



Innovative scraper system

Product overview





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# **INNOVATIVE SCRAPER SYSTEM**

Since decades, cleaning conveyor belts is a subject of growing importance. Soiled conveyor belts effect high costs through the loss of material and time-consuming cleaning effort. Conveyor belts, rolls and other plant component wear out prematurely. For this reason, an efficient conveyor belt cleaning is pressingly necessary in case of transporting adhesive materials.

#### We offer solutions

In the range of cleaning conveyor belts, Maschinenbau Krumscheid GmbH reached a particular specialization. Krumscheid Conveyor belt scrapers are high-quality, gently and mature products, which offer the optimum solution around the theme of clean conveyor belts.

Both in the planning phase and during production our staff draw on comprehensive technical knowledge and long-standing experience. Extremely well trained and qualified staff is your reliable partner for difficult tasks. Innovative scraping systems, reliable, effective products.

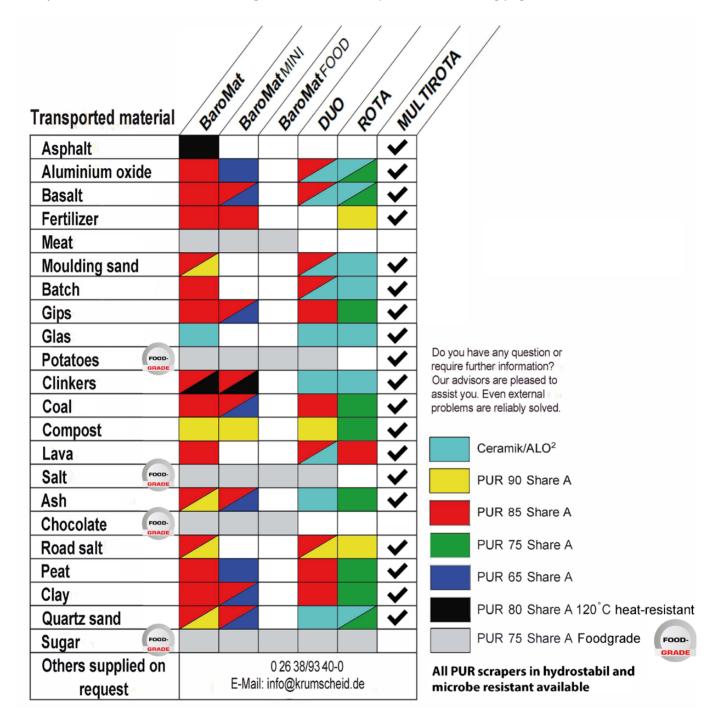
#### **Perfect Combination**

To ensure an optimum scraping performance and long life not only the right system but also the suitable combination of scraping element and transported materials is of utmost importance. The scraping element consists if necessary of different materials and various grades of hardness. Our conveyor belt scraper is thus ideally suited for cleaning belts. Particularly in cleaning food conveyor belts, BAROMAT Food was developed. All metal parts are made of stainless steel and thus meet the requirements of the EU-directives in food industry. For the following transported materials our system proved itself: aluminium oxide, basalt grid, fertilizer, compost, meat, moulding sand, gypsum, glass fragments, potatoes, clinker, coal, sugar, slag (ash), etc.

Which combination of scraper type and element is the appropriate one for which transported material?



The table overview on the next page shows different combinations and helps with the choice and makes it easy to select. Get to know the advantages of the several scrapers on the following pages.





# **BAROMAT**

## - Belt friendly, controlled pneumatically







## 🤽 Technology

An elastic pressure tube in between bearing structure and scraper element provides the necessary pressing pressure regarding to the conveyor belt. A pressure regulator makes sure that the pressure within the system is stable and remains constant. The BAROMAT gets the necessary compressed air from the available operational air pressure supply. If there is no central pressure air supply a corresponding pressure storage can be supplied. There is no air consumption with the BAROMAT.

## Reversing operation

The BAROMAT is especially suitable for reversing operation. A particular advantage is that the not needed scraper will be removed from conveyor belt by a special reversing valve which is connected with the electrical control of the conveyor belt.

#### Maintenance

The BAROMAT works nearly maintenance-free. The scraping element consists of a single part and can easily be exchanged. Due to the simple handling, downtimes remain minimal.

