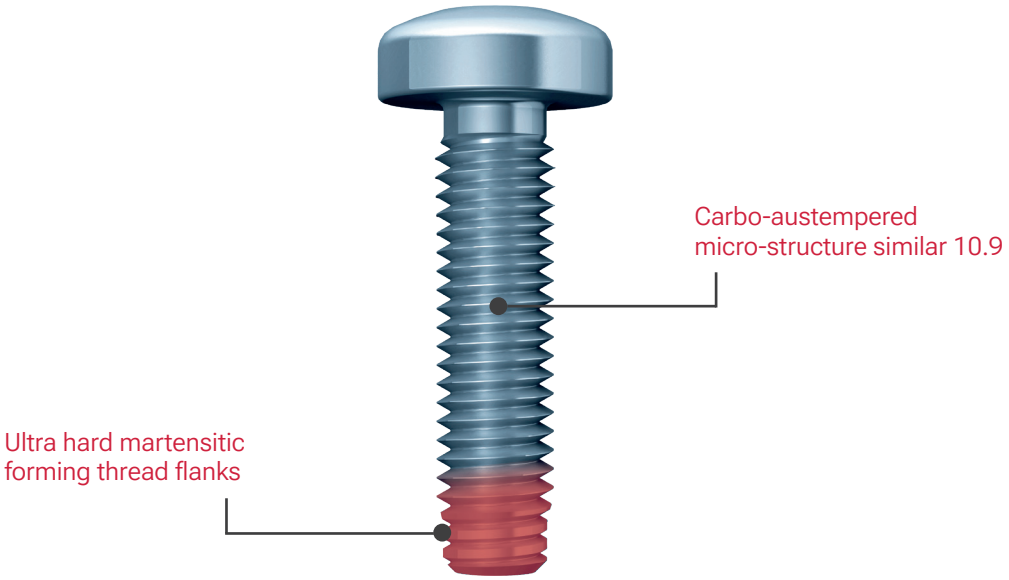
# EJOT MAXXtip®

## Thread forming solutions for (ultra) high strength materials

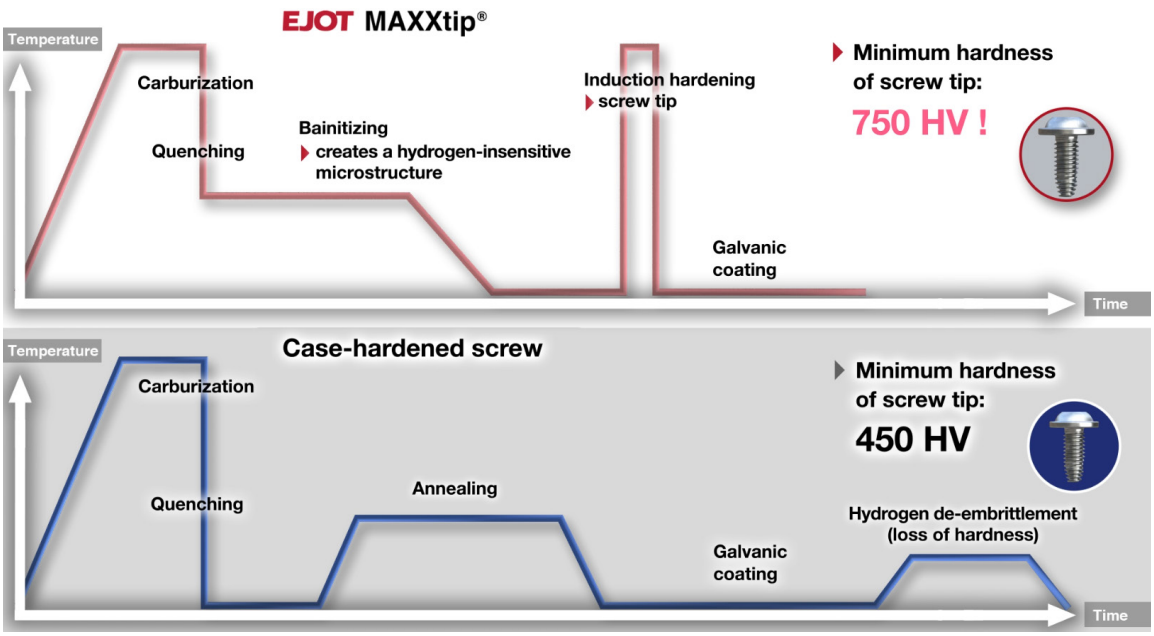
EJOT MAXXtip® combines a carbo-austempered shank with an ultra hard screw tip. This unique combination allows completely new options for direct fastening into (ultra) high strength materials.

