



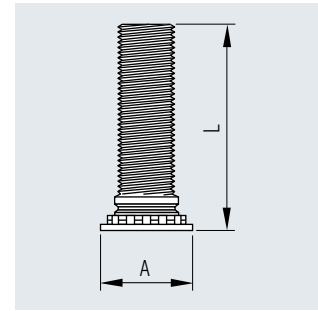
Captive® self-clinching fasteners


Self-clinching threaded studs for metal

Material

Zinc-plated steel
(CH series)
Suitable for sheet
hardness HRB 80
or less

A2 stainless steel, 300 series,
passivated (CHS series)
Suitable for sheet hardness
HRB 70 or less



Thread size	Bore \varnothing +0.08 -0.00 [mm]	Material thickness min [mm]	L ± 0.4 [mm]	A ± 0.4 [mm]	 min [mm]	Steel		Stainless steel	
						Description	Article No.	Description	Article No.
M 2	2.0	1.0	8	3.5	5.2	CH M 2-8	358 111 000	-	-
			10	3.5	5.2	CH M 2-10	358 112 000	-	-
M 2.5	2.5	1.0	6	4.1	5.4	CH M 2.5-6	358 120 000	CHS M 2.5-6	358 220 000
			8	4.1	5.4	CH M 2.5-8	358 121 000	CHS M 2.5-8	358 221 000
			10	4.1	5.4	CH M 2.5-10	358 122 000	CHS M 2.5-10	358 222 000
			12	4.1	5.4	CH M 2.5-12	358 123 000	CHS M 2.5-12	358 223 000
			15	4.1	5.4	CH M 2.5-15	358 124 000	CHS M 2.5-15	358 224 000
			18	4.1	5.4	CH M 2.5-18	358 125 000	CHS M 2.5-18	358 225 000
M 3	3.0	1.0	5	4.6	5.6	CH M 3-5	358 129 000	CHS M 3-5	358 229 000
			6	4.6	5.6	CH M 3-6	358 130 000	CHS M 3-6	358 230 000
			8	4.6	5.6	CH M 3-8	358 131 000	CHS M 3-8	358 231 000
			10	4.6	5.6	CH M 3-10	358 132 000	CHS M 3-10	358 232 000
			12	4.6	5.6	CH M 3-12	358 133 000	CHS M 3-12	358 233 000
			15	4.6	5.6	CH M 3-15	358 134 000	CHS M 3-15	358 234 000
			16	4.6	5.6	CH M 3-16	358 126 000	CHS M 3-16	358 275 000
			18	4.6	5.6	CH M 3-18	358 135 000	CHS M 3-18	358 235 000
			20	4.6	5.6	CH M 3-20	358 136 000	CHS M 3-20	358 236 000
			22	4.6	5.6	CH M 3-22	358 137 000	CHS M 3-22	358 237 000
			25	4.6	5.6	CH M 3-25	358 138 000	CHS M 3-25	358 238 000
			30	4.6	5.6	CH M 3-30	358 176 000	CHS M 3-30	358 239 000


For punch and anvil dimensions, see page 31.

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Captive® self-clinching fasteners

Cont'd

Thread size	Bore \varnothing +0.08 -0.00 [mm]	Material thickness min [mm]	L ± 0.4 [mm]	A ± 0.4 [mm]	 min [mm]	Steel		Stainless steel	
						Description	Article No.	Description	Article No.
M 4	4.0	1.0	6	5.9	7.2	CH M 4-6	358 140 000	CHS M 4-6	358 240 000
			8	5.9	7.2	CH M 4-8	358 141 000	CHS M 4-8	358 241 000
			10	5.9	7.2	CH M 4-10	358 142 000	CHS M 4-10	358 242 000
			12	5.9	7.2	CH M 4-12	358 143 000	CHS M 4-12	358 243 000
			13.5	5.9	7.2	CH M 4 -13.5	358 980 000	CHS M 4-13.5	-
			15	5.9	7.2	CH M 4-15	358 144 000	CHS M 4-15	358 244 000
			16	5.9	7.2	CH M 4-16	358 844 000	CHS M 4-16	-
			18	5.9	7.2	CH M 4-18	358 145 000	CHS M 4-18	358 245 000
			20	5.9	7.2	CH M 4-20	358 146 000	CHS M 4-20	358 246 000
			22	5.9	7.2	CH M 4-22	358 147 000	CHS M 4-22	358 247 000
			25	5.9	7.2	CH M 4-25	358 148 000	CHS M 4-25	358 248 000
			28	5.9	7.2	CH M 4-28	358 199 000	CHS M 4-28	-
			30	5.9	7.2	CH M 4-30	358 150 000	CHS M 4-30	358 250 000
			35	5.9	7.2	CH M 4-35	358 139 000	CHS M 4-35	-
			38	5.9	7.2	CH M 4-38	358 149 000	CHS M 4-38	358 258 000
			45	5.9	7.2	CH M 4-45	358 198 000	CHS M 4-45	358 228 000
			50	5.9	7.2	CH M 4-50	358 117 000	CHS M 4-50	-
			M 5	5.0	1.0	6	6.5	7.2	CH M 5-6
8	6.5	7.2				CH M 5-8	358 151 000	CHS M 5-8	358 251 000
10	6.5	7.2				CH M 5-10	358 152 000	CHS M 5-10	358 252 000
12	6.5	7.2				CH M 5-12	358 153 000	CHS M 5-12	358 253 000
15	6.5	7.2				CH M 5-15	358 154 000	CHS M 5-15	358 254 000
16	6.5	7.2				CH M 5-16	358 116 000	CHS M 5-16	-
18	6.5	7.2				CH M 5-18	358 155 000	CHS M 5-18	358 255 000
20	6.5	7.2				CH M 5-20	358 156 000	CHS M 5-20	358 256 000
22	6.5	7.2				CH M 5-22	358 115 000	CHS M 5-22	358 257 000
25	6.5	7.2				CH M 5-25	358 158 000	CHS M 5-25	358 274 000
28	6.5	7.2				CH M 5-28	358 173 000	CHS M 5-28	358 259 000
30	6.5	7.2				CH M 5-30	358 160 000	CHS M 5-30	358 260 000
35	6.5	7.2				CH M 5-35	358 159 000	CHS M 5-35	358 249 000
38	6.5	7.2				CH M 5-38	358 157 000	CHS M 5-38	358 262 000
42	6.5	7.2	CH M 5-42	358 177 000	CHS M 5-42	-			
50	6.5	7.2	CH M 5-50	358 194 000	CHS M 5-50	358 267 000			
54	6.5	7.2	CH M 5-54	358 174 000	CHS M 5-54	-			
M 6	6.0	1.6	8	8.2	7.9	CH M 6-8	358 161 000	CHS M 6-8	358 269 000
			10	8.2	7.9	CH M 6-10	358 162 000	CHS M 6-10	358 261 000
			12	8.2	7.9	CH M 6-12	358 163 000	CHS M 6-12	358 263 000
			14	8.2	7.9	CH M 6-14	-	CHS M 6-14	358 277 000
			15	8.2	7.9	CH M 6-15	358 164 000	CHS M 6-15	358 264 000
			16	8.2	7.9	CH M 6-16	358 178 000	CHS M 6-16	-
			18	8.2	7.9	CH M 6-18	358 165 000	CHS M 6-18	358 265 000
			20	8.2	7.9	CH M 6-20	358 166 000	CHS M 6-20	358 266 000
			22	8.2	7.9	CH M 6-22	358 167 000	CHS M 6-22	358 272 000
			25	8.2	7.9	CH M 6-25	358 168 000	CHS M 6-25	358 268 000
			28	8.2	7.9	CH M 6-28	358 180 000	CHS M 6-28	-


For punch and anvil dimensions, see page 31.

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Captive® self-clinching fasteners

Cont'd

Thread size	Bore \varnothing +0.08 -0.00 [mm]	Material thickness min [mm]	L ± 0.4 [mm]	A ± 0.4 [mm]	 min [mm]	Steel		Stainless steel				
						Description	Article No.	Description	Article No.			
			30	8.2	7.9	CH M 6-30	358 170 000	CHS M 6-30	358 270 000			
			35	8.2	7.9	CH M 6-35	358 171 000	CHS M 6-35	358 271 000			
			38	8.2	7.9	CH M 6-38	358 172 000	CHS M 6-38	358 273 000			
			50	8.2	7.9	CH M 6-50	358 179 000	CHS M 6-50	358 276 000			
			M 8	8.0	2.4	12	9.6	9.6	CH M 8-12	358 183 000	CHS M 8-12	358 283 000
			15	9.6	9.6	CH M 8-15	358 184 000	CHS M 8-15	358 284 000			
			18	9.6	9.6	CH M 8-18	358 185 000	CHS M 8-18	358 285 000			
			20	9.6	9.6	CH M 8-20	358 186 000	CHS M 8-20	358 286 000			
			22	9.6	9.6	CH M 8-22	358 187 000	CHS M 8-22	358 287 000			
			25	9.6	9.6	CH M 8-25	358 188 000	CHS M 8-25	358 288 000			
			28	9.6	9.6	CH M 8-28	-	CHS M 8-28	-			
			30	9.6	9.6	CH M 8-30	358 190 000	CHS M 8-30	358 291 000			
			35	9.6	9.6	CH M 8-35	358 191 000	CHS M 8-35	358 292 000			
			38	9.6	9.6	CH M 8-38	358 195 000	CHS M 8-38	358 732 000			
			42	9.6	9.6	CH M 8-42	358 113 000	CHS M 8-42	358 294 000			
			45	9.6	9.6	CH M 8-45	358 192 000	CHS M 8-45	-			
			58	9.6	9.6	CH M 8-58	358 193 000	CHS M 8-58	-			
			M 10	10.0	2.4	15	12.3	11.4	CH M 10-15	-	CHS M 10-15	-
						18	12.3	11.4	CH M 10-18	-	CHS M 10-18	-
						20	12.3	11.4	CH M 10-20	-	CHS M 10-20	-
22	12.3	11.4				CH M 10-22	-	CHS M 10-22	-			
25	12.3	11.4				CH M 10-25	-	CHS M 10-25	-			
28	12.3	11.4				CH M 10-28	-	CHS M 10-28	-			
30	12.3	11.4				CH M 10-30	-	CHS M 10-30	-			
35	12.3	11.4				CH M 10-35	-	CHS M 10-35	-			
			38	12.3	11.4	CH M 10-38	-	CHS M 10-38	-			

