

W+D 410 Easy Enveloper

Direct Mail – The Easy Way



W+D

Envelope production made SIMPLE – the first fast change, easy-to-use envelope converting and finishing system for short to medium runs

The W+D 410 Easy Enveloper now allows a simpler more efficient way to produce high-quality direct mail envelopes and some self mailers. The W+D 410 comes in two different configurations: the 410 BC blank only or the 410 KC blank and roll combi machine.



shown W+D 410 BC

Reasons for the W+D 410 Easy Enveloper

- / The W+D 410 Easy Enveloper is designed for „1-man operation“ and short learning times even for newcomers to envelope production. No previous envelope converting experience required.
- / The machine processes rectangular sheets with complete cut and pre-cut blanks (BC/KC) as well as unprinted and preprinted rolls (KC).
- / The magnetic cylinder technology used for cutting rectangular sheets enables fast format changeovers as well as new types of formats such as the Envacard or shape cut envelopes.
- / Coordinated gripper and roller elements enable mark- or scratch-free processing of preprinted or coated sheets.
- / The modular design allows a wide range of finishing options in the machine, such as: printing, embossing, rectangular or shaped windows, processing or insertion of metallized paper to achieve an effect comparable to hot or cold foil applications.
- / Versatile setting aids on the machine or via the operating terminal enable fast job changes with virtually no need for tools and reduce startup waste to just a few hundred rectangular sheets.
- / Low running waste with automated run out delivery feature enables running variable data digital material with very low waste.
- / Speeds of up to 550 envelopes per minute (33,000 env/hr)

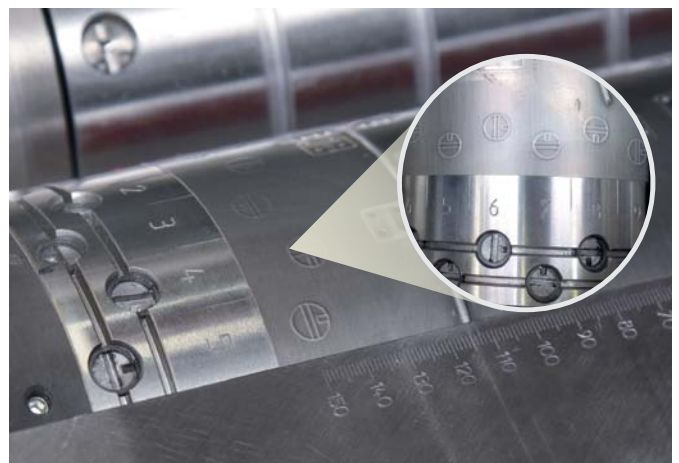
The Easy Enveloper offers a wide range of direct mail flexibility. Print flexo, emboss and convert preprinted litho or digital into envelopes as well as some popular self-mailer formats.

W+D 410 Easy Enveloper Features

- / Easily run envelope sizes from
 - US:** from #7-3/4, A7, #9; #10, A8, A10 to 6 x 9-1/2" booklet envelopes
 - EU:** from smaller than C6 up to B5
- / Total machine range:
 - US:** 3 27/32" x 6 15/16" to 6 3/8" x 9 27/32"
 - EU:** 98 x 162 mm to 176 x 250 mm
- / Produces up to 550 env/min (33,000/hour)
- / Shuttle feeder for scuff and mark free envelopes
- / EasyCut® magnetic cylinder technology for formats like booklet, commercial and diamond shape, as well as window cuts with the industry's lowest register tolerances from print-to-format.
- / Window station for the application of traditional poly window film patches, foil patches or preprinted labels
- / Patented staggering wheel with a "flipper" for scuff and mark free coated and specialty envelope paper results in highest quality envelopes using any envelope paper
- / Remoistenable seal gum or options for pressure-sensitive strip (hot melt) or latex (self seal)
- / Reject tray between stations – generally less than 20 envelopes lost in total during a machine stop
- / Options for 2/1 in-line flexo printing - for logo print and imprint on blank or pre-printed rolls or sheets
- / Push-to-service button sends an email with a diagnostic report to W+D service when activated, initiating immediate help
- / Option for extrusion (nozzle) gumming for booklets and dimensional side flaps
- / Self-contained vacuum, blow air, and chip collector available
- / Integrated safety hoods provide noise protection (85 decibels – EN 13023)
- / Optional W+D 914 PackAssist to make boxing of envelopes, including coated stock, easier.



Quick and easy envelope format adjustment with integrated adjustment aids and scales



Settings for the valves are pre-marked on the EasyCut® flex die making set-up simple and fast



Removal of individual envelopes from running production stream for quality control



Easy-to-use touch screens traverse the full machine length to fully support the operator

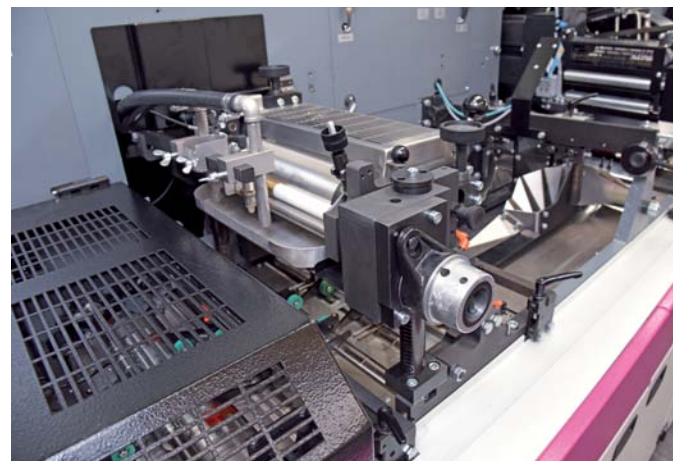
Standard components (BC)

- / An optional quick-change infeed table for either rectangular or die cuts
- / EasyCut® magnetic flex die cylinder technology
- / Roller gumming for side flaps
- / Waste reduction through intelligent servo drive technology
- / Two control panels as a touch screen monitor
- / Extensive help menus integrated into the operating software
- / Window station

- / Completely enclosed machine for personal and noise protection
- / Vacuum pumps and blowers
- / Suction aggregates for paper and window material
- / Connection to W+D Expert Online (free of charge within warranty)
- / W+D LED strobe light (for monitoring the closing station closing flap)
- / Eject gate for removal of envelope from running production for quality control



