



PULP & PAPER

DOCTORING SOLUTIONS

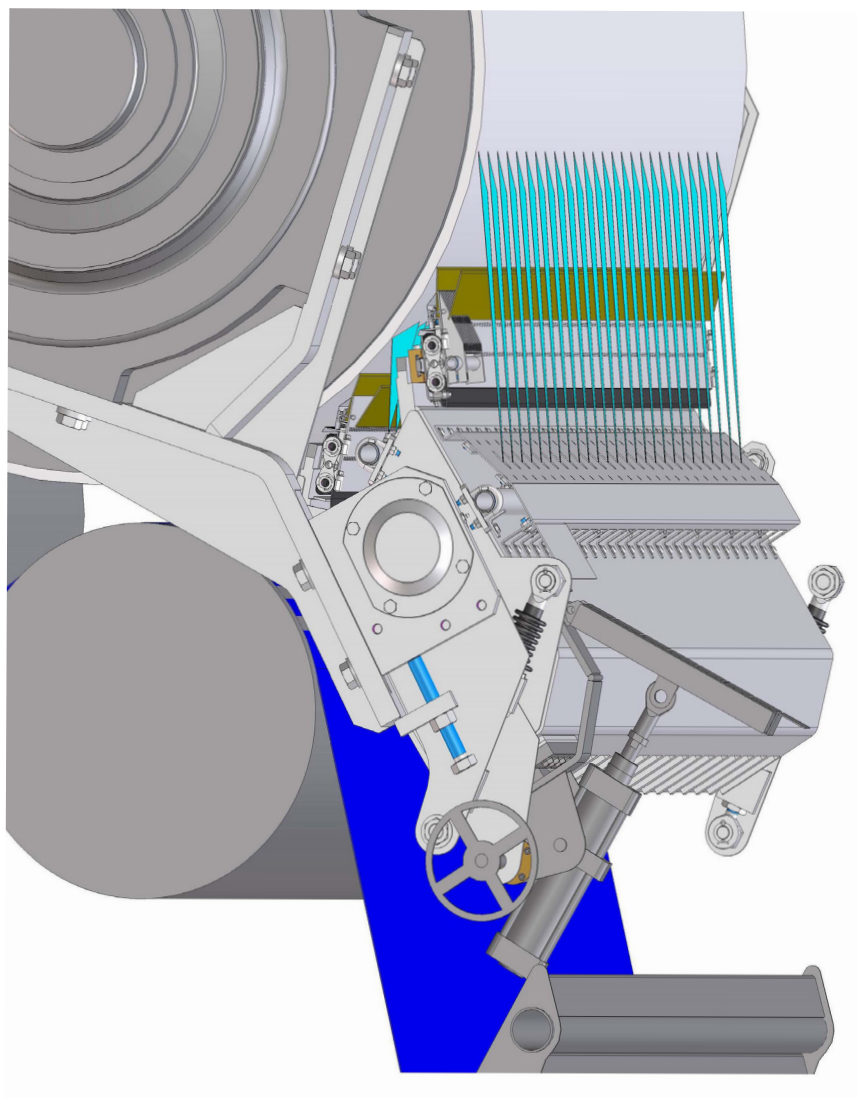
HOLDERS AND SYSTEMS

ANDRITZ

ENGINEERED SUCCESS

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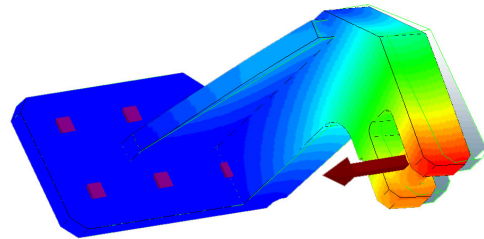
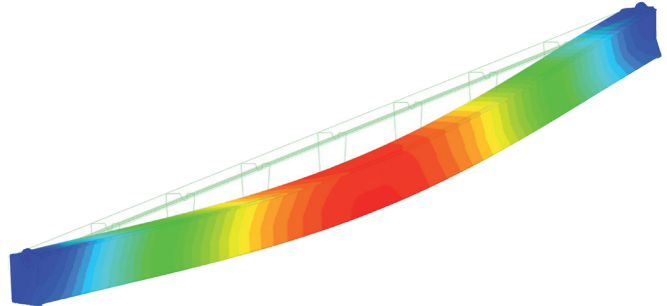
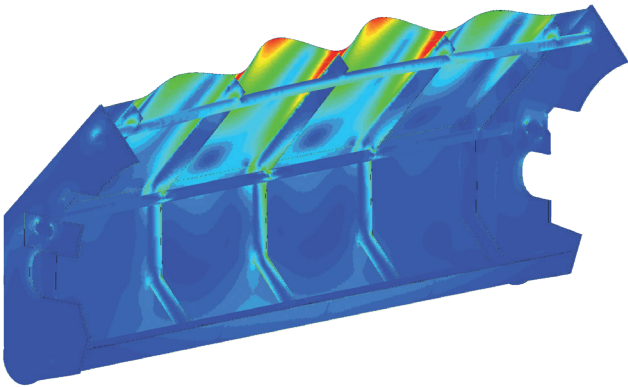
Doctoring Systems

Engineering

The proper design and application of a doctoring system can improve the performance of your paper machine.

