
techso

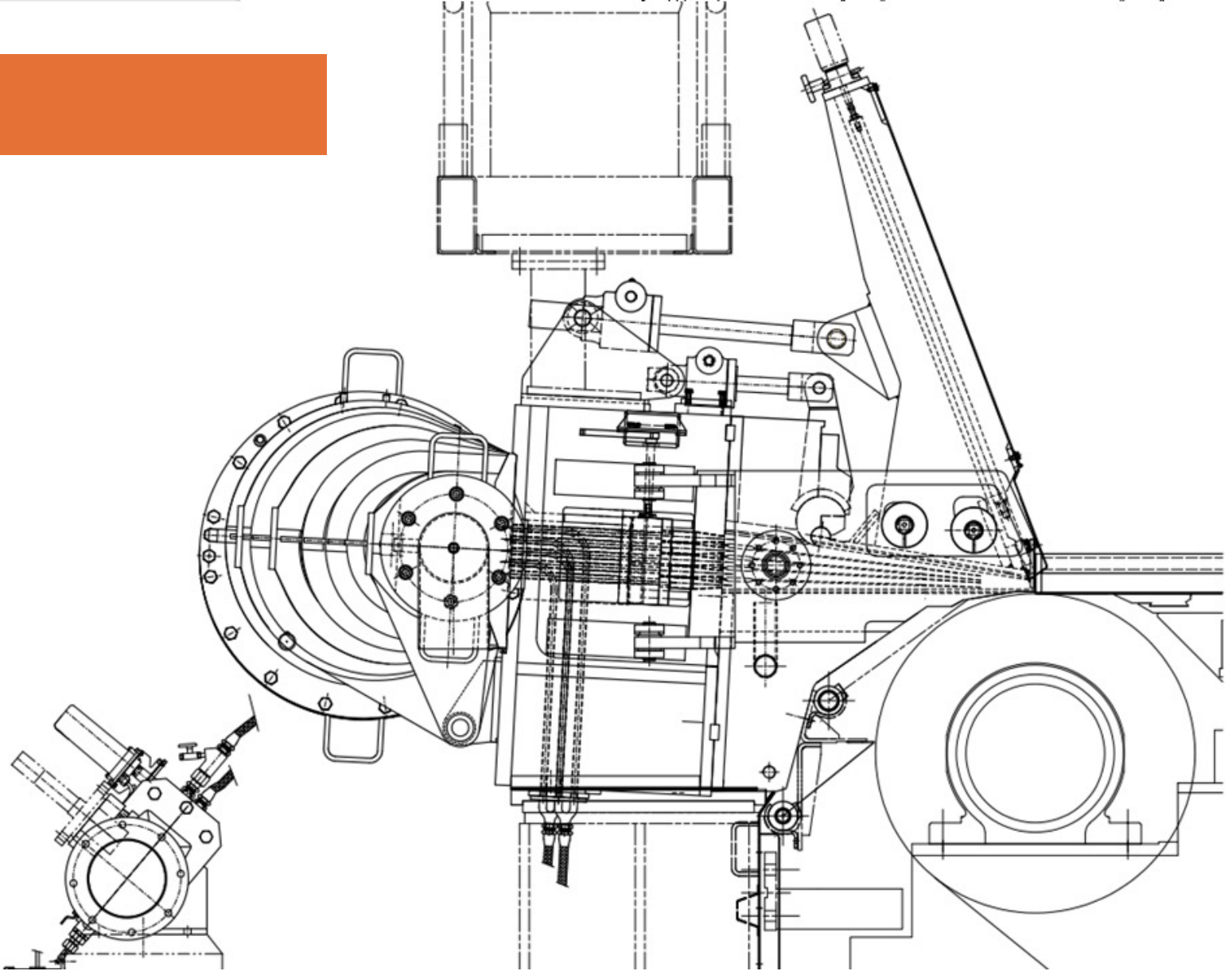
t-FLOW

What is t-FLOW?

t-FLOW is the hydraulic headbox with dilution control system by Techso.

t-FLOW has been developed following consistent concepts to guarantee reliable and efficient performances.

t-FLOW



For which paper grades is t-FLOW?