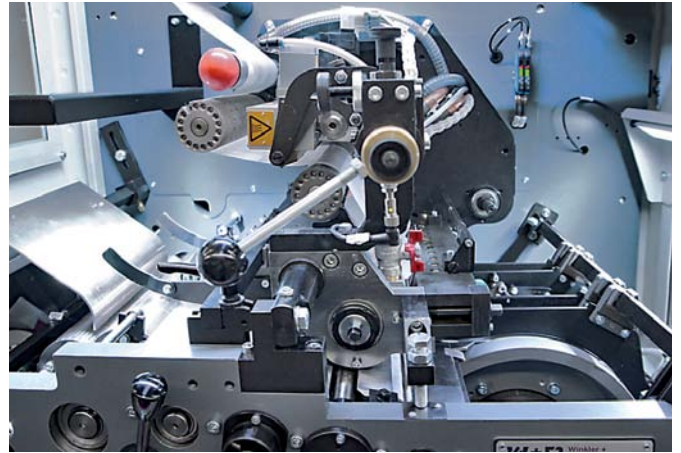
Blank feeder



Side-flap roller gumming section



Seal-flap gumming section with glue humidification



Hot-melt pressure-sensitive gumming section

Optional components (BC)

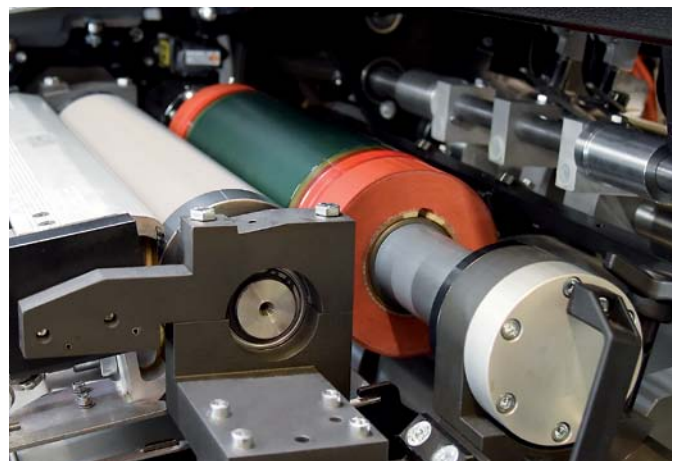
- / An additional quick-change infeed table for rectangular or die cuts
- / Flexo printing units for inside and outside printing
- / Folding device for outside side flaps
- / 2nd window station
- / Easy-to-use embossing station for photopolymer plate use
- / Nozzle gumming for side flaps
- / Hot melt Peel-and-Seal-section

- / Continuation motor and automatic humidification of the seal-flap gummer reduce washing times when restarting after machine stop
- / W+D machine cameras (for monitoring the material flow at the drying section and during window gumming)
- / The W+D 914 PackAssist is helpful for coated envelope products
- / W+D Service Connect
- / IQS – Inline Quality Control System

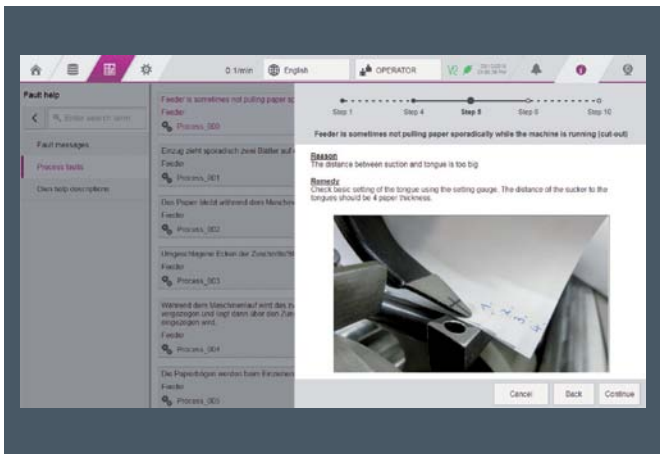
The W+D 410 offers a wide range of value-add finishing capabilities for your direct mail



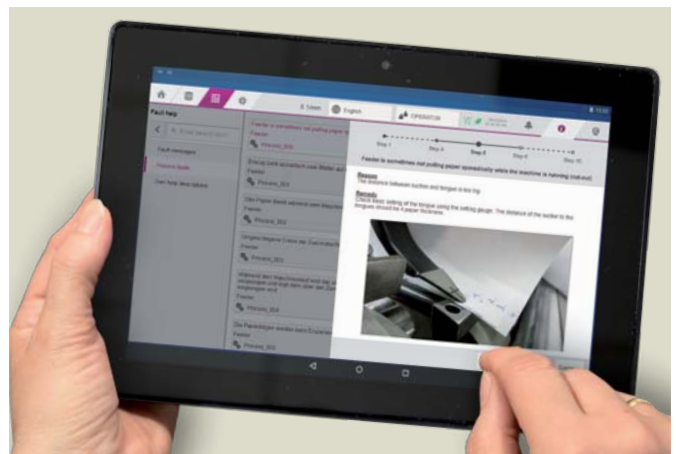
Embossing station for standard and deep embossing



Flexo printing unit with sleeve technology for fast print changes



Help Wizard



W+D Service Connect

Help Wizard

- / Extensive help menus for format changes, adjustments, paper jams, etc.
- / Step-by-step instructions on troubleshooting
- / Notes contain photo and video tutorials

Push-to-Service Button

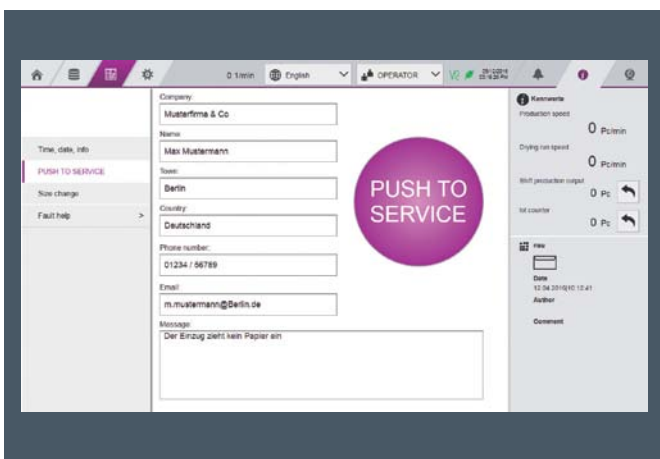
Activating this button triggers system diagnostics and copies all related data and messages into an e-mail. After that, it will automatically send the e-mail to W+D First Level Support with the following information: Machine number, error message, customer's phone number and a complete diagnostic report.