Our doctoring systems are custom designed to meet the deflection and natural frequency requirements for a particular machine width, speed and roll diameter. Engineering is supported by the most advanced software available on the market.

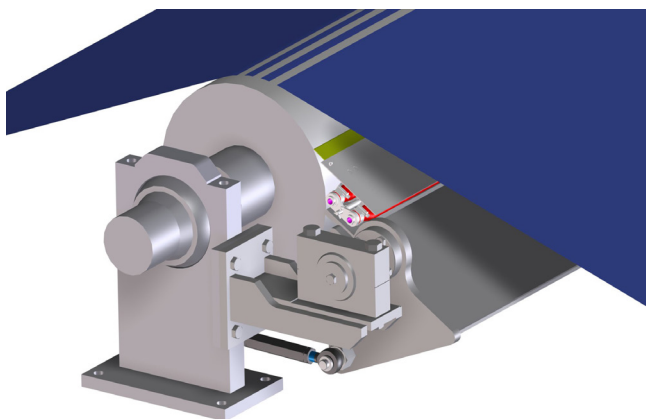
We perform finite element analysis (FEA) to accurately model our products to determine structural integrity, performance and reliability, as well as predict structural failures.



Our beams are stress relieved and machined in the intended working position, to remove the natural deflection present in the structure after fabrication.

Our troubleshooting team is available for field machine reports, maintenance and improvements to increase doctoring performance and blade life, as well as for installation supervisions.

OUR SOLUTIONS FOR PAPER MACHINES

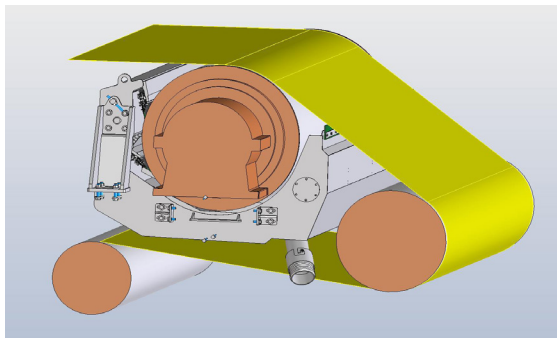


DOCTORS FOR FORMING SECTION

Doctors are available with rigid or flexible blade holder and they can be stationary or oscillated.

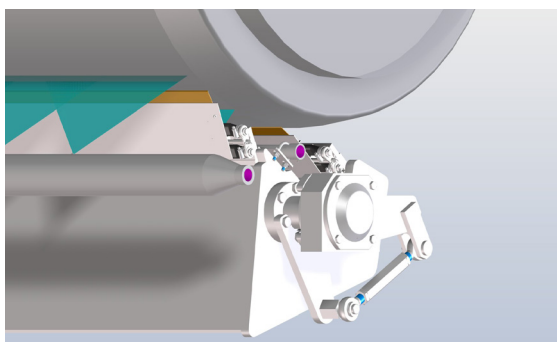
Doctoring Systems

Our solutions for Paper machines



DOCTORS FOR FORMING SECTION

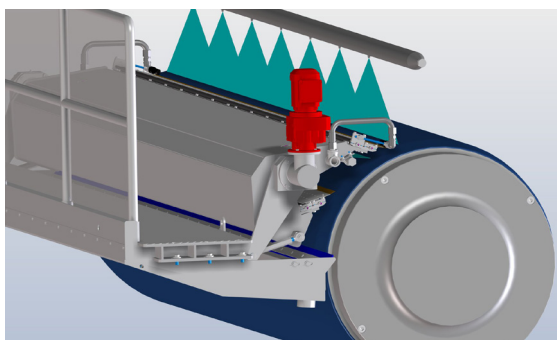
Single or double doctors for couch roll complete of save-all.



DOCTORS FOR PRESS SECTION

Single and double doctors equipped with flexible blade holder.

Pneumatic, electromechanical and hydraulic oscillators are available.

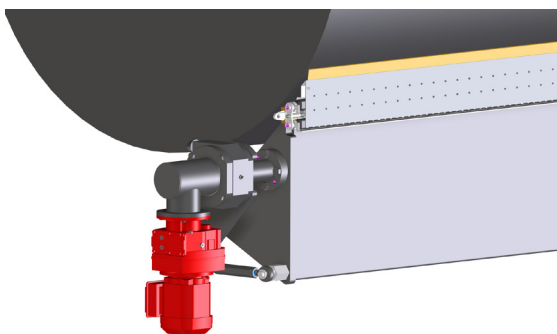


DOCTORS FOR PRESS SECTION

Single and double doctors for top presses equipped with flexible blade holder.

Pneumatic, electromechanical and hydraulic oscillators are available.

Heated save-all or walk way are available.



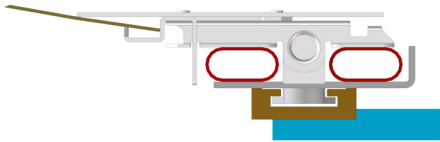
DOCTORS FOR DRYER SECTION

Doctors are available with rigid or flexible blade holder and they can be stationery or oscillated.

