

# C58

SINGLE BY CHOICE

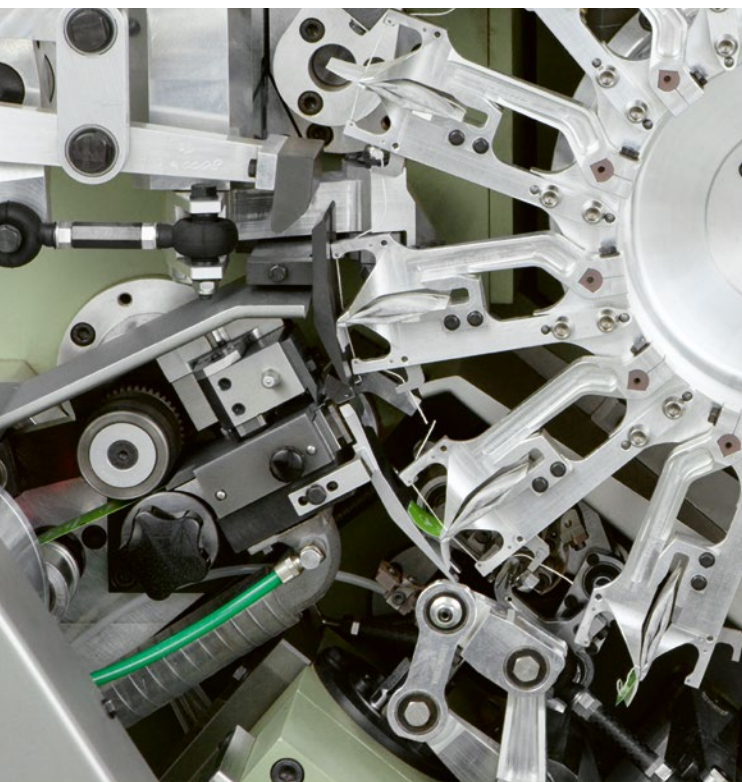


## C58 SINGLE BY CHOICE

When IMA's sophisticated knot technology meets a top quality single bag, a new generation of teabags for the packaging of tea and herbs sees the light of day in a continuously evolving market scenario.

Highly reliable and versatile, the C58 combines high speed production (300 teabags per minute) with a variety of packaging solutions, starting, for example, from simple naked bags up to final packaging into cartons of different styles or, to mention one, pouches.

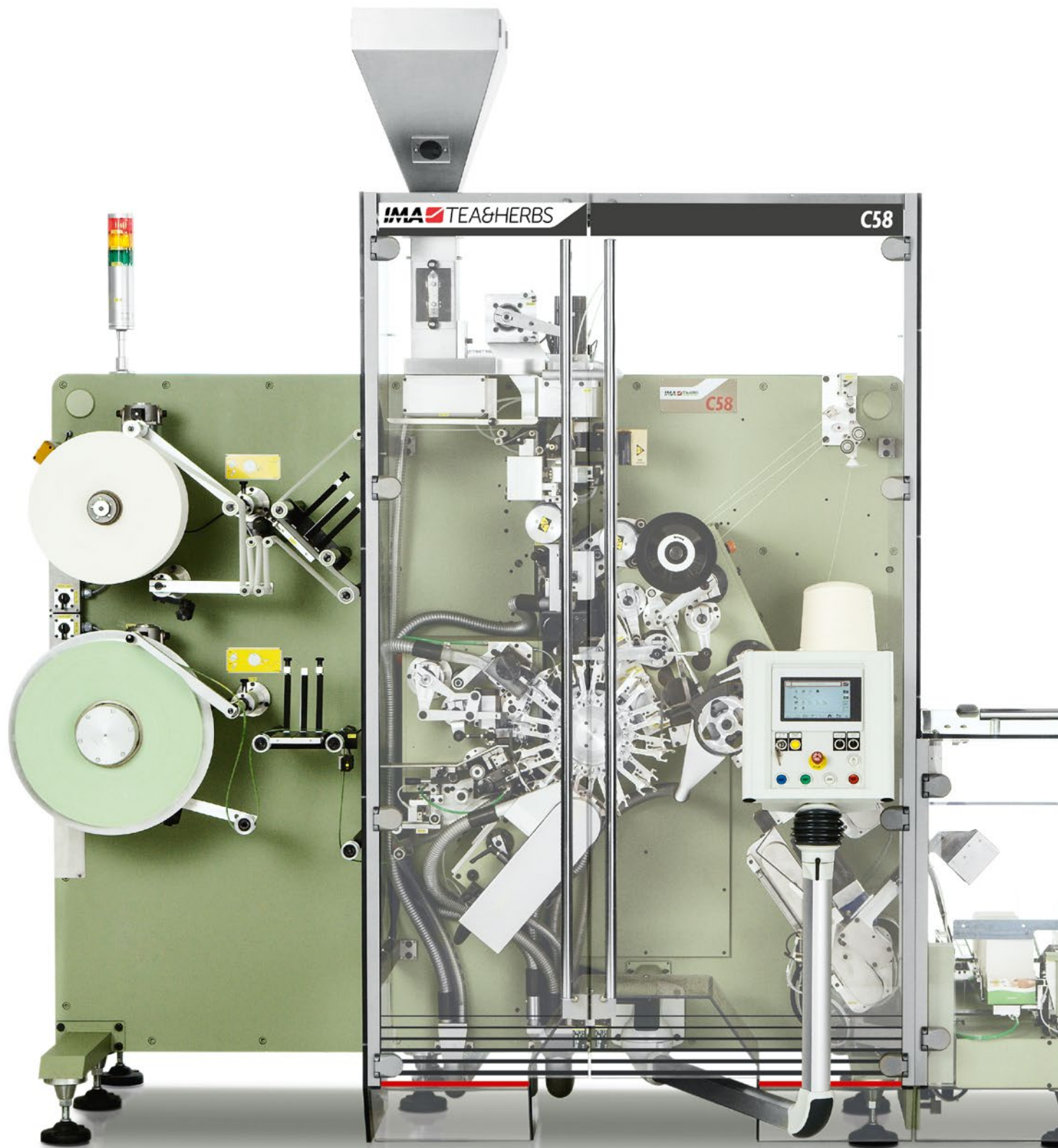
Consolidated technologies for the handling of tea and herbs match with newly designed solutions for the production of a new and noteworthy style of teabag with the aim to transform a simple single bag into a graceful and unique teabag.

