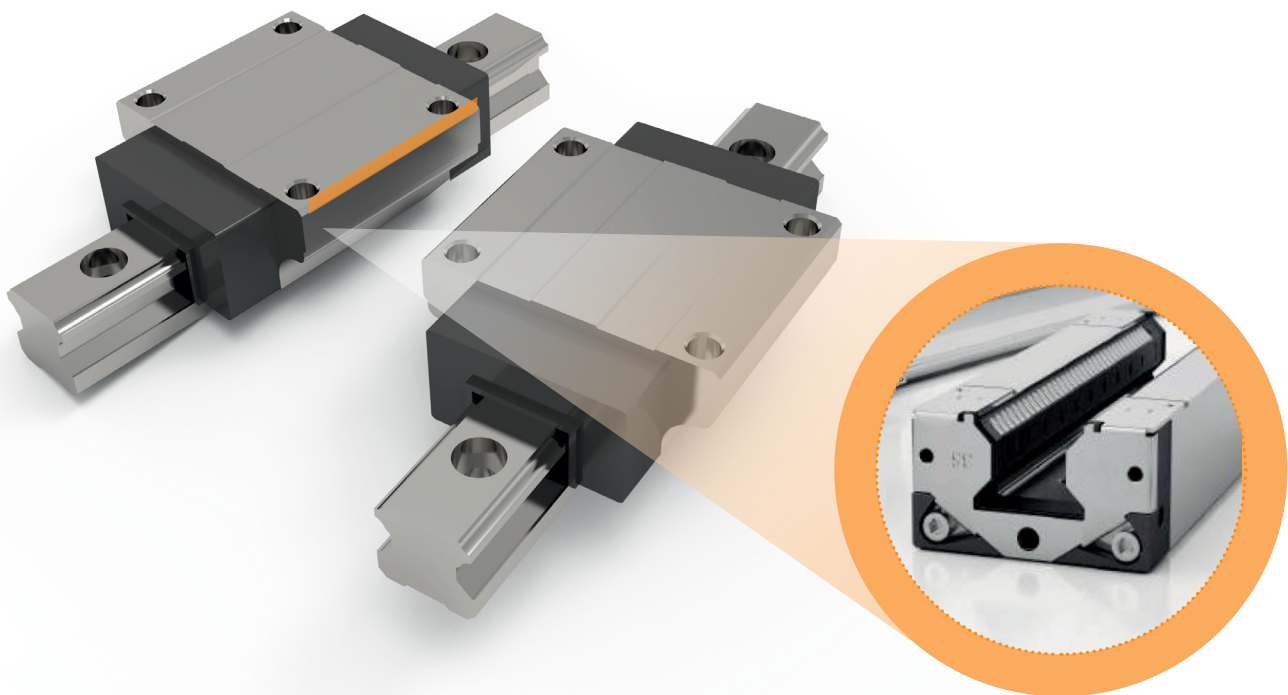


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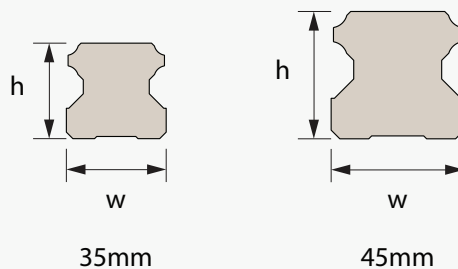
## Why use this product?

- Ideal for applications with very high load ratings (where space restrictions prevent larger standard linear guides from being an option).
- Higher load ratings and greater rigidity than standard linear guides.

LINEAR GUIDES : L1017



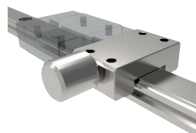
## Rail sizes





**L1010 - Miniature Linear Rails**

Standard width. 3mm to 15mm. Hardened, corrosion resistant stainless steel



**L1010.CL - Manual Clamp for Miniature Rails**

Manual clamps for miniature rail for L1010 & L1012. Stainless steel. Corrosion resistant



**L1012 - Miniature Linear Rails**

Wide version. 10mm to 42mm. Hardened, corrosion resistant stainless steel



**L1012.C - Miniature Rail Carriages**

Wide version. Corrosion resistant stainless steel body, with hardened stainless steel ball bearings



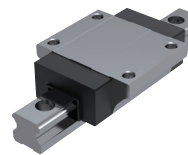
**L1013 - Miniature Rail Assembly**

Miniature rail assembly. Rail and carriage. Hardened stainless steel. Max temperature +150°C



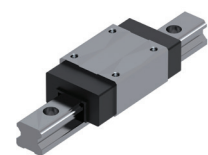
**L1016 - Linear Guide Rails**

Standard. 15mm to 55mm. Hardened and ground steel



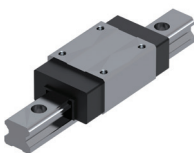
**L1016.F - Flanged Carriages - Standard**

Blackened. Hardened and ground steel. Matt black oxide ceramic layer. Resistant to acids, alkalis and solvents



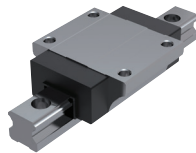
**L1016.U - Unflanged Carriages**

Unflanged carriages - Standard. With retained ball cage. Steel



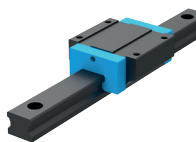
**L1016.U-NC - Unflanged Carriages**

Carriages - standard. No ball cage. Steel. Flanged L1016.F-NC. Unflanged L1016.U-NC



**L1016.F-NC - Flanged Carriages**

Flanged carriages - standard. No ball cage. Steel



**L1016.F-BC - Flanged Carriages**

Blackened carriages, standard. Black chrome coating. Flanged L1016.F-BC. Unflanged L1016.U-BC



**L1016.BL - Linear Guide Rails**

Standard. Blackened. 15mm to 25mm. Hardened and ground steel. Black oxide



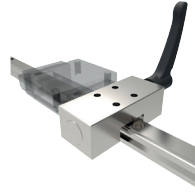
**L1016.CL - Rail Clamps**

Manual. Aluminium body, steel contact faces. Used in conjunction with the rail carriages, flanged and unflanged



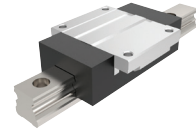
**L1018 - Aluminium Linear Guide Rails**

With stainless raceways for added durability. Lightweight and compact. Used with aluminium carriages



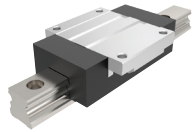
**L1018.CL - Rail Clamps**

Rail clamp for aluminium rail L1018. Aluminium body, plastic contact faces



**L1018.U - Unflanged Carriages**

Carriages. Aluminium, with retained ball cage



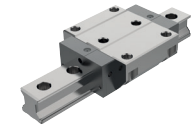
**L1018.F - Flanged Aluminium Carriages**

Flanged aluminium carriages. With retained ball cage. Aluminium block, stainless ball & slider



**L1017 - Needle Roller Linear Rails**

Needle roller linear rail. Steel. Heavy duty. Sizes 25-55mm



**L1017.U - Unflanged Carriages**

Needle roller carriages. Steel. Flanged L1017.F, unflanged L1017.U



**L1017.F - Needle Roller Flanged Carriages**

Needle roller - flanged carriages. Steel



# Crossed Roller Rails & Tables

Crossed roller rails and tables represent low-profile, high-precision solutions for linear support and guidance, ensuring elevated accuracy, repeatability, and minimal friction. Crossed roller tables, in particular, excel in handling higher loads compared to their ball bearing counterparts of similar dimensions.

Whether you need lightweight aluminium rails for use in aviation applications or stainless steel components for when exposure to water or corrosive chemicals is a factor, we have a range of options to a variety of requirements.



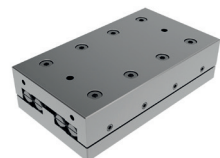
## L1000 - Crossed Roller Rail Sets

Supplied in sets of 4 rails - with 2 roller cages and 8 end screws as standard. Can be cut to length, but this affects load rating



## L1006.V - Anti-Friction Coated V Rail

High load capacity. Primarily used as dirt-proof units, to reduce system vibration and improve rigidity



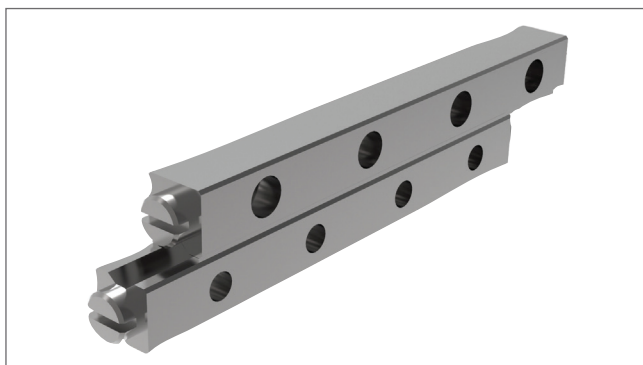
## L1020 - Crossed Roller Tables

Base and carriage with standard hole pattern. Top can be machined as required

# An overview of Crossed Slides



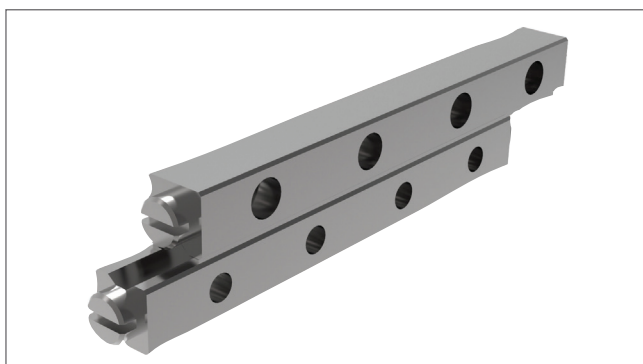
VIEW THE FULL RANGE



## Standard cross roller rail sets

### L1000 & L1001

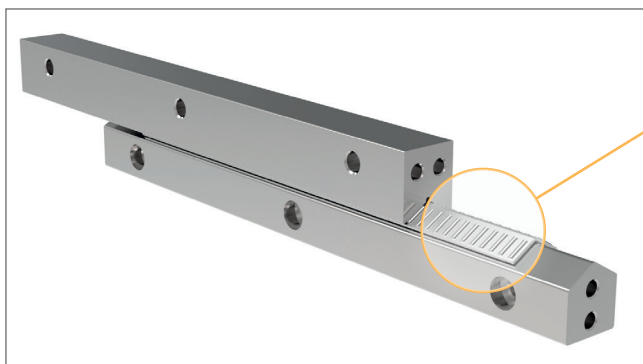
- Seven rail profiles (Sizes 1-12)
- Lengths: 20mm to 1 metre
- L1000 standard rail set
- L1001 corrosion resistant rail sets



## Deep groove and anti-creep rail sets

### L1002 & L1003

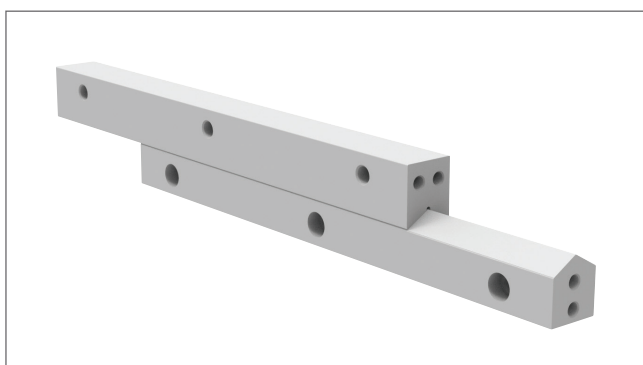
- 3 x load capacity of standard rail sets (due to deep V groove)
- Two rail profiles (Sizes 4 & 6)
- Lengths 50mm to 400mm
- Anti-creep versions for high acceleration applications



## Needle roller rail sets

### L1004.HW

- Heavy load ratings and needle rollers are used
- Five rail profile size
- Lengths: 200mm to 1.2 metres



## Anti-friction coated rail sets

### L1005 & L1006

- Same profile as needle roller rails but contact face Teflon coated.
- Ideal for harsh, dirty conditions
- Vibration damping characteristics



**L1001 - Stainless Crossed Roller Rail Sets**

Supplied in sets of 4 rails - with 2 roller cages and 8 end screws as standard



**L1002 - Crossed Roller Rail Sets**

Crossed roller rail sets. Deep groove version. Steel. Supplied in sets of 4 rails



**L1004.HW - Needle Roller Linear Cages**

Needle roller linear cages. Steel. Sizes range from 10-30 and from 100-1000mm in length



**L1004.M - Needle Roller Rail Sets - M Rail**

High load capacity. Usually supplied in a set of 4, with needle rollers in aluminium cage, GM end stops



**L1004.V - Needle Roller Rail Sets - V Rail**

High load capacity. Usually supplied in a set of 4, with needle rollers in aluminium cage, GM end stops



**L1005.M - Anti-Friction Coated M Rail**

Anti-friction coated M rail. Medium load capacity. Steel



**L1005.V - Anti-Friction Coated Rail Set**

Anti-friction coated rail set. V rail. Steel.



**L1007 - Linear Cage - Ball**

Linear cage - ball. Steel. Sizes 20-160



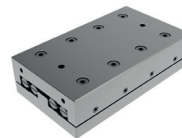
**L1008 - Linear Cage - Crossed Roller**

Linear cage - crossed roller. Plastic or stainless steel. Size 20-90



**L1009 - Linear Cage - Needle Roller**

Linear cage - needle roller. Steel. Sizes 25-60



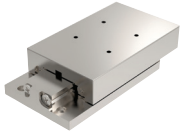
**L1021 - Crossed Roller Tables**

Crossed roller tables, aluminium



**L1022 - Stainless Crossed Roller Slides**

Stainless cross roller slides



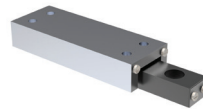
**L1023 - Stainless Cross Roller Slides**

Stainless cross roller slides. Flanged. Stainless steel



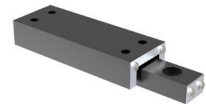
**L1027 - Low Profile Crossed Roller Table**

Low profile crossed roller table. Aluminium or steel



**L1024 - Ball Slide Assemblies**

Standard precision. Stroke is centered on the mid-point of the slides. Aluminium



**L1026 - Crossed Roller Slides**

Standard precision. Stroke is centered on the mid-point of the slides. Aluminium



**L1028 - Ball Slide Assemblies**

Precision. Stroke is centered on the mid-point of the slides. Aluminium



**L1029 - Crossed Roller Slides**

Precision. Stroke is centered on the mid-point of the slides



**L1030 - Low Profile Ball Slide Assemblies**

High precision. Stroke is centered on the mid-point of the slides



**L1032 - Low Profile Crossed Roller Table**

Low profile crossed roller table. High precision. Aluminium



**L1034 - Flanged Ball Slide Assemblies**

Flanged ball slide assemblies. High precision. Aluminium



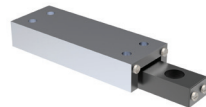
**L1036 - Flanged Crossed Roller Slides**

Flanged crossed roller slides, wide base, high precision. Aluminium



**L1038 - Anti-Creep Ball Slide Assemblies**

The anti-creep retainer used in these units, prevent ball retainer misalignment



**L1039 - Non Magnetic Ball Slide Assemblies**

No lubrication required due to self-cleaning ball bearing design



Linear Components ▶ Linear Guideways & Rails

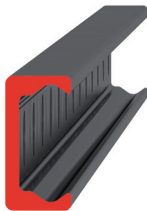
# Compact Rails

The compact rail system is a unique linear rail, or linear guide system that is very easy to install and allows for some misalignment of the structure in which it is being used. With the pre-load, or stiffness of the system also being adjustable by the user during set up.

Induction hardened raceways on all rails and a precision 'master' rail ensure this is still a high precision system but with minimal set up time.



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## L1918.18 - Light Duty T Rails

Light duty, compact rails with counterbored fixing holes. Usually used with a U slave rail to allow for system misalignment

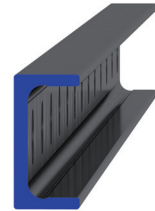
 **Automation**  
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## L1918.CS - Light Duty Sliders - Size 18

Light duty, compact rail sliders with rubber seals. No side seal. Front fixing. Easy to install. Quiet and fast. The U rail sliders cannot accept axial loads

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## L1918.18 - Light Duty U Rails

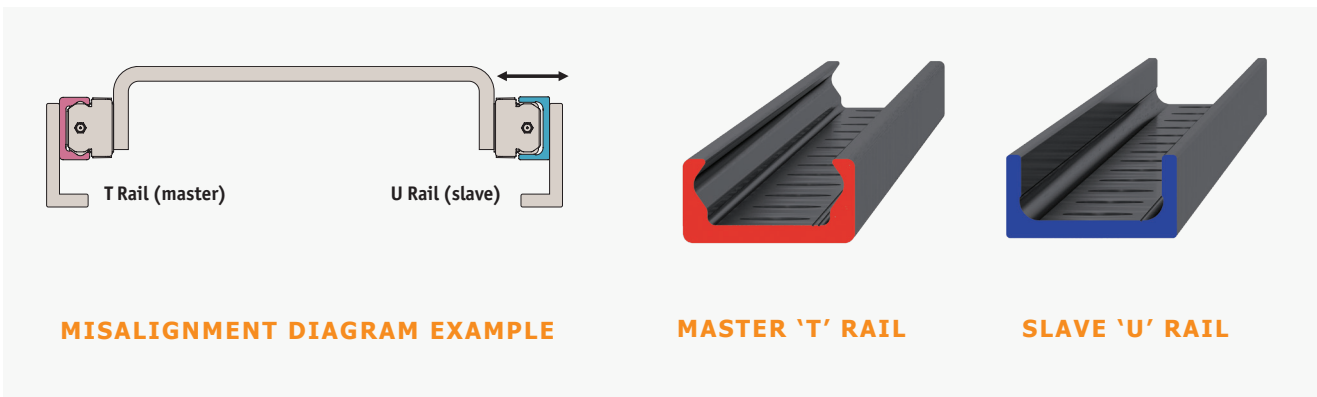
Light duty, compact U rails with counterbored fixing holes. Usually used with a T master rail and a corresponding T-C rail

# An overview of Compact Rails

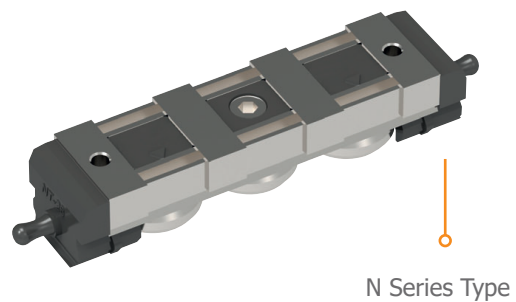


## Why use this product?

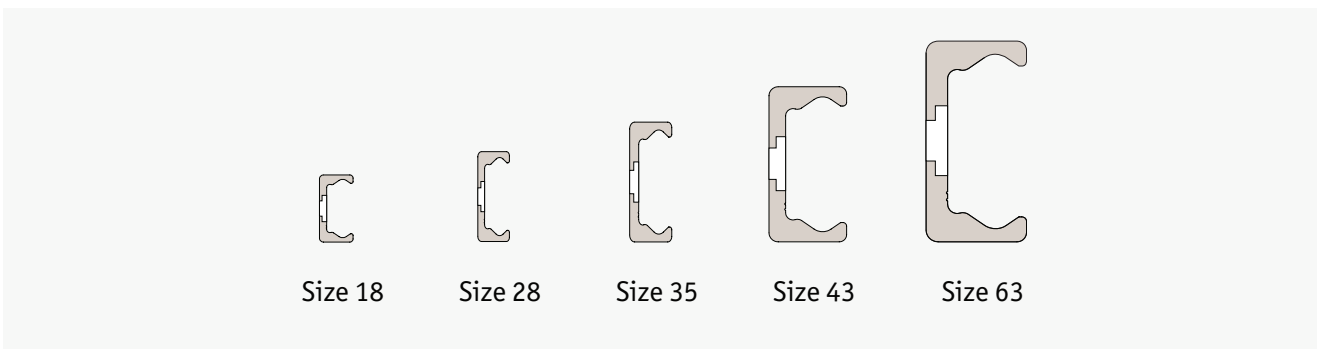
- Misalignment compensation system. Unique master and slave rails allow the system to operate effectively even when a pair of rails are not perfectly parallel.
- Manually adjustable pre-load.
- Ideal product when mounting surfaces are not precision ground, which is a requirement for standard linear guides.



## Slider options



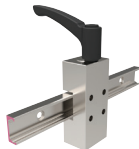
## Rail sizes





**L1900.CB - Individual Rollers**

Individual rollers, steel, with 2RS seals (splash proof). Lubricated for life



**L1900.CL - Slider Clamps**

Manual slider clamps for use with our compact rail systems. Aluminium clamp body with steel clamping face



**L19xx.CL - Sliders**

Sliders. L1918.CL - light duty, L1928.CL & L1935.CL - medium duty, L1943.CL - heavy duty. Side seal, front fixing with wiper



**L1900.CPN - Individual Rollers**

Individual rollers, steel, with either 2Z seals (for dust protection) or 2RS (splash proof)



**L1900.CPNX - Individual Rollers**

Individual rollers, stainless steel, with 2RS seals (splash proof)



**L1900.S - Low Profile Screws**

Special low head torx screws for compact rails. Zinc or nickel plated



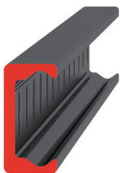
**L19xx.CSW - Sliders**

Sliders, ranging from light duty to very heavy duty. Replace xx with either 18, 28, 35, 43, 63. Front fixing. No side seal



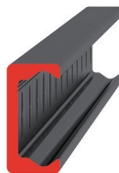
**L19xx.NSWxx - Sliders**

Sliders - no side seal, front fixing. Sizes 18-63. Light through to heavy duty. Replace 'xx' with required size



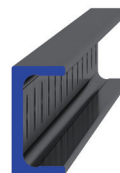
**L19xx.TLCxx - T-Rails**

T Rail. Counterbored holes. Steel. Light duty size 18 through to heavy duty size 63. 28, 43 & 35 also available. Replace 'xx' with required size



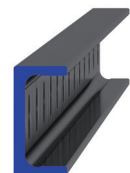
**L19xx.TLVxx - T-Rails**

T Rail. Countersunk holes. Steel. Light duty size 18 through to heavy duty size 63. 28, 43 & 35 also available. Replace 'xx' with required size



**L19xx.ULCxx - U-Rails**

U Rail. Counterbored holes. Steel. Light duty size 18 through to heavy duty size 63. 28, 43 & 35 also available. Replace 'xx' with required size



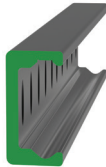
**L19xx.ULVxx - V-Rails**

V Rail. Countersunk holes. Steel. Light duty size 18 through to heavy duty size 63. 28, 43 & 35 also available. Replace 'xx' with required size



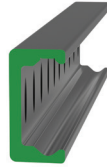
**L19xx.CDW - Sliders**

Sliders. No side seal. Top fixing. Steel. Sizes 28 & 43. Replace 'xx' with required size



**L19xx.KLCxx - Heavy Duty K-Rails**

Heavy duty K rail. Counterbored holes. Steel. Sizes 43, heavy duty or 63, very heavy duty. Replace 'xx' with required size



**L19xx.KLVxx - Heavy Duty K-Rails**

Heavy duty K rail. Countersunk holes. Steel. Sizes 43, heavy duty or 63, very heavy duty. Replace 'xx' with required size



**L1972.xx - Easy Slide Rails**

Easy slide, high load rail. Sizes 28, 35, 43 & 63. Steel. Replace 'xx' with required size



Linear Components ▶ Linear Guideways & Rails

# X-Rails

X rails are highly cost-effective systems for linear motion and are excellent for applications such as drawers, protective screens, battery casings etc. They come with a rolled-formed steel section, accommodating structural misalignment and providing durability for diverse applications.

Available in zinc-plated steel but also available in stainless steel for added corrosion resistance, suitable for outside and marine environments.



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**L1970.T - Steel X Rails - T Rails (Master)**

The X rail system is a cold rolled rail system offering an economical solution to simple linear movement applications. Low-profile and very effective

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**L1970.U - Steel X Rails - U Rails (Slave)**

The X rail system is a cold rolled rail system offering an economical solution to simple linear movement applications. Low-profile and very effective

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AN ESSENTRA COMPANY

**L1971.LP - Low Profile Stainless Sliders**

For T rail (master). The X rail system is a cold rolled rail system offering an economical solution to simple linear movement applications. Low-profile and very effective

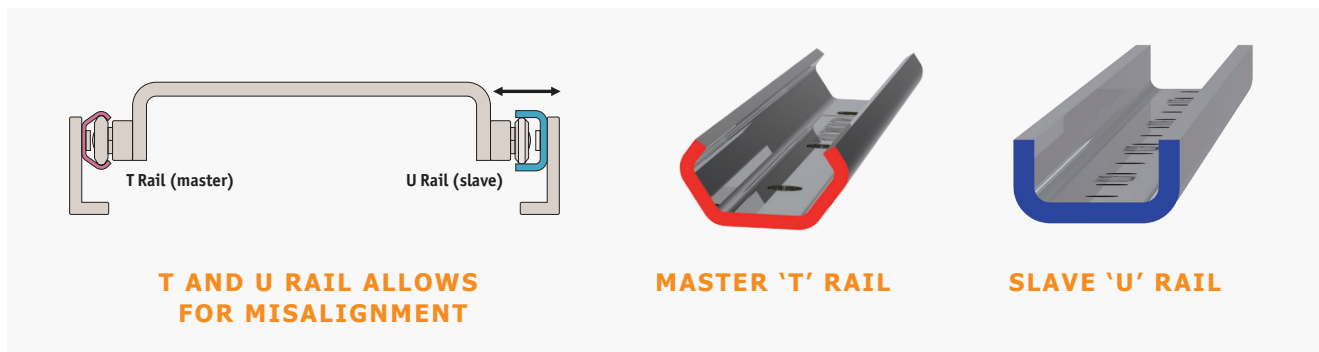
# An overview of **X Rails**



VIEW THE FULL RANGE

## Why use this product?

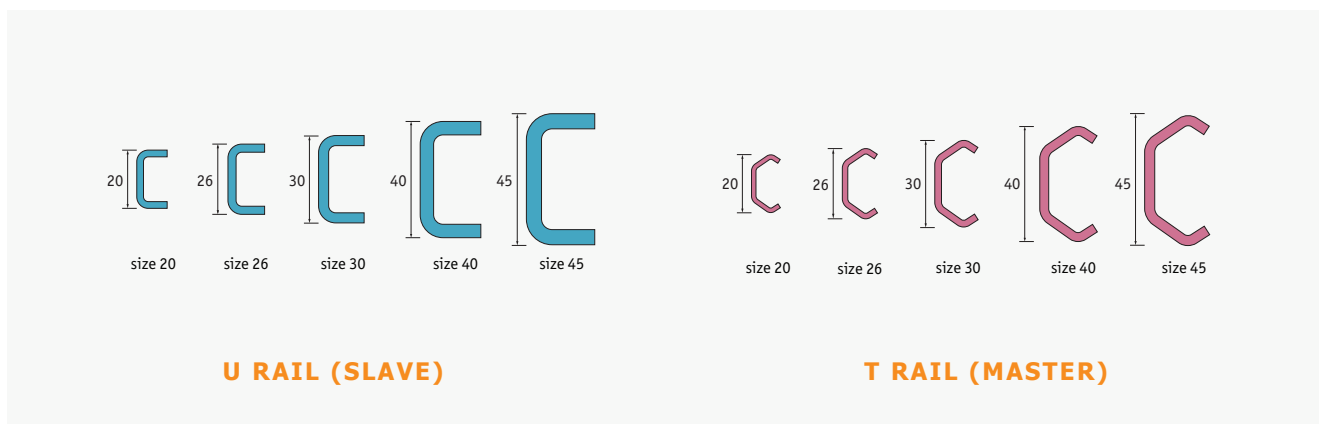
- Cost effective, low precision solution.
- Misalignment compensation system.
- Manually adjustable pre-load.
- Zinc steel or AISI 316 Stainless steel. Ideal for marine, food or outside applications.
- Same day despatch available.



