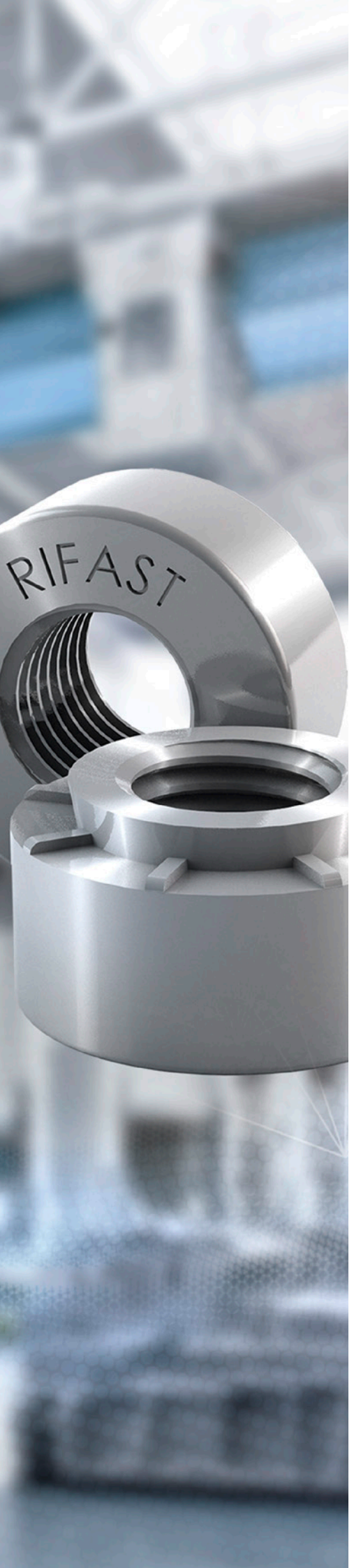


Technical product data sheet

SELF-PIERCING NUT RIFAST® STM+

RIFAST® STM+ · IDEA OF DEVELOPMENT

RIFAST® STM+ is an innovative nut development for material thickness from 2.0 to 3.0 mm. This addition to our RIFAST® Systems product line increases the installation capacity into sheet metal components without a pre-hole.

RIFAST® STM+ · DESIGN AND FUNCTION

RIFAST® Systems new STM+ design uses an optimized pilot geometry where the thickness of the pilot is increased to manage the increased stress from self-piercing into thicker sheet metal. Our new STM+ development utilizes our trusted RIFAST® Systems patented self-piercing technology (STM) and improves upon the proven design.

SELF-PIERCING NUT RIFAST® STM+

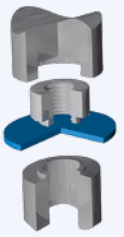
Size range	M5 - M12, 7/16" - 20
Property class	10 (DIN EN ISO 898-2)
Fastener surface coating	OEM approved electro-deposited coatings available from OEM approved suppliers
Metal component thickness	2.0 to 3.0 mm
Metal component tensile strength	$R_m \leq 600\ N/mm^2$
Installation process	In-die, C-frame, manual work station

Thread size	M10	M12
Push out (kN)*	5.2	5.4
Torque out unsupported (Nm)*	90	106

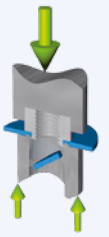
* as installed in 3.0 mm DC04 steel

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

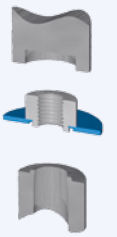
RIFAST® · MECHANICAL JOINING PROCESS



The component is in the piercing position above the staking die. The RIFAST® STM+ nut is in the piercing position of the punch.



The insertion operation is started. The punch moves down and the nut pilot contacts the sheet metal to pierce a hole. By means of the staking die and the installation force applied, the RIFAST® STM+ nut is pressed into the component.



The stamping is raised from the staking die.

RIFAST® STM+ M10 installed in sheet steel DC04 with 3 mm wall thickness

RIFAST® · ONE SYSTEM ENDLESS POSSIBILITIES

RIFAST® is proven to help keep you ahead of the curve with the growing demands on car body production by optimizing functionality while simultaneously lowering both part weight and manufacturing costs. RIFAST® elements are clinched in place. Through the utilization of our in-die or offline automated installation technology, we provide cost-effective assemblies when compared with welded joints. Our RIFAST® System provides joints that yield superior resistance to torsional and pushout forces.

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