



NORTHERN PRECISION LTD

Specialist Fasteners for Sheet Metal

✓ Quality ✓ Service ✓ Reliability



Cert No. FS 41345

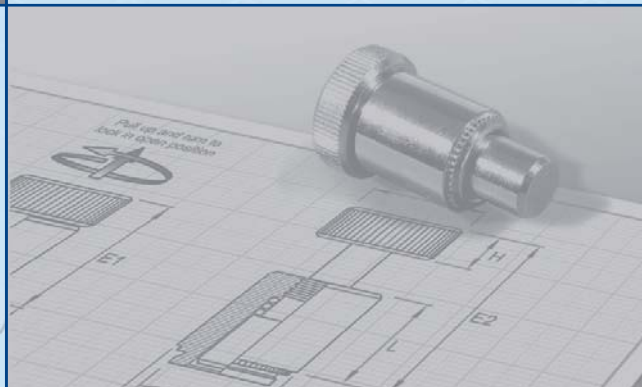
PRODUCT CATALOGUE

Rev 13 2008

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www.npfasteners.com

THE COMPANY

Northern Precision Ltd is a leading European supplier of specialist fasteners for sheetmetal, inserts for plastics, installation equipment, as well as bespoke bar turned and cold headed parts.

Established in 1996, the Company has built up a reputation for quality, service and reliability. By combining highly trained internal sales people, experienced technical sales engineers and customer focused management systems, we have a proven track record in providing high quality products and services to our customers that are at the forefront of our industry.

Our core product ranges include: Self Clinching Fasteners, Rivet Bushes, Blind Rivet Nuts, Blind Rivets, Cage Nuts, Weld Studs and Inserts for plastics.

We are also authorised distributors in the UK for: Arnold & Shinjo Fastener Systems and their range of branded nuts, studs and installation systems including; Pias® and Rivtex® Piercing Nuts, Rivtex® and Strux® Clinch Studs; and LCM Machine Tools whose range of fastener installation presses and bespoke tooling solutions such as the Prima Inserter which is a user friendly, high quality, cost effective press ideal for installing our self clinching fasteners and rivet bushes.

With manufacturing facilities in the UK, Europe and the Far East we are able to produce high quality parts in quantities ranging from one-off turned parts to high volume turned or cold headed components with industry beating lead times and at a price that is highly competitive without compromising on quality.

Mission Statement

It is the aim of Northern Precision to consistently exceed our customers requirements and expectations by striving for customer satisfaction first time, every time.

In order to achieve our goals and ensure that our products remain competitive in the market place, we recognise that quality is vital throughout the company and its suppliers.

To further our objectives, as a fundamental part of the Company's policy the Company commits itself to the training not only in skill requirements but also the need to educate and involve our employees in all aspects of quality and customer service as a part of our strategy for continuous improvement.

Vision

"We know that any company with enough money could replicate the kind of stock we have here, but what they can't buy is the attitude and knowledge of our people, the culture that makes the investment work".

Northern Precision operates a Quality Management System in accordance with BS EN ISO 9001:2000



Some of the companies that use our products



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**SELF CLINCHING FASTENERS**

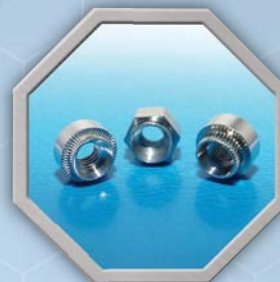
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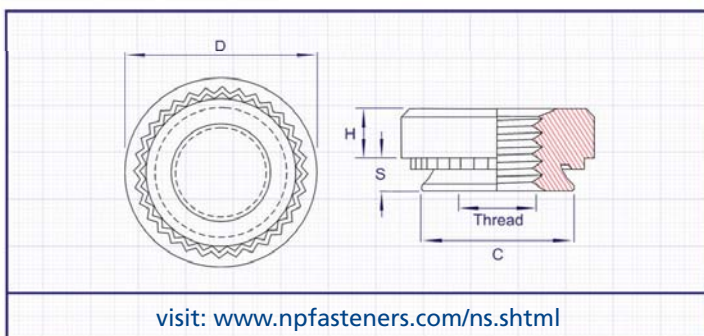
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**WELD FASTENERS**

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**BLIND RIVETS**

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TYPE
NS

SPECIFICATION

Thread & Pitch	Material Code	C Max	D ± 0.25	H ± 0.25	S MAX	Min. Rec. Sheet Thickness	Hole Size + 0.08 - 0.00	Min C/L to Edge of Panel
M2.5 x 0.45 M3 x 0.5	0	4.22	6.3	1.5	0.77	0.8	4.25	4.8
	1				0.97	1.0		
	2				1.38	1.4		
Alternative M3 x 0.5	0	4.73	7.1	1.7	0.77	0.8	4.75	5.6
	1				0.97	1.0		
	2				1.38	1.4		
M3.5 x 0.6	0	4.73	7.1	1.5	0.77	0.8	4.75	5.6
	1				0.97	1.0		
	2				1.38	1.4		
M4 x 0.7	0	5.38	7.9	2.0	0.77	0.8	5.4	6.9
	1				0.97	1.0		
	2				1.38	1.4		
M5 x 0.8	0	6.38	8.7	2.0	0.77	0.8	6.4	7.1
	1				0.97	1.0		
	2				1.38	1.4		
M6 x 1.0	0	8.72	11.05	4.08	1.15	1.2	8.75	8.6
	1				1.38	1.4		
	2				2.21	2.3		
M8 x 1.25	1	10.47	12.65	5.47	1.38	1.4	10.5	9.7
	2				2.21	2.3		
M10 x 1.5	1	13.97	17.35	7.48	2.21	2.3	14.0	13.5
	2				3.05	3.2		
Alternative M10 x 1.5	1	12.65	14.30	6.72	2.21	2.3	12.7	12.0
	2				3.20	3.2		

Aluminium (AL) (Special Order) Specification available on request.

INFORMATION

FINISHES

Bright Zinc Trivalent Clear Passivate (ZI), (Other Platings Available To Special Order).

MATERIALS

Carbon Steel, 300 Series Stainless Steel (A2), (400 Series Stainless Steel, (Aluminium (AL) To Special Order).

NOTES

The following installation panel material hardness limitations apply when installing Self Clinching Nuts. Steel Clinch Nuts: 80HRB Max, 300 series Stainless Steel Clinch Nuts: 70HRB Max, 400 series Stainless Steel Clinch Nuts 90HRB Max (a special punch/anvil is recommended for a proper installation - call our sales office for further information), Aluminium Clinch Nuts 50HRB Max.

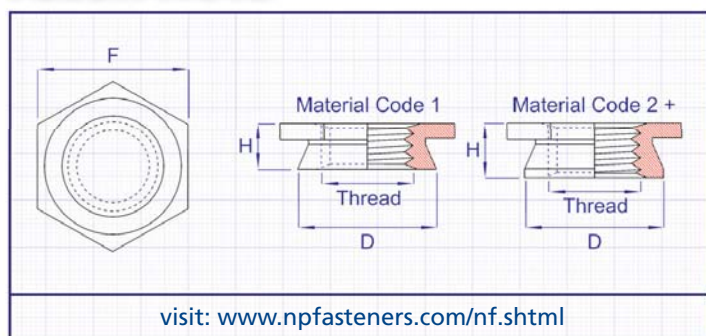
PART NUMBER EXAMPLES

Type / Thread / Material Code / Finish = NS - M3 - 1 - ZI (Clinch Nut, M3, Mat Code 1, Steel, BZP)

Type / Thread / Material Code / Finish = NS - M4 - 2 - A2 (Clinch Nut, M4, Mat Code 2, Stainless Steel)

For detailed installation guides and performance data visit www.npfasteners.com

FLUSH NUTS



SPECIFICATION

*TO SPECIAL ORDER

Thread & Pitch	Material Code	D Max	F ± 0.2	H Max	Min. Rec. Sheet Thickness	Hole Size + 0.08 - 0.00	Min. C/L To edge of panel
M2.5 x 0.45 *	1 2	4.35	4.8	1.5 2.3	1.5 2.4	4.4	6.0
M3 x 0.5	1 2	4.35	4.8	1.5 2.3	1.5 2.4	4.4	6.0
Alternative M3 x 0.5	1 2	5.35	6.4	1.5 2.3	1.5 2.4	5.4	6.5
M3.5 x 0.6*	1 2	5.35	6.4	1.5 2.3	1.5 2.4	5.4	6.5
M4 x 0.7	1 2	7.35	7.9	1.5 2.3	1.5 2.4	7.4	7.2
M5 x 0.8	1 2	7.85	8.7	1.5 2.3	1.5 2.4	7.9	8.0
M6 x 1.0 *	3	8.70	9.5	3.1	3.2	8.75	8.8

INFORMATION

MATERIALS

300 Series Stainless Steel (A2).

NOTES

Stainless Steel Parts are suitable for use in sheets with a maximum hardness of 70 HRB. (Stainless Steel parts will not usually install successfully in Stainless Sheet).

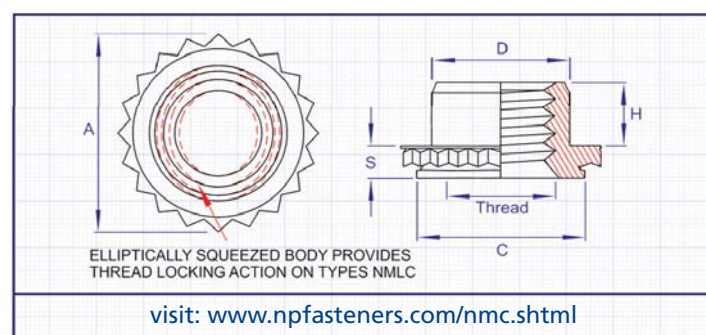
PART NUMBER EXAMPLES

Type / Thread / Material Code / Finish =

NF - M3 - 1 - A2

(Flush Nut, M3, Mat Code 1, Stainless)

MINIATURE CLINCH NUTS



SPECIFICATION

*TO SPECIAL ORDER

Thread & Pitch	Material Code	Hole Size + 0.08	Recommend Panel Thickness	S Max	C - 0.13	D Max	A ± 0.13	H + 0.4	Min Dist C/L to edge
M3 x 0.5	1 2	4.4	0.99 - 1.14 1.50 - 1.78	1.02 1.53	4.34	3.96	4.88	1.90	3.6
M4 x 0.7	1 2	7.4	0.99 - 1.14 1.50 - 1.78	1.02 1.53	7.34	5.23	8.17	2.55	5.2
M5 x 0.8	1 2	7.4	0.99 - 1.14 1.50 - 1.78	1.02 1.53	7.34	6.48	8.17	3.05	5.2
M6 x 1.0*	1	8.75	1.50 - 1.78	1.53	8.71	7.72	9.74	3.30	7.1

INFORMATION

MATERIALS

300 Series Stainless Steel (A2).

FINISHES

Type NMC Passivated. Type NMLC Dry Film Lubricant (MD).

NOTES

Parts are suitable for use in sheets with a maximum hardness of 70 HRB.

PART NUMBER EXAMPLES

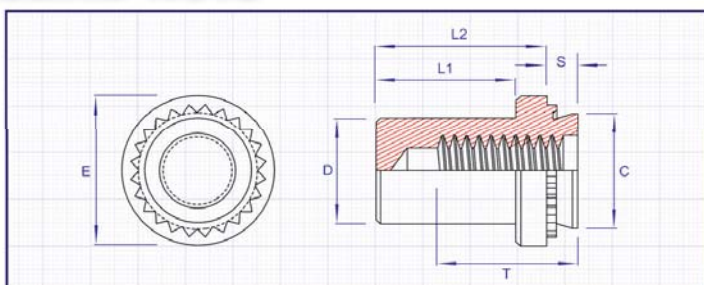
Type / Thread / Material Code / Finish =

NMC - M4 - 1 - A2

(Miniature Clinch Nut, M4, 0.99-1.14 Panel, Stainless)

For detailed installation guides and performance data visit www.npfasteners.com

BLIND NUTS



visit: www.npfasteners.com/nb.shtml

TYPE NB



SPECIFICATION

*TO SPECIAL ORDER

Thread & Pitch	Material Code	Hole Size + 0.8	Min Rec Sheet Thickness	S Max	C Max	D Max	L1 Max	L2 ± 0.25	E ± 0.25	T Min
M3 x 0.5	1 2	4.25	1.0 1.40	0.97 1.38	4.22	3.8	8.5	9.6	6.35	5.3
M4 x 0.7	1 2	5.40	1.0 1.4	0.97 1.38	5.38	5.2	9.8	11.2	7.95	7.1
M5 x 0.8	1 2	6.40	1.0 1.4	0.97 1.38	6.38	6.0	9.8	11.2	8.75	7.1
M6 x 1.0*	1 2	8.75	1.4 2.3	1.38 2.21	8.72	7.8	12.7	14.3	11.1	7.8

NOTES - Steel parts are suitable for use in sheets with a maximum hardness of 80 HRB. Stainless Steel Parts are suitable for use in sheets with a maximum hardness of 70 HRB. (Stainless Steel parts will not usually install successfully in Stainless Sheet). If you need to install into stainless sheet please contact our sales department for alternatives.

INFORMATION

FINISHES

Bright Zinc Trivalent
Clear passivated (ZI),
(Other Platings Available
To Special Order).

MATERIALS

Carbon Steel, 300 Series
Stainless Steel (A2),
(Aluminium (AL) To
Special Order).

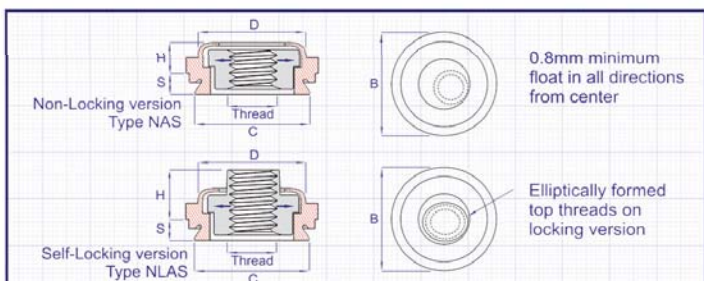
PART NUMBER EXAMPLES

Type / Thread / Material
Code / Finish =

NB - M4 - 1 - ZI

(Blind Clinch Nut, M4,
Mat Code 1, Steel, BZP)

FLOATING CLINCH NUTS



visit: www.npfasteners.com/nas.shtml

TYPE NAS
NON LOCKING
NLAS
LOCKING

SPECIFICATION

*TO SPECIAL ORDER

Thread & Pitch	Material Code	Min Rec Sheet Thickness	S Max	C Max	D Max	B ± 0.4	H Max Non Locking	H Max Locking	Hole Size in Panel +0.08, -0.0	Min C/L to edge of panel
M3 x 0.5	1 2	1.0 1.4	0.97 1.38	7.35	7.37	9.14	3.31	4.83	7.37	7.62
M4 x 0.7	1 2	1.0 1.4	0.97 1.38	9.33	9.28	11.18	3.31	5.34	9.35	8.64
M5 x 0.8*	1 2	1.0 1.4	0.97 1.38	10.29	10.29	11.94	4.32	6.86	10.31	9.14

NOTES

Maximum hardness of parent material : Steel and Stainless Steel parts - 70HRB.
Please note that Stainless Steel parts cannot usually be successfully installed into Stainless Steel Sheet.

INFORMATION

FINISHES

Bright Zinc Trivalent
Clear passivated (ZI).

MATERIALS

Carbon Steel,
300 Series Stainless Steel (A2).

