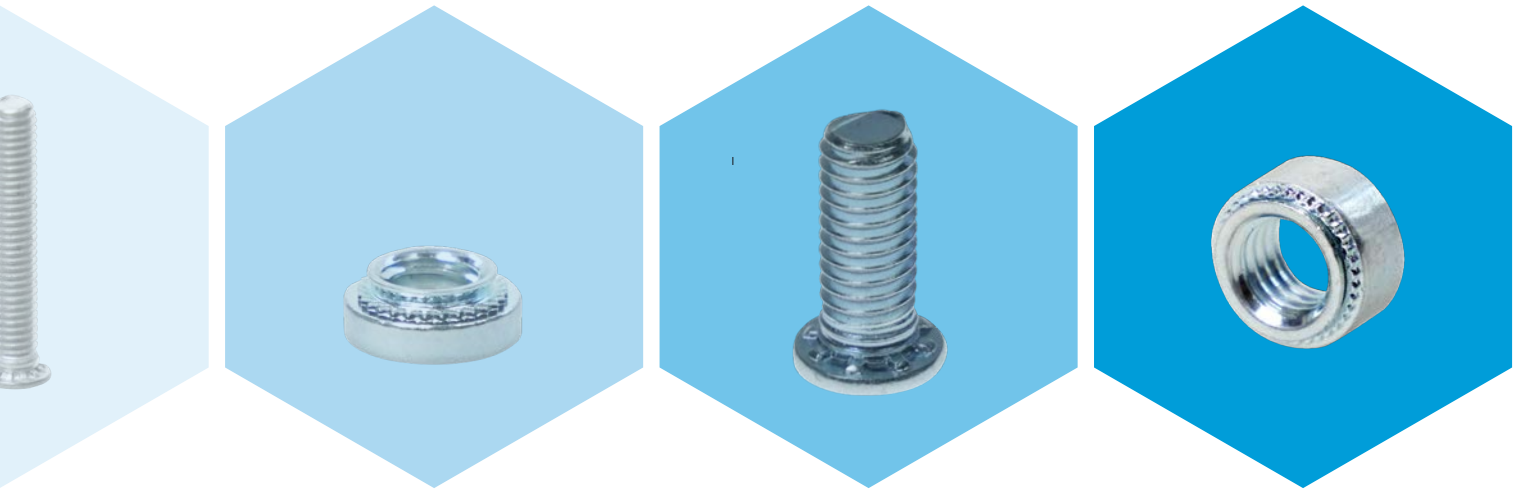
GOEBEL



SELF-CLINCHING FASTENERS

PRODUCT GUIDE AND DATA SHEETS

TABLE OF CONTENTS

Self-Clinching Fasteners

Subject to modifications

PIONEERING KNOW-HOW FOR FIRM AND SAFE FASTENINGS

With its broad product portfolio, Goebel offers as a specialist for high-performance joining applications innovative solutions in the field of engineering.

Construction | Fastening Technology | Electrical Engineering
Mechanical Engineering |Marine | Energy Technology |
Hydraulics | Precision Mechanics | Off-Shore | Transport

SELF-CLINCHING FASTENERS

Self-clinching fasteners are used for ideal and efficient fastening in many areas of industry when thin components are used. This product achieves a firm fastening with a secure hold during the process of cold forming (pressing). The practical assembly and the potential to save assembly time and process costs make the self-clinching fasteners very interesting for modern manufacturing. An application equipped with this fastener also ensures a permanent fastening, high unscrewing and extraction torques. Even for components with a thickness of 0.5 mm or more in a wide variety of materials, load-bearing internal and external threads can be inserted.

Self-clinching fasteners are installed by inserting them into the round locating hole and pressing them together with a commercially available press-fit system. Within the locating hole, the fastener displaces the material at the edge of the hole. The displaced material flows by means of cold deformation into an undercut in the area of the shank of the self-clinching fastener. Twisting of the component is prevented by a serration or a special head shape.

No damage or bulging is caused to the back of the component during installation and after pressing, when the clinching fastener has become one with the workpiece, a durable and permanent anchorage is guaranteed.

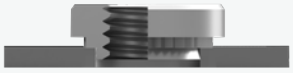
Advantages:

- Very high load capacity, loadable threads even in thin sheets from 0.5 mm
- No further machining of the locating bore necessary
- Easy installation in coated components
- No special preparatory work or reworking necessary
- Mounting exactly at right angles to the sheet metal, high positioning accuracy
- No need to recut the thread

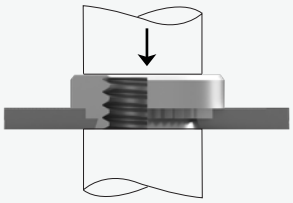
INSTALLATION ADVICE

1. Creating hole

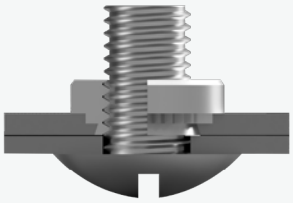
2. GOEBEL clinching nut is inserted



3. Grouting



4. Screwing in



Installation Note

- Determine the location hole using the catalogue/product data sheets
- Do not countersink or deburr punched and drilled holes, the burr makes the press-in process easier
- In the case of punched holes, the entry side of the punch is preferable for mounting
- Press in the self-clinching fastener (do not hit the fastener with a hammer!)
- In order to avoid deformation of the sheet edge, observe minimum edge distances according to catalogue/product data sheets
- The self-clinching fastener must always be harder than the component to be fastened. Please observe the information in the catalogue/product data sheets
- When using aluminium sheets, make sure to install the steel and stainless steel press-fit fasteners only after anodising the sheet

Important Notice

All mechanical values such as strengths and forces stated in the catalogue/product data sheets are guide values based on the prescribed processing methods. Due to deviations in drill hole diameter, material and installation method, these values may differ. It is therefore recommended to test and verify the function of the product within the specific application in advance.