Technical specifications

Thread size	Test material	Installation force [kN]	Push-out [N]	Torque-out [Nm]
M 2.5	1.6 mm aluminium	8.9	465	1.0
	1.5 mm steel	11.1	740	1.0
M 3	1.6 mm aluminium	12.9	600	1.7
	1.5 mm steel	14.7	820	1.7
M 4	1.6 mm aluminium	20.0	975	2.9
	1.5 mm steel	28.9	1780	4.2
M 5	1.6 mm aluminium	24.5	1070	3.5
	1.5 mm steel	33.4	2000	6.5
M 6	2.4 mm aluminium	28.9	1660	7.3
	2.2 mm steel	44.5	2560	11.3
M 8	2.4 mm aluminium	29.8	1910	11.3
	2.2 mm steel	44.5	2890	19.2

Guidelines only - the exact values will need to be calculated on the original component.

For punch and anvil dimensions, see page 31.

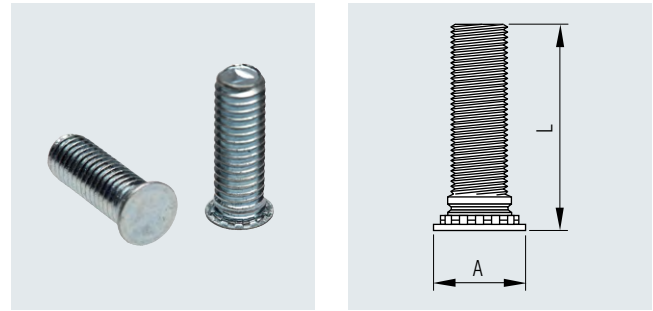



Captive® self-clinching fasteners

Self-clinching threaded studs for metal

Material

Aluminium (CHA series)
Suitable for sheet hardness HRB 50 or less



Thread size	Bore ϕ	Material thickness	L	A		Aluminium Description	Article No.	
	+0.08 -0.00 [mm]	min [mm]	± 0.4 [mm]	± 0.4 [mm]	min [mm]			
M 2	2.0	1.0	8	3.5	5.2	-	-	
			10	3.5	5.2	-	-	
M 2.5	2.5	1.0	6	4.1	5.4		CHA M 2.5-6	-
			8	4.1	5.4		CHA M 2.5-8	-
			10	4.1	5.4		CHA M 2.5-10	-
			12	4.1	5.4		CHA M 2.5-12	-
			15	4.1	5.4		CHA M 2.5-15	-
			18	4.1	5.4		CHA M 2.5-18	-
M 3	3.0	1.0	5	4.6	5.6		-	-
			6	4.6	5.6		CHA M 3-6	-
			8	4.6	5.6		CHA M 3-8	358 911 000
			10	4.6	5.6		CHA M 3-10	-
			12	4.6	5.6		CHA M 3-12	358 774 000
			15	4.6	5.6		CHA M 3-15	358 914 000
			16	4.6	5.6		CHA M 3-16	-
			18	4.6	5.6		CHA M 3-18	-
			20	4.6	5.6		CHA M 3-20	358 916 000
			22	4.6	5.6		CHA M 3-22	-
			25	4.6	5.6		CHA M 3-25	-
30	4.6	5.6		CHA M 3-30	-			


For punch and anvil dimensions, see page 31.

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Captive® self-clinching fasteners

Cont'd

Thread size	Bore \varnothing +0.08 -0.00 [mm]	Material thickness min [mm]	L ± 0.4 [mm]	A ± 0.4 [mm]	 min [mm]	Aluminium	Article No.
						Description	
M 4	4.0	1.0	6	5.9	7.2	CHA M 4-6	358 310 000
			8	5.9	7.2	CHA M 4-8	-
			10	5.9	7.2	CHA M 4-10	358 942 000
			12	5.9	7.2	CHA M 4-12	-
			13.5	5.9	7.2	CHA M 4-13.5	-
			15	5.9	7.2	CHA M 4-15	358 944 000
			16	5.9	7.2	CHA M 4-16	-
			18	5.9	7.2	CHA M 4-18	358 945 000
			20	5.9	7.2	CHA M 4-20	-
			22	5.9	7.2	CHA M 4-22	-
			25	5.9	7.2	CHA M 4-25	358 948 000
			28	5.9	7.2	CHA M 4-28	-
			30	5.9	7.2	CHA M 4-30	358 950 000
			35	5.9	7.2	CHA M 4-35	-
			38	5.9	7.2	CHA M 4-38	-
45	5.9	7.2	CHA M 4-45	-			
50	5.9	7.2	CHA M 4-50	-			
M 5	5.0	1.0	6	6.5	7.2	CHA M 5-6	-
			8	6.5	7.2	CHA M 5-8	-
			10	6.5	7.2	CHA M 5-10	-
			12	6.5	7.2	CHA M 5-12	358 943 000
			15	6.5	7.2	CHA M 5-15	-
			16	6.5	7.2	CHA M 5-16	-
			18	6.5	7.2	CHA M 5-18	-
			20	6.5	7.2	CHA M 5-20	-
			22	6.5	7.2	CHA M 5-22	-
			25	6.5	7.2	CHA M 5-25	-
			28	6.5	7.2	CHA M 5-28	-
			30	6.5	7.2	CHA M 5-30	-
			35	6.5	7.2	CHA M 5-35	-
			38	6.5	7.2	CHA M 5-38	-
			42	6.5	7.2	CHA M 5-42	-
50	6.5	7.2	CHA M 5-50	-			
54	6.5	7.2	CHA M 5-54	-			
M 6	6.0	1.6	8	8.2	7.9	CHA M 6-8	-
			10	8.2	7.9	CHA M 6-10	-
			12	8.2	7.9	CHA M 6-12	358 308 000
			14	8.2	7.9	CHA M 6-14	-
			15	8.2	7.9	CHA M 6-15	-
			16	8.2	7.9	CHA M 6-16	-
			18	8.2	7.9	CHA M 6-18	-
			20	8.2	7.9	CHA M 6-20	358 311 000
			22	8.2	7.9	CHA M 6-22	-
			25	8.2	7.9	CHA M 6-25	358 313 000

For punch and anvil dimensions, see page 31.


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Subject to change



Captive® self-clinching fasteners

Cont'd

Thread size	Bore ϕ +0.08 -0.00 [mm]	Material thickness min [mm]	L ± 0.4 [mm]	A ± 0.4 [mm]	 min [mm]	Aluminium	Article No.
						Description	
			28	8.2	7.9	CHA M 6-28	-
			30	8.2	7.9	CHA M 6-30	-
			35	8.2	7.9	CHA M 6-35	-
			38	8.2	7.9	CHA M 6-38	-
			50	8.2	7.9	CHA M 6-50	-
M 8	8.0	2.4	12	9.6	9.6	CHA M 8-12	-
			15	9.6	9.6	CHA M 8-15	-
			18	9.6	9.6	CHA M 8-18	-
			20	9.6	9.6	CHA M 8-20	-
			22	9.6	9.6	CHA M 8-22	-
			25	9.6	9.6	CHA M 8-25	-
			28	9.6	9.6	CHA M 8-28	-
			30	9.6	9.6	CHA M 8-30	-
			35	9.6	9.6	CHA M 8-35	-
			38	9.6	9.6	CHA M 8-38	-
			42	9.6	9.6	CHA M 8-42	-
45	9.6	9.6	CHA M 8-45	-			
58	9.6	9.6	CHA M 8-58	-			
M 10	10.0	2.4	15	12.3	11.4	CHA M 10-15	-
			18	12.3	11.4	CHA M 10-18	-
			20	12.3	11.4	CHA M 10-20	-
			22	12.3	11.4	CHA M 10-22	-
			25	12.3	11.4	CHA M 10-25	-
			28	12.3	11.4	CHA M 10-28	-
			30	12.3	11.4	CHA M 10-30	-
			35	12.3	11.4	CHA M 10-35	-
			38	12.3	11.4	CHA M 10-38	-

Technical specifications

Thread size	Test material	Installation force	Push-out	Torque-out
		[kN]	[N]	[Nm]
M 2.5	1.6 mm aluminium	8.9	465	1.0
	1.5 mm steel	11.1	740	1.0
M 3	1.6 mm aluminium	12.9	600	1.7
	1.5 mm steel	14.7	820	1.7
M 4	1.6 mm aluminium	20.0	975	2.9
	1.5 mm steel	28.9	1780	4.2
M 5	1.6 mm aluminium	24.5	1070	3.5
	1.5 mm steel	33.4	2000	6.5
M 6	2.4 mm aluminium	28.9	1660	7.3
	2.2 mm steel	44.5	2560	11.3
M 8	2.4 mm aluminium	29.8	1910	11.3
	2.2 mm steel	44.5	2890	19.2

Guidelines only - the exact values will need to be calculated on the original component.

For punch and anvil dimensions, see page 31.