## AISI 316 Stainless version



## Rail sizes





**L1970.CRT - Steel Replacement Rollers**

For T version steel X rails and U version steel X rails. (L1970.CRU)



**L1970.CR2640 - Steel Replacement Rollers**

Steel replacement rollers for T version steel X rails



**L1970.LP - Low Profile Steel Sliders**

For T rail (master). Rollers with metal seals. The punched dot mark, indicates the orientation for the loading of the fixed rollers



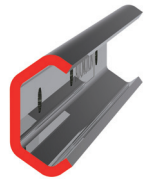
**L1970.S - Fixing Screws**

For steel X rails. Strength class 10.9. Hex. socket oval head and Torx screws



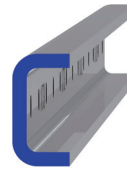
**L1970.SBT - Solid Body Stainless Sliders**

For T rails (master) and U rails (slave) (L1970.SBU). The "V" marks on the slider body indicate the orientation for the loading of the fixed rollers



**L1971.T - Stainless X-Rails**

T rail (master), U rail (slave). X rails for light duty loads. Corrosion resistant



**L1971.U - Stainless X Rails**

Stainless X rail, U (slave). Stainless steel



**L1971.S - Fixing Screws**

For stainless steel X rails



**L1971.CR2640 - Stainless Replacement Rollers**

Stainless steel replacement rollers for T version stainless x-rails



**L1971.CRT - Stainless Replacement Rollers**

For T version stainless X rails and U version stainless X rails (L1971.CRU). With water resistant rubber seals



**L1971.SBT - Solid Body Steel Sliders**

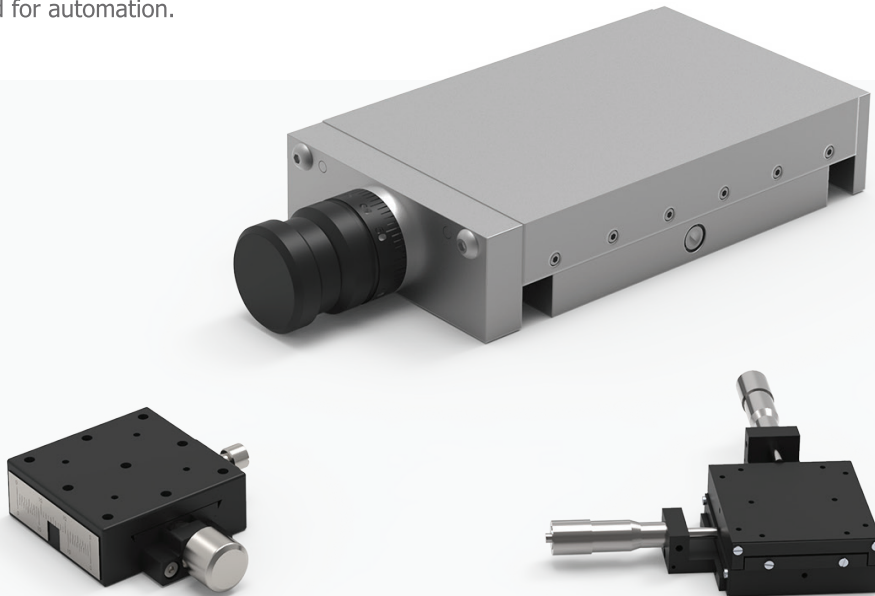
For T rails (master) and U rails (slave) (L1971.SBU). The "V" marks on the slider body indicate the orientation for the loading of the fixed rollers



# Manual Positioning Stages

At Automation Components, we offer a comprehensive selection of manual positioning stages, available in X, Y, and Z axis configurations. Our range includes precision-engineered styles such as cross roller, dovetail, and needle roller guides - ideal for applications requiring fine, repeatable adjustments without the need for automation.

These stages are available in various sizes and materials, including lightweight aluminium for weight-sensitive environments and corrosion-resistant stainless steel for more demanding conditions.



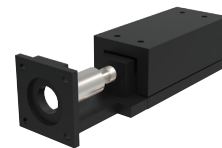
### L3100 - Positioning Stages - Front Micrometer

Positioning stages - front micrometer, X stage, main dimensions. Aluminium



### L3182 - Manual Lead Screw Stages

Manual lead screw stages, dovetail. Iron



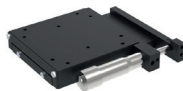
### L3141 - Lead Screw Driven Stages

Lead screw driven stages, size 1 light duty, prepared for motor. Aluminium



**L3100.FH - Front Micrometer Stages**

Front micrometer stages, further fixing holes detail. Aluminium



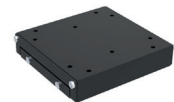
**L3102 - Positioning Stages - Side Micrometer**

Positioning stages - side micrometer, X stage, main dimensions. Aluminium



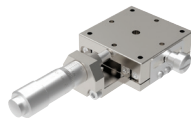
**L3102.FH - Side Micrometer Stages**

Side micrometer stages, further fixing holes detail. Aluminium



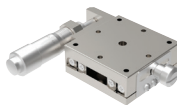
**L3103 - Positioning Stages - Plain**

Positioning stages - Plain, X stages, main dimensions. Aluminium



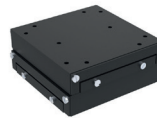
**L3120 - Stainless Micrometer X Stages**

Stainless micrometer X stages, front drive. Stainless steel



**L3122 - Stainless Micrometer X Stages**

Stainless micrometer X stages, side drive. Stainless steel



**L3104 - Plain Positioning XY Stages**

Plain positioning XY stages. XY stage, main dimensions. Aluminium



**L3105 - Micrometer Positioning XY, XYZ Stages**

Micrometer positioning XY, XYZ stages, front drive, small sizes. Aluminium



**L3106 - Micrometer Positioning XY, XYZ Stages**

Micrometer positioning XY, XYZ stages, front drive, medium sizes. Aluminium



**L3107 - Micrometer Positioning XY, XYZ Stages**

Micrometer positioning XY, XYZ stages, front drive, medium sizes. Aluminium



**L3108 - Micrometer Positioning XY, XYZ Stages**

Micrometer positioning XY, XYZ stages, front drive, large sizes. Aluminium



**L3110 - Micrometer Positioning XY, XYZ Stages**

Micrometer positioning XY, XYZ stages, side drive, small sizes. Aluminium



**L3111 - Micrometer Positioning XY, XYZ Stages**

Micrometer positioning XY, XYZ stages, side drive, medium sizes. Aluminium



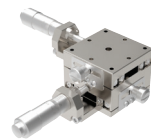
**L3112 - Micrometer Positioning XY, XYZ Stages**

Micrometer positioning XY, XYZ stages, side drive, medium sizes. Aluminium



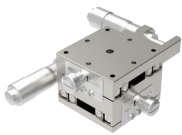
**L3113 - Micrometer Positioning XY, XYZ Stages**

Micrometer positioning XY, XYZ stages, side drive, large sizes. Aluminium



**L3121 - Stainless Micrometer XY Stages**

Stainless micrometer XY stages, front drive. Stainless steel



**L3123 - Stainless Micrometer XY Stages**

Stainless micrometer XY stages, side drive. Stainless steel



**L3141.XY - Lead Screw Driven XY & XYZ Stages**

Lead screw driven XY & XYZ stages, size 1 light duty, prepared for motor. Aluminium



**L3142 - Lead Screw Driven Stages**

Lead screw driven stages, size 2 medium duty, prepared for motor. Aluminium



**L3142.XY - Lead Screw Driven XY & XYZ Stages**

Lead screw driven XY & XYZ stages, size 2 medium duty, prepared for motor. Aluminium



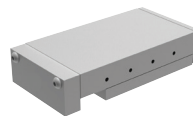
**L3143 - Lead Screw Driven Stages**

Lead screw driven stages, size 3 medium duty, prepared for motor. Aluminium



**L3143.XY - Lead Screw Driven XY & XYZ Stages**

Lead screw driven XY & XYZ stages, size 3 medium duty, prepared for motor. Aluminium



**L3170 - Plain Positioning Stages**

Plain positioning stages, cross roller. Iron



**L3171 - Plain Compact Positioning Stages**

Plain compact positioning stages, cross roller. Iron



**L3172 - Manual Lead Screw Stages**

Manual lead screw stages, cross roller. Iron



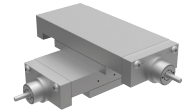
**L3173 - Manual Lead Screw Stages**

Manual lead screw stages, compact, cross roller. Iron



**L3174 - Motor Lead Screw X Stages**

Motor lead screw X stages, cross roller. Iron



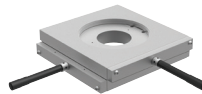
**L3175 - Motor Lead Screw XY Stages**

Motor lead screw XY stages, cross roller. Iron



**L3177 - Miniature XY Stages**

Miniature XY stages, cross roller. Iron



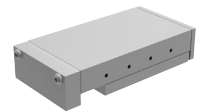
**L3179 - XY Stages with Through Hole**

XY stages with through hole, cross roller. Iron



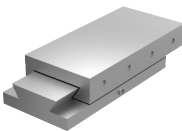
**L3199 - Angle Brackets**

Angle brackets, for linear stages. Iron or aluminium



**L3180 - Plain Positioning Stages**

Plain positioning stages, dovetail. Iron



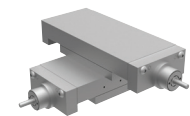
**L3181 - Plain Compact Stages**

Plain compact stages, dovetail. Iron



**L3184 - Motor Lead Screw X Stages**

Motor lead screw X stages, dovetail. Iron



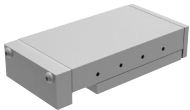
**L3185 - Motor Lead Screw XY Stages**

Motor lead screw XY stages, dovetail. Iron



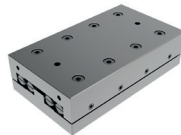
**L3188 - Miniature XY Stages**

Miniature XY stages, dovetail. Iron



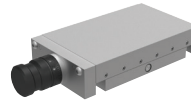
**L3190 - Plain Positioning Stages**

Plain positioning stages, needle roller. Iron



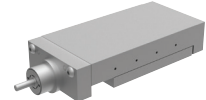
**L3191 - Plain Compact Positioning Stages**

Plain compact positioning stages, needle roller. Iron



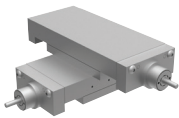
**L3192 - Manual Lead Screw Positioning Stages**

Manual lead screw positioning stages, needle roller. Iron



**L3194 - Motor Lead Screw X Stages**

Motor lead screw X stages, needle roller. Iron



**L3195 - Motor Lead Screw XY Stages**

Motor lead screw XY stages, needle roller. Iron



**L3300.X - Miniature Dovetail Stages**

Miniature dovetail stages, X axis. Brass



**L3300.XY - Miniature Dovetail Stages**

Miniature dovetail stages, XY axis. Brass



**L3303.X - Dovetail Stages - Rack & Pinion**

Dovetail stages - rack & pinion, X axis. Aluminium



**L3303.XY - Dovetail Stages - Rack & Pinion**

Dovetail stages - rack & pinion, XY axis. Aluminium



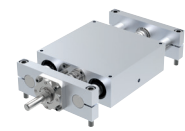
**L3305 - Dovetail Stages - Rack & Pinion**

Dovetail stages - rack & pinion, long stroke, X axis. Aluminium



**L3320 - Manual Laboratory Jacks**

Manual laboratory jacks, Z axis. Aluminium



**L3149 - Ball Screw Linear Tables**

Ball screw linear tables. Steel. Shafts sizes 12, 20 & 30



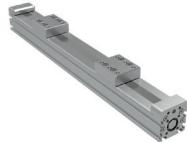
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**L3147.S - Lead Screw Linear Stages**

Lead screw linear stages, single carriage. Aluminium

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**L3147.D - Linear Screw Linear Stages**

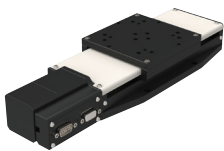
Lead screw linear stages, double carriage. Aluminium



# Motorised Linear Stages

Motorised linear translation stages are engineered for high-precision applications across a variety of industries, including research, scientific instrumentation, automation, fibre optics, and semiconductors. Designed for accuracy and reliability, each stage is driven by Acme lead screws, offering repeatability in the micron range.

Our motion controllers are supplied with dedicated control software and are also broadly compatible with popular platforms such as LabVIEW, allowing seamless integration into existing systems.



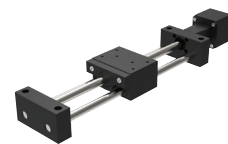
### L3500 - Medium-Duty Motorised Stages

Medium-duty motorised stages, high precision. Aluminium



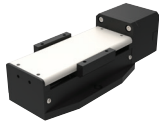
### L3521 - Single Axis Stepper Controllers

Single axis stepper controllers



### L3510 - Motorised Linear Stages

Motorised linear stages, economy. Aluminium



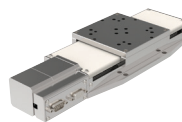
**L3506 - Miniature Motorised Stages**

Miniature motorised stages, high precision. Aluminium



**L3508 - Motorised Linear Stages**

Motorised linear stages, high precision. Aluminium



**L3502 - Vacuum Compatible Motorised Stages**

Vacuum compatible motorised stages, high precision. Aluminium



**L3504 - Heavy Duty Motorised Stages**

Heavy-duty motorised stages, high precision. Aluminium



**L3505 - Motorised Linear Stages**

Motorised linear stages, high precision. Aluminium



**L3522 - Two Axis Stepper Controllers**

Two axis stepper controllers. Steel



**L3524 - Multi-Axis Stepper Controllers**

Multi-axis stepper controllers. Aluminium



**L3525 - Single Axis Servo Controllers**

Single axis servo controllers. Steel



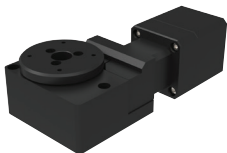
VIEW THE FULL RANGE

# Rotary Stages

A range of manual and motorised rotary positioning stages offer precise angular adjustment. Our motorised stages are compatible with stepper and servo motors, providing smooth, fully controllable rotation for automation, optics, and metrology applications.

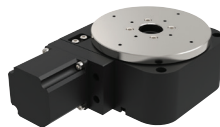
Manual versions offer stable, backlash-minimised positioning - ideal for lab setups or low-power environments.

- High-precision control
- Motor compatibility (stepper & servo)
- Compact & durable design



### L3550 - Motorised Rotary Stages Ø50

Motorised rotary stages Ø50, high precision, medium duty. Aluminium



### L3558 - Motorised Rotary Stages Ø125

Motorised rotary stages Ø125, high precision, heavy duty. Aluminium



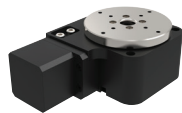
### L3560 - Motorised Rotary Stages Ø125

Motorised rotary stages Ø125, high precision, submersible. Aluminium



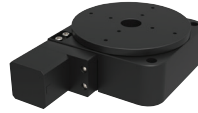
**L3552 - Motorised Rotary Stages Ø75**

Motorised rotary stages Ø75, high precision, medium duty. Aluminium



**L3554 - Motorised Rotary Stages Ø75**

Motorised rotary stages Ø75, high precision, heavy duty. Aluminium



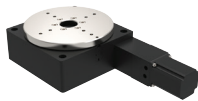
**L3556 - Motorised Rotary Stages Ø125**

Motorised rotary stages Ø125, high precision, medium duty. Aluminium



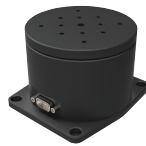
**L3559 - Manual Rotary Stages Ø125**

Manual rotary stages Ø125, with digital read out. Aluminium



**L3562 - Motorised Rotary Stages Ø200**

Motorised rotary stages Ø200, high precision, heavy duty. Aluminium



**L3569 - High Speed Rotary Tables**

High speed rotary tables. Aluminium



VIEW THE FULL RANGE

Linear Components ▶ Telescopic Slides

# Telescopic Slides

Telescopic slides, also known as telescopic rails or drawer runners, are most commonly used in pairs. Primarily designed for sliding drawers, doors, and platforms, they find application in scenarios where linear movement is necessary, but standard linear guides are impractical due to length constraints.

Whether facilitating horizontal or vertical linear travel, these telescopic slides offer a practical alternative, allowing for smooth and controlled motion without the need for extended guides spanning the entire travel length.



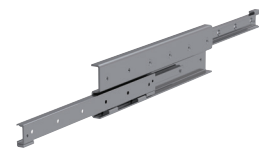
### L1986 - Fully Telescopic Slides

Strong and rigid with high load capacities. Only to be used for horizontal movements. Sizes 22-63



### L1994 - Partially Telescopic Slides

Semi-telescopic rails with high load capacities. Size 22-63. Steel



### L1984 - Fully Telescopic Slides

Extremely strong and rigid slides with high load capacities. Single or double direction stroke. Steel. Sizes 28-63

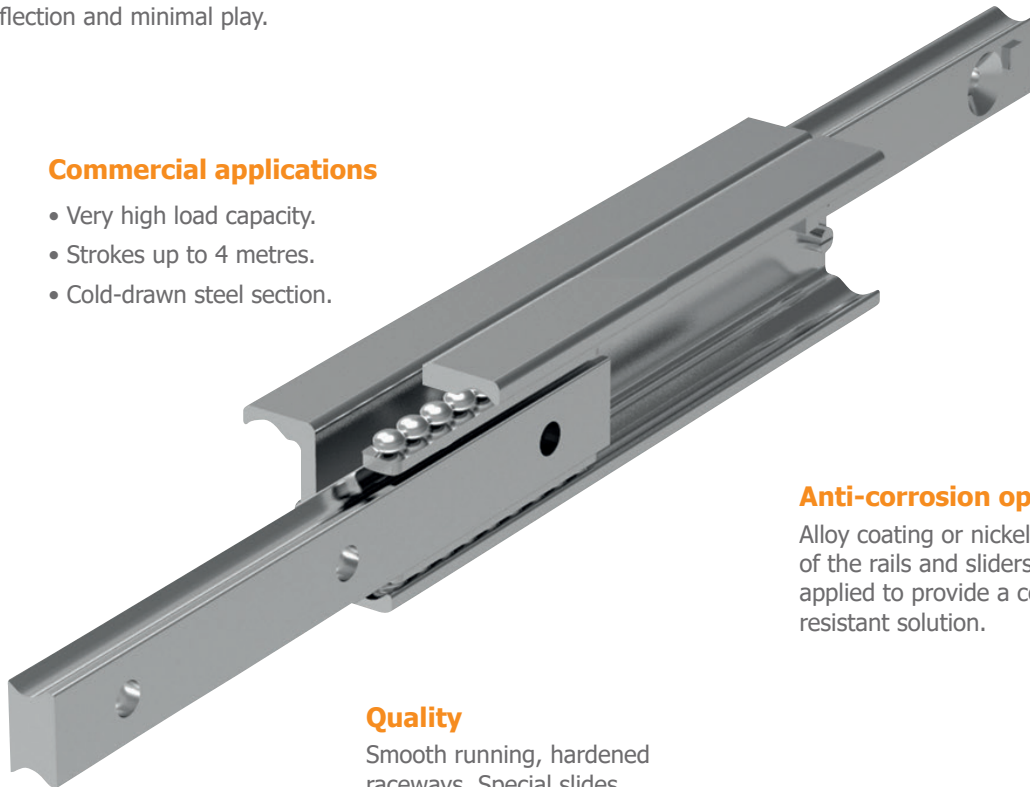
# An overview of Telescopic Slides



If you are looking for heavy duty, quality telescopic slides for industrial or commercial applications then these are the slides for you!

## The best heavy duty telescopic slides on the market

These are unique slides that are not made from pressed steel but from cold-drawn steel section. The slides can take high loads, with very long strokes, with repeated use, low deflection and minimal play.



### Commercial applications

- Very high load capacity.
- Strokes up to 4 metres.
- Cold-drawn steel section.

### Anti-corrosion option

Alloy coating or nickel plating of the rails and sliders can be applied to provide a corrosion resistant solution.

### Quality

Smooth running, hardened raceways. Special slides available.

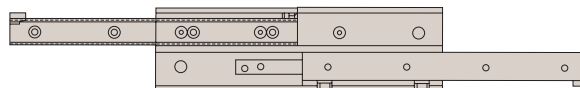
### Rail types

Our range of telescopic rails covers partial, full stroke and over-extension.

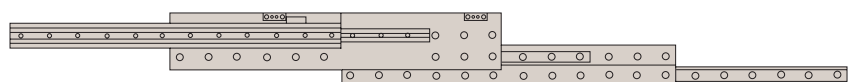
For more information refer to our product specifications pages or call our technical department.



Partial Stroke (~60%)



Full Stroke (~100%)



Over-extension (150%)



**L1988 - Fully Telescopic Slides**

This slide is compact, low profile and square shaped



**L1992 - Fully Telescopic Slides LTF**

Our lightest duty telescopic slides. Still from cold-drawn steel, both with unhardened raceways



**L1995 - Fully Telescopic Slides**

Fully telescopic slides, ultra heavy-duty. Steel



**L1996 - Fully Telescopic Slides**

Able to support heavy loads up to nearly 2000kg



**L1997 - Extended Stroke Telescopic Slides**

These are extended stroke (150%), heavy duty telescopic rails, with high load capacity and stiffness



**L1998 - Extended Stroke Telescopic Slides**

These are extended stroke (150%), heavy duty telescopic rails



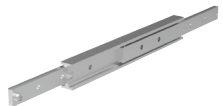
**L2041 - Aluminium Telescopic Slides**

High quality grade aluminium with steel ball bearings and cage. Full extension



**L2042 - Aluminium Telescopic Slides**

Aluminium telescopic slides, fully telescopic, size 50. Aluminium



**L2044 - Aluminium Telescopic Slides**

Aluminium telescopic slides, fully telescopic, size 70. Aluminium



**L2051 - Stainless AISI 316 Slides**

Ideal for applications requiring a high degree of corrosion resistance



**L2052 - Stainless AISI 316 Slides**

Stainless AISI 316 slides. Fully telescopic, size 50. Stainless steel



**L2054 - Stainless AISI 316 Slides**

Stainless AISI 316 slides. Fully telescopic, size 70. Stainless steel



**L2000 - Semi-Telescopic  
Drawer Slides**

Semi-telescopic drawer slides. Steel



**L2010 - Fully Telescopic  
Drawer Slides**

Fully telescopic drawer slides. Steel



**L2011 - Soft Close Drawer  
Slides**

Soft-close drawer slides. Steel



**L2012 - Fully Telescopic  
Drawer Slides**

Fully telescopic drawer slides. Steel



**L2013 - Fully Telescopic  
Drawer Slides**

Fully telescopic drawer slides. Steel



**L2060 - Drawer Slides - Full  
Extension**

Drawer slides - full extension, 200 Kg  
load per pair. Steel



**L2062 - Drawer Slides - Full  
Extension**

Drawer slides - full extension, 80 Kg load  
per pair. Steel



**L2064 - Drawer Slides - Full  
Extension**

Drawer slides - full extension, 60 Kg load  
per pair. Steel



**L2066 - Drawer Slides - Full  
Extension**

Drawer slides - full extension, 45 Kg load  
per pair. Steel



**L2068 - Drawer Slides - Full  
Extension**

Drawer slides - full extension, 30 Kg load  
per pair. Steel



**L2070 - Drawer Slides - Full  
Extension**

Drawer slides - full extension, 60 Kg load  
per pair. Steel



**L2072 - Drawer Slides - Full  
Extension**

Drawer slides - full extension, lever  
disconnect - 20 Kg load per pair. Steel



**L2080 - Drawer Slides - Full Extension**

Drawer slides - full extension, 30 Kg load per pair. Stainless steel



**L2082 - Drawer Slides - Full Extension**

Drawer slides - full extension, lever disconnect - 45 Kg load per pair. Stainless steel



Linear Components ▶ Linear Guideways & Rails

## Curved Rails

Curved rails are unique linear guides that offer a solution for applications where the equipment requires movement along curves, corners, or circular paths.

With a minimum radius of 120mm, these rails can be precisely machined into full circles, fractional arcs, straight sections with bends in, or customised shapes according to specific requirements.



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### L1978.CR - Curviline Sliders

Where moment loads are present, use two or more sliders. With lubricated for life roller pins. Stainless steel available. Steel sizes 16+23

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### L1978.CRX - Constant Radius Rails

Not to be used in high-cycle applications. Advise angle required and fixing option type. Steel sizes 16+23. Also available in stainless steel

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### L1978.VRX - Variable Radius Rails

Not to be used in high-cycle applications. Advise angle required and fixing option type. All stainless steel on request. Steel sizes 16+23

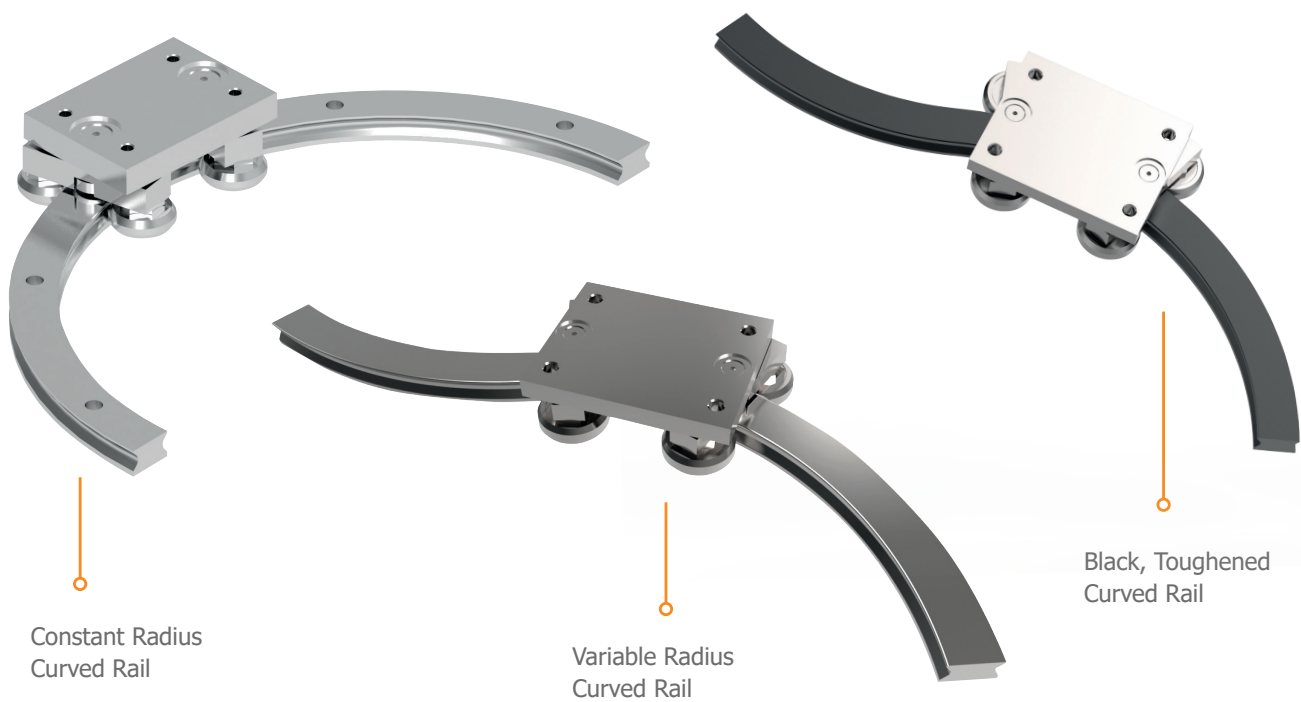
# An overview of Curved Rails



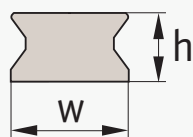
VIEW THE FULL RANGE

## Why use this product?

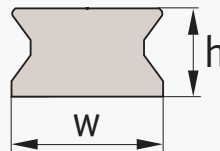
- In any application where a bend or curve is required in the linear guide such as a door, sliding table or oval track.
- Manufactured to your specifications.
- Can also be manufactured in aluminium and stainless steel.



