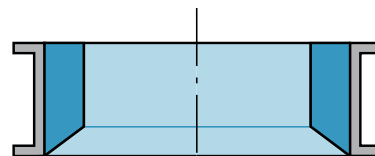


# TOUGH PERFORMERS – DURABLE DESIGN, THE NEW WEAR PROTECTION



# DURABLE DESIGN – WEAR PROTECTION RANGE



A broad spectrum of applications in industry and agriculture causes high wear in tubing 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 product range and consists of a polyurethane base. The materials differ in their various properties. In the standard product range, we offer diameters ND 6" to ND 14" with bolted wear protection and diameters ND 4" to ND 14" with glued wear protection. Diameters larger than 14" are available on request. Polyurethane offers the advantage of a flexible and yet wear-resistant structure. The impact energy, from deflection, is absorbed as a result and thus extends the lifetime of the part.

DURABLE DESIGN is frequently used in industry, i.e. for the transportation of cement, lime, sand, grit, concrete, or mineral wool; and in agriculture, i.e. for the transportation of grain, soybeans, corn, or barley.

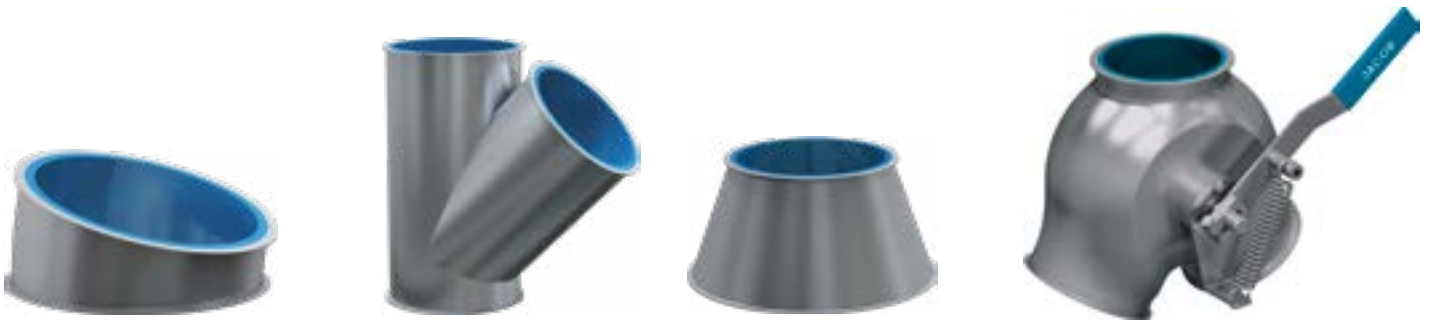
As a benefit of the modular JACOB system, you can replace worn tube components with tubing from the DURABLE DESIGN line. You can still use pull rings and seals from the standard product range. To ensure an optimum product flow, we have a transition component (see drawing above) in our product line with a chamfered lining which is fixed securely in place. We recommend fitting this component at every place where the lined tubing begins.

We also continue to supply ceramic linings, a non-adhesive coating such as PTFE, or another linings on request.

Cast-iron tubing and hot-dipped galvanized, or powder-coated tubing with 11 gauge wall thickness are available as an alternative wear protection.

Our team would be pleased to assist you with selecting the right wear protection.

Version	Glued wear protection		Bolted wear protection		
Tubing diameter	ND 4"–14" (100–350 mm)		ND 6"–14" (150–350 mm)		
Wear protection material	PU ocher	Kryptane red	Blue Ox	Kryptane green	Rhino Hyde blue
Material thickness	0.2362" (6 mm)	0.2362" (6 mm)	0.2559" (6,5 mm)	0.2362" (6 mm)	0.3150" (8 mm)
Expanded metal	–	–	✓	✓	✓
Food grade	–	✓	–	✓	✓
Temperature resistance	-4°F to 176°F	-4°F to 176°F	-4°F to 176°F	-4°F to 176°F	-4°F to 176°F
Shore hardness A	70	80	85	83	85
Electrostatic conductivity	–	–	–	–	✓
Application	For high impact wear due to coarse products without sharp edges.	With high sliding and impact wear due to fine-grained products up to 3/16", dry and wet, at an angle of incidence of up to 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 2". For a higher angle of incidence of 30 to 60°.	Recommended application: For conveying bulk goods without sharp edges with high sliding and impact wear.
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 concentrate feed.	Universal use, Good resistance also to coarse and sharp-edged products.	Electrically conductive and FDA certification, universal use and high quality.



