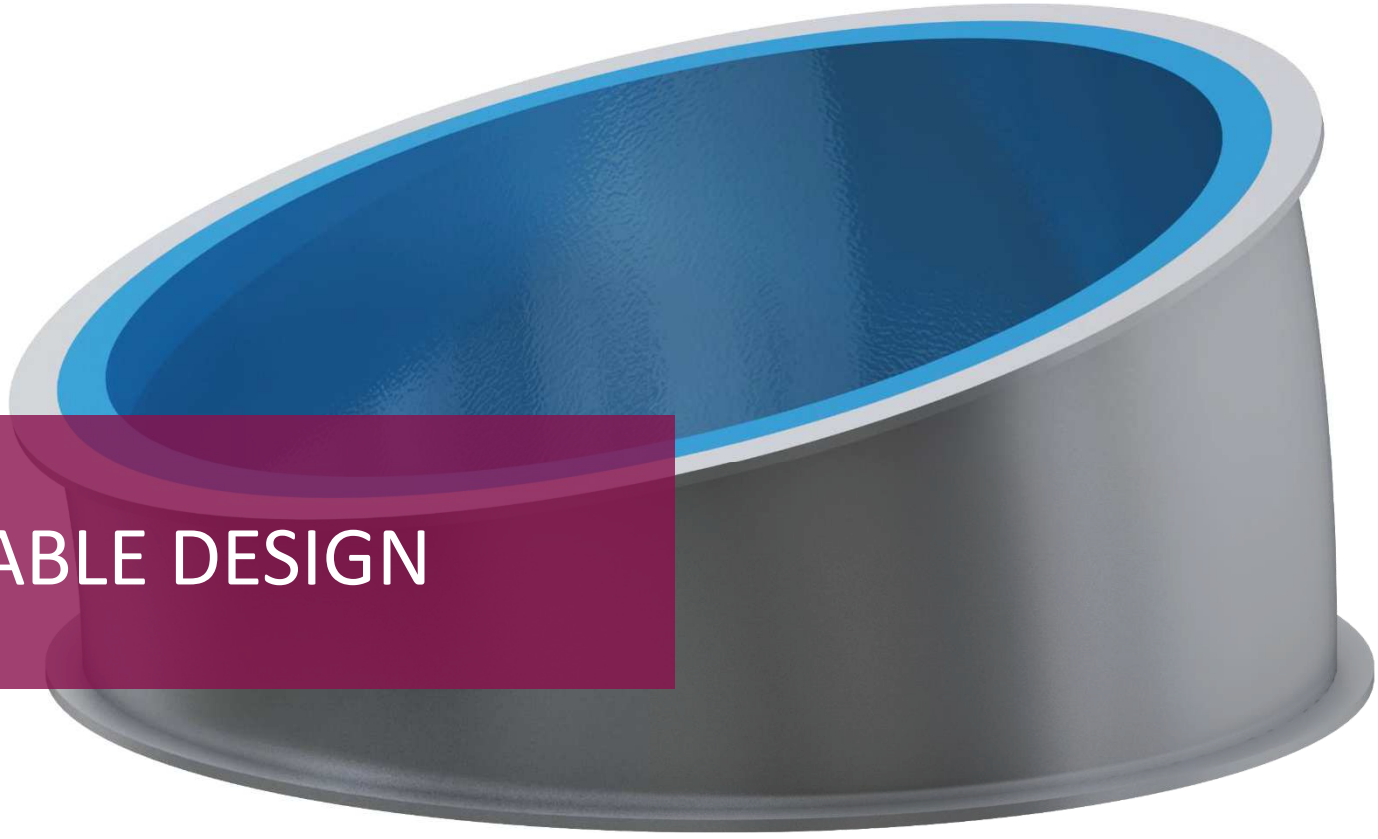

3 DURABLE DESIGN

Area of application

Cereals
Soy
Power feed raw materials
Artificial fertilizer
Corn
Rapeseed
Sunflower seeds

Cement
Limestone
Sand
Gravel
Concrete
Recycling industry
Coal
Steel industry
Glass

JACOB standard

Version	Glued wear protection		Bolted wear protection		
Pipework diameter	DN 100 to 350 mm		DN 150 to 350 mm		
Wear protection material	PU ochre	Kryptane red	Blue Ox	Kryptane green	Rhino Hyde blue
Material thickness	6 mm	6 mm	6.5 mm	6 mm	8 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	-20°C to +80°C
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 through fine-grained products up to 5 mm, 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 50 mm. 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.