## Rail sizes



16mm



23mm

# An introduction to Curviline Rails

The Curviline rail system offers a cost-effective solution to curvilinear applications.



VIEW THE FULL RANGE

## Flexibility when you need it

Constant radius, variable radius are available in standard radii, non-standard radii to your drawings are also possible. Straight and curved sections in a single length can be supplied.

### Any radius

- From 120mm radius upwards.
- Standard and special radii.
- Angles up to 360°.

### Anti-corrosion

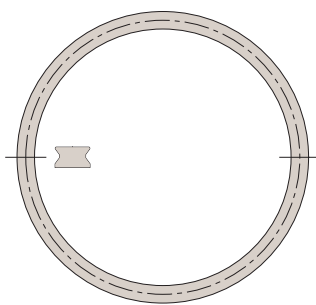
Alloy coating or nickel plating of the rails and sliders can be applied to provide a corrosion resistant solution.



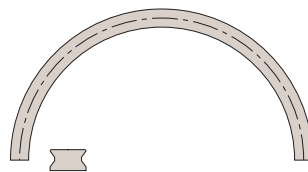
### Two profiles

- Small and medium rail profiles.
- Add carriages to suit load.

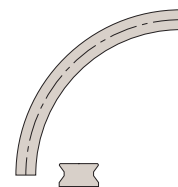
## Examples



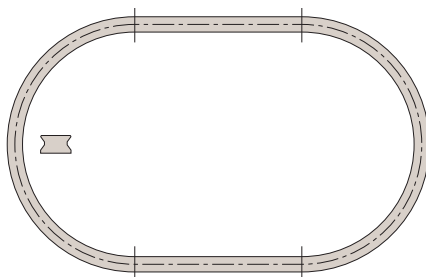
Circle



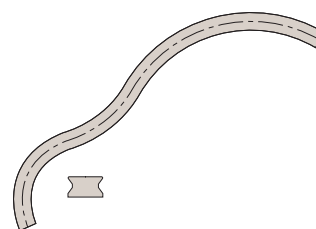
Semi-circle



Arcs



Ovals



Complex rails with varied radii and angles



Linear Components ▶ Lead Screws & Ball Screws

# Lead Screws

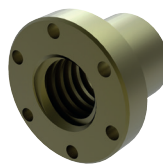
Lead screws are fundamental in translating rotary motion to linear movement and are commonly used in conjunction with parallel linear guides. Lead screws are typically used in applications where movements required are at low speed or

with low accuracy and they can be quieter and better in vertical running applications compared with ball screws. They also perform at their best in corrosive or dirty environments.



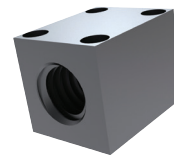
### L1320 - Steel Lead Screws

Rolled trapezoidal C45 steel lead screws, right hand thread. Lengths of up to 6 metres can be provided. Tr 10 to Tr 120



### L1331 - Flanged Bronze Nuts

Flanged bronze lead screw nuts - for trapezoidal threads. For manual or powered applications at medium/low rotation speeds under load



### L1337 - Square Steel Nut with Holes

Square steel nut with holes for right handed thread screws. Useful for fixing additional elements onto the lead screw carriage

# An overview of Lead Screws

Automation Components offers a large range of trapezoidal lead screws, typically held in stock in large volumes. Machining or custom lead screws regularly manufactured to customer drawing.



## L1320

### Steel lead screws - right hand thread



Steel C45 trapezoidal lead screws from Tr10x2 up to Tr120x16. Standard lengths up to 3 metres with specials available up to 6 metres.

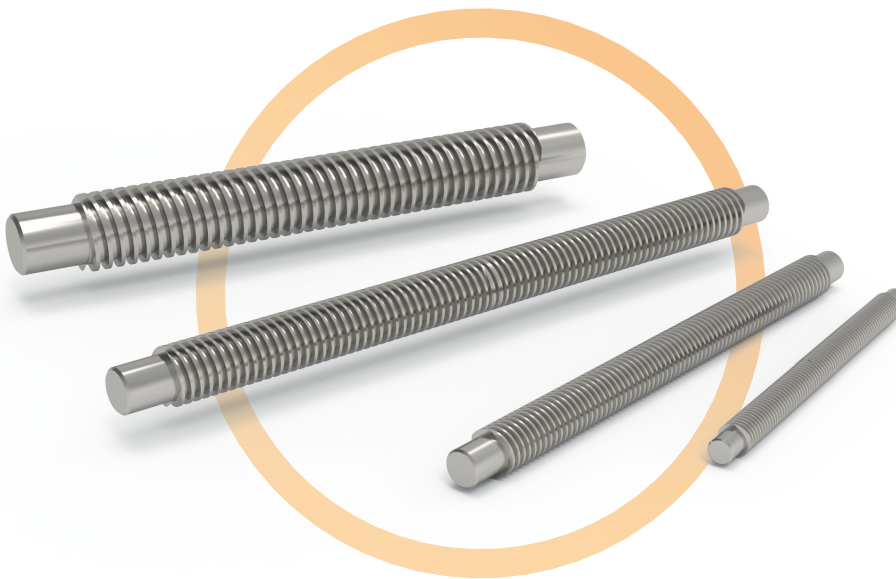
## L1322

### Stainless lead screws - right hand thread



AISI 316 stainless steel trapezoidal lead screws from Tr10x2 up to Tr70x10. Standard lengths up to 3 metres with specials available up to 6 metres.

## MACHINED LEAD SCREW



We can machine the ends of lead screws to customer drawings on request. We also manufacture special lead screws to drawing.

## L1321

### Steel lead screws - left hand thread



Left hand thread steel C45 trapezoidal lead screws from Tr10x2 up to Tr120x16. Standard lengths up to 3 metres. Also available in AISI 316 stainless, part number L1323.

## L1350

### Flanged high helix lead screw nuts



Precision high helix lead screws available in diameters from 4x1 up to 20x10. The ideal product when more accuracy is required that trapezoidal lead screws cannot offer, but the application doesn't warrant the cost of a ball screw.



**L1321 - Steel Lead Screws - LH**

Rolled trapezoidal C45 steel lead screws. Lengths of up to 6 metres can be provided. Tr 10 to Tr 120



**L1322 - Stainless Lead Screws - RH**

Rolled trapezoidal AISI 316 grade (A4) stainless lead screws. Surface hardness 280HB. Lengths of up to 6 metres. Tr 10 to Tr 120



**L1323 - Stainless Lead Screws - LH**

Rolled trapezoidal AISI 316 grade (A4) stainless steel lead screws. Lengths of up to 6 metres can be provided



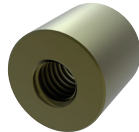
**L1325 - Stainless 304 Lead Screws - RH**

Stainless 304 lead screws. Manufactured to ISO 2901/2093, DIN103



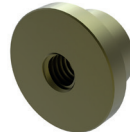
**L1326 - Stainless 304 Lead Screws - LH**

Stainless 304 lead screws. Manufactured to ISO 2901/2093, DIN103



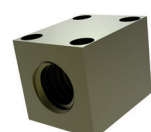
**L1330 - Cylindrical Bronze Nuts**

Cylindrical bronze lead screw nuts - for trapezoidal threads. For manual or powered applications at low and medium rotation and under loads



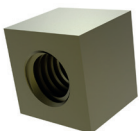
**L1332 - Plain Flanged Bronze Nuts**

Plain flanged bronze nuts for lead screws



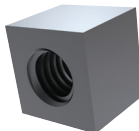
**L1334 - Square Bronze Nut with Through Holes**

Square bronze lead screws nuts - for trapezoidal threads. Suitable for movements with medium duty loads



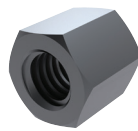
**L1335 - Square Brass Nuts**

Square brass nuts for lead screws



**L1336 - Square Steel Nuts**

Steel square nuts for lead screws. Standard nuts are right hand thread, single starts



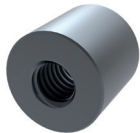
**L1338 - Hexagon Steel Nuts**

Steel hexagonal lead screw nuts - for trapezoidal threads. For low rotation speeds, manual control, locking functions or receiving dead weights



**L1339 - Cylindrical Steel Nuts**

Steel cylindrical lead screw nuts - for trapezoidal threads. For low rotation speeds, manual control, locking functions or receiving dead weights



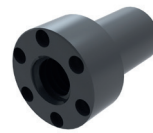
**L1340 - Long Cylindrical Steel Nuts**

To ISO 2901/2903 (DIN 103). Used for clamping and locking applications, and for slow rotational speeds with manual control



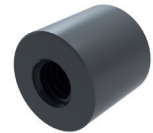
**L1341 - Cylindrical Stainless Steel Nuts**

Stainless steel lead screw nuts for trapezoidal thread. Stainless steel offers excellent corrosion resistance



**L1342 - Flanged Self-Lubricating Plastic Nut**

Plastic, flanged lead screw nuts with long thread to reduce wear and enhance service lifetime



**L1343 - Cylindrical Nylon Nuts**

Can be used without lubrication for manual or powered control and medium/high speeds under moderate loads. Low noise



**L1458 - Disk Type Handwheels**

Aluminium disc handwheels with duroplast handles. Rim turned and polished. Ideal for use with our lead screws



**L1459 - Three Spoked Handwheels**

Three spoked handwheels. Duroplast



**L1470 - Position Counters**

Four digit read out position counter, with red indicator for decimals. Clockwise (-C) and anti-clockwise (-A) versions available



**L1472 - Position Counters**

Position counters, 5 digit display. Thermoplastic. Max temperature +70°C



**L1480 - Sliding Clamps - for Solid Round Bar**

Sliding clamps for solid round bar, quarter turn lock, I-handle grip. Polyamide



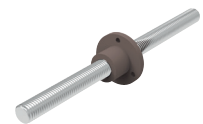
**L1349 - High Helix Lead Screws - Stainless**

Stainless SUS 304, high helix lead screw. High precision. See L1350 for corresponding nut



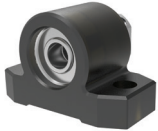
**L1350 - Flanged High Helix Lead Screw Nuts**

Resin nut (PPS), to suit lead screw L1349. High precision. Tight axial clearance



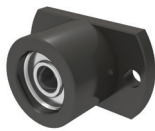
**L1351 - Anti-Backlash High Helix Lead Screws**

Anodized aluminium or 416 stainless steel screw with round acetal resin nut. High precision. Nut fitted to screw to ensure anti-backlash



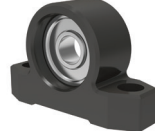
**L1353 - Miniature Fixed Support Units**

Miniature fixed support unit for miniature lead screws. Steel. End machining of lead screws on request



**L1354 - Mixed Flanged Fixed Support Units**

Miniature flanged fixed support unit for miniature lead screws. Steel. End machining of lead screws on request



**L1355 - Miniature Floating Support Units**

Miniature floating support unit for miniature lead screws. Steel. End machining of lead screws on request



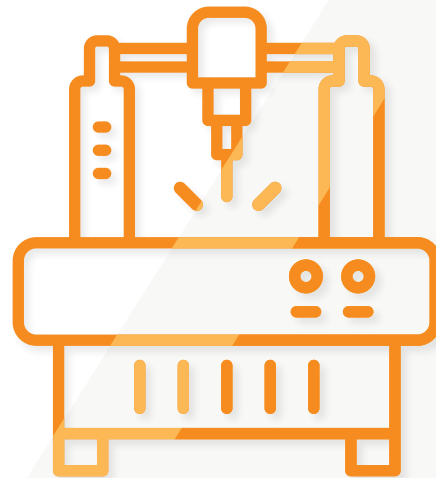
**L1356 - Miniature Flanged Floating Support Units**

Miniature flanged floating support unit for miniature lead screws. Steel. End machining of lead screws on request

## End Machining

Automotion Components offers **precision end machining services** for lead screws and ball screws, tailored to meet specific application requirements.

This ensures seamless integration into your system, helping to reduce installation time and enhance overall performance.



**Chat with us:** [automotioncomponents.co.uk/callback](https://www.automotioncomponents.co.uk/callback)

# An introduction to **Lead and Ball Screws**



VIEW THE FULL RANGE

At **Automotion Components**, we are very proud of the vast range of products we are able to offer, which includes our range of **Lead & Ball Screws**.



## **Lead Screws & Precision Screws**

Our commercial and precision screws are available in steel and 316L stainless. The commercial range has trapezoidal threads in single and twin start. The precision range provides a more accurate fit and higher "leads" - is distance travelled per revolution, offering good solutions to your application needs. The lead screw nuts are provided in brass, steel, plastic resin and stainless steel.

Thread sizes are from Ø8 with a 1mm lead up to Ø120 with a 18mm lead.

Thread types - right hand is of course standard but we offer left hand as well as "combi" lead screws (right hand thread one end and left hand on the other).

## **Precision Lead Screws**

Available in smaller diameters (down to 4mm) and up to 20mm with 40mm lead.

We also provide a range of nuts and bearing supports to complement all sizes of lead and ball screws.



## **Ball Screws**

We offer highly accurate and reliable ball screws with left and right hand threads. Miniature ball screws from 6 to Ø14mm with cylindrical or flanged nuts. Standard ball screws from 12 to Ø80mm along with a range of anti-corrosion ball screws.



## **Accessories**

All of the above are supported by a range of accessories including ball screw support units, motor brackets, spindle locks, position counters and handwheels.



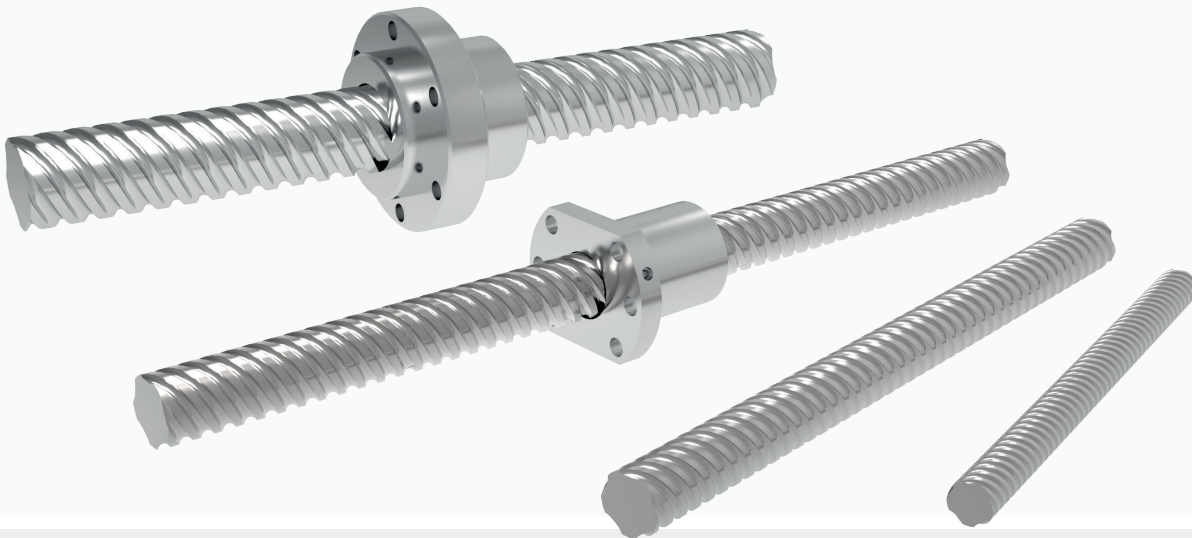
VIEW THE FULL RANGE

Linear Components ▶ Lead Screws & Ball Screws

# Ball Screws

A ball screw is a screw which translates rotary motion into linear motion. Normally used as the driving mechanism in horizontal or vertically driven applications aided by linear guides for supports. They are described by diameter and pitch or lead. The pitch or lead is the amount of travel you get, or distance the nuts travel along the screw for every

complete revolution. They can be operated manually or motorised. They differ from lead screws in that they offer greater precision, speeds, efficiency and accuracy. They are a precision screw which cost considerably more than a lead screw of comparable size so it is important to determine if your application really requires a ball screw.



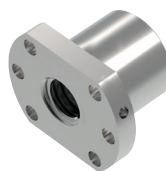
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### L1375 - Ball Screws

Highly efficient due to the recirculating ball mechanism which helps the ball nuts minimise friction against the ball screw. From 16 to 80mm diameter, a range of leads - stocked lengths up to 3 metres

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### L1370 - Flanged Ball Nuts

To DIN 69051 form B. To compliment our rolled ball screw range. With lubrication and fixing holes. Right and left hand thread

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### L1377 - Flanged Ball Nuts - Anti-Corrosion

DIN 69051 form B. Anti corrosion finish consists of a thin layer of black chrome and produces good resistance to wear, and a protective effect against corrosion. Layer thickness 2-10µm



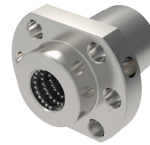
**L1379 - Miniature Rolled Ball Screws**

Miniature rolled ball screws and nuts come in 6-14 mm diameter sizes and with lengths up to 1 metre



**L1371 - Flanged Double Ball Nuts**

Can be used with ball screw nut brackets to make mounting carriages etc easier. With lubrication and fixing holes



**L1372 - Centre Flanged Ball Nuts**

Produced to DIN 69051 form B. With lubrication and fixing holes. Can be used with ball screw nut brackets to make mounting carriages etc easier



**L1373 - Cylindrical Ball Nuts**

Compatible with our wide range of ball screws with diameters 16-40 mm. With lubrication and fixing holes



**L1374 - Cylindrical Ball Nuts**

With thread. Compatible with our wide range of ball screws with diameters 16-40 mm. With lubrication and fixing holes



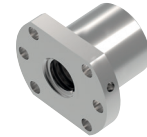
**L1377 - Anti-Corrosion Ball Screws**

Ball screws- anti corrosion. Rolled. Steel. Sizes 16-40



**L1379.C - Miniature Cylindrical Ball Nuts**

Miniature cylindrical ball nut. Steel



**L1379.F - Miniature Flanged Ball Nuts**

For use with miniature ball screws. Fit the ball nut screw with the sleeve provided

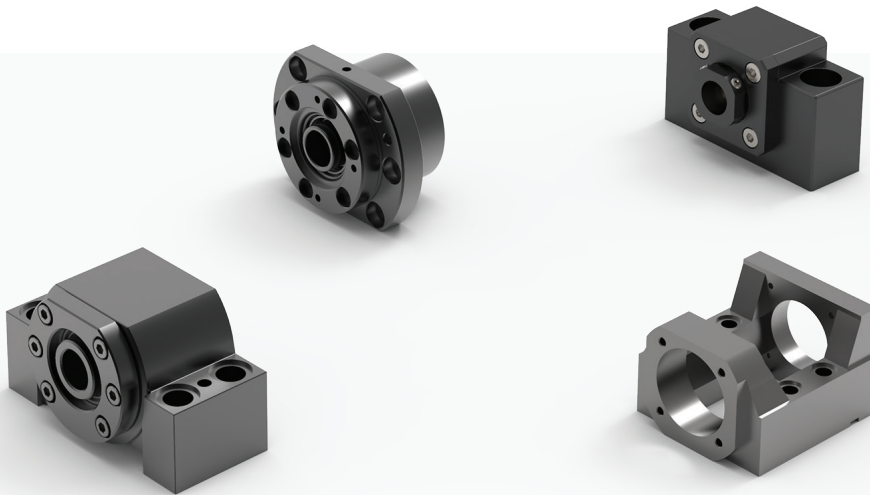


Linear Components ▶ Lead Screws & Ball Screws

# Bearing Supports

Our fixed and floating bearing support units are designed for use with lead and ball screws, accommodating screw diameters ranging from 4mm to 80mm. For custom applications, we also offer machining services to fit your specific ball or lead screw requirements.

Additionally, we provide a variety of bearing mounts in cast iron, stainless steel, and thermoplastic materials, ideal for lead screws and ball screws.



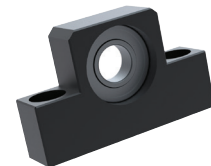
### L1388 - Fixed Rectangular Support Units (AK)

Fixed rectangular support unit (AK) for ball & lead screws. Steel



### L1390 - Fixed Round Support Units

Fixed round support unit (FK) for ball & lead screws. Steel



### L1395 - Floating Rectangular Support Units (EF)

Floating rectangular support unit (EF) for ball & lead screws. Steel



**L1389 - Floating Rectangular Support Units (AF)**

Floating rectangular support unit (AF) for ball & lead screws. Steel



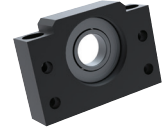
**L1391 - Floating Round Support Units**

Floating round support unit (FF) for ball & lead screws. Steel



**L1392 - Fixed Rectangular Support Units (BK)**

Fixed rectangular support unit (BK) for ball & lead screws. Steel



**L1393 - Floating Rectangular Support Units (BF)**

Floating rectangular support unit (BF) for ball & lead screws. Steel



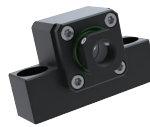
**L1394 - Fixed Rectangular Support Units (EK)**

Fixed rectangular support unit (EK) for ball & lead screws. Steel



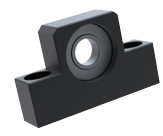
**L1400 - Fixed Round Support Units (FKA)**

Fixed round support unit (FKA) for ball & lead screws. Steel



**L1402 - Fixed Rectangular Support Units (LK)**

Fixed rectangular support unit (LK) for ball & lead screws. Steel



**L1403 - Floating Low Profile Support Units (LF)**

Floating low profile support unit (LF) for ball & lead screws. Steel



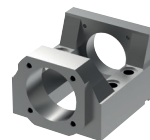
**L1405 - Heavy Load Support Units (WBK)**

Heavy load support units (WBK), for ball & lead screws. Steel



**L1406 - Heavy Load Support Units (SBK)**

Heavy load supports units (SBK), for ball & lead screws. Steel



**L1408 - Motor Bracket (MBA)**

Motor bracket (MBA), for ball & lead screws. Steel



VIEW THE FULL RANGE

# Shafts

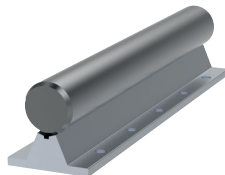
A linear shaft is a straight, precision machined bar on which linear bearings run to create a linear guide system to support or guide the movement of equipment in a linear fashion. Available in hardened steel, hardened stainless, 303 and 316 stainless, and aluminium.

We can also manufacture on short lead times linear shafts to your drawing with custom machining, keyways, circlips grooves, drilled and tapped holes and more.



### L1772 - Hardened Stainless Shafts

From the hardest type of stainless steel (AISI 440C) with a ground and polished surface. Ideal for use in applications in which there may be some corrosive materials demand high wear resistance



### L1780 - Shaft Support Rails

Hardened steel shafting or corrosion resistant linear shaft rods mounted on aluminium alloy support rails, for use with open flanged or unflanged carriages. Length up to 6 metres



### L1770 - Hardened Steel Shafts

Hardened steel linear shafting generally for use with linear bearings. The load capacity of each shaft rod depends on the length of the shaft and how it is supported

# An overview of Linear Shafts

Our large range of linear shafting includes hardened steel shaft bars, corrosion resistant shaft bars and hollow shaft bars. We can also modify these standard shafts (drilling, tapping etc) to your requirements.



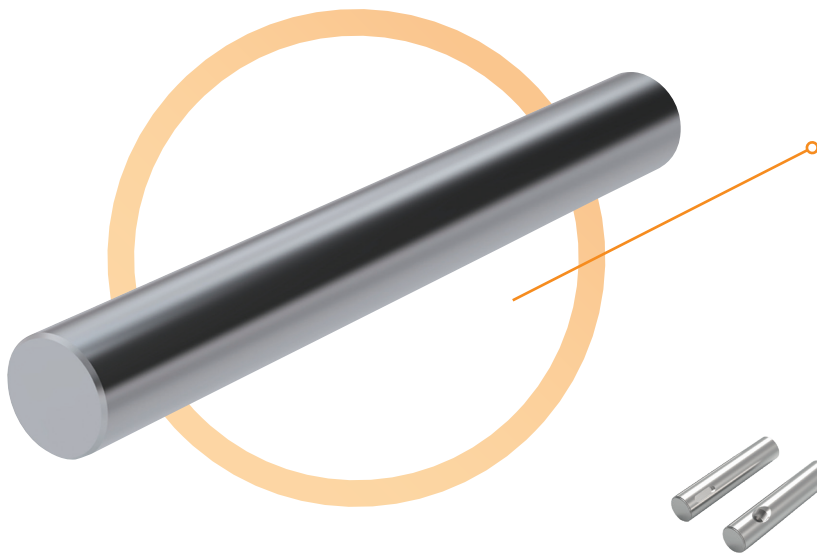
## L1771 Hardened carbon steel hollow shaft

Used in applications where weight reduction is important. Available diameters of between 12Ø to 50Ø h6 tolerance. Use with our linear bearings.



## L1772 Corrosion resistant 440C shaft

This hardened shaft is the one to use if you require corrosion resistance but also need to use linear bearings. Available diameters 06Ø to 60Ø. Use with our stainless steel linear bearings.



## L1770 : HARDENED CARBON STEEL LINEAR SHAFT

### L1770

Our most popular shaft! Available in diameters of between 05Ø to 60Ø with a surface hardness of 60-66 HRC. Use with our linear bearings. All our linear shafts are made to a standard h6 tolerance. Special tolerances available upon request.

We can offer a wide range of modifications and special product requests, across our complete range of linear shaft bars, including through holes and end machining. Our linear shafts can be cut down to any length required.



## L1773 / L1774 303/316 Stainless steel shaft

Superior corrosion resistance compared to 440C shafts. These offer ultimate protection when looking for corrosion resistance. Available diameters 06Ø to 60Ø.



## L1778 Aluminium shaft

Hard anodized to 450-550 HV where weight saving is a priority. This is also non-magnetic with a surface hardness of >80 HRC. Designed to be used with self-lubricating ceramic bearings (L1764 to L1769).



**L1771 - Hardened Hollow Shafts**

Used in linear bearing and guideway systems where weight reduction is important. Hollowed for lighter weight. Ø12 to Ø50



**L1773 - Stainless AISI 303 Shafts**

To be used with ceramic or other bearings not containing hardened ball bearings. Soft stainless. High anti-corrosion. Ø6 to Ø60



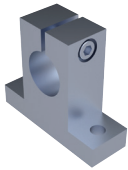
**L1774 - Stainless AISI 316 Shafts**

Marine grade. Soft stainless, very high anti-corrosion. Not for ball bushing linear bearings, but with sleeve type linear bearings & ceramic bearings. Ø6 to Ø60



**L1778 - Aluminium Shafts**

Lightweight aluminium linear shafts, coated with hard aluminium oxide, to increase durability. Non-magnetic. Used with self-lubricating ceramic linear bushes. Ø8 to Ø50



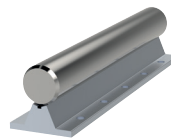
**L1779.AL - Shaft End Supports**

Shaft end supports. Aluminium. For mounting of standard shaft diameters



**L1779.A4 - Shaft End Supports**

Shaft end supports. 316 stainless steel. For mounting of standard shaft diameters. Tolerance h6



**L1781 - Shaft Support Rails**

Complete shaft and rail. For open linear bushings. Ensures a very rigid and stiff system. The shaft is pre-mounted to the shaft support rail



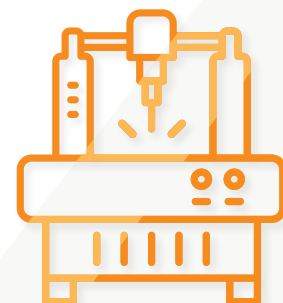
**L1783 - Shaft Support Rail**

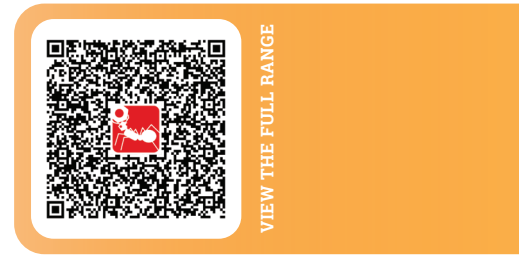
Shaft support rail. Aluminium. For open linear bushings

## End Machining

**Need a shaft customised?** Automotion Components offers precision end machining services tailored to your exact specifications. Designed for accurate fit and seamless integration, this service helps reduce installation time while improving overall system performance.

