



RIFAST® LBM

FOR COMPONENTS WITH
THICKNESSES BETWEEN
1.2 AND 4.0 MM

LIGHTWEIGHT & CLEARANCE FIT SOLUTIONS – Technical Product Sheet

RIFAST® LBM LIGHTWEIGHT NUT

The space- and weight optimize lightweight nut product line mechanically joined to metal components by means of automated insertion technology

› THE RIFAST® SYSTEMS ADVANTAGE

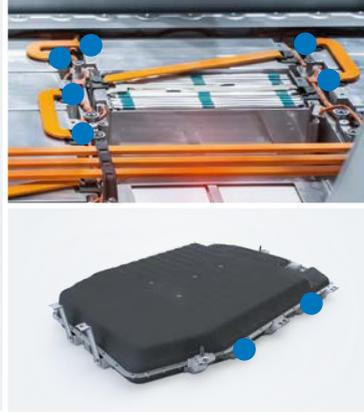
Systems expertise from designing, manufacturing clinch fasteners and automation equipment to consultation and realization in serial production

With over 25 years of expertise as a full system provider RIFAST® is the partner for developing economical solutions for reliable integration of mechanically joined clinch fasteners. The systems approach of clinch fasteners through automation equipment for in-die and off-line operations guarantees the optimal joint connection. The mechanical joining with the RIFAST® staking die designed to the customer component ensures consistent performance values in addition to eliminating thermal influences and distortions observed during welding.

› THE RIFAST® LIGHTWEIGHT NUT ADVANTAGE

Maximum weight-optimization, space-savings and secure

Up to 75% weight savings with the RIFAST® LBM M5 in comparison to a conventional clinch nut, the RIFAST® lightweight nut outperforms in maximum weight-optimization for metal parts, extruded profiles and castings. Whether this is with steels, aluminum or copper alloys, the lightweight nut offers a flat contact surface for attachment of mating parts (no protrusion on component underside after joining process), delivering on a simplified clinch nut portfolio - one clinch nut per size for various thicknesses. The RIFAST® LBM is the solution for components with wall thicknesses between 1.2 and 4.0 mm.



Application examples
 RIFAST® LBM
 i.e. body parts, busbars,
 connectors, battery
 boxes

TECHNICAL DATA

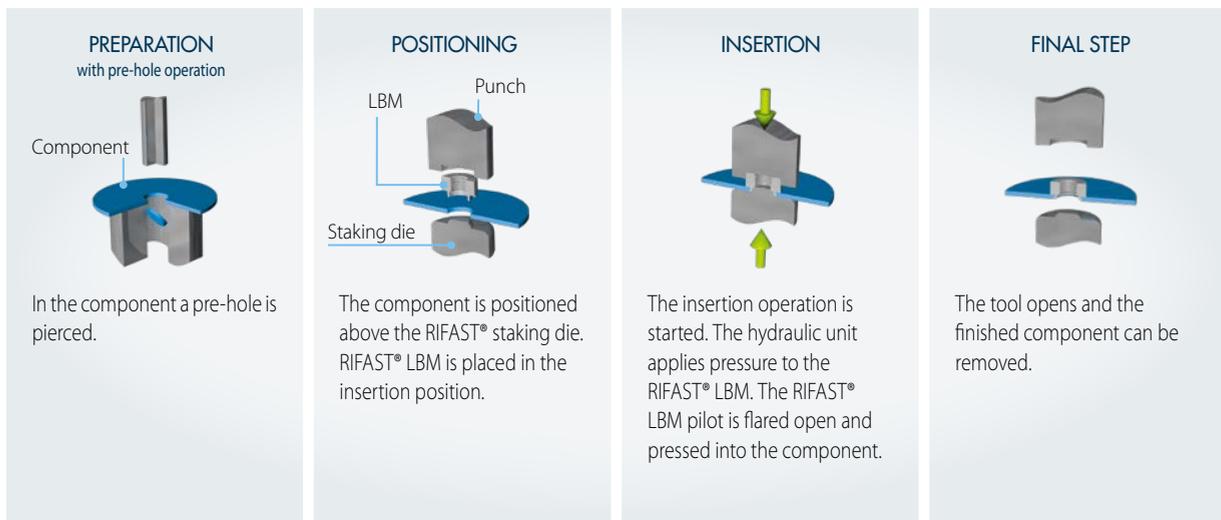
Thread Sizes	M5, M6, M8		
Strength Grade	10 (DIN EN ISO 898-2)		
Surface Coating	OEM-approved coatings		
RIFAST® Standard	WN 20350 (LBM)		
Tensile Strength	150 - 350 N/mm ²		
Component Materials	Steels, aluminum alloys, copper alloys		
Automation Equipment	Press, C-Frame (automatic or manual)		

Thread Size	M5	M6	M8
Application Thickness (mm)	1.0 - 4.0	1.2 - 4.0	1.2 - 4.0
Push-Out in 1.5 mm (kN)¹	1.0	1.1	1.2
Torque-Out in 1.5 mm (Nm)¹	9	14	20

¹ Performance values for reference, derived from destructive testing in a component made out of aluminum alloy AlMg4.5Mn with a thickness of 1.5 mm by RIFAST® Application Engineering

Performance values for push-out and torque-out are dependent on the component material (steel, aluminum alloy, copper alloy), the application thickness and in combination with RIFAST® staking die. Performance values for other component materials and application thickness can be validated through RIFAST® Application Engineering.

MECHANICAL JOINING PROCESS AND CROSS-SECTION



Cross section RIFAST® LBM M6 clinched in aluminum alloy AlMg4.5Mn with wall thickness 1.2 mm.