
techso

t-CALENDER

What is t-CALENDER?

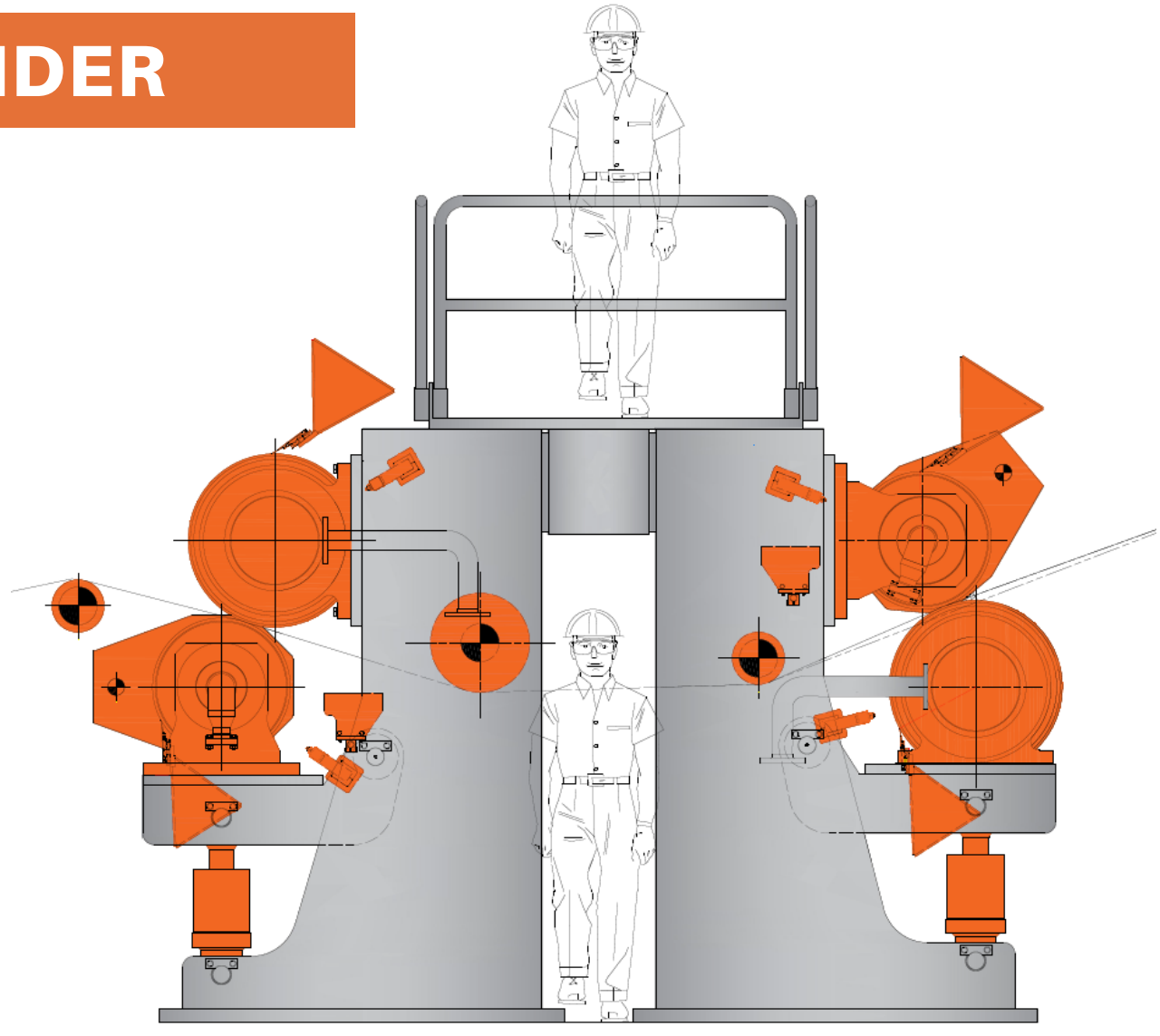
t-CALENDER is the calender solution by Techso.

t-CALENDER is the solution to achieve the better performance in terms of caliper uniformity, smoothness, bulk and, in general printing properties.

t-CALENDER is offered with different layouts (single nip, multi nip, combined double calender) and solutions (soft nip or hard nip).

t-CALENDER works with the combined effect of temperature and nip to maximize the benefits.

t-CALENDER



For which paper grades is t-CALENDER?

t-CALENDER is suitable for all the paper grades that require a finishing operation to improve smoothness, caliper profile, bulk, printing and optical properties. It works with

- Copy paper
- Packaging grades
- Specialty paper

Why t-CALENDER?

