CELO

TAPTITE 2000®

Thread rolling screw for metal and light alloy assemblies

TRILOBULAR® TAPTITE®

TAPTITE® TRILOBULAR® thread rolling screws provide assemblies with high pull-out and vibration loosening resistance and greatly reduce assembly costs.

TAPTITE® TRILOBULAR® screws are used to create a resistant and uniform thread into untapped holes during the assembly process. Their use offers many advantages, both economically with an increase in productivity during assembly and by generally reducing costs, and technically, as they offer high mechanical performance during the assembly lifespan.

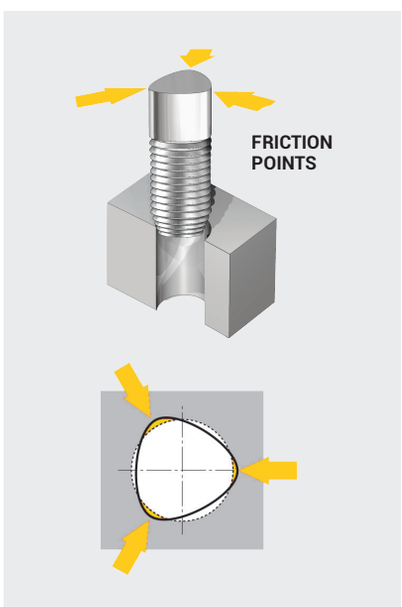


Fig.20. The three lobes put localized pressure at three points, reducing friction during thread forming.

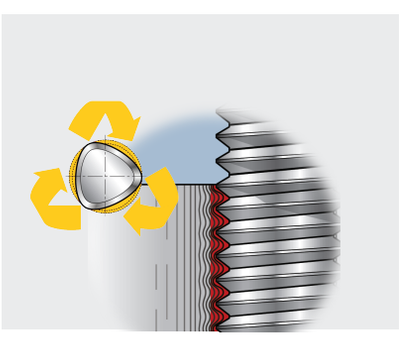
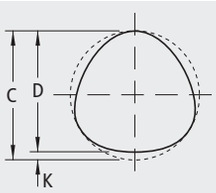


Fig.21. The material displacement during threading flows between the lobes, wrapping the shank of the screw.

1. Technical features

TRILOBULAR® TAPTITE® screws have a thread profile similar to that of a metric thread with a 60º thread angle and a machine thread pitch, but with TRILOBULAR® section (three lobes).

The TRILOBULAR® shape is defined in two dimensions instead of one, as with standard machine screws.



D = Screw diameter
C = Circumscribed diameter of screw
C-D = K = Lobe alignment

TRILOBULAR® effect
The lobe alignment K is the difference between the screw diameter and circumscribed diameter. Low stability in the lobe alignment values affects the screw's performance. A low K value increases the strength of the assembly, but also means a high thread forming torque.

The stability in K value guarantees stable parameters while fixing the screws. **Only with the use of TAPTITE® original screws you can ensure the stability of this parameter.**

- During thread forming process, the three lobes on the thread put localized pressure on the hole, which **reduces friction during and allows for more ergonomic assembly torque.**

- The thread is formed by material lamination without chips creation, crucial in electronic assemblies. The material displaced during threading, flows to fill the space between the lobes, wrapping around the shank of the screw completely and eliminating the tolerance between the screw and the thread in the nut member.

- The progressive point allows for **excellent axial alignment** of the screw into core hole, requiring minimum low starting end load.
- TRILOBULAR® TAPTITE® screws form threads into untapped nut member with the tolerance of a machine thread. In this way, in case of repair, it is possible to replace TAPTITE® screw with a standard machine screw.
- The manufacturing process for the TRILOBULAR® screws includes heat treatment process that will vary depending on the application and particular screw mechanical requirements. The most common heat treatments are case hardening and CORFLEX® N™. To ensure the thread rolling feature of the screw, it is necessary to reach a surface hardness of at least 250 HV higher than the base material.

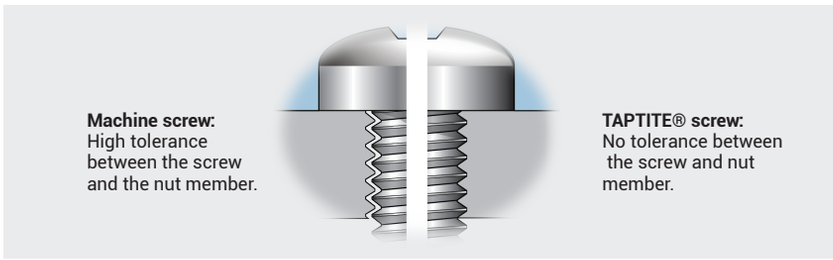


Fig.23. TRILOBULAR® screw creates a thread in nut member by lamination and without tolerance.

- Due to the hardness of the screw we apply baking process to reduce the risk of hydrogen embrittlement (more information in page 124).
- TAPTITE® are lubricated to reduce friction during threading process.
- The detailed features and associated advantages can only be achieved with TAPTITE® screws manufactured according to the manufacturing standards of CONTI Fasteners AG.

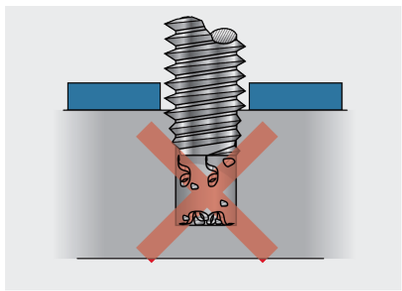


Fig.22. Thread forming by material lamination avoids chip creation.