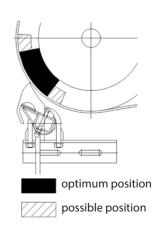
## Positioning

The scraper is attached to the driving drums near the bottom area. The optimum position depends on the angle of repose and geometrical arrangement of the entire system.

## Dimensions

Standard up to 3.200 mm | Experience up to 5.300 mm







## System \$\infty\$

The patented BAROMAT sets standards. After a very detailed and thorough practical testing at conveyor belts in various industrial sectors, the BAROMAT is a proven technology with utmost efficiency for many years. The basis of the patented, belt friendly system is a steal beam with an integrated elastic scraping element, which is constantly pressed against the conveyor belt with low air pressure across the entire belt width. The whole scraping element is adapted individually to the surface of the drum and the belt. This enables a constantly good and complete cleaning of the conveyor belt. Even if the drums are effected crowned, the scraper adapts to the shape of the drum. In consequence the belt wear is effectively compensated.

Thereby, the BAROMAT operates more effectively and economically than conventional scraping systems. The comparatively low acquisition costs face a high cleansing effect. The low space requirement is a further advantage of the BAROMAT.



## **BAROMAT FOOD**

# Food GRADE

## - Specialist for the food industry







#### The specific

The polyurethane scraping element of the BAROMAT Food complies with the requirements of the FDA- and EU-declaration of conformity of the food industry. All metal parts are made of stainless steel and thus meet the requirements of the EU-directives in food industry.

Optionally, special mounting systems of the BAROMAT food enable a simple and quick cleaning of the scraper.



Standard fastening



Optinally for quick opening





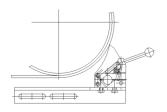


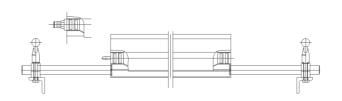


Fixing screws scraper Qick-acting coupling

c-acting coupling Locking basic body

Locking basic body open





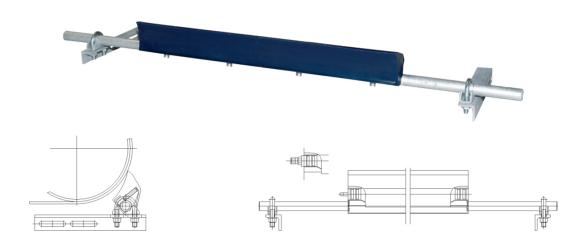


## **BAROMAT MINI**

## - For unfortunate space conditions

#### The specific

Due to its small assembly dimensions, the BAROMAT Mini fits in places where there is hardly any space to mount in a conventional scraper. The basic body of the BAROMAT Mini is made of galvanized steel. The scraper can be produced in different kinds of shore hardenings. It is also suitable for use by belts with normal drum sizes. Therefore, the BAROMAT mini is extremely versatile.

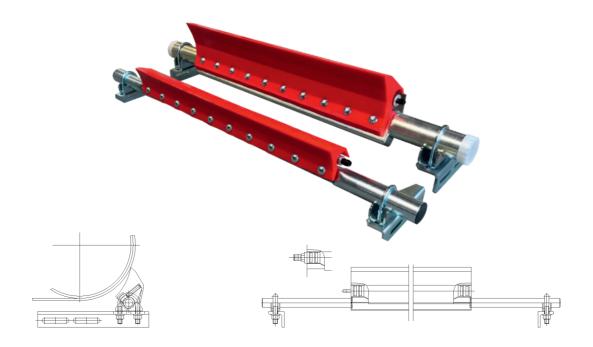


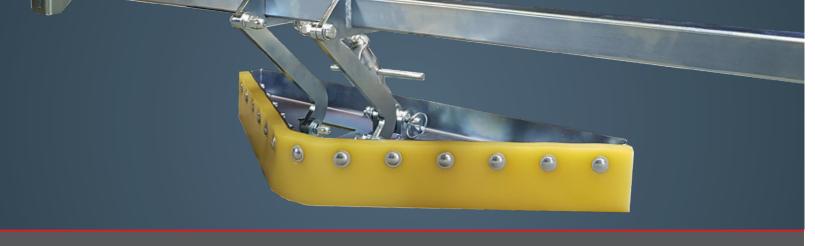
## **BAROMAT SCHWER**

## - For heavy loads and drum diameter

#### The specific

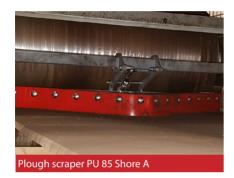
The BAROMAT SCHWER is used from a drum diameter of 400 mm. The basic body of the BAROMAT SCHWER is made of galvanized steel. The scraper can be produced in different kinds of shore hardenings. It is also suitable for use by belts with normal drum sizes.