t-CALENDER offers

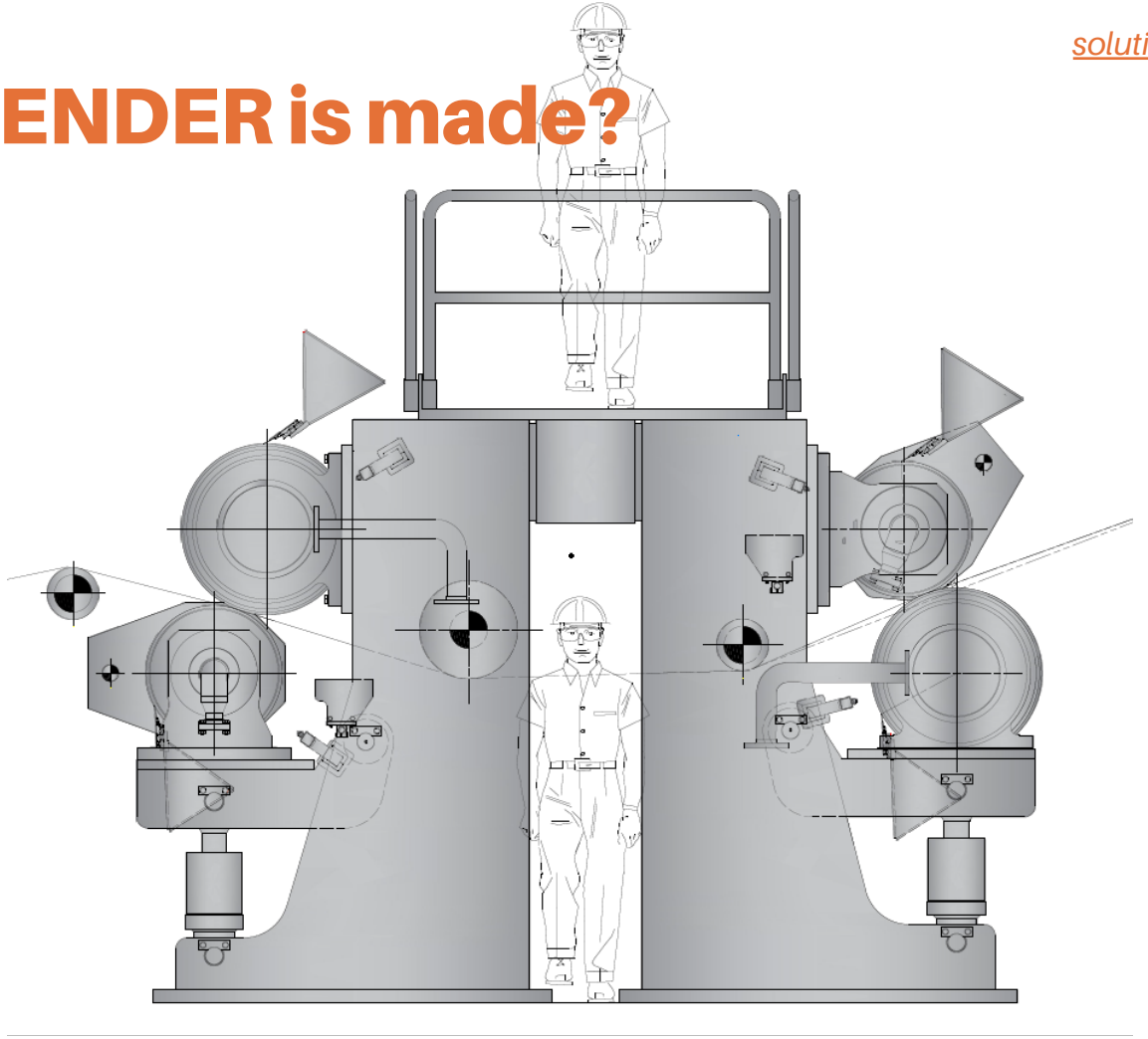
- Performances
- Reliability
- Easy operations

Why t-CALENDER?

t-CALENDER can be adapted to different application with the

- Optimized caliper profile
- Nip controllable between 10 and 150 kN/m
- Roll surface temperature up to 200°C

