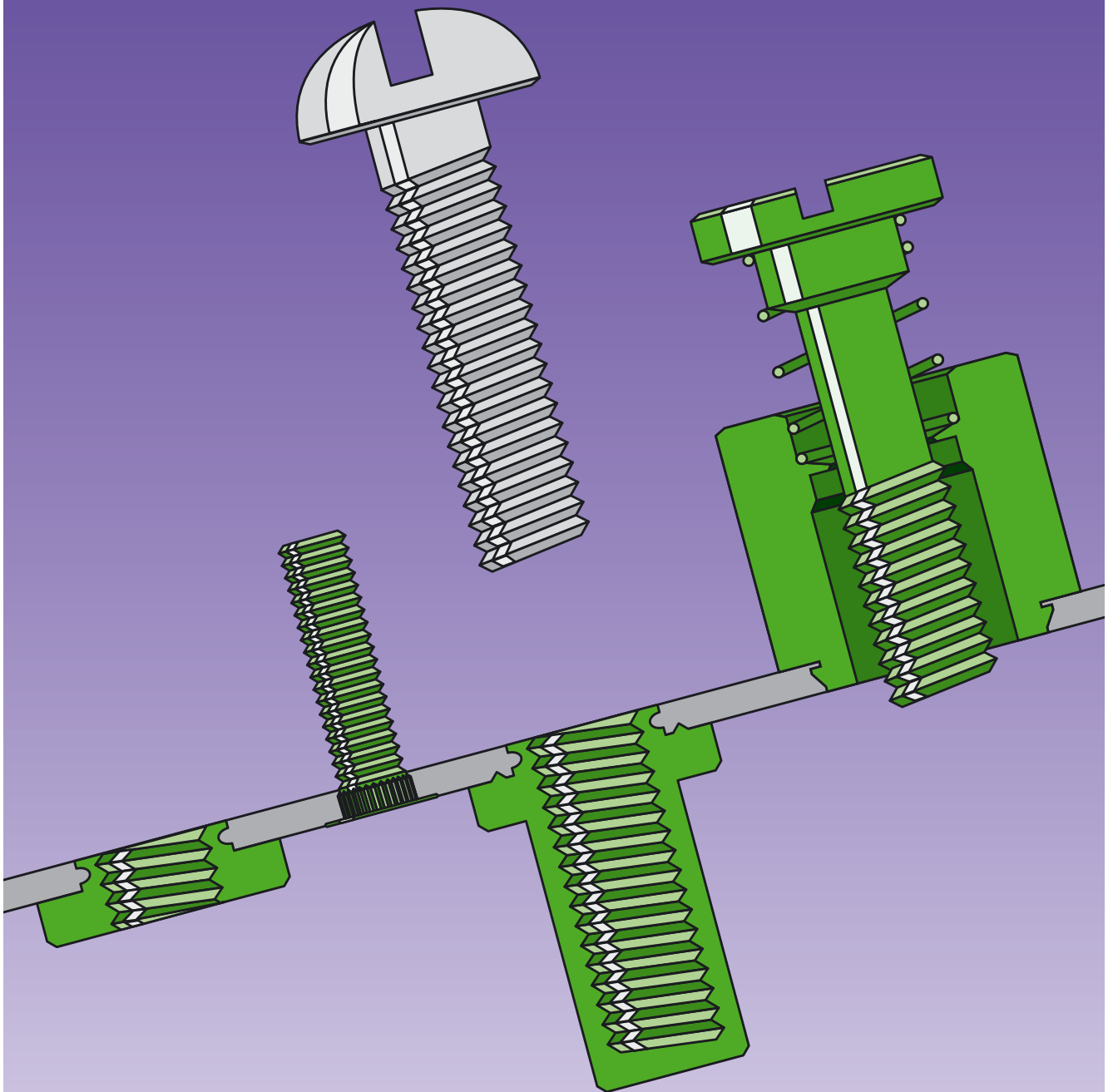


■ CAPTIVE[®] Self-clinching fasteners



TITGEMEYER Tb1420GB(0413)1

Threaded inserts

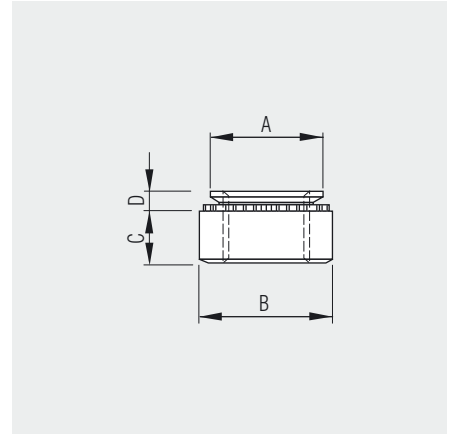
Captive® Self-clinching fasteners


Self-clinching nuts for metals

Material

Steel zinc (C series)
Suitable for metal hardnesses up to HRB 80

Stainless steel (CS series)
Suitable for metal hardnesses up to HRB 70



Thread	Hole- \varnothing +0.08 -0.00 [mm]	Material thickness min [mm]	A max [mm]	B ± 0.25 [mm]	C ± 0.25 [mm]	D max [mm]	 min [mm]	Steel		Stainless steel	
								Description	Part No.	Description	Part No.
M 2	4.25	0.8	4.22	6.3	1.5	0.76	4.8	C M 2-0	-	CS M 2-0	-
		1.0	4.22	6.3	1.5	0.97	4.8	C M 2-1	358 003	CS M 2-1	-
		1.4	4.22	6.3	1.5	1.37	4.8	C M 2-2	358 004	CS M 2-2	-
		2.3	4.22	6.3	1.5	2.21	4.8	C M 2-3	-	CS M 2-3	-
M 2.5	4.25	0.8	4.22	6.3	1.5	0.76	4.8	C M 2.5-0	358 006	CS M 2.5-0	-
		1.0	4.22	6.3	1.5	0.97	4.8	C M 2.5-1	358 007	CS M 2.5-1	358 051
		1.4	4.22	6.3	1.5	1.37	4.8	C M 2.5-2	358 008	CS M 2.5-2	-
		2.3	4.22	6.3	1.5	2.21	4.8	C M 2.5-3	-	CS M 2.5-3	-
M 3	4.25	0.8	4.22	6.3	1.5	0.76	4.8	C M 3-0	358 010	CS M 3-0	358 060
		1.0	4.22	6.3	1.5	0.97	4.8	C M 3-1	358 011	CS M 3-1	358 061
		1.4	4.22	6.3	1.5	1.37	4.8	C M 3-2	358 012	CS M 3-2	358 062
		2.3	4.22	6.3	1.5	2.21	4.8	C M 3-3	-	CS M 3-3	-
M 3.5	4.75	0.8	4.73	7.1	1.5	0.76	5.6	C M 3.5-0	358 015	CS M 3.5-0	358 065
		1.0	4.73	7.1	1.5	0.97	5.6	C M 3.5-1	358 016	CS M 3.5-1	-
		1.4	4.73	7.1	1.5	1.37	5.6	C M 3.5-2	358 017	CS M 3.5-2	-
		2.3	4.73	7.1	1.5	2.21	5.6	C M 3.5-3	-	CS M 3.5-3	-
M 4	5.4	0.8	5.38	7.9	2.0	0.76	6.9	C M 4-0	358 020	CS M 4-0	358 070
		1.0	5.38	7.9	2.0	0.97	6.9	C M 4-1	358 021	CS M 4-1	358 071
		1.4	5.38	7.9	2.0	1.37	6.9	C M 4-2	358 022	CS M 4-2	358 072
		2.3	5.38	7.9	2.0	2.21	6.9	C M 4-3	358 023	CS M 4-3	358 073
M 5	6.4	0.8	6.38	8.7	2.0	0.76	7.1	C M 5-0	358 025	CS M 5-0	358 074
		1.0	6.38	8.7	2.0	0.97	7.1	C M 5-1	358 026	CS M 5-1	358 076
		1.4	6.38	8.7	2.0	1.37	7.1	C M 5-2	358 027	CS M 5-2	358 077
		2.3	6.38	8.7	2.0	2.21	7.1	C M 5-3	358 028	CS M 5-3	-
M 6	8.75	1.4	8.72	11.05	4.08	1.37	8.6	C M 6-1	358 030	CS M 6-1	358 080
		2.3	8.72	11.05	4.08	2.21	8.6	C M 6-2	358 031	CS M 6-2	358 081
		3.2	8.72	11.05	4.08	3.05	8.6	C M 6-3	358 032	CS M 6-3	358 082
M 8	10.5	1.4	10.44	12.65	5.47	1.37	9.7	C M 8-1	358 035	CS M 8-1	358 090
		2.3	10.44	12.65	5.47	2.21	9.7	C M 8-2	358 036	CS M 8-2	358 083
M 10	14.0	3.2	10.44	12.65	5.47	3.05	9.7	C M 8-3	-	CS M 8-3	-
		2.3	13.94	17.35	7.48	2.21	13.5	C M 10-1	358 040	CS M 10-1	-
		3.2	13.94	17.35	7.48	3.05	13.5	C M 10-2	-	CS M 10-2	358 093
		6.4	13.94	17.35	7.48	6.00	13.5	C M 10-3	-	CS M 10-3	-

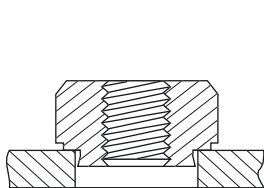
We reserve the right to amend specifications at any time.

Technical data

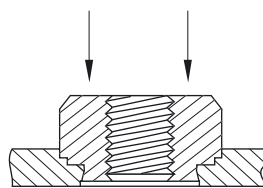
Thread	Shaft code ¹	Sheet material					
		Steel			Aluminium (H34)		
		Press-in force [kN]	Push-out force [N]	Torsional strength [Nm]	Press-in force [kN]	Push-out force [N]	Torsional strength [Nm]
M 2	-0	11.2 – 15.6	465	2.1	6.7 – 8.9	275	0.9
M 2.5	-1	11.2 – 15.6	545	2.1	6.7 – 8.9	390	1.1
M 3	-2	11.2 – 15.6	1010	2.1	6.7 – 8.9	745	1.4
	-3	11.2 – 15.6	1100	2.1	6.7 – 8.9	850	1.4
M 3.5	-0	13.4 – 26.7	475	1.8	11.2 – 13.4	290	1.8
	-1	13.4 – 26.7	565	1.8	11.2 – 13.4	465	1.9
	-2	13.4 – 26.7	1200	2.3	11.2 – 13.4	965	2.5
	-3	13.4 – 26.7	1300	2.5	11.2 – 13.4	1050	2.8
M 4	-0	18.0 – 27.0	485	2.9	11.2 – 13.4	290	2.3
	-1	18.0 – 27.0	640	2.95	11.2 – 13.4	465	2.6
	-2	18.0 – 27.0	1245	4.2	11.2 – 13.4	965	4.0
	-3	18.0 – 27.0	1300	4.2	11.2 – 13.4	1100	4.0
M 5	-0	18.0 – 31.0	525	3.6	11.2 – 15.6	290	3.0
	-1	18.0 – 31.0	790	3.6	11.2 – 15.6	475	3.6
	-2	18.0 – 31.0	1400	6.0	11.2 – 15.6	1180	4.7
	-3	18.0 – 31.0	1500	6.0	11.2 – 15.6	1225	5.7
M 6	-1	27.0 – 36.0	1755	16.4	18.0 – 32.0	1570	9.6
	-2	27.0 – 36.0	1755	16.4	18.0 – 32.0	1570	9.6
	-3	27.0 – 36.0	1755	16.4	18.0 – 32.0	1570	9.6
M 8	-1	27.0 – 36.0	1860	18.1	18.0 – 32.0	1560	13.0
	-2	27.0 – 36.0	1860	18.1	18.0 – 32.0	1560	13.0
	-3	27.0 – 36.0	1860	18.1	18.0 – 32.0	1560	13.0
M 10	-1	32.0 – 50.0	2000	36.2	22.0 – 36.0	1750	32.7
	-2	32.0 – 50.0	2000	36.2	22.0 – 36.0	1750	32.7
	-3	32.0 – 50.0	2000	36.2	22.0 – 36.0	1750	32.7

¹ denotes the minimum material thickness of the application material

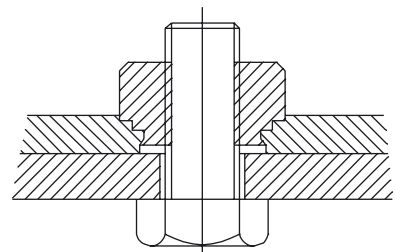
Guidelines - the precise values must be determined using the original component



Nut must be affixed at right angles



Press-in force is exerted on the head of the nut



Fastening (fitting) occurs on the opposite side to the nut head

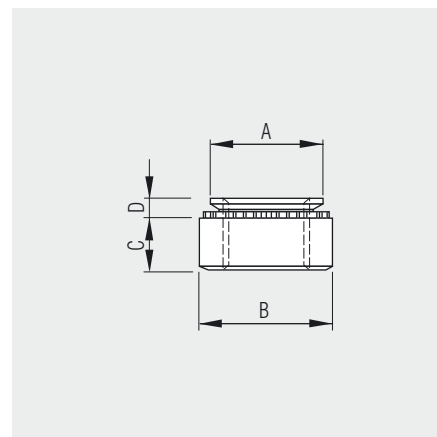
We reserve the right to amend specifications at any time.


Captive® Self-clinching fasteners

Self-clinching nuts for metals

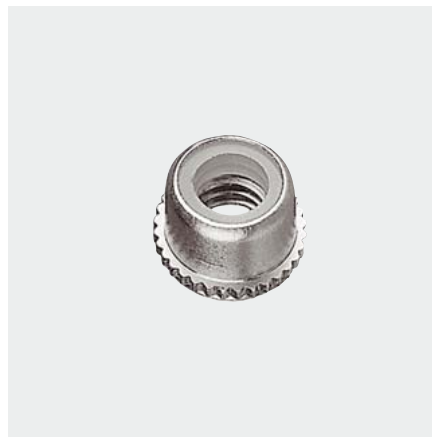
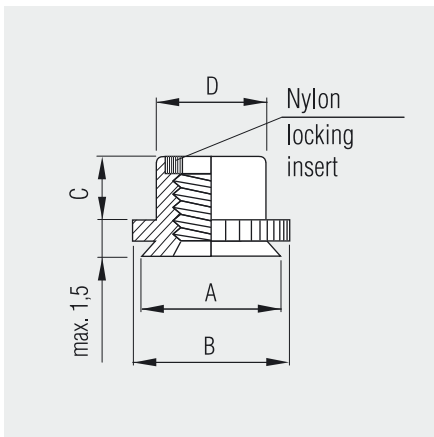
Material

- **Aluminium** (CA series)
Suitable for metal hardnesses up to HRB 50



Thread	Hole- \varnothing $+0.08 -0.00$ [mm]	Material thickness <i>min</i> [mm]	A		B		C		D  <i>min</i> [mm]	■ Aluminium	
			<i>max</i> [mm]	± 0.25 [mm]	± 0.25 [mm]	<i>max</i> [mm]	Description	Part No.			
M 2	4.25	1.0	4.22	6.3	1.5	0.97	4.8	CA M 2-1	-		
		1.4	4.22	6.3	1.5	1.37	4.8	CA M 2-2	-		
M 3	4.75	1.0	4.73	6.3	2.0	0.97	5.6	CA M 3-1	-		
		1.4	4.73	6.3	2.0	1.37	5.6	CA M 3-2	-		
M 3.5	5.4	1.0	5.38	7.1	2.0	0.97	6.9	CA M 3.5-1	-		
		1.4	5.38	7.1	2.0	1.37	6.9	CA M 3.5-2	-		
M 4	6.0	1.0	5.97	7.9	3.0	0.97	7.1	CA M 4-1	-		
		1.4	5.97	7.9	3.0	1.37	7.1	CA M 4-2	358 727		
M 5	7.5	1.0	7.47	9.5	3.8	0.97	7.9	CA M 5-1	-		
		1.4	7.47	9.5	3.8	1.37	7.9	CA M 5-2	358 729		
M 6	8.75	1.4	8.72	11.1	4.1	1.37	8.6	CA M 6-1	358 730		
		2.3	8.72	11.1	4.1	2.21	8.6	CA M 6-2	358 731		

We reserve the right to amend specifications at any time.