Pneumatic or electromechanical oscillators are available.

Holders

Flexible blade holders



BONFIFLEX - RETRACTABLE

Heavy duty self conforming tube loaded blade holder fabricated in stainless steel AISI 316L.

Retractable design for easy maintenance.



BONFIFLEX SUPER

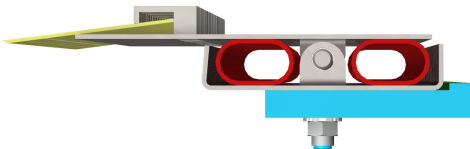
Heavy duty self conforming tube loaded blade holder fabricated in stainless steel AISI 316L.

Top plate in carbon composite material available upon request.



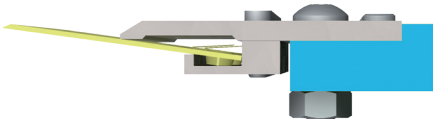
BONFIFLEX

Light duty fingerless self conforming tube loaded blade holder fabricated in stainless steel AISI 316L.



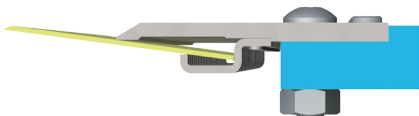
REVERSE BONFIFLEX

Light duty fingerless self conforming tube loaded blade holder fabricated in stainless steel AISI 316L, for grooved or drilled rolls dewatering applications.



BONFIRM K35A

Rigid blade holder fabricated in stainless steel AISI 316L or in mild phosphatized steel.



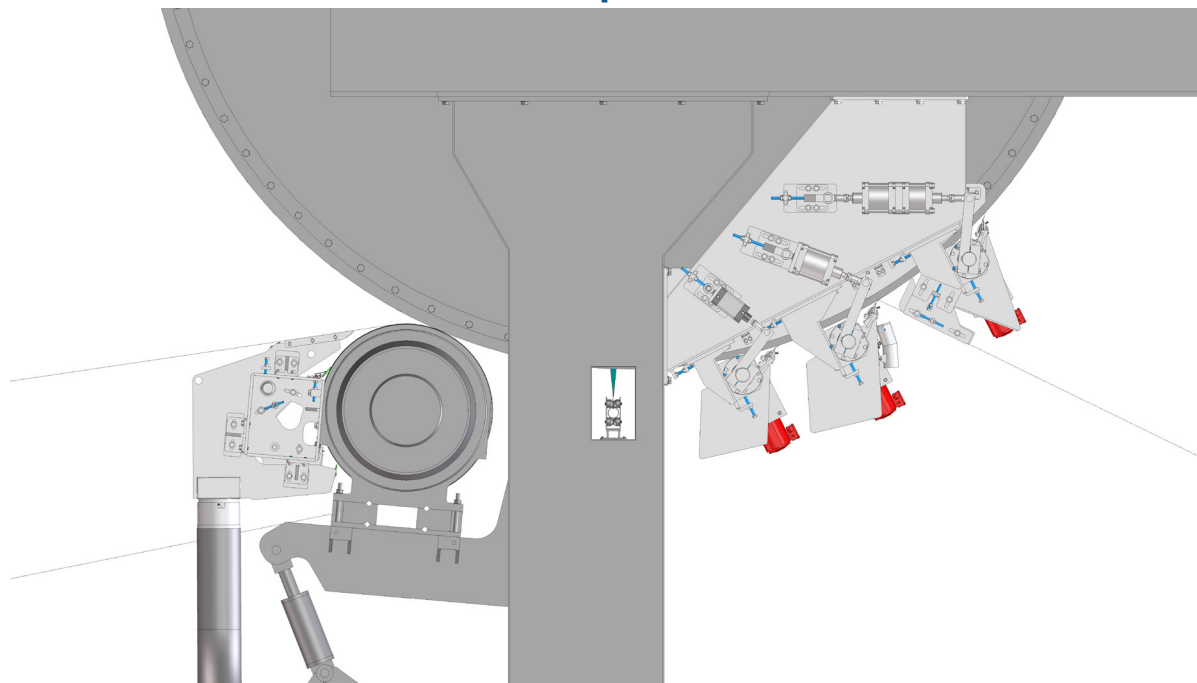
BONFIRM SUPER K35A

Rigid blade holder fabricated in stainless steel AISI 316L.

Specially engineered for dryer section applications. The special design allows easy blade replacement thanks to its self-cleaning feature.

Doctoring Systems

Our solutions for Tissue Paper machines

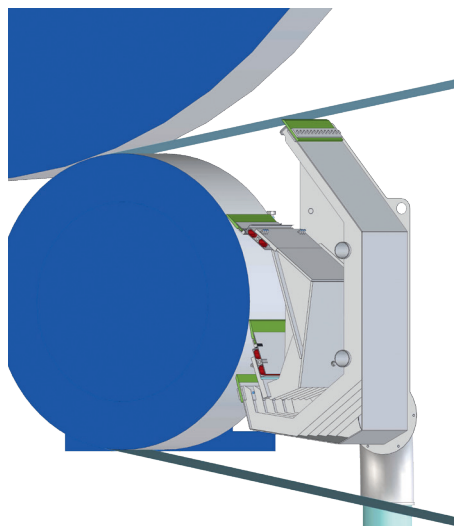


DOCTORS FOR TISSUE MACHINES

The engineering and subsequent fabrication of creping systems are processes that must be entrusted to specialists since are crucial factors for tissue makers to outperform their expectations. The creping doctor is the heart of the process but cut off and cleaning doctors are also fundamental components for the manufacture of tissue.