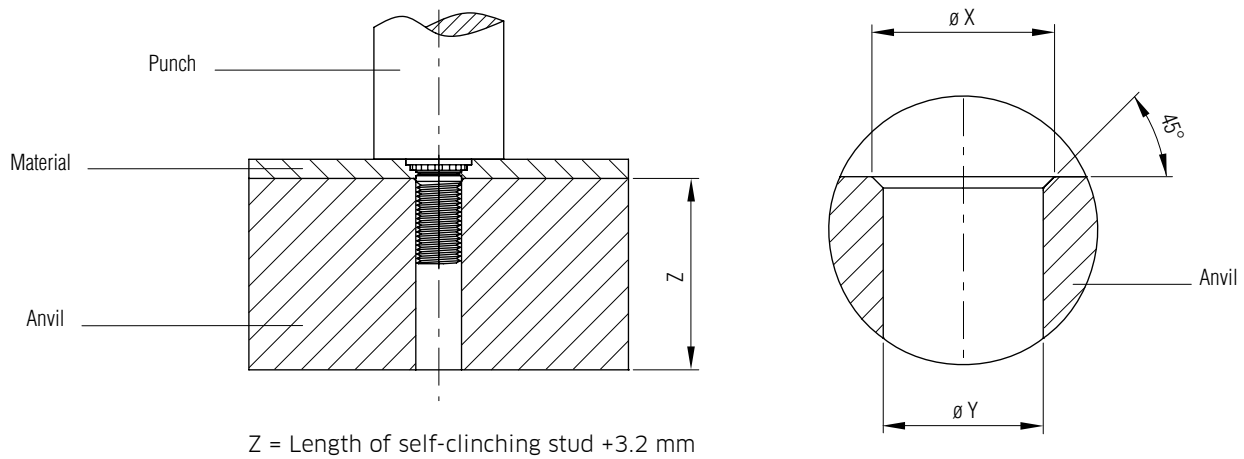


Captive® self-clinching fasteners

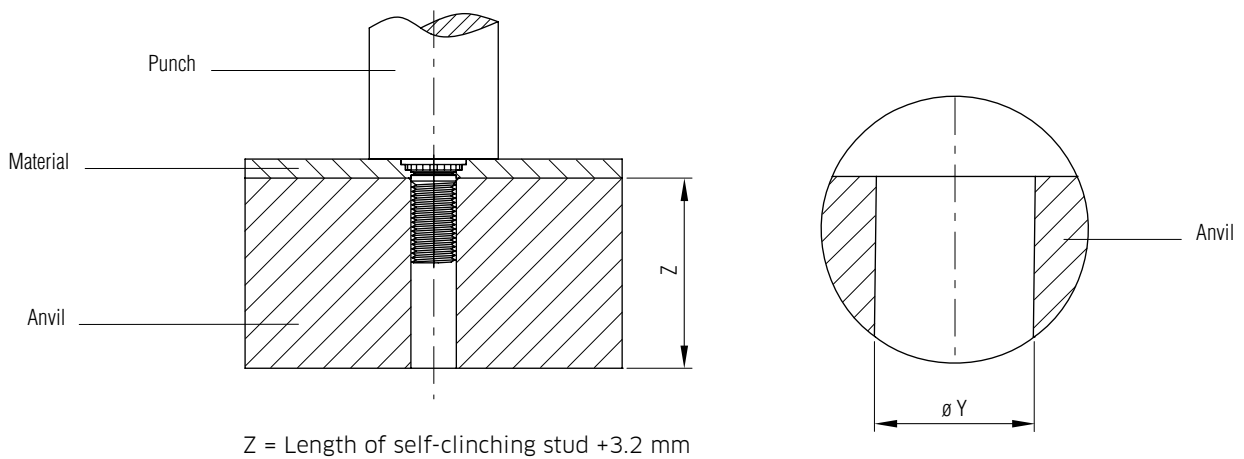
Punch and anvil dimensions for self-clinching fasteners
from series: CH - CHS - CHA - CHN

Thread size	Anvil dimensions	
	X +0.1 [mm]	Y +0.08 [mm]
M 2.5	3.1	2.5
M 3	3.6	3.0
M 4	4.6	4.0
M 5	5.6	5.0
M 6	6.6	6.0
M 8	-	8.0

Anvil for material thickness < 1.5 mm for thread sizes M 2.5-M 5
Anvil for material thickness < 2.3 mm for thread sizes M 6-M 8



Anvil for material thickness > 1.5 mm for thread sizes M 2.5-M 5
Anvil for material thickness > 2.3 mm for thread sizes M 6-M 8





Captive® self-clinching fasteners

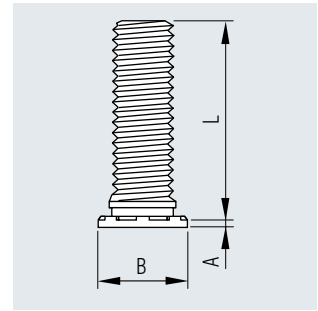
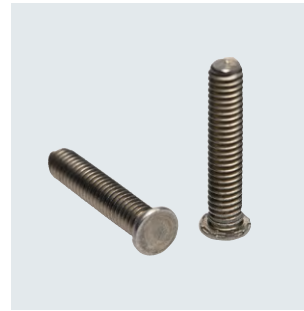
Self-clinching threaded studs for metal

For sheeting as thin as 0.51 mm, non-flush installation

Material

Zinc-plated steel
(TCH series)
Suitable for sheet
hardness HRB 80
or less

A2 stainless steel, 300 series
(TCHS series)
Suitable for sheet
hardness HRB 70
or less



Thread size	Bore ϕ	Material thickness	L	A	B		Steel		Stainless steel	
							Description	Article No.	Description	Article No.
M 3	3.0	0.51	6	0.64	4.5	5.6	TCH M 3-6	358 850 000	TCHS M 3-6	-
			8	0.64	4.5	5.6	TCH M 3-8	358 851 000	TCHS M 3-8	-
			10	0.64	4.5	5.6	TCH M 3-10	-	TCHS M 3-10	-
			12	0.64	4.5	5.6	TCH M 3-12	-	TCHS M 3-12	-
			15	0.64	4.5	5.6	TCH M 3-15	358 854 000	TCHS M 3-15	-
			18	0.64	4.5	5.6	TCH M 3-18	-	TCHS M 3-18	358 885 000
			20	0.64	4.5	5.6	TCH M 3-20	-	TCHS M 3-20	-
			25	0.64	4.5	5.6	TCH M 3-25	-	TCHS M 3-25	-
M 4	4.0	0.51	10	0.64	5.8	7.2	TCH M 4-10	358 884 000	TCHS M 4-10	-
			12	0.64	5.8	7.2	TCH M 4-12	358 716 000	TCHS M 4-12	-
			15	0.64	5.8	7.2	TCH M 4-15	-	TCHS M 4-15	-
			18	0.64	5.8	7.2	TCH M 4-18	-	TCHS M 4-18	-
			20	0.64	5.8	7.2	TCH M 4-20	-	TCHS M 4-20	-
			22	0.64	5.8	7.2	TCH M 4-22	-	TCHS M 4-22	-
			25	0.64	5.8	7.2	TCH M 4-25	-	TCHS M 4-25	-
			28	0.64	5.8	7.2	TCH M 4-28	-	TCHS M 4-28	-
M 5	5.0	0.51	10	0.64	6.4	7.2	TCH M 5-10	358 697 000	TCHS M 5-10	-
			12	0.64	6.4	7.2	TCH M 5-12	-	TCHS M 5-12	-
			15	0.64	6.4	7.2	TCH M 5-15	-	TCHS M 5-15	-
			18	0.64	6.4	7.2	TCH M 5-18	-	TCHS M 5-18	-
			20	0.64	6.4	7.2	TCH M 5-20	-	TCHS M 5-20	-
			22	0.64	6.4	7.2	TCH M 5-22	-	TCHS M 5-22	-
			25	0.64	6.4	7.2	TCH M 5-25	-	TCHS M 5-25	-
			28	0.64	6.4	7.2	TCH M 5-28	-	TCHS M 5-28	-
			30	0.64	6.4	7.2	TCH M 5-30	-	TCHS M 5-30	-
			35	0.64	6.4	7.2	TCH M 5-35	-	TCHS M 5-35	-
			38	0.64	6.4	7.2	TCH M 5-38	-	TCHS M 5-38	-

For punch and anvil dimensions, see page 38.



Captive® self-clinching fasteners

Technical specifications

Thread size	Max. screw torque	Material	Sheet material	Installation force	Push-out	Torque-out
			Material hardness			
	[Nm]	[mm]	[HRB]	[kN]	[N]	[Nm]
M 3	0.74	0.5 aluminium	28	5.3	190	0.6
		0.6 steel	52	6.7	290	1.0
M 4	1.7	0.5 aluminium	28	9.8	245	0.7
		0.6 steel	52	13.4	495	2.5
M 5	3.5	0.5 aluminium	28	13.4	265	1.2
		0.6 steel	52	17.8	665	2.9

Guidelines only - the exact values will need to be calculated on the original component.

For punch and anvil dimensions, see page 38.



