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AN ESSENTRA COMPANY



Design Elements IN FOCUS

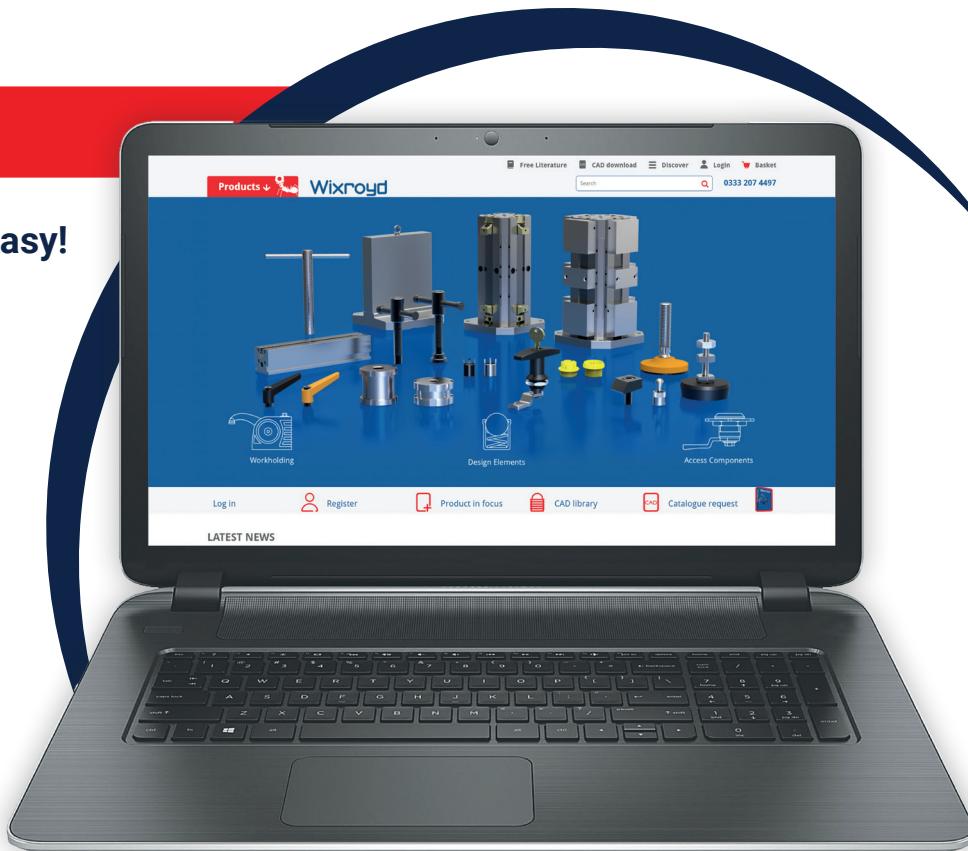
PLUNGERS | BALL LOCK PINS | LEVELLING FEET | LIFTING
RINGS | SCREWS | GRIPS | HANDLES | HANDWHEELS | LEVERS

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SPRING & INDEX PLUNGERS IN APPLICATION



32300 SPRING PLUNGERS SMOOTH MODEL

Product Details:

Smooth model, with collar and ball - stainless steel. Press fit spring plungers.

Spring & index plungers are specialised components widely used in industrial applications for **holding and positioning of parts**, and for **providing quick, efficient locking, and releasing mechanisms**.

The key differences between spring and index plungers are that **spring plungers are designed to hold parts in position through spring force**, while **index plungers have a locking mechanism that allows them to lock parts in place** and have a locking nut that allows for adjustment of the locking force.

COMMERCIAL LIGHTING

The **push-fit design of Wixroyd's spring plunger** greatly simplifies the mounting and servicing of commercial lighting units. Their simple push-fit installation makes for easy assembly during production of the light units, saving both time and money.



32302 EXPANDER FIT SPRING PLUNGER

Product Details:

Smooth body, thermoplastic. Simple push fit design, no special tooling necessary.



SCAN ME TO VIEW THE FULL SPRING & INDEX PLUNGER RANGE

KEY FEATURES & BENEFITS

Easy to install with a simple thumb pressure, the Expander Fit spring plunger provides these **unique benefits for your application**;

- ▶ **Speed and flexibility** in production and assembly.
- ▶ Removes need and cost of high tolerance machining and workpiece preparation.
- ▶ **Easy push fit installation**, no special tools or punches required.



PLASTIC INJECTION MOULDED PARTS

Expander fit spring plungers have a unique body design that flexes to expand and contract to fit in location bore tolerances as wide as $+0,2\text{mm}$. Especially suited to installation in plastic moulded components where hole and bore precision is not high.

SPRING PLUNGERS

What is a Spring Plunger?

Spring plungers are a discrete mechanical device to secure, position, index, positively lock, and apply lift-off pressure. They are a three-piece component: (1) ball or pin as the contact point. (2) Spring of varying force, assembled into a small grub screw-like housing. (3) The housing is typically made from steel, stainless steel, brass or plastic with ball bearing steel ball or pin head. These are available in a range of threads as small as M2 up to M24, but are also available in imperial thread options.



VIEW THE FULL RANGE




Spring Plungers - 32300

Smooth model, press fit, with collar. Special types available on request.
 Body - stainless steel (305), brass or plastic.
 Ball - steel, or thermoplastic.
 Spring - stainless steel.


Spring Plungers - 31500

With ball end and hex socket. Special types available on request.
 Body & ball - blackened steel or stainless steel (303). Spring - stainless steel.


Spring Plungers - 31400

Headed spring plungers with ball and slot. Can handle temperatures up to 250°C.
 Body & ball - steel or stainless steel (303). Spring - stainless steel.

[Products](#) [Spring & Index Plungers & Ball Lock Pins](#)[Spring Plungers](#)**Spring Plungers - Ball End - Smooth - 32284**

Smooth body with collar, special types available on request.
Body, pin & spring - stainless steel (303).

**Expander Fit Spring Plungers - 32302**

Flexes to expand to fit in location bore tolerances as wide as +0,2mm.
Body - thermoplastic. Ball - steel or thermoplastic. Spring - stainless steel.

**Expander Fit Spring Plungers - 32305.w**

Smooth body, with collar and ball. Ideal for detent or ejection.
Body - thermoplastic.
Ball & spring - stainless steel.

**Spring Plungers - Pin End - Smooth - 32282**

Pin end, smooth with collar.
Body & spring - stainless steel (305).
Pin - stainless steel (303) or thermoplastic.

**Spring Plungers - 32400**

Long, smooth model. Used for pulling off pins and spring stops in tool making.
Body & pin - steel.
Spring - stainless steel.

**Spring Plungers - 32100**

With ball end and slot. Increased spring strength variations.
Body & ball - blackened steel or stainless steel (303). Spring - stainless steel.

**Spring Plungers - Double Ended - 32350**

Double ended with a central knurled section for ease of installation.
Body - brass.
Ball & spring - stainless steel.

**Spring Plungers - 31420**

With ball end and hex socket head.
Special types available on request.
Body & ball - blackened steel or stainless steel (303). Spring - stainless steel.

**Spring Plungers - 32280**

Smooth body without collar, special types available on request.
Ball & body - steel.
Spring - stainless steel.

**Smooth Running - Spring Plungers - 31610**

With ball, hex socket and plastic bearing.
Body & ball - blackened steel or stainless steel (303). Spring - stainless steel.
Bearing cup - plastic.

**Spring Plungers - 32000**

Plastic version for use where electrical conductivity is not required.
Body - thermoplastic. Ball - stainless steel or thermoplastic. Spring - stainless steel.

**Spring Plungers - 32102**

With slot and ceramic ball. Highest corrosion protection.
Body & spring - stainless steel (316).
Ball - ceramic.

Products [Spring & Index Plungers & Ball Lock Pins](#)[Spring Plungers](#)**Spring Plungers - 31600**

Hex socket with an indexing pin. Increased spring forces available in range. Body & pin - blackened steel or stainless steel (303). Spring - stainless steel.

**Spring Plungers - 32150**

With a slot and round ended pin for locating. Body & pin - blackened steel or stainless steel (303). Spring - stainless steel.

**Spring Plungers - 32200**

With pin end and hex socket. Increased spring load available. Body & pin - steel, blackened or stainless steel (303). Spring - stainless steel.

**Spring Plungers - 32220**

Pin end, hex socket and seal to prevent liquid penetrating into the spring plunger. Body & pin - blackened steel or stainless steel (303). Spring - stainless steel.

**Spring Plungers - 32420**

Long version used for ejecting parts and applying pressure. Body & pin - steel or blackened steel. Spring - stainless steel.

**Spring Plungers - Imperial - 3B100**

With ball and slot, available with or without thread lock. Body & ball - blackened steel, or stainless steel (303). Spring - stainless steel.

**Spring Plungers - 3B150**

With round ended pin and slot. Available with or without thread lock. Body & pin - blackened steel, or stainless steel (303). Spring - stainless steel.

**Spring Plungers - Imperial - 3B200**

With round ended pin and hex socket. Available with or without thread locking. Body & pin - blackened steel, or stainless steel (303). Spring - stainless steel.

**Spring Bodies - 31000**

Round with collar and tipped styles available. Body - nickel plated steel or stainless steel (305). Spring - stainless steel.

**Lateral Spring Plungers - 32800**

Positions and applies pressure. Body - steel. Ball - steel, stainless steel, or thermoplastic. Spring - stainless steel or plastic.

**Lateral Spring Plungers - 32802**

One or double sided options to position workpieces or components. Body - blackened steel. Spring - stainless steel.

**Striker Bushes - 32440**

To be used together with spring plungers when a contact surface is required with high resistance. Fully steel.

WIXROYD SPRING PLUNGERS

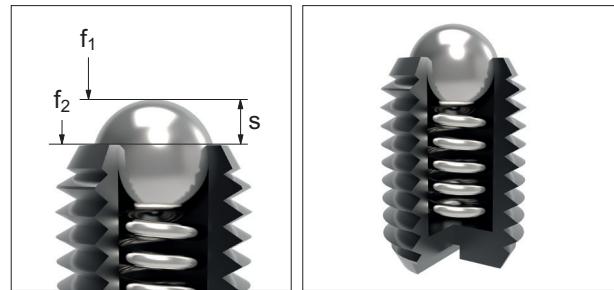
THREAD DETAILS

All Wixroyd metric spring plungers have a coarse thread.

	ISO metric coarse threads (mm)															
Thread (D)	3	3,5	4	4,5	5	6	7	8	10	12	14	16	18	20	22	24
Pitch	0,5	0,6	0,7	0,75	0,8	1,0	1,0	1,25	1,5	1,75	2,00	2,0	2,5	2,5	2,5	3,0

SPRING LOADS

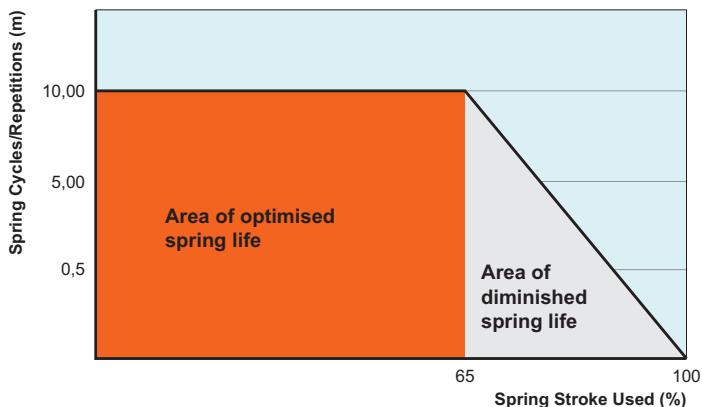
- s** Stroke, or movement of plunger's ball or pin.
- f₁** The force required in Newtons (N) to overcome the static strength of the spring and achieve initial movement of the plunger's ball or pin.
- f₂** The force required in Newtons (N) to fully compress the spring until the ball or pin is fully depressed against the plunger's body.