Technical Data

- Standard self-clinching fasteners
  - Thread tolerance: clinching nuts 6H, self-clinching studs 6g
  - Gauge accuracy according to ISO 1502
- Surface protection: (steel press-fit elements)
  - galvanised and passivated, layer thickness 5 - 6 µ
- Corrosion resistance: (steel press-fit elements)
  - Min. 12h WR (white rust) / 72h RR (red rust)

- With UNC/UNF thread on request
- Other surfaces possible
- All dimensions are given in mm

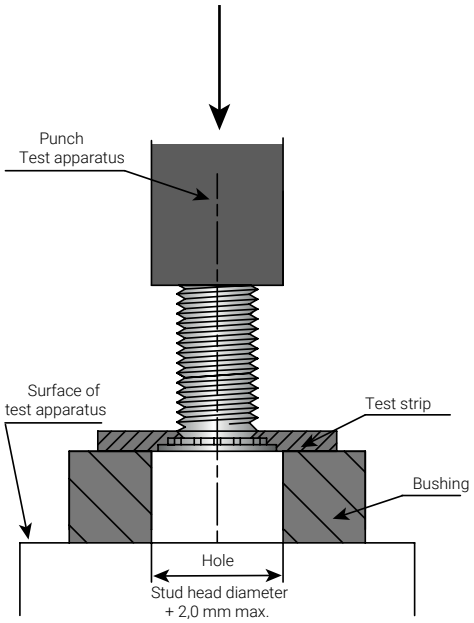
Subject to modifications

TECHNICAL EXPLANATIONS

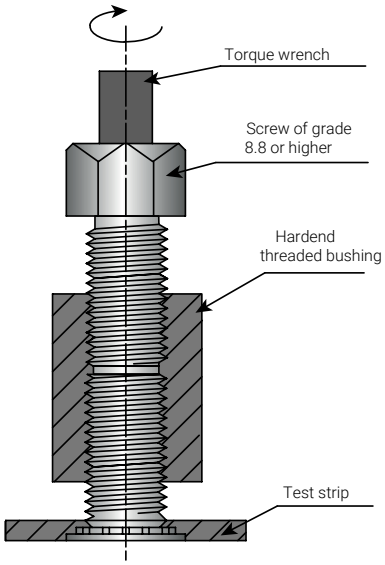
The Goebel self-clinching fasteners are subject to the tests according to the test set-ups listed below. The assurance of quality standards by means of our integrated quality management enables our customers to process self-clinching fasteners without worries and at a consistently high quality level.

All specifications are in Newton, 1kp = 9.80665 N (10 N). On request GOEBEL will provide the test results for each delivered batch. The tests ensure that only faultless goods are delivered and that the customer can guarantee a secure processing.

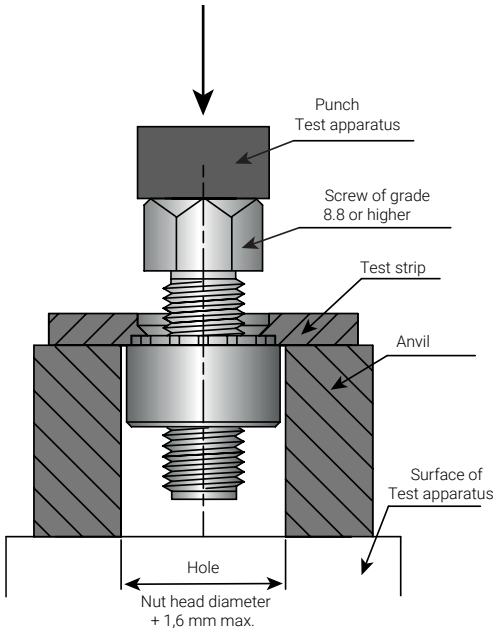
Stud pushout test set-up



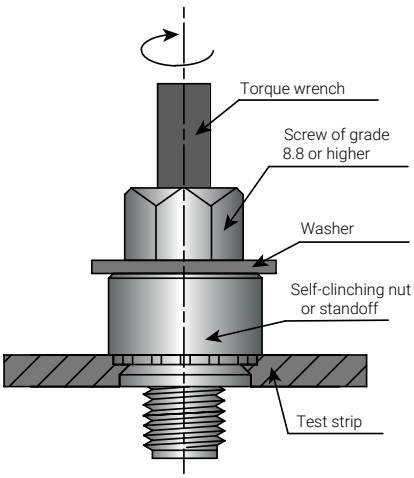
Stud torque-out test set-up



Nut and standoff pushout test set-up



Nut and standoff torque-out test set-up



Subject to modifications

OVERVIEW SELF-CLINCHING FASTENERS

Self-clinching nuts

The commercially available and most versatile way of providing sheet metal or thin metal parts with a heavy-duty internal thread. Various shaft lengths guarantee an optimum tight fit in a wide range of materials.

