

Fibre Preparation  
VARIOnline

**RIETER**



# VARIOnline

VARIOnline



The variable cleaning concept

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# VARIOline

The high raw material yield is achieved by the microtufts, the VARIOset, and the progressive cleaning.

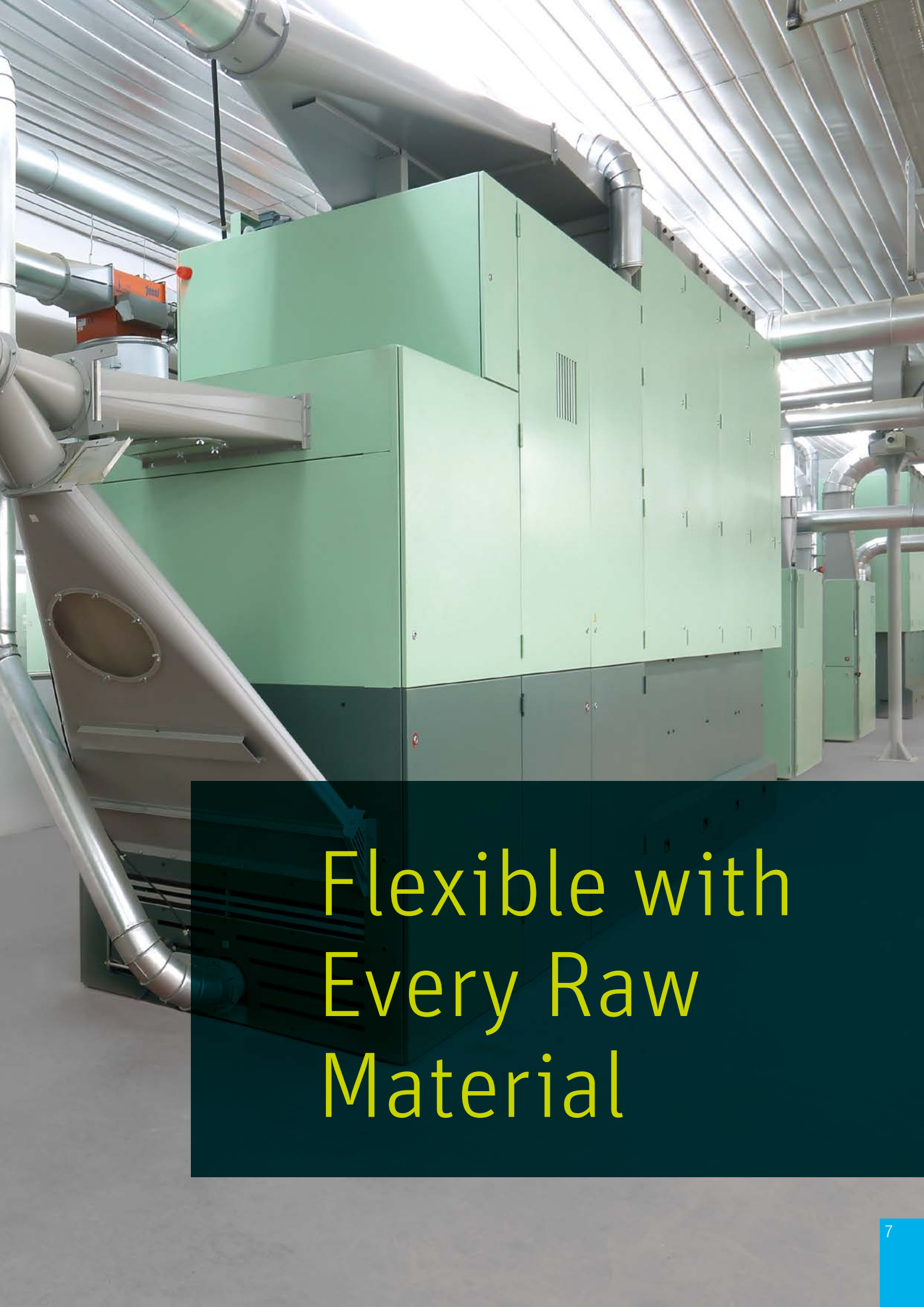


Up to 1 % Raw  
Material Saving

RIETER

Thanks to the modular concept,  
the progressive cleaning / opening  
as well as the by-pass options,  
the line management in the  
VARIOline is precisely aligned to  
the material.


