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Converge to evolve

Throughout its history, Hergen has always sought to evolve and enhance its activities and equipment produced. But time is moving faster and is necessary to also modify its brand so as to follow the evolution occurred in Hergen's technologies applied and developed internally for the paper machines and, additionally, to present to the market the properly brand company.

With this in mind, the company started the process of construction of its new visual identity, a long process involving research, creation activities and several meetings to finally reach what we are now introducing here. During the process, we have defined our pillars those are guiding our actions: Partnership, Safety, Reliable, Strength and Continuous Improvement. Building safe relationships in order to produce history is our essence.

Next step was to initiate a process to enable finding one new way to translate these pillars and this essence into a visual element, into some sort of symbol. After extended research, we came up with the idea of an airplane, which is one of the most important engineering works created by human being. Heavy parts are made able to fly thanks to state-of-the-art, sophisticated technology. The airplane is a clear example of what men, when properly focused, can create. However, despite of providing sustain, the airplane wings alone do not assure flight stability. A set of auxiliary wings, usually comprising stabilizers and rudders located at the airplane tail, are in fact the elements to ensure airplane navigation, as well as vertical and horizontal stability. And this is in Hergen's DNA, with its management group leading the company forward making history in its market.

We are building safe relationships in order to produce not only quality equipment to surprise our customers but also to create histories, always seeking the common goal, always improving, always Converging to Evolve. Converge to Evolve.



HERGEN
CONVERGE TO EVOLVE

For 40 years developing state of the art technology and generating solutions for the paper industry



Who we are

In Rio do Sul, State of Santa Catarina, is located our Headquarter where for 40 years we are developing state of art technology for the paper industry. Our lines include paper machines for different grades as tissue, fine and board production and stock preparation equipment as well.

With a highly-specialized technical staff, we have reached excellence in high-performance products, in compliance with strict quality standards acknowledged worldwide. This consolidated position results from the adoption of an advanced management process, from conscious investments for project development and from result-oriented planning.

At this moment, we are inaugurating one new cylinders manufacturing line for paper machines with capacity to produce Yankee Cylinders with diameters up to 7320 mm (24 ft) and face length up to 6500 mm. This manufacturing site counts on modern machines and a unique infrastructure which allow complete equipment construction from plate calandering to the final process of metallization and grinding.

In addition to product development, Hergen has the expertise to offer a full range of services from pre-engineering to the mill site services during machine shutdown periods. Aiming at fulfilling requirements expressed in the international safety regulations, we invest in modern tools for quality and process control.

Every step forward in our vision of the future increases our competitiveness and market presence, consolidating us as an important player in this worldwide sector.

Hergen, solutions for the paper industry.





Industrial site

Industrial area
50,000 m²

Building area
16,000 m²

Handling capacity
180 tons



High-capacity Calander



Hydraulic Bender



Electric Oven
for heat treatment



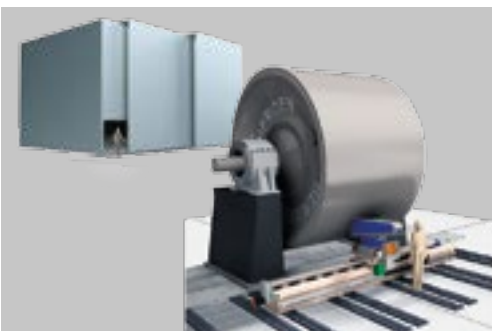
CNC Horizontal Lathe



CNC Vertical Lathe Center

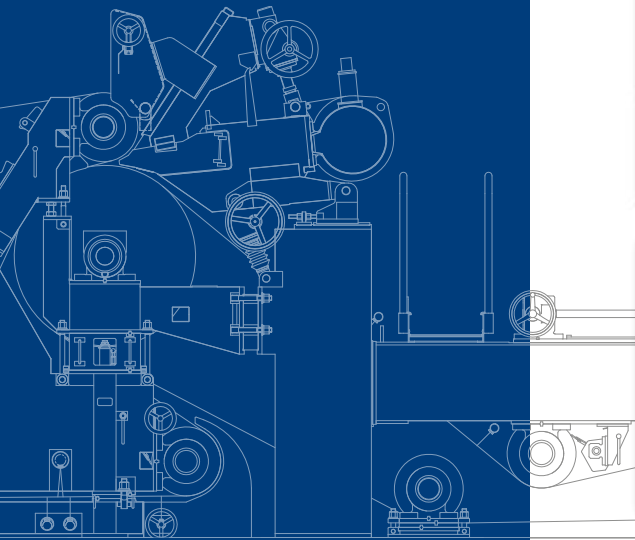


CNC Vertical Lathe

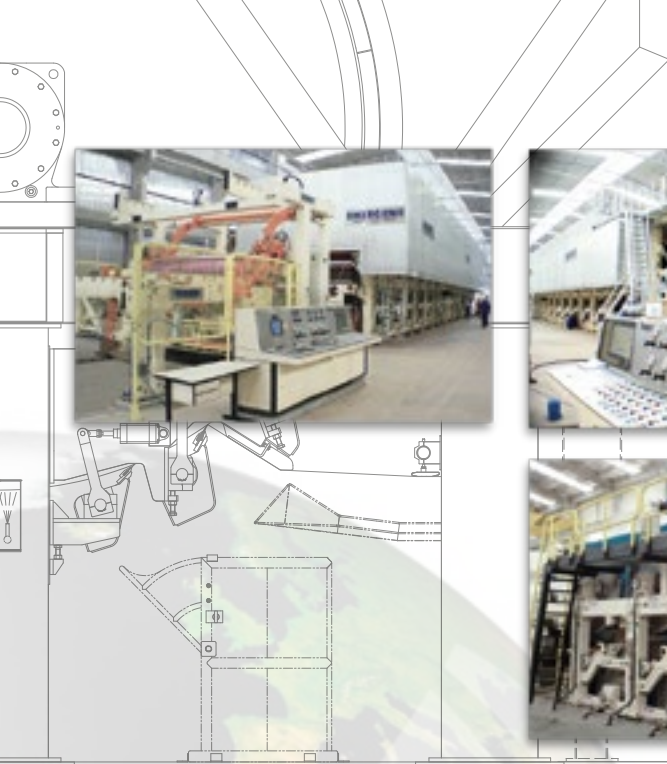


Metal Coating for Cylinders
balancing, machining, metallization and grinding





Proven
quality



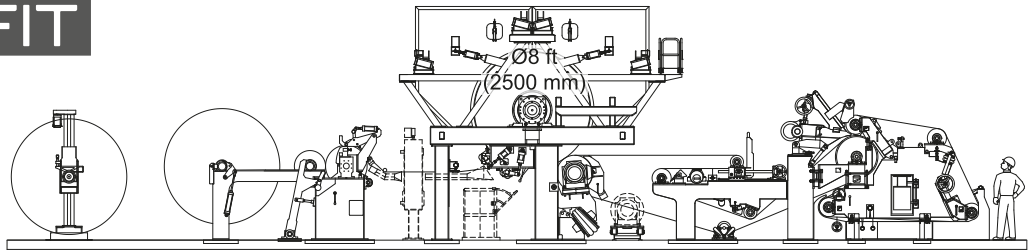
TISSUE PAPER line



TISSUE MACHINES line

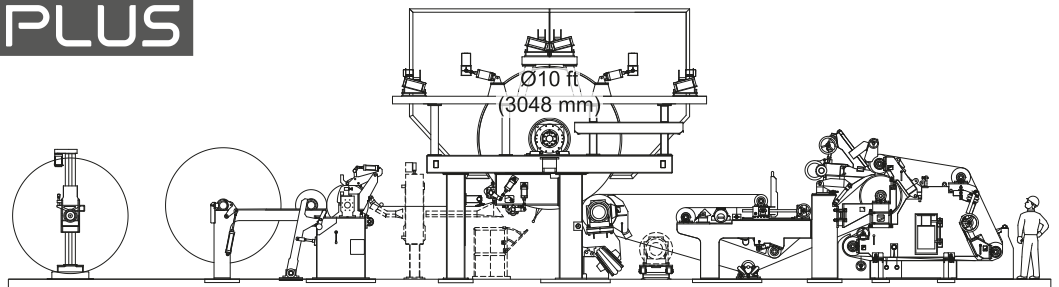
SMART FIT

Web width: 2760 mm
 Design speed: 1100 m/mim
 Yankee dryer diam.: 2500 mm
 Maximum height: 5640 mm
 Maximum production: * 57 t/d



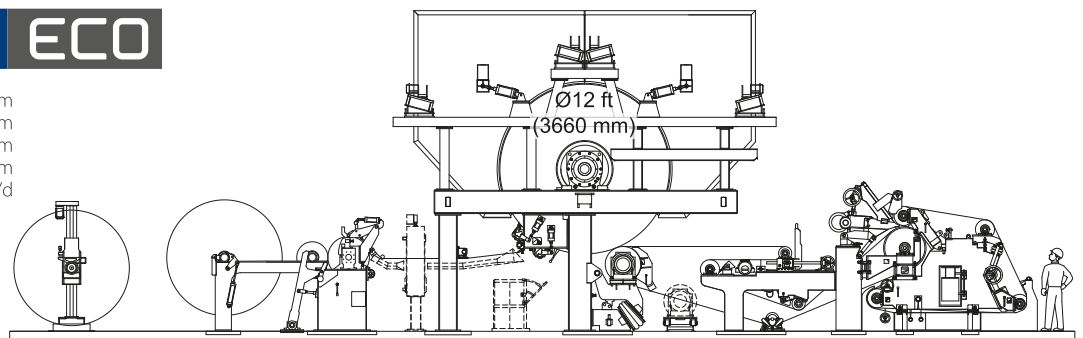
SMART PLUS

Web width: 2760 mm
 Design speed: 1200 m/mim
 Yankee dryer diam.: 3048 mm
 Maximum height: 5900 mm
 Maximum production: * 67 t/d



SMART ECO

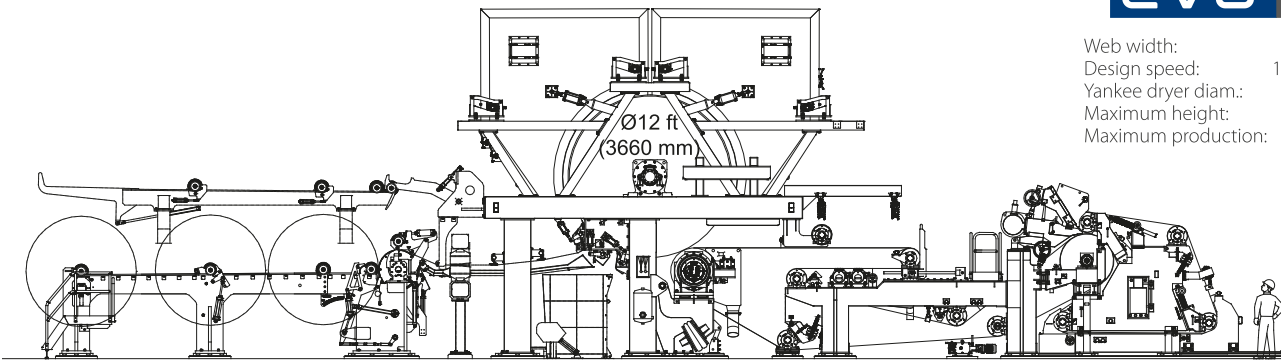
Web width: 2760 mm
 Design speed: 1200 m/mim
 Yankee dryer diam.: 3660 mm
 Maximum height: 7000 mm
 Maximum production: * 55 t/d



* Referred to a single press and 18gsm at pope reel with 20% crepe ratio

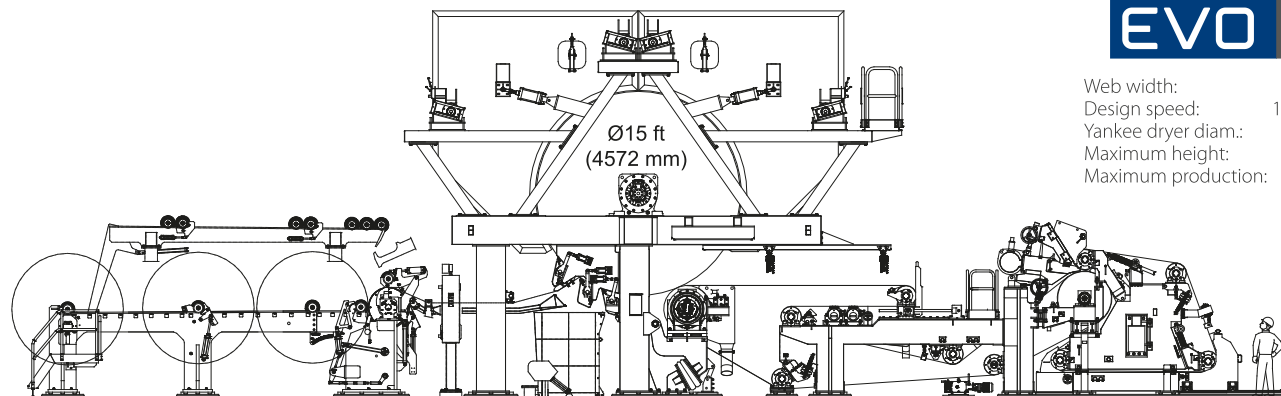
EVO 12

Web width: 2760 mm
 Design speed: 1600 m/mim
 Yankee dryer diam.: 3660 mm
 Maximum height: 7900 mm
 Maximum production: * 80 t/d



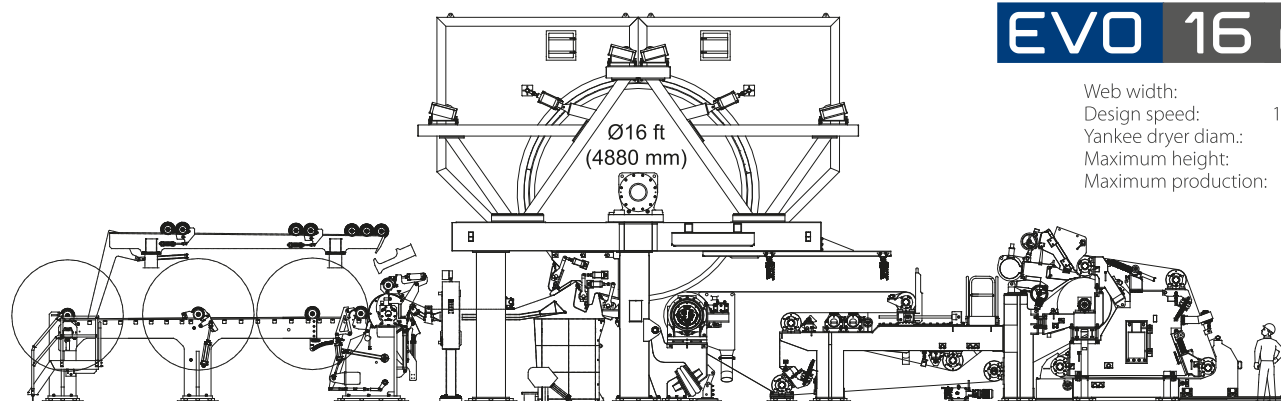
EVO 15

Web width: 2760 mm
 Design speed: 1800 m/mim
 Yankee dryer diam.: 4572 mm
 Maximum height: 8500 mm
 Maximum production: * 96 t/d



EVO 16 ECO

Web width: 2760 mm
 Design speed: 1800 m/mim
 Yankee dryer diam.: 4880 mm
 Maximum height: 8700 mm
 Maximum production: * 96 t/d

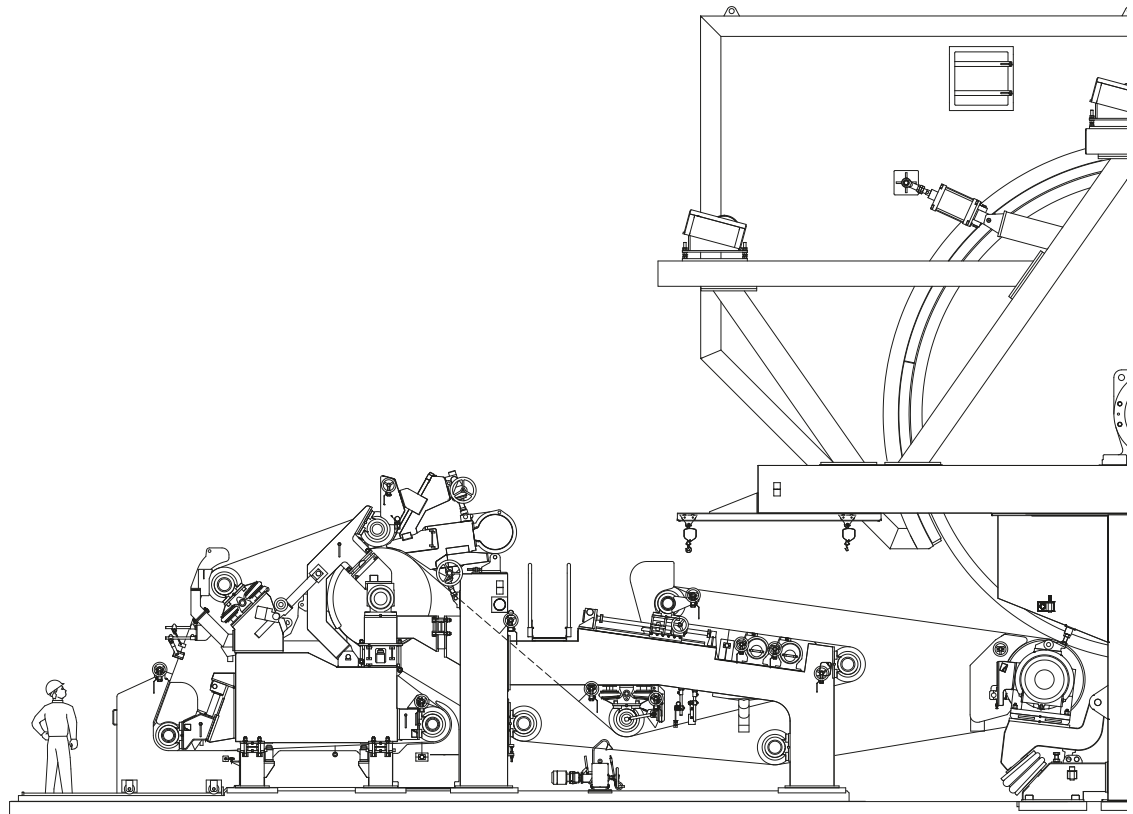
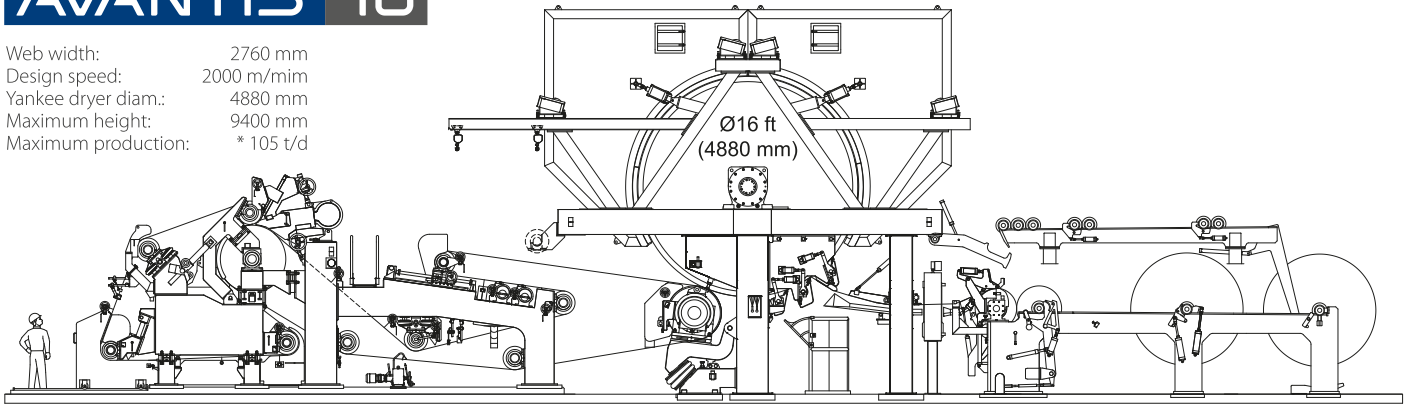


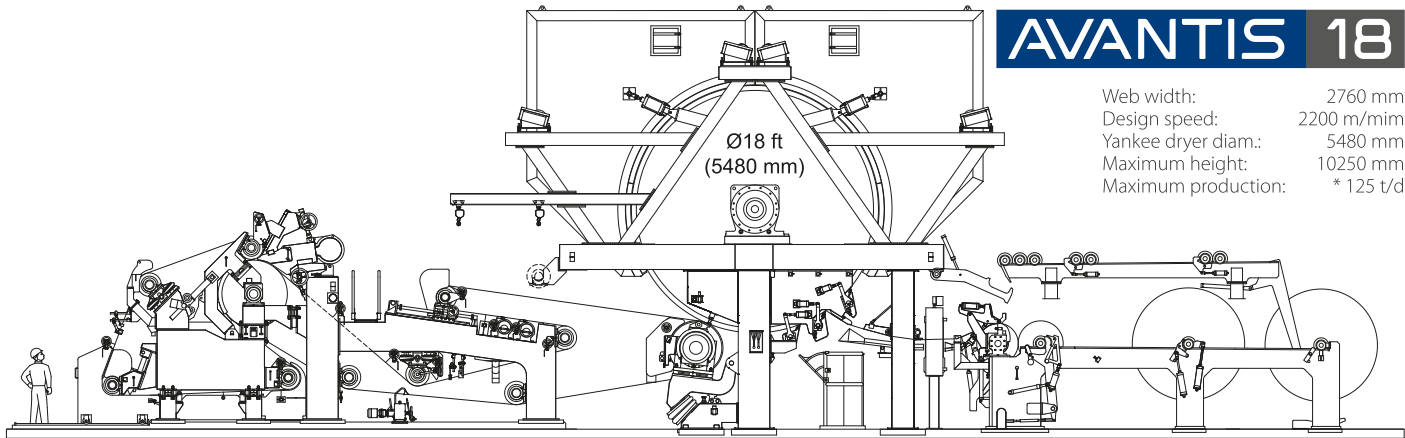
* Referred to a single press and 18gsm at pope reel with 20% crepe ratio

TISSUE MACHINES line

AVANTIS 16

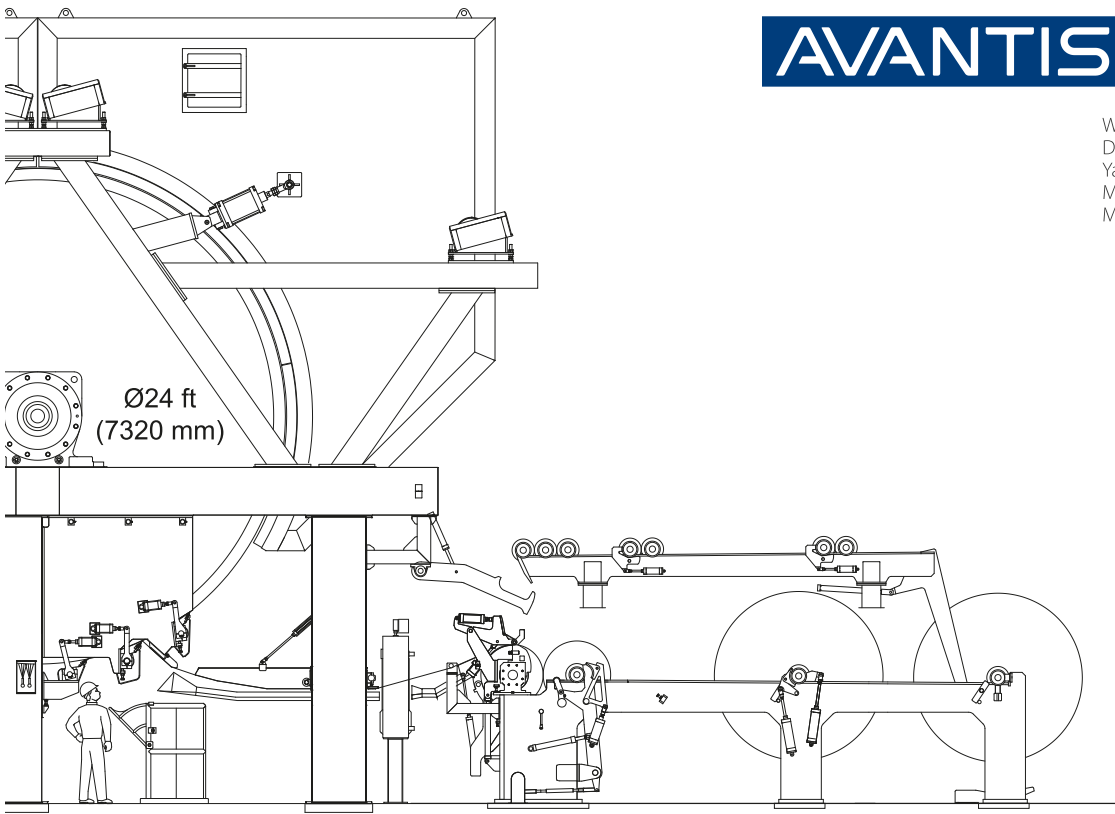
Web width: 2760 mm
Design speed: 2000 m/mim
Yankee dryer diam.: 4880 mm
Maximum height: 9400 mm
Maximum production: * 105 t/d





