

# TOUGH PERFORMERS – DURABLE DESIGN MODULAR WEAR PROTECTION

**NEW:  
ELECTRICALLY  
CONDUCTIVE  
WEAR  
PROTECTION –  
DEKRA TESTED**



**JACOB**

NO.1 IN PIPEWORK SYSTEMS

# DURABLE DESIGN – WEAR PROTECTION RANGE



A broad spectrum of applications in industry and agriculture causes high wear in pipework systems. In view of this, we have developed the new modular wear protection range: DURABLE DESIGN.

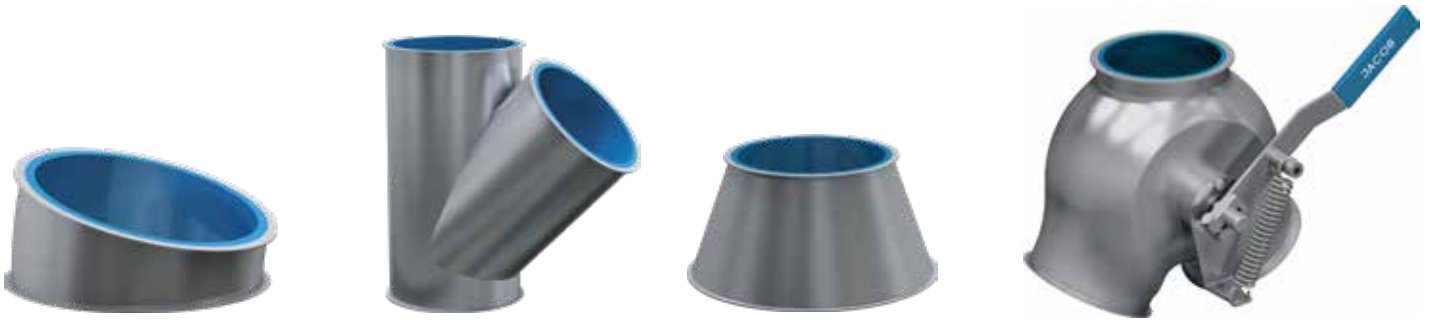
The wear protection is glued or bolted in the standard range and consists of a polyurethane base. The materials differ in their various properties. The products are combined with our modular pipework system. In the standard range, we offer diameters DN 150 to 350 mm with bolted wear protection and diameters DN 100 to 350 mm with glued wear protection. Diameters larger than DN 350 mm are generally available on request. Polyurethane offers the advantage that it has a flexible yet wear-resistant structure. The impact energy, particularly from deflection, is therefore absorbed as a result and thus extends the lifetime.

DURABLE DESIGN is frequently used in industry, e.g. for conveying cement, lime, sand, grit, concrete or mineral wool, and in agriculture, e.g. for conveying grain, soya, maize or barley.

Thanks to the modular JACOB system, you can simply replace worn pipe components with lined ones from the DURABLE DESIGN line. You can still use pull-rings and seals from the standard range. To ensure optimal product flow, we have an inlet piece (see drawing) in our range with a chamfered lining which is fixed particularly securely in place. It is recommended that this piece is fitted at every place where lined pipework begins.

Version	Glued wear protection		Bolted wear protection		
	PU ochre	Kryptane red	Blue Ox	Kryptane green	Kryptane blue
Pipework diameter	DN 100–350 mm		DN 150–350 mm		
Wear protection material	PU ochre	Kryptane red	Blue Ox	Kryptane green	Kryptane blue
Material thickness	6 mm	6 mm	6.5 mm	6 mm	6 mm
Expanded metal	–	–	✓	✓	✓
Food grade	–	✓	–	✓	–
Temperature resistance	-20°C to +80°C	-20°C to +80°C	-20°C to +80°C	-20°C to +80°C	-30°C to +80°C
Shore A hardness	70	80	85	83	83
Electrostatic conductivity	–	–	–	–	✓
Application	For high impact wear due to coarse products without sharp edges.	With high sliding and impact wear through fine-grained products up to 5 mm, dry and wet, at an angle of incidence of up to about 30°.	Mainly for the grain and concentrated feed industry, for light to medium wear.	For high sliding and impact wear due to coarse products up to 50 mm. For a higher angle of incidence of 30 to 60°.	For high sliding and impact wear, such as in the grain and concentrated feed industry, for conveying products with increased dust content.
Feature	Flexible use, suitable for light and medium wear.	Low friction coefficient, consequently no caking of the products and good sliding properties.	Focus on grain and concentrated feed.	Universal use, good resistance including to coarse and sharp-edged products.	Flame-resistant and electrically conductive (in installed state DEKRA tested), good antifric-tion properties.