2. Advantages

- **Low threading torque** allowing for a **more ergonomic assembly.**
- Forming thread by lamination avoids chips creation and ensures a **high pull-out resistance and high stripping torque.** It eliminates the cost of losses or repair of stripped holes.
- High values of prevailing torque ensure **excellent vibration loosening resistance.**
- As it is a thread rolling screw, it **avoids cross threading** and associated costs.
- The perfect axial alignment of the screw is an **ideal solution for automated assembly lines:**
  - Allows for an **easy insertion into the hole**
  - Requires **low starting end load**

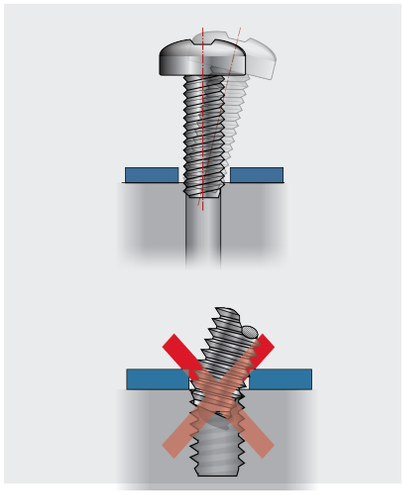


Fig.24. The progressive point facilitates axial alignment in core hole.

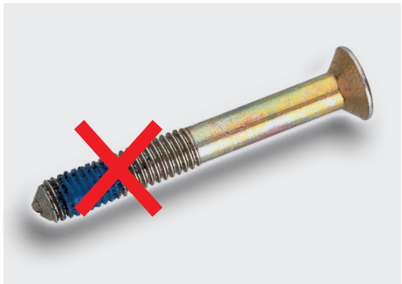


Fig.25. The adhesive patches on the thread are limited in temperature resistance and the screw cannot be reused.

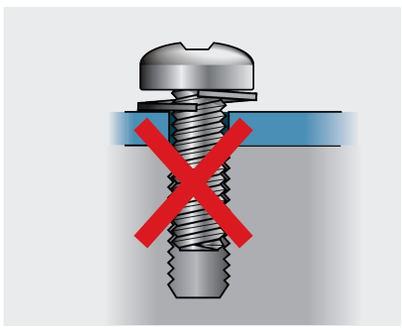
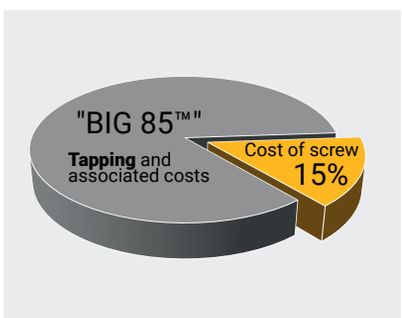


Fig.26. Use of TRILOBULAR® screws prevents the use of grower washers. These are used to maintain compression after setting the screw, which does not prevent vibration loosening.



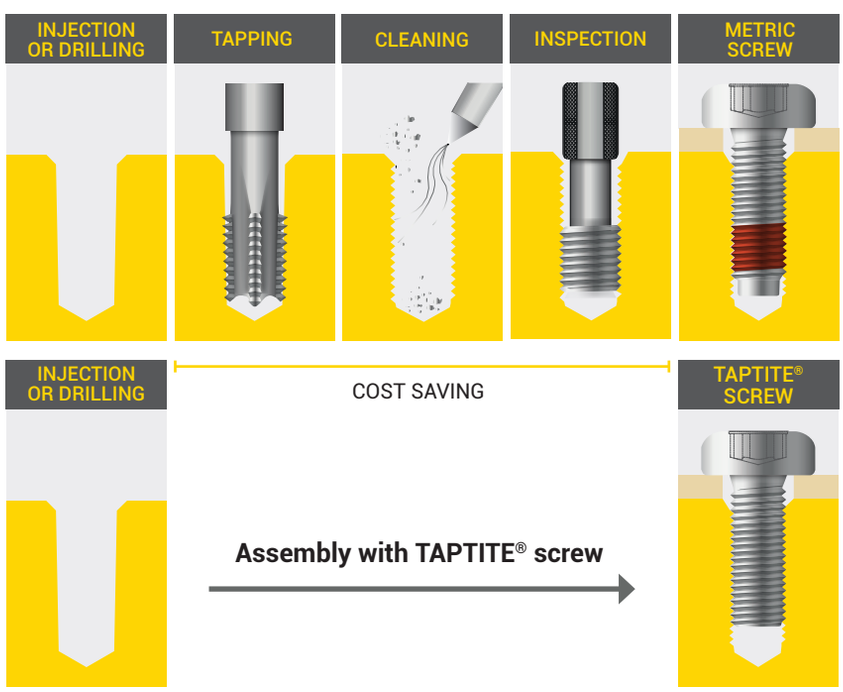
TRILOBULAR® TAPTITE® screws eliminate the problems of:

- Misalignment of machine screws in tapped holes, avoiding the use of guiding components (screws with dog point…).
- Screw vibrational loosening:
  - Avoid the use of blocking elements (lock washers, adhesives patches, etc.)
  - Eliminates retightening (which does not prevent vibration loosening).