AVANTIS 18

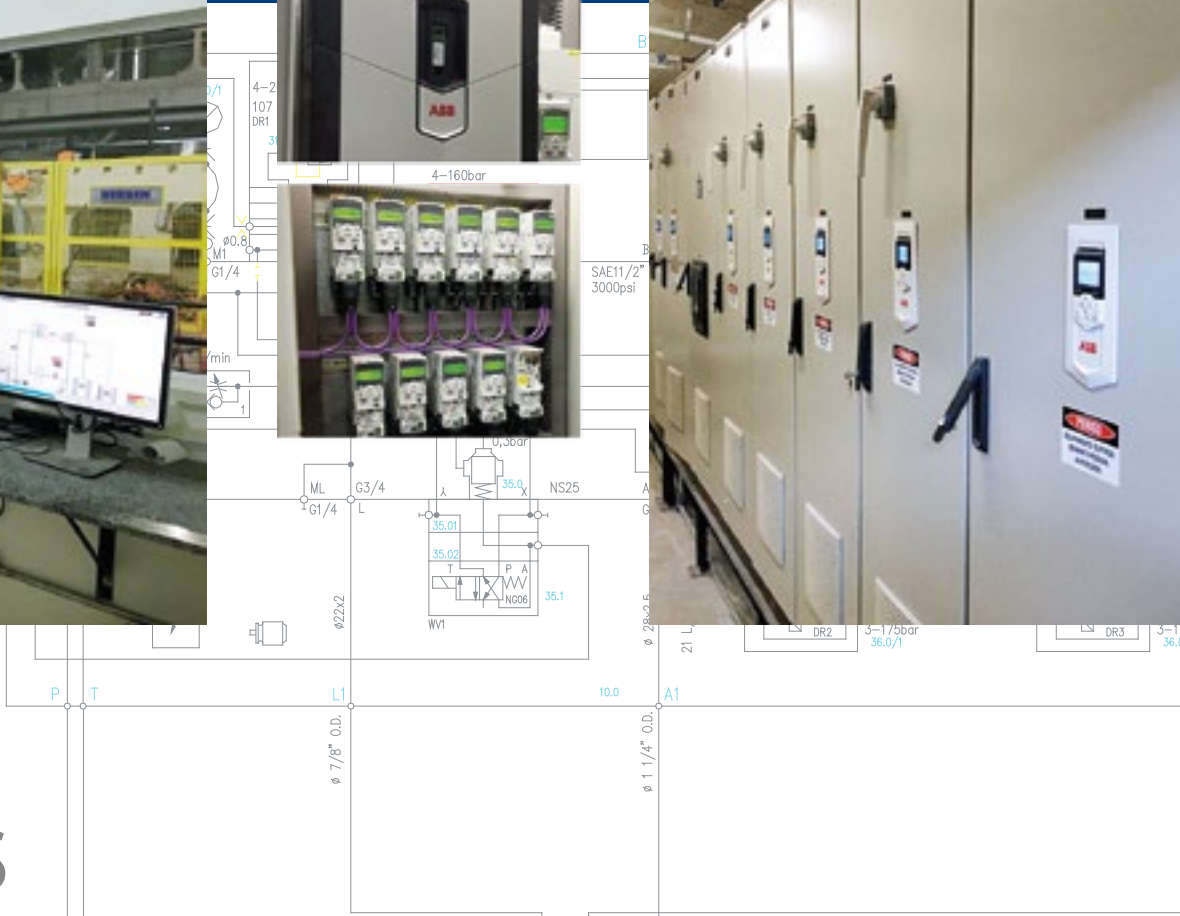
Web width: 2760 mm
 Design speed: 2200 m/min
 Yankee dryer diam.: 5480 mm
 Maximum height: 10250 mm
 Maximum production: * 125 t/d



AVANTIS 24 ECO

Web width: 2760 mm
 Design speed: 2200 m/min
 Yankee dryer diam.: 7320 mm
 Maximum height: 11750 mm
 Maximum production: * 125 t/d

* Referred to a single press and 18gsm at pope reel with 20% crepe ratio



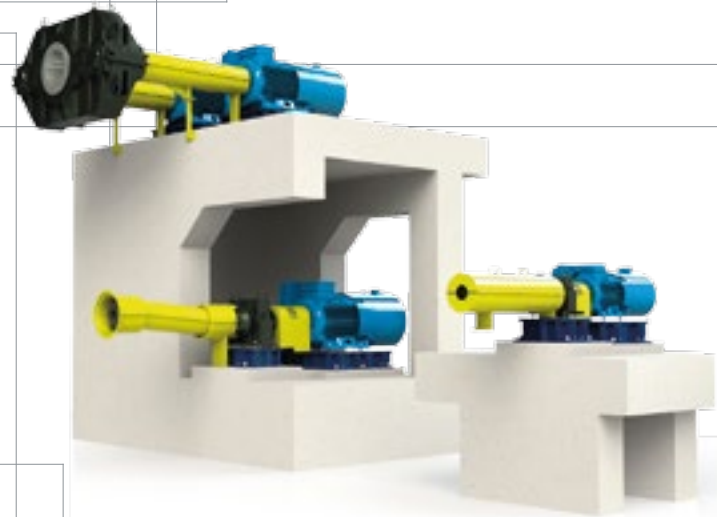
Process Automation and Drives

Supply

Fully integrated solutions for process automation and drives for paper machines

Project

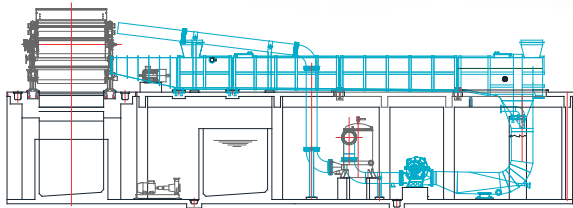
Multidisciplinary engineering team (process, instrumentation, automation, electric and controls) offering integrated solutions in Turnkey, EPCM and EPC modalities



DN150 (168,3x4,5)

DN150 (168,3x4,5)

DN80 (88,9x3,2)



Approach Flow



Troubleshooting service

Beyond to supply new systems, Hergen can offer mill site services for evaluation and troubleshooting in existing approach flow systems allowing increase efficiency and final paper quality

Design

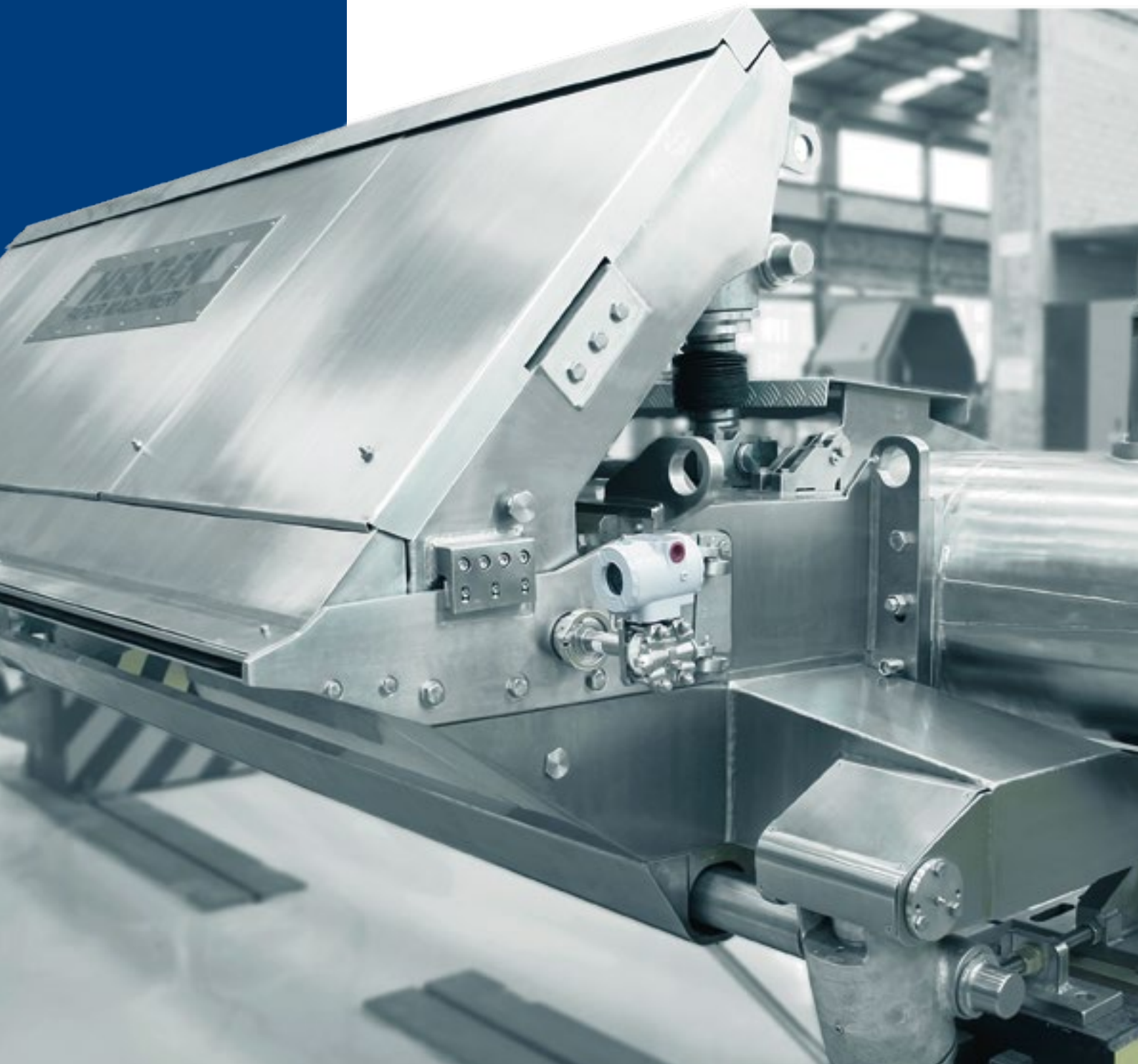
Customized solution for each paper machine for new and existing plants

Modern engineering concepts allow systems with low-pulsation, accurate and continuous consistency control and air elimination

Supply

Complete solutions for approach flow systems with single or double dilution including:

- basis weight control
- jet-to-wire ratio control
- low-pulsation Screens
- secondary Screens
- chests and special piping
- low-consistency Cleaners





Headboxes



iNOVAFLOW Concept

Uniform cross profile

Excellent formation quality

Internal stock flow optimization due an excellent distribution design

Convergence chamber with vanes for better turbulence control

Design speeds up to 2200 m/min

Design

Option for basis weight cross profile with manual direct adjustment through high precision micro jacks

Slice opening fitted with motorized regulation and controlled via electronic encoder, if required

Easy access for cleaning purposes

Installation in existing machines

Compact design for
easier installation in
existing machines

Possibility for installation
on Fourdrinier with after
Crescent Former upgrade

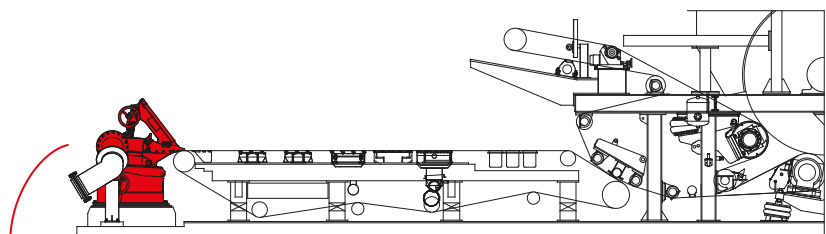
Headbox is supplied with
a supplementary frame
to enable installation
in the Fourdrinier



Installation in two steps

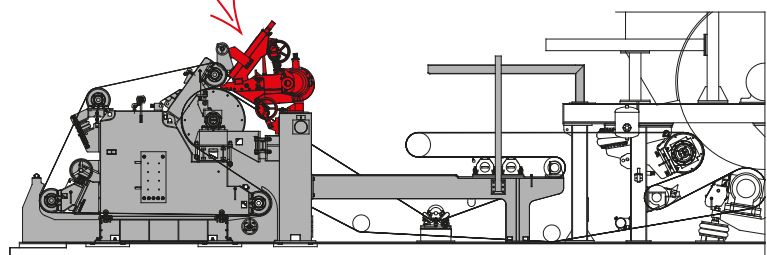
In the first step, only the
headbox is installed while
existent Fourdrinier
is maintained

This step already offers
significant gains such
as improved web
formation and basis
weight cross profile



1st. step: Headbox installed at existing Fourdrinier

In the second step, Fourdrinier
is replaced by one Crescent
Former while the headbox is
reused and installed in new
position at the top of new
Crescent Former



2nd. step: Crescent Former installed while the headbox is repositioned



More than 80 Headboxes manufactured by Hergen*

	Customer	Country	Width (mm)	Year
1	Trombini	Brasil	2600	1994
2	Primo Tedesco	Brasil	1820	1996
3	Sapelba	Brasil	2660	1996
4	Portuguesa	Portugal	2780	1997
5	Bragagnolo	Brasil	2430	1999
6	Carta Rio	Brasil	2000	1999
7	Bragagnolo	Brasil	1900	1999
8	CBP	Brasil	1570	2000
9	CBP	Brasil	1570	2000
10	CBP	Brasil	1570	2000
11	CVG	Brasil	2810	2000
12	Estrela	Brasil	2810	2001
13	BN Papéis	Brasil	2650	2001
14	Vinhedos	Brasil	2000	2001
15	Novacki	Brasil	2650	2001
16	Wiled Paper	Bolívia	1600	2002
17	Ipel	Brasil	2810	2002
18	Bragagnolo	Brasil	2480	2002
19	Paraibuna	Brasil	3100	2002
20	Doppel	Brasil	1300	2003
21	Safelca	Brasil	2650	2003
22	Cambará	Brasil	2460	2003
23	Valpasa	Brasil	1820	2003
24	Trombini	Brasil	2650	2004
25	Novacki	Brasil	2950	2004
26	Sepac	Brasil	1760	2004
27	Sepac	Brasil	1760	2004
28	Century	Paquistão	2550	2004
29	Rigesa	Brasil	2480	2004
30	Doppel	Brasil	2530	2005
31	Ondunorte	Brasil	2530	2005
32	Cataguases	Brasil	2700	2005
33	Buckeye	Brasil	2667	2005
34	Miguel Forte	Brasil	2650	2006
35	Astória	Brasil	1940	2006
36	Celupaper	Argentina	2810	2006
37	Vinhedos	Brasil	2050	2006
38	IPB (Penha)	Brasil	2700	2006
39	Trombini	Brasil	2500	2007
40	Trombini	Brasil	2650	2007
41	Copapa	Brasil	2640	2007

	Customer	Country	Width (mm)	Year
42	Ondunorte	Brasil	2530	2007
43	Mili	Brasil	2435	2007
44	LPP	Argentina	2880	2007
45	Copelme	Bolívia	2810	2008
46	Ipusa	Uruguai	2830	2008
47	Mili	Brasil	2435	2008
48	Sengés	Brasil	2600	2008
49	Ipel	Brasil	2856	2010
50	Trópicos	Brasil	2810	2010
51	Ouroverde	Brasil	2346	2010
52	Cipel	Brasil	2646	2010
53	Carta Goias	Brasil	2136	2010
54	Unionpel	Argentina	2731	2010
55	Kaczory	Polónia	3186	2010
56	Sopasta	Brasil	1856	2010
57	Trombini MP#4	Brasil	2806	2010
58	Mili MP#	Brasil	2435	2010
59	Trombini MP#4	Brasil	2806	2011
60	Valpasa	Brasil	1881	2011
61	Penha	Brasil	2756	2012
62	Canoinhas MP#1	Brasil	1956	2012
63	Santher MP#7	Brasil	2676	2012
64	Muniks	Belarus	2556	2014
65	Pakman	Rússia	3186	N/D
66	OL Papéis	Brasil	2856	2014
67	Carvalhoira	Brasil	2916	2014
68	Claramax	Brasil	2886	2015
69	Beskidy	Polónia	2886	2015
70	GZP	Polónia	2886	2015
71	Estrela MP#2	Brasil	2586	2015
72	Papel Tangará	Brasil	2646	2015
73	Lewandowski	Polónia	2886	2015
74	Reyes MP#1	Peru	2856	2016
75	Copapa MP#4	Brasil	2856	2015
76	Mili MP#8	Brasil	2856	2016
77	Canoinhas MP#2	Brasil	1956	2016
78	Canoinhas MP#4	Brasil	2856	2016
79	Manikraft MP#3	Brasil	2316	2016
80	GZP MP#2	Polónia	2616	2016
81	FEX	Brasil	-	2016
82	PoH-Mak	Polónia	2946	2017

*until August, 2016



HCF Formers

Quality

Better formation
Better cross profile
More softness

Machine runnability

Production gain
Design speed above
1000 m/min

Savings

Energy
Clothing
Fibers

Design

Designed for production of high quality tissue grades in terms of softness, bulk, smoothness, CD and MD profiles, as well as sufficient MD strength aiming to fulfill the speed and quality requirements of modern conversion lines

Installation

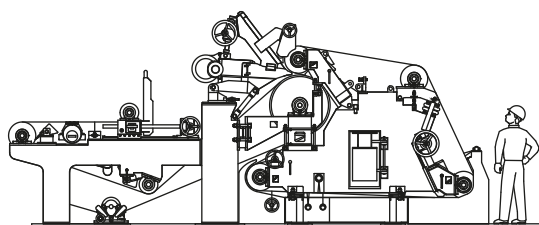
In existing buildings, the wire change may be designed with a porter-bar device eliminating large civil work requirements for the Crescent Former installation



HCF



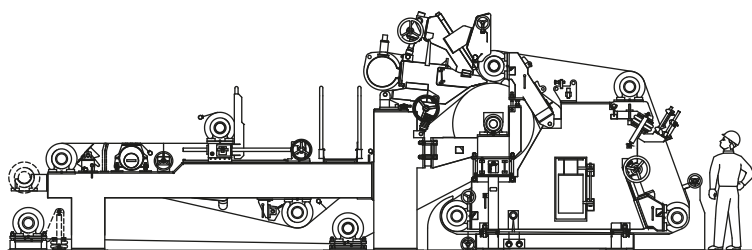
Formers line



HCF 920

Forming Roll Diameter: 920 mm

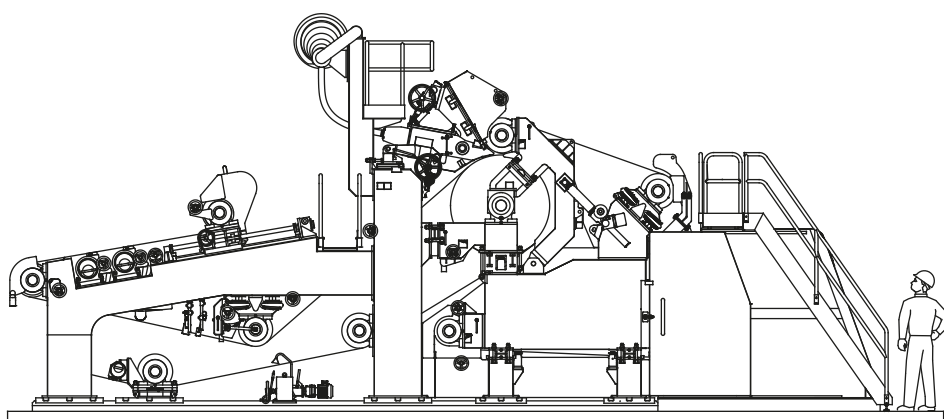
Operating speed: up to 1.200 m/min



HCF 1225

Forming Roll Diameter: 1.225 mm

Operating speed: up to 1.800 m/min



HCF 1500

Forming Roll Diameter: 1.500 mm

Operating speed: up to 2.200 m/min



Suction Pressure Roll

Design

Larger suction pressure rolls promote a wider nip and operation on high speeds with no damage to roll covers

Hydro-pneumatic system for vibration attenuation

Nip load operation up to 120 kN/m

Internal cross rails with carriage are supplied for press roll removal

Suction Roll

Diameter up to 1200 mm (47")

Internal suction box on stainless steel construction

Suction shell on stainless steel or brass construction

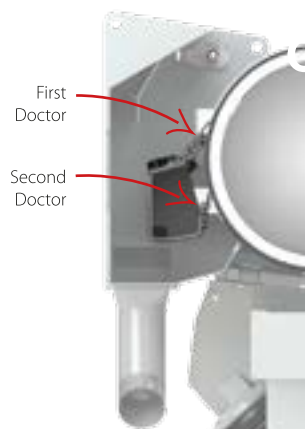
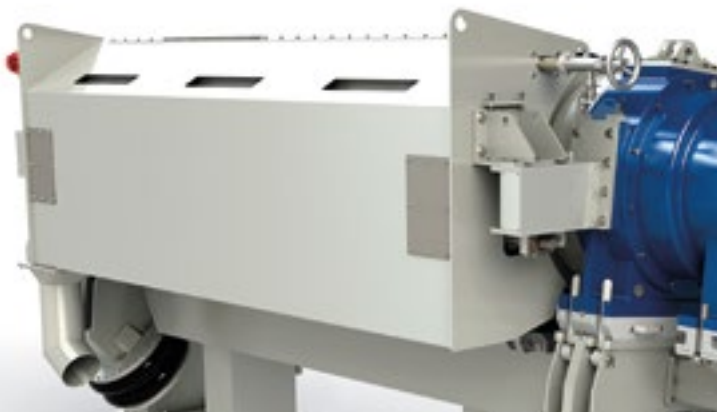
Bearing Lubrication system with circulating oil for main bearings and internal bearing

More details in the specific page in ROLLS section



Accessories for Suction Pressure Roll

Water Saveall with Double Doctor



Improves significantly the press efficiency increasing the water removal from suction roll surface reducing paper web rewetting

Double doctoring also ensures a more homogeneous cross water removal improving the paper web moisture profile

More details in the ACCESSORIES section



Steam Boxes

Increases dryness at outgoing press nip

Allows reusing the flash steam from the Yankee Dryer and hood resulting in energy savings

Very useful operating along with pressure roll (dry-press roll or suction roll)

More details in the ACCESSORIES Section

SMART YANKEE DRYER

Ø 24 ft (7.320 mm)

Double width (up to 6.500 mm)



Yankee Dryers

Following the paper market tendency around the world, we are inaugurating one new Yankee cylinder manufacturing line with capacity to manufacture Yankee Dryers with diameters up to 7.320 mm (24 ft) and double width (face length up to 6.500 mm)

Therefore, we are now able to fulfill any demand from this paper industry segment and definitely established ourselves in the market as the major supplier of Yankee cylinders in Latin America

