

# Tissue Rewinder F(O)CUS<sup>®</sup> The state-of-the-art

Andrea Coluccini - Sales Manager PAP TM Rewinder Technology

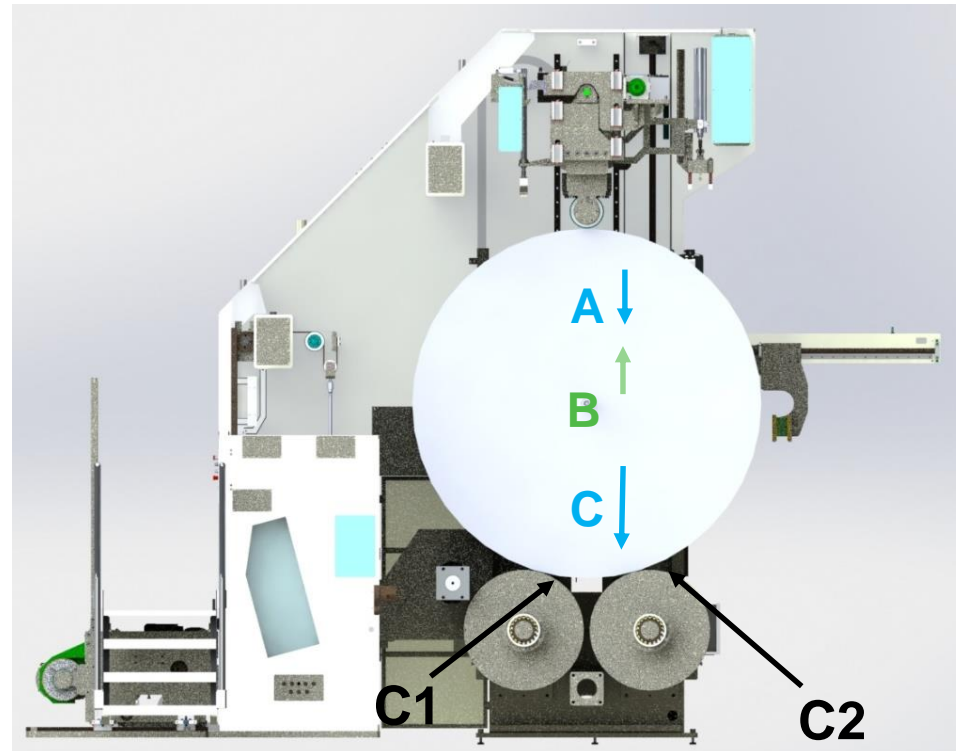
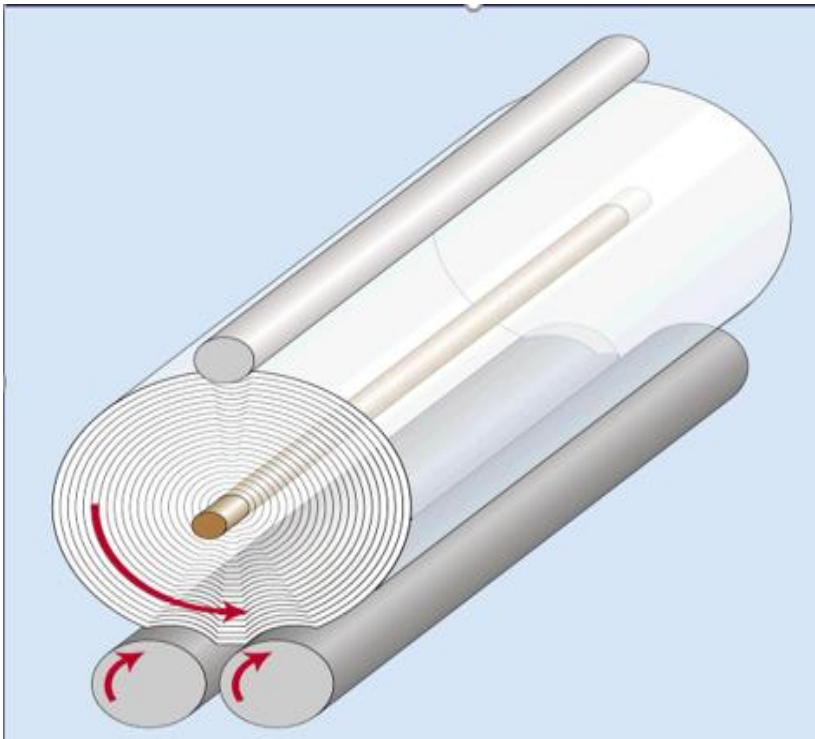


