



POLIMEK

DOCTORING SYSTEMS SPECIALIST

---

## SUMMARY

---

About us	3
Activities offered	4
Example of doctoring systems applications	6
Range of production	17
Suggestion for a correct doctor selection	18
Production facilities	20
Examples of production	22

---

## ABOUT US

---

With over 25 years of our technicians experience, **PolimeK** is able to design and manufacture any kind of doctor for paper & board, tissue and non woven applications.

In order to ensure success in all our projects we use the rule “ tailor made” , so that each installation is perfectly designed and developed to meet the needs of the customer.

The success of this policy is achieved through the highly skilled personnel and by using the latest equipment and production facilities.

Operating unit  
Via Monte Rosa 10/B  
28040 Paruzzaro (NO) ITALY

Registered office  
V.le F. Baracca 8  
28041 Arona (NO) ITALY

P.IVA  
02465310031

Tel.  
+39 0322 011353

[info@polimek.it](mailto:info@polimek.it)  
[www.polimek.it](http://www.polimek.it)




---

## ACTIVITIES OFFERED

---

- Visit to inspect and study the customer request on site
- Checking of existing application or machine basis for new projects
- Designing the cad file on site for a preliminary discussion with the customer
- Creating a project for new doctoring system
- Manufacture of the doctoring system
- Installation by Polimek experts or supervision by Polimek personnel whilst the installation is performed by customer's workforce
- Setting up and alignment of the supplied system
- Attendance of Polimek personnel during start-up phase
- Auditing of the existing doctoring systems

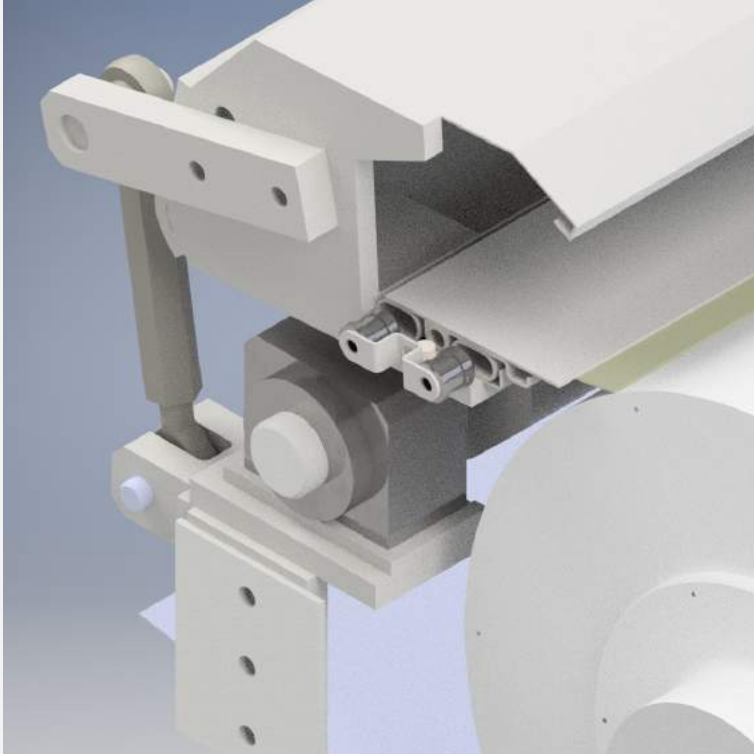
This involves inspection of the current doctoring arrangements and the compilation of a separate report

	A	B	C	D	E	F	G	H
1		PM21	YANKEE CYLINDER CREPING DOCTOR	Position nbr -02-		DOCTORING SYSTEM AUDIT	POLIMEK Srls via G Matteotti, 28 28045 Ivorio (NO) Italy info@polimek.it	
2								
3	ITEM	TYPE	INSPECTION	YEAR 2016 maintenance stop January 2016		YEAR 2017 maintenance stop January 2017	YEAR 2018	NOTE
4	Yankee condition	metalized	Ø 4572 face 6180 mm					
5	Doctor holder	Flexible	visual check	good condition		cleaned and reinstalled good condition		
6	Pressure plate		visual check	ok		ok		
7	Top Apron		visual check	ok		new		
8	Loadin hose	Ø45		ok		new		
9	Muonting plate	S/steel	visual check	no corrosion ok		no corrosion ok		
10	Blade sensor	IFB 3007- BPG/M/V4A	visual check	ok		ok		
11	Doctor blade	ceramic	85° bevel	120 mm		120 mm		
12	Stick-out			25 mm		25 mm		
13	Blade working angle	COLD WORKING T.	check at 600mm from Front Side 600 mm to Drive Side	F.S. 19.2°	D.S. 19.1°	F.S. 19.2° F.S. 17.5°	D.S. 19.1° D.S. 17.8°	
14	Blade loading		N.1 loading hose	2.5 N/mm		2.5 N/mm		
15	Support bearing	ball bearing SSAR 100/110	visual check	both replaced 2015 ok		both replaced 2015 ok		next changing 2020
16	Side sealing flange		visual check	ok		ok		
17	Hydraulic cilinders		visual check	ok		replaced hyd. hose D.5 L. 630 Ø12 ok		
18	Hyd. Cilinders joints	GE TXG3E	visual check	ok		replaced F.S. + D.S. front and rear joints ok		type of joint not appropriate
19	Oscillating system	elettromec.	SEW Eurodrive R87 DT9054/U	functionality ok		ok		
20	Grear motor		visual check	ok		ok		
21	Drive plate	stainless steel	visual check	ok		ok		
22	Rotating bearing		visual check	ok		greased ok		
23	Oil level			to be replaced on 2017 ok		replaced with type KLÜBEROIL GEM 1-220N		
24	Pneumatic valve	V63D4D7A XA090	visual check	ok		replaced		
25	Brackets		visual check	ok		ok		

The chart represent an example of a yearly inspection on a flexible creping doctor.

## EXAMPLE OF DOCTORING SYSTEMS APPLICATIONS

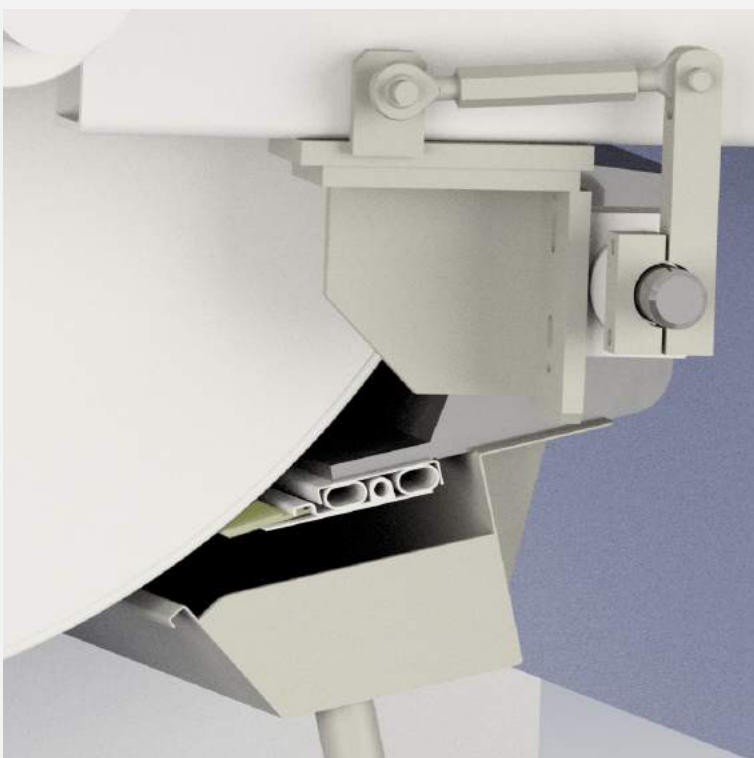
### Wire roll doctor with saveall tray



Flexible cleaning doctor

- Doctor holder type PFlex 200
- Non oscillating
- Saveall tray for water collection

