

ANDRITZ Ro-Tec Dolphin® rotor

Improved screening capacity with less energy



The challenge: Higher capacity and lower specific energy consumption

Ro-Tec Dolphin® HC

Recycled fiber

Fine screening

Fractionating

Ro-Tec Dolphin® LR

Virgin fiber

TMP / CTMP

Kraft / Sulfite

Thick stock screening (PMA)

Ro-Tec Dolphin® LRs /

LRsb

Recycled fiber

Coarse screening



High capacity efficient production

A new rotor design for pressurized screens – the Ro-Tec Dolphin® – is capable of delivering higher capacities from existing screens at lower specific energy consumption. Since the screening process has such an important effect on downstream processes, it is a critical focus area. Contaminants and visible particles in the stock suspension not only degrade overall process efficiency, but also reduce the end product quality.

Low energy consumption

The Ro-Tec Dolphin® rotor gets its name due to the protrusions on the new foil shape concept. The shape resembles a dolphin and the rotor's action is more gentle on fibers than other geometries. The foil geometry is optimized in terms of hydrodynamics and the overall performance has been proven in several mills. Ro-Tec Dolphin® rotors can be operated at lower speeds, improving the screening efficiency. The reduced rotor tip speed requires less power – consumption has been reduced by up to 60% in some applications.

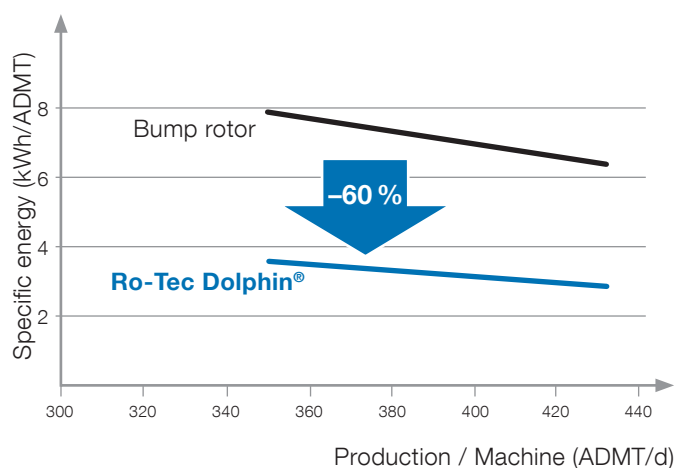
Long life

In addition to energy cost savings, the lifetime cost of the Ro-Tec Dolphin® rotor is substantially less. The rotor design incorporates better wear resistance and the gentle operation within the screen itself has minimal impact on the basket's profile bars. It is even possible to use smaller slot widths than normally required to prevent plugging. The greater open area of the screen baskets ensures higher capacities. As an alternative to increased capacity, an increase in stock consistency could be considered. ANDRITZ process experts can assist in specifying the optimum equipment for each unique application.

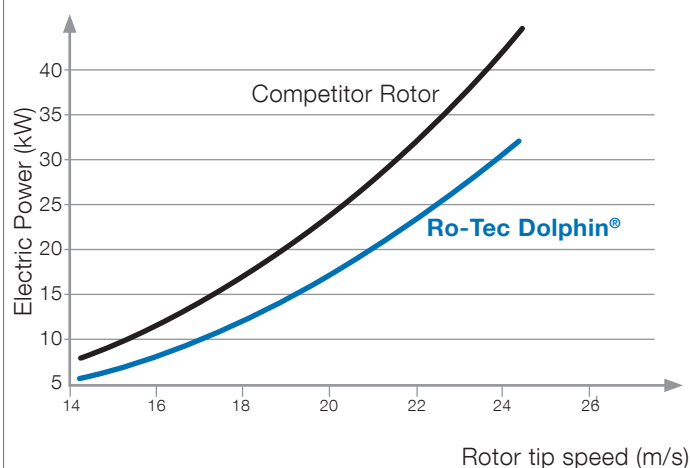
The ANDRITZ solution:

Ro-Tec Dolphin® rotor series

Monitored energy consumption – virgin fiber



Rotor speed comparison – recycled fiber



Benefits

- Extremely fast ROI
- Up to 60% less energy required
- Higher capacities
- Improved end product quality
- Highly reliable
- Excellent wear resistance
- Excellent pulp fluidization
- Gentle on fibers
- Process-optimized foil shapes
- Less reject thickening

Pulp production

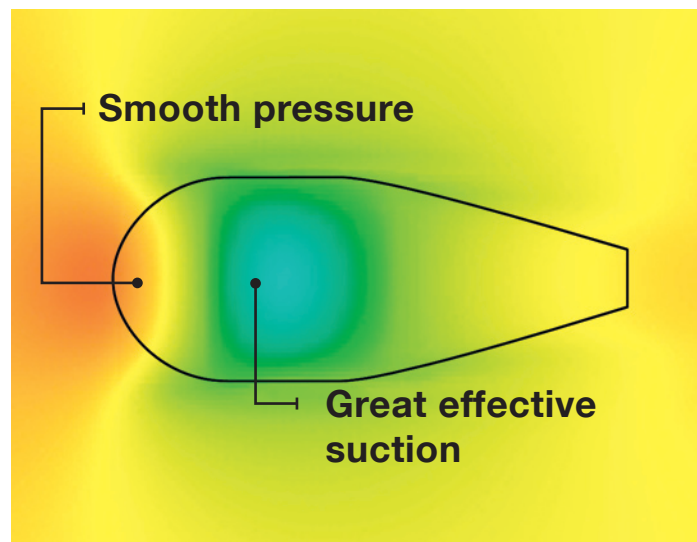
- Higher capacities
- Higher accept consistency

Paper production

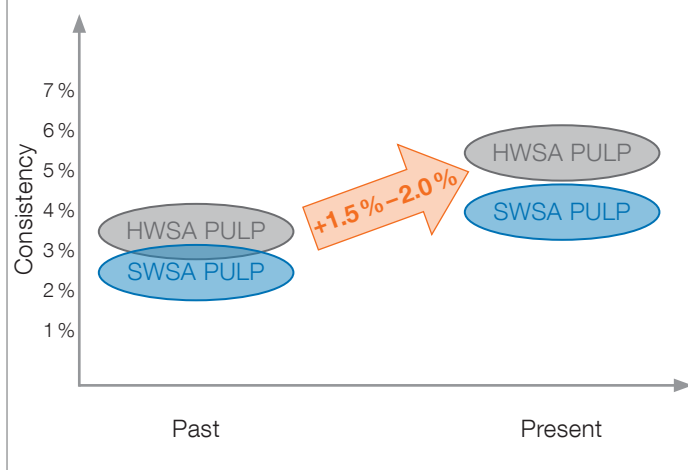
- Longer life
- Lower lifetime cost
- Higher screening efficiency

Main features of Ro-Tec Dolphin[®] family

The Ro-Tec Dolphin[®] HC and LR rotors are suited for high capacity, power-efficient applications. The rotors are distinguished by their low rotor speeds, yet they are able to create optimal shear forces for breaking fiber networks near the screen basket surface. The design of the pressure and suction zones has a major influence on the capacity and quality of screening. Impurities are screened out – not pressed through the screen openings by high pressure cycles or strong acceleration.



Increased consistency – virgin fiber



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