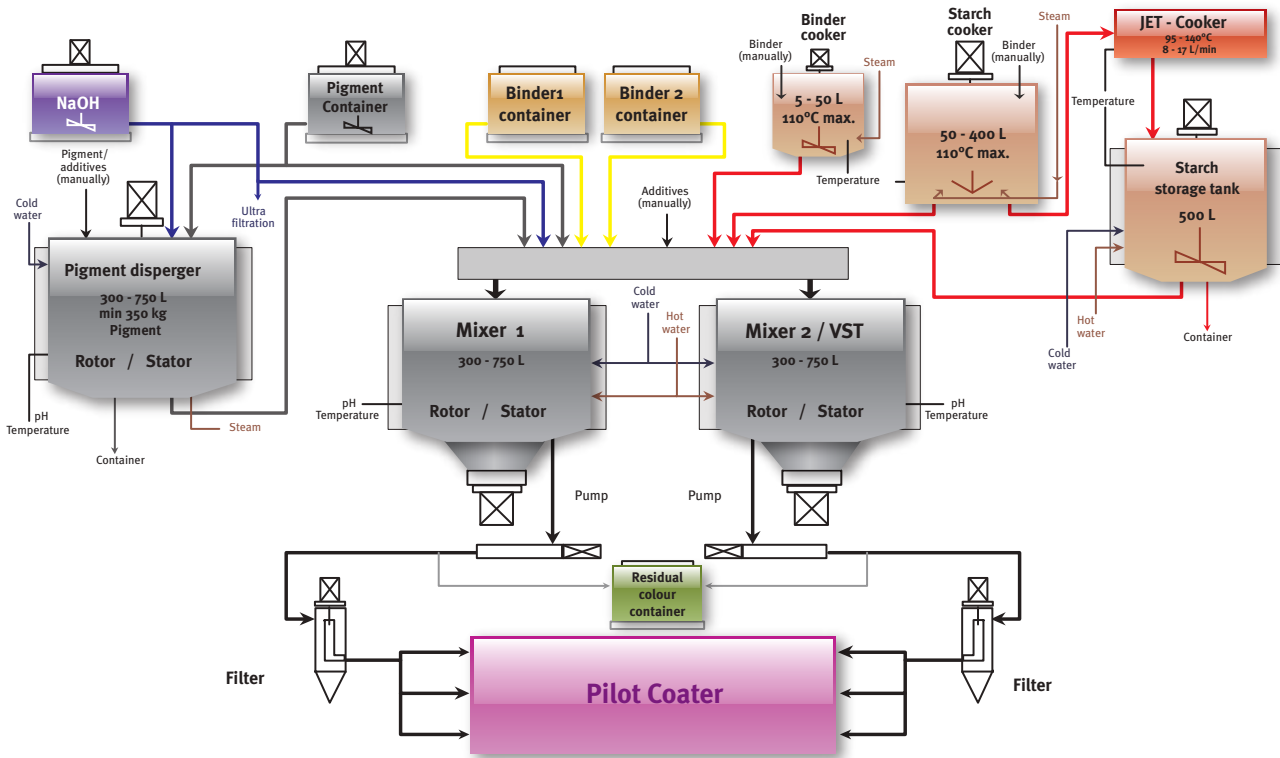




» FIBRES AND COMPOSITES / » PACKAGING AND CONFORMITY / » PRINT AND FUNCTIONAL SURFACES / » INDUSTRY 4.0 / » MATERIAL TESTING AND ANALYTICS