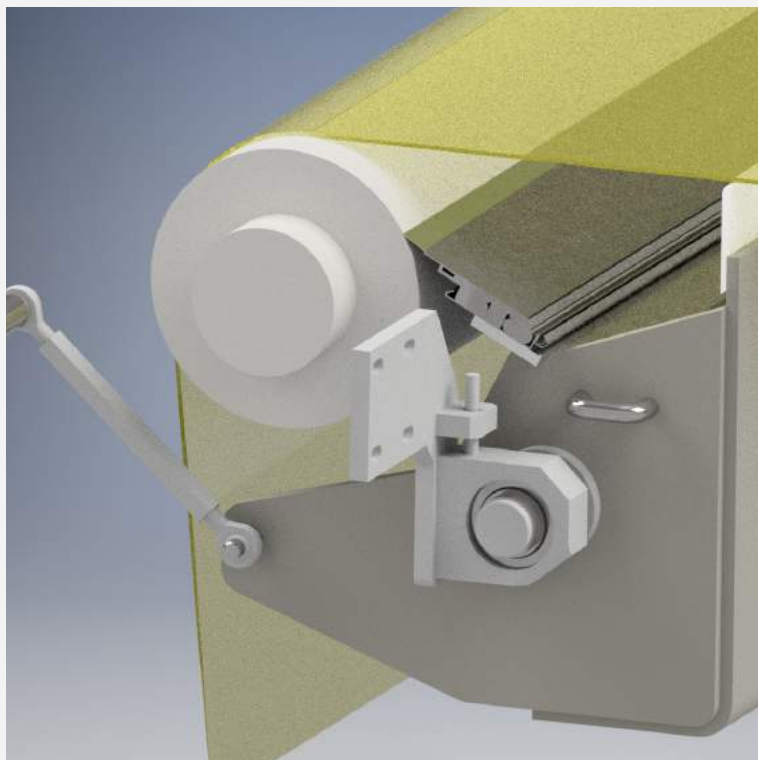
### Forming roll doctor



Flexible cleaning doctor

- Doctor holder type PFlex 200
- Non oscillating
- Saveall tray for water collection

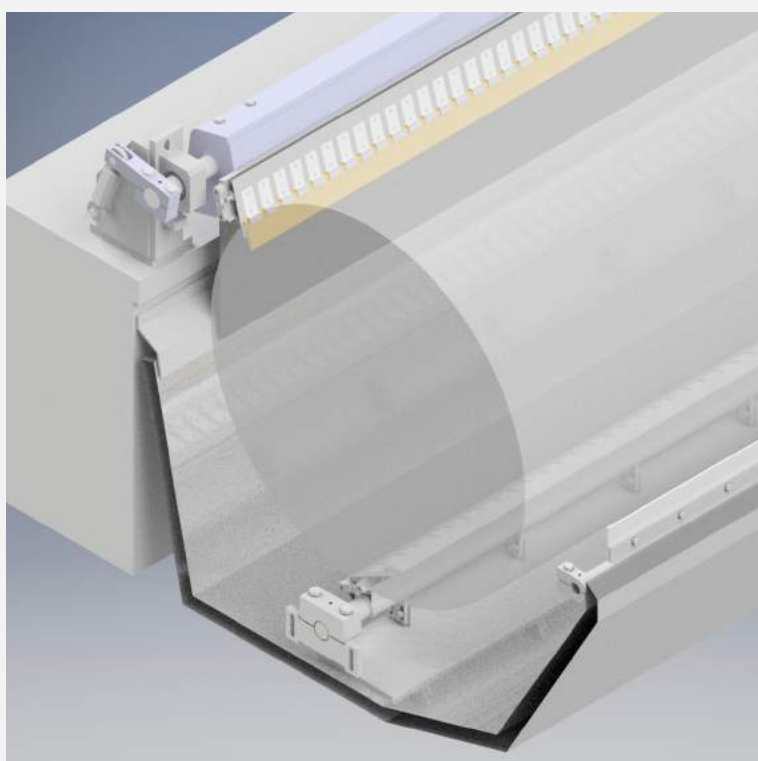
### Inner felt roll doctor



Flexible cleaning doctor

- Doctor holder type PFlex 300
- Non oscillating
- Saveall tray for water collection with internal heating system

### Couch roll



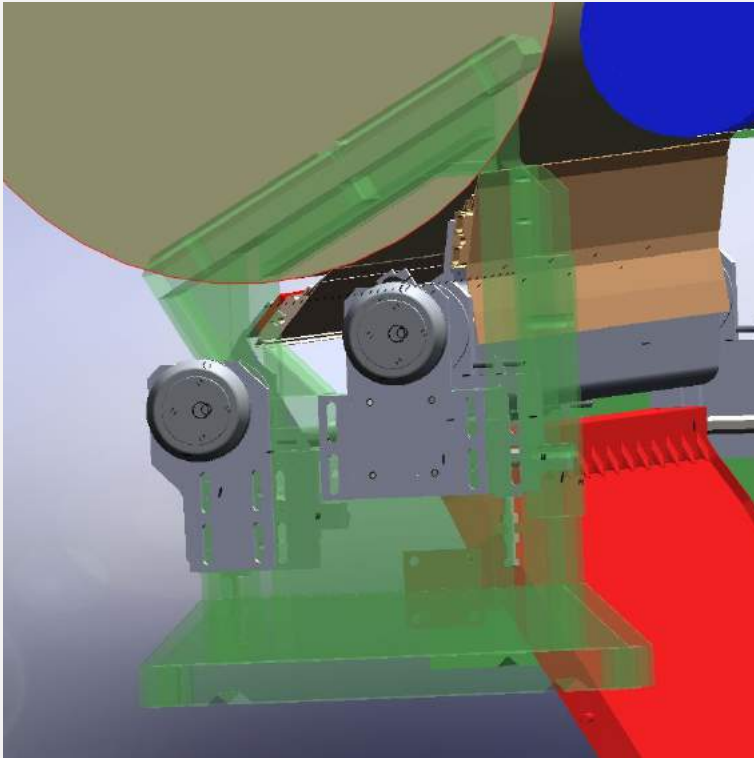
Flexible cleaning doctor

- Doctor holder type PFlex 200
- Non oscillating
- Saveall tray for water collection