3. Reduction of total cost of assembly

When fastening machine screws in metal assemblies, screw represents only 15% of the total in-place cost. The remaining 85% corresponds to tapping operations, cleaning oil and chips, use of additional elements to prevent vibration loosening and cross-threading and labor expenses. All of these elements are known as "BIG 85™".

TRILOBULAR® TAPTITE® thread screws have been specially designed to reduce the remaining 85%.



TRILOBULAR® TAPTITE® screws eliminate tapping operations and associated costs of:

- Direct or indirect labor cost.
- Tapping elements (lubricants, gauges, taps…).
- Cleaning of oils and chips.
- Inspection for class of fit in tapped holes.
- Loss or repair of tapped assemblies due to undersize or oversize tapped threads.
- Additional elements to prevent cross threading.
- Additional elements to secure the screw against looseness.

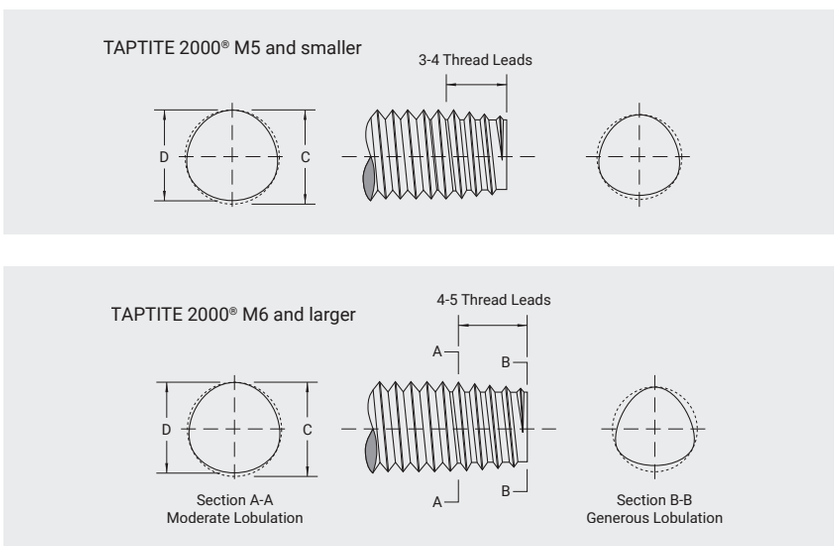
TAPTITE 2000®

TAPTITE 2000® thread rolling screws are recommended for the assembly of steel sheet and die casting parts.

TAPTITE 2000® thread design includes innovative Radius Profile™ thread and optimized TRILOBULAR® section that improves the thread forming process and strengthens the assembly, increasing the vibration loosening resistance.

TAPTITE 2000® screws afford users with enhanced opportunities to reduce the overall cost of assembly and provide excellent mechanical and assembly properties.

1. Technical features



- **Reduced TRILOBULAR® thread section**
  TAPTITE 2000® thread section has moderate lobulation (less TRILOBULAR®) which generates larger surface contact between the screw and the nut member.

  Double TRILOBULAR® thread design for M6 and larger screws:
  - The thread leads (Section B-B) have generous lobulation, which **reduces friction during fixing process** and allows for a lower thread forming torque.
  - The shank of the screw (Section A-A) has moderate lobulation, which increases contact surface between the screw and nut member, **improving pull-out and vibration loosening resistance.**

- **Radius Profile™ thread**
  Radius Profile™ thread geometry reduces thread forming torque and ensures the maximum surface contact between the screw and nut member, resulting in higher pull-out and vibration loosening resistance.

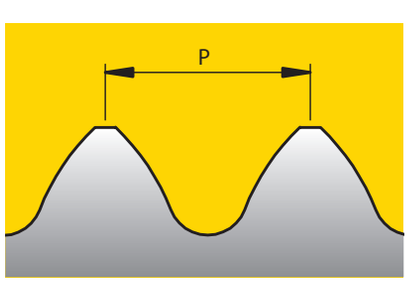


Fig.27. Radius Profile™ thread increases surface contact between screw and nut member.

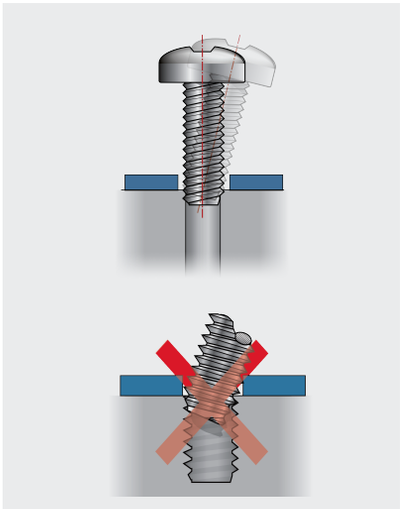
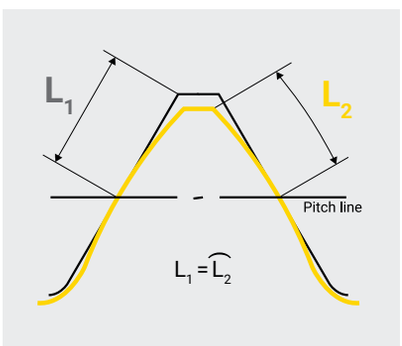


Fig.28. The progressive point facilitates axial alignment in core hole.



TAPTITE 2000® thread profile

TAPTITE II® thread profile

- **Progressive point**
  Thread leads enhance the screw insertion and permit low axial end load to initiate thread forming.