**Chat with us:** [automotioncomponents.co.uk/callback](https://www.automotioncomponents.co.uk/callback)



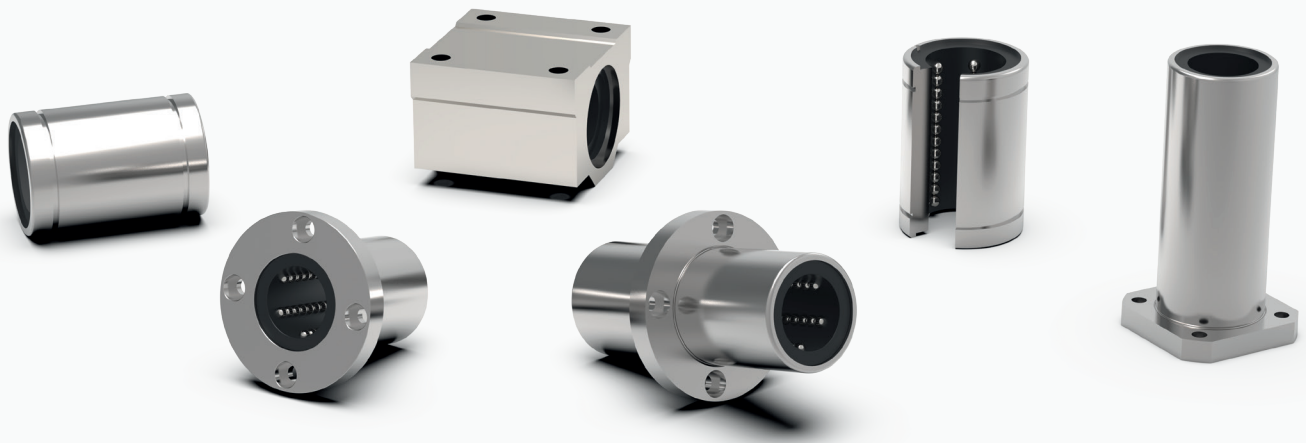


Linear Components ▶ Linear Bearings & Shafts

# Bearings

A Linear Bearing, also known as a linear ball bush or bushing, is a bearing that runs on a hardened linear shaft to help guide or support the movement of a component in a linear fashion. A cost effective method of achieving linear motion where the

loads are light enough to not need conventional linear guides or where the guide can only be supported at the ends and not over the entire length.



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### L1706 - Closed Linear Ball Bushings

Closed linear ball bearings - 5mm to 60mm. For use with hardened shafts only

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### L1750 - Linear Carriages

Aluminium body, with linear bearing. For use with hardened shafts only

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### L1718 - Flanged Linear Ball Bushings

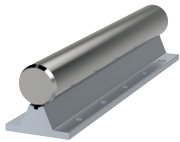
Circular ball bushing for shafts from 6mm to 60mm diameter. Used with hardened shafts only

# An overview of Support Rails & Bearings



VIEW THE FULL RANGE

Automotion Components offer a range of support rails and bearings to suit.



## L1781

### Stainless steel shaft

Hardened and ground stainless steel shaft (440C), pre-mounted aluminium alloy support rail. Surface hardness of shaft 60-65 HRC. For open linear bushings.

## L1707 : OPEN LINEAR BALL BEARINGS



## L1707

A hardened ground and steel open linear bearing is a bearing typically used with shaft support rails. For use in applications with downward acting loads. Not suitable for use with loads hanging from it as load would be pulling an open slot.

**TIP** – The L1707 range can only be used with the hardened shafts (L1770 – L1772).



## L1784

### Manual shaft clamp

Aluminium body, with hardened steel contact faces. Activating the clamping lever presses the contact faces into contact with the shaft bar to clamp it in place. Can be used for clamping from above and below. Pneumatic shaft clamps are also available on request.



## L1752

### Open linear ball bearing carriages

Unflanged open linear bearing carriages. An aluminium body with a steel linear bearing, used with the L1780 support rail.

**TIP** – Effective for high loads in combination with the hardened shafts.

# An overview of Standard Linear Bearings



VIEW THE FULL RANGE

Standard closed, open and adjustable linear bearings.  
For shafts from 5mm to 60mm.



## L1706 & L1712

### Closed linear bearings

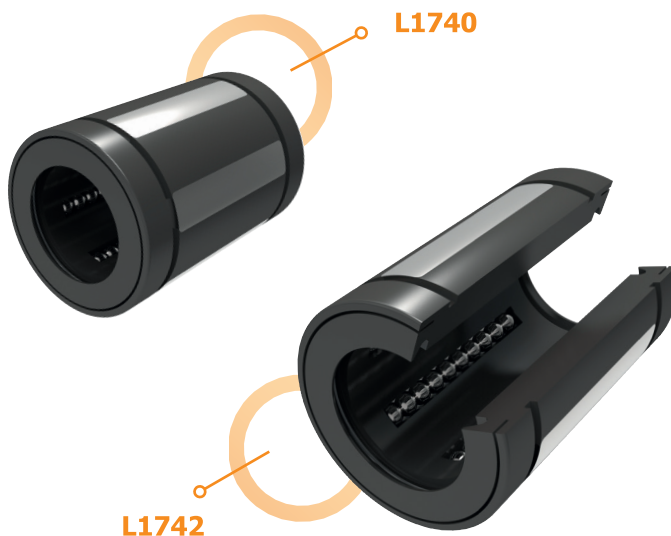
These closed linear bearings are manufactured in hardened steel. Used with hardened shafts (L1770-L1772). L1712 is the longer version of the standard L1706 linear bearing.



## L1718 & L1719

### Flanged linear ball bearings

Hardened and ground body from bearing steel. Available with either circular flange (L1718) or square flange (L1719). Single body resin retainer (POM). Supplied with nitrile rubber (NBR) end-seals - UU as standard.



## L1740 & L1742 : SUPERBALL LINEAR BALL BEARINGS

## L1740 & L1742

Hardened and ground steel ball plate from bearing steel. The floating plate feature offers a self-alignment and clearance adjustment. The Superball series has three times the load rating and twenty-seven times the travel life of conventional linear bearings. Available closed (L1740) and open (L1742).



## L1730 & L1731

### Linear ball bearings

Extended / double complement bearings, with a central flange, to deal with higher load applications. Available in circular flanged (L1730) or square flanged (L1731). Use with hardened shafts only (L1770-L1772).



## L1750 & L1750-L

### Linear carriages

Aluminium body with linear bearing L1706 installed. Bearing has a resin retainer (POM). Supplied with nitrile rubber (NBR) end seals - UU as standard. Also available in longer lengths (L1750-L).

# An overview of Stainless Steel Linear Bearings



Stainless steel linear bearings - standard, flanged and pre-mounted aluminium carriages. Stainless linear bearings have either resin ball retainers or stainless steel ball retainers.

## L1709 & L1713 Closed ball bearings



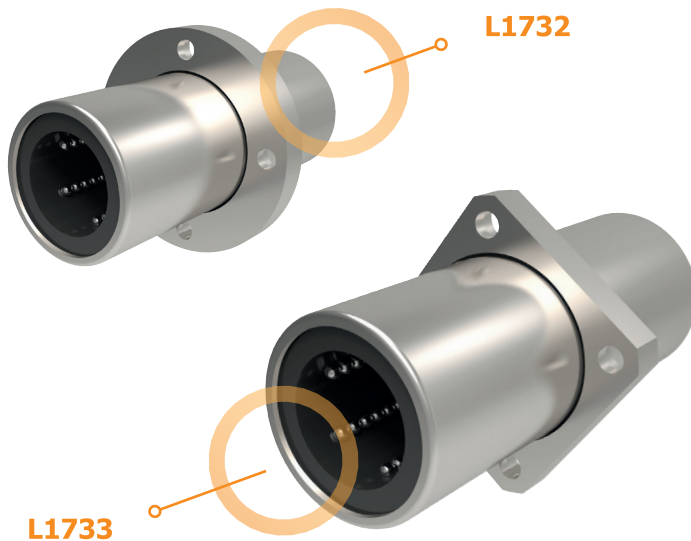
Manufactured with a stainless steel body (440C) and either resin or stainless steel (316) retainer. L1713 is the longer version of the standard L1709 bearing. Use with corrosion resistant hardened shafts (L1772).

## L1720 & L1721 Ball bearings



Stainless steel body (440C) with either a resin (POM) or stainless steel (316) retainer. Available with either circular flange (L1720) or square flange (L1721).

## L1732 & L1733 : STAINLESS BALL BEARINGS



## L1732 & L1733

Extended / double compliment bearings, with a central flange, to deal with higher load applications. Stainless steel body (440C) with either a resin (POM) or stainless steel (316) retainer. Available in circular flanged (L1732) or square flanged (L1733). For use with corrosion resistant hardened shafts (L1772).

## L1724 & L1725 Flanged ball bearings



Extended / double compliment bearings, with a central flange, to deal with higher load applications. Available in circular flanged (L1730) or square flanged (L1731). Use with hardened shafts only (L1770-L1772).

## L1751 & L1756 Linear carriages



Aluminium carriage housing with stainless steel (440C) linear bearing installed. Available closed (L1751) or open (L1756), longer lengths are also available.

# An overview of Ceramic Linear Bearings

Ceramic bearings are designed to run in "dirty" environments. They can also run on soft shafting (reduces cost) and also allows them to run on 303 and 316 stainless shafting. Many of our bearings are self-aligning. We also offer self-lubricating options.



VIEW THE FULL RANGE

## L1764

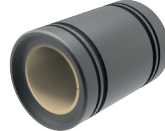
### Ceramic closed linear bearing



Aluminium with aluminium-oxide ceramic coating (4-7 $\mu$ ). Hardness >80 HRC. Can be run on hardened or soft steel shafts. Tolerance h6, all part no. L1770-L1778. These bearings have a self-aligning feature.

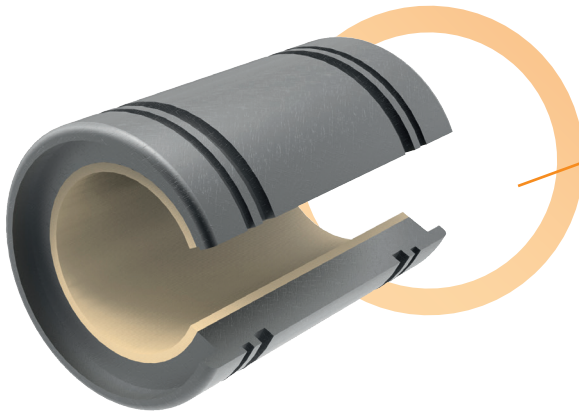
## L1765

### Self-lubricating ceramic closed linear bearing



Aluminium with aluminium-oxide ceramic coating (4-7 $\mu$ ). Hardness >80 HRC. PTFE insert. Can be run on hardened or soft steel shafts. Tolerance h6, all part no. L1770-L1778.

## L1767 : CERAMIC OPEN LINEAR BEARINGS



## L1767

Aluminium with aluminium-oxide ceramic coating (4-7 $\mu$ ). Hardness >80 HRC. PTFE insert. Can be run on hardened or soft steel shafts, tolerance h6, all part no. L1770-L1778. Self-lubricating versions can also be run on ceramic coated aluminium shafts (L1778). These bearings have a self-aligning feature available.

## L1766

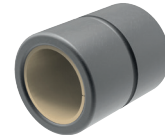
### Ceramic open linear bearing



Aluminium with aluminium-oxide ceramic coating (4-7 $\mu$ ). Hardness >80 HRC. Can be run on hardened or soft steel shafts. Tolerance h6, all part no. L1770-L1778. These bearings have a self-aligning feature available.

## L1769

### Thin wall self-lubricating ceramic linear bearing



Aluminium with aluminium-oxide ceramic coating (4-7 $\mu$ ). Hardness >80 HRC. PTFE insert. Can be run on hardened or soft steel shafts. Tolerance h6, all part no. L1770-L1778. Self-lubricating versions can also be run on ceramic coated aluminium shafts (L1788.)



**L1707 - Open Linear Ball Bushings**

Linear ball bushings for use on hardened shafts



**L1708 - Adjustable Linear Ball Bushings**

Adjustable linear ball bushings. Steel shafts



**L1709 - Ball Bushings**

Stainless steel closed ball bushings. For use with corrosion resistant hardened shafts



**L1710 - Stainless Ball Bushings**

Stainless ball bushings, open. Stainless steel



**L1711 - Stainless Ball Bushings**

Stainless ball bushings, adjustable. Stainless steel



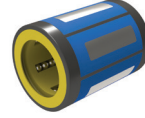
**L1712 - Long Linear Ball Bushings**

For use with hardened shafts only, steel ball retainers can be supplied for higher temperature applications up to 120 °C



**L1713 - Stainless Ball Bushings**

Stainless ball bushings, long version. Stainless steel



**L1715 - Compact Linear Ball Bushings**

Low cost, compact. Durable plastic body with corrosion resistant hardened steel raceway segments



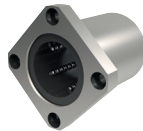
**L1719 - Flanged Linear Ball Bushings**

Square flanged ball bushing for shafts from 6mm to 60mm diameter. Used with hardened shafts only



**L1720 - Stainless Ball Bushings**

Circular flange ball bushings to use with corrosion resistant hardened shafts



**L1721 - Stainless Ball Bushings**

Stainless ball bushings, square flange. Stainless steel



**L1722 - Long Flanged Linear Ball Bushings**

Long, circular flanged linear ball bushings - 6mm to 60mm. Double complement bearings



**L1723 - Long Flanged Linear Ball Bushings**

Long, square flanged linear ball bushings - 6mm to 60mm. Double complement bearings



**L1724 - Stainless Ball Bushings**

Stainless ball bushings, long version, circular flange. Stainless steel



**L1725 - Stainless Ball Bushings**

Double complement. For use with corrosion resistant hardened shafts



**L1730 - Long Centre Flange Linear Ball Bushing**

Circular flange. For use with hardened shaft only



**L1731 - Linear Ball Bushings**

Double length. Linear ball bushings for use on hardened shafts



**L1732 - Stainless Ball Bushings**

Long version. Circular centre flange. For use with hardened shaft only



**L1733 - Stainless Ball Bushings**

Long version. Square centre flange. For use with corrosion resistant hardened shafts



**L1740 - Superball Closed Linear Ball Bushings**

Superball, linear ball bearings. 10mm to 50mm. Floating plate feature offers self-alignment and clearance adjustment



**L1741 - Nickel-Plated Superball Closed Bushings**

Nickel-plated superball closed bushings. Steel



**L1742 - Superball Open Linear Ball Bushings**

Superball open linear ball bushings. Steel



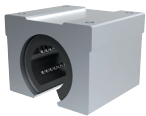
**L1743 - Nickel-Plated Superball Open Bushings**

Nickel-plated superball open bushings. Steel



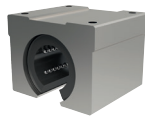
**L1751 - Stainless Linear Carriages**

Nickel-plated superball open bushings. Steel



**L1752 - Open Linear Ball Bushing Carriages**

Open linear ball bushing carriages. Particularly effective for high loads and long stroke applications



**L1753 - Stainless Unflanged Carriages**

Open stainless unflanged carriages. Aluminium carriage housing. For use with shaft support rails



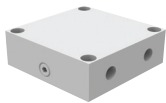
**L1755 - Flanged Linear Carriages**

Open. For use with shaft support rails. Particularly effective for high loads and long stroke applications



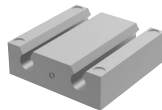
**L1756 - Stainless Flanged Carriages**

Stainless flanged carriages, open. Aluminium



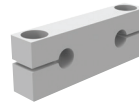
**L1758 - Quadro Carriages**

Quadro carriages, closed type bearings. Aluminium



**L1759 - Quadro Carriages**

Quadro carriages, open type bearings. Aluminium



**L1760 - End Blocks for Twin Shafts**

End blocks for twin shafts, clearance and tapped hole fixing. Aluminium



**L1764 - Ceramic Closed Linear Bearings**

Ceramic closed linear bearings. Made with aluminium-oxide ceramic coating



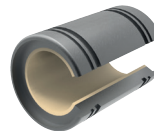
**L1765 - Ceramic Closed Linear Bearings**

Self-lubricating. Ceramic bearings are ideal for use on all shaft bar materials



**L1766 - Ceramic Open Linear Bearings**

Ceramic bearings are ideal for use on all shaft bar materials, hardened or soft



**L1767 - Ceramic Open Linear Bearings**

Self-lubricating. Ceramic bearings are ideal for use on all shaft bar materials, hardened or soft

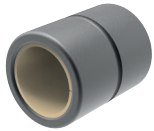


**L1768 - Thin Wall Ceramic Linear Bearings**

Thin wall ceramic linear bearings. Aluminium



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**L1769 - Thin Wall Ceramic  
Linear Bearings**

Thin wall ceramic linear bearings,  
self-lubricating. Aluminium

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**L1784 - Manual Shaft  
Clamps**

Manual shaft clamps. Aluminium

# Technical information

## Load Rating



### Basic dynamic load rating C

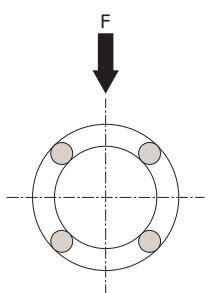
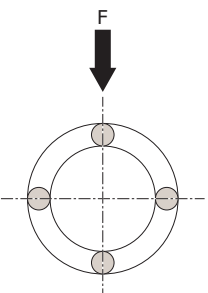
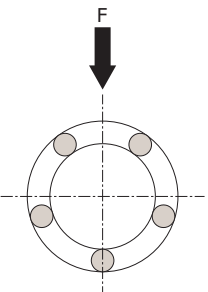
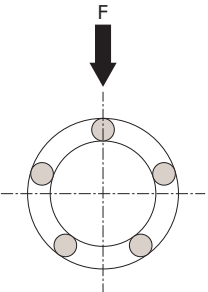
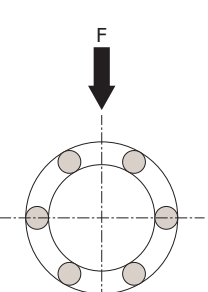
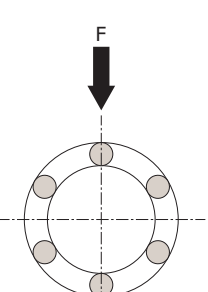
The basic dynamic load rating is defined as the constant load both in direction and magnitude under which a group of identical linear bushings are individually operated. 90% of the units can travel 50Km without failing due to rolling contact fatigue.

### Basic static load rating C<sub>0</sub>

If a linear bushing is subject to an excessive load or impact, a permanent deformation occurs between the raceway and the rolling element. The basic static load rating is defined as the static load that gives a prescribed constant contact stress at the centre of the contact area between the rolling element and raceway receiving the maximum load.

### Relationships between load ratings and the position of ball circuits

Load ratings of linear bushing are affected by the position of the ball circuits as shown below.

No of ball rows	Orientation of balls	
	Maximum load rating	Minimum load rating
4		
	$F = 1.41 \times C$	$F = C$
5		
	$F = 1.46 \times C$	$F = C$
6		

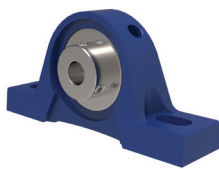
Load ratings and orientation of balls.



# Pillow Blocks

Pillow blocks, also known as plummer blocks and bearing supports range in sizes from 12mm to 90mm inner diameter. These blocks house bearing inserts equipped with two set screws to secure the shaft in place after installation, providing stability and support.

As specialists in linear motion systems, we offer a choice of materials and sizes to accommodate wet or chemical environments such as bottling lines, food or pharmaceutical production lines, outdoor applications and more.



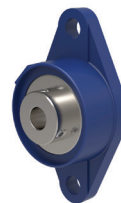
## L1860 - Pillow Block Bearing Units

Pillow block bearing units. Cast iron (FG20 or FG25)



## L1862 - Square Flanged Bearing Units

Square flanged bearing units. Cast iron (FG20 or FG25)



## L1864 - Oval Flanged Bearing Units

Oval flanged bearing unit. Cast iron (FG20 or FG25)

# An overview of **Bearing Supports**

Automation Components offer a range of bearing supports with a variety of mounting options (front, side and top), for use with our wide range of linear shafts. Also known as plummer blocks or pillow blocks.



## **L1872**

### **Stainless steel bearing units**



Stainless steel (AISI 304) self-aligning bearing units (440C), with smooth surfaces. Resistant to moisture and a wide range of aggressive chemicals.

## **L1878**

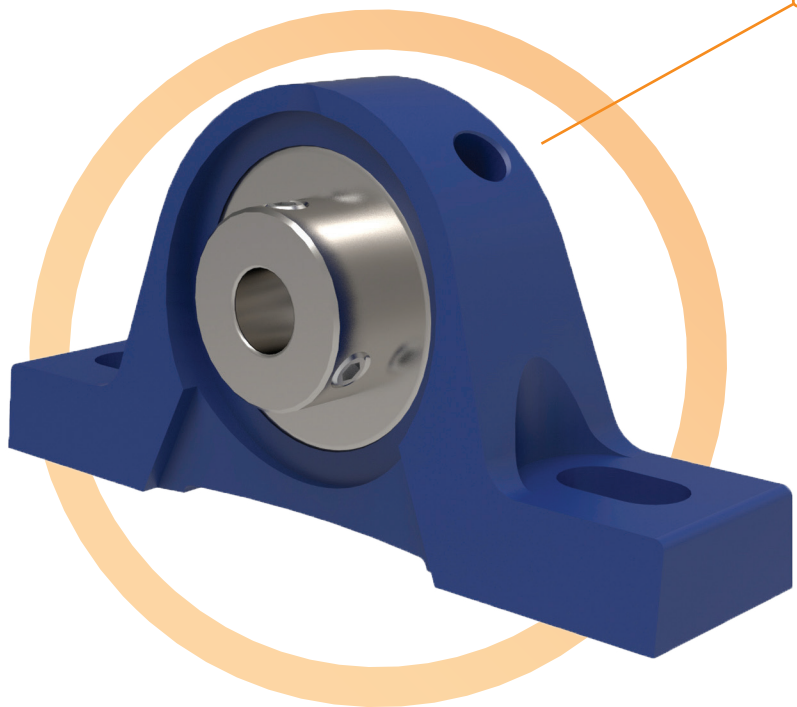
### **Thermoplastic bearing units**



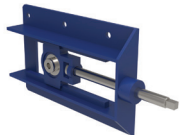
Thermoplastic (PBT) housing, with smooth surfaces. Stainless steel self-aligning bearings (440C) with 2RS seals. Bearing lubricated with food grade grease.

## **L1860 : PILLOW BLOCK BEARING UNITS**

## **L1860**

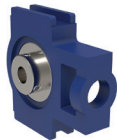


Steel, self-aligning bearing units with double seals, lubricated for life. Cast iron (FG20 or FG25), passivated and painted blue (RAL 5010). Used with h6 tolerance shafts (L1770-L1776). The housings are rated to take the maximum bearing loads. Available in multiple mounting options/shapes - part no's L1862-L1869.



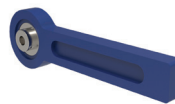
**L1865 - Take-Up Units & Frame**

Take-up units & frame, with stretcher frame. Iron



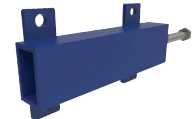
**L1866 - Take-Up Units**

Take-up units, set screw type. Iron



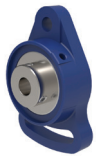
**L1867 - Conveyor Belt Tensioners**

Conveyor belt tensioners, cast iron. Steel housing



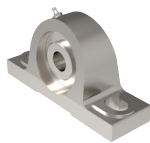
**L1868 - Stretcher Units**

Stretcher units, for conveyor belt tensioner. Iron



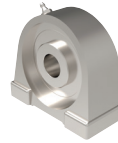
**L1869 - Take-Up Units**

Take-up units. Quality grey cast iron (FG20 or FG25)



**L1870 - Stainless Pillow Block Bearing Units**

Stainless pillow block bearing units. Stainless steel



**L1871 - Stainless Pillow Block Bearing Units**

Stainless pillow block bearing units, blind holes. Stainless steel



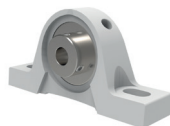
**L1872 - Stainless Square Flanged Bearing Units**

Stainless square flanged bearing units, four point flange. Stainless steel



**L1873 - Stainless Oval Flanged Bearing Units**

Stainless oval flanged bearing units. Stainless steel



**L1876 - Thermoplastic Pillow Block Unit**

Thermoplastic pillow block unit. Thermoplastic (PBT) housing



**L1877 - Thermoplastic Square Flanged Units**

Thermoplastic square flanged units, four point flange. Thermoplastic (PBT) housing



**L1879 - Thermoplastic End Caps**

Thermoplastic end caps, open & closed. White SR50 polypropylene

# Request a call back

## How we can help:

- ✓ Speak directly to product specialists
- ✓ Help with part selection or alternatives
- ✓ Advice on materials and specifications
- ✓ Support with bespoke or modified components

**Chat with us:** [automotioncomponents.co.uk/callback](https://automotioncomponents.co.uk/callback)





Mechanical Components ▶ Shoulder Screws, Captive Screws & Sealing Screws

# Shoulder Screws

Shoulder screws, also known as shoulder bolts or sometimes referred to as stripper bolts, distinguish themselves by featuring a head, a threaded portion, and an additional unthreaded "shoulder" in between. This shoulder, with a larger diameter than the thread and high precision tolerance, serves a dual purpose as both a fastener

and a precise guide for moving parts, such as pulleys and gears. Available in various materials, including stainless steel and titanium, shoulder screws offer versatility and reliability in applications requiring precise alignment and support for moving components.



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**P0130 - Cap Head Shoulder Screws**

Available in the following materials: 303 stainless steel, 316 stainless steel, blackened 303 stainless steel, blackened 316 stainless steel, grade 2 titanium or grade 5 titanium

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**MADE IN BRITAIN**

**P0133 - Slot Head Shoulder Screws**

Slot drive. Available in martensitic stainless steel (AISI 416, 1.4005)

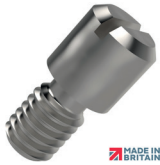
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**MADE IN BRITAIN**

**P0128 - Countersunk Shoulder Screws**

Available in the following materials: 303 stainless steel, 316 stainless steel, blackened 303 stainless steel, blackened 316 stainless steel



**P0126 - Headless Shoulder Screws**

Slot drive. Stainless AISI 303



**P0127 - Cap Head Shoulder Nuts**

Hex. drive. Available in stainless AISI 303/316, and blackened AISI 303/316



**P0130.P2 - Cap Head Shoulder Screws**

With locking patch, Hex. drive Stainless AISI 303



**P0131 - Cap Head Shoulder Screws**

Hex. drive. Stainless AISI 416



**P0132 - Cap Head Shoulder Screws**

Slot drive. Available in stainless AISI 303, AISI 316 and imperial



**P0134 - Ultra Low Head Shoulder Screws**

Hex. drive. Available in stainless AISI 303/316 and blackened AISI 303/316



**P0135 - Stainless Shoulder Bolts**

Hex. head, Stainless AISI 303 Small sizes



**P0136 - Hex. Socket Head Shoulder Screws**

Blackened alloy steel. High grade strength 12.9



**P0137 - Hex. Socket Head Shoulder Screws**

Stainless AISI 303. Large sizes



**P0138 - Stainless Shoulder Bolts**

Hex. head, Stainless AISI 303 Long thread



**P0139 - Steel Shoulder Bolts**

Hex. head. Blackened alloy steel - strength 10.9. Std. thread



**P0140 - Steel Shoulder Bolts**

Hex. head. Blackened alloy steel - strength 8.8. Short thread



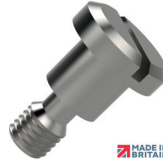
**P0141 - Steel Shoulder Bolts**

Hex. head. Blackened alloy steel - strength 10.9. Short thread



**P0142 - Steel Shoulder Bolts**

Hex. head. Blackened alloy steel - strength 8.8. Construction grade



**P0144 - Pan Head Shoulder Screws**

Slot drive. Available in zinc-plated steel and stainless AISI 303



**P0145 - Cap Head Shoulder Screws**

TX drive. Available in stainless AISI 303/316 and blackened AISI 303/316



# Captive Screws

Captive screws, designed for permanent hold or "captive," offer enhanced safety by significantly reducing the likelihood of accidental removal once installed. The reduced diameter section of the screw helps keep the screw captivated in the panel once the panel has been removed, hence the name.