36 Yankee Dryers supplied by Hergen*

	Country	Diameter	Year
1	Brasil	3660	2006
2	Argentina	3660	2007
3	Bolívia	3660	2007
4	Peru	3600	2007
5	Uruguai	3660	2007
6	Brasil	3660	2010
7	Brasil	4880	2011
8	Equador	2440	2010
9	Brasil	3650	2010
10	Equador	3660	2012
11	Brasil	3012	2012
12	Brasil	4880	2013
13	Brasil	3600	2013
14	Brasil	3660	2013
15	Brasil	3660	2013
16	Brasil	3660	2013
17	Brasil	3660	2013
18	Brasil	3660	2013
19	Polônia	2500	2014
20	Brasil	3660	2014
21	Brasil	3500	2014
22	Brasil	3012	2014
23	Brasil	3660	2014
24	Polônia	3048	2014
25	Brasil	3660	2014
26	Peru	3660	2014
27	Brasil	3660	2014
28	Brasil	5490	2015
29	Brasil	4880	2015
30	Brasil	3600	2015
31	Brasil	3012	2015
32	Brasil	3012	2015
33	Polônia	3660	2016
34	Brasil	3660	2016
35	Brasil	3600	2016
36	Confidential	4572	2016

* until August, 2016

Main features

Shell: manufactured with carbon steel plates with high mechanical resistance under ASTM standard. All welded joints are totally inspected by means of ultrasonic and x-ray inspections and heat treatment (relief stress)

Head covers: mounted with capscrew or welded to the cylinder shell. All materials are totally controlled by means of ultrasonic inspection and heat treatment (relief stress)

Central stay: manufactured with carbon steel plates under ASTM standard. All welded joints are totally inspected by means of ultrasonic and x-ray inspections and heat treatment (relief stress). Steel cast journals with total control of the physical properties of materials

Condensate extractor: fitted with multiple straw pipes those are manufactured on stainless steel with micro casting nozzle (high hardness). Special system for fixing the straw pipes with easy adjustment of the gap (distance between nozzle and internal shell surface)

Metal coating: with high-hardness for extended useful life and reduced thickness allowing high heat transfer to the sheet paper

Manufactured according to ASME North American Code or PED European standard



Cylinders advantages



NO rupture risk due construction in Carbon Steel

Innovative condensate extraction system

Higher reliability with no risk inherent to the casting process, such as porosities or discontinuities

Two construction options for Head Covers: mounted with capscrew or welded to the cylinder shell

Metal surface with high hardness resulting in better creping quality

Increase production: HIGHER HEAT TRANSFER UP TO 35% AS COMPARED WITH CAST IRON CYLINDERS resulting in higher paper evaporation ratio

Excellent temperature profile

Steel plate material allows cylinders construction with any required diameter

Easy transportation: journals may be transported disassembled thus reducing the maximum load height

Constructive features

Welded or screwed head covers



Welded heads



Screwed heads



Grooved or smooth internal surface

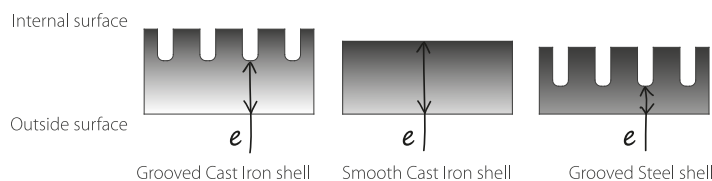
We supply cylinders machined internally with grooved or smooth surface. The grooved alternative offers more advantages as compared with the smooth one. When the grooved alternative is combined with steel construction the benefits are even greater

Advantages for steel construction with grooved internal surface

Due to the mechanical properties of Carbon Steel plate, shell thickness may be significantly reduced in comparison with a Cast Iron construction under identical operating conditions

This is an important advantage for a Yankee Dryer since a reduced shell thickness offers less resistance to the heat transference

When one Yankee Dryer is manufactured with Steel plate and in addition is machined with a grooved internal surface, the heat transfer is much better due to the reduced thickness at the shell root



Thermal insulation

Dryer cylinder loses heat through its heads which means a continuous energy waste. Cylinder thermal insulation minimizes this loss resulting in considerable energy savings



Additionally, thermal insulation also increases operator safety due to the significant temperature reduction on the outside of the insulation

Benefits

- Steam saving from 3 to 5%
- Increase operator safety
- Low cost investment



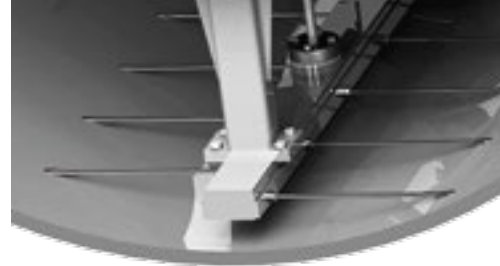
Condensate extractors

The condensate extractors are supported by solid structures which ensure the required frame rigidity. Whole system is designed to compensate thermal expansion and provide high wear resistance

For grooved cylinders



For smooth cylinders



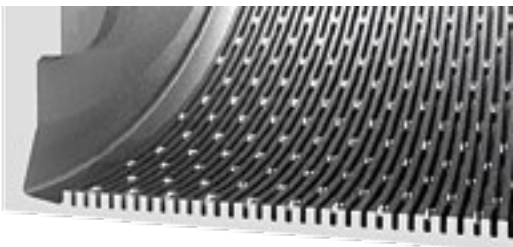
Benefits

- Homogeneous condensate extraction resulting in:
 - Extremely homogeneous Yankee cylinder temperature cross profile
 - Homogeneous cure/maintenance of the organic coating
 - High stability of drying and creping processes
 - Increased drying capacity

Turbulence Bars and Blocks

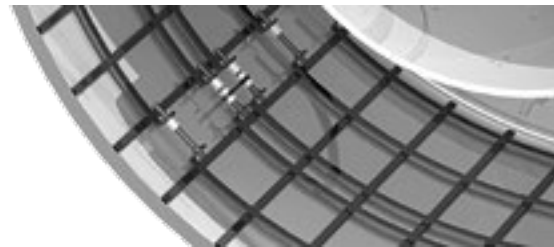
The function of the turbulence bars and blocks is to break the condensate film formed on the inner cylinder surface thus allowing higher convection between the steam and the cylinder for better heat transfer and consequently higher evaporation rate

For grooved cylinders



Turbulence blocks installed in a grooved cylinder

For smooth cylinders



Turbulence bars installed in a smooth cylinder

Benefits

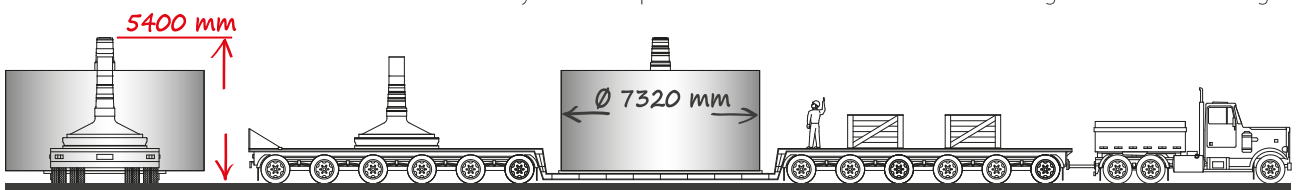
- Increase cylinder drying capacity
- Improve drying/moisture profile
- Easy installation
- Low cost investment

Quality control

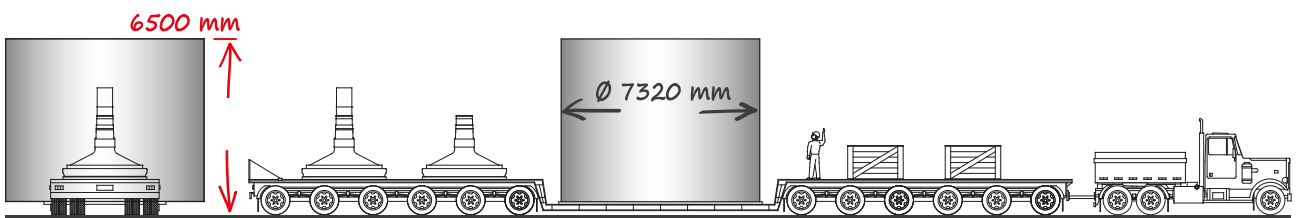
- Quality certificate for all steel plates used in the manufacture – mechanical and chemical properties
- Quality certificate for cast parts – mechanical and chemical properties and metallographic structure
- Cylinder construction in compliance with strict manufacturing standards (ASME, PED or others, as required)
 - Ultrasonic inspection for every shell and cover head
 - Dimensional inspection after cylinder shell manufacture
 - Ultrasonic inspection for all weld fillets
 - Heat treatment for stress relief
- Strict dimensional control in all cylinder manufacture stages
- Hydrostatic test in compliance with ASME and PED standards
 - Ultrasonic inspection for all capscrews

Easy transportation

Journals may be disassembled from the Yankee cylinder. Our team executes journal assembly at the customer site. This makes cylinder transportation easier with considerable reducing of the maximum height



Cylinder diameter 7320 mm and 3700 mm face during transport without the journal on drive side



Cylinder diameter 7320 mm and 6000 mm face during transport without both journals

Manufacturing line





AeroDry

Hoods

Design

Specific designs for different applications according to the circumstances for each case

Any design can be supplied for gas, steam or thermal oil operation

With reinforced frame the hood provides high dimensional stability maintaining its geometry in operation during the life cycle

Benefits

Increase production

Improve quality

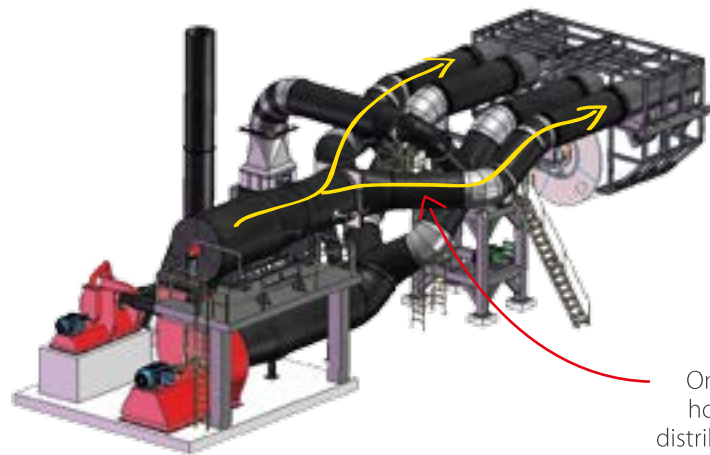
Leakage proof ducts insulation

Designed to allow large expansions without hood frame distortions and maintaining drying efficiency



AeroDry *mono*

Monosystem

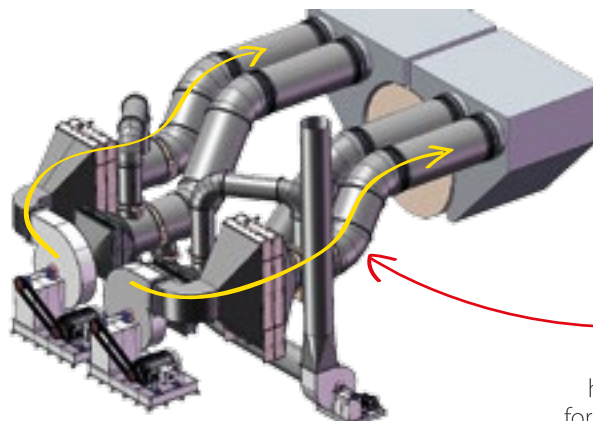


Monosystem
gas-operated hood

One single
hot air line
distributed to
both hood sides
(wet and dry)

AeroDry *duo*

Duosystem



Duosystem
steam-operated hood

Two
independent
hot air lines, one
for each hood side
allowing independent
temperature control
for the dry and wet side



Yankee Dryer Doctors

Robust

Extremely robust construction resulting in very low vibration level allowing a better creping quality

For an extended useful lives and reduced maintenance requirements, each doctor is equipped with oversized ball bearings and one robust and single oscillator with zero gap adjustment

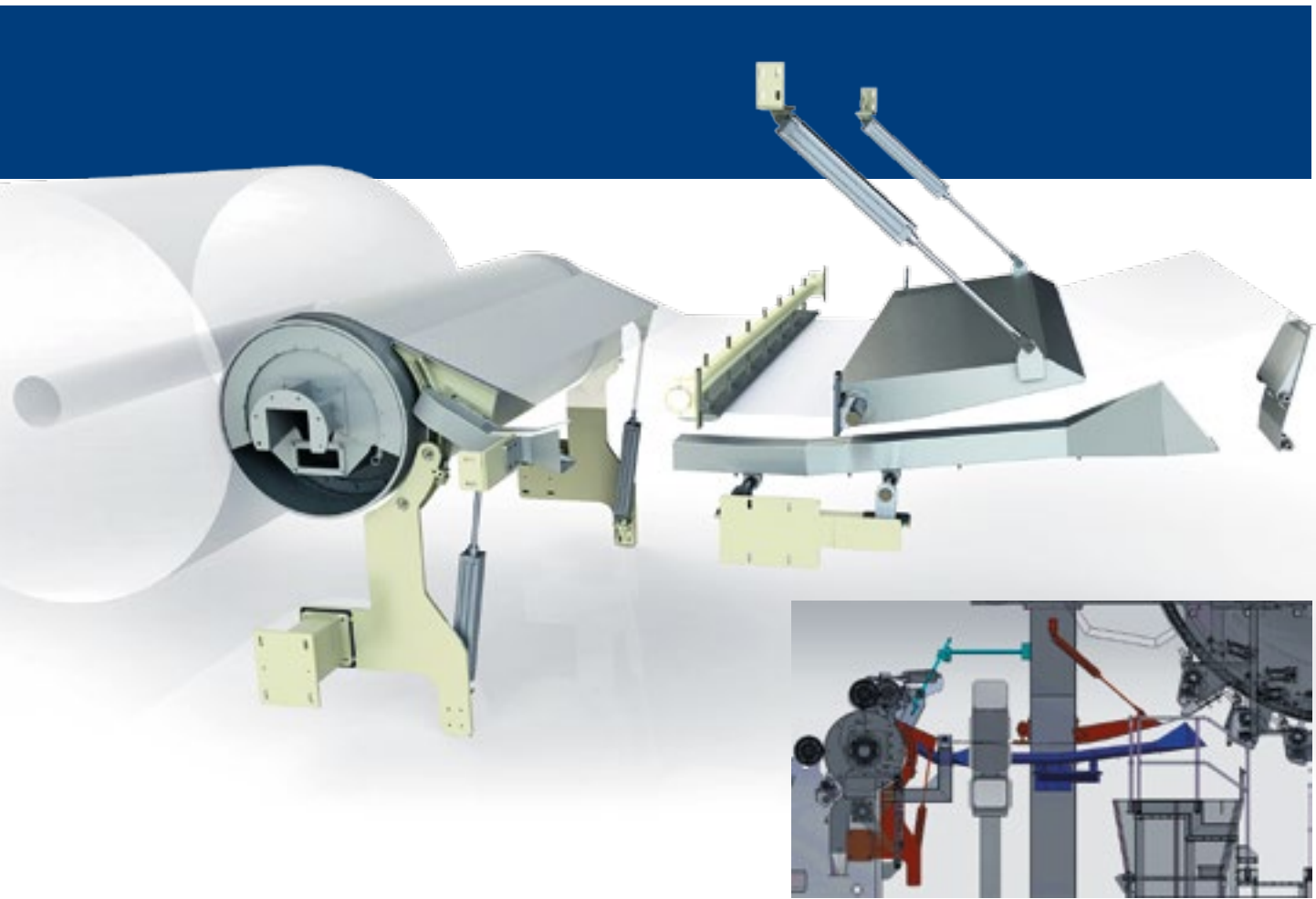
Flexible design

Yankee doctors can be supplied with some optional items and different blade holder types according to the requirements of each application

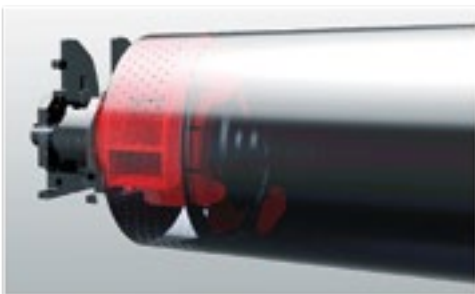
Doctor blade magazine

Allowing better operational safety and faster blade replacement, one blade magazine can be supplied with compartments for new blades and worn blades





Tail Threading Systems



Design

Systems for high speed machines up to 2200 m/min offering operational safety and reduced time losses

Systems fitted with vacuum ring on the reel drum and movable channels actuated by pneumatic cylinders to clear space for the operational staff

Benefits

Increase operator safety

Improve machine runnability with reduced time losses during tail threading

Existing machines

Possibility to install in existing machines where in some cases the reel drum must be replaced for vacuum ring installation



Design fully compliant with NR-12 Safety Standards



Reels

Hydraulic or Pneumatic Reels

Safety

Safety protections are installed around the equipment and fitted with blocked accesses to avoid operator entrance while machine is running



Accessories

Flexible design allowing gradual accessories installation until full automation for increasing efficiency and safety

Optional items

Reel Spool feeding system

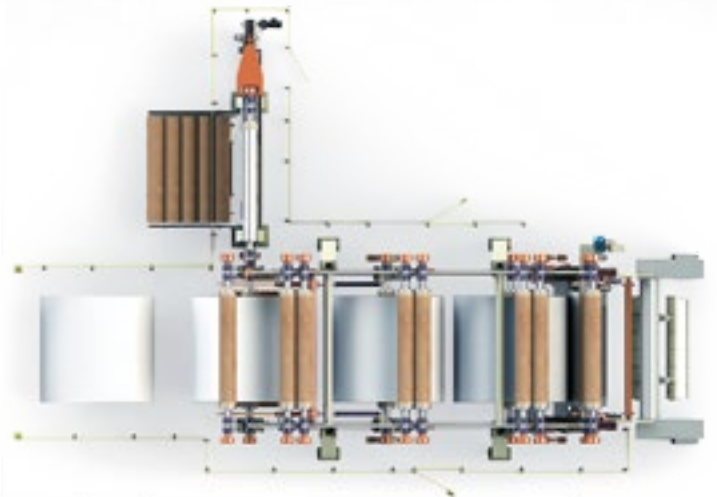
Jumbo roll weighing station

Reel Spool Storage with Loading Arms

Spool shaft puller and Lifting table

Core magazine fitted with core loading station

Glue application for jumbo roll change

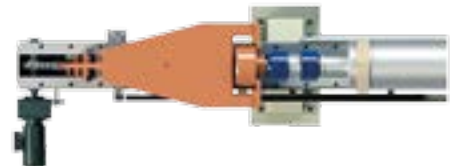




Shaft Puller

Trolley movements by central chain and electric gearmotor

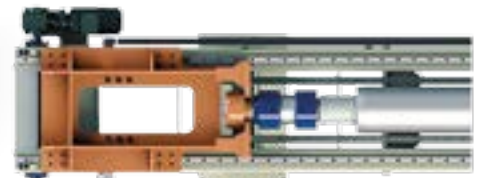
Spool shaft supported by movable cradles attached to the chain



Shaft Puller for Air Shaft

Trolley movements by two chains and electric gearmotor

Air shaft supported by V-roller



Shaft Puller

SMART PULLER

Shaft Puller system without Lifting Table where it is not necessary to move the jumbo roll

Shaft puller carriage is movable in horizontal and vertical direction allowing the shaft extraction regardless of the jumbo roll diameter

Simple and compact system with excellent cost and benefits

PAPER and BOARD line



PAPER and BOARD machines

Main features

Headbox **INOVAFlow** with optional automatic cross profile control and dilution

Fourdrinier with high drainage and formation efficiency with modular construction to allow future top wire installation

Pick-up suction roll provides better efficiency and operational safety during the sheet transfer maintaining paper quality improving runnability and eliminating sheet breaks in this region

SMART SHOE press with nip load up to 1300 kN/m allowing steam consumption reduction and improvements for sheet quality (physical tests)

Sheet stabilizer boxes improving machine runnability

Dryer cylinders, diameter 1816 mm, manufactured on carbon steel plate with design for operating pressure up to 13 Bar and NO rupture risk due to the excellent welding process applied for steel plates

SMART SIZER for starch application can operate with solid contents up to 14% allowing reduced costs at after drying section and starch application control

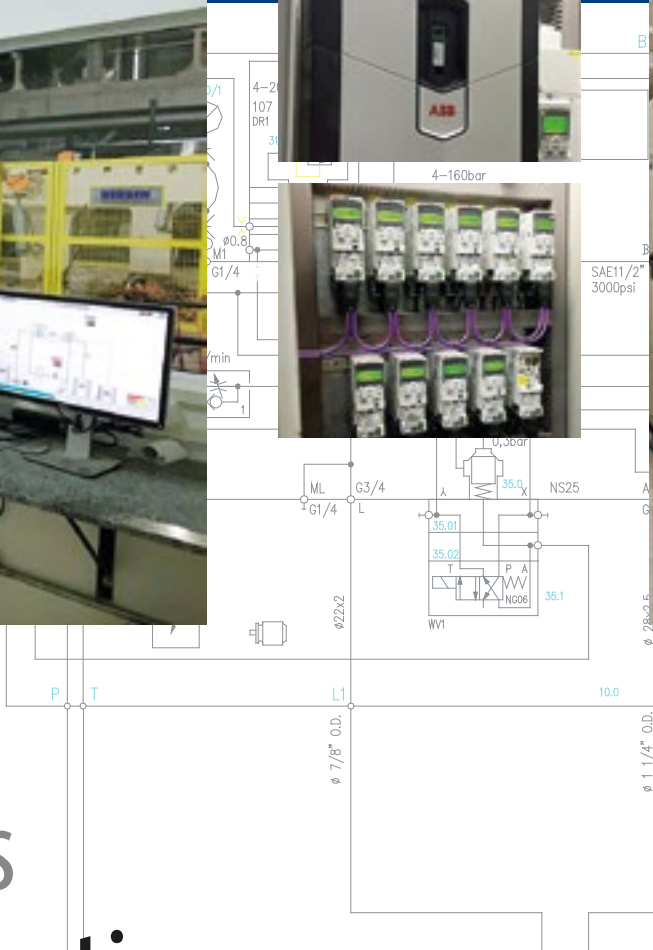
Reel **EH** series with hydraulic commands and modular construction to allow future upgrades

Hydraulic Winder designed for operating speeds up to 2500 m/min with regenerative brake for Unwinder and automatic positioning for slitter section

Full Broke Systems for couch pit, press pit, size pit and reel pit







Process Automation and Drives

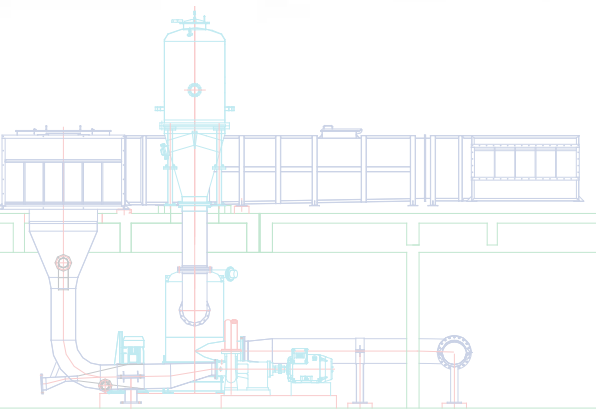
Supply

Fully integrated solutions for process automation and drives in paper machine

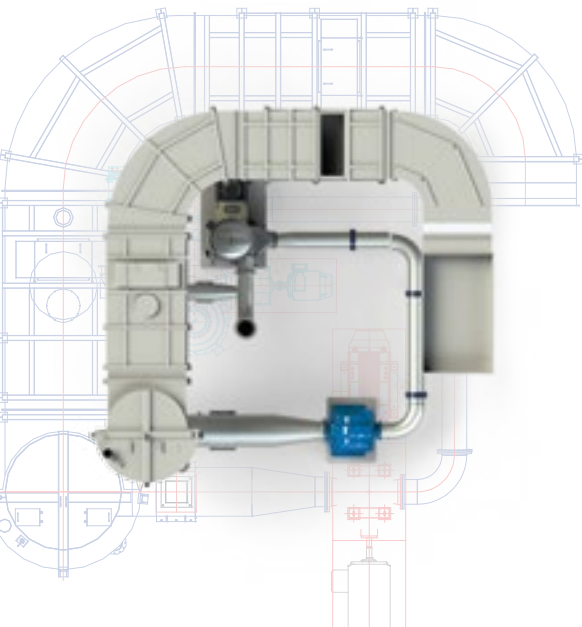
Design

Multidisciplinary engineering team (process, instrumentation, automation, electric and controls) offering integrated solutions in Turnkey, EPCM e EPC modalities





