

**Flush Head  
Self-Clinching Studs**

**ELECTRONIC HARDWARE**



STEEL SELF-CLINCHING STUDS - 12-RIB STYLE WITH ANNULAR GROOVE									
Nominal Diameter & Thread Size	A		B	Minimum Sheet Thickness	Hole in Sheet (+0.08)	Distance to Center of Hole in Panel	Push-Out (N)	Torque-Out (N·m)	Pull Through (N)
	Head Diameter		Unthreaded Length						
	Max	Min	Max			Min			
M2.5 x 0.45	4.5	3.7	1.95	1	2.5	5.4	740	1.0	2800
M3 x 0.5	5.0	4.2	2.1	1	3	5.6	820	1.7	3840
M4 x 0.7	6.3	5.5	2.4	1	4	7.2	1780	4.2	5650
M5 x 0.8	6.9	6.1	2.7	1	5	7.2	2000	6.5	6270
M6 x 1	8.6	7.8	3	1.6	6	7.9	2560	11.3	11,300
M8 x 1.25	10.0	9.2	3.7	2.4	8	9.6	2890	19.2	15,450
<b>Tolerance on Length</b>				± 0.4					

<b>Description</b>	A fastener with unified thread pitch and a cylindrical, low profile head with small, rectangular ribs protruding from the underside of the head. The top of the head is flat and is flush with the mating surface when installation is complete. Below the ribs and above the first thread is an annular groove which helps to hold the fastener in position.
<b>Applications/ Advantages</b>	Intended for metal panel-to-panel applications and well-suited for use in printed circuit boards. A hole is pierced into the circuit board and the unit it is attached to. The stud is inserted using a hand press or by hand, applying parallel squeezing forces. A hex nut is twisted onto the stud, securing it from the back. As the nut is tightened, the ribbed stud head grips the front panel to secure the application from the front as well, eliminating the need for welding. As the application force is applied, part of the sheet cold flows into an undercut under the head, making the fastener an integral part of the sheet.
<b>Material</b>	Steel Low carbon steel
<b>Heat Treatment</b>	Clinch studs shall be case hardened, oil quenched and tempered.
<b>Case Hardness</b>	Rockwell C 45 minimum
<b>Core Hardness</b>	Rockwell C 29 - 38
<b>For Use In...</b>	...materials with a hardness of Rockwell B80 or less.
<b>Finish</b>	Steel clinch studs are usually furnished with a zinc plating.