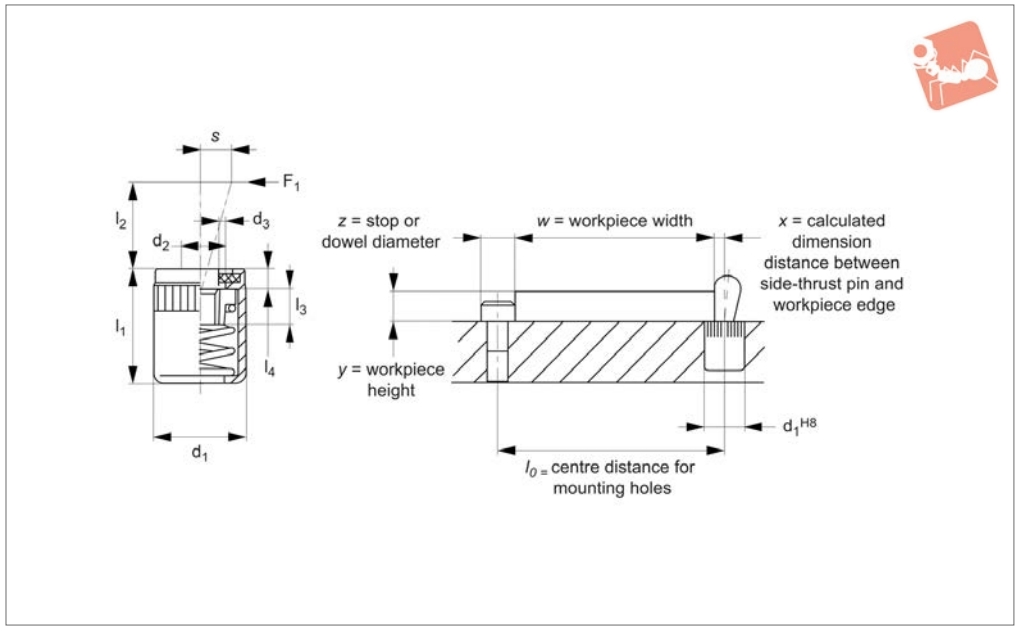
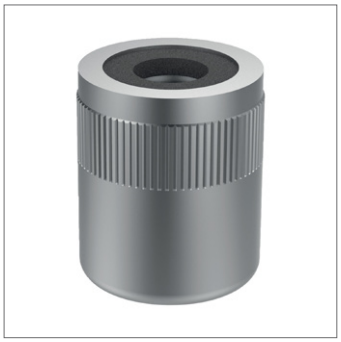




32830.2

Material
Body: aluminium.
Threaded Washer: steel, blackened.
Spring: steel (blackened or blue galvanized), or stainless steel.
Seal: rubber (CR), 60 shore.

Technical Notes
Press fit installation into hole d_1 to tol. H8, using fitting tool (order separately).
Installation calculations;
A) Calculating centre distance for mounting holes (l_0);
$l_0=(z/2)+w+x$

B) Calculating pin location (x);

When workpiece height (y) is greater than or equal to $l_2-(d_2/2)$ then (x) is calculated as; $x=(d_2/2)-s$

When workpiece height (y) is less than $l_2-(d_2/2)$ then (x) is calculated as;
$x=(d_2/2)-s-\{[l_2-(d_2/2)-y]*0.123\}$

l_0 = centre distance for mounting holes
y = workpiece height
w = workpiece width
x = distance between side-thrust pin and workpiece edge
s = stroke
z =stop or dowel stop diameter

Tips
Side-thrust pins are ideal for holding, clamping and positioning parts.
Spring colour gives visual indication of spring pressure (N).
Light spring load = natural stainless spring.
Standard spring load = steel spring, blackened.
Heavy spring load = steel spring, blue galvanized.