PART NUMBER
EXAMPLE

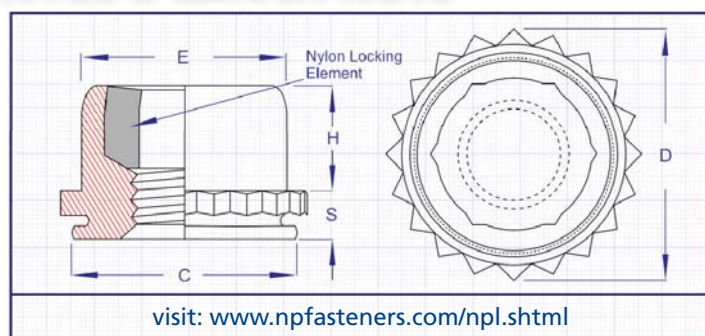
Type / Thread / Material
Code / Finish =

NAS - M3 - 1 - ZI

(Floating Clinch Nut, M3,
1mm Min Sheet, Steel, BZP)

For detailed installation guides and performance data visit www.npfasteners.com

NYLOC CLINCH NUTS



SPECIFICATION

Thread & Pitch	Hole Size in Panel +0.8 -0.00	Sheet Thickness (See Note)	S Max	C Max	E Max	D Max	H Max	Min C/L to edge of Panel	Maximum Hole in mating component	Maximum Tightening Torque (Nm)
M3 x 0.5	6.0	1.5 - 1.78	1.52	5.97	5.5	7.1	3.6	4.3	3.5	1.13
M4 x 0.7	7.5	1.5 - 1.78	1.52	7.47	7.0	8.6	4.2	5.6	4.5	2.3
M5 x 0.8	8.0	1.5 - 1.78	1.52	7.97	7.5	8.9	4.5	6.4	5.5	3.12

NOTE: This part may be used in panels from 1.0mm to 1.49mm if the fastener is not installed with the knurling collar fully flush. The knurled collar must be left proud of the panel as if the sheet thickness was 1.5mm or less. Incorrect installation of this fastener may result in the collar fracturing in panels thicker than 1.7mm where the mating screw is tightened past the maximum recommended torque.

INFORMATION

MATERIALS

Carbon Steel,
300 Series Stainless Steel (A2).

Locking Element:
Heat Stabilised Nylon.

FINISHES

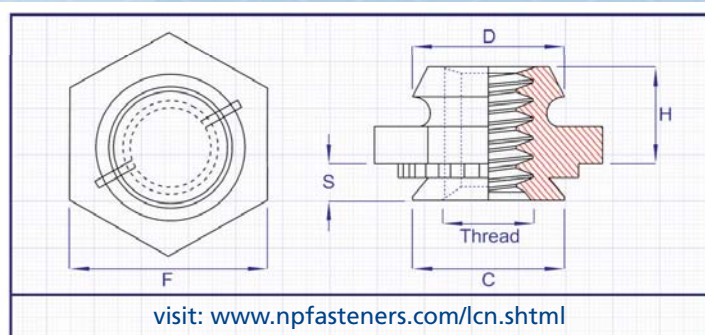
Bright Zinc Trivalent Clear Passivate (ZI).

PART NUMBER EXAMPLES

Type / Thread / Material Code / Finish
= NPL - M3 - ZI
(Nyloc Clinch Nut, M3, Steel, BZP)

NOTES: Maximum hardness of parent material: Steel and Stainless Steel parts - 70HRB. Please note that Stainless Steel parts cannot usually be successfully installed into Stainless Steel Sheet (See Self Clinch technical notes page for further details). The maximum operating temperature for this fastener is 120°C / 250°F.

LOCKING SELF CLINCHING NUTS



SPECIFICATION

Thread & Pitch	Material Code	Min Rec Sheet Thickness	S Max	C Max	D Max	F Nom	H ± 0.4	Hole Size in Panel +0.08 -0.0	Max Prevailing Locking Torque (Nm) (Guide)	Min C/L to edge of panel
M3 x 0.5	1	1.0	0.97	4.73	4.85	6.35	3.43	4.75	0.56	4.0
	2	1.4	1.38							
M4 x 0.7	1	1.0	0.97	6.73	6.20	8.73	4.45	6.76	1.7	5.2
	2	1.4	1.38							
M5 x 0.8	1	1.0	0.97	7.90	7.75	9.53	5.21	7.92	2.0	5.6
	2	1.4	1.38							

INFORMATION

FINISHES

Bright Zinc Trivalent Clear passivated (ZI), Also available with a Dry Film Lubricant (MD).

MATERIALS

Carbon Steel,
300 Series Stainless Steel (A2), (Aluminium (AL) To Special Order).

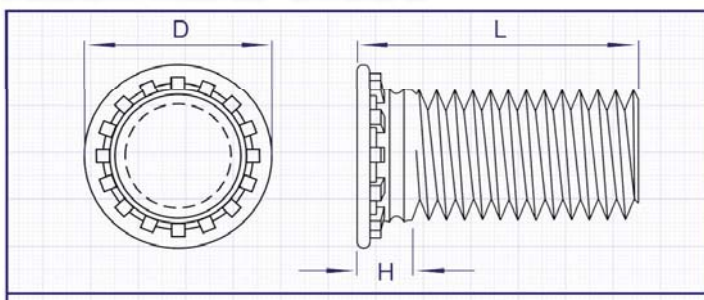
NOTES:

Maximum hardness of parent material : Steel and Stainless Steel parts - 70HRB : Aluminium - 50 HRB. Please note that Stainless Steel parts cannot usually be successfully installed into Stainless Steel Sheet.

PART NUMBER EXAMPLE

Type / Thread / Material Code / Finish =
LCN - M3 - 1 - ZI (Locking Clinch Nut, M3, 1mm Min Sheet, Steel, BZP)

For detailed installation guides and performance data visit www.npfasteners.com



visit: www.npfasteners.com/nfh.shtml

TYPE NFH

Also available with thread lead in Type NFHD



SPECIFICATION

Thread & Pitch	D ±0.4	H Max.	Min. Rec. Sheet Thickness	Hole Size +0.08 -0.0	Max Mating Hole	Min C/L to Edge of Panel
M2.5 x 0.45	4.1	1.95	1.0	2.5	3.1	5.4
M3 x 0.5	4.6	2.1	1.0	3.0	3.6	5.6
M3.5 x 0.6	5.3	2.25	1.0	3.5	4.1	6.4
M4 x 0.7	5.9	2.4	1.0	4.0	4.6	7.2
M5 x 0.8	6.5	2.7	1.0	5.0	5.6	7.2
M6 x 1.0	8.2	3.0	1.6	6.0	6.6	7.9
M8 x 1.25	9.6	3.7	2.4	8.0	8.6	9.0

STANDARD LENGTHS

Thread Size			'L' Length ±0.4									
M2.5	6	8	10	12	15	18	-	-	-	-	-	-
M3	6	8	10	12	15	18	20	25	30	-	-	-
M3.5	6	8	10	12	15	18	20	25	-	-	-	-
M4	6	8	10	12	15	18	20	25	30	-	-	-
M5	-	8	10	12	15	18	20	25	30	35	-	-
M6	-	-	10	12	15	18	20	25	30	35	-	-
M8	-	-	10	12	15	18	20	25	30	35	40	-

INFORMATION

FINISHES

Bright Zinc Trivalent Clear Passivate (ZI), (Other Platings Available To Special Order).

MATERIALS

Carbon Steel, 300 Series Stainless Steel (A2), (400 Series Stainless Steel (400) To Special Order), (Aluminium (AL) To Special Order).

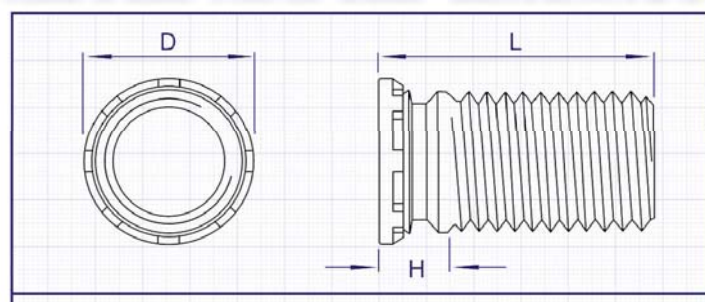
PART NUMBER EXAMPLES

Type / Thread / Length / Finish = NFH - M4 - 10 - ZI (Clinch Stud, M4, 10mm, Steel, BZP)

NOTES

The following installation panel material hardness limitations apply when installing Self Clinching Studs. Steel Clinch Studs: 80HRB Max, 300 series Stainless Steel Clinch Studs: 70HRB Max, 400 series Stainless Steel Clinch Studs: 92HRB Max (a special anvil is recommended for a proper installation, the maximum recommended panel thickness is 2.4mm – call our sales office for further information), Aluminium Clinch Studs 50HRB Max.

REDUCED HEAD SELF CLINCHING STUDS



visit: www.npfasteners.com/nfhl.shtml

TYPE NFHL



SPECIFICATION

*TO SPECIAL ORDER - MIN MANUFACTURING QUANTITY APPLIES.

Thread & Pitch	D ±0.4	H Max.	Min. Rec. Sheet Thickness	Hole Size +0.08 -0.0	Max Mating Hole	Min C/L to edge of panel
M2.5 x 0.45	3.15	2.1	1.0	2.5	2.9	2.8
M3 x 0.5	3.65	2.1	1.0	3.0	3.4	3.3
M3.5 x 0.6	4.15	2.3	1.0	3.5	3.9	3.8
M4 x 0.7	4.65	2.4	1.0	4.0	4.4	4.3
M5 x 0.8	5.90	2.7	1.0	5.0	5.4	5.6

STANDARD LENGTHS

Thread Size	'L' Length ±0.4									
M2.5	6	8	10	12	15	18	-	-	-	-
M3	6	8	10	12	15	18	20	25	30	-
M3.5	6	8	10	12	15	18	20	25	-	-
M4	6	8	10	12	15	18	20	25	30	-
M5	-	8	10	12	15	18	20	25	30	35

INFORMATION

FINISHES

Bright Zinc Trivalent Clear Passivate (ZI), (Other Platings Available To Special Order).

MATERIALS

Carbon steel, 300 Series Stainless Steel (A2), (Aluminium (AL) To Special Order).

PART NUMBER EXAMPLES

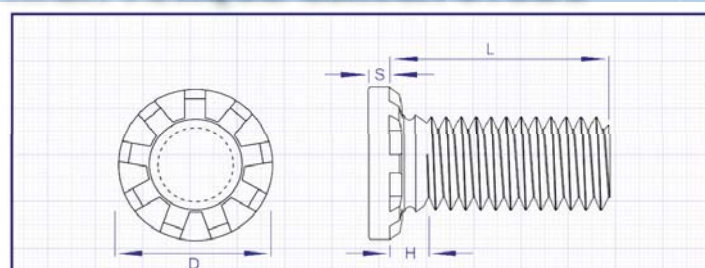
Type / Thread / Length / Finish = NFHL - M3 - 12 - ZI (Reduced Head Clinch Stud M3 x 12mm Long Steel Zinc)

Type / Thread / Length / Finish = NFHL - M5 - 15 - A2 (Reduced Head Clinch Stud M5 x 15mm Long Stainless Steel)

NOTES

The following installation panel material hardness limitations apply when installing Reduced Head Self Clinching Studs. Steel Clinch Studs: 80HRB Max, Stainless Steel Clinch Studs: 70HRB Max, Aluminium Clinch Studs: 50HRB Max.

HIGH TORQUE CLINCH STUDS



visit: www.npfasteners.com/nhts.shtml

TYPE NHTS

Also available with thread lead in Type NHTSD*



SPECIFICATION

*TO SPECIAL ORDER. MIN MANUFACTURING QUANTITY APPLIES.

Thread Size & Pitch	H Max	Min Sheet Thickness	Hole Size in Panel +0.13-0.0	Max Mating Hole	S Max	D ±0.25	Min C/L to Edge of Panel	Torque Out 'Nm'	Push Out 'N'	Lengths Length (L) +/-0.4							
M5 x 0.8*	2.7	1.3	5.0	6.5	1.14	7.8	10.7	7.8	1496	15	20	25	30	35	40	45	50
M6 x 1.0*	2.8	1.5	6.0	7.5	1.27	9.4	11.5	14.3	1803	15	20	25	30	35	40	45	50
M8 x 1.25	3.5	2.0	8.0	9.5	1.78	12.5	12.7	31.2	2294	15	20	25	30	35	40	45	50
M10 x 1.5	4.1	2.3	10.0	11.5	1.29	15.7	13.7	49.8	3456	15	20	25	30	35	40	45	50

Torque Out & Push Out figures are to be used as a guide only and will vary depending on panel thickness and installation method. Figures are based on installation into 1.5mm cold rolled steel for M5 & M6 & 2.3mm cold rolled steel for M8 & M10 under test conditions.

INFORMATION

THIS FASTENER DOES NOT INSTALL FLUSH

MATERIALS

Carbon Steel, 300 Series Stainless Steel.

FINISHES

Bright Zinc Trivalent Clear Passivate (ZI), (Other Platings Available To Special Order).

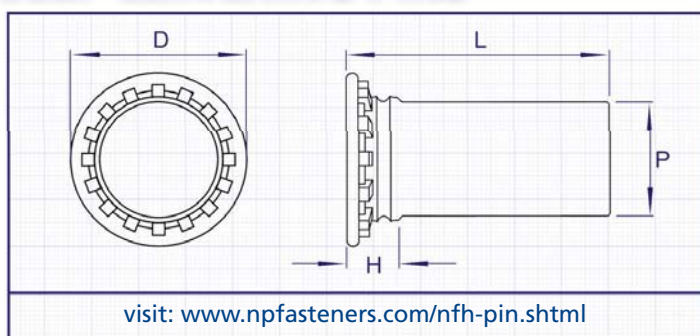
PART NUMBER EXAMPLES

Type / Thread / Length / Finish = NHTS - M6 - 25 - ZI (High Torque Stud, M6 x 25mm, Steel, BZP)

NOTES

Maximum hardness of parent material: steel parts - 85HRB, Stainless Steel parts - 70HRB. Please note that Stainless Steel parts cannot usually be successfully installed into Stainless Steel Sheet. (See Self Clinch technical notes page for further details).

SELF CLINCHING PINS



SPECIFICATION

*TO SPECIAL ORDER

Pin Diameter P	H Max	Min Sheet Thickness	Hole Size in Panel +0.08 -0.0	D +/- 0.4	Min C/L to edge of panel
3mm	2.3	1.0	3.5	5.3	6.4
4mm	2.3	1.0	4.1	6.0	7.1
5mm*	2.5	1.0	5.5	7.5	7.6
6mm*	2.7	1.6	6.5	8.0	7.9

LENGTHS

Pin Diameter P	Length (L) +/- 0.4								
3mm	6	8	10	12	15	-	-	-	-
4mm	6	8	10	12	15	18	20	-	-
5mm*	-	8	10	12	15	18	20	22	-
6mm*	-	-	10	12	15	18	20	22	25

INFORMATION

MATERIALS

Carbon Steel, 300 Series Stainless Steel, (Aluminium (AL) To Special Order).

FINISHES

Bright Zinc Trivalent Clear Passivate (ZI), (Other Platings Available To Special Order).

NOTES Maximum hardness of parent material: Steel parts - 80HRB : Stainless Steel parts - 70HRB : Aluminium parts - 50HRB. Please note that Stainless Steel parts cannot usually be successfully installed into Stainless Steel Sheet. (See Self Clinch technical notes page for further details).

