

# EJOT FDS® M4 High-Strength

Advanced FDS® Screw for High-Strength Sheet Metal



The EJOT FDS® is a flow-drilling and thread-forming screw for mixed-material joining. This innovative fastening element allows for a fully-automated joint without pre-hole and for those applications requiring one-sided access. It can also be replaced by a metric screw for serviceability/repair of the joint.

Weight optimization and reduction is of key importance to vehicle manufacturers. Mixed-material body designs is an effective way of achieving these lightweight goals. The EJOT FDS®, in the standard M5 version, has been effective in supporting manufacturers in achieving these goals for many years; however, higher steel grades have since been developed and adopted into body-in-whites.

These new lightweight designs have increased usage of high-strength steels whose tensile strengths are >600 MPa. For these types of applications, EJOT has developed the FDS® M4 High-Strength screw that meets the high demands of these types of materials while also directly contributing to weight savings.



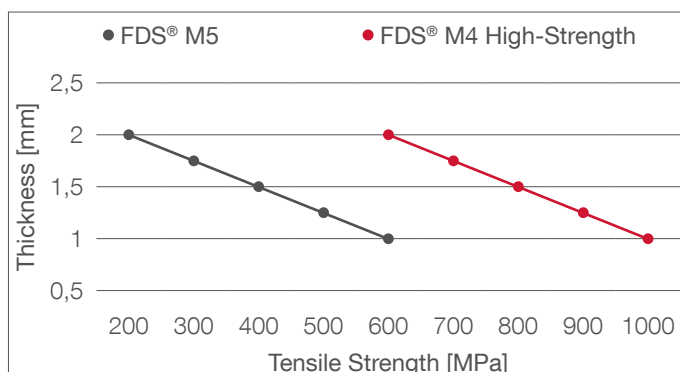
FDS® M5 Standard



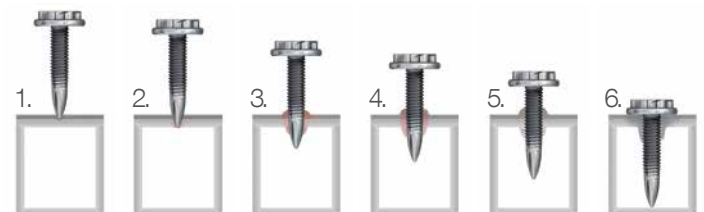
FDS® M4 High-Strength

## Comparison FDS® M5 and M4

	FDS® M5 Standard	FDS® M4 High-Strength
<b>Weight</b>	4.5 g	< 3 g
<b>Surface Hardness</b>	520 - 650 HV	500 - 550 HV
<b>Core Hardness</b>	320 - 360 HV	500 - 560 HV
<b>Heat Treatment</b>	Case hardened	Austempered



## Assembly Stages



1. Warming up
2. Penetration of the material
3. Forming of the draught
4. Thread forming
5. Full thread engagement
6. Tightening



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