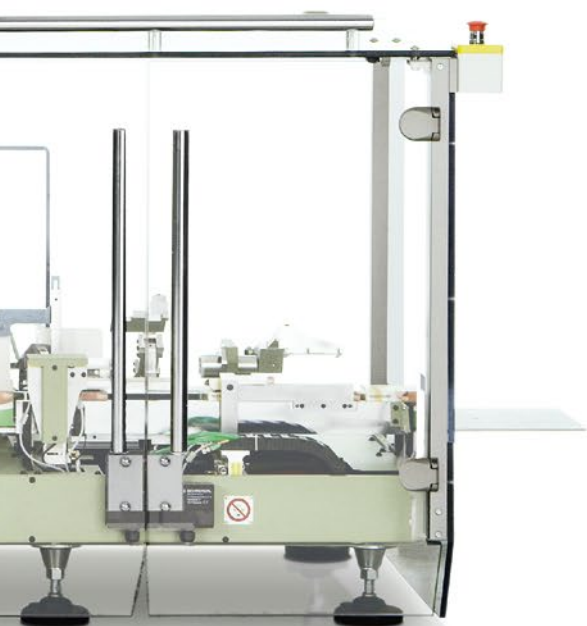






# C58 THE IDEAS TAKE SHAPE





## WHY A C58

- KNOT TECHNOLOGY
- **GUSSETED SINGLE CHAMBER TEABAG –  
MORE ROOM TO MOVE**
- HIGH PRODUCTION SPEED :  
UP TO 300 BAGS PER MINUTE
- HARD TAG
- DOME SHAPED TEABAG
- SINGLE BAG REJECTION
- PACKAGING MATERIAL SAVING
- PACKAGING MATERIAL VERSATILITY
- FLEXIBILITY IN FINAL PACKAGING SOLUTIONS
- EASY PART REPLACEMENT, NO ADJUSTMENT  
REQUIRED
- HIGH PRODUCTION EFFICIENCY
- REDUCED MAINTENANCE
- REDUCED SPARE PARTS CONSUMPTION

