



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.

Optisoft™ and supercalender

When it comes to the calendering of coated paper, offers both a GL&V Off-line eleven-nip supercalender or an On-line two-nip Optisoft™ calender. Linear loads, temperature and even cover hardness can thus be used to achieve all desired properties of the coated paper.



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 angle loading with fixed blade support list
Blade tip angle 0° - 45°
Blade free lengths 20 mm

• With tube loading:

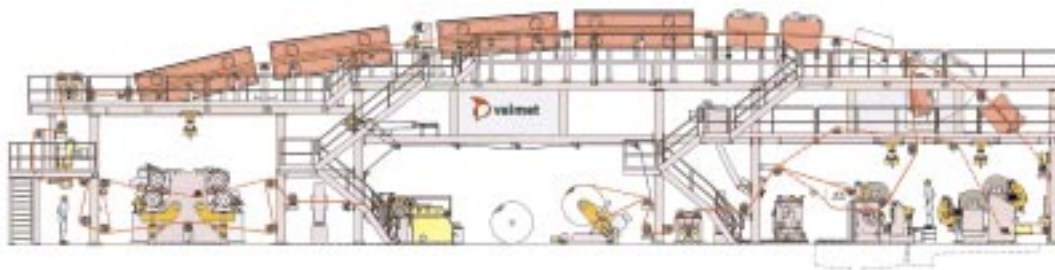
Blade beam angle range 38°-50° (OB) 15°-65° (OC, OCJ, AB)
Loading Pneumatic pressure bar
Rod doctors available 10 & 25 mm chrome rod
Color circulation volume 50-150 l/min
Baking roll 1000 mm diameter, rubber cover (Dynacoat)
Applicator roll 600 mm diameter, rubber cover
Hardness of applicator roll 25 P&J

2. OPTISIZER

Type Single-sided or two sided film transfer coating head
Surface size/pigment/coating 0.5-1.5 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

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

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)		
AIRDRYERS	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 kg Filter Optiscreen (Opti 25 RF) Deaerator Optair 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)



SUPERCALENDER

GENERAL	Web width	762 mm	(30 in.)
	Number of rolls	12	
	Nip pressure max (bottom nip)	440 kN/m	(2500 pli)
	Nip pressure min (bottom nip)	250 kN/m	(1416 pli)
	Max speed	800 m/min	(2700 fpm)
	Rolls hydraulically loaded from the top.		
	Web tension	200-1400 N/m	(1-8 pli)
ROLL DIAMETERS	Top roll	559 mm	(22 in)
	Chiller iron roll	300 mm	(11.8 in)
	Cotton rolls	457mm	(18 in)
	Driven roll	300 mm	(11.8 in)
	Bottom roll	559 mm	(22 in)
FIBER ROLLS	6 pcs Cotton 100%, hardness 85 ShD		
HEATING SYSTEM	3 heating circuits for chilled rolls: bottom rolls, middle higher, top rolls Water temp. max 120 °C (250 °F)		
WEB STEAMING	DELTEC steam showers	1 pce	
	Located between	3-4 nip or 4-5 nip	
SENSOMAT SYSTEM	Can run approach or contact		
NIP PATTERN	Nip 1 to 7	steel - cotton	
	Nip 8	cotton - cotton	
	Nip 9 to 11	steel - cotton	
ON-LINE MEASUREMENTS	basis weight (β-ray), moisture (infra-red), gloss (optical)		

