

VOITH

Steel cylinders are
the future of drying
EvoDry





All over the world, paper manufacturers are facing the challenge of ensuring consistently high or superior paper quality while at the same time reducing their investment and production costs. With EvoDry steel cylinders, Voith is revolutionizing the paper drying process and facilitating improved papermaking at the highest level of efficiency.

Smart material meets innovative design

Steel offers significant advantages over cast iron. The thinner shell of the EvoDry steel cylinders allows heat transfer to be increased by 7%. A uniform surface temperature over the entire width of the cylinder also enables gentle drying for optimum paper quality.

The revolutionary design of the Voith drying cylinders enables the maximum level of safety and performance. Using EvoDry, the width of the web can be increased by 160 mm because the shell is welded directly to the head, providing a maximum effective working width. Moreover, EvoDry steel cylinders are especially safe thanks to their ductile material, which avoids the kind of spontaneous breakages that can occur in cast iron cylinders.

Efficient drying for any application

The EvoDry steel cylinder offers outstanding performance and is suitable for drying graphic papers and board and packaging papers. It therefore offers an efficient drying process for a wide range of paper grades.

Uniform heat distribution over the steel cylinder

based on the normal operation of a customer



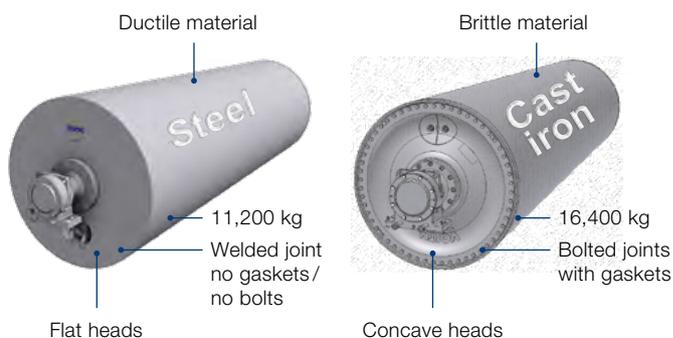
Steel cylinder with even surface temperature



Cast iron cylinder with uneven temperature at shell edge

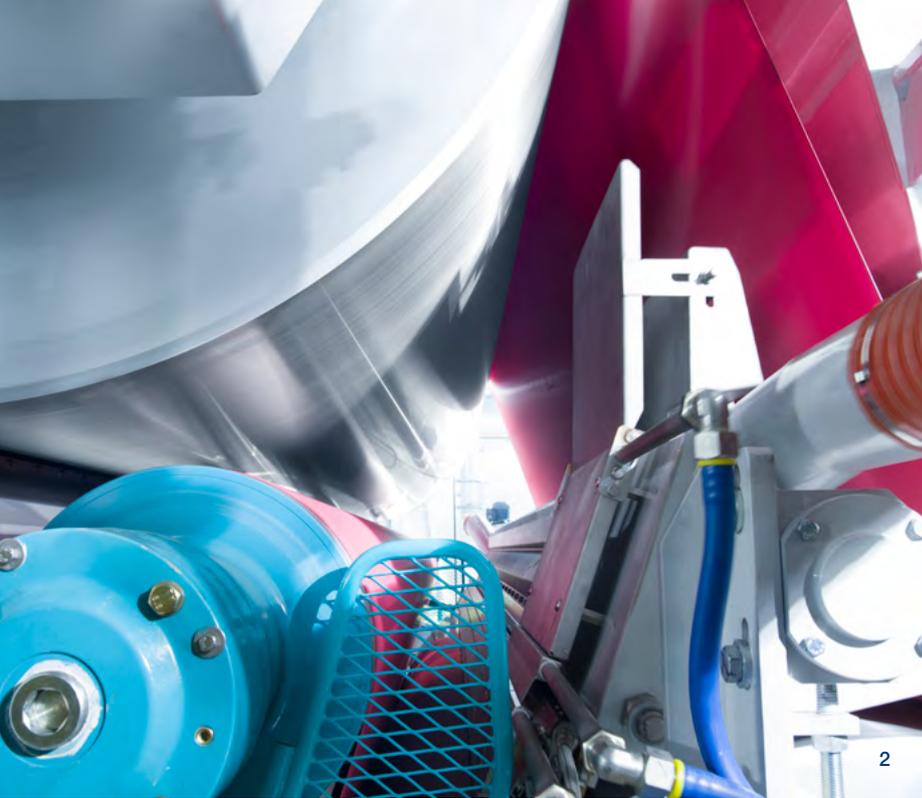
Cutting-edge material and design

EvoDry steel cylinder vs. cast iron drying cylinder



11,200 kg

16,400 kg



- 1 Efficient after-dryer section with EvoDry steel cylinders
- 2 Optimum material properties and cutting-edge design

“We have been able to save space yet still achieve better runability and energy efficiency than before.”

Henning Dippel, Operations Manager KM 6, WEIG-Karton, Mayen, Germany

Better papermaking with EvoDry steel cylinders

- + Investment costs reduced by EUR 400,000
- + Annual electricity costs reduced by EUR 80,000
- + Heat transfer improved by 7%
- + Homogeneous surface temperature over width of shell
- + Dryer weight reduced by 260 metric tons
- + Building footprint reduced by 6 m
- + 158 kW lower motor output required
- + 160 mm wider web with same cylinder width
- + More safety thanks to ductile material
- + No risk of steam leakage between head and shell

Substantial reduction in investment and running costs

The use of EvoDry can reduce the number of drying cylinders in the pre-dryer and after-dryer section. Apart from lower procurement costs, the entire dryer weight can be reduced by 260 metric tons, because fewer and lighter steel cylinders are installed. Moreover, the length of the building can be cut by 6 m and one drive point can be eliminated. This results in investment costs reduced by EUR 400,000 and a drop in annual electricity costs of EUR 80,000.

Manufacturing at the highest standard

Voith has extensive experience in the manufacture of drying cylinders and is continuously developing and refining welding processes. EvoDry steel cylinders have proven effective in more than 20 years in use and are now better than ever. State-of-the-art production processes and an improved design ensure premium quality, uniformity and on-time delivery. EvoDry steel cylinders meet international standards like ASME, AD-2000, GB, JIS, AS1210 etc.

Integrated solution for optimum results

To enhance performance in the dryer section even more, Voith offers dryer hoods, air systems and clothing fabrics that are a perfect match for EvoDry. The Voith dryer section hood EcoHood guarantees efficient heat recovery and low energy consumption due to a high operating due point as well as easy and safe access for operation and maintenance. Thanks to their high level of cleanliness, durability and hydrolytic stability, dryer fabrics from Voith also make a major contribution to enhancing paper quality and drying efficiency.



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Engineered Reliability