W+D Service Connect

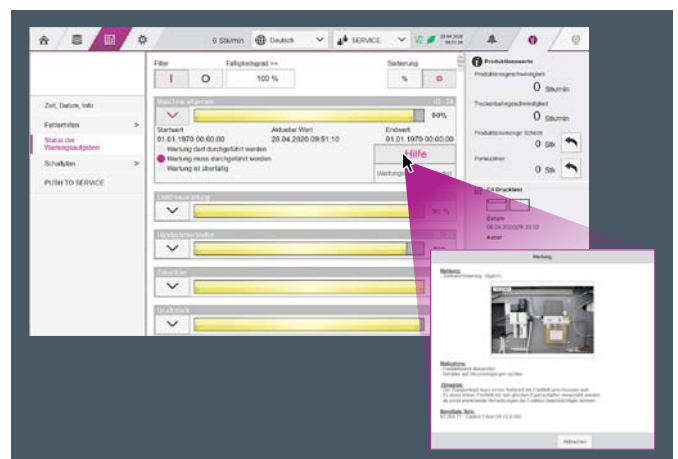
- / W+D Service Connect is the ideal mobile companion for your maintenance and repair experts
- / The tablet displays real-time updates of machine status, running jobs, current speed, error messages, etc.
- / Creates an online connection with W+D Service. The integrated camera can send photos and videos to W+D's experts

Maintenance Manager

With the Maintenance Manager from W+D, you always have your upcoming maintenance in view. The Maintenance Manager increases your machine availability, reduces your planning effort and ensures lower maintenance costs.

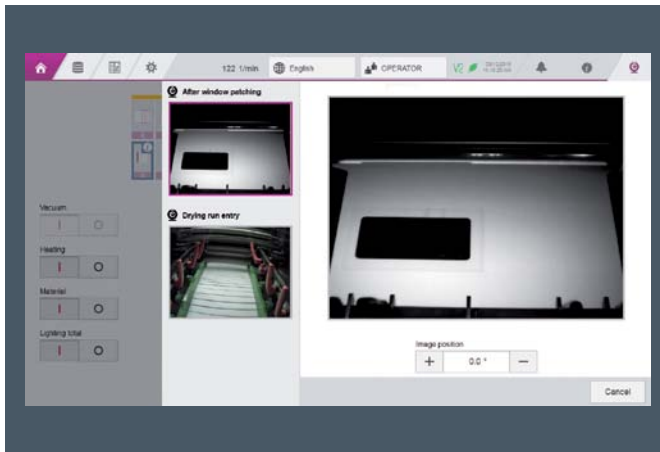


Push-to-Service Button

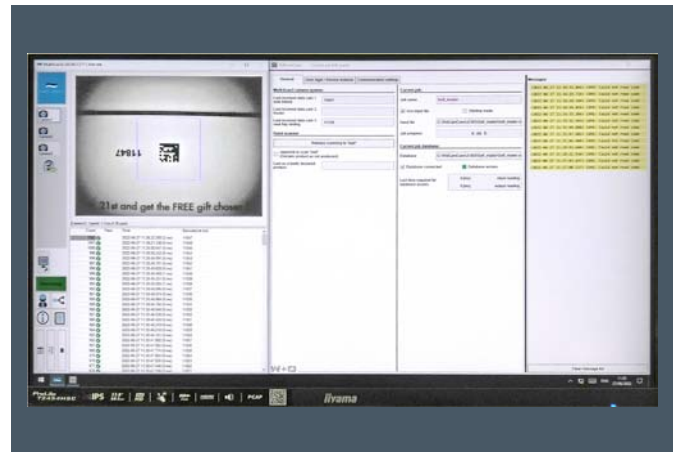


Maintenance Manager

In line intelligence package allows complete piece level tracking for 1:1 data driven personalized envelopes



Machine cameras



Protocol (Report) – Intelligence Package

Machine cameras

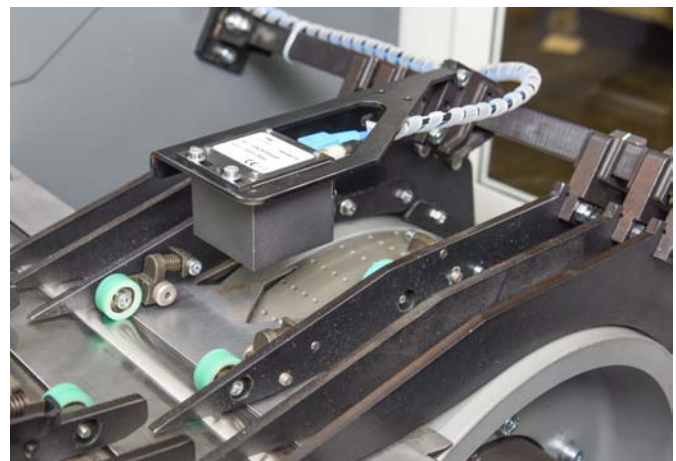
- / Cameras in the machine support quality control or process monitoring via HMI in real-time
- / With partially viewable areas of the product run (window station, dryer chain inlet), machine cameras allow for these processes to be monitored by video on the HMI

