

W+D BB820 and BB820+

20k fully servo driven inserting systems
for the highest productivity and integrity
and now with our widest format range

W+D Winkler +
Dünnebier

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Fully servo driven inserting systems now with a multi-format option

BB820 / enhanced performance and net output at highest integrity

Efficient. Intelligent. Secure. The high-performance **W+D BB820** insertion system reliably inserts up to 20,000 pcs/h with even the most challenging inserts into a wide range of outer envelopes from a US #7 (3 ¾" x 6 ¾"), up to a 6 ½" x 11 ½", European sizes from C6 to C5. The patented Auto Mismatch Recovery means one can process multiple personalized inserts with minimal manual interventions and therefore achieve the highest net output and security for the most demanding jobs. The **W+D BB820** boasts full modularity to ensure quick and easy interchangeability of different feeder types within the W+D inserter platforms and to easily adapt to future requirements.

Now the W+D BB820+ / the new flagship

With up to 20,000 pcs/h the **W+D BB820+** now merges the speed and performance, improved product control, consistency, intelligence and integrity of the **W+D BB820** with the size range not only matching but even exceeding the one of the W+D BB700. The **W+D BB820+** will handle envelopes up to a 10 x 13", European B4, with a package thickness of up to 15 mm or 6/10".



W+D BB820+ comes with the new RF4 rotary feeder for consistent feeding at

increased speeds with enhanced size range and a new insertion module with

- an additional servo axis for flexible, size dependent individual motion control of collating track, envelope gripper transport, insert pusher assembly and vacuum supported envelope opening bar and insert finger control with dedicated digital cams, meaning motion profiles optimized for each of the different envelope sizes
- a new envelope stopper and exit belt assembly supporting the enhanced size range with Autoset functionality.

Reasons for the W+D BB820 and W+D BB820+

- / Patented Auto Mismatch Recovery for "hands free" synchronized inserting of personalized inserts, further enhanced to match personalized outer envelopes by deploying the new divert bin on the track
- / Stuck seal flaps on badly made outer envelopes will automatically divert up to 3 times before stopping the machine
- / One-man operation with on edge conveyor OC4 and autoloader(s) to your choice of feeder(s) on the track
- / FBI (File Based Inserting) and CLIP (Closed Loop Integrated Processing) provides highest degree of security, tracking and reporting for sensitive applications like health insurance compliances (HIPPA) and Vote-by-Mail or Absentee Ballot Voting (option)
- / Option for elevated track to print personalized reply envelopes (including unique IMb), etc.
- / Tightest industry side to side tolerance down to 6 mm or ¼" in total clearance
- / Capable of running new shape-cut/TED-C envelopes (USPS approved) with a welded side seam and subsequently reduced clearance
- / Tool-free settings for fast changeovers
- / Designed for self service and lowest cost of ownership



Inserting section with new insert pusher unit

Standard components

- / Inserting module with a 6 or 8 station track
- / High-performance software package (selective or team feeding, etc.)
- / BSC 4.0 control panel with advanced user administration, password protected
- / Network interface incl. job report to the network
- / Batch feed function
- / Patented Auto Mismatch Recovery
- / Outer envelope autoloader
- / Inserting module with stuck flap divert
- / Vacuum sealing section with integrated eject gate
- / Comprehensive product tracking
- / Vertical delivery on edge conveyor (OC4)
- / Selectable integrity/productivity modes
- / Router for Remote Support (Expert Online)

W+D control panel with the BSC4.0 operating system – everything at a glance

W+D's new 22" touchscreen HMI allows intuitive machine operation. All key production data can be seen at a glance on the Production Cockpit. Work progress and the remaining time for the current job are clearly displayed both numerically and graphically, along with the „good“ pieces and ejected



