



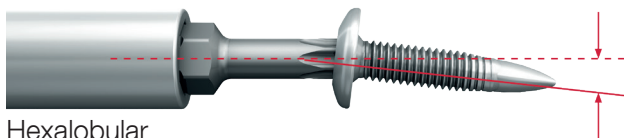
TOBI® Drive-System

The powerful screw drive concept

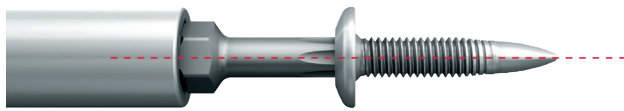
EJOT®

Functionality

The TOBI® Drive-System is a completely new developed drive concept. Due to the special geometry between the drive and the bit, important requirements can be combined: When inserting the bit into the screw head drive, the axial alignment of the system simplifies the handling even in areas that are difficult to access. The large concave and small convex radii of the drive as well as a taper towards the top edge of the bit, lead to a slight clamping effect on the screw so that it cannot fall out of the bit. This leads to safe working in all positions, for example installing overhead or fastening components in areas that are difficult to access – even for automated fastening processes.



Hexalobular



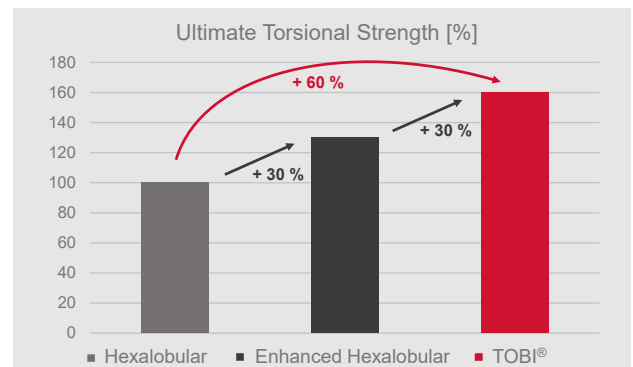
TOBI® Drive-System

Sustainability

The vacuum technology previously used in assembly to suck in the screw into the mouthpiece is slow, energy-intensive, and has only limited process reliability. The TOBI® Drive-System also holds screws made of non-magnetic materials securely in all positions without complex system technology. This leads to significant cost and time savings and reduces the carbon footprint.

Improved ultimate torsional strength [%] of TOBI® Drive tools

- > Much higher torque resistance due to improved tension distribution
- > **60%** higher than hexalobular / **30%** higher than enhanced hexalobular

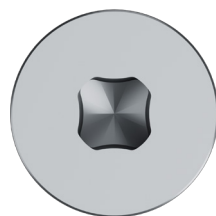


Overview of different TOBI® variations



TOBI® (6-lobe)

- > Size: B3-B80
- > Standard TOBI® drive



TOBI® Q (4-lobe)

- > Size: ≤ B3
- > 4-winged TOBI® drive, specially designed for micro screws



TOBI® Secure

- > Size: B8-B80
- > TOBI® tamper-resistant drive, avoids accidental disassembly of the screw

Compatible with other 6-lobe bits but without the benefits of the TOBI® Drive-System

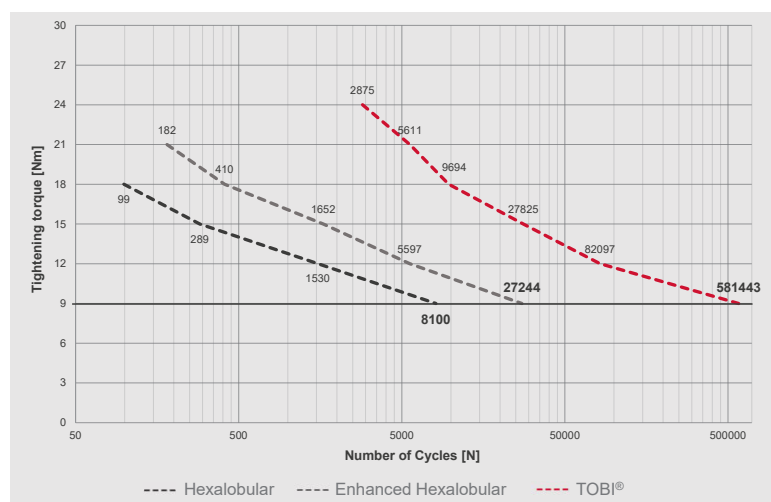
Use in industrial assembly

The TOBI® Drive-System prevents disruption times during screw assembly. Worn bits cause enormous tool costs, every tool change means machine shutdown. The large contact surface between bit and drive ensures a lower surface pressure and therefore less wear on the tools. The system allows to pick the screw with one hand, while the other hand can be used to hold the tool during the assembly process. Easy insertion of the screw is ensured by the axial alignment.

Lifetime of the drive tools:

Comparison of the drive types TOBI®, Hexalobular and enhanced Hexalobular

The diagram visualizes the amount of possible screw connections until the tool breaks or wears out compared to the applied torque. Particularly noteworthy is the TOBI® drive, which offers a significantly longer bit life due to the improved stress distribution. The X axis shows the number of possible fastening cycles, while the Y axis shows the tightening torque. The tightening torque differs depending on the application. In this case, a tightening torque of 9 Nm is assumed for a drive size B25, which is typically used with an M5 screw. This means a hexalobular bit would have to be changed after 8,100 repeat assemblies, enhanced hexalobular bit after 28,000 assemblies. This is where the TOBI® Bit stands out clearly, with an extraordinary bit life of 580,000 screw connections. This results in considerable advantages for the end user, in particular lower costs for drive tools as well as a significant increase in productivity due to less machine shutdowns.



Advantages

- > Self-retaining effect prevents the screw from falling off
- > This ensures secure fastening of components in areas that are difficult to access
- > Axial alignment of the screw simplifies handling
- > Simplified manual / automatic assembly process
- > Increased contact surface between bit and drive minimizes tool wear
- > Ideal also for non-magnetic screws (e.g. stainless steel, aluminium, titanium)
- > Conservation of resources by eliminating vacuum technology
- > Disassembly with standard hexalobular bits possible



Further information at: www.ejot.com/industry or contact Michael Schmidt: phone: +49 2752 109-256, email: mschmidt@ejot.com