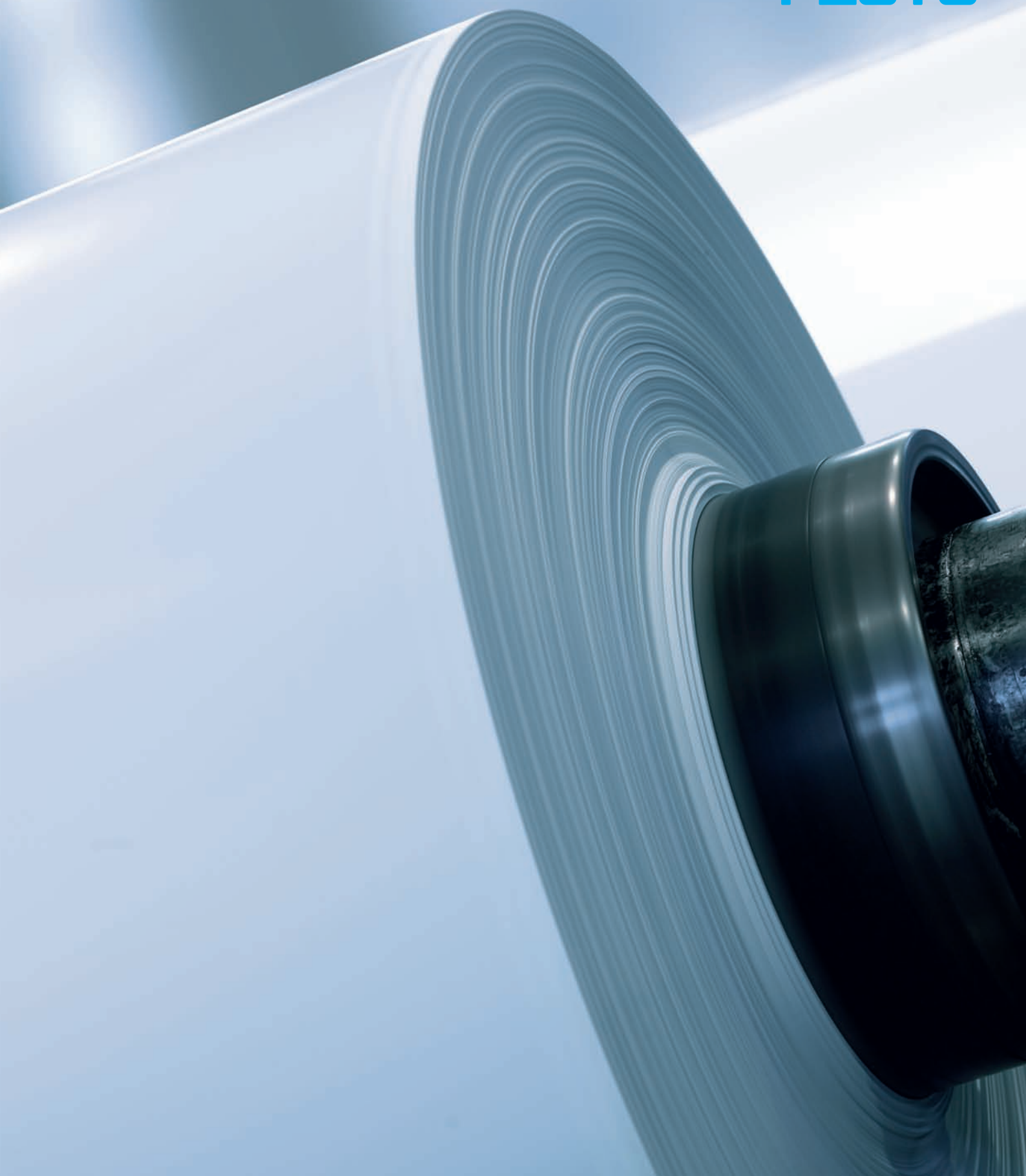


**Systematically quicker
pulp and paper production**

FESTO





Synergetic signals for more intelligent process and factory automation

Everything from a single source

The Festo brand is globally recognised as a symbol of expertise in factory automation. Festo has also been successfully committed to process automation for quite some time. You can benefit from this.

The synergies that develop when these two automation fields merge add to the pool of experience Festo can draw on, with the aim of simplifying complex automation tasks and – most importantly – solving them more quickly.