Self-clinching top collar lock nuts for metals self-locking

Material

Steel zinc (CPL series)
Suitable for metal hardnesses up to HRB 70

Stainless steel (CPLC series)
Suitable for metal hardnesses up to HRB 70



Threaded inserts

Thread	Hole- \varnothing +0.08 -0.00 [mm]	Material thickness min [mm]	A max [mm]	B ± 0.25 [mm]	C ± 0.25 [mm]	D max [mm]		Steel zinc		Stainless steel	
								Description	Part No.	Description	Part No.
M 3	6.0	1.5 – 1.78	5.97	7.1	3.6	5.5	4.3	CPL M 3	358 770	CPLC M 3	358 773
M 4	7.5	1.5 – 1.78	7.47	8.6	4.2	7.0	5.6	CPL M 4	358 771	CPLC M 4	–
M 5	8.0	1.5 – 1.78	7.97	8.9	4.5	7.5	6.4	CPL M 5	358 772	CPLC M 5	–

Technical data

Thread	Tightening torque max [kN]	Sheet material					
		Steel 1.5 mm			Steel 1.2 mm		
		Press-in force [kN]	Push-out force [N]	Torsional strength [Nm]	Press-in force [kN]	Push-out force [N]	Torsional strength [Nm]
M 3	1.1	13.34	1156	2.2	13.34	1000	2.2
M 4	2.2	13.34	1290	6.7	13.34	1200	6.7
M 5	3.1	13.34	1557	7.9	13.34	1380	7.9

Thread	Tightening torque max [kN]	Sheet material					
		Aluminium (H 34) 1.5 mm			Aluminium (H 34) 1.0 mm		
		Press-in force [kN]	Push-out force [N]	Torsional strength [Nm]	Press-in force [kN]	Push-out force [N]	Torsional strength [Nm]
M 3	1.1	8.9	1000	2.2	6.67	710	2.2
M 4	2.2	8.9	1290	6.7	6.67	800	3.1
M 5	3.1	8.9	1330	7.9	6.67	800	4.5

Guidelines - the precise values must be determined using the original component.

We reserve the right to amend specifications at any time.

Installation tips

Thin sheet metal – If the fastener is fitted to sheet metal thinner than 1–1.5 mm, the fastener is only partially attached to the material. The knurled collar must be pressed into the sheet metal to make up the difference in the sheet thickness to a minimum material thickness of 1.5 mm.

Thick sheet metal – If the fastener is fitted into sheet metal thicker than 1.78 mm, the knurled collar may snap if the permissible tightening torque is exceeded.

Captive® Self-clinching fasteners

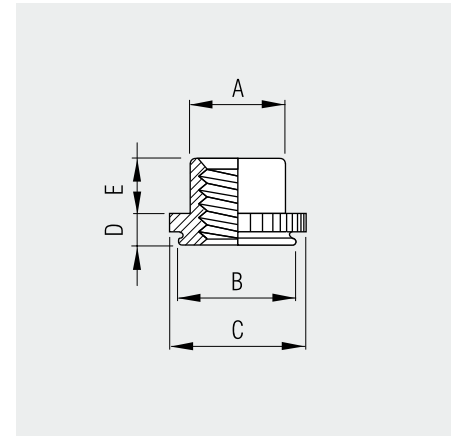
Miniature self-clinching nuts for metals


Material

Suitable for metal hardnesses up to HRB 70

■ **Stainless steel**
(CFE, CFEO series)
self-locking

■ **Stainless steel**
(CFEX, CFEOX series)
not locking



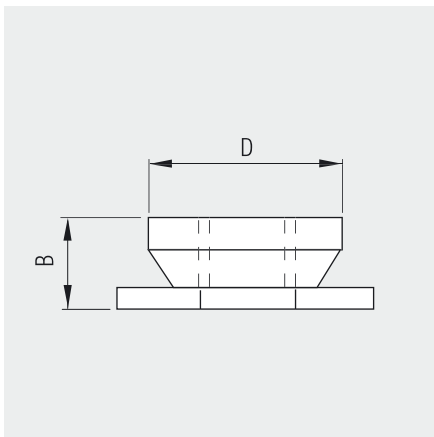
Thread	Hole- \varnothing +0.08 -0.00 [mm]	Material thickness		A [mm]	B [mm]	C [mm]	D [mm]	E +0.4 -0.0 [mm]		■ Stainless steel self-locking		■ Stainless steel not locking	
		min [mm]	max [mm]							Description	Part No.	Description	Part No.
M 3	4.4	1.02	3.96	4.34	4.88	1.02	1.90	3.6	min	CFEO M 3	–	CFEOX M 3	358 633
		1.53	3.96	4.34	4.88	1.53	1.90	3.6		CFE M 3	–	CFEX M 3	358 623
M 4	7.4	1.02	5.23	7.34	8.17	1.02	2.55	5.2	min	CFEO M 4	–	CFEOX M 4	–
		1.53	5.23	7.34	8.17	1.53	2.55	5.2		CFE M 4	–	CFEX M 4	–
M 5	7.4	1.02	6.48	7.34	8.17	1.02	3.05	5.2	min	CFEO M 5	–	CFEOX M 5	–
		1.53	6.48	7.34	8.17	1.53	3.05	5.2		CFE M 5	358 606	CFEX M 5	358 637
M 6	8.75	1.53	7.72	8.71	9.74	1.53	3.30	7.1	min	CFE M 6	–	CFEX M 6	–

Technical data

Thread	Material thickness [mm]	Sheet material						Series
		Steel			Aluminium (H 34)			
		Press-in force [kN]	Push-out force [N]	Torsional strength [Nm]	Press-in force [kN]	Push-out force [N]	Torsional strength [Nm]	
M 3	1.0	6.7	600	1.3	4.0	380	1.3	CFEO, CFEOX
	1.5	6.7	900	1.3	4.0	590	1.3	CFE, CFEX
M 4	1.0	11.1	1100	5.3	7.0	675	5.3	CFEO, CFEOX
	1.5	11.1	1600	5.3	7.0	1100	5.3	CFE, CFEX
M 5	1.0	12.0	1200	5.3	7.0	675	5.3	CFEO, CFEOX
	1.5	12.0	1600	5.3	7.0	1100	5.3	CFE, CFEX
M 6	1.5	15.6	1800	11.3	9.0	1400	11.3	CFE, CFEX

Guidelines - the precise values must be determined using the original component.

We reserve the right to amend specifications at any time.




Self-clinching flush nuts
for metals
for flush-surface installation

Material

■ **Stainless steel** (CFL series)
Suitable for metal hardnesses
up to HRB 70



Threaded inserts

Thread	Hole- \varnothing +0.08 -0.00 [mm]	Material thickness min [mm]	SW nom [mm]	B max [mm]	D max [mm]	 min [mm]	■ Stainless steel	
							Description	Part No.
M 2	4.4	1.5	4.8	1.5	4.34	6.0	CFL M 2-1	358 501
M 2.5	4.4	1.5	4.8	1.5	4.34	6.0	CFL M 2.5-1	358 502
M 3	4.4	1.5	4.8	1.5	4.34	6.0	CFL M 3-1	358 506
		2.3	4.8	2.3	4.34	6.0	CFL M 3-2	358 507
M 3.5	5.4	1.5	6.4	1.5	5.35	6.5	CFL M 3.5-1	-
		2.3	6.4	2.3	5.35	6.5	CFL M 3.5-2	-
M 4	7.4	1.5	7.94	1.5	7.34	7.2	CFL M 4-1	358 511
		2.3	7.94	2.3	7.34	7.2	CFL M 4-2	358 512
M 5	7.9	1.5	8.73	1.5	7.87	8.0	CFL M 5-1	358 516
		2.3	8.73	2.3	7.87	8.0	CFL M 5-2	358 517
M 6	8.75	3.2	9.53	3.1	8.71	8.8	CFL M 6-3	358 518
		4.0	9.53	3.9	8.71	8.8	CFL M 6-4	-
		4.75	9.53	4.7	8.71	8.8	CFL M 6-5	-

Technical data

Thread	Installation torque max [Nm]	Sheet material			
		Steel		Aluminium	
		Press-in force [kN]	Push-out force [N]	Press-in force [kN]	Push-out force [N]
M 2	0.16	13.3	0.9	8.9	0.9
M 2.5	0.23	13.3	0.9	8.9	0.9
M 3	0.3	13.3	0.9	8.9	0.9
M 3.5	0.4	15.0	1.0	8.9	0.9
M 4	0.5	17.0	1.1	8.9	1.0
M 5	0.8	17.0	1.1	11	1.1
M 6	3.7	20.0	3.7	15	2.8

Guidelines - the precise values must be determined using the original component.

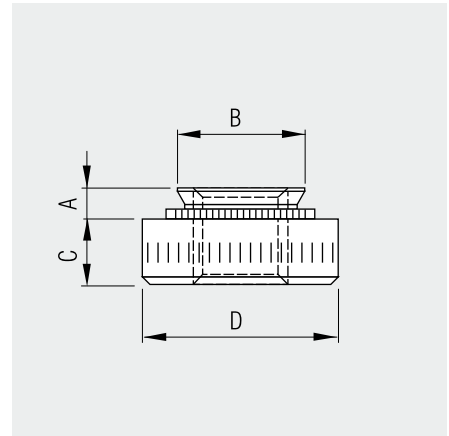
We reserve the right to amend specifications at any time.

Captive® Self-clinching fasteners

Self-clinching nuts for metals
self-locking

Material

■ **Stainless steel** (CFSP series)
Suitable for metal hardnesses
up to HRB 88



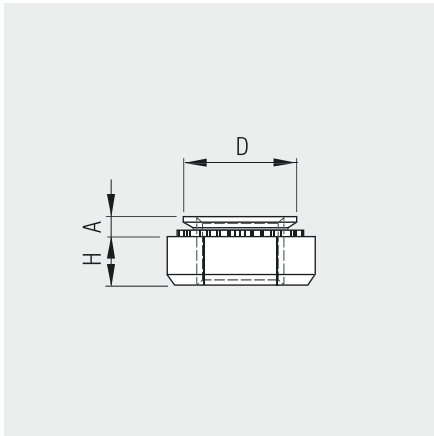
Thread	Hole- \varnothing +0.08 - 0.0 [mm]	Material thickness min [mm]	A		B		C		D		■ Stainless steel	
			max [mm]	max [mm]	±0.25 [mm]	±0.25 [mm]	min [mm]	Description	Part No.			
M 3	4.25	0.8 – 1.0	0.76	4.22	1.5	6.3	4.8	CFSP M 3-0	358 789			
		1.0	0.97	4.22	1.5	6.3	4.8	CFSP M 3-1	358 790			
		1.4	1.37	4.22	1.5	6.3	4.8	CFSP M 3-2	358 791			
M 4	5.4	0.8 – 1.0	0.76	5.38	2.0	7.9	6.9	CFSP M 4-0	–			
		1.0	0.97	5.38	2.0	7.9	6.9	CFSP M 4-1	358 794			
		1.4	1.37	5.38	2.0	7.9	6.9	CFSP M 4-2	358 795			
M 5	6.4	0.8 – 1.0	0.76	6.38	2.0	8.7	7.1	CFSP M 5-0	–			
		1.0	0.97	6.38	2.0	8.7	7.1	CFSP M 5-1	–			
		1.4	1.37	6.38	2.0	8.7	7.1	CFSP M 5-2	358 796			
M 6	8.75	1.4	1.37	8.72	4.1	11.1	8.6	CFSP M 6-1	358 799			

Technical data

Thread	Shaft code	Press-in force [kN]	Push-out force [N]	Torsional strength [Nm]
M 3	-0	13 – 22	570	1.55
	-1	13 – 22	720	1.90
	-2	13 – 22	1285	2.00
M 4	-0	22 – 31	640	3.35
	-1	22 – 31	790	4.15
	-2	22 – 31	1595	5.05
M 5	-0	26 – 40	790	3.90
	-1	26 – 40	1020	5.05
	-2	26 – 40	1770	6.75
M 6	-1	40 – 48	1990	16.5

Guidelines - the precise values must be determined using the original component.

We reserve the right to amend specifications at any time.




Self-clinching nuts KAL for metals

Material

Steel zinc (CKN series)
Suitable for metal hardnesses up to HRB 80

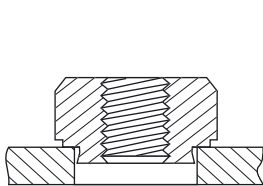
Threaded inserts

Thread	Hole- \varnothing +0.08 - 0.0 [mm]	Material thickness <i>min</i> [mm]	SW -0.2 [mm]	A <i>max</i> [mm]	C Corner size ± 0.25 [mm]	D <i>max</i> [mm]	H ± 0.25 [mm]		Steel	
									Description	Part No.
M 3	4.5	1.0	5.5	1.0	6.4	4.45	2.0	4.5	CKN M 3-1	358 760
		1.4	5.5	1.4	6.4	4.45	2.0	4.5	CKN M 3-2	358 761
M 4	5.5	1.0	7.0	1.0	8.1	5.45	2.2	5.5	CKN M 4-1	358 762
		1.4	7.0	1.4	8.1	5.45	2.2	5.5	CKN M 4-2	358 763
M 5	6.5	1.0	8.0	1.0	9.2	6.45	3.0	6.5	CKN M 5-1	358 764
		1.4	8.0	1.4	9.2	6.45	3.0	6.5	CKN M 5-2	358 765
M 6	8.0	1.0	10.0	1.0	11.5	7.95	4.0	8.0	CKN M 6-1	358 766
		1.4	10.0	1.4	11.5	7.95	4.0	8.0	CKN M 6-2	358 767
M 8	10.0	1.4	13.0	1.4	15.0	9.95	4.5	10.0	CKN M 8-2	358 768
		2.0	13.0	2.0	15.0	9.95	4.5	10.0	CKN M 8-3	358 769

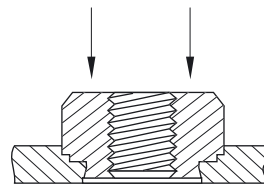
Technical data

Thread	Shaft code	Material thickness <i>min</i> [mm]	Press-in force [kN]	Push-out force [N]	Torsional strength [Nm]
M 3	-1	1.0	13	800	2.5
M 4	-1	1.0	14	800	3.0
M 5	-1	1.0	14	800	6.0
M 6	-1	1.0	17	850	15.0
M 8	-2	1.6	22	2000	25.0

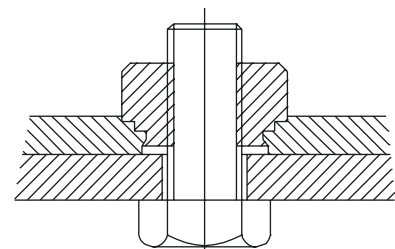
Guidelines - the precise values must be determined using the original component.



Nut must be affixed at right angles



Press-in force is exerted on the head of the nut



Fastening (fitting) occurs on the opposite side to the nut head

We reserve the right to amend specifications at any time.

Captive® Self-clinching fasteners

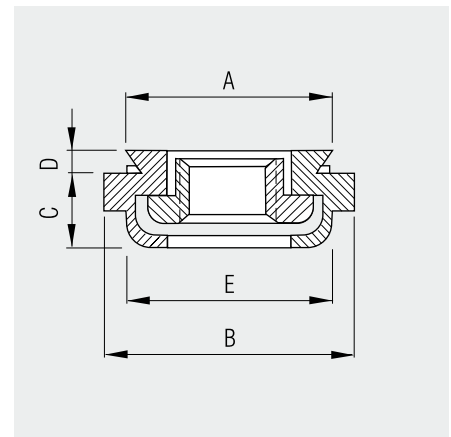
Self-clinching floating nuts for metals


- Floating thread
- To compensate for an axis offset by approx. 0.8 mm

Material

Steel zinc (CFAS series)
Suitable for metal hardnesses up to HRB 80

Stainless steel (CFAC series)
Suitable for metal hardnesses up to HRB 70



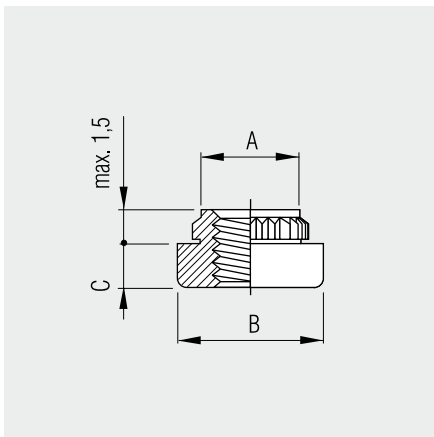
Thread	Hole- \varnothing +0.08 - 0.0 [mm]	Material thickness min max [mm]	A max [mm]	B ± 0.361 max [mm]	C max [mm]	D max [mm]	E max [mm]	 min [mm]	Steel		Stainless steel	
									Description	Part No.	Description	Part No.
M 3	7.4	1.0	7.34	9.1	3.3	0.97	7.4	7.6	CFAS M 3-1	358 701	CFAC M 3-1	358 708
		1.4	7.34	9.1	3.3	1.37	7.4	7.6	CFAS M 3-2	358 702	CFAC M 3-2	358 709
M 4	9.4	1.0	9.32	11.2	3.3	0.97	9.3	8.6	CFAS M 4-1	358 703	CFAC M 4-1	-
		1.4	9.32	11.2	3.3	1.37	9.3	8.6	CFAS M 4-2	358 704	CFAC M 4-2	-
M 5	10.3	1.0	10.29	11.9	4.3	0.97	10.3	9.0	CFAS M 5-1	358 706	CFAC M 5-1	-
		1.4	10.29	11.9	4.3	1.37	10.3	9.0	CFAS M 5-2	-	CFAC M 5-2	-
M 6	13.1	1.4	13.06	15.3	5.3	1.37	13.0	11.0	CFAS M 6-2	-	CFAC M 6-2	-

Technical data

Thread	Shaft code	Sheet material								
		Steel			Aluminium (T 3)			Aluminium (H 34)		
		Press-in force [kN]	Push-out force [N]	Torsional strength [Nm]	Press-in force [kN]	Push-out force [N]	Torsional strength [Nm]	Press-in force [kN]	Push-out force [N]	Torsional strength [Nm]
M 3	1	13	1330	9	13	970	7	7	950	9
	2	13	1330	17	14	1000	17	9	1000	17
M 4	1	13	1330	17	14	1050	12	9	1100	17
	2	13	1780	22	15	1330	17	10	1178	22
M 5	1	15	1780	17	15	1330	17	10	1330	17
	2	15	2000	22	16	1550	22	11	1550	22
M 6	2	22	2200	36	23	1550	36	14	1780	36

Guidelines - the precise values must be determined using the original component.