Combination of double point cleaning



### Press section double doctor



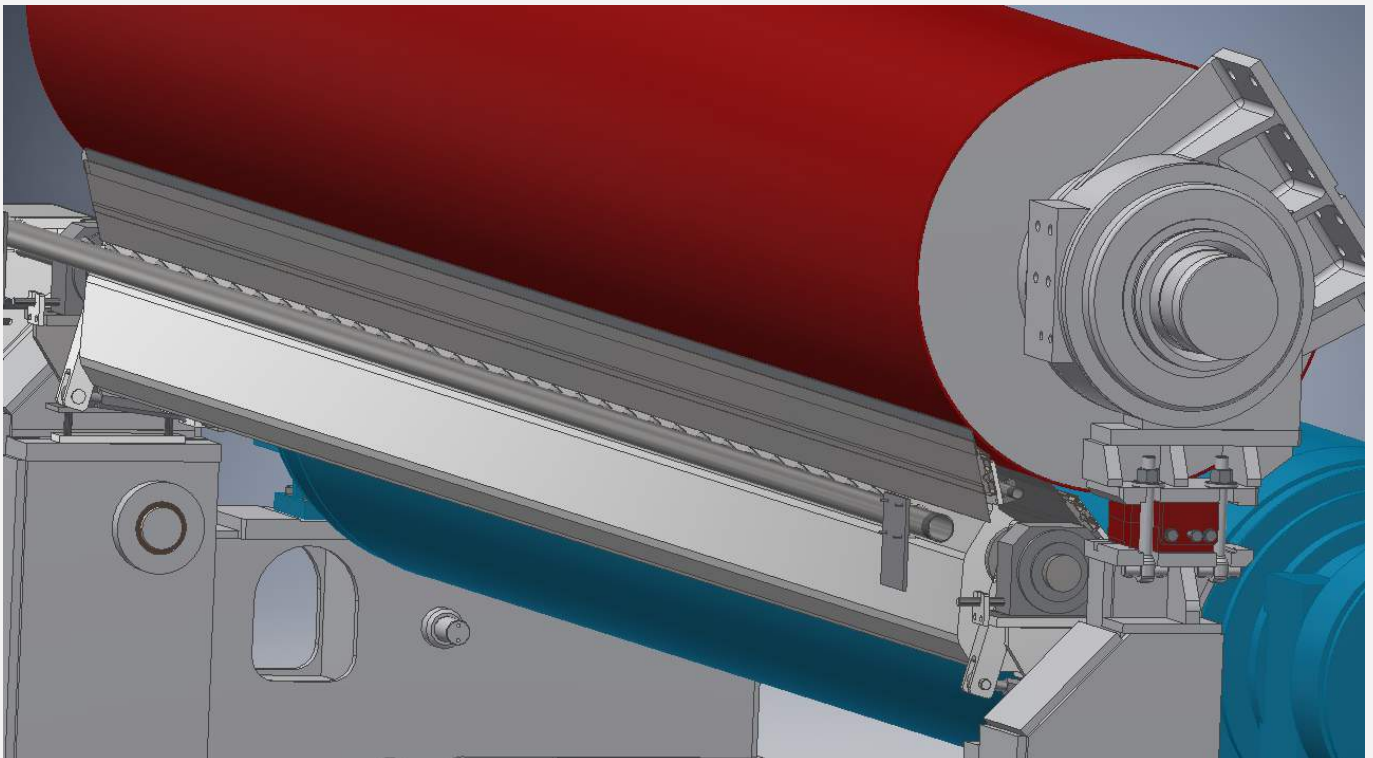
Flexible cleaning doctor

- Doctor holder type PFlex 301
- Pneumatic oscillating unit
- Double doctor with separate beams

Below

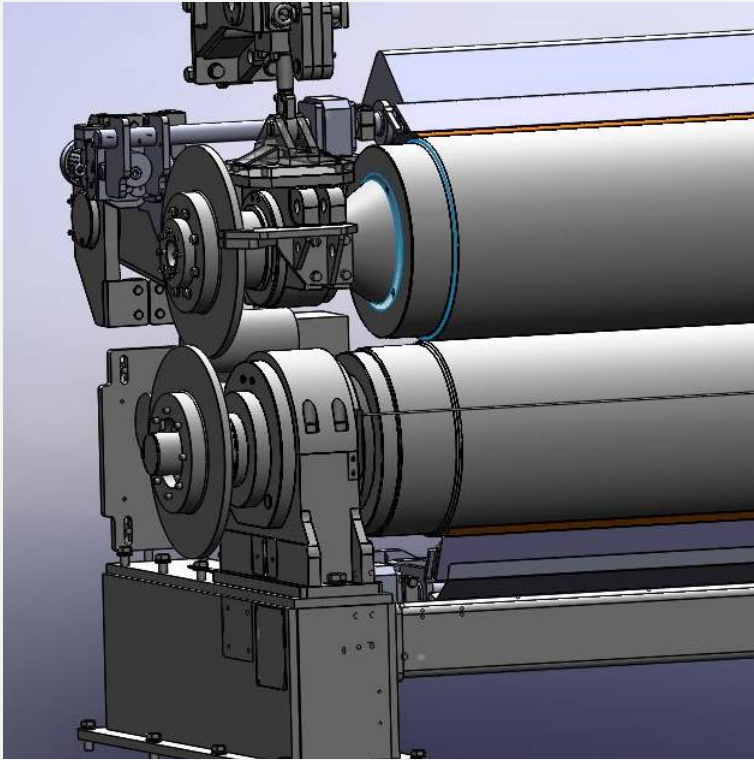
Flexible cleaning doctor

- Doctor holder type PFlex 500
- Electromechanical oscillation unit
- Double doctor with integrated beams





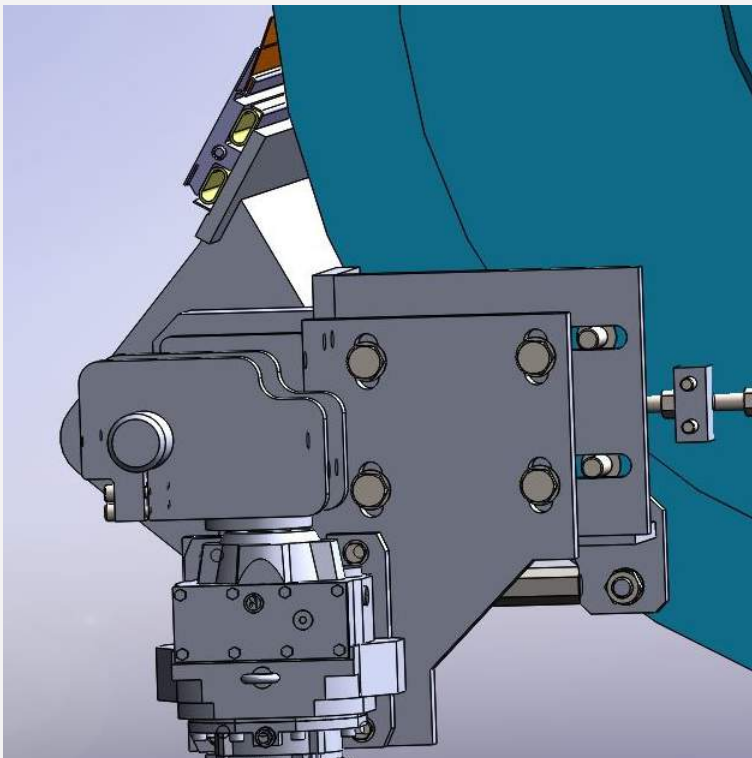
### Calander top and bottom doctors



Flexible cleaning doctor

- Doctor holder type PFlex 300
- Electromechanical oscillation unit
- Top and Bottom calander rolls