Due to interdisciplinary diagnostic concepts and products with diagnostic capability, production downtime is reduced to a minimum.

Based on win-win cooperation: Festo uses every instrument available for reducing the total cost of ownership with and for its partners. Using global framework agreements, for example, or services for reducing compressed air consumption and replacement parts management.

Learning systems include optimal vocational and further training for process technology and process engineering. Designed to improve skills and knowledge.



Produce pulp and paper more reliably

Sophisticated diagnostic concepts

Festo is present throughout the entire manufacturing process where flowing water or other materials are subject to automatic control. From the actuator level to the control level, with visualisation.

Maximum process reliability included! Unplanned interruptions can have dramatic consequences, especially for continual processes. In addition to sophisticated diagnostic and condition monitoring concepts, the hot swap function of our valve terminals provide the highest

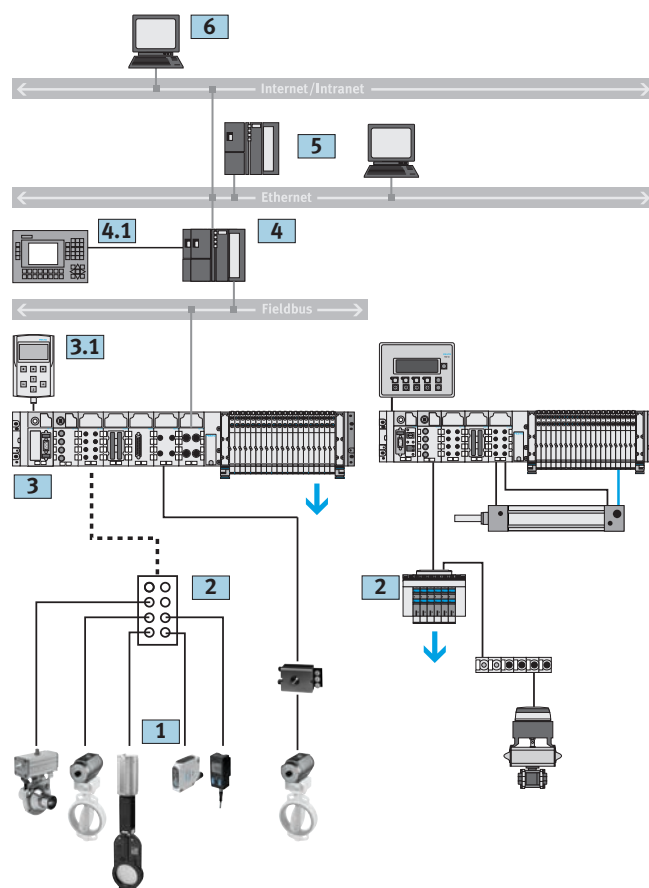
degree of reliability. It allows defective valve slices to be replaced without stopping production.





**Everything from a single source:
from process valves to process
visualisation.**

- 6** Remote servicing and diagnosis
- 5** SCADA system
- 4** PLC
- 4.1** Decentralised visualisation
- 3** Field level
- 3.1** Handheld control device
- 2** Module level
- 1** Sensor/actuator level





The path to paper

Stock preparation

Preparing raw stock for the pulp primarily occurs in process flows. Festo provides specific automation solutions for almost all areas of application. In this way, unnecessary stocks of automation components from different manufacturers can be eliminated.

The guarantee for safe, dependable, risk-free processes is reliable technology combined with effective control engineering. The result: highly flexible production plants, whether they are for various preparation processes for pulp or control systems for paper webs.