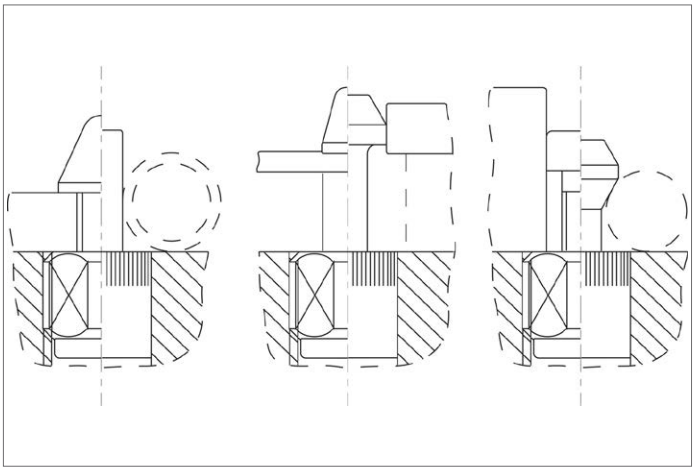
Order No.	Spring load	d_1	d_2	d_3	l_1 -2	l_2	l_3	Weight g
32830.W0401	Light	10	M 4	6.3	11	2.5	4.5	2
32830.W0402	Standard	10	M 4	6.3	11	2.5	4.5	2
32830.W0403	Heavy	10	M 4	6.3	11	2.5	4.5	2
32830.W0404	Light	10	M 4	6.3	11	7.5	4.5	2
32830.W0405	Standard	10	M 4	6.3	11	7.5	4.5	2
32830.W0406	Heavy	10	M 4	6.3	11	7.5	4.5	3
32830.W0407	Light	16	M 6	10.3	18	11.5	7.5	9
32830.W0408	Standard	16	M 6	10.3	18	11.5	7.5	9
32830.W0409	Heavy	16	M 6	10.3	18	11.5	7.5	9

Order No.	l_4	Location hole d_1 tol. H8	Spring colour	Spring pressure N	Stroke s	Temp. resistance °C max.	Fitting tool 32810
32830.W0401	1.8	10	S/S	20	1.6	110	.W0831
32830.W0402	1.8	10	Black	50	1.6	110	.W0831
32830.W0403	1.8	10	Blue	100	1.6	110	.W0831
32830.W0404	1.8	10	S/S	40	2.0	110	.W0831
32830.W0405	1.8	10	Black	75	2.0	110	.W0831
32830.W0406	1.8	10	Blue	100	2.0	110	.W0831
32830.W0407	2.0	16	S/S	100	3.2	110	.W0833
32830.W0408	2.0	16	Black	150	3.2	110	.W0833

Side-Thrust Pins - With Seal

for use with pins of your own design

Order No.	l_4	Location hole d_1 tol. H8	Spring colour	Spring pressure N	Stroke s	Temp. resistance °C max.	Fitting tool 32810
32830.W0409	2.0	16	Blue	200	3.2	110	.W0833



A Wide Selection of Solutions

Applications

- Locating and positioning.
- Indexing.
- Securing.
- Positive locking.
- Rapid adjustment of all kinds of tables, platforms and fixtures.
- Machine and fixture design.
- OEM products.
- Sports equipment.
- Medical aides (wheelchairs etc.).
- Aerospace.
- Machine cabinets.

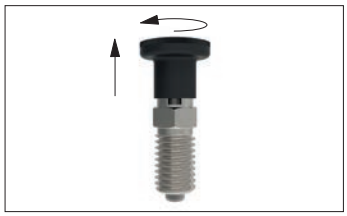
Materials

Steel with plastic grip

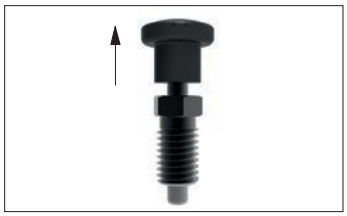
Stainless with plastic grip

Stainless body and grip

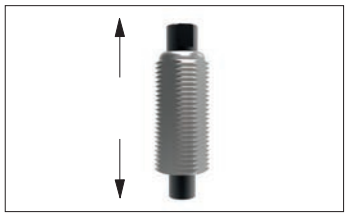
Locking or Non Locking



Locking (park)



Non locking (spring back)



Push pull

Handling and Actuation Methods

Standard grip

Lever grip

T-handle

Pull ring

Threaded for bespoke handle

Mounting Options

Fine threaded (standard)

Coarse thread

Flange mount

Thin wall mount

Weldable

Additional Technical Notes

- Unless otherwise stated, grips on index plungers are not removable.
- Many of the pins on index plungers are toleranced to either the pin or the hole. Please refer to the specific product table.
- Index plungers are not recommended for shear load applications.

