TR FASTENINGS
TR Hank® Self Clinch Fasteners

TR Fastenings is recognised throughout the industry for world-class products and services.
We manufacture, stock and distribute a vast range of industrial fasteners and associated components.

SPECIFY • MANUFACTURE • DELIVER • INTERNATIONALLY

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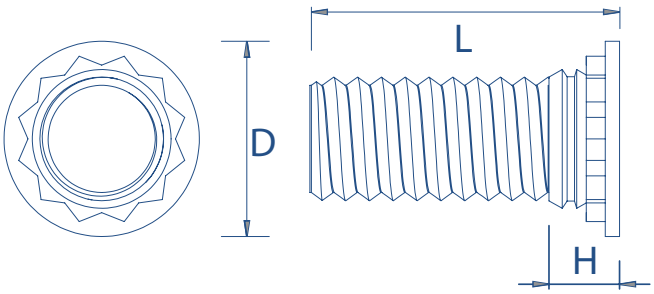
Edition 6

TR Hank® Self-Clinch

Contents

TR Hank® Self-Clinch
Flush Head Studs

Plated Steel : TR-FH | Stainless Steel : TR-FHS | 400 Series Stainless Steel : TR-FH4 |
*Aluminium Alloy : TR-FHA



Metric Dimensions

Thread size	M2	M2.5	M3	M3.5	M4	M5	M6	M8
D ±0.4	3.5	4.1	4.6	5.3	5.9	6.5	8.2	9.6
H max	1.95	1.95	2.1	2.2	2.4	2.7	3.0	3.7
Min sheet thickness	1	1	1	1	1	1	1.6	2.4
Hole +0.08 -0.0	2	2.5	3.0	3.5	4.0	5.0	6.0	8.0
Min distance to edge of sheet	5.2	5.4	5.6	6.4	7.2	7.2	7.9	9.6

Preferred Range

Thread size x Pitch		M2 x 0.4	M2.5 x 0.45	M3 x 0.5	M3.5 x 0.6	M4 x 0.7	M5 x 0.8	M6 x 1.0	M8 x 1.25
Length ±0.4	5			●					
	6	●	●	●		●			
	8	●	●	●	●	●	●	●	
	10	●	●	●	●	●	●	●	●
	12	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●	●
	16	●		●	●	●	●	●	●
	18	●	●	●		●	●	●	●
	20	●	●	●		●	●	●	●
	22			●		●	●	●	●
	25			●		●	●	●	●
	28					●	●	●	●
	30			●		●	●	●	●
	35			●		●	●	●	●
	38					●	●	●	●
	40					●	●	●	●
	45					●		●	●
	50					●	●	●	●

TR Hank® Self-Clinch
Flush Head Studs

Metric Performance Data: TR-FH4

Thread Metric	M3	M4	M5	M6
Test sheet data (mm)	1.5 ST/ST	1.5 ST/ST	1.5 ST/ST	1.5 ST/ST
Installation (kN)	41	51	54	71
Pushout (N)	2230	3300	3600	4210
Torque-out (Nm)	1.8	6.6	10.8	15.9
Pull through (N)	3300	8010	10020	14950

Metric Performance Data: TR-FHS

Thread Metric	M2.5	M3	M4	M5	M6	M8
Sheet thickness (mm)	1.5	1.5	1.5	1.5	2.5	2.5
Installation (kN)	13.5	14.7	26	32	44	49.9
Torsional resistance (Nm)	0.8	1.4	2.9	6.4	10	17
Pushout (N)	740	820	1790	2000	2500	2800
Pull through (N)	1800	2450	4800	6000	10600	13600

Metric Performance Data: TR-FH

Thread Metric	M2	M2.5	M3	M3.5	M4	M5	M6	M8
Sheet thickness (mm)	1.5	1.5	1.5	1.5	1.5	1.5	2.5	2.5
Installation (kN)	9.0	11	14.7	22.3	28	33.5	45	45
Torsional resistance (Nm)	0.45	1	1.7	2.8	4.3	6.8	12	19.5
Pushout (N)	700	740	820	1335	1800	2100	2600	2900
Pull through (N)	1700	2800	3900	3780	5700	6300	11400	15500

*Aluminium Alloy available on request

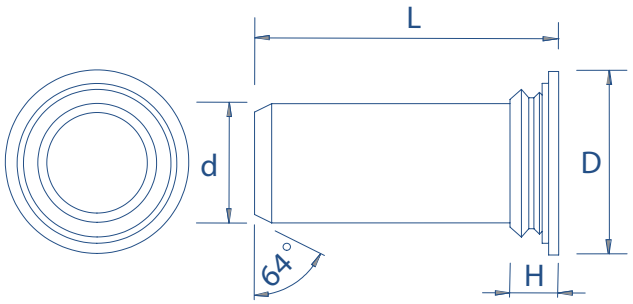
These tests have been conducted in laboratory conditions, these figures should therefore be used for guidance only.

All data is correct to the best of our knowledge, however TR cannot be held responsible for any errors or omissions.

FH4 - Recommended for use in stainless steel sheets: HRB 92 or less.
FHS - Recommended for use in steel or aluminium sheets: HRB 70 or less.
FH - Recommended for use in steel or aluminium sheets: HRB 80 or less.

TR Hank® Self-Clinch
Flush Head Pins

Zinc Plated Steel : TR-TP | Stainless Steel : TR-TPS



Metric Dimensions

Pin diameter +/- 0.05	Min sheet thickness	Hole size in sheet + 0.08	D +/- 0.4	H max	Min. distance hole C/L to edge
3mm	1	3.5	5.20	2.29	6.4
4mm	1	4.5	6.12	2.29	7.1
5mm	1	5.5	7.19	2.29	7.6
6mm	1	6.5	8.13	2.29	7.9

Preferred Range

Pin diameter P±0.05		3	4	5	6
Length ±0.4	6	●			
	8	●	●	●	
	10	●	●	●	●
	12	●	●	●	●
	16	●	●	●	●
	20		●	●	●

Metric Performance Data: TR-TP

Pin diameter code	3mm	4mm	5mm	6mm
Test sheet material	Steel	Steel	Steel	Steel
Installation (kN)	23	27	35	40
Pushout (kN)	1	1.6	1.8	2.2

These tests have been conducted in laboratory conditions, these figures should therefore be used for guidance only.

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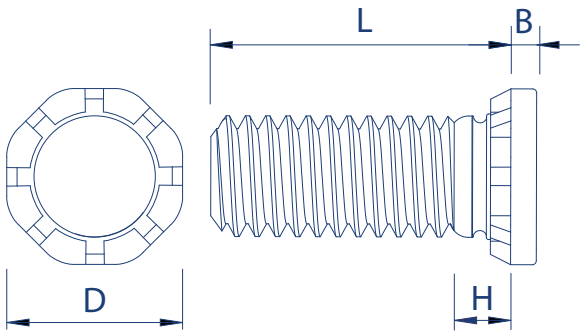
TPS - Recommended for use in sheet hardness: HRB 70

TR Hank® Self-Clinch
Hi Strength Studs

Fastenings

Zinc Plated Steel : TR-HFH | Stainless Steel : TR-HFHS



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Metric Dimensions

Thread size	M5	M6	M8	M10
D ±0.25	7.8	9.4	12.5	15.7
H max	2.7	2.8	3.5	4.1
B max	1.14	1.27	1.78	2.29
Min rec sheet thickness	1.3	1.5	2	2.3
Hole +0.13 -0.0	5	6	8	10
Min distance to edge of sheet	10.7	11.5	12.7	13.7

Preferred Range

Thread size x Pitch		M5 x 0.8	M6 x 1	M8 x 1.25	M10 x 1.5
Length ±0.4	10		●		
	12		●		
	15	●	●	●	●
	16			●	
	18			●	
	20		●	●	●
	25		●	●	●
	30		●	●	●
	35		●	●	●
	40		●	●	●
	45				
	50			●	●

TR Hank® Self-Clinch
Hi Strength Studs

Metric Performance Data: TR-HFH

Thread		M5	M6	M8	M10
Test sheet thickness	Aluminium	1.5	1.5	2.3	2.4
	Steel				
Test sheet hardness (HRB)	Aluminium	15	43	39	39
	Steel	65	59	58	58
Installation (kN)	Aluminium	14	30	36	41
	Steel	27	34	45	55
Pushout (N)	Aluminium	805	1280	1750	2450
	Steel	1550	1780	2210	3475
Torque-out (Nm)	Aluminium	5.4	14.5	30.1	36
	Steel	7.7	14.5	30.1	49.5

Metric Performance Data: TR-HFHS

Thread		M5	M6	M8	M10
Test sheet thickness	Aluminium	1.62	1.62	2.23	2.3
	Steel	1.5	1.6	2.48	2.3
Test sheet hardness (HRB)	Aluminium	35	35	44	44
	Steel	54	45	43	44
Installation (kN)	Aluminium	13	15.5	24.5	34
	Steel	22.5	25	38	47
Pushout (N)	Aluminium	805	1280	1700	2450
	Steel	1505	1780	2200	3500
Torque-out (Nm)	Aluminium	5.4	11.5	21	36.5
	Steel	6.5	11.5	21	36.5

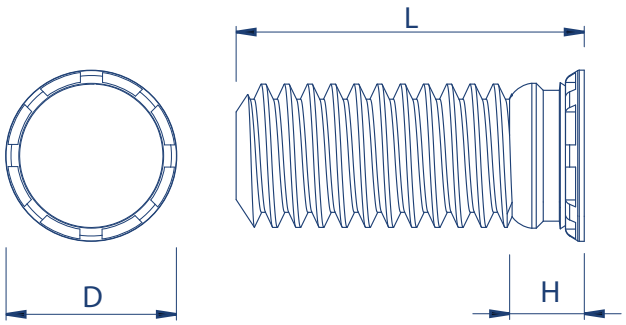
These tests have been conducted in laboratory conditions, these figures should therefore be used for guidance only.