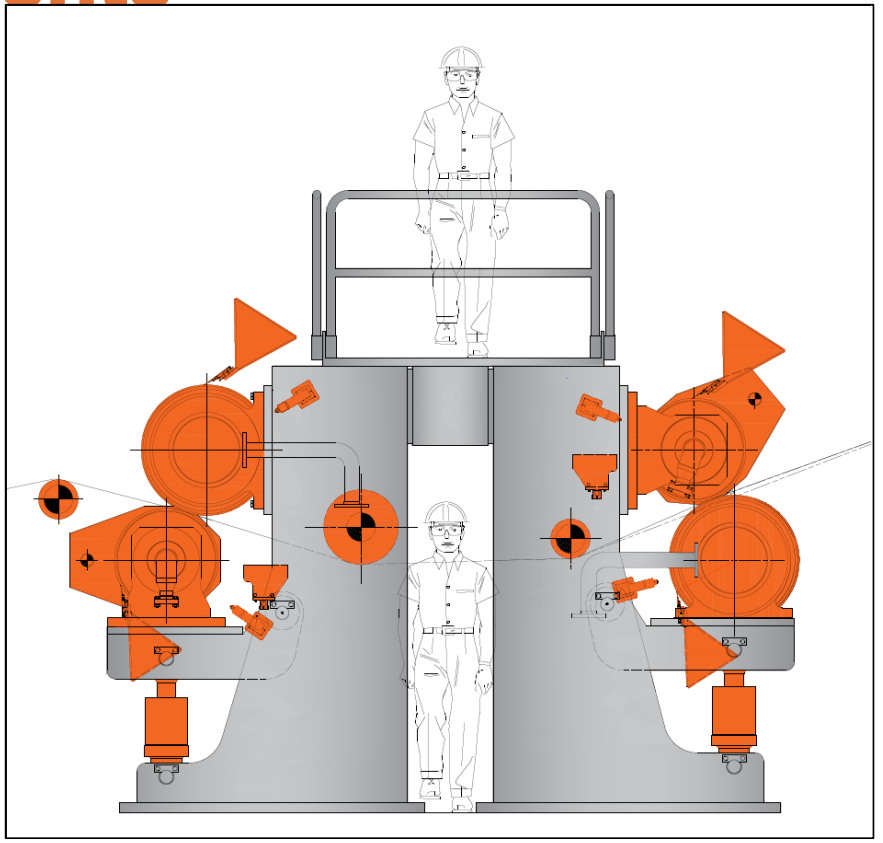
How t-CALENDER is made?



Soft nip t-CALENDER components

Main components soft nip t-CALENDER are

- VCR roll with soft coating
- Thermal roll with thermal unit
- Frame with loading system
- Edge temperature control devices
- Doctors
- Paper and spreader rolls
- Hydraulic station

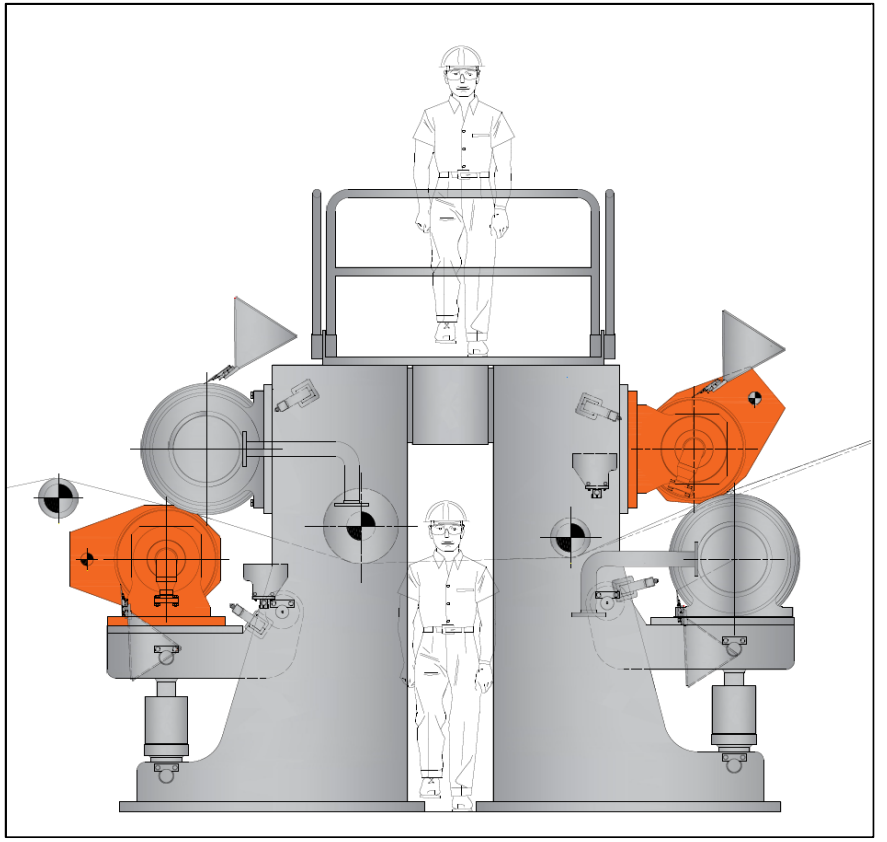


Soft nip t-CALENDER materials

- Thermal roll in chilled cast iron
- Forged steel shaft for VCR
- Cast iron or forged shell shell for VCR
- Massive steel modular frame