This captivation is crucial for compliance with safety regulations, such as the EU Machine Safety Directive (2006/42/EC) and/or ISO 14583, where certain equipment, like safety covers or panels, require permanent fastenings.






**P0154 - Cap Head Captive Screws**

Available in the following materials: 303 stainless & 316 stainless, blackened 303 & 316 stainless, titanium, zinc-plated and blackened

**P0153 - Countersunk Captive Screws**

Available in the following materials: 303 stainless & 316 stainless, blackened 303 & 316 stainless and titanium





**P0158 - Captive Hex Bolts**

Available in the following materials: 303 stainless & 316 stainless, blackened 303 & 316 stainless and titanium





**P0149 - Button Head Captive Screws**

TX drive. Available in titanium grade 2/5, stainless AISI 303/316 and blackened AISI 303/316



**P0150 - Pan Head Captive Screws**

TX drive. Available in titanium grade 2/5, stainless AISI 303/316 and blackened AISI 303/316



**P0151 - Button Head Captive Screws**

Hex. drive. Available in titanium grade 2/5, stainless AISI 303/316 and blackened AISI 303/316



**P0152 - Cheese Head Captive Screws**

Hex. drive. Available in stainless AISI 303/316 and blackened AISI 303/316



**P0154.P2 - Cap Head Captive Screws**

With locking patch. Hex. drive  
Stainless AISI 303



**P0155 - Cheese Head Captive Screws**

Slot drive. Available in titanium grade 2/5, stainless AISI 303/316 and blackened AISI 303/316



**P0156 - Cap Head Captive Screws**

TX drive. Available in titanium grade 2/5, stainless AISI 303/316 and blackened AISI 303/316



**P0157 - Pan Head Captive Screws**

Phillips drive. Stainless AISI 303



**P0159 - Captive Panel Thumb Screws**

Slot drive. Available in titanium grade 2/5, stainless AISI 303/316 and blackened AISI 303/316



**P0160 - Captive Thumb Screws**

Available in titanium grade 2/5, stainless AISI 303/316 and blackened AISI 303/316



**P0161 - Captive Thumb Screws**

Available in titanium grade 2/5, stainless AISI 303/316 and blackened AISI 303/316



**P0163 - Captive Screws with Washers**

Hex. drive. Stainless AISI 303

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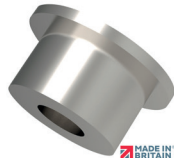


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BRITAIN

**P0168 - Threaded Captive Washers**

Threaded captive washers, for captive screws. Stainless steel

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**P0169 - Captive Screws Retainer Flange**

Captive screw retainer flange. Aluminium or 303 stainless steel

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BRITAIN

**P0169.TL - Installation Tools**

Installation tools, for retainer flanges. Steel

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**P0340 - Threaded Washers**

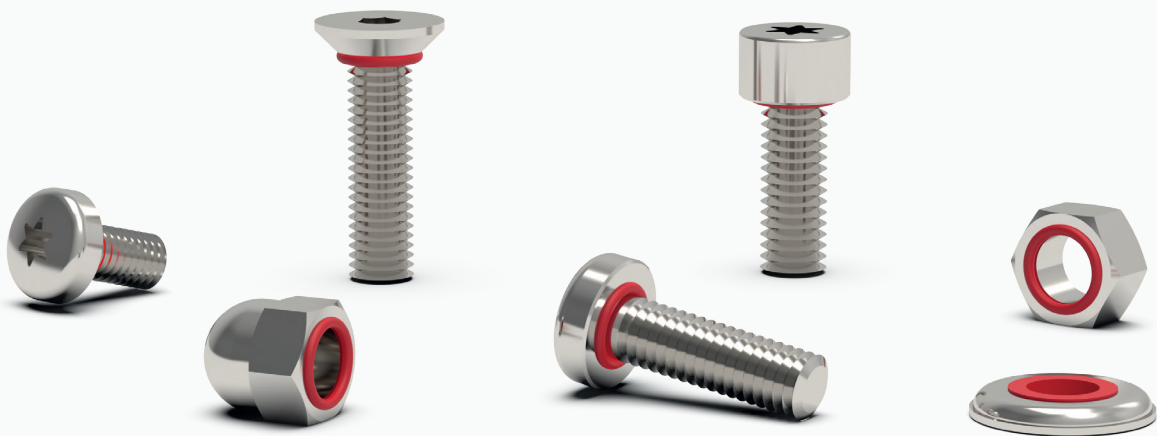
Threaded washers, 303 stainless. Stainless steel



# Sealing Screws

Sealing screws offer crucial bi-directional protection against contaminants, preventing potential damage to sensitive devices. Featuring an O-ring beneath the screw or bolt, these screws create a reliable seal as they are tightened, controlled by a precision-engineered groove. This design ensures consistent O-ring compression, making the screws reusable. Various O-ring materials resist diverse chemical and

environmental conditions. Sealing screws, available to military specifications (MILSPEC) on request, are user-friendly, requiring no special preparation or re-tightening. With silicone "O" ring as standard. Other "O" ring materials available on request (fluorosilicone, EPDM, viton, nitrile, Buna etc).



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**P0171 - Pan Head Seal Screws**

Slot drive. Available in 303 and 316 stainless steel

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**P0173 - Cap Head Seal Screws**

TX drive (P0185). Available in 303 and 316 stainless steel

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**P0174 - Button Head Seal Screws**

Hex drive. Available in 303 and 316 stainless steel



**P0170 - Pan Head Seal Screws**

Seal screws. Pan head. Phillips drive. 303 stainless steel. 316 available on request



**P0171.i - Pan Head Seal Screws - Inch**

Pan head seal screws - inch. Slotted. 303 Stainless steel. 316 available on request



**P0172 - Pan Head Seal Screws**

Seal screws. Pan head. Torx drive. 303 stainless steel. 316 available on request



**P0173.P2 - Seal Screws - Cap Head**

Seal screws. Cap head, with locking patch. Hex drive. 303 stainless steel. 316 available on request



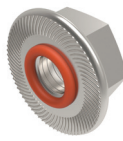
**P0175 - Countersunk Seal Screws**

Countersunk seal screws. Hex socket. 303 stainless steel. 316 available on request



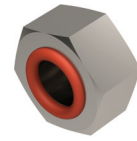
**P0176 - Integral Seal Bolts**

Integral seal bolts. Hexagon head. 303 or 316 stainless steel



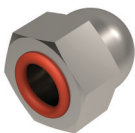
**P0177 - Integral Seal Flanged Hex Nuts**

Stainless steel (A2 AISI 303) with silicone O ring as standard. Other O rings on request



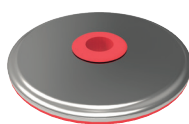
**P0178 - Integral Seal Hex. Nuts**

Integral seal hex. nuts. 303 or 316 Stainless steel



**P0179 - Integral Seal Domed Nuts**

Integral seal domed nuts. 303 or 316 Stainless steel



**P0180 - Seal Washers**

Seal washers. 316 stainless steel



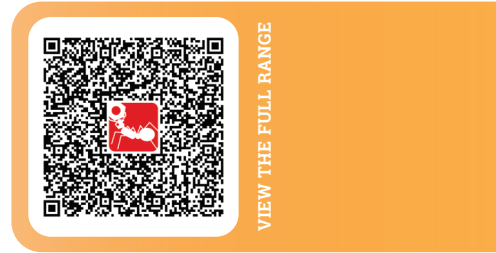
**P0181 - Waterproof Seal Washers**

Waterproof seal washers. 304 stainless steel



**P0185 - Cap Head Seal Screws**

TX drive. Stainless steel A2. Silicone O ring as standard, other O rings on request



# Vented Screws

Vented screws are purpose-built for applications where trapped air bubbles pose challenges, such as in vacuum systems and clean rooms. The vent allows trapped air under the screw to be released quickly. Therefore, systems that are subjected to vacuum conditions can reach low pressures more quickly and remain at low pressures more effectively.

All products are ultrasonically cleaned to meet the cleanliness requirements of vacuum environments. Additionally, coatings are offered to reduce seizing or galling in vented screws.



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**P0090 - Cap Head Vented Screws**

Available in 303 and 316 stainless steel

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**MADE IN BRITAIN**

**P0091 - Hex Head Vented Screws**

Available in 303 and 316 stainless steel

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**MADE IN BRITAIN**

**P0094 - Socket Button Head Vented Screws**

Available in 303 and 316 stainless steel

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**P0093 - Vented Machine  
Screws**

Countersunk. Hex. drive. Available in  
stainless AISI 304 and 316

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BRITAIN

**P0097 - Stainless Vented  
Washers**

Available in stainless AISI 304 and 316  
Ultrasonically cleaned. Available with  
coating

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BRITAIN

**P0098 - Vented Shoulder  
Screws**

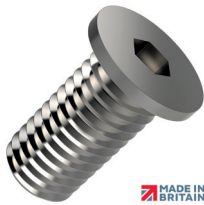
Cap head. Hex. drive. Available in  
stainless AISI 304 and 316



# Low Head Screws

Low head screws, crucial in weight-sensitive applications like aerospace, provide minimal weight and reduced drag. Unlike traditional countersunk screws requiring a minimum metal depth for head recess, our innovative low head profile screws allow for the use of thinner panels, saving weight and ensuring a flush fit with the surface, with thicknesses

as minimal as 0.5mm. Available in hex or TX versions, these screws provide a streamlined solution for applications requiring both lightweight design and reduced aerodynamic resistance.



## P0207 - Extra Low Head Cap Screws

Available in the following materials:  
303 stainless & 316 stainless, blackened 303 & 316 stainless and titanium



## P0208 - Ultra Low Head Cap Screws

Hex drive. Available in the following materials: 303 stainless & 316 stainless, blackened 303 & 316 stainless and titanium



## P0209 - Ultra Low Head Cap Screws

TX drive. Available in the following materials:  
303 stainless & 316 stainless and blackened 303 & 316 stainless



# Thumb Screws

A thumb screw or nut is designed to be easily tightened and loosened by hand, for quick and easy fixturing. Because of this they are characterised by different heads depending on their use. Knurled nuts for example provide ridges for extra grip, whereas winged nuts are designed with wing-like protrusions

where space allows for more leverage. Our thumb screws are available in steel and with the thread all the way up to the head.



### P0400 - Knurled Thumb Screws

Knurled thumb screws. Steel zinc-plated, brass, A4 & A2 stainless steel & blackened. To DIN 464



### P0405 - Flat Knurled Thumb Screws

Flat knurled thumb screws. Steel zinc-plated, brass, A4 & A2 stainless steel & blackened. To DIN 653



### P0406 - Flat Knurled Nuts

Flat knurled nuts. Steel zinc-plated, brass, A2 stainless steel & blackened. To DIN 467



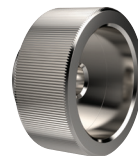
**P0403 - Knurled Thumb Nuts**

Knurled nuts. Brass, steel zinc-plated, A4 & A2 stainless steel & blackened. To DIN 466



**P0404 - Knurled Thumb Screws - with Slot**

Knurled thumb screws with slot. A2 Stainless steel. To DIN 465



**P0409 - Knurled Nuts**

Knurled nuts. A2 stainless steel and blackened. To DIN 6303



**P0435 - Thin Head Thumb Screws**

Thin head thumb screws. A2 and A4 stainless steel & blackened



**P0437 - Narrow Head Thumb Screws**

Narrow head thumb screws. A2 and A4 stainless steel & blackened



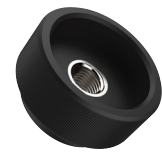
**P0438 - Thumb Screws - with Collar**

Thumb screws with collar. A2 and A4 stainless steel & blackened



**P0440 - Knurled Thumb Screws**

Knurled thumb screws. Plastic with a steel or stainless grub screw



**P0441 - Plastic Knurled Nuts**

Plastic knurled nuts. Thermoplastic



**P0443 - Thin Head Thumb Screws**

Thin head thumbscrews. Steel zinc-plated. Male or female version



**P0444 - Plastic Head Thumb Screws**

Plastic head thumbscrews. Fluted body, steel zinc-plated. Male or female version



**P0445 - Plastic Head Thumb Screws**

Plastic head thumbscrews. Duroplast. Male or female version (blind or through)



**P0480.A4 - Plastic Head Thumb Screws**

Plastic head thumb screws. A4 stainless steel thread. Other colours available on request

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**P0481 - Wing Nuts**

Wing nut. Plastic, with grub screw and colour insert. Thermoplastic

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**P0490 - Hygienic Screws - Male**

Hygienic screws - male. 304 stainless steel

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**P0491 - Hygienic Nuts - Female**

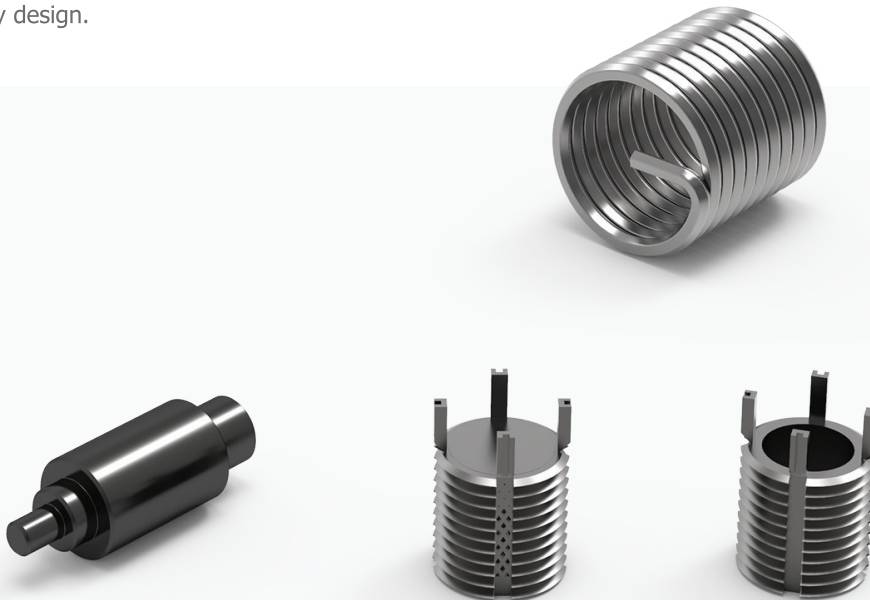
Hygienic nuts - female. 304 stainless steel



# Threaded Inserts

Threaded inserts are inserted into objects to add a threaded hole. They provide durable threaded holes, ideal for soft materials, or for transitioning between unified and metric threads. Predominantly used to repair damaged threads and enhance parent material strength, our threaded inserts feature a locking key design.

Easy to install and remove, we offer standard options for commercial or military grade use, manufactured in steel or stainless steel, with floating thin-walled versions also available.




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**P0080 - Wire Thread Inserts - Free Running**

Wire threaded insert - free running. Stainless steel A2


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**P0083.1 - Thread Inserts - Metric**

Threaded insert - metric, heavy duty. Stainless steel

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**P0087.1 - Thread Inserts - Solid - Metric**

Threaded insert - solid - metric, carbon steel



**P0081 - Wire Thread Inserts - Screw Lock**

Wire thread inserts - screw lock, A2 stainless steel



**P0083.2 - Thread Inserts - Metric**

Threaded insert - metric, heavy duty - carbon steel



**P0084.1 - Thread Inserts - Metric**

Threaded insert - metric, thinwall - stainless steel



**P0084.2 - Thread Inserts - Metric**

Threaded insert - metric, thinwall - carbon steel



**P0087.2 - Thread Inserts - Solid - Metric**

Threaded insert - solid - metric, stainless steel



**P0088.1 - Installation Tool - Metric - Thinwall**

Installation tool - metric - thinwall, for threaded inserts P0084.1 & P0084.2. Steel



**P0088.2 - Installation Tool - Metric - Heavy Duty**

Installation tool - metric - heavy duty, for threaded inserts P0083.1 & P0083.2. Steel



# Titanium Screws

Titanium screws are essential for industries like aerospace, robotics, and marine, where a high strength-to-weight ratio and exceptional corrosion resistance are critical. Our range of titanium fasteners is designed to meet these demanding requirements, and we offer bespoke manufacturing services for custom screws.

Additionally, we provide titanium shoulder screws and captive screws for specialised applications.



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**P0100 - Socket Cap Screws**

Socket cap screws. DIN 912 grade 2 titanium. Size M2 - M20

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**P0101 - Hex Head Bolts**

Titanium hex head bolts. Grade 2. Grade 5 available on request

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**P0102 - Socket Button Screws**

Titanium socket button screws. Grade 2. Grade 5 available on request



**P0108 - Titanium Hex Nuts**

Titanium hex nuts, Grade 2



**P0109 - Titanium Washers**

Titanium washers, flat & spring lock.  
Grade 2



# Tipped Screws

Automotion Tipped Screws are engineered for applications that demand precision and reusability. The self-locking mechanism ensures a secure fit while the brass, solder, or nylon tips protect delicate surfaces, making them a dependable choice for sensitive positioning tasks.



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**P0121 - Thrust Screws - Brass Pad**

Thrust screws - brass pad. Steel

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**P0125 - Thrust Screws - Plastic Pad**

Thrust screws - plastic pad. Heat treated steel

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**P0124 - Thrust Screws - Plastic Pad**

Thrust screws - plastic pad. Stainless steel

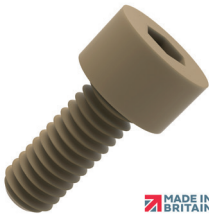
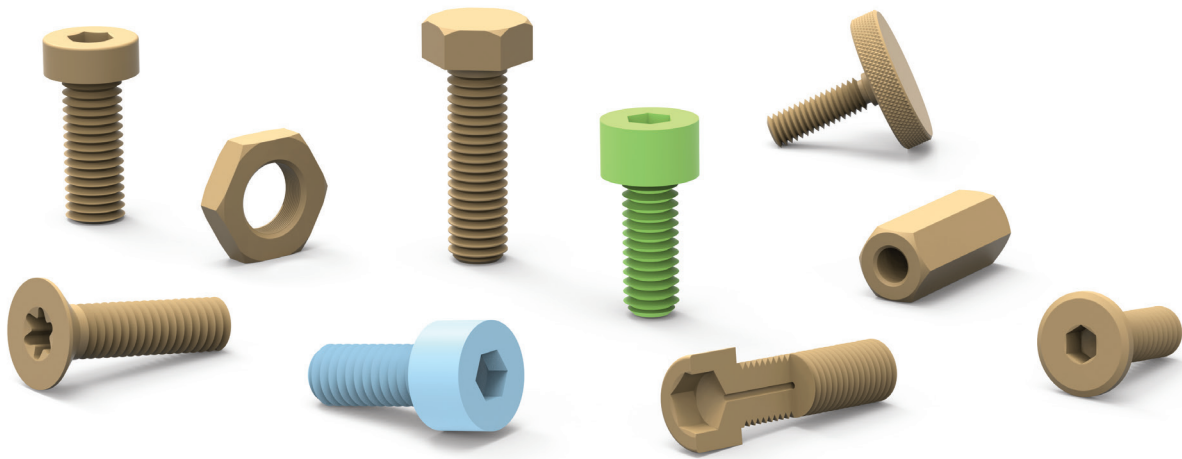


Mechanical Components ▶ Thread Inserts & Specialist Screws

# PEEK (Polyether ether ketone)

PEEK (Polyether Ether Ketone) fasteners are lightweight, high-strength alternatives to metal fasteners, offering exceptional chemical resistance, thermal stability, and mechanical properties. PEEK fasteners are ideal for applications requiring high purity, low outgassing, and resistance to harsh environments. We stock a wide range of PEEK fasteners, including cap head screws, spacers, set screws, ultra-low head cap screws, and countersunk

screws. Known for their high strength, corrosion resistance, and lightweight properties, these fasteners are ideal for demanding industries such as aerospace, automotive, food processing electronics, and medical. PEEK fasteners withstand extreme temperatures, aggressive chemicals, and high-stress environments, making them a superior alternative to traditional metal fasteners in specialised applications.



**P0500.NP - Cap Head  
Hexagon Socket**

Cap head hexagon socket, natural PEEK



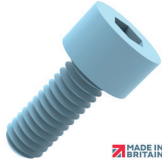
**P0501.NP - Hexagonal Head  
Set Screw**

Hexagonal head set screw, natural PEEK



**P0508.NP - Ultra Low Head  
Cap Screws**

Ultra low head cap screws, natural PEEK



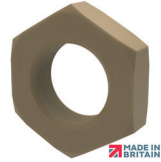
**P0500.HP - Cap Head Hexagon Socket**

Cap head hexagon socket, hygienic



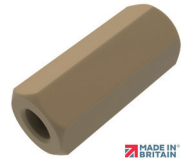
**P0500.MP - Cap Head Hexagon Socket**

Cap head hexagon socket, medical



**P0502.NP - Hexagon Nuts**

Hexagon nuts, natural PEEK



**P0503.NP - Female - Female Hexagon Spacers**

Female-female hexagon spacers, natural PEEK



**P0504.NP - Male - Female Hexagonal Spacers**

Male-female hexagonal spacers, natural PEEK



**P0507.NP - Set Screws**

Set screws, natural PEEK



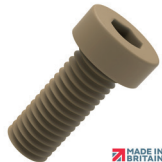
**P0509.NP - Torx Low Cap Head Screws**

Torx low cap head screws, natural PEEK



**P0510.NP - Washers**

Washers, natural PEEK



**P0511.NP - Low Cap Head Hex Socket Screws**

Low cap head hex socket screws, natural PEEK



**P0512.NP - Slotted Cheese Head Screws**

Slotted cheese head screw, natural PEEK



**P0513.NP - Torx Ultra Low Head Screws**

Torx ultra low head screws, natural PEEK



**P0514.NP - Countersunk Hexagon Head Screws**

Countersunk hexagon head screws, natural PEEK



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**P0515.NP - Torx  
Countersunk Head Screws**

Torx countersunk head screws, natural PEEK

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**P0520.NP - Torx Pan Head  
Screws**

Torx pan head screws, natural PEEK

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**P0530.NP - Cap Head Vented  
Screws**

Cap head vented screws, natural PEEK

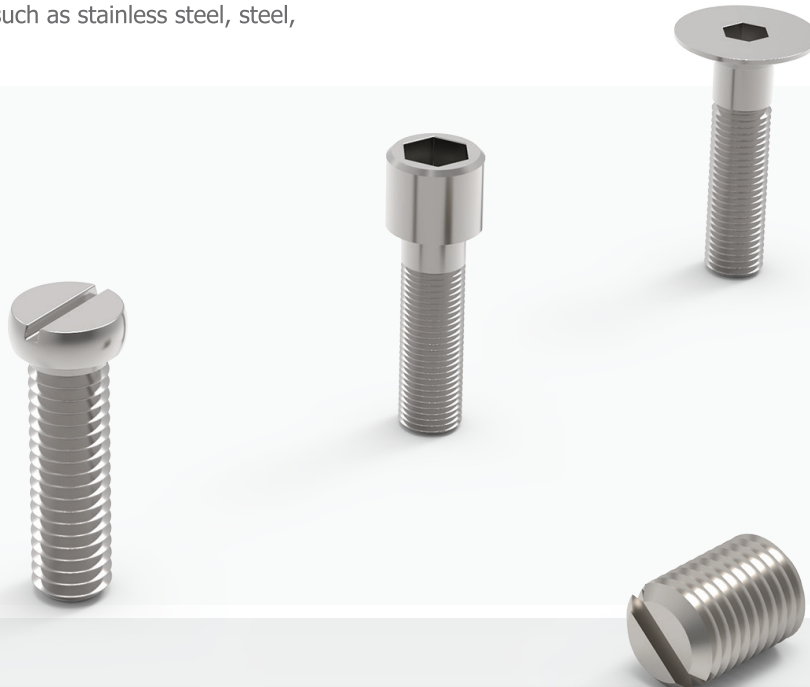


Mechanical Components ▶ Standard Fasteners

# Standard Screws

Our standard screws range is designed to meet a wide spectrum of fastening needs across industries. We offer an extensive selection of options including socket cap, hex head, set screws, and countersunk and more, all available in both standard and bespoke sizes. Screws are manufactured in a variety of durable materials such as stainless steel, steel,

titanium, and blackened stainless steel to suit diverse applications. Whether you're sourcing for general engineering or a specialised project, our screw range delivers precision, strength and reliability.