All data is correct to the best of our knowledge, however TR cannot be held responsible for any errors or omissions.

HFH - Recommended for use in steel or aluminium sheets: HRB 85 or less.
HFHS - Recommended for use in steel or aluminium sheets: HRB 70 or less.

TR Hank® Self-Clinch
Low Displacement Flush Head Studs

Zinc Plated Steel : TR-FHL | Stainless Steel : TR-FHLS



Metric Dimensions

Thread size	M2.5	M3	M4	M5
D ±0.4	3.15	3.65	4.65	5.9
H max	2.1	2.1	2.4	2.7
Min sheet thickness	1	1	1	1
Hole +0.08	2.5	3	4	5
Min distance to edge of sheet	2.8	3.3	4.3	5.6

Preferred Range

Thread size		M2.5	M3	M4	M5
Length ±0.4	6	●	●	●	
	8	●	●	●	
	10	●	●	●	●
	12	●	●	●	●
	15	●	●	●	●
	18	●	●	●	
	20		●	●	●
	25		●		
	30			●	
	35				

These tests have been conducted in laboratory conditions, these figures should therefore be used for guidance only.

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TR Hank® Self-Clinch
Low Displacement Flush Head Studs

Metric Performance Data: TR-FHL - TR-FHLS

Thread		M2.5	M3	M4	M5
Test sheet thickness	Aluminium - HRB 33	1.2	1.2	1.2	1.2
	Steel - HRB 55	1.1	1.1	1.1	1.1
Installation (kN)	Aluminium	3.2	4.5	5.4	11.1
	Steel	5.4	5.4	6.7	20.1
Pushout (N)	Aluminium	286	286	370	535
	Steel	451	476	555	1010
Torque-out (Nm)	Aluminium	0.56	0.66	1.2	2.2
	Steel	1.2	1.3	2.2	4.5
Pull through (N)	Aluminium	1250	1300	1560	1900
	Steel	2290	2550	3350	3760

These tests have been conducted in laboratory conditions, these figures should therefore be used for guidance only.

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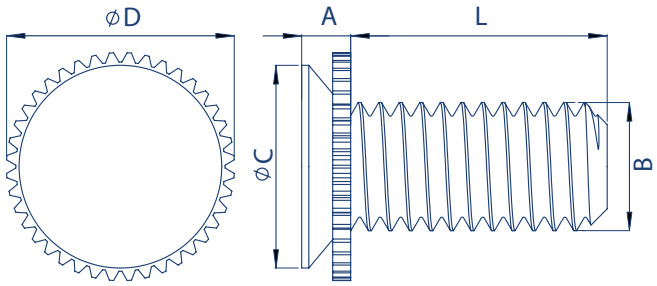
FHL - Recommended for use in steel or aluminium sheets: HRB 80 or less.
FHLS - Recommended for use in steel or aluminium sheets: HRB 70 or less.

TR Hank® Self-Clinch
Concealed Head Studs

Stainless Steel : TR-CHC / TR-CFHC | Aluminium : TR-CHA / TR-CFHA



Metric Dimensions

Thread size		M3	M4	M5
D ±0.4		5.21	8.33	8.89
C max		4.35	7.35	7.9
Blind Mounting Hole +/- 0.08		4.37	7.37	7.93
Min distance to edge of sheet		4	5.6	6.4
Hole +0.08 -0.0		3.6	4.6	5.6
Hole Depth	TR-CHC / TR-CHA	1.10		
	TR-CFHC / TR-CFHA	1.91		
A max	TR-CHC / TR-CHA	1.04		
	TR-CFHC / TR-CFHA	1.83		
Min rec sheet thickness mm	TR-CHC / TR-CHA	1.6		
	TR-CFHC / TR-CFHA	2.4		

Preferred Range

Thread size x Pitch		M3 x 0.5	M4 x 0.7	M5 x 0.8
Length ±0.4	6	●	●	
	8	●	●	
	10	●	●	
	12	●	●	
	16	●	●	
	20	●	●	
	25	●		

TR Hank® Self-Clinch Concealed Head Studs

Performance Data

Thread x Pitch		M3 x 0.5	M4 x 0.7	M5 x 0.8
Installation Cold Rolled Steel (kN)	Stainless Steel: TR-CHC	8	17.8	22.2
	Stainless Steel: TR-CFHC	8.9	14.7	17.8
Installation Aluminium Sheet (kN)	Aluminium: TR-CHA	6.2	12.5	17.8
	Aluminium: TR-CFHA	6.7	13.3	15.6
Pushout (N)	Stainless Steel: TR-CHC	1065	1200	1290
	Stainless Steel: TR-CFHC	1065	1955	3020
	Aluminium: TR-CHA	555	645	755
	Aluminium: TR-CFHA	845	1065	1330
Max Tightening Torque	Stainless Steel: TR-CHC	0.5	2	3.6
	Stainless Steel: TR-CFHC	0.5	2	3.6
	Aluminium: TR-CHA	0.3	1.2	2.16
	Aluminium: TR-CFHA	0.3	1.2	2.16

Please note:
TR-CHC & TR-CHA: To suit 1.6mm sheet
TR-CFHC & TR-CFHA: To suit 2.4mm sheet

These tests have been conducted in laboratory conditions, these figures should therefore be used for guidance only.

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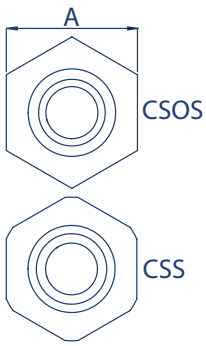
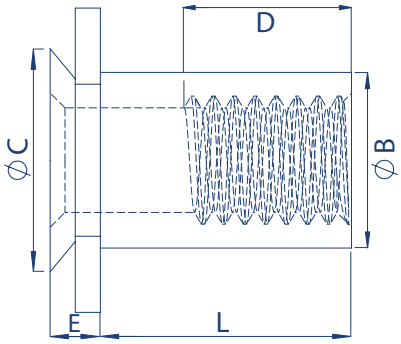
TR Hank® Self-Clinch
Concealed Head Standoffs

Stainless Steel : TR-CSOS / TR-CSS





Metric Dimensions

Thread size		M3	M4	M5	M6
A		6.35	8.73	9.53	11.11
D		5	6.5	9.6	9.6
B		4.2	6.23	7.37	9
C		5.39	7.9	8.72	9.89
Blind mounting hole +/-0.8		5.41	7.92	8.74	9.9
Min.Distance hole C/L edge		4.8	6.4	7.2	9.5
Hole +0.08 -0.0		5.41	7.92	8.73	9.9
Hole Depth	TR-CSOS	1.91	1.91	1.91	1.91
	TR-CSS	1.09	1.09	1.09	-
E -Min Depth of Blind Hole	TR-CSOS	1.83	1.83	1.83	1.83
	TR-CSS	1.04	1.04	1.04	-
Min rec sheet thickness mm	TR-CSOS	2.4	2.4	2.4	2.4
	TR-CSS	1.6	1.6	1.6	-

Preferred Range

Thread size x Pitch		M3 x 0.5	M4 x 0.7	M5 x 0.8	M6 x 1
Length ±0.4	4	●			
	6	●	●		
	8	●	●		
	10	●			
	12	●			
	16	●			
	20	●			

TR Hank® Self-Clinch
Concealed Head Standoffs

Performance Data

Thread x Pitch		M3 x 0.5	M4 x 0.7	M5 x 0.8	M6 x 1.0
Installation Cold Rolled Steel (kN)	Stainless Steel: TR-CSS	17.8	21.3	24.5	-
	Stainless Steel: TR-CSOS	19.2	23.6	26.7	28.9
Pushout (N)	Stainless Steel: TR-CSS	1330	1775	2000	-
	Stainless Steel: TR-CSOS	1465	1955	2665	2860
Max Tightening Torque	Stainless Steel: TR-CSS	0.55	2	3.6	-
	Stainless Steel: TR-CSOS	0.44	1.6	2.9	7.2

These tests have been conducted in laboratory conditions, these figures should therefore be used for guidance only.