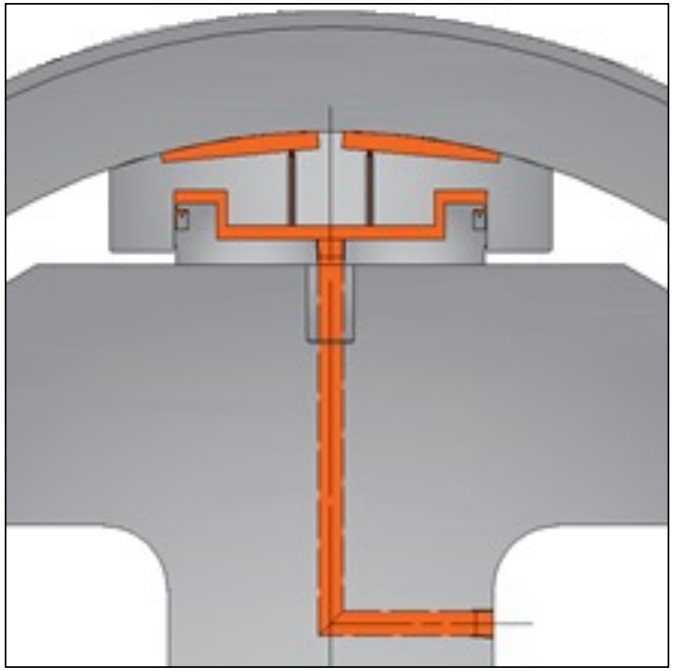
Soft nip t-CALENDER VCR

- Covered with soft cover (composite polyurethane)
- Possibility to control the load profile by a flexible roll, in order to reach a uniform pressure profile or a correction on the caliper profile



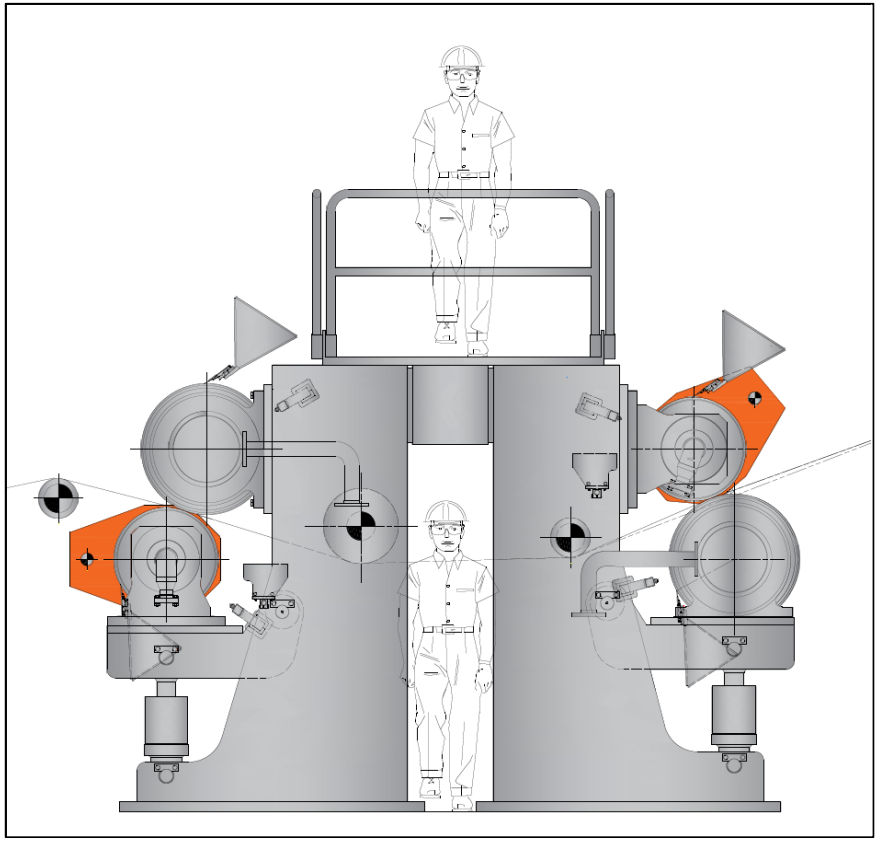
Soft nip t-CALENDER VCR

- Pressure elements are hydrostatic type allowing lubrication with any speed and load
- Multi piston arrangement allows CD load control as option with each single pressure element individually controlled