Double doctors with the associated save all, have raised over the years the attention of paper makers for the obvious savings coming from an efficient dewatering of the suction presses.

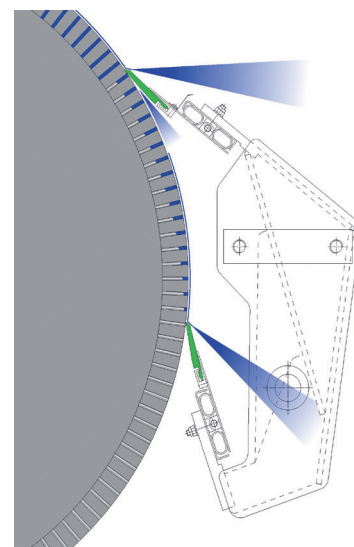
Our doctoring systems, are custom designed to meet specific requirements of each paper machine.



WORKING PRINCIPLE OF THE BONTWIN DOUBLE DOCTOR

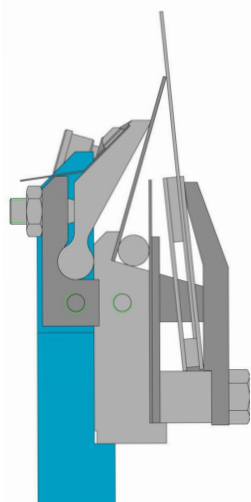
The primary blade removes the film of water present on the surface of the press roll. The foil effect created by the special design of the blade, extracts debris and fillers from the holes of the press.

The secondary blade removes the remaining water on the roll surface extracted by the foil effect and centrifugal force delivering a clean surface back to the nip.



Holders

Tissue Yankee Dryer doctors



BONCREPE 501AN

Heavy duty semi-rigid holder with profiling fingers at both ends.

Open design reduces dust accumulation.

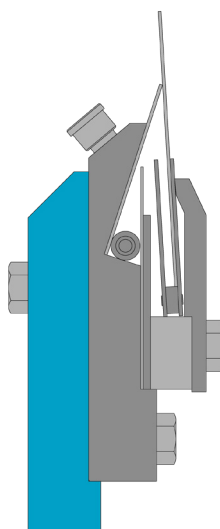
Robust design for high load application.

Cartridge design allows rapid blade changing.

Stainless steel construction.

APPLICATION:

Creping, Cleaning and Cut-Off



BONCREPE 401

Heavy duty semi-rigid holder.

Open design reduces dust accumulation.

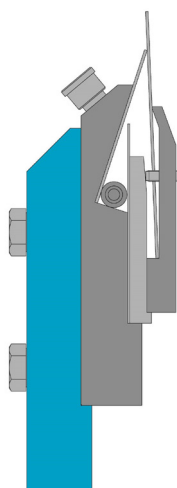
Robust design for high load application.

Cartridge design allows rapid blade changing.

Stainless steel construction.

APPLICATION:

Creping, Cleaning and Cut-Off



BONCREPE 201AN

Heavy duty semi-rigid holder.

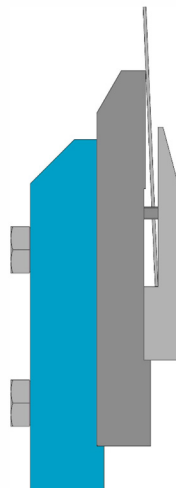
Robust design for high load application.

Stainless steel construction.

Abutment bar allows various blade widths.

APPLICATION:

Creping, Cleaning and Cut-Off



BONCREPE 131AN

Heavy duty rigid holder.

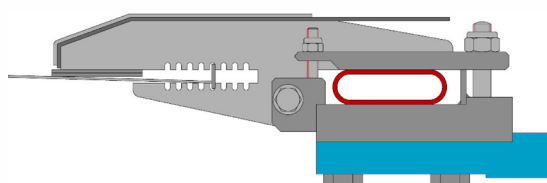
Robust design for high load application.

Stainless steel construction.

Abutment bar allows various blade widths.

APPLICATION:

Creping, Cleaning and Cut-Off



BONAIRCREEPE 134

Self-conforming tube loaded blade holder, blade conforms automatically to roll crown.

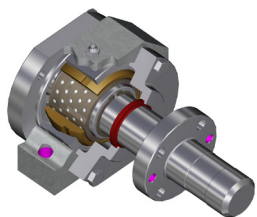
Stainless steel construction.