We reserve the right to amend specifications at any time.




Broaching type nuts for plastics
printed circuit boards, fibre-glass, acrylic

Material

Steel electrolytically zinc plated
(CKF2 series)
Suitable for metal hardnesses
up to HRB 60

Stainless steel (CKFS2 series)
Suitable for metal hard-
nesses up to HRB 60



Thread	Hole- \emptyset $+0.08 - 0.0$ [mm]	Material thickness <i>min</i> [mm]	A ± 0.08 [mm]	B ± 0.13 [mm]	C ± 0.13 [mm]	 <i>min</i> [mm]	Steel		Stainless steel	
							Description	Part No.	Description	Part No.
M 2.5	4.2	1.5	4.68	5.56	1.5	4.5	CKF2 M 2.5	358 551	CKFS2 M 2.5	-
M 3	4.2	1.5	4.68	5.56	1.5	4.5	CKF2 M 3	358 561	CKFS2 M 3	358 593
M 4	6.4	1.5	6.81	8.74	2.0	6.4	CKF2 M 4	358 571	CKFS2 M 4	358 594
M 5	6.9	1.5	7.37	9.53	3.0	7.1	CKF2 M 5	358 572	CKFS2 M 5	-

Technical data

Thread	Press-in force [kN]	Push-out force [N]	Torsional strength [Nm]
M 2.5	2.22	200	1.35
M 3	2.22	200	1.35
M 4	2.90	330	3.73
M 5	2.90	350	4.52

Guidelines - the precise values must be determined using the original component.

We reserve the right to amend specifications at any time.

Captive® Self-clinching fasteners

Self-clinching studs for metals

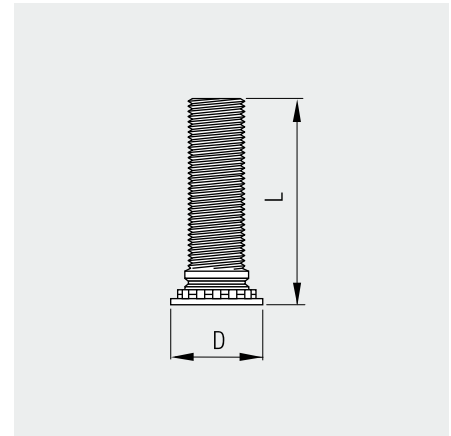
Material


Steel zinc (CH series)
Suitable for metal hardnesses up to HRB 80

Stainless steel (CHS series)
Suitable for metal hardnesses up to HRB 70



Aluminium (CHA series)
Suitable for metal hardnesses up to HRB 50

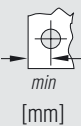


Thread	Hole- \varnothing +0.08 - 0.0 [mm]	Material thickness min [mm]	L ± 0.4 [mm]	D ± 0.4 [mm]	 min [mm]	Steel		Stainless steel		Aluminium	
						Description	Part No.	Description	Part No.	Description	Part No.
M 2	-	-	8	-	-	CH M 2-8	358 111	-	-	-	-
			10	-	-	CH M 2-10	358 112	-	-	-	-
M 2.5	2.5	1.0	6	4.1	5.4	CH M 2.5-6	358 120	CHS M 2.5-6	358 220	CHA M 2.5-6	-
			8	4.1	5.4	CH M 2.5-8	358 121	CHS M 2.5-8	-	CHA M 2.5-8	-
			10	4.1	5.4	CH M 2.5-10	358 122	CHS M 2.5-10	-	CHA M 2.5-10	-
			12	4.1	5.4	CH M 2.5-12	358 123	CHS M 2.5-12	-	CHA M 2.5-12	-
			15	4.1	5.4	CH M 2.5-15	358 124	CHS M 2.5-15	358 224	CHA M 2.5-15	-
M 3	3.0	1.0	18	4.1	5.4	CH M 2.5-18	358 125	CHS M 2.5-18	358 225	CHA M 2.5-18	-
			5	4.6	5.6	CH M 3-5	358 129	CHS M 3-5	-	-	-
			6	4.6	5.6	CH M 3-6	358 130	CHS M 3-6	358 230	CHA M 3-6	-
			8	4.6	5.6	CH M 3-8	358 131	CHS M 3-8	358 231	CHA M 3-8	358 911
			10	4.6	5.6	CH M 3-10	358 132	CHS M 3-10	358 232	CHA M 3-10	-
			12	4.6	5.6	CH M 3-12	358 133	CHS M 3-12	358 233	CHA M 3-12	-
			15	4.6	5.6	CH M 3-15	358 134	CHS M 3-15	358 234	CHA M 3-15	358 914
			18	4.6	5.6	CH M 3-18	358 135	CHS M 3-18	358 235	CHA M 3-18	-
			20	4.6	5.6	CH M 3-20	358 136	CHS M 3-20	358 236	CHA M 3-20	358 916
			22	4.6	5.6	CH M 3-22	358 137	CHS M 3-22	358 237	CHA M 3-22	-
M 4	4.0	1.0	25	4.6	5.6	CH M 3-25	358 138	CHS M 3-25	358 238	CHA M 3-25	-
			30	4.6	5.6	CH M 3-30	358 176	CHS M 3-30	-	CHA M 3-30	-
			6	5.9	7.2	CH M 4-6	358 140	CHS M 4-6	358 240	CHA M 4-6	-
			8	5.9	7.2	CH M 4-8	358 141	CHS M 4-8	358 241	CHA M 4-8	-
			10	5.9	7.2	CH M 4-10	358 142	CHS M 4-10	358 242	CHA M 4-10	358 942
			12	5.9	7.2	CH M 4-12	358 143	CHS M 4-12	358 243	CHA M 4-12	-
			13.5	5.9	7.2	CH M 4-13.5	358 980	CHS M 4-13.5	-	CHA M 4-13.5	-
			15	5.9	7.2	CH M 4-15	358 144	CHS M 4-15	358 244	CHA M 4-15	358 944
			16	5.9	7.2	CH M 4-16	358 844	CHS M 4-16	-	CHA M 4-16	-
			18	5.9	7.2	CH M 4-18	358 145	CHS M 4-18	358 245	CHA M 4-18	358 945
			20	5.9	7.2	CH M 4-20	358 146	CHS M 4-20	358 246	CHA M 4-20	-
			22	5.9	7.2	CH M 4-22	358 147	CHS M 4-22	358 247	CHA M 4-22	-
25	5.9	7.2	CH M 4-25	358 148	CHS M 4-25	358 248	CHA M 4-25	358 948			
28	5.9	7.2	CH M 4-28	358 199	CHS M 4-28	-	CHA M 4-28	-			
30	5.9	7.2	CH M 4-30	358 150	CHS M 4-30	358 250	CHA M 4-30	358 950			
35	5.9	7.2	CH M 4-35	358 139	CHS M 4-35	-	CHA M 4-35	-			
38	5.9	7.2	CH M 4-38	358 149	CHS M 4-38	358 258	CHA M 4-38	-			

Please refer to page 201 for details of punch/die dimensions. We reserve the right to amend specifications at any time.

Continued next page

Continued

Thread	Hole- \varnothing +0.08 - 0.0 [mm]	Material thickness min [mm]	L ± 0.4 [mm]	D ± 0.4 [mm]	 min [mm]	Steel		Stainless steel		Aluminium				
						Description	Part No.	Description	Part No.	Description	Part No.			
M 5	5.0	1.0	6	6.5	7.2	CH M 5-6	358 169	CHS M 5-6	–	CHA M 5-6	–			
			8	6.5	7.2	CH M 5-8	358 151	CHS M 5-8	358 251	CHA M 5-8	–			
			10	6.5	7.2	CH M 5-10	358 152	CHS M 5-10	358 252	CHA M 5-10	–			
			12	6.5	7.2	CH M 5-12	358 153	CHS M 5-12	358 253	CHA M 5-12	–			
			15	6.5	7.2	CH M 5-15	358 154	CHS M 5-15	358 254	CHA M 5-15	–			
			18	6.5	7.2	CH M 5-18	358 155	CHS M 5-18	358 255	CHA M 5-18	–			
			20	6.5	7.2	CH M 5-20	358 156	CHS M 5-20	358 256	CHA M 5-20	–			
			22	6.5	7.2	CH M 5-22	358 115	CHS M 5-22	358 257	CHA M 5-22	–			
			25	6.5	7.2	CH M 5-25	358 158	CHS M 5-25	–	CHA M 5-25	–			
			28	6.5	7.2	CH M 5-28	358 173	CHS M 5-28	358 259	CHA M 5-28	–			
			30	6.5	7.2	CH M 5-30	358 160	CHS M 5-30	358 260	CHA M 5-30	–			
			35	6.5	7.2	CH M 5-35	358 159	CHS M 5-35	358 249	CHA M 5-35	–			
			38	6.5	7.2	CH M 5-38	358 157	CHS M 5-38	358 262	CHA M 5-38	–			
			M 6	6.0	1.6	8	8.2	7.9	CH M 6-8	358 161	CHS M 6-8	–	CHA M 6-8	–
						10	8.2	7.9	CH M 6-10	358 162	CHS M 6-10	358 261	CHA M 6-10	–
12	8.2	7.9				CH M 6-12	358 163	CHS M 6-12	358 263	CHA M 6-12	358 308			
15	8.2	7.9				CH M 6-15	358 164	CHS M 6-15	358 264	CHA M 6-15	–			
18	8.2	7.9				CH M 6-18	358 165	CHS M 6-18	358 265	CHA M 6-18	–			
20	8.2	7.9				CH M 6-20	358 166	CHS M 6-20	358 266	CHA M 6-20	358 311			
22	8.2	7.9				CH M 6-22	358 167	CHS M 6-22	–	CHA M 6-22	–			
25	8.2	7.9				CH M 6-25	358 168	CHS M 6-25	358 268	CHA M 6-25	358 313			
28	8.2	7.9				CH M 6-28	–	CHS M 6-28	–	CHA M 6-28	–			
30	8.2	7.9				CH M 6-30	358 170	CHS M 6-30	358 270	CHA M 6-30	–			
35	8.2	7.9				CH M 6-35	358 171	CHS M 6-35	358 271	CHA M 6-35	–			
38	8.2	7.9				CH M 6-38	358 172	CHS M 6-38	–	CHA M 6-38	–			
M 8	8.0	2.4	50	8.2	7.9	CH M 6-50	358 179	CHS M 6-50	–	CHA M 6-50	–			
			8	9.6	9.6	CH M 8-8	–	CHS M 8-8	–	CHA M 8-8	–			
			10	9.6	9.6	CH M 8-10	–	CHS M 8-10	–	CHA M 8-10	–			
			12	9.6	9.6	CH M 8-12	358 183	CHS M 8-12	–	CHA M 8-12	–			
			15	9.6	9.6	CH M 8-15	358 184	CHS M 8-15	358 284	CHA M 8-15	–			
			18	9.6	9.6	CH M 8-18	358 185	CHS M 8-18	358 285	CHA M 8-18	–			
			20	9.6	9.6	CH M 8-20	358 186	CHS M 8-20	358 286	CHA M 8-20	–			
			22	9.6	9.6	CH M 8-22	358 187	CHS M 8-22	–	CHA M 8-22	–			
25	9.6	9.6	CH M 8-25	358 188	CHS M 8-25	358 288	CHA M 8-25	–						
28	9.6	9.6	CH M 8-28	–	CHS M 8-28	–	CHA M 8-28	–						
30	9.6	9.6	CH M 8-30	358 190	CHS M 8-30	358 291	CHA M 8-30	–						
35	9.6	9.6	CH M 8-35	358 191	CHS M 8-35	358 292	CHA M 8-35	–						

For punch and die dimensions, see page 201.

We reserve the right to amend specifications at any time.

Captive® Self-clinching fasteners

Technical data

Thread	Test material	Press-in force [kN]	Push-out force [N]	Torsional strength [Nm]	Over tightening torque [Nm]
M 2.5	Aluminium 1.6 mm	8.9	625	0.9	0.40
	Steel 1.5 mm	11.1	1025	0.9	0.40
M 3	Aluminium 1.6 mm	12.9	890	1.6	1.72
	Steel 1.5 mm	14.7	1240	1.6	1.72
M 3.5	Aluminium 1.6 mm	15.6	980	1.6	1.10
	Steel 1.5 mm	22.3	1550	2.7	1.10
M 4	Aluminium 1.6 mm	22.3	1290	2.8	1.60
	Steel 1.5 mm	28.9	1780	4.1	1.60
M 5	Aluminium 1.6 mm	24.5	1470	3.4	3.40
	Steel 1.5 mm	33.4	2440	6.4	3.40
M 6	Aluminium 2.4 mm	28.9	2000	7.2	5.70
	Steel 2.4 mm	29.8	3110	11.2	5.70
M 8	Aluminium 2.4 mm	29.0	2440	11.2	14.0
	Steel 2.4 mm	44.5	3780	19.1	14.0

Guidelines - the precise values must be determined using the original component.
For punch and die dimensions, see page 201.

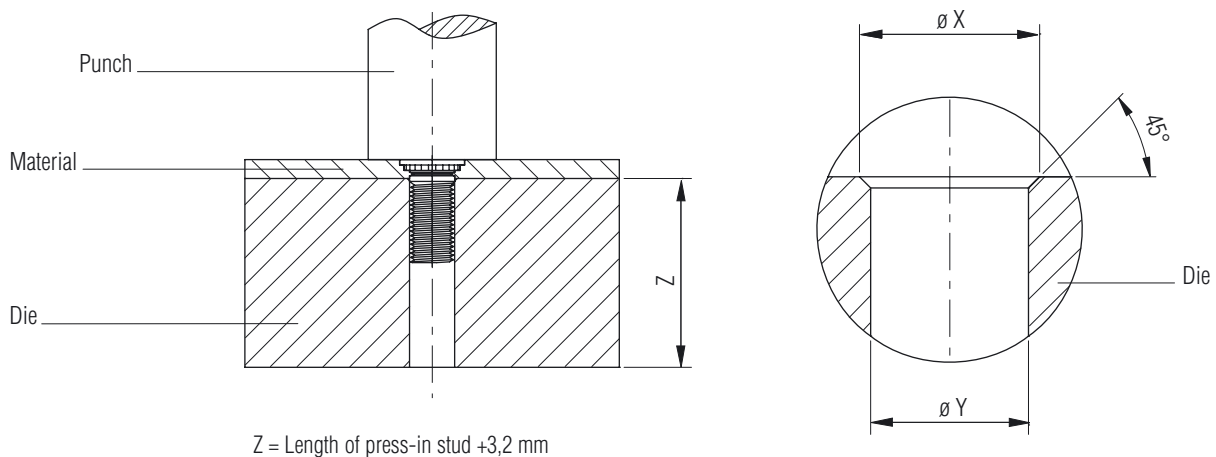
We reserve the right to amend specifications at any time.