## Your benefits with DURABLE DESIGN

- Wear protection in a modular system
- Perfect for combining with JACOB pull ring system
- Easily replaceable
- Wide product spectrum through bolting or gluing the wear protection in the standard product range
- Easy to assemble
- Longer lasting when conveying abrasive materials
- Choice between several standard linings
- Other linings available on special request

## Technical data

For the DURABLE DESIGN product range, JACOB uses tubing components from the modular system which are lined with different materials:

- JACOB tubing system with a lip for pull ring connection
- Wall thicknesses 16 gauge and 14 gauge
- Powder-coated RAL 7032 in the standard range
- Special colors, galvanized tubing or stainless steel available on special request
- Bolted wear protection: ND 6" to 14" mm in the standard range, ND >14" available on special request
- Glued wear protection: ND 4" to 14" mm in the standard range, ND >14" available on special request

Product range	PU ocher 0.2362" (6,0 mm) (glued)	Kryptane red 0.2362" (6,0 mm) (glued)	Blue Ox 0.2559" (6,5 mm) (bolted)	Kryptane green 0.2362" (6,0 mm) (bolted)	Rhino Hyde blue 0.3510" (8,0 mm) (bolted)
Transition component 2" (50 mm)	ND 4"–14" (100–350 mm)	ND 4"–14" (100–350 mm)	ND 6"–14" (150–350 mm)	ND 6"–14" (150–350 mm)	ND 6"–14" (150–350 mm)
Tubes 2"–39" (50–1000 mm)	ND 4"–14"	ND 4"–14"	ND 6"–14"	ND 6"–14"	ND 6"–14"
Tubes 78¾" (2000 mm)	ND 4"–14"	ND 4"–14"	–	–	–
Segments 5°–30°	ND 4"–14"	ND 4"–14"	ND 6"–14"	ND 6"–14"	ND 6"–14"
Segments 45°	ND 4"–14"	ND 4"–14"	Special segment (with straight back) ND 6"–14"	Special segment (with straight back) ND 6"–14"	Special segment (with straight back) ND 6"–14"
Bends R = 1D, 90°	ND 4"–14"	ND 4"–14"	–	–	–
Bends R = 2D, 30°–90°	ND 4"–14"	ND 4"–14"	–	–	–
Slip tubes 8"–39" (200–1000 mm)	ND 4"–14"	ND 4"–14"	–	–	–
Laterals 30° and 45°	ND 4"–14"	ND 4"–14"	ND 6"–14"	ND 6"–14"	ND 6"–14"
Symmetrical Y-branches 60° and 90°	ND 4"–14"	ND 4"–14"	ND 6"–14"	ND 6"–14"	ND 6"–14"
Cones	ND 4"–14"	ND 4"–14"	Special cone (with 2" connecting flange) ND 6"–14"	Special cone (with 2" connecting flange) ND 6"–14"	Special cone (with 2" connecting flange) ND 6"–14"
Connecting flange with loose flange	ND 4"–14"	ND 4"–14"	ND 6"–14"	ND 6"–14"	ND 6"–14"
Adapters with loose flange	ND 4"–14"	ND 4"–14"	–	–	–
Spouts from square to round	ND 4"–14"	ND 4"–14"	ND 6"–14"	ND 6"–14"	ND 6"–14"
Spouts from square to round 45° and 60°	ND 4"–14"	ND 4"–14"	ND 6"–14"	ND 6"–14"	ND 6"–14"
Two-way valves with inner collar, hand-operated	–	–	ND 6"–14"	ND 6"–14"	ND 6"–14"



Tough performers: The new wear protection range from JACOB makes your tubing system extremely resistant. This allows you to maximize the service life and the cost effectiveness of your industrial plants. For this purpose, we use standard tubing components with a diameter of ND 4" to ND 14" from the modular system. Diameters larger than 14" are generally available on special request. Depending on the requirements, the components are lined with different polyurethane materials. The benefit of the polyurethane is its

elasticity that absorbs the impact energy. On request, we also offer ceramic linings, a non-adhesion coating such as PTFE or another lining offered by JACOB. This ensures that the full modularity of the JACOB product is maintained. As a result, the wear protection is not only for installation in new systems, but also for easy replacement of worn-out tubing components. In combination with the JACOB pull ring system, this is fast and easy to achieve.

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NO. 1 IN TUBING SYSTEMS