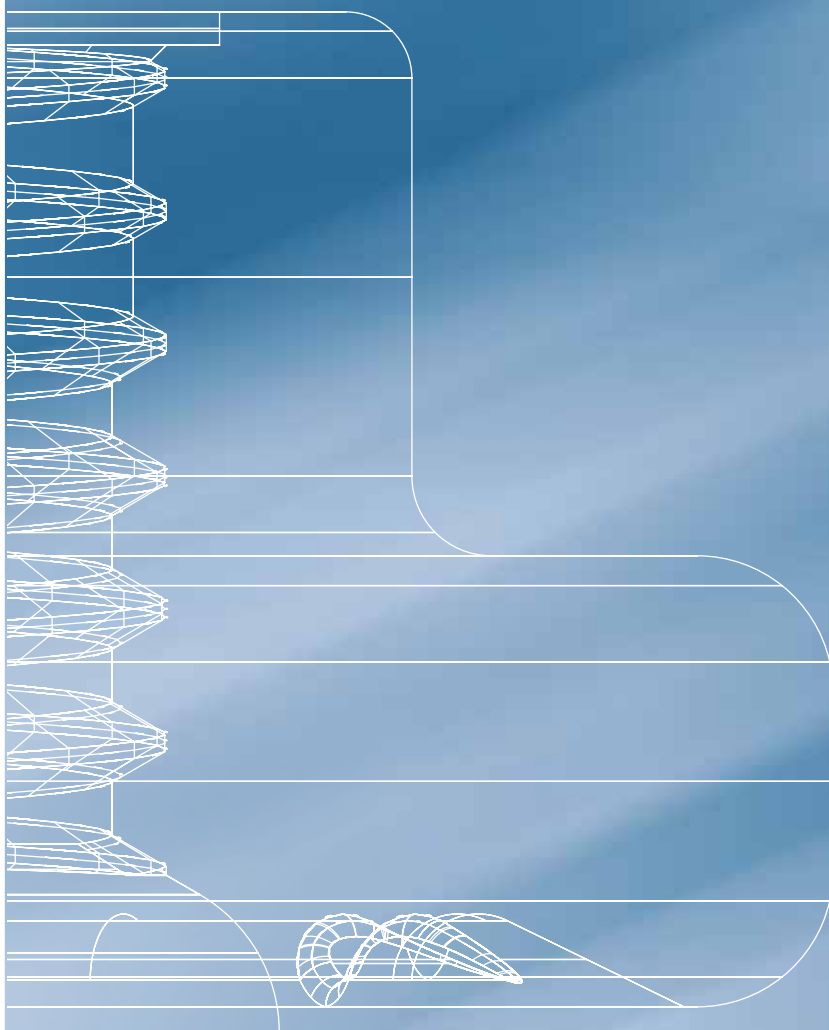
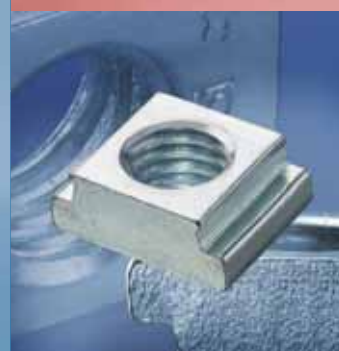


Next Generation Fastener Technology

Your System Supplier
for Pierce Nuts
and Studs



PROFIL – Your System Supplier for Pierce Nuts and Studs

PROFIL develops pierce nuts and studs which are fastened to metal shaped parts by means of a riveting process. We are a system supplier who also constructs automated feeding equipment which is customized to meet the individual production requirements of our customers.

PROFIL is a pioneer in mechanically joined fastener technology and has steadily continued its development throughout the last decades. That is why we can offer you today the widest product range of this type in Europe.

The economic advantages of using the PROFIL system in industrial manufacturing is documented by a multitude of applications, mainly in the automobile, appliance and construction fittings industries.

All major European automobile manufacturers and their suppliers are numbered among our customers.