- **Machine thread configuration**
  TAPTITE 2000® screws form threads into untapped nut member with the tolerance of a machine thread. In this way, in case of repair, TAPTITE 2000® screw can be replaced with a standard machine screw.

2. Advantages

- As it is a thread rolling screw, it **avoids cross threading** and associated costs.

- The **excellent axial alignment** of the screw in core hole is an ideal solution for automated assembly lines:
  - Allows for **an easy insertion into the hole**
  - Requires **low axial end load** to initiate thread forming, providing a **more ergonomic assembly.**

- Volume of material displaced during thread forming is lower, requiring **low thread forming torque.**

- Forming thread by lamination **avoids chips creation**. Radius Profile™ improves material displacement and ensures a **high pull-out resistance and high stripping torque.**

- It allows a higher assembly torque, transmitting **higher clamping** to the assembly.

- Applying the same assembly torque than other thread rolling screws, TAPTITE 2000® permits **higher compression** while **optimizing mechanical properties** of the assembly.

- High prevailing torque allows **excellent vibration loosening resistance.**

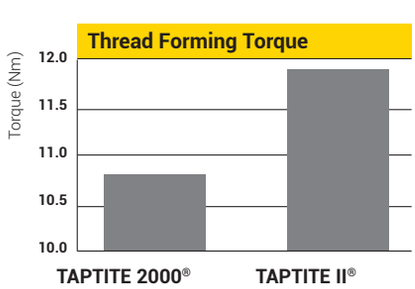
Advantages of TAPTITE 2000® screws compared to TAPTITE II®.

Double TRILOBULAR® thread for M6 and larger screws:

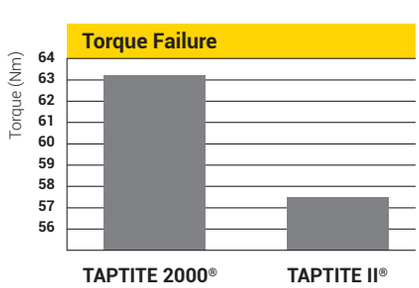
- **Reduces thread forming torque** providing a more ergonomic assembly. For the same diameter, thread forming torque of TAPTITE 2000® is approximately 10%⋆ lower than TAPTITE II® torque value.

- Increased surface contact **improves pull-out and vibration loosening resistance.**

Tests done with TAPTITE 2000® and TAPTITE II® screws, M8x1,25:



The geometry of TAPTITE 2000® thread reduces threading torque by 9.25% in comparison with TAPTITE II® screw.



The geometry of TAPTITE 2000® thread increases torque failure by 10% in comparison with TAPTITE II® screw.

⋆ Depending on the diameter of the screw.

TAPTITE 2000® compared to other alternative solutions.

Screw	Cost of screw	Cost of assembly process	Disadvantages	Advantages
Machine screw	•	••• Tapped holes	Low vibration loosening resistance Cross threading	Market availability
Machine screw + locking patch	•••	••• Tapped holes	Non reusable screw Cross threading	Vibration loosening resistance
Machine screw + locking patch + dog point	••••	••• Tapped holes	Non reusable screw Risk of cross threading for misalignment > 7°	Vibration loosening resistance Minimizes cross threading risk
TAPTITE 2000®	••	• Untapped holes		Eliminates problems of: - Vibrational loosening - Cross threading

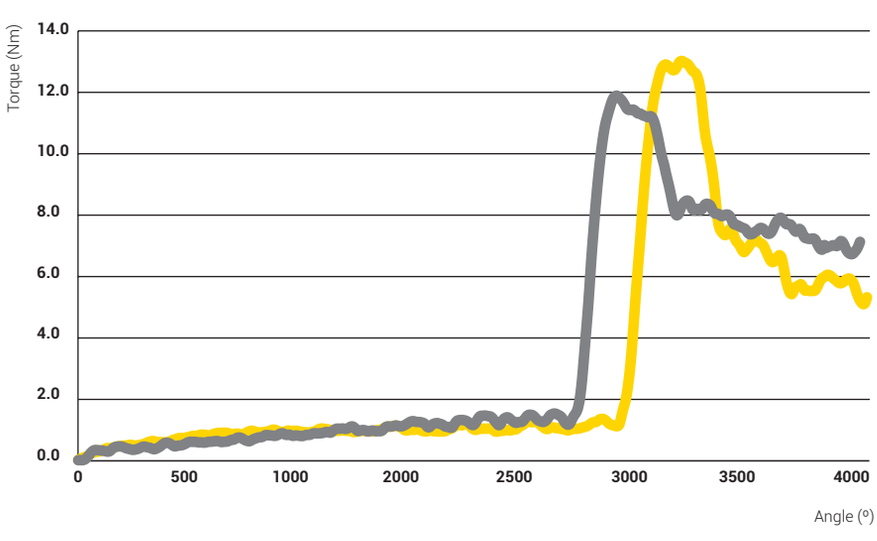
• Low •• Medium ••• High •••• Very high

In case that tapped holes are a customer requirement or specified by regulation, we recommend POWERLOK® screw with special locking concept that prevents vibrational loosening and keeps high clamping force.

3. Threading curve

The graph shows the threading curve of a TAPTITE 2000® screw on aluminium die casting part injected holes. The wide margin between low threading torque and high failure torque offers a safe assembly torque range and permits higher compression of the assembly.

