

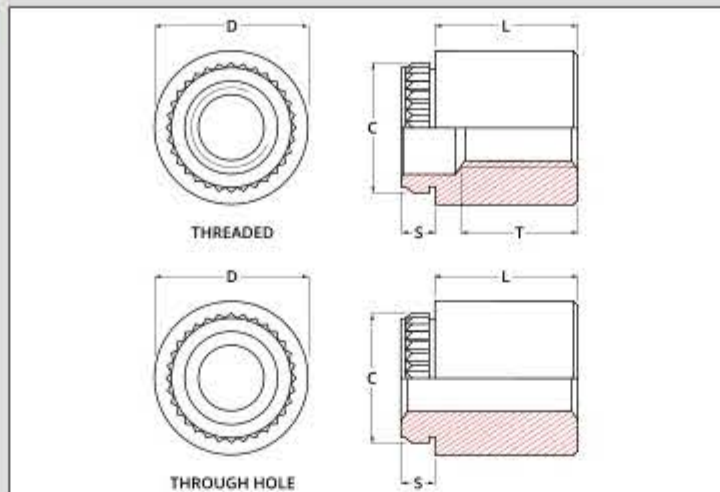


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## BROACHING

- Broaching Nuts
- Broaching Studs
- Broaching Standoffs
- Flare-Mounted Broaching Standoffs
- Quick Release Broaching Standoffs
- Broaching Panel Fasteners



## BROACHING STANDOFFS



## OUR PRODUCT RANGE

- Self-Clinching Fasteners
- Broaching Fasteners
- Arnold & Shinjo Fasteners
- Rivet Bushes
- Rivet Nuts
- Weld Fasteners
- Cage Nuts
- Blind Rivets
- Inserts for Plastics
- Inserts for Stone, Solid Materials, Composites & Sandwich Panels
- Crown-Nuts
- Fast-Con
- Installation Equipment
- Turned & Cold Formed special parts made to order

### Info

Broaching standoffs provide strong reusable threads or thru-holes in a spacer format in non-ductile materials such as printed circuit board, polycarbonate, acrylic, glass epoxy and resin laminate components as well as ductile panels with a maximum hardness of 60HRB.

Featuring an axially knurled shank, the serrations are designed to cut into the panel material as it is installed, resulting in an interference fit that offers good torque-to-turn resistance and pull-out performance. Installation is simple, prepare the specified hole and using a flat punch and appropriate anvil, apply a parallel squeezing force to press the part into the hole. When installing in printed circuit board, broaching standoffs are suitable for use in non-plated holes only.

Available in metric thread and thru-hole sizes in electro tin plated steel and A2 stainless steel, broaching standoffs are suitable for installation in panels with a maximum hardness of 60HRB.

### Dimensional

Thread size	Thru-hole +0.10 -0.08	Min. panel thickness	S Max.	C ±0.08	D ±0.13	Hole size +0.08 -0.0	Min. CL to edge of panel
M3 x 0.5	3.30	1.53	1.53	4.68	5.56	4.22	4.40
M3.5 x 0.6	3.60	1.53	1.53	5.87	7.14	5.41	5.50
M4 x 0.7	4.20	1.53	1.53	6.86	8.74	6.40	7.10

Length (L) ±0.13	3	4	5	6	8	10	12	14	16	
Minimum thread length (T) (where applicable)	Fully threaded						9.50 ±0.40			

## SERVICES & SUPPORT

- Bespoke fastener design & development
- Fastener & Application testing
- Technical support
- ISO 9001
- RoHS | WEEE Compliance
- REACH Compliance
- Conflict minerals
- Environmental Policy

### Material & Finish

Electro Tin Plated Steel (ET)  
Stainless Steel (A2)