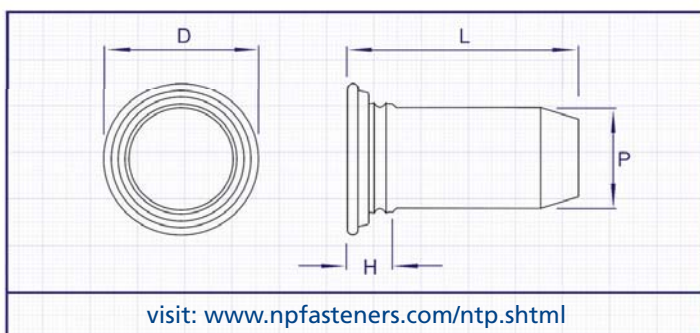
PART NUMBER EXAMPLE:

Type / Diameter / Length / Finish =

NFH - 4mm - 10 - ZI

(Flush Head Pin, 4mm Ø 10mm, Steel, BZP)

SELF CLINCHING TAPERED PINS



SPECIFICATION

*TO SPECIAL ORDER

Pin Diameter P	H Max	Min Sheet Thickness	Hole Size in Panel +0.08 -0.0	D +/- 0.4	Min C/L to edge of panel
3mm	2.3	1.0	3.5	5.2	6.4
4mm	2.3	1.0	4.5	6.12	7.1
5mm*	2.3	1.0	5.5	7.19	7.6
6mm*	2.3	1.0	6.5	8.13	7.9

LENGTHS

Pin Diameter P	Length (L) +/- 0.4				
3mm	8	10	12	16	20
4mm	8	10	12	16	20
5mm*	-	10	12	16	20
6mm*	-	10	12	16	20

INFORMATION

MATERIALS

300 Series Stainless Steel (A2).

NOTES: Maximum hardness of parent material : 70HRB. Please note that Stainless Steel parts cannot usually be successfully installed into Stainless Steel Sheet. (See Self Clinch technical notes page for further details).

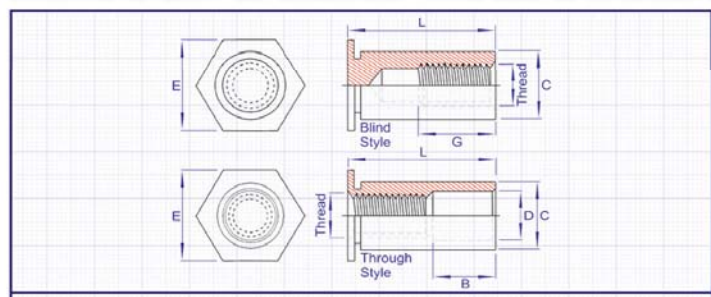
PART NUMBER EXAMPLE:

Type / Diameter / Length / Finish =

NTP - 4mm - 10 - A2

(Tapered Pin, 4mm x 10mm, Stainless Steel)

THROUGH & BLIND HOLE STANDOFFS



visit: www.npfasteners.com/nso.shtml or [nbso.shtml](http://www.npfasteners.com/nbso.shtml)

TYPE NSO NBSO

Also available Type
NTSO* for installation
into thin panels.



SPECIFICATION

*TO SPECIAL ORDER

Thread Size & Pitch	Min Sheet Thickness	Hole size +0.08 -0.0	C +0.0 -0.13	D	E	Min C/L to edge of panel
M3 x 0.5	1.02	4.22	4.2	3.2	4.8	6.0
5.4 M3 x 0.5	1.02	5.41	5.39	3.2	6.4	6.8
M3.5 x 0.6*	1.02	5.41	5.39	3.9	6.4	6.8
M4 x 0.7	1.27	7.14	7.12	4.8	7.9	8.0
M5 x 0.8	1.27	7.14	7.12	5.35	7.9	8.0

Clear hole versions available to special order

STANDARD LENGTHS

Thread Size

'L' Length ± 0.20

M3	6	8	10	12	14	16	18	20	-
5.4 M3	6	8	10	12	14	16	18	20	-
M4	6	8	10	12	14	16	18	20	25
M5	6	8	10	12	14	16	18	20	25

Length 'mm'

6	8	10	12	14	16	18	20	22
---	---	----	----	----	----	----	----	----

Through Hole 'B Dim' ± 0.25

-	4	6	8	10	12
---	---	---	---	----	----

Blind Hole 'G Dim' min

3.2	4	5	6.5	9.5
-----	---	---	-----	-----

INFORMATION

FINISHES

Bright Zinc Trivalent Clear Passivate (ZI), (Other Platings Available To Special Order).

MATERIALS

Carbon Steel, 300 Series Stainless Steel (A2), (400 Series Stainless Steel (400) To Special Order), (Aluminium (AL) To Special Order).

PART NUMBER EXAMPLES

Type / Thread / Length / Finish =

NSO - M4 - 8 - ZI (Through Hole Standoff, M4 x 8mm, Steel, BZP)

Type / Thread / Length / Finish =

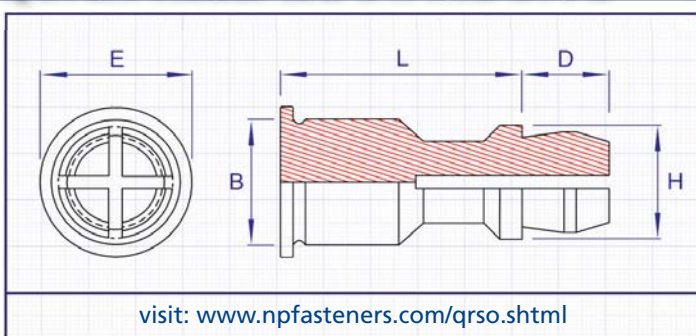
NBSO - M4 - 10 - A2 (Blind Standoff, M4 x 10mm, Stainless Steel)

NOTES

The following installation panel material hardness limitations apply when installing Self Clinching Standoffs.
Steel Clinch Standoffs: 80HRB Max, 300 series Stainless Steel Clinch Standoffs: 70HRB Max, 400 series Stainless Steel Clinch Standoffs: 88HRB Max, Aluminium Clinch Standoffs 50HRB Max.

For detailed installation guides and performance data visit www.npfasteners.com

QUICK RELEASE STANDOFFS



SPECIFICATION

QUICK RELEASE STANDOFFS ARE TO SPECIAL ORDER ONLY.

Mounting Hole in Top Panel ± 0.08	Mounting Hole in bottom Panel ± 0.08	Thickness range for top panel	Minimum sheet Thickness bottom panel	H ± 0.13	D ± 0.13	E ± 0.13	B Max
4mm	5.40	1 - 1.8	1.0	4.77	3.58	6.35	5.38
Length (L) ± 0.13	8	10	12	14	16	18	20

INFORMATION

MATERIALS

Carbon Steel,
300 Series Stainless Steel,
Aluminium (AL).

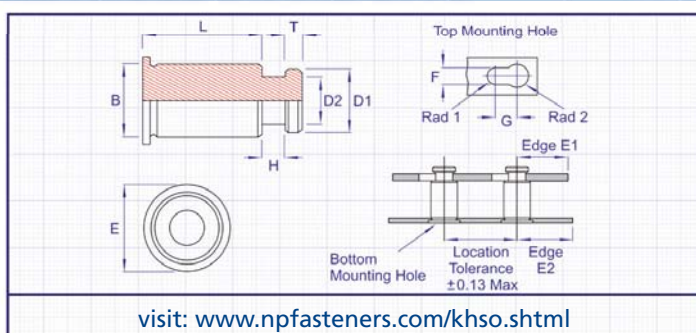
FINISHES

Bright Zinc Trivalent
Clear passivated (ZI).

PART NUMBER EXAMPLE

Type / 4mm / Length / Finish =
QRSO - 4mm - 10 - A2
(Quick Release Standoff, 4mm x 10mm, Stainless)

KEYHOLE STANDOFFS



SPECIFICATION

KEYHOLE STANDOFFS ARE TO SPECIAL ORDER ONLY.

E Nom	B Max	D1 +/- 0.08	D2 +/- 0.08	H Max	T +/- 0.08	Anvil Hole +/- 0.08	L +/- 0.13								
6.35	5.38	4.50	2.50	1.72	1.03	5.50	6	8	10	12	14	16	18	20	22
Bottom Panel				Top Panel											
Bottom Mounting Hole +0.08 -0.0	Minimum Panel Thickness	Minimum C/L to Edge E2	Top Mounting Hole				Material	Thickness Range	Minimum C/L to Edge E1						
			Rad1 Nom	Rad2 ± 0.08	F ± 0.08	G Min									
5.4	1.0	6.6	1.5	5.0	3	3.75	Metal Or PCB	1.45 - 1.62	4.1						

INFORMATION

MATERIALS

300 Series Stainless Steel (A2),
(Carbon Steel To Special Order),
(Aluminium (AL) To Special Order).

FINISHES

Bright Zinc Trivalent
Clear Passivate (ZI).

NOTES

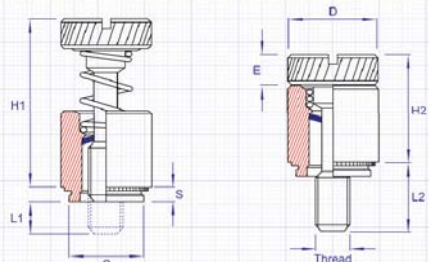
Maximum hardness of parent material :
Steel parts - 80HRB: Stainless Steel parts - 70HRB : Aluminium parts - 50HRB. Please note that Stainless Steel parts cannot usually be successfully installed into Stainless Steel Sheet. (See Self Clinch technical notes page for further details).

PART NUMBER EXAMPLE

Type / 61.5 / Length / Finish =
KHSO - 61.5 - 10 - ZI (Key Hole Standoff, 61.5x10mm, Steel, BZP)

For detailed installation guides and performance data visit www.npfasteners.com

PANEL FASTENER



visit: www.npfasteners.com/npf.shtml

TYPE NPF



SPECIFICATION

*TO SPECIAL ORDER

Thread & Pitch	Screw Code	Hole Size + 0.08	Minimum Panel Thickness	S Max	C Max	D +0.4 -0.15	L1 ± 0.64	E ± 0.13	L2 ± 0.4	H1 ± 1.5	H2 Max
M3 x 0.5	40 62*	6.73	1.53	1.53	6.71	7.92	0 3.2	1.83	6.4 9.5	13.72	9.14
M4 x 0.7	50 72* 94*	7.92	1.53	1.53	7.9	9.53	0 3.2 6.4	2.08	7.9 11.1 14.3	17.53	11.43
M5 x 0.8	50 72* 94*	8.74	1.53	1.53	8.72	10.31	0 3.2 6.4	2.08	7.9 11.1 14.3	17.53	11.47
M6 x 1.0*	60 82 04	10.49	1.53	1.53	10.47	11.89	0 3.2 6.4	2.46	9.5 12.7 15.9	22.35	14.73

INFORMATION

STEEL 60 HRB MAX STAINLESS 70 HRB MAX

FINISHES

Bright Nickel Over
a Copper Flash (CN).

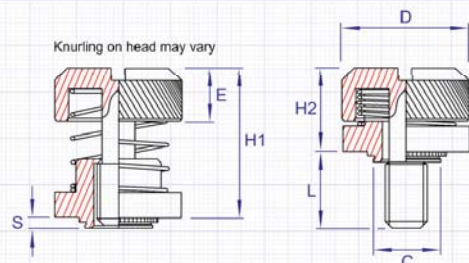
MATERIALS

Carbon Steel, 300
Series Stainless Steel.

PART NUMBER EXAMPLE

Type / Thread / Screw Code / Finish = NPF - M3 - 40 - CN
(Panel Fastener, M3, S/Code 40, Copper Nickel).

LOW PROFILE PANEL FASTENER



visit: www.npfasteners.com/npfl2.shtml

TYPE NPFL2



SPECIFICATION

Thread & Pitch	Material Code	Hole Size + 0.08	Minimum Panel Thickness	S Max	C Max	D +0.4 -0.15	L ± 0.4	E ± 0.13	H1 ± 1.5	H2 Max
M3 x 0.5	1 2	5.5	1.0 1.5	0.97 1.48	5.48	10.31	7.62	5.13	15.11	8.26
M4 x 0.7	1 2	6.4	1.0 1.5	0.97 1.48	6.38	11.89	7.62	5.26	15.24	8.38
M5 x 0.8	1 2	8.0	1.0 1.5	0.97 1.48	7.98	13.46	7.62	5.59	15.57	8.51
M6 x 1.0	1	9.5	1.5	1.48	9.48	15.88	8.89	6.12	17.15	9.78

INFORMATION

HRB 60 MAX PANEL HARDNESS

MATERIALS

Carbon Steel.

FINISHES

Bright Nickel Over
a Copper Flash (CN).

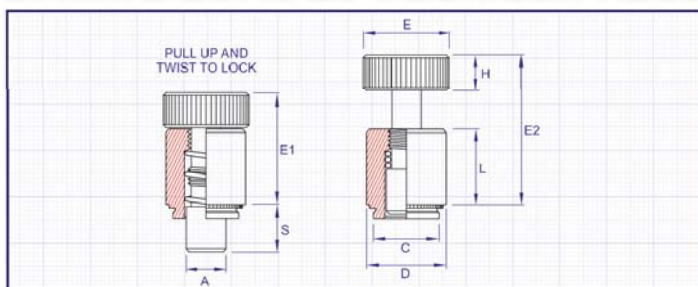
PART NUMBER EXAMPLE

Type / Thread / Material Code / Finish =
NPFL2 - M4 - 1 - CN (Low Profile Panel Fastener, M4, S/Code 1, Copper, Nickel)

For detailed installation guides and performance data visit www.npfasteners.com

SELF CLINCHING FASTENERS

SPRING LOADED PLUNGER ASSEMBLY



visit: www.npfasteners.com/ntl2.shtml



**TYPE
NTL2**

SPECIFICATION

Hole Size + 0.08 - 0.00	Minimum Panel Thickness	Min C/L to edge of panel	A +0.0 -0.13	E +0.25	D +0.25	C Max	S ±0.25	H ±0.25	E1 ±0.25	E2 ±1.0	L ±0.13
8.33	1.53	8.64	6.35	12.7	10.3	8.31	7.87	4.32	15.11	22.73	10.92

INFORMATION

MATERIALS

Carbon Steel, 300 Series
Stainless Steel.

FINISHES

Bright Nickel over a
Copper Flash (CN).

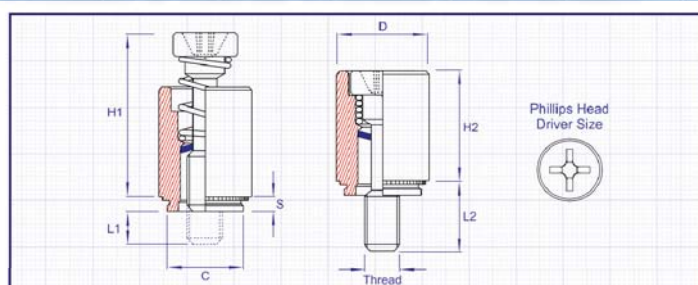
PART NUMBER EXAMPLES

NTL2 - 04 - 4 - CN
(Plunger Assembly, Steel,
Copper Nickel)
NSL2 - 04 - 4 - A2
(Plunger Assembly, Non Locking,
Stainless Steel)

NOTES

Maximum hardness of parent material :
Steel parts - 60HRB : Stainless Steel parts - 70HRB :
Please note that Stainless Steel parts cannot usually
be successfully installed into Stainless Steel Sheet.
(See Self Clinch installation notes on page 16.)

PHILLIPS HEAD PANEL FASTENER



visit: www.npfasteners.com/npfp.shtml



**TYPE
NPFP**

SPECIFICATION

PHILLIPS HEAD PANEL FASTENERS ARE TO SPECIAL ORDER ONLY

Thread & Pitch	Screw Code	Hole Size + 0.08	Minimum Panel Thickness	S Max	C Max	D +/- 0.25	L1 +/- 0.64	L2 +/- 0.4	H1 +/- 1.5	H2 Max	Driver Size	Min C/L to edge of panel
M3 x 0.5	40 62	6.73	1.53	1.53	6.71	7.92	0 3.2	6.4 9.5	13.72	9.40	Phillips No. 1	6.35
M4 x 0.7	50 72 94	7.92	1.53	1.53	7.9	9.53	0 3.2 6.4	7.9 11.1 14.3	17.91	12.19	Phillips No. 2	7.87
M5 x 0.8	50 72 94	8.74	1.53	1.53	8.72	10.31	0 3.2 6.4	7.9 11.1 14.3	17.91	12.45	Phillips No. 2	8.63
M6 x 1.0	60 82 04	10.49	1.53	1.53	10.47	11.89	0 3.2 6.4	9.5 12.7 15.9	22.99	15.75	Phillips No. 3	9.65

INFORMATION

MATERIALS

300 Series
Stainless Steel (A2).

PART NUMBER EXAMPLES

Type / Thread / Screw Code / Finish =
NPFP - M5 - 50 - A2
(Phillips Head Panel Fastener, M5,
Screw Code 50, Stainless Steel)

NOTES

Maximum hardness of parent material : Stainless
Steel parts - 70HRB. Please note that Stainless Steel
parts cannot usually be successfully installed into
Stainless Steel Sheet. (See Self Clinch technical
notes page for further details).