Bulk Control

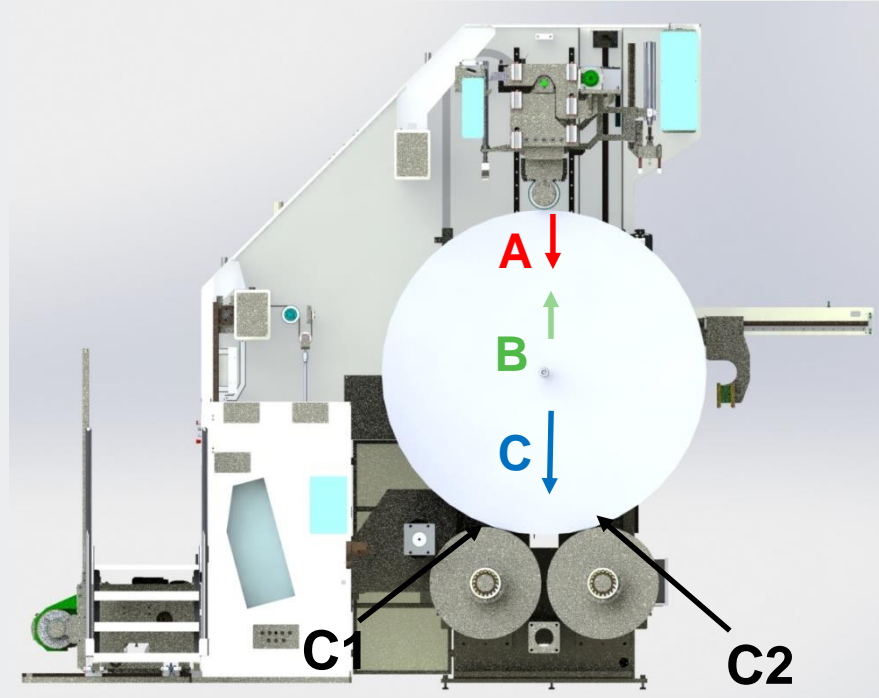
# Forces during the winding process

- A= Rider roll linear load
- B= Chucks relieving action
- C= Winding reel own weight
- C1=Nip on drum 1
- C2=Nip on drum 2

