

b&m-TRIMNUT®

Thread-forming nut



Welcome to baier & michels



Group headquarters in an idyllic location
in Ober-Ramstadt near Frankfurt

Dear customer,
Dear business partner,

The globally oriented b&m group has built up a strong position as a partner for connection technology and C-parts management in the automotive industry. This is based on innovations in products, processes and systems, and confidence through competence, commitment and soundness.

New innovative products are being developed as problem solvers for customers in the field of technology. Our application engineers support customers with their requirements. A unique standardization tool with an online portal can substantially reduce the variety of parts the customer uses.

As a manufacturer, the b&m Group has the know-how to ensure very high and reliable product quality. With b&m Logistics, the b&m Group has a company that optimizes the customer supply chain worldwide through modern systems such as RFID.

Enjoy reading

Peter Federolf
Managing Director

baier & michels, founded in 1932, has developed a strong position as a supplier of fastener technology in the automotive industry and now employs more than 500 people worldwide. The Würth Group, to which b&m has belonged since 1973, provides additional financial stability with more than 79,139 employees and over 14,41 billion Euro in sales worldwide. baier & michels is now active in Europe, Asia and North America.



Fasteners with integrated functions

WHY FASTENERS WITH INTEGRATED FUNCTIONS?

Fasteners with additional integrated functions to solve application problems

The increasing complexity of components in the automotive industry also increases the demands placed on fasteners. They should not only connect, but also solve complex problems in the application.

Application problems can arise, for example, due to process-related residues in the counterpart. These residues jeopardize the secure connection between the screw and counterpart. Fasteners with function integration can overcome such challenges due to their special, additionally integrated functions.

BENEFITS:

- Specific additional functions for the respective application
- Solution of various application problems
- Providing a secure connection

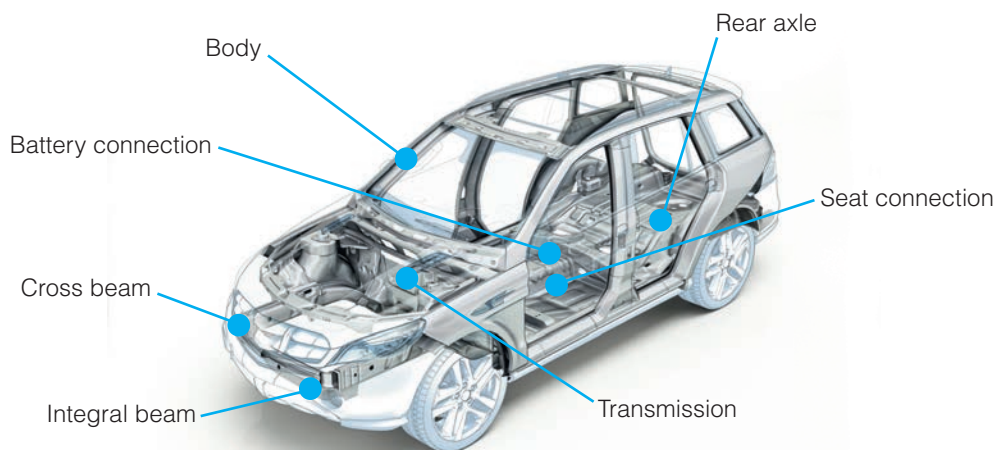
b&m-TRIMNUT®



- Fastener and thread-forming tool in one
- Compensates for imperfections by local reshaping of the damaged threads
- Easy application of bolt threads using thread-forming
- Higher strength than with machined threads - therefore unrestricted force and torque transferability

Application examples

New!



b&m-TRIMNUT®

The b&m-TRIMNUT® turns the thread-forming principle upside down. In this case, it is not the screw but the nut that is both the fastener and the thread-forming tool. Designed to remove weld spatter on welding studs or coating residues, the b&m-TRIMNUT® is also capable of forming a thread in conjunction with a corresponding bolt geometry.

The b&m-TRIMNUT® enables the removal of imperfections by locally reshaping the damaged thread turns and it also removes rust and heavy dirt. This operating principle is effective during screwing and unscrewing and it ensures safe assembly and disassembly without destroying the connection.

Process-safe screw connections



CHALLENGE: Screwing problems in series assembly due to process-related residues in the thread

Due to production-related influences, undesirable disturbances in the screwing process occur time and again in the series assembly of components. When stud welding on galvanised sheet metal, for



example, welding spatter may remain on the external thread. Coating such as cathodic dip painting can also clog the threads during the coating process. This often leads to downtimes or costly reworking of the affected parts. In many cases, however, "seizure" of the nut makes the entire component unusable or even destroyed.

