

MD20

SIMPLE AND VERSATILE



MD20 SIMPLE AND VERSATILE



A SIMPLE, VERSATILE SOLUTION PRODUCING KNOTTED TEABAGS FOR TEA AND HERBS, THE MD20 PROCESSES UP TO 200 BAGS/MIN AND IS AVAILABLE FOR BOTH NAKED BAGS AND HEATSEALED OUTER ENVELOPES. IT CAN BE EQUIPPED WITH A CARTONING ATTACHMENT FOR PRE-GLUED CARTONS.

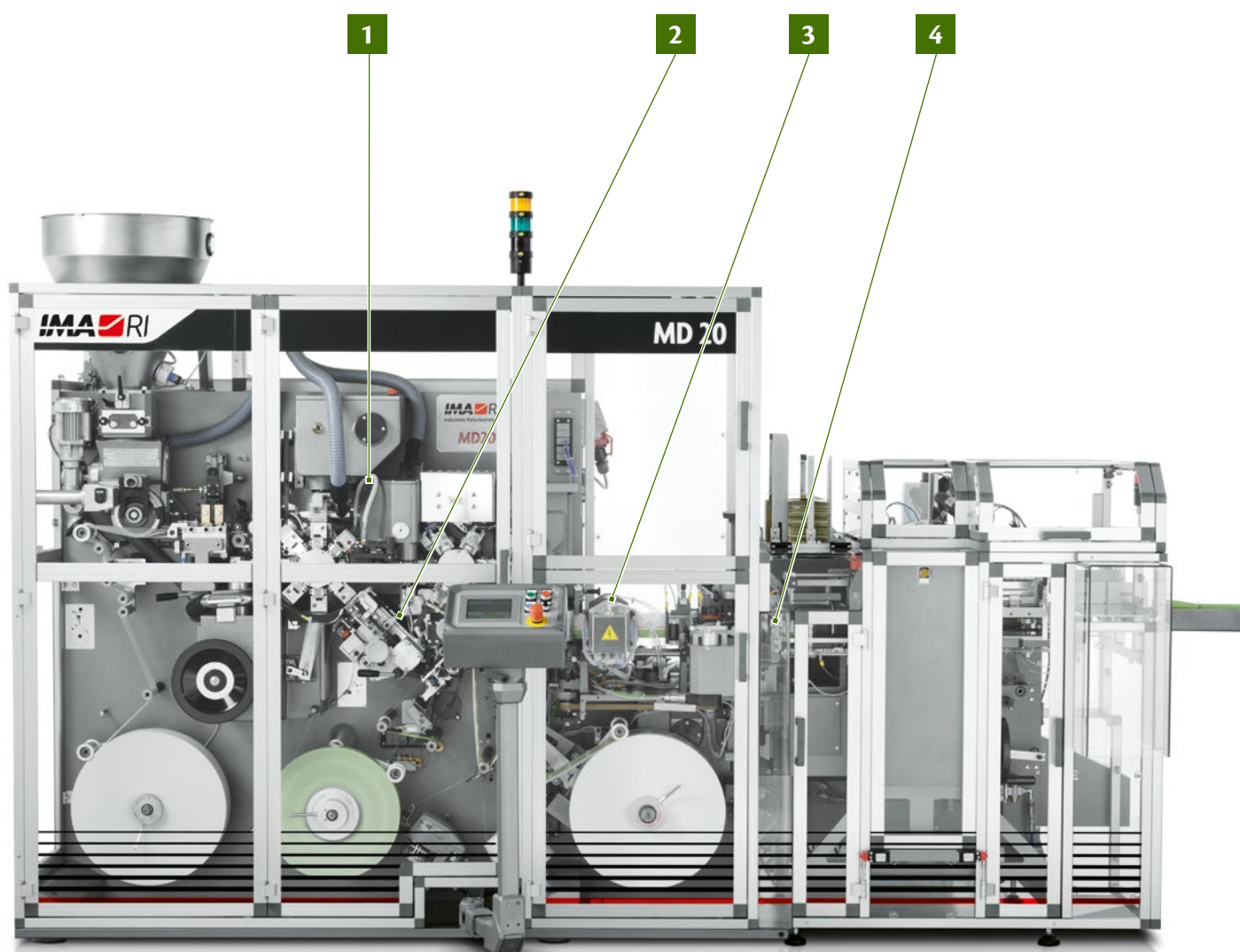


A mid to low-speed packaging machine for non-heatsealable, double-chamber, knotted bags for tea and herbs, the MD20 processes either naked bags or bags in heatsealed outer envelopes. Equipped with an optional automatic cartoning attachment for pre-glued cartons, the MD20 can also be fitted with a hand-removal unit for counted or uncounted teabags, according to customer needs.

Production is constantly monitored by dedicated supervision software and a video camera which checks knotting and teabag conformity.

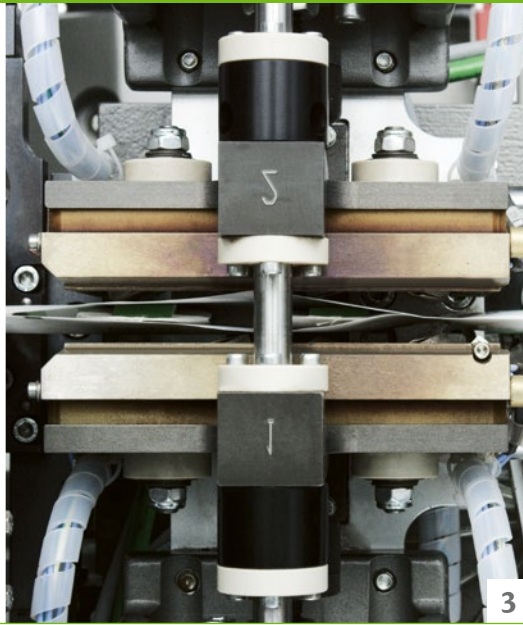
MD20 THE IDEAS TAKE SHAPE

MD20, A SIMPLE
AND VERSATILE SOLUTION
STEP BY STEP.