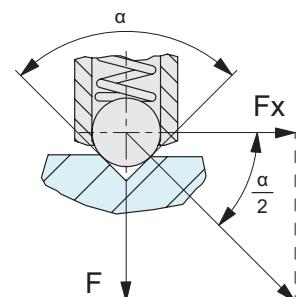
TYPICAL SPRING REPETITIONS

Although dependent upon a number of application specific factors, we are able to give the following guide relating to the maximum number of spring repetitions or cycles of our spring plungers.

- 100% or full stroke "s" used: approx. 300,000 cycles.
- 65% of stroke "s" used: approx 10,000,000 cycles.



CALCULATING INDEXING RESISTANCE



Important Note: This is only an approximation formula. For more accurate calculation the roughness of the counterpart surface as well as any variation in the plungers spring force (due to age or high repetitions) should be considered.

We are able to provide the following formula as an approximation of the pull or push force (N) required to 'release' a ball plunger from its indexing counterpart.

$$F_x = \frac{F}{\tan \frac{\alpha}{2}}$$

F_x = pull or push force (N)

F = plungers spring force (see relevant product table)

α = angle of the indexing counterpart face

For example:

For Spring plunger 31500.W0010;

$F = 24\text{N}$ (see product table)

If $\alpha = 90^\circ$

$$F_x = \frac{24}{\tan \frac{90}{2}} = 24\text{N}$$

If $\alpha = 60^\circ$

$$F_x = \frac{24}{\tan \frac{60}{2}} = 41,5\text{N}$$

If $\alpha = 120^\circ$

$$F_x = \frac{24}{\tan \frac{120}{2}} = 13,8\text{N}$$

ELECTRICAL CONDUCTIVITY

We are often asked the electrical conductivity of our spring plungers, unfortunately we are unable to provide any reliable information related to this as there are many factors in an application. We recommend you study the specific material properties of the spring plunger's component parts to make your own calculations, alternatively if in doubt make a test application.

SPECIALS TO YOUR OWN DESIGN

Manufacturing exactly to your specific requirements is also our strength. If you need a variation in spring pressure, plunger body or pin design we can assist with a special design item for volumes as low as 1,000 units. For further information, or to request a quotation, please call our sales office on **0333 207 4497**.

INDEX PLUNGERS

What is an Index Plunger?

An index plunger is a mechanical device with a retractable pin that automatically expands when space becomes available, thereby locking or indexing an item into place. Index plungers can also be used to ease the positioning of removable parts on machines, equipment assemblies and to help locate the correct component. Available with a variety of different grips and locking functions to suit various applications.



VIEW THE FULL RANGE




Index Plungers - Compact - 32690

Benefits from a more compact design and hence shorter overall length.
Body - blackened steel or stainless steel (303). Pin - steel or stainless steel.
Grip - thermoplastic.



Index Plungers - Pull Grip - 32700

Thread recess on body allows full engagement of thread length. Hexagon collar improves leverage for secure installation.
Body & pin - blackened steel, or stainless steel (303). Grip - thermoplastic.



Index Plungers - Pull Grip - 32702

Non-locking. Suitable for the demands of food processing, pharmaceutical or water treatment applications.
Fully stainless steel (303).

[Products](#) 

Spring & Index Plungers & Ball Lock Pins



Index Plungers

**Index Plungers - Pull Grip - 32570**

Locking and non-locking options. With coarse thread. For quick, simple manual indexing purposes. Body - steel. Grip - thermoplastic.

**Index Plungers - Pull Grip - 32571**

Locking and non-locking options. With coarse thread. Body - stainless steel (303). Grip - thermoplastic.

**Index Plungers - Pull Grip - 32680**

Non-locking. Benefits from a more compact design and shorter length. Body - blackened steel or stainless steel (303). Grip - thermoplastic.

**Index Plungers - No Grip - 32681**

Non-locking. Compact design. Threaded head enables use of larger handle or grip. Body & pin - blackened steel or stainless steel (303).

**Index Plungers - Pull Grip - 32712**

Locking. Designed for food processing, pharmaceutical and water treatment industries. Fully stainless steel (303).

**Index Plungers - Pull Grip - 32710**

Locking. With non-removable grip. Body & pin - blackened steel or stainless steel (303). Grip - thermoplastic.

**Index Plungers - Pull Grip - 32720**

Non-locking. Designed to be welded or glued in place. With or without grip. Body & pin - free cutting steel. Grip - plastic.

**Index Plungers - Pull Grip - 32730**

Locking and non-locking. For thin walled parts. Ideal for compact applications. Body & pin - blackened steel or stainless steel (303). Grip - thermoplastic.

**Index Plungers - Pull Grip - 32740**

Non-locking. With or without grip options. Assembly tool available. Body & pin - blackened steel or stainless steel (303). Grip - thermoplastic.

**Index Plungers - Pull Grip - 32742**

Non-locking. Designed for demands of food processing, pharmaceutical and water treatment industries. Fully stainless steel (303).

**Index Plungers - Push-Pull - 32790**

Non-locking. Ideal for either pressure (push) or tension (pull) applications, due to threads at both ends. Fully steel.

**Index Plungers - Pull Grip - 32494**

Pull grip index plunger with release lock. Body & pin - steel or stainless steel. Knob & button - thermoplastic.

[Products](#) [Spring & Index Plungers & Ball Lock Pins](#)[Index Plungers](#)**Index Plungers - Pull Grip - 32495**

With rapid locking head.
Body & pin - blackened steel or stainless steel. Knob & button - thermoplastic.

**Index Plungers - Pull Ring - 32550**

Non-locking with coarse thread.
Where high precision is not required.
Body - steel. Pin & pull ring - stainless steel (303).

**Index Plungers - Pull Ring - 32551**

Non-locking with coarse thread.
Where high precision is not required.
Fully stainless steel (303).

**Index Plungers - T-handle Grip - 32502**

Non-locking. Easy to grip handle helps improved handling.
Body & pin - blackened steel or stainless steel (303). Grip - thermoplastic.

**Index Plungers - T-handle Grip - 32504**

Locking-type. Easy to grip handle helps improved handling.
Body & pin - blackened steel or stainless steel (303). Grip - thermoplastic.

**Index Plungers - Lever Grip - 32491**

Pin protruding at start. With 90° or 120° actuation. With or without rest position, and safety rest position types available.
Body - steel. Grip - thermoplastic.

**Index Plungers - Lever Grip - 32492**

Pin retracted at start. With 90° or 120° actuation. With or without rest position, and safety rest position types available.
Body - steel. Grip - thermoplastic.

**Index Plungers - Lever Grip - 32500**

Locking type. Turn lever 180° to retract pin. Plastic grip type improves handling.
Body & pin - blackened steel. Grip - thermoplastic.

**Index Plungers - Lever Grip - 32501**

Locking. Plastic grip improves handling.
Body & pin - stainless steel (303).
Grip - thermoplastic.

**Index Plungers - Lever Grip - 32555**

Locking. With coarse thread.
Where high precision is not required.
Fully steel.

**Index Plungers - Precision - 32460**

Locking or non-locking. With cylindrical pin.
Body, pin & bush - blackened steel.
Grip - thermoplastic.

**Index Plungers - Precision - 32480**

Locking or non-locking. With tapered pin.
Body, pin & bush - blackened steel.
Grip - thermoplastic.

[Products](#) [Spring & Index Plungers & Ball Lock Pins](#)[Index Plungers](#)**Index Plungers - Pull Grip - 32602**

Locking or non-locking. Fine threaded. For positioning and indexing in small spaces. Body - steel or stainless (303). Pin - stainless steel (303). Grip - thermoplastic.

**Index Plungers - Pull Grip - 32604**

Locking or non-locking. Coarse threaded. For use on sheet metal assemblies. Body - steel or stainless (303). Pin - stainless steel (303). Grip - thermoplastic.

**Index Plungers - Pull Grip - 32606**

Locking or non-locking. Extra fine thread. For use on sheet metal assemblies. Fully stainless steel (303 & 304).

**Index Plungers - Pull Grip - 32770**

Locking or non-locking. Compact. For installation on thin walled panels/sheet metal of thickness 1 to 5mm. Body - steel. Grip - thermoplastic.

**Index Plungers - Lever Grip - 32520**

Flange mounting, with or without grip. Finished in anti-glare matt black. Body & lever - blackened steel. Grip - thermoplastic.

**Index plungers - Pull Grip - 32530**

Flange mounting with extended pin. Pin assists with locating and indexing. Body - blackened steel. Grip - thermoplastic.

**Index Plungers - Pull Grip & Pull Ring - 32540**

Non-locking. Ideal for quick and simple manual indexing purposes. Body - die cast zinc. Pin & pull ring - stainless steel (303).

**Index Plungers - Pull Grip - 32542**

Locking and non-locking type. With flange mounting. Simplifies installation on horizontal surfaces. Body - die cast zinc. Grip - thermoplastic.

**Index Plungers - Pull Grip - 32760**

Locking and non-locking. With flange mounting. Body - die cast zinc. Pin - steel or stainless steel (303). Grip - thermoplastic.

**Index Plungers - Pull Grip - 32762**

Locking and non-locking. Compact. With flange mounting. Installation requires welding of plunger body to component. Body - blackened steel. Grip - matt finish.

**Locating Feet - 36000**

Non-locking. With threaded shank. Bearing surface without centre. Blackened steel.

BALL LOCK PINS

What is a Ball Lock Pin?

A ball lock pin is a fastener which is used to quickly lock or fasten workpieces together. The pin is pushed through a clearance fit hole and the spring-loaded balls are subsequently pushed out of the pin into a recess - effectively locking the pin in place. Ideal for applications that require repetitive, reliable and rapid assembly, such as; audio and light rigging, gym equipment, scientific and medical applications, "pop-up" installations and displays. Available in steel, stainless steel and titanium with varying shear resistance forces.



VIEW THE FULL RANGE






Clamp Lock Pins - Single Acting - 33230

High-visibility yellow push-button to act as a visual reminder to avoid knocking or bumping equipment.
Pin - stainless steel (303 or 630).
Handle - aluminium.




Ball Lock Pins - Single Acting - 33060

Also in blue, grey and black. For repeated connection of parts with high shear forces.
Pin, ball & spring - stainless steel (630).
Handle - thermoplastic.




Aviation Pip-Pins - Standard T-Handle - 33610

Single acting. For wide range of aviation applications; interior panels, folding tables, ground handling equipment.
Fully steel.

[Products](#) 

Spring & Index Plungers & Ball Lock Pins



Ball Lock Pins

**Ball Lock Pins - Single Acting - 33100**

Elastic handle provides integral spring action to reset pin. Self locking. Pin - stainless steel (303 or 630). Handle - plastic.

**Ball Lock Pins - Single Acting - T-Handle - 33200.1**

Anti-glare finish is excellent for stage rigging applications. Pin & ball - stainless steel (303). Handle - aluminium.

**Ball Lock Pins - Single Acting - L-Handle - 33220.1**

Quick fastening and locking of frequently repeated connections. Self-locking. Fully stainless steel (303).

**Ball Lock Pins - Mushroom Handle - 33224.1**

For limited space applications. Wide selection of diameters and grip lengths. Pin, ball & spring - stainless steel (303). Handle - aluminium.

**Ball Lock Pins - Single Acting - 33104.1**

Adjustable length, up to 10mm, useful for pre-made holes where pin needs adjusting. Pin, ball & spring stainless steel (303). Grip - thermoplastic.

**Ball Lock Pins - Single Acting - 33226.1**

Safety Handle protects against accidental actuation. For quick fastening and locking of frequently repeated connections. Fully stainless steel (303).

**Ball Lock Pins - Contoured Handle - 33194.1**

Designed from a single piece of material to minimise the danger of parts coming away from the pin. Fully stainless steel (303).