**ELECTRICALLY CONDUCTIVE WEAR PROTECTION – DEKRA TESTED**



### Your benefits with DURABLE DESIGN

- Wear protection in a modular system
- Perfect for combining with JACOB pull-ring system
- Flexibly replaceable
- Wide product spectrum, wear protection possible with various materials from DN 100 mm
- Easy to assemble
- Longer lasting when conveying abrasive materials
- Choice of 6 different materials in the standard range
- Other linings available on request

### Technical data

For the DURABLE DESIGN wear protection range, JACOB uses pipe components from the modular system which are lined with different materials:

- JACOB pipework system with a lip for pull-ring connection
- Wall thicknesses 1.5 and 2 mm, further wall thicknesses on request
- Powder-coated RAL 7032 in the standard range
- Special colours, galvanised pipe components or stainless steel on request
- Bolted wear protection: DN 150–350 mm in the standard range, DN >350 mm on request
- Glued wear protection: DN 100–350 mm in the standard range, DN >350 mm on request

	Product range DN > 350 mm on request	PU ochre and Kryptane red (glued)	Blue Ox, Kryptane green, Rhino Hyde blue and Kryptane blue (bolted)
DN 150–350 mm	Inlet piece 50 mm	DN 100–350	DN 150–350
Rhino Hyde blue	Pipes 50–1000 mm	DN 100–350	DN 150–350
8 mm	Pipes 2000 mm	DN 100–350	–
✓	Segments 5°–30°	DN 100–350	DN 150–350
✓	Segments 45°	DN 100–350	DN 150–350 Special segment (with straight back)
-20°C to +80°C	Bends R = 1D, 90°	DN 100–350	–
85	Bends R = 2D, 30°–90°	DN 100–350	–
–	Push-in pipes 200–1000 mm	DN 100–350	–
Recommended application: For conveying bulk goods without sharp edges with high sliding and impact wear.	Forks 30° and 45°	DN 100–350	DN 150–350
	Symmetrical forks 60° and 90°	DN 100–350	DN 150–350
	Cone pieces	DN 100–350	DN 150–350 Special cone (with 50 mm connecting flange)
	Connecting flange with loose flange	DN 100–350	DN 150–350
	Adapters with loose flange	DN 100–350	–
	Spouts from square to round	DN 100–350	DN 150–350
	Spouts from square to round 45° and 60°	DN 100–350	DN 150–350
FDA-certified, universally usable and high quality.	Two-way valves with inlet collar, hand-operated	–	DN 150–350



**DURABLE  
DESIGN**

Tough performers: The new wear protection range from JACOB makes your pipework system extremely resistant. This allows you to extend the service life and the cost-effectiveness of your industrial plants. For this purpose, we use standard pipe components in diameters of DN 100 to 350 mm from the modular range. Diameters larger than 350 mm are available on request. Depending on the requirement, these are lined with different polyurethane compounds. This ensures that the full modularity is maintained. As a result, the wear protection is not only for

installation in new systems, but also for easy replacement of worn-out pipe components. In combination with the JACOB pull-ring system, this is fast and easy to achieve. The benefit of the polyurethane is its elasticity that absorbs the impact energy. On request, we also offer ceramic linings, a non-stick coating such as PTFE or a lining of your choice. Cast-iron pipe components and hot-galvanised or powder-coated pipe components with a wall thickness of 3 mm are available as an alternative. Our team would be pleased to assist you with selecting the right wear protection.

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