2



3



4

1 VIDEO CAMERA
for filter bag conformity control

3 OUTER ENVELOPE
heatsealing

2 KNOTTING
double knotting on the filter bag

4 SINGLE BAG REJECTION
single faulty bag rejection

WHY AN MD20

- NO ALUMINIUM STAPLES
- NATURAL FILTER PAPER
- NEW ECOLOGICAL TEA BAG
- HIGH FLEXIBILITY AND VERSATILITY
- REDUCED SPARE PARTS CONSUMPTION
- EASY TO OPERATE
- REDUCED PACKAGING MATERIAL CONSUMPTION
- SIMPLE WORKING METHOD
- QUICK COUNTING AND CARTON SIZE CHANGE OVER
- INNOVATIVE THREAD'S FIXING
- SIMPLE ELECTRONICS AND MAXIMUM EFFICIENCY
- SINGLE BAG REJECTION
- VIDEO CAMERA FOR KNOT CONTROL

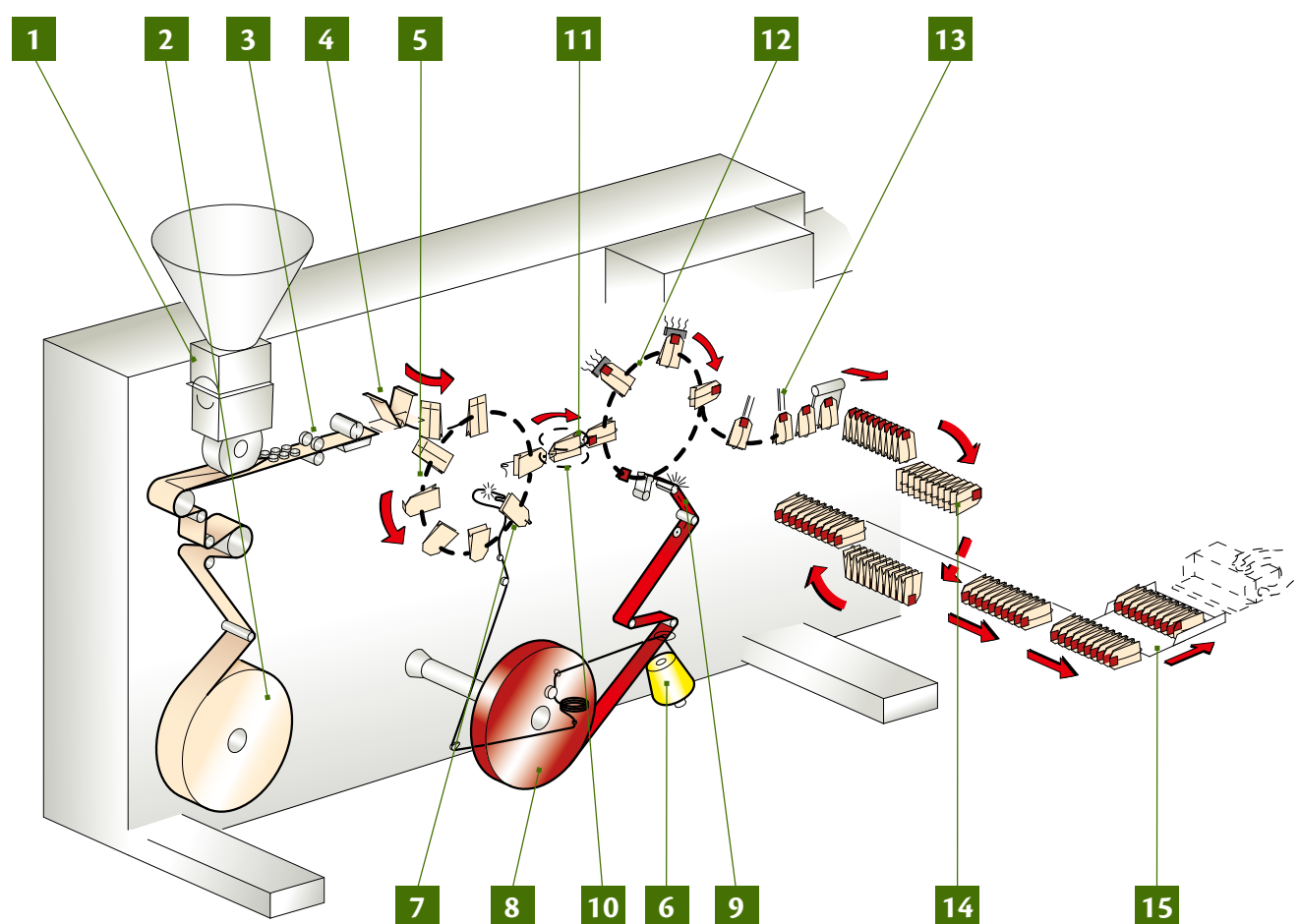
MD20 A CHOICE OF SOLUTIONS



THE MD20 BOASTS
A VARIETY OF POSSIBLE
CONFIGURATIONS
TO SUIT ALL MARKET'S
REQUIREMENTS.

MD20 FOR NAKED BAGS WITH COUNTING AND HAND REMOVAL SYSTEM

The easiest way to produce the new natural filter bag without staples.