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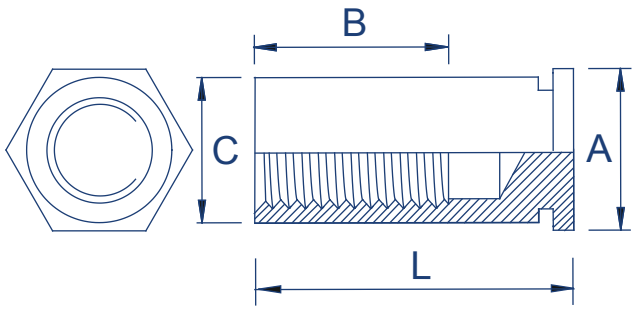
TR Hank® Self-Clinch Blind Standoffs

Zinc Plated Steel : TR-BSO | Stainless Steel : TR-BSOS | *400 Series Stainless Steel : TR-BSO4 | *Aluminium Alloy : TR-BSOA



Metric Dimensions

Thread	M2, M2.5, M3			M3alt			M4			M5		
C +0.0 -0.13	4.2			5.39			7.12			7.12		
A Nom	4.8			6.4			7.9			7.9		
Min rec sheet thickness	1.0			1.0			1.27			1.27		
Hole size +0.08 -0.00	4.22			5.41			7.14			7.14		
Min distance to edge of sheet	6			6.8			8			8		

Length (mm)	5	6	7	8	10	12	14	16	18	20	22	25
'B' Dim (mm)	2.8	3.2	3.6	4		5	6.5		9.5			

Metric Performance Data: TR-BSO - TR-BSOS

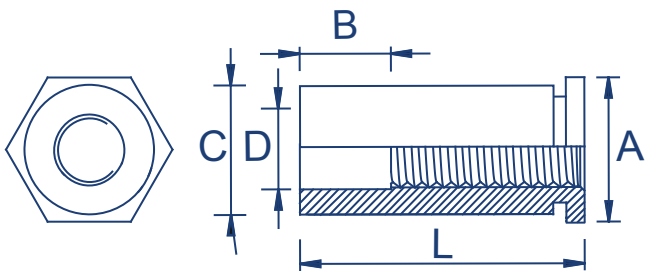
Thread		M2, M2.5, M3	M3alt	M3.5, M4	M5
Test sheet	Steel	1.5mm	1.5mm	1.5mm	1.5mm
Installation	(kN) Steel + Stainless	9.9	14.8	17.9	17.9
Torsional resistance	(Nm) Steel + Stainless	2.16	2.16	8.5	8.5
Pushout	(N) Steel + Stainless	1050	1870	2500	2500
Pull-through	(N) Steel	1470	1470	3180	3180
	(N) Stainless	1180	1180	2490	2490
Max torque for mating screw	(Nm) Steel	0.56	0.56	2.1	3.7
	(Nm) Stainless	0.45	0.45	1.7	2.9

*400 Series Stainless Steel and Aluminium Alloy available on request

These tests have been conducted in laboratory conditions, these figures should therefore be used for guidance only.

TR Hank® Self-Clinch Through Standoffs

Zinc Plated Steel : TR-SO | Stainless Steel : TR-SOS | *400 Series Stainless Steel : TR-SO4 | *Aluminium Alloy : TR-SOA



Metric Dimensions

Thread	M2, M2.5, M3	M3alt	M4	M5
C +0.0 -0.13	4.2	5.39	7.12	7.12
D Counterbore dia ± 0.13	3.2	3.2	4.8	5.35
A Nom	4.8	6.4	7.9	7.9
Min rec sheet thickness	1.0	1.0	1.27	1.27
Hole size +0.08 -0.00	4.22	5.41	7.14	7.14
Min distance to edge of sheet	6	6.8	8	8

Length (mm)	3	4	5	6	7	8	10	12	14	16	18	20	22	25
'B' Dim (mm)	N/A						4			8			11	

Metric Performance Data: TR-SO - TR-SOS

Thread		M2.5, M3	M3alt	M3.5, M4	M5
Test sheet thickness	Steel	1.5mm	1.5mm	1.5mm	1.5mm
Installation	Metric (kN)	9.9	14.8	17.9	17.9
Torsional resistance	Metric (Nm)	2.16	2.16	8.5	8.5
Pushout	Metric (N)	1050	1870	2500	2500
Pull-through	Metric (N) (Steel)	1470	1470	3180	3180
	(N) (st/st)	1180	1180	2490	2490

*400 Series Stainless Steel and Aluminium Alloy available on request

These tests have been conducted in laboratory conditions, these figures should therefore be used for guidance only.

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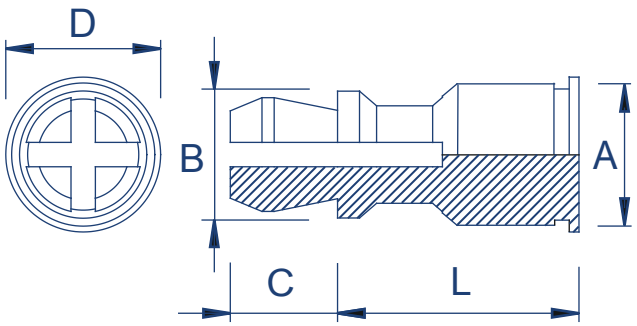
TR Hank® Self-Clinch
Clip-on Standoffs

Zinc Plated Steel : TR-SSS | Stainless Steel : TR-SSC | Aluminium Alloy : TR-SSA



Metric Dimensions

Top panel mounting hole diameter	Length code 'L' mm ±0.13									A max	B ±0.13	C ±0.13	D ±0.13	Hole size +0.08
Metric 4mm	8	10	12	14	16	18	20	22	25	5.39	4.78	3.58	6.35	5.4

Metric Performance Data: TR-SSS - TR-SSC - TR-SSA

Type	Steel Zinc	Stainless Steel	Aluminium
Installation (kN)	15.6	16.5	6.7
Pushout (kN)	1785	1785	881
Test Material	1.5mm Steel	1.5mm Steel	1mm Aluminium

	Panel 1 - Metal HRB50					Panel 2 - PC Board or Metal			
	Bottom Mounting Hole +0.08	Hardness Max.	Thickness Min.	Edge Distance Min.	Location Tolerance Max.	Top Mounting Hole +0.08	Hardness Max.	Thickness Range	Edge Distance Min.
TR-SSS	5.41	HRB 60	1	6.6	±0.13	4	No limit	1-1.8	2.54
TR-SSC		HRB 70							
TR-SSA		HRB 50							

These tests have been conducted in laboratory conditions, these figures should therefore be used for guidance only.

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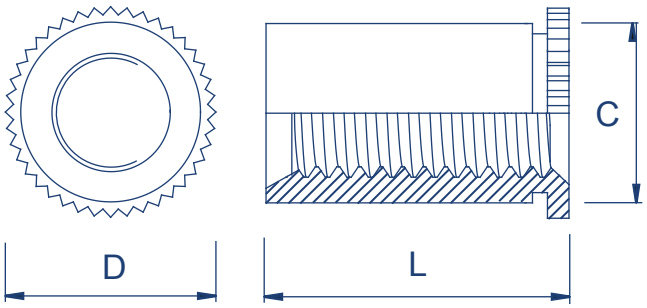
TR Hank® Self-Clinch
Screw Lock Threaded Standoffs

Zinc Plated Steel : TR-DSO | Stainless Steel : TR-DSOS



Metric Dimensions

Thread	**M3**
L +0.05 -0.13	6.35
	7
C max	4.2
D nom	4.92
Sheet thickness	0.94 - 6.35
Hole +0.08	4.2
Min distance to edge of sheet	3.2

Metric Performance Data: TR-DSO - TR-DSOS

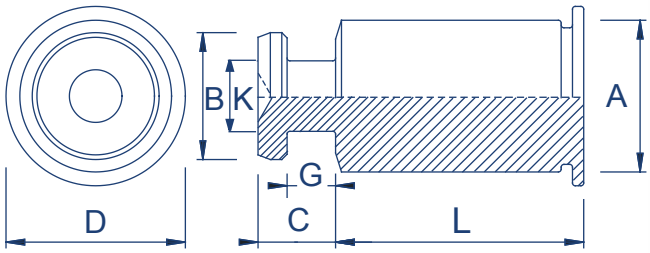
Thread		**M3**
Sheet thickness (mm)	**Steel**	1
	Aluminium	1
Installation (kN)	**Steel**	5.85
	Aluminium	4.5
Pushout (N)	**Steel**	334
	Aluminium	225
Torsional Resistance (Nm)	**Steel**	1.2
	Aluminium	1.1

These tests have been conducted in laboratory conditions, these figures should therefore be used for guidance only.

All data is correct to the best of our knowledge, however TR cannot be held responsible for any errors or omissions.