Self-clinching nuts – flush on both sides*

This type of insert nuts for flush insertion on both sides are flush with the top and bottom of the sheet metal.

Standoffs*

Threaded standoff bushes are an effective fastening element that serves as a spacer. A time-saving and simple assembly of workpieces, which have to be arranged at a certain distance from each other or parallel to each other, is made possible by this fastener.

Closed end self-clinching nuts*

In contrast to the open version, the closed end self clinching nuts offer the advantage of a longer threaded part. The closed shank end seals the thread against external influences such as dirt, oil, moisture and protects against atmospheric corrosion. In addition, their use is generally more cost-effective than comparable fasteners with similar sealing properties, which, however, require complicated seals and special assembly procedures.

Self-clinching studs & self-clinching threaded bolts

Self-clinching studs & self-clinching threaded studs whether with or without thread offer the option of positioning the components accordingly before the final fixing. The bolts, which are available in numerous standard lengths, are then firmly anchored in the workpiece. Any fastening elements with a corresponding counter thread such as nuts can be screwed on or pressed on. Depending on the series selected, the bolts can be flush with the component.

Self-clinching low profile knob, spring loaded*

Self-clinching low profile knob, spring loaded fasteners are ideal for quickly opening and closing pre-assembled self-clinching low profile know, spring loaded, e.g. for covers or claddings etc. The screw is flexibly attached and captively secured.

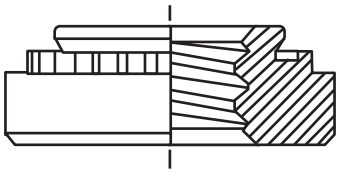
*Available on request

Subject to modifications

TECHNICAL DATA - SELF-CLINCHING NUTS

FOR METALLIC MATERIALS - TYPE S / CLS

TYPE S - STEEL - FOR SHEET HARDNESS UP TO HRB 80
TYPE CLS - STAINLESS STEEL - FOR SHEET HARDNESS UP TO HRB 70



Thread	Type	Shank length	Sheet material	Press-in force (KN)	Push-out force (N)	Torsional strength (N)
M 2 M 2,5 M 3	S CLS	0	Aluminium	6,7 - 8,9	280	0,90
		1			400	1,13
		2			750	1,47
		0	Steel	11,2 - 15,6	470	1,47
		1			550	1,70
		2			1010	2,03
M 4	S CLS	0	Aluminium	11,2 - 13,4	300	2,37
		1			470	2,60
		2			970	4,00
		0	Steel	18 - 27	490	2,95
		1			645	4,00
		2			1250	5,10
M 5	S CLS	0	Aluminium	11,2 - 15,6	300	3,00
		1			480	3,60
		2			845	5,70
		0	Steel	18 - 38	530	3,60
		1			800	4,50
		2			1112	6,80
M 6	S CLS	0	Aluminium	18 - 32	970	7,90
		1			1580	10,20
		2				14,10
		0	Steel	27 - 36	1380	13,00
		1			1760	17,00
		2				
M 8	S CLS	1	Aluminium	18 - 32	1570	13,60
		2				18,10
		1	Steel	27 - 36	1870	18,70
		2				20,30
M 10	S CLS	1	Aluminium	22 -36	1760	32,7
		2				
		1	Steel	32 - 50	2020	36,2
		2				
M 12	S	1	Aluminium	23 - 30	1390	35,2
		1	Steel	33 - 45	3065	73,9