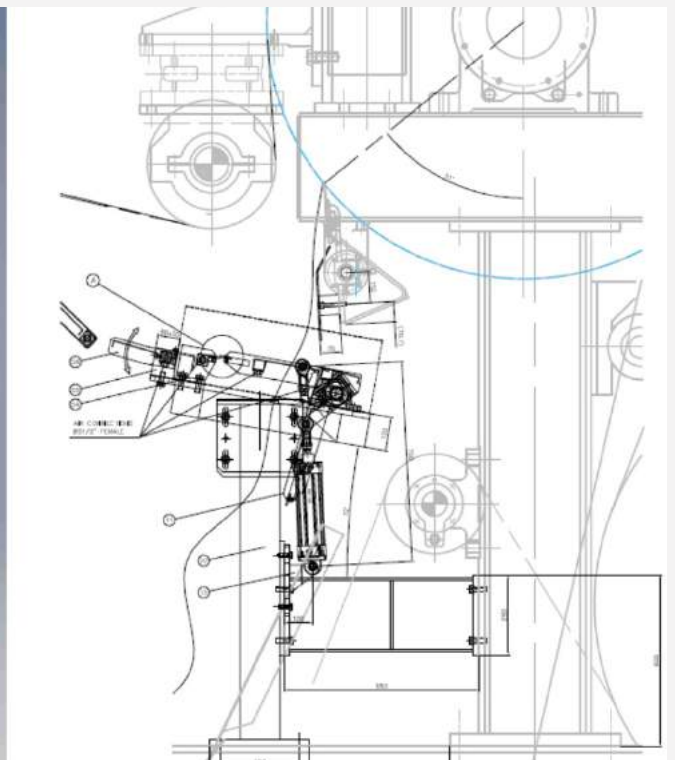
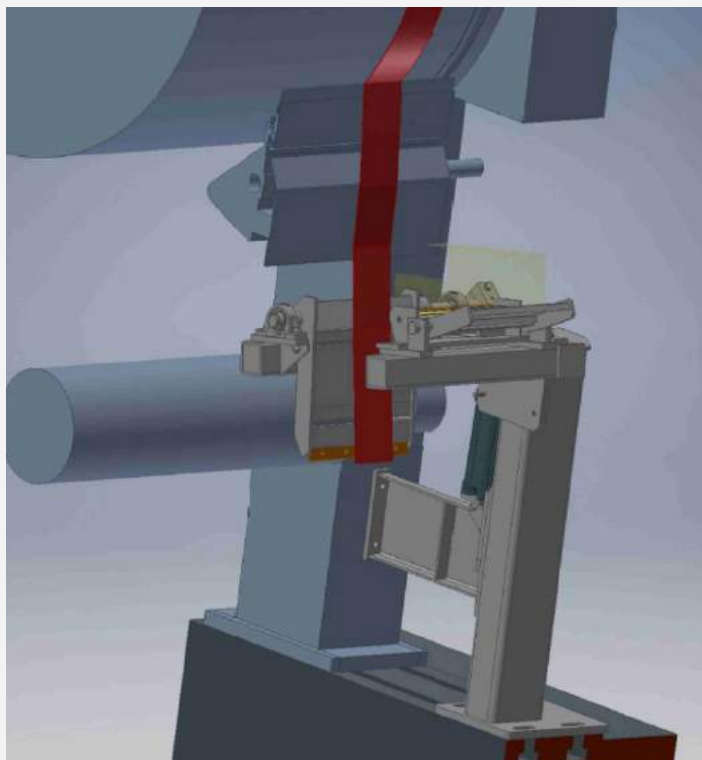
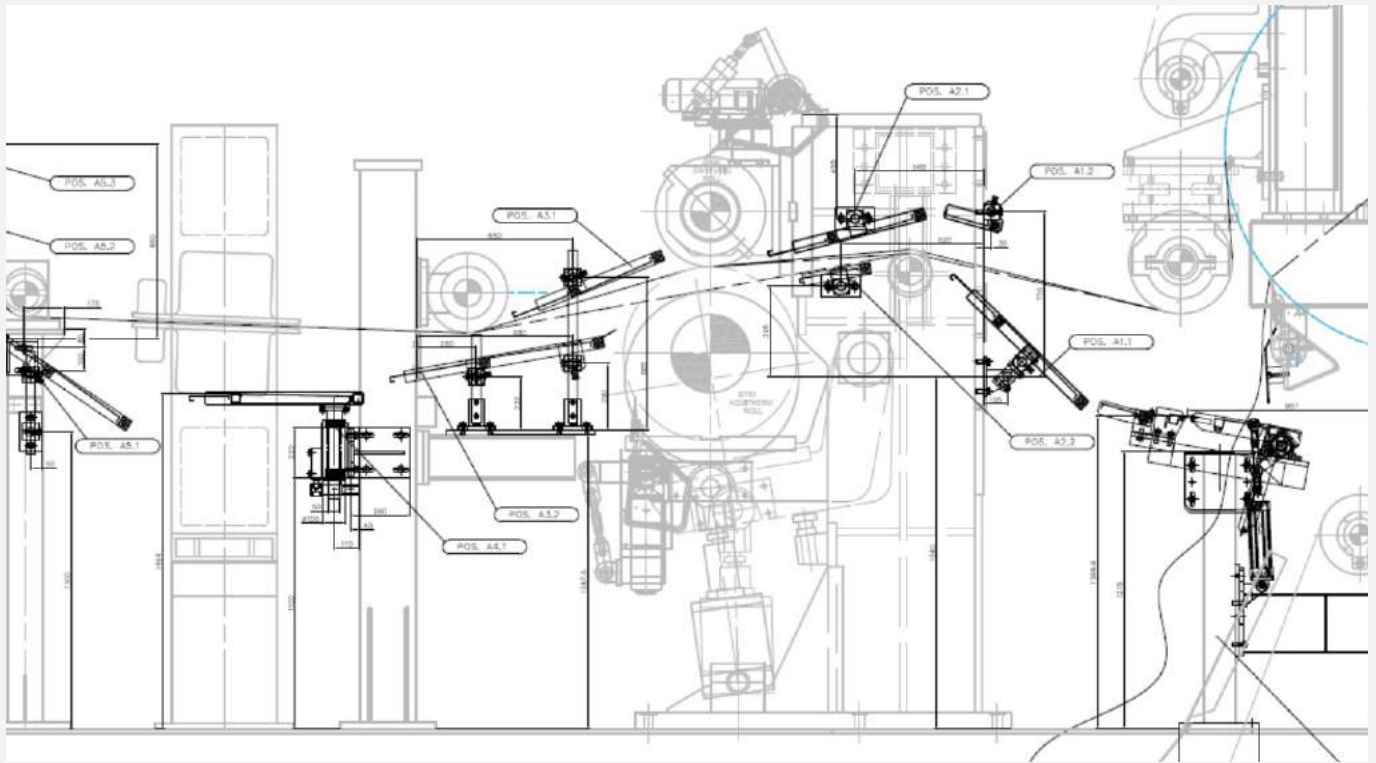
### Top dryer roll

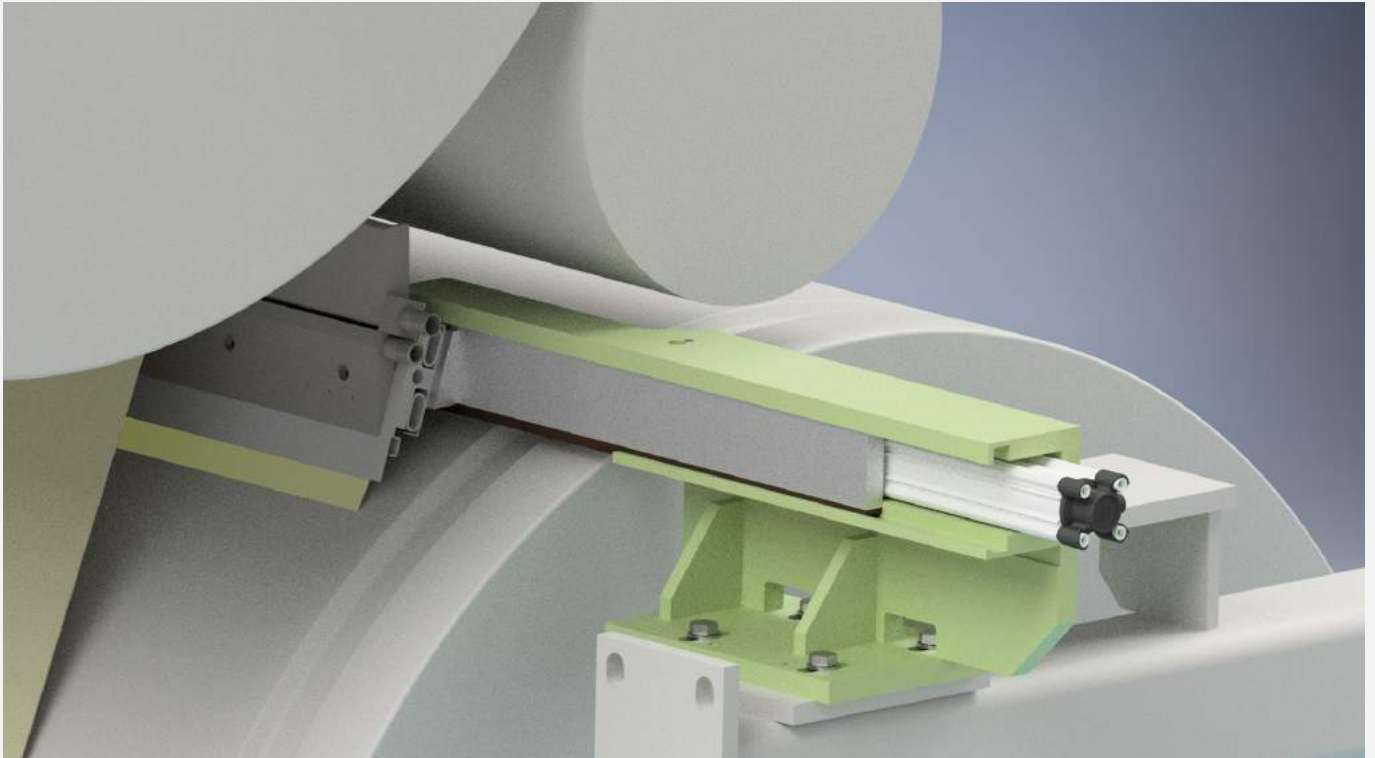


Flexible cleaning doctor

- Doctor holder type PFlex 300
- Electromechanical oscillation unit
- Last dryer application