# **PLOUGH SCRAPER**

## - for inner belt cleaning







#### Ö,

#### Technnology

Due to its small assembly dimensions, the Plough Scraper fits in every conveyor system.

The Plough Scraper together with its basic body are fixed to the conveyor belt system and receives its pressing pressure by its own weight. An automatic adjustment of contact pressure ensures a consistent cleansing effect. The Plough Scraper is mounted between the basic body and the scraper element, smooth running and slow pace. To optimize the scraping results, it is possible to modify the tilt angle manually.

#### -

#### Maintenance

Due to the simple construction, the maintenance for the Plough Scraper is very low. There are no parts on the Plough Scraper that need to be maintained regularly and a cleaning procedure is usually not needed. A simple visual inspection should be performed on a regular basis. Worn-out scraper elements must be replaced.



#### **Positioning**

The Plough Scraper is positioned at the belt conveyor system depending on customer requirements, mostly in front of the reversing drum at the inner belt.



#### **Advantages**

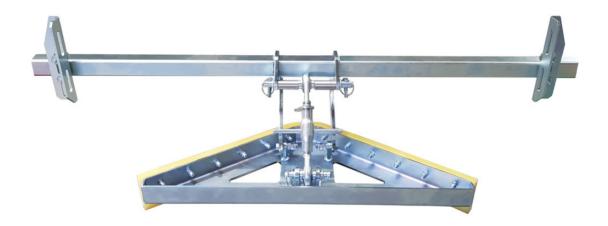
- · low installation height
- high scraping performance through individual adjustment
- tilt angle and inclination height adjustable

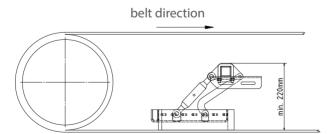


#### System \$\infty\$

The Plough Scraper convinces with its simple construction in numerous standard applications. It can be installed subsequently in almost every conveyor system without difficulties.

For the food sector the polyurethane element of the Plough Scraper is available with the FDA- and EU-declaration of conformity of the food industry and with stainless steel. With low costs for acquisition, operation and maintenance guarantee economic efficiency.





#### **Services overview**

- · low installation height
- · adjustable in height
- · simple handling
- nearly maintenance-free
- · different shore hardenings
- different colour possibilities
- · special versions on request

The scraper elements consist of different raw materials. For abrasive conveyor goods PU elements with different shore-hardenings are available. For extremely abrasive conveyor goods special ceramic elements are used.



# **ROTA**

## - The active rotating belt scraper

## Technology

The ROTA is pressed against the belt by two threaded spindles (right and left). Following, the circular scraping element is set in a slightly inclined position. Due to the rotary motion, the scraper remains flat and wears evenly. By rotation, the scraper hits the belt in a different angle and removes the adhesions. Even using a clamp connection on conveyor, the ROTA retains its functioning.

## Reversing operation

The ROTA is perfectly suitable for reversing operation. By change of direction, only the direction of rotation of the scraper is changed automatically. Two scrapers are required for reversing operation. The installation of the scraper takes place on each side of the conveyor belt.

#### Maintenance

The maintenance effort for the ROTA is very low. Also cleaning is usually not needed. A simple visual inspection should be performed on a regular base. Worn scraper elements or ceramic tapes must be replaced.

## Positioning

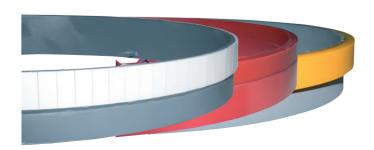
The positioning of the conveyor system is made at the lower belt according to the localities.

