

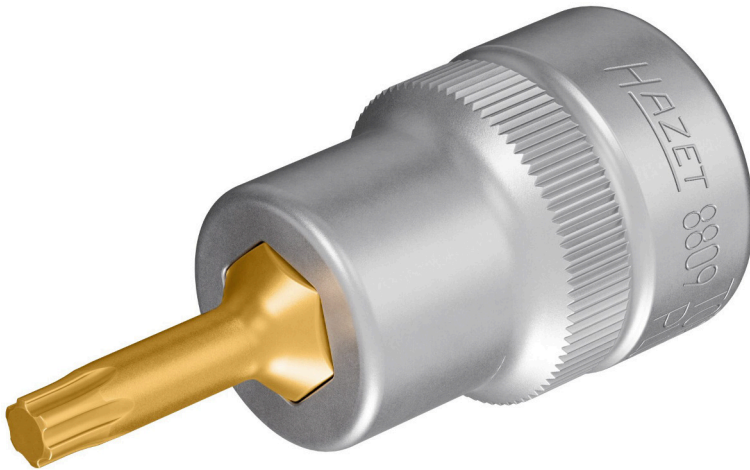
Product data sheet

8809-20 IP

EAN-No. 4000896282722



Size 20IP · ·



- Short design
- With knurling
- Locking ball
- Surface:
- Made in Germany
- Drive:
- Output:
- Wrench size: · 20IP
- Dimensions: 43.5 mm
- Length l1: 17 mm
- For manual operation

TORX PLUS® is a further development of the TORX® drive system. Compared with TORX®, this profile has larger and flatter flanks, as well as an increased contact area between the tool and the screw. The optimised force distribution results in a precise and stable grip. This allows torque levels up to 25 % higher to be transmitted. At the same time, this reduces the risk of the "cam-out" effect – where the tool slips out of the screw head unintentionally whilst being operated. The larger contact area reduces the stress at any one point and thus minimises wear on the tool and the screw. This ensures a longer service life and greater control during operation.

Advantages of the TORX PLUS® profile

- Up to 25 % higher torque transmission
- Optimal force distribution thanks to larger and flatter flanks
- Increased contact area between the tool and the screw
- Precise and stable force transmission
- Reduced risk of the cam-out effect
- Reduced wear on the tool and screw
- Significantly longer service life
- Greater control when operating

TORX PLUS® is used in a range of sectors, including industry, cycling, aviation and the automotive industry. Typical applications include mechanical assemblies, production plant, e-bike components, structural bolted joints, maintenance access points, drive components, braking systems and safety-critical vehicle components.

TORX PLUS® application examples

In industrial manufacturing, TORX PLUS® is used, amongst other things, on CNC machines, milling heads, turning tools and drill bits. A typical application is the clamping of indexable inserts.

- CNC machines
- Milling heads

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- Turning tools
- Core bits
- Tips
- Machine assemblies
- Production facilities
- Automated manufacturing lines

Sizes: TORX PLUS® 8IP · 10IP · 15IP

Bicycle and e-bike

In the bicycle and e-bike sector, TORX PLUS® is typically used to attach the 4th and 5th generation BOSCH Performance Line CX electric motors to the bicycle frame. The motor mounting using TORX PLUS® 40IP is tightened to a tightening torque of 20 Nm.

- Motor mounting on the bicycle frame, e.g. BOSCH Performance Line CX, Gen. 4 and 5
- Electric motor assembly plate
- Motor cover on the electric motor housing
- Chain wheel
- Brake disc with 6-hole mounting
- Brake calliper
- Battery holder and frame adapter

Sizes: TORX PLUS® 20IP · 25IP · 30IP · 40IP

Aviation

In the aviation industry, TORX PLUS® is used, amongst other things, for structural fastenings, maintenance access points, cladding and electronic components. Examples include maintenance hatches on the BOEING 787 Dreamliner fitted with TORX PLUS® 27IP, and fastenings on lighting systems for wing, taxi and nose turn-off lights fitted with TORX PLUS® 8IP.

- Structural screw connections
- Avionics fastenings
- Maintenance access and maintenance hatches
- Interior components
- Housing fastenings
- Light covers
- Freight hatches
- Auxiliary equipment near the drive
- Electronic modules and sensors
- Drive cladding
- Rotor blade end caps
- Composite structure panels
- Avionics shafts and cockpit panels

Sizes: TORX PLUS® 8IP · 10IP · 15IP · 27IP

Automotive

In the automotive sector, TORX PLUS® is used in, amongst other things, drive, chassis, bodywork and safety systems. Examples include the cardan shaft on the VW Amarok, which uses TORX PLUS® 45IP, as well as seat belt anchor points and buckles on the vehicle floor, for example on the FORD Transit MK8 and FORD Focus, which use TORX PLUS® 55IP.

- Cardan shaft
- Seat belt anchor
- Seat console
- Seat belt buckles
- Cable rack and frame
- Dual mass flywheel
- Cylinder head bolts
- Camshaft adjuster
- Bearing cap

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- Gearbox housing
- Calliper anchor bracket
- Wheel hubs and compact wheel bearings
- Steering gear fastening
- Door hinges and tailgates
- Body trim
- Sensors and control units
- E-drive housing
- Battery housing
- HV structural components
- Airbag modules
- Seat belt tensioner

Sizes: TORX PLUS® 45IP · 50IP · 55IP

Important information

With TORX PLUS® applications, the appropriate TORX PLUS® tool must be used. This is the only way to make full use of the profile's benefits and avoid unnecessary wear on the tool and screw. TORX PLUS® screws can be used in an emergency with TORX® tools. However, this results in an increased level of wear. Conversely, using TORX® screws with TORX PLUS® tools is not possible.

Order Number

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