

FASTENERS FOR THE AGRICULTURAL INDUSTRY





Fully-automated warehouse logistics

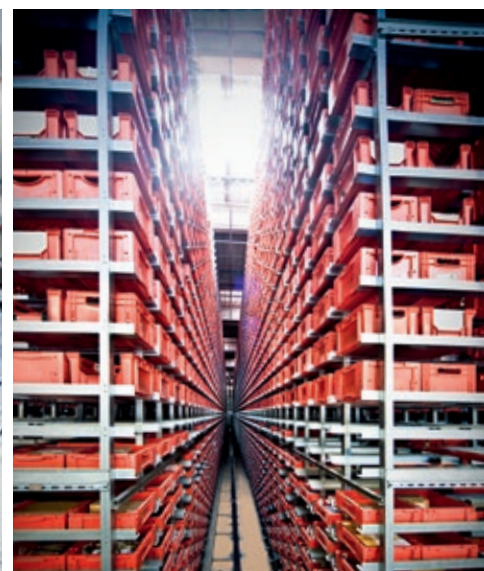




■ About REYHER

Today, with 130 years' experience REYHER is one of the leading trading companies for fasteners and fixing technology in Europe and supplies industry and trade customers worldwide.

With individual, flexible solutions over 650 staff at our central location in Hamburg ensure a daily fill rate of over 99% for our c-part supplies.





Agricultural industry sector

Farming is one of man's oldest economic sectors and has changed dramatically as it has developed over the centuries. The biggest changes have been in modernization and increased productivity made by the use of tractors with their implements and self-propelled machinery.

The fasteners used in agricultural equipment are subject to stringent requirements. They are affected by many

environmental aspects such as weather, fertilizers and soil conditions. To withstand these influences a variety of surface systems are employed depending on application and surroundings. A consistent quality of fasteners is of enormous importance to agricultural machinery manufacturers.

■ REYHER in the agricultural industry

REYHER, a VDA 6.2 certified company, supplies individual logistics concepts to the agricultural industry with sector-specific parts in a wide variety of types and surfaces. These include standard parts as well as special and engineered parts held in stock. REYHER has a large range of articles with surface coatings e.g. zinc flake coated and thickness layer passivation in stock as alternatives to chrome (VI) corrosion protection coatings. Our REM – REYHER Engineering Management team is always on hand to advise.

Our service portfolio covering sourcing and C-parts management positions REYHER optimally for the agricultural sector. Customers can design ordering processes efficiently with a wide variety of e-business solutions. For series production we offer data transfer

via EDI (Electronic Data Interchange). For this REYHER has a dedicated team of EDI specialists at our central location in Hamburg.

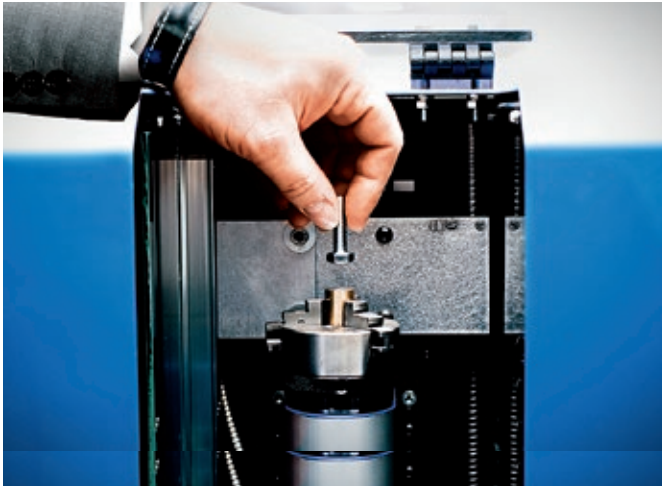
RKP – REYHER Kitting & Packaging fulfils individual picking and packing requirements. For mounting sets or for filling spare-parts stores we supply fasteners in sets or assembly kits. Naturally, these can also be supplied in small load carriers – SLC. Our flexible Kanban supply systems ROM – REYHER Order Management ensure reliable material feeds in the production.





■ Reliable product quality

Fasteners in agricultural equipment are subject to high mechanical stresses as well as a variety of environmental influences. These specific requirements are taken into account in our choice of suppliers and during in-company testing. REYHER operates its own test laboratory where products are subject to special tests using state-of-the-art methods and technology. This ensures consistent quality.