# ROTA with ceramic scraping element



## Advantages

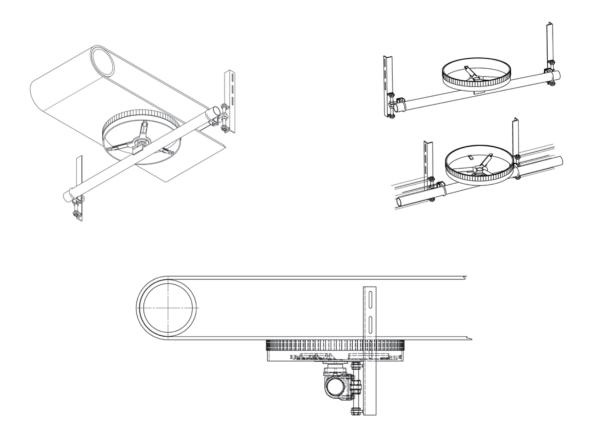
- Stubborn contamination from sticky or wet conveyed goods are removed cleanly and belt gently
- · Belt, lower belt roll and the whole conveyor system stay free from material deposit and falling spillage
- Due to the rotation, the scraper remains flat and stays free from grindings, that means functionally safe and low-maintenance
- The greater length of the scraper element compared with rigid scrapers gives 3.14-fold working length





## System \$\forall \text{The system}

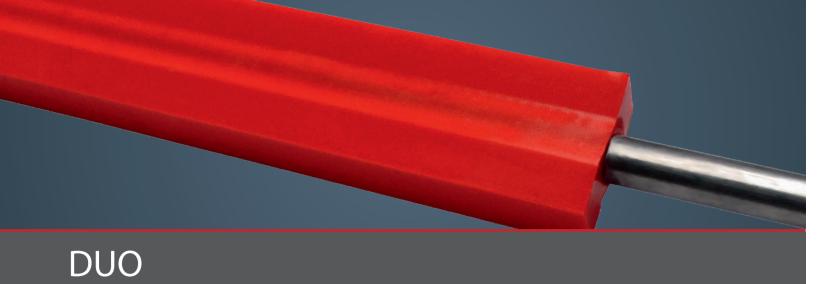
The ROTA consists of a ring-shaped scraper element lying firmly at the lower belt and is set into rotation by the movement of the conveyor belt. Furthermore the ROTA is extremely gentle to the belt. According to operational requirements the scraping edge can consist of polyurethane with different shore hardness or ceramic.





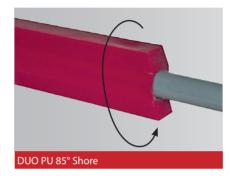
The scraper elements consist, in accordance with the operational requirements, of different raw materials. For abrasive conveyor goods PU elements with different shore-hardenings are available. For extremely abrasive conveyor goods special ceramic elements are used.





## - Pays off twice!







## 🐾 Technology

For assembly, clamping elements are screwed on the belt construction. After aligning of the clamping elements, the DUO scraper element is attached to these. At this point, the desired pressure can be set. The wearout of the scraper edge is adjusted automatically through the cramping element. When the first scraper edge is used off, the scraper will be turned by 180° in the installed condition to the second edge. A standard solution with the best price-performance ratio!

#### Maintenance

Due to the simple construction, the maintenance for the DUO is very low. There are no parts on the DUO that need to be maintained regularly and a cleaning procedure is usually not needed. A simple visual inspection should be performed on a regular basis. Worn-out scraper elements must be replaced.

#### Positioning

The DUO is positioned at the belt conveyor system directly behind the driving drum.

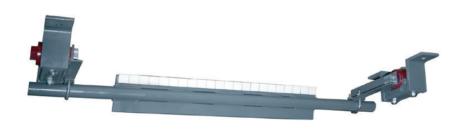
## Advantages

- The scraper element can be replaced easily and quick. Precise pressure control on both sides of the conveyor belt ensure an even scrape across theentire width of the conveyor belt
- An optimum contact between conveyor belt and DUO scraper is guaranteed by progressive rubber spring elements
- · An automatic adjustment of contact pressure ensures a consistent cleansing effect
- Optional: Tandem configuration, also combinable ceramic with Polyurethane

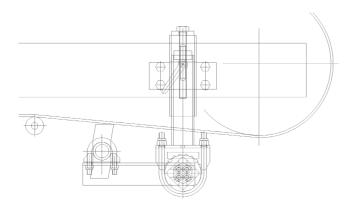


## System \$\infty\$

The DUO convinces with its simple construction in numerous standard applications. It can be installed subsequently in almost every conveyor system without difficulties. Due to two usable scraper edges, the DUO offers a very long service life.