Due to the carbo-austempered microstructure (strength similar to 10.9) in the load-bearing area MAXXtip® screws are insensitive to hydrogen embrittlement. Therefore, galvanic surfaces can be applied without tempering leading to a thread flank hardness of at least 750 HV* in the forming area.

*In case of Zn flake surfaces, baking leads to a reduced thread flank. hardness in the forming area of at least 600 HV.




**Heat treatment comparison of a case hardened screw and a MAXXtip® screw**

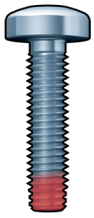



EJOT. Bringing it together.

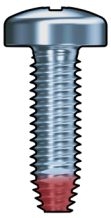
**Main application fields of EJOT MAXXtip®:**

> (Ultra) high strength steel sheets (at least UTS of 1200 MPa) using the thread types
  - SHEETtracs® up to 2 mm
  - Spiralform® analogous DIN 7500
> Cast iron (GJS und GJL) using the Spiralform® thread type

MAXXtip Spiralform®

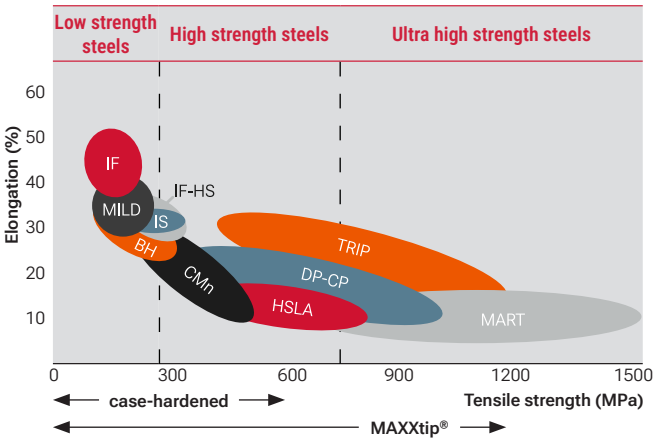


MAXXtip SHEETtracs®



## Application vs. material strengths

| Material | Yield strength (MPA) | Tensile strength (MPa) | Hardening process | |
|---|---|---|---|---|
| | | | case-hardened | MAXXtip® |
| S 420MC | 420 | 550 | ● | ● |
| S 500MC | 500 | 640 | – | ● |
| DP 800 | 620 | 800 | – | ● |
| CP-W 800 | 680 | 800 | – | ● |
| S 700MC | 700 | 850 | – | ● |
| DP1000 | 700 | 1000 | – | ● |
| CP900Y1180T-CP | 900 | 1180 | – | ● |
| MSW 1200 | 900 | 1200 | – | ● |



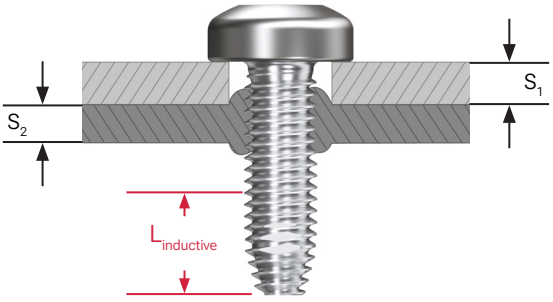

## Application example for high strength sheets

The advantages of MAXXtip® become obvious when fastening plastic seat attachment parts to seat frames made of S700MC. Even in (ultra) high strength sheets safe and reliable direct fastening can be achieved. This results in a significant reduction of working operations and costs.

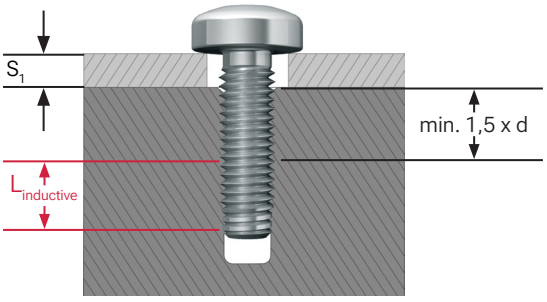
## Application example for cast iron

In case to cast iron (GJL or GJS) thread cutting can be omitted if MAXXtip® screws are used. Application fields can be found in the complete motor vehicle powertrain as well as in pumps, compressors or electric engines. A direct fastening into boreholes or cast holes is possible without any further preparations.

## Construction hints




| Screw length MAXXtip® | $L > s_1 + s_2 + L_{inductive}$ |
|---|---|




| Screw length MAXXtip® | $L > s_1 + 1{,}5 \times d + L_{inductive}$ |
|---|---|

Further information at www.ejot.com/industry or please contact
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07.26/PDF 07.26 Technische Änderungen vorbehalten.