W+D BSC 4.0 HMI with touchscreen Production Cockpit



Camera reading for Code on the envelope back panel

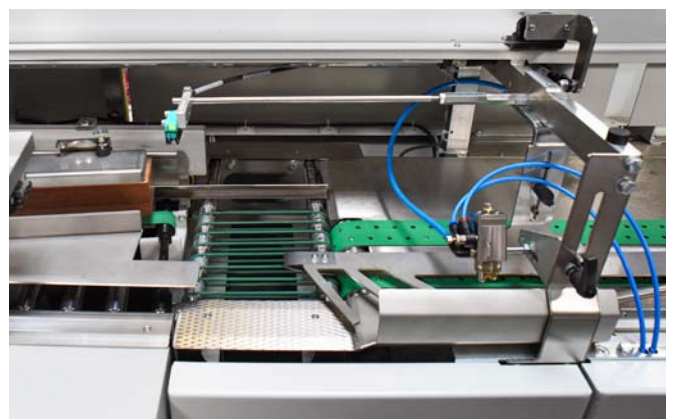
items. The cameras for code reading are configured easily and centrally on the control panel.

Tablet

The user interface can be optionally supplemented by a mobile control panel (tablet) that supports remote machine operation and local camera settings.

Optional components

- / Wide range of feeders (rotary right, rotary left, rotary 90 degree, friction, shuttle, Italian disc, pick & place, etc.)
- / Intelligent cut sheet or continuous roll input channels
- / SL2 autoloader for all common feeder models
- / Sealing section with enlarged exit read window for USPS IMB
- / Shingle conveyor (DC4) with or without kicker
- / Postal tray loading and palletizer (PT4)
- / Various camera and reading options for different feeder types, read and print applications, etc.
- / Various printing options (incl. four color overprint or UV)
- / Various post insertion modules
- / Interfaces for third-party systems like cameras, printers, etc.
- / File based inserting (FBI) or closed-loop integrated processing (CLIP) with mail piece status, time stamp and reprint file.



Large reading window for IMB-codes in the closing section



High-performance cut sheet input channel

Heavy duty input channels

Whether intelligent cut-sheet feeder-folder or 2up- continuous roll processing, W+D's system channels are designed for reading, collecting, and folding personalized documents. The channels are compact and easy to use with Autoset features for the four pocket folder and quick set up and flexible camera reading.

Autoloader W+D SL2

The W+D SL2 shingle autoloader reduces the loading frequency of a feeder and thus supports the one-man operation, thus optimizing the output per operator. The W+D SL2 supports all common W+D feeder types. The autoloader is controlled by a level sensor in the feeder hopper. The consistent fill level in the feeder ensures trouble-free operation and increases efficiency and net output. Positioned 90° to the track multiple autoloaders can be used on a single system.

Vertical delivery W+D OC4

At high speeds in particular, the „on edge“ conveyor W+D OC4 is the perfect delivery option. The W+D OC4 allows 4 to 10 times more products on the working table, reducing clearing frequency and number of operator steps, thereby optimizing system and operator productivity. A kicker for a physical offset on a ZIP or tray break is a standard component of the W+D OC4. The multi format unit will also handle 9 x 12" or C4 sizes.



Autoloader SL2



High-performance 2-up continuous input channel

Postal tray palletizer W+D PT4

As a perfect extension to the W+D OC4 on edge conveyor, the W+D PT4 makes postal tray palletizing easy. With just a few simple steps, the inserted envelopes can be positioned on the bomb bay gate and then securely released into the tray.

Feeders

W+D utilizes the latest servo technology for all of its feeders. Moving the modular feeder positions on the track, swapping different feeder types or sharing feeders between inserters is simple and fast, commonly under 15 minutes; a one man operation when using the W+D feeder carrier.

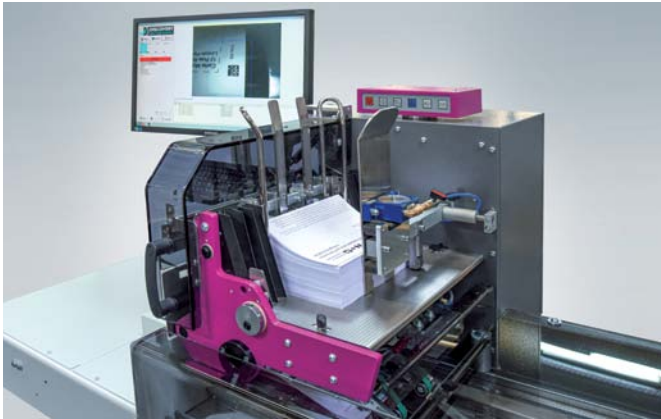
The rotary feeder W+D RF3, RF4 and the friction feeder W+D HF2 support speeds up to 20K but W+D offers a wide range of feeders to tackle the most complex and highest value-add jobs, too. All W+D feeders feature a camera port providing camera trigger and lighting power locally at the feeder; making moving cameras on the system swift and easy and reducing the complexity when employing multiple cameras on a system.