Captive® self-clinching fasteners

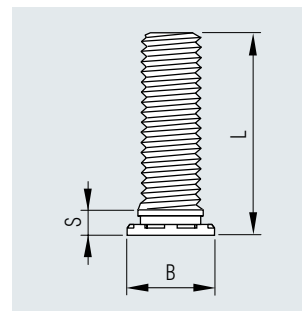
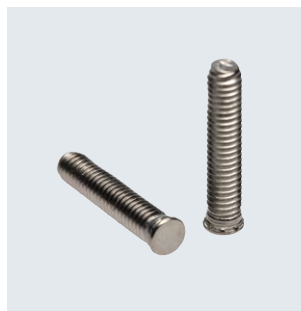
Self-clinching threaded studs for metal


For close-edge installation

Material

Zinc-plated steel
(CHE series)
Suitable for sheet
hardness HRB 80
or less

A2 stainless steel, 300 series,
passivated (CHES series)
Suitable for sheet
hardness HRB 70
or less



Thread size	Bore ϕ	Material thickness	L	B	S		Steel	Stainless steel		
							Description	Article No.	Description	Article No.
M 2.5	2.5	1.0	6	3.15	2.1	2.8	CHE M 2.5-6	358 863 000	CHES M 2.5-6	-
			8	3.15	2.1	2.8	CHE M 2.5-8	358 881 000	CHES M 2.5-8	358 937 000
			10	3.15	2.1	2.8	CHE M 2.5-10	358 864 000	CHES M 2.5-10	-
			12	3.15	2.1	2.8	CHE M 2.5-12	358 858 000	CHES M 2.5-12	-
			15	3.15	2.1	2.8	CHE M 2.5-15	358 865 000	CHES M 2.5-15	358 938 000
			18	3.15	2.1	2.8	CHE M 2.5-18	358 877 000	CHES M 2.5-18	358 939 000
			25	3.15	2.1	2.8	CHE M 2.5-25	358 882 000	CHES M 2.5-25	-
M 3	3.0	1.0	6	3.65	2.1	3.3	CHE M 3-6	358 888 000	CHES M 3-6	358 756 000
			7	3.65	2.1	3.3	CHE M 3-7	358 852 000	CHES M 3-7	-
			8	3.65	2.1	3.3	CHE M 3-8	358 889 000	CHES M 3-8	358 758 000
			10	3.65	2.1	3.3	CHE M 3-10	358 890 000	CHES M 3-10	358 645 000
			12	3.65	2.1	3.3	CHE M 3-12	358 891 000	CHES M 3-12	358 737 000
			15	3.65	2.1	3.3	CHE M 3-15	358 892 000	CHES M 3-15	358 759 000
			18	3.65	2.1	3.3	CHE M 3-18	358 893 000	CHES M 3-18	358 902 000
			20	3.65	2.1	3.3	CHE M 3-20	358 861 000	CHES M 3-20	358 738 000
			22	3.65	2.1	3.3	CHE M 3-22	358 862 000	CHES M 3-22	-
25	3.65	2.1	3.3	CHE M 3-25	358 886 000	CHES M 3-25	-			


For punch and anvil dimensions, see page 38.

Continued on next page



Captive® self-clinching fasteners

Cont'd

Thread size	Bore ϕ +0.08 -0.00 [mm]	Material thickness min [mm]	L ± 0.4 [mm]	B ± 0.4 [mm]	S max [mm]	 min [mm]	Steel		Stainless steel	
							Description	Article No.	Description	Article No.
M 4	4.0	1.0	6	4.65	2.4	4.3	CHE M 4-6	358 876 000	CHES M 4-6	-
			8	4.65	2.4	4.3	CHE M 4-8	358 866 000	CHES M 4-8	-
			10	4.65	2.4	4.3	CHE M 4-10	358 894 000	CHES M 4-10	358 913 000
			12	4.65	2.4	4.3	CHE M 4-12	358 895 000	CHES M 4-12	-
			15	4.65	2.4	4.3	CHE M 4-15	358 896 000	CHES M 4-15	358 752 000
			18	4.65	2.4	4.3	CHE M 4-18	358 897 000	CHES M 4-18	358 900 000
			20	4.65	2.4	4.3	CHE M 4-20	358 898 000	CHES M 4-20	-
			22	4.65	2.4	4.3	CHE M 4-22	358 867 000	CHES M 4-22	-
			25	4.65	2.4	4.3	CHE M 4-25	358 899 000	CHES M 4-25	-
			28	4.65	2.4	4.3	CHE M 4-28	358 853 000	CHES M 4-28	-
			30	4.65	2.4	4.3	CHE M 4-30	358 855 000	CHES M 4-30	-
			35	4.65	2.4	4.3	CHE M 4-35	358 856 000	CHES M 4-35	-
			38	4.65	2.4	4.3	CHE M 4-38	358 849 000	CHES M 4-38	-
			42	4.65	2.4	4.3	CHE M 4-42	-	CHES M 4-42	358 793 000
50	4.65	2.4	4.3	CHE M4-50	-	CHES M 4-50	358 792 000			
M 5	5.0	1.0	8	5.9	2.7	5.6	CHE M 5-8	358 755 000	CHES M 5-8	-
			10	5.9	2.7	5.6	CHE M 5-10	358 868 000	CHES M 5-10	-
			12	5.9	2.7	5.6	CHE M 5-12	358 869 000	CHES M 5-12	-
			15	5.9	2.7	5.6	CHE M 5-15	358 878 000	CHES M 5-15	-
			18	5.9	2.7	5.6	CHE M 5-18	358 873 000	CHES M 5-18	358 753 000
			20	5.9	2.7	5.6	CHE M 5-20	358 857 000	CHES M 5-20	-
			25	5.9	2.7	5.6	CHE M 5-25	358 879 000	CHES M 5-25	-
			30	5.9	2.7	5.6	CHE M 5-30	358 871 000	CHES M 5-30	-
			35	5.9	2.7	5.6	CHE M 5-35	-	CHES M 5-35	-

Technical specifications

Thread size	Max. screw torque [Nm]	Material [mm]	Sheet material		Installation force [kN]	Push-out [N]	Pull-through [N]	Torque-out [Nm]
			Material hardness [HRB]					
M 2.5	0.41	1.2 aluminium	33		3.1	285	1200	0.55
		1.1 steel	54		5.3	450	2250	1.10
M 3	0.46 0.74	1.2 aluminium	33		4.4	285	1300	0.65
		1.1 steel	54		5.3	475	2500	1.25
M 4	0.75 1.70	1.2 aluminium	33		5.3	365	1550	1.10
		1.1 steel	54		6.6	550	3300	2.10
M 5	1.11 2.25	1.2 aluminium	33		11.1	530	1850	2.20
		1.1 steel	54		20.0	1000	3750	4.40

Guidelines only - the exact values will need to be calculated on the original component.

For punch and anvil dimensions, see page 38.





Captive® self-clinching fasteners

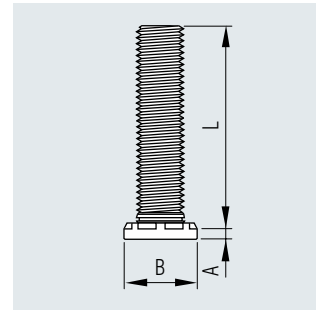
Self-clinching threaded studs for metal


For high torque


Material

 Zinc-plated steel (HCH series)
Suitable for sheet hardness HRB 85 or less

 A2 stainless steel, 300 series, passivated (HCHS series)
Suitable for sheet hardness HRB 70 or less



 Phosphor bronze (HCHB series)
Suitable for sheet hardness HRB 55 or less - available on request

Thread size	Bore ø	Material thickness	L	A	B		Hole for fastener	Steel		Stainless steel	
								Description	Article No.	Description	Article No.
	+0.13 -0.00 [mm]	±0.4 [mm]	±0.4 [mm]	max [mm]	±0.25 [mm]	min [mm]	max [mm]				
M 5	5.0	1.3	15	1.14	7.8	10.7	6.4	HCH M 5-15	358 808 000	HCHS M 5-15	-
			20	1.14	7.8	10.7	6.4	HCH M 5-20	-	HCHS M 5-20	-
			25	1.14	7.8	10.7	6.4	HCH M 5-25	-	HCHS M 5-25	-
			30	1.14	7.8	10.7	6.4	HCH M 5-30	-	HCHS M 5-30	-
			35	1.14	7.8	10.7	6.4	HCH M 5-35	-	HCHS M 5-35	-
			40	1.14	7.8	10.7	6.4	HCH M 5-40	-	HCHS M 5-40	-
M 6	6.0	1.5	10	1.27	9.4	11.5	7.5	HCH M 6-10	358 810 000	HCHS M 6-10	-
			15	1.27	9.4	11.5	7.5	HCH M 6-15	-	HCHS M 6-15	358 823 000
			20	1.27	9.4	11.5	7.5	HCH M 6-20	358 812 000	HCHS M 6-20	358 733 000
			25	1.27	9.4	11.5	7.5	HCH M 6-25	358 813 000	HCHS M 6-25	358 822 000
			30	1.27	9.4	11.5	7.5	HCH M 6-30	-	HCHS M 6-30	-
			35	1.27	9.4	11.5	7.5	HCH M 6-35	358 815 000	HCHS M 6-35	-
			40	1.27	9.4	11.5	7.5	HCH M 6-40	-	HCHS M 6-40	-
			50	1.27	9.4	11.5	7.5	HCH M 6-50	-	HCHS M 6-50	-
M 8	8.0	2.0	14	1.78	12.5	12.7	9.5	HCH M 8-14	358 821 000	HCHS M 8-14	-
			16	1.78	12.5	12.7	9.5	HCH M 8-16	358 816 000	HCHS M 8-16	-
			20	1.78	12.5	12.7	9.5	HCH M 8-20	358 817 000	HCHS M 8-20	-
			25	1.78	12.5	12.7	9.5	HCH M 8-25	358 818 000	HCHS M 8-25	358 824 000
			30	1.78	12.5	12.7	9.5	HCH M 8-30	358 819 000	HCHS M 8-30	-
			35	1.78	12.5	12.7	9.5	HCH M 8-35	358 820 000	HCHS M 8-35	-
			40	1.78	12.5	12.7	9.5	HCH M 8-40	-	HCHS M 8-40	-
			50	1.78	12.5	12.7	9.5	HCH M 8-50	358 743 000	HCHS M 8-50	-
M 10	10.0	2.3	12	2.29	15.7	13.7	11.5	HCH M 10-12	358 646 000	HCHS M 10-12	-
			15	2.29	15.7	13.7	11.5	HCH M 10-15	358 840 000	HCHS M 10-15	-
			20	2.29	15.7	13.7	11.5	HCH M 10-20	-	HCHS M 10-20	-
			25	2.29	15.7	13.7	11.5	HCH M 10-25	358 784 000	HCHS M 10-25	358 809 000
			30	2.29	15.7	13.7	11.5	HCH M 10-30	358 779 000	HCHS M 10-30	-
			35	2.29	15.7	13.7	11.5	HCH M 10-35	-	HCHS M 10-35	-
			40	2.29	15.7	13.7	11.5	HCH M 10-40	-	HCHS M 10-40	-
			50	2.29	15.7	13.7	11.5	HCH M 10-50	-	HCHS M 10-50	-

For punch and anvil dimensions, see page 38.