### Tail threading and tail shooter systems



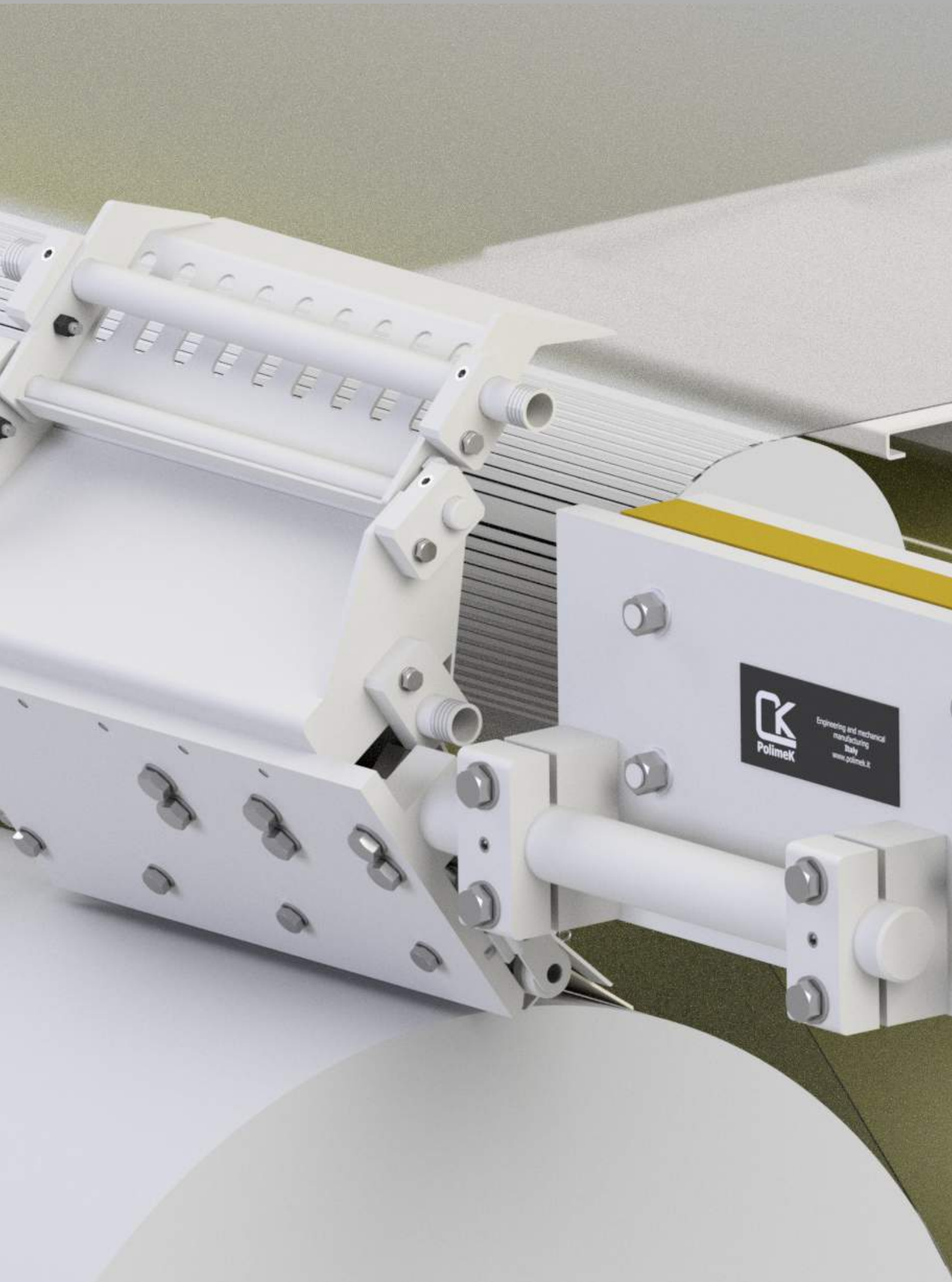


Different applications of tail feeding and tail cutting systems in the dryer section.

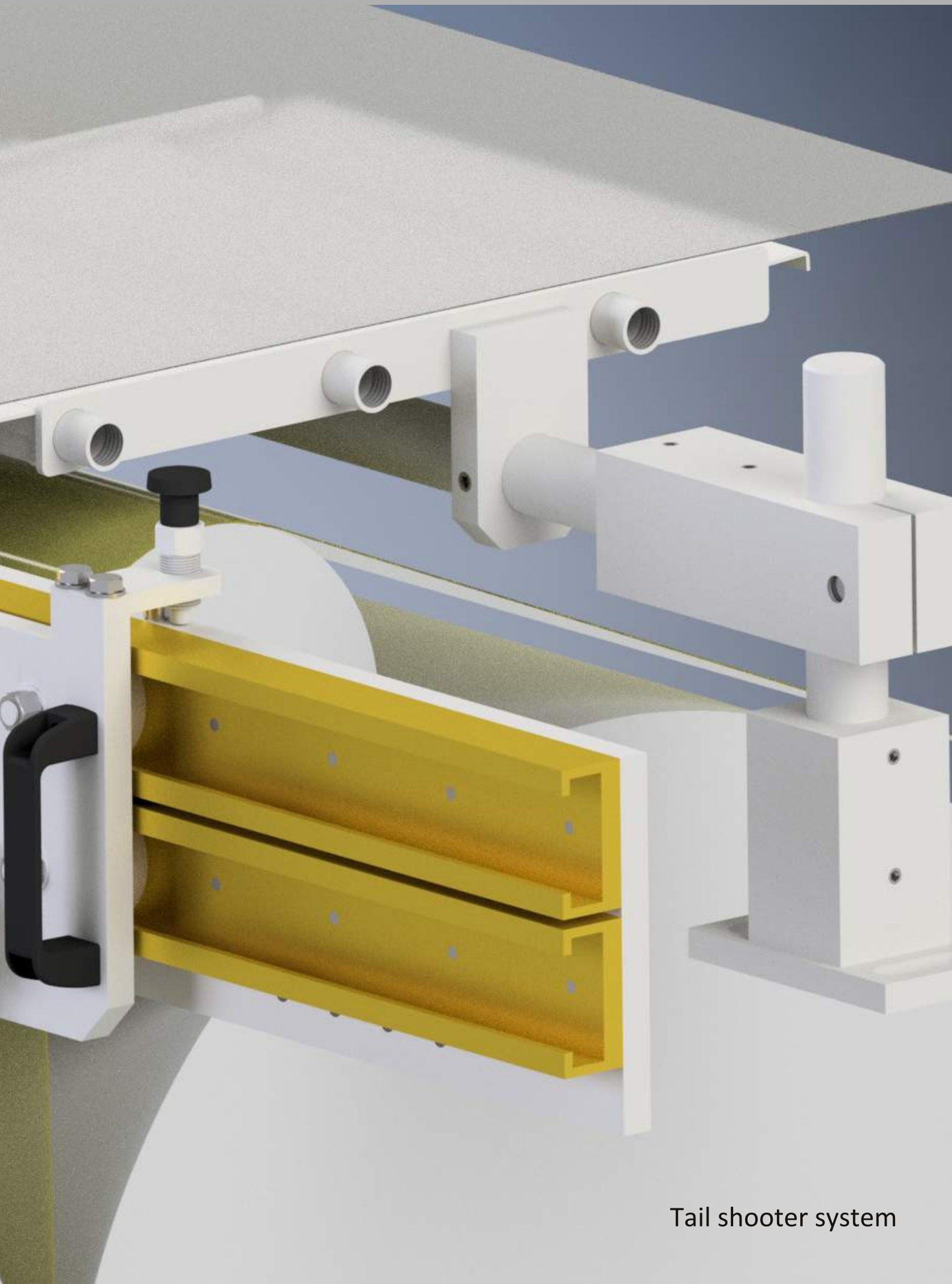
Doctor holder type                      PFlex 300