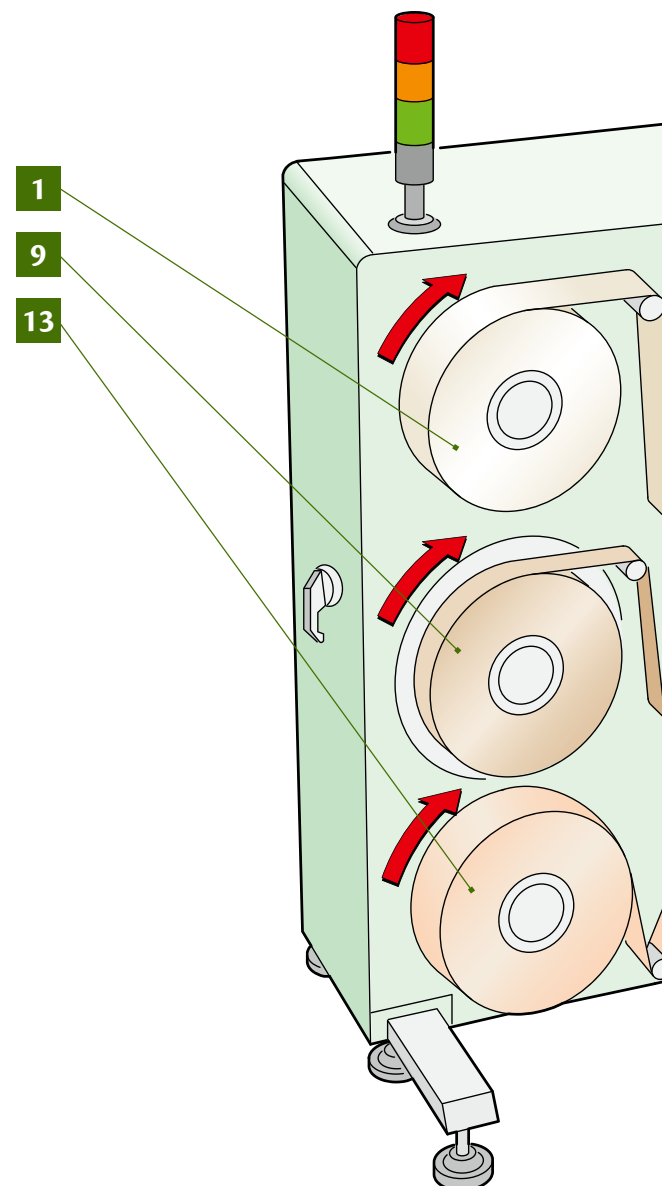


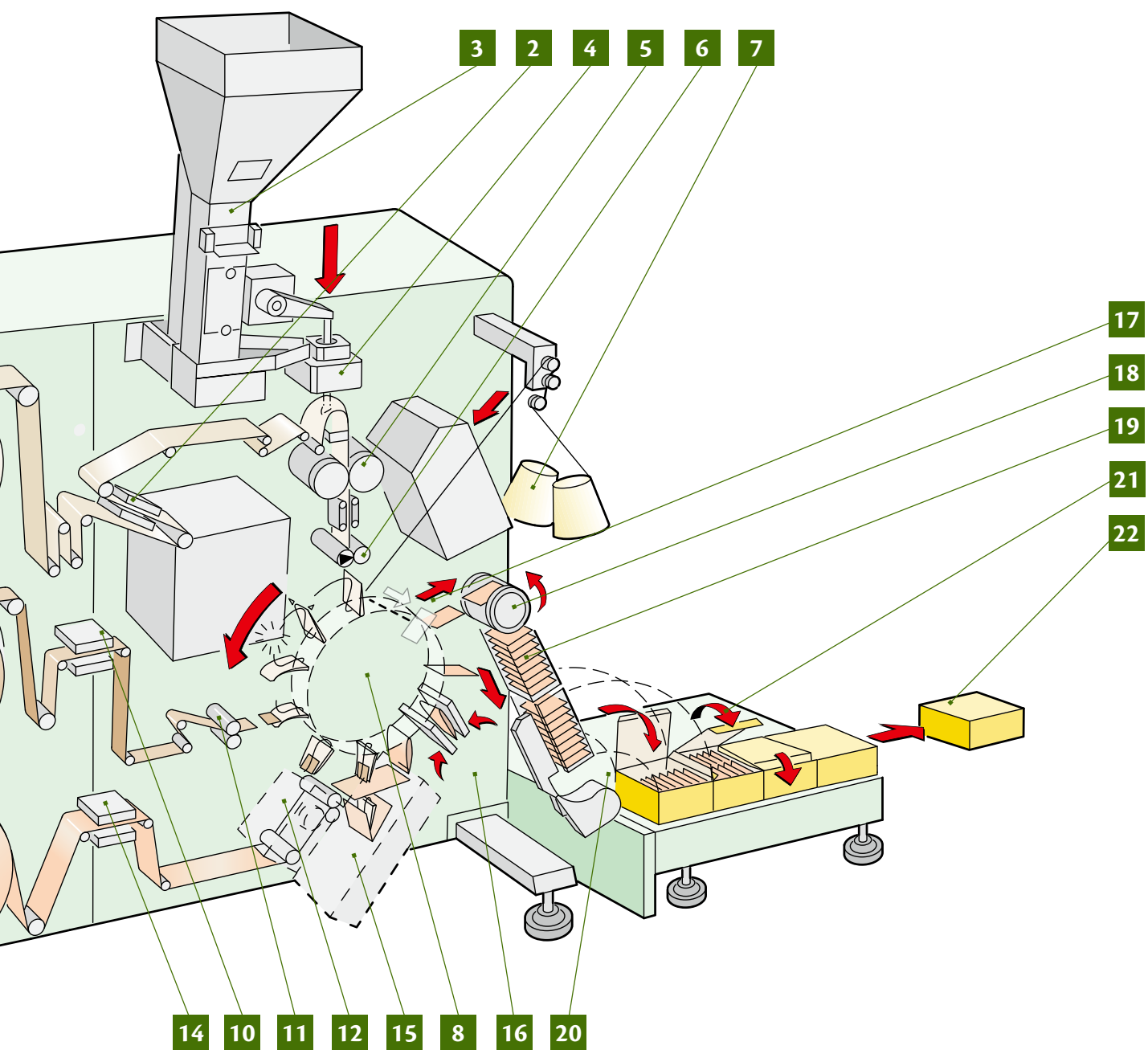
# C58 STEP BY STEP



## MAIN FUNCTIONS

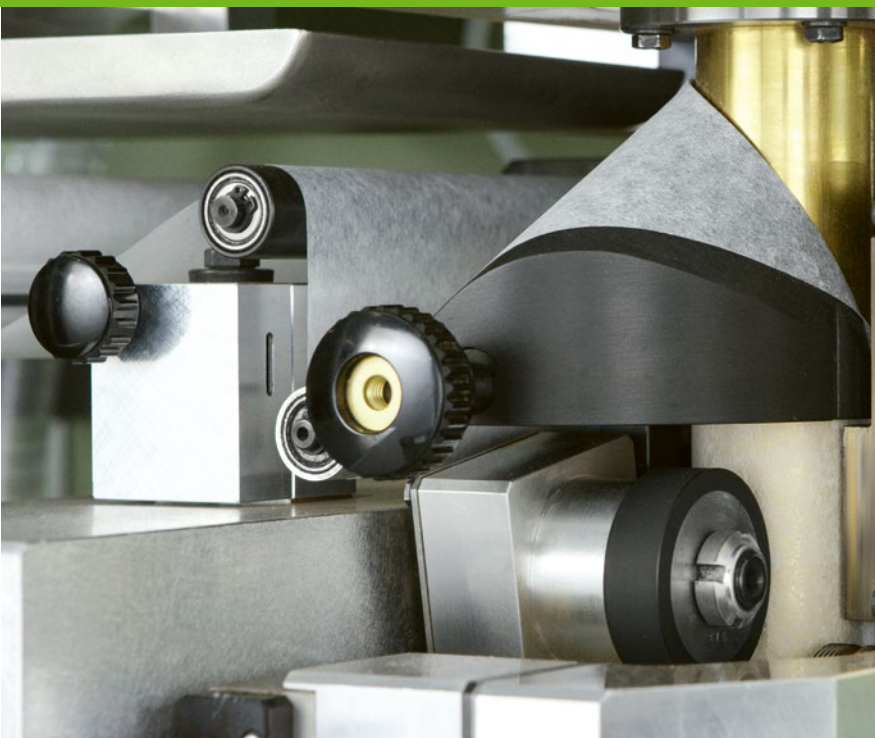
- |                                 |                            |
|---------------------------------|----------------------------|
| 1. FILTER PAPER REEL            | 17. FAULTY BAG REJECTION   |
| 2. FILTER PAPER MANUAL SPLICING | 18. STACK FILLING WHEEL    |
| 3. PRODUCT FEEDING HOPPER       | 19. FILTER BAG/ENVELOPE    |
| 4. PRODUCT DOSING UNIT          | STACKING AND COUNTING      |
| 5. BAG SEALING UNIT             | 20. STACK TRANSFER TO THE  |
| 6. BAG CUTTING UNIT             | CARTON FILLING AREA        |
| 7. COTTON THREAD COIL           | 21. CARTON CLOSING STATION |
| 8. BAG FORMING WHEEL            | 22. CARTON EXIT            |
| 9. TAG PAPER REEL               |                            |
| 10. TAG PAPER MANUAL SPLICING   |                            |
| 11. TAG PAPER CUTTING UNIT      |                            |
| 12. KNOT GROUP                  |                            |
| 13. OUTER ENVELOPE PAPER REEL   |                            |
| 14. OUTER ENVELOPE PAPER        |                            |
| MANUAL SPLICING                 |                            |
| 15. OUTER ENVELOPE PAPER        |                            |
| CUTTING AND INSERTION ON        |                            |
| THE FILTER BAG                  |                            |
| 16. OUTER ENVELOPE SEALING      |                            |
| UNIT                            |                            |







# C58 THE SINGLE BAG YOU DESERVE



Filter paper tube forming



Longitudinal sealing



Transversal sealing

## CLASS IN A SINGLE BAG

A new style of single chamber bag has arisen as a result of the combination of an innovative bag forming process and the well-known, consolidated knot technology.

The new single chamber C58 filter bag guarantees optimum infusion efficiency thanks to a newly designed gusseted bag allowing tea or herbs more room to move and infuse for a better brew.

Bags are heat-sealed on top and bottom edges. Avoiding bag side sealing helps reduce teabag size resulting in consistent packaging material savings.

No additional packaging materials are required to fix the bag to the tag and the cotton thread. This is achieved by two simple knots – one to fix the cotton thread to the filter bag head and the other to fix the cotton thread to the tag. Knotting also guarantees the maximum versatility in the choice of the filter material as it can easily be performed on materials with different specifications.

The new C58 filter bag is even more enhanced by the use of hard tags and the typical dome shape. The dome-shaped filter bag is processed on the machine and the paper corners are cut and removed by means of vacuum suction avoiding interference with the machine's mechanical process.

According to IMA's traditional concept of versatility and flexibility, the C58 offers a range of filter bag sizes to suit all product specifications and market demands.



## PLA - A NEW FRONTIER FOR FILTER MATERIAL

The new IMA C58 allows the production of tea bags with traditional heat-sealable filter paper as well as with PLA, a 100% renewable material.

PLA is made from plant-based poly-lactic acid and features a point bond pattern.

Its neutral odor, taste and high transparency make it ideal to showcase a wide variety of black and specialty teas and infusions.

It is also one of the first to be fully biodegradable and compostable.

- DELIVERS OUTSTANDING INFUSION AND TASTE NEUTRALITY
- EXCELLENT TEA BLEND RETENTION
- HIGH TRANSPARENCY IDEAL TO HIGHLIGHT TEA
- 100% RENEWABLE RAW MATERIALS
- FULLY BIODEGRADABLE AND COMPOSTABLE

NO ADJUSTMENTS ARE REQUIRED ON THE C58 MACHINE TO SWITCH FROM TRADITIONAL HEAT-SEALABLE TO PLA FILTER MATERIAL.