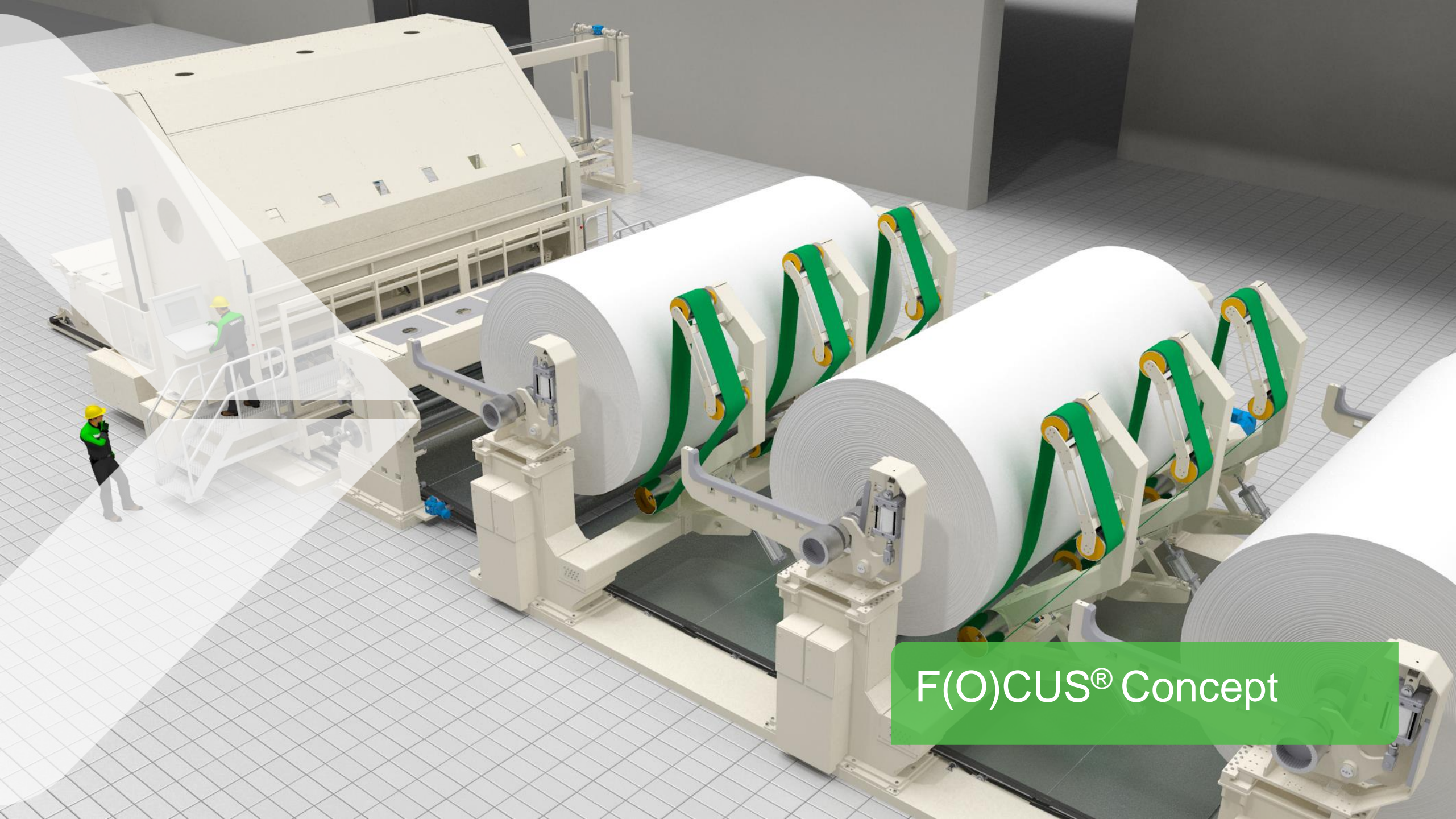
$$\text{NIP} = A + C - B$$



# Conventional hydraulic rewinder



In conventional **Hydraulic Rewinders** the **rider roll linear load (A)** and **chucks relieving action (B)** are actuated by hydraulic cylinders follow pre-established curves, based on the practical operators experience. There Is **NO NIP CONTROL** and, consequently, **NO BULK CONTROL**.



F(O)CUS<sup>®</sup> Concept

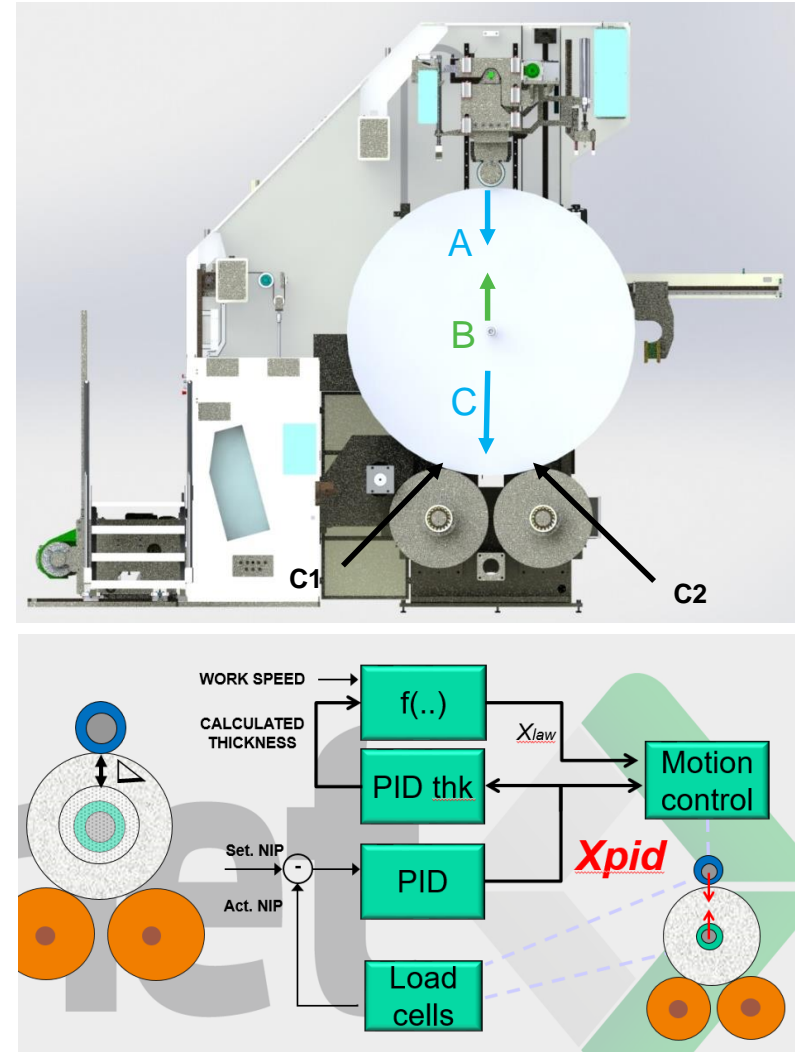
# F(O)CUS<sup>®</sup> Concept (patented)