**Sling Swivel Pins - 33170**

With natural or black finish. For quick fastening and locking of frequently repeated connections. Fully stainless steel (303).

**Ball Lock Pins - Single Acting - 33178**

Key ring. Self locking. To secure tools to work locations that are elevated. To stop tools from falling and causing accidents. Fully stainless steel (303).

**Aviation Pip-Pins - Standard B Handle - 33600**

Also known as Aviation ball lock pins. Used for frequently repeated operations. Fully steel.

**Ball Lock Pins - Contoured Handle - 33196**

Single piece, with an extremely high strength-to-weight ratio and outstanding corrosion resistance. Pin - titanium. Ball - ceramic. Spring - alloy.

**Socket Pins - Non-locking - 33140**

Balls are simply spring loaded and do not lock out. Easy to pull out, yet very secure. Pin - stainless steel (303). Handle - thermoplastic.

[Products](#) [Spring & Index Plungers & Ball Lock Pins](#)[Ball Lock Pins](#)**Clamping Pins - 33180**

For locking and clamping thin sheets of material. Clamping distance up to 5mm. Pin & spring - stainless steel (303). Handle - thermoplastic.

**Ball Lock Pins - Single-Acting - 33080.B**

Self-locking for quick fastening and locking. Pin, ball & spring - stainless steel (630). Handle - thermoplastic (grey, blue, orange).

**Aviation Pip-Pins, Standard LA Handle - 33620**

Single-acting. For frequently repeated operations such as quick fastening, locking, adjusting, changing and securing. Stainless steel.

**Aviation Pip-Pins, Standard R Handle - 33630**

Single-acting. For frequently repeated operations such as quick fastening, locking, adjusting, changing and securing. Stainless steel.

**Threaded Lock Pins - Self-Locking - 33331**

Can be quickly inserted into a threaded hole, and further tightened up. Pin - steel or stainless steel (303). Handle - thermoplastic.

**Detent Pins - 33010.1**

Solid body with direct spring loaded ball ensures reliable operation. Shaft - steel. Ball & spring - stainless steel (316).

**Detent Pins - Ring Handle - Shoulder - 33014**

With shoulder. Solid body with direct spring loaded ball ensures reliable operation. Shaft - steel. Ball & spring - stainless steel (316).

**Detent Pins - T Handle - Shoulder - 33018**

With shoulder. Solid body with direct spring loaded ball ensures reliable operation. Shaft - steel. Ball & spring - stainless steel (316).

**Detent Pins - T Handle - Shoulder - 33020**

With shoulder. Solid body with direct spring-loaded ball ensures reliable operation. Shaft, ball & spring - stainless steel (303/316).

**Detent Pins - L Handle - Shoulder - 33022**

With shoulder. Solid body with direct spring-loaded ball ensures reliable operation. Shaft, ball & spring - stainless steel (316).

**Detent Pins - 33012.1**

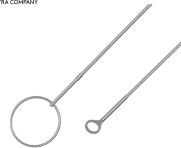
Solid body with direct spring-loaded ball ensures reliable operation. Shaft, ball & spring - stainless steel (303/316).

**Sling Swivel Receivers - 33172**

For quick fastening and locking frequently repeated connections. Indexing at 90°C or non-indexing rotation options. Pin & spring - stainless steel.

[Products](#) [Spring & Index Plungers & Ball Lock Pins](#)[Ball Lock Pins](#)**Lanyards - Loop to Loop with Split Rings - 33250**

For securing components to assemblies. Temperature range up to 250°C (uncoated). Fully stainless steel.

**Lanyards - Eyelet to Loop with Split Rings - 33251**

For securing components to assemblies. Temperature range up to 250°C (uncoated). Fully stainless steel.

**Lanyards - Split Ring to Rectangle Tab - 33252**

For securing components to assemblies. Temperature range up to 80°C. Wire rope, tabs & ring - stainless steel. Crimps - brass. Coating - thermoplastic.

**Lanyards - Ring to Teardrop Tab - 33253**

For securing components to assemblies. Temperature range up to 80°C. Wire rope, tabs & ring - stainless steel. Crimps - brass. Coating - thermoplastic.

**Lanyards - Cable Tie Loop - 33260**

For securing components to assemblies. Temperature range up to 80°. Offers two fixing alternatives. Fully thermoplastic.

**Lanyards - Circlip End to Eyelet - 33265**

Designed specifically to hold ball lock pin 33194. Wire, eyelet, circlip & ring - stainless steel. Coating - PVC. Crimps - brass.

**Retaining Bead Chains - 33270**

To secure single-acting ball lock pins against possible loss. Bead chain & rings - stainless steel (304). End attachments - brass.

**Lanyards - Bead Chains - 33272**

For securing components to assemblies, or to avoid items being misplaced. Bead chain - stainless steel (304). Terminals - brass.

**Flange Bushings for Ball Lock Pins - 33246**

Optimised centering due to precision collar on bush. Pin, ball & spring - stainless steel (303). Handle - thermoplastic.

**Locating Bushes for Ball Lock Pins - 33248**

For quick and safe location of single acting ball lock pins. Optimised centering due to precision collar on bush. Fully stainless steel (303).

QUICK LIFT PINS

What is a Quick Lift Pin?

A quick lift pin is an essential tool for lifting and repositioning heavy items, such as machinery. The lifting pin easily fits in to bored or threaded lifting holes, where it becomes locked in until the lift has been completed. Our self-locking lifting pins are operator-friendly, reliable, and CE certified. These quick lifting pins are much faster to install and remove than threaded lifting rings or threaded eye bolts. Ideal for routine hoisting in warehouses and construction sites where regular lifting is required.



VIEW THE FULL RANGE




Quick Lift Pins - Threaded - 33425

Double swivel. With pivoting shackle and protective bar to prevent unintentional unlocking. Corrosion protected. Pin & shackle - steel or stainless steel (630). Threaded element & spring - stainless steel.



Quick Lift Pins - Threaded - 33430

To suit metric coarse threads. Ideally used for single point straight up lifts. Corrosion protected. Pin & shackle - steel or stainless steel (630). Threaded element & spring - stainless steel.



Quick Lift Pins - Self Locking - 33400

Safety shackle prevents accidental locking/unlocking. For lift forces of up to 4.8Kn. Can be used to lift components at 90°, 45° or 180°. Pin, body & shackle - steel. Spring - stainless steel.

Products [Lifting Pins, Lifting Points & Load Rings](#)[Quick Lift Pins](#)**Quick Lift Pins - Threaded - 33435**

With centering. To suit metric coarse threads. Corrosion protected. Pin & shackle - steel or stainless (630). Threaded element & spring - stainless.

**Quick Lift Pins - Self Locking - 33420**

Safety shackle design for preventing accidental locking or unlocking. Adjustable for lifting components at 45°, 90° or 180°. Pin, shackle, spring - stainless steel (630).

**Lifting Pins - Self-Locking - 33424**

Easy to install T-handle. Corrosion and weather resistant for outdoor application. Pin & spring stainless steel (630). Handle - aluminium.

**Locating Bushes - for Quick Lift Pins - 33440**

They allow quick and safe assembly in a variety of materials, including thin walled parts. Fully stainless steel (630).

**Locating Bushes - for Quick Lift Pins - 33442**

Suitable for applications which require installation flush to the surface. Quick and safe locating of lifting pins. Fully stainless steel (630).

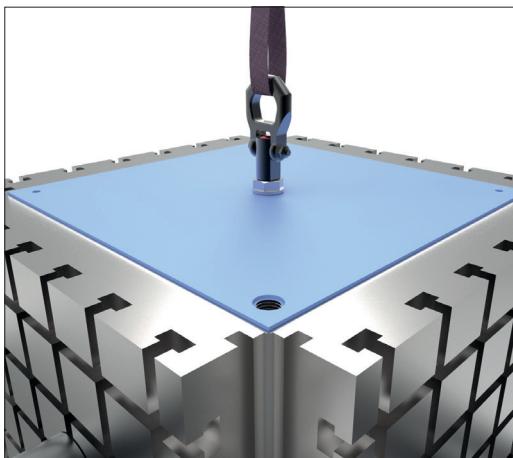
**Locating Bushes with Seal - 33444**

For quick lift pins. To use with 33400 and 33420. Ideal for outdoor use as seal prevents ingress of liquid or dirt. Stainless steel (630) with rubber o-ring.

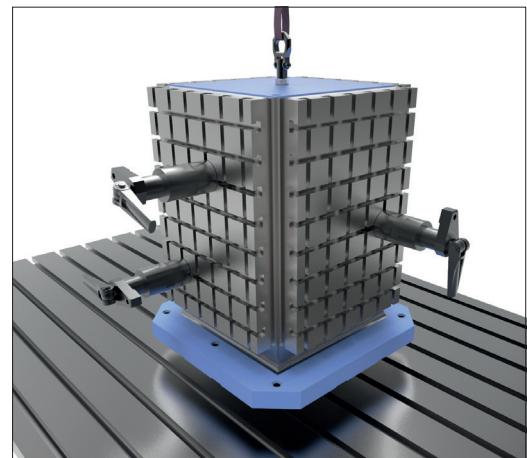
QUICK LIFT PINS IN APPLICATION



Simple, Safe, Strong



Simple...



Safe...



Ergonomic...



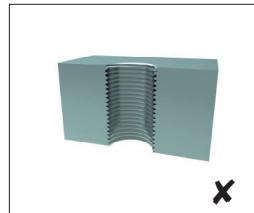
Multifunctional...

Quick and easy to use with every load

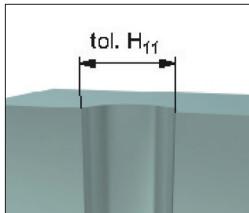
Do you find threaded lifting shackles time consuming to install?

Frustrated with numerous lifting threads in the machine shop? Looking for a simple but reliable alternative?

Then standardise your machine shop lifting to our self-locking lifting pins – CE marked and TUV certified.



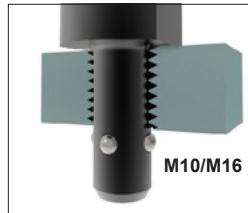
No more threads



Simple plain bore



Press = unlock and fit
Release = lock and lift



Compatible with some pre-threaded holes:
Ø8,3 for M10 threaded hole
Ø13,8 for M16 threaded hole

Simple



Production monitored,
type tested



Fully CE marked

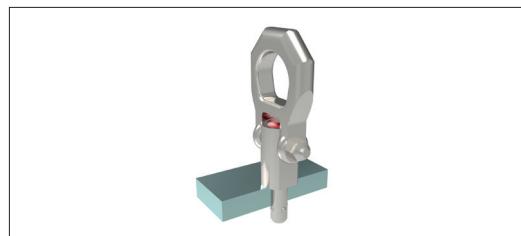


Five-fold safety factor

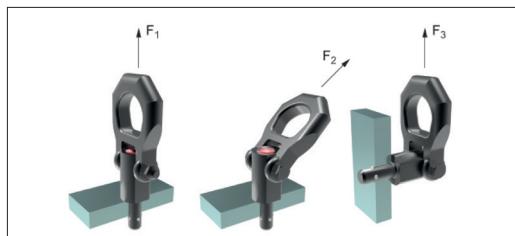


Shackle barrier - prevents
accidental actuation

Safe

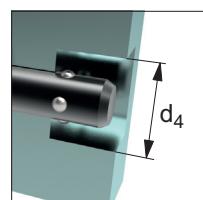


Up to 480 Kg with five-fold safety factor

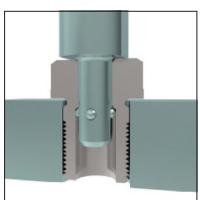


Lift vertically, 45° or 90° - see specific product tables for exact lifting capacities

Strong



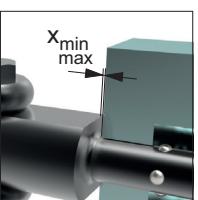
To ensure full clearance for secure engagement of bearings, the minimum clearance d_4 is required in material - see product tables.



