

# CELO

## MAThread®

**The efficient solution to cross-threading  
problem in pre-tapped holes**



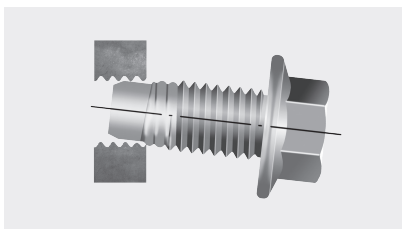
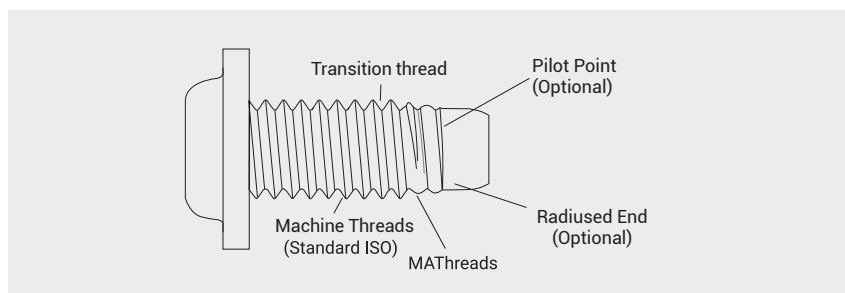
# MAThread® POINT



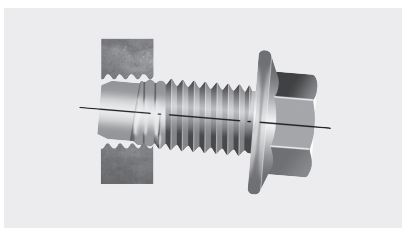
MAThread® point uses a patented thread design applied to machine screws to avoid cross-threading and blocking problems during installation.

MAThread® point allows an easy assembly and rapid thread engagement in tapped holes or nuts on the assembly line, improving ergonomics and providing great opportunities for cost saving.

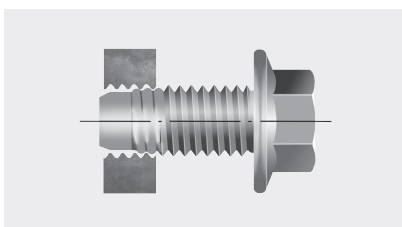
## 1. Technical features



1. Helix misalignment.



2. MAThread® point helps threads come into place.



3. Threads drive normally into the nut.

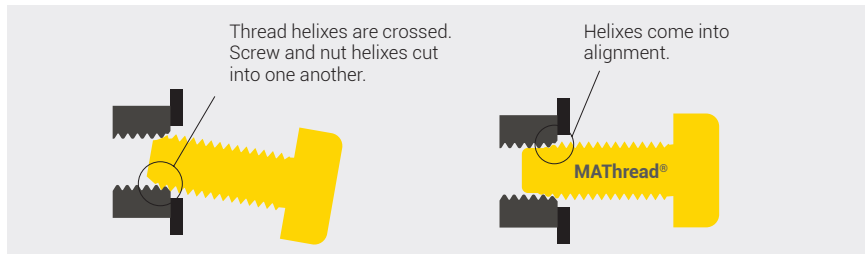
- **Perfect alignment of screw in nut member.** Transition zone aligns the screw to fit into the nut member. **MAThread® point engages with optimum interference into the nut** to straighten the screw with misalignment up to 15°.
- MAThread® point parts can be **made from all common cold-forming steels**, copper and stainless steel.

## 2. Advantages

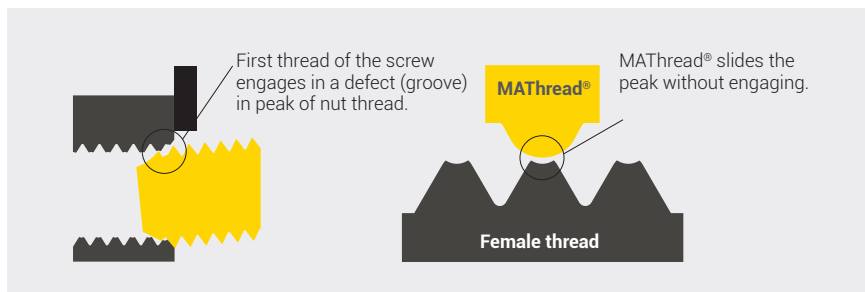
- It **reduces the cost of assembly**: MAThread® point allows an **easy and rapid insertion** without reducing the installation speed and **avoid cross-threading or blocking problems**:
  - Reduces the screw installation time.
  - Eliminates the costs derived from downtime, rework and scrap associated to the assembly with standard screws.
- MAThread® performance is **unaffected by installation speed**.
- MAThread® **improves the ergonomics** of the assembly by an easier insertion into the tapped hole or nut. It reduces operator stress during run-down.