Punch/die dimensions for press-in studs of the series: CH – CHS – CHA – CHN

Thread	Die dimensions	
	X +0.1 [mm]	Y +0.08 [mm]
M 2.5	3.1	2.5
M 3	3.6	3.0
M 3.5	4.1	3.5
M 4	4.6	4.0
M 5	5.6	5.0
M 6	6.6	6.0
M 8	–	8.0

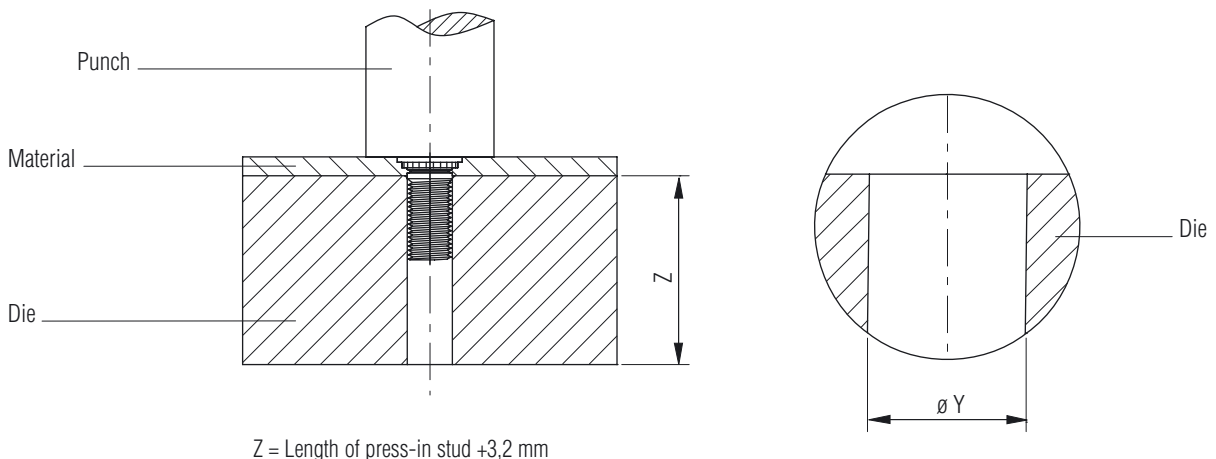
Die for material thickness < 1.5 mm for thread sizes M 2,5–M 5

Die for material thickness < 2,3 mm for thread sizes M 6–M 8



Die for material thickness > 1.5 mm for thread sizes M 2,5–M 5

Die for material thickness > 2.3 mm for thread sizes M 6–M 8



We reserve the right to amend specifications at any time.

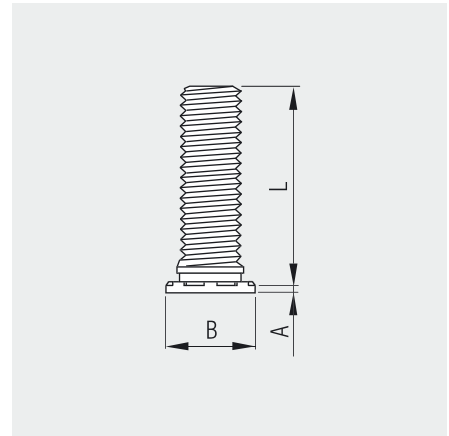
Captive® Self-clinching fasteners


Self-clinching studs for metals
for thin sheet metal > 0.51 mm,
not flush-fitting

Material

Steel zinc (TCH series)
Suitable for metal hardnesses
up to HRB 80

Stainless steel (TCHS series)
Suitable for metal hard-
nesses up to HRB 70



Thread	Hole- \emptyset +0.08 - 0.0 [mm]	Material thickness min [mm]	L ± 0.4 [mm]	A max [mm]	B ± 0.4 [mm]	 min [mm]	■ Steel		■ Stainless steel	
							Description	Part No.	Description	Part No.
M 3	3.0	0.51	6.0	0.64	4.5	5.6	TCH M 3-6	358 850	TCHS M 3-6	-
			8.0	0.64	4.5	5.6	TCH M 3-8	358 851	TCHS M 3-8	-
			10.0	0.64	4.5	5.6	TCH M 3-10	-	TCHS M 3-10	-
			12.0	0.64	4.5	5.6	TCH M 3-12	-	TCHS M 3-12	-
			15.0	0.64	4.5	5.6	TCH M 3-15	358 854	TCHS M 3-15	-
			18.0	0.64	4.5	5.6	TCH M 3-18	-	TCHS M 3-18	358 885
M 4	4.0	0.51	10.0	0.64	5.8	7.2	TCH M 4-10	-	TCHS M 4-10	-
			12.0	0.64	5.8	7.2	TCH M 4-12	-	TCHS M 4-12	-
			15.0	0.64	5.8	7.2	TCH M 4-15	-	TCHS M 4-15	-
			18.0	0.64	5.8	7.2	TCH M 4-18	-	TCHS M 4-18	-
			20.0	0.64	5.8	7.2	TCH M 4-20	-	TCHS M 4-20	-
			22.0	0.64	5.8	7.2	TCH M 4-22	-	TCHS M 4-22	-
			25.0	0.64	5.8	7.2	TCH M 4-25	-	TCHS M 4-25	-
			28.0	0.64	5.8	7.2	TCH M 4-28	-	TCHS M 4-28	-
			30.0	0.64	5.8	7.2	TCH M 4-30	-	TCHS M 4-30	-
			35.0	0.64	5.8	7.2	TCH M 4-35	-	TCHS M 4-35	-
M 5	5.0	0.51	10.0	0.64	6.4	7.2	TCH M 5-10	-	TCHS M 5-10	-
			12.0	0.64	6.4	7.2	TCH M 5-12	-	TCHS M 5-12	-
			15.0	0.64	6.4	7.2	TCH M 5-15	-	TCHS M 5-15	-
			18.0	0.64	6.4	7.2	TCH M 5-18	-	TCHS M 5-18	-
			20.0	0.64	6.4	7.2	TCH M 5-20	-	TCHS M 5-20	-
			22.0	0.64	6.4	7.2	TCH M 5-22	-	TCHS M 5-22	-
			25.0	0.64	6.4	7.2	TCH M 5-25	-	TCHS M 5-25	-
			28.0	0.64	6.4	7.2	TCH M 5-28	-	TCHS M 5-28	-
			30.0	0.64	6.4	7.2	TCH M 5-30	-	TCHS M 5-30	-
			35.0	0.46	6.4	7.2	TCH M 5-35	-	TCHS M 5-35	-
38.0	0.46	6.4	7.2	TCH M 5-38	-	TCHS M 5-38	-			

For punch and die dimensions, see page 207.

We reserve the right to amend specifications at any time.

Technical data

Thread	Installation torque <i>max</i> [Nm]	Material [mm]	Sheet material			
			Material hardness [HRB]	Press-in force [kN]	Push-out force [N]	Torsional strength [Nm]
M 3	0.74	Aluminium 0.5	28	5.3	190	0.8
		Steel 0.6	52	6.7	290	1.0
M 4	1.70	Aluminium 0.5	28	9.8	245	0.7
		Steel 0.6	52	13.4	495	2.5
M 5	3.50	Aluminium 0.5	28	13.4	265	1.2
		Steel 0.6	52	17.8	665	2.9

Guidelines - the precise values must be determined using the original component.

For punch and die dimensions, see page 201.

We reserve the right to amend specifications at any time.

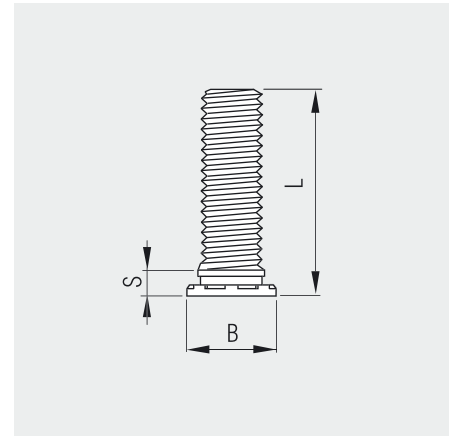
Captive® Self-clinching fasteners

Close edge studs for metals
for fitting close to an edge

Material

Steel zinc (CHE series)
Suitable for metal hardnesses
up to HRB 80

Stainless steel (CHES series)
Suitable for metal hardnesses up to HRB 70



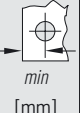
Thread	Hole- \varnothing +0.08 - 0.0 [mm]	Material thickness min [mm]	L ± 0.4 [mm]	B ± 0.4 [mm]	S max [mm]		■ Steel		■ Stainless steel	
							Description	Part No.	Description	Part No.
M 2.5	2.5	1.0	6.0	3.15	2.1	2.8	CHE M 2.5-6	358 863	CHES M 2.5-6	-
			8.0	3.15	2.1	2.8	CHE M 2.5-8	358 881	CHES M 2.5-8	-
			10.0	3.15	2.1	2.8	CHE M 2.5-10	358 864	CHES M 2.5-10	-
			12.0	3.15	2.1	2.8	CHE M 2.5-12	358 858	CHES M 2.5-12	-
			15.0	3.15	2.1	2.8	CHE M 2.5-15	358 865	CHES M 2.5-15	-
			18.0	3.15	2.1	2.8	CHE M 2.5-18	358 877	CHES M 2.5-18	-
M 3	3.0	1.0	6.0	3.65	2.1	3.3	CHE M 3-6	358 888	CHES M 3-6	-
			7.0	3.65	2.1	3.3	CHE M 3-7	358 852	CHES M 3-7	-
			8.0	3.65	2.1	3.3	CHE M 3-8	358 889	CHES M 3-8	-
			10.0	3.65	2.1	3.3	CHE M 3-10	358 890	CHES M 3-10	-
			12.0	3.65	2.1	3.3	CHE M 3-12	358 891	CHES M 3-12	-
			15.0	3.65	2.1	3.3	CHE M 3-15	358 892	CHES M 3-15	-
			18.0	3.65	2.1	3.3	CHE M 3-18	358 893	CHES M 3-18	-
			20.0	3.65	2.1	3.3	CHE M 3-20	358 861	CHES M 3-20	-
M 4	4.0	1.0	22.0	3.65	2.1	3.3	CHE M 3-22	358 862	CHES M 3-22	-
			25.0	3.65	2.1	3.3	CHE M 3-25	358 886	CHES M 3-25	-
			6.0	4.65	2.4	4.3	CHE M 4-6	358 876	CHES M 4-6	-
			8.0	4.65	2.4	4.3	CHE M 4-8	358 866	CHES M 4-8	-
			10.0	4.65	2.4	4.3	CHE M 4-10	358 894	CHES M 4-10	-
			12.0	4.65	2.4	4.3	CHE M 4-12	358 895	CHES M 4-12	-
			15.0	4.65	2.4	4.3	CHE M 4-15	358 896	CHES M 4-15	-
			18.0	4.65	2.4	4.3	CHE M 4-18	358 897	CHES M 4-18	358 900
			20.0	4.65	2.4	4.3	CHE M 4-20	358 898	CHES M 4-20	-
			22.0	4.65	2.4	4.3	CHE M 4-22	358 867	CHES M 4-22	-
25.0	4.65	2.4	4.3	CHE M 4-25	358 899	CHES M 4-25	-			
28.0	4.65	2.4	4.3	CHE M 4-28	358 853	CHES M 4-28	-			
30.0	4.65	2.4	4.3	CHE M 4-30	358 855	CHES M 4-30	-			
35.0	4.65	2.4	4.3	CHE M 4-35	358 856	CHES M 4-35	-			
38.0	4.65	2.4	4.3	CHE M 4-38	358 849	CHES M 4-38	-			

For punch and die dimensions, see page 207.

Continued next page

We reserve the right to amend specifications at any time.

Continued

Thread	Hole- \varnothing <i>+0.08 - 0.0</i> [mm]	Material thickness <i>min</i> [mm]	L ± 0.4 [mm]	B ± 0.4 [mm]	S <i>max</i> [mm]		■ Steel		■ Stainless steel	
							Description	Part No.	Description	Part No.
M 5	5.0	1.0	8.0	5.9	2.7	5.6	CHE M 5-8	-	CHES M 5-8	-
			10.0	5.9	2.7	5.6	CHE M 5-10	358 868	CHES M 5-10	-
			12.0	5.9	2.7	5.6	CHE M 5-12	358 869	CHES M 5-12	-
			15.0	5.9	2.7	5.6	CHE M 5-15	358 878	CHES M 5-15	-
			18.0	5.9	2.7	5.6	CHE M 5-18	358 873	CHES M 5-18	-
			20.0	5.9	2.7	5.6	CHE M 5-20	358 857	CHES M 5-20	-
			25.0	5.9	2.7	5.6	CHE M 5-25	358 879	CHES M 5-25	-
			30.0	5.9	2.7	5.6	CHE M 5-30	358 871	CHES M 5-30	-
			35.0	5.9	2.7	5.6	CHE M 5-35	-	CHES M 5-35	-

Technical data

Thread	Installation torque <i>max</i> [Nm]	Test material [mm]	Sheet material			
			Material hardness [HRB]	Press-in force [kN]	Push-out force [N]	Torsional strength [Nm]
M 2.5	0.41	Aluminium 1.2 mm	33	3.1	285	0.55
	0.41	Steel 1.1 mm	54	5.3	450	1.10
M 3	0.46	Aluminium 1.2 mm	33	4.4	285	0.65
	0.74	Steel 1.1 mm	54	5.3	475	1.25
M 4	0.75	Aluminium 1.2 mm	33	5.3	365	1.10
	1.70	Steel 1.1 mm	54	6.6	550	2.10
M 5	1.11	Aluminium 1.2 mm	33	11.1	530	2.20
	2.25	Steel 1.1 mm	54	20.0	1000	4.40

Guidelines - the precise values must be determined using the original component.

For punch and die dimensions, see page 201.

We reserve the right to amend specifications at any time.

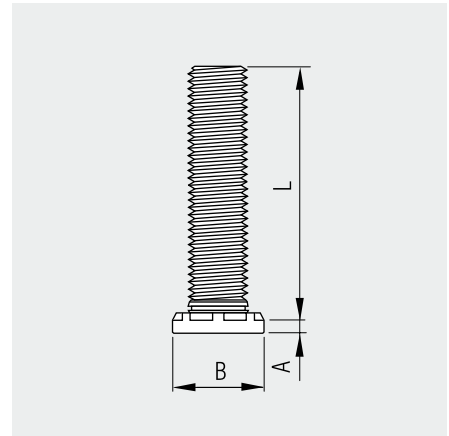
Captive® Self-clinching fasteners


Self-clinching studs for metals
for high torques

Material

Steel zinc (HCH series)
Suitable for metal hardnesses
up to HRB 85

Stainless steel (HCHS series)
Suitable for metal hardnesses up to HRB 70



Thread	Hole- \emptyset +0.13 - 0.0 [mm]	Material thickness min [mm]	L ± 0.4 [mm]	A max [mm]	B ± 2.5 [mm]	 min [mm]	Hole for fastener max [mm]	Steel		Stainless steel	
								Description	Part No.	Description	Part No.
M 5	5.0	1.3	15.0	1.14	7.8	10.7	6.5	HCH M 5-15	358 808	HCHS M 5-15	-
			20.0	1.14	7.8	10.7	6.5	HCH M 5-20	-	HCHS M 5-20	-
			25.0	1.14	7.8	10.7	6.5	HCH M 5-25	-	HCHS M 5-25	-
			30.0	1.14	7.8	10.7	6.5	HCH M 5-30	-	HCHS M 5-30	-
M 6	6.0	1.5	20.0	1.27	9.4	11.5	7.5	HCH M 6-20	358 812	HCHS M 6-20	-
			25.0	1.27	9.4	11.5	7.5	HCH M 6-25	-	HCHS M 6-25	-
			30.0	1.27	9.4	11.5	7.5	HCH M 6-30	-	HCHS M 6-30	-
			35.0	1.27	9.4	11.5	7.5	HCH M 6-35	358 815	HCHS M 6-35	-
M 8	8.0	2.0	16.0	1.78	12.5	12.7	9.5	HCH M 8-16	358 816	HCHS M 8-16	-
			20.0	1.78	12.5	12.7	9.5	HCH M 8-20	358 817	HCHS M 8-20	-
			25.0	1.78	12.5	12.7	9.5	HCH M 8-25	358 818	HCHS M 8-25	358 824
			30.0	1.78	12.5	12.7	9.5	HCH M 8-30	358 819	HCHS M 8-30	-
			35.0	1.78	12.5	12.7	9.5	HCH M 8-35	358 820	HCHS M 8-35	-
			40.0	1.78	12.5	12.7	9.5	HCH M 8-40	-	HCHS M 8-40	-
			50.0	1.78	12.5	12.7	9.5	HCH M 8-50	-	HCHS M 8-50	-

Technical data

Thread	Test material	Material hardness [HRB]	Press-in force [kN]	Push-out force [N]	Torsional strength [Nm]	Over tightening torque [Nm]
	Steel 1.5 mm	65	26.0	1556	7.5	6.8
M 6	Aluminium 1.5 mm	43	29.0	1620	13.9	17.9
	Steel 1.5 mm	59	33.0	2020	13.9	23.7
M 8	Aluminium 2.3 mm	39	35.6	1780	30.0	43.4
	Steel 2.3 mm	58	44.5	2890	30.0	43.4

Guidelines - the precise values must be determined using the original component.

