TAPTITE 2000® Thread-rolling bolts and screws

General
Due to their specific triangular (trilobular) cross section and flowing transitions, TAPTITE thread-rolling bolts and screws form the internal screw thread in the side of a predrilled or punched hole without creating swarf; tapping is dispensed with and no annoying and sometimes unallowable swarf is created.
TAPTITE 2000® bolts and screws now, in addition to the proven advantages of their standard predecessor, have an innovative thread design: the Radius Profile™
This results in a new generation of fasteners with excellent mechanical, assembly and ergonomic characteristics; as yet unsurpassed by any other technology.

Applications
TAPTITE 2000® thread-rolling bolts and screws can be used in all ductile metals up to 500 N/mm² or 150 HB.

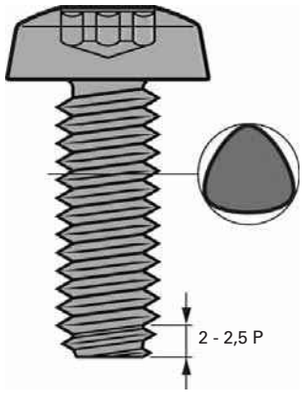
Load
Due to the cold hardening of the material, the uninterrupted fibre structure and the full flank overlapping, the connection can accommodate considerably higher forces, usually a smaller size can be used than for a tapped thread; therefore a lighter design. Moreover, the special Radius Profile™ ensures a low insertion torque, while the preloading force and pull-out force have increased; thus a higher safety margin.

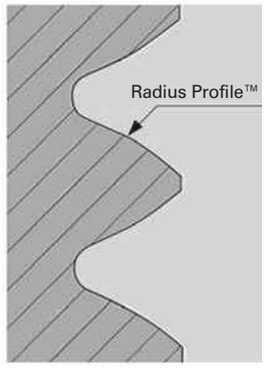
Locking
Due to the clamping action of the material on the thread flanks, the connection is self-locking; no additional locking agents are required.

Formed thread
The ***TAPTITE 2000®*** thread rolling bolts and screws form a normal ISO metric thread, into which other metric fasteners with the usual 6h tolerance (according to ISO 965) can be screwed.

Drive, head style and point length
All usual drive options and head styles are possible. Serrations under the head, a colour, an attached washer or pre-coated adhesive or seals are also possible.
The conical screw thread point length of this new generation of ***TAPTITE 2000®*** thread-rolling bolts and screws has been reduced to approximately 2 – 2.5 P (was at the maximum 4P).

Material and surface coating
TAPTITE 2000® thread-rolling bolts and screws are made of case hardening steel and are case hardened (min. 450 HV0.3), while the core has retained its ductility (300-350 HV10). As standard, the bolts/screws are Cr^{6+} free electro-galvanized. Other surface coatings or materials are possible.





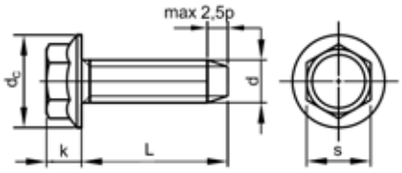
Design values for TAPTITE 2000® thread-rolling bolts and screws (1)

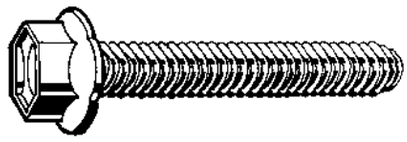
d	M2,5	M3	M3,5	M4	M5	M6	M8
Insertion torque (Nm)	**0,4**	0,8	1,3	2,0	3,2	6,4	16,0
Tightening torque maximum (Nm)	**0,8**	1,5	2,5	3,7	7,0	12,0	30,0
Failure torque min. (Nm) (inserted)	**1,2**	2,0	3,3	4,8	10,0	16,0	41,0
Preloading force during assembly (kN)	**---**	1,9	2,6	3,4	5,6	7,8	15,0

(1)The specified values apply to St 37 steel for an insertion length 1 x screw thread diameter

Hexagon head thread rolling screw with flange

DIN ≈7500





Technical data

d	P	k (max.)	s	d_c (max.)
M3	0,5	2,58	5,5	6,9
M4	0,7	3,58	7	8,9
M5	0,8	4,45	8	10,4
M6	1	5,2	10	13
M8	1,25	7	13	17

- The nominal length (L) is with tolerance js15.

67020 TAPTITE 2000® Hexagon head thread rolling screw with flange **J05A**

Thread Metric thread
Material Steel
Surface treatment Zinc plated
Packaging Standard

TAP TITE®

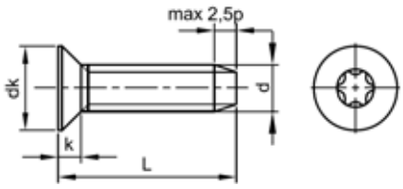
6

d x L	✉	Art.number	d x L	✉	Art.number	d x L	✉	Art.number
M3X10	1000	67020.030.010	M5X10	500	67020.050.010	M6X20	500	67020.060.020
M4X6	1000	67020.040.006	M5X12	500	67020.050.012	M6X25	500	67020.060.025
M4X8	1000	67020.040.008	M5X16	500	67020.050.016	M6X30	500	67020.060.030
M4X10	1000	67020.040.010	M5X20	500	67020.050.020			
M4X12	1000	67020.040.012				M8X15	500	67020.080.015
M4X16	1000	67020.040.016	M6X10	500	67020.060.010	M8X20	500	67020.080.020
			M6X12	500	67020.060.012	M8X25	500	67020.080.025
M5X8	500	67020.050.008	M6X16	500	67020.060.016			

- Warning: electro-galvanizing of these products may cause hydrogen embrittlement.