MAIN FUNCTIONS

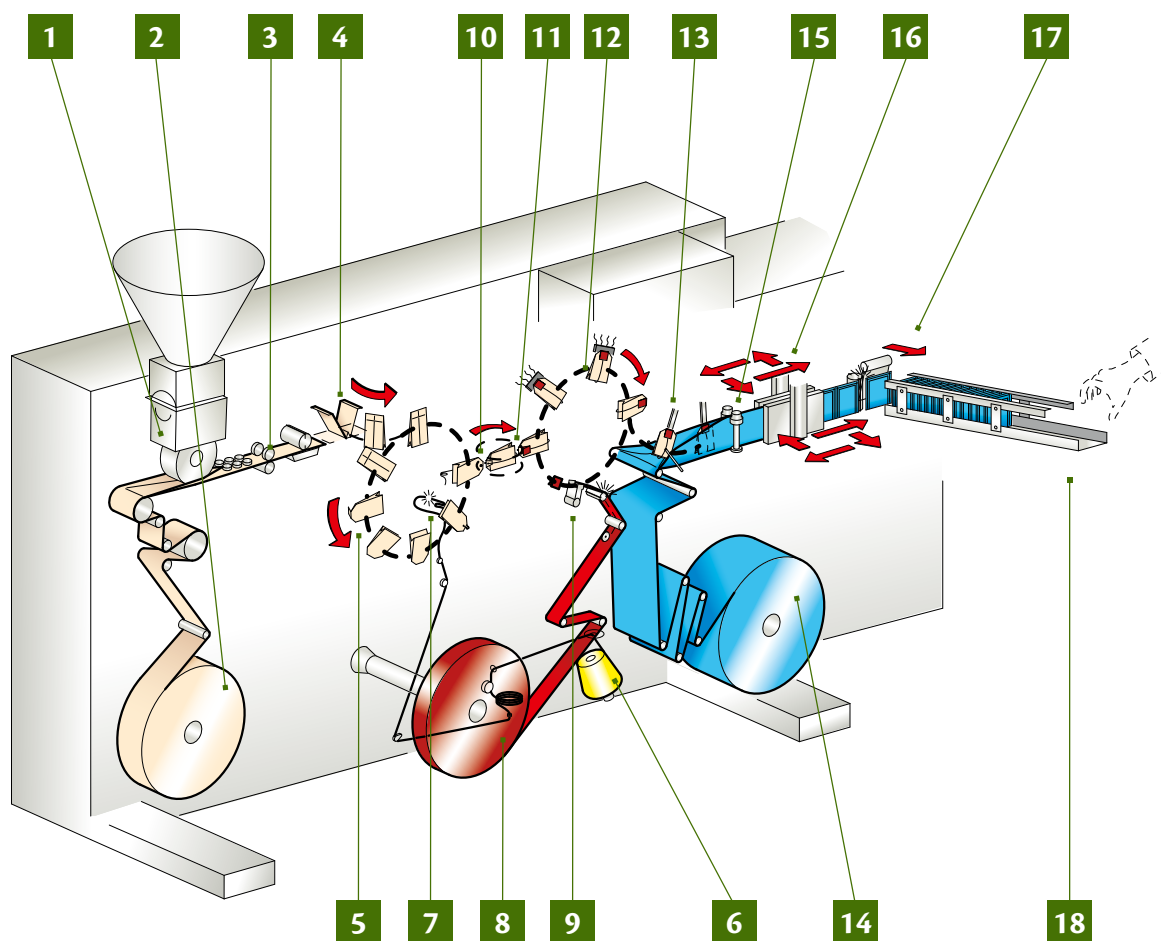
- | | | |
|--|---|--|
| 1. PRODUCT FEEDING AND DOSING | 8. TAG PAPER REEL | 13. BAG ROTATION AND TRANSFER INTO THE COUNTING GROUP |
| 2. FILTER PAPER REEL | 9. TAG PAPER CUTTING AND FOLDING | 14. COUNTING AND STACKING GROUP |
| 3. FILTER PAPER TUBE FORMING AND CUTTING | 10. COTTON THREAD WRAPPING AROUND THE BAG | 15. ROTATION AND TRANSLATION OF THE COUNTED STACK OF BAGS INTO THE CHANNEL FOR MANUAL BOXING |
| 4. FILTER BAG ERECTION | 11. COTTON THREAD INSERTION INTO THE TAG | |
| 5. FILTER BAG TOP FOLD FORMING | 12. TAG AND THREAD WELDING | |
| 6. COTTON THREAD COIL | | |
| 7. KNOTS GROUP | | |

MD20 A CHOICE OF SOLUTIONS

MD20 FOR UNCOUNTED HEATSEALED OUTER ENVELOPES, WITH HAND REMOVAL SYSTEM

Simply efficient

An affordable answer to the new market demand: new natural tea bag, airtight envelope, high efficiency.