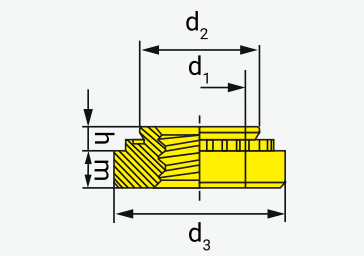
Subject to modifications

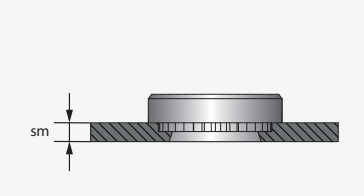
TYPE S

SELF-CLINCHING NUTS
FOR METALLIC MATERIALS

Material
Steel, hardened, galvanised, colourlessly passivated

Application
Type S: For sheet hardness up to HRB 80





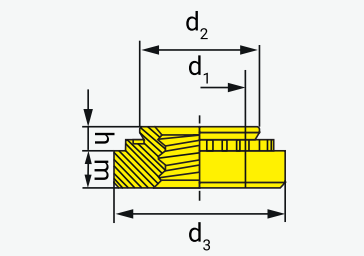
Thread d_1	Shank CODE	CODE	Hole-Ø in sheet metal +0,08 in mm	d_2 max. in mm	d_3 ± 0,25 in mm	m ± 0,25 in mm	h max. in mm	sm min. in mm	Minimum. edge distance to centre hole in mm		
M 2 x 0,4	0	8010102000	4,25	4,22	6,25	1,50	0,77	0,8	4,8	1.000	40.000
M 2 x 0,4	1	8010102010					0,97	1,0		1.000	40.000
M 2 x 0,4	2	8010102020					1,38	1,4		1.000	32.000
M 2,5 x 0,45	0	8010102500	4,25	4,22	6,35	1,50	0,77	0,8	4,8	1.000	40.000
M 2,5 x 0,45	1	8010102510					0,97	1,0		1.000	40.000
M 2,5 x 0,45	2	8010102520					1,38	1,4		1.000	32.000
M 3 x 0,5	0	8010103000	4,25	4,22	6,35	1,50	0,77	0,8	4,8	1.000	40.000
M 3 x 0,5	1	8010103010					0,97	1,0		1.000	40.000
M 3 x 0,5	2	8010103020					1,38	1,4		1.000	32.000
M 3,5 x 0,6	0	8010103500	4,75	4,73	7,10	1,50	0,77	0,8	5,6	1.000	20.000
M 3,5 x 0,6	1	8010103510					0,97	1,0		1.000	20.000
M 3,5 x 0,6	2	8010103520					1,38	1,4		1.000	16.000
M 4 x 0,7	0	8010104000	5,40	5,38	7,87	2,00	0,77	0,8	6,9	1.000	20.000
M 4 x 0,7	1	8010104010					0,97	1,0		4.000	20.000
M 4 x 0,7	2	8010104020					1,38	1,4		1.000	16.000
M 5 x 0,8	0	8010105000	6,40	6,38	8,64	2,00	0,77	0,8	7,1	1.000	17.500
M 5 x 0,8	1	8010105010					0,97	1,0		1.000	17.000
M 5 x 0,8	2	8010105020					1,38	1,4		1.000	14.000
M 6 x 1,0	0	8010106000	8,75	8,72	11,18	4,08	1,15	1,2	8,6	1.000	5.000
M 6 x 1,0	1	8010106010					1,38	1,4		1.000	5.000
M 6 x 1,0	2	8010106020					2,21	2,3		1.000	5.000

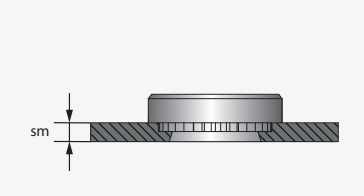
Subject to modifications

SELF-CLINCHING NUTS
FOR METALLIC MATERIALS

Material
Steel, hardened, galvanised, colourlessly passivated

Application
Type S: For sheet hardness up to HRB 80





Thread d_1	Shank CODE	CODE	Hole-Ø in sheet metal +0,08 in mm	d_2 max. in mm	d_3 ± 0,25 in mm	m ± 0,25 in mm	h max. in mm	sm min. in mm	Minimum. edge distance to centre hole in mm		
M 8 x 1,25	1	8010108010	10,50	10,47	12,70	5,47	1,38	1,4	9,7	500	3.000
M 8 x 1,25	2	8010108020					2,21	2,3		500	3.000
M 10 x 1,5	1	8010110010	14,00	13,97	17,35	7,48	2,21	2,31	13,5	500	1.250
M 10 x 1,5	2	8010110020					3,05	3,18		500	1.000
M12 x 1,75	1	8010112010	17,00	16,95	20,57	8,50	3,05	3,18	16,0	500	1.000

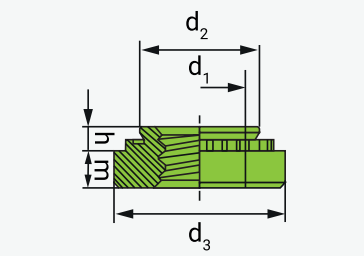
Subject to modifications

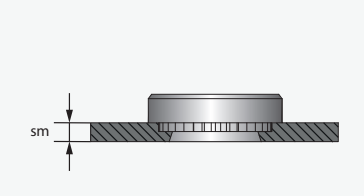
TYPE CLS

SELF-CLINCHING NUTS
FOR METALLIC MATERIALS

Material
Stainless steel (AISI 302/303)

Application
Type CLS: For sheet hardness up to HRB 70





Thread d_1	Shank CODE	CODE	Hole-Ø in sheet metal +0,08 in mm	d_2 max. in mm	d_3 ± 0,25 in mm	m ± 0,25 in mm	h max. in mm	sm min. in mm	Minimum. edge distance to centre hole in mm		
M 2 x 0,4	0	8010202000	4,25	4,22	6,25	1,50	0,77	0,8	4,8	1.000	40.000
M 2 x 0,4	1	8010202010					0,97	1,0		1.000	40.000
M 2 x 0,4	2	8010202020					1,38	1,4		1.000	32.000
M 2,5 x 0,45	0	8010202500	4,25	4,22	6,35	1,50	0,77	0,8	4,8	1.000	40.000
M 2,5 x 0,45	1	8010202510					0,97	1,0		1.000	40.000
M 2,5 x 0,45	2	8010202520					1,38	1,4		1.000	32.000
M 3 x 0,5	0	8010203000	4,25	4,22	6,35	1,50	0,77	0,8	4,8	1.000	40.000
M 3 x 0,5	1	8010203010					0,97	1,0		8.000	40.000
M 3 x 0,5	2	8010203020					1,38	1,4		1.000	32.000
M 3,5 x 0,6	0	8010203500	4,75	4,73	7,10	1,50	0,77	0,8	5,6	1.000	20.000
M 3,5 x 0,6	1	8010203510					0,97	1,0		1.000	20.000
M 3,5 x 0,6	2	8010203520					1,38	1,4		1.000	16.000
M 4 x 0,7	0	8010204000	5,40	5,38	7,87	2,00	0,77	0,8	6,9	1.000	20.000
M 4 x 0,7	1	8010204010					0,97	1,0		4.000	20.000
M 4 x 0,7	2	8010204020					1,38	1,4		1.000	16.000
M 5 x 0,8	0	8010205000	6,40	6,38	8,64	2,00	0,77	0,8	7,1	1.000	17.500
M 5 x 0,8	1	8010205010					0,97	1,0		1.000	17.000
M 5 x 0,8	2	8010205020					1,38	1,4		1.000	14.000
M 6 x 1,0	0	8010206000	8,75	8,72	11,18	4,08	1,15	1,2	8,6	1.000	5.000
M 6 x 1,0	1	8010206010					1,38	1,4		1.000	5.000
M 6 x 1,0	2	8010206020					2,21	2,3		1.000	5.000