Rotary feeder W+D RF3

The W+D RF3 was developed specially for use at high speeds of up to 20K. The enlarged feeder drum, the use of joggers, blow air in the oscillator and additional venturi valves ensure that the documents are reliably separated and that documents from the magazine are carefully transferred to the track.



Automated delivery configuration with W+D OC4 and W+D PT4



Rotary feeder RF3

W+D rotary feeders provide the highest camera read rates as the feeder drum offers a large read window and the insert is securely handled in the feeder belts.

Rotary feeder W+D RF4

The W+D RF4 was developed on the platform of the W+D RF3 and features all of its improvements but based on a further developed cam design is now capable of not only feeding smaller products at high speeds of up to 20K but also of feeding 8 1/2 x 11" or A4 sizes.

Friction feeder W+D HF2

The W+D HF2 hybrid feeder uses friction and vacuum to separate and feed products. It compliments the rotary feeders to handle open edge inserts such as Z-folds, thicker brochures and rigid products.

Shuttle feeder W+D SF2

With its oscillating based plate, front vacuum segment and rear pusher the shuttle feeder is the best option to process heavier catalogues, perfect bound brochures or brochures with delicate cover stock which eventually may unfold on a friction feeder.

Vacuum transport on the gathering section/elevated track

The modular vacuum conveyor belt on the gathering section allows inline personalization / printing or the affixing of cards,



Elevated vacuum transport on track



Divert on the track

coins etc. at high running speeds and precision, with the option of camera verification on the unit.

Pick and place feeder

The perfect feeder for the accurate placement of credit or loyalty cards, luggage tags or coins, etc. using a hot melt glue system either in the track or on an elevated track for even better control and throughput.

Turnover belt on the gathering section

A turnover belt on the gathering section is also available where inline affixing or printing applications require a change in product orientation.

Small Format Kits

Special parts for envelope stop and insert module side guides to support smaller envelope sizes down to 95 mm (3 3/4") height, (BB820) and 162 mm (6 1/4") width (BB820 and BB820+).