t-FLOW is suitable for different paper grades

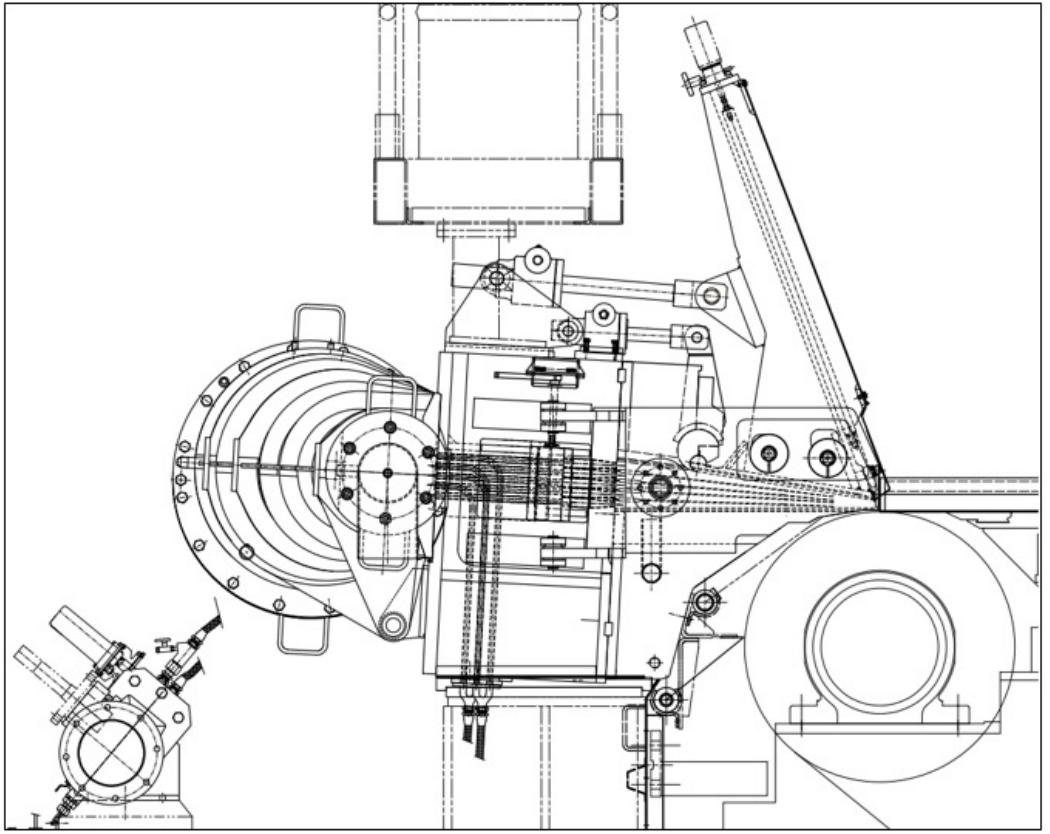
- Fine paper
- Packaging grades
- Tissue grades

Why t-FLOW?

t-FLOW main features

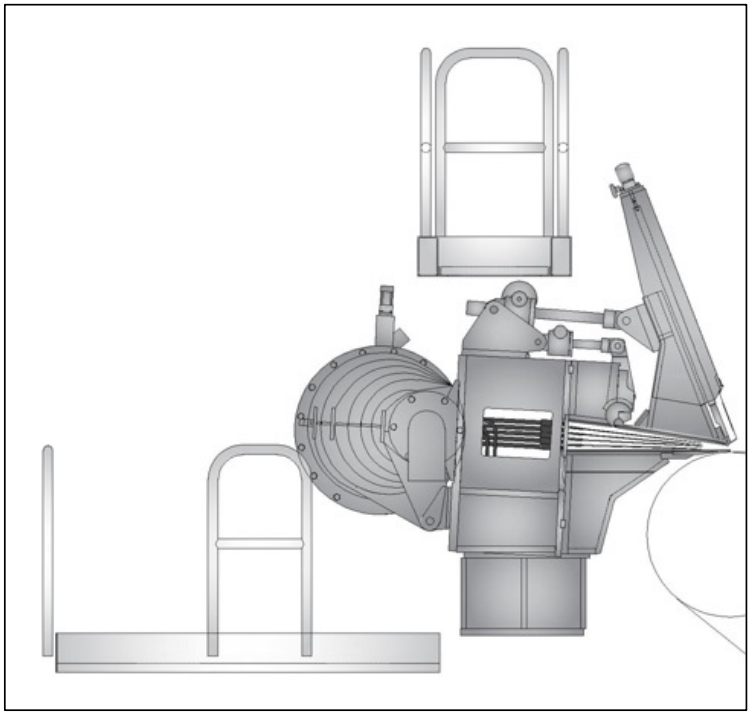
- Superior paper quality
- Easy to handle
- Efficient lifecycle cost
- State of the art technology