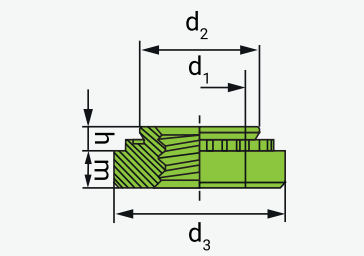
Subject to modifications

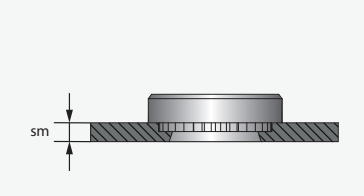
TYPE CLS

SELF-CLINCHING NUTS
FOR METALLIC MATERIALS

Material
Stainless steel (AISI 302/303)

Application
Type CLS: For sheet hardness up to HRB 70





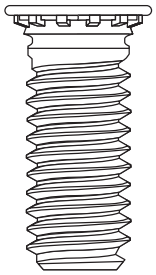
Thread d_1	Shank CODE	CODE	Hole-Ø in sheet metal +0,08 in mm	d_2 max. in mm	d_3 ± 0,25 in mm	m ± 0,25 in mm	h max. in mm	sm min. in mm	Minimum. edge distance to centre hole in mm		
M 8 x 1,25	1	8010208010	10,50	10,47	12,70	5,47	1,38	1,4	9,7	500	3.000
M 8 x 1,25	2	8010208020					2,21	2,3		500	3.000
M 10 x 1,5	1	8010210010	14,00	13,97	17,35	7,48	2,21	2,31	13,5	500	1.250
M 10 x 1,5	2	8010210020					3,05	3,18		500	1.000

Subject to modifications

TECHNICAL DATA - SELF-CLINCHING STUDS

FOR METALLIC MATERIALS - TYPE FH / FHS

TYPE FH - STEEL - FOR SHEET HARDNESS UP TO HRB 80
TYPE FHS - STAINLESS STEEL - FOR SHEET HARDNESS UP TO HRB 70

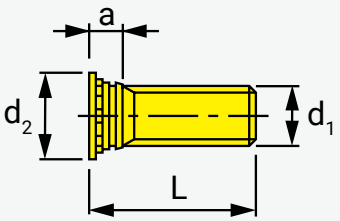


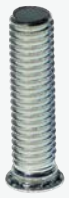
Thread	Max. nut tighte-ning torque (Nm)	Sheet thickness and material	Sheet Hardness (HRB)	Press-in force (kN)	Press-out force (N)	Torsional strength (Nm)	Pull through resistance (N)
M2,5	0,41	1,6 mm Aluminium	29	8,9	465	1,0	2600
		1,5 mm Steel	59	11,1	740		2800
M3	0,74	1,6 mm Aluminium	29	12,9	600	1,7	3150
		1,5 mm Steel	59	14,7	820		3840
M3,5	1,15	1,6 mm Aluminium	29	15,6	800	1,7	3780
		1,5 mm Steel	59	22,3	1335	2,8	3780
M4	1,70	1,6 mm Aluminium	29	20,0	975	2,9	4448
		1,5 mm Steel	59	28,9	1780	4,2	5650
M5	3,50	1,6 mm Aluminium	29	24,5	1070	3,5	5170
		1,5 mm Steel	59	33,4	2000	6,5	6270
M6	5,90	2,4 mm Aluminium	28	28,9	1660	7,3	10200
		2,2 mm Steel	46	44,5	2560	11,3	11300
M8	14,20	2,4 mm Aluminium	28	29,8	1910	11,3	10500
		2,4 mm Steel	46	44,5	2890	19,2	15450

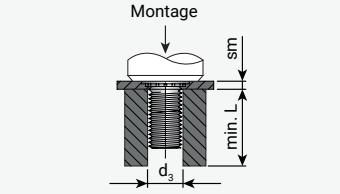
SELF-CLINCHING STUDS
FOR METALLIC MATERIALS