APPLICATION:

Creping, Cleaning and Cut-Off

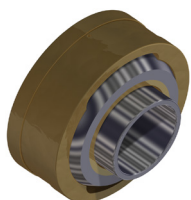
Ancillary Equipments-Spares

Bearings



BEARING ASSEMBLIES

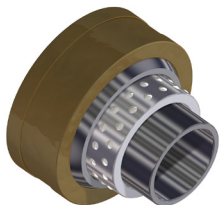
Bearing assembly available in painted carbon steel or in stainless steel.



SELF-ALIGNING RECIPROCATING BUSH BEARING

Self aligning, reciprocating bearing with bronze bushing.

Available diameters
50-55-65-80-100 mm.



SELF-ALIGNING RECIPROCATING BALL BEARING

Self aligning, reciprocating ball bearing.

Available diameters
40-50-55-65-80-100-150 mm.

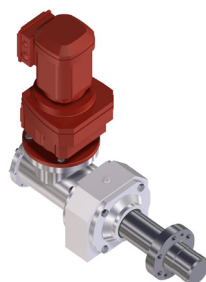
Oscillators



PNEUMATIC OSCILLATOR

Made of stainless steel, suitable for dry and wet-end part of the machine.

The control valves are integrated in the oscillator.



ELECTROMECHANICAL OSCILLATOR

With accessories in painted carbon steel for the dry-end of the machine.

With accessories in stainless steel for the wet-end of the machine.



HYDRAULIC

Made of stainless steel, suitable for the wet-end of the machine and recommended for heavy-duty applications.

Two versions are available, one with integrated control valves and one with external control valves.

Pressure tubes

BON70

Loading hose for wet-end application.
Max 70°C



BON140

Loading hose for dry-end application.
Max 140°C



BON250

Loading hose for dry-end application.
Max 250°C



BonMatic

Doctor Pneumatic Oscillator

BonMatic is a pneumatic oscillator, specifically designed for oscillating doctors in the Paper, Tissue and Pulp machines.

The pneumatic control unit is integrated.

The oscillator only requires a single air supply line; once the air supply is switched on the oscillation begins.

No external control panel is required.

BonMatic is manufactured from stainless steel AISI 316L and equipped with VITON seals.

The oscillator is suitable for both wet and dry end applications.

Temperature range is +5°C to +150°C.

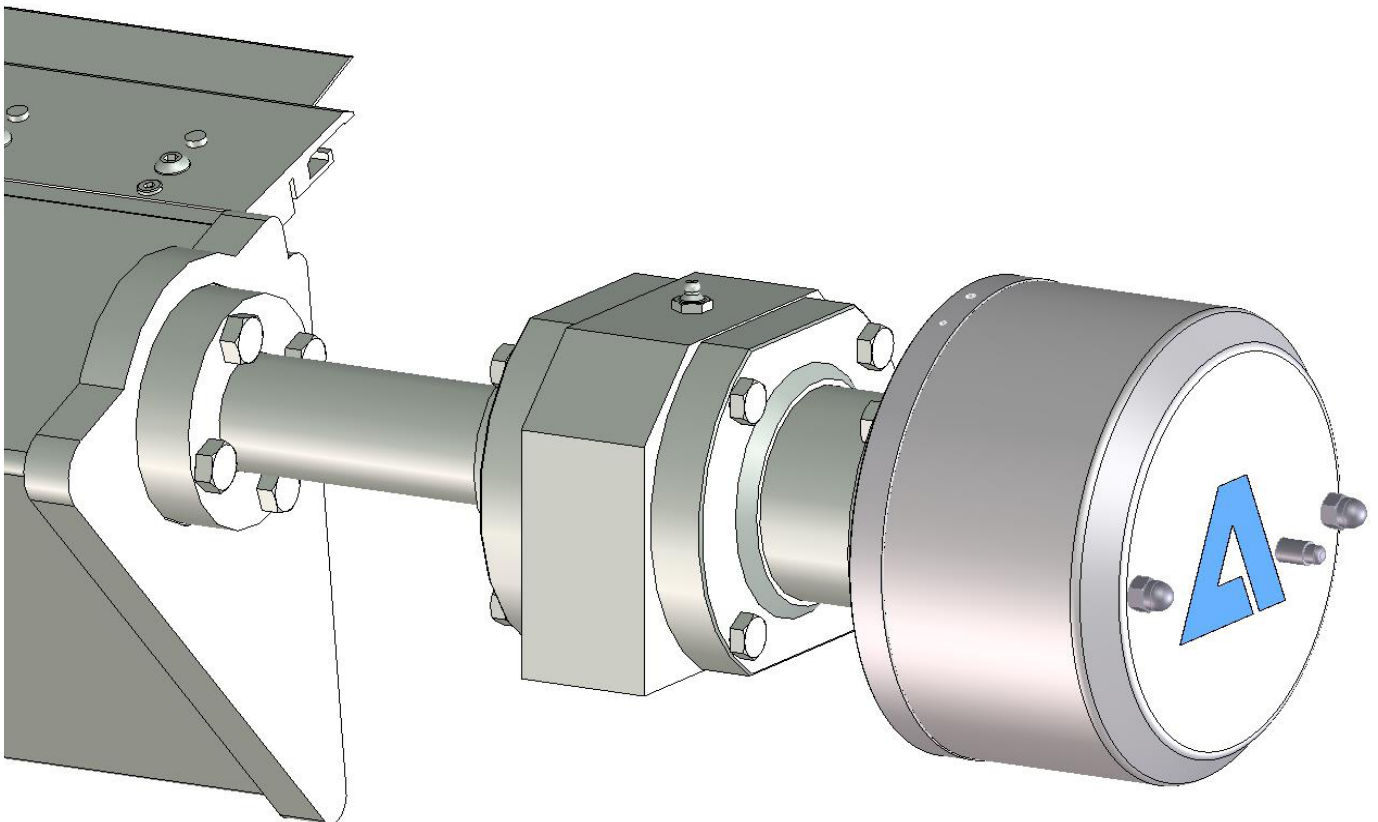
BonMatic is available in two sizes, for standard and heavy duty applications. For each