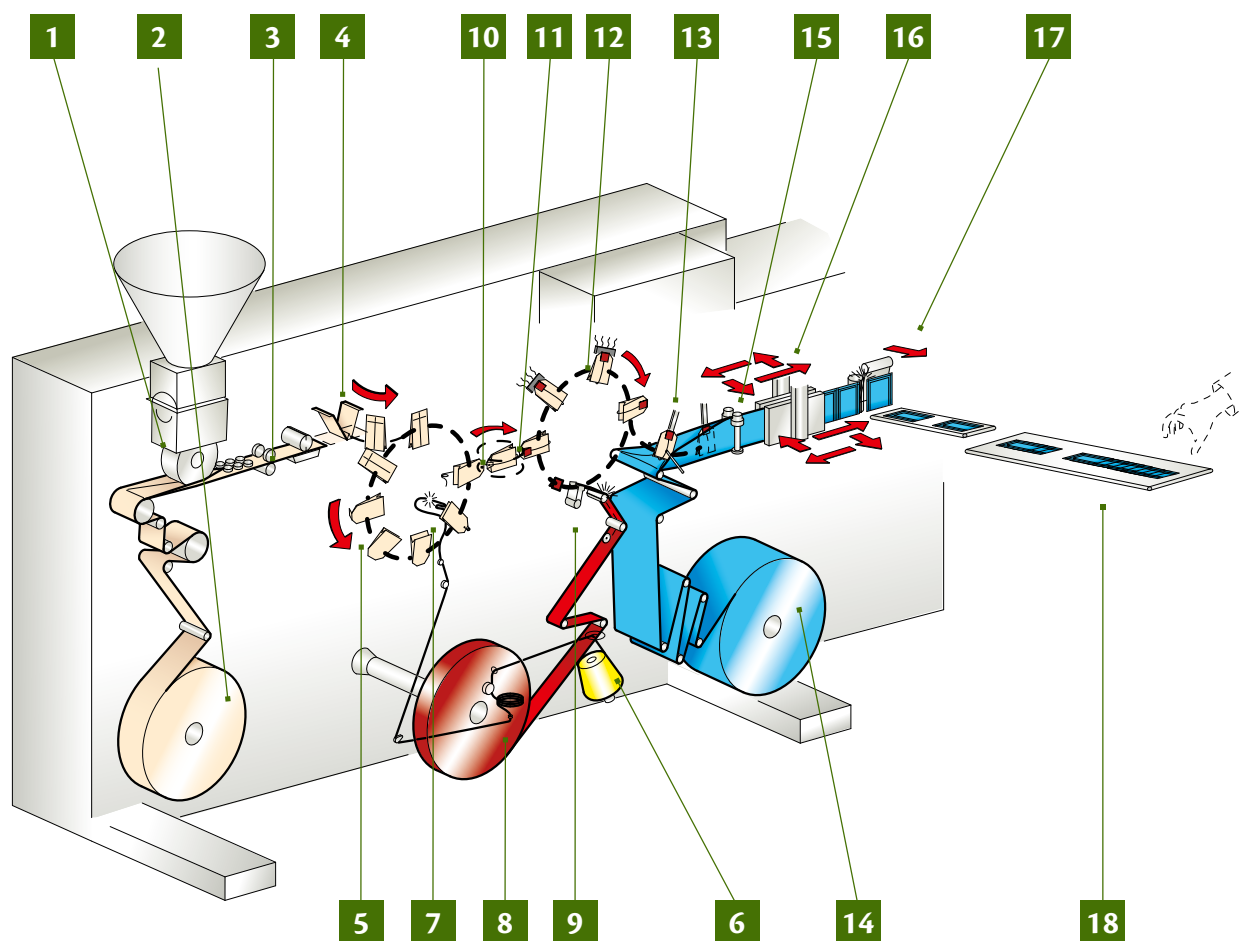
MAIN FUNCTIONS

- | | | |
|--|--|--|
| 1. PRODUCT FEEDING AND DOSING | 9. TAG PAPER CUTTING AND FOLDING | 15. HEATSEALED OUTER ENVELOPE FILM FOLDING |
| 2. FILTER PAPER REEL | 10. COTTON THREAD WRAPPING AROUND THE BAG | 16. OUTER ENVELOPE HEATSEALING GROUP |
| 3. FILTER PAPER TUBE FORMING AND CUTTING | 11. COTTON THREAD INSERTION INTO THE TAG | 17. HEATSEALED ENVELOPE CUTTING AND TRANSFER INTO THE EXIT CHANNEL |
| 4. FILTER BAG ERECTION | 12. TAG AND THREAD WELDING | 18. ENVELOPE STACKING FOR HAND REMOVAL |
| 5. FILTER BAG TOP FOLD FORMING | 13. BAG ROTATION AND TRANSFER INTO THE FOLDED ENVELOPE PAPER | |
| 6. COTTON THREAD COIL | 14. OUTER ENVELOPE HEATSEALABLE FILM REEL | |
| 7. KNOTS GROUP | | |
| 8. TAG PAPER REEL | | |

MD20 FOR HEATSEALED OUTER ENVELOPES, WITH COUNTING AND CONVEYOR BELTS FOR HAND REMOVAL

Maximum flexibility

An easy way to produce counted and stacked top quality heatsealed envelopes.



MAIN FUNCTIONS

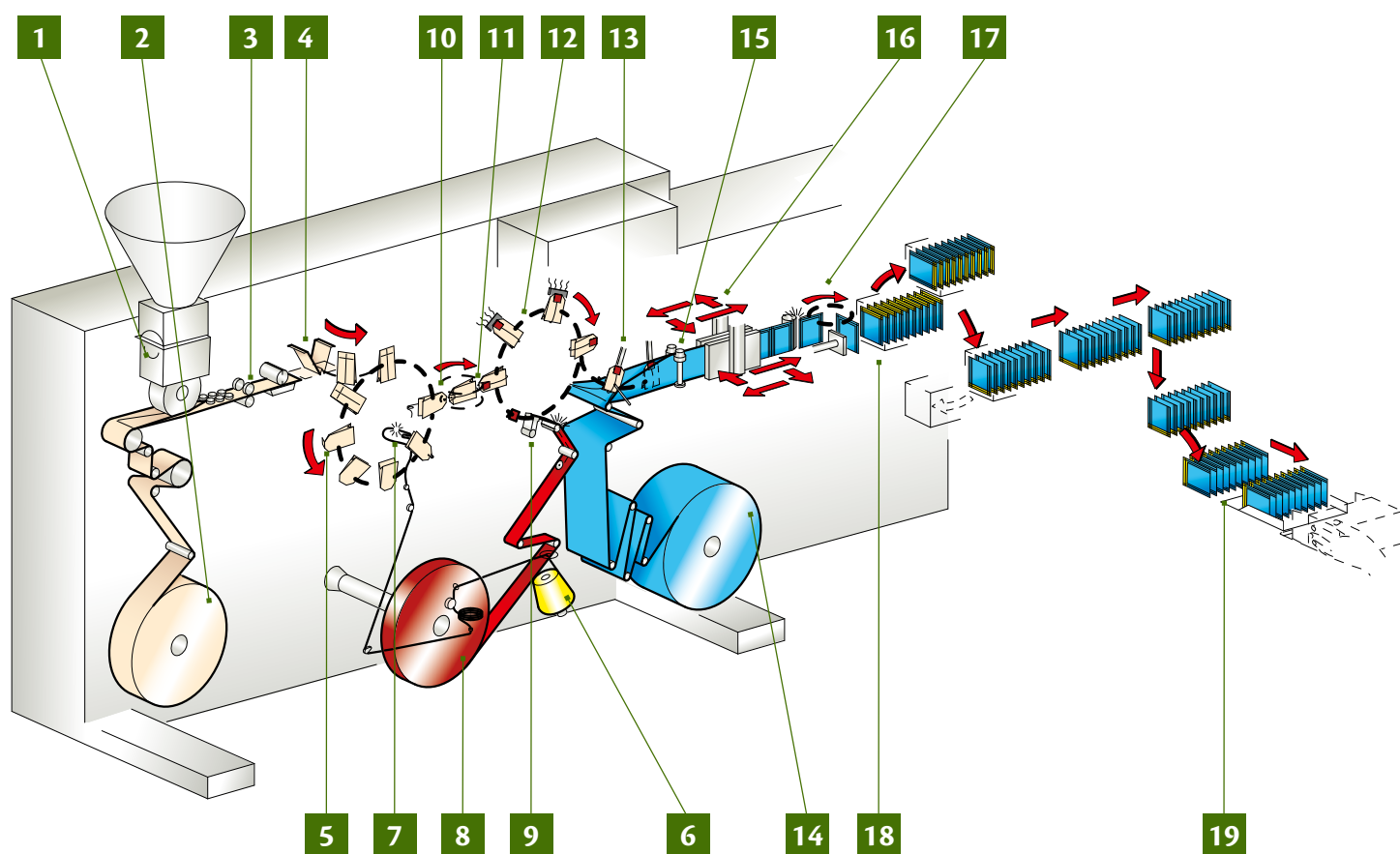
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| 2. FILTER PAPER REEL | 10. COTTON THREAD WRAPPING AROUND THE BAG | 16. OUTER ENVELOPE HEAT SEALING GROUP |
| 3. FILTER PAPER TUBE FORMING AND CUTTING | 11. COTTON THREAD INSERTION INTO THE TAG | 17. HEATSEALED OUTER ENVELOPE CUTTING AND TRANSFER ON EXIT CONVEYOR BELT |
| 4. FILTER BAG ERECTION | 12. TAG AND THREAD WELDING | 18. HEATSEALED OUTER ENVELOPE COUNTING AND TRANSFER ON THE CONVEYOR BELT |
| 5. FILTER BAG TOP FOLD FORMING | 13. BAG ROTATION AND TRANSFER INTO THE FOLDED ENVELOPE PAPER | |
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| 8. TAG PAPER REEL | | |

MD20 A CHOICE OF SOLUTIONS

MD20 FOR HEATSEALED OUTER ENVELOPES WITH COUNTING AND HAND REMOVAL SYSTEM

Maximum flexibility

An easy way to produce top quality heatsealed envelopes completely counted and stacked.