Your Fastening Problem- Our Development Task

- Our state-of-the-art development, manufacturing and quality systems guarantee standardized and customized systems with a complete range of pierce nuts and studs, installation tools and feed equipment from a single source.
- Customer-specific solutions are offered by consultation, development, manufacturing and service.
- Worldwide presence secured by membership of the international company federation FSI. We cooperate with other partners in a worldwide company federation. So you can count on competent support in all of the world markets – from development to customer service.
- Our certificates
DIN EN ISO 9001
DIN EN 14001: 2005
ISO/TS 16949: 2002

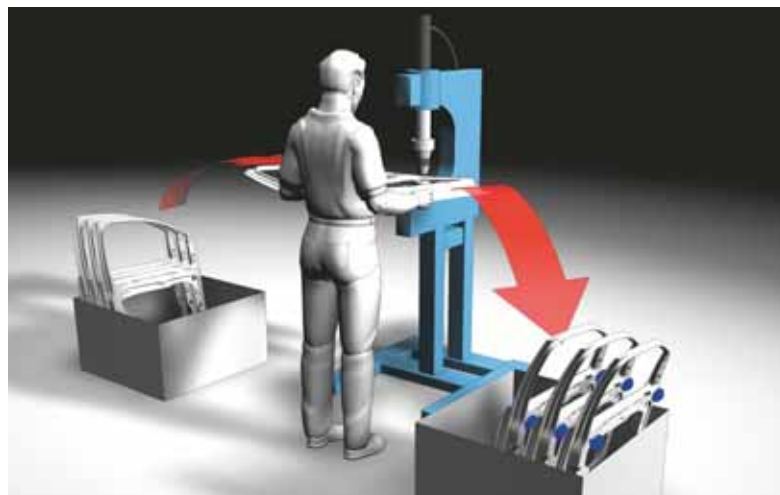
The System That Fastens.

The wide range of nut and stud families makes it possible to implement solutions at optimal cost and benefit. We offer a number of different techniques for use with each of the fastener elements:

Manual insertion procedure

Low-cost method for limited series, single parts and prototypes. The fastener element is manually inserted into a tool and attached to the metal part with a press stroke.

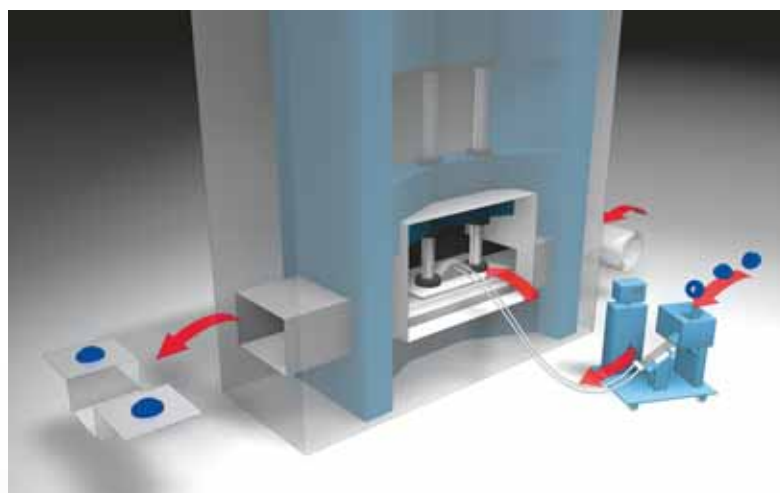
*Manual
insertion
procedure*



Fully automatic placement utilising installation tools and automatic presses

Especially economical for mass production. The fastener element is transported by a sorting and feeding machine through feed tubes to the pierce head. One or more heads are integrated into a press tool. With every stroke, one or more fastener elements are installed into the work piece.

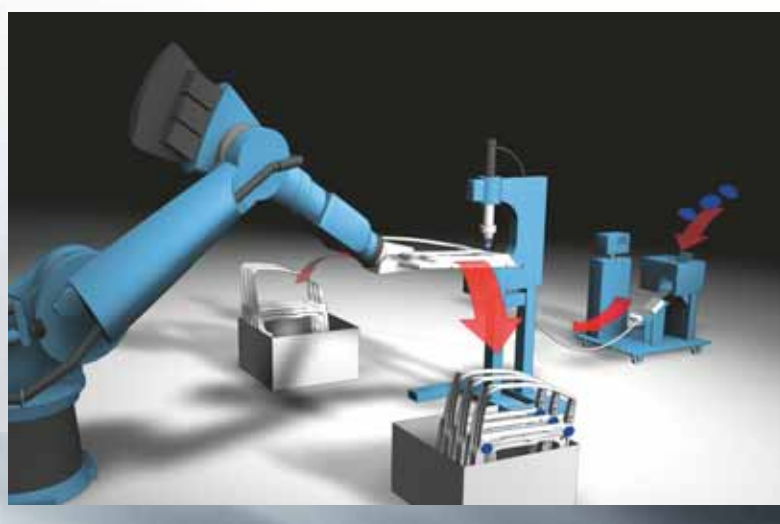
*Fully
automatic
placement*



Robot-controlled placement in the body in white shop

Ideal application for bodywork with large pre-formed metal pieces and component parts with fastener elements assembled in different planes. The robot carries the metal part or the piercing tool.