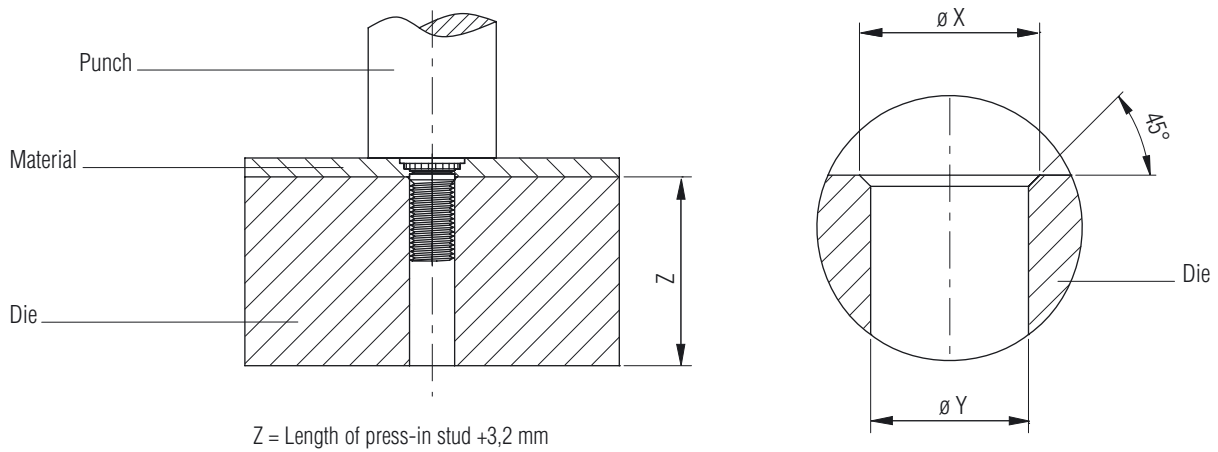
For punch and die dimensions, see page 207.

We reserve the right to amend specifications at any time.

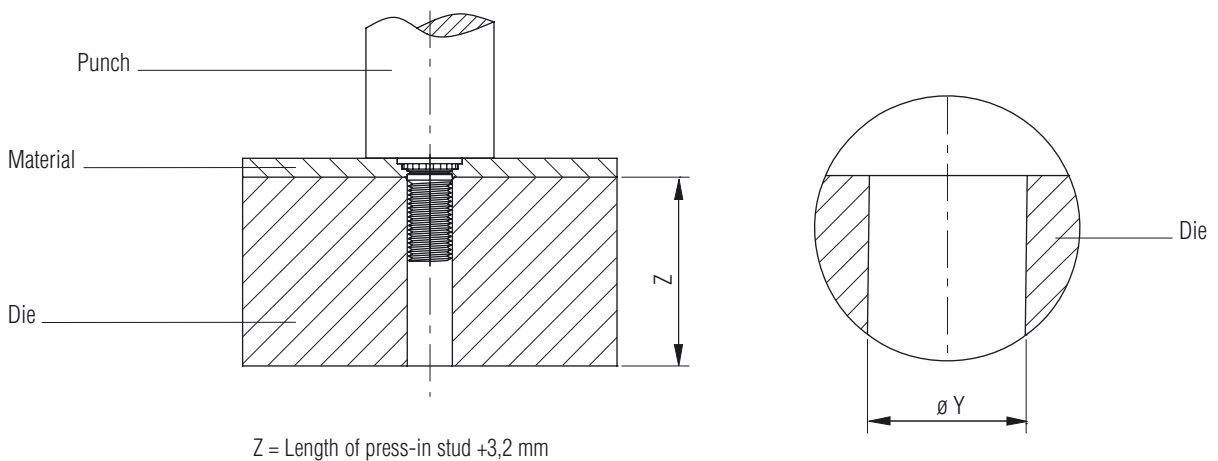
Punch/die dimensions for press-in studs of the series: TCH – TCHS – CHE – CHES – HCH – HCHS – HCHB

Thread	Die dimensions	
	X +0,1 [mm]	Y +0,1 [mm]
M 2.5	3.1	2.6
M 3	3.6	3.1
M 4	4.6	4.1
M 5	5.6	5.1

Die for material thickness < 1,5 mm



Die for material thickness > 1,5 mm



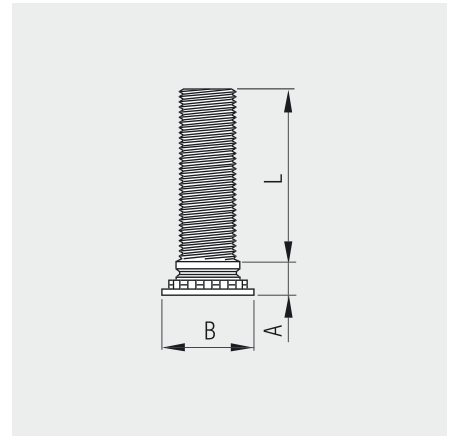
We reserve the right to amend specifications at any time.

Captive® Self-clinching fasteners

Self-clinching studs for metals

Material

■ **Stainless steel** (CHTS series)
Suitable for metal hardnesses
up to HRB 92



Thread	Hole- \varnothing <i>+0.08 - 0.0</i> [mm]	Material thickness [mm]	L ± 0.4 [mm]	A <i>max</i> [mm]	B ± 0.4 [mm]	■ Stainless steel	
						Description	Part No.
M 3	3.0	1-2.4	6	2.1	4.6	CHTS M 3-6	-
			8	2.1	4.6	CHTS M 3-8	-
			10	2.1	4.6	CHTS M 3-10	-
			12	2.1	4.6	CHTS M 3-12	358 970
			15	2.1	4.6	CHTS M 3-15	358 975
			18	2.1	4.6	CHTS M 3-18	-
			20	2.1	4.6	CHTS M 3-20	358 971
			25	2.1	4.6	CHTS M 3-25	-
M 4	4.0	1-2.4	6	2.4	5.9	CHTS M 4-6	-
			8	2.4	5.9	CHTS M 4-8	-
			10	2.4	5.9	CHTS M 4-10	358 972
			12	2.4	5.9	CHTS M 4-12	-
			15	2.4	5.9	CHTS M 4-15	-
			18	2.4	5.9	CHTS M 4-18	-
			20	2.4	5.9	CHTS M 4-20	-
			25	2.4	5.9	CHTS M 4-25	-
			30	2.4	5.9	CHTS M 4-30	-
			35	2.4	5.9	CHTS M 4-35	-
M 5	5.0	1-2.4	8	2.7	6.5	CHTS M 5-8	-
			10	2.7	6.5	CHTS M 5-10	358 974
			12	2.7	6.5	CHTS M 5-12	-
			15	2.7	6.5	CHTS M 5-15	-
			18	2.7	6.5	CHTS M 5-18	-
			20	2.7	6.5	CHTS M 5-20	358 973
			25	2.7	6.5	CHTS M 5-25	-
			30	2.7	6.5	CHTS M 5-30	-
35	2.7	6.5	CHTS M 5-35	-			

For punch and die dimensions, see page 209.

We reserve the right to amend specifications at any time.

Technical data

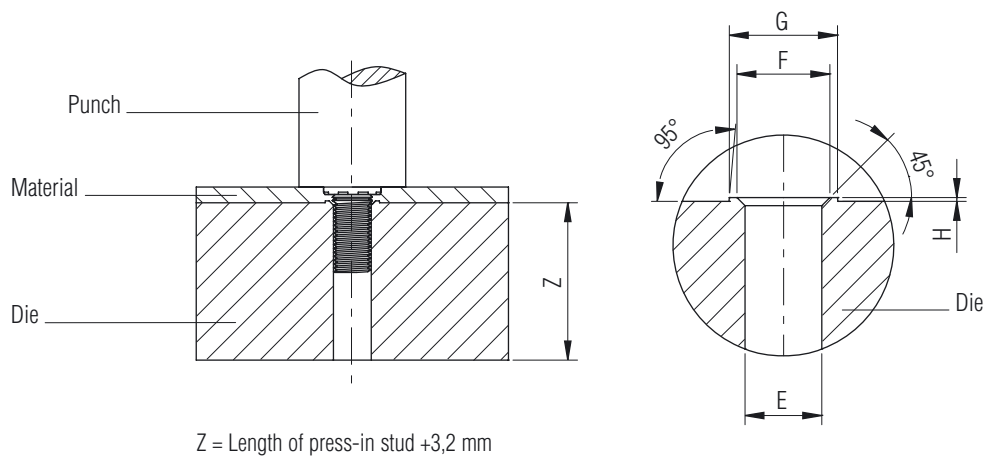
Thread	Test material	Material thickness [mm]	Material hardness [HRB]	Press-in force <i>max</i> [kN]	Push-out force <i>min</i> [N]	Torsional strength <i>max</i> [Nm]	Tensile force <i>max</i> [N]
M 3	Stainless steel	1.5	92	40.0	3290	1.7	3510
M 4	Stainless steel	1.5	92	50.0	4400	6.4	7960
M 5	Stainless steel	1.5	92	53.0	4850	10.50	8980

Guidelines - the precise values must be determined using the original component.

Punch/die dimensions for press-in studs of the series: CHTS

Thread	Die dimensions			
	E [mm]	F [mm]	G [mm]	H [mm]
M 3	3.05	3.81	4.57	0.25
M 4	4.04	4.95	5.82	0.25
M 5	5.08	6.15	7.16	0.25

Die for material thickness < 1,5 mm



We reserve the right to amend specifications at any time.

Captive® Self-clinching fasteners

Self-clinching pins for metals
for thin sheet metal > 1.0 mm

Material

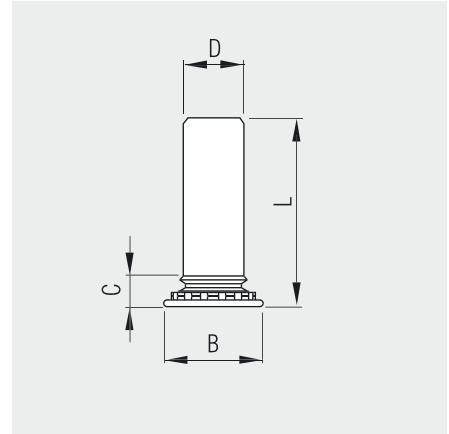
Steel heat treated, zinc (CH series)¹

Steel not heat treated, zinc
(CHN series)²

Stainless steel
(CHS series)³



Aluminium (CHA series)²



Pin ø D ±0.05 [mm]	Hole-ø +0.08 - 0.0 [mm]	Material thickness min [mm]	L ±0.4 [mm]	B ±0.4 [mm]	C max [mm]	C min [mm]	Steel heat treated		Steel not heat treated		Stainless steel		Aluminium				
							Description	Part No.	Description	Part No.	Description	Part No.	Description	Part No.			
3	3.5	1.0	6.0	5.3	2.3	6.4	CH 3-6	-	CHN 3-6	-	CHS 3-6	358 839	CHA 3-6	-			
			8.0	5.3	2.3	6.4	CH 3-8	-	CHN 3-8	358 801	CHS 3-8	-	CHA 3-8	-			
			10.0	5.3	2.3	6.4	CH 3-10	-	CHN 3-10	-	CHS 3-10	-	CHA 3-10	-			
			12.0	5.3	2.3	6.4	CH 3-12	-	CHN 3-12	-	CHS 3-12	-	CHA 3-12	-			
			15.0	5.3	2.3	6.4	CH 3-15	-	CHN 3-15	-	CHS 3-15	-	CHA 3-15	-			
			18.0	5.3	2.3	6.4	CH 3-18	-	CHN 3-18	-	CHS 3-18	-	CHA 3-18	-			
			20.0	5.3	2.3	6.4	CH 3-20	-	CHN 3-20	-	CHS 3-20	-	CHA 3-20	-			
			25.0	5.3	2.3	6.4	CH 3-25	-	CHN 3-25	-	CHS 3-25	-	CHA 3-25	-			
			30.0	5.3	2.3	6.4	CH 3-30	-	CHN 3-30	-	CHS 3-30	-	CHA 3-30	-			
			35.0	5.3	2.3	6.4	CH 3-35	-	CHN 3-35	-	CHS 3-35	-	CHA 3-35	-			
			4	4.1	1.0	8.0	6.0	2.3	7.1	CH 4-8	358 828	CHN 4-8	358 841	CHS 4-8	-	CHA 4-8	-
						10.0	6.0	2.3	7.1	CH 4-10	358 827	CHN 4-10	-	CHS 4-10	-	CHA 4-10	-
12.0	6.0	2.3				7.1	CH 4-12	358 831	CHN 4-12	-	CHS 4-12	-	CHA 4-12	-			
15.0	6.0	2.3				7.1	CH 4-15	-	CHN 4-15	-	CHS 4-15	-	CHA 4-15	-			
18.0	6.0	2.3				7.1	CH 4-18	-	CHN 4-18	-	CHS 4-18	-	CHA 4-18	-			
20.0	6.0	2.3				7.1	CH 4-20	358 834	CHN 4-20	-	CHS 4-20	-	CHA 4-20	-			
25.0	6.0	2.3				7.1	CH 4-25	358 835	CHN 4-25	358 847	CHS 4-25	-	CHA 4-25	-			
30.0	6.0	2.3				7.1	CH 4-30	-	CHN 4-30	-	CHS 4-30	-	CHA 4-30	-			
5	5.5	1.0	6.0	7.5	2.55	7.6	CH 5-6	358 829	CHN 5-6	-	CHS 5-6	-	CHA 5-6	-			
			8.0	7.5	2.55	7.6	CH 5-8	358 830	CHN 5-8	-	CHS 5-8	-	CHA 5-8	-			
			10.0	7.5	2.55	7.6	CH 5-10	358 832	CHN 5-10	-	CHS 5-10	-	CHA 5-10	-			
			12.0	7.57	2.55	7.6	CH 5-12	-	CHN 5-12	-	CHS 5-12	-	CHA 5-12	-			
			15.0	5	2.55	7.6	CH 5-15	358 833	CHN 5-15	-	CHS 5-15	-	CHA 5-15	-			
			18.0	7.5	2.55	7.6	CH 5-18	-	CHN 5-18	-	CHS 5-18	-	CHA 5-18	-			
			20.0	7.5	2.55	7.6	CH 5-20	-	CHN 5-20	-	CHS 5-20	-	CHA 5-20	-			
			25.0	7.5	2.55	7.6	CH 5-25	358 836	CHN 5-25	-	CHS 5-25	-	CHA 5-25	-			
			28.0	7.5	2.55	7.6	CH 5-28	358 837	CHN 5-28	-	CHS 5-28	-	CHA 5-28	-			
			30.0	7.5	2.55	7.6	CH 5-30	-	CHN 5-30	-	CHS 5-30	-	CHA 5-30	-			
35.0	7.5	2.55	7.6	CH 5-35	-	CHN 5-35	-	CHS 5-35	-	CHA 5-35	-						

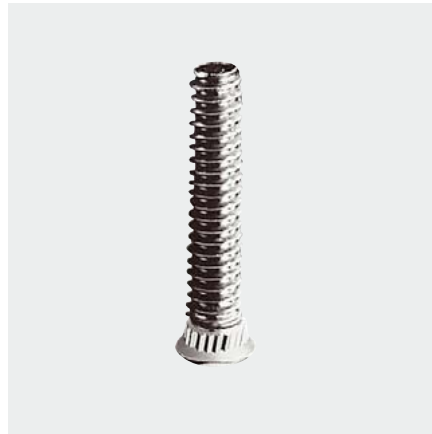
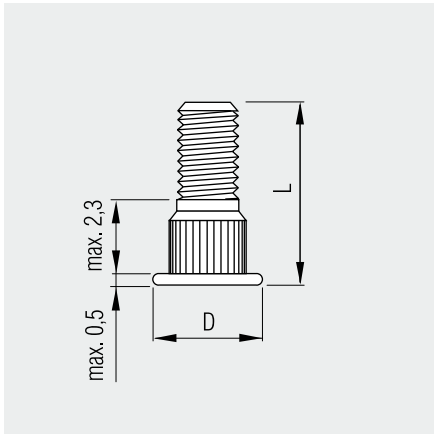
¹ suitable for metal hardnesses up to HRB 80

² suitable for metal hardnesses up to HRB 50

³ suitable for metal hardnesses up to HRB 70

For punch and die dimensions, see page 201.


We reserve the right to amend specifications at any time.



Self-clinching studs for plastics
solderable

Material

Phosphorous bronze
electrolytically tin plated
(CKFH series)

Thread	Hole- \varnothing $+0.003 - 0.000$ [mm]	Material thickness <i>min</i> [mm]	L [mm]	Hole for fastener [mm]	Torque for nut <i>max</i> [Nm]	Hole for die $+0.08 - 0.00$ [mm]	D ± 0.25 [mm]	 <i>min</i> [mm]	Description	Part No.
M 3	3.0	1.5	6.0	3.7	0.45	3.1	4.58	3.8	CKFH M 3-6	358 581
			8.0	3.7	0.45	3.1	4.58	3.8	CKFH M 3-8	358 582
			10.0	3.7	0.45	3.1	4.58	3.8	CKFH M 3-10	358 583
			12.0	3.7	0.45	3.1	4.58	3.8	CKFH M 3-12	358 584
			15.0	3.7	0.45	3.1	4.58	3.8	CKFH M 3-15	358 585
M 4	4.2	1.5	8.0	4.8	1.60	4.1	5.74	5.1	CKFH M 4-8	358 587
			10.0	4.8	1.60	4.1	5.74	5.1	CKFH M 4-10	358 588
			12.0	4.8	1.60	4.1	5.74	5.1	CKFH M 4-12	358 589
			15.0	4.8	1.60	4.1	5.74	5.1	CKFH M 4-15	358 590
M 5	5.0	1.5	18.0	4.8	1.60	4.1	5.74	5.1	CKFH M 4-18	-
			10.0	5.8	2.10	5.1	6.60	5.3	CKFH M 5-10	-
			12.0	5.8	2.10	5.1	6.60	5.3	CKFH M 5-12	-
			15.0	5.8	2.10	5.1	6.60	5.3	CKFH M 5-15	-
			18.0	5.8	2.10	5.1	6.60	5.3	CKFH M 5-18	-

Technical Data

Thread	Press-in force [kN]	Push-out force [N]	Torsional strength [Nm]
M 3	1.8	285	0.79
M 4	1.8	355	1.80
M 5	1.8	400	1.92

Guidelines - the precise values must be determined using the original component.