#### **Services overview**

- · double scramping edge
- · more durable
- · precise pressure control
- · consistent cleansing effect





!

PU-Scraper elements with different shore-hardening are available for the DUO.

For extremely abrasive conveyor goods special ceramic elements are used.



# **MULTIROTA**

## - The first brush wiper with vertical rotary axes

## 🤽 Technology

Depending on the construction type, the MULTIROTA is equipped with a different number of star-shaped, rotating brushes. These are individually adjustable, alternately clockwise, counter-clockwise and turning in intervals. To ensure that the brushes are evenly worn and not bended into only one direction after a certain period, the rotating direction of the drive is returned at a given time interval. Height adjustment enables to offset the amount of wear on the brushes. According to your requirement and type of transported material, the assembly of brush wipers with different bristle material takes place.



#### Maintenance

The maintenance effort for the MULTIROTA is very low. There are no parts that need to be maintained by the user regularly.

## Positioning

The installation of the brush wiper MULTIROTA with the corresponding fastening devices is usually done directly after the driving drum.

## Advantages

- vertical rotary axes
- brush heads are individually driven by gears
- Tte drive is returned at a given time interval
- easy changing of brush heads



#### **Services overview**

- robust, gently purifying brush wiper
- · height adjustable
- installation directly after the driving drum
- · maintenance-frinedly

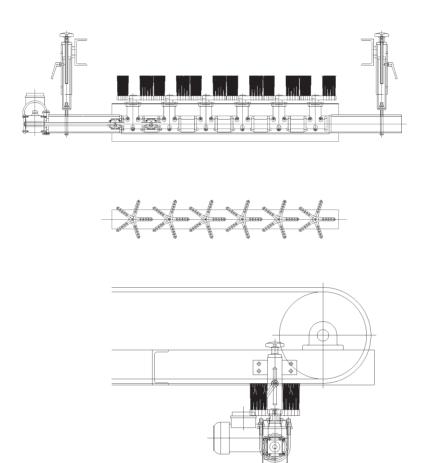
The MULTIROTA is friendly in maintenance. Gearboxes can be replaced individually.

Different types of brushes can be used.

#### System \$\infty\$

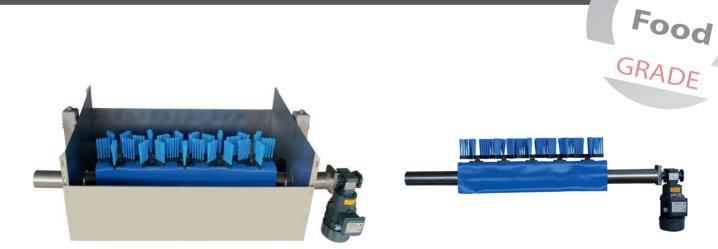
The brush wiper MULTIROTA consists of a basic body and segmented gears, which are interconnected and provided with individual coupling. An engine, which is mounted on the side, operates the brush heads. The whole system is adjustable in height by telescopic tubes on the belt frame.

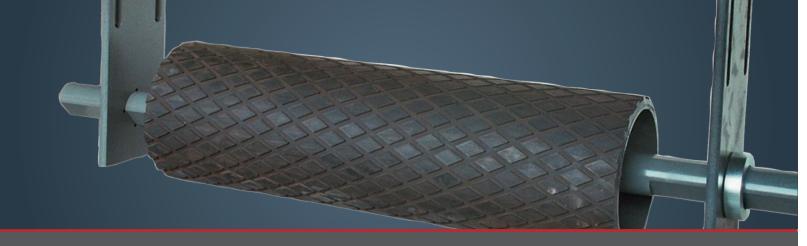
The basic version of the MULTIROTA brush wiper includes robust PA-bristles. Optionally, various bristle heights and materials can be used. The MULTIROTA is friendly in maintenance. Gearboxes can be replaced individually. Depending on customer request we supply the MULTIROTA with casing to collect the scraped material.