For detailed installation guides and performance data visit www.npfasteners.com

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RIVTEX® & STRUX® STUDS

Suitable for panel thickness: 0.75 - 2.5mm
Available in thread Sizes: M5 - M10
Available in strength property classes: 8 and 10
Ideal application: thinner sheet metal panels

visit: www.npfasteners.com/rivtex-studs.shtml

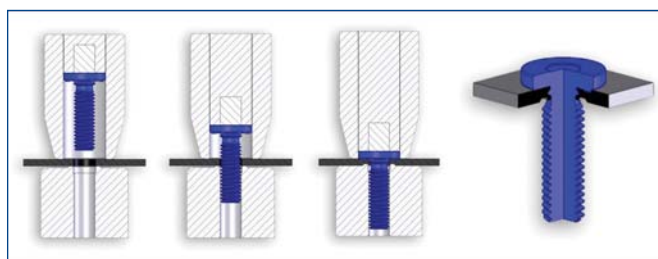
TYPE RIVTEX®



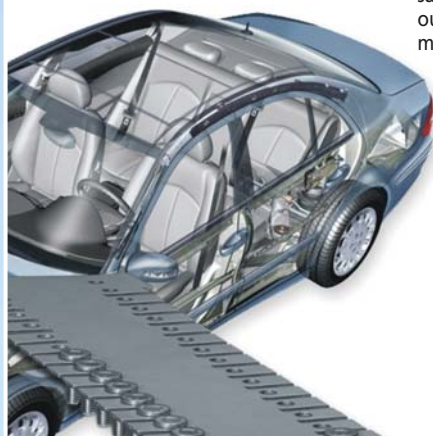
Suitable for panel thickness: 2.5 - 5.0mm
Available in thread Sizes: M5 - M10
Available in strength property classes: 8 and 10
Ideal application: thicker sheet metal panels

visit: www.npfasteners.com/strux-studs.shtml

TYPE STRUX®



Manual and fully automatic installation systems available. Call our sales office or visit our website for more information.



Our high performance Rivtex® and Strux® clinch studs offer a stronger and highly reliable alternative to traditional self clinching, staking and weld studs. In most cases a Rivtex® or Strux® solution will yield significant cost and time savings when compared to weld studs or a staked fastener.

Eliminates Welding - and the need for expensive and sometimes hazardous welding operations.

Repeatable Reliability - with proper installation, Rivtex® and Strux® clinch studs can reduce potential failures. Consistent push-out and torque-out strength is achievable from the first to the last installation.

High Performance - once installed, the lobes resist high rotational forces from spinning the part in the panel and the clinch ring provides high resistance to push-out forces unseating the part. Torsional and push-out strength are limited only by the shear strength of the panel material.

Easy Installation - Rivtex® and Strux® clinch studs can be fed manually, or with any equipment capable of feeding weld studs or conventional clinch studs. Fully automated installation equipment is available including bespoke solutions giving multiple simultaneous installations. By utilising progressive die technology, extremely high production rates can be achieved.



Available in a range of high quality finishes

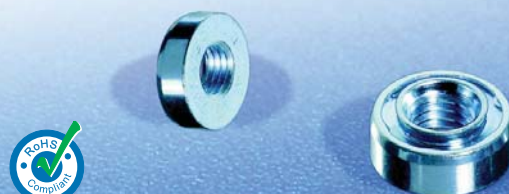
SELF CLINCHING FASTENERS

RIVTEX® & PIAS® CLINCH NUTS

Suitable for panel thickness: 0.75 - 2.5mm
 Available in thread Sizes: M5 - M10
 Available in strength property class: 10
 Ideal application: for use in thin panels

visit: www.npfasteners.com/rivtex-nuts.shtml

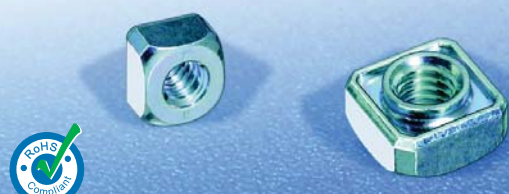
TYPE RIVTEX®



Suitable for panel thickness: 0.6 - 2.5mm
 Available in thread Sizes: M5 - M12
 Available in strength property classes: 8 and 10
 Ideal application: high torque applications

visit: www.npfasteners.com/pias-kp.shtml

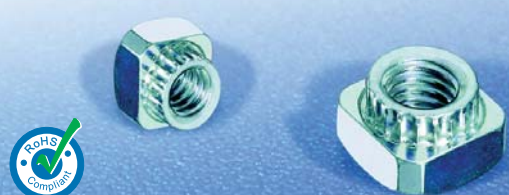
TYPE KP



Suitable for panel thickness: 2.5 - 4.0mm
 Available in thread Sizes: M5 - M12
 Available in strength property class: 10
 Ideal application: thicker panels

visit: www.npfasteners.com/pias-hn.shtml

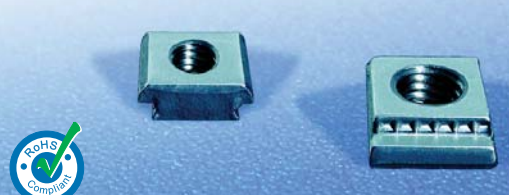
TYPE HN



Suitable for panel thickness: 0.6 - 4.0mm
 Available in thread Sizes: M5 - M10
 Available in strength property class: 8
 Ideal application: thin and thick panels where a mid strength fasteners is required. Has an excellent price/performance ratio.

visit: www.npfasteners.com/pias-pn.shtml

TYPE PN



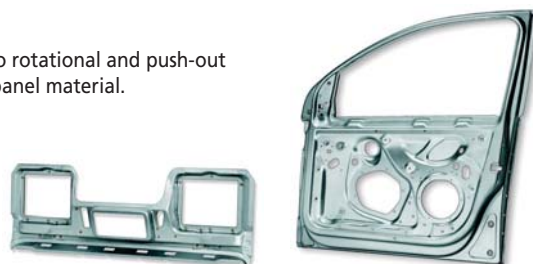
Our high performance Rivtex® and Pias® clinch nuts offer a stronger and highly reliable alternative to traditional self clinching, staking and weld nuts. In most cases a Rivtex® or Pias® solution will yield significant cost and time savings when compared to weld nuts or a staked fastener.

Eliminates Welding - and the need for expensive and sometimes hazardous welding operations.

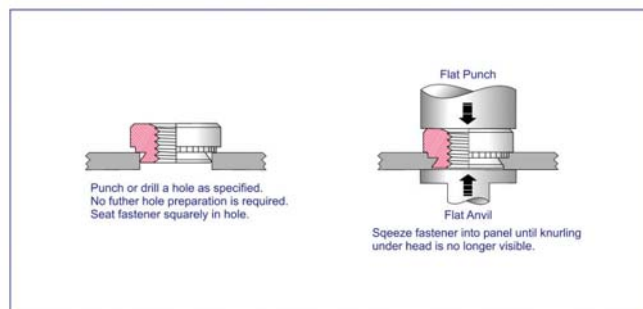
Repeatable Reliability - with proper installation, Rivtex® and Pias® clinch nuts can reduce potential failures. Consistent push-out and torque-out strength is achievable from the first to the last installation.

High Performance - once installed, Rivtex® and Pias® nuts provide a high resistance to rotational and push-out forces. Torsional and push-out strength are limited only by the shear strength of the panel material.

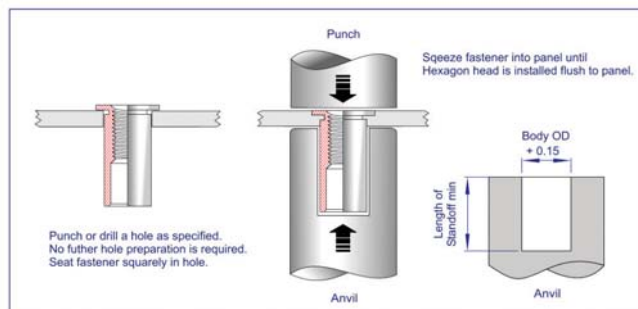
Installation - Utilising modular punch dies and blocks, Rivtex® and Pias® clinch nuts can be installed on most presses, or for very high production rates, fully automated feed and installation equipment is available. Modular construction of the punch blocks allow up to 100 strokes per minute.



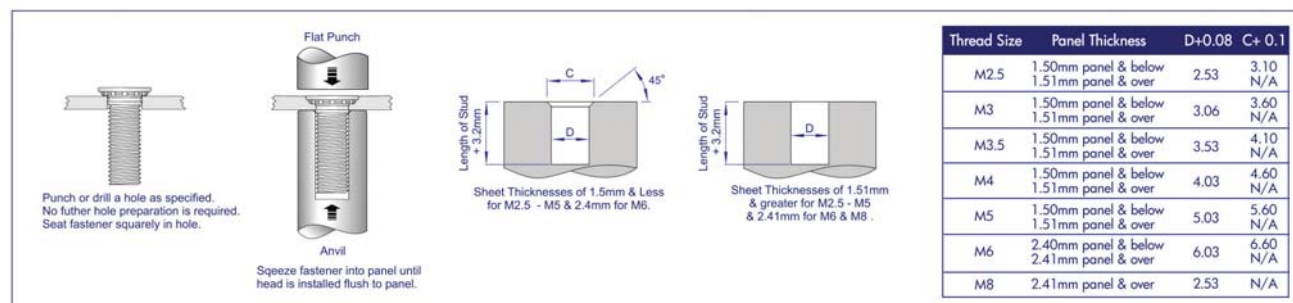
Clinch Nuts Type NS



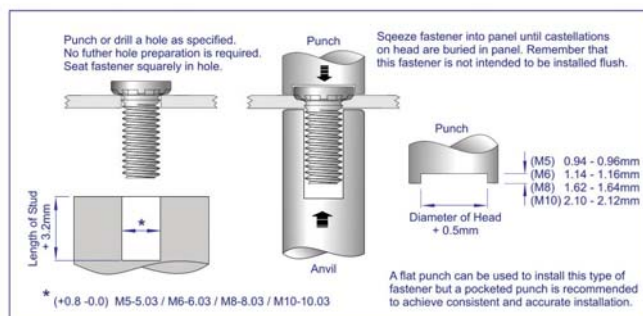
Clinch Standoffs Type NSO and NBSO



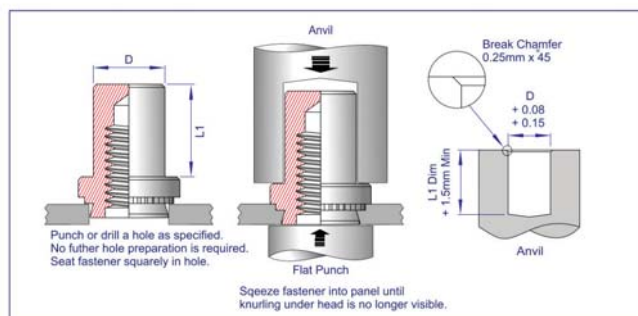
Clinch Studs Type NFH



High Strength Clinch Studs Type NHTS



Blind Clinch Nuts Type NB



INSTALLATION DO'S AND DON'TS

DO

- Punch or drill the correct size hole in the panel as specified for the fastener.
- Make sure that the Shank or pilot of the fastener is located squarely in the hole before applying pressure.
- Apply a parallel squeezing force
- Make sure the panel is held perpendicular to the Punch / Anvil.
- Apply enough force to totally embed the knurling so the shoulder of the nut is squarely in contact with the sheet. For Stud and Standoffs, the head should be completely flush with the top of the panel.
- Pay attention the specified minimum panel thickness for the fastener.
- Pay attention to the specified maximum panel hardness limitations.
- Pay attention to the minimum centerline to edge limits as specified for the fastener.
- Make sure that installation tooling is in good condition and within specification for the fastener you are installing.
- Please note that all punches and anvils should be made from hardened tool steel. A worn or deformed punch or anvil will result in a sub-standard installation and poor performance.

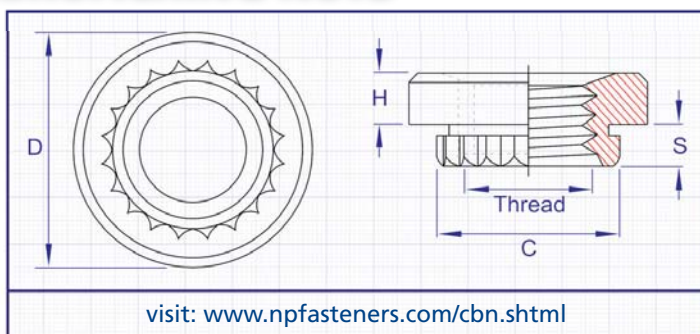
DON'T

- De-burr the hole on either side of the panel - de-burring will remove material that is required during the clinching process.
- Over install the fastener - the fastener will distort, resulting in tight threads and a buckled panel.
- Try to install the fastener with a hammer blow - a sustained parallel squeezing force is required to allow the cold flow process of material into the clinch ring / undercut to happen.
- Install steel or stainless fasteners into aluminium panels before anodising or finishing.
- Install the screw from the head side of the fastener. You must install from the opposite side of installation.

Common problems and solutions when installing self clinching fasteners can be found on our website:

<http://www.npfasterers.com/selfclinch-problem-solving.shtml>

BROACHING NUTS



SPECIFICATION

*TO SPECIAL ORDER

Thread Size Pitch	S Max	C ±0.08	D ±0.13	H ±0.13	Min. Sheet Thickness	Hole Size in Sheet +0.08	Min. Distance to edge of Sheet
M2.5 x 0.45 *	1.53	4.68	5.56	1.5	1.53	4.22	4.4
M3 x 0.5	1.53	4.68	5.56	1.5	1.53	4.22	4.4
M4 x 0.7	1.53	6.86	8.74	2.0	1.53	6.40	6.4
M5 x 0.8 *	1.53	7.37	9.53	3.0	1.53	6.90	7.1

INFORMATION

MATERIALS

Carbon Steel,
300 Series Stainless Steel (A2).

FINISHES

Electro Tin (ET).

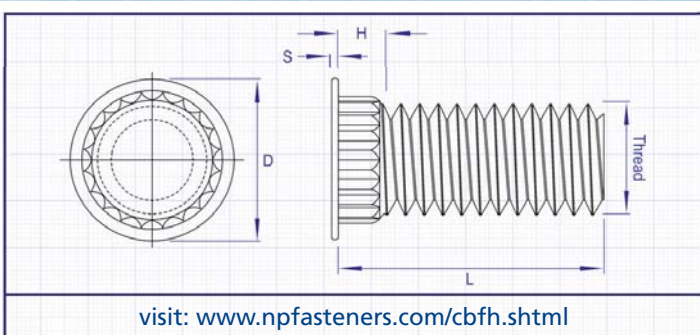
PART NUMBER EXAMPLES

Type / Thread / Finish =
CBN - M4 - ET
(Broaching Nut, M4, Steel, Electro Tin)

NOTES

CBN steel nuts are suitable for use in PCB and material of 60HRB or less.
CBN Stainless nuts are suitable for use in PCB and material of 70HRB or less.