■ Technical expertise

REM - REYHER Engineering Management team deals with all technical matters and details involving fasteners and fixing technology. Through continuous in-service training our staff keep their all-round technical knowledge up to the latest standards. Because of the wide-ranging influences in the agricultural industry special attention is paid to corrosion protection systems. In particular farming implements present a very specific challenge for these requirements. Experienced engineers and technicians in our REM team are always on hand to consult our customers. Over and above this we support our customers to standardise their product ranges, usually resulting in a reduced number of parts.



■ REYHER – Your partner in the agricultural industry

- ▶ Comprehensive product range for the sector in stock
- ▶ Alternatives to Cr(VI) surface coatings
- ▶ Sourcing special and engineered parts
- ▶ Reliable product quality
- ▶ Individualized kitting - compiling sets and assembly kits
- ▶ Diverse e-business solutions e.g. EDI
- ▶ Flexible Kanban supply systems
- ▶ Fast deliveries
- ▶ Technical consulting
- ▶ Staff specialized in purchasing, sales and technology





REYHER in the agricultural industry

■ Special and engineered parts



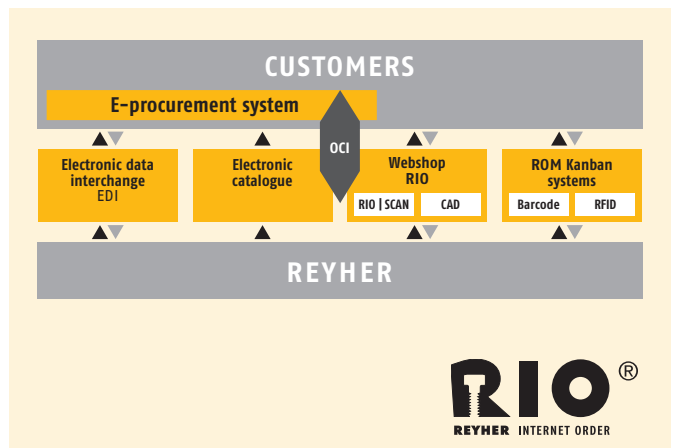
Apart from standard fasteners the applications in the agricultural field frequently demand the use of customer-specific parts. REYHER realises high-quality customer-specific products based on drawings, samples or works standards, stored and delivered according to needs.

■ Individual kitting of sets and assembly kits



For assembling agricultural machinery and repair kits for spare parts stores, we have sets and assembly kits to increase efficiency in the agricultural sector. RKP – REYHER Kitting & Packaging fulfils every customer-specific requirement. Through needs related compiling of articles, pack units and labelling we create individual sets and assembly kits for every situation. The goods are delivered in customer-specific cardboard boxes, crates or small load carriers.

■ Diverse e-business solutions



Whether data exchange via EDI (Electronic Data Interchange), RIO – REYHER Internet Order Webshop, needs capture via barcode or electronic catalogue:

We offer a comprehensive service and together with you optimize your ordering process. REYHER offers EDI solutions for series production. REYHER e-business solutions simplify procurement and speed up the ordering process. Automatic data processing reduces manual checking. Data quality is improved and errors avoided.

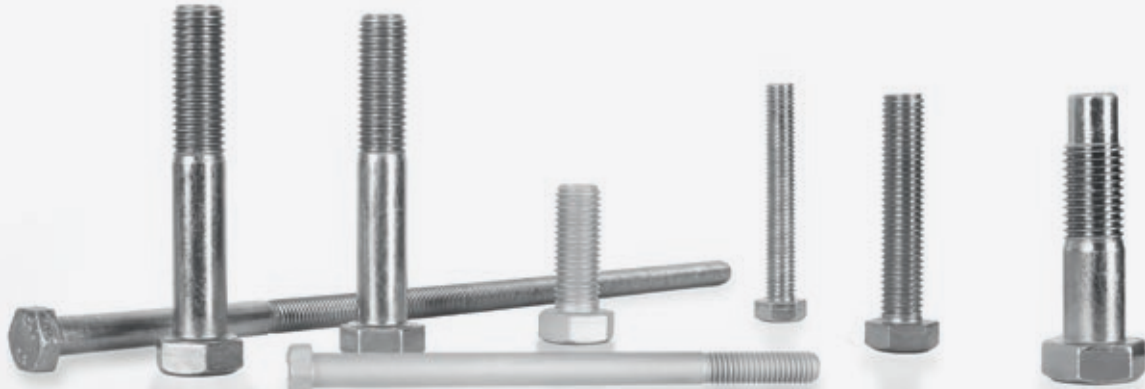
■ Flexible Kanban supply systems



Using ROM – REYHER Order Management provides our customers with the highest supply and process reliability. Modules can be combined, RFID technology, barcode systems, flexible labelling and cutting-edge data interchange to build an all-round seamless package for smooth materials feed – reliable, precise and flexible – made to meet individual customer needs.