How t-FLOW is made?



t-FLOW technical features

- High open area tube bank
- No intermediate stilling chamber
- Lamellas in convergent zone
- Parabolic header
- Dilution control
- Edge valves
- Mechanical jacks micro adjustment
- Pulsation damper

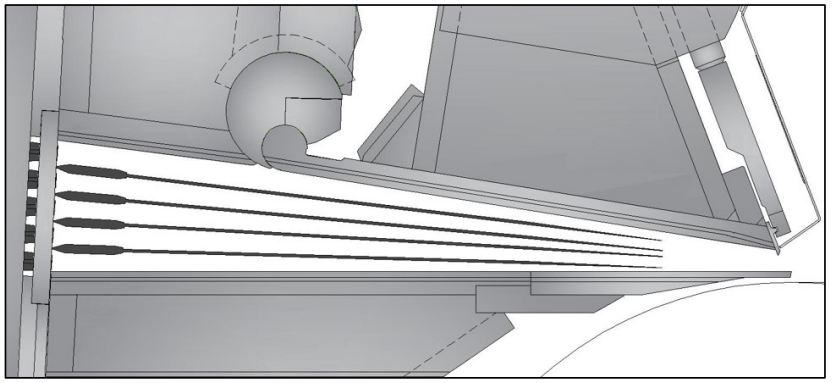


t-FLOW materials

- Massive stainless steel AISI 316L construction
- Superior finishing grade for cleanliness
- Electropolishing and passivation on stock contact surfaces upon request
- Polycarbonate lamellas

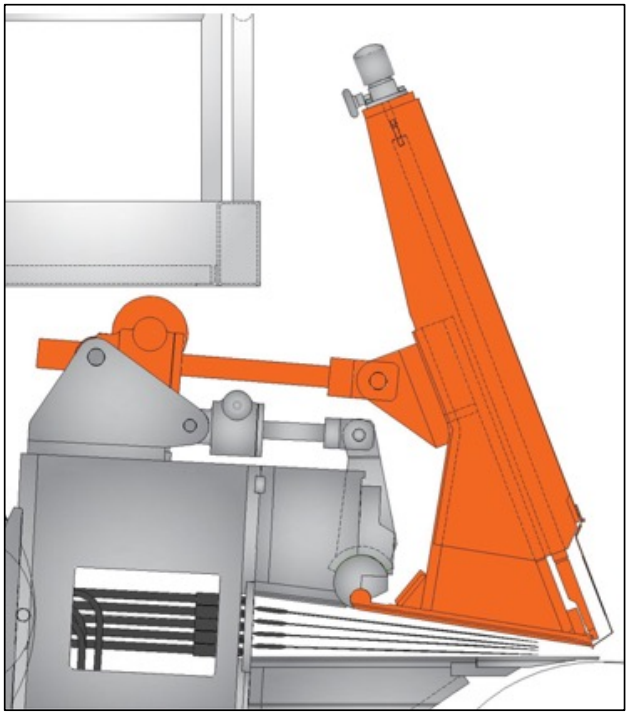
t-FLOW nozzle geometry

- Apron body is in a fixed position
- Slice body can move around double knuckle
- Adjustment of opening and setback are done by slice movement
- Possibility to extend range of operation working on the jacks setting