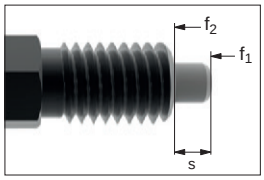
	Pin Tol.	Hole Tol.
1	h_9	+0,03 +0,08
2	-0,02 -0,04	H_7

Spring Loads

s Stroke, or movement of plunger's pin.

f_1 The force required in Newtons (N) to over come the static strength of the spring and achieve initial movement of the plunger's pin.

f_2 The force required in Newtons (N) to fully compress the spring until the pin is fully depressed against the plunger's body.



ov-W32460-A-T-W32790-A-T-a-rnh - Updated - 27-10-2022

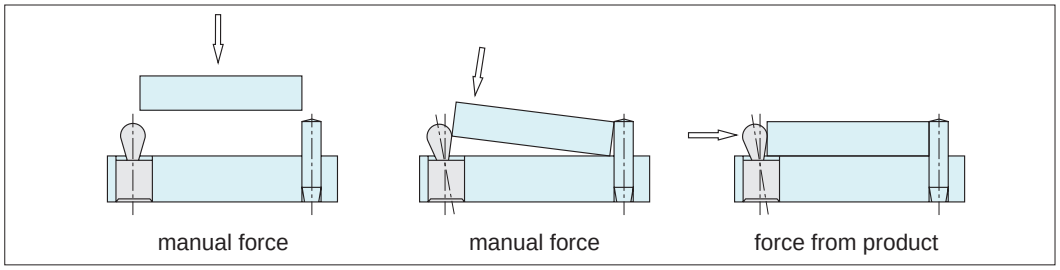
Wixroyd Side-Thrust Pins

for clamping, positioning and holding components

Wixroyd side-thrust pins are an economical way to clamp, hold and position components – from low height PCB's to relatively large castings.

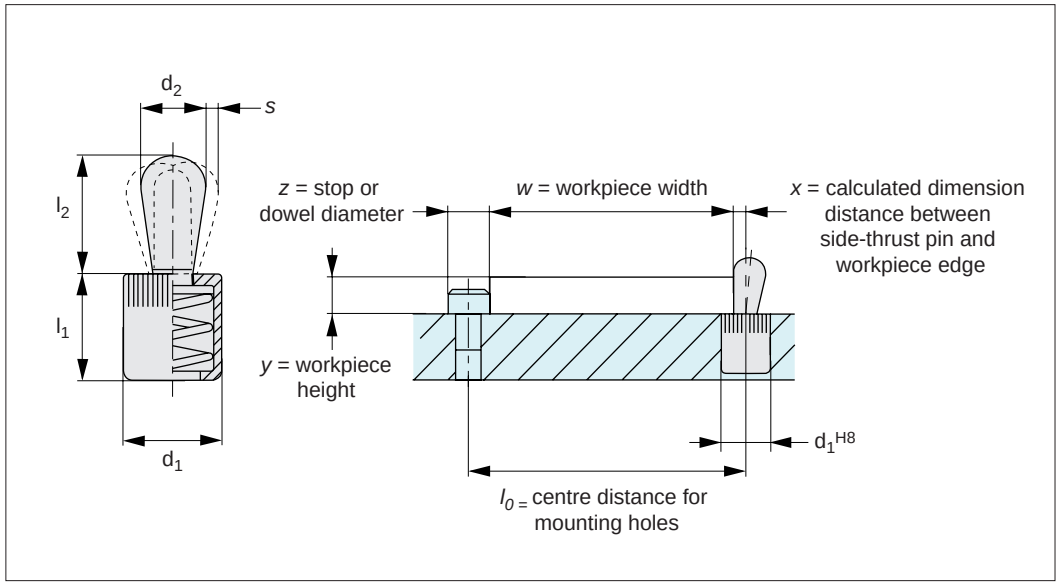
Easy to Use

Simple to mount, easy to use and space saving.



