Henrob T-Rivet

A new rivet that enables consistent joint quality in multiple layers of high-strength aluminum

Self-pierce riveting is rapidly becoming an invaluable solution for high-volume car production. Manufacturers looking for strong and efficient joints in lightweight material – like 6000 grade aluminum – now have a reliable solution in the Henrob T-Rivet.

With a fully tubular design, the T-Rivet reduces the amount of material that is displaced during the riveting process – respecting the low ductility of aluminum to avoid tearing. It is designed for joining thick gauges and multiple layers of high-strength aluminum alloys.

Key features

- Can be used with existing equipment. No further investment is needed.
- The tubular design of the T-rivet displaces less material - perfect for joining low-ductility aluminum.
- Consistently joins multi-layer aluminum and thick stacks.
Henrob T-Rivet
Facing challenges in aluminum

A switch from steel to the lighter aluminum improves fuel efficiency and boosts performance in modern vehicles. However, working with aluminum has presented a number of challenges to the industry – especially when it comes to joining thick gauges and multiple layers of high-strength aluminum in safety critical areas.

Low ductility

Unlike welding, a cold joining technology like self-pierce riveting is highly suitable for joining aluminum. Using conventional semi-tubular rivets and deep dies often lead to non-uniform flaring or button tearing. This can cause corrosion and a weak joint due to the low ductility of aluminum and its tendency to crack when deformed to a certain point.

Multi-layer joining

The Henrob T-Rivet is tailored for joining high-strength aluminum alloys like aluminum 6000. With a fully tubular design the T-Rivet reduces the amount of material that is displaced during the insertion and needs to be accommodated by the die. A special low-friction coating helps the aluminum to flow up and fill the bore. This enables to consistently join even thick gauges and up to four layers of high-strength aluminum.

Features in brief:

- Used primarily in the automotive industry
- Developed for lightweight design
- Joins high-strength aluminum
- Enables multi-layer stacks
- Best used with shallow dies
- Runs on 5 mm riveting equipment
Henrob T-Rivet

Part number build up

- **Shank Ø** – ‘5’ – 5 mm nom.
- **Material** – ‘4’ – Type 10 Steel
- **Head** – ‘A’ – Rad. C’sink
- **Coating** – ‘HL0’ – Zinc/Tin+Lube

Part Number: T50942AHL0

- **Geometry** – ‘T’ – T-rivet
- **Effective Lengths** –
  - ‘07’ – 7.0 mm
  - ‘0M’ – 7.5 mm
  - ‘08’ – 8.0 mm
  - ‘0A’ – 8.5 mm
  - ‘09’ – 9.0 mm
  - ‘0C’ – 9.5 mm
  - ‘10’ – 10.0 mm
  - ‘1C’ – 10.5 mm
  - ‘11’ – 11.0 mm
- **Nominal Hardness** –
  - ‘2’ – 410 Hv
  - ‘4’ – 480 Hv
  - ‘6’ – 555 Hv
- **Packaging/Quantity** –
  - ‘A***’ – Loose in P-Y Bottles
  - ‘L***’ – Loose in Bags
  - ‘Z***’ – Sprocket Tape Spool

(** quantity depends on rivet Ø, length)