BÖLLHOFF

RIVKLE®

Blind rivet nuts and studs for the automotive industry
PASSION FOR SUCCESSFUL JOINING
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We have designed this document as a practical guide for the exclusive use of companies working in the automotive industry. Thus, we provide readers with our technical expertise and know-how in the design of reliable and cost-effective assembly solutions. This catalog contains the necessary essential information to understand how we comprehend the functional problems encountered by our customers and presents the solutions we offer, both in terms of components and in terms of setting systems.

Our team, throughout the world, is at your disposal to answer any questions.

We hope you enjoy reading.
An optimized assembly solution for improved performance

**RELIABILITY**

- 100% conforming rivet nuts
  100% of the RIVKLE© fasteners intended for the automotive market undergo optical sorting before packaging. This allows us to meet your requirements and to optimize the availability rate of your automatic setting machines.

- Controlled setting
  The technologies implemented in BÖLHOF® tools allow you to make sure that 100% of the RIVKLE© fasteners are conforming after setting.
  The setting parameters of each installed fastener can be transmitted to your production line in real time.

- Components comply with the rules applicable to threaded joints
  Obtain robust assemblies thanks to components which, after setting, are comparable to class 8 nuts (or even class 10 or 12 for HRT versions) or to class B8 screws (stud version).
  After setting, RIVKLE® blind rivet nuts comply with the rules applicable to threaded joints. These rules guarantee, among other things, that in the case of over-tightening, the screw will fall, leaving the nut re-usable.

**SIMPPLICITY**

- A safe and environmentally-friendly solution
  Reduce your environmental costs with this assembly solution which requires no exhaust or cooling.

- Minimal equipment and expertise required
  You can easily integrate the RIVKLE© solution into your production process, as it does not require your operators to have any particular qualifications or safety equipment.

- Simple to use
  The RIVKLE© technology can be integrated quickly and easily thanks to easy-to-use setting methods and simple tool adjustment procedures.

**PERFORMANCE**

- Fasteners suited to high production rates
  Optimize your production rates by combining the RIVKLE© components with the BÖLHOF® setting solutions which allow you to install up to 40 RIVKLE© fasteners per minute (based on BÖLHOF® test procedures).

- A repeatable solution
  Ensure the reliability of your assemblies by using components with a repeatable setting behavior in combination with setting tools with well-known repeatability (Cpk > 1.66).

- A competitive global solution
  Reduce the costs of your assemblies thanks to a cost per installed RIVKLE© fastener that is usually more competitive than alternative solutions: manpower, energy, maintenance, investment, floor area.

**VERSATILITY**

- RIVKLE© can be set at every stage of your production process
  You can integrate RIVKLE© at any stage of your production process, either before or after surface coating.
  In fact, the RIVKLE© components are supplied with a surface treatment which complies with the strictest customer requirements, and the setting operation does not alter the support or the component's surface treatment.
  Moreover, as the RIVKLE© components can be set either with hand tools or with automatic setting units on robots, the RIVKLE© technology can fit into all your production environments.

- Compatibility with all application materials
  The RIVKLE© components are compatible with metal (steel, light alloys) as well as polymers (composites, plastics, etc.), and they can be integrated into the majority of the parts used in vehicles.

- Installation with access from only one side
  Simplify your design and integrate RIVKLE© into many of your applications, as these fasteners can be installed with access on only one side.
  The dimensions and the accessibility of your parts do not hinder the use of the RIVKLE© solution.
The RIVKLE® technology

RIVKLE® blind rivet nuts and studs are the most versatile solutions to add reusable high-strength male or female threads to low thickness application materials.

The joint between the application material and the RIVKLE® nuts or studs is obtained by means of a crimping process.

- Allows male threads to be added to low thickness application materials.
- Allows female threads to be added to low thickness application materials.
- Allows two or more plates made of different materials to be assembled together (rivet function).

Under normal conditions of use...
A tailor-made solution

The RIVKLE® blind rivet nut and stud technology can be configured as you wish and tailored to the required environment.

Our experts will assist you in designing the RIVKLE® fastener that will meet your requirements by carefully selecting the useful product characteristics (head shape, material, body end).

BODY
- HEAD
- BODY END
- MATERIAL
- DIAMETER
- GRIP THICKNESS
- PLATING
- ADDITIONAL FUNCTIONS

DIAMETER
+ M3
+ M4
+ M5
+ M6
+ M8
+ M10
+ M12
+ M14
+ M16

Cylindrical
Cylindrical
Knurled
Hexagonal
Semi-Hexagonal
Slotted

BODY

DIAMETER
The standard **RIVKLE®** product line

The standard RIVKLE® product line offers many variants. It is possible to change the characteristics of a nut or a stud so that it can be integrated into your automotive application (e.g.: plating).