## VESTRA PILOT COATER AT PTS INDEPENDENT R&D CENTRE FOR PAPER COATING

# COATING COLOUR PREPARATION



GAW rotor/stator & GAW-VST dispersion mixers

180 - 750 l

Additive & binder preparation

Cooker 1

10 - 50 l

Cooker 2

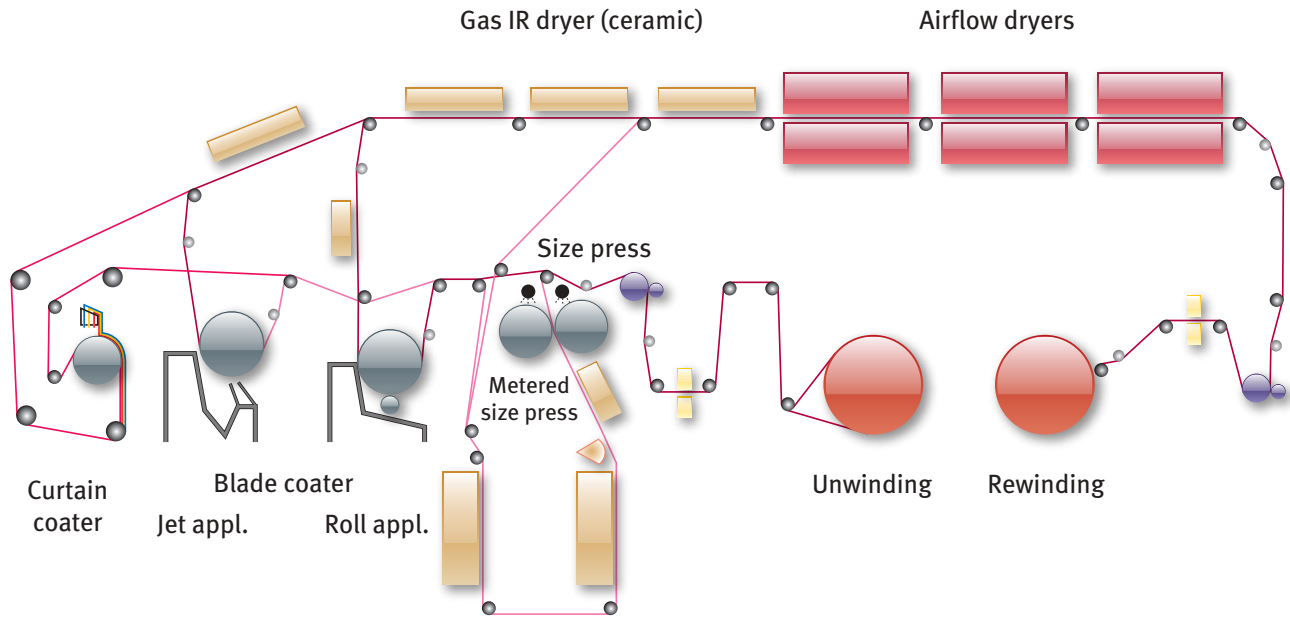
80 - 400 l

Jet cooker

500-1000 l/h



# GENERAL DATA



**Width of coater**

600 mm

**Speed**

50 - 2500 m/min

**Paper roll diameter**

max. 1500 mm

**Core diameter**

76 /100 mm

**Size press**

Roll hardness

15, 30 P&J

**Metered Size Press**

Roll hardness rubber

15, 30, 50 P&J

Roll hardness PU

30 P&J

Profiled rods

12, 15, 45 mm

Smooth rods

12, 15, 18, 20, 25, 38 mm

**Blade Coater Combi Blade**

Roll Applicator

Bent blade

Stiff blade

VARI-BAR with Combisystem

**Jet applicator JetFlow F**

**Curtain Coater**

Gap opening

0.58 mm

Flow rate

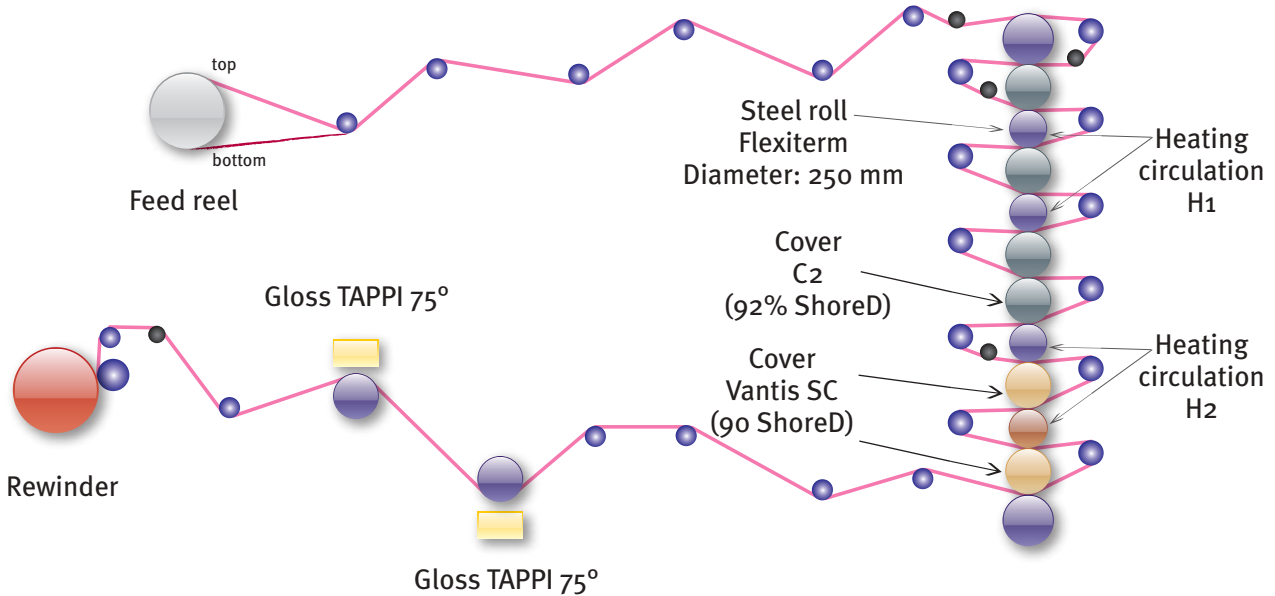
max 450 l/h

**Dryers:** Krieger ceramic gas IR and gas CB air dryers

**Data acquisition and analysis**

Voith LSC and OnView