# VARIOline



Flexible with  
Every Raw  
Material



# Precision Blends in 1 % Range

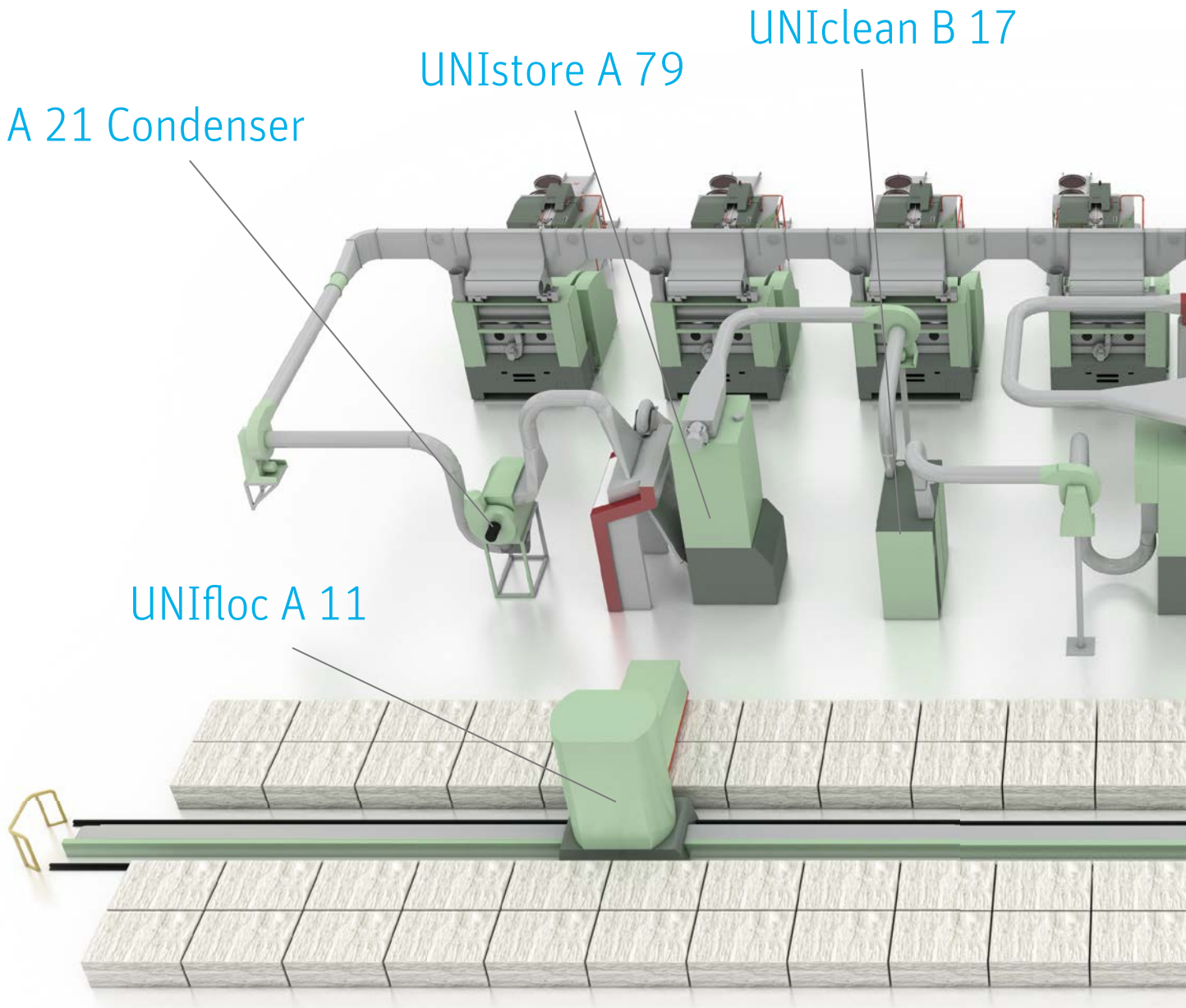


The A 81 UNIBlend precision blender sets the standard for blends with a deviation of less than 1 %. Up to 8 different raw materials can be easily processed in multiple type operation.

VARIOLINE

# VARIOnline

## ECONOMY



### Economy

Blowroom lines for the most economically efficient production of carded ring and OE applications:

Line production 1 000 kg/h

Trash content < 5 %

# VARIOLine

UNImix B 76

UNIClean B 12

C 70 Card line

B 25 Waste opener

A 48 Heavy particle extractor

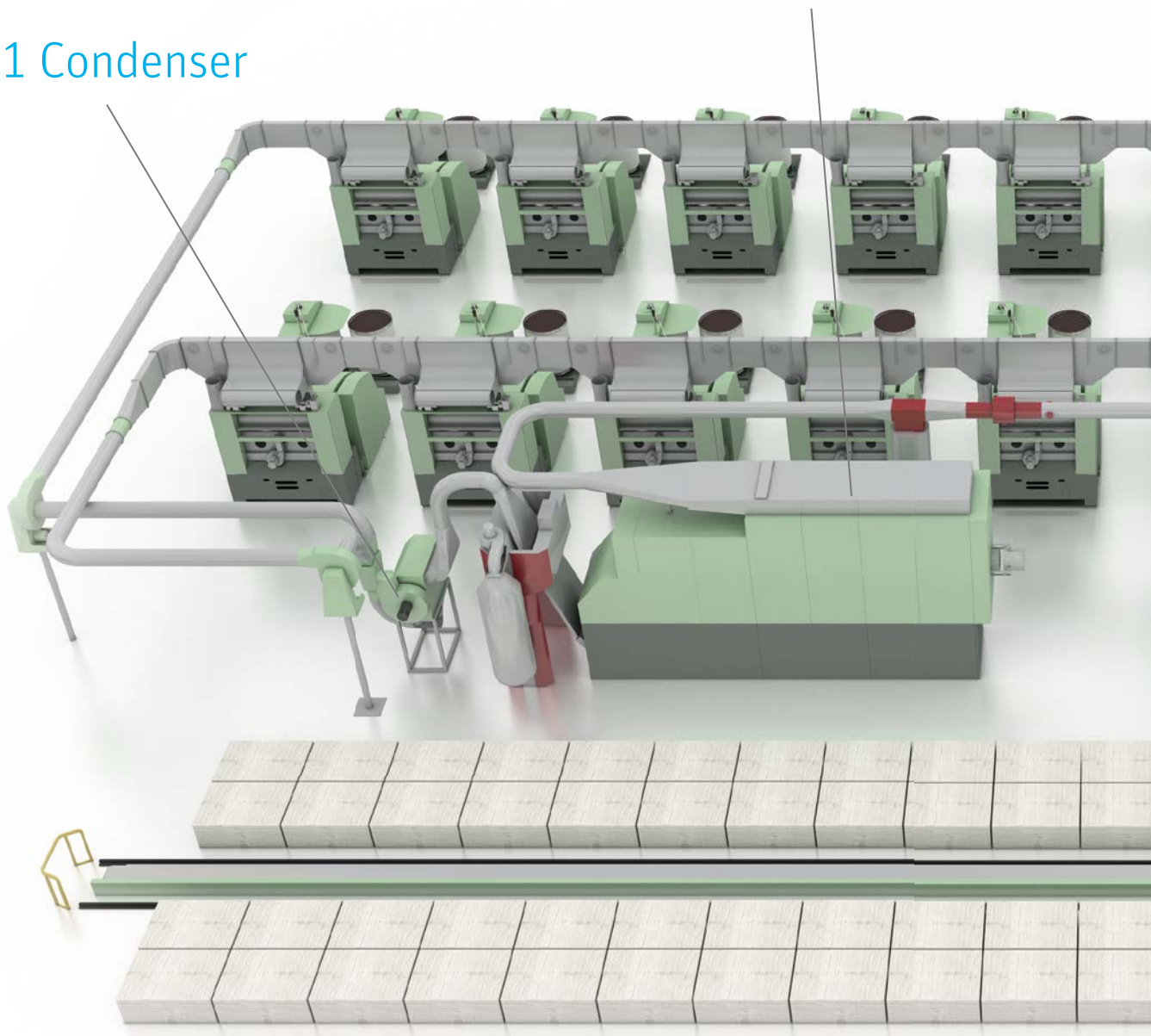
Further equipped with USTER® JOSSI COMBO SHIELD and THE VISION SHIELD and MAGIC EYE.