Approach Flow



Troubleshooting service

Beyond to supply new systems, Hergen can offer mill site services for evaluation and troubleshooting in existing approach flow systems allowing increase efficiency and final paper quality

Design

Customized solution for each paper machine for new and existing plants

Modern engineering concepts allow systems with low-pulsation, accurate and continuous consistency control and air elimination

Supply

Complete solutions for approach flow systems with single or double dilution including:

- basis weight control
- jet-to-wire ratio control
- low-pulsation Screens
- secondary Screens
- special chests and piping
- low-consistency Cleaners





Headboxes

Sheet formation

Uniform cross profile

Excellent formation quality

Design

Internal stock flow optimization due an excellent distribution design

Convergence chamber with vanes for better turbulence control

Vertical or horizontal pulsation attenuator

Slice opening fitted with motorized regulation and controlled via electronic encoder

Compact design for easy installation on rebuilds machines

Options for basis weight cross profile

Manual – direct adjustment through high precision micro jacks

Automatic – actuators are installed on each micro jack those are electronic controlled with the use of scanner readings





Forming Section

Supply

Complete section with primary and secondary fourdriniers, headboxes with pulsation attenuators, dewatering elements, suction roll and lumpbreaker roll

Upgrades for existing installations

Design

Frameworks are fully Stainless Steel cladding

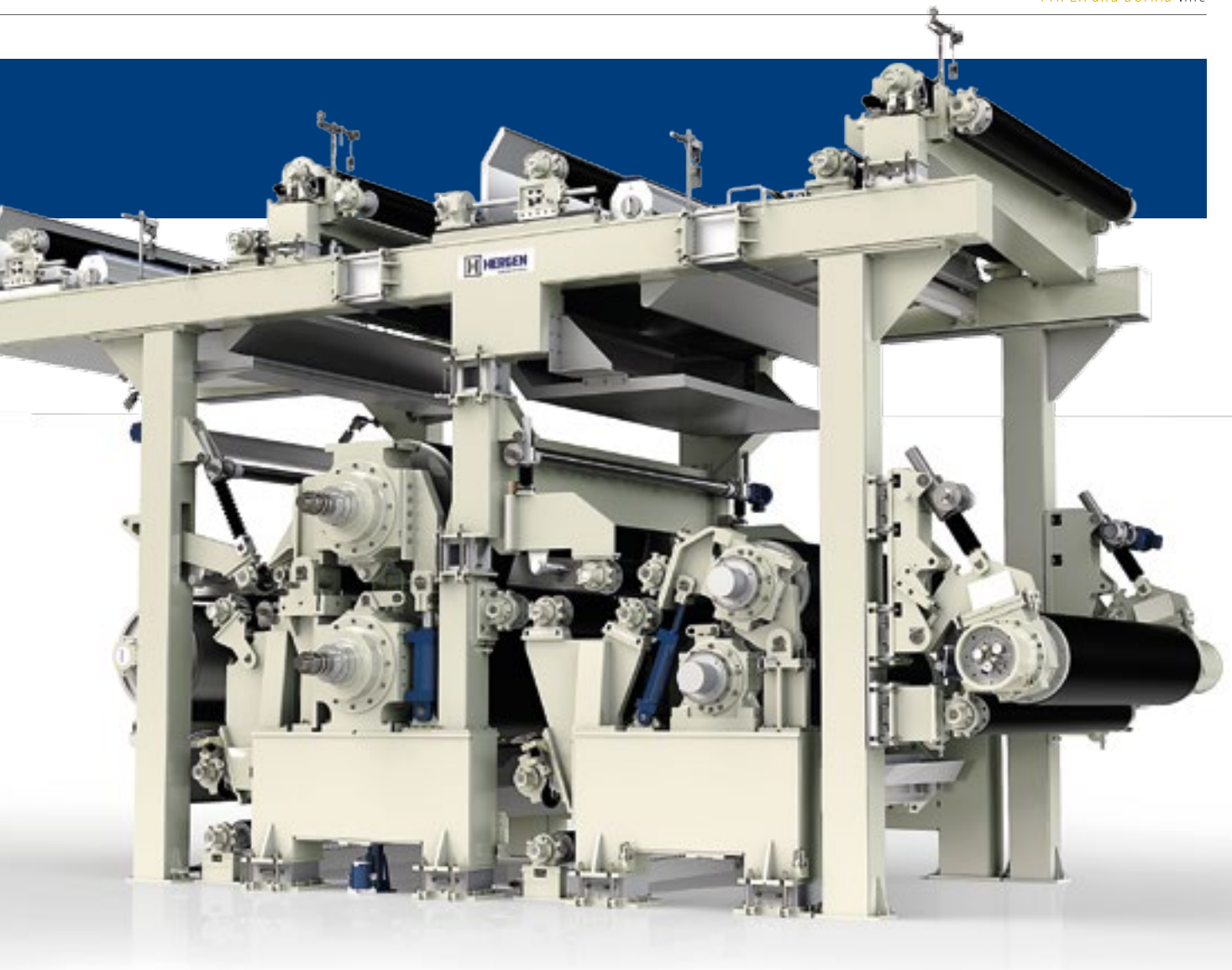
Swing arms for Breast roll movement is driven

Vacuum inlet for couch roll on front side

Safety

Walkways and handrails are supplied on both machine sides





Press Section



Supply

Complete sections with Jumbo Press designed up to 400 kN/m nip load and diameter up to 1350 mm

Bi-Nip press concept designed for many different applications

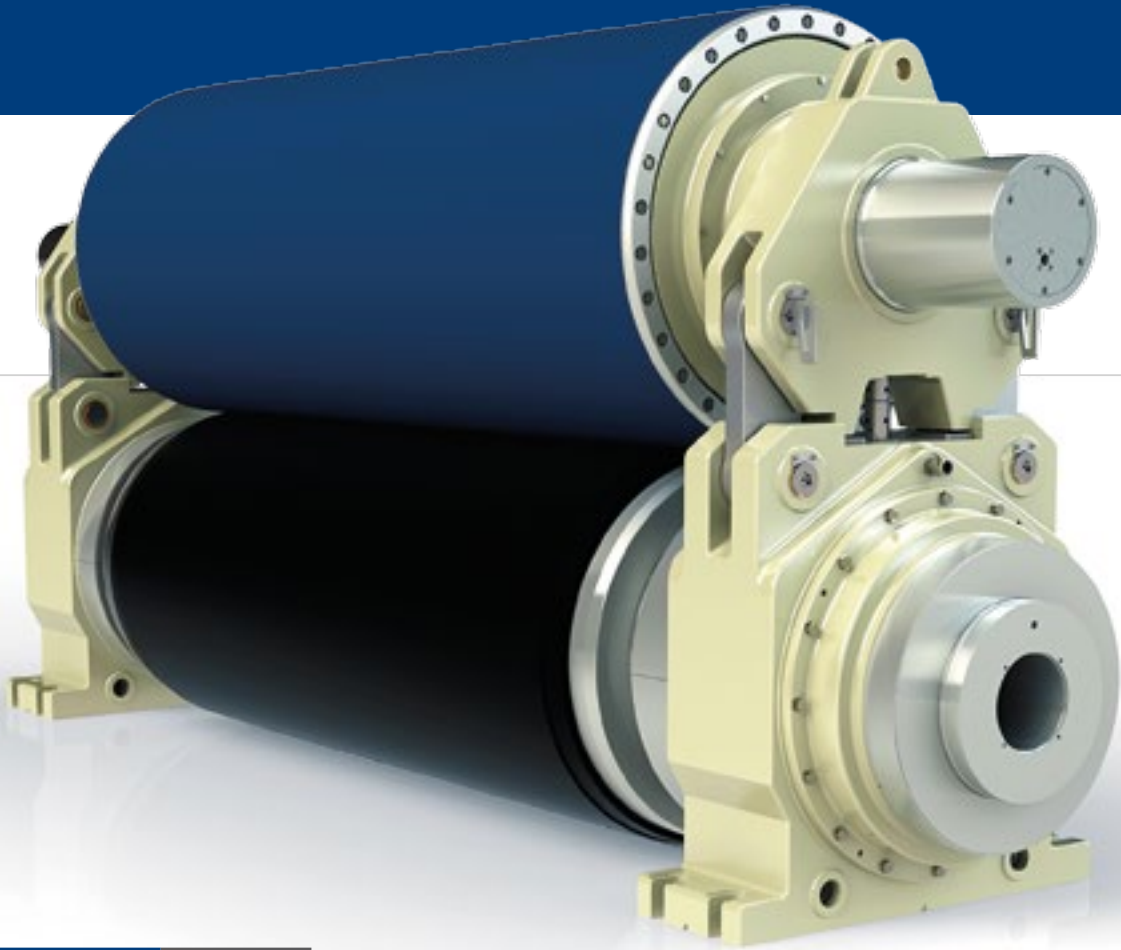
Upgrades of existing installations

Shoe Press

See detailed information in the specific page

Sheet Transfer

See detailed information in the specific page



SMART SHOE

Shoe Press

Design

Fully automated allowing easy and safe operation

Counter roll without crown control system resulting in low cost design and reduced maintenance requirements

Auxiliary systems designed for minimum and low cost maintenance requirements

Compact design allows easy installation in existing machines

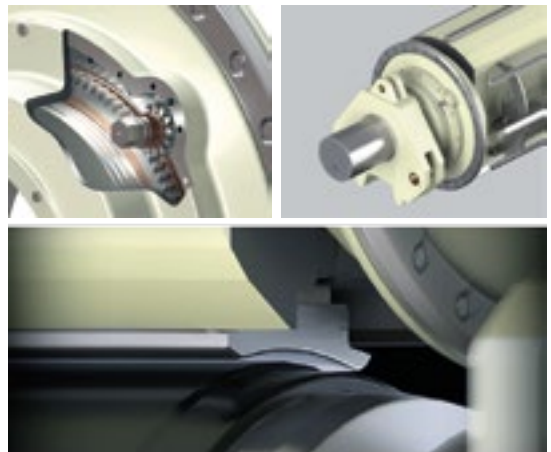
Benefits

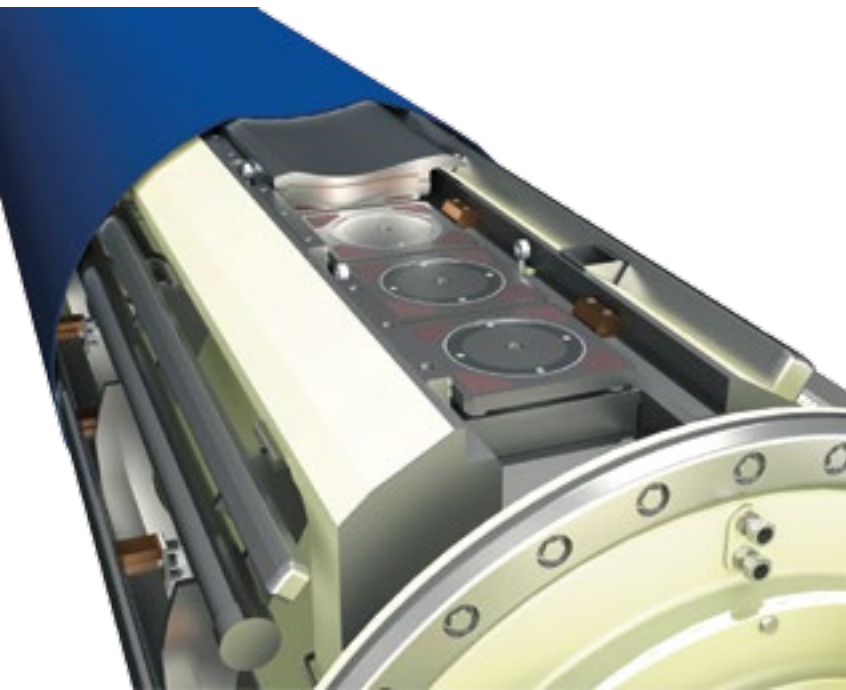
Increase production

Reduce steam consumption

Improve sheet quality (physical tests)

Moisture profile more uniform





SMART SHOE

Loading system

Designed with multiple in-line hydraulic pistons contributing to a more uniform moisture profile

Design parameters	Press Roll	Shoe Press
Nip width (mm)	40 - 70	250 - 280
Operating pressure (kN/m)	150 - 450	1000 - 1300
Press Impulse (psi.s)	2 - 5	10 - 21

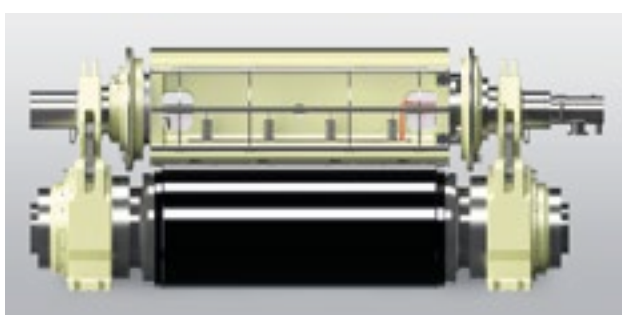
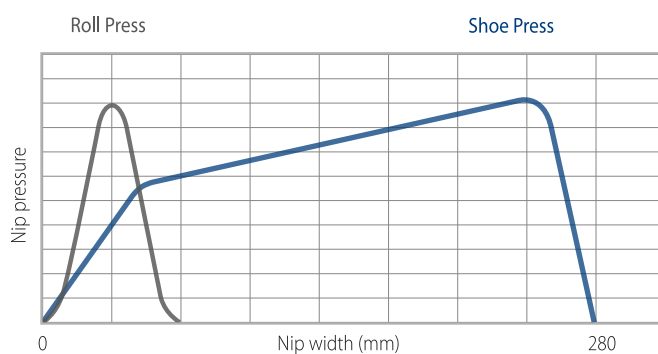
Technology

Combining high nip load and long nip shoe the result is higher press impulse than conventional nip roll press

Higher press impulse achieved by

SMART SHOE

Press along with its progressive pressure curve allows superior dewatering with no damage to the paper web



Technical data

Shoe Press diameter:	1.250 mm
Counter Roll diameter:	1.200 mm
Nip width:	280 mm
Linear nip load - max:	1.300 kN/m
Paper width - max:	5.000 mm



Dryer Section

Supply

Complete sections with Hood, drives, Dryer Cylinders with diameter up to 2000 mm, complete steam and condensate system and lubrication system

Upgrades for existing installations

Drives

Designed for conventional or silent drive (multi-drives)

For further information regarding Drives, see the specific page

Dryer Cylinders

See detailed information in the specific page





Hoods

Designed according to each application – open or closed Hoods

Complete Hoods with ducts and fans for new machines or small upgrades for existing Hoods

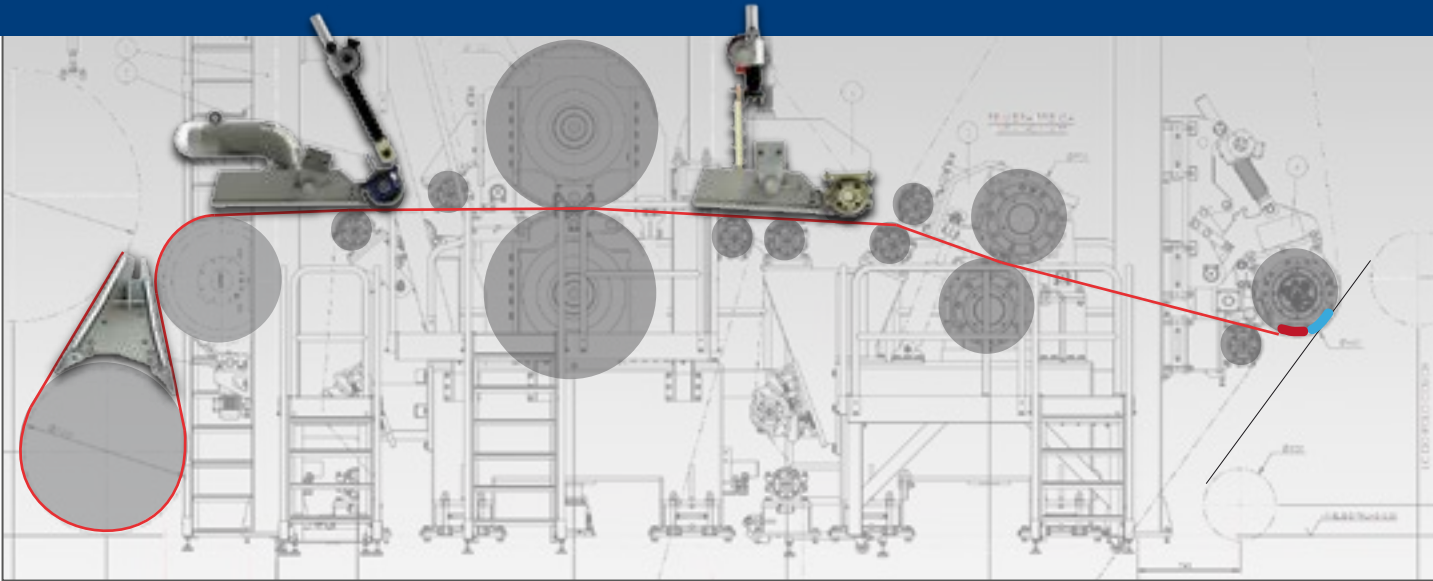
Benefits

Increase production

Energy savings

Paper run is protected against dripping due low external temperatures





Sheet Transfer System

in the Press Section

Design

Full sheet transfer systems with closed loop from Pick-up Roll to first Dryer Cylinder

Our engineering team collects data on-site and prepares the layouts to adapt new system to real circumstance

Benefits

Allows a safe operation during sheet transfer



Improves machine runnability with downtime reduction due to sheet breaks

Losses reduction

Increases machine efficiency

Sheet quality (physical test) is improved due to reduced open draw on sheet run since fourdrinier to the dry section





Tail Threading System

Design

Complete tail threading systems are designed and supplied according to Customer requirements

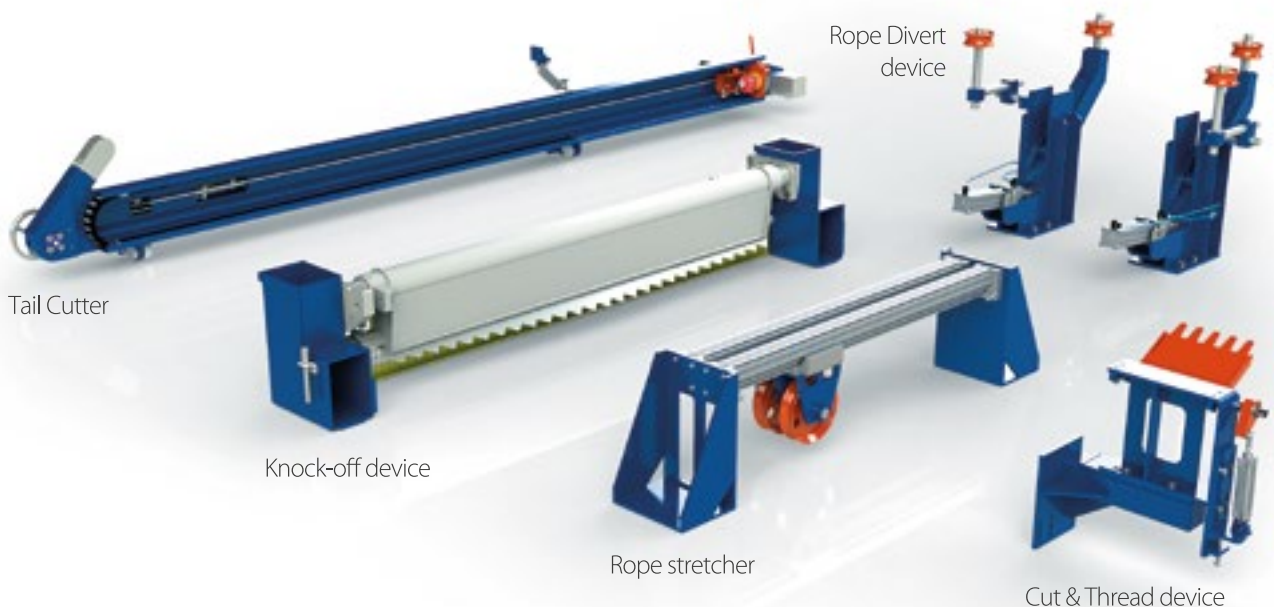
Benefits



Allow a safe operation during tail threading

Losses reduction

Increase machine efficiency



Tail Cutter

Knock-off device

Rope stretcher

Rope Divert device

Cut & Thread device





SMART **STEEL DRYER**

Dryer Cylinders

More than 200
Dryer Cylinders
supplied to the Latin American market

With more than 30 years of experience in the manufacture of dryer cylinders, we are today one of the major suppliers in Latin America and worldwide

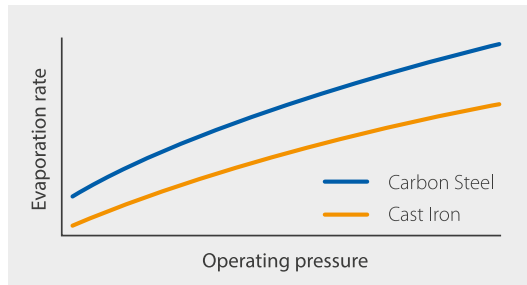
We design and build Carbon Steel Dryer Cylinders for small and large paper machines through a modern and rigorous process in compliance with high quality standards required by the world market

SMART STEEL DRYER

Many advantages with Carbon Steel construction

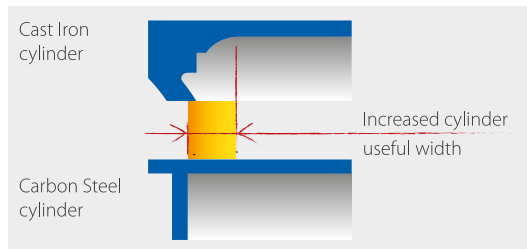
Dryness gain

Main carbon steel property is ductility and this allows reducing shell thickness of dryer cylinder resulting in higher rates for heating transfer from the steam to the paper web



Increase useful width

Due a more compact construction the steel dryer cylinder increases its useful width eliminating wet edge problems during paper drying



Increase safety

NO rupture risk due construction in Carbon Steel

Reduce maintenance

Excellent welding process applied for steel plates eliminating possible leakages



SMART STEEL DRYER

Cylinder features

Turbulence Bars



Destroy the condensate film created on the inner surface thus enabling higher heat transfer through convection between steam and the inner cylinder surface

Benefits

- Increase cylinder drying capacity
- Improve drying / moisture cross profile
- Increase evaporation rate for cylinders already running at their evaporation limit
- Low cost investment



Oil lubricated bearings

- Increase bearing useful life
- Reduced maintenance
- Excellent cost efficiency

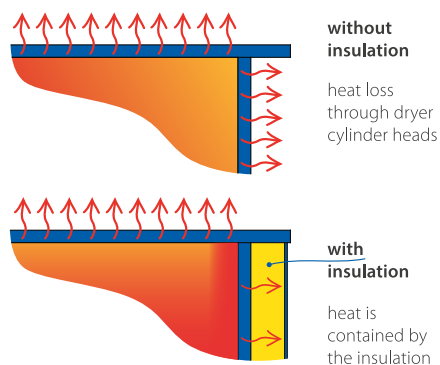


Rotary Joint with flange mounted

This allows precise alignment of the rotary joint with dryer cylinder journal reducing seal ring wear

Benefits

- Increase seal ring useful life
- Reduce maintenance



Thermal insulation

Dryer Cylinder loses heat through its heads which means a continuous energy waste. Cylinder thermal insulation minimizes this loss resulting in considerable energy savings

Benefits

- Steam saving from 3 to 5%
- Increase operator safety
- Low cost investment





Quality Control

Quality certificate for all steel plates used in the manufacture – mechanical and chemical properties