# CALENDERING



PTS regards calendering as one of the most important finishing processes that is greatly influenced by all paper and coating parameters. The equipment of the pilot coater has been designed especially to allow different papers coated with different coating colours to be examined in order to evaluate optimum coating and calendering conditions. The targets are clear: less calendering to achieve the same gloss whilst saving energy and, thus, costs, and to enhance paper quality (more bulk, higher stiffness/whiteness/opacity) with fewer negative effects.

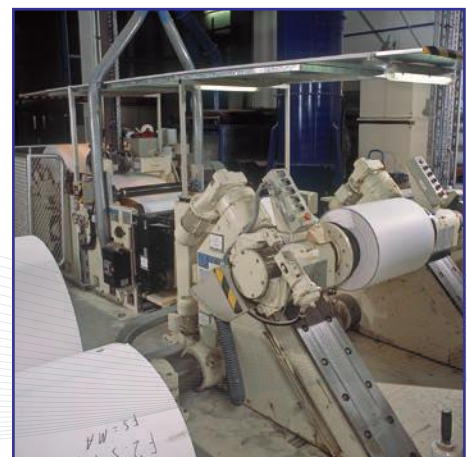
## Voith Sulzer 12-roll supercalender

Usable width (max.)	600 mm
Speed (max.)	600 m/min
Linear load:	110 - 320 kN/m
Temperature range	40 - 95°C
Roll diameter feed reel (max.)	1500 mm
Roll diameter collection reel (max.)	1400 mm
Roll core diameter (feed/collection reels)	76 / 150 mm



## Slitter-winder: Jagenberg VARI-ROLL

Usable width min./max.	560 / 600 mm
Speed max.	1500 m/min
Feed and collection reels:	
Roll diameter max.	1500 mm
Roll core diameter	76 / 150mm
Edge trimm	both sides



