



Precision Cleaning

The components and assemblies in the automotive industry are becoming more complex and also more sensitive to cleanliness. In addition, products are exposed to the risk of further contamination in subsequent manufacturing operations. In order to minimize this concern, some automotive production systems operate at special cleanliness levels. Conventional production (SaS 0) allows particle sizes of $> 1,000 \mu\text{m}$. In addition, there are the cleanliness classes SaS 1 and 2, which are referred to as the "grey zone" in manufacturing and in which the number of particles is minimized. "Clean room production" (SaS 3) is rarely encountered in the automotive industry.

HONSEL has extensive experience to meet these high customer requirements and is able to supply products that correspond to cleanliness classes 1 and 2. This is achieved through precision cleaning. Production-related impurities such as dust, emulsion residue and material shavings are removed in a special cleaning process. The downstream packaging of the products in airtight containers or blisters guarantees maximum cleanliness and security for the customer.

Materials



Copper

Conductivity

Very good
 $58 \cdot 10^6 \text{ S/m}$

Density

$8,96 \text{ kg/dm}^3$

Corrosion resistance

Good
Patina protects the base metal

Industrial applications

Electronic components



Aluminum

Average
 $37,7 \cdot 10^6 \text{ S/m}$

$2,7 \text{ kg/dm}^3$

Good
but reduced in strong acidic or basic environments

Lightweight construction



Stainless Steel

Not good
 $1,4 \cdot 10^6 \text{ S/m}$

$7,9 \text{ kg/dm}^3$

Very Good
304 (A2) is not resistant to salt water
316 (A4) is resistant to salt water and acids

Traditional body-in-white

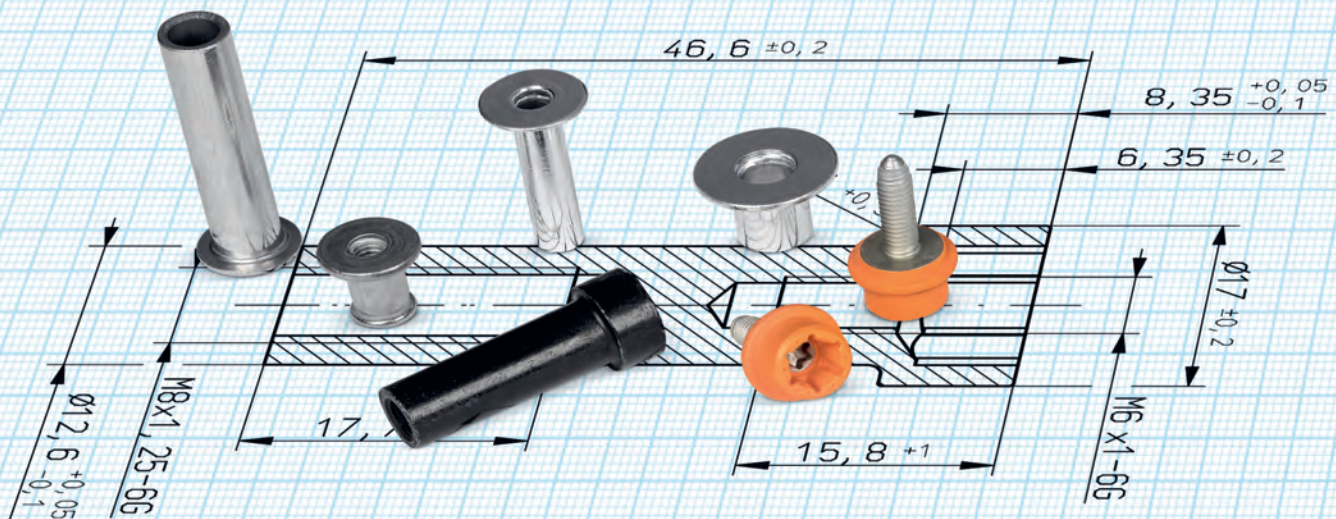
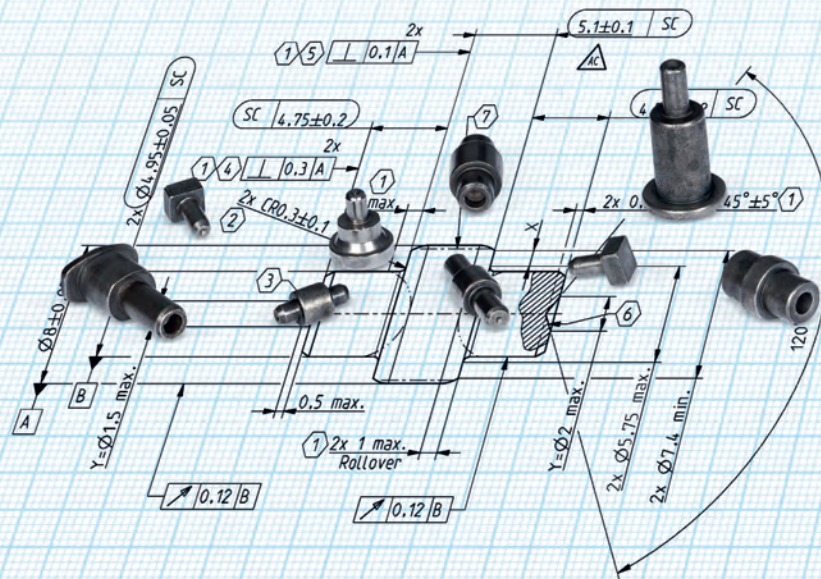
Solid Rivets