Captive® self-clinching fasteners

Technical specifications

Thread size	Description	Test material	Material hardness	Installation force	Push-out	Torque-out	Max. tightening torque
		[mm]	[HRB]	[kN]	[N]	[Nm]	[Nm]
M 5	HCH	1.5 aluminium	15	13.0	800	5.4	4.4
	HCH	1.5 steel	65	26.0	1500	7.6	4.4
	HCHS	1.62 aluminium	35	12.4	800	5.4	4.4
	HCHS	1.47 aluminium	54	21.7	1500	6.4	4.4
	HCHB	1.5 copper CDA-110	28	15.6	1115	3.4	3.5
M 6	HCH	1.5 aluminium	43	29.0	1270	14.0	10.0
	HCH	1.5 steel	59	33.0	1750	14.0	10.0
	HCHS	1.62 aluminium	35	15.4	1270	11.0	10.0
	HCHS	1.6 aluminium	45	24.6	1750	11.0	10.0
	HCHB	1.5 copper CDA-110	28	25.3	1600	6.7	5.9
M 8	HCH	2.3 aluminium	39	35.6	1700	30.0	21.7
	HCH	2.3 steel	58	44.5	2200	30.0	21.7
	HCHS	2.23 aluminium	44	24.4	1700	20.0	21.7
	HCHS	2.48 steel	43	37.8	2100	20.0	21.7
	HCHB	3.2 copper CDA-110	32	33.0	2250	15.3	14.3
M 10	HCH	2.3 aluminium	39	53.3	2445	36.0	36.6
	HCH	2.3 steel	58	80.0	3470	49.0	36.6
	HCHS	2.3 aluminium	44	44.4	2445	36.0	36.6
	HCHS	2.3 steel	44	57.7	3470	36.0	36.6
	HCHB	3.2 copper CDA-110	32	53.3	2500	25.0	28.5

Guidelines only - the exact values will need to be calculated on the original component.

For punch and anvil dimensions, see page 38.

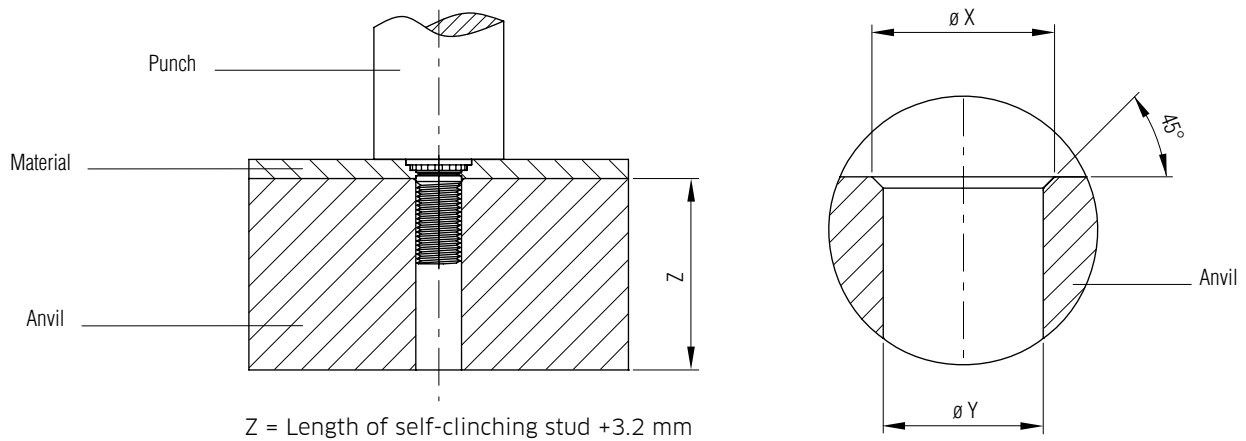


Captive® self-clinching fasteners

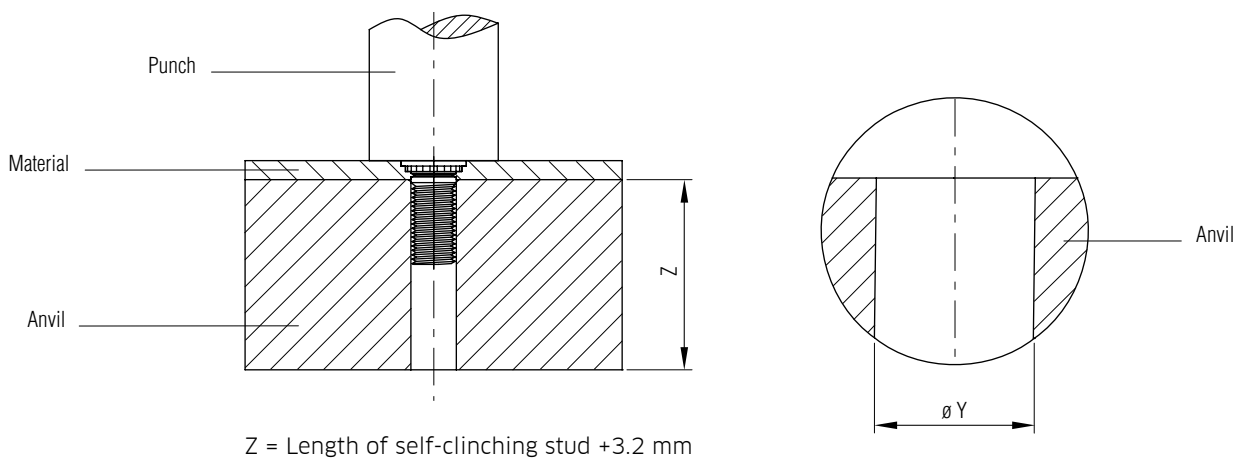
Punch and anvil dimensions for self-clinching studs
 from series: TCH - TCHS - CHE - CHES - HCH - HCHS - HCHB

Thread size	Anvil 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

Anvil for material thickness < 1.5 mm



Anvil for material thickness > 1.5 mm



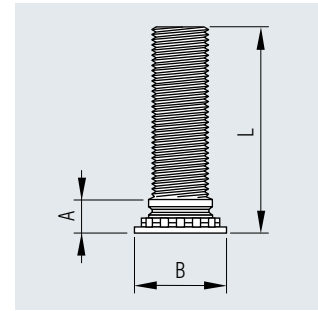
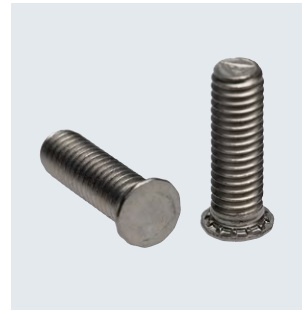



Captive® self-clinching fasteners

Self-clinching threaded studs for metal

Material

Stainless steel, 400 series,
passivated (CHTS series)
Suitable for sheet hardness
HRB 92 or less



Thread size	Bore \varnothing	Material thickness	L	A	B		Stainless steel Description	Article No.
	+0.08 -0.00 [mm]	[mm]	± 0.4 [mm]	max [mm]	± 0.4 [mm]	min [mm]		
M 3	3.0	1-2.4	6	2.1	4.6	5.6	CHTS M 3-6	358 956 000
			8	2.1	4.6	5.6	CHTS M 3-8	358 940 000
			10	2.1	4.6	5.6	CHTS M 3-10	358 825 000
			12	2.1	4.6	5.6	CHTS M 3-12	358 970 000
			15	2.1	4.6	5.6	CHTS M 3-15	358 975 000
			18	2.1	4.6	5.6	CHTS M 3-18	-
			20	2.1	4.6	5.6	CHTS M 3-20	358 971 000
			25	2.1	4.6	5.6	CHTS M 3-25	-
M 4	4.0	1-2.4	6	2.4	5.9	7.2	CHTS M 4-6	-
			8	2.4	5.9	7.2	CHTS M 4-8	358 935 000
			10	2.4	5.9	7.2	CHTS M 4-10	358 972 000
			12	2.4	5.9	7.2	CHTS M 4-12	358 845 000
			15	2.4	5.9	7.2	CHTS M 4-15	358 976 000
			18	2.4	5.9	7.2	CHTS M 4-18	-
			20	2.4	5.9	7.2	CHTS M 4-20	-
			25	2.4	5.9	7.2	CHTS M 4-25	-
			30	2.4	5.9	7.2	CHTS M 4-30	358 811 000
			35	2.4	5.9	7.2	CHTS M 4-35	-
M 5	5.0	1-2.4	8	2.7	6.5	7.2	CHTS M 5-8	-
			10	2.7	6.5	7.2	CHTS M 5-10	358 974 000
			12	2.7	6.5	7.2	CHTS M 5-12	-
			15	2.7	6.5	7.2	CHTS M 5-15	-
			18	2.7	6.5	7.2	CHTS M 5-18	-
			20	2.7	6.5	7.2	CHTS M 5-20	358 973 000
			25	2.7	6.5	7.2	CHTS M 5-25	-
			30	2.7	6.5	7.2	CHTS M 5-30	-
			35	2.7	6.5	7.2	CHTS M 5-35	-
			M 6	6.0	1.6-3	8	3.0	8.2
10	3.0	8.2				7.9	CHTS M 6-10	-
12	3.0	8.2				7.9	CHTS M 6-12	358 736 000
15	3.0	8.2				7.9	CHTS M 6-15	358 936 000
18	3.0	8.2				7.9	CHTS M 6-18	-
20	3.0	8.2				7.9	CHTS M 6-20	358 593 000
22	3.0	8.2				7.9	CHTS M 6-22	358 918 000
25	3.0	8.2				7.9	CHTS M 6-25	358 805 000
30	3.0	8.2				7.9	CHTS M 6-30	-
35	3.0	8.2				7.9	CHTS M 6-35	-


For punch and anvil dimensions, see page 40.