In **ELECTROMECHANICAL** rewinders, the **NIP** is closed-loop controlled (ACC = Active Caliper Control) with feedback from load cells mounted on **rider roll** and **chucks**

- The operator sets the desired **NIP** value and the **web thickness**
- The weight of the winding reel is constantly calculated
- If the initial **web thickness** is not correct, the actual **NIP** will tend to increase or decrease dramatically.



In this case, the system automatically corrects the **web thickness** set point in order to re-establish the control balance.



# F(O)CUS<sup>®</sup> Electromechanical technology

**Chucks** relieving and **rider roll** pressure are actuated by high precision ball circulation screws.

## Advantages:

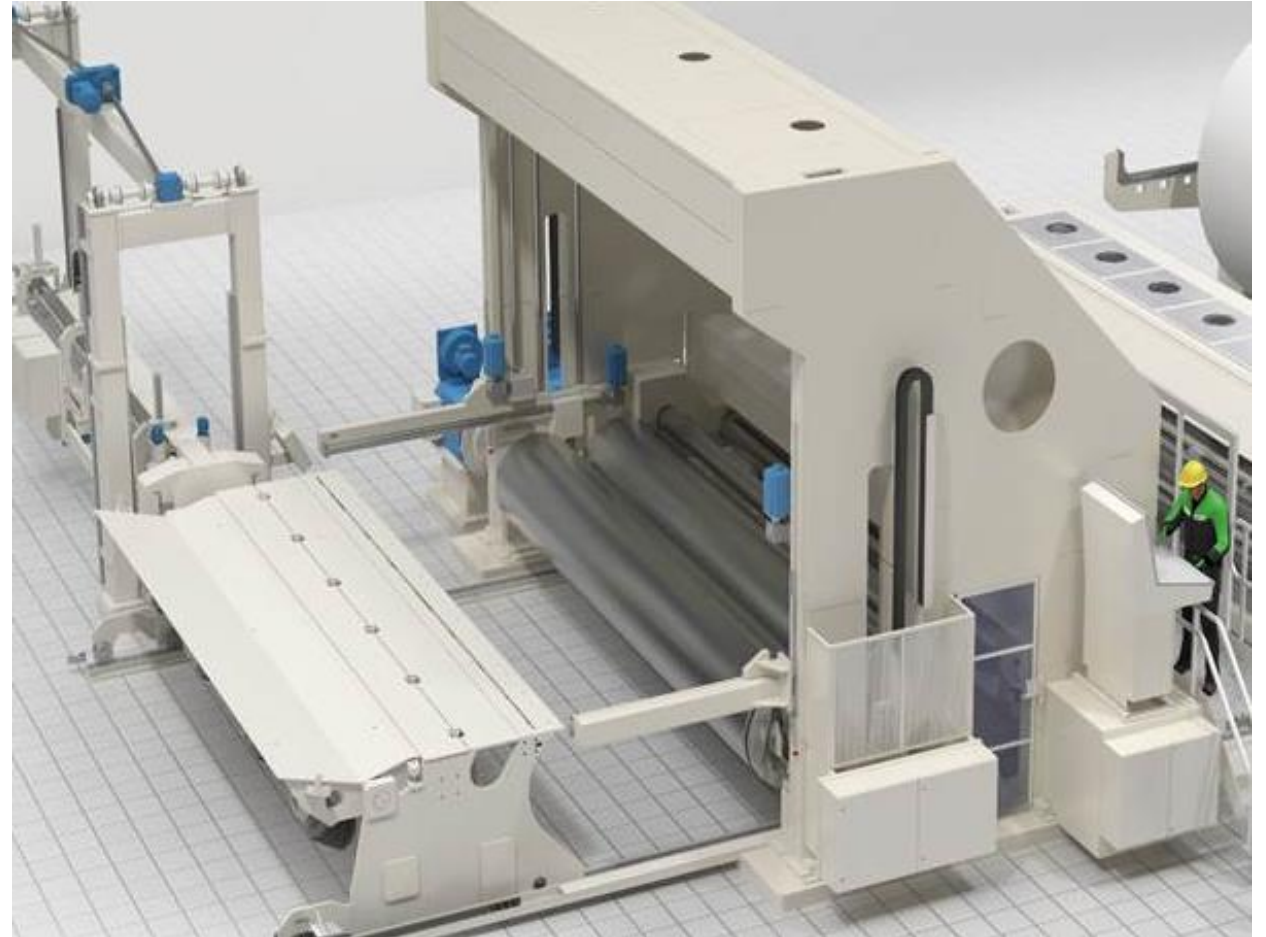
- Precision
- Clean operation (no hydraulic)
- Lower and easier maintenance



