

From Starch to Finish

Marquip, Ward, United, Curioni, Vortx and K&H are global brands brought together as BW Papersystems, a division of Barry-Wehmler. It provides 'From Starch to Finish' solutions such as starch kitchens, complete corrugators and converting equipment.

A trustworthy manufacturer focused on quality, reliability, and value for money with a strong service and parts support structure. BW Papersystems manufactures several corrugator lines that range in width and speed. The Value, Harmony, Performance and Elite Corrugators ensure that the right product is available for every customer demand.

Regardless of paper weight, the sheet produced must be strong, flat and have an excellent print surface for post printing and high-speed converting. To finish strong, one should start well with the VortX Starch Mixing system and the corrugator wet-ends.

BW Papersystem's philosophy views the wet-end as a single cohesive unit, but also supply individual components as needed. To optimally operate the Wet End, a supervisory system called 'Orchestra' is offered.

Singlefacer

The heart of the corrugator, BW Papersystems singlefacers have a reputation of being robust and easy to operate. Available as pressure-roll and pressure-belt, both types are positive pressure machines. Operators have indicated their clear preference for a positive pressure machine versus negative (vacuum) pressure singlefacer.

A quick flute change capability is important. Using an electric tug, all models can change a flute cassette between 5 to 10 mins. To suit an existing layout, the Singlefacer can be configured to change from the operator or drive side.

All modern options expected from a leading global supplier are available. Automatic cassette flute type detection; automatic glue dam positioning, automatic wrap arm control, metering roll and glue application gaps are linked to the supervisory control system.

To improve production, while designing the singlefacers, special attention was paid to the ease of cleaning. If a machine is difficult to clean, dirt and debris will build up leading to inaccurate machine settings, and paper tears. The glue unit on specific models retracts 700mm to allow cleaning access for higher uptime and higher profits for the operation.

Starch Mixing Systems

When looking at starch in a modern corrugator, the parameters usually are sustainability and reducing waste. BW Papersystems

developed equipment to accommodate any level of demand. As corrugators get wider and faster, the entire starch production becomes more important.

Starch recipes have evolved, and now different types of starch such as wheat, pea and tapioca are used based on regional availability. BW Papersystems and its partners are working on additives to reshape the starch mixing system on the corrugator. The focus is to improve the thermal characteristics and permeability of the starch. This becomes increasingly more important with smaller flutes, and ultra-lightweight and recycled papers.

The VortX Tornado F3 Starch System was developed to handle higher volumes and increase the flexibility of the system. Modern corrugators use run tanks at the corrugator. This allows thermal control of the adhesive by locally adding chemicals or products on demand and within the confines of the scheduling system. Over 300 Vortx Tornado F3 systems are installed, with customers claiming a ROI of 9 to 18 months.



Singlefacer with the glue unit retracted.



Preheaters & Preconditioning

Depending on the corrugator design speed, BW Papersystems supplies 900, 1100 or 1200mm preheater drums. The drums are driven close to corrugator speed to have web tension without causing tear outs or creating end-to-end warp. Automatic wrap arm position is controlled by the corrugator supervisory system based on the order recipe or on feedback from an optional warp measuring laser device.

BW Papersystems offers a remarkable paper conditioning system - 'Infusion' that is fitted to a drum, a flat hotplate, or a curved hotplate. The singleface or outside liner is impregnated with a superheated steam that quickly boosts the paper temperature without over drying. Attempts to copy this system have met with a low level of success. On the other hand, BW Papersystems has many times upgraded other name-brand corrugators with Infusion hotplates at the singlefacer, glue machine or doublefacer.

breaks and ensuring simple splice preparation. Rollstands can be outfitted with dual size chucks giving more flexibility in the sourcing of paper. Automatic core ejection saves time for operators and reduces injury risk.

With an eye for modern design - the latest generation servo-controlled Splicer and Rollstand.



Splicers and Rollstands

BW Papersystems is synonymous with the ability to splice reliably at high speed. Today's servo tension control splicers are effective with light paper. It is not unusual to splice medium papers with a grammage of 60 to 90gsm.

Modern corrugators are run with a minimum of operators, BW Papersystems designs, makes regular operations as uncomplicated as possible. Features such as, 'Auto Index' make splice preparation easier and quicker. The prepared splice is automatically positioned at the correct spot for the optimum splice seal.

A Mill Splice Detect option is available on some splicer models to prevent a tear out on unavoidable paper mill splices.

Splice Synchronization and Bridge Buffer control are managed by the supervisory system. Some customers place great value on an extra interface to a roll stock inventory system.

The rollstand and splicer combination ensure web tension is accurate, and waste is kept to a minimum by avoiding paper



BW Papersystems
Glue Machine

Glue Machine

Glue machines can be installed as an individual machine or part of a wet-end solution. When part of a corrugator the Orchestra supervisory system controls glue gaps and glue dam settings. The glue gap settings automatically adjust to reduce glue application as speeds increase. Regardless of micro-flute or large flute the least amount of starch is applied to ensure product defects, such as wash-boarding, warp and poor web edge bonding do not occur.

Customers may choose the glue roll type and a rider roll or contact shoe system to keep the singleface web against the glue roll with just enough contact to avoid crush and pick up just enough glue for the bond to occur.

Doublefacer

BW Papersystems Cool-Vac Doublefacer combines traditional style heating sections with a Vacuum Traction Section (VTS). This vacuum pulling section reduces web crush significantly,

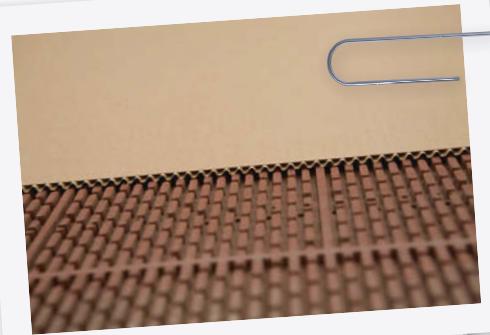
whilst removing excess moisture from the web prior to it entering the dry-end. Standard Doublefacers must squeeze the board to pull it forward causing a discernable level of board crush that impacts the strength of the finished box. The Cool-Vac design eliminates board crush.

The Cool-Vac Doublefacer is equipped with gun drilled (peripheral heated) hotplates, Infusion steam technology, and reliable belt tracking systems that allow lighter paper weights to be produced whilst retaining box strength.



Cool-Vac Doublefacer

The corrugator supervisory control system interface can control incoming steam pressures to each zone, the shoe pressure and number of shoes used per board grade and steam showers if required.



Vacuum Traction belt

BW Papersystems wet-ends are flexible, reliable, and designed for most budget requirements. Customers can rely on decades of experience and expert know-how of a group having a long heritage of supporting the industry. BW Papersystems matches technology, project experience, performance, quality, and services to the unique needs of their customers.

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