BROACHING STUDS



SPECIFICATION

*TO SPECIAL ORDER

Thread Size & Pitch	Hole Size in Sheet + 0.08	Min. Panel Thickness	D ±0.25	H Max	S ±0.13	Min. Distance to Edge to Sheet	Length (L) +0.25					
M3 x 0.5	3.0	1.53	4.58	2.3	0.51	3.8	6	8	10	12	15	18
M4 x 0.7	4.2	1.53	5.74	2.3	0.51	4.1	-	8	10	12	15	18
M5 x 0.8	5.0	1.53	6.6	2.3	0.51	5.1	-	-	-	-	15	18

INFORMATION

MATERIALS

Phosphor Bronze,
300 Series Stainless Steel (A2).

FINISHES

Electro Tin (ET).

PART NUMBER EXAMPLES

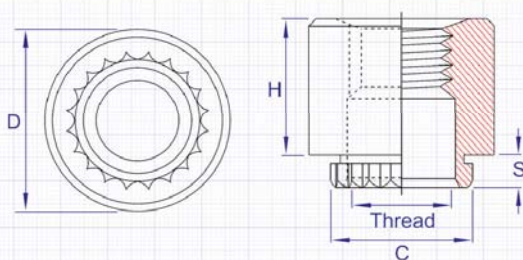
Type / Thread / Length / Finish =
CBFH - M3 - 10 - A2
(Broaching Stud, M3, 10mm,
Stainless Steel)

NOTES

CBFH Phosphor Bronze studs are suitable for use in PCB and material of 55HRB or less. CBFH Stainless studs are suitable for use in PCB and material of 70HRB or less.

For detailed installation guides and performance data visit www.npfasteners.com

BROACHING STANDOFFS



visit: www.npfasteners.com/cbso.shtml

TYPE CBSO



SPECIFICATION

BROACHING STANDOFFS ARE MADE TO ORDER ONLY.

Thread & Pitch	S Max	C ± 0.08	D ± 0.13	Minimum Sheet Thickness	Hole Size in Sheet $+0.08$	Minimum Distance to Edge of Sheet
M3 x 0.5	1.53	4.68	5.56	1.53	4.22	4.4
M4 x 0.7	1.53	6.86	8.74	1.53	6.40	7.1
I/D 3.60mm	1.53	5.87	7.14	1.53	5.41	5.5
STANDOFF Length (L)		3	4	6	8	10 12 14 16
Minimum Thread (E)		FULLY THREADED			9.00 \pm 0.4	

INFORMATION

MATERIALS

Carbon Steel,
Stainless Steel (A2).

FINISHES

Electro Plate Bright
Tin (ET).

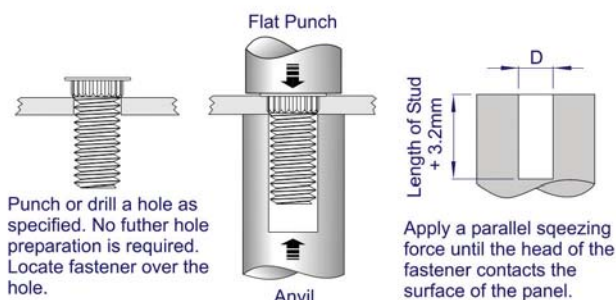
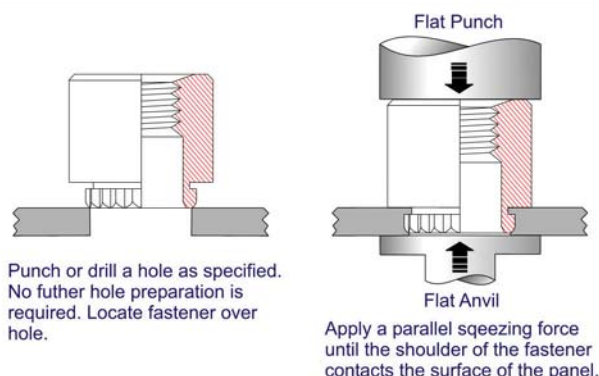
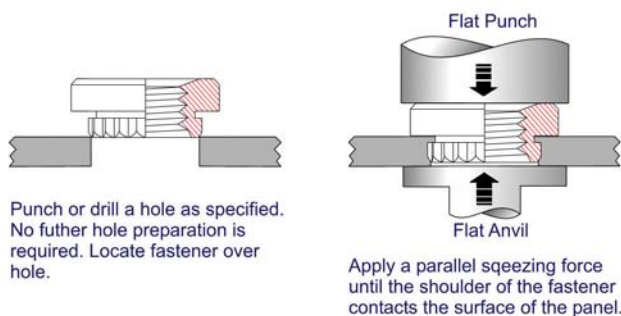
PART NUMBER EXAMPLE

Type / Thread / Length / Finish =
CBSO - M3 - 10 - ET
(Broaching Standoff, M3,
10mm, Electro Tin)

NOTES:

Maximum hardness of parent material : Steel parts - 60HRB : Stainless Steel parts - 70HRB. Please note that Stainless Steel parts cannot usually be successfully installed into Stainless Steel Sheet. (See Self clinch technical notes page for further details).

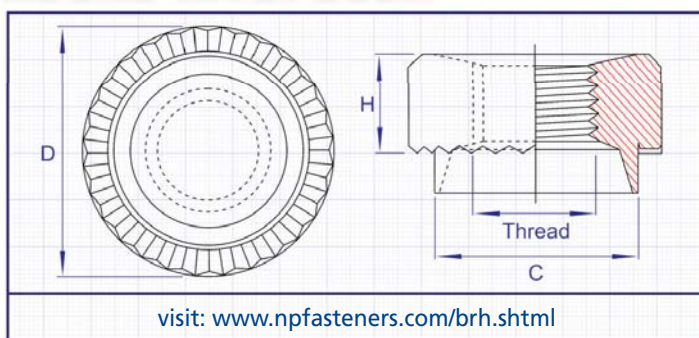
BROACHING FASTENER INSTALLATION GUIDE



For detailed installation guides
and performance data visit
www.npfasteners.com/installation-broaching.shtml

For our full range of broaching fasteners
visit www.npfasteners.com/broaching.shtml

ROUND RIVET BUSH



TYPE BRH BRHK



BRHK



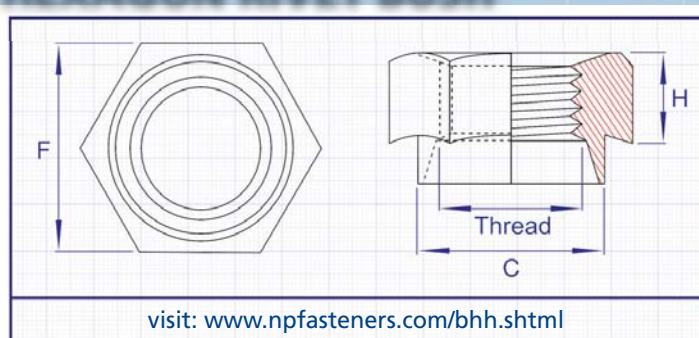
Parts for Special
Panel Thickness
Available to Order.
Contact our sales
department for
further details.

SPECIFICATION

*TO SPECIAL ORDER

Thread Size	Sheet Thickness (Standard)	Hole Size in Sheet +0.1 -0.0	D ±0.13	H ±0.13	C +0.0 -0.13
M2.5 x 0.45*	10 - 20 Swg	5.54	7.92	3.17	5.54
M3 x 0.5	10 - 20 Swg	5.54	7.92	3.17	5.54
M3.5 x 0.6*	10 - 20 Swg	6.73	9.52	3.17	6.73
M4 x 0.7	10 - 20 Swg	6.73	9.52	3.17	6.73
M5 x 0.8	10 - 20 Swg	7.92	11.10	3.81	7.92
M6 x 1.0	10 - 20 Swg	9.52	12.70	5.08	9.52
M8 x 1.25	10 - 20 Swg	12.70	15.87	6.35	12.70
M10 x 1.5	10 - 20 Swg	15.87	19.05	7.62	15.87
M12 x 1.75*	10 - 20 Swg	19.05	25.40	10.16	19.05

HEXAGON RIVET BUSH



TYPE BHH

Parts for Special
Panel Thickness
Available to Order.
Contact our sales
department for
further details.

SPECIFICATION

*TO SPECIAL ORDER

Thread Size	Sheet Thickness (Standard)	Hole Size in Sheet +0.1 -0.0	F ±0.13	H ±0.13	C +0.0 -0.1
M2.5 x 0.45*	10 - 20 Swg	5.54	7.92	3.17	5.54
M3 x 0.5	10 - 20 Swg	5.54	7.92	3.17	5.54
M3.5 x 0.6*	10 - 20 Swg	6.73	7.92	3.17	6.73
M4 x 0.7	10 - 20 Swg	6.73	7.92	3.17	6.73
M5 x 0.8	10 - 20 Swg	7.92	9.52	3.81	7.92
M6 x 1.0	10 - 20 Swg	9.52	11.10	5.08	9.52
M8 x 1.25	10 - 20 Swg	12.70	14.27	6.35	12.70
M10 x 1.5	10 - 20 Swg	15.87	19.05	7.62	15.87
M12 x 1.75*	10 - 20 Swg	19.05	22.22	10.16	19.05

INFORMATION BRH/BRHK & BHH

FINISHES

Self Finish (GX), Bright Zinc Trivalent Clear Passivated (GZ),
(Other Platings Available To Special Order).

MATERIALS

Mild Steel, Stainless Steel 300 Series (GS),
(Aluminium (GA) To Special Order), (Brass (GB) To Special Order).

PART NUMBER EXAMPLES

Type / Thread / Sheet Thickness / Finish =

BRH - M3 - 10 - GZ (Round Rivet Bush, M3x10swg, Steel, BZP)

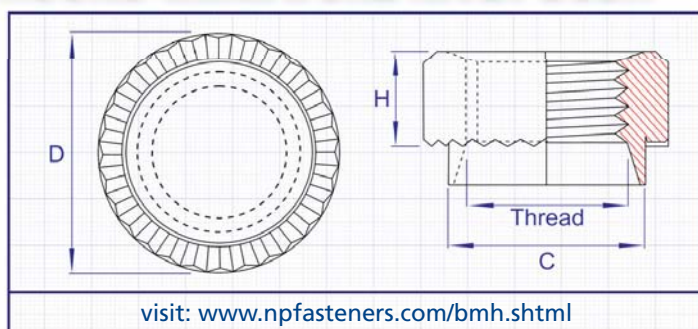
BRH - M6 - 18 - GS (Round Rivet Bush, M6x18swg, Stainless)

BHH - M5 - 16 - GB (Hexagon Rivet Bush, M5x16swg, Brass)

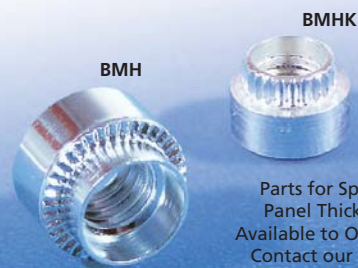
BHH - M4 - 18 - GX (Hexagon Rivet Bush, M4x18swg, Steel)

We can also supply Rivet Bushes in UNC/UNF, BSW, BA, BSP threads to special order. Please contact our sales department for further information.

ROUND MINIATURE RIVET BUSH



TYPE BMH BMHK



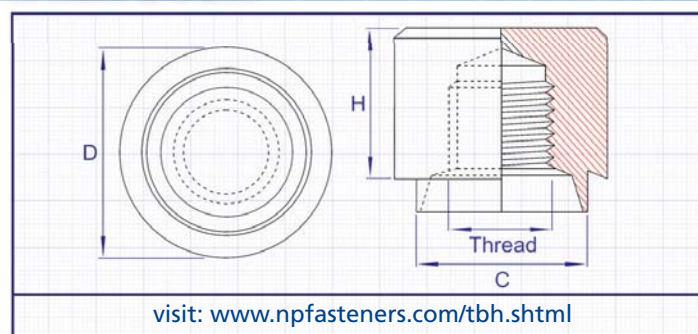
Parts for Special
Panel Thickness
Available to Order.
Contact our sales
department for
further details.

SPECIFICATION

*TO SPECIAL ORDER

Thread Size	Sheet Thickness (Standard)	Hole Size in Sheet +0.1 -0.0	D ±0.13	H ±0.13	C +0.0 -0.13
M2.5 x 0.45*	10 - 20 Swg	4.19	5.55	2.80	4.19
M3 x 0.5	10 - 20 Swg	4.19	5.55	2.80	4.19
M3.5 x 0.6 *	10 - 20 Swg	5.41	7.00	3.20	5.41
M4 x 0.7	10 - 20 Swg	5.41	7.00	3.20	5.41
M5 x 0.8	10 - 20 Swg	6.40	8.50	3.80	6.40
M6 x 1.0	10 - 20 Swg	7.70	10.00	5.10	7.70
M8 x 1.25*	10 - 20 Swg	9.70	12.00	6.50	9.70

TANK BUSH



TYPE TBH



Parts for Special
Panel Thickness
Available to Order.
Contact our sales
department for
further details.

SPECIFICATION

*TO SPECIAL ORDER

Thread Size	Sheet Thickness (Standard)	Hole Size in Sheet +0.1 -0.0	D ±0.13	H ±0.13	C +0.0 -0.13
M3 x 0.5	10 - 20 Swg	5.54	7.92	8.61	5.54
M3.5 x 0.6 *	10 - 20 Swg	6.73	9.52	8.97	6.73
M4 x 0.7	10 - 20 Swg	6.73	9.52	8.97	6.73
M5 x 0.8	10 - 20 Swg	7.92	11.10	9.32	7.92
M6 x 1.0	10 - 20 Swg	9.52	12.70	10.57	9.52
M8 x 1.25	10 - 20 Swg	12.70	15.87	11.89	12.70
M10 x 1.5 *	10 - 20 Swg	15.87	19.05	16.50	15.87
M12 x 1.75 *	10 - 20 Swg	19.05	25.40	19.05	19.05

INFORMATION BMH/BMHK & TBH

FINISHES

Self Finish (GX), Bright Zinc Trivalent Clear Passivated (GZ), (Other Platings Available To Special Order).

MATERIALS

Mild Steel, Stainless Steel 300 Series (GS), (Aluminium (GA) To Special Order), (Brass (GB) To Special Order).

PART NUMBER EXAMPLES

Type / Thread / Sheet Thickness / Finish =

BMH - M3 - 10 - GZ (Round Mini Rivet Bush, M3 x 10swg, Steel, BZP)

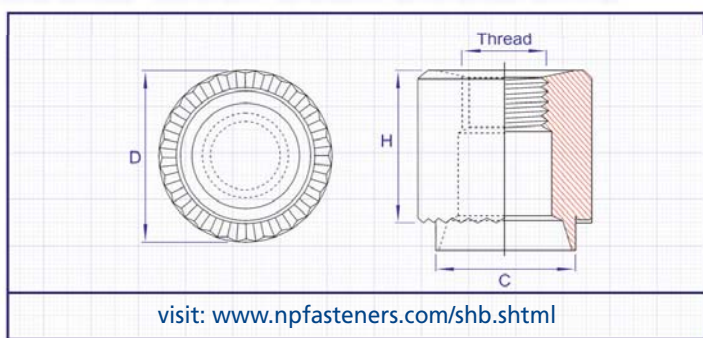
BMH - M6 - 18 - GS (Round Mini Rivet Bush, M6 x 18swg, Stainless Steel)

TBH - M5 - 16 - GZ (Tank Bush, M5 x 16swg, Steel, BZP)

TBH - M4 - 18 - GX (Tank Bush, M4 x 18swg, Steel)

We can also supply Rivet Bushes in UNC/UNF, BSW, BA, BSP threads to special order. Please contact our sales department for further information.