size 3 different oscillating strokes are available: +/- 5mm +/- 8 mm +/- 10 mm.

Oscillating speed can be adjusted.

Thrust up to 22kN at 6 bars (working range 2–10 bar).

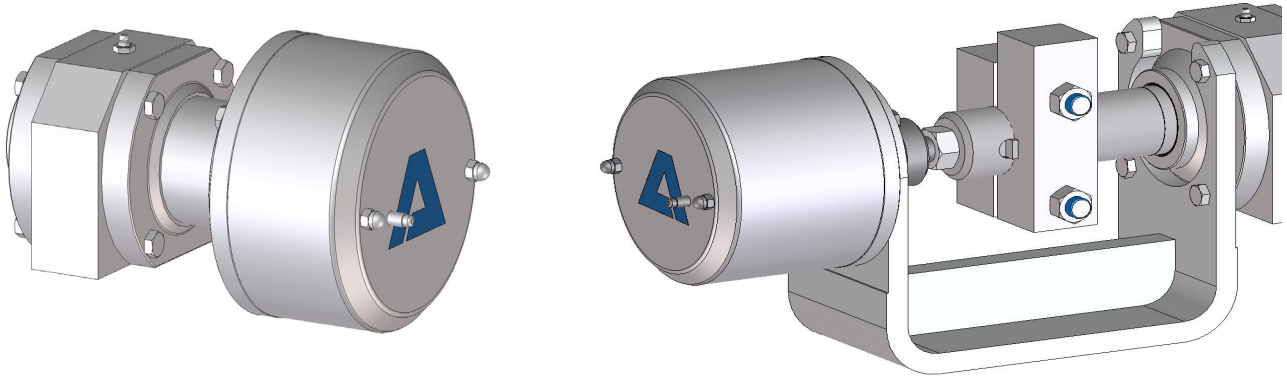
BonMatic is not only used for new doctor applications, the several mounting flanges and journal couplings available, make it a perfect retrofit unit to existing oscillators.