**RIVKLE® hexagonal nuts**

- Head type: flat / thin
- Body end: open / closed
- Materials: steel / aluminium / stainless steel

**RIVKLE® knurled cylindrical nuts**

- Head type: flat / thin
- Body end: open / closed
- Materials: steel / aluminium / stainless steel

**RIVKLE® hexagonal**

- Head type: flat / thin
- Materials: steel / stainless steel

**RIVKLE® cylindrical**

- Head type: flat / thin
- Materials: steel / stainless steel
<table>
<thead>
<tr>
<th>RIVKLE®</th>
<th>Function</th>
<th>Characteristics</th>
<th>Variants</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Spacer</strong></td>
<td>Ensures a spacer function within the assembly</td>
<td>Combination of two functions: rivet nut and spacer. Overthickness of the head obtained without reworking during the RIVKLE® manufacturing process.</td>
<td>All RIVKLE® variants, including sealing. Spacer head adaptable to all requirements (diameter, thickness).</td>
</tr>
<tr>
<td><strong>Fir tree stud</strong></td>
<td>Allows snap-on clips to be attached without tools</td>
<td>Crimped blind rivet stud. Fir tree thread.</td>
<td>All RIVKLE® stud body variants. With or without pilot point. Possibility of scratch protection.</td>
</tr>
<tr>
<td><strong>HRT</strong></td>
<td>Adds a blind rivet nut with high mechanical strength</td>
<td>Specific material and/or process to improve the strength of the installed product. Compatibility with class 10.9 and class 12.9 screws (class 8.8 for the aluminium version). Specific design to ensure easy installation.</td>
<td>Steel: class 10 or 12 equivalent. Aluminium: class 8 equivalent.</td>
</tr>
<tr>
<td><strong>SFC</strong></td>
<td>Preserves soft or brittle application materials (composites / plastics, etc.)</td>
<td>Deformation specifically studied to eliminate the radial loads and ensure better distribution of the axial loads. Bulge seating on a perimeter away from the axis of the hole.</td>
<td>Steel or stainless steel nut or stud, with standard, elliptic or hexagonal head.</td>
</tr>
<tr>
<td><strong>Watertight</strong></td>
<td>Ensures leak tightness with pressurised or non-pressurized liquids</td>
<td>Seal placed in a groove under the head. Possibility of resistance to different environments (temperature and product). Resistance level in compliance with standard EN 60529, specifications IPX4 to IPX9.</td>
<td>With O-Ring or injected seal under the head. Seal installed around the head (clipped or molded on).</td>
</tr>
<tr>
<td><strong>PN slotted body</strong></td>
<td>Provides high pull-out resistance on soft application materials of variable thicknesses</td>
<td>Slotted body undergoing a petal-shaped deformation on the blind side of the application material, thereby forming an abutment with a significant diameter. Wide setting range, for grip thicknesses varying up to 6.6 mm.</td>
<td>Steel, stainless steel, aluminium.</td>
</tr>
</tbody>
</table>
The key to light assemblies

**An advantage for weight saving in vehicles**
This rivet nut adds a high-strength female thread in polymer materials without causing damage to the application material. RIVKLE® SFC is suitable for flexible and brittle materials and can be integrated into any plastic parts without the need for particular precautions. After setting, thanks to its specific deformation, the bulge ensures uniform distribution of the grip forces.

**Advantages**
- Make simpler designs without worrying about the edge distances of your parts
- Use wider tolerances when drilling the holes (relief angle, etc.)
- No more constraints regarding the compatibility between the materials and the assembly components

For absolute robustness

**High strength and reduced dimensions for your structural assemblies.**
This blind rivet nut was designed to provide high-strength female threads after setting while retaining optimum dimensions.

**Advantages**
- Extend the use of blind rivet nuts to applications involving high mechanical stresses.
- Add high-strength female threads to complex parts allowing access from only one side.
- In its aluminium version, this rivet nut provides full compatibility with class 8.8 screws.
Tightness in all circumstances

Preserve your assemblies from external influences.
This insert leaves no room for compromise and ensures sealing against all fluids while retaining the performance of RIVKLE® over time (metal-to-metal contact). All our products are proof tested with air pressure in accordance with stringent procedures (ATEQ) and comply with the IPX7 requirement (IEC 60529).

