

# High productivity **metallizing**



VACUUM METALLIZING

EXPERT K5 METALLIZER

At a glance



# Leading sustainability

The **EXPERT K5 Metallizer**, the next generation of the successful K5000, has been optimized to handle the new generation of sustainable substrates (BOPE, MDO PE, CPE) and low temperature Heat Sealable BOPP films.

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**Outstanding** performance. **Lowest production costs** in the market

**Energy saving** and waste reduction

**BOBST Connect Essential**, data and connectivity, **as standard**



# Creating value

**BOBST innovations**  
are driven by customer  
and brand owner needs.

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## Sustainability

Growing demand in the market for recyclable, reusable and compostable packaging solutions, to work towards a circular economy.

## Barrier solutions

Growing requirement for packaging with high barrier to oxygen and water to extend shelf life. Unique combinations of vacuum and wet coatings for faster time-to-market.

## Expanding reach of added value coating

Barrier enhancement and high precision coating for high quality, high appeal products with extended shelf life to be used in a variety of industries including labels, medical, hygiene, cosmetics and industrial.

## Partnerships to deliver new innovative solutions

Working together to develop, test, refine and certify new products and solutions. Process experts and converters fulfill the desired end product and meet evolving market needs.

## Cost reduction

AluBond® as an enabling technology to higher performance, dyne level, adhesion and barrier at a lower cost.

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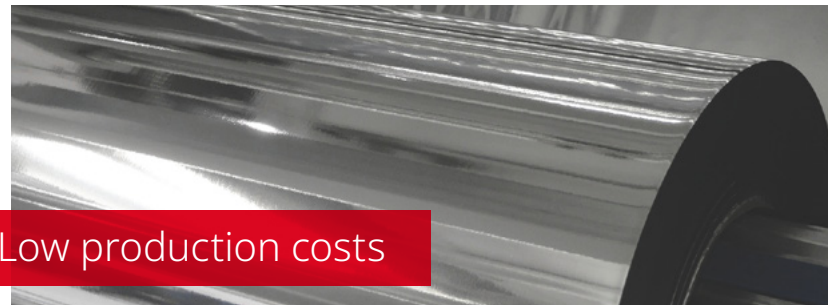
### 20% wider coating window

- Largest coating drum in industry at 700mm
- Collection efficiency improved by 16%
- Increased cooling efficiency of 25%
- Less aluminium consumption
- Increased boat life



### Improved reliability

- Designed with reliability, serviceability and robustness in mind
- Host of new features for total peace of mind
- Maximum machine uptime
- Product quality consistency



### Low production costs

- Faster venting and pump down times
- Reduced production cycle resulting in more rolls per day
- Total Cost of Ownership reduced by 10-15% compared to a K5000
- TCO can be reduced up to 25% when compared to competitor metallizers
- 20% savings in production costs




### Easy to operate

- Automatic Sequential Control (ASC) feature
- ASC speeds up start-up with minimum operator involvement
- More intuitive HMI screen and software interface

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### Energy saving & waste reduction

- ECO Mode reduces energy consumption by up to 50% during stand-by
- Reduced carbon footprint
- Film Save Mode minimizes the amount of un-metallized film (waste) to less than 400m per roll
- Auto Water Shut Valve saves cooling water usage resulting in heat and energy savings
- Improved film cooling efficiency due to the 2 zone gas wedge giving further energy savings
- 15% more aluminium deposited on the web



### Perfect winding

- More responsive direct drives on winders for more accurate tension control
- New robust design for Oscillation on rewind and unwind give optimized roll winding
- Off-the-shelf vacuum shaft seals highly resistant to friction with a longer life
- Splined shafted chucking system for increased reliability, improved engagement and reduced shaft vibrations
- Shaftless chucks for wide web units with easy to maintain design for extended service intervals