Divert on the track

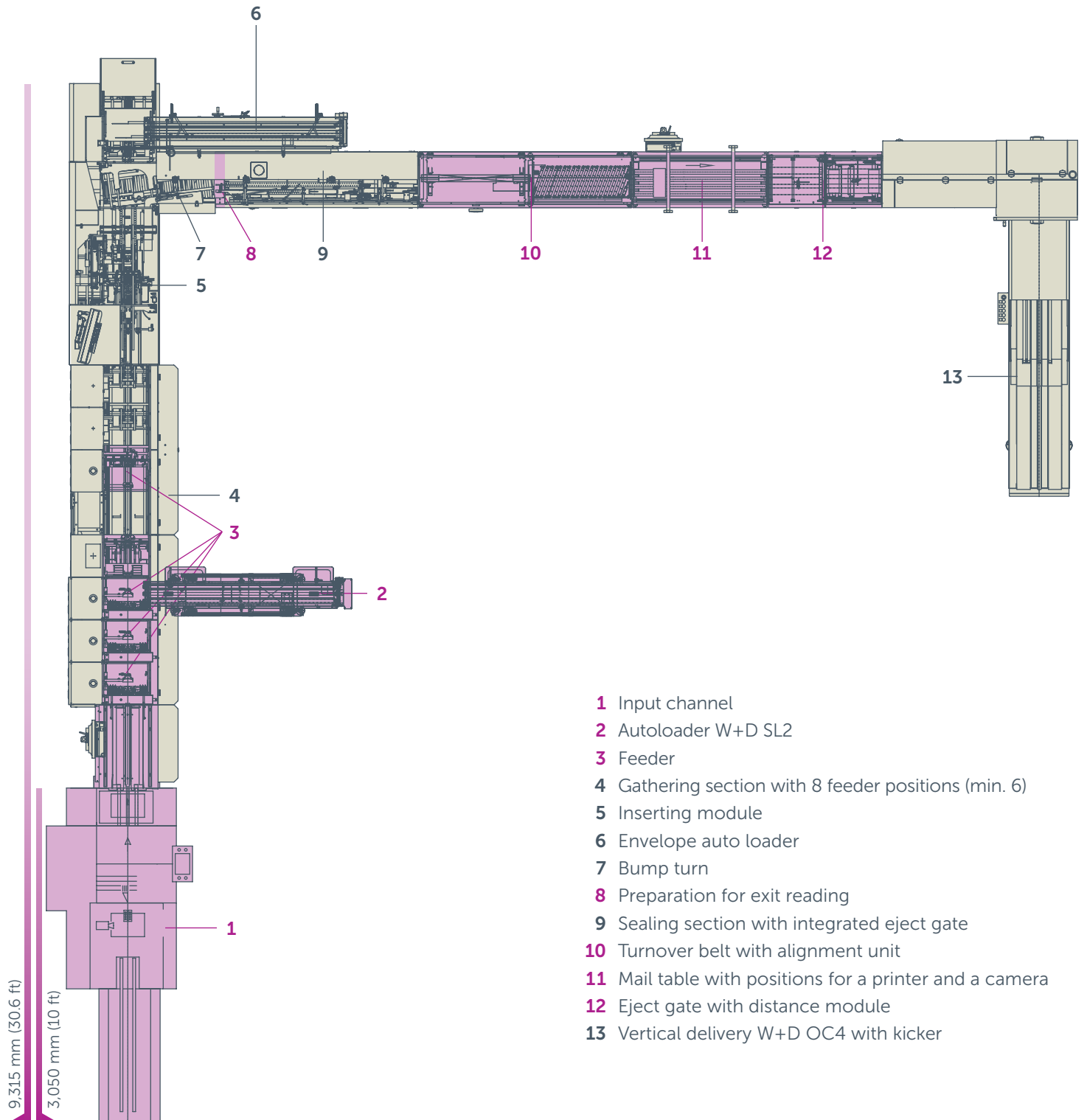
Patented automatic mis-match recovery now available when running pre-personalized outer envelopes as a mis-match of personalized inserts to the outer envelope can be diverted in the track before being inserted into the wrong envelope and vice-versa (i.e. outer envelope can be diverted to restore the correct personalized sequence to the incoming personalized inserts).



Mail table for inline, end of line read-write personalization.