For some softer materials such as aluminium, or where there is regular and repeated use, we recommend our hardened locating bushes or liners.



We also proved a stainless steel model for occasional outdoor use. It is not intended for permanent or long term exposure to the outdoor environment or conditions.



Due to the radius on the underside of the lifting face, please ensure x_{\min} is adhered to. Also note x_{\max} to avoid stress on pin when used as angle lift. See product table for details.



Important Notes

LEVELLING FEET & MACHINE MOUNTS IN APPLICATION

Levelling feet and machine mounts are mechanical devices used to **support and level heavy machinery and equipment in industrial applications**. Their main purpose is to provide a **stable base and reduce vibrations caused by the machine's operation**. Levelling feet are typically used to level and support equipment such as conveyors, worktables, and machine frames, while machine mounts are used to support machinery such as motors, pumps, and compressors.

Prevent machine failure or inaccurate results, by using the right levelling feet and machine mounts for your application.



◀ 34705
INDUSTRIAL
LEVELLING FEET



34990 ▶
STAINLESS
MACHINE MOUNTS

SCAN ME TO VIEW THE FULL
LEVELLING FEET & MACHINE
MOUNT RANGE



CONVEYOR SYSTEM

In conveyor systems **levelling feet are used to level and stabilise the conveyor**, while **machine mounts are used to support the motor and gearbox**. The stability provided by levelling feet and machine mounts ensures that the conveyor runs smoothly and accurately, **reducing wear and tear and improving safety**.



34718 LEVELLING FEET BOLT DOWN

Product Details:

Stainless steel, heavy duty.



Levelling feet are used to stabilise the conveyor in this application example.

- ▶ **Adjustable height** to compensate for uneven floors and machinery installation.
- ▶ **Durable materials** that can withstand heavy loads and harsh environments.
- ▶ Anti-vibration and shock-absorbing properties to **minimise machine movement and noise**.
- ▶ **Easy** installation and maintenance.
- ▶ Available in a range of **materials and finishes**.

LEVELLING FEET

What are Levelling Feet?

VIEW THE FULL RANGE



Levelling feet are height adjustable supports for equipment or machinery. Adjustable levelling feet have varying degrees of articulation providing angular adjustment, whilst the use of hex nuts up the threaded stud provide height adjustment. Fixed levelling feet provide a basic support that doesn't require any angular adjustments. Available in steel and stainless bases for more heavy-duty applications and more economical plastic bases for lighter-duty applications.



 **Wixroyd**
AN ESSENTRA COMPANY



Levelling Feet - 34703

With rubber pad. Maximum load values stated in specification refers to static loads. Sizes: M12 - M30. Galvanised steel (C40). Pad - rubber.

 **Wixroyd**
AN ESSENTRA COMPANY



Levelling Feet - Bolt Down - 34702

Has a 20° angle of movement. Sizes: M8 - M24. Pad & bolt - mild steel, nickel plated.

 **Wixroyd**
AN ESSENTRA COMPANY



Levelling Feet - 34721

20° articulation. Sizes: M6 - M12. Pad - polyamide reinforced nylon. Bolt - steel plated.

Products [Levelling Feet, Mounts & Adjusters](#)[Levelling Feet](#)**Levelling Feet - Pad and Bolt - 34701**

Available with or without a bolt. To be used as feet and thrust pads. Sizes: M6 - M24. Fully steel or stainless steel (303).

**Levelling Feet - Non Slip - 34700**

To be used as feet and thrust pads. Used for levelling up to 15° on surface. Rubber cap reduces slipping. Sizes: M6 - M24. Steel or stainless steel (303) with cap.

**Fixed Feet with Hex Socket - 34611**

With anti-slip pad. Maximum load values stated in specification refers to static loads. Sizes: M8 - M10. Pad - polyamide. Bolt - steel.

**Fixed Feet with Hex Socket - 34612**

With anti-slip pad. Maximum load values stated in specification refer to static loads. Sizes: M8 - M10. Bolt - stainless (304). Pad - polyamide.

**Levelling Feet - 34753**

Height adjustable supports for equipment and machinery. Absorbs vibrations. Sizes: M16 & M30. Stud - steel. Base - plastic.

**Mini Levelling Feet - 34616**

Height adjustable supports for equipment and machinery. Absorbs vibrations. Sizes: M8 - M12. Stud - galvanised steel. Base - plastic.

**Mini Levelling Feet with Hex Base - 34619**

Height adjustable supports for equipment and machinery. Absorbs vibrations. Sizes: M8 & M10. Stud - galvanised steel. Base - plastic.

**Mini Levelling Feet - 34631**

Height adjustable supports for equipment and machinery. Absorbs vibrations. Size: M10. Stud - galvanised steel. Base - plastic.

**Levelling Feet - 34760**

For use as feet and thrust pads. Available with or without pad. Sizes: M6 - M24. Bolt & lock nut - stainless steel (303). Pad - thermoplastic.

**Fixed Feet - Non-Tilt - 34610**

Where angular adjustment is not required. Sizes: M8 and M10. Thread - zinc plated steel. Pad - thermoplastic.

**Levelling Feet - 34640**

Tilting. With varying degrees of articulation for angular adjustment. Size M8. Thread - zinc plated steel. Pad - thermoplastic.

**Mini Levelling Feet - 34641**

Height adjustable supports for equipment and machinery. Absorbs vibrations. Sizes: M6 - M12. Stud - steel. Base - plastic with chromate case.

Products [Levelling Feet, Mounts & Adjusters](#)[Levelling Feet](#)**Levelling Feet - 34704**

For heavy duty applications.
Sizes: M10 - M30.
Fully steel base with rubber.

**Levelling Feet - Bolt Down, Medium Duty - 34712**

Bolt has a 20° articulation.
Sizes: M8 - M24.
Fully stainless steel (303).

**Levelling Feet - Bolt Down, Heavy Duty - 34718**

Due to dealing with heavy loads, the thread bolt does not articulate.
Sizes: M16 - M30.
Stainless steel (304) or (316) on request.

**Hygienic Tank Feet - 34777**

For pharmaceutical and food industry in respect of the strictest hygienic regulations. Sizes: M20 - M40.
Fully stainless steel (304).

**Levelling Feet - 34705**

With rubber pad. Swivel with 30° articulation.
Sizes: M10 - M30.
Steel, powder coated, with rubber pad.

**Levelling Feet - 34711**

For food industries, pharmaceutical, electronic, medical and machinery shops.
Sizes: M12 - M24.
Fully stainless (303), nitrile rubber pad.

**Levelling Feet - 34714**

Swivel with 30° articulation.
Sizes: M10 - M30.
Fully stainless steel (304) or (316) available on request, with rubber pad.

**Levelling Feet - Heavy Duty - 34716**

Swivel with 30° articulation.
Sizes M20 - M36.
Fully stainless steel (304) or (316) available on request, with rubber pad.

**Machine Mounts - Vibration Dampening - 34751**

7° articulation. Sizes M10 - M24.
Lock nuts sold separately.
Fully stainless (304), nitrile rubber pad.

**Machine Mounts - Bolt Down - 34752**

7° articulation. Bolt down tag allows the machine mount to be fixed in place.
Sizes: M16 - M24.
Fully stainless (304), nitrile rubber pad.

**Machine Feet - Low Profile - 34780**

Suitable for food, drink, pharmaceutical and clean room environments.
Sizes: M8 - M24.
Fully stainless (304), nitrile rubber pad.

**Mini Levelling Feet - Articulated - 34614**

Swivel with 30° articulation. Size: M8.
Fully stainless steel (304) or (316) available on request, with rubber pad.

[Products](#) [Levelling Feet, Mounts & Adjusters](#)[Levelling Feet](#)**Machine Mounts with Hygienic Seal - 34770**

For clean room applications.
20° articulation. Sizes: M12 - M20.
Bolt & pad - stainless steel (304).
Seal - nitrile rubber.

**Hygienic Levelling Feet - 34772**

For clean room applications. 20° articulation. Sizes: M16 - M30.
Base & screw - stainless steel (304) with vulcanized rubber.

**Levelling Feet - 3A Standard - Hygienic Line - 34778**

Designed for effective and easy cleaning.
Corrosion resistant, non-toxic.
15° articulation. Sizes M6 - M24.
Stainless steel (304). Pad - nitrile rubber.

**Levelling Feet - 34723**

Adjustable, with 30° articulation.
With anti-slip pad. Sizes: M8 - M20.
Bolt - galvanised steel.
Pad - polyamide.

**Levelling Feet - Heavy Duty - Bolt Down Option - 34726**

Adjustable, with 30° articulation.
With anti-slip pad. Sizes: M16 - M30.
Bolt - steel.
Pad - polyamide.

**Levelling Feet - 34724**

Adjustable, with 30° articulation. With anti-slip pad. Sizes: M10 - M24.
Bolt - steel.
Pad - polyamide.

**Levelling Feet - 34743**

Adjustable, with 30° articulation. With anti-slip pad. Sizes: M8 - M20.
Bolt - stainless steel (304).
Pad - polyamide.

**Levelling Feet - Bolt Down Option - 34744**

30° articulation. Larger pad allows drill through. Anti-slip pad. Sizes: M10 - M24.
Bolt - stainless steel (304).
Pad - polyamide.

**Levelling Feet - Heavy Duty - Bolt Down Option - 34746**

30° articulation. Larger pad allows drill through. Anti-slip pad. Sizes: M16 - M30.
Bolt - stainless steel (304).
Pad - polyamide.

**Hygienic Levelling Feet - 34771**

For clean room applications. Adjustable, 16° articulation. Nut shroud used to prevent contamination. Sizes: M20 - M30.
Screw - stainless (304). Base - polyamide.

**Levelling Feet - 34741**

Adjustable, 20° articulation.
Sizes: M6 - M12.
Bolt - stainless steel (303).
Pad - polyamide reinforced nylon.

**Levelling Feet - Bolt Down - 34722**

With plastic mounting hole plugs to prevent waste entering. Adjustable, 20° articulation. Sizes: M12 - M24.
Bolt - steel. Pad - nylon.

LIFTING RINGS & EYE BOLTS

What are Lifting Rings & Eye Bolts?

VIEW THE FULL RANGE



A lifting ring is a swiveling attachment fixed to an object, designed for lifting. It allows freedom of movement for the hoisted load, with options like doubly articulated for better sling alignment and triply articulated for parallel hook movement. An eyebolt is a metal bolt with an eye, specifically crafted for lifting at angles up to 45° from the thread. Ideal for permanent mounting on components like motors and switchgear cabinets. We also offer specialist fall arrest lifting bolts suitable for supporting personnel during maintenance.



Lifting Eye Bolts - Male - 18864

They are installed and remain on a piece of equipment for the purpose of transporting them. Not to be used at lifting angles greater than 45°.
Fully stainless steel (316).



Double Swivel Rings Male - 63050

Double articulation. Very low overhang for improved safety. Large support surface. Longer or shorter thread lengths can be supplied. Strength class >8.
Fully high tensile steel.



Fall Arrest Swivel Rings - 63350

Single articulation of full 360°. Typically used in building maintenance, wind power and offshore industries. Corrosion resistant. Strength class >8.
Fully high tensile steel.

Products **Wixroyd®**
AN ESSENTRA COMPANY[Lifting Pins, Lifting Points & Load Rings](#)[Lifting Rings & Eye Bolts](#)**Female Lifting Eye Bolts
- 18843**

DIN 582. Installed and remain on a piece of equipment for the purpose of transporting them. Zinc plated steel (C15E).

**Female Lifting Eye Bolts
- 18844**

DIN 582. Installed and remain on a piece of equipment for the purpose of transporting them. Stainless steel (316).