# VARIOnline

## QUALITY

UNImix B 72R

A 21 Condenser



### Quality

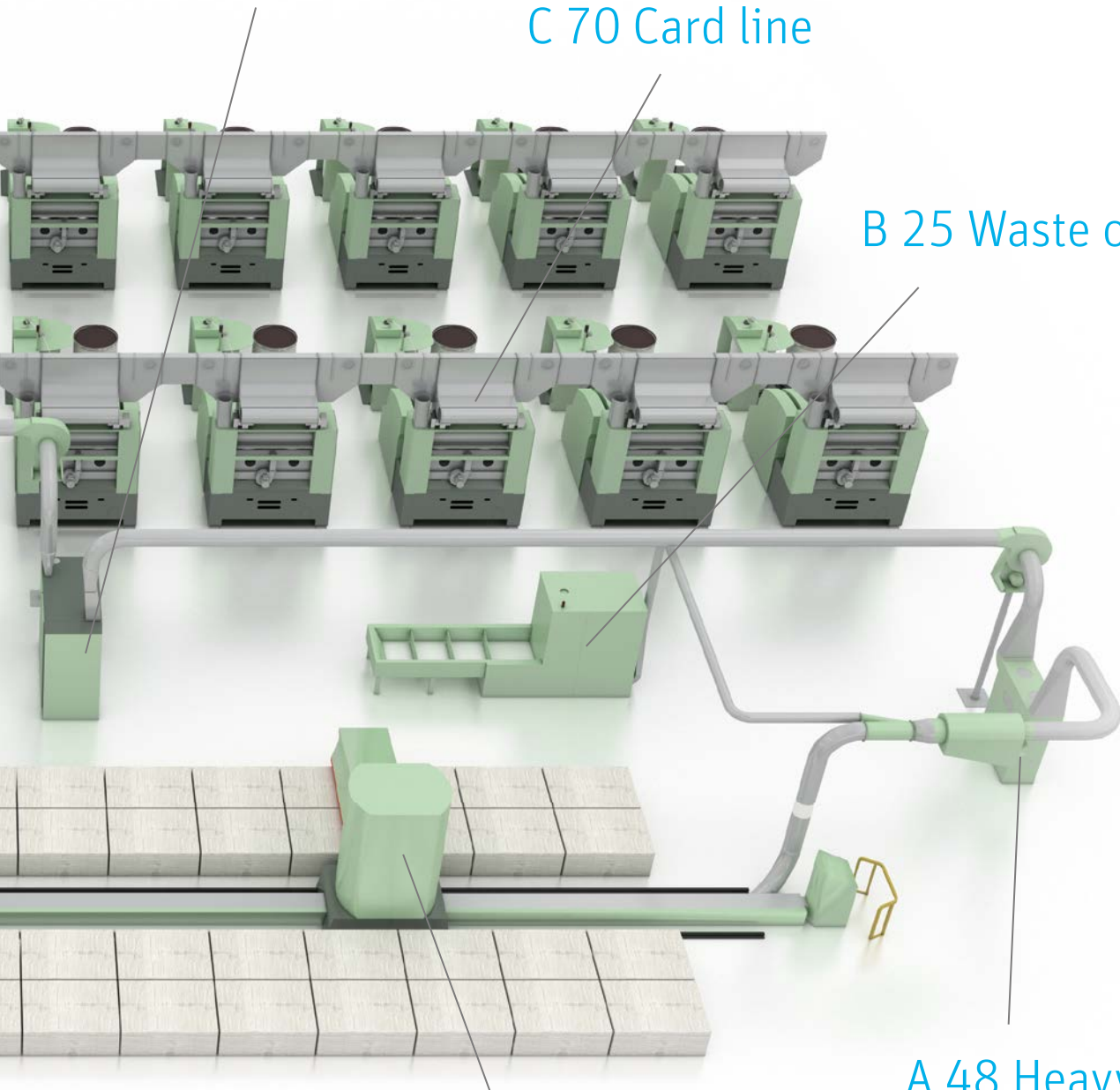
Blowroom lines for quality yarns for fine combed ring yarns:  
Line production 800 kg/h  
Trash content < 3 %