Countersunk head thread rolling screw with Torx® recess

DIN ≈7500-1



Technical data

d	P	d_k	k (max.)	No. Torx®
M3	0,5	5,6	1,65	10
M4	0,7	7,5	2,2	20
M5	0,8	9,2	2,5	25
M6	1	11	3	30
M8	1,25	14,5	4	40

- The nominal length (L) is with tolerance js15.

67080 TAPTITE 2000® Countersunk head thread rolling screw with Torx® recess **J05A**

Thread Metric thread
Material Steel
Surface treatment Zinc plated
Packaging Standard

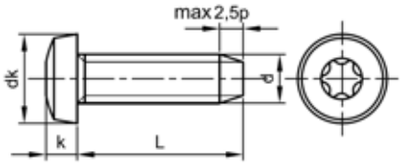
TAP TITE®

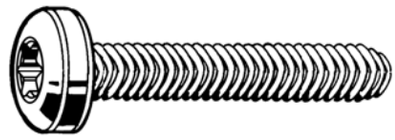
d x L	✉	Art.number	d x L	✉	Art.number	d x L	✉	Art.number
M3X8	1000	67080.030.008	M4X25	1000	67080.040.025	M6X16	500	67080.060.016
M3X10	1000	67080.030.010				M6X20	500	67080.060.020
M3X12	1000	67080.030.012	M5X10	500	67080.050.010	M6X25	500	67080.060.025
M3X16	1000	67080.030.016	M5X12	500	67080.050.012	M6X30	500	67080.060.030
			M5X16	500	67080.050.016	M6X40	500	67080.060.040
M4X10	1000	67080.040.010	M5X20	500	67080.050.020			
M4X12	1000	67080.040.012	M5X25	500	67080.050.025	M8X40	500	67080.080.040
M4X16	1000	67080.040.016	M5X30	500	67080.050.030			
M4X20	1000	67080.040.020						

- Warning: electro-galvanizing of these products may cause hydrogen embrittlement.

Raised cheese head thread rolling screw with Torx® recess

DIN ≈7500-1





Technical data

d	P	d_k	k (max.)	No. Torx®
M2,5	0,45	5	2,12	8
M3	0,5	6	2,52	10
M3,5	0,6	7	2,82	15
M4	0,7	8	3,25	20
M5	0,8	10	3,95	25
M6	1	12	4,75	30

- The nominal length (L) is with tolerance js15.

67155 TAPTITE 2000® Raised cheese head thread rolling screw with Torx® recess **J05A**

Thread Metric thread
Material Steel
Surface treatment Zinc plated
Packaging Standard

TAP TITE®

6

d x L	✉	Art.number	d x L	✉	Art.number	d x L	✉	Art.number
M2,5X16	1000	67155.025.016	M4X6	1000	67155.040.006	M5X16	500	67155.050.016
M3X6	1000	67155.030.006	M4X8	1000	67155.040.008	M5X20	500	67155.050.020
M3X8	1000	67155.030.008	M4X10	1000	67155.040.010	M5X25	500	67155.050.025
M3X10	1000	67155.030.010	M4X12	1000	67155.040.012	M5X30	500	67155.050.030
M3X12	1000	67155.030.012	M4X16	1000	67155.040.016			
M3X16	1000	67155.030.016	M4X20	1000	67155.040.020	M6X10	500	67155.060.010
M3X20	1000	67155.030.020	M4X25	1000	67155.040.025	M6X12	500	67155.060.012
M3X25	1000	67155.030.025	M4X30	1000	67155.040.030	M6X16	500	67155.060.016
						M6X20	500	67155.060.020
M3,5X8	1000	67155.035.008	M5X8	500	67155.050.008	M6X30	500	67155.060.030
M3,5X12	1000	67155.035.012	M5X10	500	67155.050.010			
			M5X12	500	67155.050.012			

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REMFORM® Thread-forming screws for use in plastics

Specific characteristics of REMFORM® thread-forming screws for use in plastics

- The ideal solution for fastening of/ in all types of plastic (thermoplastic or elastomer)
- Angle of thread of just 8°
- Asymmetric thread geometry which allows the plastic during assembly to flow along the load-bearing flank resulting in
  - less plastic being displaced
  - lower insertion torque
  - deeper profile depth
  - large flank cover, therefore high loadability
  - less chance of the plastic cracking
  - useable in thin-walled castings
- Made as standard
  - in strength class 9.8
  - Cr^{6+}-free electro-galvanized
  - other materials and surface coatings are possible
- Due to the clamping action of the material on the thread flanks, the connection is self-locking

REMFORM® detail of thread