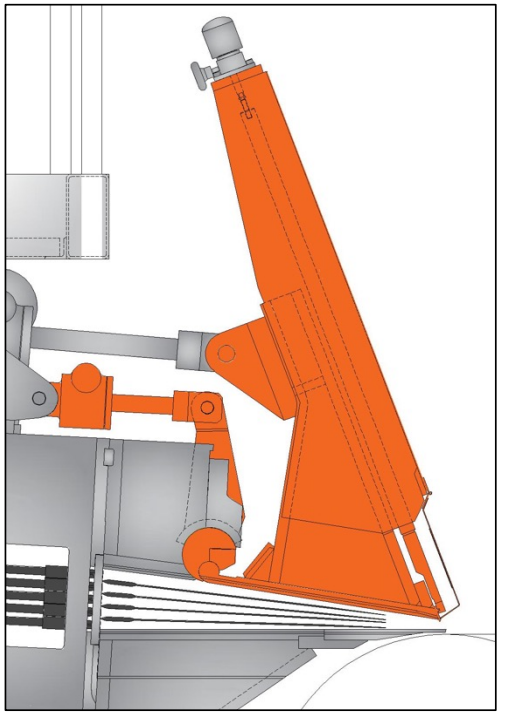
t-FLOW slice opening

- Slice opening adjustment by a almost-vertical movement
- Top mechanical jacks powered by electrical motor
- Operating range 6 to 40 mm
- Max opening 110 mm for easy maintenance and inspection



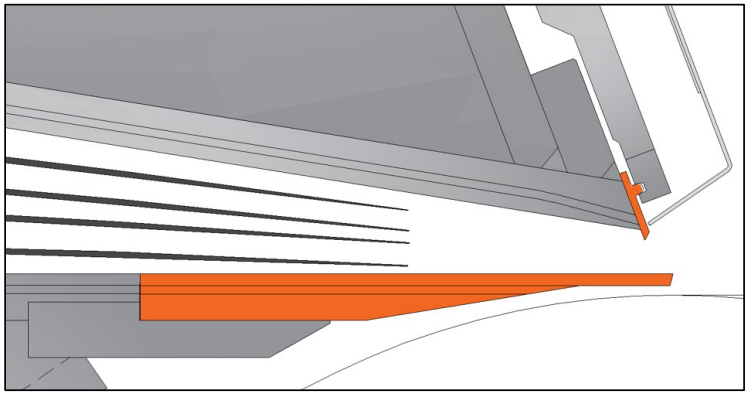
t-FLOW setback

- Setback adjustment by a almost-horizontal movement
- Bottom mechanical jacks powered by electrical motor
- Compact joint construction
- Operating range 5 to 30 mm
- Easy control of the jet landing



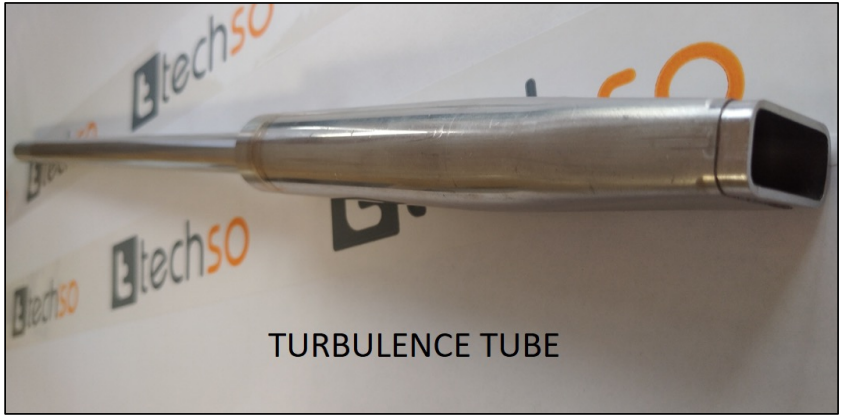
t-FLOW lips

- Slice lip replaceable
- Slice lip provided with independent seals
- Apron lip replaceable
- No need to replace or remachine complete slice or complete apron when damage on the lip



t-FLOW tube bank

- In line stock flow from header to nozzle
- No intermediate stilling chamber
- High open area
- Turbulence tubes with expansion to rectangular shape at outlet