Applications:

- Door locks, hinges, clutches, transmission parts

Features:

- Localized hardening on functional surfaces
- Complex asymmetrical geometries can be achieved



Customer specific designs

Applications:

- E-mobility, structural components, body-in-white

Features:

- With or without threads
- High compressive strength sleeve designs
- Plastic overmolded products that insulate high voltage
- Complex geometries
- Tight tolerances
- Localized hardening or annealing

Blind rivet nuts

• **Strength classes:** 8 / 10 / 12

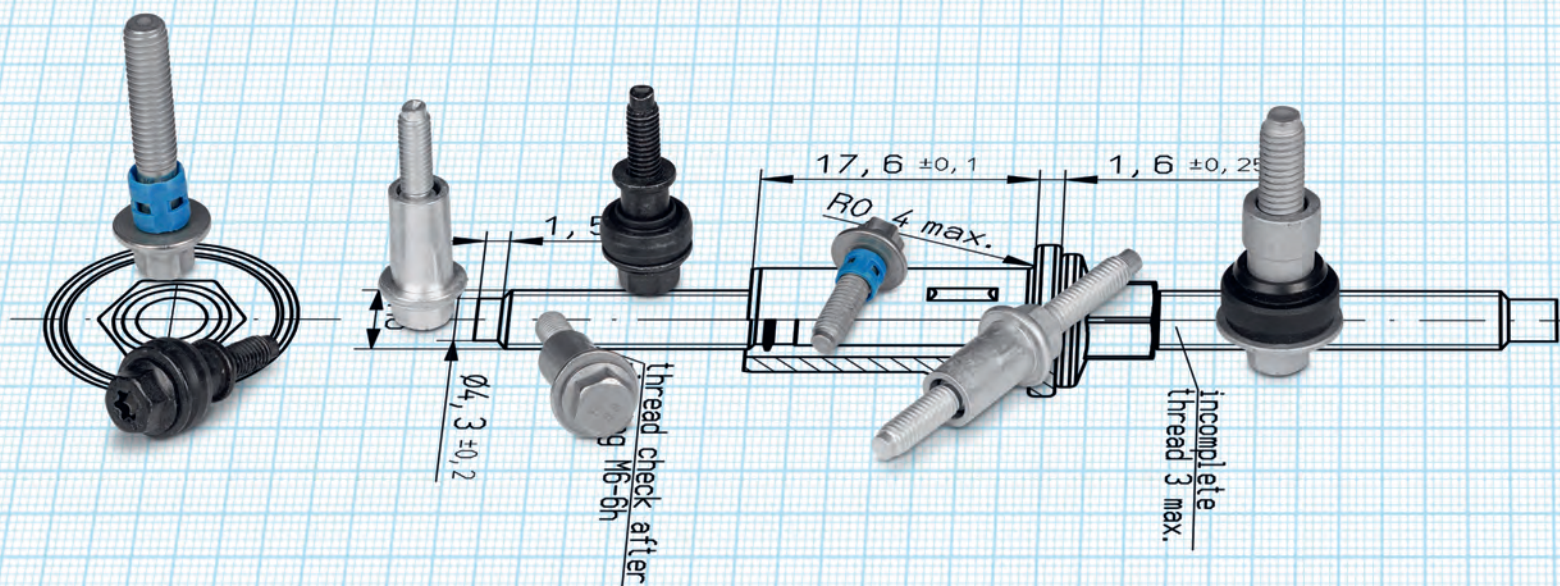
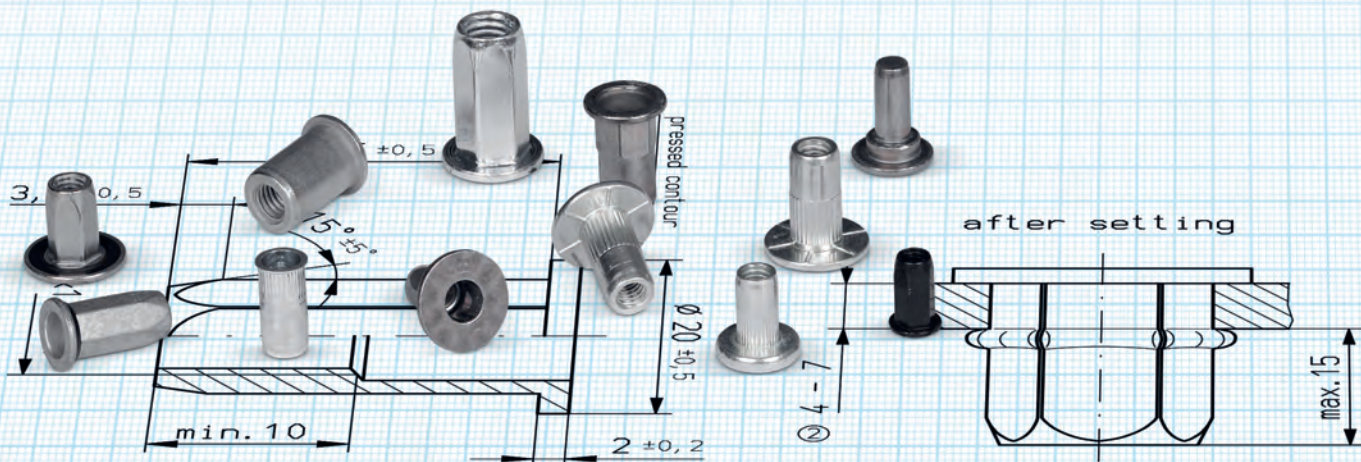
• **Sizes:** M5 – M10

Applications:

- Vehicle chassis, roof rails, bumpers, subframes, battery trays, high-voltage storage

Features:

- Non-metric threads available



HPF – HONSEL Powertrain Fastener

Property classes: 8.8 / 10.9

Thread: M5 – M10

Applications:

- Powertrain-related components and modules, battery trays, shields and covers, NVH reduction

Features:

- Secure fastening of plastic components
- Pre-assembly of fasteners
- Vibration reduction through decoupling (NVH)