**Female Lifting Eye Bolts -
Imperial - 18846**

DIN 582. Installed and remain on a piece of equipment for the purpose of transporting them. Imperial sizes. Zinc plated steel (C15E).

**Male Lifting Eye Bolts
- 18863**

DIN 580. Installed and remain on a piece of equipment for the purpose of transporting them. Zinc plated steel (C15E).

**Male Lifting Eye Bolts -
Imperial - 18866**

DIN 580. Installed and remain on a piece of equipment for the purpose of transporting them. Imperial sizes. Zinc plated steel (C15E).

**Double Swivel Shackles Male
- 63080.1**

Double articulation. Very low overhang for improved safety. Large support surface. Fully high tensile steel.

**Double Swivel Lifting Points
- 63120**

Double articulation. For wire rope. Low overhang for improved safety. Fully high tensile steel.

**Double Swivel Nuts Female
- 63054**

Double articulation. Very low overhang for improved safety. Large support surface. Fully high tensile steel.

**Double Swivel Shackle Nuts
Female - 63084**

Double articulation. Designed to be used directly with the hook of the crane. Fully high tensile steel.

**Stainless Double Swivel Rings
- 63200**

Double articulation. Very low overhang for improved safety. Large support surface. Fully high tensile stainless steel (316L).

**Stainless Double Swivel Nuts
- 63204**

Double articulation. Very low overhang for improved safety. Large support surface. Fully high tensile stainless steel (316L).

**Swivel Eye Bolts Male - 63020**

Single articulation, 360°. Very low overhang for improved safety. Large support surface. Fully high tensile steel.

[Products](#) [Lifting Pins, Lifting Points & Load Rings](#)[Lifting Rings & Eye Bolts](#)**Swivel Eye Bolts Male - 63022**

Single articulation. Very low overhang for improved safety. Large support surface. Stainless steel (316L).

**Swivel Eye Nuts Female - 63024**

Single articulation. Permits the hook to move parallel to the supporting face of the ring when being pulled at 90° angle. Fully high tensile steel.

**Lifting Points - Double Swivel - Male - 63501**

Double articulation. Standard bar. Black oxide coated. Forged alloy steel (4140).

**Lifting Points - Double Swivel - Male - 63502**

Double articulation. Long bar. Black oxide coated. Forged alloy steel (4140).

**Lifting Points - Double Swivel - Male - 63511**

Double articulation. UNC thread. Standard bar. Black oxide coated. Forged alloy steel (4140).

**Lifting Points - Double Swivel - Male - 63512**

Double articulation. UNC thread. Long bar. Black oxide coated. Forged alloy steel (4140).

**Lifting Points - Double Swivel - Male - 63521**

Double articulation. Standard bar. Black oxide coated. Forged alloy steel (4140).

**Lifting Points - Double Swivel - Male - 63522**

Double articulation. Long bar. Black oxide coated. Forged alloy steel (4140).

**Lifting Points - Double Swivel - Male - 63531**

Double articulation. UNC thread. Standard bar. Black oxide coated. Forged alloy steel (4140).

**Lifting Points - Double Swivel - Male - 63532**

Double articulation. UNC thread. Long bar. Black oxide coated. Forged alloy steel (4140).

**Lifting Points - Double Swivel - Male - 63591**

Double articulation. EZ-torque hoist rings reduce required torque load. Black oxide coated. Forged alloy steel (4140).

**Lifting Points - Double Swivel - Male - 63592**

Double articulation. UNC thread. EZ-torque hoist rings reduce required torque load. Black oxide coated. Forged alloy steel (4140).

Products [Lifting Pins, Lifting Points & Load Rings](#)[Lifting Rings & Eye Bolts](#)**Stainless Double Swivel Rings - 63210**

Double articulation. Very low overhang for improved safety. Large support surface. Some imperial sizes. Fully high tensile stainless steel (316L).

**Lifting Points - Double Swivel - Male - 63571**

Double articulation. Standard bar. Coarse thread. Fully stainless steel (300).

**Lifting Points - Double Swivel - Male - 63572**

Double articulation. Long bar. Coarse thread. Fully stainless steel (300).

**Lifting Points - Double Swivel - Male - 63581**

Double articulation. Standard bar. UNC thread. Imperial sizes. Fully stainless steel (300).

**Lifting Points - Double Swivel - Male - 63582**

Double articulation. Long bar. UNC thread. Imperial sizes. Fully stainless steel (300).

**Stainless Double Swivel Nuts - 63214**

Double articulation. Very low overhang for improved safety. Large support surface. Some imperial sizes. Fully high tensile stainless steel (316L).

Instructional Overview

Operating instructions

Note: The full thread must be engaged. Longer thread lengths can be supplied on request or a bolt and washer/nut combination can be used.

- Ensure all lifting bolts are CE marked.
- Ensure they are handled by qualified personnel.
- Refer to the operating instructions particularly with regards to product selection, any possibility of the load swivelling, the effect of lifting angles on the load capacity (see relevant tables), etc.
- Never allow any personnel underneath a suspended load.
- Always heed the load rating of the lifting bolt.
- Always perform a visual inspection of the lifting rings prior to use. Checking for any damage to thread and/or swivelling system. Check for wear or corrosion, signs of stress or bending.
- Ensure a yearly full service inspection is performed.
- Always ensure the full bottom face of the lifting bolts is in contact with a smooth, square surface.
- Ensure bolt is tightened to the correct torque.
- Ensure full and unrestricted movement of the lifting ring in all directions.
- Before each lift ensure the correct orientation of the shackle in the lift direction.
- Avoid using our standard steel lifting rings in corrosive environments eg. sandy, chemical, acid, moisture etc. In this case consider using our stainless steel lifting rings.
- Note the thread length requirements:
 - 1 x thread diameter for steel (ST37 min.).
 - 1.25 x thread diameter for cast iron.
 - 2 x thread diameter for aluminium.
 - 2.5 x thread diameter for other light metals.
 - If fixing into low resistance material it is better to allow for a bigger diameter thread to compensate for the lower material resistance.

Temperature extremes

-40°C to -20°C

Load rating reduces by 20%.

+200°C to +300°C

Load rating reduces by 10%.

+300°C to +400°C

Load rating reduces by 25%.

Rugged environments

REPORT OF THOROUGH EXAMINATION
This report complies with the requirements of the Lifting Operations and Lifting Equipment Regulations 1998

READ IN CONJUNCTION WITH PRODUCT LEAFLET

Date of Thorough Examination: _____
Name and Address of customer for whom the thorough examination was carried out: _____

Description and identification of the equipment, including type, dimension and part number: _____

Material: _____

Batch/Serial Number: _____

This part is CE marked in compliance with European Directive: 2006/42/EC

Identification of any part found to have a defect which is or could become a danger to persons and a description of the defect. If none state 'NONE' _____
None. _____
N/A _____

To the above an existing defect does not exist. _____
Particulars of any defect found in the equipment: _____
(If none state 'NONE') _____

Visual inspection for compliance. _____

IS THIS EQUIPMENT SAFE TO OPERATE?
Name of person making this report: _____
Name of person authenticating this report: _____
Signature: _____
Latest date by which next thorough examination must be carried out: _____
6 months from report date _____

Name and address of employer of persons making and authenticating this report: _____
Wixroyd International Limited, Alexa House, Glenmore Business Park, Portfield Works, Chichester PO19 7BJ

Wixroyd International Ltd, Alexa House, Glenmore Business Park, Portfield Works, Chichester PO19 7BJ
Tel: 0333 201 4277, Email: info@wixroyd.com
Web: www.wixroyd.com

Refer to Safety Guide in conjunction with this document. Original declaration of conformity is available on request
November 24, 2021

SPECIMEN

For harsh environments we recommend the use of our stainless steel lifting rings.



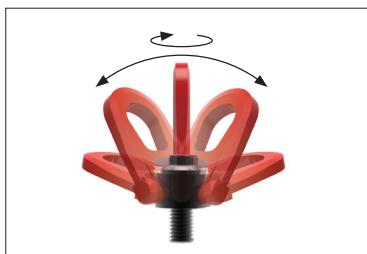
63200 - Threads M8 – M30
Loads 0,3 tons – 3 tons.

63210 - Threads M30 – M45
Loads 3,5 tons – 6 tons.

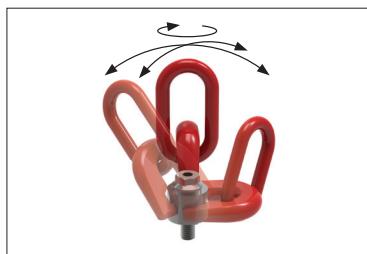
Benefits of Swivel Lifting Rings Over Lifting Rings



Single swivel - threads M8 – M48
loads 0,3 tons – 15 tons



Double swivel - threads M4 – M100
loads 0,05 tons – 50 tons



Triple swivel - threads M8 – M56
loads 0,3 tons – 22 tons

Swivel lifting rings

Our swivel lifting rings fully comply with the EC directive 2006/42/EC. They are CE marked and are supplied with a Certificate of Conformity. There is a 100% check on anti-cracking, a proof load test of 2.5 x load limit and a safety factor of 5 on most parts. Each ring is individually marked to ensure full product traceability.

The Swivel Lifting Rings come in three main forms – depending on the number of axis required to swivel. The most popular type is the double swivel rings.

Pros

- ✓ Individual CE certification
- ✓ CE marked
- ✓ 100% physical check
- ✓ Proof load test of 2.5 x load limit
- ✓ Safety factor 5x stated load
- ✓ 100% traceability with individual marking
- ✓ Complies with 2006/42/CE
- ✓ Axial load
- ✓ Max. load bearing 90°
- ✓ Max. lateral load 90°
- ✓ Swivel loads
- ✓ Forces across lifting ring plane (double and triple swivel type)

Cons

High tensile lifting rings

The High-tensile lifting bolts are similar to the standard lifting bolts but are rated at higher loads and can lift loads at up to 90° from the thread. They are not meant for loads that might swivel.

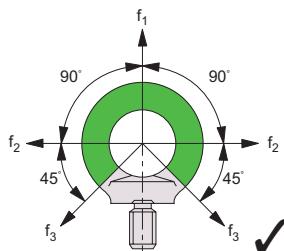
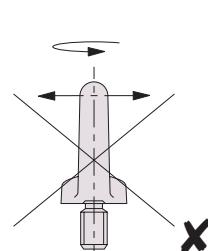
Pros

- ✓ CE marked
- ✓ Axial load
- ✓ Max. load bearing 90°
- ✓ Max. lateral load 90°

Cons

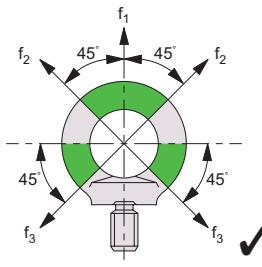
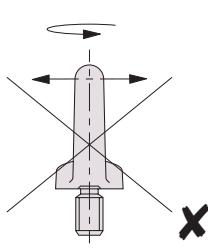
- ✗ Individual CE certification
- ✗ Shear tension
- ✗ Swivel loads
- ✗ Forces across lifting ring plane

Important Note:
Forces must act in the direction of the lifting ring plane.



Standard lifting rings DIN580 and DIN582

These are CE marked and are available with male or female threads in either steel or stainless steel (A4 AISI 316). They are meant only for axial loads, or load bearing or lateral loads at a maximum of 45° from the thread. They are not for use under shear tension or loads (across the thread), nor for loads likely to swivel.



Pros

- ✓ CE marked
- ✓ Axial load
- ✓ Max. load bearing 45°
- ✓ Max. lateral load 45°

Cons

- ✗ Individual CE certification
- ✗ Shear tension
- ✗ Swivel loads
- ✗ Forces across lifting ring plane

Applied forces must act in the direction fo the eye bolt plane, do not apply forces across the eye bolt plane.