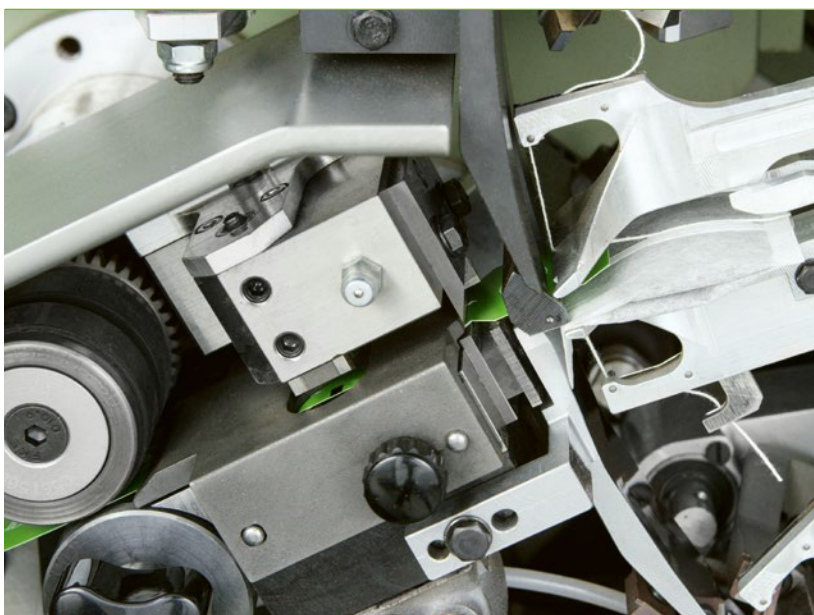
Bag transfer to central wheel



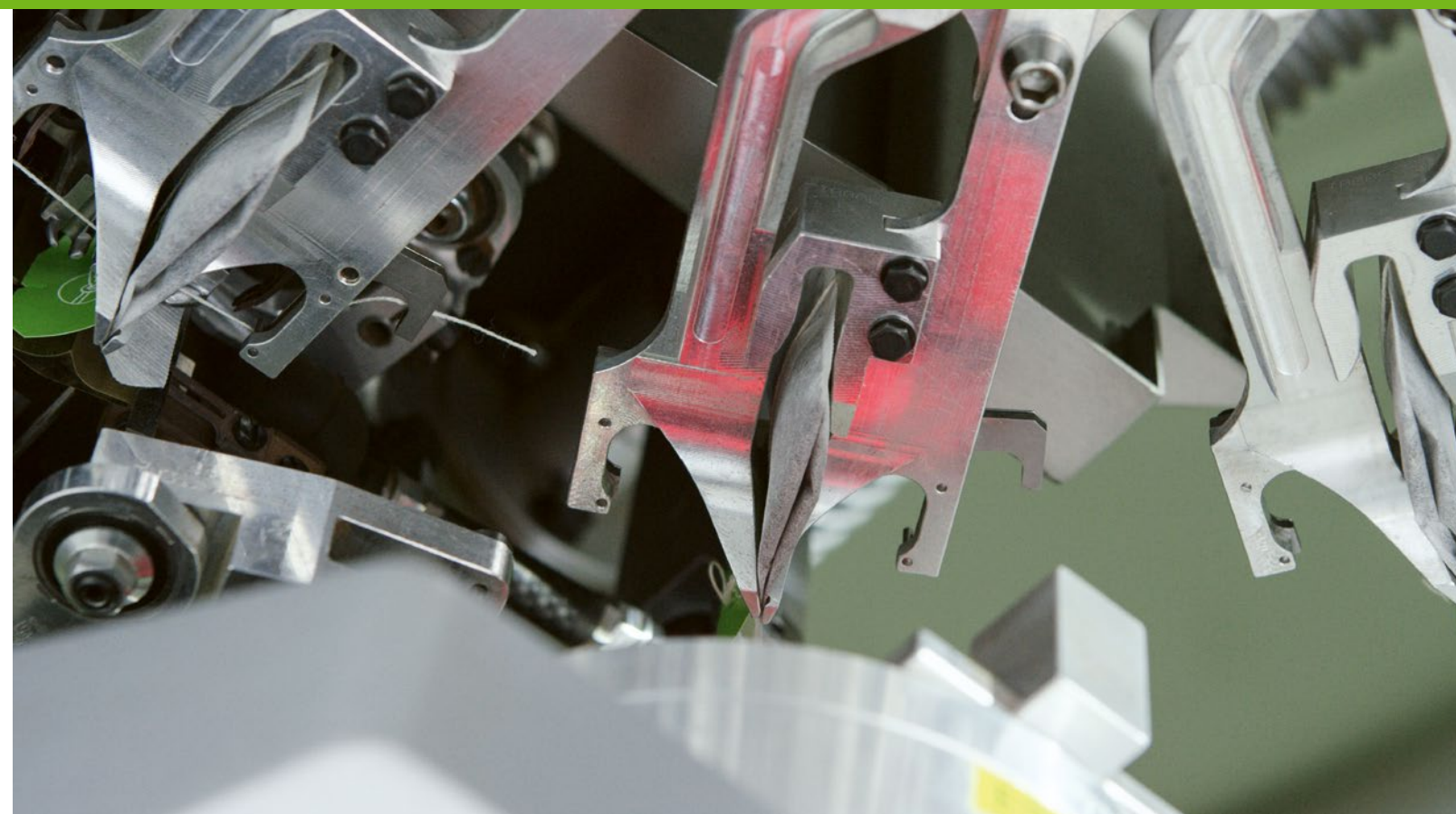
Dome shape cutting unit

- GUSSETED TEABAG
- KNOT TECHNOLOGY
- HARD TAG
- DOME SHAPE TEABAG

- ◀ Tag cutting unit



# C58 THE SINGLE BAG YOU DESERVE



## THE PROCESS

The new C58 teabag is formed vertically by wrapping the filter paper around the tube forming unit while longitudinal sealing is performed and the product is contemporarily ejected. As the filter paper tube descends through the forming unit, the two side gussets are achieved and simultaneously transversal top and bottom sealing is performed.

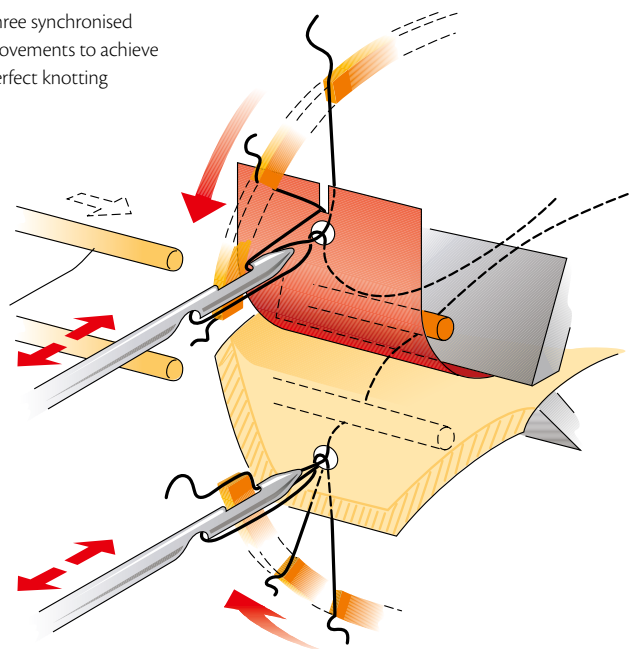
The teabags are then individually separated by means of a rotating cutter and consequently transferred to the central wheel for knotting.

Both knots, on the filter bag and tag, are performed simultaneously on the same station and are achieved through synchronised movements of three mechanical elements controlled by cams. Successful knotting is controlled by a high-precision video camera, based on an artificial vision work system and connected to a monitor enabling constant observation of the function.

Any knot which does not correspond to the prearranged model is highlighted and memorised and consequently causes the rejection of the single bag without introducing it into the stacking station.

The counting of filter bags is then automatically stopped, a correct bag is retrieved to complete the required count and production flow proceeds smoothly without interruption.