ROUND RIVET BUSH STANDOFFS



TYPE SHB SHBK

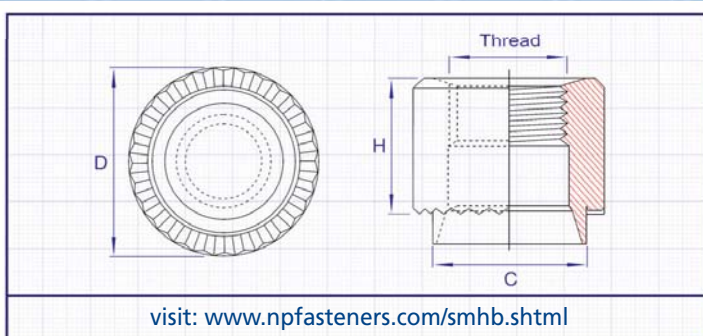


Parts for Special Panel Thickness Available to Order. Contact our sales department for further details.

SPECIFICATION

Thread and Pitch	Sheet Thickness (Standard)	Hole Size in Sheet +0.1 -0.0	D ±0.13	L ±0.13	C +0.0 -0.13
M2.5 x 0.45	10 - 20 Swg	5.54	7.92	MANUFACTURED TO YOUR REQUIREMENTS	5.54
M3 x 0.5	10 - 20 Swg	5.54	7.92		5.54
M3.5 x 0.6	10 - 20 Swg	6.73	9.52		6.73
M4 x 0.7	10 - 20 Swg	6.73	9.52		6.73
M5 x 0.8	10 - 20 Swg	7.92	11.10		7.92
M6 x 1.0	10 - 20 Swg	9.52	12.70		9.52
M8 x 1.25	10 - 20 Swg	12.70	15.87		12.70
M10 x 1.5	10 - 20 Swg	15.87	19.05		15.87
M12 x 1.75	10 - 20 Swg	19.05	25.40		19.05

MINIATURE RIVET BUSH STANDOFFS



SMHB

SMHBK

TYPE SMHB SMHBK



Parts for Special Panel Thickness Available to Order. Contact our sales department for further details.

SPECIFICATION

Thread Size	Sheet Thickness (Standard)	Hole Size in Sheet +0.1 -0.0	D ±0.13	L ±0.13	C +0.0 -0.13
M2.5 x 0.45	10 - 20 Swg	4.19	5.55	MANUFACTURED TO YOUR REQUIREMENTS	4.19
M3 x 0.5	10 - 20 Swg	4.19	5.55		4.19
M3.5 x 0.6	10 - 20 Swg	5.41	7.00		5.41
M4 x 0.7	10 - 20 Swg	5.41	7.00		5.41
M5 x 0.8	10 - 20 Swg	6.40	8.50		6.40
M6 x 1.0	10 - 20 Swg	7.70	10.00		7.70
M8 x 1.25	10 - 20 Swg	9.70	12.00		9.70

INFORMATION SHB/SHBK & SMHB/SMHBK

FINISHES

Self Finish (GX), Bright Zinc Trivalent Clear Passivated (GZ), (Other Platings Available To Special Order).

MATERIALS

Mild Steel, Stainless Steel 300 Series (GS), (Aluminium (GA) To Special Order), (Brass (GB) To Special Order).

PART NUMBER EXAMPLES

Type / Length / Thread / Sheet Thickness / Finish =

SHB - 10M5 - 12 - GX (Rivet Bush Standoff, M5 x 10mm x 12swg, Steel)

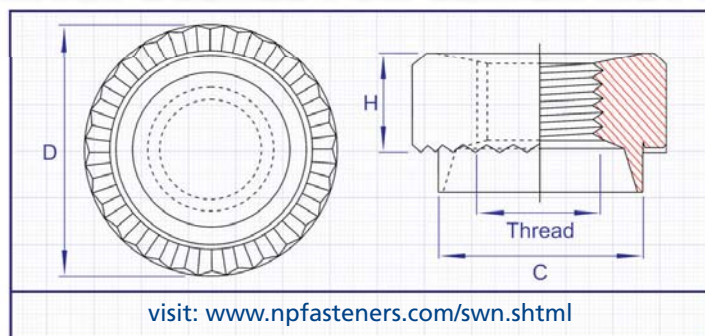
SHB - 8M4 - 18 - GA (Rivet Bush Stand off, M4 x 8mm x 18swg, Aluminium)

SMHB - 6M3 - 18 - GX (Mini Rivet Bush Standoff, M3 x 6mm x 18swg, Steel)

SMHB - 10M4 - 18 - GA (Mini Rivet Bush Stand off, M4 x 10mm x 18swg, Aluminium)

We can also supply Rivet Bushes in UNC/UNF, BSW, BA, BSP threads to special order. Please contact our sales department for further information.

RIVET BUSHES FOR CLINCH NUT HOLE SIZES



TYPE SWN



SPECIFICATION

Thread Size	Sheet Thickness (Standard)	Hole Size in Sheet +0.1 -0.0	D ±0.13	H ±0.13	C +0.0 -0.13
M3 x 0.5	10 - 20 Swg	4.25	6.35	1.50	4.24
M3.5 x 0.6	10 - 20 Swg	4.75	7.11	1.50	4.74
M4 x 0.7	10 - 20 Swg	5.40	7.92	2.00	5.38
M5 x 0.8	10 - 20 Swg	6.40	8.70	2.00	6.35
M6 x 1.0	10 - 20 Swg	8.75	11.20	4.00	8.70
M8 x 1.25	10 - 20 Swg	10.50	12.65	5.50	10.44

SPECIFICATION

FINISHES

Bright Zinc Trivalent Clear Passivate (GZ), (Other Platings Available To Special Order).

MATERIALS

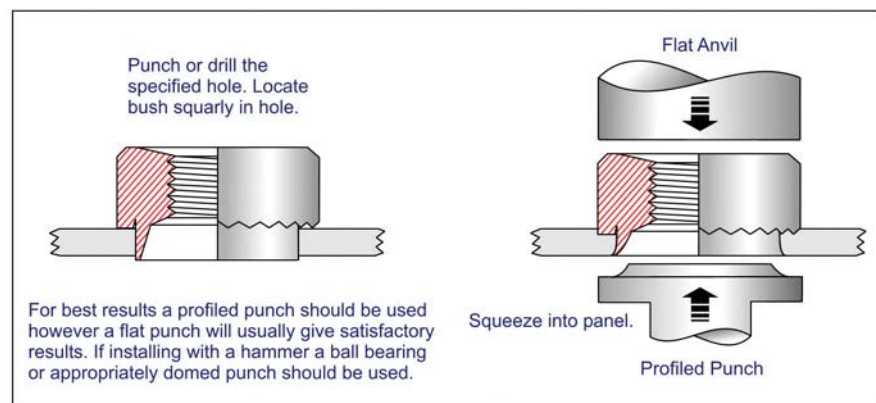
Mild steel, 300 Series Stainless Steel (GS), (Aluminium (GA) To Special Order).

PART NUMBER EXAMPLES

Type / Thread / Sheet Thickness / Finish = SWN - M3 - 16 - GZ (Rivet Bush for Clinch Nut Hole Size M3 x 16swg Steel Zinc)

Type / Thread / Sheet Thickness / Finish = SWN - M6 - 20 - GS (Rivet Bush for Clinch Nut Hole Size M6 x 20swg Stainless Steel)

RIVET BUSH INSTALLATION GUIDE



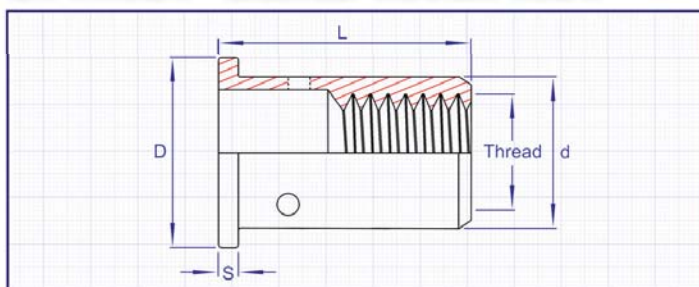
NOTES

TIP

Our SWN Nuts for Clinch Nut hole sizes are the perfect fix where a stainless steel clinch nut has been used in error in a stainless steel panel and installation is not satisfactory.

Simply ensure the hole size is correct and replace with the appropriate sized SWN Nut.

OPTINUT® BLIND RIVET NUT



visit: www.npfasteners.com/optinut.shtml

TYPE OptiNut® LARGE FLANGE (LF)



SPECIFICATION

Thread & Pitch	Grip Range	Hole Size +0.1 -0.0	D	d	S	L
M6 x 1.0	45 (0.5 - 4.5)	9.0	13.0	9.0	1.50	18.0
	60 (0.5 - 6.0)	9.0	13.0	9.0	1.50	19.5
M8 x 1.25	60 (0.5 - 6.0)	11.0	16.0	11.0	1.50	20.0
	80 (0.5 - 8.0)	11.0	16.0	11.0	1.50	23.0
	110 (3.5 - 11.0)	11.0	16.0	11.0	1.50	23.0
M10 x 1.5	70 (0.8 - 7.0)	13.0	19.0	13.0	2.00	26.0
	100 (0.8 - 10.0)	13.0	19.0	13.0	2.00	30.0

Also available in small countersunk head style and with optional knurled body - call for details

INFORMATION

FINISHES

Bright Zinc Trivalent Clear passivated (ZI96), Provides 96 hours salt spray resistance (Other Platings Available To Special Order).

MATERIALS

Medium Tensile Steel, (Aluminium (AL), Brass (BR)).

PART NUMBER EXAMPLES

Type / Style / Thread / Grip Code / Finish
OPTI - LF - M6 - 60 - ZI96

(OptiNut-Large Flange - M6 - 0.5 - 6.0 Grip Range - 96 Hour Zinc Trivalent Pass)

The high performance patented OptiNut® is a new type of rivet nut designed to streamline rivet nut usage and at the same time solve most of the age-old problems associated with this sort of fixing.

Primarily the OptiNut® offers a much wider grip than conventional rivet nuts, for instance. M3 will cover 0.5-3.00mm the M4 0.5-4.00mm, M8 0.5-8.00 and so on. One nut will cover 2 grips in the smaller sizes and up to 4 grips in larger sizes so reducing inventory items and the danger placing the wrong nut in the work piece.

OptiNut® rivet nuts are produced in 23B2 material and therefore offer up to 40% better thread performance than standard CB4 FF. This material is most suited when used with 8.8 screws.

OptiNut® rivet nuts can be used with conventional tooling but tool adjustment will still be necessary to obtain the correct setting.

OptiNut® rivet nuts can also be produced with a grip range to suit your application i.e. M8 - 3.5-11.0mm.

OptiNut® rivet nuts produce a bulge with a much larger diameter than conventional rivet nuts and with a controlled upset point can safely be used in softer materials, composites or sandwich sections.

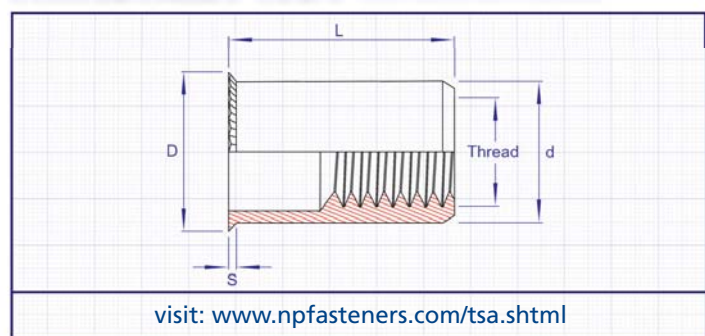
OptiNut® rivet nuts can be produced in first grip, large flange and small C'sk Head styles in steel with a Zinc / CR3 based plating (giving 96 hours to white rust) as standard but can be produced in all head styles, body shapes and materials to suit your application.

OptiNut® custom can be offered in specific or conventional grips where the bulge control system will offer manageable mechanical control for upset point, or providing lower upset load requirement for minimum heat treated parts which withstand the maximum torque requirement for 12.9 bolts.



OptiNut® is a registered trademark of Northern Precision Ltd

THINSHEET NUT IMPERIAL HOLES



TYPE TSA



SPECIFICATION

OTHER GRIP RANGES AVAILABLE, PLEASE CALL FOR DETAILS.

Thread & Pitch	Grip Range	Hole Size +0.1 -0.0	D	d	S	L	Height when Installed (Guide only)
M3 x 0.5	18 (0.5 - 1.8)	4.8	5.4	4.8	0.35	8.5	5.5
M4 x 0.7	25 (0.5 - 2.5)	6.4	7.1	6.4	0.5	10.5	6.3
M5 x 0.8	30 (0.5 - 3.0)	7.2	7.9	7.2	0.5	12.0	6.8
M6 x 1.0	30 (0.5 - 3.0)	9.6	10.4	9.5	0.6	14.0	8.0
M8 x 1.25	30 (0.5 - 3.0)	10.6	11.5	10.5	0.6	16.0	9.4

INFORMATION

MATERIALS

Mild Steel.

FINISHES

Zinc / Trivalent Passivate (SZ).

PART NUMBER EXAMPLE

Type / Thread /

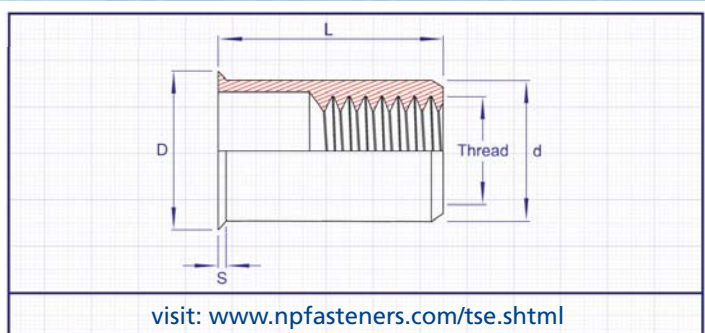
Grip Range /

Finish =

TSA - M4 - 25 - SZ

(Thin Sheet M4,
0.5 to 2.5mm panel,
Steel, Zinc)

THINSHEET NUT METRIC HOLES



TYPE TSE



SPECIFICATION

OTHER GRIP RANGES AVAILABLE, PLEASE CALL FOR DETAILS.

Thread & Pitch	Grip Range	Hole Size +0.1 -0.0	D	d	S	L	Height when Installed (Guide only)
M3 x 0.5	15 (0.5 - 1.5)	5.0	5.6	5.0	0.35	8.5	5.5
M4 x 0.7	20 (0.5 - 2.0)	6.0	7.0	6.0	0.5	11.5	6.0
M5 x 0.8	30 (0.5 - 3.0)	7.0	8.0	7.0	0.5	11.5	6.3
M6 x 1.0	30 (0.5 - 3.0)	9.0	10.0	9.0	0.5	14.5	8.6
M8 x 1.25	30 (0.5 - 3.0)	11.0	12.0	11.0	0.5	16.5	10.0
M10 x 1.5	35 (0.8 - 3.5)	13.0	14.0	13.0	0.5	20.0	12.8

INFORMATION

MATERIALS

Mild Steel, Stainless Steel (A2), (Aluminium (AL) To Special Order).

FINISHES

Zinc Trivalent Passivate (SZ).

PART NUMBER EXAMPLES

Type / Thread /

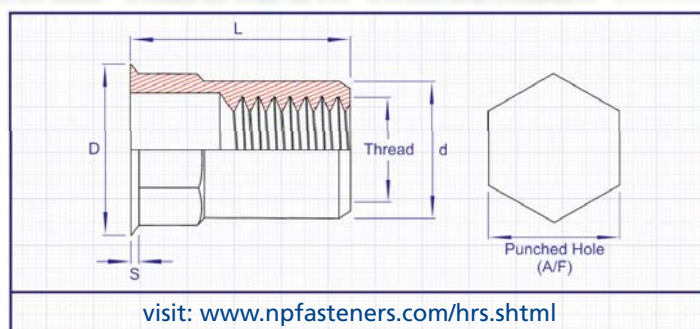
Grip Range / Finish =

TSE - M3 - 15 - SZ

(Thinsheet, M3,
0.5 to 1.5mm panel,
Steel, Zinc)

For detailed installation guides and performance data visit www.npfasteners.com

HALF HEXAGON THINSHEET IMPERIAL HOLES



SPECIFICATION

OTHER GRIP RANGES AVAILABLE, PLEASE CALL FOR DETAILS.