Important Note: Forces must act in the direction of the lifting ring plane.

THUMB SCREWS

What is a Thumb Screw?

VIEW THE FULL RANGE



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.



Knurled Thumb Screws - 37140

One-piece manufactured with thread up to the head, as shown, but no recess at the thread end. Sizes: M3 - M10. Fully blackened steel.



Flat Knurled Thumb Screws - 37040

One-piece manufactured with thread up to the head. Sizes: M4 - M10. Fully stainless steel (303)



Flat Knurled Nuts - 37120

Turned, visible face, good finish. Sizes: M3 - M12. Fully blackened steel.

[Products](#) 

Thumb, Captive & Sealing Screws



Thumb Screws

**Flat Knurled Thumb Screws - 37020**

One-piece manufactured with thread up to the head. Sizes: M3 - M10. Turned, visible face, good finish. Fully blackened steel.

**Knurled Thumb Screws - 37150**

One-piece manufactured with thread up to the head, as shown, but no recess at the thread end. Sizes: M3 - M8. Fully stainless steel (303). Matt.

**Knurled Nuts - with Collar - 37100**

Sizes: M3 - M12. Turned, visible face, good finish. Fully blackened steel.

**Knurled Nuts - with Collar - 37110**

Sizes: M2.5 - M10. Fully stainless steel (303). Matt.

**Flat Knurled Nuts - 37130**

Sizes: M3 - M10. Fully stainless steel (303). Dull blasted.

**Knurled Nuts - 37160**

With or without pin hole. Tolerance of pin hole is H7. Sizes: M5 - M12. Fully blackened steel.

**Knurled Nuts - 37170**

With or without pin hole. Tolerance of pin hole is H7. Sizes: M5 - M12. Fully stainless steel (303). Matt, shot-blasted.

**Thin Head Thumb Screws - 37200**

Typically used in food and pharmaceutical applications. Sizes: M3 - M5. Fully stainless steel (303).

**Plastic Knurled Nuts - 37330**

Temperature resistant from -30°C to + 80°C. Sizes: M4 - M10. Body - thermoplastic. Insert - steel or stainless steel (303).

**Knurled Thumb Screws - Plastic, Grub Screw - 37352**

Temperature range from -30°C up to +80°C. Sizes: M4 - M10. Handle - thermoplastic. Screw - steel.

**Knurled Thumb Screws - Plastic, Grub Screw - 37354**

Temperature range from -30°C up to +80°C. Sizes: M5 - M10. Handle - thermoplastic. Screw - stainless steel (303).

**Quick Tightening Knurled Knobs - 37360**

Used when quick tightening is required and with only a slight clamping force. Sizes: M6 - M12. Blackened steel.

[Products](#) [Thumb, Captive & Sealing Screws](#)[Thumb Screws](#)**Thumb Knobs - 37460**

Knurled or smooth edge finish. Used when a push or pull movement is required.
Sizes: M4 - M10.
Blackened or stainless steel (303). Matt.

**Tommy Screws - with Fixed Bar - 38000**

With or without thrust pad. With fixed bar.
Sizes: M6 - M20.
Black steel.

**Tommy Nuts - with Moveable Bar - 38100**

With or without thrust pad. With moveable bar retained by spring. Sizes: M8 - M20.
Black steel.

**Tommy Nuts - with Fixed Bar - 38200**

With fixed bar. Sizes: M8 - M20.
Black steel.

**Tommy Nuts - with Moveable Bar - 38300**

With moveable bar retained by spring.
Sizes: M8 - M20.
Black steel.

GRIPS

What are Grips?

A grip is a versatile component used for industrial design engineering, commonly used in cabinetry, machinery doors or as clamping screws in collapsible structures. Available in various shapes, sizes, threads, fixing options and durable materials like plastic with steel or stainless steel threads. Our extensive range includes palm, star, three, six and eight lobed grips, wing nuts, knurled, ball and mushroom knobs. These high-quality grips contribute to the functionality and efficiency of industrial projects, meeting the demands of a wide array of design and engineering needs.



VIEW THE FULL RANGE






Palm Grips - Aluminium - 70040

Available with smooth blind hole, threaded through or threaded blind hole.
Threaded sizes: M8 - M16.
Polished or unpolished aluminium.




Six Lobed Knobs - with Grub Screw - 70720

Sizes: M6 - M16.
Grip - duroplast, black. Grub screw - zinc plated steel.




Three Lobed Knobs - with Grub Screw - 70590

Sizes: M6 - M10.
Grip - thermoplastic, black. Grub screw - stainless steel.

[Products](#) [Grips, Handles & Handwheels](#)[Grips](#)**Palm Grips - Cast Iron - 70000**

Available unmachined, smooth or threaded through bore, smooth or threaded blind hole. Sizes: M6 - M20. Cast iron GG20.

**Palm Grips - Plastic Coated Cast Iron - 70020**

Available with smooth blind hole or threaded blind hole. Sizes: M8 - M16. Cast iron GG20. Plastic coated in orange or black. Dull finish.

**Six Lobed Knobs - 70680**

Available as threaded through or with threaded bush. Sizes: M4 - M12. Grip - duroplast. Bush - brass.

**Three Lobed Knobs - Plastic - 70580**

Sizes: M6 - M10. Grip - thermoplastic, black. Bush - stainless steel.

**Palm Grips - Die-cast Stainless Steel - 70042**

Available unmachined, with threaded through bore or threaded blind hole. Sizes: M6 - M12. Stainless Steel (304), dull blasted.

**Palm Grips - Plastic - 70060**

Temperature range max. 110°C. Sizes: M4 - M16. Grip - duroplast, black. Threaded bush - steel or stainless steel A2.

**Palm Grips - with Grub Screw - 70080**

Temperature range up to 110°C. Sizes: M5 - M16. Grip - duroplast, black. Grub screw - steel, stainless steel A2.

**Star Grips - Cast Iron - 70100**

Available unmachined, smooth or threaded through bore, smooth or threaded blind hole. Sizes: M6 - M16. Cast iron GG20.

**Star Grips - Aluminium - 70120**

Available unmachined, smooth or threaded through bore, smooth or threaded blind hole. Sizes: M8 - M16. Polished or unpolished aluminium.

**Star Grips - Die-cast Stainless Steel - 70122**

Available unmachined, threaded through bore or threaded blind hole. Sizes: M6 - M20. Stainless steel (304), dull blasted.

**Star Grips - Plastic - 70140**

Temperature range max 110°C. Sizes: M4 - M16. Grip - duroplast, black. Threaded bush - steel, stainless steel A2 or brass.

**Star Grips - Female - 70160**

Available with smooth or threaded blind hole. Sizes: M8 - M12. Grip & hub - stainless steel (304).

[Products](#) [Grips, Handles & Handwheels](#)[Grips](#)**Knurled Knobs - 72410**

Bush with tapped hole. Sizes: M4 - M8.
Grip - thermoplastic, black, matt finish.
Bush - brass.

**Knurled Knobs - 72420**

Bush with tapped through hole.
Sizes: M4 to M5.
Grip - thermoplastic, black, matt finish.
Bush - brass.

**Knurled Knobs - with Stud - 72430**

Sizes: M4 - M8.
Grip - thermoplastic, black, matt finish.
Stud - zinc plated steel.

**Knurled Knobs - 72440**

With threaded bush, grub screw or philips grub screw. Sizes: M4 - M6.
Grip - thermoplastic, black. Bush - brass.
Stud - zinc plated steel.

**Quarter Turn Screws, Male - 37380**

Used to develop higher clamping torques.
Sizes: M6 - M10.
Grip - stainless steel (316). Screw - stainless steel (304). Matt finish.

**Quarter Turn Screws, Female - 37400**

Used to develop higher clamping torques.
Sizes: M6 - M10.
Fully stainless steel (316). Matt finish.

**Wing Nuts - 37420**

Available in threaded blind or threaded through hole. Sizes: M6 - M10.
Fully stainless steel (304), matt finish.

**Wing Nuts - Plastic - 72180**

Available in threaded bush or threaded through. Sizes: M5 - M8.
Nut - thermoplastic, black. Matt finish.
Bush - Brass.

**Wing Nuts - Plastic - with Grub Screw - 72190**

Sizes: M5 - M8.
Wing nut - thermoplastic, black, matt finish.
Stud - zinc plated steel.

**Ball Knobs - Plastic - 73000**

Available with moulded thread, threaded bush or taper bore. Sizes: M4 - M12.
Grip - duroplast, black. Bush - zinc plated steel.

**Ball Knobs - Steel - 73002**

Often found on levers and gear shifts.
Sizes: M4 - M12.
Polished steel.

**Ball Knobs - Stainless Steel - 73004**

Often used in machinery, various devices for manual adjustments. Sizes: M4 - M10.
Fully stainless steel (304), dull blasted.

[Products](#) [Grips, Handles & Handwheels](#)[Grips](#)**Ball Knobs - 73006**

Often found on levers, gear shifts etc.
Sizes: M4 - M12.
Polished aluminium.

**Revolving Ball Knobs - 73020**

Hexagonal locking blind hole. Often found on levers and gear shifts. Sizes: M8 - M10.
Grip - duroplast, black. Stud - zinc plated steel.

**Gear Shift Knobs - 73100**

Temperature range max. 110°C.
Sizes: M5 - M12.
Fully duroplast, black.

**Three Lobed Knobs - 70620**

Sizes: M5 - M16.
Grip - duroplast, black. Bush - brass.

**Three Lobed Knobs - with Grub Screw - 70630**

Sizes: M6 - M12.
Grip - duroplast, black. Stud - zinc plated steel.

**Three Lobed Knobs - 70640**

Threaded through or threaded bush.
Sizes: M6 - M12.
Grip - thermoplastic, black. Matt finish.
Bush - brass.

**Three Lobed Knobs - with Grub Screw - 70660**

Sizes: M6 to M10.
Grip - thermoplastic, black. Matt finish.
Stud - zinc plated steel.

**Six Lobed Knobs - 70700**

Threaded through or threaded bush.
Sizes: M6 - M12.
Grip - duroplast, black. Bush - brass.

**Six Lobed Knobs - 70740**

With threaded bush or grub screw.
Sizes: M6 - M12.
Grip - duroplast, black. Bush or thread - stainless steel (303).

**Six Lobed Knobs - 70760**

Threaded through, threaded bush or with grub screw. Sizes: M4 - M6.
Grip - thermoplastic. Bush - brass.

**Eight Lobed Knobs - 70800**

Threaded through or threaded bush.
Sizes: M4 - M12.
Grip - thermoplastic. Matt finish.
Bush - brass.

**Eight Lobed Knobs - with Grub Screw - 70820**

Size: M4 - M12.
Grip - thermoplastic. Matt finish.
Stud - zinc plated.

HANDLES

What are Handles?

Handles are simple, durable, and ergonomically designed for providing a grip for stability or an opening point. We supply high grade industrial handles suited for commercial and industrial use, as well as sleek and attractive handles for cabinet doors or instrument panels. Available in stainless steel, aluminium and plastic with a range of grip styles, these components ensure reliability and longevity and deliver durability in a broad range of applications.



VIEW THE FULL RANGE




Cabinet Handles - Rear Mounting - 78000

Ergonomic design offers high stability and smooth surfaces. Aluminium. Black plastic coated or natural silver anodised, bright.


Pull Handles - 78120

Rear or front mounting type. For 19" drawers and instrument panels. Self locking nuts supplied for the front mounting type. Aluminium.


Pull Handles - Plastic - 79120

Extremely resistant to torsion and easy to grip. With hex screws, suitable nuts and washers. Matt black or orange. Thermoplastic.

[Products](#) [Grips, Handles & Handwheels](#)[Handles](#)**Pull Handles - Heavy Duty - 79200**

Straight or offset type. Provides high stability under load. For 10° front panels and appliances. Natural or black colour. Shank & grip - aluminium. Pin - stainless.