MAIN FUNCTIONS

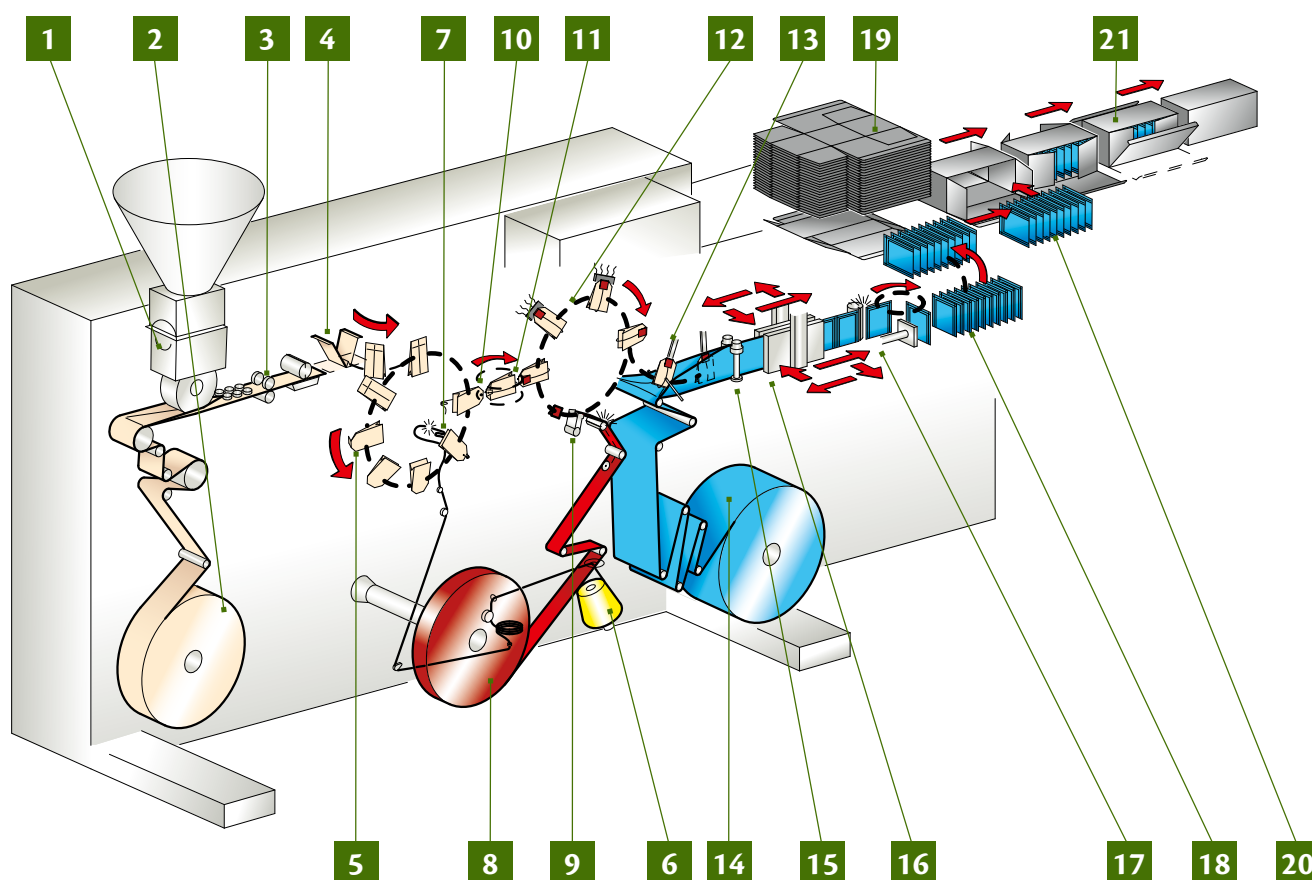
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|--|--|--|
| 1. PRODUCT FEEDING AND DOSING | 10. COTTON THREAD WRAPPING AROUND THE BAG | 15. HEATSEALED OUTER ENVELOPE FILM FOLDING |
| 2. FILTER PAPER REEL | 11. COTTON THREAD INSERTION INTO THE TAG | 16. OUTER ENVELOPE HEATSEALING GROUP |
| 3. FILTER PAPER TUBE FORMING AND CUTTING | 12. TAG AND THREAD WELDING | 17. HEATSEALED ENVELOPE CUTTING AND TRANSFER INTO COUNTING GROUP |
| 4. FILTER BAG ERECTION | 13. BAG ROTATION AND TRANSFER INTO THE FOLDED ENVELOPE PAPER | 18. COUNTING AND STACKING GROUP |
| 5. FILTER BAG TOP FOLD FORMING | 14. OUTER ENVELOPE HEATSEALABLE FILM REEL | 19. ROTATION AND TRASLATION OF THE COUNTED STACK OF ENVELOPES INTO THE CHANNEL FOR MANUAL BOXING |
| 6. COTTON THREAD COIL | | |
| 7. KNOTS GROUP | | |
| 8. TAG PAPER REEL | | |
| 9. TAG PAPER CUTTING AND FOLDING | | |

MD20 FOR HEATSEALED OUTER ENVELOPES WITH AUTOMATIC CARTONING ATTACHMENT

Maximum efficiency

To protect the flavour of tea and herbal teas, the MD20 tea bag can be wrapped in a heat-sealed outer envelope, totally airtight and waterproof. The outer envelope is sealed on three sides and shows a cut out notch for easy opening.

The automatic cartoning unit for pre-glued cartons on 1 row, for a maximum of 34 tea bags, is complete with electronic counting and allows carton closure for tuck-in and hot-melt cartons.