# ENS Rewinders

In ENS models, the typical F(O)CUS<sup>®</sup> electromechanical relieving approach has been implemented with the complete automatic system “No-Stress”:

- finished reels removal by electromechanical actuators and shuttle (smooth operation, no violent action on finished reels)
- shaft handling (with perfect alignment of finished reels set and shaft puller)
- automated downloading operations
- easy access to carrying drums for cleaning and maintenance





# F(O)CUS<sup>®</sup> Reelite ENS





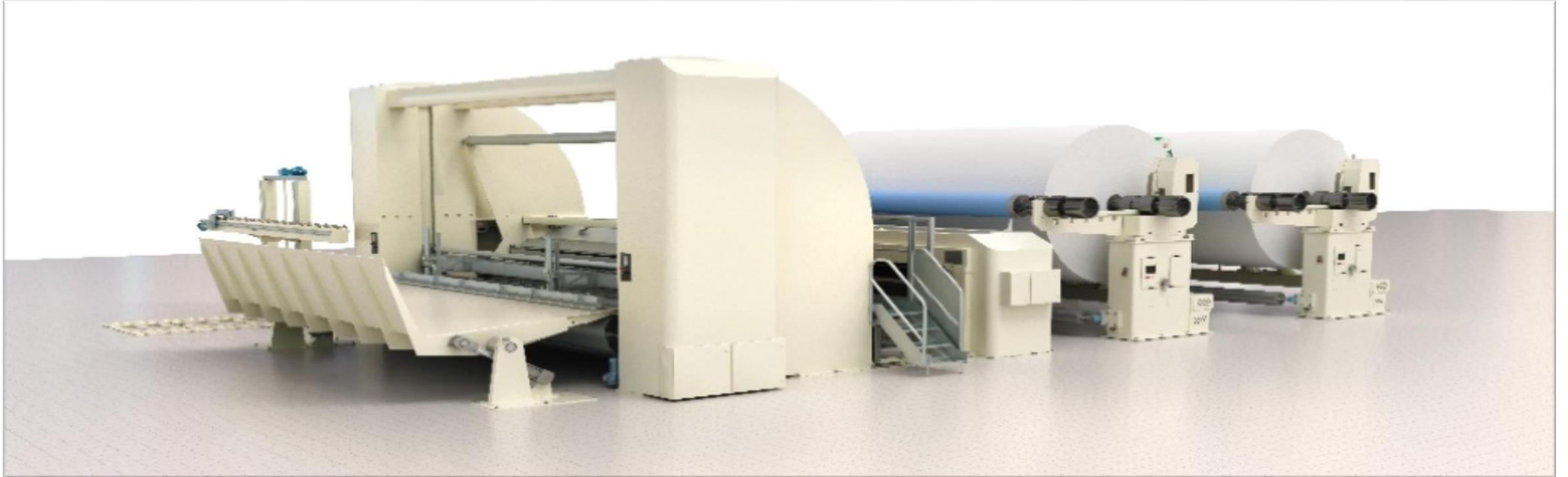
New Rewinder Generation  
F(O)CUS® REELITE T