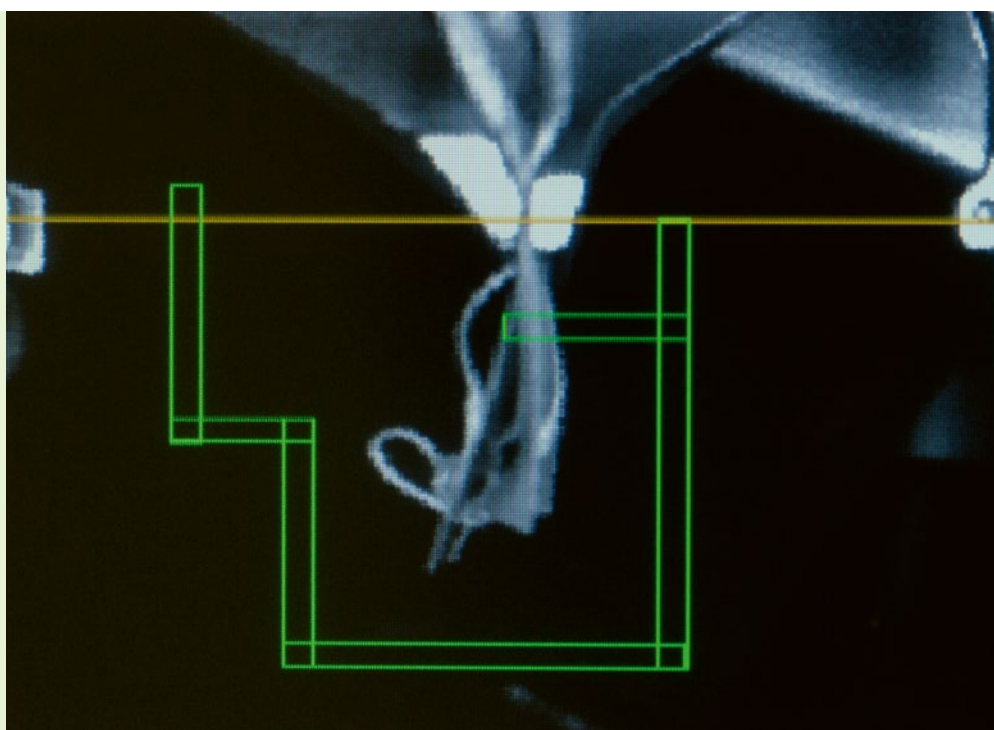
Three synchronised movements to achieve perfect knotting







ONCE MORE THE C58 TRIUMPHS BY CUTTING THE EDGES OF THE OCTAGONAL TAG DIRECTLY ON THE MACHINE RESULTING IN A SIGNIFICANT REDUCTION IN COSTS.



# C58 THE OUTER ENVELOPE

## CRIMPED AND HEATSEALED OUTER ENVELOPE

IMA offers the option of individually wrapping the C58 filter bag in either heat-sealed or crimped outer envelopes. The latter resulting in a hygienic, tasteful and functional solution, and the former in an airtight and waterproof outer envelope guaranteeing preservation of the product.

IMA's high degree of flexibility enables the change from naked bags to crimped outer envelopes or from naked bags to heat-sealed outer envelopes quickly and easily, thereby offering the right solution to any market demand.

## FLEXIBLE BY CHOICE

The C58 is able to run both multi and single layer packaging materials guaranteeing the same efficiency ratio for perfect product preservation.

As an alternative, cold-seal materials can also be run on the machine allowing packaging material savings

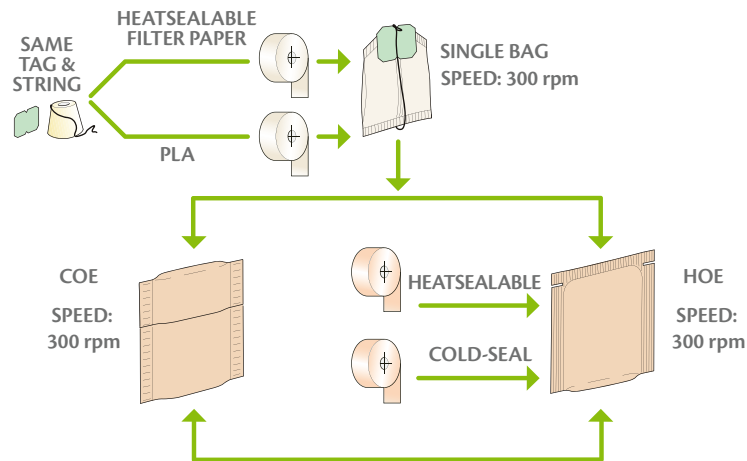


PRODUCTION SPEED :  
300 OUTER ENVELOPES  
PER MINUTE

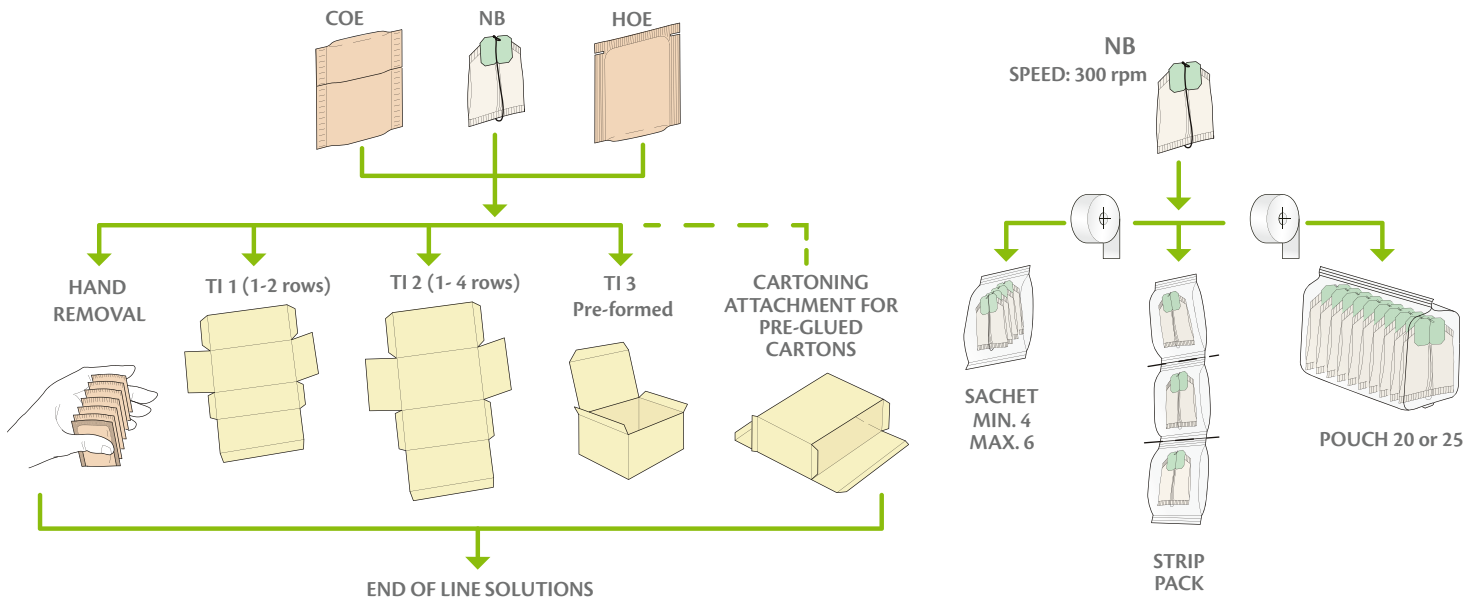


# C58 A VARIETY OF PACKAGING SOLUTIONS

## NEW GUSSETED SINGLE CHAMBER TEABAGS



## SECONDARY PACKAGING



FLEXIBILITY ACHIEVES ITS MAXIMUM GOAL ON THE C58 BY OFFERING THE GREATEST VARIETY OF FINAL PACKAGING SOLUTIONS TO RESPOND TO ANY MARKET DEMAND AND DEDICATED REQUESTS.

# C58 A VARIETY OF PACKAGING SOLUTIONS



## TI3 AUTOMATIC CARTONING ATTACHMENT FOR PRE-ERECTED CARTONS

The C58 can also be equipped with a simplified automatic cartoning attachment for pre-erected cartons able to pack:

- from a minimum of 15 to a maximum of 150 naked bags on 5 rows (production speed : maximum 30 boxes per minute);
- from a minimum of 15 to a maximum of 180 crimped outer envelopes on 6 rows;
- from a minimum of 15 to a maximum of 150 heatsealed outer envelopes on 5 rows.