Maximum recommended panel hardness: 60HRB

### Part Number Examples

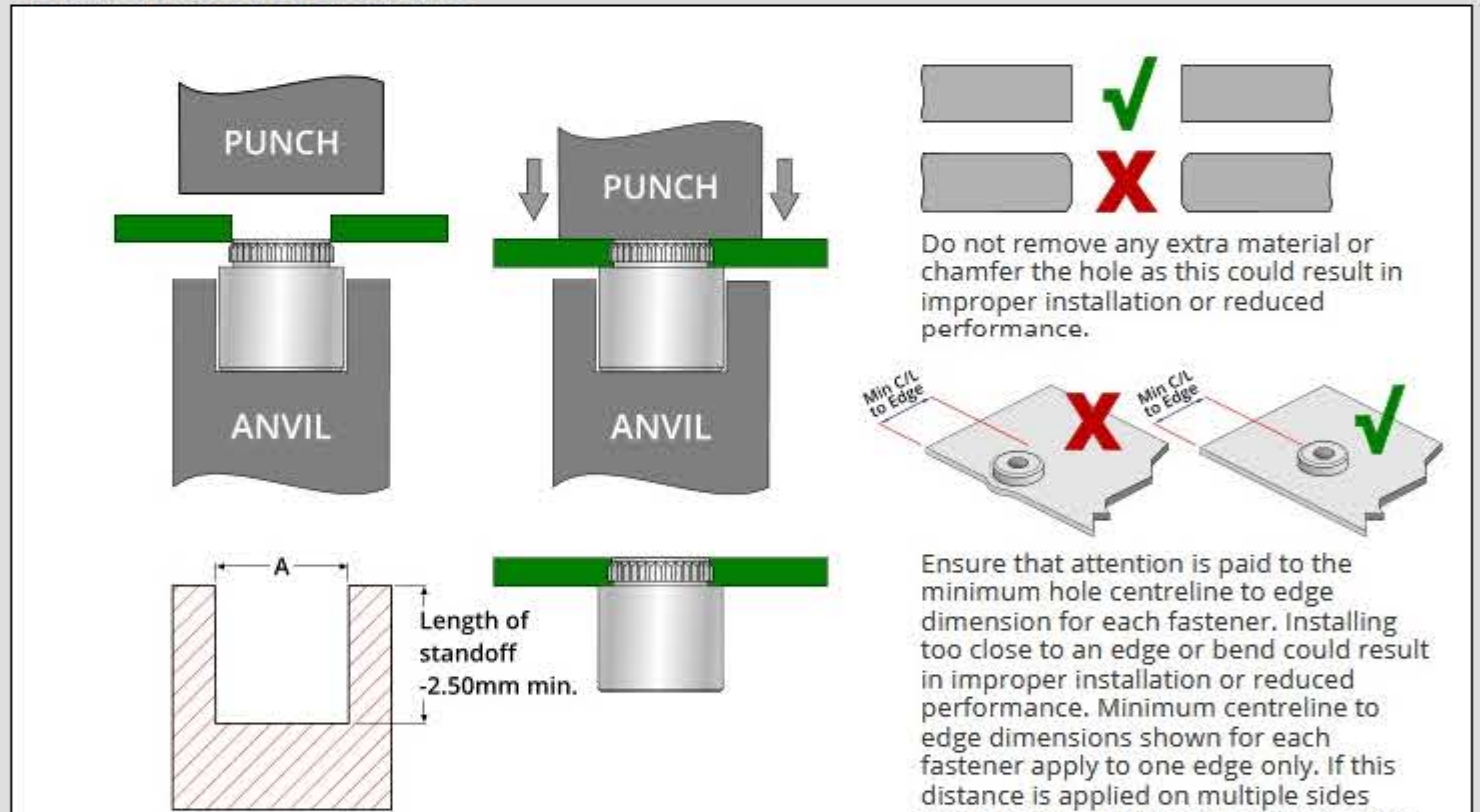
Part number is made up as follows:  
(Type)-(Thread code or Thru-hole)-(Length)-(Material/Finish code)

For example:

CBSO-M3-8-ET (Broaching Standoff-M3-8mm long-electro tin plated steel)

CBSO-3.6-10-A2 (Broaching Standoff-3.6mm thru-hole-10mm long-stainless steel)

### Installation Method & Performance



Do not remove any extra material or chamfer the hole as this could result in improper installation or reduced performance.

Ensure that attention is paid to the minimum hole centreline to edge dimension for each fastener. Installing too close to an edge or bend could result in improper installation or reduced performance. Minimum centreline to edge dimensions shown for each fastener apply to one edge only. If this distance is applied on multiple sides there will be significant panel distortion unless the panel edges are supported during installation.

First prepare the specified hole in the panel.

Place the fastener in the anvil with the shank facing up like in the diagram above. Locate the panel mounting hole over the shank of the fastener.

Ensuring the panel is held level, apply a parallel squeezing force until the shoulder of the fastener is seated against the panel. Do not over squeeze the fastener into the panel as this will result in panel deformation or damage.

When installing broaching fasteners, please pay attention to the minimum hole centreline to edge and parent material hardness limitations.

**HRB (ROCKWELL HARDNESS B SCALE)**  
Ensure that you are installing into a panel that is at or below the published maximum recommended hardness for the fastener.

### Anvil Dimensions

Thread or Thru-hole	A ±0.05
M3 3.30	5.79
M3.5 3.60	7.23
M4 4.20	8.97

### Performance

Thread or Thru-hole	Test Sheet Material	Installation (kN)	Pull-out (N)	Torque-out (Nm)
M3 3.30	1.6mm FR4 Epoxy Laminate	2.1	285	1.6
M3.5 3.60	1.6mm FR4 Epoxy Laminate	2.2	420	3.5
M4 4.20	1.6mm FR4 Epoxy Laminate	2.8	430	4.4

All performance figures are averages obtained over a range of installations and should be used for guidance only. Panel material, hole preparation, installation tooling and method can affect part performance. We always recommend that you carry out your own tests in the actual application. Please call our sales team and we will be happy to provide you with samples as well as offering technical assistance.



[Downloadable Data Sheet](#)

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### Accreditations

Northern Precision Ltd operate a quality management system in accordance with ISO 9001.

The ISO 9001 standard is recognised worldwide and you can be assured of the benefits of working with a certified company knowing that our management systems are constantly assessed and improved.



[Click here to download our current accreditation certificate.](#)

### Regulatory

- RoHS | WEEE Compliance
- REACH Compliance
- Conflict minerals statement
- Environmental Policy



### Opening Hours

Mon - Fri 08:00 - 17:00

### Contact us

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