Intelligence Package

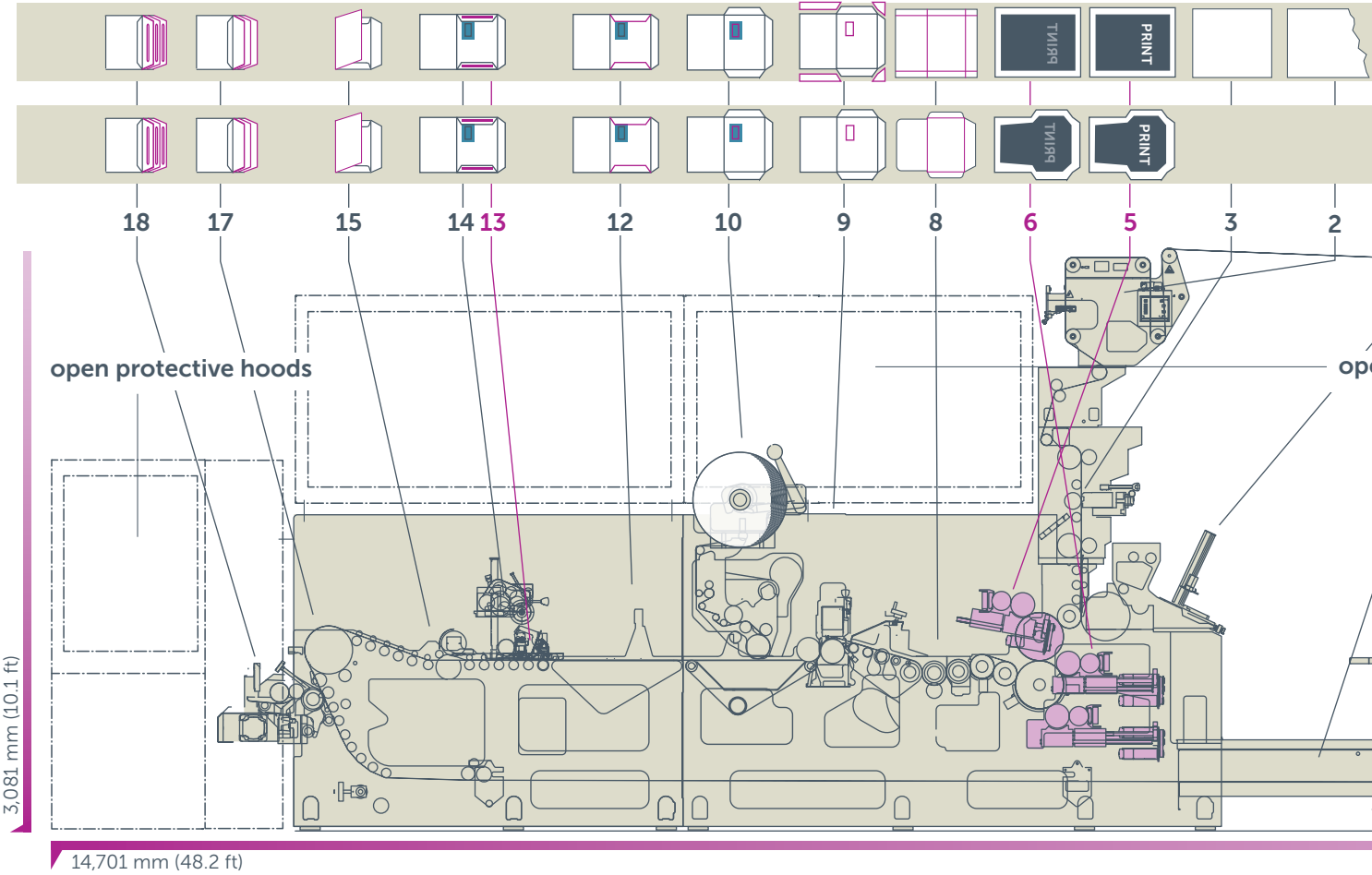
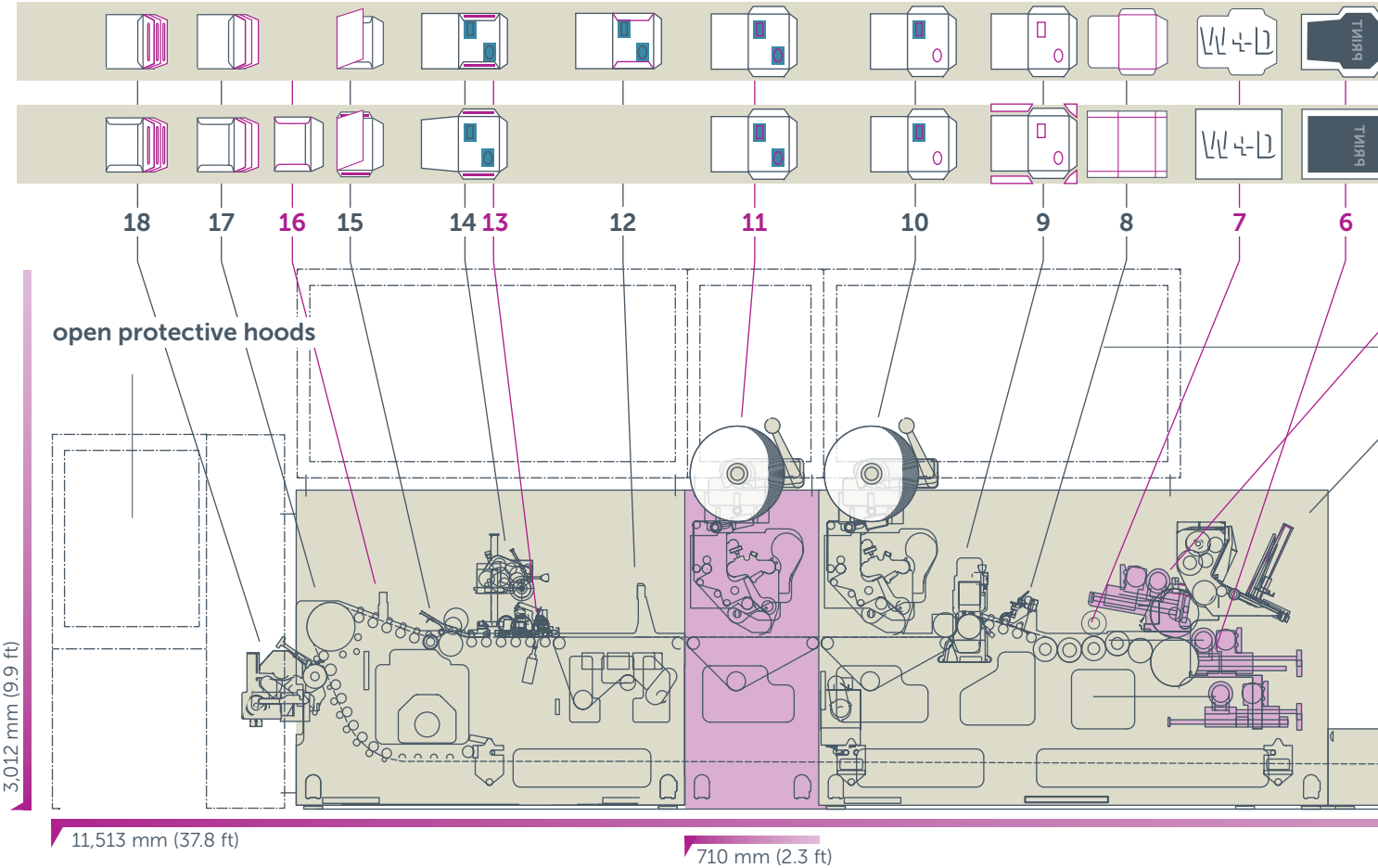
- / Allows processing of personalized envelopes for 1:1 direct mail
- / Closed loop protocol for full integrity
- / Cameras for reading the code at the material infeed and aligner section record every envelope
- / Output of a "reprint report" for envelopes that have not been produced