*Robot-
controlled
placement*



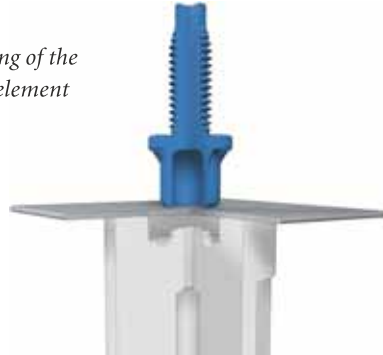
PROFIL's special service

PROFIL installs customer's metal parts with PROFIL fastener in a short time for use as visual or functional samples and also conducts suitability tests. The test results are available for the customer's assessment.

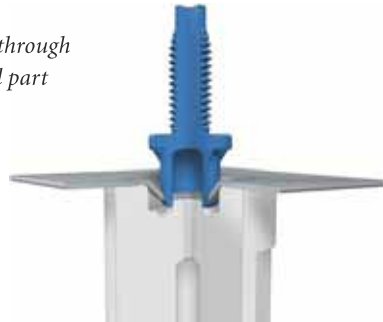
The advantages

Piercing and riveting process

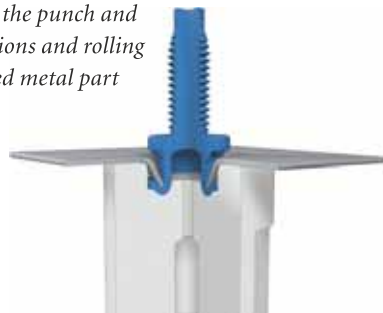
Positioning of the fastener element



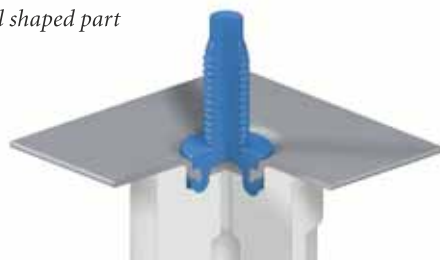
Piercing through the metal part



Flanging the punch and rivet sections and rolling the shaped metal part



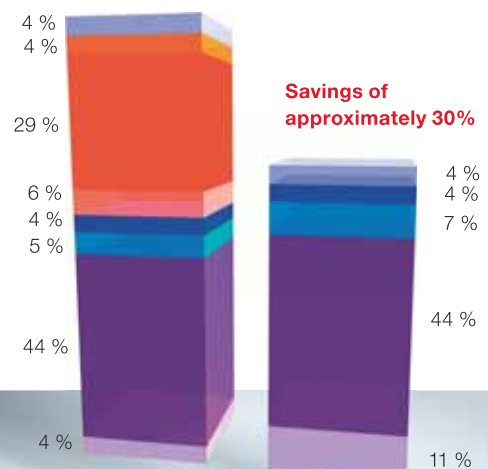
Completed attachment of fastener element in the metal shaped part



- Optimal economic efficiency
- Compared to standard joining procedures, mechanical attachment costs about a third less because the number of intermediate steps such as temporary storage, transport within the plant, welding and quality assurance measures is greatly reduced. The investment costs are lower than those for thermal procedures. There are no costs for follow-up work.
- Process security
- High static and dynamic stability of the fastening
- Suitable for surface-coated metals and sandwich metals
- Suitable for many different kinds of metal materials, from aluminium to high strength steels ($R_m = 1500 \text{ MPa}$ tensile strength)
- Highly accurate positioning
- No functional impairment or damage to components, e.g. by weld spatters
- No effects on the environment or production of waste materials as a result of the process

- Follow up work
- QA measures*
- Welding, energy, cooling, space*
- Logistics*
- QA measures
- Manufacturing costs for press
- Costs for metal parts
- Costs for fastener element

*** These steps are eliminated when you use PROFIL fastener technology**



Weld nut M8 PROFIL Rivet nut RND M8

The advantages

PROFIL-Verbindungstechnik solves manufacturing engineering problems

- Steel
- High strength steel *
- Sandwich-panels
- Surface coated panels
- Aluminium
- Magnesium
- Prepainted panels



PROFIL fasteners are suitable for use in different materials.