MAIN FUNCTIONS

- | | | |
|--|--|--|
| 1. PRODUCT FEEDING AND DOSING | 10. COTTON THREAD WRAPPING AROUND THE BAG | 16. OUTER ENVELOPE HEATSEALING GROUP |
| 2. FILTER PAPER REEL | 11. COTTON THREAD INSERTION INTO THE TAG | 17. HEATSEALED ENVELOPE |
| 3. FILTER PAPER TUBE FORMING AND CUTTING | 12. TAG AND THREAD WELDING | 18. COUNTING AND STACKING GROUP |
| 4. FILTER BAG ERECTION | 13. BAG ROTATION AND TRANSFER INTO THE FOLDED ENVELOPE PAPER | 19. PRE-GLUED CARTON FILLING, COLLECTING AND FORMING |
| 5. FILTER BAG TOP FOLD FORMING | 14. OUTER ENVELOPE HEATSEALABLE FILM REEL | 20. STACK INSERTION INTO THE CARTONS |
| 6. COTTON THREAD COIL | 15. HEATSEALED OUTER ENVELOPE FILM FOLDING | 21. CARTON CLOSURE AND EXIT |

MD20 THE KNOTTED TEA BAG



Filter paper tube forming and crimping



Filter bag top folding



Knotting group

SIMPLY TWO STRONG KNOTS

The new idea of MD20 filter bag is a synthesis of tradition, innovation and competition. Starting from the traditional non heatsealable double chamber bag, the MD20 guarantees a pure and natural flavour of tea with an ecological tea bag and a faultless thread's fixing. Without using any metal staples or other additional or contaminating materials, the MD20 fixes the top fold of the bag by two subsequent knots made by the same connecting thread (without auxiliary thread). This innovative feature offers to the tea packers the most competitive manner to satisfy the new market's demands.

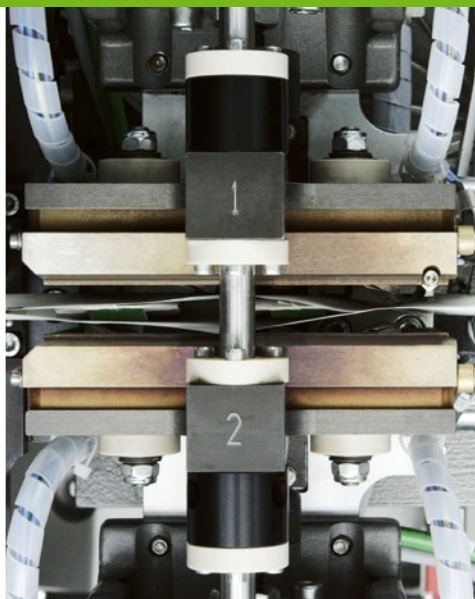
Filter bag transfer to central wheel



THE HEATSEALED OUTER ENVELOPE



Filter bag introduction into outer envelope



Outer envelope heat sealing



Outer envelope ink jet coding unit in continuous motion

THE PROCESS

After the insertion of the filter bag, the outer envelope film is sealed by the synchronized movement of a pair of heated sealers which follow the film at the same speed, while pressing the film itself to guarantee a perfect seal.

MAXIMUM FLEXIBILITY

The MD20 is able to process the highest variety of heatsealable materials up to 35 micron minimum thickness. Superb envelope quality with perfect material alignment and no creases or wrinkles on the sealing area.



MD20 A CHOICE OF PACKAGING SOLUTIONS



Cartoning unit for pre-glued cartons



Outer envelope stacking

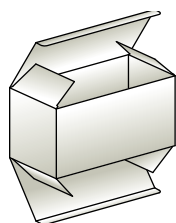
AUTOMATIC CARTONING UNIT FOR PRE-GLUED CARTONS.
COMPLETE WITH ELECTRONIC COUNTING.



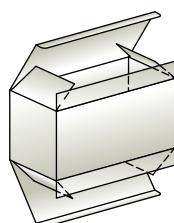
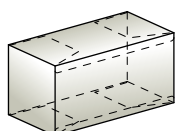
THE ELECTRONICS

Electronic counting to guarantee always the correct number of envelopes in the stacking device. It allows a swift electronic count change over without replacement of mechanical parts.

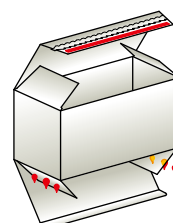
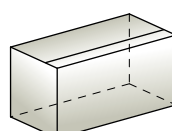
The cartoning attachment automatically erects pre-glued cartons, fills the cartons with filter bags wrapped in a heat sealed outer envelope, and finally closes the carton (tuck-in or glued). Different special closures are available for the maximum flexibility in cartoning.



Pre-glued tuck-in carton



Kurzlaschen carton closure



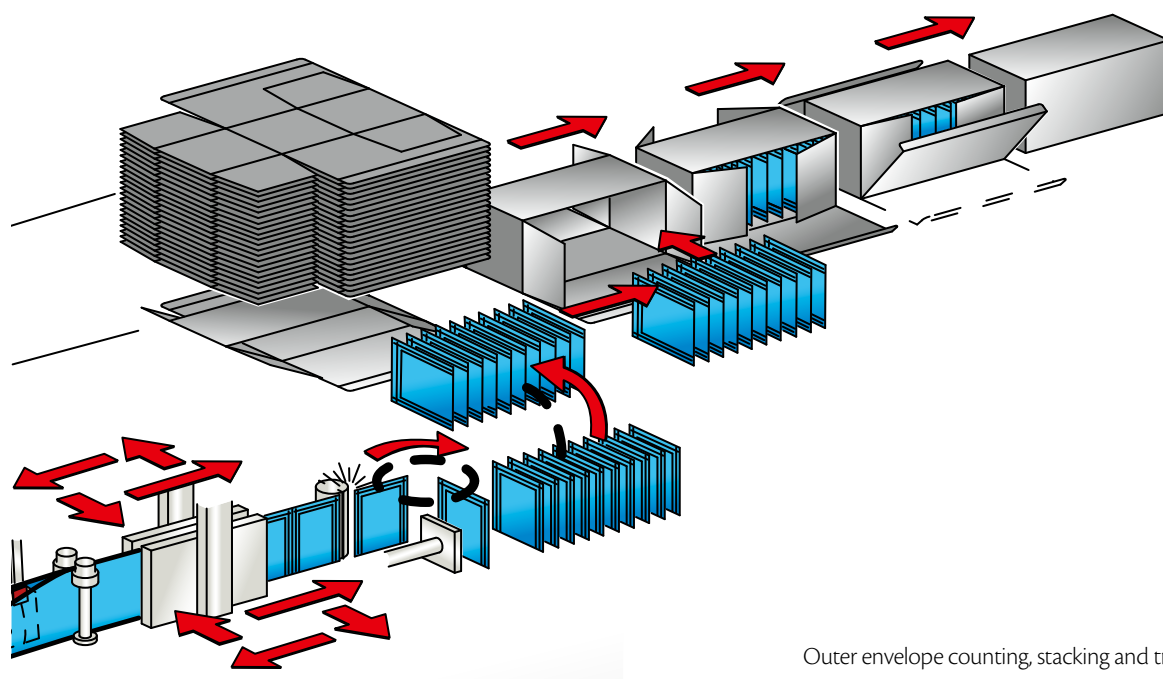
Pre-glued carton closed by front flap tear-off and glued side bottom flaps