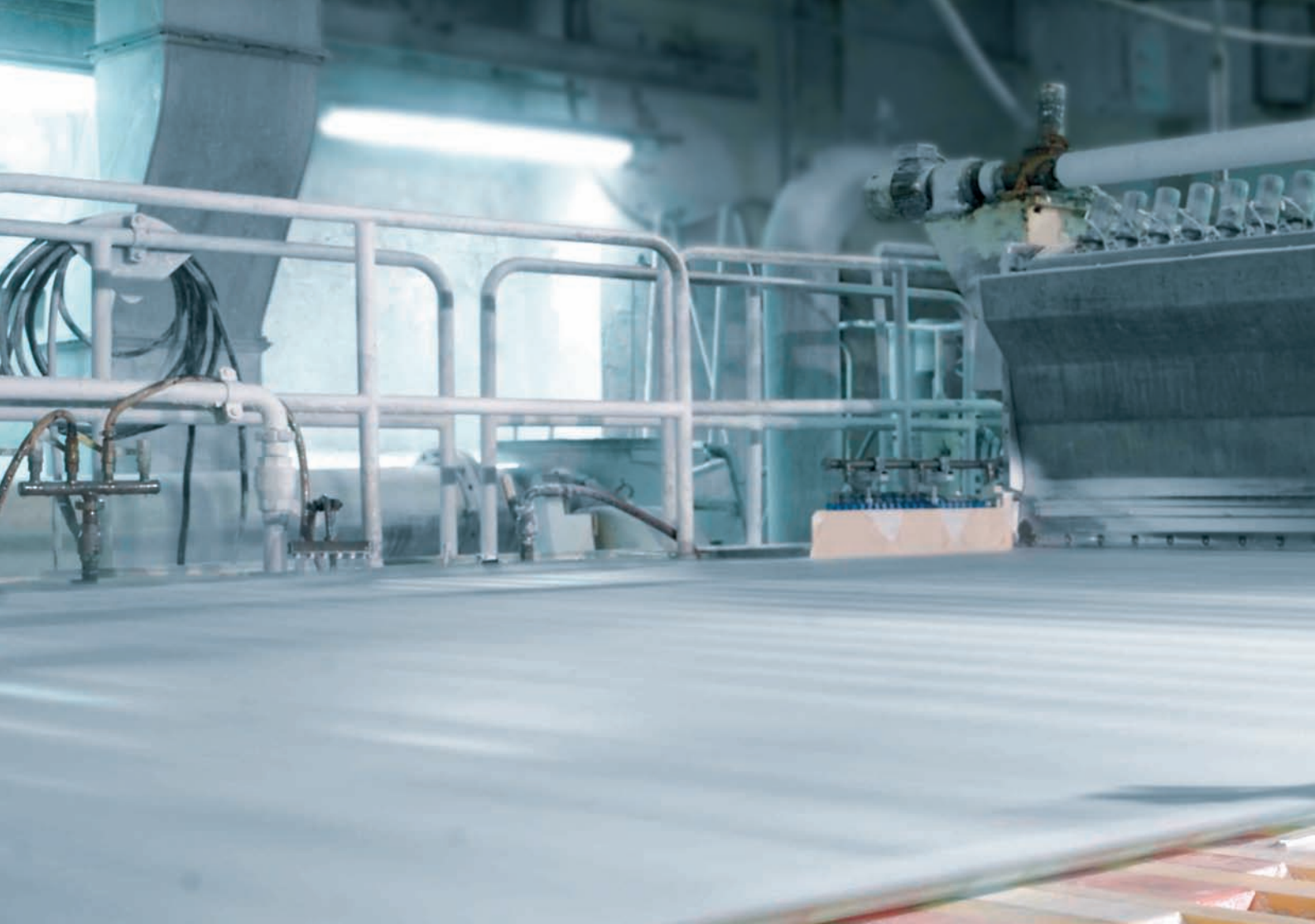




Pulp manufacturing

Various mechanical, thermal and chemical processes are used here. The objective is to sort and thicken the pulp, and bleach it as required. Then the pulp is purified and thickened again.





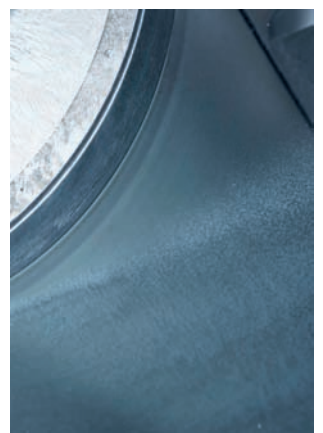
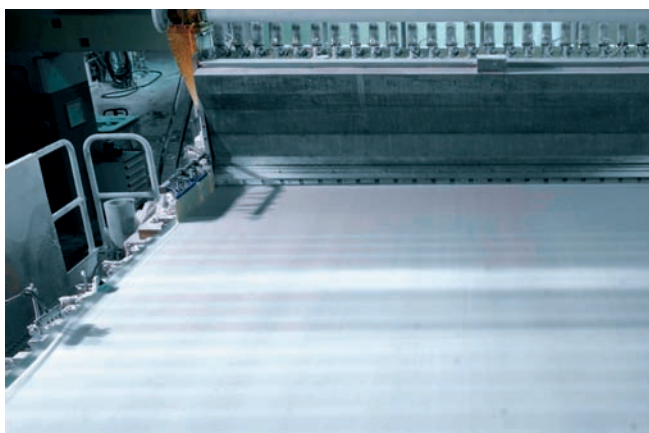
The path to paper