The mechanical joining technology allows an optimal material selection and solves quality problems.

* Up to $R_m = 1500$ MPa tensile strength

PROFIL offers a broad range of products and differentiates between the following fastening methods:

Self-Piercing and -Riveting

Self Riveting

Pressing In

Bolt



Nut



Specific advantages

- Installation in one step
- Minimum space requirements within the tool
- Minimum tolerances
- Simple installation in every work direction (no evacuation of slugs)
- Easy joining of high strength steel up to a tensile strength of $R_m = 1500$ MPa
- Suitable for a wide range of sheet metal thicknesses with only one Nut type ($t = 0,5$ mm - 5 mm)
- Easy and simple tool maintenance
- All kinds of surface coatings are feasible (no deformation of the fastener by piercing or riveting)
- Wide range of sheet metal thicknesses available
- Solutions for single or multistage installation available

The advantages

Broad range of products

PROFIL's wide range of standard nut and stud families makes it possible to implement solutions at optimal cost and benefit.

Each product family covers a specific application spectrum. Special fasteners with additional functions according to customer requirements integrated into the fastener complement the PROFIL product range.



Examples of applications

You will find PROFIL fasteners not only in the car body, but also in the subsystems closures, seats, instrument panels, pedals ... For these applications we already have tailored concepts which could be adapted according to your requirements.



Next Generation Fastener Technology

PROFIL – Your Innovative Partner

More than 450 patents reflect our innovative abilities. PROFIL develops to the production stage an average of more than 20 new products per year.



PROFIL – Your Contact for Specialist Departments

Through an intensive exchange of information at an early stage with

- Development and test departments
- Quality assurance
- Standardization
- Production planning
- Tool-making, manufacturing, maintenance
- Purchasing

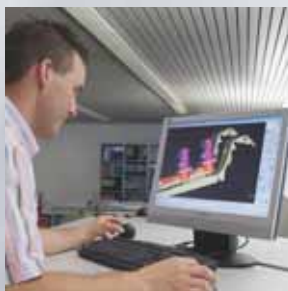
We develop optimal problem solutions and the integration of the PROFIL-system into your production is assured.

When you start up the system which has been customized for your requirements in your plant, our customer service support makes sure that the processing systems are always available for use as you expect.

Take Advantage of our Know-how

The comprehensive PROFIL norms which we make available to you contain key technical data with numerous drawings and tables – from fastener elements to pierce heads to sorting and feeding technology.

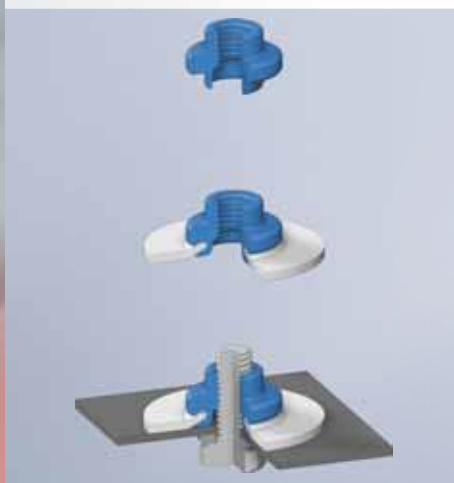
Our technical sales engineers are glad to answer your question in your company. Many automobile manufacturers have added PROFIL fasteners to their company standards.



Product Range

RND

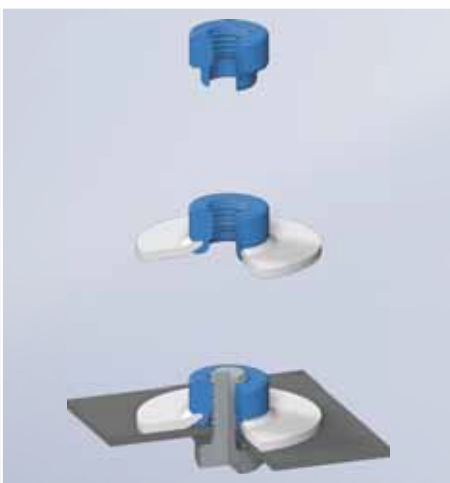
Round rivet nut for high pull-through forces



Suitable for a wide spectrum of dynamic, static and impact loads.