Hole \varnothing of dies = Dimension "A" +0.10/+0.18 mm.

We reserve the right to amend specifications at any time.

Captive® Self-clinching fasteners

Self-clinching stand-offs with thread for metals
open style

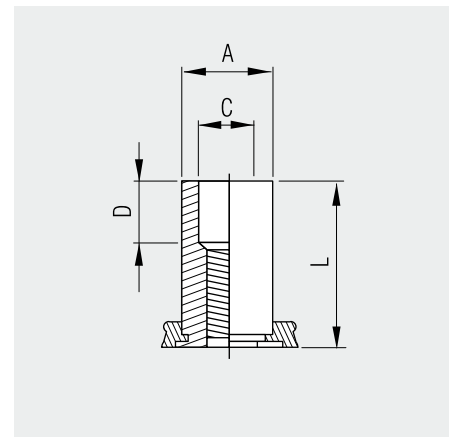
Material


 **Steel zinc** (CFSO series)¹

 **Stainless steel** (CFSOS series)²



 **Aluminium** (CFSOA series)³



Thread	Hole- ø +0.08 -0.00 [mm]	Material thick- ness min [mm]	L +0.05 -0.13 [mm]	A +0.00 -0.13 [mm]	SW nom [mm]	C [mm]	D ±0.4 [mm]		■ Steel		■ Stainless steel		■ Aluminium	
									Description	Part No.	Description	Part No.	Description	Part No.
M 3	4.2	1.0	3.0	4.19	4.8	3.2	0	6.0	CFSO M 3-3	-	CFSOS M 3-3	-	CFSOA M 3-3	-
			4.0	4.19	4.8	3.2	0	6.0	CFSO M 3-4	358 331	CFSOS M 3-4	358 381	CFSOA M 3-4	-
			5.0	4.19	4.8	3.2	0	6.0	CFSO M 3-5	358 337	CFSOS M 3-5	-	CFSOA M 3-5	-
			6.0	4.19	4.8	3.2	0	6.0	CFSO M 3-6	358 332	CFSOS M 3-6	358 382	CFSOA M 3-6	-
			8.0	4.19	4.8	3.2	0	6.0	CFSO M 3-8	358 333	CFSOS M 3-8	358 383	CFSOA M 3-8	-
			10.0	4.19	4.8	3.2	4.0	6.0	CFSO M 3-10	358 334	CFSOS M 3-10	358 385	CFSOA M 3-10	-
			12.0	4.19	4.8	3.2	4.0	6.0	CFSO M 3-12	358 335	CFSOS M 3-12	-	CFSOA M 3-12	-
			14.0	4.19	4.8	3.2	4.0	6.0	CFSO M 3-14	358 336	CFSOS M 3-14	-	CFSOA M 3-14	-
M 3	5.4	1.0	3.0	5.38	6.4	3.2	0	7.0	CFSO3.5 M 3-3	358 340	CFSOS3.5 M 3-3	-	CFSOA3.5 M 3-3	-
			4.0	5.38	6.4	3.2	0	7.0	CFSO3.5 M 3-4	358 341	CFSOS3.5 M 3-4	-	CFSOA3.5 M 3-4	-
			5.0	5.38	6.4	3.2	0	7.0	CFSO3.5 M 3-5	358 342	CFSOS3.5 M 3-5	-	CFSOA3.5 M 3-5	-
			6.0	5.38	6.4	3.2	0	7.0	CFSO3.5 M 3-6	358 343	CFSOS3.5 M 3-6	358 391	CFSOA3.5 M 3-6	-
			8.0	5.38	6.4	3.2	0	7.0	CFSO3.5 M 3-8	358 344	CFSOS3.5 M 3-8	358 390	CFSOA3.5 M 3-8	-
			9.0	5.38	6.4	3.2	0	7.0	CFSO3.5 M 3-9	358 350	CFSOS3.5 M 3-9	-	CFSOA3.5 M 3-9	-
			10.0	5.38	6.4	3.2	4.0	7.0	CFSO3.5 M 3-10	358 345	CFSOS3.5 M 3-10	358 393	CFSOA3.5 M 3-10	-
			12.0	5.38	6.4	3.2	4.0	7.0	CFSO3.5 M 3-12	358 346	CFSOS3.5 M 3-12	358 394	CFSOA3.5 M 3-12	-
			14.0	5.38	6.4	3.2	4.0	7.0	CFSO3.5 M 3-14	358 347	CFSOS3.5 M 3-14	-	CFSOA3.5 M 3-14	-
			16.0	5.38	6.4	3.2	8.0	7.0	CFSO3.5 M 3-16	358 339	CFSOS3.5 M 3-16	-	CFSOA3.5 M 3-16	-
M 3.5	5.4	1.0	3.0	5.38	6.4	4.0	0	7.0	CFSO M 3.5-3	-	CFSOS M 3.5-3	-	CFSOA M 3.5-3	-
			4.0	5.38	6.4	4.0	0	7.0	CFSO M 3.5-4	-	CFSOS M 3.5-4	-	CFSOA M 3.5-4	-
			6.0	5.38	6.4	4.0	4.0	7.0	CFSO M 3.5-6	-	CFSOS M 3.5-6	-	CFSOA M 3.5-6	-
			8.0	5.38	6.4	4.0	4.0	7.0	CFSO M 3.5-8	358 338	CFSOS M 3.5-8	-	CFSOA M 3.5-8	-
			10.0	5.38	6.4	4.0	4.0	7.0	CFSO M 3.5-10	-	CFSOS M 3.5-10	-	CFSOA M 3.5-10	-
			12.0	5.38	6.4	4.0	8.0	7.0	CFSO M 3.5-12	-	CFSOS M 3.5-12	-	CFSOA M 3.5-12	-
			14.0	5.38	6.4	4.0	8.0	7.0	CFSO M 3.5-14	-	CFSOS M 3.5-14	-	CFSOA M 3.5-14	-
			16.0	5.38	6.4	4.0	8.0	7.0	CFSO M 3.5-16	-	CFSOS M 3.5-16	-	CFSOA M 3.5-16	-
18.0	5.38	6.4	4.0	8.0	7.0	CFSO M 3.5-18	-	CFSOS M 3.5-18	-	CFSOA M 3.5-18	-			

¹ suitable for metal hardnesses up to HRB 80

² suitable for metal hardnesses up to HRB 70


³ suitable for metal hardnesses up to HRB 50

Continued next page

Die for drill hole diam. = Dimension "A" +0.10/+0.18 mm.
We reserve the right to amend specifications at any time.

Technical data see page 218

Continued

Thread	Hole- ø +0.08 -0.00 [mm]	Material thick- ness min [mm]	L +0.05 -0.13 [mm]	A +0.00 -0.13 [mm]	SW nom [mm]	C [mm]	D ±0.4 min [mm]		■ Steel		■ Stainless steel		■ Aluminium	
									Description	Part No.	Description	Part No.	Description	Part No.
M 4	7.2	1.3	3.0	7.11	7.9	4.8	0	8.0	CFSO M 4-3	358 359	CFSOS M 4-3	-	CFSOA M 4-3	-
			4.0	7.11	7.9	4.8	0	8.0	CFSO M 4-4	358 351	CFSOS M 4-4	358 373	CFSOA M 4-4	-
			6.0	7.11	7.9	4.8	0	8.0	CFSO M 4-6	358 352	CFSOS M 4-6	358 384	CFSOA M 4-6	358 395
			7.0	7.11	7.9	4.8	0	8.0	CFSO M 4-7	358 356	CFSOS M 4-7	-	CFSOA M 4-7	-
			8.0	7.11	7.9	4.8	0	8.0	CFSO M 4-8	358 353	CFSOS M 4-8	358 389	CFSOA M 4-8	-
			10.0	7.11	7.9	4.8	4.0	8.0	CFSO M 4-10	358 354	CFSOS M 4-10	-	CFSOA M 4-10	-
			12.0	7.11	7.9	4.8	4.0	8.0	CFSO M 4-12	358 355	CFSOS M 4-12	-	CFSOA M 4-12	-
			14.0	7.11	7.9	4.8	4.0	8.0	CFSO M 4-14	-	CFSOS M 4-14	-	CFSOA M 4-14	-
			16.0	7.11	7.9	4.8	8.0	8.0	CFSO M 4-16	358 361	CFSOS M 4-16	-	CFSOA M 4-16	-
			18.0	7.11	7.9	4.8	8.0	8.0	CFSO M 4-18	358 358	CFSOS M 4-18	-	CFSOA M 4-18	-
			20.0	7.11	7.9	4.8	8.0	8.0	CFSO M 4-20	358 357	CFSOS M 4-20	-	CFSOA M 4-20	-
			22.0	7.11	7.9	4.8	11.0	8.0	CFSO M 4-22	358 360	CFSOS M 4-22	-	CFSOA M 4-22	-
M 5	7.2	1.3	3.0	7.11	7.9	5.2	0	8.0	CFSO M 5-3	-	CFSOS M 5-3	-	CFSOA M 5-3	-
			4.0	7.11	7.9	5.2	0	8.0	CFSO M 5-4	358 362	CFSOS M 5-4	-	CFSOA M 5-4	-
			6.0	7.11	7.9	5.2	0	8.0	CFSO M 5-6	358 363	CFSOS M 5-6	358 388	CFSOA M 5-6	-
			8.0	7.11	7.9	5.2	0	8.0	CFSO M 5-8	358 364	CFSOS M 5-8	358 387	CFSOA M 5-8	-
			10.0	7.11	7.9	5.2	4.0	8.0	CFSO M 5-10	358 365	CFSOS M 5-10	-	CFSOA M 5-10	-
			12.0	7.11	7.9	5.2	4.0	8.0	CFSO M 5-12	-	CFSOS M 5-12	-	CFSOA M 5-12	-
			14.0	7.11	7.9	5.2	4.0	8.0	CFSO M 5-14	358 367	CFSOS M 5-14	-	CFSOA M 5-14	-
			16.0	7.11	7.9	5.2	8.0	8.0	CFSO M 5-16	-	CFSOS M 5-16	-	CFSOA M 5-16	-
			18.0	7.11	7.9	5.2	8.0	8.0	CFSO M 5-18	-	CFSOS M 5-18	-	CFSOA M 5-18	-
			20.0	7.11	7.9	5.2	8.0	8.0	CFSO M 5-20	-	CFSOS M 5-20	358 386	CFSOA M 5-20	-
22.0	7.11	7.9	5.2	11.0	8.0	CFSO M 5-22	-	CFSOS M 5-22	-	CFSOA M 5-22	-			

Threaded inserts

Die for drill hole diam. = Dimension "A" +0.10/+0.18 mm.

Technical data see page 204

We reserve the right to amend specifications at any time.

Captive® Self-clinching fasteners

Self-clinching stand-offs with thread for metals
closed

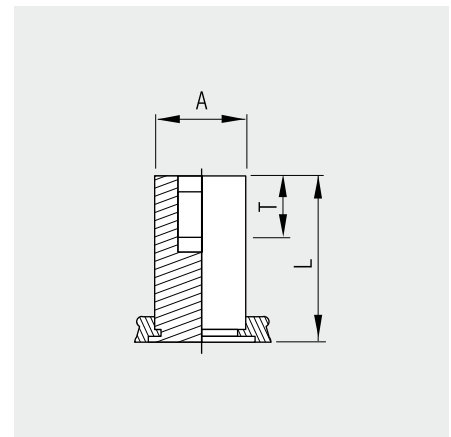
Material

■ **Steel zinc** (CFBSO series)²

■ **Stainless steel** (CFBSOS series)³



■ **Aluminium** (CFBSOA series)⁴



Thread	Hole- ø +0.08 -0.00 [mm]	Material thick- ness min [mm]	L +0.05 -0.13 [mm]	A +0.00 -0.13 [mm]	SW nom [mm]	T ¹ ±0.4 [mm]		■ Steel		■ Stainless steel		■ Aluminium	
								Description	Part No.	Description	Part No.	Description	Part No.
M 3	4.2	1.0	6.0	4.19	4.8	3.2	6.0	CFBSO M 3-6	358 402	CFBSOS M 3-6	–	CFBSOA M 3-6	–
			8.0	4.19	4.8	4.0	6.0	CFBSO M 3-8	358 403	CFBSOS M 3-8	358 433	CFBSOA M 3-8	–
			10.0	4.19	4.8	4.0	6.0	CFBSO M 3-10	358 404	CFBSOS M 3-10	358 434	CFBSOA M 3-10	–
			12.0	4.19	4.8	5.0	6.0	CFBSO M 3-12	358 405	CFBSOS M 3-12	358 435	CFBSOA M 3-12	–
			14.0	4.19	4.8	6.5	6.0	CFBSO M 3-14	358 406	CFBSOS M 3-14	358 436	CFBSOA M 3-14	–
			16.0	4.19	4.8	6.5	6.0	CFBSO M 3-16	358 407	CFBSOS M 3-16	–	CFBSOA M 3-16	–
			18.0	4.19	4.8	9.5	6.0	CFBSO M 3-18	358 408	CFBSOS M 3-18	358 438	CFBSOA M 3-18	–
			20.0	4.19	4.8	9.5	6.0	CFBSO M 3-20	358 409	CFBSOS M 3-20	–	CFBSOA M 3-20	–
			22.0	4.19	4.8	9.5	6.0	CFBSO M 3-22	358 410	CFBSOS M 3-22	–	CFBSOA M 3-22	–
			25.0	4.19	4.8	9.5	6.0	CFBSO M 3-25	358 421	CFBSOS M 3-25	358 437	CFBSOA M 3-25	–
M 3	5.4	1.0	6.0	5.38	6.4	3.2	7.0	CFBSO3.5 M 3-6	358 412	CFBSOS3.5 M 3-6	–	CFBSOA3.5 M 3-6	–
			8.0	5.38	6.4	4.0	7.0	CFBSO3.5 M 3-8	358 413	CFBSOS3.5 M 3-8	358 439	CFBSOA3.5 M 3-8	–
			9.0	5.38	6.4	4.0	7.0	CFBSO3.5 M 3-9	358 401	CFBSOS3.5 M 3-9	–	CFBSOA3.5 M 3-9	–
			10.0	5.38	6.4	4.0	7.0	CFBSO3.5 M 3-10	358 414	CFBSOS3.5 M 3-10	358 440	CFBSOA3.5 M 3-10	–
			10.0	5.38	6.4	4.0	7.0	CFBSO3.5 M 3-11	358 411	CFBSOS3.5 M 3-11	–	CFBSOA3.5 M 3-11	–
			12.0	5.38	6.4	5.0	7.0	CFBSO3.5 M 3-12	358 415	CFBSOS3.5 M 3-12	358 441	CFBSOA3.5 M 3-12	–
			14.0	5.38	6.4	6.5	7.0	CFBSO3.5 M 3-14	358 416	CFBSOS3.5 M 3-14	358 442	CFBSOA3.5 M 3-14	–
			16.0	5.38	6.4	6.5	7.0	CFBSO3.5 M 3-16	358 417	CFBSOS3.5 M 3-16	–	CFBSOA3.5 M 3-16	–
			18.0	5.38	6.4	9.5	7.0	CFBSO3.5 M 3-18	358 418	CFBSOS3.5 M 3-18	–	CFBSOA3.5 M 3-18	–
			20.0	5.38	6.4	9.5	7.0	CFBSO3.5 M 3-20	358 419	CFBSOS3.5 M 3-20	–	CFBSOA3.5 M 3-20	–
22.0	5.38	6.4	9.5	7.0	CFBSO3.5 M 3-22	358 420	CFBSOS3.5 M 3-22	–	CFBSOA3.5 M 3-22	–			
25.0	5.38	6.4	9.5	7.0	CFBSO3.5 M 3-25	358 448	CFBSOS3.5 M 3-25	–	CFBSOA3.5 M 3-25	–			
25.0	5.38	6.4	9.5	7.0	CFBSO3.5 M 3-30	358 449	CFBSOS3.5 M 3-30	–	CFBSOA3.5 M 3-30	–			

¹ T = Thread length

² suitable for metal hardnesses up to HRB 80

³ suitable for metal hardnesses up to HRB 70

⁴ suitable for metal hardnesses up to HRB 50


Continued next page

Die for drill hole diam. = Dimension "A" +0.10/+0.18 mm.