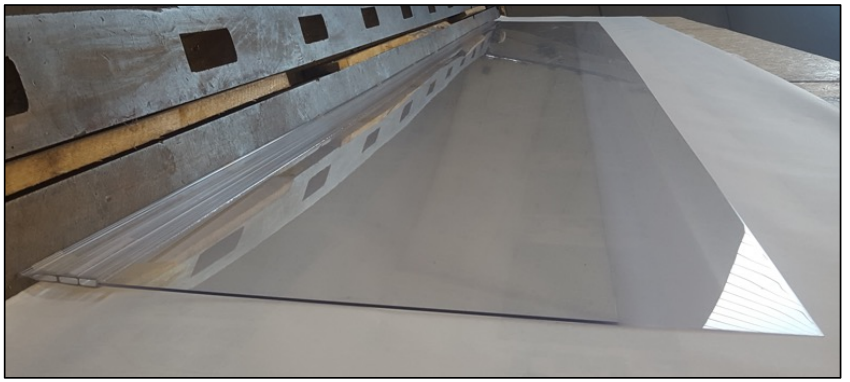
TURBULENCE TUBE

t-FLOW tube bank

- Even CD basis weight profile, including edges
- Optimal stock dispersion
- Flocks breaking
- Low headlosses

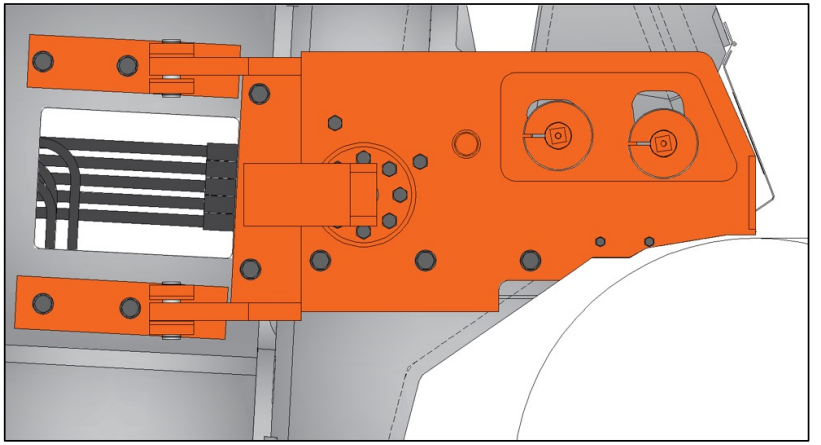
t-FLOW lamellas

- Polycarbonate material
- Generate microturbulence to improve formation
- Prevent vortices in nozzle area
- Stabilize jet
- Reduce headlosses
- Reduce risk of surface marks and strips



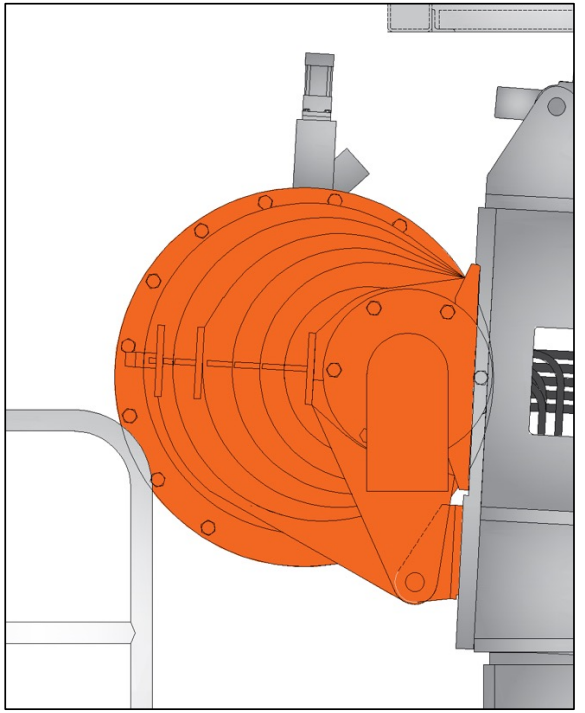
t-FLOW pondsides

- Pivoting pondsides
- Convergent area completely accessible when pondsides open
- Easy lamellas removal and installation
- Easy inspection and cleaning operation of the nozzle



