

Technical product data sheet

# RIFAST® ENB ENM FOR HIGH-STRENGTH STEEL

## › RIFAST® ENB ENM · IDEA OF DEVELOPMENT

RIFAST® ENB (Bolt) and RIFAST® ENM (Nut) is an innovative development for high-strength steels with tensile strength greater than  $600\text{N/mm}^2$  with material thickness from 1.0 to 2.0mm. This addition to our RIFAST® Systems product line increases the installation capacity into sheet metal components made from HSLA and Gen 3 steels.

## › RIFAST® ENB ENM · DESIGN AND FUNCTION

RIFAST® Systems new ENB ENM design uses the pilot geometry and the staking die design to create the element and sheet metal joint in such a way that the torsional and push-out strength is achieved from the element pilot in the sheet metal hole. This design creates a flat sheet metal surface after installation on the clinching side for better final assembly of parts attached to the sheet metal with no cracks in the element pilot.

**rifast**®

## RIFAST® ENB ENM FOR HIGH-STRENGTH STEEL


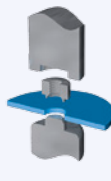
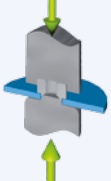



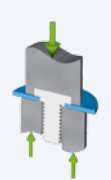

<b>Size range</b>	M5 - M12, 7/16"-20
<b>Property class</b>	DIN EN ISO 898-1 for studs, 10 DIN EN ISO 898-2 for nuts
<b>Fastener surface coating</b>	OEM approved electro-deposited coatings available from OEM approved suppliers
<b>Metal component thickness</b>	1.0 to 2.0 mm
<b>Metal component tensile strength</b>	$R_m > 600 \text{ N/mm}^2$
<b>Installation process</b>	In-die, C-frame, manual work station
<b>Hole size</b>	pre-hole required

Thread size	ENB M6	ENM M6
<b>Push out (kN)</b>	2.0*	2.0**
<b>Torque out unsupported (Nm)</b>	15.5*	12**

\* as installed in 1.0 mm HCT780X  
 \*\* as installed in 1.25 mm HCT780X

Feasibility to be tested for different sheet metal thicknesses and strengths at our application laboratories.

### ▶ RIFAST® · MECHANICAL JOINING PROCESS

ENM				
				
ENB				
				
<p>Create a pierced hole in the sheet metal component from the same direction as the installation of the element.</p>	<p>The sheet metal is in the installation position above the die. The RIFAST® ENM ENB is in the insertion position.</p>	<p>The insertion operation is started. The hydraulic unit moves down, the element pilot is inserted in the sheet metal hole and installation force is applied. By means of the die, the RIFAST® ENMENB is pressed into the component.</p>	<p>In order to remove the component, it must be raised at least by the height of the bolt length / shaping dome.</p>	