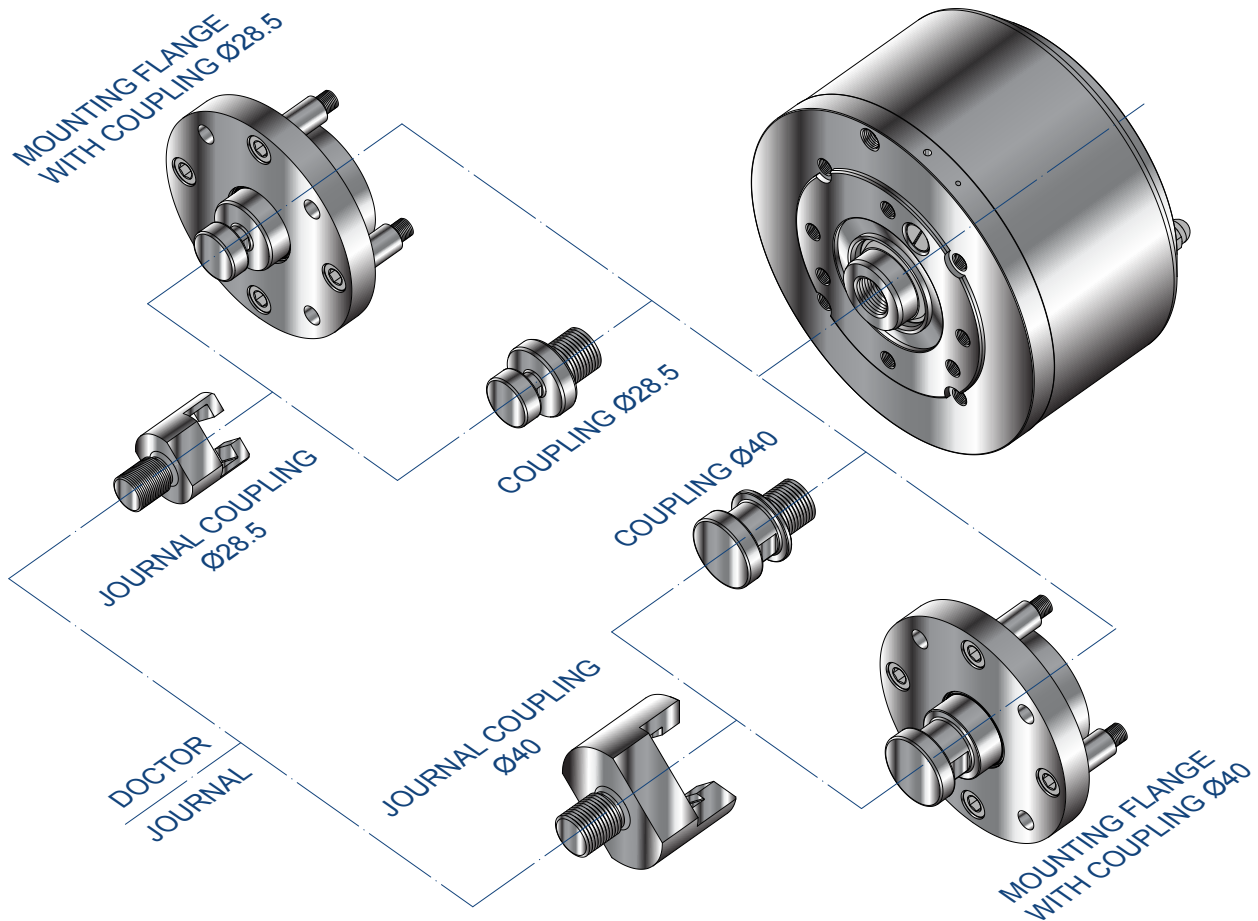
Two sizes available

Single type 11kN @6bar

Double type 22kN @6bar



Parts and Accessories



Bonvibes

Blades Vibrating monitor system

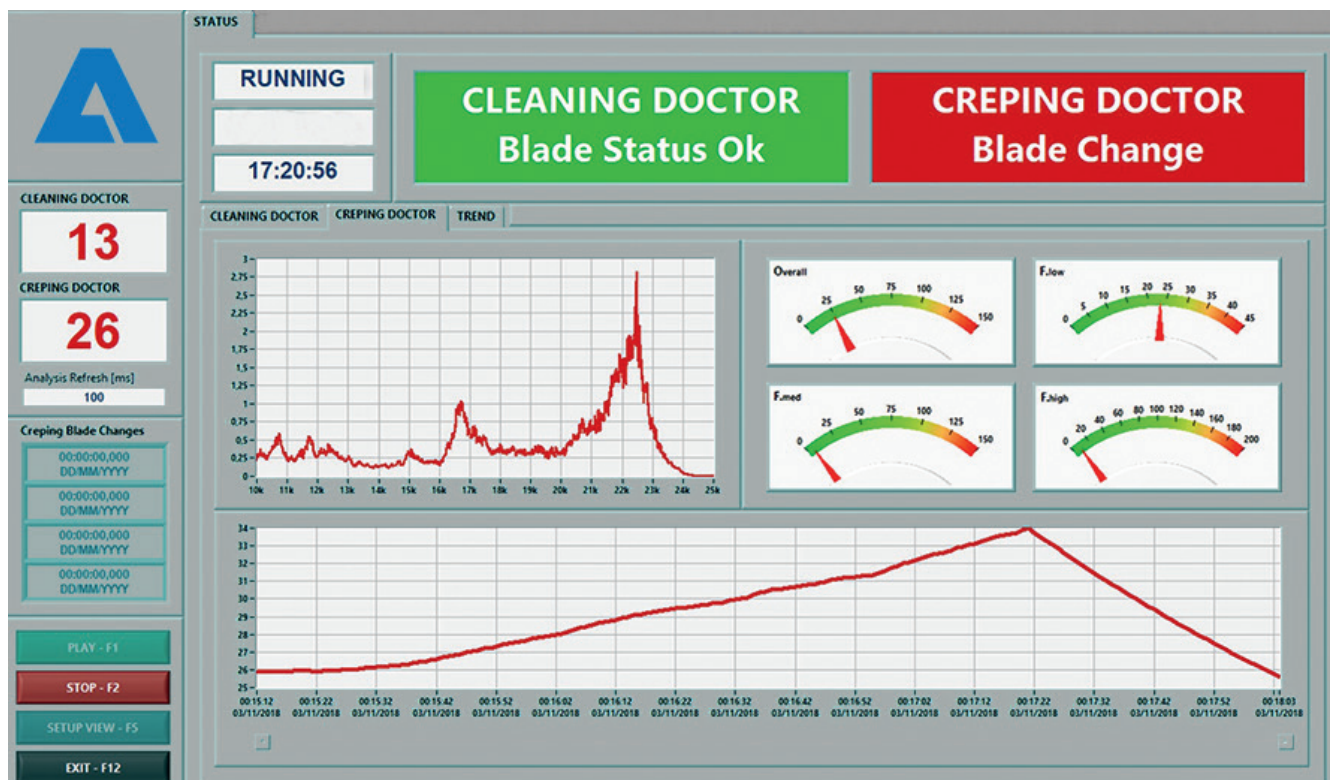
BonVibes is used in the tissue industry for monitoring the status of the cleaning and creping doctors of the Yankee dryer.

By monitoring and analysing the detected vibrations, BonVibes software informs the tissue maker on the correct timing for changing the blades, reducing at minimum the risk of chatter marks formation.