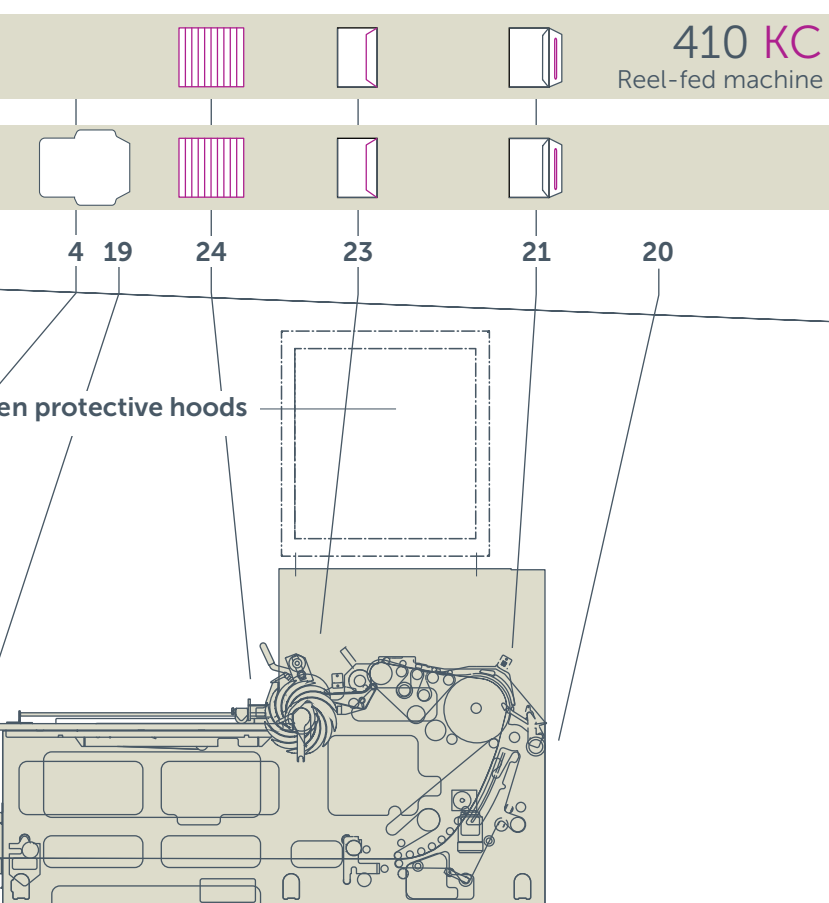
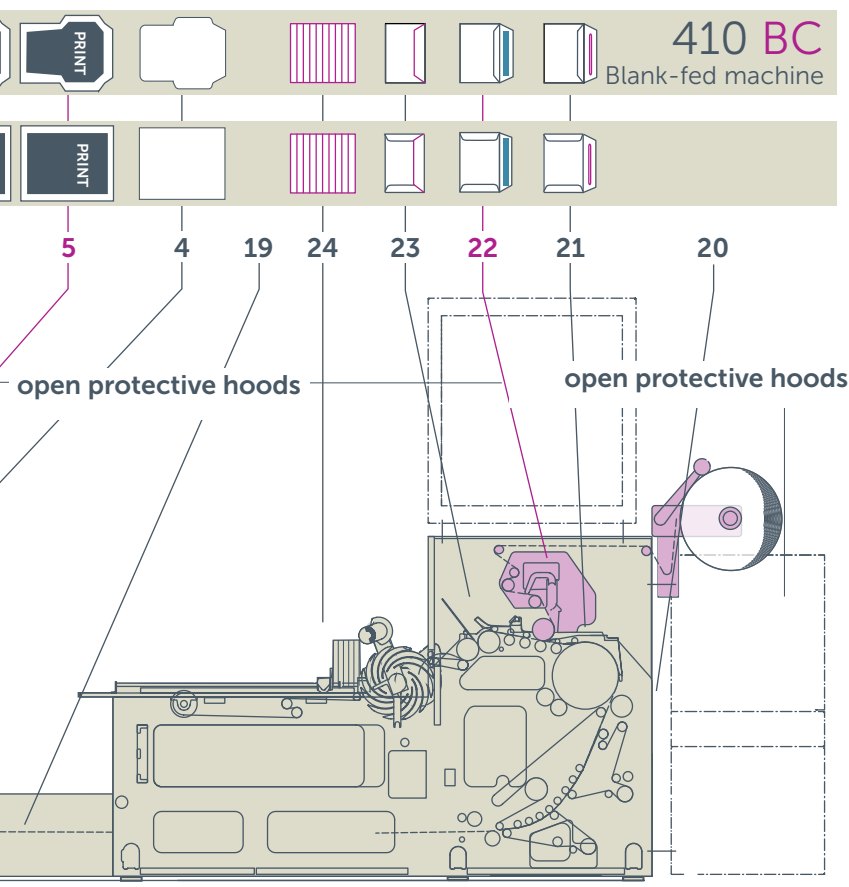


Smart camera at the roll infeed in the cutting tower



Smart camera in front of the seal-flap folding section

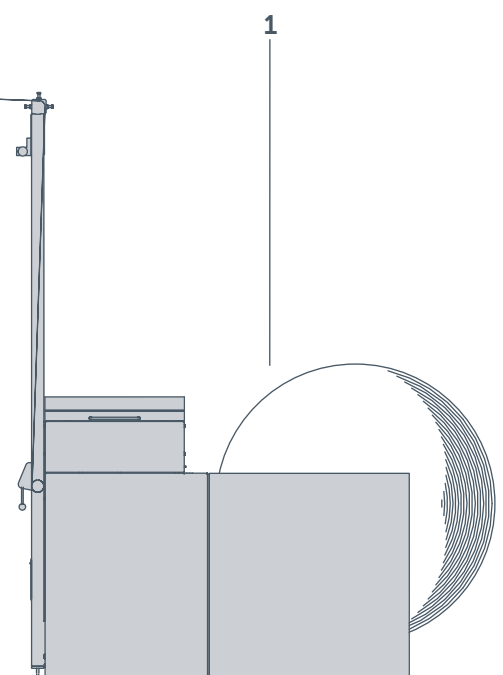




Machine layout

- 1 Unwind
- 2 Web aligning section
- 3 Separating cutting section
- 4 Blank feeder
- 5 Flexo printing units for inside printing
- 6 Flexo printing units for outside printing
- 7 Embossing station
- 8 Longitudinal and cross scoring section
- 9 Cutting section for windows and complete cuts
- 10 Window material patching station
- 11 2nd window material patching station
- 12 Side flap folding section (for inside side flaps)
- 13 Nozzle gumming for side flaps (optional)
- 14 Seal flap gumming section
- 15 Bottom flap folding section
- 16 Folding tools for outside side flaps
- 17 Staggering section
- 18 Seal flap gumming section
- 19 Drying section
- 20 Product removal section
- 21 Aligner section
- 22 Hot-melt pressure-sensitive gumming section
- 23 Seal flap folding section
- 24 Delivery

- optional machine components
- mandatory option (KC)



Single splicer shown / Two roll auto splicing also available – see pg. 12)

W+D 410 KC – Production flexibility of blank or roll production from one machine

The W+D 410 KC offers the production flexibility that can be run as either a blank-fed machine or a roll-fed machine. This configuration offers the widest range of blank or preprinted paper sources based on your particular run lengths as well as preprint formats. In both running modes, the inline 2 topside and 1 inside flexo printer can be used for printing on blank or pre-printed papers.

With the optional „Intelligence Package“ you are also able to convert personalized and individualized rolls or sheets into envelopes. In the running production process, the individual prints are read by a camera when they enter the machine and the finished products before they are stacked, and a log is created for the further workflow.



shown W+D 410 KC with W+D 191 two roll auto splicer

Additional reasons for the W+D 410 KC:

- / The ideal combination machine for the production from rectangular sheets, die cut sheets or rolls
- / Quick and easy changeover between sheet and roll production in just a few steps
- / Inline printing units for simple logo print and inside printing, as well as for imprinting on printed sheets or rolls
- / ONE format-independent separating knife roller for the entire format range of the machine
- / Ideal supplement for print shops in the area of direct mail with roll or sheet processing who want to keep the entire workflow from the envelope to the finished mailing in-house.