Advantages

- Simplify your sealed assemblies with a solution directly integrated into your RIVKLE® nuts or studs.
- Ensure systematic and repeatable sealing and preserve the mechanical performance of your assemblies.
- Keep enjoying the advantages of simple and quick setting methods, either manual or automatic.

Controlled spacing for your assemblies

Our robust solution to accurately control the position of the components to be assembled.
By changing the head diameter and thickness of RIVKLE® nuts or studs, these can perform a spacer function in your assemblies, in addition to their basic functions. For example, it becomes possible to control the compression force during the screwing operation (seal, plastic parts, etc.) or to ensure accurate spacing (roof racks, etc.).

Advantages

- You can be assured that the spacer is always aligned with the female thread and thus provides accurate and repeatable spacing.
- You have a robust seating point which is integral with the product.
- You can optimise your assembly costs while enjoying the installation characteristics of standard RIVKLE® fasteners.
Crimping Fir tree thread

Fir tree studs without constraints in terms of materials or accessibility.
This product is a forged crimped stud with inclined thread Fir tree thread, crimped in the body of a RIVKLE® blind rivet nut. This combination adds the advantages of the rivet nut technology to the advantages of tool-less mounting on inclined thread studs. This product can be installed using the standard BÖLLHOFF manual and automatic tools and thus makes it possible to install stud clip-on plastic fasteners anywhere.

Advantages
- Extend the use of Fir tree threads to all materials, including those with little or no compatibility with welding (HSS plates, aluminium, plastics and composites).
- Extend the use of Fir tree threads to complex parts thanks to the possibility of performing the installation with access to only one side.
- You can install Fir tree threads at every stage of your production process, and in particular on finished parts (paint, cataphoresis, etc.).

The universal solution for supports with extreme variations

Extreme versatility in terms of thickness and diameter
The main difference of this RIVKLE® fastener is its slotted body which allows a petal-shaped deformation during the setting operation, thereby forming a large-size abutment. Its specific design allows it to accept large variations of the thickness of the support and/or variations of the diameter of the hole.

Advantages
- A great number of applications can be covered with a single product.
- You can counterbalance the variations of thickness and hole diameter which result from your process (plastic parts, plies, etc.).
- Secure your assemblies on thin plates or soft materials thanks to a large-size abutment.
**RIVKLE® – Complementary additional functions**

**Electrical insulation**

Thanks to a plastic ring molded in or added to its head, a RIVKLE® fastener can electrically insulate a part for the cataphoresis painting process.

![Image of RIVKLE® fastener](image)

**Earth ground function**

Set before cataphoresis and with ribs underhead blind rivet nuts and studs are able to provide an earth ground function and thus drive electricity in your assemblies.

![Image of earth ground function](image)

**Clip function / Indexing**

With their shouldered heads, the RIVKLE® blind rivet nuts and rivet studs can receive plastic clips. This kind of design allows large-size parts to be positioned or indexed during your assembly operations.

![Image of clip function](image)

**Scratch protection**

A drop of resin is applied to the end of the stud to prevent any risk of scratching your parts during handling.

![Image of scratch protection](image)

**Stronger anti-turn function**

The combination of a knurled body with ribs under the head allows you to optimize the anti-turn resistance of your assemblies on soft materials.

![Image of stronger anti-turn function](image)
SETTING OF RIVKLE® FASTENERS
Setting of RIVKLE® fasteners – Simplicity and repeatability

Pull setting method

The BÖLLHOFF setting tools use the pull setting method to set the RIVKLE® assembly components.

This method consists of 4 steps

1. (or 2) Spin on
2. (or 1) Insertion of the component into the support
3. Upset
4. Spin off

Our pressure setting method

Today, all the BÖLLHOFF setting tools use the pressure setting method. With this setting method, a tension force is applied in order to generate the deformation of the RIVKLE®.

Advantages

- Ensures a constant setting quality, particularly for applications with variable thicknesses.
- Allows the use of preventive controls.
- Quick and simple adjustment of the setting tools.
- Prevents damage to the setting tool or the RIVKLE® in the event of a 2nd setting cycle.
- Increased mandrel life.
Setting of RIVKLE® fasteners – A process under control

Process control

The RIVKLE® technology guarantees that each fastener will be properly set during the process.

This non-destructive test is carried out as a background task during the setting process. This validation of the setting parameters and conditions is available on the hand setting tools and the automatic setting tools as well.