Blind rivet screws

Property classes: 8.8 / 10.9

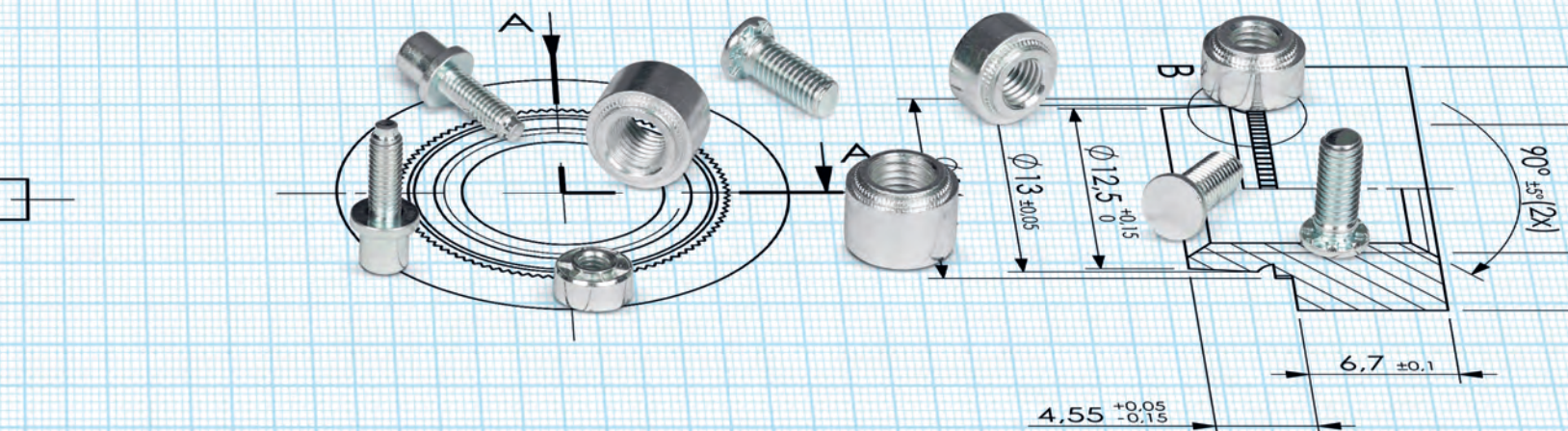
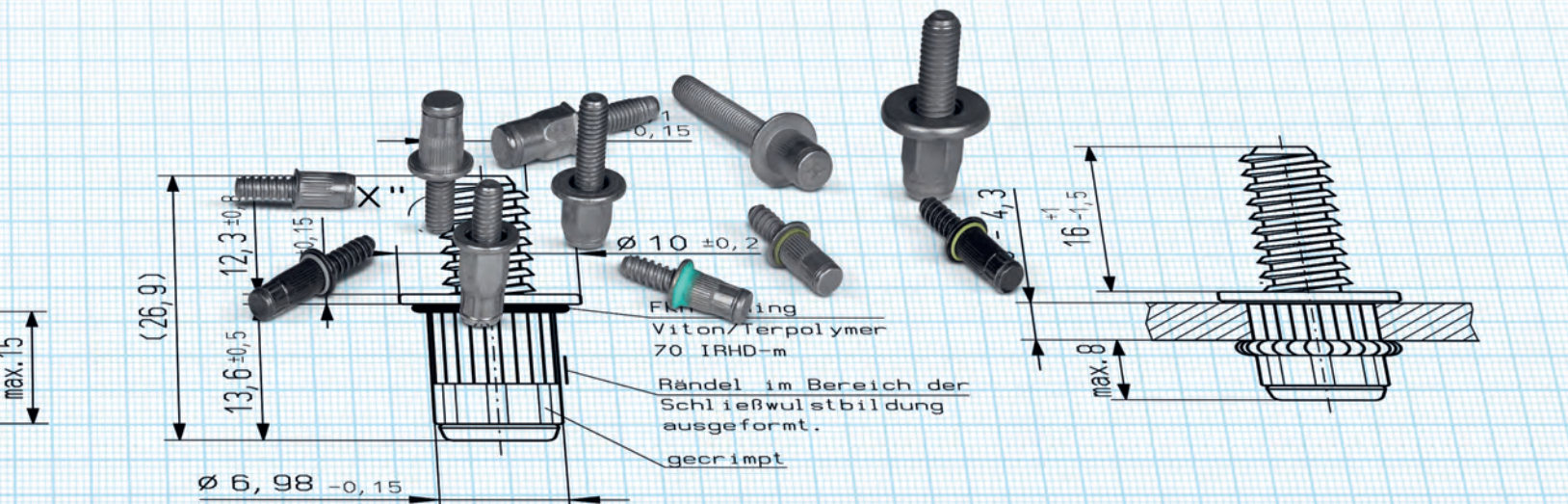
Sizes: M5 – M10