Change from blank to web mode in only a few minutes



Blank fed – feeder in working position



Roll fed – feeder in stand-by position

Standard components (KC)

- / Blank fed table that can be moved sideways, either for rectangular sheets or for die cut sheets
- / An optional quick-change infeed table for either rectangular or die cuts
- / EasyCut® magnetic flex die cylinder technology
- / Roller gumming for side flaps
- / Waste reduction through intelligent servo drive technology
- / Two control panels as a touch screen monitor
- / Extensive help menus integrated into the operating software
- / Window station
- / Completely enclosed machine for personal and noise protection

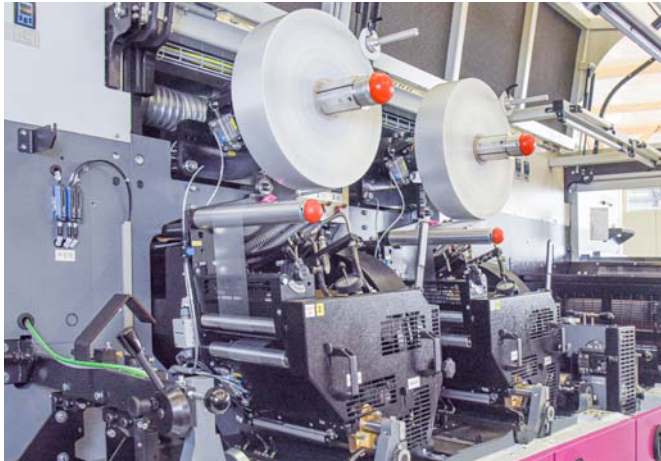
- / Register mark reading with control
- / Web aligning section
- / Separating cutting station - ONE separating knife roller for the entire format range
- / Vacuum pumps and blowers
- / Suction aggregates for paper and window material
- / Connection to W+D Expert Online (free of charge within warranty)
- / W+D LED strobe light (for monitoring the closing station closing flap)
- / Eject gate for removal of envelope from running production for quality control



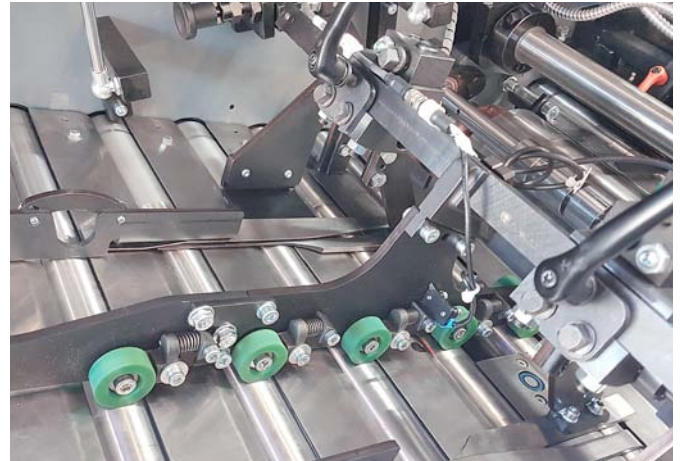
Cutting tower with section for separation cut



Single unwinder – Option



2nd window station



Folding section with tools for outer side flaps

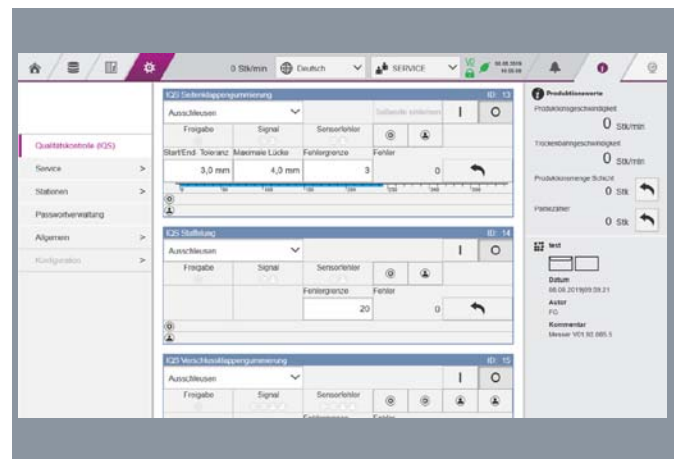
Optional Module (KC)

- / An additional quick-change infeed table for rectangular or die cuts
- / Flexo printing units for inside and outside printing
- / Folding device for outside side flaps
- / 2nd window station
- / Easy-to-use embossing station for photopolymer plate use
- / Nozzle gumming for side flaps
- / Hot melt Peel-and-Seal-section
- / Continuation motor and automatic humidification of the seal-flap gummer reduce washing times when restarting after machine stop

- / Single unwinder
- / Automatic splicer W+D 191
- / W+D machine cameras (for monitoring the material flow at the drying section and during window gumming)
- / The W+D 914 PackAssist is helpful for coated envelope products
- / W+D Service Connect
- / IQS – Inline Quality Control System