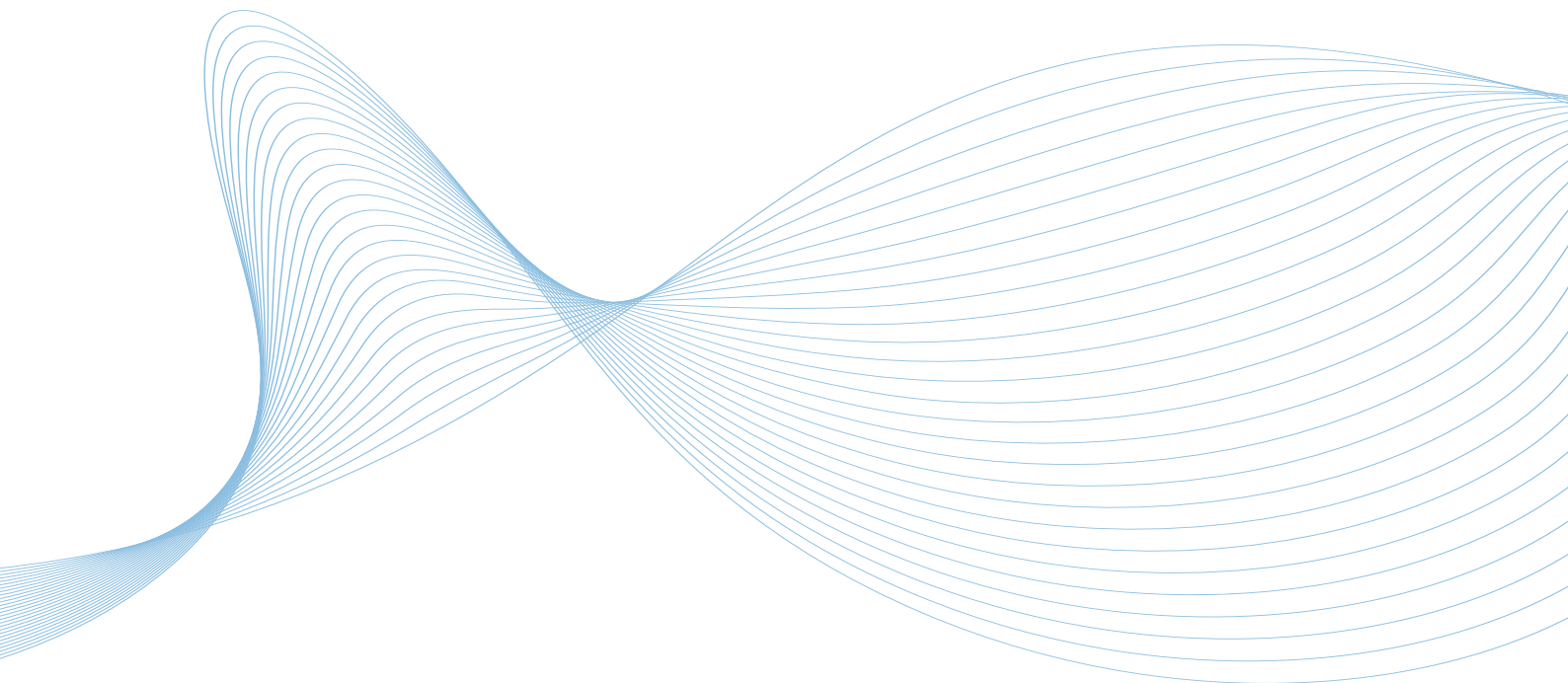
# UNIQUE FEATURES OF THE VESTRA PILOT COATER

- » Five applicators including a 3-layer slide curtain coater with a speed range from 50 to 2,500 m/min
- » Independence, neutral status, no product- /additive-related sales interests
- » Access to research programmes (public-funded, multiclient or bilateral) where paper mills and suppliers are co-operating with PTS in joint research projects in order to improve their cost situation and product quality
- » Increased reliability in field tests, avoiding operation interruptions, minimising the risk of complaints
- » Significantly reduces costs compared to field tests
- » Availability of all laboratory and analytical possibilities of PTS incl. SEM (scanning electron microscope) and AFM (atomic force microscope) as well as many standard methods such as those for analysing rheology, water retention, surface tension, contact angle, Cobb value, kit test, whiteness, gloss, porosity, smoothness, thickness, IGT and Pruefbau testers

## WHAT PTS CAN DO FOR YOU

- » Market analysis
- » Supporting product development and research
- » Process optimisation
- » Increasing efficiency
- » Testing and pre-demonstration of process conditions to minimise the risk of changing products or developing new products
- » Production of pre-production run
- » Making up samples
- » Fast and cost-efficient „Troubleshooting“
- » Supervision of field tests
- » Support during commissioning





VESTRA was founded in 1994 by a consortium comprising plant and equipment manufacturers, pigment producers, suppliers of binding agents and the paper technology institute PTS. In 2006 VESTRA was incorporated into PTS, the independent research company. This brings together a wide spectrum of industrial know-how from all key areas of coating technology - something which so far is unique throughout the world.

The pilot coater VESTRA runs a complete test line ranging from a kitchen where coating colours are prepared according to customer specifications up to five different applicators including a state-of-the-art curtain coater and a 12-roll supercalender. The measured data of coating colour, coater and calender is recorded together with quality parameters measured online. Key paper parameters are measured in a separate line. Upon request, additional tests can be conducted in PTS laboratories.

VESTRA pilot coater customers enjoy the double benefits of:

- » independent advice aimed exclusively at fulfilling the customer`s needs (no hidden sales interest), and
- » the very latest research results which may be used to develop innovative products and processes.



[www.ptspaper.com](http://www.ptspaper.com)

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