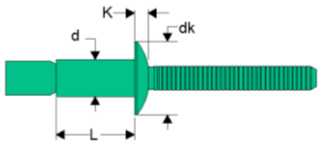
# STRUCTURAL RIVET

Body: ALUMINIUM

Mandrel: Aluminium

Head: Dome

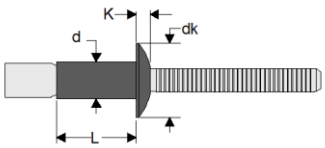



| Code | Diameter(d) X Length(L) (mm) | Head Diameter (Ave) (dk) (mm) | Head Thickness (Max) (K) (mm) | Hole Size (mm) | Grip Range (mm) | Tensile Strength (N) | Shear Strength (N) |
|---|---|---|---|---|---|---|---|
| **AA-C-LOCK** | 4.8 x 14 | 10.0 | 2.3 | 5 | 1.58-11.10 | 2002 | 2446 |
| | 6.4 x 15 | 13.0 | 2.9 | 7 | 2.03-9.53 | 3692 | 5649 |
| | 6.4 x 19 | | | | 2.03-15.87 | | |

Body: STEEL

Mandrel: Steel

Head: Dome

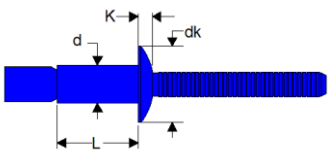



| Code | Diameter(d) X Length(L) (mm) | Head Diameter (Ave) (dk) (mm) | Head Thickness (Max) (K) (mm) | Hole Size (mm) | Grip Range (mm) | Tensile Strength (N) | Shear Strength (N) |
|---|---|---|---|---|---|---|---|
| **SS-C-FIX** | 4.8 x 14 | 10.0 | 2.3 | 5 | 1.63-11.10 | 4450 | 5785 |
| | 6.4 x 15 | 13.0 | 2.9 | 7 | 2.03-9.53 | 8230 | 10675 |
| | 6.4 x 19 | | | | 2.03-15.87 | | |
| **SS-C-LOCK** | 9.8 x 20 | 19.0 | 4.6 | 10 | 3.05-15.88 | 16010 | 26240 |

Body: STAINLESS STEEL

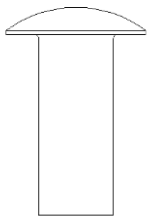
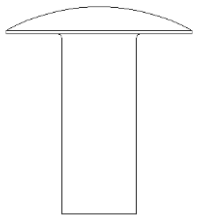
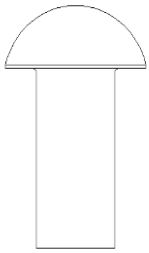
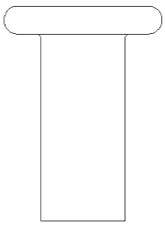
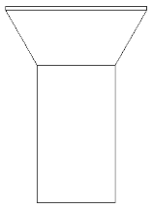
Mandrel: Stainless Steel

Head: Dome




| Code | Diameter(d) X Length(L) (mm) | Head Diameter (Ave) (dk) (mm) | Head Thickness (Max) (K) (mm) | Hole Size (mm) | Grip Range (mm) | Tensile Strength (N) | Shear Strength (N) |
|---|---|---|---|---|---|---|---|
| **BB-C-FIX** | 4.8 x 14 | 10.0 | 2.3 | 5 | 1.63-11.10 | 4450 | 5785 |
| | 6.4 x 14 | 13.0 | 2.9 | 7 | 2.03-9.53 | 8230 | 10675 |
| | 6.4 x 19 | | | | 2.03-15.87 | | |

# SOLID RIVET

| Oval | Mushroom | Round | Flat | CSK |
|---|---|---|---|---|
|  |  |  |  |  |

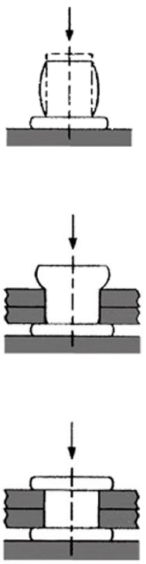
| | Shank Diameter (mm) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Material** | 3 | 4 | 4.8 | 6 | 6.35 | 7 | 8 | 10 |
| **STEEL** | • | • | • | • | • | • | • | • |
| **ALUMINIUM** | • | • | • | • | • | | • | |
| **COPPER** | • | • | • | • | | | | |
| **BRASS** | • | • | • | • | • | | | |
| **STAINLESS STEEL** | | | • | | | | | |

| | |
|---|---|
| **Plating** | **Zinc and Nickel** |
| **Hole Size (mm)** | Diameter of the rivet + 0.1 mm |
| **Recommended Rivet Length (mm)** | Material thickness + Diameter of the Rivet |

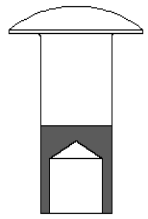
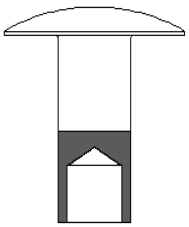
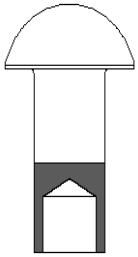
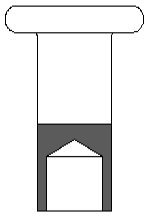
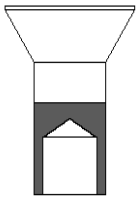
## SOLID IMPACT RIVETING

In solid impact riveting, a compressive axial load is applied to the end of the rivet shank. This causes the rivet shank to swell through out its length as it shortens under the load. The rivet shank continues to expand, until the hole in the parts being assembled restrict it from further expansion. The unrestricted rivet end then expands, forming the rivet clinch, as shown in the sequence to the right.

This is an excellent method of permanently assembling solid materials.



# SEMI-TUBULAR RIVET

| Oval | Mushroom | Round | Flat | CSK |
|---|---|---|---|---|
|  |  |  |  |  |

| | Shank Diameter (mm) | | | | |
|---|---|---|---|---|---|
| **Material** | 3 | 4 | 4.8 | 6 | 6.35 |
| **STEEL** | • | • | • | • | • |
| **ALUMINIUM** | • | • | • | • | • |
| **COPPER** | • | • | • | • | |
| **BRASS** | • | • | • | • | • |
| **STAINLESS STEEL** | | | • | | |

| | |
|---|---|
| **Plating** | **Zinc and Nickel** |
| **Hole Size (mm)** | Diameter of the rivet + 0.1 mm |
| **Recommended Rivet Length (mm)** | Material thickness + 2 to 3 mm (depends on the rivet diameter) |

## SEMI-TUBULAR IMPACT RIVETING

Semi-tubular rivets are inserted in the same basic manner as solid rivets. The way the rivet is formed and its affect on the parts being assembled, however, are quite different.
In semi-tubular impact riveting, a compressive axial load is applied to the end of the tubular rivet shank with a specially shaped form tool. This causes the rivet end to flare as it follows the shape of the tool.
The rivet continues to flare and roll, until the end has rolled back against the surface of the work piece.
The parts being assembled are (typically) slightly compressed under this load. Most of the joint strength is compressive between the rivet head and the rivet clinch (formed head). Rivet shank expansion, like that required for successful solid impact riveting, is minimal. Rivet insertion force is typically less than 40% of that required for a solid rivet of the same shank diameter and material.