# F(O)CUS<sup>®</sup> REELITE T – Scalability Concept

SCALABILITY = POSSIBILITY OF UPGRADING



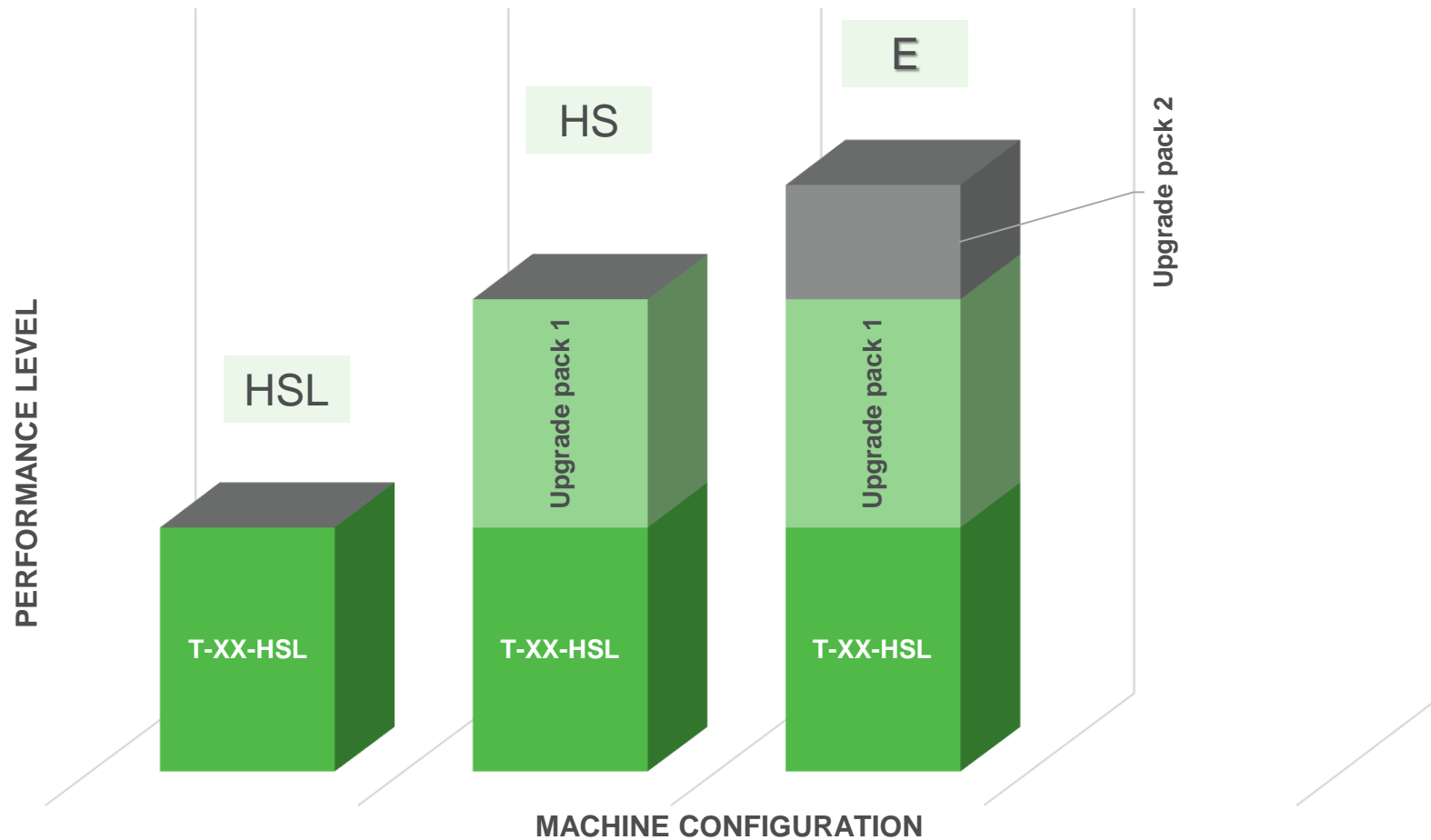
## The REELITE T could be provided in three different configurations:



- Initial Stage - HSL: Hydraulic shaftless
- Improved capacity - HS: Hydraulic shafted
- Enhanced quality (bulk control) - E: Electromechanical

# Reelite T Rewinder

## SUMMARY OF REELITE «T» SCALABILITY

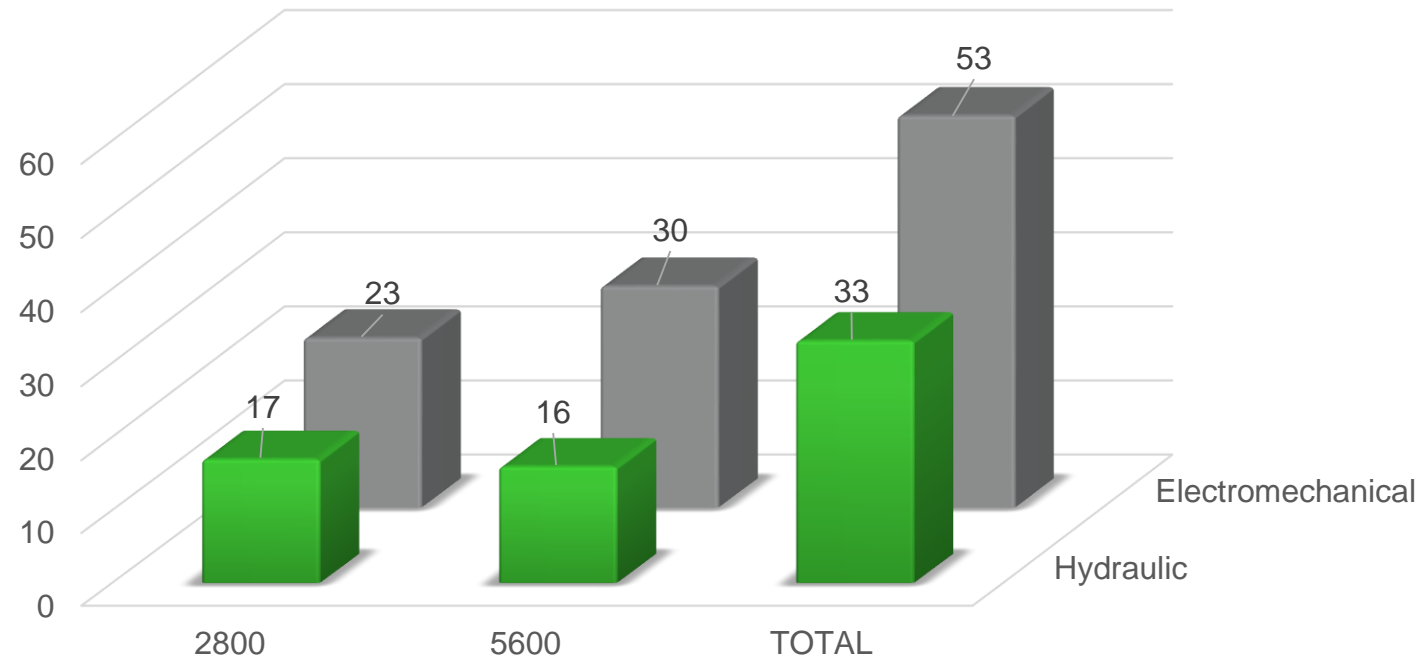


# F(O)CUS® Reelite T



# Valmet tissue rewinders sold in the last 10 years

## Splitting between Electromechanical and Hydraulic type



■ Hydraulic ■ Electromechanical