- Hexagon head bolts
ISO 4014/4017 DIN 931/933
ISO 8675/8676 DIN 960/961
or in line with drawings



- Hexagon socket head cap screws
ISO 4762
DIN 912
or in line with drawings



- Cup head square neck bolts
DIN 603
or in line with drawings



- Eye bolts
DIN 444
or in line with drawings



- Screw plugs
DIN 906/908/909/910
DIN 5586
DIN 7604
or in line with drawings





Fasteners for the agricultural industry

Examples

- **Wheel bolts**
DIN 74361
or in line with drawings



- **Flange bolts**
DIN 6921
EN 1662/1665
or in line with drawings



- **Stirrup bolts**
DIN 3570
or in line with drawings



- **Lock washers**





- **Linch pins**
DIN 11023
or linch pins for tubes
Article 88023



- **Bolts and wire bending parts**



- **Locking nuts with flange**
similar to DIN 6923
Article 88934



- **Flat countersunk square neck bolts**



- **Hexagon nuts**
ISO 4032/4033
DIN 934
or in line with drawings



- **Prevailing torque type hexagon nuts (Locking nuts)**
ISO 7040/7042
DIN 980/982/985
or in line with drawings





REYHER product range with CR(VI)-free coatings

Fertilizers and diverse soil conditions for example, acidic and acid soils are factors that impact the stability of the fasteners in agricultural equipment.

The demands on screws, nuts and washers are high, to meet all needs – especially corrosion protection.

For these special needs we have various surface systems and coating methods available:

- ▶ Steel, zinc plated with blue chromating
- ▶ Steel, thickness layer passivation (optional with sealing)
- ▶ Steel, zinc nickel coating
- ▶ Steel, zinc flake coating
- ▶ Steel, hot dip galvanized
- ▶ Stainless steels
- ▶ BUMAX®

Product	Property class	Ø	Surface designation REYHER	Normative designation	Corrosion resistance of saltspray test [h] white rust/ red rust	Friction coefficient adjustment
Screws/nuts	<8.8/8	<M 6	ZP TLP	-	72/120	-
Screws/nuts	<8.8/8	≥M 6	ZP8 TLP	-	72/120	-
Screws/nuts*	8.8/8	<M 6	ZP TLP + SL	ISO 19598 – Fe//Zn//Cn//T2yL	120/264	0.12 – 0.18**
Screws/nuts*	8.8/8	≥M 6	ZP8 TLP + SL	ISO 19598 – Fe//Zn8//Cn//T2yL	120/264	0.12 – 0.18**
Screws/nuts	10.9/10	≥M 6	flZnnc 480h-L	ISO 10683 – flZn/nc/TL/x/480h/C	-/480	0.09 – 0.14**
Screws/nuts*	10.9/10	≥M 6	flZnncL-480h	ISO 10683 – flZnL/nc/x/x/480h/C	-/480	0.12 – 0.18**
Hexagon socket head cup screws	12.9	≥M 6	flZnnc 480h-L	ISO 10683 – flZn/nc/TL/x/480h/C	-/480	0.09 – 0.14**
Washers*	200 HV	< 6	ZP TLP + S	ISO 19598 – Fe//Zn//Cn//T2	120/264	-
Washers*	200 HV	≥ 6	ZP8 TLP + S	ISO 19598 – Fe//Zn8//Cn//T2	120/264	-
Washers	200 HV	≥ 6	flZnnc 480h-L	ISO 10683 – flZn/nc/TL/x/480h/C	-/480	0.09 – 0.14***
Washers*	300 HV	≥ 6	flZnnc 480h-L	ISO 10683 – flZn/nc/TL/x/480h/C	-/480	0.09 – 0.14***
Washers*	300 HV	≥ 6	flZnncL-480h	ISO 10683 – flZnL/nc/x/x/480h/C	-/480	0.12 – 0.18***

* Stock goods

** Test conditions in the line with ISO 16047.

*** Friction coefficient for washers are only for information. No test conditions are defined for washers in the standard.

EVERYTHING FROM ONE SOURCE

Comprehensive product selection

- + Engineered parts**
- + Technical consulting**
- + Individual kitting and packaging**
- + C-parts management**
- + Flexible Kanban supply systems**
- + Diverse e-business solutions**
- + Customer-specific logistics concepts**
- + Fast deliveries**

= REYHER –
Your reliable partner in the
Agricultural industry!





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