The simplified cartoning attachment receives pre-formed cartons from a conveyor belt, fills them with a predetermined quantity of naked bags and, if required, closes them. Each filter bag is picked up from the central wheel by means of a mechanical gripper, transferred, by means of a second wheel, to a stacking station and counted. The whole stack is then inserted into the carton by means

of a rotating movement and, if required, the carton is closed and transported to the exit. The cartoning attachment is able to fill a variety of pre-erected carton styles :

- TUCK-IN CARTON
- KURZLASCHEN CARTON
- CADDY STYLE CARTON
- TEAR STRIP CARTON
- OPEN TRAYS



**THE CARTON CLOSURE IS AVAILABLE FOR SIMPLER PACKAGING SOLUTIONS SUCH AS :**

- TUCK-IN CARTON
- KURZLASCHEN CARTON
- CADDY STYLE CARTONS WITH ALREADY PRE-FORMED AND GLUED CLOSING LIDS

**THE CARTONING ATTACHMENT CAN BE COMPLETED WITH THE FOLLOWING ADDITIONAL GROUPS :**

- CARDBOARD DIVIDER UNIT
- LEAFLET INSERTER



## C58 A VARIETY OF PACKAGING SOLUTIONS



### AUTOMATIC CARTONING ATTACHMENT FROM FLAT BLANKS

The C58 can be equipped with an automatic cartoning attachment from flat blanks, available in two different versions :

- T11 – from 1 to 2 rows for a minimum of 8 to a maximum of 68 naked bags or outer envelopes
- T12 – from 1 to 3-4 rows for a minimum of 8 to a maximum of 100 outer envelopes on 3 rows – for a minimum of 8 to a maximum of 100 naked bags on 4 rows

The cartoning attachment automatically erects cartons from flat blanks, fills the carton with filter bags (with or without outer envelope) and finally closes the carton (tuck-in or glued). Each correct filter bag is picked up from the central wheel by means of a mechanical pincer, transferred, by means of a second wheel, to a stacking station and counted. The whole stack is then inserted into the carton by means of a rotating movement and the carton is finally closed and transported to the exit.

The cartoning attachment can be completed with the following additional groups :

- Cardboard divider unit
- Carton coding unit
- Coupon inserter





## STACKING AND HAND REMOVAL

The C58 can be easily equipped with a hand removal system for counted naked bags or enveloped bags from a minimum of 8 to a maximum of 28 bags.



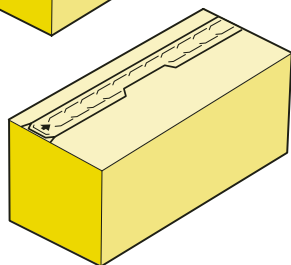
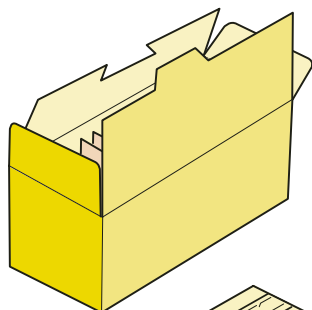
# C58 A VARIETY OF PACKAGING SOLUTIONS

## FLEXIBILITY IN STYLE

The C58 cartoning attachment permits the packaging of filter bags in different final carton styles according to such criteria as product integrity, personalisation, style and cost saving.

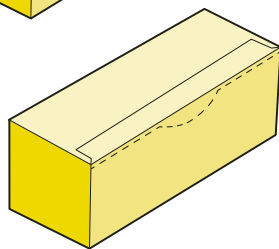
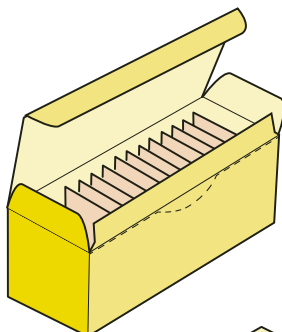
As well as the standard tuck-in closure cartons, three further options are also available:

- Tear Strip Closure carton
- Kurzlaschen Closure carton
- Caddy Closure carton



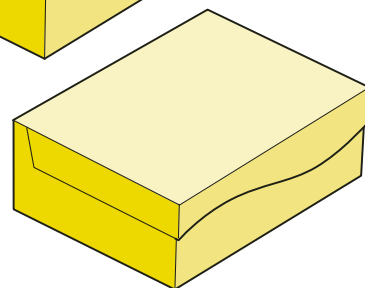
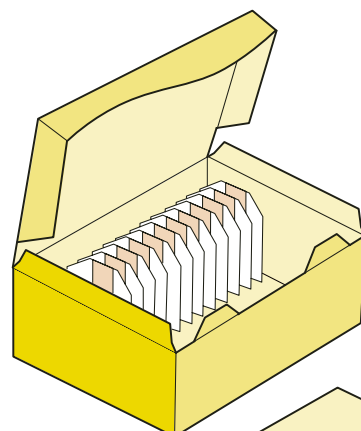
### TEAR STRIP CLOSURE CARTON

The Tear Strip Closure carton offers a tamper proof security as well as a re-closable solution. This carton style requires no overwrapping, therefore guaranteeing additional cost saving.



### KURZLASCHEN CLOSURE CARTON

The Kurzlaschen Closure carton offers a tamper proof security as well as a re-closable solution. This carton style reduces cardboard consumption and does not need overwrapping, therefore guaranteeing additional cost saving.



### CADDY CLOSURE CARTON

The Caddy Closure carton represents the perfect solution for a more stylish and appealing final package. This carton is re-closable and remains intact after opening. It is completely ideal for personalization.





## THE ADVANTAGE OF ELECTRONICS – FROM COUNT TO COUNT

The IMA C58 achieves the greatest versatility in the design of its new counting and stacking units. Stacking is controlled by independent motors which allow a swift electronic count changeover completely avoiding the need for any part replacement and guaranteeing always the correct number of bags or envelopes in the stacking unit.

## FLOW-PACK AND POUCHES SOLUTIONS

As an alternative to the final packaging into cartons, the new C58 machine is particularly suitable for integrated solutions that foresee the packaging of naked bags in flow-packs or pouches directly on the machine :

- Counted naked bags (minimum 4 – maximum 6) packed in single “sachet” or “strip pack” (continuous strip of pre-cut sachets for single sale)
- Counted naked bags (20 or 25) packed in a one-row pouch. Pouches can be finally packed into cartons for a more appealing solution.

The groups for flow-packs and pouch packaging are fully integrated on the C58 machine and operate vertically for packs or pouch forming.

# C58 UTMOST EFFICIENCY

## VERTICAL FLOW DOSER

IMA's tradition for accuracy in dosing methods stands out in the design of this vertical flow doser, driven by a dedicated motor and where product quantity and volume are strictly connected to the timing of the product ejector opening and closing processes (product quantity is pre-determined by the operator).

The feeding system provides a "forced" product ejection into the bag which gets particularly close to the feeding mouth. This feature ensures the highest production speed is reached – 300 bags per minute – as the feeding process is not dependent on the force of gravity.

## VIBRATING PRODUCT FEEDING SYSTEM

The new C58 is equipped with a vibrating product feeding system allowing the machine to easily run products, drastically reducing product degradation and thereby preserving the best product quality.