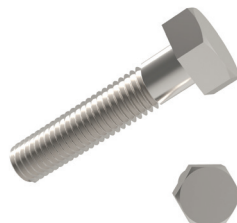
 **Automotion**  
AN ESSENTRA COMPANY



## P0200 - Socket Cap Screws

Steel zinc-plated or A2/A4 stainless steel. To DIN 912, ISO 4762

 **Automotion**  
AN ESSENTRA COMPANY



## P0262 - Hexagon Head Bolts

Steel zinc-plated or A2/A4 stainless steel. To DIN 931, ISO 4014

 **Automotion**  
AN ESSENTRA COMPANY



## P0270 - Socket Set Screws - Cup Point

Steel zinc-plated or A2/A4 stainless steel. To DIN 916, cup point



**P0202 - TX Cap Screws - Hexalobular Drive**

Stainless steel A2 or A4. To ISO 14579



**P0204 - Metric Ultra Low Slotted Cap Head Screws**

Stainless steel AISI 303 or AISI 316



**P0205 - Low Head Cap Screws**

Available in stainless steel A2 or A4, as well as steel zinc-plated. To DIN 7984



**P0206 - TX Cap Screws**

Stainless steel A2 or A4. To DIN 14580



**P0207 - Extra Low Head Cap Screws**

Stainless steel A2 or A4 and blackened A2 or A4, as well as Titanium grade 2 or 5



**P0208 - Ultra Low Head Cap Screws**

Stainless steel A2 or A4 and blackened A2 or A4, as well as Titanium grade 2 or 5



**P0209 - Ultra Low Head Cap Screws**

Stainless steel A2 or A4 and blackened A2 or A4



**P0210 - Socket Button Screws**

Available in stainless steel A2 or A4, as well as steel zinc-plated (10.9). To ISO 7380



**P0212 - TX Button Screws**

Stainless steel A2. To ISO 7380



**P0214 - Flanged Button Screws**

Available in stainless steel A2 or A4, as well as steel zinc-plated (10.9). To ISO 7380



**P0217 - Pin TX Security Screws**

Stainless steel A2. To ISO 7380, but with pin TX feature



**P0220 - Phillips C'sunk Machine Screws**

Available in stainless steel A2 or A4, as well as steel zinc-plated (4.8). To DIN 965 H, ISO 7046



**P0221 - Pozi C'sunk Machine Screws**

Available in stainless steel A2 or A4, as well as steel zinc-plated (4.8). To DIN 965 H, ISO 7046



**P0222 - Socket C'sunk Machine Screws**

Available in stainless steel A2 or A4, as well as steel zinc-plated (10.9). To DIN 7991, ISO 10642



**P0224 - Slot C'sunk Machine Screws**

Available in stainless steel A2 or A4, as well as steel zinc-plated (4.8). To DIN 963, ISO 2009



**P0225 - TX C'sunk Machine Screws**

Available in stainless steel A2 or A4, as well as steel zinc-plated (4.8). To ISO 14581



**P0226 - Phillips Raised C'sunk Machine Screws**

Available in stainless steel A2 or A4, as well as steel zinc-plated (4.8). To DIN 966



**P0227 - Pozi Raised C'sunk Machine Screws**

Available in stainless steel A2 or A4, as well as steel zinc-plated (4.8). To DIN 966



**P0228 - Slot Raised C'sunk Screws**

Available in stainless steel A2 or A4, as well as steel zinc-plated (4.8). To DIN 964



**P0230 - Slot Pan Head Screws**

Available in stainless steel A2 or A4, as well as steel zinc-plated (4.8). To DIN 85, ISO 1580



**P0232 - Nylon Slot Pan Head Screws**

Nylon. To DIN 85, ISO 1580



**P0234 - Phillips Pan Head Screws**

Available in stainless steel A2 or A4, as well as steel zinc-plated (4.8). To DIN 7985 H, ISO 7045



**P0235 - Pozi Pan Head Screws**

Available in stainless steel A2 or A4, as well as steel zinc-plated (4.8). To DIN 7985 H, ISO 7045



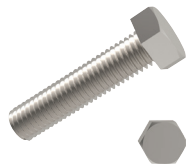
**P0236 - TX Pan Head Screws**

Available in stainless steel A2 or A4, as well as steel zinc-plated (4.8). To DIN 7985 H, ISO 7045



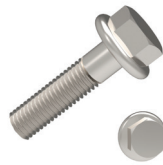
**P0239 - Slot Cheese Head Screws**

Available in stainless steel A2 or A4, as well as steel zinc-plated (4.8). To DIN 84



**P0260 - Hexagon Head Set Screws**

Available in stainless steel A2 or A4, as well as steel zinc-plated (4.8) and brass. To DIN 933, ISO 4017



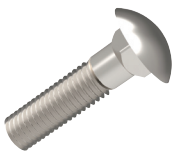
**P0266 - Flanged Hexagon Bolts**

Available in stainless steel A2 or steel, zinc-plated (8.8). To DIN 6921



**P0264 - Carriage Bolts - Full Thread**

Available in stainless steel A2 or A4, as well as steel zinc-plated (8.8). To DIN 603



**P0265 - Carriage Bolts - Partial Thread**

Available in stainless steel A2 or A4, as well as steel zinc-plated (8.8). To DIN 603



**P0272 - Socket Set Screws - Cup Point**

Available in stainless steel A2 or A4, as well as steel zinc-plated (45H). To DIN 913, flat point



**P0273 - Socket Set Screws - Cone Point**

Available in stainless steel A2 or A4, as well as steel zinc-plated (45H). To DIN 914, flat point



**P0274 - Socket Set Screws - Dog Point**

Available in stainless steel A2 or A4, as well as steel zinc-plated (45H). To DIN 915, dog point



**P0276 - Slotted Set Screws - Cup Point**

Available in stainless steel A2 or A4, as well as steel zinc-plated (14H). To DIN 438, cup point



**P0277 - Slotted Set Screws - Flat Point**

Available in stainless steel A2 or A4, as well as steel zinc-plated (14H). To DIN 551, flat point



**P0278 - Slotted Set Screws - Cone Point**

Steel zinc-plated (class 14H). To DIN 553, cone point



**P0290 - Stainless Threaded Rod**

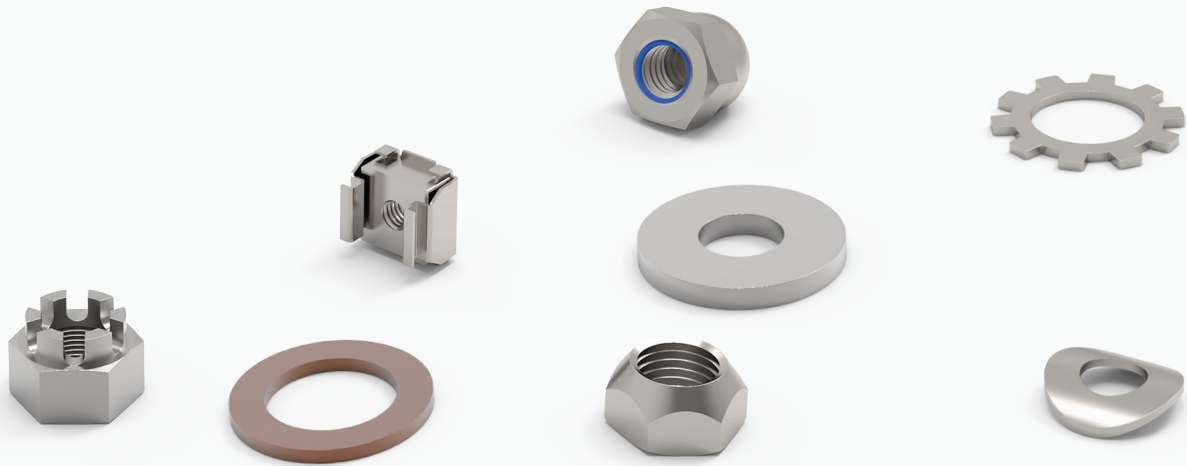
Stainless steel A2 or A4, as well as steel (8.8) zinc-plated or self-colour. Also left handed option. To DIN 976-1



# Standard Nuts & Washers

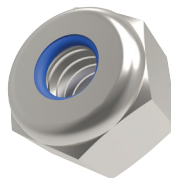
Our nuts and washers range complements our fastener offering with reliable, high-performance components suitable for a wide variety of applications. The selection includes coarse & fine thread nuts, lock nuts, dome nuts, flat washers, spring washers, and more. Manufactured from high-quality materials including stainless steel,

brass, steel, and nylon, these components ensure secure fastening and load distribution across all types of assemblies. Whether for industrial, construction, or bespoke engineering use, our nuts and washers provide the strength and versatility your project demands.



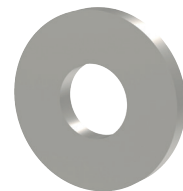
## P0301 - Full Nuts - Coarse Thread

Available in stainless A2/A4, steel zinc-plated or self-colour, brass and nylon



## P0314 - Nylon Insert Nuts

Type T in steel zinc-plated, or stainless A2/A4



## P0330 - Flat Washers (Form A, B & C)

Available in stainless A2/A4, steel zinc-plated or self-coloured, brass and nylon



**P0302 - Full Nuts - Fine Thread**

Available in stainless steel A2 or A4, as well as steel zinc-plated (8) and brass. To DIN 934



**P0303 - Full Nuts - Left Hand Thread**

Available in stainless steel A2 or A4, as well as steel (8) zinc-plated or self colour. To DIN 934



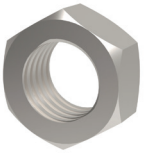
**P0305 - Lock Nuts - Coarse Thread**

Stainless steel, A2 or A4, brass, steel (4) zinc-plated and self-colour. To DIN 939



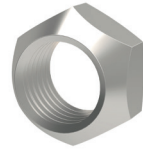
**P0306 - Lock Nuts - Fine Thread**

Stainless steel, A2 or A4, brass, steel (4) zinc-plated and self-colour. To DIN 939



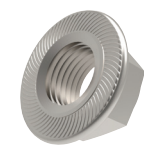
**P0307 - Lock Nuts - Left Hand Thread**

Available in stainless steel, A2 or A4, and steel (4) zinc-plated. To DIN 439



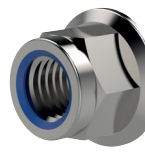
**P0308 - Stover Nuts**

Available in stainless steel, A2 and steel (8) zinc-plated. To DIN 980 V



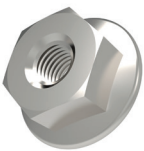
**P0309 - Serrated Flanged Nuts**

Available in stainless steel, A2 or A4 and steel (8) zinc-plated. To DIN 6923



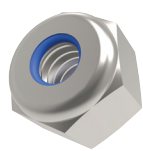
**P0310 - Nylon Insert Serrated Flanged Nuts**

Available in stainless steel, A2 or A4. To DIN 6926



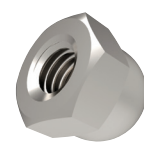
**P0311 - Flanged Nuts**

Available in stainless steel, A2 and steel (8) zinc-plated. To DIN 6923



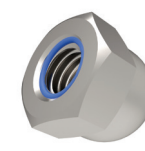
**P0315 - Nylon Insert Nuts - High Type**

Available in stainless steel, A2 or A4 and steel (8) zinc-plated. To DIN 982



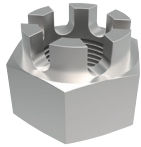
**P0318 - Hexagon Domed Nuts**

Stainless steel, A2 or A4, brass, nylon, steel (8) zinc-plated and self-colour. To DIN 1587



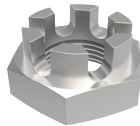
**P0319 - Nylon Insert Domed Nuts**

Available in stainless steel, A2 and steel (6 and over) zinc-plated. To DIN 986



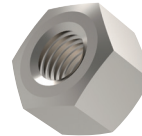
**P0320 - Hexagon Castle Nuts**

Available in stainless steel, A2 or A4 and steel (4) zinc-plated. To DIN 935



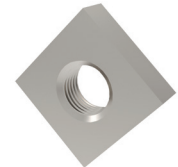
**P0321 - Hexagon Castle Nuts - Thin Type**

Available in stainless steel, A2 or A4 and steel zinc-plated. To DIN 937



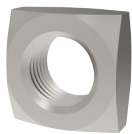
**P0317 - Hexagon Cap Nuts**

Available in stainless steel, A2 or A4 and steel (6) zinc-plated. To DIN 917



**P0323 - Square Nuts**

Available in stainless steel, A2 or A4 and steel (4) zinc-plated. To DIN 562



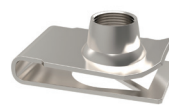
**P0324 - Chamfered Square Nuts**

Stainless steel, A2 or A4, steel (5 and over) zinc-plated and self-colour. To DIN 557



**P0325 - Cage Nuts**

Available in stainless steel, A2 and steel zinc-plated



**P0326 - Sheet Metal Nuts**

Steel zinc-plated



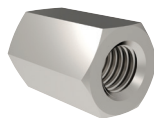
**P0328 - Wing Nuts**

Available in stainless steel, A2 or A4 and steel zinc-plated. To DIN 315 AF



**P0329 - Wing Screws**

Available in stainless steel, A2 or A4 and steel zinc-plated. To DIN 316 AF



**P0322 - Hexagonal Coupler Nuts**

Available in stainless steel, A2 or A4



**P0333 - Penny Washers**

Available in stainless steel, A2 or A4 and steel zinc-plated



**P0335 - Flat Washer**

Available in stainless steel, A2 or A4 and steel zinc-plated. To DIN 433



**P0336 - Heavy Flat Washers**

Stainless steel, A2 or A4, steel zinc-plated and self-colour. To DIN 7349



**P0363 - Schnorr Safety Washers**

Stainless steel A2, steel self-colour and galvanised. To DIN 17222



**P0360 - Curved Spring Washers**

Stainless steel A2, steel zinc-plated and self-colour. To DIN 137 A



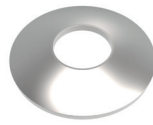
**P0361 - Wave Spring Washers**

Stainless steel, A2 or A4, steel zinc-plated. To DIN 137 B



**P0368 - Crinkle Washers**

Stainless steel A2 AISI 303. To BS 4463



**P0369 - Disc Springs**

Stainless steel A2 (DIN 1.4310). To DIN 2093



**P0370 - Spring Washers - Rectangular Section**

Stainless steel, A2 or A4, steel zinc-plated and self-colour. To DIN 127 B



**P0371 - Spring Washers - Square Section**

Stainless steel, A2 or A4, steel zinc-plated and self-colour. To DIN 7980



**P0367 - Locking Washers (Nord-Lock)**

Stainless steel A4 AISI 316



**P0372 - External Serrated Lock Washers**

Stainless steel, A2 or A4, steel zinc-plated and self-colour. To DIN 6798 A



**P0373 - Internal Serrated Lock Washers**

Stainless steel, A2 or A4, steel zinc-plated and self-colour. To DIN 6798 B



**P0374 - External A2 Tooth Washers**

Stainless steel, A2 or A4, steel zinc-plated and self-colour. To DIN 6797 AZ



**P0375 - Internal A2 Tooth Washers**

Stainless steel, A2 or A4, steel zinc-plated. To DIN 6797 IZ



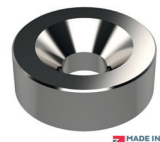
**P0334 - Sealing Rings**

Copper. To DIN 7603 A



**P0339 - Polyamide Washers**

Type 1 - to DIN 9021, ISO 7093 (3x thread diameter). Type 2 - to DIN 125, without chamfer



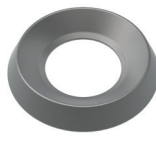
**P0341 - Solid Countersunk Washers**

Stainless steel, A2 or A2 blackened



**P0342 - Shim Washers**

Stainless steel 304. To DIN 988



**P0346 - Screw Cups**

Stainless steel (A2 AISI 303 or A4 AISI 316)



VIEW THE FULL RANGE

# Pins & Spacers

Pins and spacers are integral components in a range of applications, providing precise alignment and spacing for diverse needs. Complying with DIN/ISO standards, our collection includes pins and spacers in various materials such as steel, stainless steel (AISI 303 and 316) and more.

Designed to meet specific requirements, we offer flexibility in dimensions and can manufacture special sizes on demand. Whether you need standardised options or custom solutions, our comprehensive range ensures reliability and adherence to industry standards.



### P1204 - Steel Dowel Pins

Steel (100 Cr6). To DIN 6325, ISO 8734



### P1231 - Stainless Slotted Spring Pins

Stainless slotted spring pins. Stainless steel A2



### P0061 - Stainless Hexagonal Pillars

Hexagonal pillars. 303 stainless, steel zinc-plated or brass



**P1206 - Stainless Dowel Pins**

Stainless dowel pins. A2 stainless



**P1207 - Stainless Dowel Pins**

Stainless dowel pins. A4 stainless



**P1230 - Steel Slotted Pins**

Steel slotted pins. Steel



**P1232 - Steel Spiral Spring Pins**

Steel spiral spring pins. Steel



**P1234 - Stainless Spiral Spring Pins**

Stainless spiral spring pins. A2 stainless



**P1240 - Steel Cotter Pins**

Steel cotter pins. Steel zinc-plated



**P1241 - Stainless Cotter Pins**

Stainless cotter pins. A2 stainless



**P1242 - Clevis Pins**

Clevis pins. Steel zinc-plated



**P1243 - Retaining Pins (R Clips)**

Retaining pins (R Clips), R clips. Steel zinc-plated or A2 stainless



**P1244 - Locking Rings**

Locking rings. Steel galvanised or A4 stainless



**P1248 - Shaft Locking Pins**

Shaft locking pins. Steel silver or steel zinc-plated



**P1247 - Linch Pins**

Linch pins. Steel yellow zinc-plated

 AN ESSENTRA COMPANY



**P1249 - Locking Pins**

Locking pins, for square tubes. Steel

 AN ESSENTRA COMPANY



**P0060 - Brass Hexagonal Spacers**

Hexagonal spacers. Brass, steel zinc-plated, or 303 stainless

 AN ESSENTRA COMPANY



**P0065 - Brass Clearance Spacers**

Clearance spacers. Brass, steel zinc-plated or 303 stainless



# Anti-Vibration

Anti-vibration products are essential in minimising the impact of vibrations on machinery and equipment, ensuring stable and efficient operation and reducing noise. Our comprehensive range adheres to industry standards and includes various solutions such as mounts, feet, pads, and bushes.

Available in different materials and sizes, these products are designed to absorb and dampen vibrations, providing enhanced stability in diverse applications.



**Automotion**  
AN ESSENTRA COMPANY



**P2150 - Machine Mounts**

Machine mounts, with silver zinc-plated thread. Steel

**Automotion**  
AN ESSENTRA COMPANY



**P2103 - Anti-Vibration Mounts**

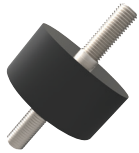
Anti-vibration mounts. Steel

**Automotion**  
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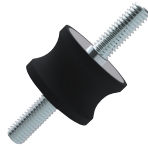
**P2004 - Anti-Vibration Cylinders**

Anti-vibration cylinders, male:male. Steel



**P2005 - Anti-Vibration Cylinders**

Anti-vibration cylinders, male:male. Stainless steel



**P2010 - Anti-Vibration Cylinders - Waisted**

Anti-vibration cylinders - waisted, male. Steel



**P2017 - Anti-Vibration Cylinders**

Anti-vibration cylinders, spherical. Steel



**P2006 - Anti-Vibration Cylinders**

Anti-vibration cylinders, male:female. Steel



**P2014 - Anti-Vibration Cylinders - Waisted**

Anti-vibration cylinders - waisted, male:female. Steel



**P2008 - Anti-Vibration Cylinders**

Anti-vibration cylinders, female:female. Steel



**P2013 - Anti-Vibration Cylinders - Waisted**

Anti-vibration cylinders - waisted, female:female. Stainless steel



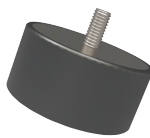
**P2012 - Anti-Vibration Cylinders - Waisted**

Anti-vibration cylinders - waisted, female:female. Steel



**P2016 - Anti-Vibration Cylinders - Waisted**

Anti-vibration cylinders - waisted, male feet. Steel



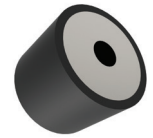
**P2019 - Anti-Vibration Feet**

Anti-vibration feet, light duty. Steel



**P2020 - Anti-Vibration Feet**

Anti-vibration feet, male. Steel



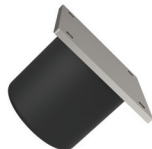
**P2021 - Anti-Vibration Feet**

Anti-vibration feet, female. Steel



**P2022 - Anti-Vibration Bumpers**

Anti-vibration bumpers, male. Steel



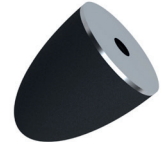
**P2023 - Anti-Vibration Bumpers**

Anti-vibration bumpers, flanged. Steel



**P2024 - Anti-Vibration Cones - Male**

Anti-vibration cones, male. Steel



**P2025 - Anti-Vibration Cones - Female**

Anti-vibration cones, female. Steel



**P2100.AV - Anti-Vibration Failsafe Mounts - Steel**

Anti-vibration fail-safe mounts. Steel



**P2101 - Anti-Vibration Failsafe Mounts**

Anti-vibration fail-safe mounts, A2 stainless steel



**P2102 - Anti-Vibration Failsafe Mounts**

Anti-vibration fail-safe mounts, 316 stainless steel



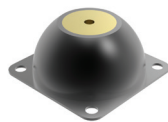
**P2110 - Anti-Vibration Mounts**

Anti-vibration mounts, fz sylomer mounts. Aluminium



**P2104 - Marine Engine Mounts**

Marine engine mounts, v-shaped. Steel



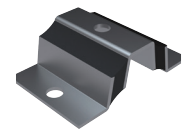
**P2105 - Anti-Vibration Dome Mounts**

Anti-vibration dome mounts. Steel



**P2106 - Anti-Vibration Dome Mounts**

Anti-vibration dome mounts. Steel



**P2107 - Anti-Vibration Mounts - V Shaped**

Anti vibration mounts - v shaped. Steel



**P2108 - Anti-Vibration Mounts**

Anti-vibration mounts, silicone gel. Steel



**P2109 - Anti-Vibration Mounts**

Anti-vibration mounts, silicone gel. Steel or stainless steel



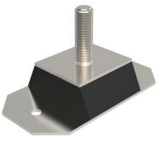
**P2040 - Anti-Vibration Mounts**

Anti-vibration mounts, engine. Steel



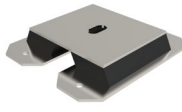
**P2041 - Anti-Vibration Mounts**

Anti-vibration mounts, ribbed pads. Steel



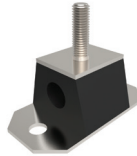
**P2042 - Anti-Vibration Mounts**

Anti-vibration mounts, rectangular. Steel



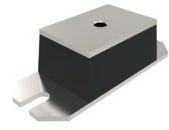
**P2043 - Anti-Vibration Mounts**

Anti-vibration mounts, rectangular. Steel



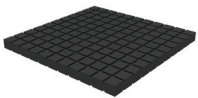
**P2044 - Anti-Vibration Mounts**

Anti-vibration mounts, with through holes. Steel



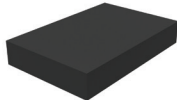
**P2045 - Anti-Vibration Mounts**

Anti-vibration mounts, rectangular. Steel



**P2050 - Anti-Vibration Pads**

Anti-vibration pads. Rubber



**P2051 - Rubber Pads**

Rubber pads, rectangular. Rubber



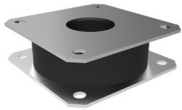
**P2052 - Rubber Pads**

Rubber pads, round. Rubber



**P2053 - Rubber Pads with Holes**

Rubber pads with holes, with holes. Rubber



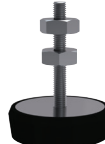
**P2054 - Anti-Vibration Pads**

Anti-vibration pads, flanged. Steel



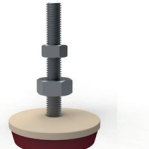
**P2056 - Anti-Vibration Pads**

Anti-vibration pads, silicone gel



**P2151 - Machine Mounts**

Machine mounts, with steel zinc-plated thread



**P2152 - Heavy Duty Machine Mounts**

Heavy duty machine mounts, polyurethane base. Steel



**P2153 - Heavy Duty Machine Mounts**

Heavy duty machine mounts. Steel



**P2154 - Heavy Duty Machine Mounts - Levelling**

Heavy duty machine mounts levelling. Steel



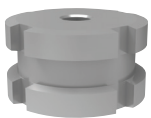
**P2160 - Stainless Machine Mounts - Rubber Base**

Stainless machine mounts rubber base. Stainless steel



**P2161 - Stainless Machine Mounts**

Stainless machine mounts, polyurethane base. Stainless steel



**P2180 - Precision Adjuster**

Precision adjuster. Steel



**P2181 - Tilt Head Precision Adjuster**

Tilt head precision adjuster. Steel zinc-plated



**P2182 - Precision Adjuster**

Precision adjuster. Steel zinc-plated



**P2183 - Precision Adjuster**

Precision adjuster, with locking nut. Steel



**P2184 - Tilt Head Precision Adjuster**

Tilt head precision adjuster. Steel



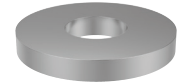
**P2185 - Tilt Head Precision Adjuster**

Tilt head precision adjuster, tall with locking nut. Steel zinc-plated



**P2186 - Ball Shim Leveller**

Ball shim leveller. Steel zinc-plated



**P2187 - Spacers**

Spacers, for part nos. P2180 to P2186. Steel zinc-plated



**P2200.AV1 - Mini Levelling Feet**

Mini levelling feet, articulated. Stainless steel



**P2200.AV2 - Levelling Feet**

Levelling feet, swivel. Stainless steel



**P2201 - Stainless Levelling Feet**

Stainless levelling feet, fixed feet



**P2202 - Machine Mount - Bolt Down**

Machine mount - bolt down, pad and bolt. Stainless steel



**P2203.1 - Levelling Feet**

Levelling feet, bolt. Plastic and stainless steel



**P2203.2 - Levelling Feet**

Levelling feet, bolt down option. Plastic and stainless steel



**P2203.3 - Levelling Feet - Heavy Duty**

Levelling feet - heavy duty, bolt down option. Plastic and stainless steel



**P2204.2 - Machine Mount**

Machine mount, plastic pad, bolt down option. Black polyamide



**P2205.1 - Levelling Feet**

Levelling feet, plastic pad, bolt steel.  
Plastic and steel



**P2205.2 - Levelling Feet**

Levelling feet, plastic pad, bolt steel.  
Plastic and steel



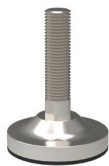
**P2206 - Plastic Levelling Feet**

Plastic levelling feet, steel stud



**P2207 - Steel Levelling Feet**

Steel (C40), powder coated (RAL 1007),  
with rubber pad (70 shore A)



**P2208 - Steel Levelling Feet**

Galvanized steel (C40), with rubber pad  
(70 shore A)



**P2209 - Steel Levelling Feet**

Full galvanized steel (C40) base with  
vulcanized rubber



**P2217 - Elastomer Levelling Feet**

Elastomer levelling feet, A2 stainless  
steel thread. Thermoplastic



**P2700.AV - Push-Fit Ball Transfer Units**

Push-fit ball transfer units, light duty.  
Steel



**P2701 - Acetal Body Ball Transfer Units**

Acetal body ball transfer units, light  
duty. Acetal



**P2702 - Saturn Type Ball Transfer Units**

Saturn type ball transfer units, light duty.  
Steel or stainless steel



**P2705 - Miniature Ball Transfer Units**

Miniature ball transfer units. Carbon  
steel, aluminium or stainless steel  
housing



**P2710 - Push-Fit Ball Transfer Units**

Push-fit ball transfer units, medium duty.  
Steel or stainless steel



**P2711 - Plain-Fit Ball Transfer Units**

Push-fit ball transfer units, medium duty. Steel or stainless steel



**P2712 - Threaded Ball Transfer Units**

Threaded ball transfer units, medium duty, female. Steel or stainless steel



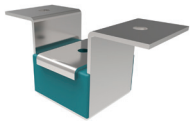
**P2713 - Threaded Ball Transfer Units**

Threaded ball transfer units, medium duty, male. Steel



**P2500.AV - Acoustic Ceiling Hanger**

Acoustic ceiling hangers. Steel zinc-plated (anti-corrosive treatment) with Sylomer® pad and steel spring



**P2501 - Acoustic Ceiling Hanger**

Acoustic ceiling hangers flanged. Steel zinc-plated (anti-corrosive treatment) with Sylomer® pad



**P2502 - Acoustic Ceiling Hanger**

Acoustic ceiling hangers without nut. Steel zinc-plated (anti-corrosive treatment) with Sylomer® pad



**P2503 - Acoustic Ceiling Hanger - With Nut**

Acoustic ceiling hangers with nut. Steel zinc-plated (anti-corrosive treatment) with Sylomer® pad



**P2504 - Acoustic Ceiling Hanger**

Acoustic ceiling hangers. Steel zinc-plated (anti-corrosive treatment) with Sylomer® pad



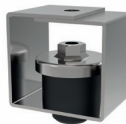
**P2551 - Acoustic Suspension Hanger**

Acoustic suspension hanger spring. Steel zinc-plated (anti-corrosive treatment)



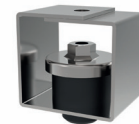
**P2552 - Acoustic Suspension Hanger**

Acoustic suspension hanger top mount. Steel zinc-plated and rubber



**P2553 - Acoustic Suspension Hanger**

Acoustic suspension hanger without nut. Steel anti-corrosive zinc-plated, with rubber (50 shore A) cylinder

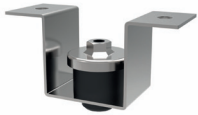


**P2554 - Acoustic Suspension Hanger**

Acoustic suspension hanger with nut. Steel anti-corrosive zinc-plated, with rubber (50 shore A) cylinder



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**P2555 - Acoustic Suspension Hanger**

Acoustic suspension hanger u-shape. Steel anti-corrosive zinc-plated, with rubber (50 shore A) cylinder

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**P2556 - Acoustic Wall Damper**

Acoustic wall damper right angle fixing. Rubber on steel zinc-plated



VIEW THE FULL RANGE

# Blanking Plugs & Tolerance Rings

Our range of Mechanical Components includes, among others, Tolerance Rings - corrugated metal strips designed to securely fasten one mechanical component to another - and Blanking Plugs, ideal for applications that require pressure relief.