## MULTIROTA food compliant with stainless steel housing



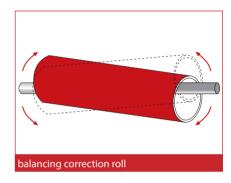


# **CORRECTION ROLL**

## - For the optimum running of the belt







#### 🤽 Technology

Out-of-line running of the belt can have the most different reasons. In addition to age-related belt changes wrong roll adjustment, conical head drums, or damages on the steel construction can also lead to irregularly running belts. The cause is often an asymmetrical use as a result of one-sided loadings or caused by friction forces of conveyor system accessories like rolls or drums.

The CORRECTION ROLL has a bearing in its center. By the double sealing of the CORRECTION ROLL bearing it reaches a long operating life. In case of tilting the roll is twisted diagonally to the running direction and corrects out-of-line running of the belt.

## Reversing operation

In the reversing operation a special mechanic ensures that the axis of the CORRECTION ROLL changes automatically in case of a change of direction of the belt. The independent switch of the CORRECTION ROLL is not always guaranteed due to the best conditions. Optionally we offer a pneumatic reversing operation.

#### Maintenance

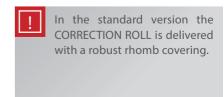
There are no parts that need to be maintained regularly on the CORRECTION ROLL and a cleaning procedure is usually not needed. A simple visual inspection should be performed on a regular basis.

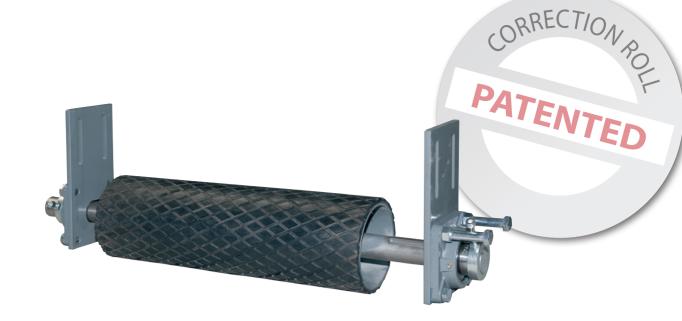
#### Positioning

The installation of the CORRECTION ROLL with its fixing devices takes place in exchange with a return-belt idler. Retaining plates as well as markings on roll axes specify the running direction/mounting position.

## Advantages

- A constant centered run of the conveyor belt is reached
- Protection of belt edges and construction
- · Simple installation in exchange with a return-belt idler
- No maintenance
- · Automatic correction without foreign drive



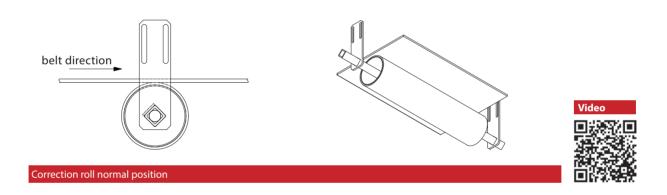


## System 5

The CORRECTION ROLL offers the solution for an optimum running of the belt, because it allows an effective balance in case of out-of-line-running.

In case of out-of-line-running the roll tilts unilaterally downwards and twists diagonally to the running direction. The conveyor belt moves into its normal position by the unilateral higher friction power. The CORRECTION ROLL puts itself into its horizontal normal position automatically.

The CORRECTION ROLL is available in FDA and EU permissible rubber coating and stainless high-grade steel.



## CORRECTION ROLL food compliant (FDA/EU)





#### Speciality

- very light run due to low deadweight
- food compliant FDA and EU-guidelines
- height-adjustable
- · no maintenance or operation needed



# **BELT GUIDE ROLLER**



- To an end with the out-of-line running of the conveyor belt and related belt damages!

#### Technology

The special mechanism of height-adjustable reel bodies, provides optimal and gentle guidance for the belt.