Material
Steel, hardened, galvanised, colourlessly passivated

Application
Type FH: For sheet hardness up to HRB 80







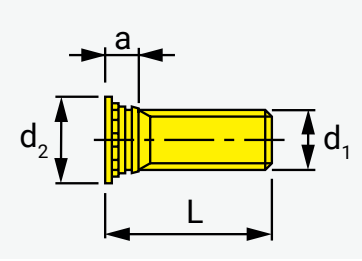
Thread d_1	Length marking „L" (+- 0,4)	CODE	Hole-Ø in sheet metal +0,08 in mm	d_2 (+- 0,4) in mm	d_3 in mm	a max. in mm	sm min. in mm	Minimum. edge distance to centre hole in mm	Max. drill hole in the 2.component in mm		
M 2,5 x 0,45	6	8020102006	2,50	4,1	2,60	1,95	1,0	5,4	3,1	1.000	60.000
M 2,5 x 0,45	8	8020102008								1.000	50.000
M 2,5 x 0,45	10	8020102010								1.000	40.000
M 2,5 x 0,45	12	8020102012								1.000	35.000
M 2,5 x 0,45	15	8020102015								1.000	30.000
M 2,5 x 0,45	18	8020102018								1.000	25.000
M 3 x 0,5	6	8020103006	3,00	4,6	3,10	2,10	1,0	5,6	3,6	1.000	50.000
M 3 x 0,5	8	8020103008								1.000	40.000
M 3 x 0,5	10	8020103010								1.000	30.000
M 3 x 0,5	12	8020103012								1.000	25.000
M 3 x 0,5	15	8020103015								1.000	20.000
M 3 x 0,5	18	8020103018								1.000	20.000
M 3 x 0,5	20	8020103020								1.000	15.000
M 3 x 0,5	22	8020103022								1.000	14.000
M 3 x 0,5	25	8020103025								1.000	10.000
M 3 x 0,5	28	8020103028								1.000	10.000
M 3 x 0,5	30	8020103030								1.000	10.000
M 3,5 x 0,6	6	8020103506	3,50	5,3	-	2,25	1,0	6,4	4,1	1.000	50.000
M 3,5 x 0,6	8	8020103508								1.000	40.000
M 3,5 x 0,6	10	8020103510								1.000	30.000
M 3,5 x 0,6	12	8020103512								1.000	25.000
M 3,5 x 0,6	15	8020103515								1.000	20.000
M 3,5 x 0,6	18	8020103518								1.000	20.000
M 3,5 x 0,6	20	8020103520								1.000	15.000
M 3,5 x 0,6	22	8020103522								1.000	14.000
M 3,5 x 0,6	25	8020103525								1.000	10.000
M 3,5 x 0,6	28	8020103528								1.000	10.000
M 3,5 x 0,6	30	8020103530								1.000	10.000

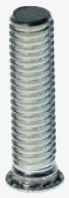
Subject to modifications

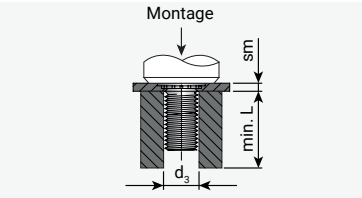
SELF-CLINCHING STUDS
FOR METALLIC MATERIALS

Material
Steel, hardened, galvanised, colourlessly passivated

Application
Type FH: For sheet hardness up to HRB 80







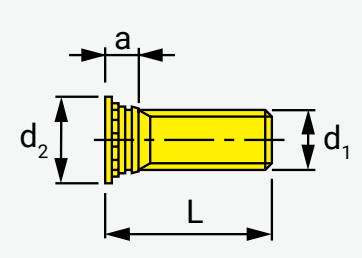
Thread d_1	Length marking „L" (+- 0,4)	CODE	Hole-Ø in sheet metal +0,08 in mm	d_2 (+- 0,4) in mm	d_3 in mm	a max. in mm	sm min. in mm	Minimum. edge distance to centre hole in mm	Max. drill hole in the 2.component in mm		
M 4 x 0,7	6	8020104006	4,00	5,9	4,10	2,40	1,0	7,2	4,6	1.000	30.000
M 4 x 0,7	8	8020104008								1.000	25.000
M 4 x 0,7	10	8020104010								1.000	20.000
M 4 x 0,7	12	8020104012								1.000	16.000
M 4 x 0,7	15	8020104015								1.000	12.000
M 4 x 0,7	18	8020104018								1.000	10.000
M 4 x 0,7	20	8020104020								1.000	8.000
M 4 x 0,7	22	8020104022								1.000	8.000
M 4 x 0,7	25	8020104025								1.000	7.000
M 4 x 0,7	28	8020104028								1.000	6.000
M 4 x 0,7	30	8020104030								1.000	5.000
M 4 x 0,7	35	8020104035								1.000	4.000
M 4 x 0,7	38	8020104038								1.000	4.000
M 5 x 0,8	8	8020105008	5,00	6,5	5,10	2,70	1,0	7,2	5,6	1.000	20.000
M 5 x 0,8	10	8020105010								1.000	14.000
M 5 x 0,8	12	8020105012								1.000	12.000
M 5 x 0,8	15	8020105015								1.000	8.000
M 5 x 0,8	18	8020105018								1.000	6.000
M 5 x 0,8	20	8020105020								1.000	6.000
M 5 x 0,8	22	8020105022								1.000	5.000
M 5 x 0,8	25	8020105025								1.000	5.000
M 5 x 0,8	28	8020105028								1.000	4.000
M 5 x 0,8	30	8020105030								1.000	4.000
M 5 x 0,8	35	8020105035								1.000	3.000
M 5 x 0,8	38	8020105038								1.000	3.000