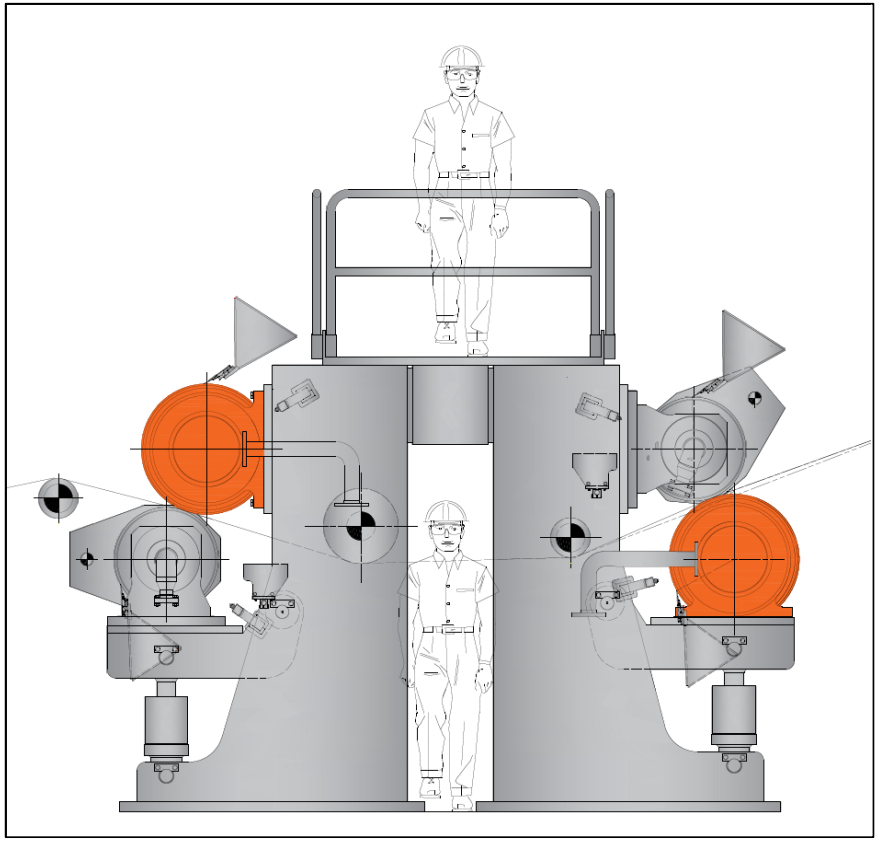
Soft nip t-CALENDER VCR

- Drive of the shaft by a on board gearbox
- Lubrication function integrated in the hydraulic unit



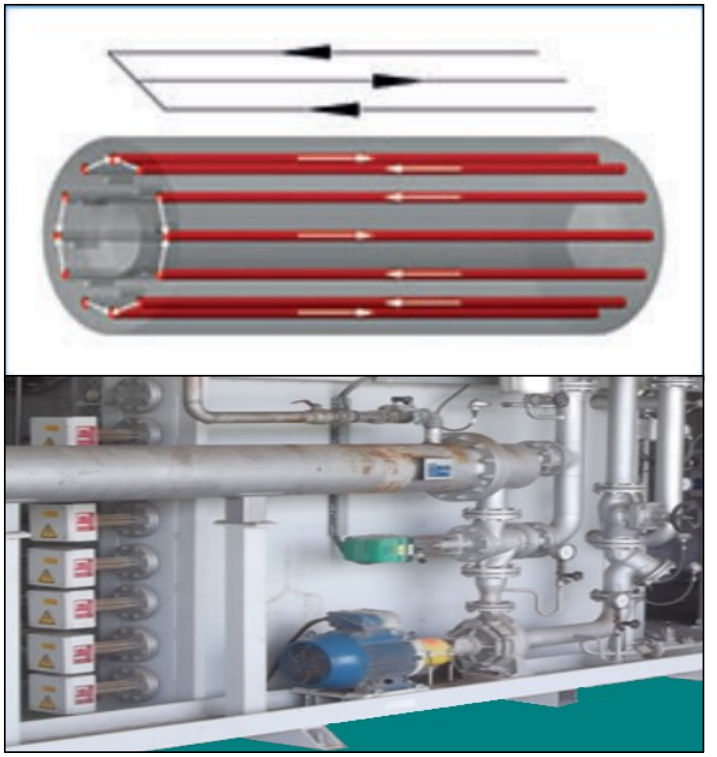
t-CALENDER thermal roll

- t-CALENDER is equipped by thermal roll to heat the paper on one side
- To improve control of smoothness and gloss
- Heated by diathermic oil