## System 5

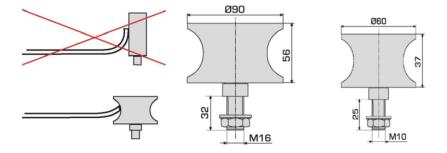
The system, consisting of an axis with bearing and height-adjustable, concave shaped reel body, allows an extremely conveyor belt edge gently limit in case of lateral conveyor belt drift.



#### Advantages

- Exchangeable rotating guiding system
- Gentle belt guidance, no belt damages, e.g. through standard guiding roll
- · High endurance/maintenance-free
- · Applicable to upper and lower belt
- · Simple assembly





#### Other dimensions can be requested!

In the standard version bearing and axis are made of stainless steel and the reel body of steel, optional of stainless steel.



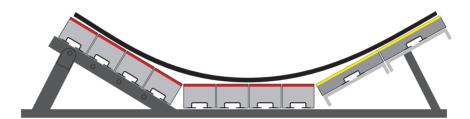




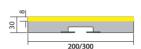
# **IMPACT TABLE**











## 🤽 Technology

IMPACT TABLES are used in the transfer area in the conveyor. Their duty is to depress falling materials and thereby reduce wearouts on the system and its components. KRUMSCHEID GmbH supplies IMPACT TABLES and accessories in standard sizes or to customer-specific information as manufacture. We would be pleased to consult with you, based on our long years of experience in conveyor systems.

IMPACT TABLES consist of damping elements and sliding elements.

#### Sliding element

Surface	8mm thick, macromolecular polyethylene
Damping	22mm impact dumping rubber
Mounting	Across its entire length integral vulcanized aluminium profile

#### **Damping element**

Surface	8mm thick, macromolecular polyethylene for friction reduction between belt and damping element
Damping	Special soft rubber for high energy absorption
Mounting	Across its entire length integral vulcanized aluminium profile



# POLYURETHANE PARTS

#### POLYURETHANE-METALL-PARTS

The possibilities of PUR-elastomers in industrial applications are very diverse. PUR elastomers are first choice wherever high stability has to be achieved despite immense strain.

#### Material

The term polyurethane refers to a family of artificial materials which arise from polyaddition. Contrary to polymerization, there is no separation of by-products. The applied components react completely with each other. The result is polyurethane with a wide range of characteristics.

## Advantages

- Excellent abrasion characteristics, which can be specifically controlled (an advantage in comparision to rubber)
- An excellent reformation profile, that means it is reversibly formable and after relieving, they resume their original shape within certain limits
- High strain capability and elastic behavior within a large hardness range
- Temperature application range of -40° to +70/80°C (temporarily +110°C)
- Sheet products -with or without metal- up to 5000x2500mm or 5500x1000 in cuts according to your individual wishes
- · Concept solutions for many industrial problems

#### Products for general mechanical engineering

When metal parts are coated with polyurethane, the positive characteristics of both materials complement each other. In engineering it means optimal durability and better wearout data, even at the highest loads (such as used in crankshaft bearings or spring element with damper effect).

#### Applications in Conveying technology

Conveying technology demands specific requirements on polyurethane. On the one hand the goods that need to be transported as well as conveyor belts and other work equipment have to be handled carefully during the transport process. On the other hand the polyurethane parts, used for this, need a good abrasion and wearout resistant. Maschinenbau KRUMSCHEID GmbH uses only those products which have best datas regarding to the abrasion resistance.

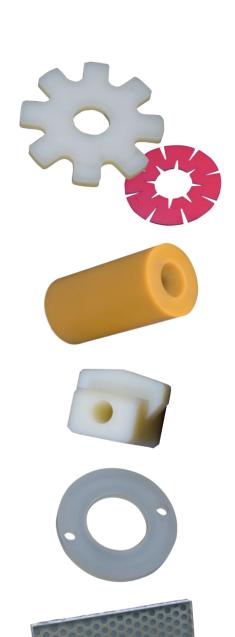
#### Hoses, rods and plates

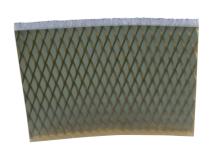
Semi-finished products made of polyurethane are offered in countless different shapes and sizes. They are excellently suited as sealing material. They are used for example in form of gaskets or sealing rings for hydraulic cylinders and oil feeding cases. The prefabricated forms are milled, drilled or separated mechanically as requested.