Continued on next page



Captive® self-clinching fasteners

Cont'd

Thread size	Bore \varnothing +0.08 -0.00 [mm]	Material thickness [mm]	L ± 0.4 [mm]	A max [mm]	B ± 0.4 [mm]	 min [mm]	Stainless steel	Article No.
							Description	
M 8	8.0	2.4 -3.8	12	3.7	9.6	9.6	CHTS M 8-12	-
			15	3.7	9.6	9.6	CHTS M 8-15	-
			18	3.7	9.6	9.6	CHTS M 8-18	-
			20	3.7	9.6	9.6	CHTS M 8-20	-
			25	3.7	9.6	9.6	CHTS M 8-25	-
			30	3.7	9.6	9.6	CHTS M 8-30	-
			35	3.7	9.6	9.6	CHTS M 8-35	-

Technical specifications

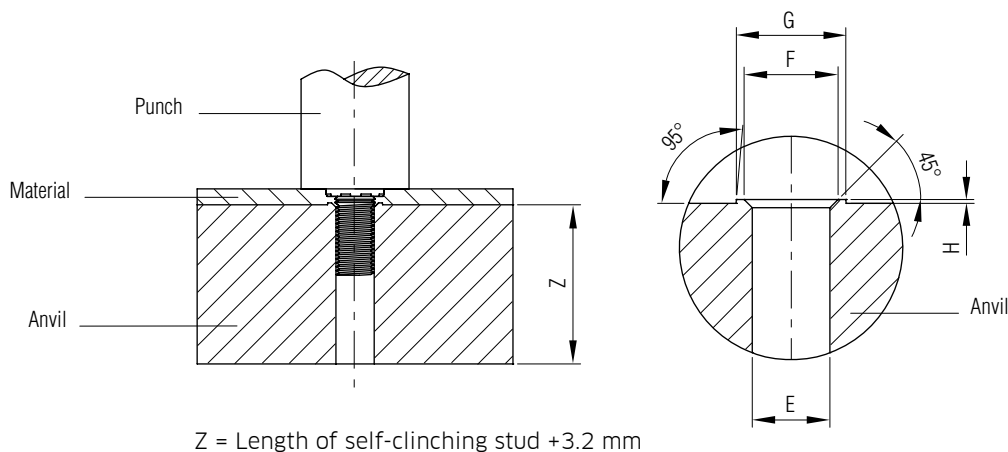
Thread size	Test material	Material thickness [mm]	Material hardness [HRB]	Installation force [kN]	Push-out [N]	Torque-out [Nm]	Pull-through
							max [N]
M 3	Stainless steel	1.5	92	40	2210	1.7	3510
M 4	Stainless steel	1.5	92	50	3200	6.4	7960
M 5	Stainless steel	1.5	92	53	3570	10.5	9980
M 6	Stainless steel	1.5	92	58	4195	15.7	14880
M 8	Stainless steel	2.3	92	71	7895	33.3	32804

Guidelines only - the exact values will need to be calculated on the original component.

Punch and anvil dimensions for self-clinching studs from the series: CHTS

Thread size	Anvil 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

Anvil for material thickness < 1.5 mm





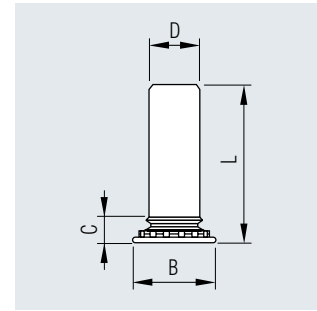
Captive® self-clinching fasteners

Self-clinching studs for metal


For sheeting as thin as 1.0 mm

Material

Steel, hardened, zinc-plated (CH series)¹ Steel, unhardened, zinc-plated (CHN series)²



Stainless steel A2, 300 series, passivated (CHS series)³

Stud ø D ±0.05 [mm]	Bore ø +0.08 -0.00 [mm]	Material thickness min [mm]	L ±0.4 [mm]	B ±0.4 [mm]	C max [mm]	 min [mm]	Steel hardened		Steel unhardened		Stainless steel	
							Description	Article No.	Description	Article No.	Description	Article No.
3	3.5	1.0	6	5.3	2.3	6.4	CH 3MM-6	358 723 000	CHN 3MM-6	-	CHS 3MM-6	358 839 000
			8	5.3	2.3	6.4	CH 3MM-8	-	CHN 3MM-8	358 801 000	CHS 3MM-8	-
			10	5.3	2.3	6.4	CH 3MM-10	-	CHN 3MM-10	-	CHS 3MM-10	-
			12	5.3	2.3	6.4	CH 3MM-12	358 826 000	CHN 3MM-12	-	CHS 3MM-12	-
			15	5.3	2.3	6.4	CH 3MM-15	-	CHN 3MM-15	-	CHS 3MM-15	-
			18	5.3	2.3	6.4	CH 3MM-18	-	CHN 3MM-18	-	CHS 3MM-18	-
			20	5.3	2.3	6.4	CH 3MM-20	-	CHN 3MM-20	-	CHS 3MM-20	-
			25	5.3	2.3	6.4	CH 3MM-25	-	CHN 3MM-25	-	CHS 3MM-25	-
4	4.1	1.0	8	6.0	2.3	7.1	CH 4MM-8	358 828 000	CHN 4MM-8	358 841 000	CHS 4MM-8	358 848 000
			10	6.0	2.3	7.1	CH 4MM-10	358 827 000	CHN 4MM-10	-	CHS 4MM-10	-
			12	6.0	2.3	7.1	CH 4MM-12	358 831 000	CHN 4MM-12	-	CHS 4MM-12	-
			15	6.0	2.3	7.1	CH 4MM-15	358 721 000	CHN 4MM-15	-	CHS 4MM-15	-
			18	6.0	2.3	7.1	CH 4MM-18	-	CHN 4MM-18	-	CHS 4MM-18	-
			20	6.0	2.3	7.1	CH 4MM-20	358 834 000	CHN 4MM-20	-	CHS 4MM-20	-
			25	6.0	2.3	7.1	CH 4MM-25	358 835 000	CHN 4MM-25	358 847 000	CHS 4MM-25	-
			30	6.0	2.3	7.1	CH 4MM-30	-	CHN 4MM-30	-	CHS 4MM-30	-
5	5.5	1.0	6	7.5	2.55	7.6	CH 5MM-6	358 829 000	CHN 5MM-6	-	CHS 5MM-6	-
			8	7.5	2.55	7.6	CH 5MM-8	358 830 000	CHN 5MM-8	-	CHS 5MM-8	-
			10	7.5	2.55	7.6	CH 5MM-10	358 832 000	CHN 5MM-10	-	CHS 5MM-10	-
			12	7.5	2.55	7.6	CH 5MM-12	358 838 000	CHN 5MM-12	-	CHS 5MM-12	-
			15	7.5	2.55	7.6	CH 5MM-15	358 833 000	CHN 5MM-15	-	CHS 5MM-15	-
			18	7.5	2.55	7.6	CH 5MM-18	-	CHN 5MM-18	-	CHS 5MM-18	-
			20	7.5	2.55	7.6	CH 5MM-20	-	CHN 5MM-20	-	CHS 5MM-20	-
			25	7.5	2.55	7.6	CH 5MM-25	358 836 000	CHN 5MM-25	-	CHS 5MM-25	-
			28	7.5	2.55	7.6	CH 5MM-28	358 837 000	CHN 5MM-28	-	CHS 5MM-28	-
			30	7.5	2.55	7.6	CH 5MM-30	-	CHN 5MM-30	-	CHS 5MM-30	-
			35	7.5	2.55	7.6	CH 5MM-35	358 846 000	CHN 5MM-35	-	CHS 5MM-35	-

¹ Suitable for sheet hardness HRB 80 or less

² Suitable for sheet hardness HRB 50 or less

³ Suitable for sheet hardness HRB 70 or less

For punch and anvil dimensions, see page 31.