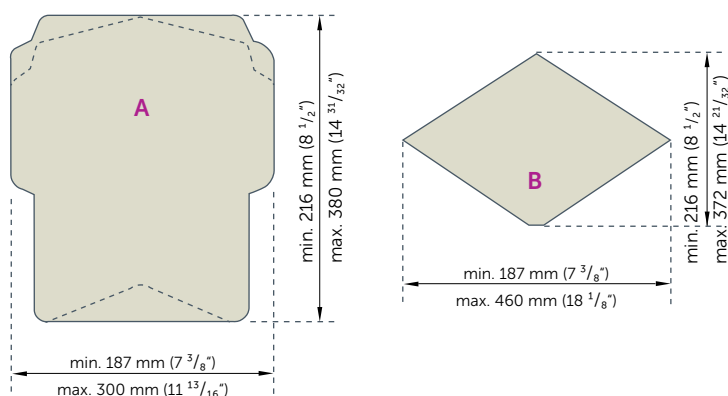
Automatic splicer W+D 191 – Option



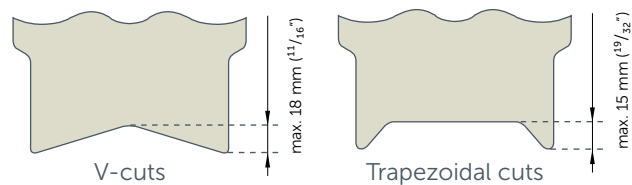
IQS-System

Dimensions and Formats

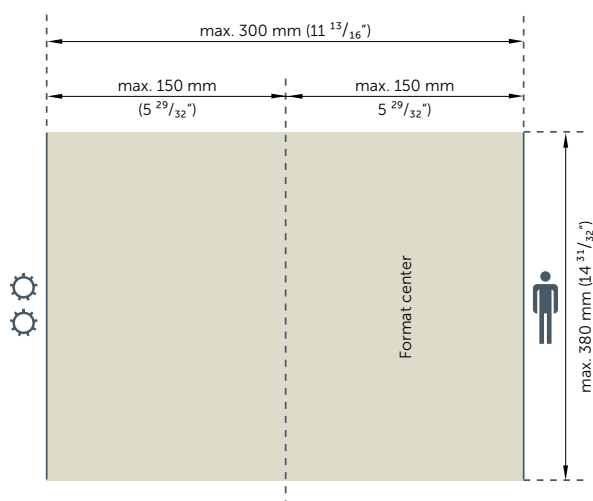
Blank format



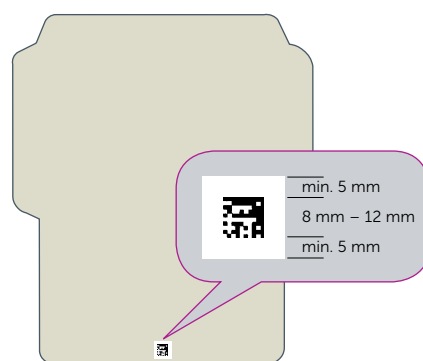
Cut-out depth



Complete cut

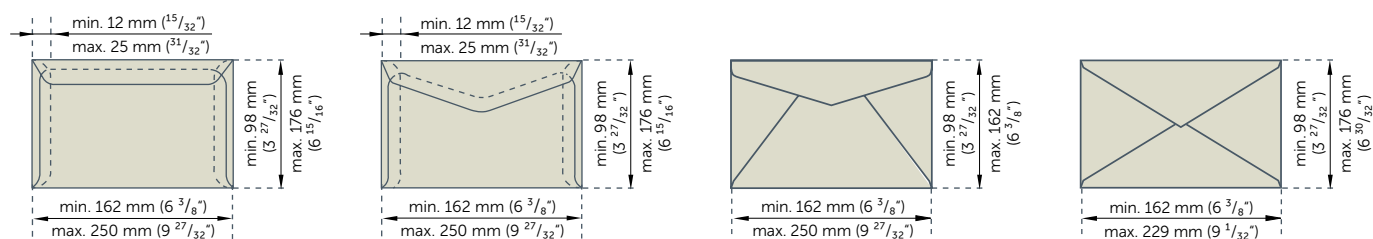


Dimensions and position QR-Code



End format

Envelopes



Booklet *

Inserting *

Commercial *

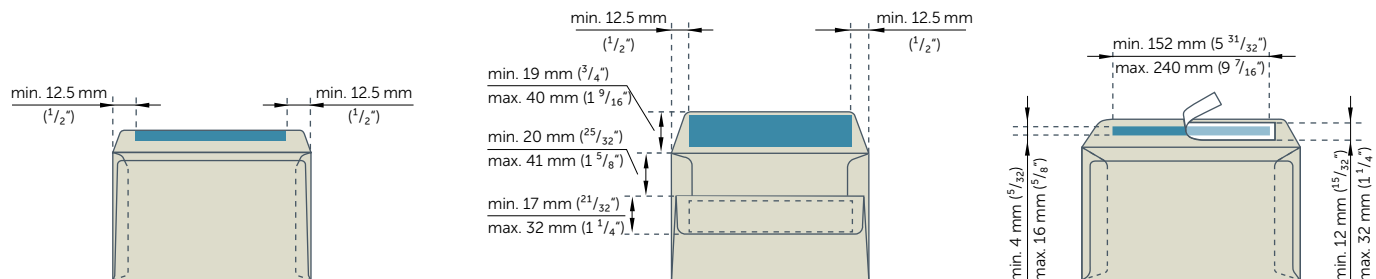
Diamond *

* Separate format range with "US format" option – see Technical Specifications (page 15)

All binding data concerning the dimensions and formats for each machine type can be found in the performance data sheet.

Dimensions and Formats

Seal flap gumming

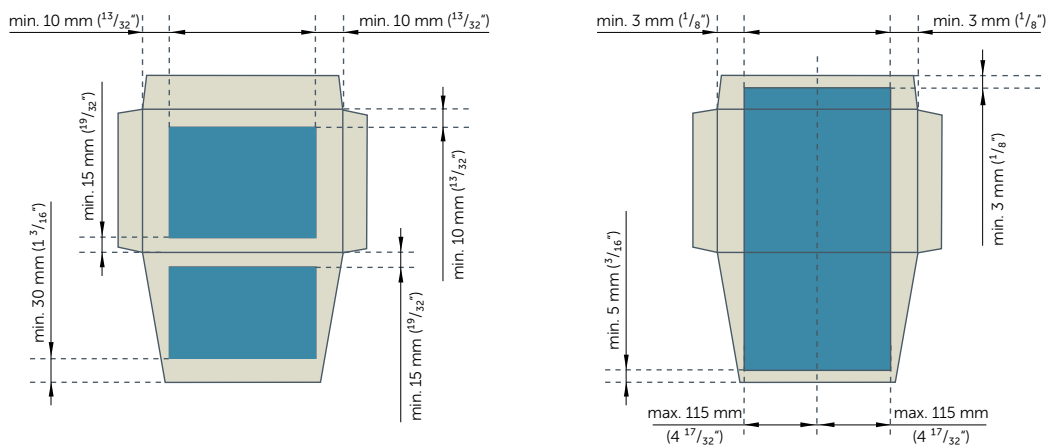


Remoistenable gumming

Self-seal gumming ①

Hot-melt pressure-sensitive gumming

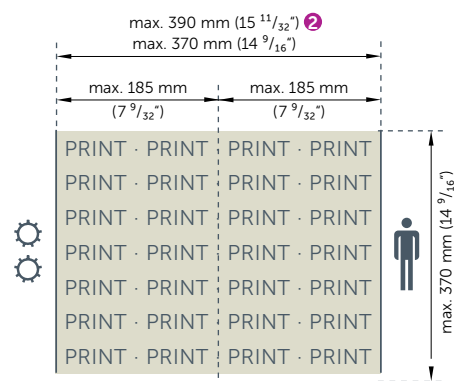
Window range



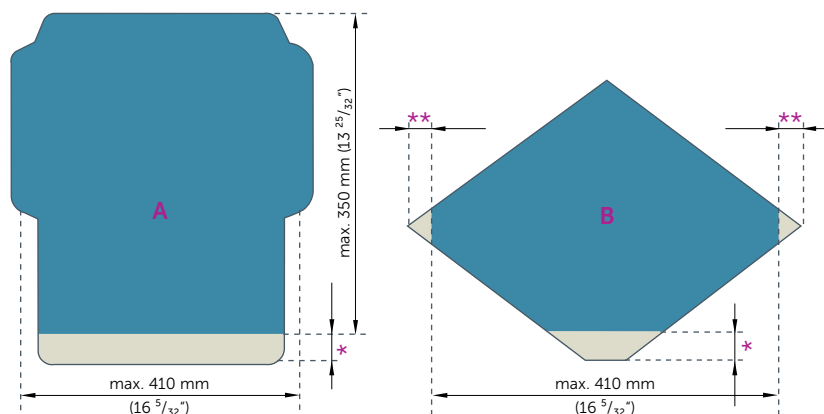
Cutting area

Patching area

Printing range



Embossing area



Flexo printing units for inside and outside printing

- ① with perforation cut
- ② with restricted sidelay register (+/- 3 mm)