Hand setting tools

The RIVKLE® FC340 Force Controller is the most reliable solution to allow you to check that your hand setting tools are correctly adjusted and deliver the suitable setting forces for your application.

Digital display
Instant reading of the setting force applied by the tool

Hydraulic pressure sensor
Measurement accuracy: +/-3%

Enclosed hydraulic module
High capacity (≥ 40 kN) and repeatability over time

Checking tools
Suitable for the setting of studs and nuts. Suitable for the setting of M3 to M16 fasteners.

This tool is available with or without calibration certificate.
Setting of RIVKLE® fasteners – A setting process under control

Process control – Automatic setting tools

Our automatic setting machines are equipped with advanced monitoring devices which allow them to check in advance that the required conditions for proper setting are complied with, in order to achieve a 100% compliant setting.

The tools communicate in real time with the production environment and act as high-performance components of the production line.

All the information collected before and after the setting operation is transmitted in real time to your production line to optimize the management of your parts flow.
RIVKLE® POWERTOOL
HAND SETTING TOOLS
### RIVKLE® P1007
- **Maximum stroke**: 7.0 mm
- **Maximum setting force**: 13 kN (up to M6 steel)
- **Operating air pressure**: 5.5 bar min. to 7 max.
- **Weight without tooling**: 1.8 kg
- **Noise level**: < 70 dB (A)
- **Production rate**: 32 RIVKLE® /min

### RIVKLE® P2007
- **Maximum stroke**: 7.0 mm
- **Maximum setting force**: 21 kN (from M4 to M10 steel)
- **Operating air pressure**: 5.5 bar min. to 7 max.
- **Weight without tooling**: 2.2 kg
- **Noise level**: < 70 dB (A)
- **Production rate**: 32 RIVKLE® /min

### RIVKLE® P3007
- **Maximum stroke**: 8.0 mm
- **Maximum setting force**: 40 kN (from M8 to M14 steel)
- **Operating air pressure**: 5.5 bar min. to 7 max.
- **Weight without tooling**: 3.4 kg
- **Noise level**: < 70 dB (A)
- **Production rate**: 14 RIVKLE® /min

### RIVKLE® B2007
- **Maximum stroke**: 8.0 mm
- **Maximum setting force**: 22 kN (from M3 to M10 steel)
- **Battery**: Li-Ion / 14.4 V / 2.6 Ah
- **Weight without tooling**: 2.1 kg + 0.3 kg (tool + battery)
- **Noise level**: < 70 dB (A)
- **Production rate**: 24 RIVKLE® /min
**RIVKLE® Powertool – Power hand tool**

**RIVKLE® B2007 – Flexible and versatile battery tool**

- **Optimized mandrel installation and holding system**
  - Quickly and easily change the tooling*

- **Single press trigger**
  - Automatic unscrewing when the force is reached

- **Optimized maintenance**
  - Training courses and tutorials available

- **Soft polymer inserts**
  - Comfort and shock protection

- **High-capacity lithium-ion battery**
  - Maximum battery life

- **Electro-hydraulic technology**
  - Powerful, compact and reliable

- **Multifunction LCD display**
  - Reading of the essential setting parameters

* The toolings choice is made according to component diameters
RIVKLE® Powertool – Accessories for power tool

- Battery with higher capacity 14.4 V 4.0AH / Li-Ion
- Multicharger with 4 positions
- Power supply cord
- Screw kit adapter
- Tool support
**RIVKLE® PX007 – Flexible and versatile hydro-pneumatic tools**

- **Automatic screwing system**
  Guaranteed fast and full screwing

- **Hydraulic pulling module**
  Accurate and repeatable setting forces

- **Single press trigger**
  Automatic unscrewing when the force is reached

- **Ergonomic handle**
  Improved handling and comfort

- **Hydro-pneumatic system**
  Compact and powerful

- **Optimized maintenance**
  Training courses and tutorials available

- **Force adjustment with color coding**
  Quick and simple adjustment
  *Note: A foolproof pre-set cartridge, calibrated to the desired force, is available.*

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**RIVKLE® P1007**
Lightweight and compact size

**RIVKLE® P2007**
Medium-sized tool, well balanced

**RIVKLE® P3007**
Heavy duty tool for large diameters
RIVKLE® Powertool – Vertical kit for pneumatic tools
**RIVKLE® Powertool** – Fully controlled setting

**RIVKLE® EPK** – Guaranteed perfect setting of fasteners for your manual assembly lines.

Fully controlled manual setting operation with communication with your production lines. This hydro-pneumatic tool was specifically designed for the mass production of motor vehicles.