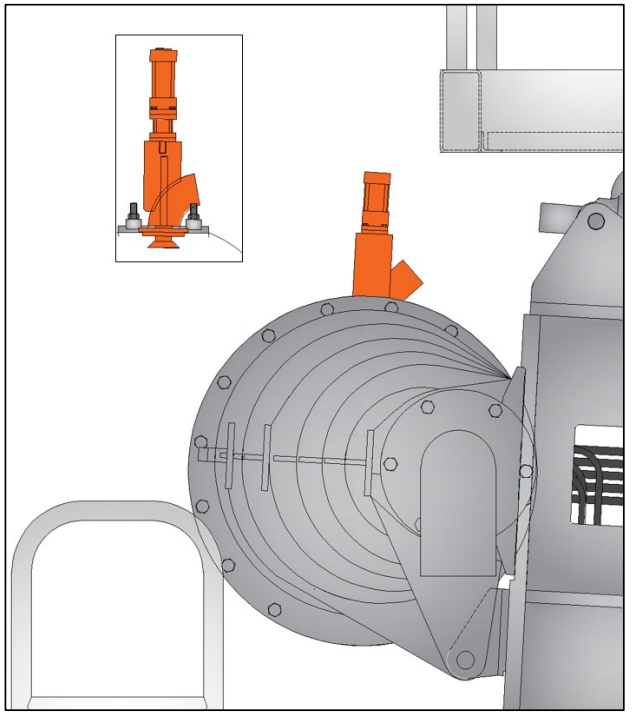
t-FLOW header

- Round cross section
- Parabolic shape
- Metal to metal connection flanges
- Even flow speed through headbox
- Low recirculation to optimize power consumption



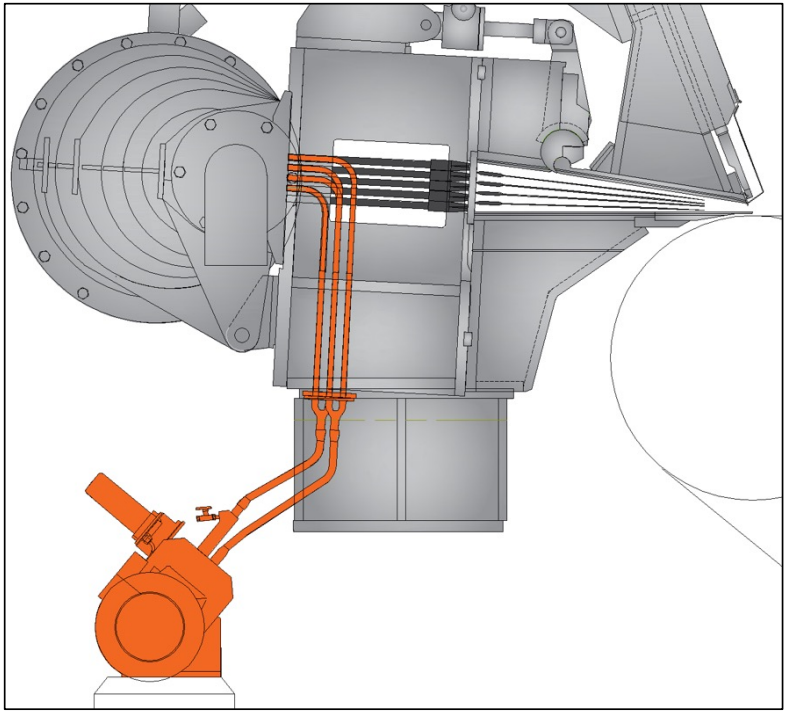
t-FLOW vacuum breaker valve

- Placed directly on the header
- Automatic operation
- Operates to prevent vacuum effect on lamellas when fan pump stops
- Extends lamellas lifetime