Thread & Pitch	Grip Range	Hole Size (AF) +0.1 - 0.0	D	d	S	L	Height when Installed (Guide only)
M3 x 0.5	18 (0.5 - 1.8)	4.8	5.4	4.8	0.35	8.5	5.5
M4 x 0.7	25 (0.5 - 2.5)	6.4	7.1	6.4	0.5	10.5	6.3
M5 x 0.8	30 (0.5 - 3.0)	7.2	7.9	7.2	0.5	12.0	6.8
M6 x 1.0	30 (0.5 - 3.0)	9.6	10.2	9.5	0.6	14.0	8.0
M8 x 1.25	30 (0.5 - 3.5)	10.6	11.3	10.5	0.6	16.0	9.4

INFORMATION

MATERIALS

Mild Steel.

FINISHES

Zinc Trivalent Passivate (SZ).

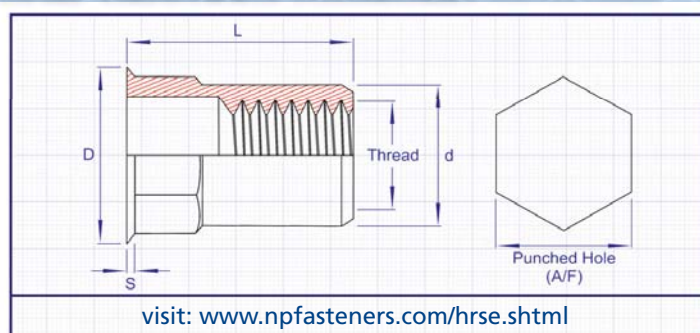
PART NUMBER EXAMPLE

Type / Thread / Grip Range / Finish =

HRS - M5 - 30 - SZ

(Hexagon sheetnut, M5, 0.5 to 3.0mm panel, Steel, Zinc)

HALF HEXAGON THINSHEET METRIC HOLES



SPECIFICATION

OTHER GRIP RANGES AVAILABLE, PLEASE CALL FOR DETAILS.

Thread & Pitch	Grip Range	Hole Size (AF) +0.1 - 0.0	D	d	S	L	Height when Installed (Guide only)
M3 X 0.5*	18 (0.5 - 1.8)	5.0	5.6	5.0	0.35	8.5	5.5
M4 X 0.7	20 (0.5 - 2.0)	6.0	7.0	6.0	0.5	10.5	6.0
M5 X 0.8	30 (0.5 - 3.0)	7.0	8.0	7.0	0.5	11.5	6.3
M6 X 1.0	30 (0.5 - 3.0)	9.0	10.0	9.0	0.6	14.5	8.6
M8 X 1.25	30 (0.5 - 3.0)	11.0	12.0	11.0	0.6	16.5	10.0
M10 X 1.5*	40 (2.5 - 4.0)	13.0	14.0	13.0	0.6	20.0	12.8

INFORMATION

MATERIALS

Mild Steel, Stainless Steel (A2), (Aluminium (AL) To Special order).

FINISHES

Zinc Trivalent Passivate (SZ).

PART NUMBER EXAMPLE

Type / Thread / Grip Range / Finish =

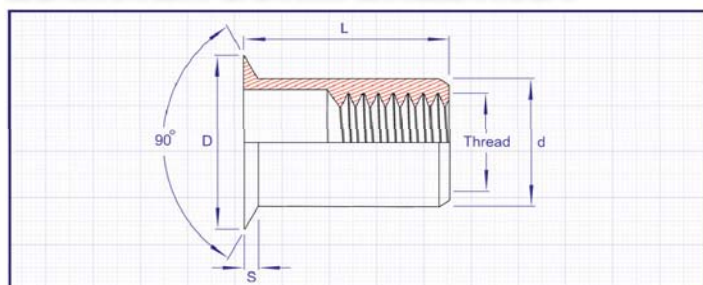
HRSE-M6-30-SZ

(Hexagon Sheet Nut, M6, 0.5 to 3.0mm Panel, Steel, Zinc)

* Special order only

For detailed installation guides and performance data visit www.npfasteners.com

COUNTER SUNK SHEETNUT



visit: www.npfasteners.com/crs.shtml

TYPE CRS



SPECIFICATION

OTHER GRIP RANGES AVAILABLE, PLEASE CALL FOR DETAILS.

Thread & Pitch	Grip Range	Hole Size +0.1 - 0.0	D	d	S	L	Height when Installed (Guide Only)
M3 x 0.5	20 (1.0 - 2.0)	5.0	7.0	5.0	1.0	8.5	5.5
M4 x 0.7	25 (1.0 - 2.5)	6.0	8.0	6.0	1.0	10.5	6.5
M5 x 0.8	30 (1.0 - 3.0)	7.0	9.0	7.0	1.0	12.0	7.0
M6 x 1.0	30 (1.0 - 3.0)	9.0	11.0	9.0	1.0	14.0	8.5
M8 x 1.25	30 (1.0 - 3.0)	11.0	13.0	11.0	1.0	16.0	10.0
M10 x 1.5	40 (1.6 - 4.0)	13.0	15.7	13.0	1.6	22.0	14.5

INFORMATION

MATERIALS

Mild Steel,
(Stainless Steel To Special Order),
(Aluminium To Special Order).

FINISHES

Zinc Trivalent Passivate (SZ).

PART NUMBER EXAMPLE

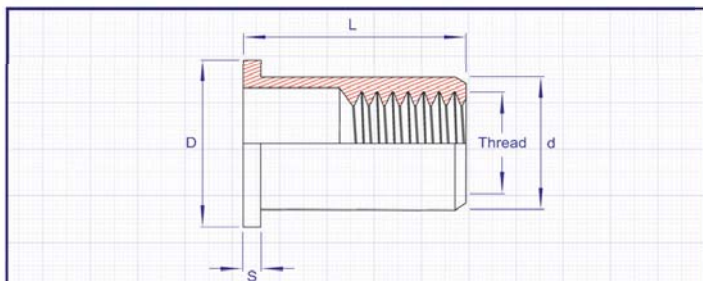
Type / Thread /
Grip Range / Finish =

CRS - M6 - 30 - SZ

(Counter Sunk Closed End, M6,
1.0 to 3.0mm Panel, Steel, Zinc)

Splined Body Versions Available. Contact our sales department for further details.

FLAT HEAD SHEETNUT



visit: www.npfasteners.com/frs.shtml

TYPE FRS



SPECIFICATION

OTHER GRIP RANGES AVAILABLE, PLEASE CALL FOR DETAILS.

Thread & Pitch	Grip Range	Hole Size +0.1 - 0.0	D	d	S	L	Height when Installed (Guide Only)
M3 x 0.5	18 (0.3 - 1.8)	5.0	8.0	5.0	0.75	9.0	5.5
M4 x 0.7	20 (0.3 - 2.0)	6.0	9.0	6.0	0.75	10.5	6.0
M5 x 0.8	30 (0.5 - 3.0)	7.0	10.0	7.0	1.0	14.0	8.0
M6 x 1.0	30 (0.5 - 3.0)	9.0	13.0	9.0	1.5	16.0	9.0
M8 x 1.25	35 (0.5 - 3.5)	11.0	16.0	11.0	1.5	17.0	10.0
M10 x 1.5	35 (0.8 - 3.5)	13.0	19.0	13.0	2.0	23.0	14.5

INFORMATION

MATERIALS

Mild Steel, (Stainless Steel
To Special Order),
(Aluminium To Special Order).

FINISHES

Zinc Trivalent Passivate (SZ).

PART NUMBER EXAMPLES

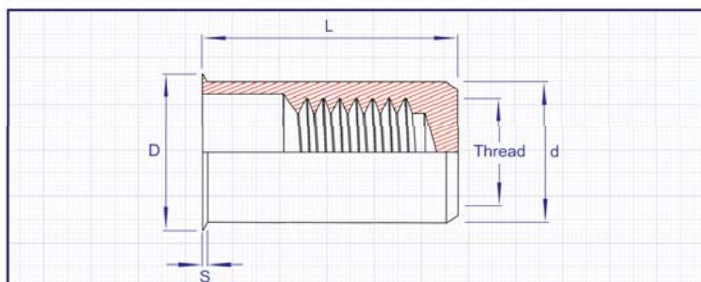
Type / Thread /
Grip Range / Finish =

FRS - M8 - 35 - SZ

(Flat Head, M8,
0.5 to 3.5mm Panel,
Steel, Zinc)

**Closed End and Splined Body Versions Available. Contact our sales department for further details.
For detailed installation guides and performance data visit www.npfasteners.com**

THINSHEET NUT CLOSED END



visit: www.npfasteners.com/tsb-steel.shtml



**TYPE
TSB**

SPECIFICATION

*SUBJECT TO AVAILABILITY

Thread & Pitch	Grip Range	Hole Size + 0.1 - 0.0	D	d	S	L
M3 x 0.5*	11 (0.5 - 1.1)	5.0	5.8	5.0	0.3	11.7
	23 (1.0 - 2.3)					12.9
M4 x 0.7	13 (0.5 - 1.3)	6.0	6.8	6.0	0.3	15.1
	30 (1.0 - 3.0)					16.8
M5 x 0.8	15 (0.5 - 1.5)	7.0	8.0	7.0	0.4	16.8
	35 (1.0 - 3.5)					19.3
M6 x 1.0	15 (0.5 - 1.5)	9.0	10.0	9.0	0.4	21.3
	35 (1.0 - 3.5)					23.3
M8 x 1.25	18 (0.5 - 1.8)	11.0	12.0	11.0	0.4	24.0
	50 (1.5 - 5.0)					27.8
M10 x 1.5	32 (0.5 - 3.2)	13.0	14.4	13.0	0.5	32.0
	50 (1.5 - 5.5)					34.4

INFORMATION

MATERIALS

Mild Steel (Stainless Steel To Special Order), (Aluminium To Special Order).

FINISHES

Zinc Trivalent Passivate (SZ).

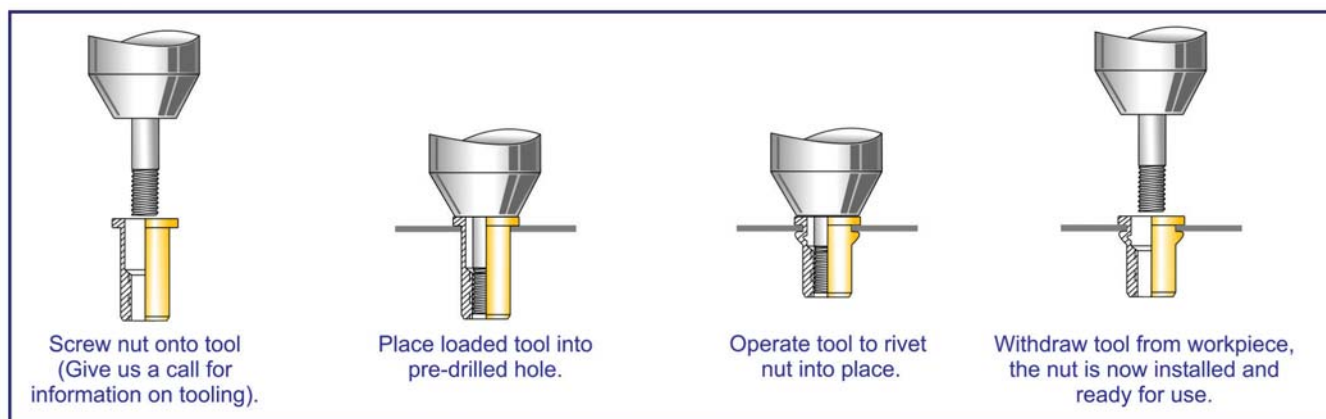
PART NUMBER EXAMPLE

Type / Thread / Grip Range / Finish =

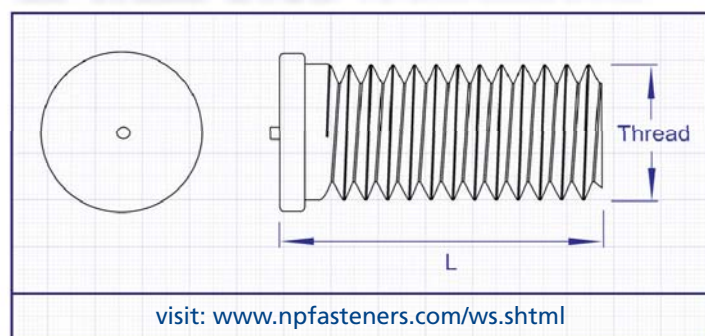
TSB - M5 - 35 - SZ

(Thinsheet Closed End, M5, 1.0 to 3.5mm Panel, Steel, Zinc)

SHEET NUT INSTALLATION GUIDE



CD WELD STUD TO DIN 32501/440



TYPE WS



SPECIFICATION

Thread & Pitch

Available Lengths (L) ± 0.25

Thread & Pitch	6	8	10	12	16	20	25	30	-	-	-	-
M3 x 0.5	6	8	10	12	16	20	25	30	-	-	-	-
M4 x 0.7	6	8	10	12	16	20	25	30	-	-	-	-
M5 x 0.8	-	8	10	12	16	20	25	30	35	40	-	-
M6 x 1.0	-	-	10	12	16	20	25	30	35	40	45	-
M8 x 1.25	-	-	-	-	16	20	25	30	35	40	45	50

Weld Standoffs & Unthreaded Weld Pins Available To Special Order.

INFORMATION

MATERIALS

Steel, Stainless Steel (A2),
(Aluminium To Special Order).

FINISHES

Steel / Copper Flashed (CP).

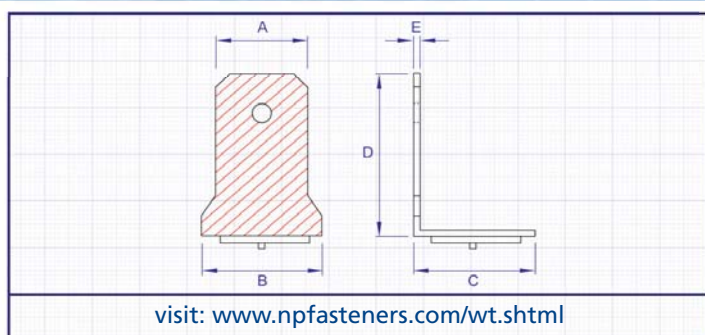
PART NUMBER EXAMPLE

Type / Thread / Length / Finish =

WS - M3 - 10 - CP (Weld Stud, M3 x 10mm, Steel, Copper Flash)

WS - M4 - 12 - A2 (Weld Stud, M4 x 12mm, Stainless)

CD WELD SPADE TAG



SPECIFICATION

SUITABLE FOR 1/4" RECEPTACLES.

A	B	C	D	E
6.3	8.0	10.0	11.5	0.7

Also available in double sided version (Type D/E).

Other sizes and specials available on request. Please contact our sales office for details.

INFORMATION

MATERIALS

Steel.

FINISHES

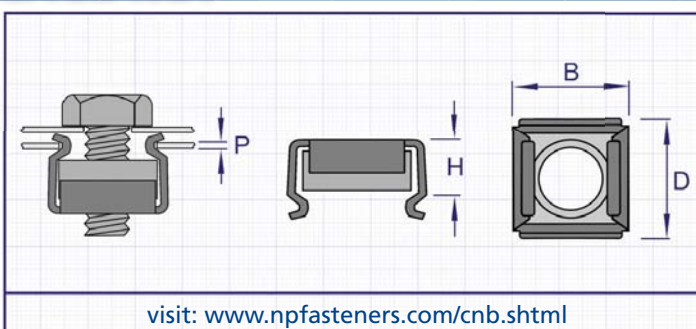
Copper Flashed.

PART NUMBER EXAMPLE

Size / Type = 1/4 - Spade Tag Single

For detailed installation guides and performance data visit www.npfasteners.com

CAGE NUT



SPECIFICATION

OTHER SPRING STEEL FASTENERS AVAILABLE, PLEASE CALL FOR DETAILS.