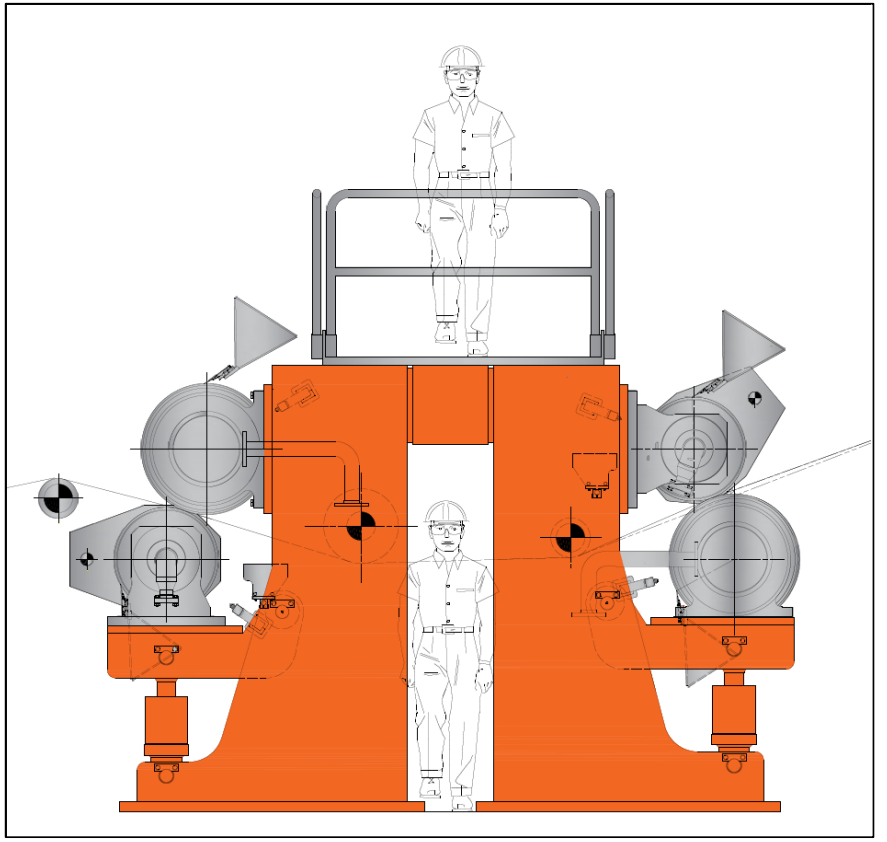
t-CALENDER thermal roll

- Tri-pass system to ensure uniform temperature profile in both CD and circumferential directions
- Temperature control by dedicated thermal unit



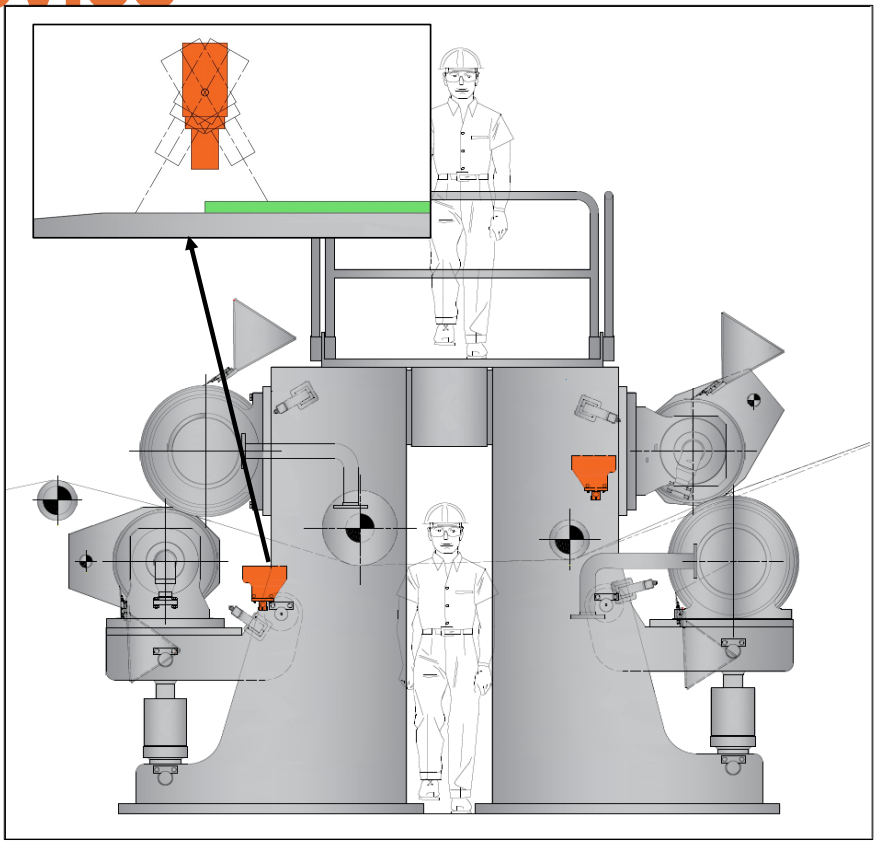
t-CALENDER frame

- Modular frame
- Massive mild steel frame
- Easy roll removal
- Loading system with hydraulic piston
- Device for synchronized closure