Different versions are available

- Fixed
- Manual
- Pneumatic
- Automatic

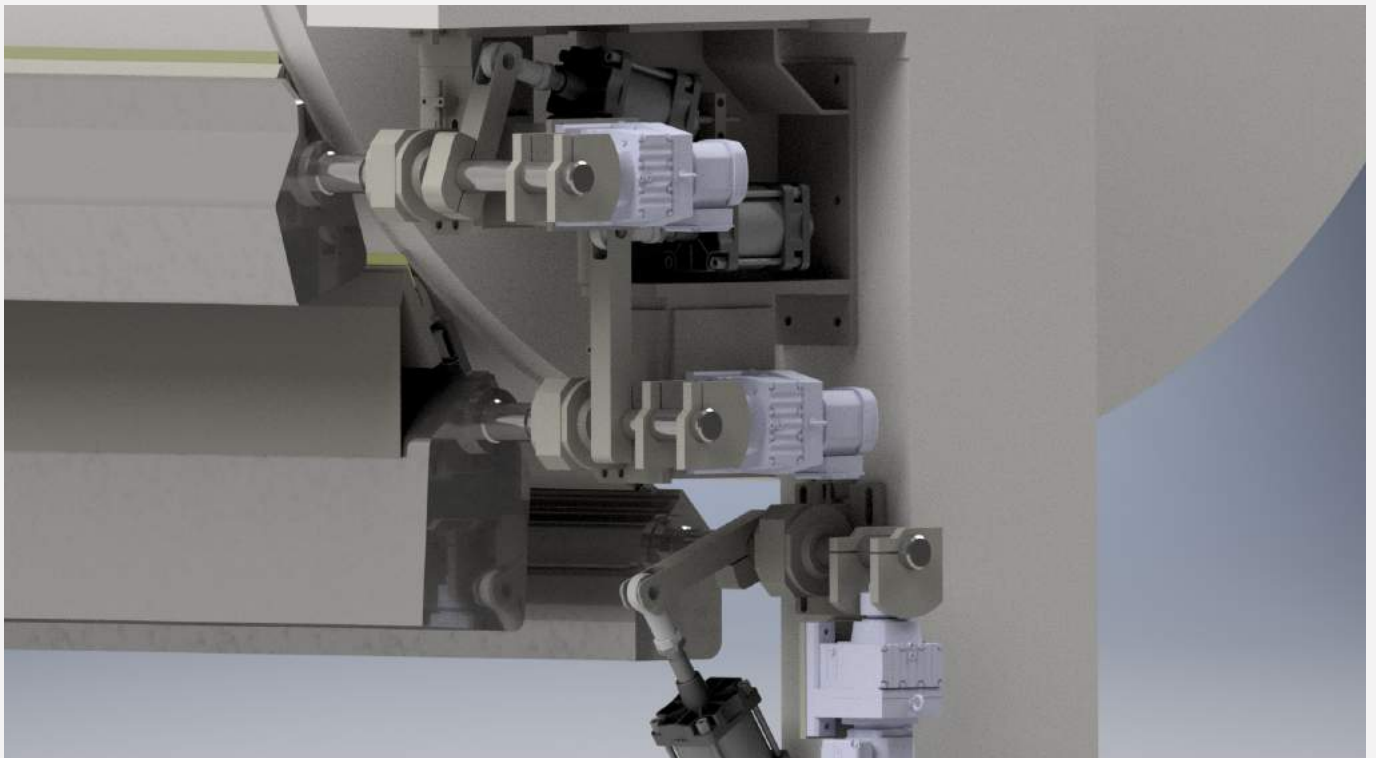
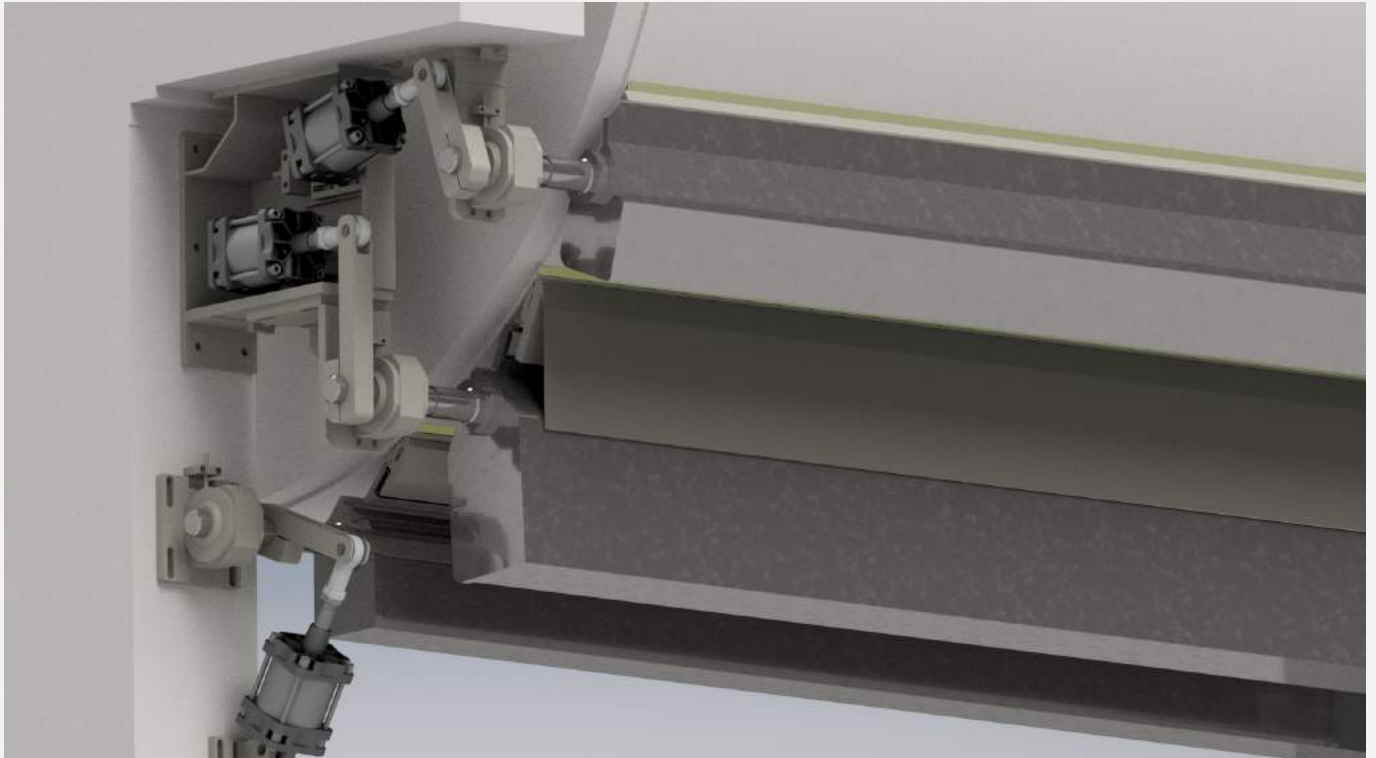