# VARIOLine

UNIcean B 12

C 70 Card line

B 25 Waste opener



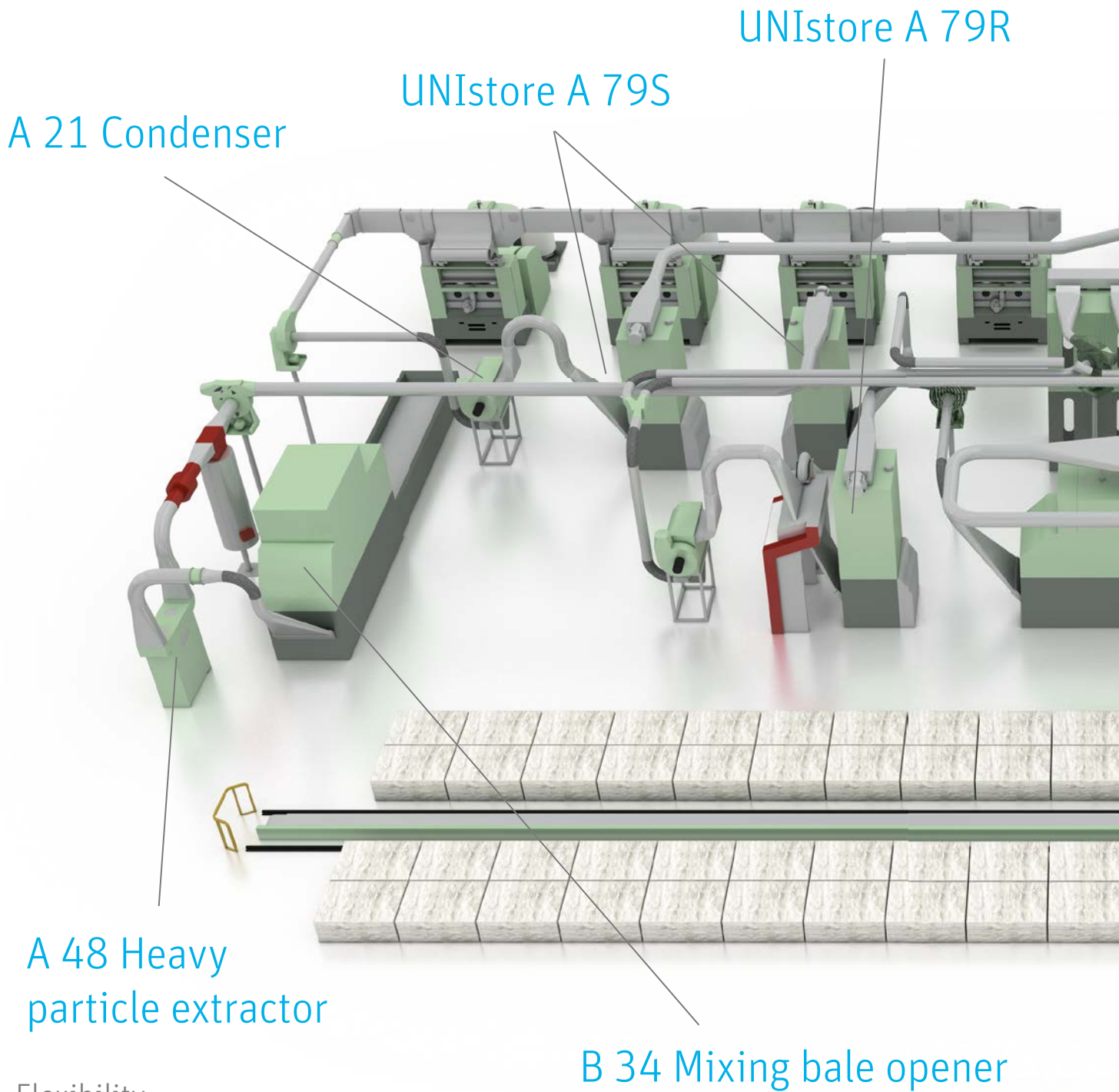
UNIfloc A 11

A 48 Heavy  
particle extractor

Further equipped with USTER® JOSSI COMBO SHIELD and THE VISION SHIELD and MAGIC EYE.