## SINGLE BAG REJECTION

Prior to entry into the stacking unit, the revolutionary use of a sophisticated video camera, connected to a monitor which controls correct knotting on both filter bag and tag, allows the rejection of single bags which do not correspond to the pre-established quality standards. Thanks to the innovative independent motorisation system, the counting of filter bags is automatically stopped, a correct bag is retrieved to complete the required count and production flow proceeds smoothly without interruption. This unique system guarantees the highest product quality and at the same time contributes to savings in packaging material and increases the machine's efficiency.



## MOTORISATION

The C58 is provided with independent motorisation synchronised with an integrated electronic control system. The strength of this innovative system is most emphasised in the count and carton size changeover functions, where the motorisations provide for a quicker and safer operation assuring maximum production efficiency.





## PROGRAMMABLE CONTROL

The whole working cycle logic and quality control are achieved by a PC, software compliant with the IEC 1131-3 standards. The use of a PC, as an alternative to a PLC system, represents a great advantage towards the risk of obsolescence and consequent need for spare part replacement and software update. All main machine stations have been provided with a specific product control device to guarantee the maximum product quality. All main functions can be easily controlled by the operator on the push-button panel. Production efficiency is kept at the highest level as most of the controls do not stop the machine, but automatically reject the faulty product (single filter bag or carton).

## AUTOMATIC WEIGHT CONTROL AND ADJUSTMENT

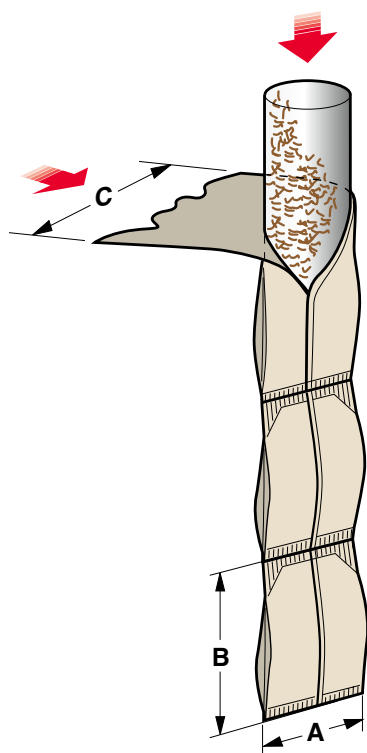
In case a checkweigher unit is provided on the C58, the automatic weight control and adjustment group can be fitted on the product feeding and dosing group. It automatically rejects cartons not reflecting the exact weight previously selected by the operator. The weight is controlled on the checkweigher and automatically adjusted to the required dosage.



# C58 PACKAGING MATERIALS AND PRODUCTS

## PACKAGING MATERIALS AND PRODUCT SPECIFICATIONS

FILTER BAG SIZE

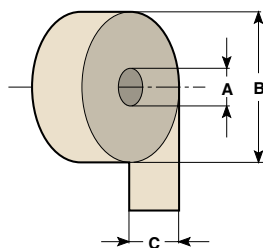


SIZES

A	B	C
40	60	118
45	60	128

FILTER PAPER WEIGHT 16÷17 gr/m<sup>2</sup>

HEATSEALABLE  
FILTER PAPER REEL

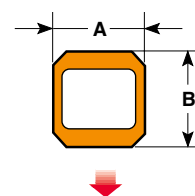


SIZES

A	B	C
76	Max. 500	118
76	Max. 500	128

FILTER PAPER WEIGHT 16÷17 gr/m<sup>2</sup>

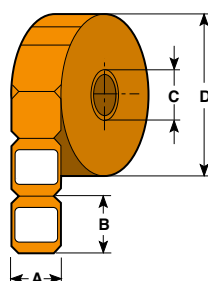
TAG SIZE



SIZES

A	B
28	28
28	32

TAG PAPER REEL

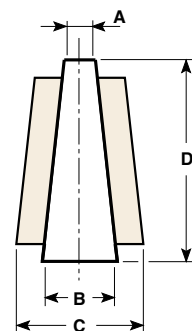


TAG PAPER REEL SIZES

A	B	C	D
A	B	152	Max. 500

WEIGHT (gr/m <sup>2</sup> )		THICKNESS (Micron)	
Min.	Max.	Min.	Max.
180	200	150	180

COTTON THREAD REEL

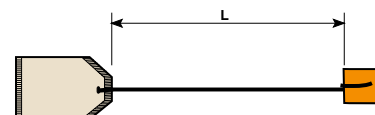


ENDS' NUMBER: 3 (WITHOUT KNOTS)  
AVERAGE TITLE: 20 NE.

Ø

A	B	C	D
20	Max. 64	Max. 220	140 ÷ 180

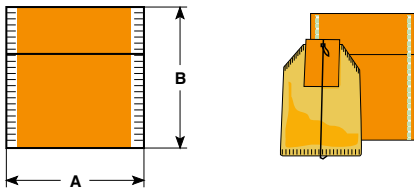
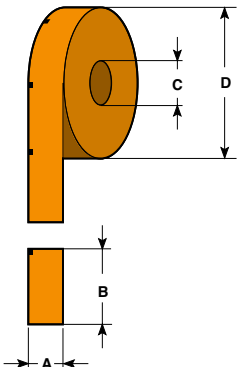
COTTON THREAD LENGTH  
EACH FILTER BAG



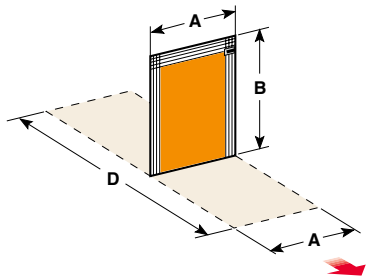
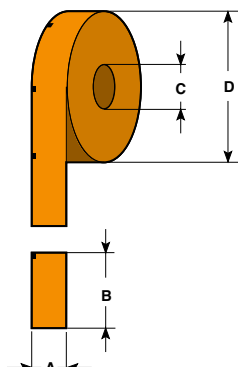
	SIZES 40X60	SIZES 45X60	TOTAL LENGTH
L (mm.)	140	140	210



CRIMPED OUTER ENVELOPE SPECIFICATIONS

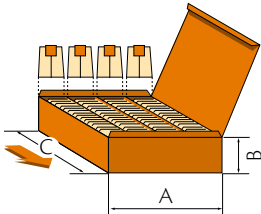
CRIMPED OUTER ENVELOPE				CRIMPED OUTER ENVELOPE PAPER REEL							
											
OUTER ENVELOPE SIZES			PAPER REEL SIZES					WEIGHT (gr/m²)		THICKNESS (Micron)	
BAG TYPE	A	B	BAG TYPE	A	B	C	D	Min.	Max.	Min.	Max.
40x60	55	67	40x60	55	Tbd	152	Max. 500	60	70	70	80
40x60	58	70	40x60	58	Tbd	152	Max. 500				
45x60	63	70	45x60	63	Tbd	152	Max. 500				