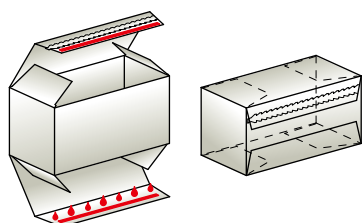
Carton closure



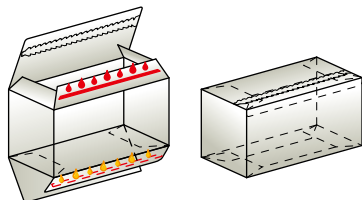
Faulty carton rejection



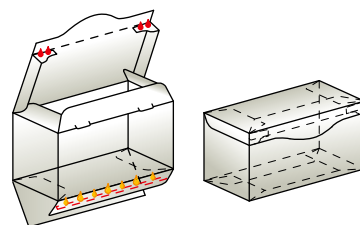
Outer envelope counting, stacking and transfer to cartoning unit.



Pre-glued carton closed by front flap tear off and hot-melt closure for bottom flap



Pre-glued carton closed by top tear-off and glued bottom flap



Pre-glued carton closed by flip - top and glued bottom flap

MD20 QUALITY AND EFFICIENCY



Video camera for knot conformity control



Ink-jet coding unit for boxes

FILTER BAG CONFORMITY CONTROL

A high precision video camera checks the knots area and memorizes every filter bag which does not correspond to the prearranged model, consequently causing the rejection of the single filter bag without introducing it into the stacking station.

AUTOMATIC WEIGHT CONTROL AND ADJUSTMENT

The optional dynamic checkweigher checks the weight and causes the rejection of cartons which do not comply with the set up weight, it can be connected to the MD20 to automatically adjust the weight of the final carton.





BEFORE CARTON CLOSING, AN OPTIONAL DEVICE CAN INSERT A PRE-FOLDED LEAFLET

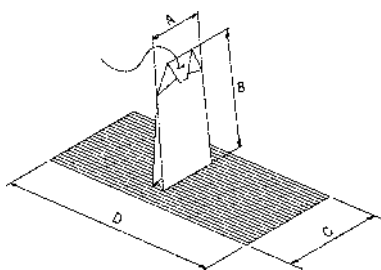
SPECIAL ROTATING
FEEDING UNIT FOR HERBS.



MD20 PACKAGING MATERIALS AND PRODUCTS

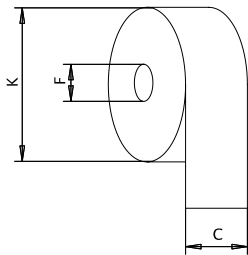
BAG, PAPER AND ENVELOPES

FILTER BAG SIZE



TYPE	A	B	C	D
2	40	58	94	141
3	45	63	103	151
7	45	58	103	141

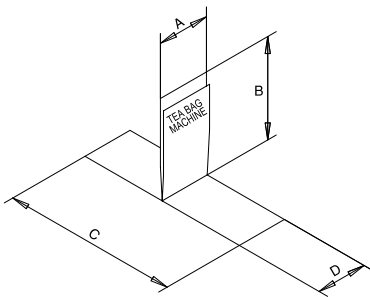
NON-HEATSEALABLE FILTER PAPER



TYPE	F	K	C
2	75	500	94 +/- 0; 0.50
3	75	500	103 +/- 0; 0.50
7	75	500	103 +/- 0; 0.50

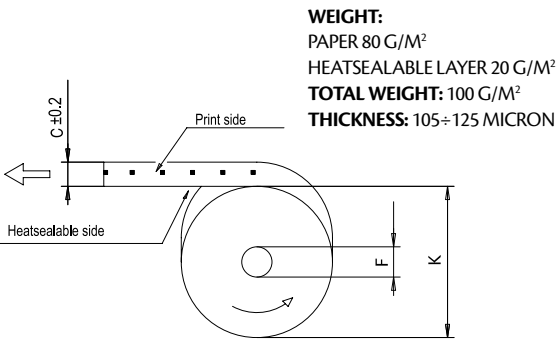
WEIGHT 12-12.7 g/m² NON HEATSEALABLE FILTER PAPER

TAG SIZE



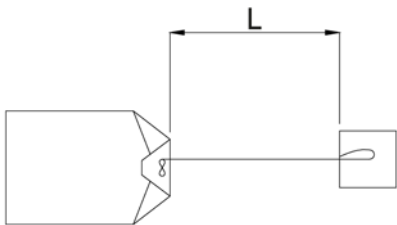
TYPE	A	B	C	D
20X21	20	21	40	20
20X24	20	24	46	20

TAG PAPER REEL



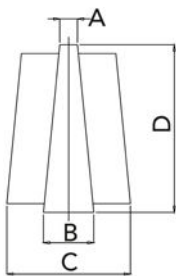
TYPE	F	K	C
20×21	152	500	40 +/- 0.20
20×24	152	500	46 +/- 0.20

COTTON THREAD LENGTH



TYPE	L
2-7	120
3	130

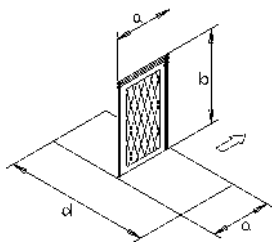
COTTON THREAD REEL



ENDS' NUMBER:
3 (WITHOUT KNOTS)
AVERAGE TITLE:
20 NE.