**Pull Handles - 78800**

Standard and safety mounting. With suitable screw, nut and washer. For food industries. Stainless steel. Ring - silicone rubber.

**Pull Handles - Round Steel Bar - 78700**

Precision ground and high gloss chromium plated surface. Brass cover washers included. Bar - steel.

**Pull Handles - Plastic with Coloured Caps - 79100**

Cap colours in black, red, green, blue and yellow, or without caps and screws. With bolts, nuts and washers. Handle - thermoplastic. Matt black.

**Cabinet Handles - Front Mounting - 78010**

Ergonomic design offering high stability and smooth surfaces. Aluminium. Black plastic coated or natural silver anodised, bright.

**Pull Handles - Oval - 78020**

Anodised in matt natural or black. Aluminium.

**Pull Handles - Oval - 78030**

For engineering, instrument and apparatus building. Anodised in matt natural or black. Aluminium.

**Pull Handles - 78720**

Ground, brushed, matt chromium plated or black powder coated. Bar - Ø20mm round steel.

**Pull Handles with Plastic Cover - 78740**

Precision ground and matt gloss chromium plated surface handle arms. Plastic cover. With brass end bushes. Bar - Ø10mm round steel.

**Pull Handles - Cranked - 78760**

Other bore clearances on request. Matt chromium plated or black powder coated. Bar - Ø20mm round steel.

**Pull Handles - Front or Rear Mounting - 78820**

Front or rear mounting. Natural or plastic covered. With suitable screw, nut and washer. Stainless steel. Tube - plastic coated.

**Pull Handles - 78830**

Angular D-handle. Front or rear mounting. With suitable screw, nut and washer. Semi-matt finish. Fully stainless steel (304).

[Products](#) [Grips, Handles & Handwheels](#)[Handles](#)**Ledge Handles - 78850**

Other lengths on request. Blasted and electro-polished with a semi-matt finish. Fully stainless steel (316).

**Pull Handles - 78190**

Ideal for applications where one-sided fastening required. Matt black. Fully thermoplastic.

**Finger Pulls - Recessed - 79430**

Two types available. Compact finger pulls for doors/enclosures of minimum thickness 30mm. Satin finish. Fully stainless steel (304).

**Plastic Pull Handles - 79150**

Through hole or threaded bush. Front or rear mount. Other colours on request. Handle - thermoplastic. Threaded bush - brass.

**Pull Handles - Heavy Duty - 79210**

Straight, offset or angled. Supplied with hex screws and suitable washers. Semi-glossed finish. Aluminium.

**Pull Handles - 79240**

Fitted with 4 clamping pins. Natural or plastic finish. With suitable screws, nuts and washers. Shank - polyamide. Tube - aluminium.

**Pull Handles - 79250**

Two types available. Natural or plastic finish. With suitable screws, nuts and washers. Shank - polyamide. Tube - aluminium.

**Pull Handles - Recessed - 79440**

Rear mounting. Supplied with spacer and screws (M4x8). Body - plastic. Cover - zinc alloy, chrome, satin nickel or brass finish.

**Pull Handles - Recessed - 79460**

For harsh and high corrosive environments. M4 mounting screws required. Satin finish. Fully stainless steel (304).

**Pull Handles - Recessed - 79470**

Supplied with stainless steel M5 nut. Satin finish. Fully stainless steel (304).

**Tray Handles - Collapsible - 79540**

Spring return feature - returns from working to resting position when released. Fully stainless steel (304).

**Pull Handles - Collapsible - 79550**

Snap-lock or pull-back type. Front and rear mounting possible. Natural finger profiling in the handle. Fully aluminium.

[Products](#) [Grips, Handles & Handwheels](#)[Handles](#)**Tray Handles - Plastic - 79552**

Mountable in front or behind housing wall. Finger profiling at the rear of the hinged handle. Fully polyamide.

**Finger Pulls - 79660**

Ideal for cabinets, enclosures or furniture. Black or grey. Pull - polyamide. Insert - threaded brass bushing.

**Pull Handles - Clean Line - Oval - 79820**

Two types available. Especially suited for food and medical industries. Fully aluminium.

**Pull Handles - Clean Line - Flat Oval - 79830**

Two types available. Especially suited for food and medical industries. Fully aluminium.

**Pull Handles - Clean Line - 79840**

Standard or angled. Especially suited for food and medical industries. Fully aluminium.

**Ring Pulls - Recessed - 79711**

Supplied with stainless steel screws (3.8x16). Fully stainless steel (304).

**Ring Pulls - Recessed - 79720**

Supplied with stainless steel screws (3.8x16). Fully stainless steel (304).

**Ring Pulls - Recessed - 79730**

Supplied with stainless steel screws (3.8x16). Fully stainless steel (304).

**Cold Forming Handles - 79583**

Suitable for applications where durability is critical. Fully nickel plated steel.

**Trunk Handles - 79584**

Designed for instrument cases or similar applications. Fully brass plated or zinc plated steel.

**Hatch Pulls - 79690**

T-handle design. Handle is concealed when not in use. Supplied with stainless steel screws. Fully stainless steel (304).



For edge of a front panel for more subtle, less bulky appearance. Supplied with stainless steel screws (3.5x20). Fully stainless steel (304).

HANDWHEELS

What is a Handwheel?

A handwheel is a device often used in industrial engineering applications for situations where manual adjustments are required (e.g. to open valves). They are especially useful in heavy machinery so must be very durable and reliable. Our handwheels include 2 spoke, 3 spoke and disc type styles and are made from the highest quality materials to DIN standards such as plastic, cast iron, steel and stainless steel. Available with or without keyway or fold-away handles.



VIEW THE FULL RANGE



Three Spoked Handwheels - 77010

The pilot hole allows various sizes of holes to be machined into the hub. Standard - duroplast. Reinforced - duroplast with glass fibre beads. Hub - zinc plated steel.



Three Spoked Handwheels - Rotating Grip - 77030

The pilot hole allows various sizes of holes to be machined into the hub. Standard - duroplast. Reinforced - duroplast with glass fibre beads. Hub - zinc plated steel.



Cast Iron Handwheels - 77100

Gripping indentations on the rear sides. With or without keyway or handle, with or without rotating handle. Handwheel - grey cast iron.

[Products](#) [Grips, Handles & Handwheels](#)[Handwheels](#)**Handwheels - Two Spoked - 77300**

With or without keyway or handle.
Aluminium mould casting.
Handle - plastic.

**Two Spoked Handwheels - 77340**

Pilot hole allows various sizes of holes,
keyways to be machined.
Thermoplastic. Hub - zinc plated steel.

**Two Spoked Handwheels - Rotating Grip - 77360**

Standard or reinforced type. Pilot hole
allows various sizes of holes, keyways to
be machined.
Thermoplastic. Hub - zinc plated steel.

**Two Spoked Handwheels - Fold-Away Grip - 77380**

Rotating. Fold-away revolving handle.
Pilot hole allows various sizes of holes,
keyways to be machined.
Thermoplastic. Hub - zinc plated steel.

**Three Spoked Handwheels - 77060**

Gripping indentations. Pilot hole allows
various sizes of holes, keyways to be
machined.
Thermoplastic. Hub - zinc plated steel.

**Three Spoked Handwheels - Rotating Grip - 77070**

Gripping indentations. Revolving handle.
Pilot hole allows various sizes of holes,
keyways to be machined.
Thermoplastic. Hub - zinc plated steel.

**Three Spoked Handwheels - Fold-Away Grip - 77080**

Fold-away rotating grip. Gripping
indentations. Pilot hole allows various
sizes of holes, keyways to be machined.
Thermoplastic. Hub - zinc plated steel.

**Three Spoked Handwheels - Fold-Away Grip - 77040**

Fold-away rotating grip. Pilot hole allows
various sizes of holes, keyways to be
machined.
Thermoplastic. Hub - zinc plated steel.

**Aluminium Handwheels - 77120**

With or without keyway, rotating or fixed
handle.
Aluminium. Hub - rim polished.

**Stainless Steel Handwheels - 77140**

With or without keyway or handle.
Stainless steel. Hub - rim turned and
mirror-finished, non-machined
surfaces cleanly blasted.

**Handwheels - 77420**

With round or square bore diameter.
Resistant to shock and impacts. Cost
effective option.
Steel, plastic coated.

**Handwheels - 77430**

With round or square bore diameter.
With welded hub.
Fully stainless steel (303).

[Products](#) [Grips, Handles & Handwheels](#)[Handwheels](#)**Disk Type Handwheels - 77200**

Gripping indentations on the rear side. With or without keyway. Aluminium. Hub - rim turned and mirror-finished, non-machined surfaces cleanly blasted.

**Disk Type Handwheels - 77400**

Gripping indentations on the rear side. With or without keyway and handle. Aluminium. Handle - duroplast. Hub - rim turned and mirror-finished, non-machined surfaces cleanly blasted.

**Solid Disc Handwheels - 77600**

The pilot hole allows various sizes of holes, keyways etc. to be machined into the hub. Duroplast. Hub - zinc plated steel.

**Solid Disc Handwheels - 77620**

The pilot hole allows various sizes of holes, keyways etc. to be machined into the hub. Duroplast. Hub - zinc plated steel.

**Solid Disc Handwheels - Fold-Away Rotating Grip - 77640**

The pilot hole allows various sizes of holes, keyways etc. to be machined into the hub. Duroplast. Hub - zinc plated steel.

**Solid Disc Handwheels - Double Fixed Handle - 77680**

The pilot hole allows various sizes of holes, keyways etc. to be machined into the hub. Duroplast. Hub - zinc plated steel.

**Solid Disc Handwheels - 77720**

Gripping indentations. Pilot hole allows various sizes of holes, keyways etc. to be machined into the hub. Thermoplastic. Hub - zinc plated steel.

**Solid Disc Handwheels - Rotating Grip - 77740**

Gripping indentations. Pilot hole allows various sizes of holes, keyways etc. to be machined into the hub. Thermoplastic. Hub - zinc plated steel.

**Solid Disc Handwheels - Fold-Away Rotating Grip - 77760**

Gripping indentations. Pilot hole allows various sizes of holes, keyways etc. to be machined into the hub. Thermoplastic. Hub - zinc plated steel.

CLAMPING LEVERS

What are Clamping Levers?

VIEW THE FULL RANGE



A clamping lever is a versatile and ergonomic device used for fastening, securing, or releasing objects with ease. Adjustable and fixed clamping levers, are useful design components and are available in various sizes and shapes, featuring both female and male threads. These levers play a crucial role in applications such as machinery or fixtures, providing a quick and efficient means to apply or release clamping force. Our range offers durable materials like plastic with steel or stainless steel threads.



 **Wixroyd**
AN ESSENTRA COMPANY



Free Running Safety Clamping Levers - Grub Screw - 74880

Unique safety handle. Where accidental loosening or readjustment can result in accidents. Sizes: M6 & M8. Lever - technopolymer. Inner parts - steel, embedded in black plastic.

 **Wixroyd**
AN ESSENTRA COMPANY



Adjustable Clamping Levers - 74430

With grub screw. Male thread. Torx head collar screw. Sizes: M4 - M16. 20° angled. Lever - die-cast zinc. Inner & screw - blackened steel.

 **Wixroyd**
AN ESSENTRA COMPANY



Adjustable Clamping Levers - 74410

Threaded bore. Female thread. Sizes: M3 - M16. 20° angled. Lever - die-cast zinc. Inner & screw - blackened steel.

[Products](#) [Grips, Handles & Handwheels](#)[Clamping Levers](#)**Adjustable Clamping Levers - 74470**

With axial bearing. Threaded bore. 16° angled. Sizes: M6 - M12. Lever - die-cast zinc. Inner - heat-treated, nitrated steel.