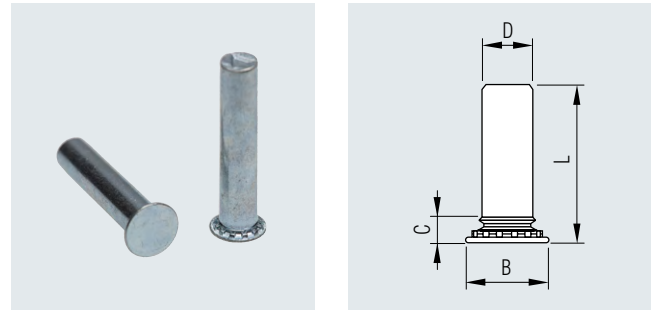
Captive® self-clinching fasteners


Self-clinching studs for metal

For sheeting as thin as 1.0 mm

Material

 Aluminium (CHA series)²



Stud ø D	Bore ø	Material thickness	L	B	C		Aluminium Description	Article No.
±0.05 [mm]	+0.08 -0.00 [mm]	min [mm]	±0.4 [mm]	±0.4 [mm]	max [mm]	min [mm]		
3	3.5	1.0	6	5.3	2.3	6.4	CHA 3MM-6	-
			8	5.3	2.3	6.4	CHA 3MM-8	-
			10	5.3	2.3	6.4	CHA 3MM-10	-
			12	5.3	2.3	6.4	CHA 3MM-12	-
			15	5.3	2.3	6.4	CHA 3MM-15	-
			18	5.3	2.3	6.4	CHA 3MM-18	-
			20	5.3	2.3	6.4	CHA 3MM-20	-
			25	5.3	2.3	6.4	CHA 3MM-25	-
4	4.1	1.0	8	6.0	2.3	7.1	CHA 4MM-8	-
			10	6.0	2.3	7.1	CHA 4MM-10	-
			12	6.0	2.3	7.1	CHA 4MM-12	-
			15	6.0	2.3	7.1	CHA 4MM-15	-
			18	6.0	2.3	7.1	CHA 4MM-18	-
			20	6.0	2.3	7.1	CHA 4MM-20	-
			25	6.0	2.3	7.1	CHA 4MM-25	-
5	5.5	1.0	30	6.0	2.3	7.1	CHA 4MM-30	-
			35	6.0	2.3	7.1	CHA 4MM-35	-
			6	7.5	2.55	7.6	CHA 5MM-6	-
			8	7.5	2.55	7.6	CHA 5MM-8	-
			10	7.5	2.55	7.6	CHA 5MM-10	-
			12	7.5	2.55	7.6	CHA 5MM-12	-
			15	7.5	2.55	7.6	CHA 5MM-15	-
			18	7.5	2.55	7.6	CHA 5MM-18	-
			20	7.5	2.55	7.6	CHA 5MM-20	-
			25	7.5	2.55	7.6	CHA 5MM-25	-
			28	7.5	2.55	7.6	CHA 5MM-28	-
			30	7.5	2.55	7.6	CHA 5MM-30	-
			35	7.5	2.55	7.6	CHA 5MM-35	-

² Suitable for sheet hardness HRB 50 or less

For punch and anvil dimensions, see page 31.



Captive® self-clinching fasteners

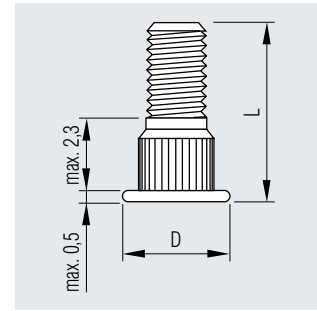
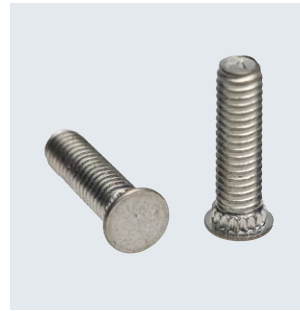
Broaching-type studs for plastics


For high torque

Material



Phosphor bronze
Electroplated with tin (CKFH series)



Thread size	Bore ϕ	Material thickness	L	Clear hole attachment part	Nut tightening torque	Anvil hole	D		Description	Article No.
	+0.08 -0.00 [mm]	min [mm]	[mm]	[mm]	max [Nm]	+0.08 -0.00 [mm]	± 0.25 [mm]	min [mm]		
M 2.5	2.6	1.53	6	-	-	2.6	4.10	3.3	CKFH M 2.5-6	358 595 000
			8	-	-	2.6	4.10	3.3	CKFH M 2.5-8	358 579 000
			10	-	-	2.6	4.10	3.3	CKFH M 2.5-10	358 591 000
			12	-	-	2.6	4.10	3.3	CKFH M 2.5-12	358 580 000
			15	-	-	2.6	4.10	3.3	CKFH M 2.5-15	358 110 000
M 3	3.0	1.53	6	3.7	0.45	3.1	4.58	3.8	CKFH M 3-6	358 581 000
			8	3.7	0.45	3.1	4.58	3.8	CKFH M 3-8	358 582 000
			10	3.7	0.45	3.1	4.58	3.8	CKFH M 3-10	358 583 000
			12	3.7	0.45	3.1	4.58	3.8	CKFH M 3-12	358 584 000
			15	3.7	0.45	3.1	4.58	3.8	CKFH M 3-15	358 585 000
			18	3.7	0.45	3.1	4.58	3.8	CKFH M 3-18	358 586 000
			20	3.7	0.45	3.1	4.58	3.8	CKFH M 3-20	358 592 000
M 4	4.2	1.53	6	4.8	1.60	4.1	5.74	5.1	CKFH M 4-6	-
			8	4.8	1.60	4.1	5.74	5.1	CKFH M 4-8	358 587 000
			10	4.8	1.60	4.1	5.74	5.1	CKFH M 4-10	358 588 000
			12	4.8	1.60	4.1	5.74	5.1	CKFH M 4-12	358 589 000
			15	4.8	1.60	4.1	5.74	5.1	CKFH M 4-15	358 590 000
			18	4.8	1.60	4.1	5.74	5.1	CKFH M 4-18	-
M 5	5.0	1.53	6	5.8	2.10	5.1	6.60	5.3	CKFH M 5-6	-
			8	5.8	2.10	5.1	6.60	5.3	CKFH M 5-8	-
			10	5.8	2.10	5.1	6.60	5.3	CKFH M 5-10	-
			12	5.8	2.10	5.1	6.60	5.3	CKFH M 5-12	-
			15	5.8	2.10	5.1	6.60	5.3	CKFH M 5-15	-
			18	5.8	2.10	5.1	6.60	5.3	CKFH M 5-18	-

Technical specifications

Thread size	Installation force	Push-out	Torque-out
	[kN]	[N]	[Nm]
M 3	1.8	285	0.79
M 4	1.8	355	1.80
M 5	1.8	400	1.92

Guidelines only - the exact values will need to be calculated on the original component.

Hole ϕ anvil = Dimension "A" +0.10/+0.18 mm.



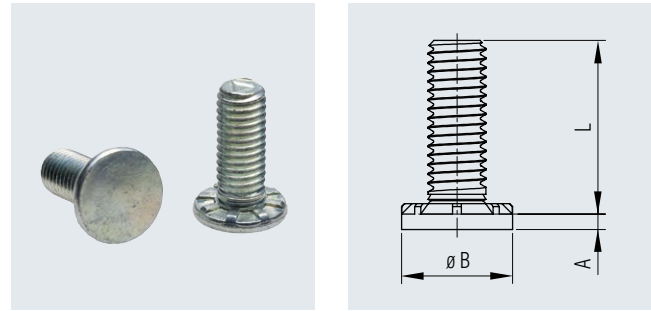
Captive® self-clinching fasteners


Self-clinching threaded studs for metal

For higher pull-through

Material

Zinc-plated steel (HCW series)
Suitable for sheet hardness HRB 85 or less



Thread size	Bore \varnothing	Material thickness	L	A	B		Hole for fastener	Steel	
								Description	Article No.
M 5	5.0	1.0	15	1.35	9.6	10.0	7.3	HCW M5 -15	-
			20	1.35	9.6	10.0	7.3	HCW M5 -20	-
			25	1.35	9.6	10.0	7.3	HCW M5 -25	-
			30	1.35	9.6	10.0	7.3	HCW M5 -30	-
			35	1.35	9.6	10.0	7.3	HCW M5 -35	-
			40	1.35	9.6	10.0	7.3	HCW M5 -40	-
M 6	6.0	1.0	15	1.52	11.35	11.5	8.3	HCW M6 -15	-
			20	1.52	11.35	11.5	8.3	HCW M6 -20	-
			25	1.52	11.35	11.5	8.3	HCW M6 -25	-
			30	1.52	11.35	11.5	8.3	HCW M6 -30	-
			35	1.52	11.35	11.5	8.3	HCW M6 -35	-
			40	1.52	11.35	11.5	8.3	HCW M6 -40	-
M 8	8.0	1.5	15	2.13	15.3	14.5	10.3	HCW M8 -15	-
			20	2.13	15.3	14.5	10.3	HCW M8 -20	-
			25	2.13	15.3	14.5	10.3	HCW M8 -25	-
			30	2.13	15.3	14.5	10.3	HCW M8 -30	-
			35	2.13	15.3	14.5	10.3	HCW M8 -35	-
			40	2.13	15.3	14.5	10.3	HCW M8 -40	-
			50	2.13	15.3	14.5	10.3	HCW M8 -50	-

Technical specifications

Thread size	Test material	Material hardness [HRB]	Installation force [kN]	Push-out [N]	Torque-out [Nm]
M 5	1.0 aluminium	27	37,7	685	8,0
	1.0 steel	67	51,1	1345	8,0
M 6	1.0 aluminium	27	39	745	11,7
	1.0 steel	67	60	1395	14,3
M 8	1.5 aluminium	22	42,0	1225	23,4
	1.5 steel	65	71,1	2395	33,8

Guidelines only - the exact values will need to be calculated on the original component.