The tightening torque depends on the screw breaking torque, friction coefficient, hole dimensions, length of engagement and screwdriver stability. The optimum tightening torque is determined based on threading curve tests in the laboratory.

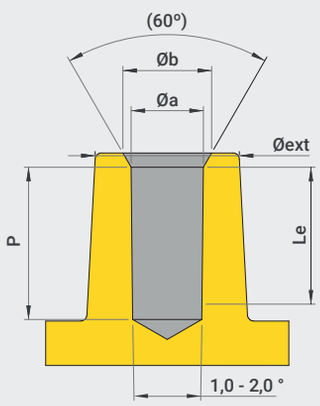


Aluminum die casting, core hole Ø5.6 mm, 12 mm engagement length.

4. Recommended hole diameter in light alloys die casting

The table shows the design recommendations for TAPTITE 2000® in aluminum die casting parts. The values in the table should be used as a reference.
We recommend to carry out relevant tests on die casting parts to establish the precise values.

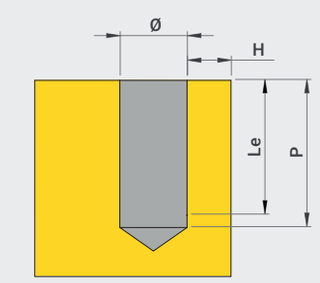
For additional information, please, contact our technical department on celo@celo.com.



P = Minimum depth
Le = Length of engagement

Table 1. Die casting parts with injected holes

d	Øa	Tolerance +	Tolerance -	Øext min.	Øb	Le	P
M2	1.87	0.03	0.04	3.4	2.6	3.4	4.6
M2.5	2.35	0.03	0.04	4.2	3.2	4.3	5.6
M3	2.84	0.03	0.05	5.0	3.9	5.1	6.8
M3.5	3.30	0.03	0.05	5.8	4.5	5.9	7.8
M4	3.77	0.03	0.05	6.7	5.2	6.8	8.8
M5	4.74	0.03	0.05	8.3	6.5	8.5	11.0
M6	5.67	0.04	0.06	10	7.7	10.2	13.0
M7	6.67	0.04	0.07	11.6	9.1	11.9	15.0
M8	7.59	0.05	0.08	13.3	10.4	13.6	17.0
M10	9.51	0.05	0.10	16.6	13.0	17.0	21.5



P = Minimum depth
Le = Length of engagement

Table 2. Die casting parts with drilled holes

d	Ø	Tolerance +	Tolerance -	H min.	Le	P
M2	1.82	0.03	0.04	1.0	4.0	4.6
M2.5	2.29	0.03	0.04	1.2	5.0	5.6
M3	2.77	0.03	0.05	1.3	6.0	6.8
M3.5	3.23	0.03	0.05	1.6	7.0	7.8
M4	3.68	0.03	0.05	1.8	8.0	8.8
M5	4.64	0.03	0.05	2.1	10.0	11.0
M6	5.54	0.04	0.06	2.6	12.0	13.0
M7	6.54	0.04	0.07	2.6	14.0	15.0
M8	7.43	0.05	0.08	3.3	16.0	17.0
M10	9.32	0.05	0.10	3.9	20.0	21.5

Dimensions in mm.

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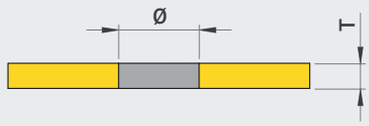
Contact us

5. Recommended pilot hole diameter in steel sheet

Plate thickness T	M2	M2.5	M3	M3.5	M4	M5	M6	M8
0.5 - 0.9	1.75	2.24	2.71	o	o	o	-	-
1.0 - 1.5	1.77	2.27	2.74	3.15	3.59	o	o	-
1.6 - 2.0	1.79	2.30	2.75	3.19	3.64	4.53	o	-
2.1 - 2.5	1.80	2.31	2.77	3.21	3.64	4.58	5.42	-
2.6 - 3.0	-	2.32	2.78	3.23	3.68	4.58	5.48	7.27
3.1 - 3.5	-	2.32	2.79	3.25	3.68	4.64	5.48	7.35
3.6 - 4.0	-	-	2.80	3.26	3.70	4.64	5.55	7.35
4.1 - 5.0	-	-	-	3.27	3.71	4.65	5.55	7.37
5.1 - 6.0	-	-	-	-	3.73	4.66	5.58	7.43
6.1 - 7.0	-	-	-	-	-	4.69	5.58	7.43
7.1 - 8.0	-	-	-	-	-	-	5.61	7.47
8.1 - 11.0	-	-	-	-	-	-	-	7.51

o We recommend FASTITE®2000™ screws for thin metal sheet.



Dimensions in mm. This data is intended for guidance purposes. We recommend carrying out relevant tests on definitive parts to establish the precise values.