Technical data see page 218

We reserve the right to amend specifications at any time.

Continued

Thread	Hole- ø +0.08 -0.00 [mm]	Material thick- ness min [mm]	L +0.05 -0.13 [mm]	A +0.00 -0.13 [mm]	SW nom [mm]	T ¹ ±0.4 [mm]	 min [mm]	■ Steel		■ Stainless steel		■ Aluminium	
								Description	Part No.	Description	Part No.	Description	Part No.
M 3.5	5.4	1.0	8.0	5.38	6.4	4.0	7.0	CFBSO M 3.5-8	-	CFBSOS M 3.5-8	-	CFBSOA M 3.5-8	-
			10.0	5.38	6.4	4.0	7.0	CFBSO M 3.5-10	-	CFBSOS M 3.5-10	-	CFBSOA M 3.5-10	-
			12.0	5.38	6.4	5.0	7.0	CFBSO M 3.5-12	-	CFBSOS M 3.5-12	-	CFBSOA M 3.5-12	-
			14.0	5.38	6.4	6.5	7.0	CFBSO M 3.5-14	-	CFBSOS M 3.5-14	-	CFBSOA M 3.5-14	-
			16.0	5.38	6.4	6.5	7.0	CFBSO M 3.5-16	-	CFBSOS M 3.5-16	-	CFBSOA M 3.5-16	-
			18.0	5.38	6.4	9.5	7.0	CFBSO M 3.5-18	-	CFBSOS M 3.5-18	-	CFBSOA M 3.5-18	-
			20.0	5.38	6.4	9.5	7.0	CFBSO M 3.5-20	-	CFBSOS M 3.5-20	-	CFBSOA M 3.5-20	-
			22.0	5.38	6.4	9.5	7.0	CFBSO M 3.5-22	-	CFBSOS M 3.5-22	-	CFBSOA M 3.5-22	-
			25.0	5.38	6.4	9.5	7.0	CFBSO M 3.5-25	-	CFBSOS M 3.5-25	-	CFBSOA M 3.5-25	-
M 4	7.2	1.3	8.0	7.11	7.9	4.0	8.0	CFBSO M 4-8	358 423	CFBSOS M 4-8	358 473	CFBSOA M 4-8	-
			10.0	7.11	7.9	4.0	8.0	CFBSO M 4-10	358 424	CFBSOS M 4-10	358 474	CFBSOA M 4-10	-
			11.5	7.11	7.9	4.0	8.0	CFBSO M 4-11.5	358 422	CFBSOS M 4-11.5	-	CFBSOA M 4-11.5	-
			12.0	7.11	7.9	5.0	8.0	CFBSO M 4-12	358 425	CFBSOS M 4-12	358 475	CFBSOA M 4-12	-
			14.0	7.11	7.9	6.5	8.0	CFBSO M 4-14	358 426	CFBSOS M 4-14	358 476	CFBSOA M 4-14	-
			16.0	7.11	7.9	6.5	8.0	CFBSO M 4-16	358 427	CFBSOS M 4-16	358 477	CFBSOA M 4-16	-
			18.0	7.11	7.9	9.5	8.0	CFBSO M 4-18	358 428	CFBSOS M 4-18	-	CFBSOA M 4-18	-
			20.0	7.11	7.9	9.5	8.0	CFBSO M 4-20	358 429	CFBSOS M 4-20	-	CFBSOA M 4-20	-
			22.0	7.11	7.9	9.5	8.0	CFBSO M 4-22	358 430	CFBSOS M 4-22	358 454	CFBSOA M 4-22	-
			25.0	7.11	7.9	9.5	8.0	CFBSO M 4-25	358 431	CFBSOS M 4-25	358 481	CFBSOA M 4-25	-
M 5	7.2	1.3	8.0	7.11	7.9	4.0	8.0	CFBSO M 5-8	-	CFBSOS M 5-8	-	CFBSOA M 5-8	-
			10.0	7.11	7.9	4.0	8.0	CFBSO M 5-10	358 444	CFBSOS M 5-10	-	CFBSOA M 5-10	-
			12.0	7.11	7.9	5.0	8.0	CFBSO M 5-12	358 445	CFBSOS M 5-12	358 484	CFBSOA M 5-12	-
			14.0	7.11	7.9	6.5	8.0	CFBSO M 5-14	-	CFBSOS M 5-14	-	CFBSOA M 5-14	-
			16.0	7.11	7.9	6.5	8.0	CFBSO M 5-16	358 447	CFBSOS M 5-16	358 486	CFBSOA M 5-16	-
			18.0	7.11	7.9	9.5	8.0	CFBSO M 5-18	-	CFBSOS M 5-18	358 487	CFBSOA M 5-18	-
			20.0	7.11	7.9	9.5	8.0	CFBSO M 5-20	-	CFBSOS M 5-20	-	CFBSOA M 5-20	-
			22.0	7.11	7.9	9.5	8.0	CFBSO M 5-22	358 450	CFBSOS M 5-22	-	CFBSOA M 5-22	-
			25.0	7.11	7.9	9.5	8.0	CFBSO M 5-25	358 452	CFBSOS M 5-25	-	CFBSOA M 5-25	-

¹ Thread length

Die for drill hole diam. = Dimension "A" +0.10/+0.18 mm.

Technical data see page 218

We reserve the right to amend specifications at any time.

Threaded inserts

Captive® Self-clinching fasteners

Unthreaded thru-hole stand-offs for metals

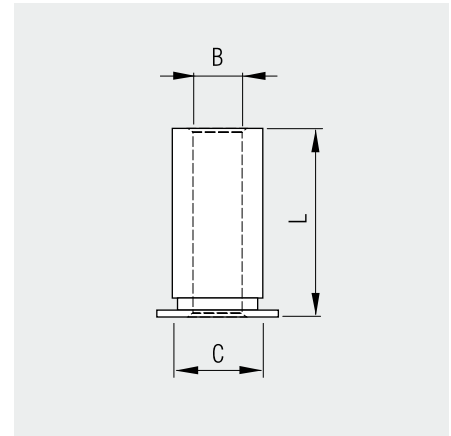
Material


Steel zinc (CFSO series)
Suitable for metal hardnesses up to HRB 80

Stainless steel (CFSOS series)
Suitable for metal hardnesses up to HRB 70



Aluminium (CFSOA series)
Suitable for metal hardnesses up to HRB 50




Bore- ϕ B [mm]	Hole- ϕ +0.08 -0.00 [mm]	Material thickness min [mm]	L +0.05 -0.13 [mm]	C +0.00 -0.13 [mm]	SW [mm]	 min [mm]	Steel		Stainless steel		Aluminium	
							Description	Part No.	Description	Part No.	Description	Part No.
3.1	4.2	1.0	3.0	4.19	4.8	6.0	CFSO 43.1-3	-	CFSOS 43.1-3	-	CFSOA 43.1-3	-
			4.0	4.19	4.8	6.0	CFSO 43.1-4	-	CFSOS 43.1-4	-	CFSOA 43.1-4	-
			6.0	4.19	4.8	6.0	CFSO 43.1-6	-	CFSOS 43.1-6	-	CFSOA 43.1-6	-
			8.0	4.19	4.8	6.0	CFSO 43.1-8	-	CFSOS 43.1-8	-	CFSOA 43.1-8	-
			10.0	4.19	4.8	6.0	CFSO 43.1-10	-	CFSOS 43.1-10	-	CFSOA 43.1-10	-
			12.0	4.19	4.8	6.0	CFSO 43.1-12	-	CFSOS 43.1-12	-	CFSOA 43.1-12	-
			14.0	4.19	4.8	6.0	CFSO 43.1-14	-	CFSOS 43.1-14	-	CFSOA 43.1-14	-
			16.0	4.19	4.8	6.0	CFSO 43.1-16	-	CFSOS 43.1-16	-	CFSOA 43.1-16	-
			18.0	4.19	4.8	6.0	CFSO 43.1-18	-	CFSOS 43.1-18	-	CFSOA 43.1-18	-
			20.0	4.19	4.8	6.0	CFSO 43.1-20	-	CFSOS 43.1-20	-	CFSOA 43.1-20	-
3.1	5.4	1.0	3.0	5.38	6.4	6.8	CFSO 63.1-3	-	CFSOS 63.1-3	-	CFSOA 63.1-3	-
			4.0	5.38	6.4	6.8	CFSO 63.1-4	-	CFSOS 63.1-4	-	CFSOA 63.1-4	-
			6.0	5.38	6.4	6.8	CFSO 63.1-6	358 963	CFSOS 63.1-6	-	CFSOA 63.1-6	-
			8.0	5.38	6.4	6.8	CFSO 63.1-8	-	CFSOS 63.1-8	-	CFSOA 63.1-8	-
			10.0	5.38	6.4	6.8	CFSO 63.1-10	-	CFSOS 63.1-10	-	CFSOA 63.1-10	-
			12.0	5.38	6.4	6.8	CFSO 63.1-12	-	CFSOS 63.1-12	-	CFSOA 63.1-12	-
			14.0	5.38	6.4	6.8	CFSO 63.1-14	-	CFSOS 63.1-14	-	CFSOA 63.1-14	-
			16.0	5.38	6.4	6.8	CFSO 63.1-16	-	CFSOS 63.1-16	-	CFSOA 63.1-16	-
			18.0	5.38	6.4	6.8	CFSO 63.1-18	-	CFSOS 63.1-18	-	CFSOA 63.1-18	-
			20.0	5.38	6.4	6.8	CFSO 63.1-20	-	CFSOS 63.1-20	-	CFSOA 63.1-20	-
3.6	5.4	1.0	3.0	5.38	6.4	6.8	CFSO 63.6-3	-	CFSOS 63.6-3	-	CFSOA 63.6-3	-
			4.0	5.38	6.4	6.8	CFSO 63.6-4	-	CFSOS 63.6-4	-	CFSOA 63.6-4	-
			6.0	5.38	6.4	6.8	CFSO 63.6-6	-	CFSOS 63.6-6	-	CFSOA 63.6-6	-
			8.0	5.38	6.4	6.8	CFSO 63.6-8	-	CFSOS 63.6-8	-	CFSOA 63.6-8	-
			10.0	5.38	6.4	6.8	CFSO 63.6-10	358 967	CFSOS 63.6-10	-	CFSOA 63.6-10	-
			12.0	5.38	6.4	6.8	CFSO 63.6-12	358 966	CFSOS 63.6-12	-	CFSOA 63.6-12	-
			14.0	5.38	6.4	6.8	CFSO 63.6-14	-	CFSOS 63.6-14	-	CFSOA 63.6-14	-
			16.0	5.38	6.4	6.8	CFSO 63.6-16	-	CFSOS 63.6-16	-	CFSOA 63.6-16	-
			18.0	5.38	6.4	6.8	CFSO 63.6-18	-	CFSOS 63.6-18	-	CFSOA 63.6-18	-
			20.0	5.38	6.4	6.8	CFSO 63.6-20	-	CFSOS 63.6-20	-	CFSOA 63.6-20	-

Die for drill hole diam. = Dimension "A" +0.10/+0.18 mm.

Continued next page

We reserve the right to amend specifications at any time.

Continued

Bore- ϕ B [mm]	Hole- ϕ +0.08 -0.00 [mm]	Material thick- ness min [mm]	L +0.05 -0.13 [mm]	C +0.00 -0.13 [mm]	SW [mm]	 min [mm]	Steel		Stainless steel		Aluminium	
							Description	Part No.	Description	Part No.	Description	Part No.
3.6	7.2	1.3	3.0	7.11	7.9	8.0	CFSO 83.6-3	-	CFSOS 83.6-3	-	CFSOA 83.6-3	-
			4.0	7.11	7.9	8.0	CFSO 83.6-4	-	CFSOS 83.6-4	-	CFSOA 83.6-4	-
			6.0	7.11	7.9	8.0	CFSO 83.6-6	-	CFSOS 83.6-6	-	CFSOA 83.6-6	-
			8.0	7.11	7.9	8.0	CFSO 83.6-8	-	CFSOS 83.6-8	-	CFSOA 83.6-8	-
			10.0	7.11	7.9	8.0	CFSO 83.6-10	-	CFSOS 83.6-10	-	CFSOA 83.6-10	-
			12.0	7.11	7.9	8.0	CFSO 83.6-12	-	CFSOS 83.6-12	-	CFSOA 83.6-12	-
			14.0	7.11	7.9	8.0	CFSO 83.6-14	-	CFSOS 83.6-14	-	CFSOA 83.6-14	-
			16.0	7.11	7.9	8.0	CFSO 83.6-16	-	CFSOS 83.6-16	-	CFSOA 83.6-16	-
			18.0	7.11	7.9	8.0	CFSO 83.6-18	-	CFSOS 83.6-18	-	CFSOA 83.6-18	-
4.1	7.2	1.3	3.0	7.11	7.9	8.0	CFSO 84.1-3	-	CFSOS 84.1-3	-	CFSOA 84.1-3	-
			4.0	7.11	7.9	8.0	CFSO 84.1-4	-	CFSOS 84.1-4	-	CFSOA 84.1-4	-
			6.0	7.11	7.9	8.0	CFSO 84.1-6	-	CFSOS 84.1-6	-	CFSOA 84.1-6	-
			8.0	7.11	7.9	8.0	CFSO 84.1-8	-	CFSOS 84.1-8	-	CFSOA 84.1-8	-
			10.0	7.11	7.9	8.0	CFSO 84.1-10	-	CFSOS 84.1-10	-	CFSOA 84.1-10	-
			12.0	7.11	7.9	8.0	CFSO 84.1-12	-	CFSOS 84.1-12	-	CFSOA 84.1-12	-
			14.0	7.11	7.9	8.0	CFSO 84.1-14	-	CFSOS 84.1-14	-	CFSOA 84.1-14	-
			16.0	7.11	7.9	8.0	CFSO 84.1-16	-	CFSOS 84.1-16	-	CFSOA 84.1-16	-
			18.0	7.11	7.9	8.0	CFSO 84.1-18	358 679	CFSOS 84.1-18	-	CFSOA 84.1-18	-
5.1	7.2	1.3	3.0	7.11	7.9	8.0	CFSO 85.1-3	-	CFSOS 85.1-3	-	CFSOA 85.1-3	-
			4.0	7.11	7.9	8.0	CFSO 85.1-4	358 671	CFSOS 85.1-4	-	CFSOA 85.1-4	-
			6.0	7.11	7.9	8.0	CFSO 85.1-6	-	CFSOS 85.1-6	-	CFSOA 85.1-6	-
			8.0	7.11	7.9	8.0	CFSO 85.1-8	-	CFSOS 85.1-8	-	CFSOA 85.1-8	-
			10.0	7.11	7.9	8.0	CFSO 85.1-10	-	CFSOS 85.1-10	-	CFSOA 85.1-10	-
			12.0	7.11	7.9	8.0	CFSO 85.1-12	-	CFSOS 85.1-12	-	CFSOA 85.1-12	-
			14.0	7.11	7.9	8.0	CFSO 85.1-14	-	CFSOS 85.1-14	-	CFSOA 85.1-14	-
			16.0	7.11	7.9	8.0	CFSO 85.1-16	-	CFSOS 85.1-16	-	CFSOA 85.1-16	-
			18.0	7.11	7.9	8.0	CFSO 85.1-18	358 678	CFSOS 85.1-18	-	CFSOA 85.1-18	-
			20.0	7.11	7.9	8.0	CFSO 85.1-20	-	CFSOS 85.1-20	-	CFSOA 85.1-20	-

Threaded inserts

Die for drill hole diam. = Dimension "A" +0.10/+0.18 mm.

Technical data

Thread/ hole- ϕ B	Fastener material	Sheet material aluminium (H 34) 1.5 mm				Sheet material steel 1.5 mm			
		Press-in force [kN]	Push-out force [N]	Torsional strength [Nm]	Push-through strength [N]	Press-in force [kN]	Push-out force [N]	Torsional strength [Nm]	Push-through strength [N]
M 3 3.1	Steel	4.7	700	1.20	1230	9.6	990	2.10	1450
	Stainless steel	4.7	700	1.20	985	9.6	990	2.10	1150
	Aluminium	4.7	700	1.20	740	-	-	-	-
M 3 / M 3.5 3.1 / 3.6	Steel	7.4	1310	2.79	1350	14.5	1850	3.90	1670
	Stainless steel	7.4	1310	2.79	1100	14.5	1850	3.90	1350
M 4 / M 5 3.1 / 4.1 / 5.1	Aluminium	7.4	1310	2.79	810	-	-	-	-
	Steel	10.5	1750	5.01	2550	17.6	2460	8.45	3100
	Stainless steel	10.5	1750	5.01	2020	17.6	2460	8.45	2450
	Aluminium	10.5	1750	5.01	1525	-	-	-	-

Guidelines - the precise values must be determined using the original component. We reserve the right to amend specifications at any time.