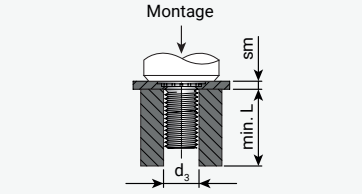
Subject to modifications

SELF-CLINCHING STUDS
FOR METALLIC MATERIALS

Material
Steel, hardened, galvanised, colourlessly passivated

Application
Type FH: For sheet hardness up to HRB 80





Thread d_1	Length marking „L" (+- 0,4)	CODE	Hole-Ø in sheet metal +0,08 in mm	d_2 (+- 0,4) in mm	d_3 in mm	a max. in mm	sm min. in mm	Minimum. edge distance to centre hole in mm	Max. drill hole in the 2.component in mm		
M 6 x 1,0	10	8020106010	6,00	8,2	6,10	3,00	1,6	7,9	6,6	1.000	9.000
M 6 x 1,0	12	8020106012								1.000	8.000
M 6 x 1,0	15	8020106015								1.000	6.000
M 6 x 1,0	18	8020106018								1.000	5.000
M 6 x 1,0	20	8020106020								1.000	5.000
M 6 x 1,0	22	8020106022								1.000	5.000
M 6 x 1,0	25	8020106025								500	4.000
M 6 x 1,0	28	8020106028								500	3.000
M 6 x 1,0	30	8020106030								500	3.000
M 6 x 1,0	35	8020106035								500	2.500
M 6 x 1,0	38	8020106038								500	2.000
M 8 x 1,25	12	8020108012	8,00	9,6	8,10	3,70	2,4	9,6	8,6	500	4.000
M 8 x 1,25	15	8020108015								500	4.000
M 8 x 1,25	18	8020108018								500	3.000
M 8 x 1,25	20	8020108020								500	3.000
M 8 x 1,25	22	8020108022								500	2.000
M 8 x 1,25	25	8020108025								500	2.000
M 8 x 1,25	28	8020108028								500	1.500
M 8 x 1,25	30	8020108030								500	1.500
M 8 x 1,25	35	8020108035								500	1.500
M 8 x 1,25	38	8020108038								500	1.000

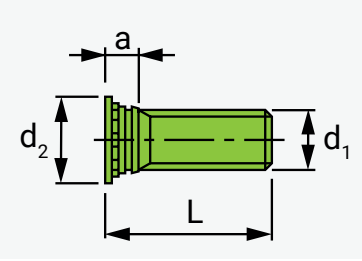
Subject to modifications

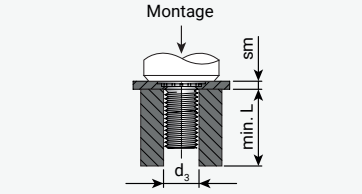
TYPE FHS

SELF-CLINCHING STUDS
FOR METALLIC MATERIALS

Material
Stainless steel A2 (AISI 304)

Application
Type FHS: For sheet hardness up to HRB 70





Thread d_1	Length marking „L" (+- 0,4)	CODE	Hole-Ø in sheet metal +0,08 in mm	d_2 (+- 0,4) in mm	d_3 in mm	a max. in mm	sm min. in mm	Minimum. edge distance to centre hole in mm	Max. drill hole in the 2.component in mm		
M 2,5 x 0,45	6	8020202506	2,50	4,1	2,60	1,95	1,0	5,4	3,1	1.000	60.000
M 2,5 x 0,45	8	8020202508								1.000	50.000
M 2,5 x 0,45	10	8020202510								1.000	40.000
M 2,5 x 0,45	12	8020202512								1.000	35.000
M 2,5 x 0,45	15	8020202515								1.000	30.000
M 2,5 x 0,45	18	8020202518								1.000	25.000
M 3 x 0,5	6	8020203006	3,00	4,6	3,10	2,10	1,0	5,6	3,6	1.000	50.000
M 3 x 0,5	8	8020203008								1.000	40.000
M 3 x 0,5	10	8020203010								1.000	30.000
M 3 x 0,5	12	8020203012								1.000	25.000
M 3 x 0,5	15	8020203015								1.000	20.000
M 3 x 0,5	18	8020203018								1.000	20.000
M 3 x 0,5	20	8020203020								1.000	15.000
M 3 x 0,5	22	8020203022								1.000	14.000
M 3 x 0,5	25	8020203025								1.000	10.000
M 3 x 0,5	28	8020203028								1.000	10.000
M 3 x 0,5	30	8020203030								1.000	10.000
M 3,5 x 0,6	6	8020203506	3,50	5,3	-	2,25	1,0	6,4	4,1	1.000	50.000
M 3,5 x 0,6	8	8020203508								1.000	40.000
M 3,5 x 0,6	10	8020203510								1.000	30.000
M 3,5 x 0,6	12	8020203512								1.000	25.000
M 3,5 x 0,6	15	8020203515								1.000	20.000
M 3,5 x 0,6	18	8020203518								1.000	20.000
M 3,5 x 0,6	20	8020203520								1.000	15.000
M 3,5 x 0,6	22	8020203522								1.000	14.000
M 3,5 x 0,6	25	8020203525								1.000	10.000
M 3,5 x 0,6	28	8020203528								1.000	10.000
M 3,5 x 0,6	30	8020203530								1.000	10.000