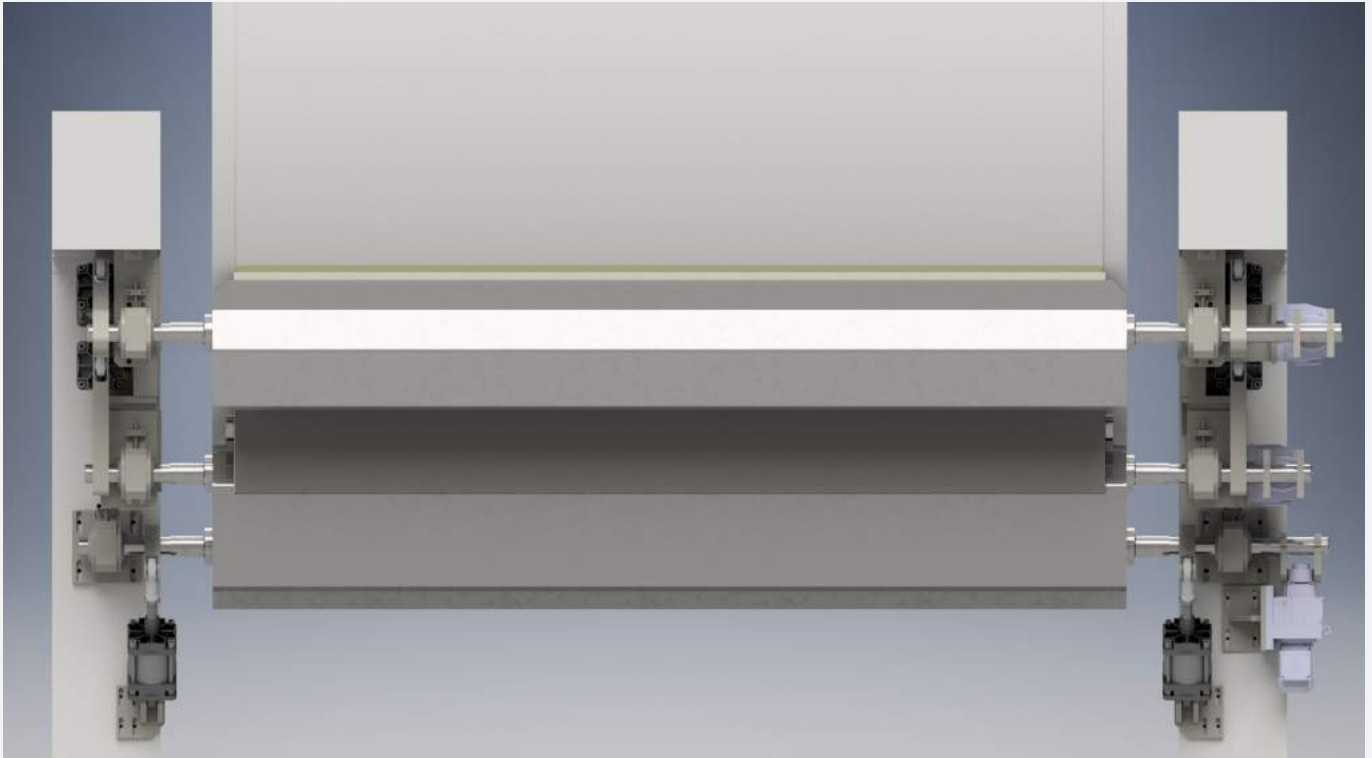




Tail shooter system

**Yankee doctoring systems**





Doctoring systems for Yankee Machines can be a combination of rigid and flexible doctor holders.

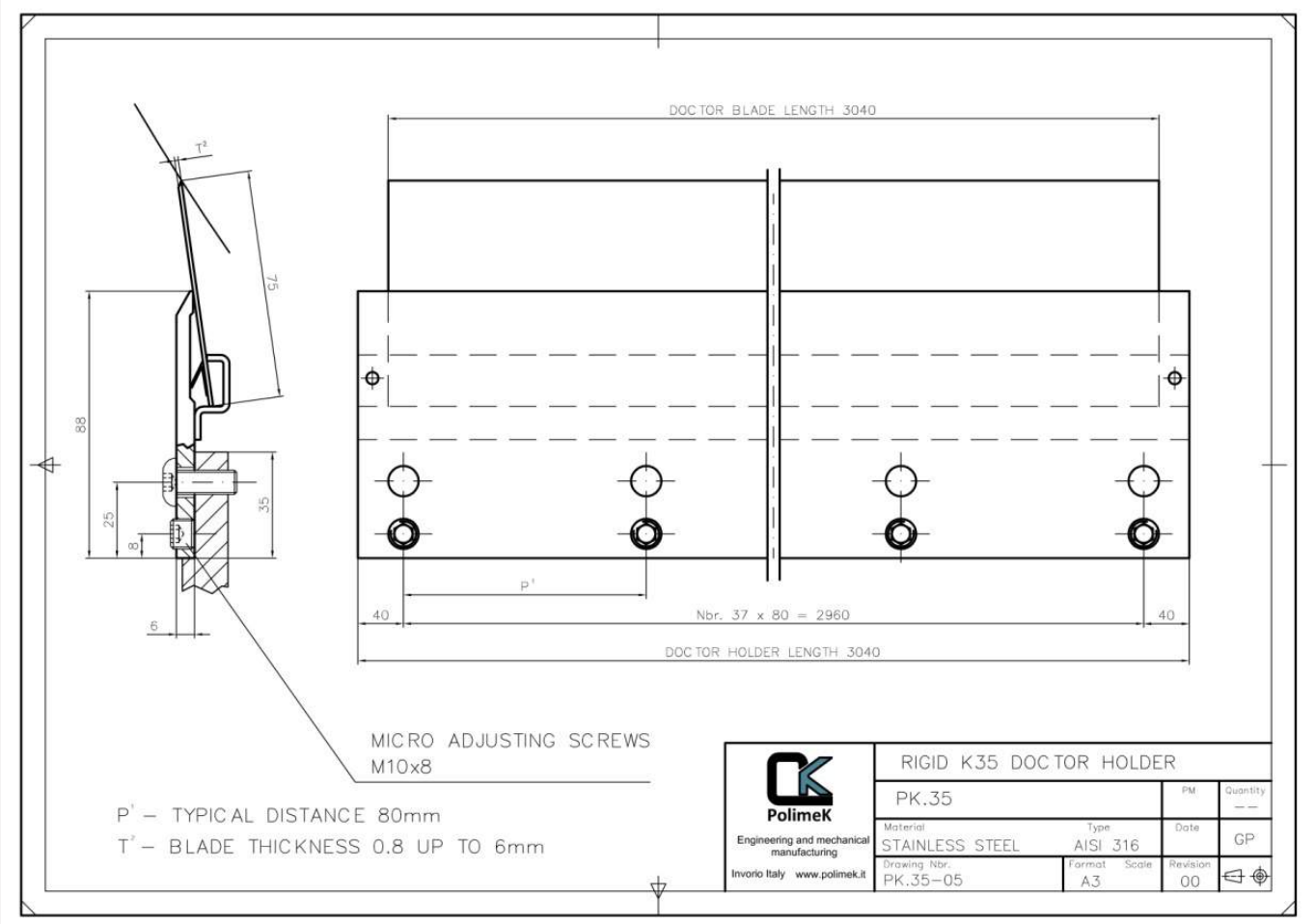
On the previous pages the following are shown:

Cut-Off position type	PCut 500	Rigid doctor holder
Creping doctor type	PCrep 400	Flexible doctor holder
Cleaning position type	PClean 300	Flexible doctor holder

Oscillation system can be either electromechanical or pneumatic type.