RSN

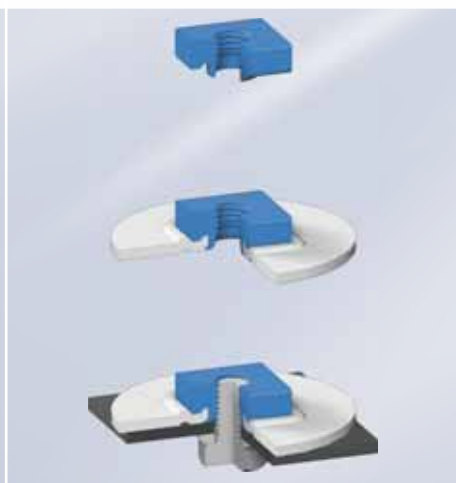
Round, narrow bodied rivet nut



Round rivet nut requiring little space for dynamic, static and impact loads.

URN

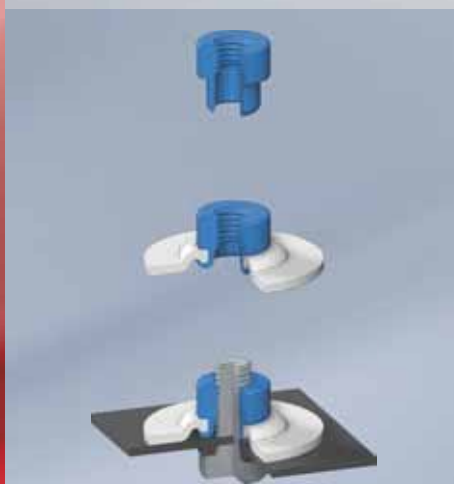
Universal-rectangular nut with round rivet portion



Rivetnut for dynamic, static and impact loads in thin panels.

RSF

Round shoulder nut with flange



Ideal for alternating pull/push loads in axial direction.

RSK

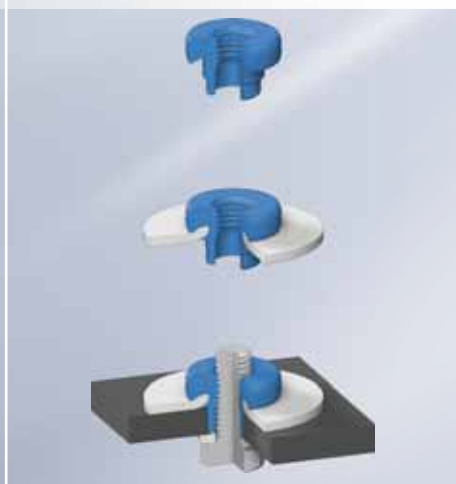
Round shoulder nut, conical



One-step installation. The nut is pierced into the panel in the direction of screw assembly. This can solve access problems.

EMF

Round rivet nut for centering functions



Depending on its position the nut is used for centering or spacer functions (see EMF – Round rivet nut for spacer functions).

Next Generation Fastener Technology

UM

Universal-rectangular nut



Rectangular pierce nut. One-step installation. Suitable for quasi-static loads. Excellent cost-benefit ratio.

HI

Rectangular nut, „high integrated“



Rectangular pierce nut. One-step installation. High clamping strength. For use with thin metals and medium loads.

RSU

Round press in nut for one step installation



One-step installation. No deformation of the nut during riveting, i.e. many different kinds of surface coatings of the nut are possible. Suitable for dynamic, static and impact loads.

EMF

Round rivet nut for spacer functions



Depending on its position the nut is used for centering or spacer functions (see EMF – Round rivet nut for centering functions).

RSN cap nut

Round, narrow bodied special rivet nut



Round rivet nut requiring little space for dynamic, static and impact loads. The cap protects against penetration of various substances.

RND cap nut

Round special rivet nut for high pull-through forces



Suitable for a wide spectrum of dynamic, static and impact loads. The cap protects against penetration of various substances.