- * Non-embossable area 40 mm
- ** Non-embossable area 25 mm

All binding data concerning the dimensions and formats for each machine type can be found in the performance data sheet.

Technical Specifications

Type		BC – Blank	KC – Blank and Roll
Maximum output per min.	Envelopes with remoistenable gumming or hot-melt pressure-sensitive gumming	550 pieces	
	Envelopes with self-seal gumming	250 pieces	
Paper weight	Envelopes	70 – 120 g/m ² (16 – 32 lb) ❶ ❷	
Size ranges envelopes	Booklet	min. 98 mm (3 ²⁷ / ₃₂ ") x 162 mm (6 ³ / ₈ ") – max. 176 mm (6 ¹⁵ / ₁₆ ") x 250 mm (9 ²⁷ / ₃₂ ")	
	Commercial	min. 92 mm (3 ⁵ / ₈ ") x 162 mm (6 ³ / ₈ ") – max. 168 mm (6 ⁵ / ₈ ") x 250 mm (9 ²⁷ / ₃₂ ") ❸	
	Diamond	min. 98 mm (3 ²⁷ / ₃₂ ") x 162 mm (6 ³ / ₈ ") – max. 162 mm (6 ³ / ₈ ") x 250 mm (9 ²⁷ / ₃₂ ") ❸	
Size height	Envelopes with an open seal flap	min. 92 mm (3 ⁵ / ₈ ") x 162 mm (6 ³ / ₈ ") – max. 162 mm (6 ³ / ₈ ") x 250 mm (9 ²⁷ / ₃₂ ") ❸	
Paper reel	Diameter	min. 98 mm (3 ²⁷ / ₃₂ ") x 162 mm (6 ³ / ₈ ") – max. 176 mm (6 ¹⁵ / ₁₆ ") x 229 mm (9 ¹ / ₃₂ ")	
	Width	min. 92 mm (3 ⁵ / ₈ ") x 162 mm (6 ³ / ₈ ") – max. 168 mm (6 ⁵ / ₈ ") x 229 mm (9 ¹ / ₃₂ ") ❸	
	Winding core inner diameter	min. 115 mm (4 ¹⁷ / ₃₂ ") – max. 211 mm (8 ⁵ / ₁₆ ")	
Size ranges (A, B see page 9)	Version A total length	–	
	Version A total width	1.530 mm (5 ft)	
	Version B total length	–	
	Version B total width	max. 300 mm (11 ¹³ / ₁₆ ")	
Blank dimensions (reel-fed)	Length	–	
	Height	127 mm (5") oder 153 mm (6 ¹ / ₃₂ ")	
Window material dimensions	Window material reel	Diameter	min. 216 mm (8 ¹ / ₂ ") – max. 380 mm (14 ³¹ / ₃₂ ")
		Width	min. 187 mm (7 ³ / ₈ ") – max. 300 mm (11 ¹³ / ₁₆ ")
	Winding core inner diameter		min. 216 mm (8 ¹ / ₂ ") – max. 372 mm (14 ²¹ / ₃₂ ")
	Cut-off length		min. 187 mm (7 ³ / ₈ ") – max. 460 mm (18 ¹ / ₈ ")
Silicone paper dimensions	Silicone paper roll	Diameter	–
		Width	min. 216 mm (8 ¹ / ₂ ") – max. 380 mm (14 ³¹ / ₃₂ ")
	Winding core inner diameter		min. 187 mm (8 ³ / ₈ ") – max. 380 mm (14 ¹³ / ₁₆ ")
	Protective strip cut-off length		max. 500 mm (19 ¹¹ / ₁₆ ")
Printing length / blank	Sleeve technology	min. 45 mm (1 ³ / ₄ ") – max. 230 mm (9 ¹ / ₁₆ ")	
Printing width / blank	Inside and outside printing	76 mm (3")	
Embossing section	Length	min. 36 mm (1 ¹³ / ₃₂ ") – max. 176 mm (6 ¹⁵ / ₁₆ ")	
	Width	max. 500 mm (19 ¹¹ / ₁₆ ")	
Dimensions and weight ❺	Length	min. 158 mm (6 ⁷ / ₃₂ ") – max. 250 mm (9 ²⁷ / ₃₂ ")	
	Width	76 mm (3")	
	Height	min. 10 mm (³ / ₃₂ ") – max. 22 mm (⁷ / ₈ ")	
	Net weight	max. 370 mm (14 ⁹ / ₁₆ ")	
Compressed air	6 bar	max. 370 mm (14 ⁹ / ₁₆ ") / max. 390 mm (15 ¹¹ / ₃₂ ") ❹	
Vacuum requirement	0.6 bar	max. 350 mm (13 ²⁵ / ₃₂ ")	
Blowing air	0.8 bar	max. 410 mm (16 ⁵ / ₃₂ ")	
Connected load (50 Hz)	Basic machine	10,803 mm (35.5 ft)	14,701 mm (48.2 ft)
	Material suction	4,655 mm (15.3 ft)	4,729 mm (15.5 ft)
	Vacuum pumps	3,012 mm (9.9 ft)	3,081 mm (10.1 ft)
	Hot-melt pressure-sensitive gumming section	approx. 9,000 kg (ca. 20.000 lb)	approx. 14,000 kg (ca. 31.000 lb) ❻
Noise emission According to specification EN 13023	Feeder	81.9 dB (A)	79.9 dB (A)
	Delivery	78.4 dB (A)	Blank 78.6 dB (A) – Roll 73.5 dB (A)

❶ Higher weights to be confirmed by W+D

❷ Complete cut from 80 g/m² (21 lb) and material thickness of 0.085 mm (0.0033")

❸ Format range with "US format" option

❹ With restricted sidelay register (+/-3 mm)

❺ Basic machine in standard version (with opened protective hoods)

❻ Without unwinder or reel splicer

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-Wehmler 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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BW Converting Solutions



ONE Global Team - Better Together



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