# VARIOnline

## FLEXIBILITY



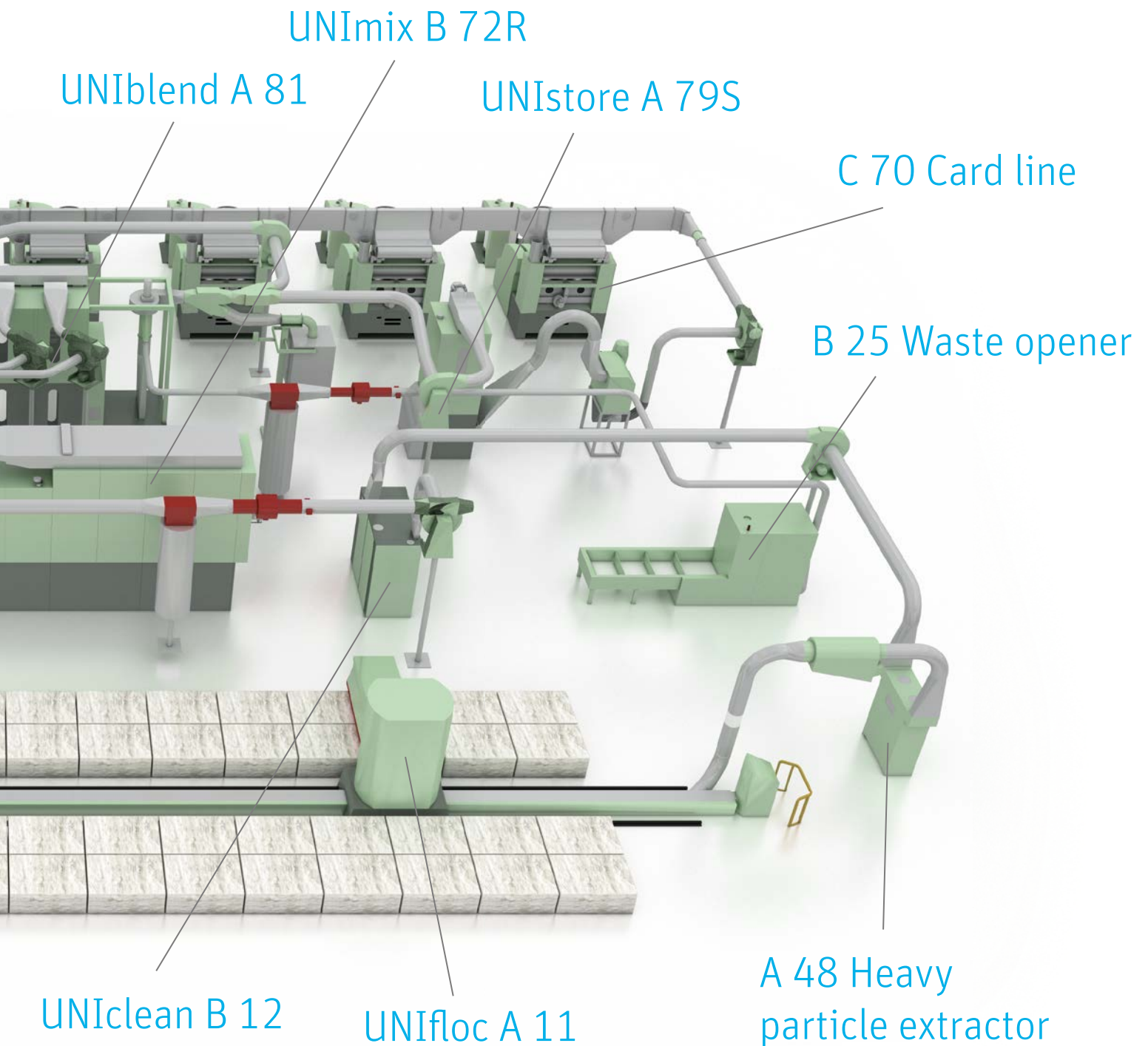
### Flexibility

Blowroom lines for blended yarns with precise proportion of components:

Line production up to 900 kg/h

Trash content in the cotton < 5 %

# VARIOLine



Further equipped with USTER® JOSSI COMBO SHIELD and THE VISION SHIELD and MAGIC EYE.

# VARIOline

## The variable cleaning concept

The Rieter blowroom line impresses with a variable concept. Cleaning is done in stages adapted to the raw material. Smallest fibre tufts and the VARIOset cleaning characteristic display, set at the push of a button, are the key to efficient and gentle cleaning. Processing of up to four material assortments is possible. In a continuous line 1 000 kg raw material can be processed hourly. VARIOset achieves a high raw material yield with all cleaning machines and the cleaning performance can be quickly and repeatedly adjusted.

### Economy

- The blowroom allows production of up to 1 200 kg/h.
- High raw material yield due to the flexible setting options of the VARIOset cleaning characteristic display with all cleaning machines.
- Low energy consumption per kilo of card sliver with minimal space requirements.
- Reduced spare part management from bale opener up to card feed due to identical modules.
- Short blowroom lines with high production keep investment costs down, especially in the area of man-made fibres.

### Quality

- Gentle fibre opening and cleaning is the basis for all high quality yarns.
- The opening of the raw material into microtufts leads to an efficient cleaning in all blowroom machines.
- The high and constant quality level of the fibre mixing is achieved by the mixing machine with the 3-point principle.
- An active dust removal at all opening and cleaning points guarantees optimal further processing with excellent operating behavior in the subsequent processes such as the rotor spinning.
- Application of the UNIBlend in the blowroom line ensures highly precise blending ratios which can be reproduced with an accuracy of +/- 1 %.

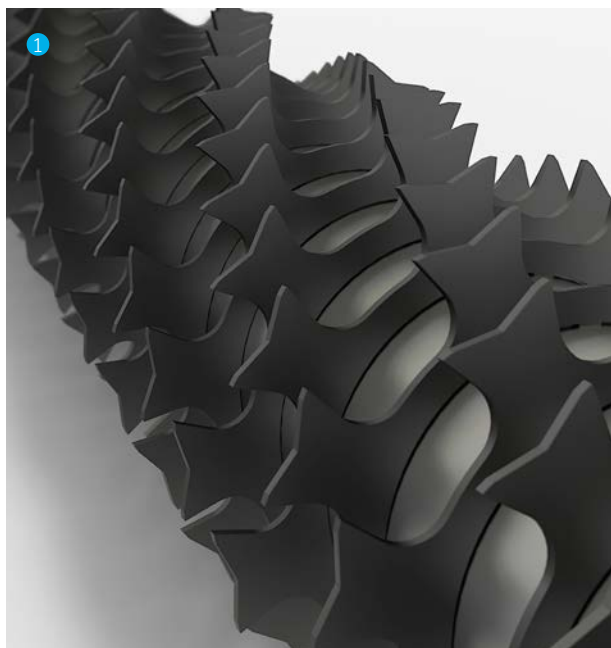
### Flexibility

- Quick and repeatable adjustment of the trash extraction on all cleaning machines at the touch of a button with VARIOset.
- Processing of all natural and man-made fibres up to 65 mm staple length.
- Simultaneous processing of up to 4 assortments.
- Flexible composition of the machines in the blowroom line – depending on the level of contamination in the raw material.