Advantages of DURABLE DESIGN

DURABLE DESIGN

JACOB
NO.1 IN PIPEWORK SYSTEMS

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

Technical data

For the wear protection range DURABLE DESIGN, 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 chrome-nickel steel on request
- Bolted wear protection: DN 150 to 350 mm in the standard range, DN >350 mm on request
- Glued wear protection: DN 100 to 350 mm in the standard range, DN >350 mm on requestLarger diameters upon request

Product Overview

DURABLE DESIGN

JACOB
NO.1 IN PIPEWORK SYSTEMS

! Additionally: ceramic, non-stick coating PTFE or other coatings
Alternatives: cast-iron piping, 3 mm hot dip-galvanised piping

Product range	PU ochre 6.0 mm (glued)	Kryptane red 6.0 mm (glued)	Blue Ox 6.5 mm (bolted)	Kryptane green 6.0 mm (bolted)	Rhino Hyde blue 8.0 mm (bolted)
Inlet piece 50 mm	DN 100 to 350	DN 100 to 350	DN 150 to 350	DN 150 to 350	DN 150 to 350
Pipes 50 to 1000 mm	DN 100 to 350	DN 100 to 350	DN 150 to 350	DN 150 to 350	DN 150 to 350
Pipes 2000 mm	DN 100 to 350	DN 100 to 350	–	–	–
Segments 5° – 30°	DN 100 to 350	DN 100 to 350	DN 150 to 350	DN 150 to 350	DN 150 to 350
Segments 45°	DN 100 to 350	DN 100 to 350	Special segment (with straight back) DN 150 – 350	Special segment (with straight back) DN 150 – 350	Special segment (with straight back) DN 150 – 350
Bends R = 1D, 90°	DN 100 to 350	DN 100 to 350	–	–	–
Bends R = 2D, 30° – 90°	DN 100 to 350	DN 100 to 350	–	–	–
Push-in pipes 200 – 1000 mm	DN 100 to 350	DN 100 to 350	–	–	–
Forks 30° and 45°	DN 100 to 350	DN 100 to 350	DN 150 to 350	DN 150 to 350	DN 150 to 350
Symmetrical forks 60° and 90°	DN 100 to 350	DN 100 to 350	DN 150 to 350	DN 150 to 350	DN 150 to 350
Cone pieces	DN 100 to 350	DN 100 to 350	Special cone (with 50 mm connecting piece) DN 150 – 350	Special cone (with 50 mm connecting piece) DN 150 – 350	Special cone (with 50 mm connecting piece) DN 150 – 350

Product Overview

DURABLE DESIGN

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Product range	PU ochre 6.0 mm (glued)	Kryptane red 6.0 mm (glued)	Blue Ox 6.5 mm (bolted)	Kryptane green 6.0 mm (bolted)	Rhino Hyde blue 8.0 mm (bolted)
Connecting piece with loose flange	DN 100 to 350	DN 100 to 350	DN 150 to 350	DN 150 to 350	DN 150 to 350
Adapters with loose flange	DN 100 to 350	DN 100 to 350	–	–	–
Spouts from square to round	DN 100 to 350	DN 100 to 350	DN 150 to 350	DN 150 to 350	DN 150 to 350
Spouts from square to round 45° and 60°	DN 100 to 350	DN 100 to 350	DN 150 to 350	DN 150 to 350	DN 150 to 350
Two-way valves with inlet collar, hand-operated	–	–	DN 150 to 350	DN 150 to 350	DN 150 to 350

Questionnaire

DURABLE DESIGN

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NO.1 IN PIPEWORK SYSTEMS

Checklist before Pricing

These questions are designed to give us an idea of the application, which will help us recommend the correct abrasion protection liner or alternative.

1. Diameter & wall-thickness 1, 2 or 3 mm of the pipework?
2. Material being conveyed?
3. Transportation throughput (tons per hour/day – how many days per week?)
4. Pneumatic conveying (positive pressure or vacuum?) or a gravity chute?
5. If pneumatic conveying, advise flow velocity (mtr/sec) of the conveyed product? (speed will have an important influence on the life time of the liner)
6. Temperature inside the pipe?
7. Is the plant outdoors? (ambient temperature to be advised)
8. Does the abrasion protection liner which have to be electrically conductive?
9. Antistatic effect of the abrasion protection liner necessary or not?
10. Food approval of the abrasion protection liner necessary or not?
11. Is the conveyed product sticky or not?
12. What is the humidity of the conveyed product?
13. Does the customer have any experience with protected pipes in his existing plant? (e.g. which material?, lifetime?, are the worn pipes single items, e.g. single bends or segments, or is the problem of wear in the whole pipeline?)

Required information according to questionnaire & bill of material in order to prepare a quotation

Manufacturing process

DURABLE DESIGN

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1. Marking geometry → 2. Cutting → 3. Forming → 4. Fixing/ Screwing → 5. Finishing/ Grinding









Product overview

DURABLE DESIGN

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Product overview

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