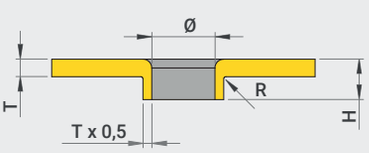
Suggested tolerances are:
+0.03 / -0.04 mm for holes < Ø2.0 mm
+0.03 / -0.05 mm for holes Ø2.0 - Ø5.0 mm
+0.04 / -0.05 mm for holes Ø5.1- Ø7.0 mm
+0.05 / -0.08 mm for holes > Ø7.0 mm

6. Recommended extruded pilot hole diameter

Table 1. Pilot hole diameter in steel sheet with extruded holes

d	Plate thickness (T)				
	0.50 – 0.69	**0.70 – 0.99**	**1.00 – 1.49**	**1.50 – 2.49**	**2.50 – 3.00**
M2.5	2.22	2.24	2.27	-	-
M3	2.7	2.72	2.76	2.82	-
M3.5	3.13	3.15	3.2	3.25	3.28
M4	3.55	3.57	3.6	3.64	3.68
M5	-	4.48	4.51	4.53	4.56
M6	-	-	5.38	5.42	5.46
M8	-	-	-	7.25	7.3

Example: Assembly on metal sheet of 0.6 mm thickness with M3 screw. Following the recommendations from Table 1, we should make 2.7 mm pilot hole diameter, and as shown in Table 2, flange height (H) would be 1.2 mm and radius (R) 0.13 mm.



Suggested tolerances are:
+0.03 / -0.04 mm for holes < Ø2.0 mm
+0.03 / -0.05 mm for holes Ø2.0 – Ø5.0 mm
+0.04 / -0.05 mm for holes > Ø5.0 mm

Tolerance for H: +0.40 mm

Table 2. Height and radius of extruded holes in metal sheet from a given pilot hole diameter

Ø	Plate thickness (T)											
	0.50-0.90		**0.91-1.35**		**1.36-1.99**		**2.00-2.39**		**2.40-2.75**		**2.76-3.00**	
	H	R	H	R	H	R	H	R	H	R	H	R
2.06-2.54	1.00	0.13	1.00	0.13	1.00	0.15	1.10	0.25	–	–	–	–
2.57-3.30	1.20	0.13	1.20	0.13	1.20	0.15	1.30	0.25	1.40	0.25	–	–
3.33-3.81	1.30	0.13	1.30	0.13	1.30	0.15	1.50	0.25	1.60	0.25	1.80	0.33
3.84-4.57	–	–	1.50	0.13	1.55	0.15	1.80	0.25	1.90	0.25	2.20	0.33
5.60-5.59	–	–	1.80	0.13	1.80	0.15	2.30	0.25	2.40	0.25	2.60	0.33
5.61-6.60	–	–	–	–	1.90	0.15	2.50	0.25	2.70	0.25	3.05	0.33
6.63-7.62	–	–	–	–	2.10	0.15	2.95	0.25	3.20	0.25	3.60	0.33

Dimensions in mm. This data is intended for guidance purposes. We recommend carrying out relevant tests on definitive parts to establish the precise values. The size of the extrusion can vary depending on the material used and tool design.

We recommend using FASTITE®2000™ screws or extruded holes for the assembly of thin metal sheet. Extruded holes nearly double the length of thread engagement over original material thickness with the objective to increase resistance to stripping and vibrational loosening.

CORFLEX® N™ Hardness	
Core	Surface
327–382 HV	min. 336 HV

Fig.29. Washing machine heater assembled with TAPTITE 2000® CORFLEX® N™ screws.

7. CORFLEX® N™ heat treatment

For the assembly of die casting injected parts in aluminum and other light alloys, we recommend TAPTITE 2000® screws with neutral hardening CORFLEX® N™ (similar strength to grade 10.9) that improves bending and heavy load cycles resistance. Surface hardness of the screw doesn't allow its use in steel assemblies.

CORFLEX® N™ heat treatment is specially recommended for assemblies in **aluminum and other light alloys** exposed to:

- Shear stress
- Alternating loads
- Severe temperature cycles
- Vibrations
- Corrosion

Advantages

The reduction of carbon content on the screw surface minimizes the risk of galvanic corrosion with the aluminum.

- Provides excellent resistance to alternating loads and thermal shock.
- Allows deep thread engagements.
- Reduces the risk of hydrogen embrittlement.
- All TRILOBULAR® screws manufactured at CELO can be treated with CORFLEX® N™ upon request.

Stock item NT5T corresponds to TAPTITE 2000® thread with CORFLEX® N™ heat treatment.

Fig.30. Assembly of electronic components in exterior lighting.

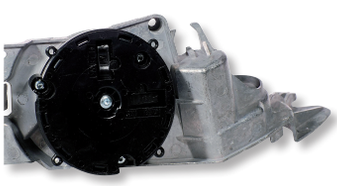


Fig.31. Rear-view mirror motor assembled on aluminum housing.

8. Applications of TAPTITE 2000® screws

TAPTITE 2000® screws have been specially designed for assemblies in steel and light alloys in:

- Components that require a low threading torque to avoid damaging other components, e.g. PCB assembly.
- Structural components that require high pull-out resistance.
- Components that require a high tightness level.

Examples
Automotive components
Electric material
Household appliances
Electronics

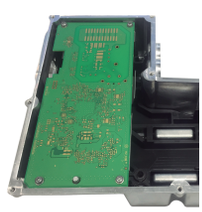


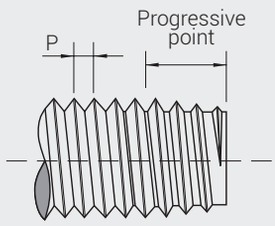
Fig.32. Partial detail of PCB assembly of aluminum for an On Board Charger (OBC) in electric vehicles.