It is equipped with a remote control unit to manage the various communications with the environment and optimise the repeatability of the setting force (hydraulic booster).

- **Single press trigger**
  Automatic unscrewing when the force is reached

- **Stroke sensor**
  Measurement and control of the setting stroke

- **Automatic screwing system**
  Guaranteed fast and complete screwing

- **Multilingual touchscreen**

- **Adjustable alarm and safety devices**

- **Fault management**
  (device / process)

- **Multiple connections**
  Automatic unscrewing when the force is reached

1. The control unit is equipped with a built-in touch screen that allows the adjustment of the setting parameters, the counters and the alarms and the management of all the sensors,
The unit features multiple connections for its power supply (air and electricity) and to communicate with its environment (PROFINET, PROFIBUS, ETHERNET, USB, etc.).

This modular range answers to all integration needs (communication and production cycle management). The setting stroke and the setting force are controlled in real time during the setting cycle.

Options such as a stack light, wheels, etc., are available. The wide range of setting heads provides a solution for all work station configurations (vertical, one hand, etc.).

<table>
<thead>
<tr>
<th>Electrical power supply</th>
<th>RIVKLE® EPK C</th>
<th>RIVKLE® EPK HP</th>
</tr>
</thead>
<tbody>
<tr>
<td>230V – 50Hz / 110V - 60Hz</td>
<td>230V – 50Hz / 110V - 60Hz</td>
<td></td>
</tr>
<tr>
<td>Pneumatic supply</td>
<td>6 bar</td>
<td>6 bar</td>
</tr>
<tr>
<td>Setting capacity</td>
<td>6 to 21 kN (up to M10 steel)</td>
<td>20 to 55 kN (up to M12 steel)</td>
</tr>
<tr>
<td>Setting stroke</td>
<td>7 mm</td>
<td>9 mm</td>
</tr>
<tr>
<td>Noise level</td>
<td>82 dB (A)</td>
<td>85 dB (A)</td>
</tr>
<tr>
<td>Production rate</td>
<td>13 to 20 RIVKLE® /min</td>
<td>11 to 15 RIVKLE® /min</td>
</tr>
</tbody>
</table>

(*) the production rate depends on the operator and the ergonomics of the work station.
Automatic setting systems

Our range of automatic setting tools is optimized so that they can be integrated into production lines. The setting heads can be used with a BÖLLHOFF bowl feeder system. The hexagonal RIVKLE® fasteners are oriented upstream, during the feeding process, in order to optimize the setting time. Defective or incorrectly oriented RIVKLE® fasteners are recycled to avoid any shutdown of the production line.

The BÖLLHOFF vibratory bowl feeders can be integrated into two types of configurations: “pick and place” or “blow-feed”.

**Pick and place configuration**
The setting head moves to the bowl feeder to pick up the RIVKLE® and moves to the workpiece to set the RIVKLE®.

The head can pick fasteners from different bowl feeders (different RIVKLE® fasteners).

**Blow-feed configuration**
The RIVKLE® fasteners are automatically blow-fed from the bowl feeder to the setting head.

Up to 4 setting heads fed with only 1 bowl feeder
RIVKLE® ESA 2.0 – Electric power to optimize your automated lines

Two powerful electric motors, combined with an accurate electronic control system, to ensure the fast and perfect setting of all your RIVKLE® fasteners. RIVKLE® ESA 2.0 provides a fully automatic setting solution, without hydraulic components, which ensures optimum setting and limits the maintenance operations over time.

- **Electric power**
  - Simplified maintenance and reduced environmental footprint

- **Electronic management of the setting parameters**
  - High speed and accuracy, for full control and optimized repeatability

- **A powerful motor combined with a roller screw**
  - Optimized energy consumption, friction, cycle time and robustness

- **4 servo-regulators**
  - Control of all motor movements

- **Mechanical compliance**
  - Insert / hole misalignment compensation

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**RIVKLE® ESA 2.0**

<table>
<thead>
<tr>
<th>Setting</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Force</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>28.5 kg (variable according to configuration)</td>
</tr>
<tr>
<td><strong>Power</strong></td>
<td>Electric (400 VAC + 110 / 220 Vac + pneumatic dual)</td>
</tr>
<tr>
<td><strong>Setting capacity (kN)</strong></td>
<td>5 to 22 kN (up to 110 kN max)</td>
</tr>
<tr>
<td><strong>Setting stroke</strong></td>
<td>8 mm</td>
</tr>
<tr>
<td><strong>Process control</strong></td>
<td>100% stroke and force</td>
</tr>
<tr>
<td><strong>RIVKLE® feed system</strong></td>
<td>Pick and Place or automatic blow feed</td>
</tr>
<tr>
<td><strong>Maximum production rate (RIVKLE®max)</strong></td>
<td>1.3</td>
</tr>
</tbody>
</table>