Also the use of polyurethane as large-sized sheet good is possible. Up to a width of 2500mm and different material thickness, the material offers a wide range of applications in almost every colour and diverse shore qualities.

#### **Food approval**

Polyurethane parts can be used in foodstuff and comply with FDA and EU standards.





Material in different models

# MACHINE COMPONENTS

#### **MADE-TO-MEASURE**

Since being founded in 1986 we operate very successfully in the engineering industry and in manufacturing mechanical parts. In planning and producing of our products, we can refer to a comprehensive experience and know-how. Our customers benefit from this long-term experience. With a modern machinery and qualified employees we are able to implement your guidelines as your competent partner.

#### **METAL CUTTING**

Turning and milling parts are manufactured by using our modern CNC-controlled turningand milling machines. According to your specifications, individual mechanical parts up to complete machinery can be realized on schedule.

#### CAD/CAM

Due to the application of CAD/CAM, Maschinenbau Krumscheid GmbH is your partner from product development up to production.

#### PRODUCTION OF SPARE PARTS

We manufacture your spare parts according to your technical drawings or sample parts. The digitalization of workpieces in 3D-model enables us to regenerate metallic or non-metallic individual workpieces.

#### **REPAIR**

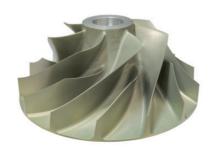
We support you in the area of repairing your wear parts for example by surface coating technologies such as metal syringes and following machining process. Thereby we provide the opportunity to reduce production interruptions and machine downtimes to a minimum.



- ·Turning
- · Milling
- Grinding
- Welding
- · CAD/CAM
- · Surface coating
- · Heat treatment

We manufacture machine parts or whole parts according to customer specifications. We will gladly prepare you a non-binding offer.-









# **COMPANY**

Since its foundation in 1986, Maschinenbau Krumscheid GmbH has continually developed its technical know-how to a more effective and qualitative demanding service. We are always focused on the needs and requirements of our customers.

A modern machinery enables our company to implement innovative solutions of individual machine components up to complete machinery. The manufacturing takes place at our site in Breitscheid.

Both in the planning phase and during production our staff draw on comprehensive technical knowledge, modern soft- and hardware and long-standing experience.

We are your reliable and competent partner for innovative, cost-effective solutions in cleaning conveyor belts and engineering.

In a time of rapid economic changes, we offer flexible solutions by choice between maintenance and new purchase:

**COMPETENCE** – long-term experience

FLEXIBILITY - large machinery

**SPARE PARTS SERVICE** – storage of recurring components

**CUSTOMER RELATION** –taking care of personal contacts

# **SERVICE**

#### INDIVIDUAL, COMPETENT AND RELIABLE.







#### Customerservice, conveyor belt technology – tailor-made solutions Optimize operating costs

We are fully aware of how costly machine downtimes can be. Maintenance departments visibly come under internal cost pressure and were reduced. Our range of production and services are designed with exactly this in mind. We offer you individual services related to our conveyor belt scrapers. With services ranging from consulting to installation of an appropriate scraper system, adapted to your requirements, we stand by your side as a reliable partner.

#### Service contract for increased security

Conclude your cost-effective service contract with Maschinenbau Krumscheid GmbH – you do not need to worry about a thing. All services are carried out automatically by us without you having to ask. Wear control and functional test on the scraper system minimize the risk of downtimes and errors at your conveyor. Due to our wide-ranging portfolio of services we support the cleanliness, safety and economy of your conveyor.

#### Discharge for your company

We place our reliance on extensive technical support and professional application consulting for you, with prompt and straightforward service on site. This takes the strain off you in your day-to-day operations so that you can focus on the job in hand. Our many years of experience in dealing with VOconveyor belt scrapers offer you qualified, reliable support.

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Technical changes reserved. All dimensions are approximated.
The relevant accident prevention regulations and installation instructions have to be considered!

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#### Maschinenbau KRUMSCHEID GmbH

Josef-Reuschenbach-Str. 3 53547 Breitscheid Germany

Phone + 49 (0) 26 38 / 93 40 - 0 Fax + 49 (0) 26 38 / 93 40 40 E-Mail info@krumscheid.de

www.krumscheid.de