### MAThread® point solves the problems of:

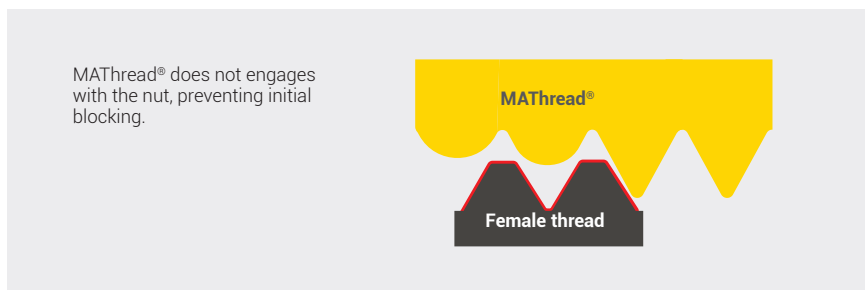
- **Cross-threading** because of angular misalignment of screw and nut: This happens when the second thread of the screw is engaged with the first thread of the nut.



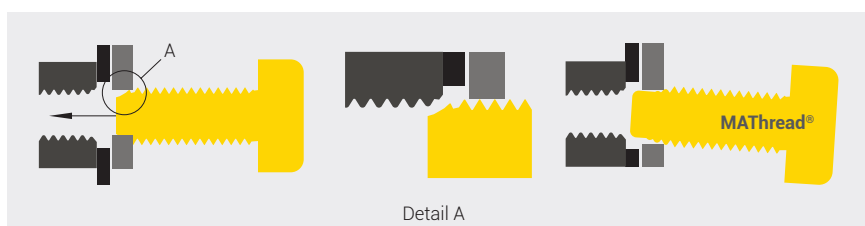
- **False threading:** Jamming with minimal or no angular misalignment. Peak of screw thread engages the groove, and during continued rotation, the nut thread is damaged and the screw is blocked. Thread strips, weakening the assembly.



- **Galling:** Jamming due to excess paint or fit problems. When inserted at an angle, screw threads interfere with paint on flanks and friction builds up, causing thread failure. MAThread® threads does not contact the paint on the flanks or root until it is aligned and preventing initial blocking.



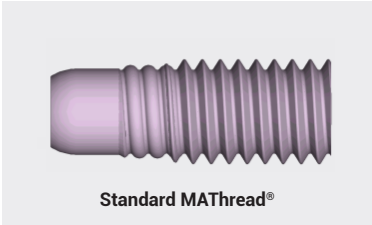
- **Winking:** Thread damage caused by component misalignment. Screw lead threads interfere with the component causing damaged thread. Mathread® round thread is not damaged by the first contact on insertion. Mathread® point helps the screw to align and fit better into the nut thread when there's a misalignment between cover and base part which, in other situations could damage the screw thread.



There are different point designs adapted to the application requirements:

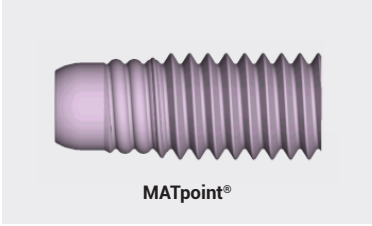
**Standard MATHread®**

- It absorbs misalignments up to 15°.
- It's recommended for applications where the length of the point is not a problem.
- It's not recommended for the assembly of high weight cover parts which require positioning during the assembly process.



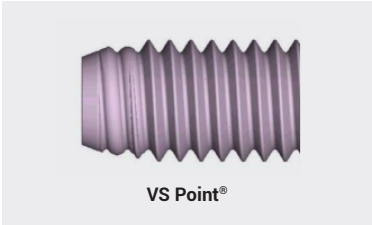
**MATpoint®**

- It's an optimized MATHread® point.
- It absorbs misalignments up to 12°.
- It's compatible to the great majority of applications.

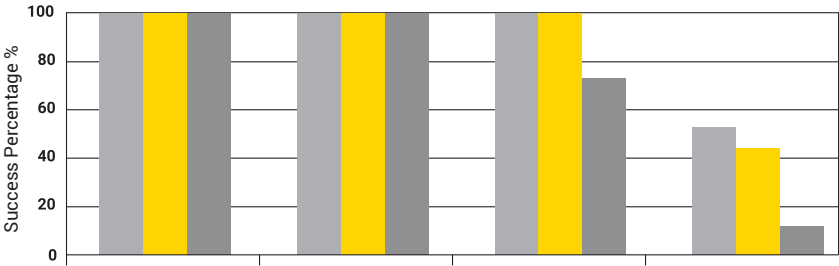


**VS Point®**

- It's a MATHread® point hardly without pilot point.
- It absorbs misalignments up to 7°.
- It's recommended for applications where the engagement length is limited.



**Anti-Cross-Thread Performance Comparison**



	MATHread®	MATpoint®	VS Point®	Dog point
7°	100	100	100	53
9°	100	100	100	44
12°	100	100	73	12

**3. Applications**

MATHread® point screws and its different variants are recommended for assemblies into nuts or tapped holes in full automated assembly lines and applications susceptible to cross-threading problems.

This is a custom-made screw. For further information, please contact our sales department or on celo@celo.com.

**Need to get in touch? Contact us to discuss your application.**

**Contact us**



## Small Things Matter

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