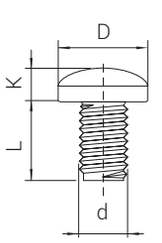
9. Technical data

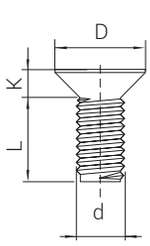
TAPTITE 2000® screws can be manufactured with different head types, recess, dimensions and coating configuration to fit your exact application requirements.

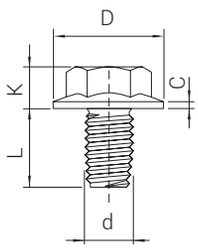
TAPTITE 2000® are lubricated to reduce friction during thread forming process. To ensure the quality of the screw we apply baking process to reduce the risk of hydrogen embrittlement (more information in page 124).

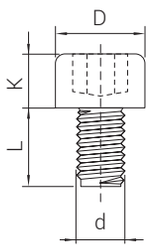
The table shows thread and head dimensions under CELO manufacturing standards. For different head design, recess or threaded length, please contact our technical department.

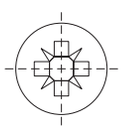




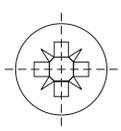








Ref. T285Z



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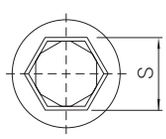
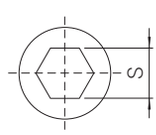
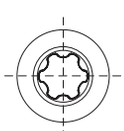


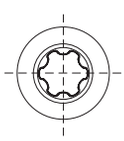
Ref. T278



Ref. T212



Ref. T285P



Ref. T265P

d	P Pich	Progressive point	D max.	K max.	TORX Plus®	Pozi	D max.	K Ref.	TORX Plus®	Pozi	D max.	K max.	C	S	D max.	K max	S
M2	0.40	1.40	4.00	1.60	6 IP	Z1	3.80	1.20	6 IP	Z1	-	-	-	-	-	-	-
M2.5	0.45	1.58	5.00	2.00	8 IP	Z1	4.70	1.50	8 IP	Z1	-	-	-	-	-	-	-
M3	0.50	1.75	6.00	2.40	10 IP	Z1	5.60	1.65	10 IP	Z1	-	-	-	-	-	-	-
M3.5	0.60	2.10	7.00	2.70	15 IP	Z2	6.50	1.93	15 IP	Z2	-	-	-	-	-	-	-
M4	0.70	2.45	8.00	3.10	20 IP	Z2	7.50	2.20	20 IP	Z2	9.00	3.50	0.72	7	7.00	4.00	3
M5	0.80	2.80	10.00	3.80	25 IP	Z2	9.20	2.50	25 IP	Z2	11.00	4.50	0.82	8	8.50	5.00	4
M6	1.00	4.50	12.00	4.60	30 IP	Z3	11.00	3.00	30 IP	Z3	13.50	5.30	1.02	10	10.00	6.00	5
M8	1.25	5.63	16.00	6.00	40 IP	Z3	-	-	-	-	17.00	7.00	1.12	13	-	-	-

Dimensions in mm. Unless expressly stated, the values shown are nominal. For tolerances and other data, please contact our technical department.

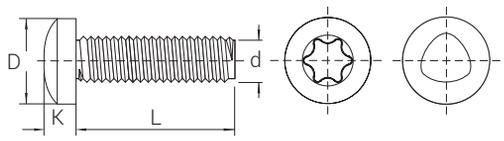
Heat treatment	Hardness (HV)		Minimum Breaking Torque (Nm)							
	Surface	Core	M2	M2.5	M3	M3.5	M4	M5	M6	M8
Case hardening	min. 446	286 -372	0.60	1.2	2.2	3.5	5.2	10.5	17.7	43.0
CORFLEX® N™	min. 336	327-382	0.45	1.0	1.9	3.0	4.4	9.3	16.0	40.0

Nominal length (mm)	Tolerance (mm)
≤ 3	± 0.2
3 < L ≤10	± 0.3
10 < L ≤ 16	± 0.4
16 < L ≤ 50	± 0.5
> 50	± 1.0

NT85T CORFLEX® N™

TAPTITE 2000®

- **Pan head**
- **TORX® recess**
- **Zinc plated Cr (III) 5µm + Lubricant + Baking**



CAD Files and Samples available

Go to product

d mm	M2	M2.5	M3	(M3.5)	M4	M5	M6
D mm	4.0	5.0	6.0	7.0	8.0	10.0	12.0
K mm	1.6	2.0	2.4	2.7	3.1	3.8	4.6
TORX®	6 IP[1]	T8	T10	T15	T20	T25	T30

L mm	**Ø2.0**	**Ø2.5**	**Ø3.0**	**Ø3.5**	**Ø4.0**	**Ø5.0**	**Ø6.0**
5	○	○	○	○	○	–	–
6	●	○	●	○	○	○	–
7	○	○	○	○	○	○	–
8	○	●	●	○	●	○	○
10	○	○	○	○	●	●	○
12	–	○	●	○	●	●	●
16	–	–	●	○	●	○	○
18	–	–	○	○	○	○	○
20	–	–	○	○	○	○	●
25	–	–	–	○	○	○	○
30	–	–	–	–	○	○	○
35	–	–	–	–	○	○	○
40	–	–	–	–	○	○	○
50	–	–	–	–	–	–	○

● Product available in stock. ○ Product available upon request. [1] TORX PLUS®
For other plating, thread dimensions and head design, please contact our sales department. Information about packaging conditions in page 130.