Product Range

SBF

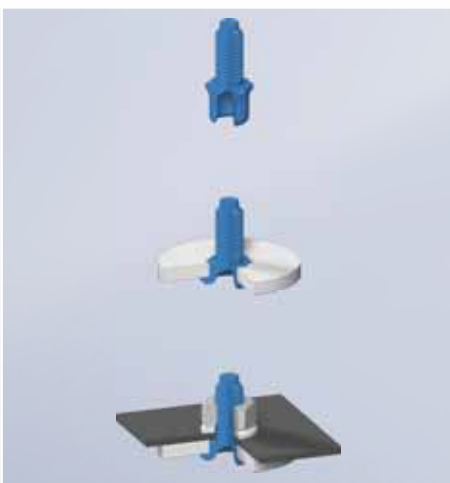
Pierce stud with flange



One-step installation.
High dynamic load capacity in pull/
push direction.

SBK

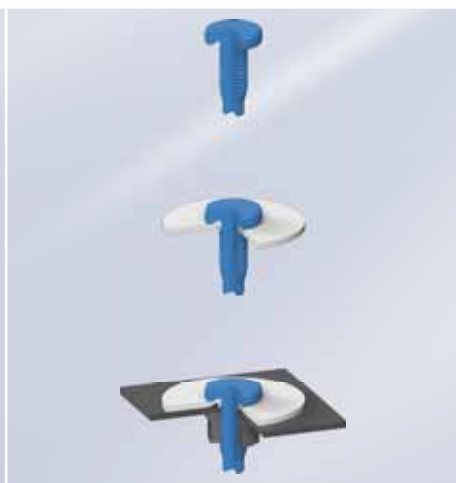
Rivet stud, conical



Rivet studs for greater panel thick-
nesses. Particularly suitable for
shearing loads.

EBF

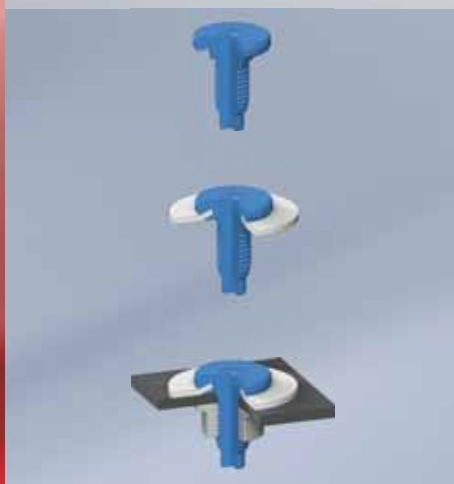
Press-in stud with flange



No deformation of the bolt during
riveting, i.e. many kinds of surface
coatings possible. Highest dynamic,
static and impact load capacity.
Wide range of metal thicknesses
and materials.

NBR

Rivet stud with skirt



Wide range of metal thicknesses
and materials especially for thin
panels, Aluminium- and high
strength steels. Suitable for a wide
spectrum of dynamic, static and
impact loads.

SZB

Ball pin



One-step installation. Pierce stud
for bearing position for high tensile
and pressure loads applied laterally
to the longitudinal axis. Excellent
price performance ratio.

SBF

Ball pin with flange



One-step installation. Pierce stud
for bearing position for highest
tensile and pressure loads applied
laterally to the longitudinal axis.
Suitable for the use in thin panels.

Special fasteners

SBF

Rest stud with flange



One-step installation. High dynamic load capacity in pull/push direction.

KSB

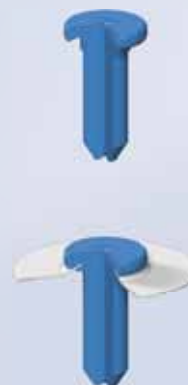
Earthing-pierce stud with screw-on nut



One-step installation guarantee constant, reproducible lowest electrical contact resistance.

NBR

Special rivet stud with skirt



Rivet stud with centering function for a wide range of metal thicknesses and materials. Suitable for a wide spectrum of dynamic, static and impact loads.

NBR

Special rivet stud with skirt



Rivet stud with centering function for a wide range of metal thicknesses and materials. Suitable for a wide spectrum of dynamic, static and impact loads.

SBF

Special pierce stud with flange



Pierce stud with centering and spacer function. High dynamic loads and capacity in pull/push direction.

Starting with the standard fasteners as a basis, PROFIL develops special fasteners and solutions as well as the necessary application techniques to meet customer's requirements. Examples of such fasteners include cap nuts, special nuts and studs for earthing connections, hinge bolts, centering bolts, bearing bolts and bushings.

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