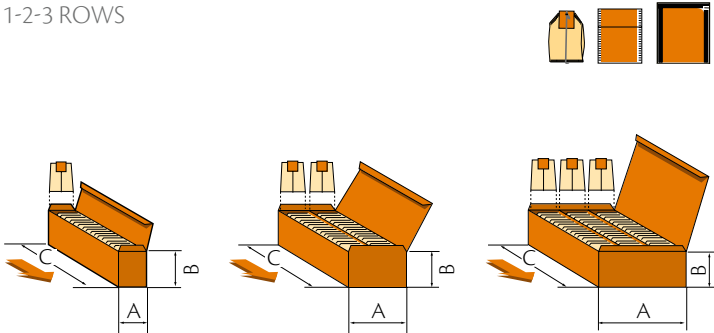
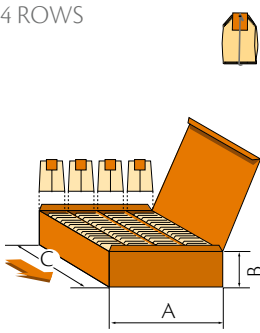
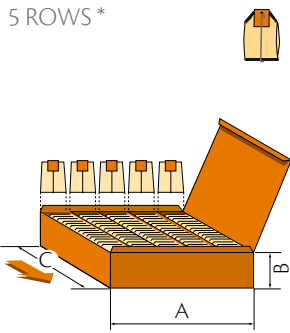
HEATSEALED OUTER ENVELOPE SPECIFICATIONS

HEATSEALED OUTER ENVELOPE				HEATSEALABLE OUTER ENVELOPE PAPER REEL							
											
OUTER ENVELOPE SIZES			PAPER REEL SIZES					WEIGHT (gr/m²)		THICKNESS (Micron)	
BAG TYPE	A	B	C	A	B	C	D	Min.	Max.	Min.	Max.
40x60	63	72	144	63	144	76	Max. 500				
	66	77	154		154	76	Max. 500				
45x60	63	72	144	66	144	76	Max. 500				
	66	77	154		154	76	Max. 500				

# C58 PACKAGING MATERIALS AND PRODUCTS

## CARTON SPECIFICATIONS FOR T13 CARTONING ATTACHMENT FROM 1 TO 5 ROWS

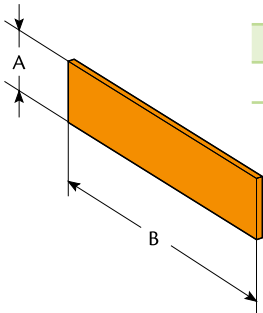
CARTON ORIENTATION TYPE A		
		
CARTON DIMENSIONS	MIN	MAX
A WIDTH	42	212
B HEIGHT	61	85
C LENGTH	100	205

1-2-3 ROWS	4 ROWS	5 ROWS *
		
* Note: for 40 mm width naked bags only		

## NUMBER OF BAGS OR ENVELOPES FOR T13 CARTONING ATTACHMENT FROM 1 TO 5 ROWS

1 TO 5 ROWS		1 TO 3 ROWS		1 TO 3 ROWS	
					
MIN	MAX	MIN	MAX	MIN	MAX
15	150*	15	100	15	100
* Note: for 40 mm width naked bags only					

## SPECIFICATIONS FOR CARDBOARD DIVIDER FOR T13 CARTONING ATTACHMENT

CARDBOARD DIVIDERS					
	<table><tr><td>A</td><td>30</td></tr><tr><td>B</td><td>90 ÷ 195</td></tr></table>	A	30	B	90 ÷ 195
A	30				
B	90 ÷ 195				
CARDBOARD SPECIFICATIONS					
WEIGHT	350 gr/m²				
THICKNESS	± 0.40 - 0.50 mm				



CARTON SPECIFICATIONS FOR TI3 CARTONING ATTACHMENT FROM 1 TO 6 ROWS

CARTON ORIENTATION TYPE B		
CARTON DIMENSIONS	MIN	MAX
A WIDTH	84	340
B HEIGHT	61	85
C LENGTH	100	212

2 ROWS	3 ROWS	4-5 ROWS	6 ROWS *
* Note: for 55 mm width envelopes only			

NUMBER OF BAGS OR ENVELOPES FOR TI3 CARTONING ATTACHMENT FROM 1 TO 6 ROWS

2 TO 6 ROWS		2 TO 6 ROWS		2 TO 5 ROWS	
MIN	MAX	MIN	MAX	MIN	MAX
30	180	30	180 *	30	150
* Note: for 55 mm width envelopes only					

SPECIFICATIONS FOR CARDBOARD DIVIDER FOR TI3 CARTONING ATTACHMENT

CARDBOARD DIVIDERS					
	<table><tr><td>A</td><td>30</td></tr><tr><td>B</td><td>90 ÷ 202</td></tr></table>	A	30	B	90 ÷ 202
A	30				
B	90 ÷ 202				
CARDBOARD SPECIFICATIONS					
WEIGHT	350 gr/m²				
THICKNESS	± 0.40 - 0.50 mm				

# C58 GENERAL TECHNICAL DATA

**Machine speed:**

- Up to 300 bags/minute

**Teabag capacity:**

- Max 3,0 grams
- Filter bag maximum volume 9.2 cubic centimeters

**Power required:**

- Total installed power: 17 kW
- Average power consumption: 3,3 kW
- Maximum power consumption: 4,5 kW

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

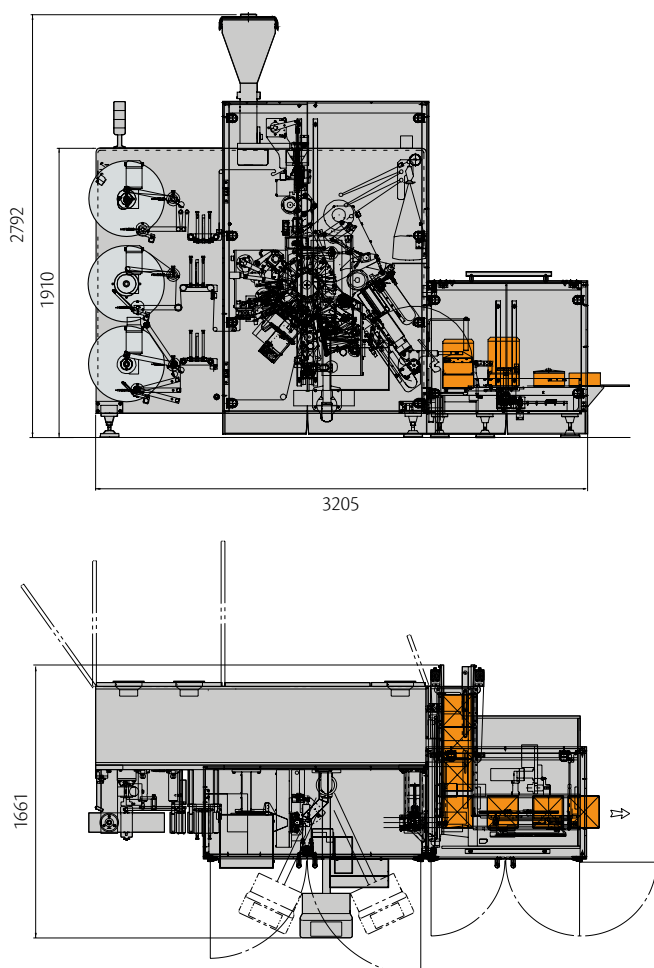
**Compressed air:**

- Exercise pressure: 6 bar
- Consumption: up to max. 200 NI/min.

**Machine net weight:**

- IMA C58 with T13 cartoning attachment: maximum 3100 kg

## MACHINE OVERALL DIMENSIONS WITH T13 CARTONING ATTACHMENT







ima.it



IMA S.p.A. - **TEA & HERBS division**  
mktg.tea@ima.it • ima.it/beverage/brands/tea-herbs  
FOLLOW IMA 