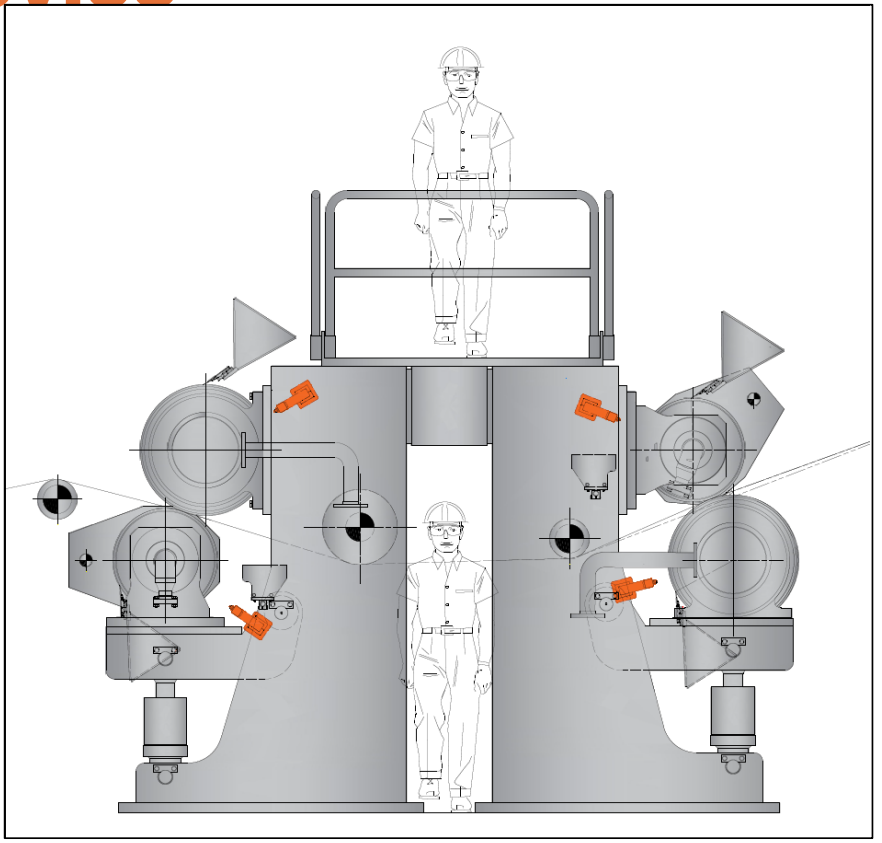
t-CALENDER edges control device

- Edge temperature control
- Monitoring of the temperature between paper edge area and out of paper area
- To avoid cracks in the cover and distortion of journal



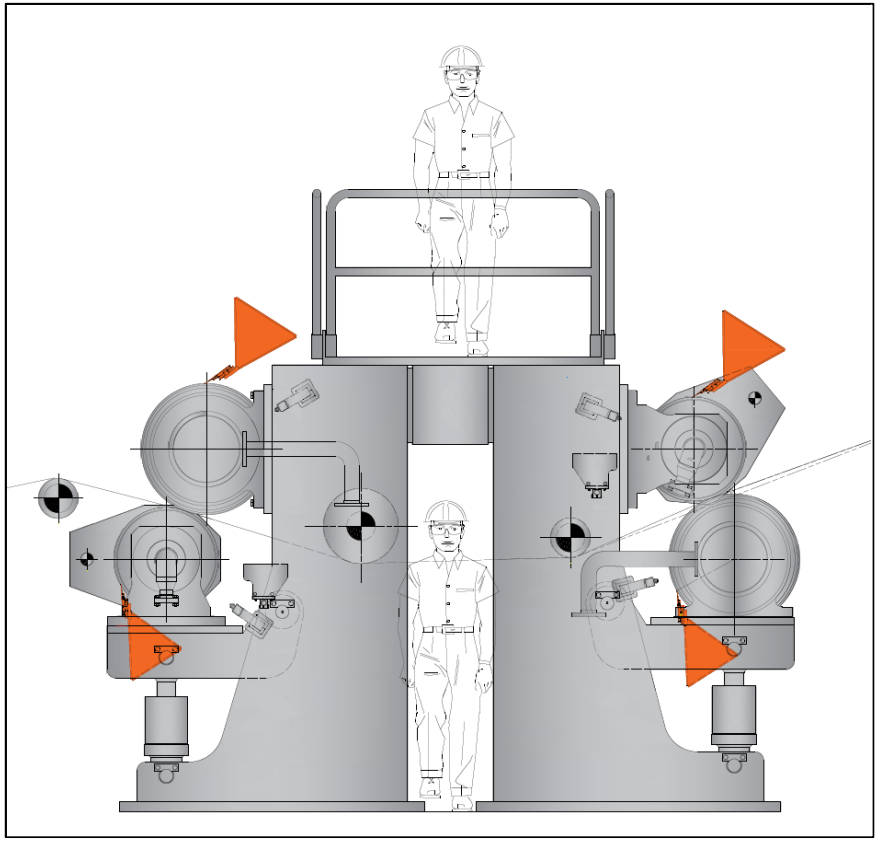
t-CALENDER edges control device

- Infrared oscillating camera to monitor the temperature difference
- Air shower to reduce the temperature difference



