



A Technology Ahead of its Time



A TESTING CENTRE THAT CAN ANSWER YOUR NEEDS

Industries that specialize in the production and printing of coated paper are presently on the rise. For these companies, the competitive edge resides in the development of new products and in the improvement of the ones that already exist. This is a available pilot facility built to meet the specific coating needs of these businesses, who can pilot-test their new products in real time according to an incredible range of parameters.



THE BEST PERFORMING KITCHEN EVER INSTALLED

With a state of the art coating kitchen, this machine can assure effective dispersing of coating colors as well as runnability in the coating lines. In mixing coating colors, our system guarantees homogeneous mixtures of chemicals with the desired viscosity, dry solids level and rheological properties.

The operational design of Valmet-Raisio mixers and cookers allows an incredible flexibility with an accurate repeatability. The metering of water, pigments, binders and other additives is insured by installing the mixer on load cells, which is special to the coating kitchen design.



Screening and air removal in the supply system have become increasingly important. Valmet OptiAir™ and OptiScreen™ units enhance quality of color coating, for the best runnability.

THE MOST ADVANCED COATING PROCESSES

Coating station

The Valmet OptiConcept™ coater. It includes the OptiCoat Jet™ and the Optiblade™ coaters which represent a revolutionary development in high-speed coating for LWC (Light Weight Coated) paper. It also includes the AutoBlade™ system for precise coat weight control for board and fine paper. The OptiConcept™ coater station is designed to achieve very high speeds up to 2500 mpm (8200 fpm) in normal production conditions.



OptiSizer™

The on-line OptiSizer™ complements the coating line. Film metered surface sizing and coating using this piece of equipment provides good coverage and uniformity even at very low coat weights. The OptiSizer™ provides a wide range of application possibilities. It allows coating on both sides of the paper web, using two different formulations simultaneously.

Rewinder

*Also has
a GL&V rewinder
allowing a four
slitter arrangement
with an operating
speed of up to
800 m/m (2625 fpm)*





QUALITY CONTROL FROM A TO Z

A team of specialized and experienced professionals insures the highest confidentiality as well as a top-notch service to meet all of our client's expectations.

IQ System

Valmet paper IQ on-line measuring system allows reliable and accurate operating parameters. Moisture, coat weight, basis weight and gloss are closely monitored to ensure the quality of the end product.



Laboratory

Our laboratory is also equipped with the newest instruments available to provide the highest quality of research and reporting. The trial reports can be prepared on paper or electronic file, according to the client's wishes.

UNSURPASSED EQUIPMENT

COATING STATIONS

1. OPTICONCEPT

Application devices

- blade metered nozzle applicator with constant tip angle final metering blade (Opticoat, OC)
- straight nozzle application with constant tip angle final metering blade (Opticoat Jet, OCJ)
- roll applicator (Autoblade, AB)
- short dwell application coating head (OptiBlade, OB)

Dwell distance OptiCoat: 150 - 360 mm
 OptiCoat Jet: 240 - 450 mm

Loading devices

- **With AutoBlade loading:**
 - Loading Constant tip angel loading with fixed blade support list
 - Blade tip angle 0° - 45°
 - Blade free lengths 20 mm
- **With tube loading:**
 - Blade beam angle range 38"-50" (OB) 15"-65" (OC, OCJ, AB)
 - Loading Pneumatic pressure bar
 - Rod doctors available 10 & 25 mm chrome rod
 - Color circulation volume 50-150 l/min
 - Baking roll 1000 mm diameter, rubber cover (Dynacoat)
 - Applicator roll 600 mm diameter, rubber cover
 - Hardness of applicator roll 25 P&J

2. OPTISIZER

- Type Single-sided or two sided film transfer coating head
- Surface size/pigment/coating 0.5-15 g/m
- Solids contents 1-72 %
- Film metering 10 mm grooved rod (size), 20, 25 and
 35 mm smooth LD-rods (coating)
- Rod rotation speed 40-300 rpm
- Film transfer roll 990 mm in dia, 35 P&J or 45 &J X-mate X polyurethane
- Top roll (for 1 sided) 990 mm in dia, hard chrome
- Nip load max. 40 kN/m(228 PLI)
- Color circulation volume 150 l/min

ON-LINE MEASUREMENTS

Basis weight (β-ray), moisture (infra-red), ash(X-ray), gloss (optical)

IR DRYERS

Pre-coater electrical IR- with reflector, 5 rows @ 164 KW/m.
 0 - 100 % continuous variable control of output
 Pre-calender electrical IR, 5 rows @ 336 Kw/m
 Gas IR-dryer, 28 rows (16 top and 12 bottom),
 54 kw/row (1512 Kw total)

AIR DRYERS

Four units (2 single-2 dual (nozzle)
 Max. temperature 315 °C, (600 F)
 Max. air speed 40 to 50 m/s, (11 900 ft/min)
 Length 4 m each, (13 ft)

COLOR PREPARATION SYSTEM

Color/pigment mixers : OptiMixer LMD-010 1000 litres,
 Coating mixer 600 litres
 Cookers : Two batch binder cookers, 200/600 l
 One jet cooker (continuous), 5-20 l/min

COLOR BATCH SIZE

Supply system standard 950 g
 Filter Optiscreen (Opti 25 RF)
 Deaerator Optiair 5.1 S

SOFT NIP CALENDERING GENERAL

| | |
|-------------------------------|------------------------|
| Number of nips | 1-2 x hard/soft |
| Max. nip pressure, mechanical | 438 kN/m (2500 pli) |
| Max. nip pressure, roll cover | 350 KN/m (2000 pli) |
| Web tension min/max | 200-1100 N/m (2,6 pli) |
| Max speed, mechanical | 3000 m/min (10170 fpm) |
| Max speed, roll cover | 2500 m/min (8500 fpm) |

ROLL DIAMETERS

| | |
|----------------|------------------|
| Thermo rolls | 762 mm (30 in) |
| Guide rolls | 318 mm (12.5 in) |
| Tension rolls | 318 mm (12.5 in) |
| Spreader rolls | 267 mm (10.5 in) |

POLYMER ROLLS

| | | |
|----------------|--------------|--------------------|
| 3 pcs Durastar | (91 Shore D) | ø 820 mm (32.3 in) |
| 1 pcs Durasoft | (86 Shore D) | ø 820 mm (32.3 in) |

HEATING SYSTEM

| | |
|----------------------------|-------------------------|
| Internal Induction heating | 100-250 °C (212-480 °F) |
|----------------------------|-------------------------|

Balance speed
3000 m/min
Grades 28-330 g/m
Width 762 mm