Thread and Pitch	Code	Panel Range (P)	Hole Size in Panel	H	B	D
M4 x 0.7	1	0.7 - 1.6	9.5	5.8	13.5	13.5
	2	1.8 - 2.6	9.5	5.8	13.5	13.5
M5 x 0.8	1	0.7 - 1.6	9.5	5.8	13.5	13.5
	2	1.8 - 2.6	9.5	5.8	13.5	13.5
	3	2.1 - 3.0	9.5	6.0	13.5	13.5
M6 x 1.0	1	0.7 - 1.6	9.5	5.8	13.5	13.5
	2	1.8 - 2.6	9.5	5.8	13.5	13.5
	3	2.1 - 3.0	9.5	6.0	13.5	13.5
M8 x 1.25	1	0.7 - 1.6	12.8	7.2	18.0	17.8
	2	1.8 - 2.6	12.8	7.2	18.0	17.8
	3	2.1 - 3.0	12.8	7.4	18.0	17.8
M10 x 1.5	1	0.7 - 1.6	12.8	7.2	18.0	17.8
	2	1.8 - 2.6	12.8	7.2	18.0	17.8
	3	2.1 - 3.0	12.8	7.4	18.0	17.8

INFORMATION

MATERIALS

Zinc Trivalent
Passivate (ZC).

FINISHES

Nut - Carbon Steel,
Cage - Spring Steel,
Also available in Stainless Steel (A2).

PART NUMBER EXAMPLE

Type / Thread / Code / Finish =

CNB - M6 - 2 - ZC

(Cage Nut Type B, M6, 1.8-2.6 Panel, Steel Zinc)

BLIND RIVETS



INFORMATION

Blind Rivets (often referred to as "Breakstem Rivets") allow two or more components to be joined together from one side of the application.

Available in a combination of head styles, diameters, grip-ranges and materials, blind rivets are highly versatile and are a cost effective, industry proven joining method.

Installation is simple, with tooling ranging from cheap pistol-grip style guns to air-powered tooling suitable for production line work.

Applications include, automotive, aerospace, furniture, restoration, sheet metal fabrication etc.

For detailed installation guides and performance data visit www.npfasteners.com

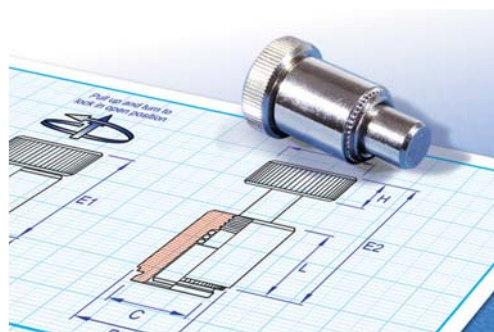
For our full range plus extensive technical information visit www.npfasteners.com

SELF CLINCHING SPECIALS

To compliment our comprehensive range of self clinching fasteners, we can manufacture to special order non-standard versions of our fasteners, such as special threads, lengths or body heights or even a complete special, we can design and manufacture a fastener to suit your applications requirements.

Subject to minimum manufacturing quantities.

Please contact our sales department on +44 (0) 1302 836010 to discuss your requirements

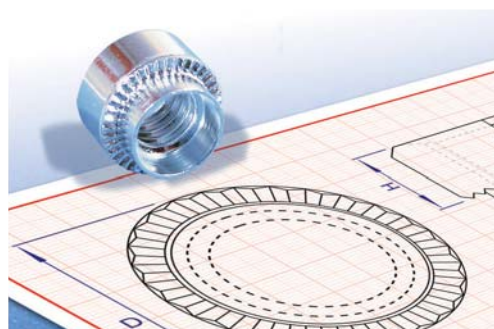


RIVET BUSH SPECIALS

To compliment our comprehensive range of rivet bushes, we can manufacture to special order variations of standard fasteners, such as a special hole size, body height, thread size or even a complete special, we can design and manufacture a fastener to suit your applications requirements.

Subject to minimum manufacturing quantities

Please contact our sales department on +44 (0) 1302 836010 to discuss your requirements



INSERTS

We offer a comprehensive range of inserts for plastics, interference fit inserts and screw-in inserts in range of materials and finishes. We can also manufacture inserts to your requirements, simply send us your drawing, or we can design and manufacture an insert to meet your specific application needs.

Subject to minimum manufacturing quantities.

Please contact our sales department on +44 (0) 1302 836010 to discuss your requirements



SPECIAL TURNED AND COLD HEADED COMPONENTS

With manufacturing facilities in the UK, France, Italy, Germany and China, we can produce small run prototype batches up to multi-million piece production runs in materials including Steel, Stainless Steels, Aluminium, Brass, Bronze and specialist Alloys. Manufacturing options include - Cold Heading, single spindle, multi-spindle, rotary transfer and capstan lathes, CNC turning and milling, centerless grinding, stamping, plus various secondary operations.

Please contact our sales department on +44 (0) 1302 836010 to discuss your requirements



**Check our website for the latest additions to our range of products and services
If you can't find the part you want, contact our sales department.**

OTHER RANGES

ENIGMA Series Blind Rivet Tooling

A Professional tool range at a standard tool price.

Enigma 0 - for 2.4mm to 4.8mm Rivets

Enigma 1 - for 3.0mm to 4.8mm Rivets

Enigma 1/6.4 - for 5.0mm to 6.4mm Rivets

Enigma 2 - for 5.0mm to 6.4mm Structural Rivets

visit: www.npfasteners.com/enigma-br.shtml

**ENIGMA
for Blind Rivets****ENIGMA Series Blind Rivet Nut Tooling**

A Professional tool range at a standard tool price.

High quality air tooling for the accurate placement of a wide range of steel, stainless steel and aluminium Blind Rivet Nuts for large production runs.

visit: www.npfasteners.com/enigma-rn.shtml

**ENIGMA
for Blind
Rivets Nuts****IS30 Blind Rivet Nut Hand Tool**

Features a double cantilever action for effortless installation. Suitable for installing M4 - M10 Rivet Nuts. This tool uses off the shelf Socket Cap screws for the mandrels considerably reducing down time. Comes in a strong plastic box with a full set of mandrels.

visit: www.npfasteners.com/rivetnut-hand-tooling.shtml

**IS30 Hand Tool
for Blind Rivet Nuts****RIVEDRILL & NUTDRILL ATTACHMENTS**

The patented drill attachment that easily converts cordless and electric drills into blind rivet or blind rivet nut guns. This innovative new tool allows operators to set up to 14 rivets per minute - twice as many as can be set by standard hand tools.

visit: www.npfasteners.com/rivedrill.shtml

**RIVEDRILL
& NUTDRILL****HAEGER INSTALLATION PRESSES**

A range of specially designed power presses for the installation of the full range of Self Clinching fasteners, Rivet Bushes and Broaching fasteners.

NP recommends Haeger presses for auto feeding our range of self clinching fasteners.

visit: www.npfasteners.com/haeger-presses.shtml

**HAEGER
INSTALLATION
PRESSES**

PRIMA INSERTA INSTALLATION PRESS

The Prima Inserter press is able to install a wide variety of self-clinching fasteners and rivet bushes into panels up to 3mm thick as standard. With the addition of custom anvils it is possible to install into panels up to 5mm thick.

Designed for safety, reliability and ease of use, with a build quality that belies its price.

Insertion force is adjustable up to 6 tons and pneumatic power means speed, consistency, simple operation and minimal maintenance. With quick tooling changeover, it's an ideal solution for those short production runs.

Main head unit available for bench mounting and with fixed or air powered risable stands.

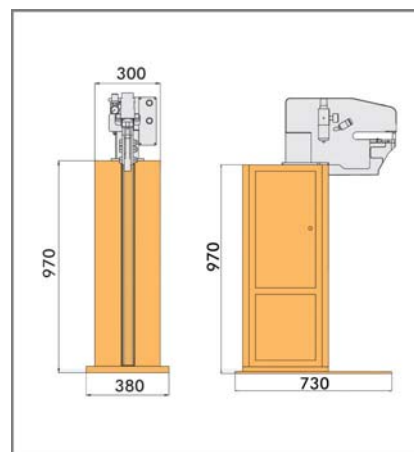
For more information contact our sales department on:-
+44 (0)1302 836010 or visit www.npfaster.com/primainserter.shtml



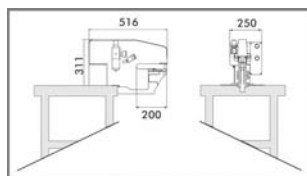
Prima Inserter head unit with risable stand



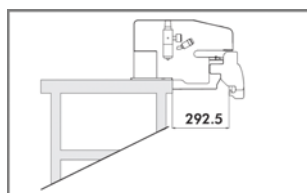
Prima Inserter head unit with risable stand fitted with Accessory No. 2 for box shaped work (Large and Small frames)



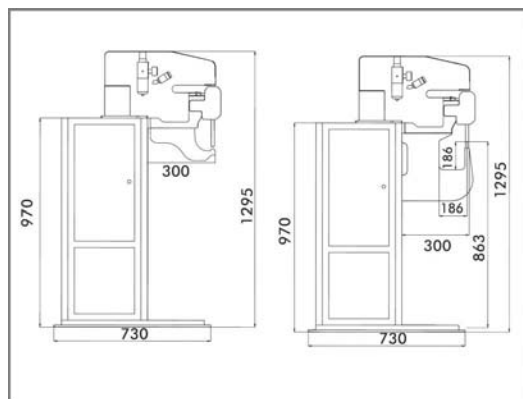
Head unit fitted to fixed stand



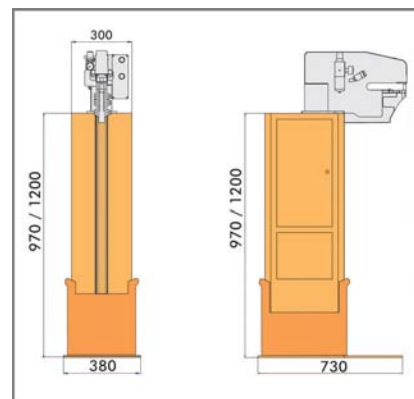
Head unit dimensions



Head unit fitted with Accessory No. 1



Head unit fitted with Accessory No. 2

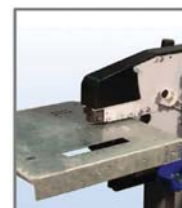
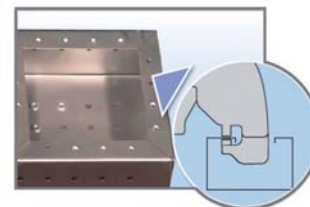


Head unit fitted to risable stand

- Available in 3 configurations
- Force range: 280kg - 6,000kg (600 lbs - 14,000lbs)
- Installs fasteners in up to 3mm panels as standard
- Interchangeable accessories for the most complex installations
- Requires 6 - 10 Bar compressed air supply and 220v/100w or 110v/100w single phase supply



Head unit fitted with Accessory No. 1 for C-shaped work



SAMPLES

We are more than happy to provide samples from our standard range of products for testing or approval purposes. If you just need a few parts to finish a job, give us a call, we will be happy to organise samples for you instead of tying you down to a minimum order quantity.

INITIAL SAMPLE INSPECTION REPORTS (ISIR)

We can provide Initial Sample Inspection Reports. Please stipulate your requirements when you place your order.

CERTIFICATES OF CONFORMITY (C OF C)

Our delivery notes have a signed declaration of conformity already on them, however, we can provide a dedicated Certificate of Conformity if required. Please request this at the time of order.

PRODUCTION PART APPROVAL PROCESS (PPAP)

We can provide PPAP documentation levels 1 - 5 as required.

MATERIAL, PLATING AND HEAT TREATMENT CERTIFICATES

All our products are traceable back to the raw material batch they were manufactured from. We are happy to provide certificates for both raw material and any plating / treatment processes. Please request this when you place your enquiry or order.

INTERNATIONAL MATERIALS DATA SYSTEM (IMDS)

We are able to enter information on the International Material Data System if required. Please forward all requests to imds-request@npfasteners.com giving your IMDS ID, our supplier code assigned by the customer if required, any other information required for 'Recipient Data'.

PERFORMANCE TESTING

We can carry out performance testing on all our products such as Torque-Out, Push-Out, Pull-Through, as well as hardness testing, Plating Thickness testing etc. Please contact our technical department for further information. (technical@npfasteners.com)

ROHS, WEEE, ELV AND REACH COMPLIANCY

Compliance statements for all our products are available on request. We can also provide independent lab test compliancy results on a batch by batch basis if required (call our sales office for costings). Visit our website (www.npfasteners.com/rohs.shtml) for a general statement on compliance.

FASTENER INSTALLATION SERVICE

You want to install our fasteners in to your application or test panel but don't have a press or the correct tooling?

Send us the test panel with the correct hole sizes punched or drilled and we will install the parts for you. Better still, call in to see us and you can watch as the parts are installed. Give our sales team a call to arrange a visit.

CUSTOMER SUPPORT

Last but by no means least is our customer support. Supplying the fastener is not the end of the story as far as we are concerned. Our prices are highly competitive, but not at the expense of providing full backup and support for all our products and services. Our technical department is happy to provide applications or engineering advice on the use of our fasteners.



Check our website for the latest additions to our range of products and services.

GAUGE CONVERSION CHART

Gauge	MM	Metric Material
10SWG	3.25	3.00
12SWG	2.64	2.50
14SWG	2.03	2.00
16SWG	1.63	1.50
18SWG	1.22	1.20
20SWG	0.914	1.00
22SWG	0.711	0.80

THREAD SIZE EQUIVALENTS

BA	Metric	UNC	UNF
8	M2	256	264
7		348	356
6	M3	440	448
5	M3.5	632	640
4			
3	M4	832	836
2	M5	1024	1032
1			
0	M6	0420	0428
	M8	5/16-18	5/16-24
	M10	3/8-16	3/8-24

HARDNESS CONVERSION CHART

Rockwell				Brinell		Vickers	Approx Tensile Strength (psi)
A	B	C	D	3000kg	500kg	136	
				10mm Ball Steel	10mm Ball Steel	Diamond Pyramid	
62	100	23	42.1	240	201	254	118,000
61	98	21	40.9	228	189	243	112,000
59	96	18	-	216	179	230	106,000
57.5	94	15	-	205	171	254	100,000
56.5	92	12	-	195	163	213	96,000
55.5	90	9	-	185	157	204	91,000
54	88 ¹	7	-	176	151	192	86,000
53	86	5	-	169	145	184	83,000
52	84	3	-	162	140	176	79,000
50.5	82	1	-	156	135	170	76,000
49.5	80 ²	-	-	150	130	163	73,000
48.5	78	-	-	144	126	-	-
47	76	-	-	139	122	-	-
46	74	-	-	135	118	-	-
45	72	-	-	130	114	-	-
44	70 ³	-	-	125	110	-	-
43	68	-	-	121	107	-	-
42	66	-	-	117	104	-	-
41.5	64	-	-	114	101	-	-
40.5	62	-	-	110	98	-	-
39.5	60 ⁴	-	-	107	95	-	-
38.5	58	-	-	104	92	-	-
37.8	56	-	-	101	90	-	-
37	54	-	-	-	87	-	-
36	52	-	-	-	85	-	-
35	50 ⁵	-	-	-	83	-	-

- (1) HRB 88 - Maximum recommended panel hardness for 400 Series Stainless Steel Self Clinching Fasteners
 (2) HRB 80 - Maximum recommended panel hardness for hardened Steel Self Clinching Fasteners
 (3) HRB 70 - Maximum recommended panel hardness for 300 Series Stainless Steel Self Clinching Fasteners
 (4) HRB 60 - Maximum recommended panel hardness for unhardened Steel Self Clinching Fasteners
 (5) HRB 50 - Maximum recommended panel hardness for Aluminium Self Clinching Fasteners



NORTHERN PRECISION LTD



Northern Precision Limited

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