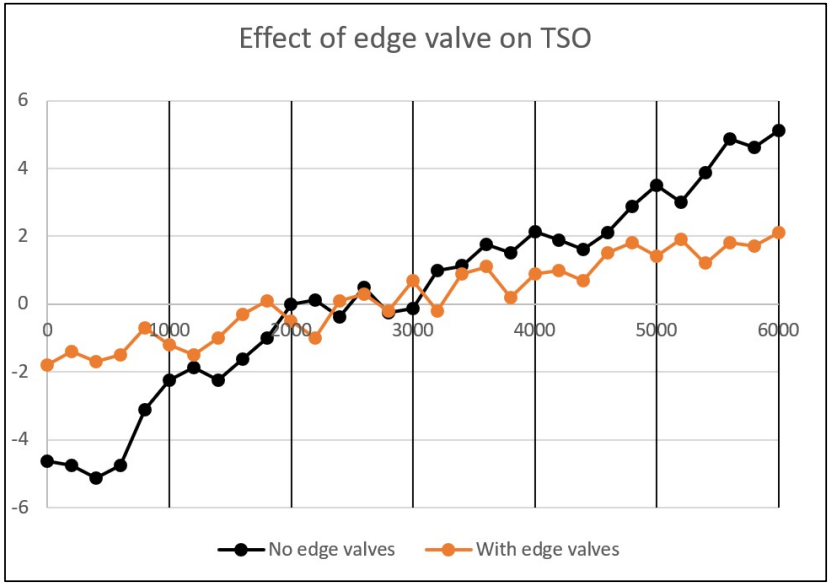
t-FLOW dilution control

- Counter direction dilution water flow
- Injection in each column of tubes
- 71 mm pitch correction
- Variable section dilution header
- Controlled by QCS
- Precise control and correction injection
- No flow variation across the slice



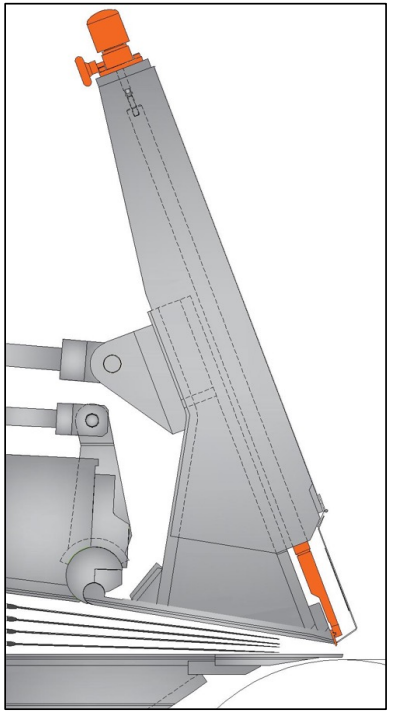
t-FLOW edge valves

- Located at both tube bank ends
- Big pipes to allow wide correction
- Automatic control as option
- Improve fibre orientation on paper edges
- Uniform fibre orientation profile
- Influence of edge valve can reach up to 1,5 m from the edge