TR Hank® Self-Clinch
Hole Slide Lock Standoffs

Stainless Steel : TR-SKC



Metric Dimensions

Body size - Sheet code	61.5	**D nom**	6.35
A max	5.39	**G ± 0.08**	1.73
B ± 0.08	4.5	**Hole + 0.08**	5.5
C max	2.75	**K ± 0.08**	2.51

Length code 'L' mm ±0.13											
2	4	6	8	10	12	14	16	18	20	22	25

Metric Performance Data: TR-SKC

Test sheet material	**1.52mm Cold-rolled Steel**		**1.52mm 5052-H34 Aluminium**	
Body sheet code	**Installation (kN)**	**Pushout (N)**	**Installation (kN)**	**Pushout (N)**
61.5	14.3	2650	7	1100

	Panel 1 - Metal HRB50					**Panel 2 - PC Board or Metal**					
	Bottom Mounting Hole +0.08	**Hardness Max.**	**Thickness Min.**	**Edge Distance Min.**	**Location Tolerance Max.**	**Top Mounting Hole +0.08**				**Thickness Range**	**Edge Distance Min.**
						A1 Nom.	**A2 ±0.08**	**A3 ±0.08**	**A4 Min.**		
TR-SKC	5.4	HRB 70	1	6.6	±0.13	1.5	3	5	3.75	1.45-1.62	4.1

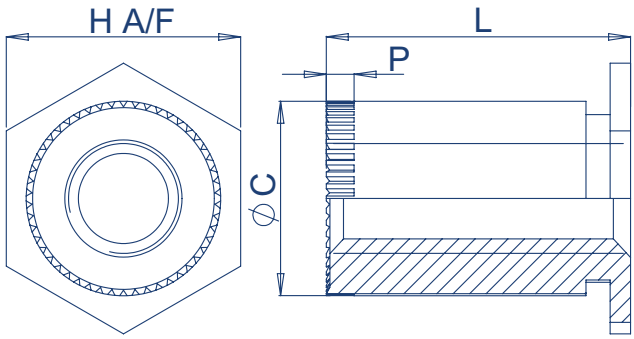
These tests have been conducted in laboratory conditions, these figures should therefore be used for guidance only.

All data is correct to the best of our knowledge, however TR cannot be held responsible for any errors or omissions.

SKC - Recommended for use in sheet hardness: HRB 70 Maximum

TR Hank® Self-Clinch Grounding Standoffs

Stainless Steel : TR-SOSG



Metric Dimensions

Thread	**M3**
C +0.0 -0.13	5.39
H Nom	6.4
Min rec sheet thickness	1
Knurling	0.76
Hole size +0.08 -0.00	5.4
Min distance to edge of sheet	6.8

Metric Performance Data: TR-SOSG

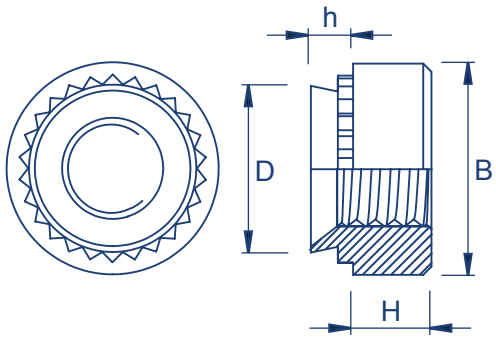
Thread Size x Pitch	Type	Length code 'L' mm ±0.13					
M3 x 0.5	**TR-SOSG**	3	4	6	8	10	12

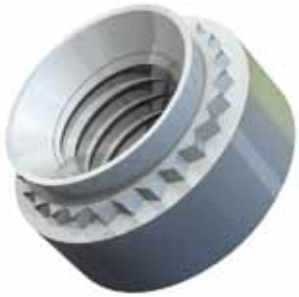
These tests have been conducted in laboratory conditions, these figures should therefore be used for guidance only.

All data is correct to the best of our knowledge, however TR cannot be held responsible for any errors or omissions.

TR Hank® Self-Clinch Nuts

Zinc Plated Steel : TR-S | Stainless Steel : TR-CLS | *400 Series Stainless Steel : TR-SP4 | *Aluminium Alloy : TR-CLA |





Metric Dimensions: TR-S - TR-CLS - TR-SP4

Thread	M2, M2.5, M3				M3alt			M3.5			M4			
Code	-0	-1	-2	-3	-0	-1	-2	-0	-1	-2	-0	-1	-2	-3
D max	4.20				4.73			4.73			5.38			
B±0.2	6.35				7.1			7.1			7.95			
H±0.10	1.5				1.5			1.5			2.0			
h max	0.77	0.97	1.38	2.21	0.77	0.97	1.38	0.77	0.97	1.38	0.77	0.97	1.38	2.21
Min rec sheet thickness	0.8	1.0	1.4	2.3	0.8	1.0	1.4	0.8	1.0	1.4	0.8	1.0	1.4	2.3
Hole size +0.08 -0.00	4.22				4.75			4.75			5.41			
Min distance to edge of sheet	4.08				5.6			5.6			6.9			

Thread	M5				M6				M8			M10		M12
Code	-0	-1	-2	-3	0	-1	-2	-3	-1	-2	-3	-1	-2	-1
D max	6.33				8.73				10.47			13.97		16.95
B±0.2	8.75				11.10				12.65			17.35		20.55
H±0.10	2.0				4.08				5.47			7.48		8.5
h max	0.77	0.97	1.38	2.21	1.15	1.38	2.21	3.05	1.38	2.21	3.05	2.21	3.05	3.05
Min rec sheet thickness	0.8	1.0	1.4	2.3	1.2	1.4	2.3	3.2	1.4	2.3	3.2	2.31	3.18	3.18
Hole size +0.08 -0.00	6.35				8.75				10.5			14.0		17
Min distance to edge of sheet	7.1				8.6				9.7			13.5		16

TR Hank® Self-Clinch Nuts

Metric Dimensions: TR-CLA

Thread	M2		M3		M3.5		M4		M5		M6	
Code	-1	-2	-1	-2	-1	-2	-1	-2	-1	-2	-1	-2
D max	4.22		4.73		5.38		5.97		7.47		8.72	
B±0.2	6.3		6.3		7.1		7.9		9.5		11.05	
H±0.10	1.5		2.0		2.0		3.0		3.8		4.08	
h max	0.98	1.38	0.98	1.38	0.98	1.38	0.98	1.38	0.98	1.38	1.38	2.21
Min rec sheet thickness	1.0	1.4	1.0	1.4	1.0	1.4	1.0	1.4	1.0	1.4	1.4	2.3
Hole size +0.08 -0.00	4.25		4.75		5.4		6.0		7.5		8.75	
Min distance to edge of sheet	4.8		5.6		6.9		7.1		7.9		8.6	

Metric Performance Data: TR-S - TR-CLS Into cold rolled Steel

Thread	M2, M2.5			M3				M3alt			M3.5			M4			
Code	0	-1	-2	0	-1	-2	-3	0	-1	-2	0	-1	-2	0	-1	-2	-3
Installation (kN)	11.2 - 15.6			11.2 - 15.6				13.4 - 26.7			13.4 - 26.7			18 - 27			
Torsional Resistance (Nm)	1.5	1.75	2	1.5	1.75	2	2.1	1.8	2.4	2.4	1.8	2.4	2.4	3	4	5	4.2
Pushout (N)	480	560	1020	480	560	1020	1110	485	575	1200	485	575	1200	495	650	1255	1300

Thread	M5				M6			M8			M10		M12
Code	0	-1	-2	-3	-1	-2	-3	-1	-2	-3	-1	-2	-1
Installation (kN)	18 - 38				27 - 36			27 - 36			32 - 50		33-49
Torsional Resistance (Nm)	3.7	4.5	6.9	6	17.1	17.1	16.4	18.8	20.4	18.1	36.1	36.1	73.9
Pushout (N)	535	801	1115	1500	1765	1765	1755	1870	1870	1860	2021	2021	3065

Metric Performance Data: TR-SP4 Into 304 Stainless Steel

Thread	M2, M2.5			M3			M4			M5			M6		M8	
Code	0	-1	-2	0	-1	-2	0	-1	-2	0	-1	-2	-1	-2	-1	-2
Installation (kN)	35	40	45	35	40	45	40	44	46	42	46	51	60	66	66	72
Torsional Resistance (Nm)	-	-	-	1.6	2	2.3	3.4	4.2	5.1	4	5.1	6.7	17	19	19	21.8
Pushout (N)	580	720	1290	580	720	1290	650	800	1590	805	1030	1780	2005	2300	2100	2415

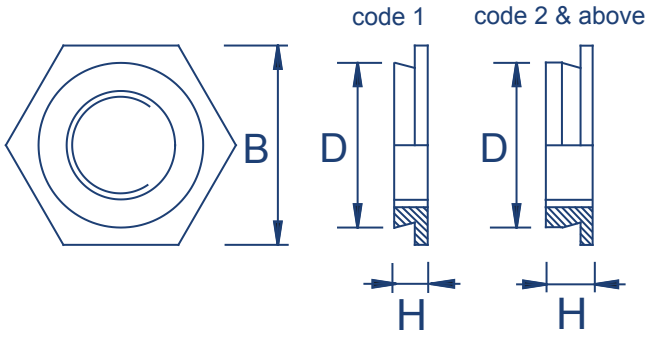
*400 Series Stainless Steel and Aluminium Alloy available on request

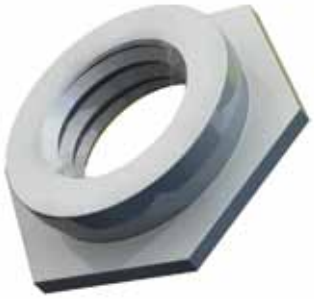
All data is correct to the best of our knowledge, however TR cannot be held responsible for any errors or omissions.