### Improved source design

- High Deposition (HD) source option with adjacent staggered boats at 75mm pitch
- Easy to set-up aluminium wire feeders to shorten the travel distance to ceramic boats
- Better coating uniformity
- Turbulence Suppression System (TSS) reduces risk of spitting
- Pneumatically activated shutter for faster response times
- Redesigned hinged shield for simple operation

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**1**

EXPERT K5 Metallizer 1350   1650   2450   2900   3300   3650	3.4 m	11.15 ft*
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**2**

EXPERT K5 Metallizer 1350	14.5 m	47.57 ft*
EXPERT K5 Metallizer 1650	15.3 m	50.19 ft
EXPERT K5 Metallizer 2450	18.6 m	61.02 ft
EXPERT K5 Metallizer 2900	19.5 m	63.97 ft
EXPERT K5 Metallizer 3300	20.1 m	65.94 ft
EXPERT K5 Metallizer 3650	22.0 m	72.17 ft

**3**

EXPERT K5 Metallizer 1350   1650   2450   2900   3300   3650	6.4 m	20.99 ft*
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\*Values may vary according to the configuration.

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## Performance EXPERT K5 METALLIZER

20µm OPP	K5 STANDARD	DarkNight®	AluBond®
Oxygen transmission rate (cm <sup>3</sup> /m <sup>2</sup> /day) - typical values	<40		<20
Water vapor transmission (g/m <sup>2</sup> /day) - typical values	<1		<0.1
OD uniformity (%)	<±5%		<±10%
Adhesion(N/15mm) - typical values	>0.5		>2

12µm PET			
Oxygen transmission rate (cm <sup>3</sup> /m <sup>2</sup> /day) - typical values	<1	<0.6	
Water vapor transmission (g/m <sup>2</sup> /day) - typical values	<1	<0.6	
OD uniformity (%)	<±5%		
Adhesion(N/15mm) - typical values	>0.5		>4

25µm CPP			
Oxygen transmission rate (cm <sup>3</sup> /m <sup>2</sup> /day) - typical values	<40		<20
Water vapor transmission (g/m <sup>2</sup> /day) - typical values	<1		<0.1
OD uniformity (%)	<±5%		
Adhesion(N/15mm) - typical values	>0.5		>2

## Technical

Max web width (mm)	1350	1650	2450	2900	3300	3650
Min web width (mm)	675	825	1225	1450	1650	1825
Max roll diameter (mm)	1270	1270	1270	1270	1270	1270
Max line speed (m/min)	1000	1000	1000	1000	1000	1000
Average power consumption (kW)	251	270	309	364	412	433
Average water consumption (m <sup>3</sup> /hr)	28	29	34	39	44	47
Estimated annual output (tonnes)	3910	4780	7100	8250	9500	10500

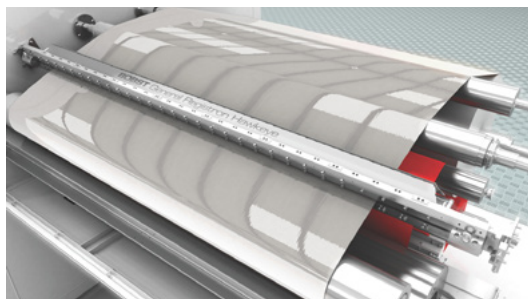
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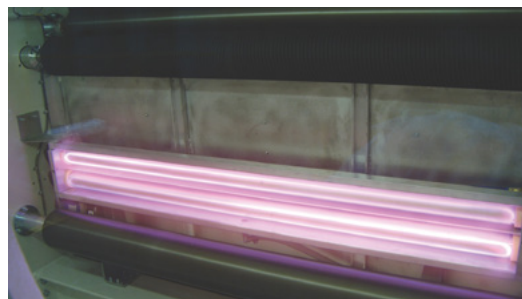
### > HAWKEYE

BOBST Hawkeye is an in-line optical density deposition control and defect monitoring system that, at full metallizer speed, detects, counts and categorizes pinholes and other defects from 0.1mm upwards. Hawkeye comes as standard with both the AIOx and DarkNight® processes.