**Adjustable Clamping Levers - 74380**

For applications with aggressive environments. Threaded bore. 20° angled. Sizes: M5 - M10. All parts - stainless steel.

**Adjustable Clamping Levers - 74780**

With grub screw. Other button colours on request. Sizes: M5 - M16. Lever - thermoplastic. Inner - zinc plated steel.

**Adjustable Clamping Levers - 74820**

With grub screw. 16° angled. More colours and sizes on request. Sizes: M4 - M16. Lever - thermoplastic. Stud - zinc plated steel.

**Adjustable Clamping Levers - 74760**

Threaded insert. Other button colours on request. Sizes: M5 - M16. Lever - thermoplastic. Inner - zinc plated steel.

**Adjustable Clamping Levers - 74800**

Threaded insert. Special sizes and colours on request. 16° angled. Sizes: M4 - M16. Lever - thermoplastic. Inner - brass.

**Adjustable Clamping Levers - 74830**

Threaded insert. Other colours on request. 16° angled. Sizes: M6 - M10. Lever - thermoplastic. Insert - stainless steel.

**Adjustable Clamping Levers - 74840**

Thread grub screw. Other colours on request. 16° angled. Sizes: M6 - M10. Lever - thermoplastic. Thread - stainless steel (303).

**Free Running Safety Clamping Levers, Threaded Insert - 74860**

Unique safety handle. Where accidental loosening can result in accidents. Sizes: M4 - M8. Lever - polyamide. Inner - blackened steel.

**Adjustable Clamping Levers - 74490**

Low height. For restricted areas. Threaded or smooth bore. Sizes: M8 - M16. Lever - die-cast zinc, black or silver. Inner - blackened steel. Plastic cover.

**Adjustable Clamping Levers - 74494**

Low height. For restricted areas. Screw can be changed. Sizes: M10 - M16. Lever - die-cast zinc, black or silver. Inner - blackened steel. Plastic cover.

**Adjustable Clamping Levers - 74500**

With threaded bore or grub screw. 20° angled. Sizes: M6 - M20. Lever, screw, inner parts - blackened steel. Ball knob - plastic.

[Products](#) [Grips, Handles & Handwheels](#)[Clamping Levers](#)**Gear Lever Handles - 74600**

Ball knob or cylindrical handle. Ball or taper type. Sizes: M6 - M14. Knob - duroplast. Shaft - steel or stainless (303).

**Split Hubs for Gear Lever Handles - 74700**

To use with 74600. For mounting on shafts without prior machining. Sizes: M8 - M12. Sintered. steel.

**Adjustable Clamping Levers - Threaded Bore - 74440**

For medical and chemical industries. 20° angled. Sizes: M3 - M16. Lever - die-cast zinc. Inner parts - stainless steel (303).

**Adjustable Clamping Levers - 74492**

Low height. For restricted areas. Threaded or smooth bore. Sizes: M8 - M16. Lever - die-cast zinc. Inner - stainless steel. Cover - plastic.

**Adjustable Clamping Levers - 74496**

Low height. For restricted areas. Adjustable lever. Sizes: M10 - M16. Lever - die-cast zinc. Inner - stainless steel (303).

**Adjustable Clamping Levers - 74460**

With grub screw. For medical and chemical industries. Sizes: M4 - M16. Lever - die-cast zinc. Inner & screw - stainless steel (303).

**Adjustable Clamping Levers - 74520**

With threaded bore. For confined spaces. 20° angled. Sizes: M6 - M12. Lever - stainless steel (303). Ball knob - plastic.

**Adjustable Clamping Levers - 74530**

With grub screw. For confined spaces. 20° angled. Sizes: M8 - M12. Ball knob - black plastic. Lever - stainless steel (303).

**Clamping Levers - 74960**

Threaded insert. 20° angled. Special size and colours on request. Sizes: M5 - M16. Handle - thermoplastic. Insert - brass.

**Clamping Levers - 74970**

With grub screw. 16° angled. Special size and colours on request. Sizes: M6 - M12. Handle - thermoplastic. Stud - zinc plated steel.

**Adjustable Clamping Levers - 74390**

With grub screw. For harsh environments like chemical industries. 20° angled. Sizes: M5 - M10. All parts - stainless steel.

**Clamping Levers - 73920**

Welded. 20° angled. Low price version. Sizes: M8 - M20. Case - hardened or stainless steel (303). Shaft butt welded.

[Products](#) [Grips, Handles & Handwheels](#)[Clamping Levers](#)**Clamping Nuts - 73922**

Welded. Double sided. Two - handed operating. 20° angled. Sizes: M8 - M20. Steel or stainless steel (304).

**Clamping Levers - 74000**

Ideal where a lacquered finish is required. 30° angled. Sizes: M8 - M20. Malleable iron.

**Double Clamping Levers - 74100**

For boiler making and special purpose machinery. 30° angled. Sizes: M8 - M20. Malleable iron.

**Clamping Levers - 74200**

Smooth or threaded bore. 20° angled. Sizes: M6 - M24. Blackened steel.

**Clamping Levers - 74201**

Smooth or threaded bore. 20° angled. Sizes: M6 - M16. Stainless steel (303).

**Clamping Levers - 74300**

Smooth or threaded bore. 20° angled. Sizes: M8 - M20. Handle - blackened steel. Ball knob - plastic.

**Clamping Levers - 74301**

Threaded bore. 20° angled. Sizes: M8 - M16. Handle - stainless steel (303). Ball knob - plastic.

**Palm Grips - 70550**

With axial bearing. Threaded - blind or grub screw. Sizes: M6 - M12. Grip - thermoplastic. Inner - nitrated black, steel.

**Adjustable Clamping Levers - 74472**

With female axial bearing. No damage to clamped parts. Sizes: M6 - M12. Lever - die-cast zinc. Inner parts - stainless steel.

**Adjustable Clamping Levers - 74480**

Axial bearing and grub screw. 20° angled. Sizes: M6 - M12. Lever - die-cast zinc. Inner - steel.

**Adjustable Clamping Levers - 74482**

Axial bearing and grub screw. 20° angled. Sizes: M8 - M12. Lever - die-cast zinc. Inner - stainless steel.

**Free Running Safety Star Grips - 70300**

Free running when not engaged. Ideal where loosening may cause accidents. Sizes: M6 - M10. Body - technopolymer. Bush - steel.

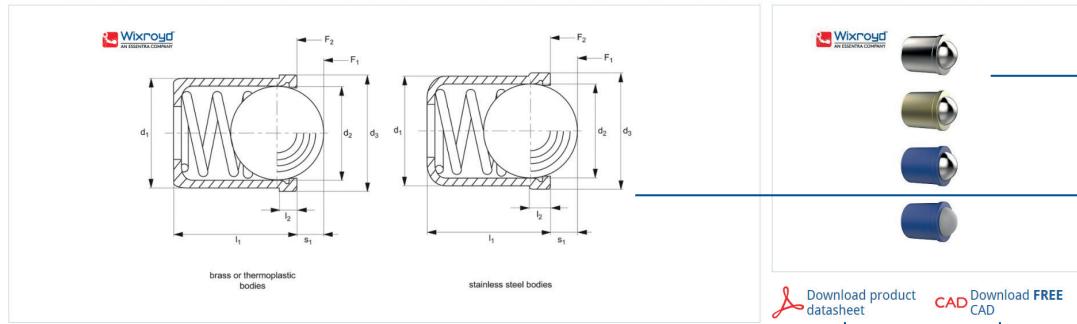
WEBSITE PRODUCT PAGE OVERVIEW

This **visual guide** will help you **navigate our product pages** to help you easily find what you are looking for.

PRODUCT PAGE FOCUS

32300 Spring Plungers

smooth model, with collar and ball- stainless steel, material: Stainless steel, delrin or brass



Each product has a diagram drawing and a render of the product, with direct links to PDF datasheets and CAD download where applicable.

Price & Availability	CAD	Order No.	Spring load	Finish	Units	d ₁ -0/+0.1	d ₂	d ₃	l ₁	l ₂	s ₁	Spring load F ₁ N	Spring load F ₂ N	Temperature max. °C	Weight g
all	all	all	all	all	all	5.00	6.5	7.0	1.00	1.80	7.3	19.0	+250	1.00	
✓ CAD 32300.W2006	Heavy	Body & Ball Stainless	6												
✓ CAD 32300.W2008	Heavy	Body & Ball Stainless	8	6.50	8.5	9.0	1.10	2.40			11.0	25.0	+250	2.70	
✓ CAD 32300.W2010	Heavy	Body & Ball Stainless	10	8.50	11.0	13.0	1.50	3.30			17.0	37.0	+250	4.40	
✓ CAD 32300.W2012	Heavy	Body & Ball Stainless	12	10.00	13.0	16.0	2.30	4.00			30.0	54.0	+250	7.30	

Buy more & save with our quantity discounts

Units	Price/unit after discount	Applied Discount
1	£ 5.55	0%
20	£ 5.00	10%
50	£ 4.72	15%
100	£ 4.16	25%
500	£ 3.61	35%

Each listed product shows a unit price for 1 unit and the discounted price when multiples are ordered.

Technical & Application

Material

Body: stainless steel 1.4303 (AISI 305), brass, or thermoplastic POM, blue.
Ball: ball bearing steel 1.3505 (100Cr6) hardened or thermoplastic POM, white.
Spring: stainless steel 1.4568 (X7CrNiAl17-7).

Technical Notes

Used for locating, applying pressure or lifting off.
Spring loads * = statistical average values.
Thermo type temperature range -30°C to +50°C.
Stainless and brass type, temperature range max. 250°C.
For calculation of indexing resistance please refer to spring plunger technical pages.

Tips

These are press fit spring plungers. Typical hole tolerance is H7 for manual assembly.
These fit tolerances vary with type of material so a trial hole is recommended.
Light spring load- marked with one line.
Standard spring load- no marking.
Heavy spring load- marked with two lines.
Special types available on request.

Product Datasheets

32300 Spring Plungers

Smooth Body - Push Fit

Spring Plunger & Detent Pins

Spring & Index Plungers & Ball Lock Pins

Design Elements

CAD files

1.67 MB 32300 Acis

2.23 MB 32300 IGES

5.18 MB 32300 Parasolid

17.79 MB 32300 ProE

62.67 MB 32300 SolidWorks

32300 Step

PRODUCT OVERVIEW & DIAGRAMS

Render

Product diagram

Product datasheet PDF & FREE CAD download

PRODUCT, CAD & AVAILABILITY

Filters

Order online, including on your account
CAD download link

Applied discount dependant on unit quantities required

Despatch information

TECHNICAL & APPLICATION

Material, Technical Notes and Tips for product

CAD download link

Product datasheet PDF download links

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Across our brands we offer an **extensive website** showcasing a large range of products, supported by **great stock availability, detailed product datasheets, application examples, free CAD downloads and easily accessible live chat, email and phone support** at your fingertips, should you need any technical advice. Each brand has a different product offering, please see below for an overview of which brand may be more suited to you.

► DESIGN ELEMENTS

Our range of standard parts from spring plungers to lifting pins.

► ACCESS COMPONENTS

A broad range of components enhancing access applications.

► WORKHOLDING

From fixing elements to clamping systems and base plates we have an extensive range of workholding solutions.



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A huge variety of mechanical components with a large range of fasteners made in-house at our Chichester site.

► LINEAR COMPONENTS

A leading supplier of linear with an extensive range available.

► LINKAGES & ROTARY COMPONENTS

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► SCREWS & WASHERS

Screws & washers available in a large range of materials from nylon and polypropylene to stainless steel, brass and titanium.

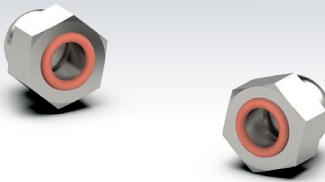
► QUICK RELEASE PINS

From T-handle to spring loaded pull pins and lanyards.



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