S - Recommended for use in sheet hardness: HRB 80 Maximum
CLS - Recommended for use in sheet hardness: HRB 70 Maximum
SP - Recommended for use in sheet hardness: HRB 90 Maximum
CLA - Recommended for use in sheet hardness: HRB 50 Maximum

TR Hank® Self-Clinch Flush Nuts

Stainless Steel : TR-F





Metric Dimensions

Thread	M2, M2.5		M3		M3alt		M3.5		M4		M5		M6		
Code	-1	-2	-1	-2	-1	-2	-1	-2	-1	-2	-1	-2	-3	-4	-5
D max	4.35		4.35		5.35		5.35		7.35		7.90		8.72		
B nom	4.8		4.8		6.4		6.4		7.9		8.7		9.5		
H max	1.53	2.3	1.53	2.3	1.53	2.3	1.53	2.3	1.53	2.3	1.53	2.3	3.05	3.84	4.63
Sheet thickness	1.53 - 2.3	2.32 min.	1.53 - 2.3	2.32 min.	1.53 - 2.3	2.32 min.	1.53 - 2.3	2.32 min.	1.53 - 2.3	2.32 min.	1.53 - 2.3	2.32 min.	3.18 - 3.94	3.96 - 4.72	4.75 min.
Hole size +0.08 -0.00	4.37		4.37		5.4		5.4		7.37		7.92		8.74		
Min distance to edge of sheet	6.0		6.0		6.5		6.5		7.2		8.8		8.8		

Metric Performance Data: TR-F

Thread	M2, M2.5		M3		M3alt		M3.5		M4		M5		M6		
Code	-1	-2	-1	-2	-1	-2	-1	-2	-1	-2	-1	-2	-3	-4	-5
Test sheet thickness (steel)	1.5	2.3	1.5	2.3	1.5	2.3	1.5	2.3	1.5	2.3	1.5	2.3	3.1	3.9	4.75
Installation (kN)	13.5		13.5		13.5		13.5		18		18		20		
Pushout (kN)	0.9		0.9		1.1		1.1		1.2		1.2		3.7		

These tests have been conducted in laboratory conditions, these figures should therefore be used for guidance only.

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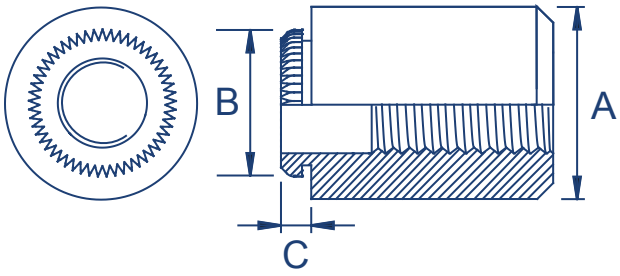
F - Recommended for use in sheet hardness: HRB 70 Maximum

TR Hank® Self-Clinch
Broaching Standoffs

Electro Tin Plated Steel : TR-KFE | Stainless Steel : TR-KFSE



Metric Dimensions - Length to suit customer requirements

Thread or Through Hole Size	M3	M4	3.6	4.2
C Max	1.53	1.53	1.53	1.53
B	4.68	6.75	5.87	6.86
A	5.56	8.74	7.14	8.74
Min rec sheet thickness	1.53	1.53	1.53	1.53
Hole size +0.08 -0.00	4.22	6.4	5.4	6.4
Min distance to edge of sheet	4.4	6.4	5.5	7

Preferred Range

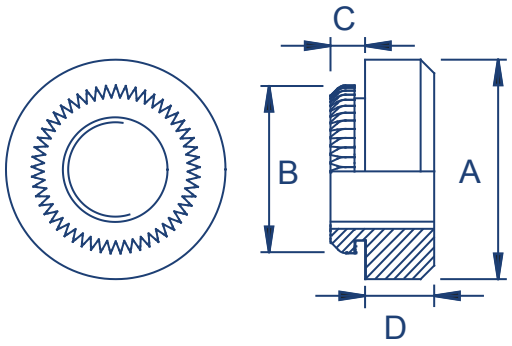
Thread Size	Thru Hole +0.10 -0.08	Length ±0.13							
		3	4	6	8	10	12	14	16
M3	(3)	●	●	●	●	●	●	●	●
(3)	3.6	●	●	●	●	●	●	●	●
(3)	4.2	●	●	●	●	●	●	●	●

Metric Performance Data: TR-KFE - TR-KFSE

Thread Metric	M3 0.5	M4	3.6	4.2
Test sheet FR4 Fiberglass	1.5mm	1.5mm	1.5mm	1.5mm
Installation Metric (kN)	2.2	2.2	2.2	2.2
Torsional resistance Metric (Nm)	1.36	3	-	-
Pushout Metric (N)	290	400	330	420

TR Hank® Self-Clinch Broaching Nuts

Electro Tin Plated Steel : TR-KF2 | Stainless Steel : TR-KFS2



Metric Dimensions

Thread	M2	M2.5	M3	M3.5	M4	M5
C max	1.53	1.53	1.53	1.53	1.53	1.53
B ±0.08	4.19	4.68	4.68	5.88	6.86	7.37
A ±0.13	5.56	5.56	5.56	7	8.74	9.53
D ±0.13	1.5	1.5	1.5	1.6	2	3
Min rec sheet thickness	1.53	1.53	1.53	1.53	1.53	1.53
Hole size +0.08 -0.00	3.73	4.22	4.22	5.5	6.40	6.90
Min distance to edge of sheet	4.2	4.4	4.4	5.5	6.4	7.1

Metric Performance Data: TR-KF2 - TR-KFS2

Thread	M2	M2.5	M3	M3.5	M4	M5
Test sheet FR4 Fiberglass (Thickness)	1.5mm	1.5mm		1.5mm	1.5mm	1.5mm
Installation (kN)	2.2	2.2		2.2	2.2	2.2
Torsional resistance (Nm)	1.36	1.36		2.06	3.75	4.55
Pushout (N)	200	200		210	335	355

These tests have been conducted in laboratory conditions, these figures should therefore be used for guidance only.

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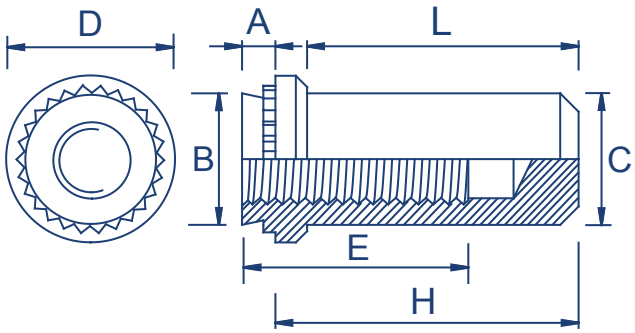
TR Hank® Self-Clinch Blind Nuts

Zinc Plated Steel : TR-B | Stainless Steel : TR-BS



Metric Dimensions

Thread	M3		M4		M5		M6	
Shank code	1	2	1	2	1	2	1	2
A max	0.97	1.38	0.97	1.38	0.97	1.38	1.38	2.21
Min sheet thickness	1	1.4	1	1.4	1	1.4	1.4	2.29
Hole size +0.08 -0.00	4.22		5.41		6.35		8.75	
B max	4.20		5.38		6.33		8.73	
C max	3.84		5.2		6.02		7.8	
D ±0.25	6.35		7.95		8.75		11.1	
E min	5.3		7.1		7.1		7.8	
H ±0.25	9.6		11.2		11.2		14.3	
L max	8.5		9.8		9.8		12.7	
Min distance to hole c/l to edge	4.8		6.9		7.1		8.6	

Metric Performance Data: TR-B - TR-BS

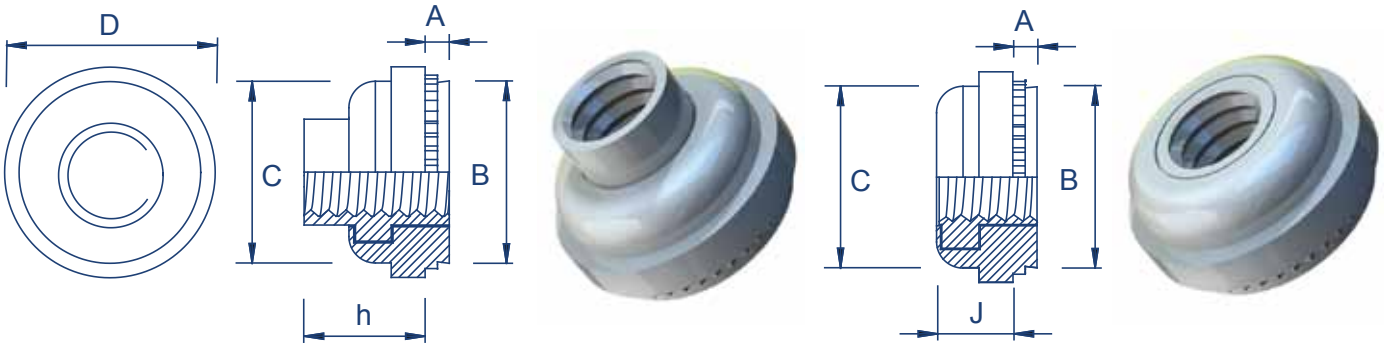
Thread	M3		M4		M5		M6	
Code	1	2	1	2	1	2	1	2
Sheet thickness	1	1.4	1	1.4	1	1.4	1.4	2.3
Installation (kN)	11.5	14	16	21	18	25	26	26
Pushout (N)	572	1021	604	1256	631	1419	1782	1782
Torque out (Nm)	1.7	2.15	3.5	5.1	4.1	6.9	11.9	12

Test material cold rolled.