**Note: All production information relates to line production (card sliver delivery).**

Benefit		Economy	Quality	Flexibility
Microtufts 1	①	Great influence	Great influence	Average influence
Dedusting 2	②	Great influence	Great influence	No influence
Gentle fibre treatment 3	③	Great influence	Great influence	Great influence
Energy-saving	④	Great influence	No influence	No influence

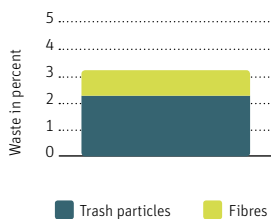
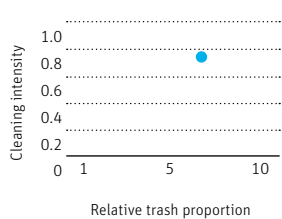
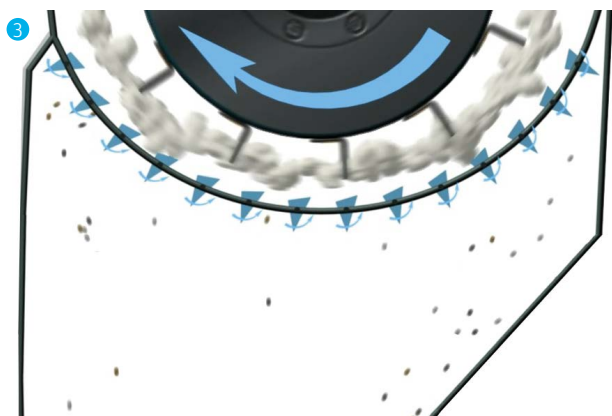
Great influence
  Average influence
  No influence