Main goals of the BonVibes are:

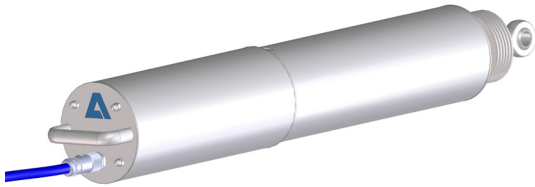
- Protection of the Yankee dryer surface
- Real time monitoring and alarming
- Data historical trending

BonVibes, has an intuitive and user-friendly operator interface. Two versions are available, with ONE or TWO acquisition channels.



BonSync and Showers

BonSync shower oscillator



BonSync electronic drive, is used in the paper and pulp industry for oscillating HP cleaning showers.

BonSync guarantees a streak-free conditioning to felts and wires, resulting in an improvement of the paper quality and extends life of fabrics, felts and rolls.

BonSync can be set at a very low oscillating speed, allowing the use of smaller nozzles diameter minimizing water and power consumption.

TECHNICAL SPECIFICATION

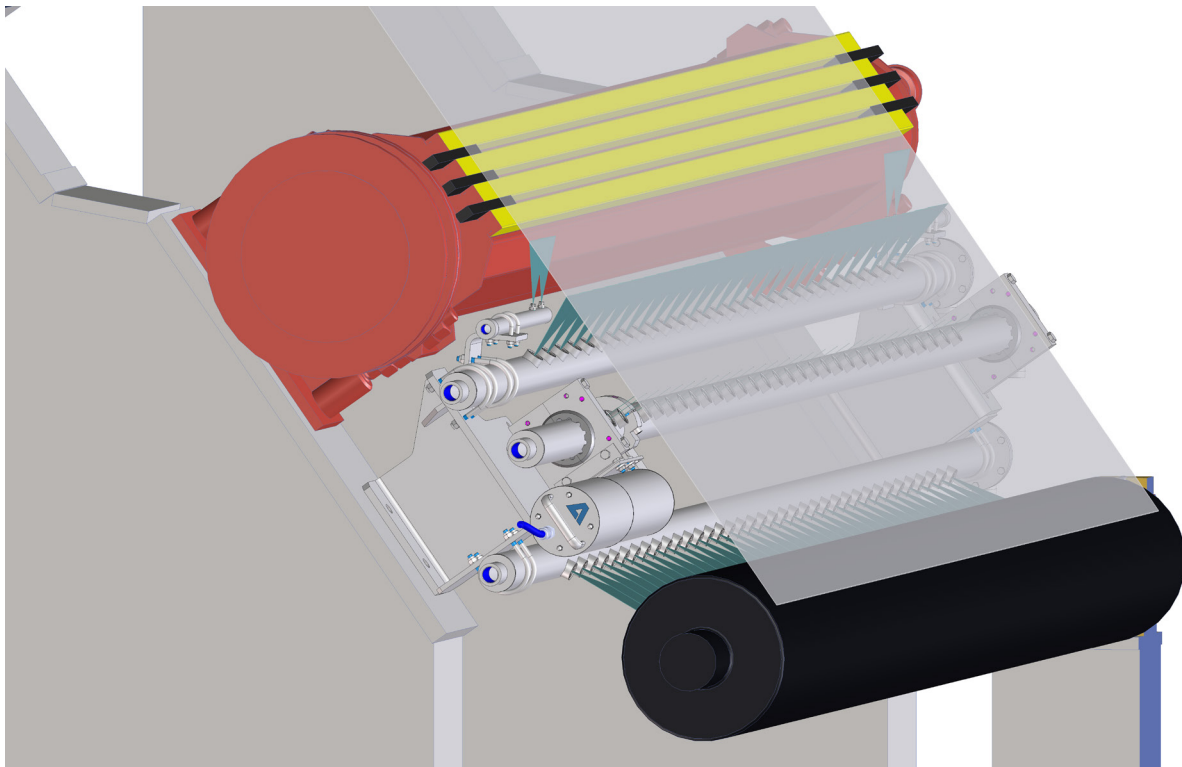
- Operating voltage: 110 - 230V 50-60Hz
- Power consumption: 200W
- Oscillator operating temperature: 0-75°C
- Control unit operating temperature: 0-55°C
- Oscillating speed: 0,01-4mm/s
- Oscillating stroke: 1-300mm
- Thrust: max 5.500 N

BonSync electronic control panel, allows a precise synchronization with the paper machine speed signal, ensuring a perfect cleaning at all machines speeds.

Operating program, can be easily modified through the touch screen display during operation.

Multiple station control panels are available.

BonSync is manufactured in AISI 316L and IP 69 rated.



Complete range of shower solutions are available:

- **Model - 3** High pressure shower with cleaning brush
- **Model - 2** Low pressure shower with cleaning brush
- **Model - 1** Low pressure shower without cleaning brush



Date:

Participants:

Subject:



ENGINEERED SUCCESS



TO DISCOVER THE BEST SOLUTIONS FOR YOUR NEEDS, PLEASE CONTACT YOUR RESPECTIVE GLOBAL LOCATION BELOW

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