TR Hank® Self-Clinch

Floating Fasteners - Locking & Non-Locking

Zinc Plated Steel : TR-LAS / TR-AS | Stainless Steel : TR-LAC / TR-AC



Metric Dimensions

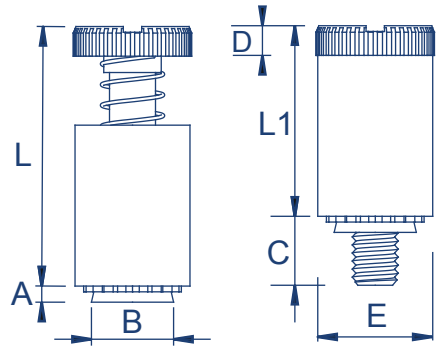
Thread size	M3		M4		M5		M6
Code	1	2	1	2	1	2	2
A max	0.97	1.38	0.97	1.38	0.97	1.38	1.38
Min sheet thickness	0.97	1.38	0.97	1.38	0.97	1.38	1.38
Hole size +0.08	7.37		9.35		10.31		13.08
B max	7.35		9.33		10.29		13.06
C max	7.37		9.28		10.29		12.96
D ±0.4	9.14		11.18		11.94		15.24
h max - TR-LAS & TR-LAC	4.83		5.34		6.86		7.88
j max - TR-AS & TR-AC	3.31		3.31		4.32		5.34
Min distance to hole C/L to edge	7.62		8.64		9.14		10.67

Metric Performance Data

Thread		M3		M4		M5		M6
Code		1	2	1	2	1	2	2
Sheet thickness		1	1.6	1	1.6	1	1.6	1.6
Installation (kN)	TR-LAS & TR-LAC	13.3	13.3	13.3	13.3	15.6	15.6	22.2
	TR-AS & TR-AC	13.4	13.4	13.4	13.4	15.7	15.7	22.3
Test material - Cold rolled steel	Pushout (N)	1341	1340	1338	1784	1789	2009	2226
	Torque out (Nm) - TR-LAS & TR-LAC	9.7	17	17.1	22.8	16.9	22.9	36.9
	Torque out (Nm) - TR-AS & TR-AC	9.8	17.2	17	22.9	17	22.9	36.9

TR Hank® Self-Clinch Panel Fasteners

Stainless Steel : TR-PFC2 | Steel : TR-PFS2



Metric Dimensions

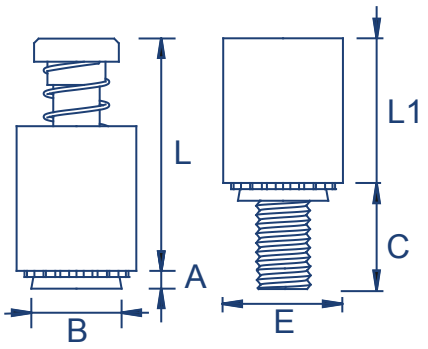
Thread size	M3		M4			M5			M6		
Screw length code	40	62	50	72	94	50	72	94	60	82	04
A max	1.53		1.53			1.53			1.53		
B max	6.71		7.9			8.72			10.47		
C +/-0.4	6.4	9.5	7.9	11.1	14.3	7.9	11.1	14.3	9.5	12.7	15.9
D +/-0.13	1.83		2.08			2.08			2.46		
E +/-0.25	7.92		9.53			10.31			11.89		
L nom	13.72		17.53			17.53			22.35		
L1 max	9.14		11.43			11.47			14.73		
Min sheet thickness	1.53		1.53			1.53			1.53		
Hole size in sheet +0.08	6.73		7.90			8.74			10.49		
Screw protrusion before installation +/-0.64	0	3.2	0	3.2	6.4	0	3.2	6.4	0	3.2	6.4
Min distance to hole C/L from edge	6.35		7.87			8.63			9.65		

Metric Performance Data: TR-PFC2 - TR-PFS2

Test sheet		M3	M4	M5	M6
Installation (kN)	Aluminium	10.8	13	13.4	15.6
	Steel	13.4	17	17.9	22.3
Pushout (N)	Aluminium	1070	1335	1780	1780
	Steel	1335	1780	2230	2670

TR Hank® Self-Clinch
Recess Panel Fasteners

Stainless Steel : TR-PFC2P



Metric Dimensions

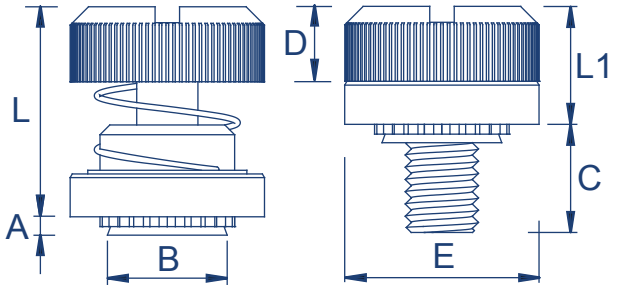
Thread size	M3		M4			M5			M6		
Screw length code	40	60	50	72	94	50	72	94	60	82	04
A max	1.53		1.53			1.53			1.53		
B max	6.71		7.9			8.72			10.47		
C +/-0.4	6.4	9.5	7.9	11.1	14.3	7.9	11.1	14.3	9.5	12.7	15.9
Driver size	No. 1		No.2			No.2			No.3		
E +/-0.25	7.92		9.53			10.31			11.89		
L nom	13.72		17.91			17.91			22.99		
L1 max	9.4		12.19			12.45			15.75		
Min sheet thickness	1.53		1.53			1.53			1.53		
Hole size in sheet +0.08	6.73		7.92			8.74			10.49		
Screw protrusion before installation +/-0.64	0	3.2	0	3.2	6.4	0	3.2	6.4	0	3.2	6.4
Min distance to hole C/L from edge	6.35		7.87			8.63			9.65		

Metric Performance Data: TR-PFC2P

Thread		M3	M4	M5	M6
Installation (kN)	Aluminium	10.8	13	13.4	15.6
	Steel	13.4	17	17.9	22.3
Pushout (N)	Aluminium	1070	1335	1780	1780
	Steel	1335	1780	2230	2670

TR Hank® Self-Clinch
Low Profile Panel Fasteners

Nickel Plated Steel : TR-PF31 | Nickel Plated Steel : TR-PF32



Metric Dimensions

Thread size	M3		M4		M5		M6
Type	TR-PF31	TR-PF32	TR-PF31	TR-PF32	TR-PF31	TR-PF32	TR-PF32
Screw length code	30		30		30		35
A max	0.97	1.48	0.97	1.48	0.97	1.48	1.48
Min sheet thickness	1	1.5	1	1.5	1	1.5	1.5
Hole size in sheet +0.08	5.5		6.4		8		9.5
B max	5.48		6.38		7.98		9.48
L nom	15.11		15.24		15.37		17.15
D +/- 0.13	5.13		5.26		5.59		6.12
E +/-0.25	10.31		11.89		13.46		15.88
C +/- 0.4	7.62		7.62		7.62		8.89
L1 max	8.26		8.38		8.51		9.78
Min distance to hole C/L from edge	6.6		7.37		8.38		9.65

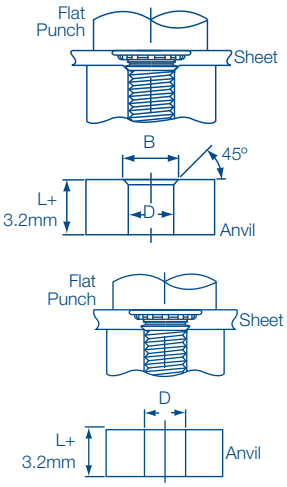
Metric Performance Data: TR-PF31 - TR-PF32 *Into Aluminium sheet

Thread		M3	M4	M5	M6
Installation (kN) Aluminium	TR-PF30	9.9	12.6	15.6	19.2
	TR-PF31				
	TR-PF32				

*Can be used in cold rolled provided hardness does not exceed rockwell B30

TR Hank® Self-Clinch
Installation Guides

Flush Head Studs (TR-FH | TR-FHS | TR-FHA)



Tooling for sheet thickness up to 1.50 for M3 - M5 and up to 2.40 for M6

Thread & Pitch	M2.5	M3	M3.5	M4	M5	M6
D mm +0.08	2.53	3.03	3.53	4.03	5.03	6.03
B mm +0.1	3.1	3.6	4.1	4.6	5.6	6.6

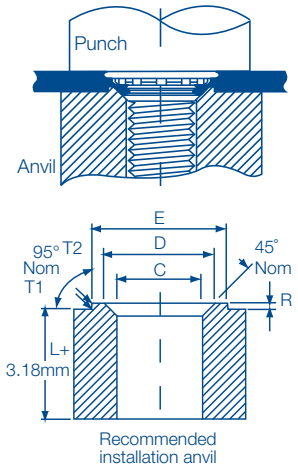
Tooling for sheet thickness above 1.50 for M3 - M5 and above 2.40 for M6 and M8

Thread & Pitch	M2.5	M3	M3.5	M4	M5	M6	M8
D mm +0.08	2.53	3.03	3.53	4.03	5.03	6.03	8.03

Installation

- Punch or drill the mounting hole. The Hank-Clinch stud data sheet shows the correct hole sizes. Do not deburr the hole or perform any other secondary operations.
- Place stud into mounting hole - ideally through the punch side.
- Apply squeezing force, ensuring that the punch and anvil surfaces are parallel, until the head of the stud is flush with the face of the sheet.