Captive® self-clinching fasteners

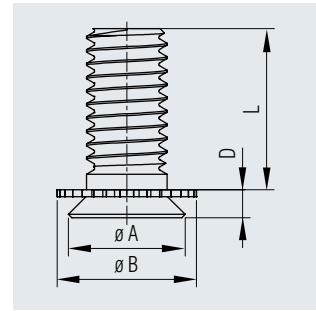
Self-clinching threaded studs for metal

For blind hole applications

Material

Aluminium
(CFA series)
Suitable for sheet
hardness HRB 50
or less

A2 stainless steel, 300 series,
passivated (Serie CFC)
Suitable for sheet
hardness HRB 70
or less



Thread size	Blind hole \varnothing +0.08 -0.00 [mm]	Material thickness min [mm]	L [mm]	Hole depth min [mm]	Hole max [mm]	D max [mm]	B ± 0.25 [mm]	A max [mm]	min [mm]	Aluminium		Stainless steel			
										Description	Article No.	Description	Article No.		
M 3	4.37	1.6	6	1.1	3.6	1.04	5.21	4.35	4.0	CFA-1 M3-6	-	CFC-1 M3-6	-		
			8	1.1	3.6	1.04	5.21	4.35	4.0	CFA-1 M3-8	-	CFC-1 M3-8	-		
			10	1.1	3.6	1.04	5.21	4.35	4.0	CFA-1 M3-10	-	CFC-1 M3-10	-		
			12	1.1	3.6	1.04	5.21	4.35	4.0	CFA-1 M3-12	-	CFC-1 M3-12	-		
			16	1.1	3.6	1.04	5.21	4.35	4.0	CFA-1 M3-16	-	CFC-1 M3-16	-		
			20	1.1	3.6	1.04	5.21	4.35	4.0	CFA-1 M3-20	-	CFC-1 M3-20	-		
			2.4	6	1.91	3.6	1.80	5.21	4.35	4.0	CFA-2 M3-6	-	CFC-2 M3-6	-	
		8	1.91	3.6	1.80	5.21	4.35	4.0	CFA-2 M3-8	-	CFC-2 M3-8	-			
		10	1.91	3.6	1.80	5.21	4.35	4.0	CFA-2 M3-10	-	CFC-2 M3-10	-			
		12	1.91	3.6	1.80	5.21	4.35	4.0	CFA-2 M3-12	358 024 000	CFC-2 M3-12	-			
		16	1.91	3.6	1.80	5.21	4.35	4.0	CFA-2 M3-16	358 014 000	CFC-2 M3-16	-			
		20	1.91	3.6	1.80	5.21	4.35	4.0	CFA-2 M3-20	-	CFC-2 M3-20	-			
		M 4	7.37	1.6	6	1.1	4.6	1.04	8.33	7.35	5.6	CFA-1 M4-6	-	CFC-1 M4-6	-
					8	1.1	4.6	1.04	8.33	7.35	5.6	CFA-1 M4-8	-	CFC-1 M4-8	-
10	1.1				4.6	1.04	8.33	7.35	5.6	CFA-1 M4-10	358 775 000	CFC-1 M4-10	-		
12	1.1				4.6	1.04	8.33	7.35	5.6	CFA-1 M4-12	358 776 000	CFC-1 M4-12	-		
16	1.1				4.6	1.04	8.33	7.35	5.6	CFA-1 M4-16	-	CFC-1 M4-16	-		
20	1.1				4.6	1.04	8.33	7.35	5.6	CFA-1 M4-20	-	CFC-1 M4-20	-		
25	1.1				4.6	1.04	8.33	7.35	5.6	CFA-1 M4-25	-	CFC-1 M4-25	-		
2.4	6			1.91	4.6	1.80	8.33	7.35	5.6	CFA-2 M4-6	-	CFC-2 M4-6	-		
8	1.91			4.6	1.80	8.33	7.35	5.6	CFA-2 M4-8	-	CFC-2 M4-8	-			
10	1.91			4.6	1.80	8.33	7.35	5.6	CFA-2 M4-10	-	CFC-2 M4-10	-			
12	1.91			4.6	1.80	8.33	7.35	5.6	CFA-2 M4-12	-	CFC-2 M4-12	-			
16	1.91			4.6	1.80	8.33	7.35	5.6	CFA-2 M4-16	-	CFC-2 M4-16	-			
20	1.91			4.6	1.80	8.33	7.35	5.6	CFA-2 M4-20	-	CFC-2 M4-20	-			
25	1.91			4.6	1.80	8.33	7.35	5.6	CFA-2 M4-25	-	CFC-2 M4-25	-			
M 5	7.93	1.6	10	1.1	5.6	1.04	8.89	7.90	6.4	CFA-1 M5-10	-	CFC-1 M5-10	-		
			12	1.1	5.6	1.04	8.89	7.90	6.4	CFA-1 M5-12	-	CFC-1 M5-12	-		
			16	1.1	5.6	1.04	8.89	7.90	6.4	CFA-1 M5-16	-	CFC-1 M5-16	-		
			20	1.1	5.6	1.04	8.89	7.90	6.4	CFA-1 M5-20	-	CFC-1 M5-20	-		
			25	1.1	5.6	1.04	8.89	7.90	6.4	CFA-1 M5-25	-	CFC-1 M5-25	-		
		2.4	10	1.91	5.6	1.80	8.89	7.90	6.4	CFA-2 M5-10	-	CFC-2 M5-10	-		
		12	1.91	5.6	1.80	8.89	7.90	6.4	CFA-2 M5-12	-	CFC-2 M5-12	-			
		16	1.91	5.6	1.80	8.89	7.90	6.4	CFA-2 M5-16	-	CFC-2 M5-16	-			
		20	1.91	5.6	1.80	8.89	7.90	6.4	CFA-2 M5-20	-	CFC-2 M5-20	-			
		25	1.91	5.6	1.80	8.89	7.90	6.4	CFA-2 M5-25	-	CFC-2 M5-25	-			

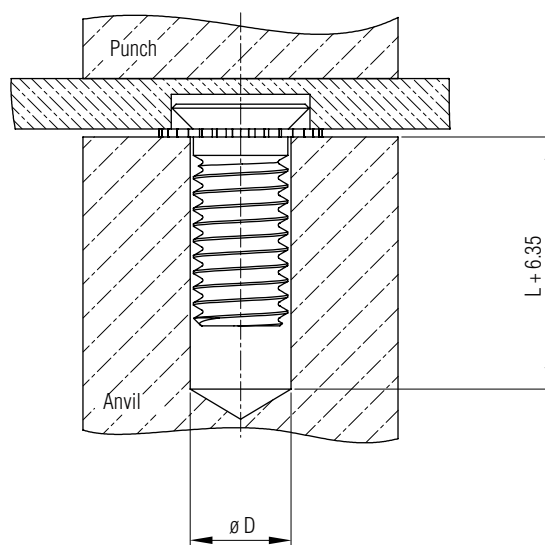


Captive® self-clinching fasteners

Technical specifications

Series	Thread size	Max. screw torque	Steel		Aluminium (H 34)	
			Installation force	Push-out	Installation force	Push-out
		[Nm]	[kN]	[N]	[kN]	[N]
CFC-1	M 3	0.5	8	1065	6.2	575
	M 4	2.0	17.8	1200	12.5	800
	M 5	3.6	22.2	1290	17.8	930
CFC-2	M 3	0.5	8.9	1065	6.7	890
	M 4	2.0	14.7	1955	13.3	1375
	M 5	3.6	17.8	3020	15.6	1600
CFA-1	M 3	0.3	-	-	6.2	555
	M 4	1.2	-	-	12.5	645
	M 5	2.16	-	-	17.8	755
CFA-2	M 3	0.3	-	-	6.7	845
	M 4	1.2	-	-	13.3	1065
	M 5	2.16	-	-	15.6	1330

1. Punch a mounting hole in the material.
2. Place the stud into the mounting hole.
3. Place the sheet material over the head of the fastener.
4. Insert the component, ensuring that the punch and anvil are parallel to each other, until the stud head is flush with the surface.



Anvil dimensions for concealed head studs CFC-1/ CFC-2/ CFA-1/ CFA-2

Series	Thread size	D [mm]
CFA / CFC	M 3	3.4
	M 4	4.4
	M 5	5.4

Captive® self-clinching fasteners

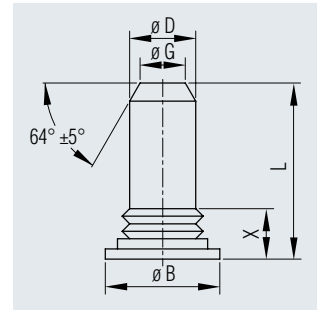



Self-clinching studs for metal

For sheeting as thin as 1.0 mm

Material

A2 stainless steel, 300 series, (CGS series)
Suitable for sheet hardness HRB 70 or less



Stud Ø D ±0.05 [mm]	Bore Ø +0.08 -0.00 [mm]	Material thickness [mm]	L [mm]	B [mm]	X [mm]	G [mm]		Stainless steel	
								Description	Article No.
3	3.5	1.0	8	5.20	2.29	2.05	6.4	CGS 3MM-8	-
			10	5.20	2.29	2.05	6.4	CGS 3MM-10	-
			12	5.20	2.29	2.05	6.4	CGS 3MM-12	358 496 000
			16	5.20	2.29	2.05	6.4	CGS 3MM-16	-
4	4.5	1.0	8	6.12	2.29	2.82	7.1	CGS 4MM-8	-
			10	6.12	2.29	2.82	7.1	CGS 4MM-10	358 495 000
			12	6.12	2.29	2.82	7.1	CGS 4MM-12	-
			16	6.12	2.29	2.82	7.1	CGS 4MM-16	-
5	5.5	1.0	10	7.19	2.29	3.53	7.6	CGS 5MM-10	358 494 000
			12	7.19	2.29	3.53	7.6	CGS 5MM-12	358 498 000
			16	7.19	2.29	3.53	7.6	CGS 5MM-16	-
			20	7.19	2.29	3.53	7.6	CGS 5MM-20	-
6	6.5	1.0	12	8.13	2.29	4.24	7.9	CGS 6MM-12	358 497 000
			16	8.13	2.29	4.24	7.9	CGS 6MM-16	-
			20	8.13	2.29	4.24	7.9	CGS 6MM-20	-

Technical specifications

Stud Ø D ±0.05 [mm]	Test material	Material hardness [HRB]	Installation force [kN]	Push-out [N]
3 MM	Aluminium	22	12	550
	Steel	65	22	970
4 MM	Aluminium	19	22	880
	Steel	66	26.4	1530
5 MM	Aluminium	18	28.6	1000
	Steel	60	35.2	1750
6 MM	Aluminium	18	30.8	1050
	Steel	62	39.6	2050

Guidelines only - the exact values will need to be calculated on the original component.