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**Touchscreen HMI**
- Simple and user-friendly configuration and data access

**Transfer**
- The standard ESA 2.0 head is installed on a transfer module in order to accurately manage the placement into the hole (collision management) and the recycling, if any, of the inserts.

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RIVKLE® HSA 2.0 – The reference for RIVKLE® fastener setting on automatic lines

Historical BÖLLHOFF offer dedicated to high volume, regularly upgraded still considered as the reference by many car producers all around the world.

The RIVKLE® HSA 2.0 tool is an automatic hydro-pneumatic setting system. Used in the production of a large number of motor vehicles throughout the world, this machine has become a point of reference in terms of reliability and efficiency.

The latest version 2.0 further optimizes the performance and the maintenance operations.

**Pneumatic / hydraulic drive**
Compact, powerful and reliable

**Recycling**
Uninstalled RIVKLE® fasteners are automatically returned to the vibratory bowl feeder in masked time.

**Full control over the setting process**
Orientation, screw in, insertion / screw in, setting

**Pneumatic loader**
Automatic feeding and orientation of the RIVKLE®

**Mechanical compliance**
Insert/hole misalignment compensation

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<table>
<thead>
<tr>
<th>Setting</th>
<th>RIVKLE® HSA 2.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Force</td>
<td>Force</td>
</tr>
<tr>
<td>Weight</td>
<td>23 kg max.</td>
</tr>
<tr>
<td>Power</td>
<td>Pneumatic / Hydraulic</td>
</tr>
<tr>
<td>Setting capacity (kNm)</td>
<td>5 to 32 kN-m (44 to 231 ft-lb)</td>
</tr>
<tr>
<td>Setting stroke</td>
<td>28 mm - 68 mm</td>
</tr>
<tr>
<td>Process control</td>
<td>100% stroke and force</td>
</tr>
<tr>
<td>RIVKLE® feed system</td>
<td>Pick and Place or automatic blow feed</td>
</tr>
<tr>
<td>Maximum production rate (RIVKLE®/min)</td>
<td>10</td>
</tr>
</tbody>
</table>

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**Touchscreen HMI**
Simple and user-friendly configuration and data access
BÖLLHOFF is the only supplier for your assembly components and associated tools

BÖLLHOFF provides you with comprehensive assistance. Thanks to our fully in-house expertise, we will support and guide you, from the stages before your design to the industrial production stage and including to provide you with training in the setting methods.

We have the expertise for each step related to your project: consulting, development, design, prototyping.

- **CONSULTING**
  - Tech day
  - Exhibitions
  - Market trends

- **DEVELOPMENT**
  - Simulations (components, tools, etc.)

- **DESIGN**
  - Prototypes made with final tools

- **PRODUCTION**
  - Industrial production
  - Identification of technical improvements during the feedback from motor vehicle production lines

- **TESTING UNDER REAL CONDITIONS**
  - Testing
  - Validation of the product dimensions and performance

- **AFTER-SALE SERVICE**
  - Training in the maintenance and use of our tools
BÖLLHOFF, an international partner: Proximity, Production, Quality

In order to produce our RIVKLE® fasteners ourselves and combine high production rates with quality, we have decided to acquire the most efficient machines currently available on the market.

We have coordinated and standardized our manufacturing tools and processes throughout the world and we systematically perform a 100% inspection and sorting of our products. This sorting is carried out in accordance with functional criteria defined with our customers during the project phase.

Advantages achieved with this approach:

- Quality
- Responsiveness
- Environmental responsibility
- Competitiveness

Dedicated points of contact

The BÖLLHOFF team is represented by its Automotive market managers. They remain at your disposal to examine all your projects. They are also your dedicated contacts and will review your requirements with our project managers, logistics, etc.

Whether you produce your vehicles and equipment in Europe, Asia, North America or South America, you will always find a BÖLLHOFF RIVKLE® production site close to you.
Worldwide for you a strong partner – at 39 locations in 24 countries.

Böllhoff Group
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