Quality certificate for cast elements – mechanical and chemical properties and metallographic structure

Cylinder construction in compliance with strict manufacturing standards (ASME, PED or others, as required)

Ultrasonic inspection for every shell and cover plate

Dimensional inspection after shell manufacture

Ultrasonic inspection for all weld fillets

Thermal treatment for stress relief

Hydrostatic test in compliance with ASME and PED standards

Dynamic balancing as per ISO 1940 class G 2.5 Standard

Rigorous dimensional control in all stages of cylinder manufacturing

Production capacity

Model	Diameter (mm)	Maximum face (mm)	Operating pressure (bar)	Regulation
SSD 1000	1000	10.300	10	ASME / PED
SSD 1200	1200	10.300	10	ASME / PED
SSD 1300	1300	10.300	10	ASME / PED
SSD 1500	1500	10.300	10	ASME / PED
SSD 1800	1828	10.300	10	ASME / PED
SSD 2000	2000	10.300	10	ASME / PED





Reels



Hydraulic or Pneumatic Reels

Robust design to produce homogeneous jumbo rolls with minimum losses

Safety



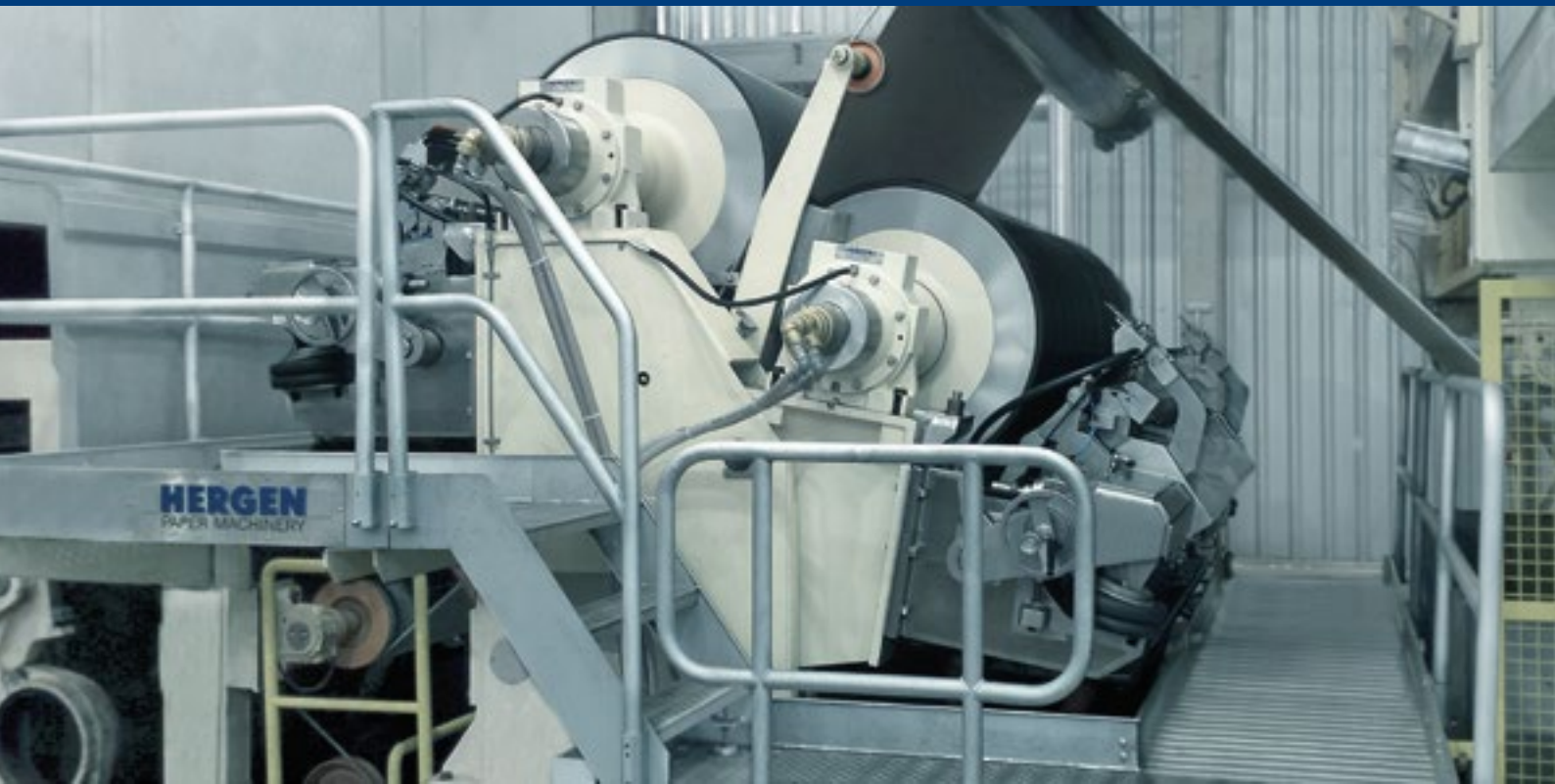
Safety protections are installed around the equipment and fitted with blocked accesses to avoid operator entrance while machine is running

Accessories

Flexible design allowing gradual accessories installation until full automation for increasing efficiency and safety

Options

- Extended Rails to unwinder fitted with access gate
- Reel Spool feeding system
- Jumbo roll weighing station
- Reel Spool Storage with Loading Arms



SMART SIZER

Metering Size for Starch Application

FilmPress Concept

All restrictions when using a normal Size Press with puddle are eliminated

High efficiency and stability even at high speeds

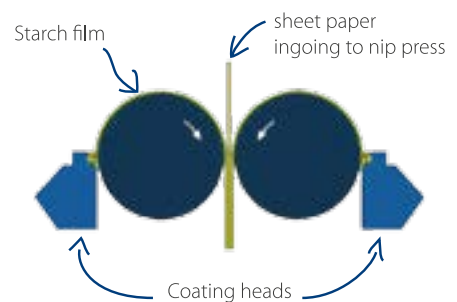
Starch is applied by two independent fully automated metering heads resulting in an extremely simple operation

Functioning

Two coating heads are fed with starch solution which remains in continuous circulation

Starch film is applied onto nip rolls by metering grooved rods according to process requirements

In the nip, the starch film applied onto rolls surface is transferred to the sheet paper





SMART SIZER

Benefits

Fiber saving

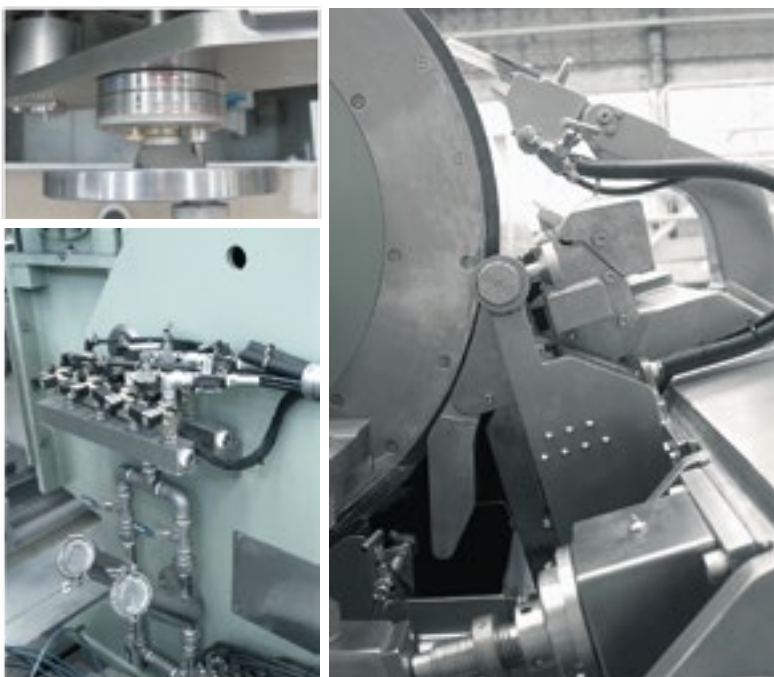
Drying energy savings
since less water is applied
to the paper

Starch film application with
up to 14% solid content

Increase film starch amount
control providing excellent
sheet surface

Fully independent film
application for each sheet
paper side allowing different
types of film application

For application in medium
and high speed machines





excel

Winders

Design

Complete lines with design for operation on 1500, 2000 and 2500 m/min

Extremely robust construction ensures stable operation

Fully automated

Fitted with regenerative brake

Automatic sheet threading

Safety

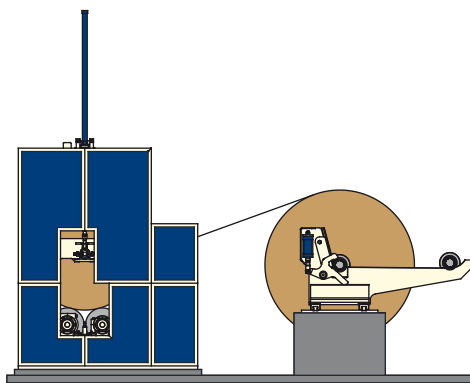
Safety Guards prevent access to hazardous machine areas during operation



All devices required to ensure operator safety are included

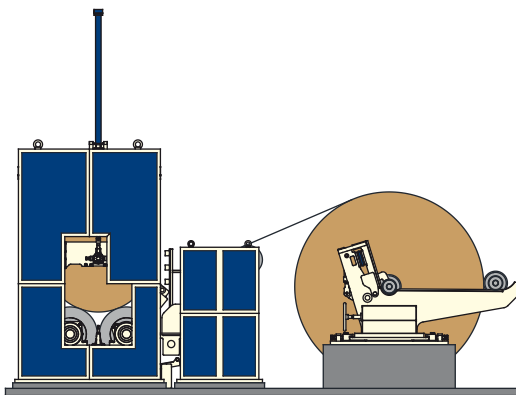


Winders Line



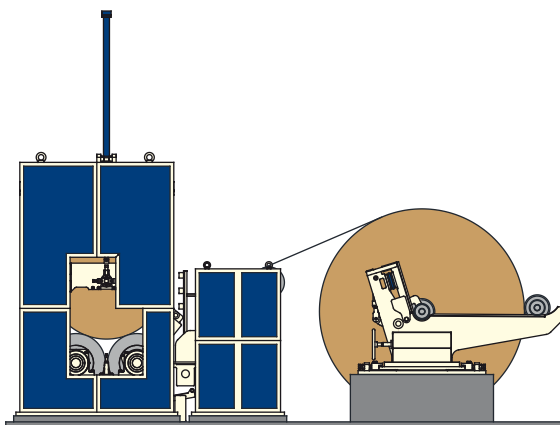
excel 1.5

Operating speed: up to 1500 m/min
Paper width: up to 3600 mm



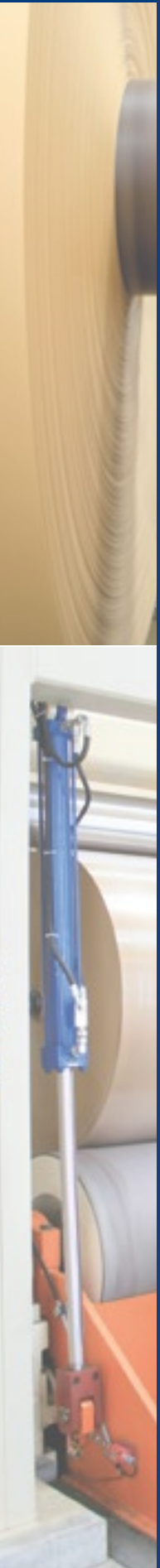
excel 2.0

Operating speed: up to 2000 m/min
Paper width: up to 5200 mm



excel 2.5

Operating speed: up to 2500 m/min
Paper width: up to 5200 mm



ROLLS line





Guide Rolls manufacturing standard

Carbon Steel Rolls

Shell in seamless Carbon Steel pipe

Cast Iron hubs

Alloy Steel journals

Cast Iron bearing housings

Grease lubrication

Optional items

Stainless Steel bearing housing

Oil lubrication

Shell finishing

Chrome layer

Rubber cover

Stainless Steel shell

Grooved surface

Rope system pulley

Loose

Fixed

Supply Limits

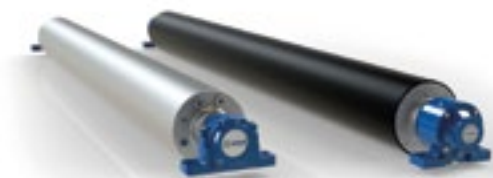
Diameter: 160 – 2.000 mm

Free length: 12.000 mm

Balancing: rotor rigid (2 plans) or flexible rotor (3 or 4 plans)

Working speed: up to 2.500 m/min





Paper Guide Rolls



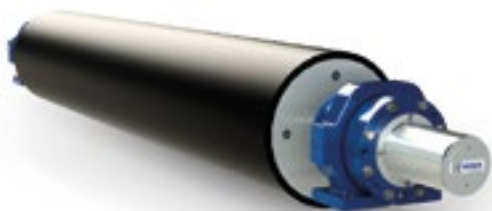
Wire/Felt Guide Rolls



Turning Rolls



Breast Rolls



Breast Rolls for shaker application

Special features for this application

- Bearing housing fixed to machine frames
- Recirculating oil lubrication
- Axial displacement u to 30 mm



Lumpbreaker Rolls

Special features for this application

- Bolted journal
- Cooling system in an option
- Rubber cover for this particular application

Press Rolls



Press Rolls manufacturing standard

- Carbon Steel shell
- Journals bolted to roll shell
- Rubber cover
- Cooling system is an option
- Cast Iron bearing housing
- Grease lubrication

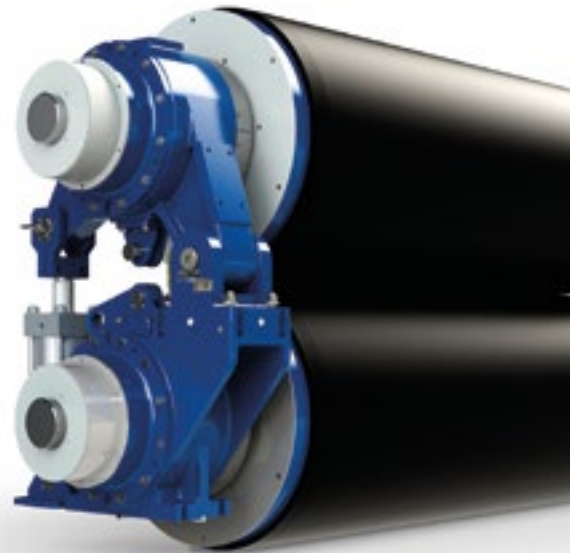
Optional items

- Recirculating oil lubrication
- Polyurethane cover
- Cover that runs without water cooling

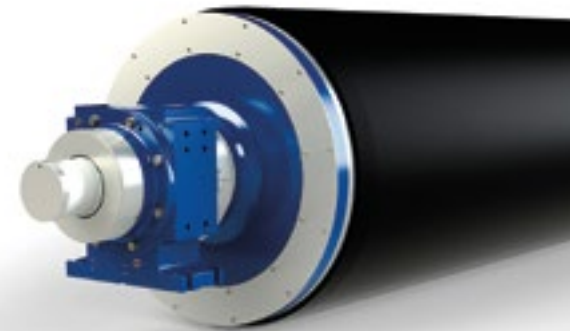
Supply limits

- Diameter: 400 – 2.000 mm
- Face length: 12.000 mm
- Working speed: up to 2.200 m/min

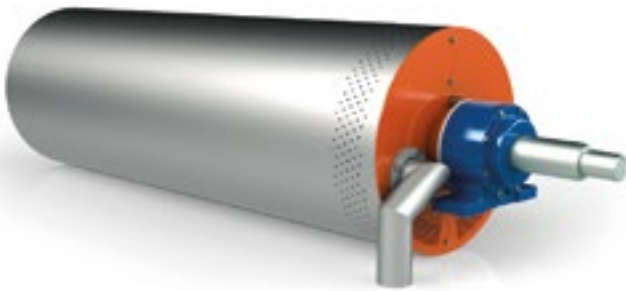
Press Rolls
for packing papers



Press Rolls
for Tissue



Pope Reel Drums



Specific features for this application

- Journals bolted to roll shell
- Shell built in Carbon Steel

Optional stems

- Vacuum stems
- Loose rope pulley
- Rope channel
- Grooved surface

Reel Spools



Specific features for this application

- Journals built in Carbon Steel

Optional Items

- Internally toothed wheel
- Flat pulley
- Journal thermal treatment
- Rubber cover

Carbon core locking

- Pneumatic (expandable shaft)

Mechanic (locking nut)

- For tissue machines application, the threads for the carton core locking nuts features thermal treatment and are replaceable which increases the equipment life span

Rewinder Rolls



Segmented Spreader Roll

- Grooved surface
- Tungsten carbide cover
- Easy bow adjustment

Low Inertia Roll

- Grooved surface
- Supports featuring chrome layer on the region contacted with the paper web
- Ready to mount a load cell on bearing housing

Rewinder Drum

- Carbon Steel shell
- Journals bolted to roll shell
- Tungsten carbide cover on front drum (optional)
- Bronze sleeve on lowering table and that roll ejector articulation

- Grooved surface on back drum (optional)

Segmented Rider Roll

- Number of segments defined by machine width and speed

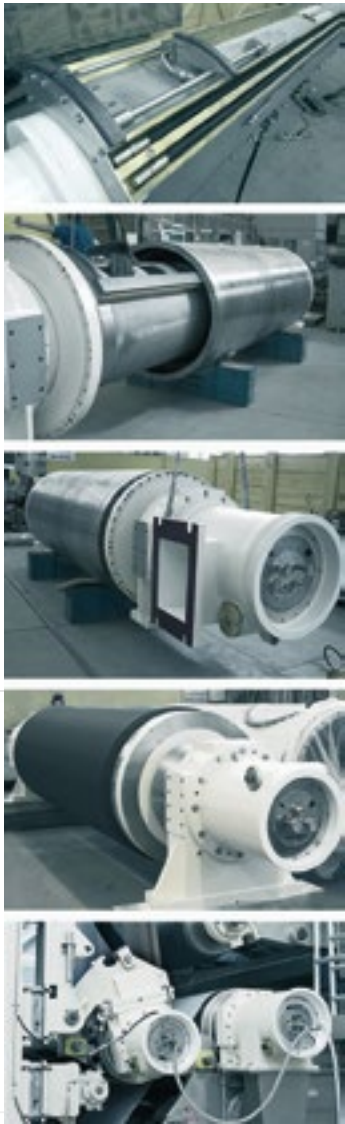


SMART SUCTION ROLL

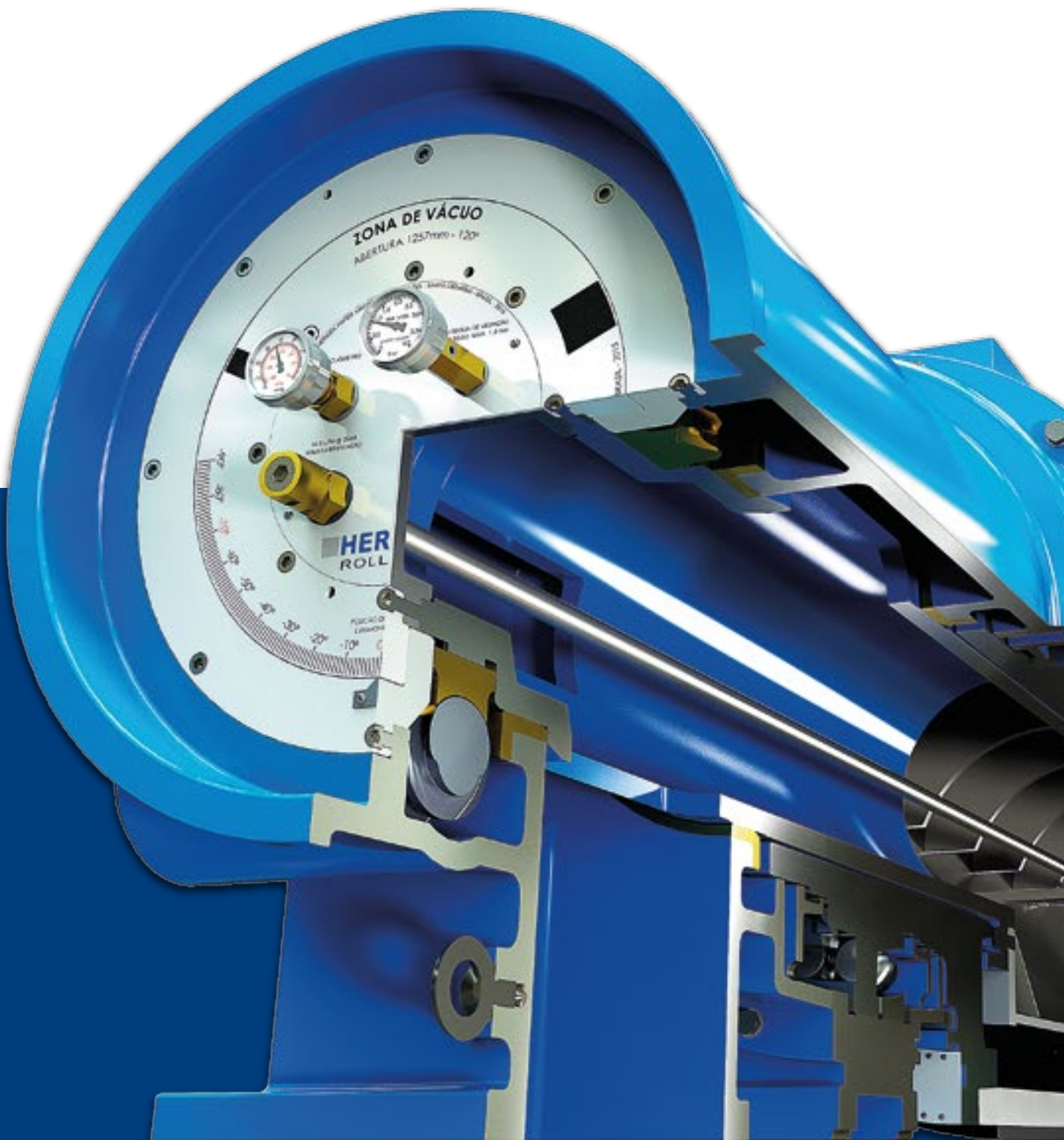


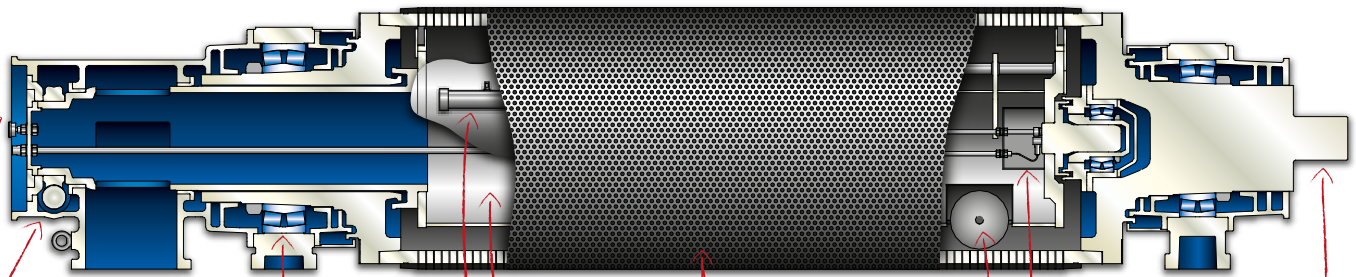
Suction Rolls

for
packaging, writing and printing, tissue
and specialty paper grades



Suction Press/Pick Up/Couch Rolls





Vacuum zone designed to rotate up to 360°

Zone width adjustment with gauge indication (if applicable)