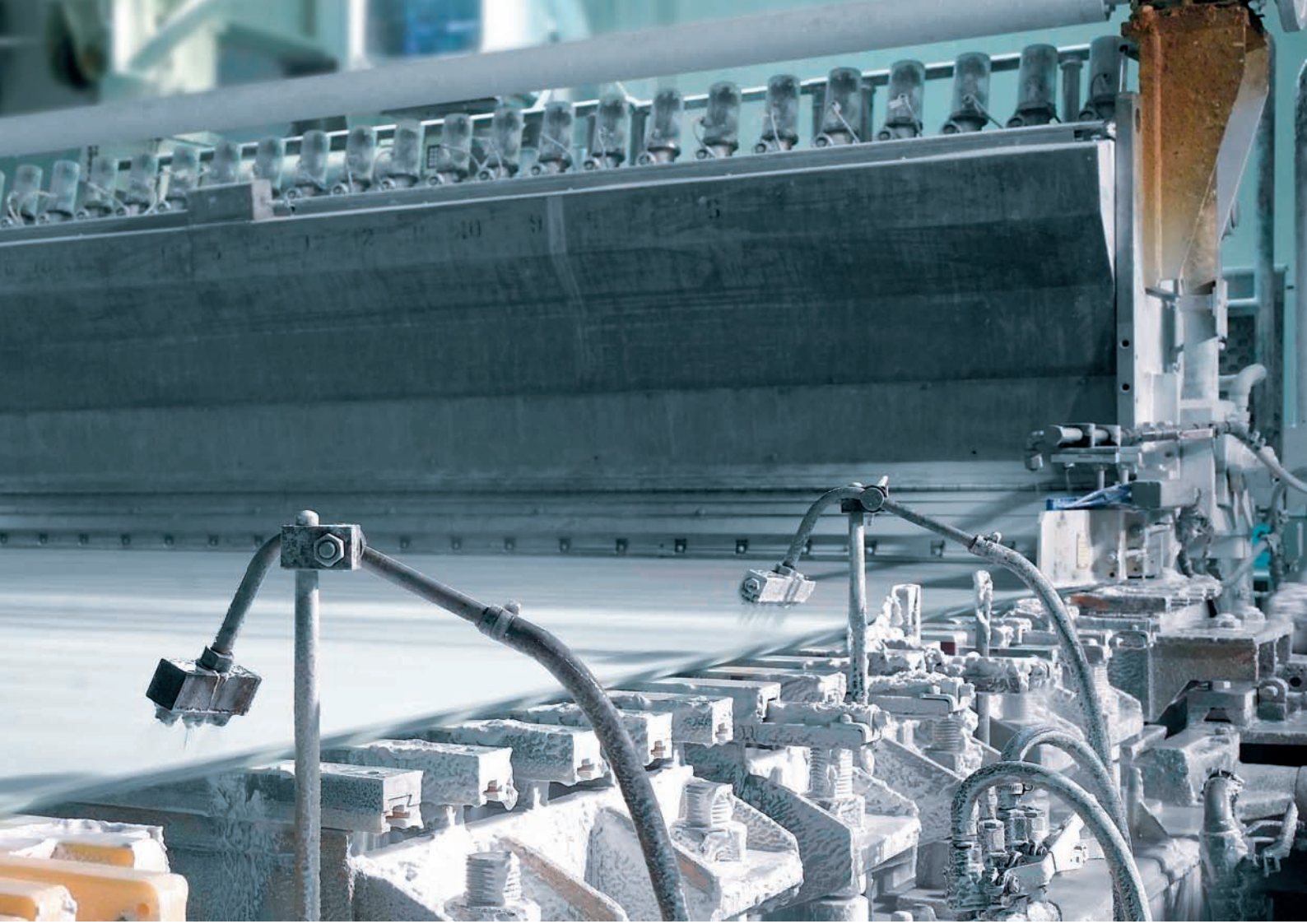
Mesh section

The first step from pulp to paper takes place here. The pulp flows from the outlet onto a mesh so that the process water can be extracted from the pulp. The water collected from the mesh is conditioned in the stock collector and fed back into the pulp process.

