



PENTADRILL

Flow forming screw for sheet metal

Main Properties

- For stamped holes, rims and blind holes in steel or alloy sheet metals.
- The flow forming tip heats up and softens the sheet metal momentarily. The forming of the hole and the rim starts in the heated material and the thread forming process follows.
- The betzer pentadrill screw is case hardened and tempered.

Applications

- Car body
- Industrial gate

Features

Head shaped for easy assembly

e.g. pan flange head with six-lobe recess

Metric thread

secure hold in the component due to the positive fit in the self-formed thread

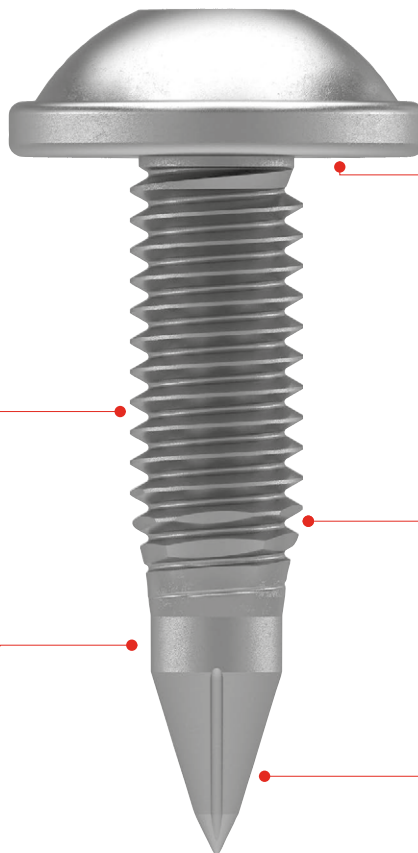
Cylindric shank section

enables rectangular positioning in the rim

Optional: groove under head for optimal head pressing

Pentagon flats to form the thread in the rim

Flow forming tip with special grooves to increase heat friction



Economic Advantages

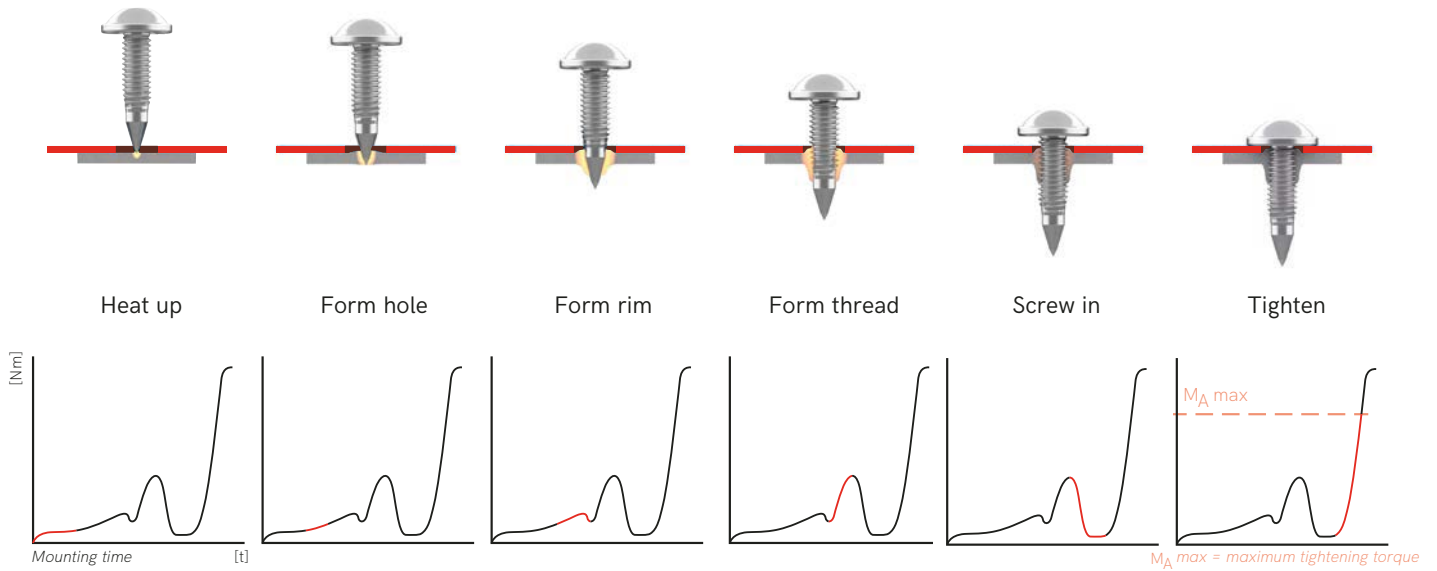
- Economized production sequence by direct mounting without stamping.
- No counternuts or other fasteners required. Reduced number of assembly components.
- Short assembly time when using high-speed screw drivers (approx. 3000 rpm).
- Reduced overall weight of the component or subassembly.



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Assembly Process

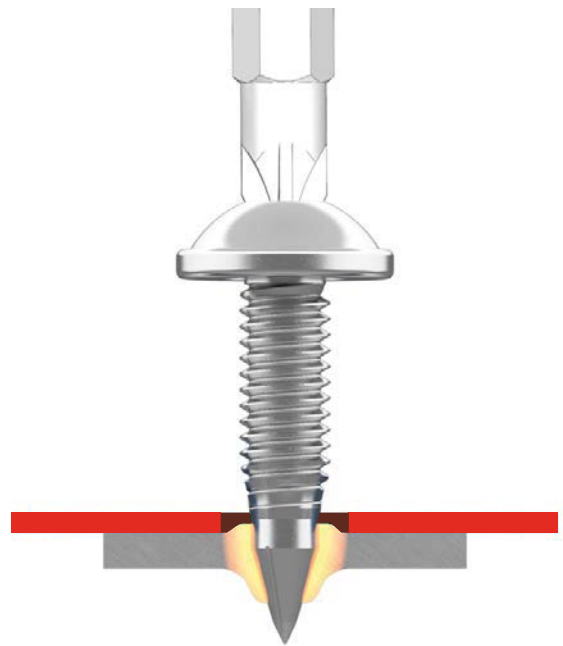


Installation Instructions

- Use of high-speed screw drivers over 2000 rpm recommended.
- During assembly vertical pressure has to be exerted to heat up the sheet metal.
- The betzer pentadrill screw can be removed and retightened repeatedly.
- Subsequent screw fastening with metric screws possible.
- Especially suitable for automatic assembly.

Precision Connects

- Manufacture of large series of high-standard screws and cold formed parts
- M1.4- M12
Wire diameter 1.0 - 11.8
- Shank lengths 2 mm - 160 mm
- Thread forming screws for plastics, metals and light metals
- Screws for thin sheet metal
- Fasteners for automatic assembly



Heating of the sheet metal with high-speed screw driver and vertical pressure (Example)