### P0395 - Tolerance Rings - Shaft Variable - SV Type

Tolerance rings - shaft variable - SV type.  
A2 stainless steel



### P0396 - Tolerance Rings - Hole Variable - HV Type

Tolerance rings - hole variable - HV type.  
A2 stainless steel



### P0182 - Blanking Plugs - Heavy Duty

Blanking plugs heavy duty. Metric & BSPP.  
Steel, stainless steel or brass



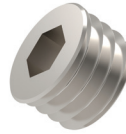
**P0397 - Bearing Tolerance Rings**

Bearing tolerance rings. Stainless steel



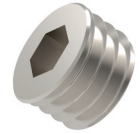
**P0183 - Blanking Plugs with Collar**

Blanking plugs with collar, metric & BSPP. Steel, stainless steel or brass



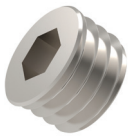
**P0184 - Blanking Plugs**

Blanking plugs, metric & BSPT. Steel SC & ZP, stainless A2 & A4, brass



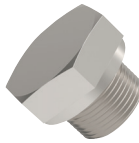
**P0184.NL - Blanking Plugs - Level Seal**

Blanking plugs - level seal, NPTF. Steel, A4 stainless or brass



**P0184.NPT - Blanking Plugs - Dry Seal**

Blanking plugs - dry seal, NPT and NPTF. Stainless, A2 and A4 or brass



**P0187 - Hexagon Blanking Plugs**

Hexagon blanking plugs. Steel ZP and SC, stainless A4 or brass



Mechanical Components ▶ Lifting Pins, Lifting Bolts & Swing Bolts

# Lifting Pins, Lifting Bolts & Swing Bolts

Lifting rings, bolts & swing bolts pins are essential tools for heavy lifting, efficiently hoisting and repositioning heavy loads. They easily secure in place, providing reliable support during lifting operations. Their user-friendly design outperform

traditional options in installation and removal speed, reliability and durability. Ideal for routine hoisting in warehouses and construction sites where regular lifting is required.



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### P4005 - Double Swivel Rings - Male

Double swivel rings, male. High tensile steel, strength class >8

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### P4074 - Quick Lift Pins - Self Locking

Quick lift pins - self locking. Heat treated steel, tempered, manganese phosphated

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### P4040 - Steel Male Lifting Eye Bolts

Steel male lifting eye bolts, metric sizes. Forged steel (C15E) annealed and zinc-plated



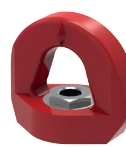
**P4075 - Quick Lift Pins - Self Locking**

Quick lift Pins - self locking, stainless steel



**P4002 - Swivel Eye Bolts - Male**

Swivel eye bolts, male. High tensile steel, strength class >8



**P4004 - Swivel Eye Nuts - Female**

High tensile steel, strength class >8



**P4003 - Swivel Eye Bolts - Male**

Swivel eye bolts, male. Stainless steel 316L



**P4006 - Double Swivel Nuts - Female**

High tensile steel, strength class >8



**P4008 - Double Swivel Shackles - Male**

High tensile steel, strength class >8



**P4010 - Double Swivel Shackle Nuts - Female**

High tensile steel, strength class >8



**P4011 - Mega Double Swivel Shackles - Male**

High tensile steel, strength class >8



**P4012 - Double Swivel Lifting Points**

Double swivel lifting points, for wire rope. High tensile steel, strength class >8



**P4017 - Double Swivel Hooks - Male**

High tensile steel, strength class >8



**P4015 - Triple Swivel Rings - Male**

High tensile steel, strength class >8



**P4020 - Stainless Double Swivel Rings**

High tensile stainless steel (316L), strength class >8



**P4021 - Stainless Double Swivel Nuts**

High tensile stainless steel (316L), strength class >8



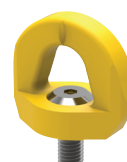
**P4022 - Stainless Double Swivel Rings**

High tensile stainless steel (316L), strength class >8



**P4023 - Stainless Double Swivel Nuts**

High tensile stainless steel (316L), strength class >8



**P4030 - Fall Arrest Swivel Rings**

Yellow to indicate personal safety. High tensile corrosion resistant steel, strength class >8



**P4041 - Steel Female Lifting Eye Bolts**

Metric sizes. Forged steel (C15E) annealed and zinc-plated



**P4043 - Stainless Male Lifting Eye Bolts**

Metric sizes. Stainless steel (A4, AISI 316). To DIN 580



**P4044 - Stainless Female Lifting Eye Bolts**

Metric sizes. Stainless steel (A4, AISI 316). To DIN 582



**P4046 - Steel Male Lifting Eye Bolts**

Metric sizes. Forged steel (C15E) annealed and zinc-plated



**P4048 - Steel Female Lifting Eye Bolts**

Metric sizes. Forged steel (C15E) annealed and zinc-plated



**P4180 - Clamping Nuts**

Steel (C35N) zinc-plated, or stainless steel (AISI 316, 1.4571)



**P0070 - Swing Bolts**

Swing bolts. A2 or A4 stainless steel, brass, self-colour or steel zinc-plated



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**R3691 - Bellows**

Bellows for single universal joints.  
Rubber

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**R3692 - Bellows**

Bellows for double universal joints.  
Rubber

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**R3693 - Universal Joint**

Universal joint with quick change  
coupling. Steel. Plain bearing.  
To DIN 808



VIEW THE FULL RANGE

Linkages & Rotary Components ▶ Universal Joints & Rod Ends


# Rod Ends

Rod ends, also known as heim joints or rose joints, are articulating joints used on the ends of control and tie rods, offering precision and robust load-bearing capabilities. It comprises a spherical bearing located in a housing with either a male or female thread to enable easy installation.

A connecting bolt or shaft is located through the spherical bearing which allows for some angular misalignment. Ideal for applications where standard clevis or ball joints may lack precision, our rod ends ensure versatility and reliability.




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**R3553 - Heavy Duty Rod Ends - Male**

Male. E series. Steel. Heavy duty rod end, with integral spherical plain bearing. Maintenance free

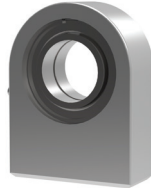
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**R3557 - Heavy Duty Rod Ends - Female**

Heavy-duty rod ends - female, with integral ball bearing. Steel

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**R3622 - Hydraulic Rod Ends**

Hydraulic rod ends, weld-on base. Steel

# An overview of Rod Ends

A rod end is an articulating joint typically used on the ends of control rods or tie rods where a clevis joint or ball joint is not precise enough or not capable of taking the loads involved in the application.



**R3550**  
Heavy duty rod ends - male

Heavy duty male rod end with plain bearing. This K series rod end is maintenance free, ideal for applications with vibrating or shock loads. Also available in stainless steel (R3565).



**R3576**  
Stainless rod end - female

Stainless steel female rod end from our economy range. Also available in zinc-plated steel (R3570).

## R3551 : HEAVY DUTY ROD ENDS - FEMALE



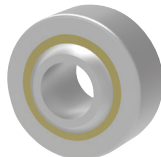
**R3551**

Heavy duty female rod end with plain bearing. This K series rod end is maintenance free and ideal for applications with vibrating or shock loads. Also available in stainless steel (R3566).



**R3577**  
Stainless rod end - male

Stainless steel male rod end from our economy range. Also available in zinc-plated steel (R3571).



**R3640**  
Spherical plain bearing

Spherical plain bearings are used when the articulating joint needs to be held within a housing and the threaded portion of a standard rod end is not required.



**R3550 - Heavy Duty Rod Ends - Male**

Male. K series. Steel. Heavy duty rod end, with integral spherical plain bearing. Maintenance free



**R3550.i - Heavy Duty Rod Ends - Male**

Male. K series. Imperial. Steel. Heavy duty rod end. Maintenance free



**R3551 - Heavy Duty Rod Ends - Female**

Female. K series. Steel. Heavy duty rod end, with integral spherical plain bearing. Maintenance free



**R3551.i - Imperial Heavy Duty Rod End**

Female. K series. Imperial. Steel. Heavy duty rod end. Maintenance free



**R3554 - Heavy Duty Rod Ends - Female**

Female. E series. Steel. Heavy duty rod end, with integral spherical plain bearing. Maintenance free



**R3556 - Heavy Duty Rod Ends - Male**

Heavy duty rod ends - male, with integral ball bearing. Steel



**R3559 - Heavy Duty Rod Ends - Male**

Heavy duty rod ends - male, with integral ball bearing. Steel



**R3560 - Heavy Duty Rod Ends - Female**

Heavy duty rod ends - female, with integral ball bearing. Steel



**R3561 - Heavy Duty Rod Ends - Male**

Heavy duty rod ends - male, with integral roller bearing. Steel



**R3562 - Heavy Duty Rod Ends - Female**

Heavy duty rod ends - female, with integral roller bearing. Steel



**R3563 - Stainless Heavy Duty Rod Ends - Male**

Stainless heavy duty rod ends - male, with integral ball bearing. Stainless steel



**R3564 - Stainless Heavy Duty Rod Ends - Female**

Stainless heavy duty rod ends - female, with integral self-aligning ball bearing. Steel



**R3565 - Stainless Heavy Duty Rod Ends - Male**

Male, A2 stainless steel. Heavy duty rod ends, with integral spherical plain bearing. Maintenance free



**R3566 - Stainless Heavy Duty Rod Ends - Female**

Female, A2 stainless steel. Heavy duty rod ends, with integral spherical plain bearing. Maintenance free



**R3567 - Stainless Heavy Duty Rod Ends - Male**

Stainless heavy duty rod ends - male, with integral spherical plain bearing. Stainless steel



**R3568 - Stainless Heavy Duty Rod Ends - Female**

Stainless heavy duty rod ends - female, with integral spherical plain bearing. Stainless steel



**R3570 - Low Cost Rod End - Female**

Female, low cost rod end, with teflon bearing race. Steel



**R3571 - Low Cost Rod End - Male**

Male, low cost rod end, with teflon bearing race. Steel



**R3573 - Low Cost Rod End - Male**

Low cost rod end - male, with integral spherical plain bearing. Steel



**R3574 - Low Cost Rod End - Female**

Low cost rod end - female, with integral spherical plain bearings. Steel



**R3576.A2 - Stainless Low Cost Rod Ends**

Female, A2 stainless steel, low cost rod end. Series K. Maintenance free



**R3576.A4 - Stainless Low Cost Rod Ends**

Female, A4 stainless steel, low cost rod end. Series K. Maintenance free



**R3577.A2 - Stainless Low Cost Rod Ends**

Male, A2 stainless steel, low cost rod end



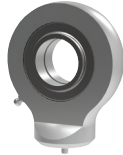
**R3577.A4 - Stainless Low Cost Rod Ends**

Male, A4 stainless steel, low cost rod end



**R3620 - Hydraulic Rod Ends**

Hydraulic rod ends, weld-on base.  
Forged steel (ST 52-3) housing



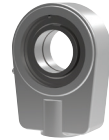
**R3621 - Hydraulic Rod Ends**

Stainless steel (AISI 316) housing



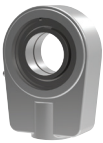
**R3623 - Hydraulic Rod Ends**

Stainless steel (AISI 316) housing



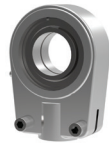
**R3624 - Hydraulic Rod Ends**

Housing up to size 60 - heat-treated  
steel (C45)



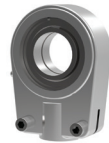
**R3625 - Hydraulic Rod Ends**

Stainless steel (AISI 316) housing



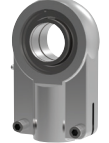
**R3626 - Hydraulic Rod Ends**

Housing up to size 60 - heat-treated  
steel (C45). With female thread and  
locking nuts



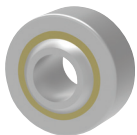
**R3627 - Hydraulic Rod Ends**

Stainless steel (AISI 316) housing



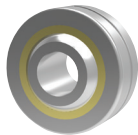
**R3628 - Hydraulic Rod Ends**

Housing up to size 60 - heat-treated  
steel (C45). With female thread and  
locking nuts



**R3640 - Spherical Plain  
Bearings**

Spherical plain bearing. Steel. To DIN  
12240-1



**R3642 - Stainless Spherical  
Plain Bearings**

Spherical plain bearing. Stainless steel.  
Maintenance free, series K. Similar to  
DIN 12240-1 (DIN 648)



# Clevis Joints & Accessories

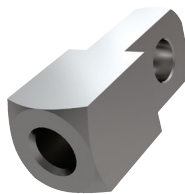
A clevis joint is a type of coupling where the mating component fits between the forks and is held in place via a clevis pin. Made to DIN 71752 and also known as a fork end or yoke, they are commonly used as a coupling on the end of air cylinders or at either end of a turnbuckle or wire rope for tensioning.

As these are specialist parts, don't hesitate to get in touch with our technical engineers who can help with calculations and choose the right products for your application.



### R3402 - Stainless Clevis Joint

Stainless steel A2 clevis joint. Right hand. Coarse or fine thread



### R3426 - Stainless Mating Piece for Clevis Joints

Mating piece for clevis joint. Right hand. Stainless steel A2



### R3450 - Clevis Pins

Clevis pin with groove, silver zinc-plated

# An overview of **Clevis Joints**

A clevis joint is a type of coupling where the mating components fits between the forks and is held in place via a clevis pin. Made to DIN 71752 and also known as a fork end or yoke, they are commonly used as a coupling on the end of air cylinders or at either end of a turnbuckle or wire rope for tensioning.



## **R3435**

### **Clevis retention clips**

Clevis retention clips designed purposely to fit and work with our R3385 clevis joints are perfect for time saving quick assembly.

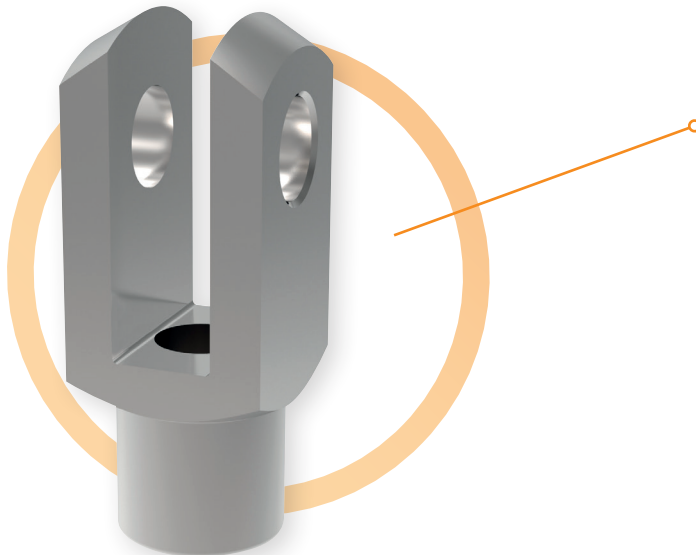


## **R3450**

### **Clevis pin**

Clevis pins designed for use with our clevis joints and R3440 safety fasteners.

## **R3385 : STEEL CLEVIS JOINTS**



## **R3385**

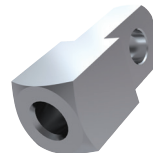
Steel clevis joint to DIN 71752. Also available in stainless steel (R3402) and left hand thread (R3386). We stock thousands of clevises in a wide range of sizes to enable quick delivery to our customers.



## **R3440**

### **Safety fasteners**

Safety fasteners for use with our R3450 clevis pins and R3385 clevis joints. These clips can be installed and removed without the need for additional hand tools making them the ideal solution instead of circlips.



## **R3420**

### **Mating piece for clevis**

Female clevis mating pieces designed specifically for use with our clevis joints, fitting perfectly between the forks of the clevis to create a flexible fastening assembly.



**R3385 - Steel Clevis Joints**

Steel clevis joint, silver zinc-plated. Right hand. Coarse or fine thread



**R3386 - Steel Clevis Joints**

Steel clevis joint, silver zinc-plated. Left hand. Coarse or fine thread



**R3387 - Steel Clevis Joints with Retention Clips**

Steel clevis joint with retention clip. Silver zinc-plated. Right hand. Coarse or fine thread



**R3388 - Steel Clevis Joints with Retention Clips**

Steel clevis joint with retention clip. Silver zinc-plated. Left hand. Coarse or fine thread



**R3389 - Steel Clevis Joints with Pin**

Steel clevis joint with pin. Silver zinc plated. Right hand. Coarse or fine thread



**R3390 - Steel Clevis Joints with Pin**

Steel clevis joint with pin. Silver zinc plated. Left hand. Coarse or fine thread



**R3400 - RH Clevis Joints with Retention Clip S/S**

Stainless steel clevis joint with retention clip. Right hand. Coarse or fine thread



**R3401 - LH Clevis Joints with Retention Clip S/S**

Stainless steel clevis joint with retention clip. Left hand. Coarse or fine thread



**R3402.A4 - Stainless Clevis Joints**

Stainless steel A4 clevis joint. Right hand. Coarse or fine thread



**R3403 - Stainless Clevis Joints**

Stainless steel A2 clevis joint. Left hand. Coarse or fine thread



**R3404 - Stainless Clevis Joints with Pin**

Stainless steel A2 clevis joint with pin. Right hand. Coarse or fine thread



**R3405 - Stainless Clevis Joints with Pin**

Stainless steel A2 clevis joint with pin. Left hand. Coarse or fine thread



**R3406 - Stainless Clevis Joints with Pin**

Stainless steel A2 clevis joint with pin. Right hand. Coarse or fine thread



**R3407 - Stainless Clevis Joints with Pin**

Stainless steel A2 clevis joint with pin. Left hand. Coarse or fine thread



**R3409 - Plastic Clevis Joints**

Plastic clevis joint. Left or right hand. Coarse or fine thread



**R3410 - Male Clevis Joints**

Male clevis joint, steel, silver zinc-plated. Right hand



**R3411 - Male Clevis Joints**

Male clevis joint, steel, silver zinc-plated. Left hand



**R3416 - Stainless Male Clevis Joints**

Male clevis joint, stainless steel A2. Right hand



**R3428 - Clevis Pin with Thread**

Clevis pin with thread. Stainless steel A2. To DIN 1445



**R3417 - Stainless Male Clevis Joints**

Male clevis joint, stainless steel A2. Left hand



**R3420 - Mating Piece for Clevis Joints**

Mating piece for clevis joint. Right hand. Steel, silver zinc-plated



**R3421 - Mating Piece for Clevis Joints**

Mating piece for clevis joint. Left hand. Steel, silver zinc-plated



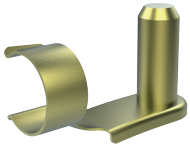
**R3427 - Stainless Mating Piece for Clevis Joints**

Mating piece for clevis joint. Left hand. Stainless steel A2



**R3435 - Clevis Retention Clips**

Clevis retention clip. Steel, silver zinc plated



**R3436.i - Clevis Retention Clips - Imperial**

Imperial clevis retention clip. Steel yellow zinc-plated



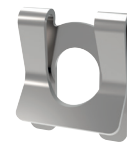
**R3437 - Plastic Clevis Retention Clips**

Black plastic (Igumid G)



**R3438 - Clevis Retention Clips**

Stainless steel 1.4305 AISI 303



**R3440 - Safety Fastener (SLM)**

Spring steel, silver zinc-plated, hardened and annealed 1450 to 1600°C N/mm<sup>2</sup>



**R3441.i - Safety Fastener - Imperial (SLI)**

Imperial safety fastener (SLI) for bolts & shafts. Steel yellow zinc-plated



**R3444 - Safety Fastener (KLM)**

Steel, silver zinc-plated. Easily assembled and removed by hand without special tools



**R3446 - Plastic Circlips**

Black plastic (POM). For use with R3409 clevis joints and R3453 clevis pins



**R3447 - Stainless Circlips**

Stainless steel (AISI 303). To DIN 471



**R3448 - Steel Cotter Pin**

Mild steel, silver zinc-plated. To DIN 94 (equivalent to ISO 1234)



**R3449 - Stainless Cotter Pins**

Stainless steel (A2, DIN 1,4301). To DIN 94 (equivalent to ISO 1234)



**R3453 - Plastic Clevis Pins**

Black plastic (Igumid G). For use with R3409 clevis joints and R3446 circlips



**R3454 - Stainless Clevis Pins**

Stainless steel (AISI 303). For use with R3402-R3403 clevis joints and R3447 circlips



**R3455 - Steel Clevis Pin with Hole**

Steel clevis pin, with hole. Steel zinc-plated



**R3456 - Stainless Clevis Pin with Hole**

Stainless steel clevis pin, with hole



VIEW THE FULL RANGE

# Turnbuckles

Turnbuckles, also referred to as tensioners, are used to adjust the length or tension of cables, rods, and wires. By rotating the turnbuckle body, you can easily tighten or loosen the attached cable. We offer a wide selection of industrial-grade, heavy-duty turnbuckles in both steel and corrosion-resistant stainless steel.

For full customization, explore our range of tensioner end types available in the turnbuckle accessories section on our website.



### R3800 - Pipe Body Turnbuckles

Pipe body turnbuckles. Steel zinc-plated



### R3804 - Stud End Pipe Body Turnbuckles

Stud end pipe body turnbuckles. Steel zinc-plated



### R3816 - Hook End Pipe Body Turnbuckles

Hook end pipe body turnbuckles. Steel zinc-plated



**R3808 - Eye End Pipe Body Turnbuckles**

Steel (1.0037) zinc-plated. To DIN 1478



**R3812 - Hook & Eye Pipe Body Turnbuckles**

Steel (1.0037 up to M48 then 1.0052) zinc-plated. To DIN 1478



**R3820 - Jaw End Pipe Body Turnbuckles**

Steel body (1.0037) jaws (1.0503) zinc-plated. To DIN 1478



**R3802 - Pipe Body Turnbuckles**

A4 stainless steel. To DIN 1478



**R3806 - Stud End Pipe Body Turnbuckles**

A4 stainless steel. To DIN 1478



**R3810 - Eye End Pipe Body Turnbuckles**

A4 stainless steel. To DIN 1478



**R3814 - Hook & Eye Pipe Body Turnbuckles**

A4 stainless steel. To DIN 1478



**R3818 - Hook End Pipe Body Turnbuckles**

A4 stainless steel. To DIN 1478



**R3830 - Turnbuckles**

Steel (1.0037) zinc-plated. To DIN 1480



**R3834 - Stub End Turnbuckles**

Steel (1.0037) zinc-plated. To DIN 1480, stub end



**R3838 - Plain End Turnbuckles**

Steel (1.0037 up to M48 then 1.0052) zinc-plated. To DIN 1480, plain ends



**R3840 - Eye End Turnbuckles**

Steel (1.0037) zinc-plated. To DIN 1480, eye to eye



**R3844 - Hook End Turnbuckles**

Steel (1.0037) zinc-plated. To DIN 1480, hook to hook



**R3848 - Jaw End Turnbuckles**

Steel body (1.0037) jaws (1.0503), zinc-plated. To DIN 1480, jaw to jaw



**R3850 - Hook & Eye Turnbuckles**

Steel (1.0037) zinc-plated. To DIN 1480, hook & eye



**R3836 - Stub End Turnbuckles**

A4 stainless steel. To DIN 1480, stub end



**R3842 - Eye End Turnbuckles**

A4 stainless steel. To DIN 1480, eye to eye



**R3846 - Hook End Turnbuckles**

A4 stainless steel. To DIN 1480, hook to hook



**R3832 - Turnbuckles**

A4 stainless steel. To DIN 1480



**R3852 - Hook & Eye Turnbuckles**

A4 stainless steel. To DIN 1480, hook & eye



**R3825 - Hexagonal Body Turnbuckles**

Steel (1.0037) zinc-plated. To DIN 1479



**R3826 - Hexagonal Body Turnbuckles**

A4 stainless steel. To DIN 1479



**R3860 - Eye for Turnbuckles**

Steel (1.0037) zinc-plated



**R3862 - Hooks for Turnbuckles**

Steel (1.0037)



**R3864 - Jaws for Turnbuckles**

Steel (C45, 1.0503) zinc-plated. Right or left hand thread



**R3866 - Welding Studs**

Steel (1.0037 up to M36, above M36 1.0052). Right or left hand thread. To DIN 34828



**R3868 - Welding Studs**

Stainless steel (A4). Right or left hand thread. To DIN 34828



# Ball & Socket Joints

Ball and socket joints, commonly a 90° joint, facilitate movement and rotation in various directions as a partial ball turns within a socket. Manufactured to DIN 71802 standards, our extensive stock includes right-angled, in-line, lockable, and quick-release ball and socket joints.

Available in steel or stainless steel and with rubber gaitors to protect against dirt. With such a wide range of options we are sure to have the right joint for your application.



 **Automotion**  
AN ESSENTRA COMPANY



### R3466 - Stainless Ball and Socket Joints

Stainless steel (A2, AISI 303). To DIN 71802 form CS, supplied with hexagon nut

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AN ESSENTRA COMPANY



### R3506 - Stainless Axial Ball and Socket Joints

Stainless steel (AISI 303). Similar to DIN 71802

 **Automotion**  
AN ESSENTRA COMPANY



### R3526 - Threaded Ball Studs

Low carbon steel (1018) silver zinc-plated. To DIN 71803 Form C

# An overview of **Ball & Socket Joints**

A ball and socket joint is a 90 degree coupling or linkage that is typically used on the end of tie bars to connect two components together whilst allowing for some articulating movements.



**R3460**  
Ball and socket joint

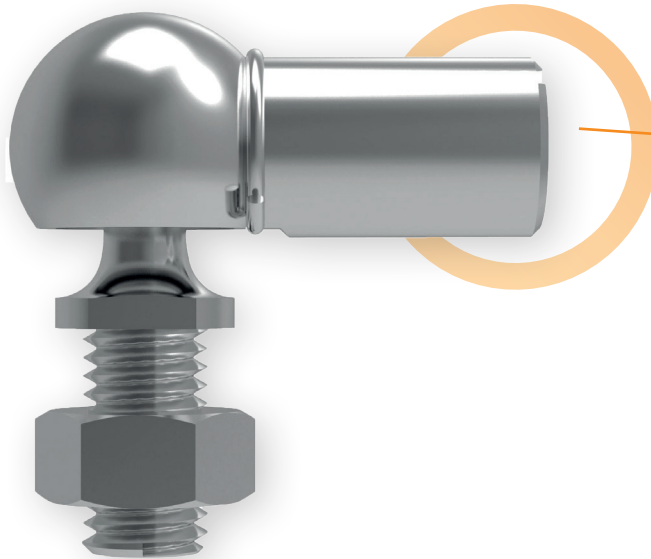
Ball and socket joint to DIN 71802 from CS. Also available in stainless steel (R3466) and left hand thread (R3461).



**R3526**  
Threaded ball stud

Threaded ball studs to DIN 71803 are used in applications that require them to be regularly connected and disconnected from the mating socket piece.

## **R3468 : STAINLESS BALL AND SOCKET JOINTS**



**R3468**

These ball and socket joints are new to our range and held in stock for immediate dispatch. They are manufactured from AISI 316 stainless steel making them perfect for use in outside or marine applications.



**R3500**  
Axial ball and socket joint

Automotion Components range of axial ball and socket joints perform the same function as a standard ball and socket joint but in a straight line rather than a 90 degree angle. Also available in stainless steel (R3506) and left hand thread (R3501).



**R3490**  
Ball and socket joint

A ball and socket joint with a rubber cap to stop dirt ingress into the main joint, plus some spanner flats on the housing to aid installation. Also available in stainless steel (R3496) and left hand thread (R3491).