SOLUTION: b&m-TRIMNUT® Removal of weld spatter or coating residues

The nut itself takes over the function of the thread-cleaning tool and thus prevents the nut from "seizing" during the screwing process. However, the coating is always maintained in the nominal layer thickness range. This means that no reworking is necessary and the assembly can be reused. This saves you time and cost in the production process.

PRODUCT FEATURES:

- **Diameter:** M5 - M22
- **Height:** similar to DIN 1661
- **Property class:** similar to 10 according to DIN EN ISO 898-2
- **Flank angle:** 60°
- **Thread pitch:** metric according to DIN 13 / fine thread or inch thread possible

- **Flange:** geometry according to DIN 1661 / customer-specific solutions possible
- **Coating:** according to specification (integrated or additionally applied lubricant depending on application)

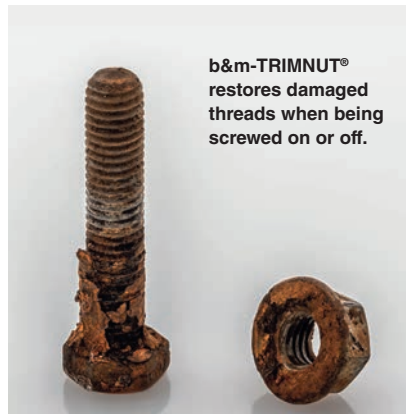
AREAS OF USE:

- Mounting onto KTL coated and hot dip galvanized threaded bolts
- Applying external threads using thread-forming
- Repair solution for damaged bolt threads
- Removal of process-related residues, such as weld spatter

Repair solution for damaged threads



Threads that are no longer functional cause time-consuming reworking or the replacement of entire assemblies.



b&m-TRIMNUT® restores damaged threads when being screwed on or off.

SOLUTION: b&m-TRIMNUT® Removal of imperfections and making damaged threads usable

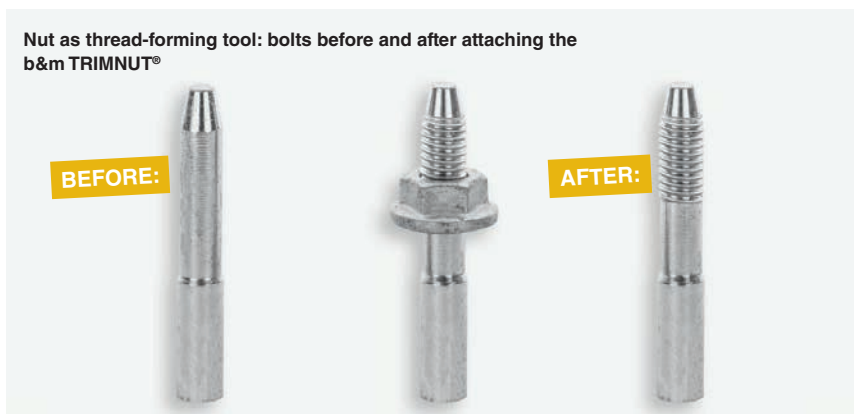
The b&m-TRIMNUT® enables the removal of imperfections by locally reshaping damaged threads. When being screwed on and off, the b&m-TRIMNUT® removes rust and dirt, and it makes threads, that have become unusable, usable again. This makes a non-destructive separation of the connection possible.

CHALLENGE: Complex reworking or replacement of entire assemblies with threads that are no longer functional

Damaged threads are a major problem in the case of repairs, particularly in the trades, agricultural and forestry technology, construction

and earthmoving machinery, but also in automotive engineering. The accessibility of the affected threads is often limited, so that the entire assembly has to be dismantled in the workshop. In addition, damaged or rusted threads often pose a problem when replacing wearing parts, as the nut can no longer be loosened.

Joining without machining



Nut as thread-forming tool: bolts before and after attaching the b&m TRIMNUT®

SOLUTION: b&m-TRIMNUT® Applying bolt threads using thread-forming

By screwing the b&m-TRIMNUT® directly onto the bolt, a regular metric thread is formed. The thread has a higher strength than threads produced by machining. The screw connection is self-locking, as there is no play between the bolt thread and nut. Due to this simple thread production process, no further work steps are necessary. This saves time and costs.

CHALLENGE: Cost-intensive reworking of components by machining threads

Components, for example made of light metal die casting, can often be produced almost ready for installation. However, the production of a thread on such components usually requires an additional and cost-intensive

machining process. Moreover, these threads produced by machining have comparatively low strengths. Possible damage to the finished machined parts due to transport or handling can only be avoided by elaborate protective measures.

baier & michels worldwide



Call us!

We analyze your screwing situation and offer you a non-binding technical consultation, upon request also on site. Our technical services include:

- Application engineering
- Process optimization
- Development of new connection systems

We also support you in the areas of procurement and logistics.

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