Bearings with running accuracy

Self-cleaning lubrication shower

Stainless Steel vacuum chamber

The shell drilling is done using gun-drilling process

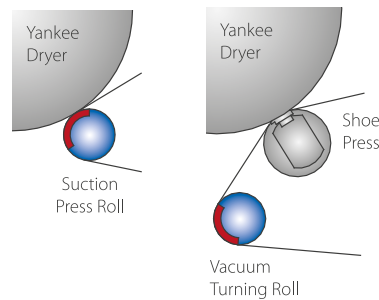
Shell built in Duplex Stainless Steel

The vacuum chamber features a roller for easy maintenance

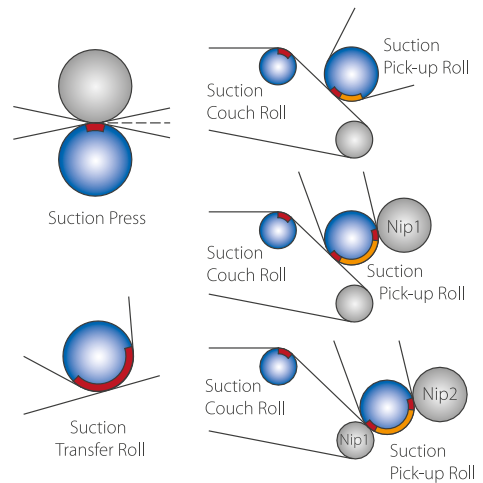
Journals built in nodular Cast Iron

Vibration level and roller bearing temperature monitoring

Tissue applications



Packaging, Carton, Writing & Printing and Special grades applications



Design

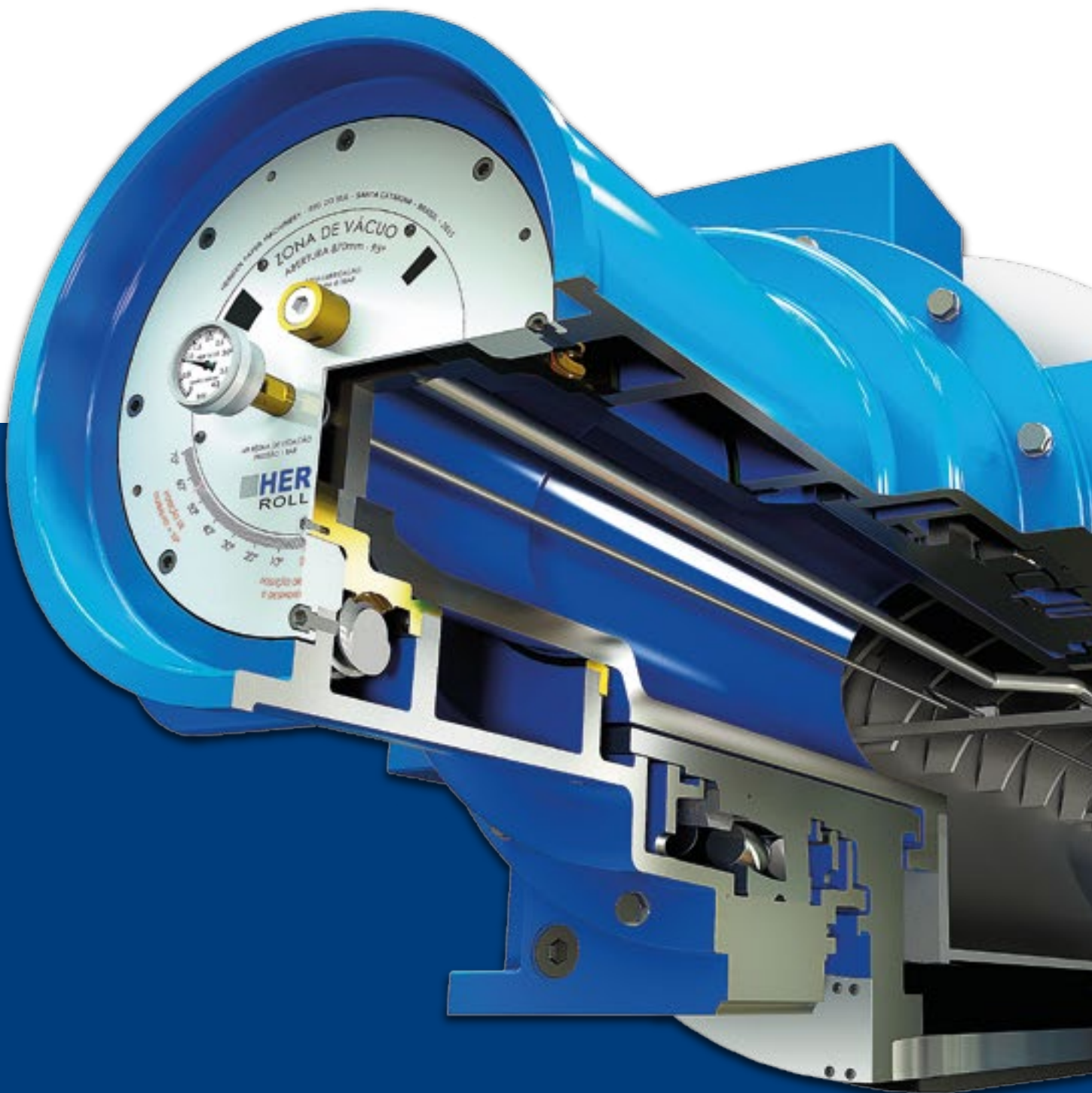
Driven, with vacuum outlet at tending side

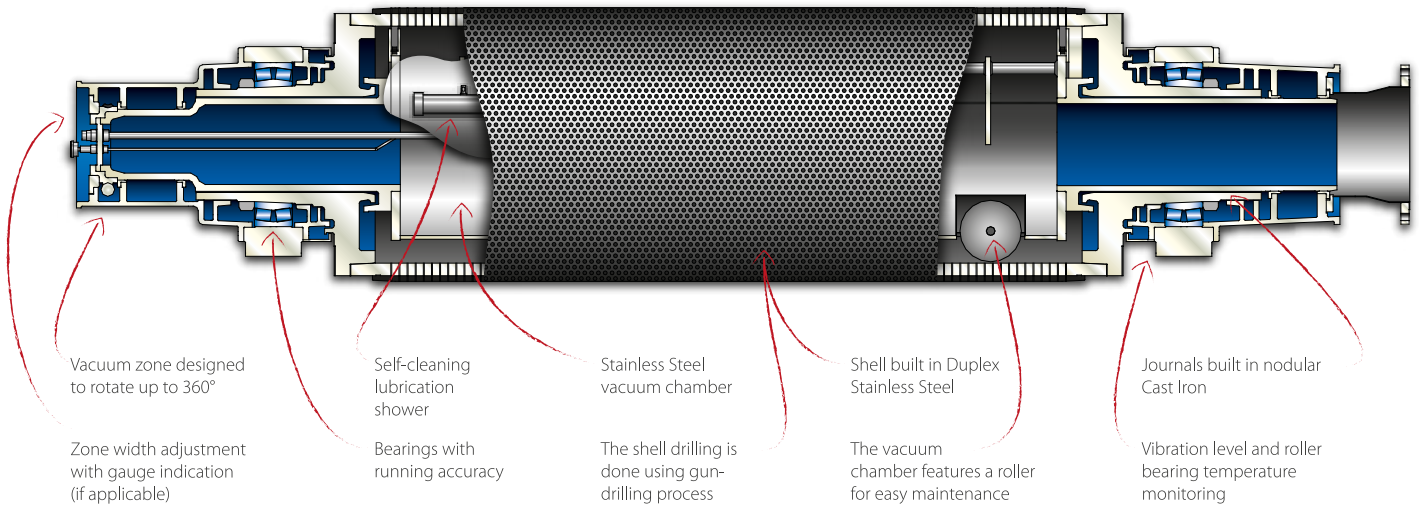
It may feature one or more vacuum zones, depending on its application

The suction roll design enables its use on a wide range of applications

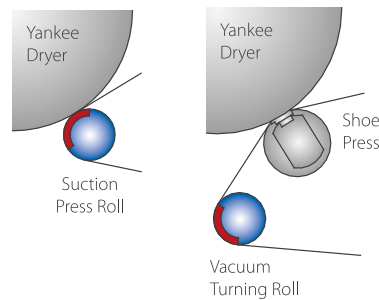
It can be grease or oil lubricated

Suction Press/Pick-Up Rolls

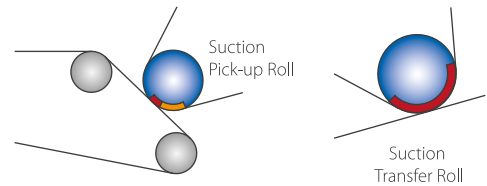




Tissue applications



Packaging, Carton, Writing & Printing and Special grades applications



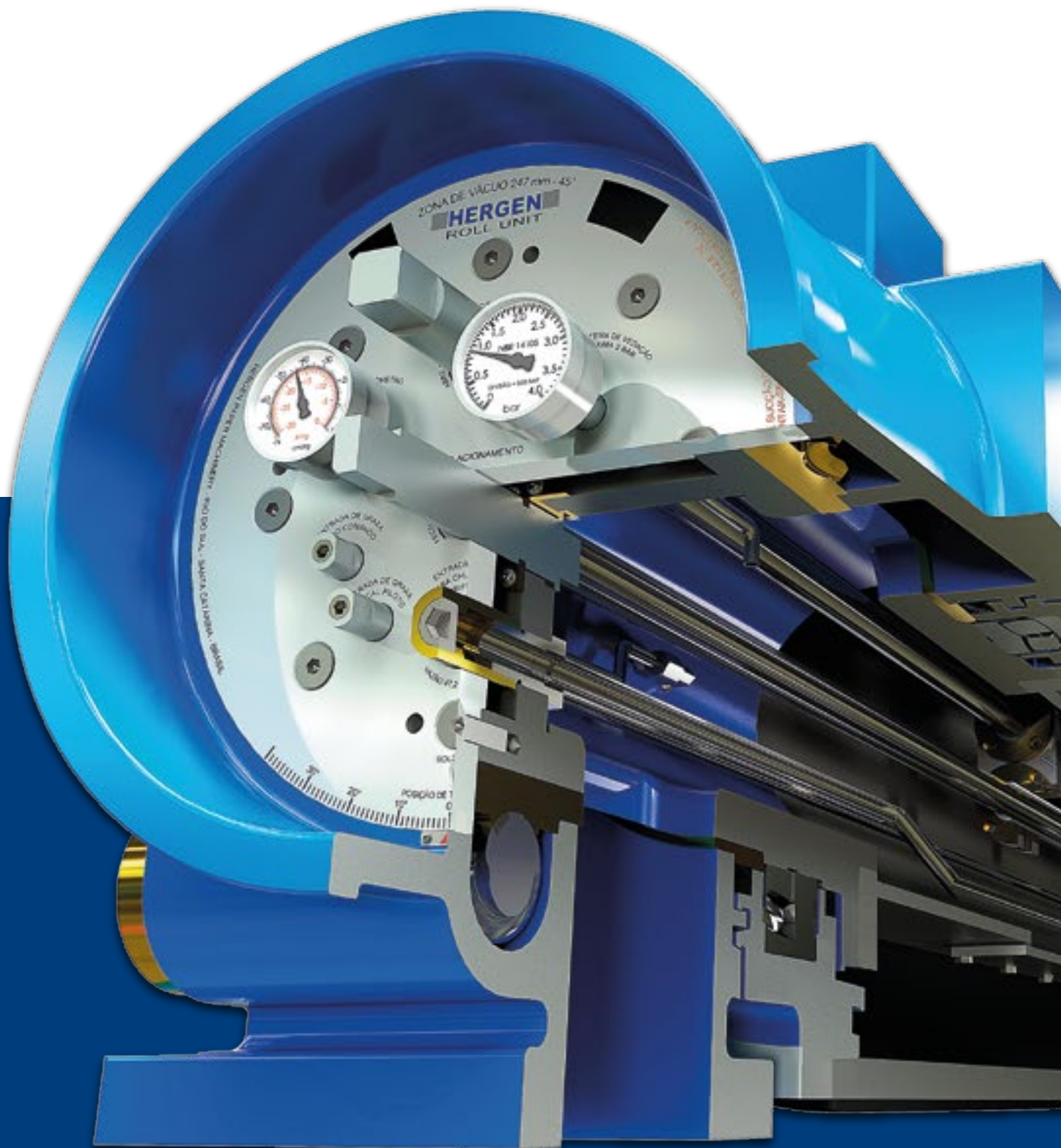
Design

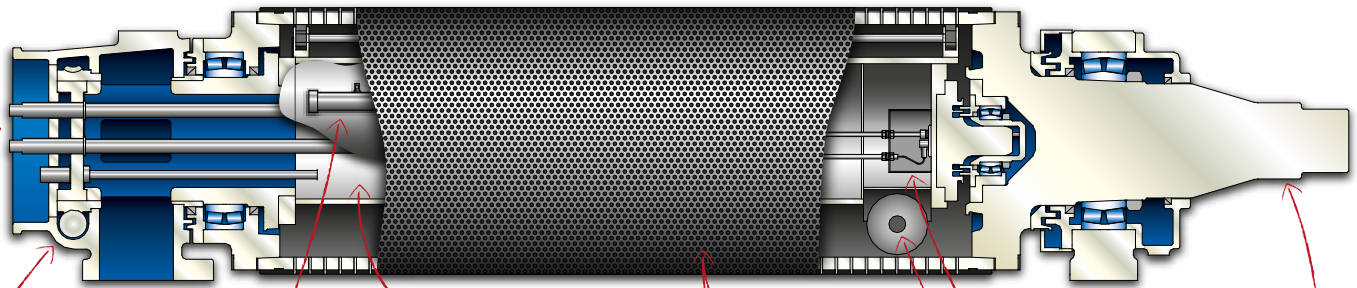
Non-driven application with vacuum outlet at drive side

It may feature one or more vacuum zones, depending on its application

The suction roll design enables its use on a wide range of applications

Suction Couch Rolls





Vacuum zone designed to rotate up to 360°

Zone width adjustment with gauge indication (if applicable)

Self-cleaning lubrication shower

Stainless Steel vacuum chamber

The shell drilling is done using gun-drilling process

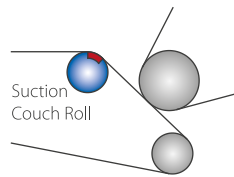
Shell built in Duplex Stainless Steel

The vacuum chamber features a roller for easy maintenance

Journals built in nodular Cast Iron

Vibration level and roller bearing temperature monitoring

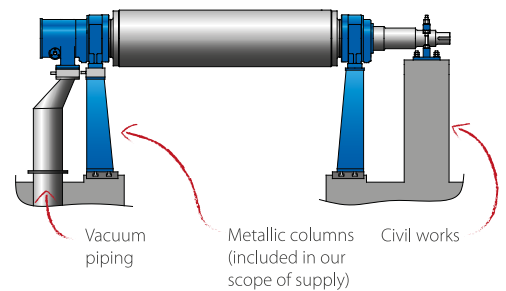
Packaging, Carton, Writing & Printing and Special grades applications



Suction Couch Roll

Cantilever system

Option 1 - conventional system

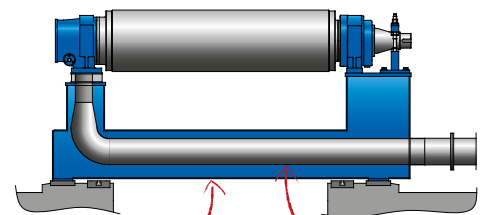


Vacuum piping

Metallic columns (included in our scope of supply)

Civil works

Option 2 - new concept – designed to replace existing Suction Couch Rolls



Steel support beam (included on our scope of supply)

Vacuum piping integrated to support beam

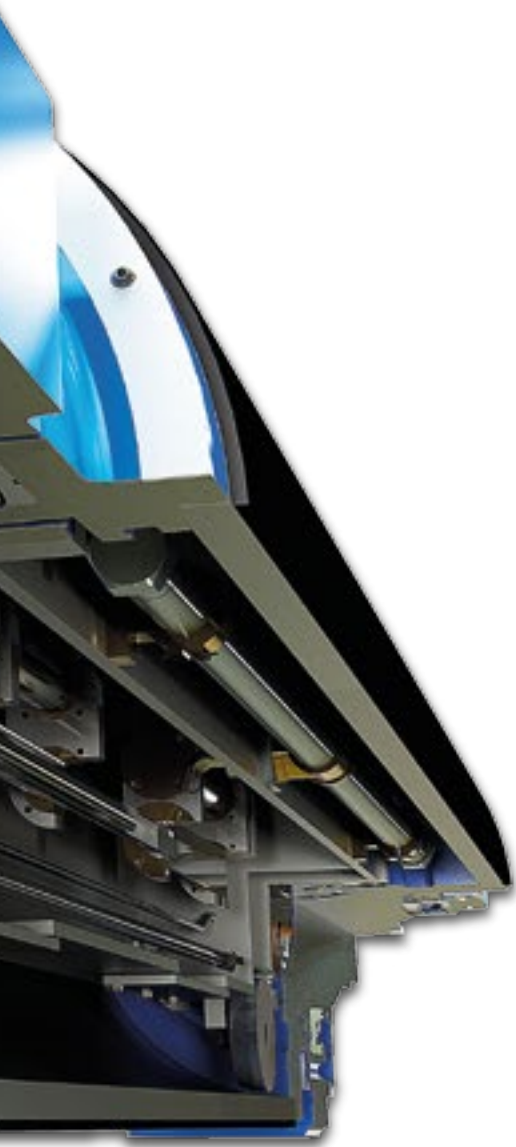
Design

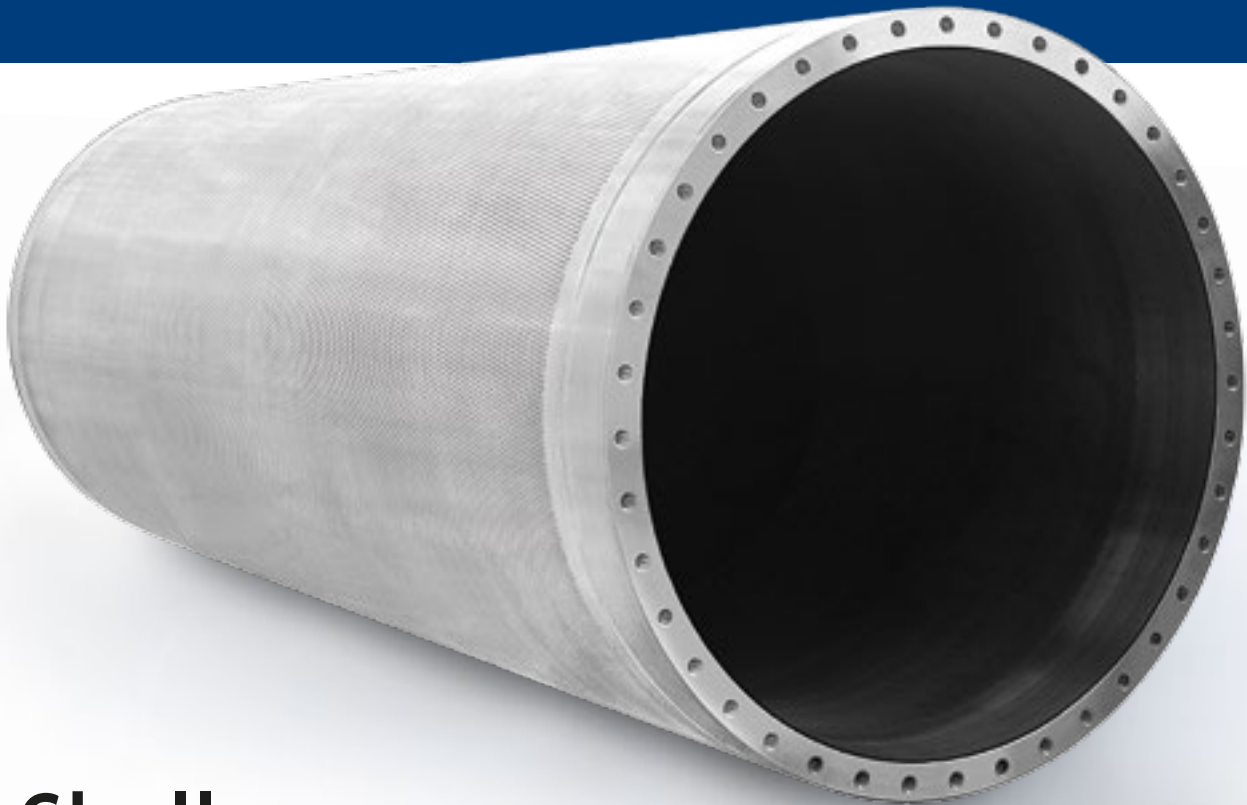
Specific design for Suction Couch Rolls

Driven, with vacuum outlet at tending side

It features a simple yet efficient design with shell running over outer ring of tending side roller bearing

Grease lubrication





Shell

Suction Rolls

Built in Duplex Stainless Steel

Material with high content of chromium and nitrogen, and often molybdenum. Due to this material components, it offers good resistance to localized and uniform corrosion

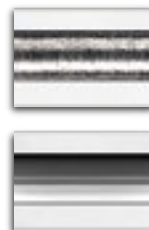
The duplex microstructure contributes to the high crack resistance caused by stress corrosion. The high yield stress of duplex steel also implies high fatigue strength

International quality

We use tubes supplied by Outokumpu, a company located in Avesta, Sweden, and since 1973 has already produced more than 2.500 hot rolled pipes used in the manufacturing of Suction Rolls in Duplex Stainless Steel

Drilling the Shell

Drilling by the gun-drilling process



The gun drilling process results on higher quality holes finishing when compared to conventional drilling

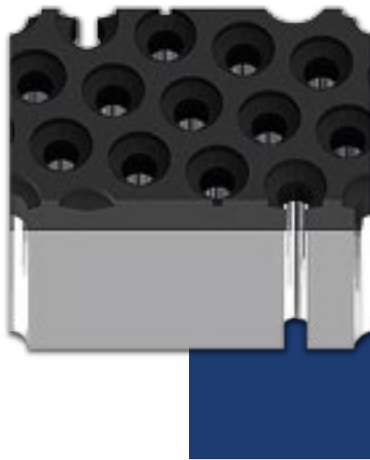
Images provided by Outokumpu



Shell cover options

Rubber

Rubber or polyurethane



- through drilling
- chamfers

Suction Couch Roll
Transfer Roll



- through drilling
- blind drilling
- grooves

Suction Press Roll



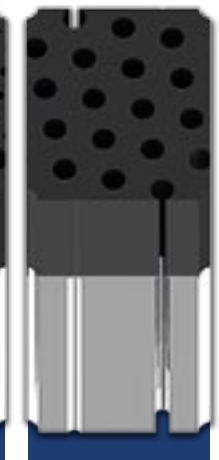
- through drilling
- grooves

Suction Press Roll



- through drilling
- blind drilling

Suction Press Roll



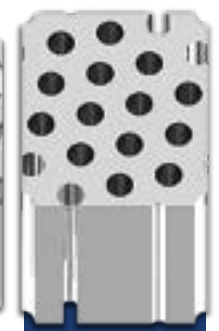
- through drilling

Suction Couch Roll
Suction Pick-up Roll
Suction Press Roll



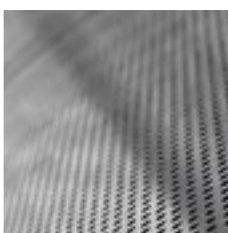
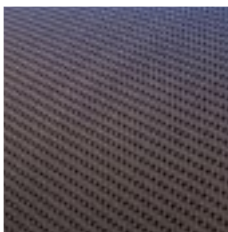
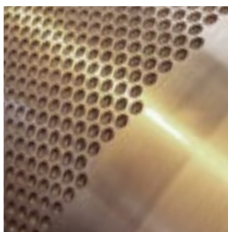
Non-covered Shell
with
- through drilling
- chamfers

Suction Couch Roll
Transfer Roll



Non-covered Shell
with
- through drilling

Suction Pick-up Roll



Supply limits

Diameter	Face length	Thickness
500 - 2.000 mm	up to 12.000 mm	30 - 105 mm

Working speed: up to 2.200 m/min

STOCK PREPARATION line





Hidrapulpers

Application

Pulp and miscellaneous broke pulping in the initial process phase

Specific rotors to operate with high and low consistencies, in continuous process or in batches