Press section

A system of press rolls squeezes more water from the paper and makes the surface smoother. The process water is drawn back into the stock collector and finds its way back into pulp production.





Drying section

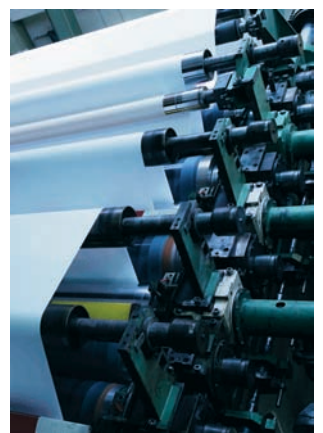
The rough raw paper passes through cylinders beneath infrared driers to remove the remaining water.

Finishing

The paper receives its final properties in the finishing section. In the size press, various materials for finishing the surface are applied and the paper is dried.

Calender

Controllable, polished iron rollers give the final surface polish to the paper, which is then reeled onto large reels.





Our principle: 100 % programme and service quality

The highest level of efficiency

Our highest priority is consistent reduction of the time from system conception to production start up. Because it pays to save time.

Festo provides the answer with products, assemblies and systems for realising modular and scalable system concepts.

When working with Festo, engineers rely on a comprehensive, fully compatible offer. A further accelerating factor is the comprehensive portfolio of engineering tools that Festo provides.

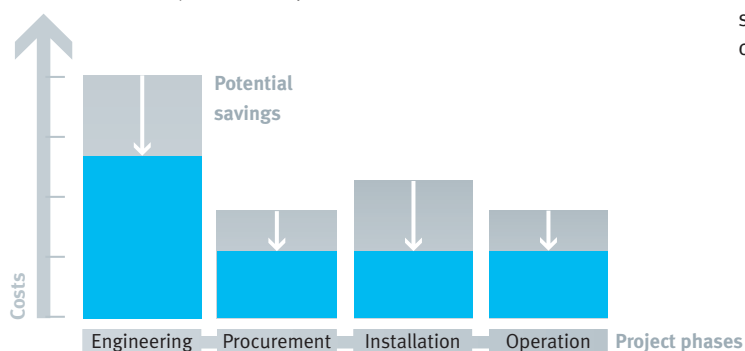
www.festo.com/engineering

Reduce total costs

Only those who understand the challenges of pulp & paper can reduce costs and generate added value. Festo relies on detailed comprehension of the processes and structures of its partner.

The products & services philosophy provides comprehensive support along the entire value creation chain.

Reducing the overall costs in accordance with TCO, by targeted use of Festo services.





Integrated process reliability

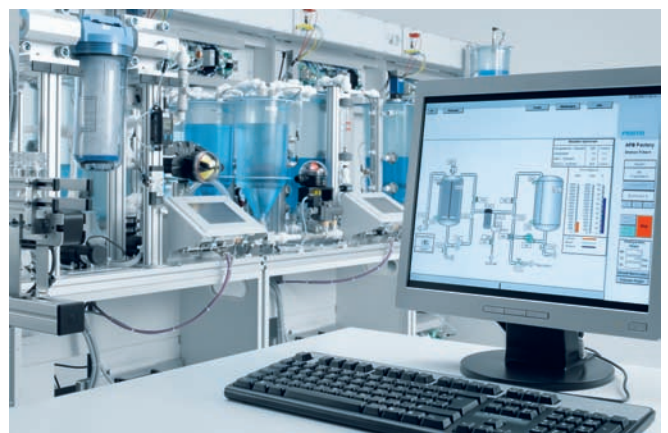
Harmonised, modular components from a single source help to increase reliability of process engineering applications. Pneumatics also offer reliability in the event of a power failure when used in an intelligent installation. Central or local air reservoirs and valve inter-connections matched to the

application ensure that valves will move to the safety position. In addition, consistently standardised, universal interfaces simplify system design and realisation.

Festo Didactic

Solid training in the individual areas of process automation requires industry-oriented model systems or training factories. “Learning by doing” and “process orientation” are two indispensable principles for successfully transferring the sensitive training content of process technology.

www.festo-didactic.com



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