Version published 01/2020 www.arnold-fastening.com



# TORX PLUS®

## The drive system that is gentle on tools

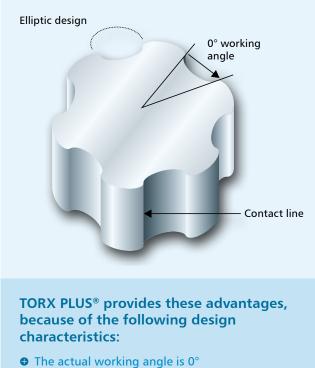
- 100% longer bit life
  Optimum tool seating when power-drive
- 20 % better torsion resistance in driving tools
- Compatible with the conventional TORX drive system

www.arnold-fastening.com



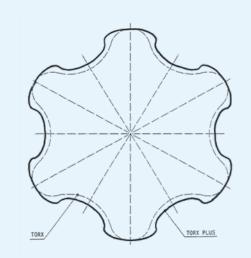
### The new TORX PLUS® drive system gives up to 100% longer service life for screwdriver bits

### TORX PLUS<sup>®</sup> with its special engineering design features.



- Larger cross-section on cam faces
- Lower chamfering on application of force

Where TORX PLUS<sup>®</sup> drivers are used the head height can be minimised, thus reducing the overall weight of the component. This is made possible with the improved force application process, which ensures decreased penetration depth.



### Further advantages of the TORX PLUS<sup>®</sup> driver system:

- 25% improvement on average torsion resistance in screwdriving tools
- Improved tool seating when power-driving the screw
- Compatible with existing tools on TORX<sup>®</sup> screwdriving system, so no maintenance problems with existing TORX<sup>®</sup> applications

#### Calculation basis:

A ratio of minimum 1.0 to 1.0 between the thread tension surface and head tension surface was established as the standard head height combined with TORX<sup>®</sup> with regard to an optimal residual base thickness.



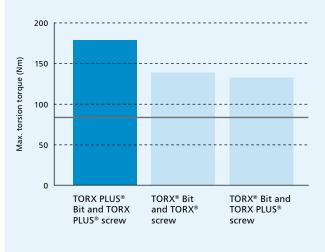
### Of course TORX PLUS<sup>®</sup> also provides the well-known advantages that distinguished the TORX<sup>®</sup> driver system.

- Low axial forces required
- Fatigue-free working
- No damage to surface
- High breakaway torques
- No tool slippage

### From this we derive the following assembly advantages

- Downtime minimised due to longer tool life
- Improved assembly reliability between tightening and breaking torques
- Screwing conditions improved with improved assembly tool seating

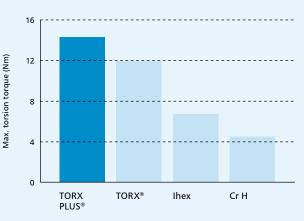
### Maximum force transfer of different screwdriving systems



 Typical tightening torque for a 7/16" screw quality 10.9. Test results from investigations made on TORX PLUS® 50IP and TORX® t50.

TORX PLUS<sup>®</sup> gives greater assembly reliability – even when the screw is undone.

### Different types of force application compared



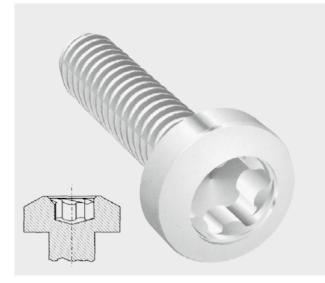
Comparison on a 4.8 mm screw with fillister countersunk head at contact pressure of 23 N.

#### **TORX PLUS® transfers higher torques.**

TORX®, TORX PLUS® and AUTOSERT® are registered trademarks of Camcar, Division of Textron, Rockford IL.

## TORX PLUS<sup>®</sup> with AUTOSERT<sup>®</sup> special shape for automated assembly

You know about the problem of constantly rotating bits on the assembly line often causing malfunctions because the screwdrivers do not engage correctly. With the recently developed AUTOSERT® characteristic the screwdriver can rotate at a speed of 700 rpm, and with reliable engagement of bit with screw. With manual assembly jobs AUTOSERT® eases the screwdriving task with angle and axis offset between the bit and the screw.



### Other versions of the TORX PLUS® drive system



SAFETY TORX PLUS® Safety driver with 5 engagement nubs and safety taps



#### **Combi TORX PLUS®**

Can be deployed universally, because two screwdriving systems are possible

### Minimum transferable torque for tools in Nm

Size	TORX®	TORX PLUS®
10	4.52	5.42
15	7.69	9.62
20	12.66	16.10
25	18.99	23.50
30	37.40	47.20
40	65.08	82.10
50	158.75	194.50

#### ARNOLD FASTENING SYSTEMS Inc.

1873 Rochester Industrial Ct., Rochester Hills, MI 48309-3336 USA T +1248997-2000 F +1248475-9470

#### ARNOLD UMFORMTECHNIK GmbH & Co. KG

Carl-Arnold-Straße 25 74670 Forchtenberg-Ernsbach Germany T +497947 821-0 F +497947 821-111

#### ARNOLD UMFORMTECHNIK GmbH & Co. KG

Max-Planck-Straße 19 74677 Dörzbach Germany T +497947821-0 F +497947821-111

#### ARNOLD FASTENERS (SHENYANG) Co., Ltd.

No. 119-2 Jianshe Road 110122 Shenyang China T +862488790633 F +862488790999

TORX PLUS® and TORX® sizes for threaded screws

Nominal Ø	TORX PLUS	TORX®		
M3	10 IP	T10		
M3.5	15 IP	T15		
M4	20 IP	T20		
M5	25 IP	T25		
M6	30 IP	Т30		
M8	40 IP	T40		
M10	50 IP	T50		