**R3460 - Ball and Socket Joints**

Steel, silver zinc-plated. To DIN 71802 form CS



**R3461 - Ball and Socket Joints**

Steel, silver zinc-plated. Left hand thread. To DIN 71802 form CS



**R3467 - Stainless Ball and Socket Joints**

Stainless steel (A2, AISI 303). Left hand thread. To DIN 71802 form CS



**R3468 - Stainless Ball and Socket Joints**

Stainless steel (A4, AISI 316). To DIN 71802 form CS



**R3470 - Ball and Socket Joints**

Steel, silver zinc-plated. To DIN 71802 form CS



**R3471 - Ball and Socket Joints**

Silver zinc-plated. With sealing cap, left hand thread. To DIN 71802 form CS



**R3476 - Stainless Ball and Socket Joints**

Stainless steel (A2, AISI 303), sealing cap: neoprene. Supplied with hexagon nut



**R3477 - Stainless Ball and Socket Joints**

Stainless steel (A2, AISI 303), sealing cap: neoprene. With sealing cap, left hand thread. Supplied with hexagon nut



**R3490 - Ball and Socket Joints**

Steel (9sMnPb28), silver zinc-plated housing, with flats. To DIN 71802 form CS



**R3491 - Ball and Socket Joints**

Steel (9sMnPb28), silver zinc-plated housing, with flats. To DIN 71802 form CS



**R3496 - Stainless Ball and Socket Joints**

Stainless steel (A2, AISI 303), sealing cap: neoprene. With flats on housing. To DIN 71802 form CS



**R3497 - Stainless Ball and Socket Joints**

Stainless steel (A2, AISI 303), sealing cap: neoprene. With flats on housing. To DIN 71802 form CS



**R3520 - Plastic Ball and Socket Joints**

Black plastic (Iguimid G). Low weight



**R3500 - Axial Ball and Socket Joints**

Left hand thread. Steel, silver zinc plated, ball stud: minimum tensile strength  $R_m=600N/mm^2$



**R3501 - Axial Ball and Socket Joints**

Left hand thread. Steel, silver zinc plated, ball stud: minimum tensile strength  $R_m=600N/mm^2$



**R3507 - Stainless Axial Ball and Socket Joints**

Left hand thread. Stainless steel (AISI 303)



**R3524 - Ball Joint - Housing Only**

Low carbon steel, silver zinc-plated. To DIN 71802



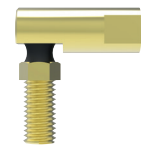
**R3527 - Rivet Studs**

Low carbon steel (1018), silver zinc-plated. To DIN 71803 Form B



**R3528 - Stainless Threaded Ball Studs**

Stainless steel (AISI 304). To DIN 71803 Form C



**R3530 - DMG Ball and Socket Joints**

Yellow zinc-plated, ball stud is case hardened



**R3532 - Stainless DMG Ball and Socket Joints**

Stainless steel (AISI 303). Standard thread is right hand thread



**R3535 - Quick Release Ball Joints - Imperial**

A2 stainless or steel, zinc-plated. Standard thread is a right hand thread



**R3540 - Lockable Ball Joints**

Steel, silver zinc-plated. Brake piece technopolymer (polyamide PA)

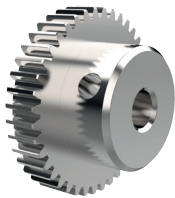
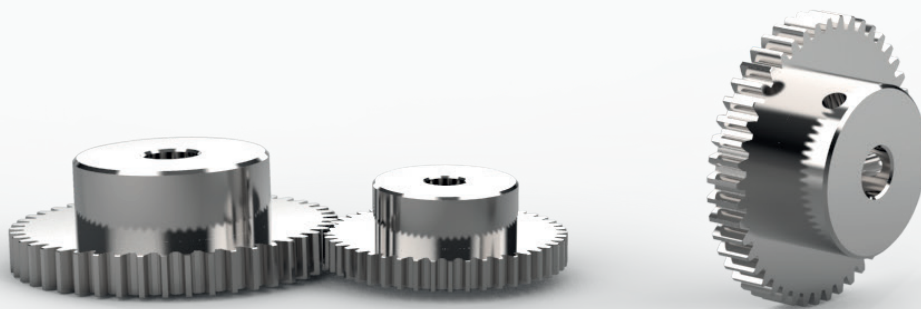


VIEW THE FULL RANGE

# Standard Spur Gears

When it comes to smooth, reliable power transmission, having the right spur gear makes all the difference. Our range of standard spur gears is built to give you flexibility without the hassle - whether you need plain hub, hubless, teeth cut into the hub, or gears supplied with shafts.

With options in carbon steel, brass, stainless steel, and durable plastics, you can match the material to your exact application with confidence. Explore the full range today and find the right solution for your next project



**R5129 - Spur Gears - Module 0.75 - Stainless**

Spur gears - module 0.75, stainless steel - 16-120 teeth



**R5173 - Spur Gears - Module 1**

Spur gears - module 1, carbon steel - 14-68 teeth. Steel



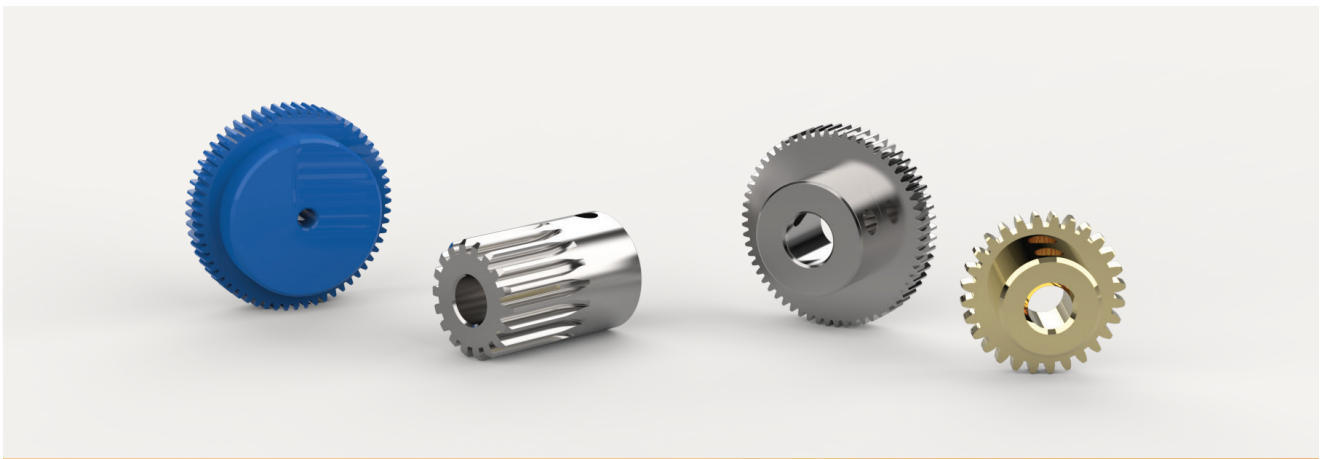
**R5199 - Spur Gears - Module 1.5**

Spur gears - module 1.5, carbon steel - 8-10 teeth. Steel

# Spur Gears Overview

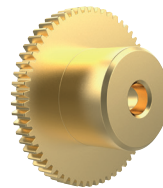
## Material Options

Our range of spur gears are available in a variety of different materials. This page gives you an overview as to the material options available.



### CARBON STEEL

Carbon steel (ISO C45). Accuracy to JIS B 1702-1 (ISO) class 8, induction hardened class 9. A cost effective solution where corrosion is not an issue.



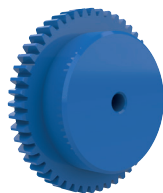
### BRASS

Brass (C3604B). Accuracy to JIS B 1702-1 (ISO) class 9. Ideal for use in low load, non-magnetic environments.



### STAINLESS STEEL

Stainless steel (SUS 304, JIS G 4303). Accuracy to JIS B 1702-1 (ISO) class 9. Ideal for use in environments where additional corrosion resistance is required.



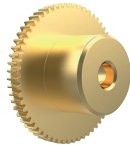
### PLASTIC

Blue polyacetal, suitable for use in food machinery applications. Accuracy to JIS B 1702-1 (ISO) class 9-10. Approved by the FDA (USA) and by regulators in the EU & Japan, where the food has an alcohol % of <15%.



**R5100 - Spur Gears - Module 0.3**

Spur gears - module 0.3, brass - 14-18 teeth



**R5101 - Spur Gears - Module 0.3**

Spur gears - module 0.3, brass - 20-120 teeth



**R5104 - Spur Gears - Module 0.5**

Spur gears - module 0.5<BR/>, stainless steel - 10-15 teeth



**R5105 - Spur Gears - Module 0.5**

Spur gears - module 0.5, stainless steel - 16-30 teeth



**R5106 - Spur Gears - Module 0.5**

Spur gears - module 0.5, stainless steel - 16-20 teeth



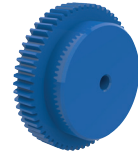
**R5108 - Spur Gears - Module 0.5**

Spur gears - module 0.5, stainless steel - 32-120 teeth



**R5117 - Spur Gears - Module 0.5 - Plastic**

Spur gears - module 0.5 - Plastic, blue polyacetal - 14-18 teeth



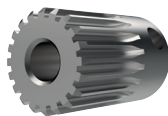
**R5120 - Spur Gears - Module 0.5 - Plastic**

Spur gears - module 0.5 - Plastic, blue polyacetal - 20- 120 teeth



**R5121 - Spur Gears - Module 0.5**

Spur gears - module 0.5, carbon steel - 10-14 teeth. Steel



**R5123 - Spur Gears - Module 0.5 - Steel**

Spur gears - module 0.5, steel, carbon steel - 15-24 teeth



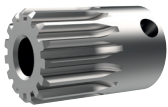
**R5125 - Spur Gears - Module 0.5 - Steel**

Spur gears - module 0.5, steel, carbon steel - 25-120 teeth



**R5126 - Spur Gears - Module 0.75 - Stainless**

Spur gears - module 0.75 - stainless steel - 10 teeth



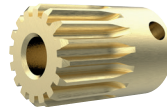
**R5128 - Spur Gears - Module 0.75 - Steel**

Spur gears - module 0.75, carbon steel - 14-15 teeth



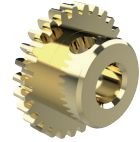
**R5130 - Spur Gears - Module 0.75 - Brass**

Spur gears - module 0.75, brass - 10-12 teeth



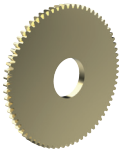
**R5132 - Spur Gears - Module 0.75 - Brass**

Spur gears - module 0.75, brass - 14-20 teeth



**R5133 - Spur Gears - Module 0.75 - Brass**

Spur gears - module 0.75, brass - 16-48 teeth



**R5135 - Spur Gears - Module 0.75 - Brass**

Spur gears - module 0.75, brass - 50-120 teeth - hubless



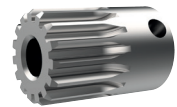
**R5136 - Spur Gears - Module 0.75 - Brass**

Spur gears - module 0.75, brass - 50-120 teeth



**R5137 - Spur Gears - Module 0.75 - Steel**

Spur gears - module 0.75, steel, carbon steel - 10-12 teeth



**R5138 - Spur Gears - Module 0.75 - Steel**

Spur gears - module 0.75, carbon steel - 14-15 teeth. Steel



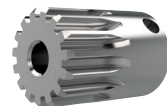
**R5140 - Spur Gears - Module 0.75 - Steel**

Spur gears - module 0.75, carbon steel - 16-120 teeth. Steel



**R5141 - Spur Gears - Module 0.8 - Stainless**

Spur gears - module 0.8, stainless steel - 10-12 teeth



**R5142 - Spur Gears - Module 0.8 - Stainless**

Spur gears - module 0.8, stainless steel - 14-15 teeth



**R5144 - Spur Gears - Module 0.8 - Stainless**

Spur gears - module 0.8, stainless steel - 14-20 teeth - boreless



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**R5146 - Spur Gears - Module 0.8**

Spur gears - module 0.8, stainless steel - 16-120 teeth

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**R5156 - Spur Gears - Module 0.8 - Plastic**

Spur gears - module 0.8, plastic, blue polyacetal - 14-15 teeth

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**R5157 - Spur Gears - Module 0.8 - Plastic**

Spur gears - module 0.8, plastic, blue polyacetal - 16-120 teeth

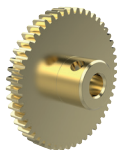
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**R5158 - Spur Gears - Module 0.8**

Spur gears - module 0.8, brass - 14-15 teeth

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**R5160 - Spur Gears - Module 0.8**

Spur gears - module 0.8, brass - 16-120 teeth

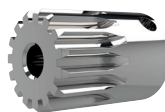
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**R5161 - Spur Gears - Module 0.8**

Spur gears - module 0.8, carbon steel - 25-120 teeth. Steel

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**R5163 - Spur Gears - Module 1**

Spur gears - module 1, stainless steel - 14-16 teeth

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**R5165 - Spur Gears - Module 1**

Spur gears - module 1, stainless steel - 17-120 teeth

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**R5172 - Spur Gears - Module 1 - Plastic**

Spur gears - module 1, plastic, blue polyacetal - 12-120 teeth

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**R5175 - Spur Gears - Module 1**

Spur gears - module 1, carbon steel - 8-10 teeth. Steel

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**R5176 - Spur Gears - Module 1**

Spur gears - module 1, carbon steel - 8-10 teeth. Steel

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**R5177 - Spur Gears - Module 1**

Spur gears - module 1, carbon steel - 12-18 teeth. Steel



**R5179 - Spur Gears -  
Module 1**

Spur gears - module 1, carbon steel -  
14-120 teeth. Steel



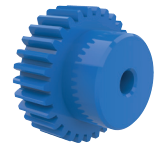
**R5190 - Spur Gears -  
Module 1.5**

Spur gears - module 1.5, stainless steel  
- 15-100 teeth



**R5191 - Spur Gears -  
Module 1.5 - Plastic**

Spur gears - module 1.5, plastic, blue  
polyacetal - 14 teeth



**R5193 - Spur Gears -  
Module 1.5 - Plastic**

Spur gears - module 1.5, plastic, blue  
polyacetal - 15-60 teeth



**R5194 - Spur Gears -  
Module 1.5**

Spur gears - module 1.5, carbon steel -  
15-100 teeth. Steel

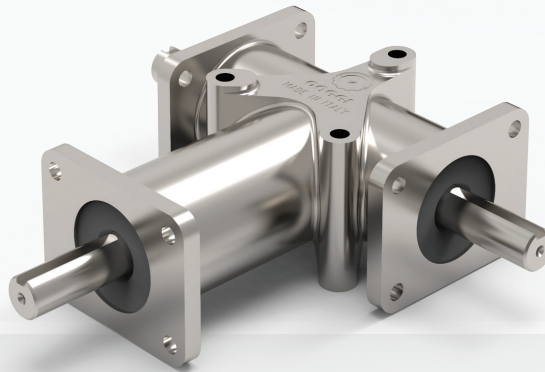
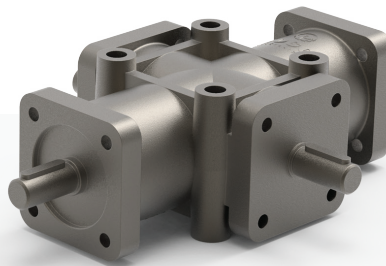


VIEW THE FULL RANGE

# Gear Boxes

Automotion Components supply a versatile range of high-quality gearboxes, including two, three, and four-shaft right-angle configurations, as well as compact miniature mitre and bevel gearboxes. Options include durable stainless steel models, ideal for demanding environments.

Designed to efficiently reduce or increase speed and torque, all gearboxes are lubricated for life to ensure long-term performance with minimal maintenance.



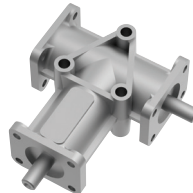
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### R2233 - Right Angle Drives - Two Shafts

Right angle drives. Mitre gear box

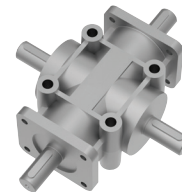
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### R2300 - Right Angle Drives - Two Shafts

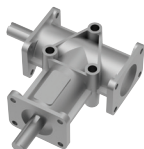
Right angle drives - 2 shafts. Ø8 shafts.  
Aluminium. Sizes Ø14-25 also available

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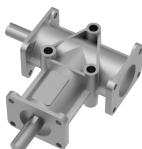
### R2342 - Right Angle Drives - Four Shafts

Right angle drives - 4 Shafts. Ø24 shafts.  
Aluminium



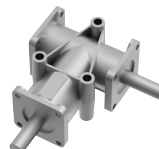
**R2306 - Right Angle Drives - Two Shafts**

Right angle drives - 2 Shafts, Ø15 shafts. Aluminium



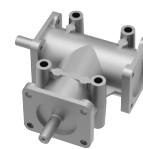
**R2308 - Right Angle Drives - Two Shafts**

Right angle drives - 2 Shafts, Ø20 shafts. Aluminium



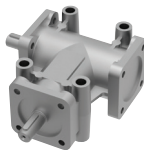
**R2312 - Right Angle Drives - Two Shafts**

Right angle drives - 2 Shafts, Ø25 shafts. Aluminium



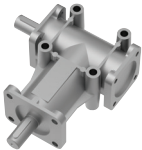
**R2320 - Right Angle Drives - Two Shafts**

Right angle drives - 2 Shafts, Ø8 shafts. Aluminium



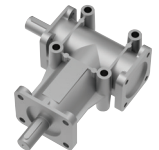
**R2322 - Right Angle Drives - Two Shafts**

Right angle drives - 2 Shafts, Ø14 shafts. Aluminium



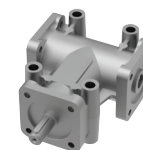
**R2330 - Right Angle Drives - Two Shafts**

Right angle drives - 2 Shafts, Ø19 shafts. Aluminium



**R2333 - Right Angle Drives - Two Shafts**

Right angle drives - 2 Shafts, Ø24 shafts. Aluminium



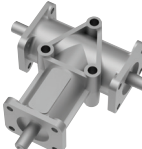
**R2336 - Right Angle Drives - Hollow Two Shafts**

Right angle drives - Hollow 2 Shafts, Ø14 shafts. Aluminium



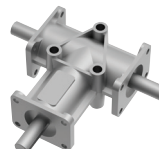
**R2338 - Right Angle Drives - Hollow Two Shafts**

Right angle drives - Hollow 2 Shafts, Ø19 shafts. Aluminium



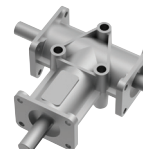
**R2302 - Right Angle Drives - Three Shafts**

Right angle drives - 3 Shafts, Ø8 shafts. Aluminium



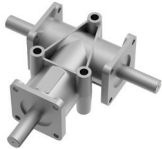
**R2307 - Right Angle Drives - Three Shafts**

Right angle drives - 3 Shafts, Ø15 shafts. Aluminium



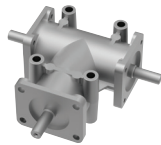
**R2310 - Right Angle Drives - Three Shafts**

Right angle drives - 3 Shafts, Ø20 shafts. Aluminium



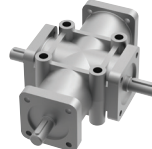
**R2314 - Right Angle Drives - Three Shafts**

Right angle drives - 3 Shafts, Ø25 shafts. Aluminium



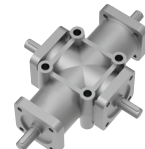
**R2321 - Right Angle Drives - Three Shafts**

Right angle drives - 3 Shafts, Ø8 shafts. Aluminium



**R2325 - Right Angle Drives - Three Shafts**

Right angle drives - 3 Shafts, Ø14 shafts. Aluminium



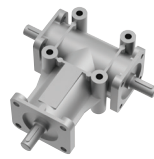
**R2328 - Right Angle Drives - Four Shafts**

Right angle drives - 4 Shafts, Ø14 shafts. Aluminium



**R2329 - Right Angle Drives - Three Shafts**

Right angle drives - 3 Shafts, Ø14 shafts. Aluminium



**R2332 - Right Angle Drives - Three Shafts**

Right angle drives - 3 Shafts, Ø19 shafts. Aluminium



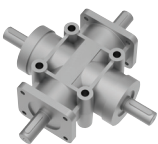
**R2334 - Right Angle Drives - Three Shafts**

Right angle drives - 3 Shafts, Ø24 shafts. Aluminium



**R2340 - Right Angle Drives - Three Shafts**

Right angle drives - 3 Shafts, Ø24 shafts. Aluminium



**R2345 - Right Angle Drives - Four Shafts**

Right angle drives - 4 Shafts, Ø24 shafts. Aluminium



**R2350 - Stainless Right Angle Drives - Two Shafts**

Stainless right angle drives - 2 Shafts, Ø8 shafts. Stainless steel



**R2352 - Stainless Right Angle Drives - Two Shafts**

Stainless right angle drives - 2 Shafts, Ø15 shafts. Stainless steel



**R2354 - Stainless Right Angle Drives - Two Shafts**

Stainless right angle drives - 2 Shafts, Ø20 shafts. Stainless steel



**R2358 - Stainless Right Angle Drives - Two Shafts**

Stainless right angle drives - 2 Shafts, Ø25 shafts. Stainless steel



**R2351 - Stainless Right Angle Drives - Three Shafts**

Stainless right angle drives - 3 Shafts, Ø8 shafts. Aluminium



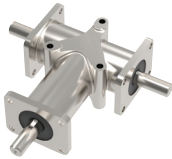
**R2353 - Stainless Right Angle Drives - Three Shafts**

Stainless right angle drives - 3 Shafts, Ø15 shafts. Stainless steel



**R2355 - Stainless Right Angle Drives - Three Shafts**

Stainless right angle drives - 3 shafts, Ø20 shafts. Stainless steel



**R2359 - Stainless Right Angle Drives - Three Shafts**

Stainless right angle drives - 3 Shafts, Ø25 shafts. Stainless steel



**R2347 - Two Way Reversing Gear Box**

2 way reversing gear box, Ø19 shafts. Aluminium



**R2348 - Two Way Reversing Gear Box**

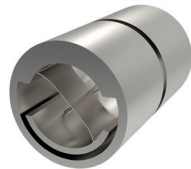
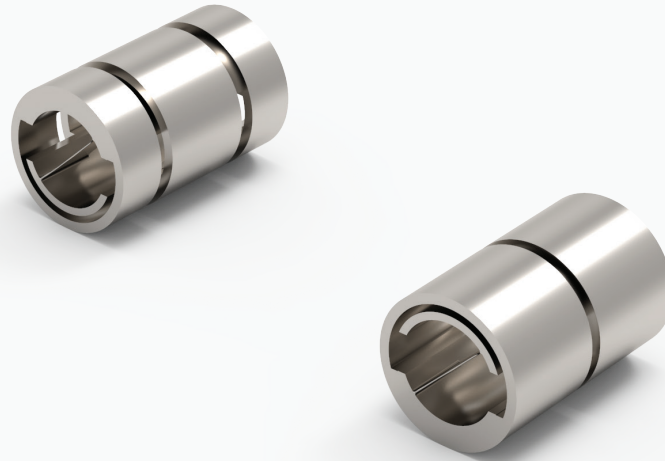
2 way reversing gear box, Ø19 shafts. Aluminium



# Flexure Pivot Bearings

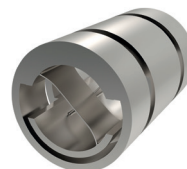
A flexure pivot bearing is a type of bearing that allows precise rotational movement through the bending of flexible materials rather than using traditional rolling or sliding elements. It consists of thin, elastic elements - typically metal - that flex to permit angular motion about a single axis. These bearings are commonly used in precision

instruments, aerospace systems, and optical devices where minimal friction, zero backlash, and high repeatability are critical. Flexure pivots are preferred in applications requiring small-range motion and high reliability because they have no moving parts to wear out, generate no particulate contamination, and require no lubrication.



## R4000 - Flexure Pivot Bearings

Single-ended. Stainless steel (416).  
Operating temperature -35°C to + 190°C



## R4002 - Flexure Pivot Bearings

Single-ended. Stainless steel (416).  
Operating temperature -35°C to + 190°C

# An overview of **Flexure Pivot Bearings**

Flexural pivot bearings are limited rotation bearings for applications that do not allow lubrication but also require precision, repeatability and infinite life.

Angle of rotations are graded into three series:

- Series 10 -  $\pm 15^\circ$  (mainly for light loads)
- Series 20 -  $\pm 7.5^\circ$  (mainly for medium-heavy loads)
- Series 30 -  $\pm 3.7^\circ$  (mainly for heavy loads)

They have a range of torsional stiffness depending on the bearing diameter. The bearing consists of two stainless steel sleeves held in position by three leaf springs on two planes. There is no contact between the sleeves (eliminating friction) and the springs provide the pivotal action which is inherently self centering and requires no lubrication.

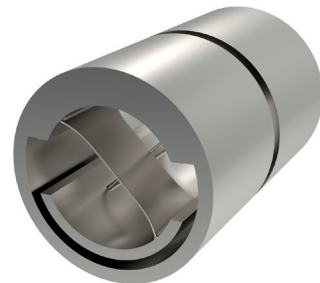
## Material

The sleeves in a Flexure Pivot bearing are made from 416 Stainless Steel. The spring and core are made from Stainless Steel (410 and 420) with a braze alloy (AMS4765).

Special pivot bearings can be manufactured with angle of rotation up to  $\pm 50^\circ$  and for heavy loads.

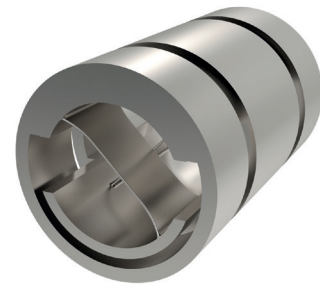
## Single Ended Pivot Bearings

Here one end is fixed and the other end is free to rotate - this type is used most widely as they support overhung loads. Single Ended Pivot Bearings are frictionless with infinite life (see our technical graphs online for life cycle curves).



## Double Ended Pivot Bearings

In these applications both ends are fixed and the centre of the bearing is free to rotate - this supports suspended loads. Double Ended Pivot Bearings are frictionless with infinite life (see our technical graphs online for life cycle curves).



# Digital Catalogues



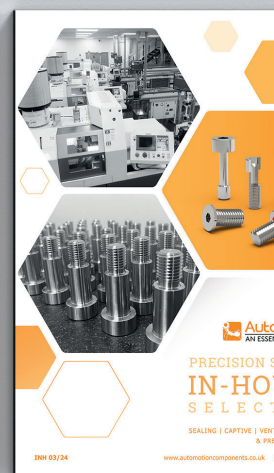
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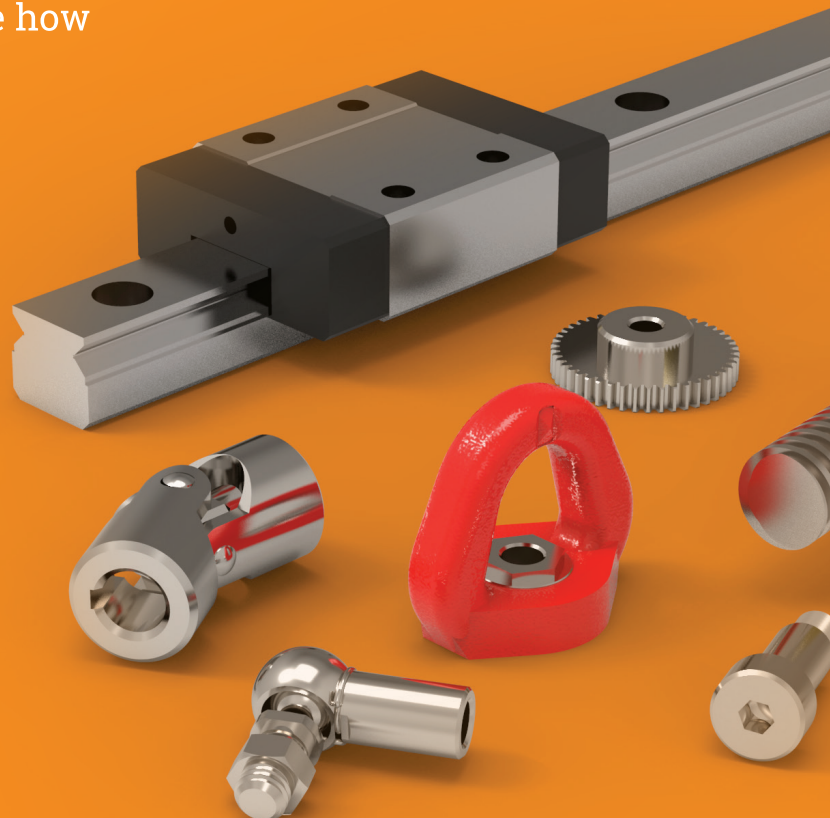
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