Applications:

- vehicle chassis, roof rails, bumpers, modules, battery trays, high-voltage storage

Features:

- Crimped or laser welded
- Sealing with O-rings or plastic molding (TPE)
- Non-metric threads available
- Sealed version is waterproof to EN 60529 and ISO 20653



PCF – HONSEL Press & Clinch Fasteners

Property classes: Screws: 8.8 / 10.9
Nuts: 8 / 10

Thread: M5 – M12

Applications:

- Cast components and profiles, sheet metal parts, stamped steel components

Features:

- Reliable use in continuous and die-casting processes
- High torque resistance and push-out forces
- Tight tolerance limits for positioning
- Operator non-destructive quality testing

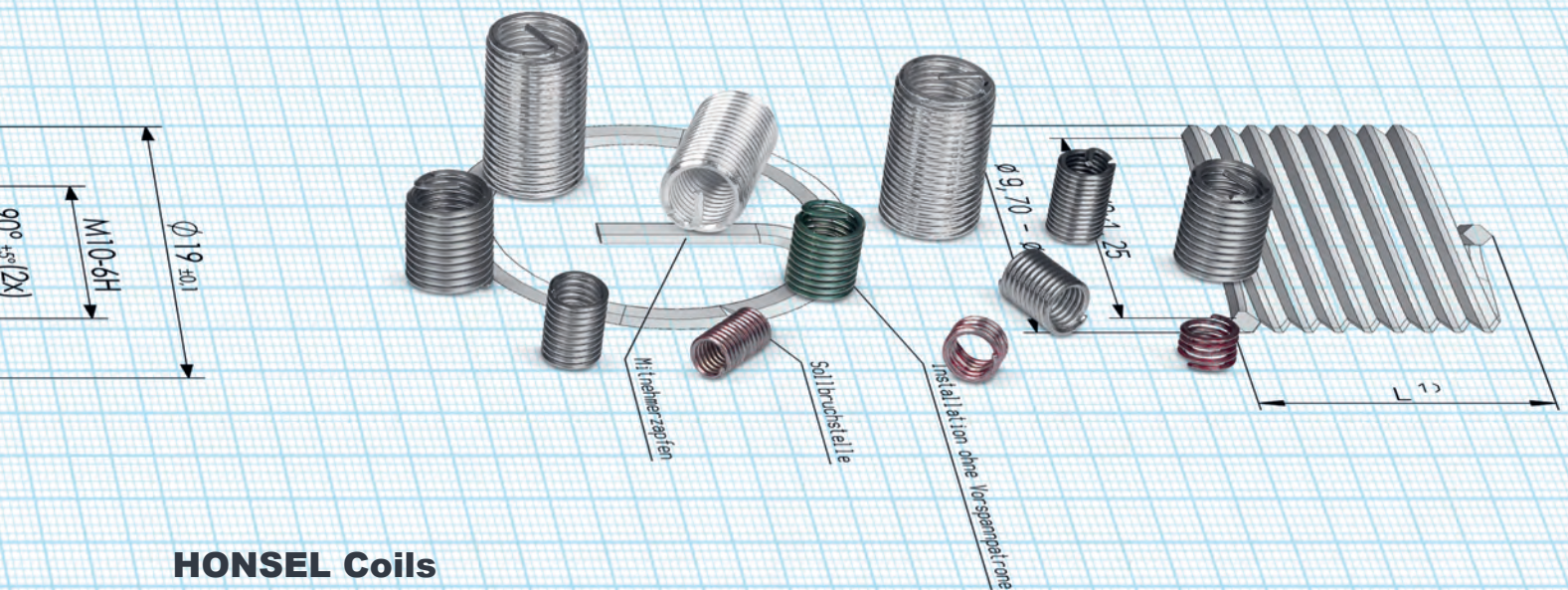
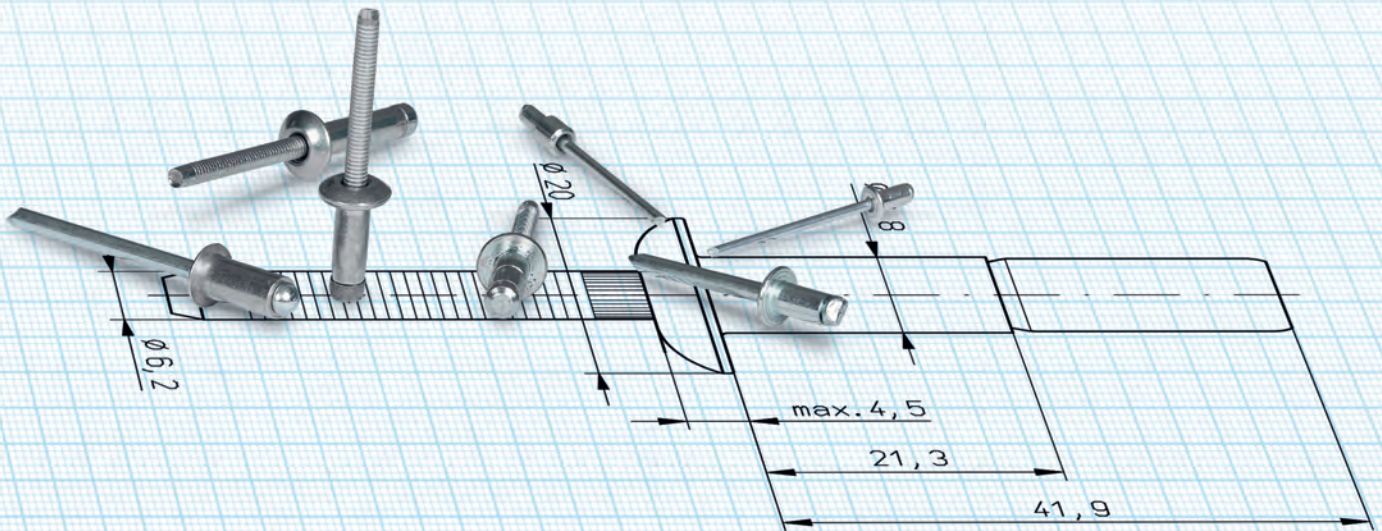
Blind rivets

Applications:

- Vehicle chassis, roof rails, bumpers, Steering columns, transmission brackets, lightweight construction

Features:

- Various material combinations possible
- HONSEL is THE specialist for high-strength Rivets "Made in Germany"



HONSEL Coils

Thread: M5 – M16

Application:

- Cast components, structures and components, Longitudinal beams, suspension strut supports

Features:

- Optional tin coating to protect against contact corrosion
- Thread reinforcement in aluminum/magnesium castings
- Thread sizes > M16 are available

HONSEL

Partner of automotive manufacturers
and automotive engineering

FOLDING BLIND RIVET NUT

HONSEL folding blind rivet nuts were developed for applications requiring high tightening forces. During setting, the slotted shank fans out into four tabs which contact the part uniformly and over a large area for uniform distribution of the forces. Furthermore, folding blind rivet nuts offer a very large grip range.