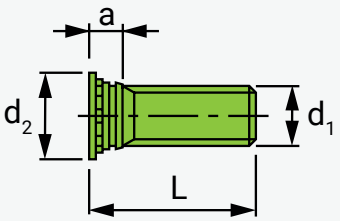
Subject to modifications

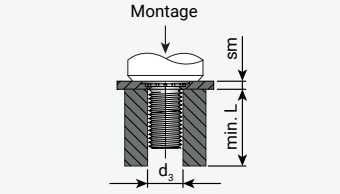
TYPE FHS

SELF-CLINCHING STUDS
FOR METALLIC MATERIALS

Material
Stainless steel A2 (AISI 304)

Application
Type FHS: For sheet hardness up to HRB 70





Thread d_1	Length marking „L" (+- 0,4)	CODE	Hole-Ø in sheet metal +0,08 in mm	d_2 (+- 0,4) in mm	d_3 in mm	a max. in mm	sm min. in mm	Minimum. edge distance to centre hole in mm	Max. drill hole in the 2.component in mm		
M 4 x 0,7	6	8020204006	4,00	5,9	4,10	2,40	1,0	7,2	4,6	1.000	30.000
M 4 x 0,7	8	8020204008								1.000	25.000
M 4 x 0,7	10	8020204010								1.000	20.000
M 4 x 0,7	12	8020204012								1.000	16.000
M 4 x 0,7	15	8020204015								1.000	12.000
M 4 x 0,7	18	8020204018								1.000	10.000
M 4 x 0,7	20	8020204020								1.000	8.000
M 4 x 0,7	22	8020204022								1.000	8.000
M 4 x 0,7	25	8020204025								1.000	7.000
M 4 x 0,7	28	8020204028								1.000	6.000
M 4 x 0,7	30	8020204030								1.000	5.000
M 4 x 0,7	35	8020204035								1.000	4.000
M 4 x 0,7	38	8020204038								1.000	4.000
M 5 x 0,8	8	8020205008	5,00	6,5	5,10	2,70	1,0	7,2	5,6	1.000	20.000
M 5 x 0,8	10	8020205010								1.000	14.000
M 5 x 0,8	12	8020205012								1.000	12.000
M 5 x 0,8	15	8020205015								1.000	8.000
M 5 x 0,8	18	8020205018								1.000	6.000
M 5 x 0,8	20	8020205020								1.000	6.000
M 5 x 0,8	22	8020205022								1.000	5.000
M 5 x 0,8	25	8020205025								1.000	5.000
M 5 x 0,8	28	8020205028								1.000	4.000
M 5 x 0,8	30	8020205030								1.000	4.000
M 5 x 0,8	35	8020205035								1.000	3.000
M 5 x 0,8	38	8020205038								1.000	3.000

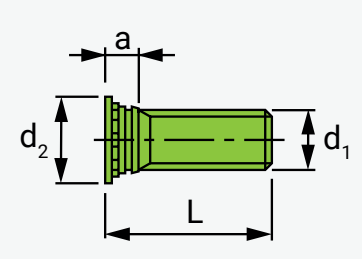
Subject to modifications

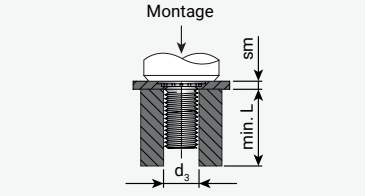
TYPE FHS

SELF-CLINCHING STUDS
FOR METALLIC MATERIALS

Material
Stainless steel A2 (AISI 304)

Application
Type FHS: For sheet hardness up to HRB 70





Thread d_1	Length marking „L" (+- 0,4)	CODE	Hole-Ø in sheet metal +0,08 in mm	d_2 (+- 0,4) in mm	d_3 in mm	a max. in mm	sm min. in mm	Minimum. edge distance to centre hole in mm	Max. drill hole in the 2.component in mm		
M 6 x 1,0	10	8020206010	6,00	8,2	6,10	3,00	1,6	7,9	6,6	1.000	9.000
M 6 x 1,0	12	8020206012								1.000	8.000
M 6 x 1,0	15	8020206015								1.000	6.000
M 6 x 1,0	18	8020206018								1.000	5.000
M 6 x 1,0	20	8020206020								1.000	5.000
M 6 x 1,0	22	8020206022								1.000	5.000
M 6 x 1,0	25	8020206025								1.000	4.000
M 6 x 1,0	28	8020206028								500	3.000
M 6 x 1,0	30	8020206030								500	3.000
M 6 x 1,0	35	8020206035								500	2.500
M 6 x 1,0	38	8020206038								500	2.000
M 8 x 1,25	12	8020208012	8,00	9,6	8,10	3,70	2,4	9,6	8,6	500	4.000
M 8 x 1,25	15	8020208015								500	4.000
M 8 x 1,25	18	8020208018								500	3.000
M 8 x 1,25	20	8020208020								500	3.000
M 8 x 1,25	22	8020208022								500	2.000
M 8 x 1,25	25	8020208025								500	2.000
M 8 x 1,25	28	8020208028								500	1.500
M 8 x 1,25	30	8020208030								500	1.500
M 8 x 1,25	35	8020208035								500	1.500
M 8 x 1,25	38	8020208038								500	1.000

Subject to modifications

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