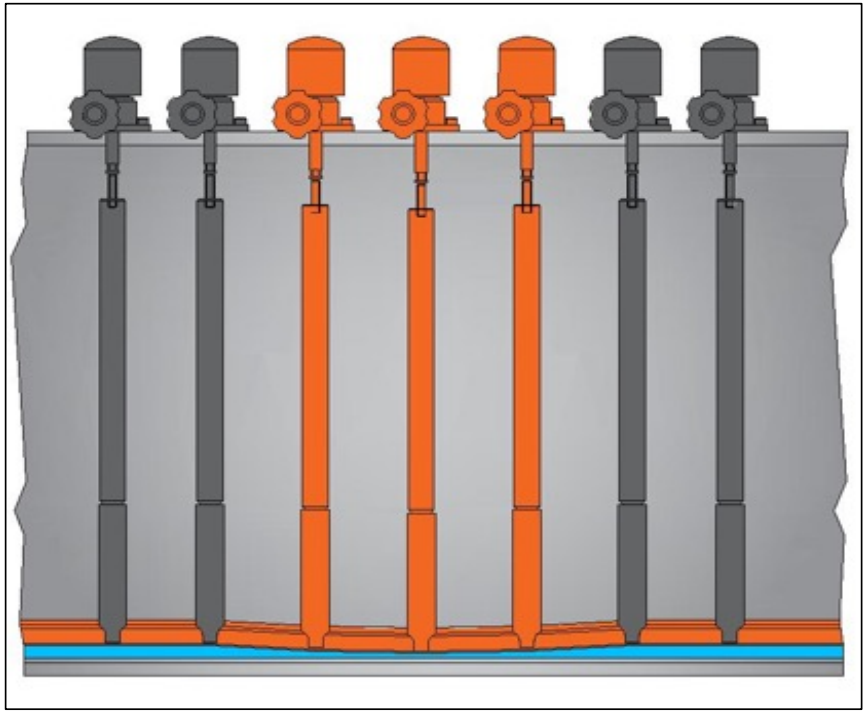
t-FLOW lip micro adjustment

- Adjustable micro jacks for CD profile correction
- Pitch of correction 76 mm
- Manually operated



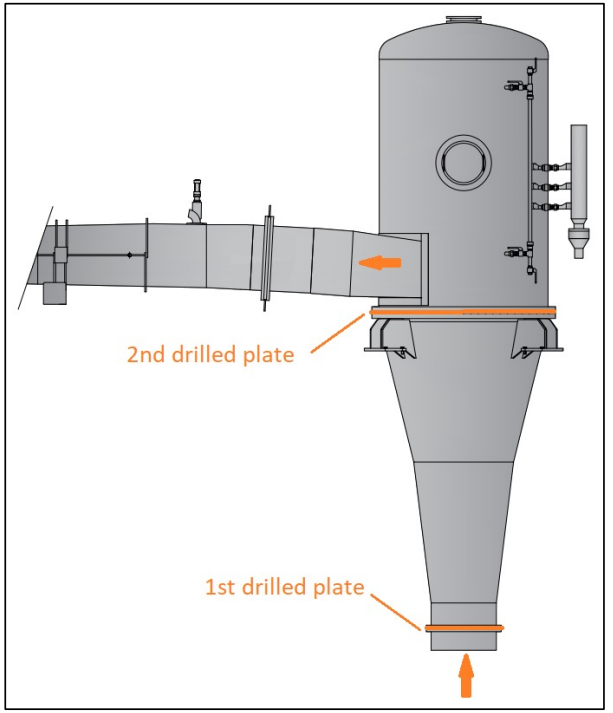
t-FLOW lip micro adjustment

- Local deformation of the slice lip
- Basis weight CD profile correction
- Local defects correction



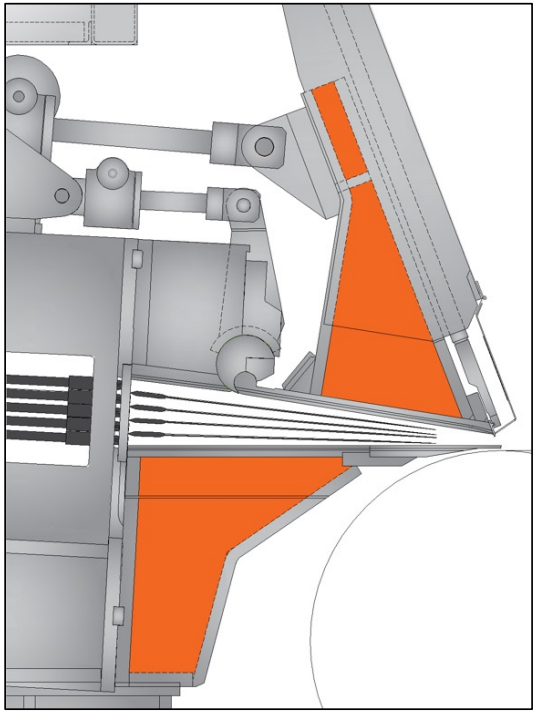
t-FLOW pulsation damper

- Vertical layout
- Double drilled plate
- 3 position stock level control
- Elimination of stock pulsation
- Easy control of turbulence and stock activity



t-FLOW conditioning system

- Conditioning of three chambers
- Top chamber with independent conditioning loop
- Possibility to heat or cool the system depending on the need
- Smooth basis weight CD profile



THANKS