**Example of parametric drawing**



---

## RANGE OF PRODUCTION

---

### DOCTOR HOLDER

- Rigid K35 for standard application in the wet end, press section or dryer section
- Flexible with double air hoses fingerless
- Flexible with double hoses for heavy applications
- Flexible creping doctor with adjustable stick-out
- Flexible cleaning doctor
- Rigid doctor holder for cut-off on yankee position

### DOCTOR BLADE MATERIAL

- Composite of Epoxy resin
- Epoxy resin with glass fibre or carbon fibre
- Stainless steel Aisi 301
- Hardened carbon steel
- Bronze

### DOCTOR LINEAR BEARING

- Support with linear bearing and side seal for the wet end, press section and dryer section

Dimensions: Ø55-Ø70-Ø100mm

### OSCILLATORS

- Pneumatic for wire section power 11kN Aisi 316L
- Pneumatic for yankee doctors 22 kN Aisi 316L
- Electromechanical with gear box up to 1kW

## SUGGESTION FOR A CORRECT DOCTOR SELECTION

PAPER AND BOARD MACHINE				
POSITION	DOCTOR TYPE	NAME	VERSION	OSCILLATING
Breast roll	rigid	PK-35	single	yes pneumatic
Wire rolls	rigid	PK-35	single	yes pneumatic
Stretcher rolls	rigid	PK-35	single	no
Guide rolls	rigid	PK-35	single	no
Couch roll	flexible	PFlex-200	double	no
Pick up roll	rigid	PK-35	single	no
Press section	flexible	PFlex-350	double	yes electromec.
First dryer	flexible	PFlex-300	single	yes electromec.
Bottom dryers	rigid	PK-35	single	yes electromec.
Top dryers	rigid	PK-35	single	yes electromec.
Felt rolls	rigid	PK-35	single	no
Coating section	flexible	Pflex-800	single	no
Last dryer	flexible	PFlex-300	single	yes electromec.
Pope reel drum	rigid	PK-35	single	yes electromec.
Calender	flexible	PFlex-300	single	yes electromec.

TISSUE MACHINE				
POSITION	DOCTOR TYPE	NAME	VERSION	OSCILLATING
Forming roll	rigid	PK-35	single	yes pneumatic
Wire rolls	rigid	PK-35	single	yes pneumatic
Stretcher rolls	rigid	PK-35	single	no
Guide rolls	rigid	PK-35	single	no
Press rolls	flexible	PFlex-200	double	no
Cleaning doctor	flexible	PClean-300	single	yes electromec.
Creping doctor	flexible	PCrep-400	single	yes electromec.
Cut-off doctor	rigid	PCut-500	single	yes electromec.
Pope reel drum	rigid	PK-35	single	yes electromec.

NON WOVEN MACHINE				
POSITION	DOCTOR TYPE	NAME	VERSION	OSCILLATING
General rolls	flexible	PFlex-200	single	no
Conveyor rolls	flexible	PFlex-200	single	yes electromec.
Calender	flexible	PFlex-300	single	yes electromec.

---

## PRODUCTION FACILITIES

---

As we enjoy a very close working relationship with our subcontractors we are able to supply any type of mechanical construction, or pneumatic or hydraulic control system .

On the following pages you can see the machines we have available for production in our facility :

<b>Fabrication dept.</b>	
Flame cutting machine MESSER GRIESHEIM CNC with plasma cutting device	12000x3000x300
Bending machine FARINA	80Tx3000
Bending machine SCHIAVI	400Tx4000
Cutting machine MARIANI	3000x15
Rolling machine	2500x20
Bending machine for steel profile BOLDRINI	
Press	150 T
Submerged arc welding machine - SAW	Lincoln Electric

<b>Machining dept.</b>	
Orizonthal lathe MORANDO	900x6000
Orizonthal lathe	200x2000
Orizonthal lathe	350x3000
Orizonthal lathe	650x3000
Vertical lathe PIETRO CARNAGHI AC42TM (including milling device)	D=4300 H=3000 P=50 T
Milling machine MECOF CS88	10300x1900x1000
Milling machine MECOF M1000 with rotating table	6300x2000x1250 1800x180
Milling machine MECOF CS103	3300x1200x1000
Milling machine MECOF UNICA 50CS	8000x1700x1000
Milling machine PAMA SR2 with rotating table	15000x4000x900x800 (X,Y,Z,W) 2500x2500 P=30T
Milling machine PAMA SR1000 with rotating table	16000x4000x900x800 2500x2000 P=20T
Milling machine FIL F.A.300	3000x2000x1550
Milling machine ARNO	1200x300x400
N' 2 Boring Machines	1600x80
Bridge crane up to 80 T	
Sandblasting and painting tunnel	



## EXAMPLES OF PRODUCTION



Painting and assembling department



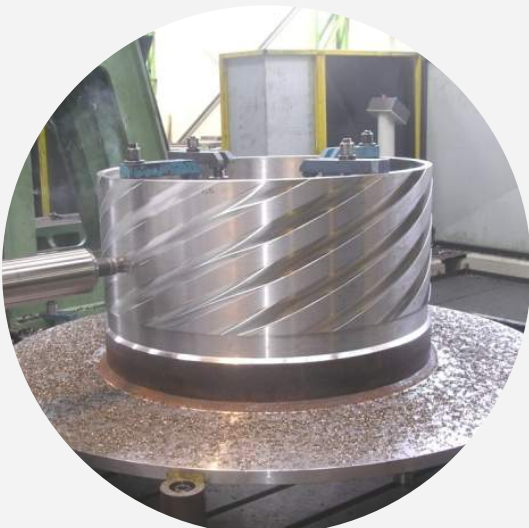
Machining department



Milling machine PAMA SR1000  
with rotating table



Vertical Lathe Pietro Carnaghi AC42TM



Insert oil



Turbine's runner Pelton

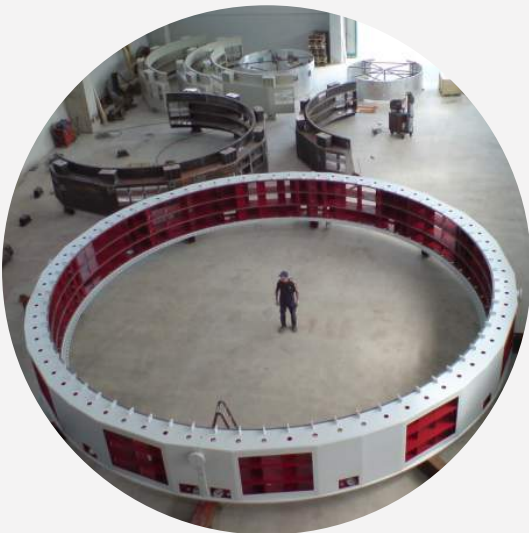




Hydraulic ball valve



Stay ring for Francis turbine



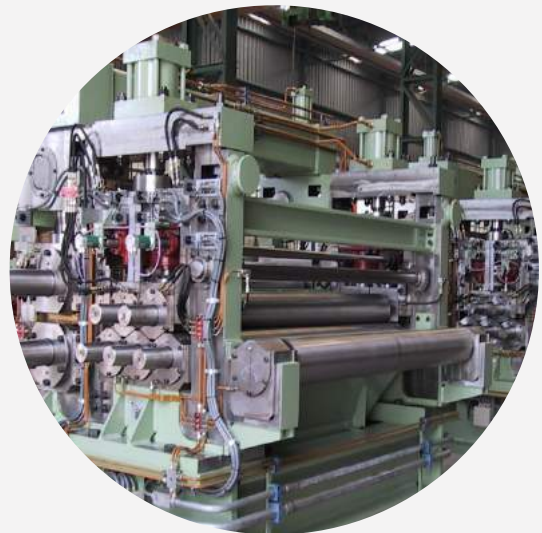
Stator frames for hydraulic turbine



Discharging machine for walking beam furnace



Manipulator for forging



Pinch roll calender



POLIMEK

---

OPERATING UNIT

Via Monte Rosa 10/B  
28040 Paruzzaro (NO)  
ITALY

REGISTERED OFFICE

V.le F. Baracca 8  
28041 Arona (NO)  
ITALY

P.IVA

02465310031

CONTACT

+39 0322 011353

[info@polimek.it](mailto:info@polimek.it)

[www.polimek.it](http://www.polimek.it)

---