Machine layout

Enhanced configuration with 8-feeder base, cut sheet channel and R+P back end



Technical Specifications

Type		W+D BB820	W+D BB820+
Mechanical performance		up to 20,000 pcs/h	up to 20,000 pcs/h for Tri and Half Fold up to 16,000 pcs/h for C4 or 9 x 12" Flats
Envelope			
Size	min. Standard	Envelopes: DL, C6/5, US 7 3/4, #9, A7 min. height: 98 mm (3 7/8") x min. width: 184 mm (7 1/4")	Envelopes: DL, C6/5, US 7 3/4, #9, A7 min. height: 95 mm (3 3/4") x min. width: 184 mm (7 1/4")
	min. Option	Envelopes: C6 US #7 (3 3/4" x 6 3/4") min. height: 95 mm (3 3/4") x min. width: 162 mm (6 1/2")	Envelopes: C6 US #7 (3 3/4" x 6 3/4") min. height: 95 mm (3 3/4") x min. width: 162 mm (6 1/2")
	max. Standard	Envelopes: C5, 6 1/2" x 9 1/2", # 14 max. height: 165 mm (6 1/2") max. width: 292 mm (11 1/2")	Envelopes: C4, B4, 9" x 12", 10" x 13" ③ max. height: 254 mm (10") max. width: 353 mm (13 7/8")
Seal flap (height)		min. 20 mm (3/4") – max. 40 mm (1 1/2")	min. 20 mm (3/4") – max. 63 mm (2 1/2")
Paper weight		min. 75 g/m² (20 lbs) – max. 110 g/m², > 110 g/m² (29 lbs) ①	min. 75 g/m² (20 lbs) – max. 110 g/m², > 110 g/m² (29 lbs) ①
Thickness		max. 8 mm (5/16")	max. 15 mm (6/10")
Insert			
Size width (Master)	min. Standard	175 mm (6 7/8")	175 mm (6 7/8")
	min. Option	148 mm (5 7/8")	148 mm (5 7/8")
	max. Standard	286 mm (11 1/4")	330 mm (13")
Paper weight		min. 70 g/m² (18 lbs) – max. 250 g/m² (65 lbs)	min. 70 g/m² (18 lbs) – max. 250 g/m² (65 lbs)
Max. Product thickness	RF3/4	RF3 = 1 mm (1/25") – RF2 = 3 mm (1/8")	RF4 = 3mm (1/8")
	HF2	8 mm (5/16") ②	15 mm (6/10")
	SF2 ④	8 mm (5/16") ②	15 mm (6/10")
Min. Product thickness	RF3/4	Single sheet 70 g/m² (18 lbs)	Single sheet 70 g/m² (18 lbs)
	HF2	Z- or half folded sheet 70 g/m² (18 lbs) 110 g/m² (29 lbs) flat sheet Single sheet unfolded < 110 g/m² (29 lbs) on request	Z- or half folded sheet 70 g/m² (18 lbs) 110 g/m² (29 lbs) flat sheet Single sheet unfolded < 110 g/m² (29 lbs) on request
	SF2	1 mm (1 1/25") 160 g/m² (43 lbs)	1 mm (1 1/25") 160 g/m² (43 lbs)
Loading capacity of the feeders	RF3/2	max. 300 mm (12")	max. 300 mm (12")
	HF2	max. 250 mm (10")	max. 250 mm (10")
	SF2	max. 250 mm (10")	max. 250 mm (10")
Side to side clearance envelope		6 mm (1/4") total clearance, respect. depending on filling	6 mm (1/4") total clearance, respect. depending on filling
Machine			
Length	Basic 6 stations	5,507 mm (18.1 ft)	5,507 mm (18.1 ft)
	Extension per 2 stations	762 mm extra (2.5 ft)	762 mm extra (2.5 ft)
Number of Stations		min. 6 – max. 12	min. 6 – max. 12
Compressed air requirement	6 feeders 7 bar	630 NL/min	630 NL/min
	add 2 feeders 6 bar	110 NL/min	110 NL/min
Power requirements		3 ~ 230/400V, 50/60 Hz N, PE (other power supplies by tap transformer)	3 ~ 230/400V, 50/60 Hz N, PE (other power supplies by tap transformer)
Modularity		6 or 8 station base; 4, 6 station extension module	6 or 8 station base; 4, 6 station extension module

① Heavier stock or card board envelopes on request

② Limited by system capacity

③ A B4 or 10 x 13" size will limit the speed to 10,000 pcs/h

④ SF2 is rated at 12,000 pcs/h

The OC4 in the system configuration will support sizes from 98 x 184 mm – # 7 3/4 (3 7/8 x 7 1/2"), C6 (114 x 162 mm) to 9 x 12" or C4 and 4/10" or 10 mm thickness

All performance data published refers to the production of a defined reference product under certain circumstances reflecting a possible practice of use. The performances achieved in practice depend on a multitude of parameters which are beyond our control. This includes, amongst other factors, the condition of the raw materials to be processed, the shapes of the products, the air humidity and the ambient temperature. W+D reserves the right to make design changes and changes to the performance values.

Winkler+Dünnebier GmbH (W+D), part of global equipment manufacturer Barry-Wehmiller and its BW Converting Solutions platform of five industry leading brands, specializes in the design and manufacture of high-performance converting machinery for the tissue, nonwovens, hygiene, package-printing and bag-converting industries worldwide.

With more than 100 years of experience, W+D is the only engineering company to cover the entire envelope mail production value chain: from converting, printing and value ad enhancement systems for the manufacturing of envelopes to highly intelligent mail inserting technology. All with the aim to produce the most complex and personalized letter mail packages for postal system intake.

For more about W+D, visit w-d.de.

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