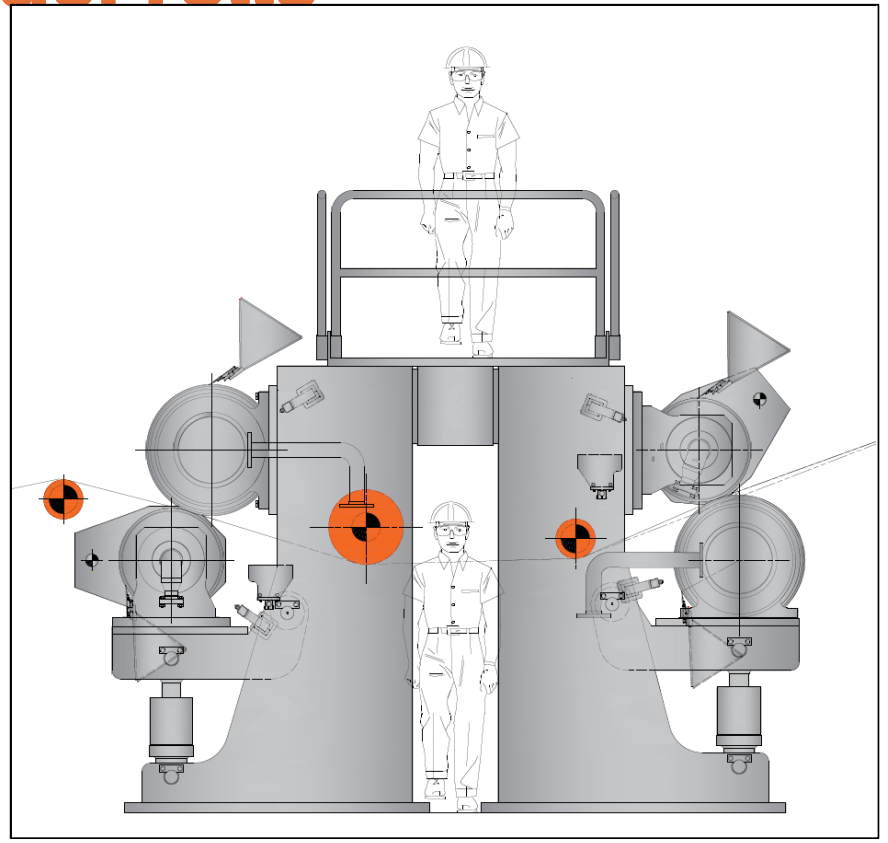
t-CALENDER doctors

- Doctors on thermo rolls and VCR rolls to protects the covers from dirty.
- Equipped by oscillation devices to avoid marking
- Composite material blades
- DST loading
- Pneumatic piston movement



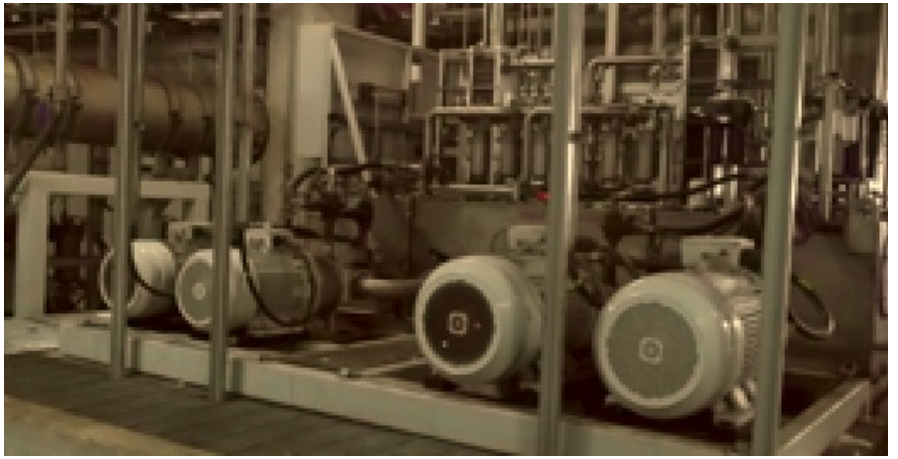
t-CALENDER paper and spreader rolls

- Chromed surface rolls
- Driven rolls to reduce tensions in the paper
- Spreader roll driven by belt
- Paper roll directly driven or driven by belt



t-CALENDER hydraulic station

- Lubrication is made by a shower that delivers oil to the inlet of hydrodynamic shoe
- Fresh oil injected also helps to keep the temperature of the shoe low



THANKS