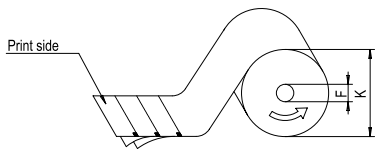
	SIZE
ØA	20-30
ØB	40-65
ØC	MAX200
ØD	160-190

HEATSEALED OUTER ENVELOPE



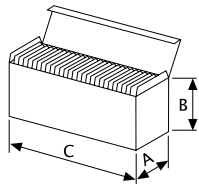
TYPE	A	B	C	D
2	145±0.15	63±0.15	72	63
2S	155±0.15	66±0.15	77	66
3	155±0.15	66±0.15	77	66
7	145±0.15	66±0.15	72	66
7S	155±0.15	66±0.15	77	66

HEATSEALED OUTER ENVELOPE REEL



THICKNESS		35÷90 MICRON
TYPE	F	K
2	75	500
2S	75	500
3	75	500
7	75	500
7S	75	500

CARTON DIMENSIONS



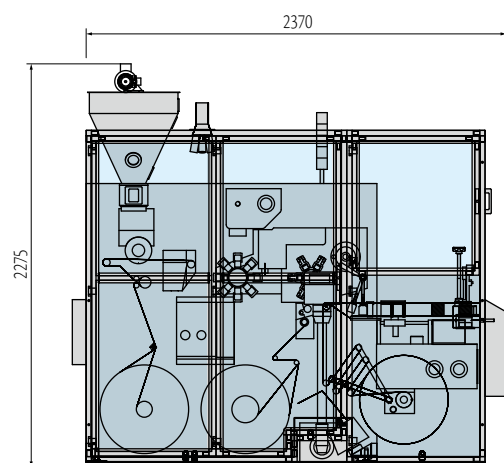
1 ROW N. OF BAGS:
10÷34

	MIN	MAX
A	42	72
B	60	80
C	65	170

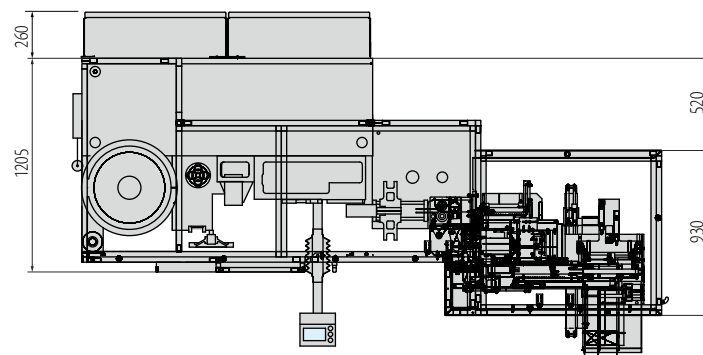
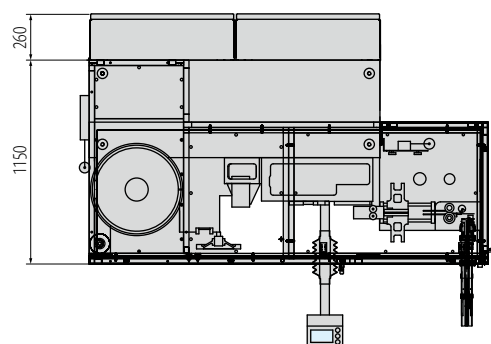
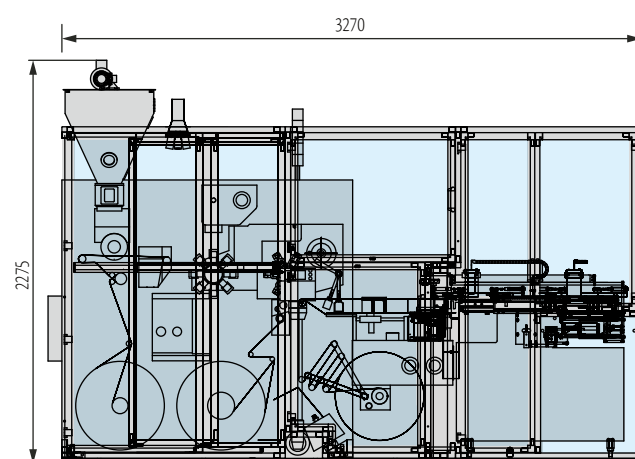


MD20 GENERAL TECHNICAL DATA

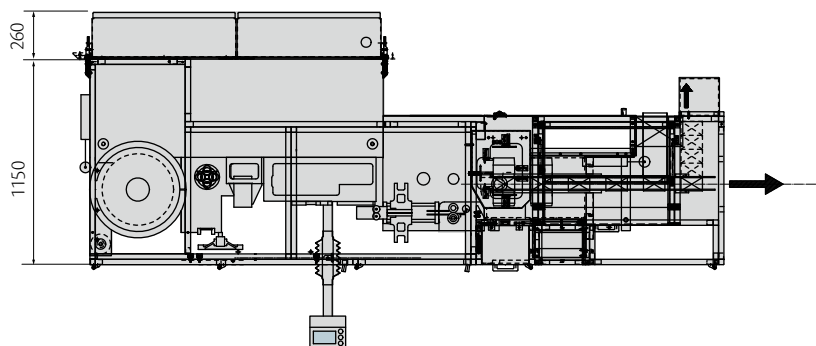
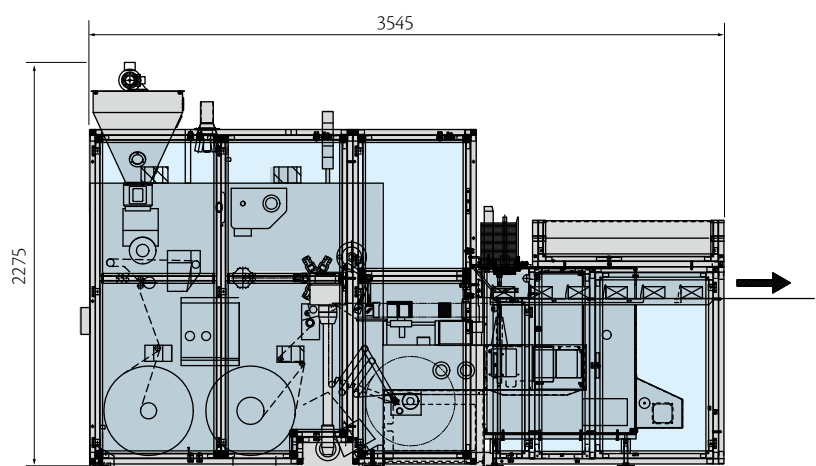
MD20 FOR HEATSEALED OUTER ENVELOPES
WITH HAND REMOVAL



MD20 FOR HEATSEALED OUTER ENVELOPES
WITH COUNTING AND HAND REMOVAL



MD20 FOR HEATSEALED OUTER ENVELOPES WITH CARTONING ATTACHMENT FOR PRE-GLUED BOXES



Machine speed:

- Up to 200 bags/minute for naked bags and heatsealed outer envelopes



Teabag capacity:

- Up to approximately 4,0 grams
- Filter bag maximum volume 14,2 cubic centimeters



Power required:

- Total installed power: max. 13 kW
- Maximum power consumption: 6 kW

Note: consumption depends on the thermic groups fitted on the machine



Compressed air:

- Exercise pressure: 6 bar
- Consumption: up to max. 800 NI/min.



Machine net weight:

- Max. 4200 kg

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