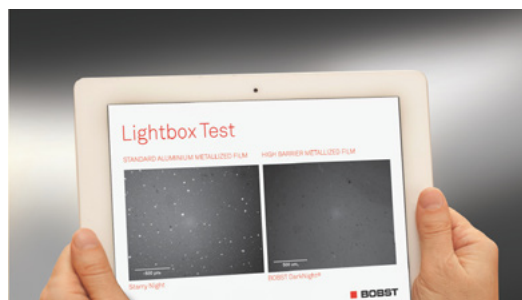
### > AluBond®

The BOBST AluBond® process provides high metal adhesion with values up to 5N/15mm and improves surface energy levels through metallization, eliminating the need for chemically treated films. Additionally, AluBond® enhances oxygen and water vapour barrier levels on BOPP and CPP films.



### PLASMA TREATMENT

BOBST offer both a plasma pre-treater and a post-treater as an option. The pre-treater is used to prepare the film surface for metallization to achieve better adhesion and improved barrier properties and is available up to 4850mm. The standard post unit is available up to 3300mm.



### > DarkNight®

BOBST DarkNight® achieves high barrier metallized films at a lower cost eliminating the need to use high Optical Density (OD) deposition levels (>3.0 OD) to achieve high OTR & WVTR values. An enhanced barrier performance of 60-80% is achieved.



### > AIOx Conversion

The BOBST AIOx process is a well-established system for production of clear film. The Integrated Conversion Solution incorporates application of an off-line topcoat to protect barrier. OTR values have been shown to improve from 1.14cm<sup>3</sup> (m<sup>2</sup>/day) to <0.1cm<sup>3</sup> (m<sup>2</sup>/day).

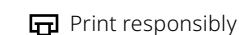


### oneBARRIER

The oneBARRIER project creates recycle-ready mono-material ultra-high and high barrier polyolefin-based (**PrimeCycle**) and paper/fibre-based (**FibreCycle**) duplex and triplex substrates for packaging designers that are industrially viable alternatives to non-recyclable metallized PET film.

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# Maintaining excellence

Expert services for all your equipment.  
Improve your processes, boost your productivity  
and enhance your expertise with a complete range  
of services from BOBST.



## Maintain your Investment

- Scheduled maintenance with BOBST certified technicians
- Preventative intervention, maximizing machine uptime
- Optimum performance over the equipment lifetime

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## Approved parts and logistics

- BOBST Original and Certified parts, and consumables
- Quality assurance, and extended maintenance intervals
- Worldwide distribution, and full availability where and when you need it

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## Machine upgrades

- Additional features, configured for your machine
- Enhanced functionality, connectivity and capability
- Future-proofing your investment, maintaining competitive advantage

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# **Digital age manufacturing** happening with BOBST Connect

BOBST Connect is an end-to-end, user-centric digital platform that enhances and increases your packaging productivity. It's designed to help you make the most of the data your machine generates, improving efficiency across your value chain.

As well as exceptional data insights, BOBST Connect helps to orchestrate and improve your whole production process, from your PDF to the finished product and quality report. It brings data and digital services together in one fully connected platform, with machine insights and expertise built in.

All of this is available to you as part of BOBST Connect Essential, the first subscription level that you receive when you purchase a new BOBST machine.



## **Performance analysis**

- Production insights, including interaction of OEE components
- Identify and eliminate performance gaps

## **Accurate reporting**

- Meaningful insights on OEE and downtime
- Accurately measure target speed and quality losses
- Trend analysis over time

## **Progress indicator**

- Highlights extensive production deviations
- Empowers timely interventions

## **Remote assistance**

- Priority access to technical specialists
- Video with Augmented Reality expert support based on real-time data
- Available 24/7 (optional)

## **Shift management**

- Optimize planning time
- Deliver overall resource efficiency

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