Flush Head Studs for Stainless Steel (TR-FH4)



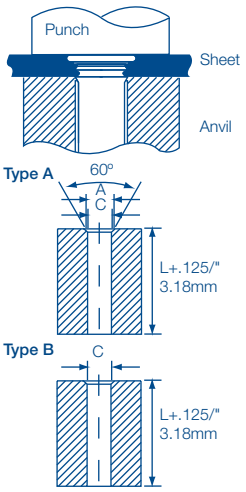
Thread Size	M3	M4	M5
C mm +0.08	3.05	4.04	5.08
D mm +/-0.05	3.81	4.95	6.15
E mm +/-0.05	4.57	5.82	7.16
R mm +/-0.025	0.25	0.25	0.25
T1 max.	0.08	0.08	0.08
T2 max.	0.13	0.13	0.13

Installation

- Punch the mounting hole. The Hank-Clinch stud data sheet shows the correct hole sizes. Do not deburr the hole or perform any other secondary operations.
- Place stud into mounting hole - ideally through the punch side.
- Apply squeezing force, ensuring that the punch and anvil surfaces are parallel, until the head of the stud is flush with the face of the sheet.

Note: An anvil with a raised ring is required to ensure correct installation.

Flush Head Pins (TR-TP | TR-TPS)



Type A Pin Dia.	3 mm	4 mm	5 mm	6 mm
Max Sheet Thickness	1.7 mm	1.7 mm	1.8 mm	1.9 mm
A mm +/- 0.05	3.88	4.88	5.89	6.89
C mm +/- 0.05	3.11	4.11	5.13	6.12

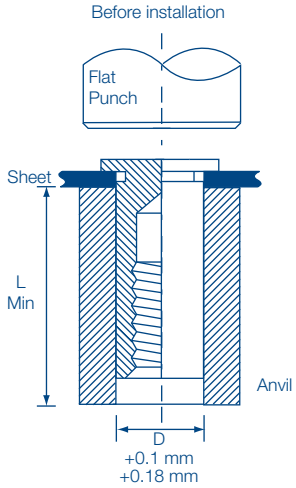
Type B Pin Dia.	3 mm	4 mm	5 mm	6 mm
Min Sheet Thickness	1.7 mm	1.7 mm	1.8 mm	1.9 mm
A mm +/- 0.05	N/A	N/A	N/A	N/A
C mm +/- 0.05	3.11	4.11	5.13	6.12

Installation

- Punch or drill the mounting hole. The Hank-Clinch pin data sheet shows the correct hole sizes. Do not deburr the hole or perform any other secondary operations.
- Place pin into mounting hole - ideally through the punch side.
- Apply squeezing force, ensuring that the punch and anvil surfaces are parallel, until the head of the pin is flush with the face of the sheet.

TR Hank® Self-Clinch
Installation Guides

Blind Standoffs (TR-BSO | TR-BSOS | TR-BSOA)

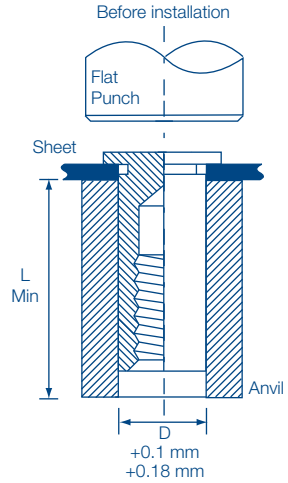


Thread Size	M3	M3 alt	M4	M5
D mm	4.18	5.39	7.10	7.10

Installation

- Punch the mounting hole. The Hank-Clinch standoff data sheets show the correct hole sizes. Do not deburr the hole or perform any other secondary operations.
- Place standoff through mounting hole and into the anvil - ideally through the punch side.
- Apply squeezing force, ensuring that the punch and anvil surfaces are parallel, until the head of the standoff is flush with the face of the sheet.

Blind Standoffs for Stainless Steel (TR-BSO4)

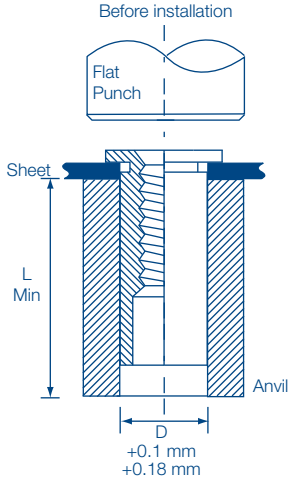


Thread Size	M3	M3 alt	M4	M5
D mm	4.18	5.39	7.10	7.10

Installation

- Punch the mounting hole. The Hank-Clinch standoff data sheets show the correct hole sizes. Do not deburr the hole or perform any other secondary operations.
- Place standoff through mounting hole and into the anvil - ideally through the punch side.
- Apply squeezing force, ensuring that the punch and anvil surfaces are parallel, until the head of the standoff is flush with the face of the sheet.

Through Standoffs (TR-SO | TR-SOS)



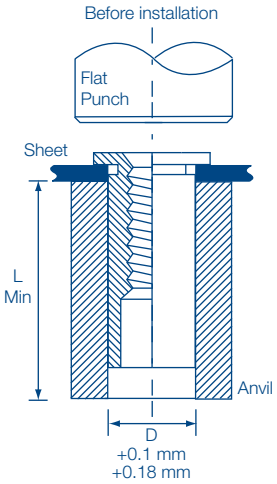
Thread Size	M3	M3 alt	M4	M5
D mm	4.18	5.39	7.10	7.10

Installation

- Punch the mounting hole. The Hank-Clinch standoff data sheets show the correct hole sizes. Do not deburr the hole or perform any other secondary operations.
- Place standoff through mounting hole and into the anvil - ideally through the punch side.
- Apply squeezing force, ensuring that the punch and anvil surfaces are parallel, until the head of the standoff is flush with the face of the sheet.

TR Hank® Self-Clinch
Installation Guides

Through Standoffs for Stainless Steel (TR-SO4)

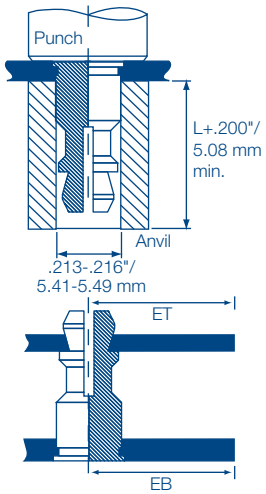


Thread Size	M3	M3 alt	M4	M5
D mm	4.18	5.39	7.10	7.10

Installation

- Punch the mounting hole. The Hank-Clinch standoff data sheets show the correct hole sizes. Do not deburr the hole or perform any other secondary operations.
- Place standoff through mounting hole and into the anvil - ideally through the punch side.
- Apply squeezing force, ensuring that the punch and anvil surfaces are parallel, until the head of the standoff is flush with the face of the sheet.

Clip-On Standoffs (TR-SSS | TR-SSC | TR-SSA)



Bottom hole size	ET	EB
5.4 mm	2.54mm min	6.60mm min
0.213"	0.100" min	0.260" min

Installation

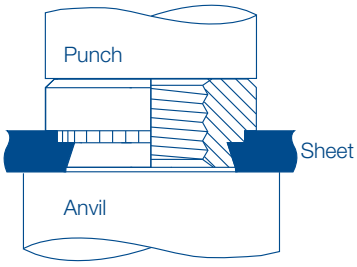
- Punch or drill the correct sized mounting hole in panel.
- Insert standoff through hole into the anvil as shown.
- Apply squeezing force, ensuring that the punch and anvil surfaces are parallel, just until the head of the standoff is flush with the panel.

ET = Top hole minimum distance to edge of sheet
EB = Bottom hole distance to edge of sheet

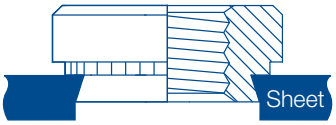
Nuts (TR-S | TR-CLS | TR-CLA)

Installation

- Punch the mounting hole. The Hank-Clinch nut data sheet shows the correct hole sizes. Do not deburr the hole or perform any other secondary operations.
- Place nut into mounting hole - ideally through the punch side.
- Apply squeezing force, ensuring that the punch and anvil surfaces are parallel, until the nut body comes into contact with the face of the sheet.