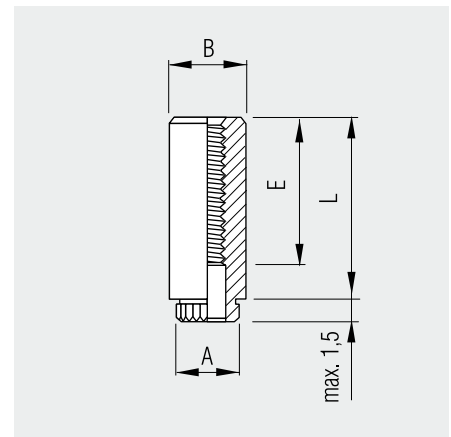
Captive® Self-clinching fasteners


Broaching type stand-offs
for plastics
with thread

Material

- Steel** (CKFE series)
 - Electrolytically tin plated
 - Suitable for metal hardnesses up to HRB 60

- Stainless steel** (CKFSE series)
 - Suitable for metal hardnesses up to HRB 70



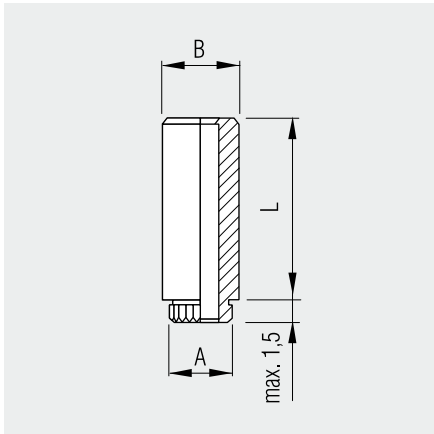
Thread	Hole- \varnothing $+0.08 -0.00$ [mm]	L ± 0.13 [mm]	A ± 0.08 [mm]	B ± 0.13 [mm]	E ± 0.4 [mm]	 min [mm]	■ Steel		■ Stainless steel	
							Description	Part No.	Description	Part No.
M 3	4.2	3.0	4.68	5.56	3.0	4.4	CKFE M 3-3	358 655	CKFSE M 3-3	-
		4.0	4.68	5.56	4.0	4.4	CKFE M 3-4	-	CKFSE M 3-4	-
		6.0	4.68	5.56	6.0	4.4	CKFE M 3-6	358 657	CKFSE M 3-6	-
		8.0	4.68	5.56	8.0	4.4	CKFE M 3-8	358 658	CKFSE M 3-8	-
		10.0	4.68	5.56	10.0	4.4	CKFE M 3-10	-	CKFSE M 3-10	-
		12.0	4.68	5.56	9.5 ¹	4.4	CKFE M 3-12	-	CKFSE M 3-12	-
		14.0	4.68	5.56	9.5 ¹	4.4	CKFE M 3-14	-	CKFSE M 3-14	-
		16.0	4.68	5.56	9.5 ¹	4.4	CKFE M 3-16	-	CKFSE M 3-16	-

Technical data

Thread	Press-in force [kN]	Push-out force [N]	Torsional strength [Nm]
M 3	2.22	200	1.35

Guidelines - the precise values must be determined using the original component.

We reserve the right to amend specifications at any time.



Broaching type stand-offs for plastics without thread

Material

Steel electrolytically tin plated (CKFE series)
Suitable for metal hardnesses up to HRB 60

Stainless steel (CKFSE series)
Suitable for metal hardnesses up to HRB 70



Threaded inserts

Bushes ø +0.10 -0.08 [mm]	Hole-ø +0.08 -0.00 [mm]	L ±0.13 [mm]	A ±0.08 [mm]	B ±0.13 [mm]	min [mm]	Steel		Stainless steel	
						Description	Part No.	Description	Part No.
3.6	5.4	3.0	5.87	7.14	5.5	CKFE 3.6-3	-	CKFSE 3.6-3	-
		4.0	5.87	7.14	5.5	CKFE 3.6-4	358 964	CKFSE 3.6-4	-
		6.0	5.87	7.14	5.5	CKFE 3.6-6	358 969	CKFSE 3.6-6	-
		8.0	5.87	7.14	5.5	CKFE 3.6-8	358 968	CKFSE 3.6-8	-
		10.0	5.87	7.14	5.5	CKFE 3.6-10	-	CKFSE 3.6-10	-
		12.0	5.87	7.14	5.5	CKFE 3.6-12	-	CKFSE 3.6-12	-
		14.0	5.87	7.14	5.5	CKFE 3.6-14	358 987	CKFSE 3.6-14	-
		16.0	5.87	7.14	5.5	CKFE 3.6-16	-	CKFSE 3.6-16	-
4.2	6.4	3.0	6.81	8.74	7.1	CKFE 4.2-3	-	CKFSE 4.2-3	-
		4.0	6.81	8.74	7.1	CKFE 4.2-4	-	CKFSE 4.2-4	-
		6.0	6.81	8.74	7.1	CKFE 4.2-6	-	CKFSE 4.2-6	-
		8.0	6.81	8.74	7.1	CKFE 4.2-8	-	CKFSE 4.2-8	-
		10.0	6.81	8.74	7.1	CKFE 4.2-10	-	CKFSE 4.2-10	-
		12.0	6.81	8.74	7.1	CKFE 4.2-12	-	CKFSE 4.2-12	-
		14.0	6.81	8.74	7.1	CKFE 4.2-14	-	CKFSE 4.2-14	-
		16.0	6.81	8.74	7.1	CKFE 4.2-16	-	CKFSE 4.2-16	-

Technical data

Internal-ø [mm]	Fibre glass 1.5 mm		
	Press-in force [kN]	Push-out force [N]	Torsional strength [Nm]
3.6	2.22	200	1.35
4.2	2.22	200	1.35

Guidelines - the precise values must be determined using the original component.

We reserve the right to amend specifications at any time.

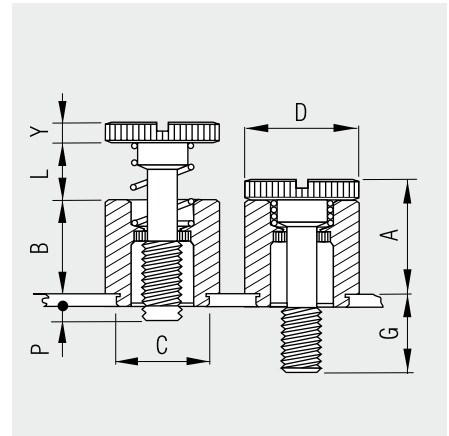
Captive® Self-clinching fasteners


Self-clinching panels for metals

Material

Stainless steel (CPFC2 series)

- Suitable for metal hardnesses up to HRB 70
- Min. material thickness 1.5 mm



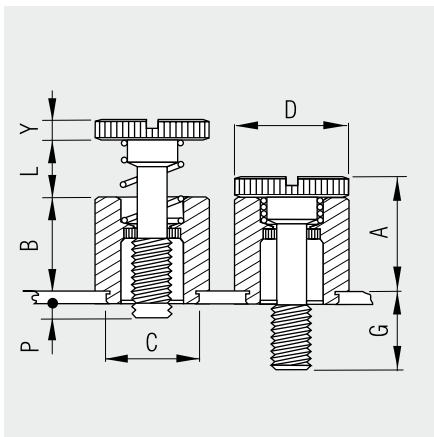
Thread	Hole- \varnothing +0.08 -0.00 [mm]	A max [mm]	B ± 0.25 [mm]	C max [mm]	D $+0.40$ -0.25 [mm]	G $+0.4$ [mm]	L $+0.4$ [mm]	P $+0.4$ [mm]	Y ± 0.13 [mm]	 min [mm]	Description	Part No.
M 3	6.75	9.1	7.2	6.7	7.9	6.4	4.8	0.0	1.83	6.4	CPFC2 M 3-40	358 744
						9.5	4.8	3.2	1.83	6.4	CPFC2 M 3-62	358 746
						12.7	4.8	6.4	1.83	6.4	CPFC2 M 3-84	-
M 4	7.95	11.4	9.3	7.9	9.5	7.9	6.4	0.0	2.08	7.9	CPFC2 M 4-50	358 745
						11.1	6.4	3.2	2.08	7.9	CPFC2 M 4-72	358 754
						14.3	6.4	6.4	2.08	7.9	CPFC2 M 4-94	-
M 5	8.75	11.4	9.3	8.7	10.3	7.9	6.4	0.0	2.08	8.7	CPFC2 M 5-50	-
						11.1	6.4	3.2	2.08	8.7	CPFC2 M 5-72	-
						14.3	6.4	6.4	2.08	8.7	CPFC2 M 5-94	358 757
M 6	10.50	14.6	12.0	10.5	11.9	9.5	7.9	0.0	2.49	9.5	CPFC2 M 6-60	-
						12.7	7.9	3.2	2.49	9.5	CPFC2 M 6-82	-
						15.9	7.9	6.4	2.49	9.5	CPFC2 M 6-04	-

Technical data

Thread	Sheet material			
	Steel		Aluminium (H 34)	
	Press-in force [kN]	Push-out force [N]	Press-in force [kN]	Push-out force [N]
M 3	13.3	1330	10.7	1070
M 4	16.9	1780	12.9	1330
M 5	17.8	2220	13.3	1780
M 6	22.2	2670	15.6	1780

Guidelines - the precise values must be determined using the original component.

We reserve the right to amend specifications at any time.



Broaching type fastener
for plastics

Material

■ **Stainless steel** (CPFK series)
min. material thickness 1.5 mm



Thread	Hole- \varnothing $+0.08 -0.00$ [mm]	A <i>max</i> [mm]	B ± 0.25 [mm]	C ± 0.08 [mm]	D $+0.40 -0.25$ [mm]	G $+0.4$ [mm]	L $+0.4$ [mm]	P $+0.4$ [mm]	Y ± 0.13 [mm]	 [mm]	Description	Part No.
M 3	6.75	9.1	7.2	7.28	8.2	6.4	4.8	0.0	1.9	5.1	CPFK M 3-40	358 734
						9.5	4.8	3.2	1.9	5.1	CPFK M 3-62	-
						12.7	4.8	6.4	1.9	5.1	CPFK M 3-84	-

Technical data

Thread	Press-in force [kN]	Push-out force [N]	Torsional strength [Nm]
M 3	1.1	245	3

Guidelines - the precise values must be determined using the original component.

We reserve the right to amend specifications at any time.

Captive® Self-clinching fasteners

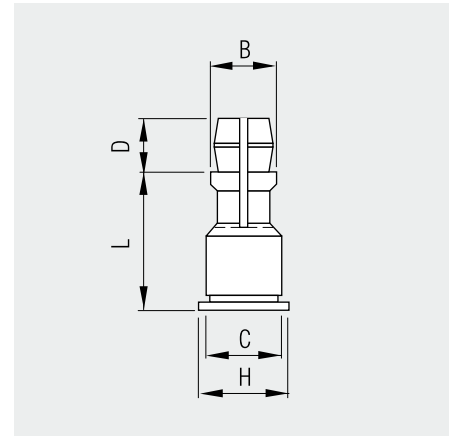
Spring top stand-offs for metals

Material

Aluminium (CFSSA series)
Suitable for metal hardnesses up to HRB 50

Steel zinc (CFSSS series)
Suitable for metal hardnesses up to HRB 60



Stainless steel (CFSSC series)
Suitable for metal hardnesses up to HRB 70



Fastening hole for movable plate [mm]	L [mm]	B [mm]	C [mm]	D [mm]	H [mm]	Aluminium		Stainless steel		Steel	
						Description	Part No.	Description	Part No.	Description	Part No.
4	8.0	4.77	5.38	3.58	6.35	CFSSA 4-8	358 880	CFSSC 4-8	358 860	CFSSS 4-8	358 870
	10.0	4.77	5.38	3.58	6.35	CFSSA 4-10	–	CFSSC 4-10	–	CFSSS 4-10	358 875
	12.0	4.77	5.38	3.58	6.35	CFSSA 4-12	–	CFSSC 4-12	–	CFSSS 4-12	358 872
	14.0	4.77	5.38	3.58	6.35	CFSSA 4-14	–	CFSSC 4-14	–	CFSSS 4-14	–
	16.0	4.77	5.38	3.58	6.35	CFSSA 4-16	–	CFSSC 4-16	–	CFSSS 4-16	358 874
	18.0	4.77	5.38	3.58	6.35	CFSSA 4-18	–	CFSSC 4-18	–	CFSSS 4-18	–
	20.0	4.77	5.38	3.58	6.35	CFSSA 4-20	–	CFSSC 4-20	–	CFSSS 4-20	–
	22.0	4.77	5.38	3.58	6.35	CFSSA 4-22	–	CFSSC 4-22	–	CFSSS 4-22	–
	25.0	4.77	5.38	3.58	6.35	CFSSA 4-25	–	CFSSC 4-25	–	CFSSS 4-25	–

Die for drill hole diam. = Dimension "A" +0.10/+0.18 mm.

Technical data

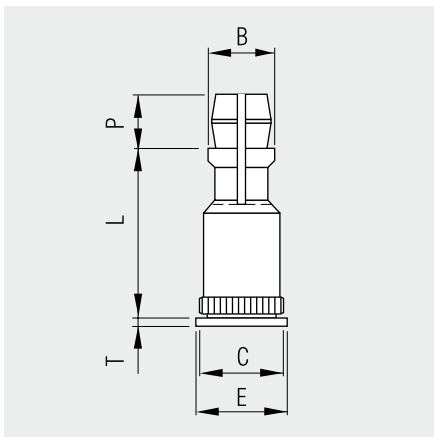
Type	Fixed plate						Movable plate				
	Fastening hole for fixed plate $+0.08 -0.00$ [mm]	Material	Hardness <i>max</i> HRB	Material thickness <i>min</i> [mm]	 <i>min</i> [mm]	Positional tolerance <i>min</i> [mm]	Fastening hole for movable plate $+0.08 -0.00$ [mm]	Material Steel 1.5 mm	Material thickness [mm]	 <i>min</i> [mm]	
CFSSA	5.4	metal	HRB 50	1	6.6	± 0.013	4.0	Circuit board or metal	1 – 1.8	2.5	
CFSSS	5.4	metal	HRB 60	1	6.6	± 0.013	4.0	Circuit board or metal	1 – 1.8	2.5	
CFSSC	5.4	metal	HRB 70	1	6.6	± 0.013	4.0	Circuit board or metal	1 – 1.8	2.5	

Technical data

Type	Material	Fixed plate		Movable plate		
		Press-in force [kN]	Push-out force [N]	Press-in force 1 time max [N]	Push-out force 1 time min [N]	Push-out force after 15 times max [N]
CFSSA	1.0 Aluminium HRB 25	6.7	880	44	13	4
CFSSS	1.0 Aluminium HRB 25	6.7	880	89	27	9
CFSSC	1.5 Steel HRB 64	16.0	2670	89	27	9

Guidelines - the precise values must be determined using the original component.

We reserve the right to amend specifications at any time.



Spring top stand-offs for PC boards

Material

- **Brass** (CFKSSB series)
 - No surface treatment
 - Suitable for metal hardnesses up to HRB 60

Threaded inserts

Fastening hole for movable plate [mm]	L ±0.13 [mm]	B ±0.13 [mm]	C max [mm]	E ±0.13 [mm]	P ±0.13 [mm]	T ±0.13 [mm]	Description	Part No.
4	8.0	4.77	5.74	6.35	3.58	0.51	CFKSSB 4-8	-
	10.0	4.77	5.74	6.35	3.58	0.51	CFKSSB 4-10	-
	12.0	4.77	5.74	6.35	3.58	0.51	CFKSSB 4-12	-
	14.0	4.77	5.74	6.35	3.58	0.51	CFKSSB 4-14	-
	16.0	4.77	5.74	6.35	3.58	0.51	CFKSSB 4-16	-
	18.0	4.77	5.74	6.35	3.58	0.51	CFKSSB 4-18	-
	20.0	4.77	5.74	6.35	3.58	0.51	CFKSSB 4-20	-
	22.0	4.77	5.74	6.35	3.58	0.51	CFKSSB 4-22	-
	25.0	4.77	5.74	6.35	6.35	3.58	0.51	CFKSSB 4-25

Die for drill hole diam. = Dimension "C" +0.10/+0.18 mm.

Technical data

Type	Fixed plate						Movable plate			
	Fastening hole for fixed plate +0.08 -0.00 [mm]	Material	Hardness max HRB	Material thickness max [mm]	min [mm]	Positional toleranche min [mm]	Fastening hole for movable plate +0.08 -0.00 [mm]	Material Steel 1.5 mm	Material thickness [mm]	min [mm]
CFKSSB	5.4	Circuit boards	HRB 65	1.25	5.6	± 0.013	4.0	Circuit board or metal	1 – 1.8	2.5

Technical data

Type	Material	Fixed plate		Press-in force 1 time max [N]	Movable plate	
		Press-in forche [kN]	Push-out force [N]		Push-out force 1 time min [N]	Push-out force after 15 times max [N]
CFKSSB	1.52 FR-4 fibre glass	2.2	484	58	13	4

Guidelines - the precise values must be determined using the original component.

We reserve the right to amend specifications at any time.

NOTES