This screw can't be used for the assembly of steel parts. NT85T screws with CORFLEX® N™ heat treatment are specially recommended for **assemblies in aluminum and other light alloys.**

TAPTITE 2000® CA™

TAPTITE 2000® CA™ screws are recommended for the assemblies where the clearance and pilot holes are not aligned.

1. Advantages

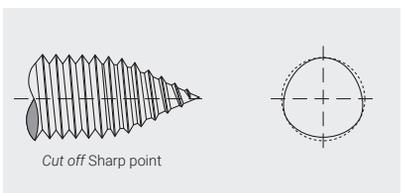
Additionally to the advantages offered by TAPTITE 2000® screws, TAPTITE 2000® CA™ screws have a gimlet point especially designed to:

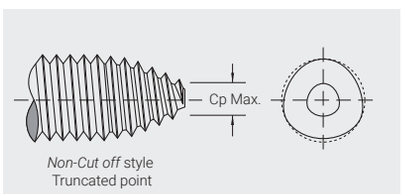
- Achieve the perfect **alignment of the screw** in applications when clearance and pilot holes are not aligned and rapid hole finding is essential.
- Provide the assembly with more ergonomics by **lowering the initial threading torque**

The **"CA" point** can be fitted with a sharp point (known as cut off) or with a truncated blunt point *(non-cut off)*.

The **cut off point** is recommended for applications in which it is necessary to pierce into the material without making a pilot hole.

The **non-cut off point** is recommended for applications in which a sharp point could be a potential hazard to other assembly components, cables, assembly lines or for personnel safety.

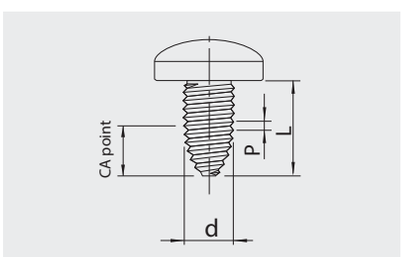




2. Technical data

d	Pitch P	"CA" Point Ref.
M2.5	0.45	2.48
M3	0.5	2.75
M3.5	0.6	3.30
M4	0.7	3.85
M5	0.8	4.40
M6	1.0	5.50
M8	1.25	6.88

Dimensions in mm. This data is intended for guidance purposes. We recommend carrying out relevant tests on die casting parts to establish the precise values.



3. Applications

TAPTITE 2000® CA™ screws are recommended for:

- Assemblies where the clearance and pilot holes are not aligned.
- Difficult access applications and deep holes.
- Assemblies where it is required to pierce material without making a pilot hole (*Cut Off point*).

This is a custom-made product. Please, contact our sales department for further information.

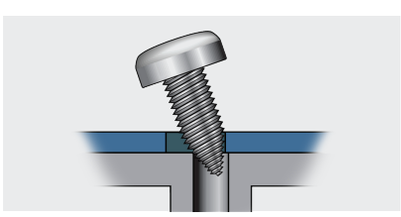
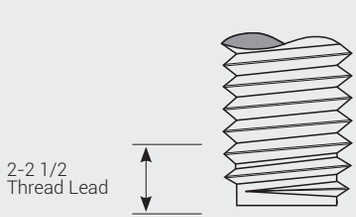


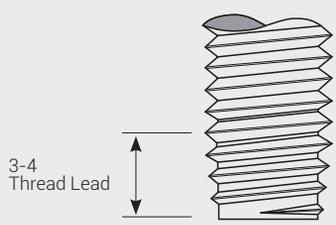
Fig.33. TAPTITE 2000® CA™ screws allows for alignment in misaligned holes.

TAPTITE 2000® SP™

TAPTITE 2000® SP™ screws have shorter thread leads point than standard TAPTITE 2000® screws to maximize the full thread engagement in shallow blind holes or in those application where depth isn't long enough for a screw point with major number of thread leads.



TAPTITE 2000® SP™

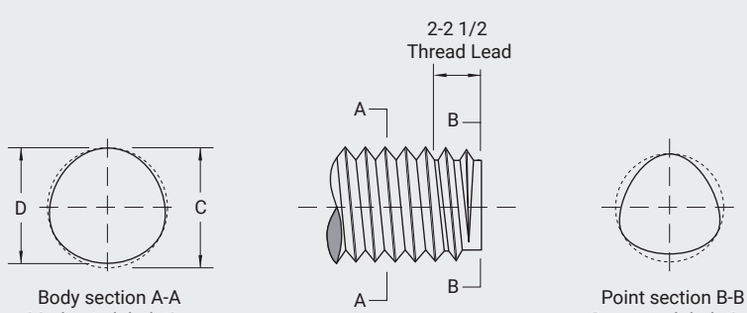


TAPTITE 2000®

Shorter point in TAPTITE 2000® SP™ screws, from 2-2 1/2 thread leads, maximizes full thread engagement in shallow blind holes or assemblies. In these cases an increase in contact points of full thread engagement is critical. In most cases, the failure mode changes from stripping to breaking of the screw, which is the desired result in die casting parts.

Recommended hole dimensioning in light alloys die casting are the same as detailed in TAPTITE 2000® screws (page 60).

This is a custom-made product. Please, contact our sales department for further information.



Body section A-A
Moderate lobulation

Point section B-B
Generous lobulation

CELO

Small Things Matter

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○ Production plant ○ Logistic hub ● Sales office