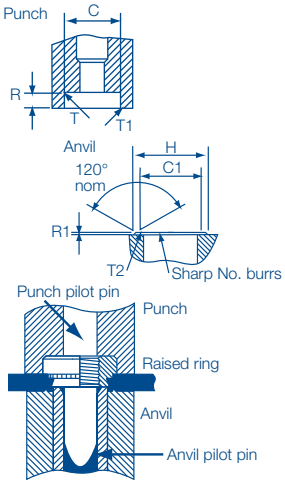
Apply force to head of nut



Install nut squarely through hole

TR Hank® Self-Clinch Installation Guides

Nuts for Stainless Steel (TR-SP)



Thread size (Punch Dims)	3 mm	4 mm	5 mm
C mm +0.05	6.48	8.05	8.84
R mm +/-0.03	1.42	1.93	1.93
T mm max.	0.25	0.25	0.25
T1 mm +0.13	0.13	0.13	0.13
Thread size (Anvil Dims)	**M3**	**M4**	**M5**
C1 mm +/-0.05	5.05	6.17	7.34
H mm nominal	6.63	7.75	8.89
R1 mm + 0.03	0.23	0.23	0.23
T2 mm max.	0.08	0.08	0.08

Installation

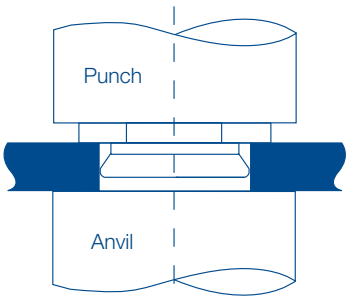
- Punch the mounting hole. The Hank-Clinch Nut data sheet shows the correct hole sizes. Do not deburr the hole or perform any other secondary operations.
- Place spigot of nut into mounting hole.
- Apply squeezing force, ensuring that the punch and anvil surfaces are parallel, until the head of the nut is flush with the face of the sheet.

Note: An anvil with a central pilot pin and a raised ring and a recessed punch with a central pilot pin are required to ensure correct installation.

Flush Nuts (TR-F)

Installation

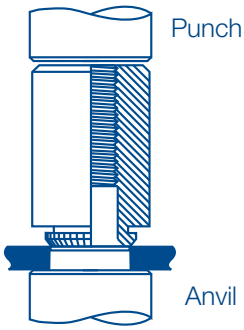
- Punch the mounting hole. The Hank-Clinch Flush Nut data sheet shows the correct hole sizes. Do not deburr the hole or perform any other secondary operations.
- Place nut into mounting hole - ideally through the punch side.
- Apply squeezing force, ensuring that the punch and anvil surfaces are parallel, until the nut body comes into contact with the face of the sheet.



Broaching Standoffs (TR-KFE | TR-KFSE)

Installation

- Punch or drill the mounting hole. The Hank-Clinch broaching standoff data sheet shows the correct hole sizes.
- Place standoff into mounting hole.
- Apply squeezing force, ensuring that the punch and anvil surfaces are parallel, until the body of the standoff makes contact board.

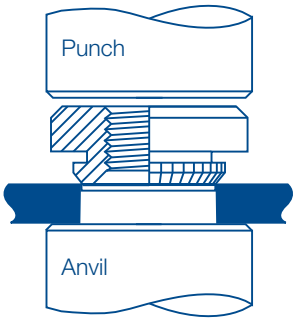


TR Hank® Self-Clinch
Installation Guides

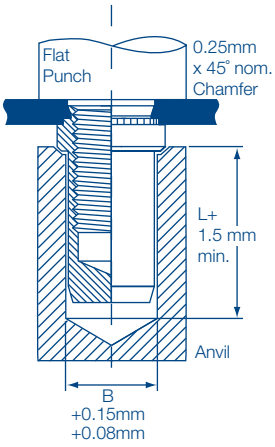
Broaching Nuts (TR-KF2 | TR-KFS2)

Installation

- Punch or drill the mounting hole. The Hank-Clinch broaching nut data sheet shows the correct hole sizes.
- Place nut into mounting hole.
- Apply squeezing force, ensuring that the punch and anvil surfaces are parallel, until the body of the nut makes contact board.



Blind Nuts (TR-B | TR-BS)

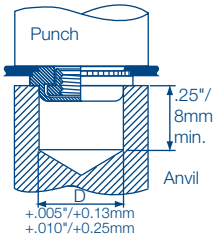


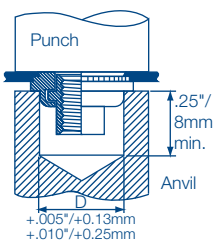
Thread Size	M3	M4	M5	M6
B mm	3.84	5.20	6.02	7.80
L Dim	8.5	9.8	9.8	12.7

Installation

- Punch the mounting hole. The Hank-Clinch blind nut data sheet shows the correct hole sizes. Do not deburr the hole or perform any other secondary operations.
- Place nut through mounting hole and into the anvil - ideally through the punch side.
- Apply squeezing force, ensuring that the punch and anvil surfaces are parallel, until the flange of the nut makes contact with the face of the sheet.

Floating Fasteners: Non-Locking | Locking (TR-AS | TR-AC | TR-LAS | TR-LAC)





Thread	M3	M4	M5	M6
D mm	7.4	9.3	10.3	13.8

Installation - Non-Locking: TR-AS | TR-AC

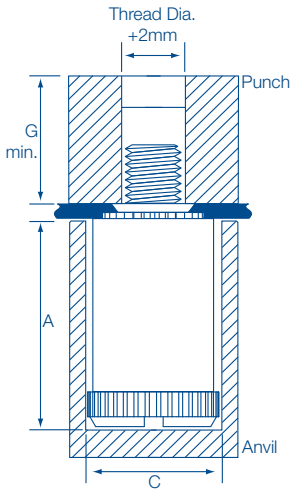
- Punch the mounting hole. The Hank-Clinch Floating Nut data sheet shows the correct hole sizes. Do not deburr the hole or perform any other secondary operations.
- Place nut into mounting hole - ideally through the punch side.
- Apply squeezing force, ensuring that the punch and anvil surfaces are parallel, until the flange head of the nut is flush with the face of the sheet.

Installation - Locking: TR-LAS | TR-LAC

- Punch or drill the mounting hole. The Hank-Clinch floating fastener data sheets show the correct hole sizes. Do not deburr the hole or perform any other secondary operations.
- Place stud into mounting hole - ideally through the punch side.
- Apply squeezing force, ensuring that the punch and anvil surfaces are parallel, until the flange head of the nut is flush with the face of the sheet.

TR Hank® Self-Clinch Installation Guides

Panel Fasteners (TR-PFC2 | TR-PFS2)

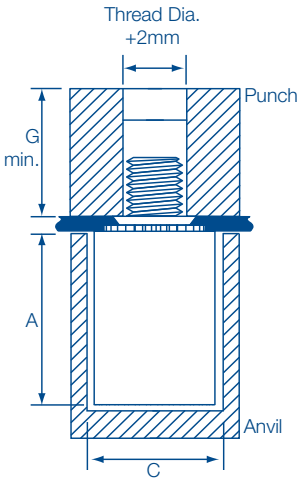


Thread Size	M3	M4	M5	M6
A mm +/- 0.05	8.76	11.05	11.05	14.35
C Dim +/- 0.05	8.2	9.8	10.69	12.29

Installation

- Punch or drill the mounting hole. The Hank-Clinch panel fastener data sheet shows the correct hole sizes. Do not deburr the hole or perform any other secondary operations.
- Place fastener into anvil recess then place sheet over the fastener spigot.
- Apply squeezing force, ensuring that the punch and anvil surfaces are parallel, until the retainer shoulder makes contact with the face of the sheet.

Recess Panel Fasteners (TR-PFC2P)

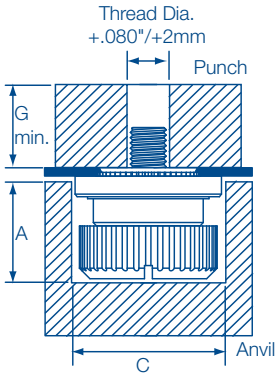


Thread Size	M3	M4	M5	M6
A mm +/- 0.05	8.76	11.05	11.05	14.35
C Dim +/- 0.05	8.2	9.8	10.69	12.29

Installation

- Punch or drill the mounting hole. The Hank-Clinch panel fastener data sheet shows the correct hole sizes. Do not deburr the hole or perform any other secondary operations.
- Place fastener into anvil recess then place sheet over the fastener spigot.
- Apply squeezing force, ensuring that the punch and anvil surfaces are parallel, until the retainer shoulder makes contact with the face of the sheet.

Low Profile Panel Fasteners (TR-PF31 | TR-PF32)



Thread Size	M3	M4	M5	M6
A mm +/- 0.05	7.49	7.87	7.87	9.27
C Dim +/- 0.05	10.69	12.29	13.87	16.26

Installation

- Punch the mounting hole. The Hank-Clinch panel fastener data sheet shows the correct hole sizes. Do not deburr the hole or perform any other secondary operations.
- Place fastener into anvil recess then place sheet over the fastener spigot.
- Apply squeezing force, ensuring that the punch and anvil surfaces are parallel, until the retainer shoulder makes contact with the face of the sheet.

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