Also in the **HONSEL** range:
The folding blind rivet

VNG 753

The special tool for SFM-PL folding rivet nuts.

Thanks to the **very large stroke** of up to 15 mm and the correspondingly **extended mandrels**, the press-tab blind rivet nuts can be set perfectly and easily.

Blind rivet nuts

M3	M4	M5	M6	M8	M10	M12
	*		Steel		*	

* optional

RIVDOM® eVNG 2

Rivdom eVNG 2 gets to grips.
Uncompromising.

The new **HONSEL** battery riveter now offers the ultimate solution for cordless settings of blind rivets nuts and bolts. Oriented to the demands of industrial series production, Rivdom eVNG 2 offers a wide range of use features and options.

Innovative. Sturdy and reliable.



Blind rivet nuts

M3	M4	M5	M6	M8	M10	M12
*	Aluminium					*
*	Steel					*
*	Stainless steel					*

* optional

Blind rivet studs

M3	M4	M5	M6	M8	M10	M12
	Steel					

Modern,
flexible and
unrestricted
processing of
**Blind rivet
nuts**
up to **M12!**



M3 - M12

VNG 703

The **force-controlled tool** for fast handling of large quantities of fasteners in serial manufacture. The individual setting of the setting force guarantees **optimal and material-friendly setting** of the blind rivet nut. Slight pressure on the threaded mandrel automatically threads on the blind rivet nut and **unthreads it again fully automatically** after setting. Switching from forward to return travel is extremely quick.

OPTO® multigrip blind rivet nut

ONE blind rivet nut FOR ALL grip ranges. The patented HONSEL development offers numerous advantages over the classic blind rivet nut. There is no mixing of different clamping areas, storage and error costs as well as delivery times are reduced and there are savings in the variety of items.



Blind rivet nuts

M3	M4	M5	M6	M8	M10	M12
	Aluminium					
	Steel					
	Stainless steel					

Blind rivet studs

M3	M4	M5	M6	M8	M10	M12
	Steel					

PROCESSING TOOLS

RIVDOM® eBZ 2

The **setting force of 20,000 N** and the very large **stroke of 30 mm** enables not only standard blind rivets but also **high-strength versions** such as **HONSEL FERO® Bulb** and **FERO® Bolt** (or comparable products) and folding blind rivets **up to 6.4 mm diameter** to be quickly and reliably set in one step. **Uncompromisingly powerful.**

Blind rivets

3,2	4,0	4,8	5,0	6,0	6,4	8,0

* optional

The POWER pack

Suitable for all high-strength blind rivets



up to 6,4 mm



24.000 N

up to 7,8 mm

RIVDOM® eBZ 3

The **HONSEL Rivdom eBZ 3** battery riveter was developed specially for the demands of the setting of high-strength blind rivets with 6.4 and 7.8 mm diameter with grooved rivet mandrel!

The clamping jaws are especially designed for this geometry and a modified clamping mechanism **guarantee reliable and positive settings** of **FERO® BULB** high-strength blind rivets (or comparable products) with a mandrel diameter from 3.8 to 6.15 mm. This also helps to minimise wear on the clamping jaws.

Blind rivets

3,2	4,0	4,8	5,0	6,0	6,4	8,0

MAXIMUMPOWER with cordless riveting

Especially for FERO®-BULB

BZ 123A

The **powerful tool** for blind rivets **up to 8.0 mm in diameter!**

With a very large stroke of 25 mm, it is also eminently suitable for the setting of high-strength **FERO® BOLT** blind rivets. Like all pneumatic-hydraulic **HONSEL** tools, noise-reduced, with excellent ergonomics and a comprehensive scope of delivery.



The tool for FERO®-BULB and FERO®-LOCK

Blind rivets

3,2	4,0	4,8	5,0	6,0	6,4	8,0



up to 8,0 mm

Authorised Distributor

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