Design

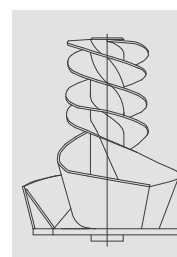
Rotors dimensioned to reach the ideal ratio between pulping efficiency and energy saving

Maintenance

System allows easy gap adjustment between the rotor and the screen as rotor wear increases

Capacities

Defined according to each application and operating regimen (in batches or continuous)





Screening Drums



Application

Used during the final stage of contaminant elimination in the pulping process

Design

Drum fully made of Stainless Steel

Drive via electric gear motor directly coupled to the drum shaft

Dimensioning

Our Technical Department carries out the screening drum dimensioning according to the characteristics of each application

Horizontal Screeners

HDD Series

Application

Operate at the outlet of high-consistency pulpers for initial decontaminant screening

Operation

Operate continuously or per batches

The flow control valve system allows tight equipment operation



High-Consistency Centrifugal Separators

Application

Remove heavy impurities such as stones, sand, staples and other metal particles by making use of centrifugal force

Operate with consistencies of up to 4.5%

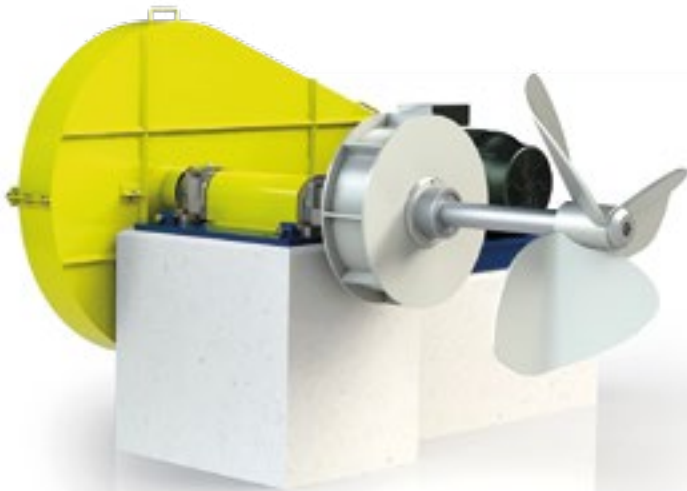
Design

Inlet head with ceramic resin cover, for higher abrasion resistance

Operate with automated heavy reject boxes and dilution system, which allow operation without any operator intervention and minimum fiber losses



HA Series Agitators



Installation

Conventional installation on concrete or metal bases. Metal bases may be supplied along with the agitator

To be installed in concrete or metal chests

Application

Operate with consistencies of up to 5.0 % in vertical chests, and of up to 5.5 % in horizontal chests



HAC Series Agitators



Installation

Cantilever installation concept eliminates the need for bases, resulting in reduced space requirements and easier installation

To be installed in concrete or metal chests

Application

Operate with consistencies of up to 5.0 % in vertical chests, and of up to 5.5 % in horizontal chests



Thickener Washers

Application

Removal of mineral loads, ashes and ink particles contained in the stock, with minimum fiber losses

Particularly recommended for sanitary papers, the quality of which is affected by the presence of mineral loads

Efficiency

Proven efficiency in the process, obtaining ash contents below 4%; approximately 2% in average



Low-Consistency Centrifugal Separators

Application

Removal of lightweight impurities in low-consistency systems, by making use of centrifugal force

Materials

Bottle-type enclosure made of highly abrasion-resistant polyurethanes, with 600 LPM individual capacity

As an option, tips may be made of ceramics, for higher abrasion resistance

Installation

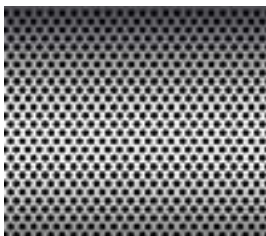
Installed in batteries of 3 or 4 stages, depending on the application and production capacity, designed to operate with consistencies of up to 1.2%

An automated reject box is installed in the last stage, allowing continuous operation without any operator intervention





Screen Baskets and Perforated Plates



Application

Suitable for miscellaneous equipment of different brands and designs

Manufacture

High-precision perforation process under strict quality control, ensuring excellent finishing quality

Perforation process

Process allows the use small diameter drilling in high-thickness plates

Dimensioning

Our Technical Department provides guidance regarding the ideal screen applications, optimizing drilling hole diameters and open areas according to each application



Refiners

Quality

Refiners widely acknowledged by the market due to their quality and efficiency

Extended refiner useful life due to high mechanical ruggedness and all parts in contact with the pulp made in Stainless Steel

Low operational cost, and fitted with electronic protections for increased operator safety

Excellent refining performance with assisted control of the refining energy used, via a PLC programmed for this application

Application

Equipment designed for applications with low consistency (up to 6%) and able to operate in stock preparation or in Approach Flow systems. Any kind of raw material can be used (Short and Long Fiber Virgin Pulp, recycled material, and others)

Spare parts

We supply all spare part items required for the maintenance of our refiners

DD 20" Refiner

Production: 50 ton/day



DD 26" Refiner

Production: 100 ton/day





HRT 34 EcoFiber Refiner

Quality

New concept in low-consistency refiners, designed for optimized electric power use and improved fiber treatment

Design

Fast plate change device, resulting in increased operator safety and time savings

New low-energy intensity discs, for improved fiber treatment and increased energy savings

Fixed shaft and ribbed hub system

Stainless Steel-clad external rings in the refiner covers and body

Low cost maintenance





Refiner Plates

Quality

Welded through exclusive process of assembly per sector which allows high flexibility in the execution of different refining areas

Plates may be of one-piece or split types

Materials

Construction of special cold-rolled alloys submitted to heat treatment, resulting in higher abrasion resistance and stable cutting geometry throughout plate useful life

Customization

We develop solutions jointly with our customers, carrying out on-site surveys and developing designs for new refining areas according to different applications and needs



Low Energy Intensity Refiner Plates

With new blade configuration, these discs feature significantly improved refiner performance

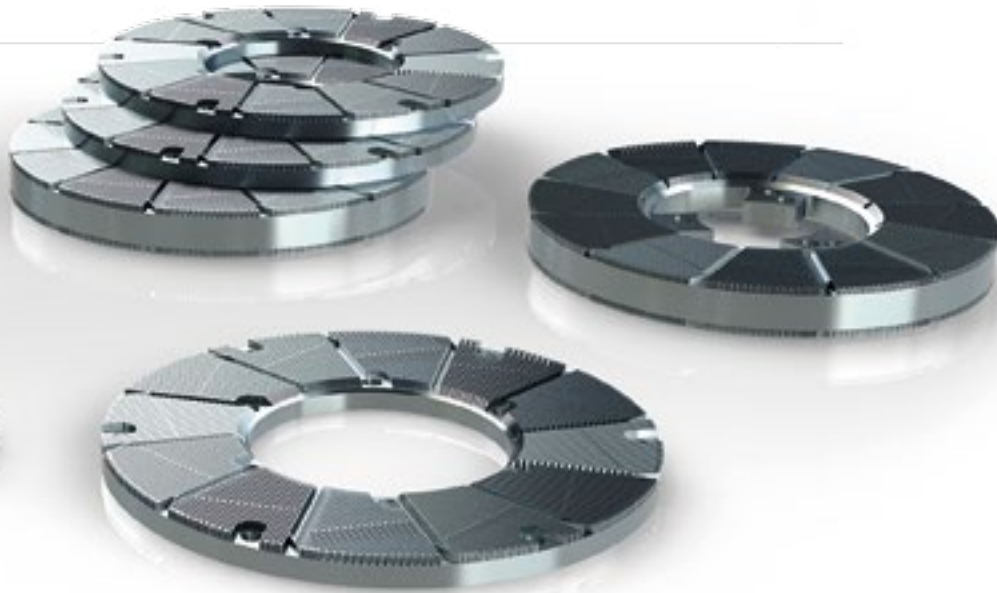
Benefits

Increased paper web flexibility and softness

Increased paper web bulk

Significantly reduced energy consumption

Increased wet paper web strength, resulting in improved operability



Pre-Refiner Plates

Plates for deflakers and pre-refiners of different sizes and brands offered in the market, with delivery times and quality control to fulfill the requirements of each application





Deflakers

Application

In stock preparation loops, designed to improve stock homogenization and fiber flake elimination

Energy savings

Due to a pressure-free operation, stock flows smoothly at low amperages

Design

Housings made of Stainless Steel and abrasion-resistant nodular Cast Iron

HD-1 Deflaker

Production: up to 50 t/d
Maximum consistency: 3-5 %



HD-2 Deflaker

Production: up to 100 t/d
Maximum consistency: 3-5 %





Tail Screen



Application

Used for continuous reject treatment with minimum fiber loss, and high efficiency

Possibility to operate as a high-consistency screener

Design

Designed to allow fast and easy maintenance

Produces rejects with minimum fiber loss

DVA Series Vertical Cleaners

Design

Low-pulsation centripetal cleaners, ideal for application in Approach Flow systems

Low energy consumption per processed ton



Vibrating Screens

Application

Secondary stock screening at paper and pulp mills

May be applied jointly with other pressure screens

Supply options

Screens with cylindrical holes, cylindrical-conical holes or grooves



VIB 1 Vibrating Screen

Filtering area: 0,52 m²
Flow rate (LPM @1.5%): 430 LPM
Operating consistency: 0.2 - 5 %



VIB 2 Vibrating Screen

Filtering area: 1,04 m²
Flow rate (LPM @1.5%): 690 LPM
Operating consistency: 0.2 - 5 %



VIB 3 Vibrating Screen

Filtering area: 1,6 m²
Flow rate (LPM @1.5%): 1,050 LPM
Operating consistency: 0.2 - 5 %

Stainless Steel Chests

Design

Manufactured according to the customer design or design developed by our team, according to each application

Safety

Chest design and construction in compliance with standards specific for each application

Dimensioning

Our Technical Department carries out chest dimensioning according to the requirements of each case

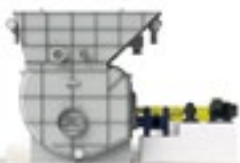
Pulpers

Application

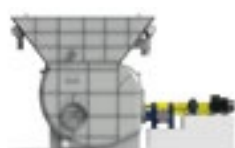
Pulping systems for all paper machine positions

Supply

We supply complete pulpers or individual pulping units to be installed in existing chests



Couch Pit



Press Pit

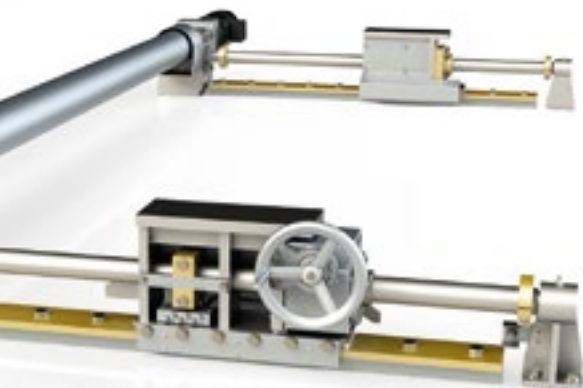


Size Pit



Reel Pit

ACCESSORIES line



Stock Injectors

Application

Installed in Approach Flow systems with the target to promote excellent stock homogenization at the fan pump line

Contribute improving stability for cross and longitudinal basis weight profiles

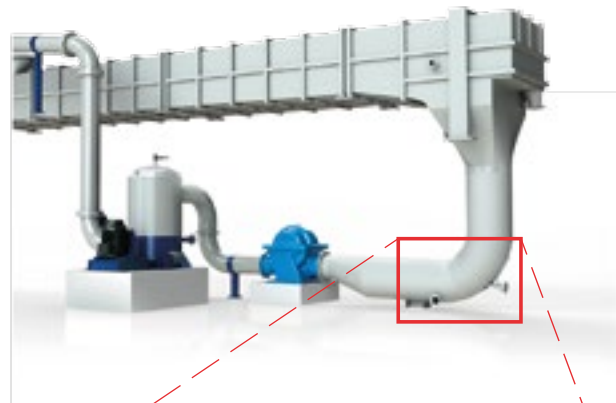


Auxiliary instrumentation for Stock Injector installation

Pressure transmitter

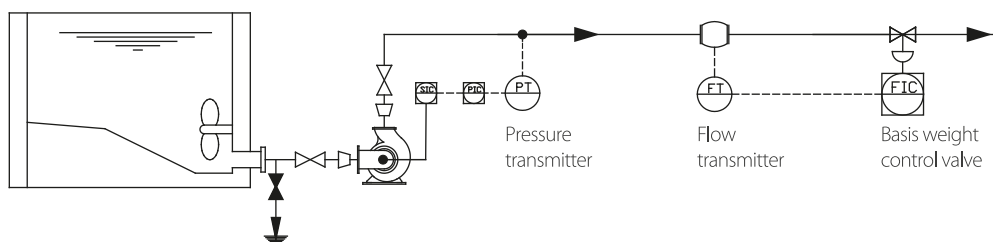
Basis weight control valve

Flow transmitter



Stock Injector installation diagram

Stock Injector installed in the Approach Flow piping



TISSUE

PAPER/
BOARD

Flow Vanes

Application

Installed in the convergence chamber in order to improve fiber distribution inside the Headbox resulting in improved paper web formation



TISSUE

PAPER/
BOARD

Deckle Straps

Design

Fully made of Stainless Steel

Fitted with vertical and horizontal adjustment for easy and fast settings

System allows reliable repositioning after each disassembling



Dewatering Elements

TISSUE

PAPER/
BOARD

Design

Robust construction to ensure stability at high speeds

Supply

Complete line with air/ water separators and all elements required for installation

Forming Boards

Hydrofoils

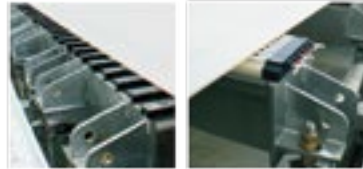
Vacuum Foils

Suction Boxes

Transfer Boxes

Cover options

UHMW or ceramics



Air/Water Separators for vacuum

TISSUE

PAPER/
BOARD

Models

AWS-2000

Max. vacuum flow: 2,000 cfm
Max. vacuum pressure: 6.5 mwc

AWS-3000

Max. vacuum flow: 3,000 cfm
Max. vacuum pressure: 6.5 mwc

AWS-4000

Max. vacuum flow: 4,000 cfm
Max. vacuum pressure: 6.5 mwc

AWS-6000

Max. vacuum flow: 6,000 cfm
Max. vacuum pressure: 6.5 mwc



TISSUE

PAPER/
BOARD

Showers

Supply

All showers required for tissue or paper/board machines

As an option, we also supply the filters and other elements required for installation, such as pumps and instrumentation



TISSUE

PAPER/
BOARD

Tail Cutter Shower

Design

Fully made of Stainless Steel

All internal parts are protected against water jets and debris

Fitted with device for position reading via encoder



Wire/Felt Guides

TISSUE

PAPER/
BOARD

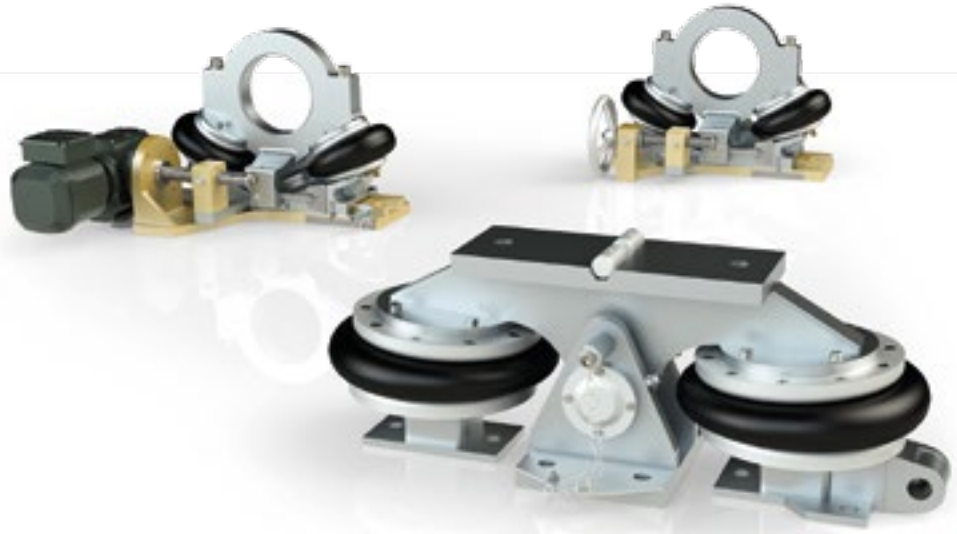
Models

Several models to fulfill different requirements for small and medium size machines

Specific design for Dry and Wet End application on paper machine

Efficiency

Designed to ensure quick response for felt/wire repositioning with simple and safe operation



Palms and Alarm Devices

TISSUE

PAPER/
BOARD

Design

Palms and Alarm Devices are extremely efficient providing quick response and ensuring a safety felt/wire run operation



TISSUE

PAPER/
BOARD

Felt/Wire Stretchers ST-1



Design

Designed for high speed machines

Specific design for Dry and Wet End application on paper machine

Seam straightener with independent drive and with fine system for accurate position adjustment

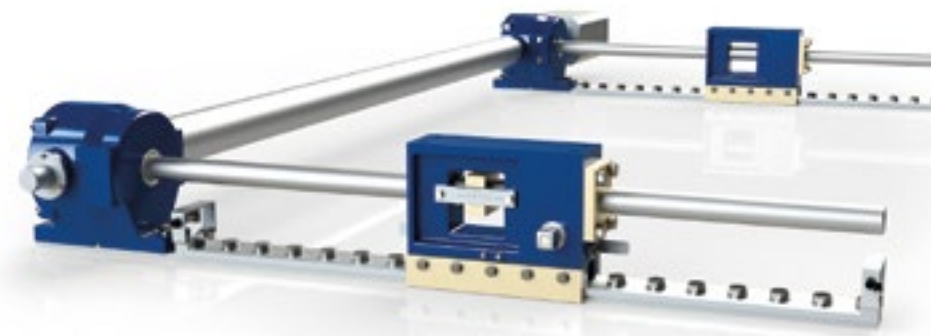
Manual or electrical or pneumatic drives

Installation for any paper machine position

TISSUE

PAPER/
BOARD

Felt/Wire Stretchers ST-2



Design

Designed for medium and low speed machines

Specific design for Dry and Wet End application on paper machine

Seam straightener with independent drive and with fine system for accurate position adjustment

Manual or Electrical or Pneumatic drives

Installation for any paper machine position

Doctors

Models

For all applications in Tissue or Paper/Board machines

Design

Fixed or oscillating design with standard or special (DST) blade holders

Robust doctor back ensures perfect operation

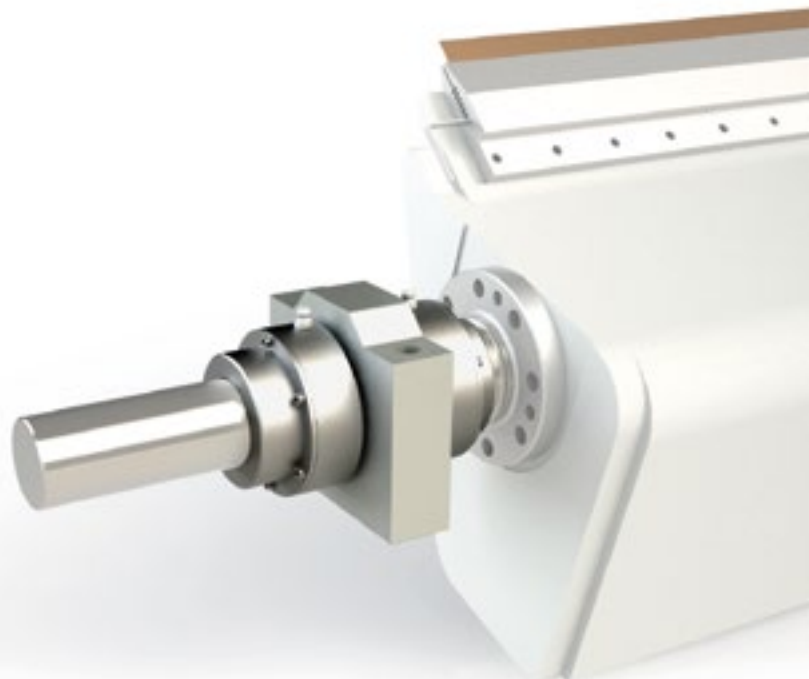


Oscillating Bearings for Skinning/Creping/Cleaning Doctors

TISSUE

Design

Oversized ball bearings ensure smooth and precise oscillation for extended useful lives for all components and increasing doctor efficiency



PAPER/
BOARD

Double Doctors



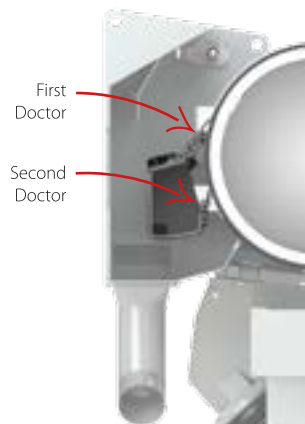
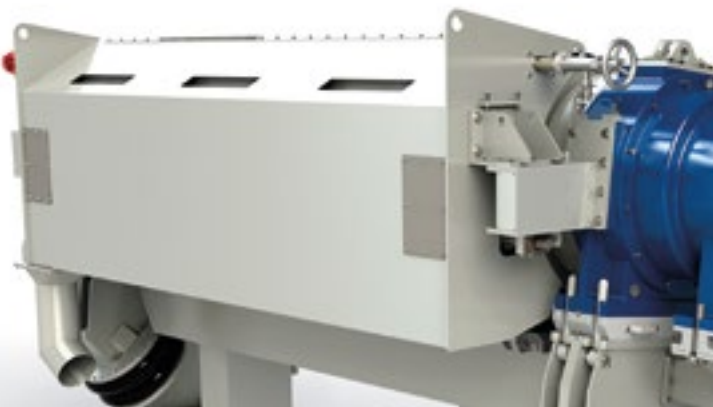
Design

Robust doctor back ensures stiffness and stability during operation

Fixed or oscillating design with standard or special (DST) blade holders

TISSUE

Water Saveall with Double Doctor for Suction Rolls



Improves significantly the press efficiency increasing the water removal from Suction Roll surface reducing paper web rewetting

Double doctoring also ensures a more homogeneous cross water removal improving the paper web moisture profile

Benefits

- Increases dryness at outgoing press nip
- Reduces paper web rewetting
- Improves moisture profile
- Low cost investment

Steam Boxes

TISSUE

PAPER/
BOARD

Function

Increase the web temperature reducing viscosity of the water contained in the fibers in order to make drainage easier resulting in increased production

Application

For paper/board machines is generally installed at Fourdrinier or at Press Section

For tissue machines is very useful operating along with pressure roll (dry-press roll or suction roll)



Devices

Can be supplied with cross profile control by zones allowing a better moisture profile adjustment

Benefits

Increases dryness at outgoing press nip

Allows reusing the flash steam from the Yankee Dryer and Hood resulting in energy savings

Low cost investment



TISSUE

PAPER/
BOARD



Uhle Boxes

Models

For all applications in tissue or paper/board machines

Design

For easier and faster slot cleaning or change of the cover strips, Uhle Box can be supplied with rotation device actuated via pneumatic cylinder



TISSUE



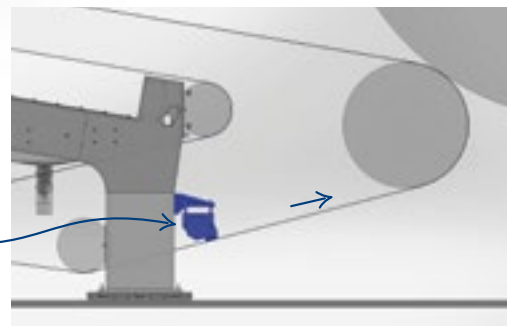
Holding Box

Application

Designed to equalize the moisture profile and increase the dryness content before the press nip

