

Tinnerman® Stud Receivers One-Piece, Self Locking

The dimensions of the above parts are envelope dimensions only. For complete design information, please request a blueprint from your Tinnerman representative or the Tinnerman Engineering department.

Metric parts listed in italic>



Ball-Stud Fasteners

Ball-Stud Speed Clips were originally developed as spring catch fasteners on aircraft access doors, inspection panels, sealing strips and other similar assemblies requiring repeated disengagement. Their versatility soon found them used extensively in other fields where they secured kitchen cabinet doors, removable toe plates, electronic cabinets, protective covers, etc. There is no direct contact between the stud and panel surfaces. This eliminates wear or chipping of painted or porcelain surfaces and resulting corrosion. When latched, the spring legs of the **Speed Clip** continually bear inward on the spherical or serrated studs, holding the latched unit snug against the panel.

Where adjustability or wide latching ranges are required, the serrated stud is used. They are mainly used for attaching compressionable materials such as rubber, fabric, insulation, etc.

Pull-out tensions, depending on the material thickness of the **Speed Clip** and the stud used, can be provided from 3.5 pounds to 50-65 pounds. Various panel thicknesses are accommodated by varying the stud lengths.

How to apply Ball-Stud Speed Clip Fasteners



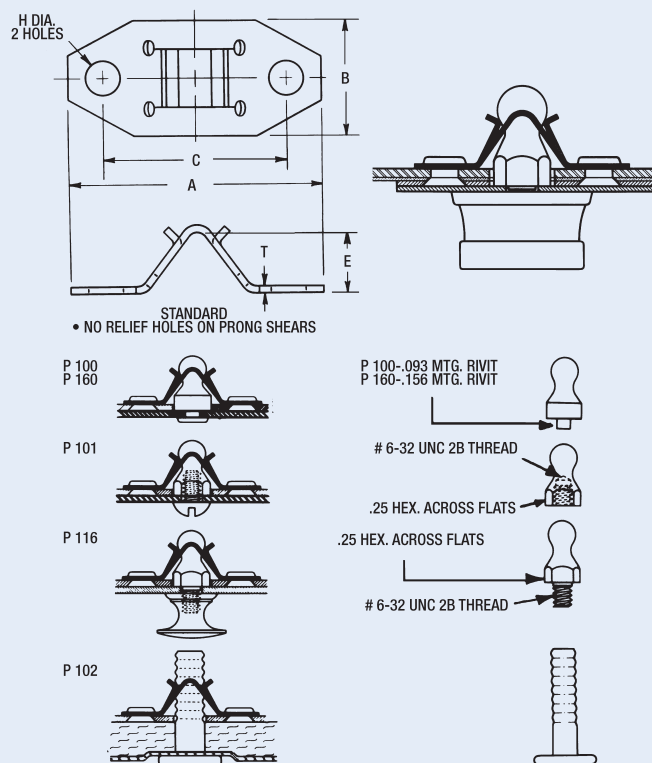
The **Speed Clip** is riveted in position on the panel with either plain or 100 degree counter-sunk head rivets.



The **Ball-Stud** is riveted, bolted or screwed into the mating panel.



The panels are snapped together. Owing to the resiliency of the spring legs, misalignment resulting from a normal amount of manufacturing tolerances can be readily absorbed.



Request further Stud information from your Eaton representative.

| H Hole Dia. | Des. Variation | Pull-Out Tension Stud Type | | A Length | B Width | C Ctr. to Ctr. | E Height | T Mat'l. Thick. | Part Number |
|-------------|----------------|----------------------------|----------|----------|---------|----------------|----------|-----------------|--------------|
| | | Ball | Serrated | | | | | | |
| .105 | Std. | 3.5 lbs. | 5 lbs. | .970 | .440 | .685 | .220 | .012 | C4893-012 |
| | Std. | 8 lbs. | 9 lbs. | .970 | .440 | .685 | .220 | .017 | C4893-017 |
| | Std. | 12 lbs. | 13 lbs. | .970 | .440 | .685 | .220 | .022 | C4893-022 |
| | Std. | 18 lbs. | 24 lbs. | .970 | .440 | .685 | .220 | .028 | C4893-028 |
| | Std. | 30 lbs. | 30 lbs. | .970 | .440 | .685 | .220 | .031 | C4893-031 |
| .135 | Std. | 3.5 lbs. | 5 lbs. | .970 | .440 | .685 | .220 | .012 | C1663-012 |
| | Std. | 8 lbs. | 9 lbs. | .970 | .440 | .685 | .220 | .017 | C1663-017 |
| | Std. | 8 lbs. | 9 lbs. | .970 | .440 | .685 | .220 | .017 | C1663SS-017 |
| | Std. | 12 lbs. | 13 lbs. | .970 | .440 | .685 | .220 | .022 | C1663-022 |
| | Std. | 18 lbs. | 24 lbs. | .970 | .440 | .685 | .220 | .028 | C1663-028 |
| | Std. | 18 lbs. | 24 lbs. | .970 | .440 | .685 | .220 | .028 | C1663SS-028 |
| | Std. | 30 lbs. | 30 lbs. | .970 | .440 | .685 | .220 | .031 | C1663-031 |
| .140 | A | 17 lbs. | 18 lbs. | 1.060 | .440 | .750 | .240 | .020 | C6273-020 |
| | A | 21 lbs. | 22 lbs. | 1.060 | .440 | .750 | .240 | .022 | C6273-022 |
| .145 | Std. | 3.5 lbs. | 5 lbs. | .970 | .440 | .685 | .220 | .012 | C4883-012 |
| | Std. | 8 lbs. | 9 lbs. | .970 | .440 | .685 | .220 | .017 | C4883-017 |
| | Std. | 12 lbs. | 13 lbs. | .970 | .440 | .685 | .220 | .022 | C4883-022 |
| | Std. | 18 lbs. | 24 lbs. | .970 | .440 | .685 | .220 | .028 | C4883-028 |
| | Std. | 30 lbs. | 30 lbs. | .970 | .440 | .685 | .220 | .031 | C4883-031 |
| .156 | Std. | 50-65 lbs. | 40 lbs. | .970 | .440 | .700 | .220 | .031 | C40488-031 • |

• No relief holes on prong shears.