- Easy handling.
- Minimum mounting space.
- Simple and rapid changeover.
- Ideal for flat pieces.
- Reduced clamping times.
- Constant clamping pressure.

Installation Calculations of Side Thrust Pins



A) Calculating centre distance for mounting holes (l_0);

$l_0=(z/2)+w+x$

B) Calculating pin location (x);

When workpiece height (y) is greater than or equal to $l_2-(d_2/2)$ then (x) is calculated as;

$x=(d_2/2)-s$

When workpiece height (y) is less than $l_2-(d_2/2)$ then (x) is calculated as;

$x=(d_2/2)-s-\{[l_2-(d_2/2)-y]*0.123\}$

l_0 = centre distance for mounting holes

y = workpiece height

w = workpiece width

x = distance between side-thrust pin and workpiece edge

s = stroke

z = stop or dowel stop diameter

ov-W32810-A-T-W32870-A-T-a-Inh - Updated - 27-10-2022

The best selection of side thrust pins is made with consideration to the following four factors:

a) Pin size Ø
b) Pin material
c) Sealed or non-sealed pin
d) Required pin force

Pin Size Ø

Pin size Ø	Application
3 mm	Circuit boards, thin metals
4 mm	Electronics, measuring equipment, small precise parts
5 mm	Drilling jigs, sheet metal, measuring devices, welding fixtures
6 mm	Fixtures for light machine parts and castings
8 mm	Fixtures for medium machine parts and castings
10 mm	Fixtures for heavy machine parts and castings

Pin Material

Plastic pins for sensitive parts. Steel pins for other parts. Stainless steel pins in corrosive environments.

Sealed or Non-sealed Pin

With/without seal	Application	Operation
Use side-thrust pins with seal e.g. 32820, 32850 etc	Milling, drilling, reaming, broaching, honing, engraving	Machining
	Washing, polishing, painting, sand blasting	After machining
Use side-thrust pins without seal e.g. 32810, 32840 etc	Gluing, welding, hard soldering	Prior to machining
	Gripping, inserting, fitting	Final mounting
	Measuring, controlling, loading	Quality assurance
	Soft soldering, checking	Processing circuit boards

Pinforce - Guide Only

Positioning applications 30 - 60 N. Clamping applications 90 - 150 N.

Compression Spring Type

Available in an aluminium body, and in various spring pressures from 10 to 300N. Each pin size is usually available in 3 spring pressures.

Pressure	Low	Medium	High
Spring Colour	Stainless	Black	Blue

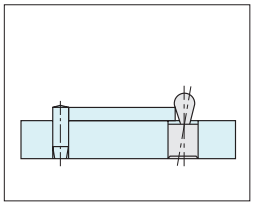
Elastomer Spring Type

Available in elastomer body and in various spring pressures from 10 to 160N.

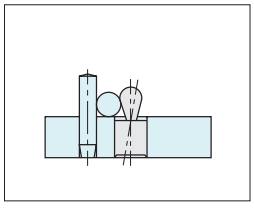
Typical Applications

Side-thrust pins find applications in the following industries and more:

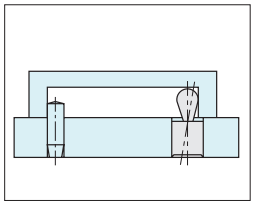
- Automotive.
- Aviation.
- Electronics.
- Computing.
- Plastics.
- Medical.
- Precision engineering.
- Tool manufacturing.



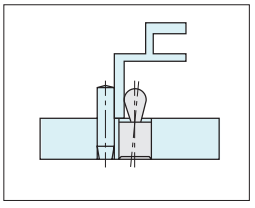
Positioning and clamping even extremely flat parts (e.g. metal sheets and printed circuit boards).



Positioning and clamping round metal using the deep drawing effect.



Space saving positioning and clamping from the inside to the outside.



Positioning and clamping different profiles when welding. Material expansions compensated for by flexibility of the side-thrust pin.