Material cover options

UHMW or ceramics



Holding Box installed before the press nip

Flexible Sealing Strips for Suction Rolls

VacuumFlex 1

TISSUE

PAPER/
BOARD

Characteristics

Material: rubber graphite

Energy savings:
friction coefficient (μ) = 0.12

Minimum water absorption
< 0.01%

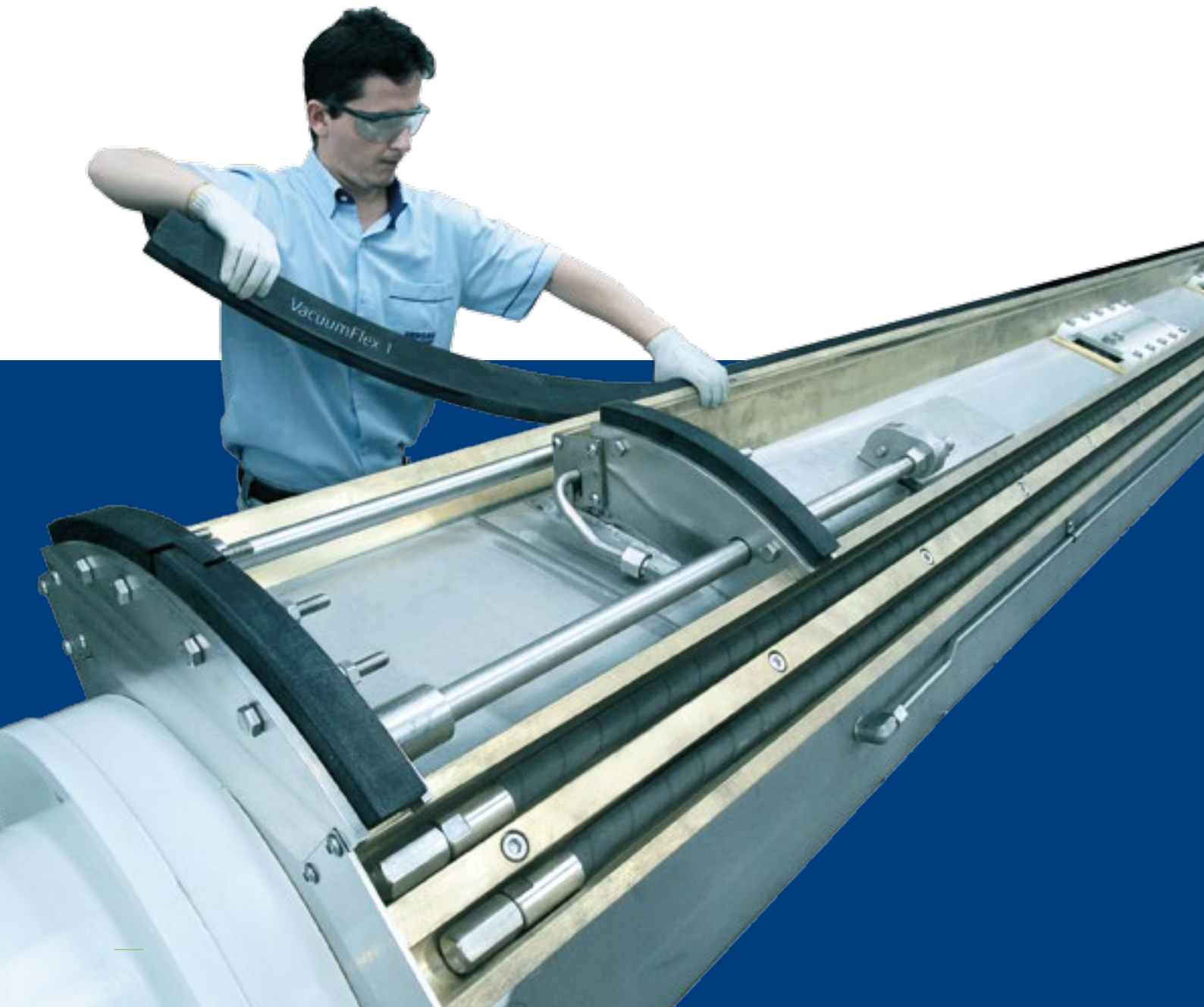
High flexibility

Minimum thermal expansion
with coefficient at 23° C:
< 1.5×10^{-5} .(1/°C)

High durability

Easy handling

Operating temperature: up to 120°C



Loading systems for Sealing Strips

VacuumFlex 1

Hoses

Hypalon synthetic rubber



Fittings

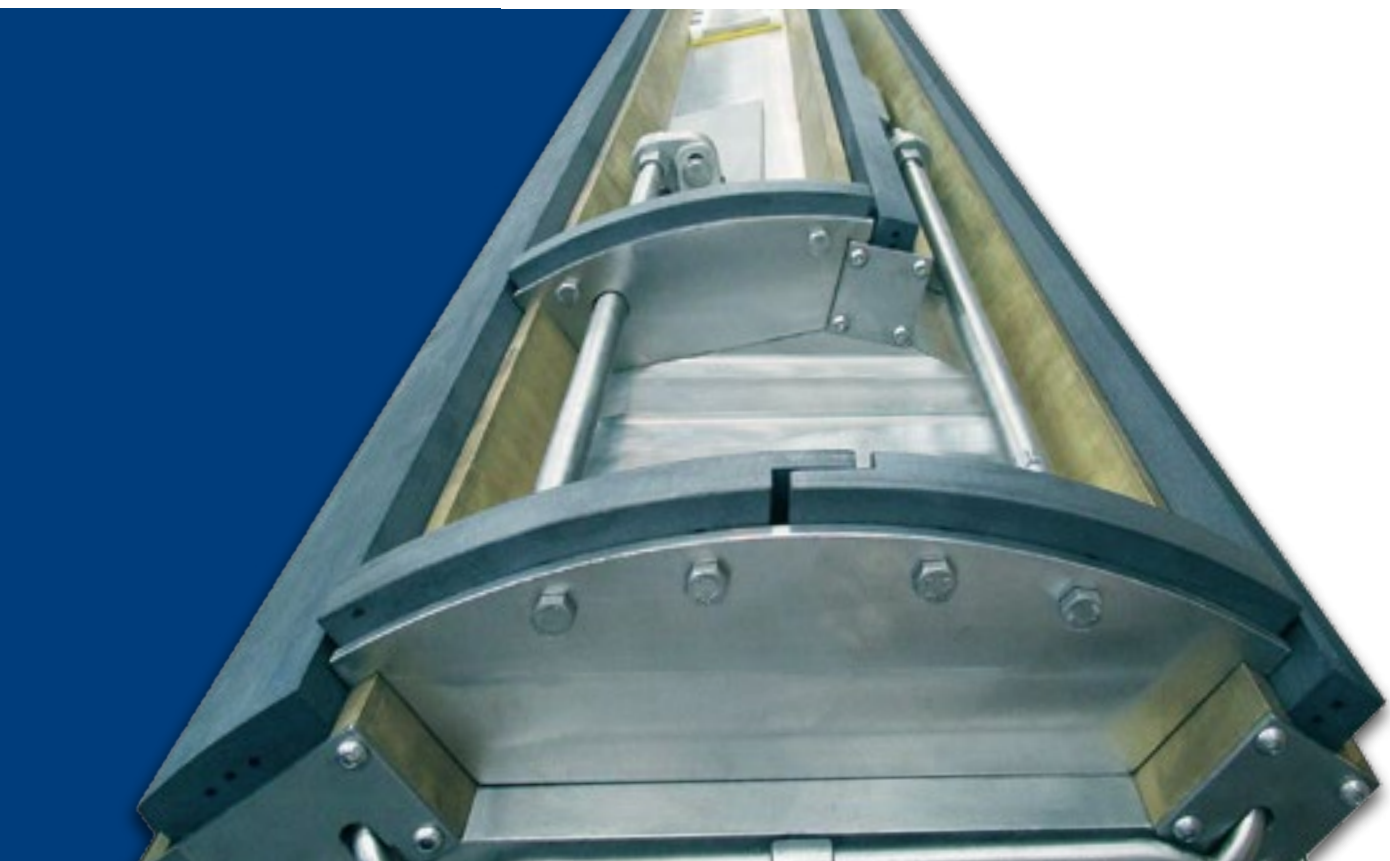
Stainless Steel



In addition to the full set of Sealing Strips for Suction Rolls, Hergen can also supply all the parts for loading system, such as: hoses, fittings and springs

Springs

Stainless Steel



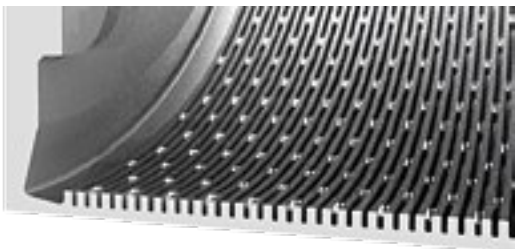


Yankee Dryers - Accessories

Turbulence Blocks and Bars

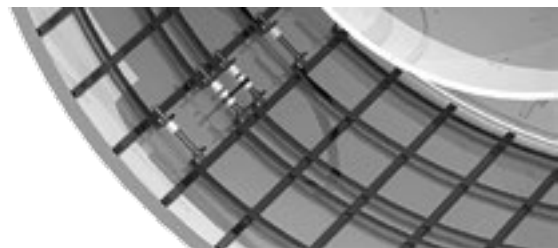
The turbulence bar target is to break the condensate film at dryer internal surface, thus increasing the convection between condensate and dryer

for
ribbed dryers



Turbulence Blocks installed on a ribbed dryer

for
smooth dryers



Turbulence Bars installed on a smooth dryer

Benefits

- Increase of drying capacity
- Improvement of drying/moisture profile
- Easy to install
- Low cost

Condensate Removal System

We manufacture and install condensate removal system for new and existing dryers

Benefits

Steady condensate extraction, resulting in:

Uniform temperature profile

Uniform cure/maintenance of the organic coating

High stability of the drying and creping process

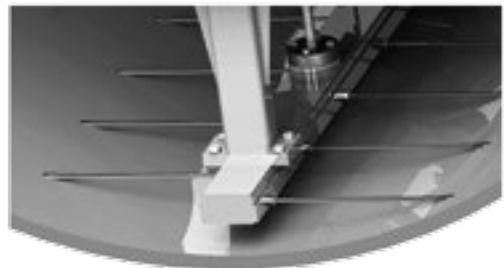
Drying capacity increase

Easy to adjust to dryers of any builder

for
ribbed dryers



for
smooth dryers



Head Insulation

The head insulation is very advantageous because it is a fast and simple procedure, which brings important benefits

The Yankee Dryer loses heat through its heads; this means a constant energy waste. Insulating the heads, it is possible to minimize this loss, resulting in considerable energy savings



Besides, the insulation also enhances operator safety, because the external temperature of the insulation is much lower

Benefits

Steam savings on the range from 3 to 5%

Safety for operators

Low cost



Steam and Condensate Systems

All elements for steam and condensate systems mounted in one skid

Benefits

Easy installation

Space optimization

Fast assembly

Safety during assembly and operation

Skid for Thermocompressor

Control the steam going to the Yankee Dryer

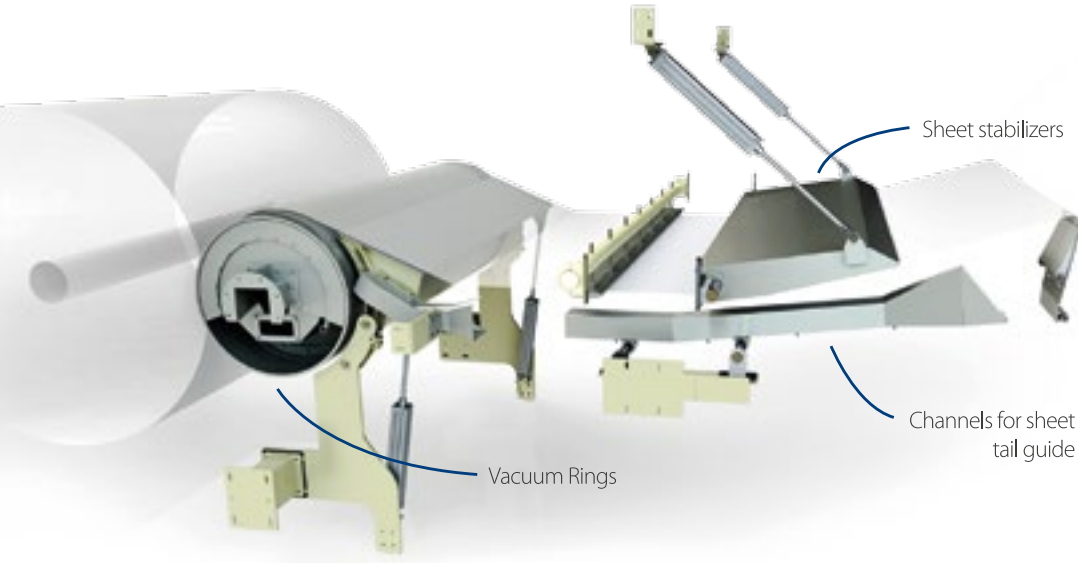


Skid for Separator Tank



TISSUE

Tail Threading Systems



Supply

- Vacuum Rings inside the reel drum
- Fixed and movable Sheet stabilizers
- Fixed and movable Channels for sheet tail guide
- Sheet Blowers

TISSUE

Glue Spray Nozzles



TISSUE

Shaft Pullers

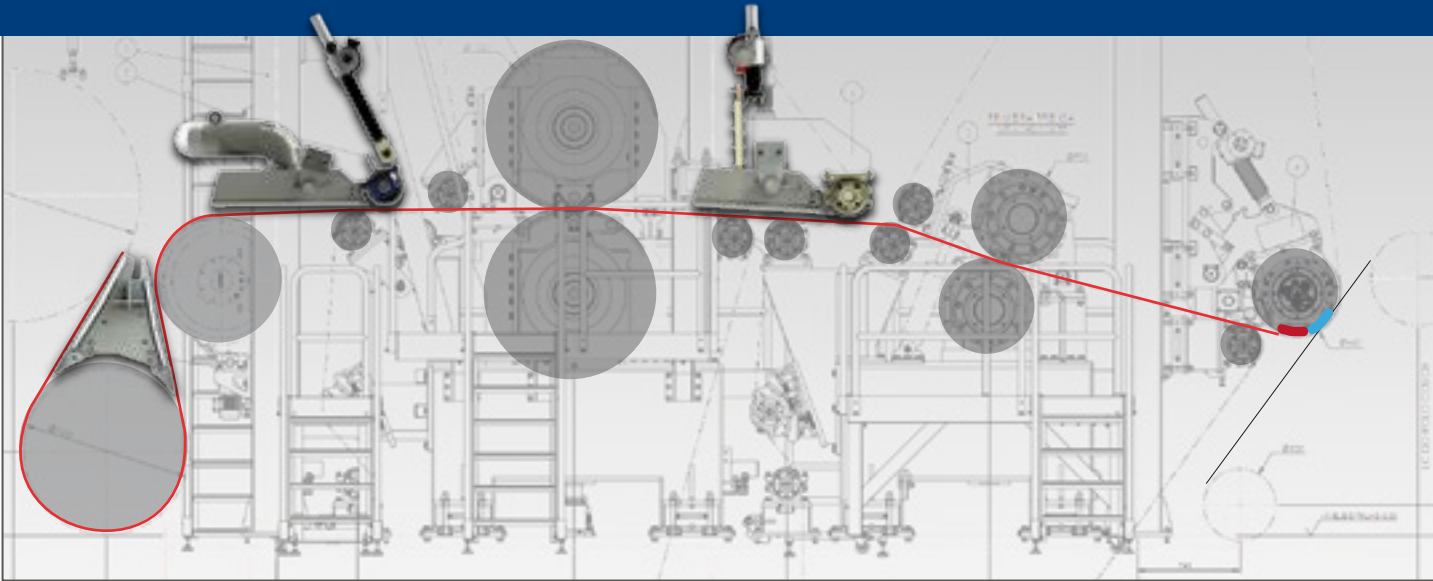
SMART PULLER



Shaft Puller system without Lifting Table where it is not necessary to move the jumbo roll

Shaft puller carriage is movable in horizontal and vertical direction allowing the shaft extraction regardless of the jumbo roll diameter

Simple and compact system with excellent cost and benefits



PAPER/
BOARD

Sheet Transfer System

in the Press Section

Design

Full sheet transfer systems with closed loop from Pick-up roll to first Dryer cylinder

Our engineering team collects data on-site and prepares the layouts to adapt new system to real circumstance

Benefits

Allows a safe operation during sheet transfer



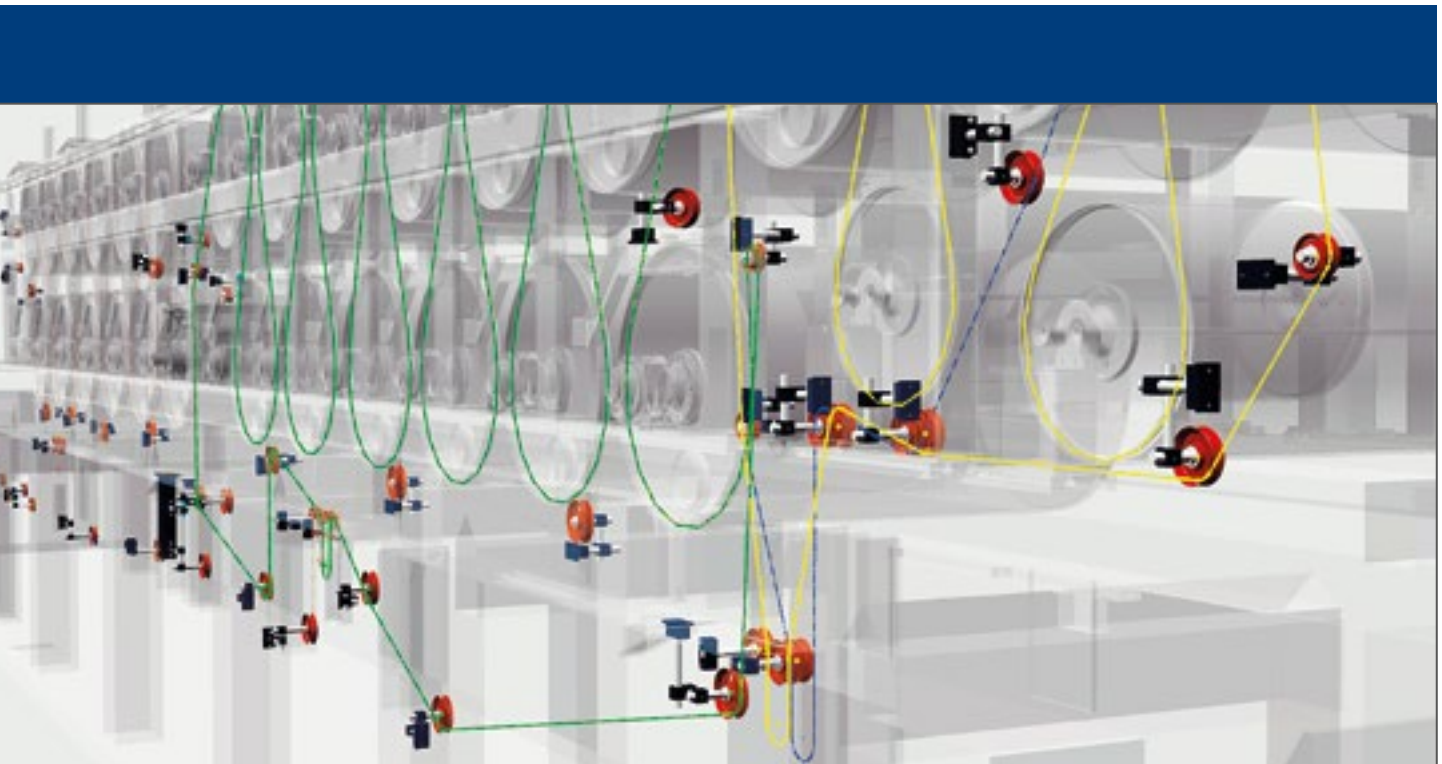
Improves machine runnability with downtime reduction due to sheet breaks

Losses reduction

Increases machine efficiency

Sheet quality (physical test) is improved due to reduced open draw on sheet run since fourdrinier to the dry section





Tail Threading System

Design

Complete tail threading systems are designed and supplied according to Customer requirements

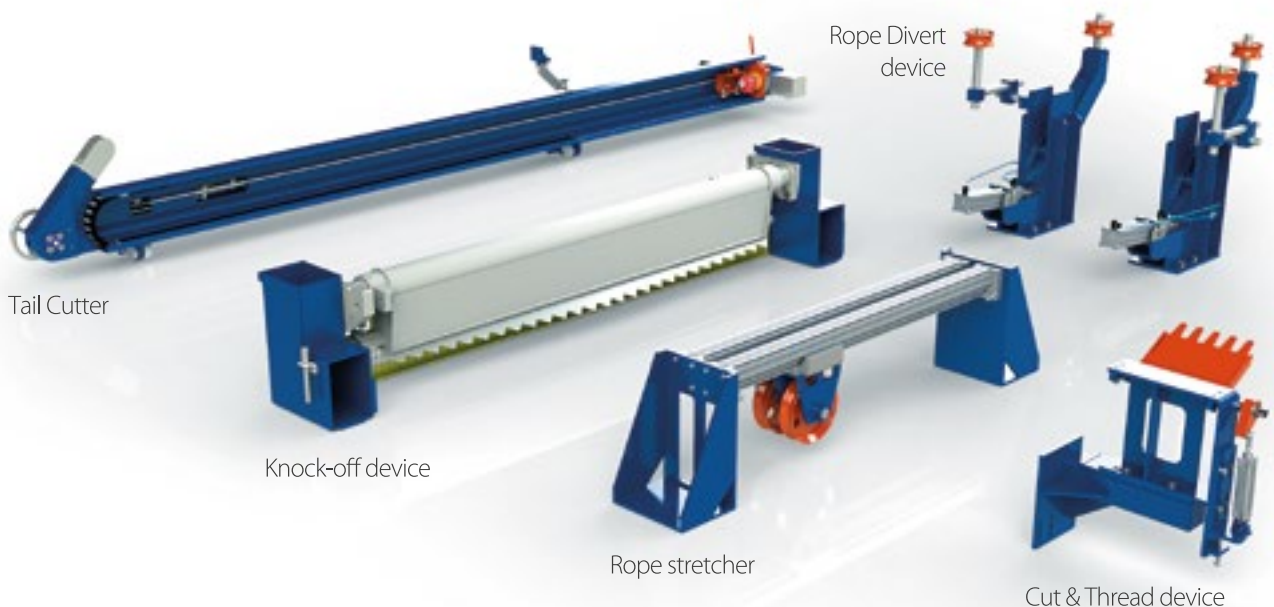
Benefits



Allow a safe operation during tail threading

Losses reduction

Increase machine efficiency



Tail Cutter

Knock-off device

Rope stretcher

Rope Divert device

Cut & Thread device

Turbulence Bars for Dryer Cylinders

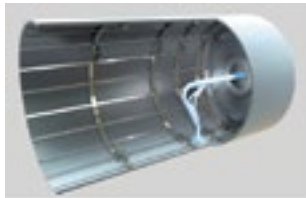
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Function

Destroy the condensate film created on the inner surface thus enabling higher heat transfer through convection between steam and the inner cylinder surface

Results

Increase drying capacity and improve cross moisture profile



Lubrication Units

TISSUE

PAPER/
BOARD

Design

All units are designed to ensure safe and adjustable lubrication for all points at machine

For grease and oil points

Excellent construction

Allow safe procedures for maintenance people





Walkways



Design

Designed in compliance with NR-12 Safety Standard

Special anti-slip floor

Swing modules

Movable modules

Construction

Fully made on aluminum

Special cross section ensure stiffness and excellent finishes

Benefits

Allow safe movement for operators

Fast and safe access to all machine positions

Adaptable design for rebuilds

Solutions for the paper industry

hergen.com.br
+55 47 3531 4400
hergen@hergen.com.br



Administration / Commercial: Avenida 7 de Setembro, 251, Centro, Rio do Sul, SC, Brazil, CEP 89160-903 phone +55 47 3531 4400
Engineering /Industrial Park: Rua Arnoldo Hoffmann, 35, Rainha, Rio do Sul, SC, Brazil, CEP: 89162-028 phone +55 47 3531 6800