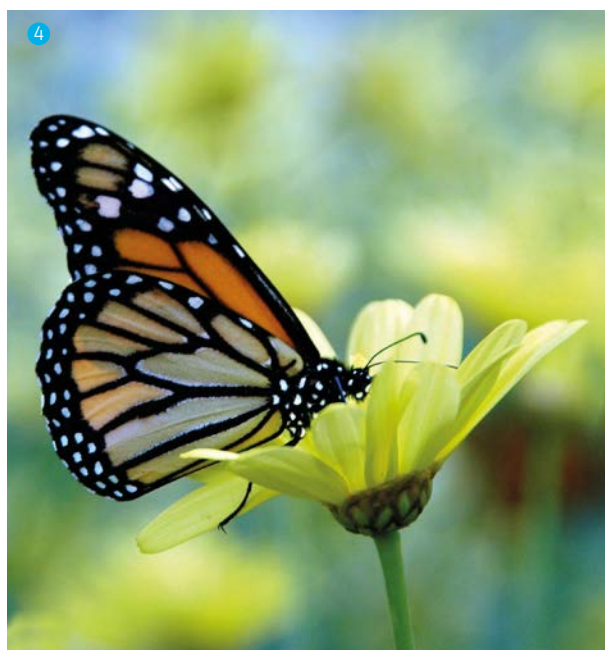
Microtufts



Dedusting



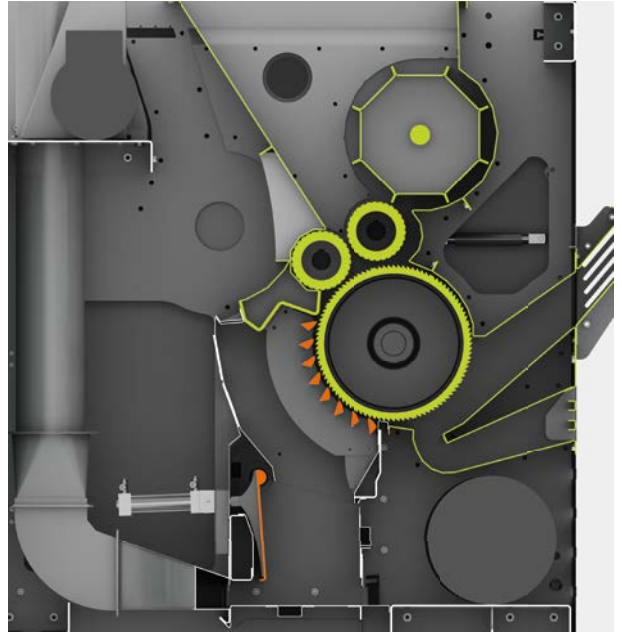
Gentle fibre treatment



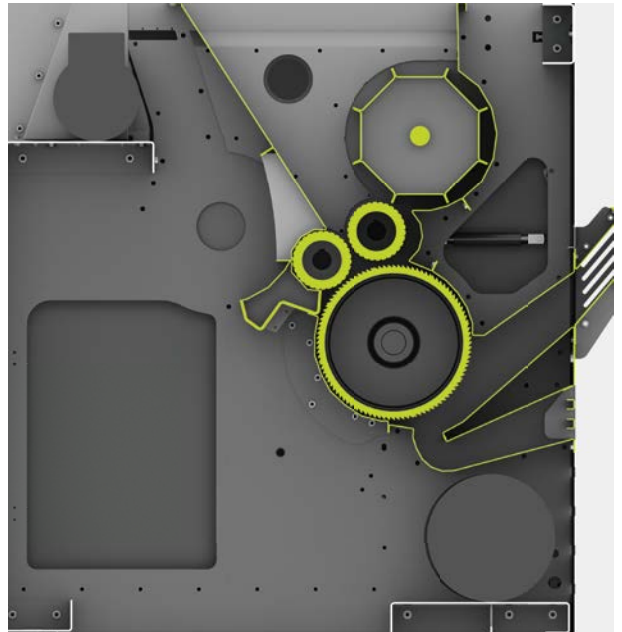
Energy-saving



Modular construction of the A 79 UNIstore



Cleaning module (R)



Opening module (S)

# Modular Concept

## Rieter's innovative blowroom

### Varioline – 1 000 kg/h production

The Rieter blowroom VARIOline processes up to 1 000 kg/h in one line. Together with the JUMBO AEROfeed system, feeding up to 10 C 60 and C 70 cards with 1 000 kg/h is possible so that a continuous, completely coordinated line from bale opener to carding is available.

### Modular concept

In the VARIOline the cleaning module (R module) and opening module (S module) are the outstanding innovations. These are used on mixing, storage and feeding machines and enable the Rieter VARIOline blowroom to be precisely adjusted to the trash content of the cotton to be processed. In addition, the correct machine sequence with up to four cleaning and opening stages is accurately coordinated (Tables 1, 2).

### Customer benefits in focus

Energy and raw material prices, and thereby the fibre yield, are subjects concerning production efficiency that are paramount to spinning mill owners. The raw material price significantly determines the economic efficiency of a spinning mill. A high fibre yield, i.e. low expulsion of good fibres and gentle fibre treatment, is important for the spinning mill. External trials have shown how gentle, at minimal fibre shortening, the VARIOline is and how the waste can be reduced.

### VARIOLINE – individually adapted to customer requirements

With the VARIOline blowroom line, Rieter always supplies an ideal solution whether cotton, man-made fibres or blends are being processed. The Rieter blowroom is always configured to the customer's specific requirements and the Rieter blowroom control, UNIcontrol, is adjusted to meet the needs and conditions of every production facility.

Degree of Contamination	Line production [kg/h]	Recommended machine sequence					
		A 11	B 12	B 72R			
Slight	800	A 11	B 12	B 72R			
	1 000	A 11	B 12	B 76R			
	1 200	A 11	B 12	B 76	A 79R*	A 79R*	
Average	800	A 11	B 12	B 72R	A 79R		
	1 000	A 11	B 12	B 76R	A 79R		
	1 200	A 11	B 12	B 76	A 79R*	A 79R*	
High	800	A 11	B 12	B 72R	B 17	A 79R	
	1 000	A 11	B 12	B 76R	B 17	A 79R	
	1 200	A 11	B 12	B 76	B 17	A 79R*	A 79R*

\* A 79R UNIstore parallel in use

Table 1: Example of VARIOline blowroom lines with differing production volume and trash content

Material	Line production [kg/h]	Recommended machine sequence			
		A 11	B 72S		
PES/PAC	600	A 11	B 72S		
	900	A 11	B 76S		
Viscose	800	A 11	B 72S	A 79S	
	900	A 11	B 76S	A 79S	
	1 000	A 11	B 76S	A 79S*	A 79S*

\* A 79S UNIstore parallel in use

Table 2: Example of VARIOline opening lines for man-made fibres (MMF) with differing production volume and degree of opening

# Proven concept refined

## VARIOLine

### Simplified cleaning due to microtufts

The basis of the good cleaning performance of the existing blowroom concept is the A 11 UNIfloc bale opener which takes extremely small tufts – so-called microtufts – from the bales. These microtufts can be far more easily cleaned in the subsequent processes than large tufts. It has been shown to be extremely efficient to clean in two stages in the process: with an intensive preliminary cleaning prior to mixing followed by the fine cleaning. This cleaning philosophy ensures that as much trash and dust as possible is removed at the beginning of the blowroom process by the efficient pre-cleaner B 12 UNIClean. This prevents the debris, the so-called pepper trash that develops from the widespread vegetable matter, from passing through the blowroom process as it is very difficult to be removed in the cleaning process. After the 3-point mixing of the fibre material in the UNImix a second cleaning – also known as fine cleaning – is carried out before feeding to the cards.

The VARIOLine retains this proven concept. The cleaning process following the mixing machine has been improved by increased emphasis on the trash proportion of the raw material; according to the degree of contamination, one to three independent cleaning stages are carried out. Including the preliminary cleaning, the fibres are thus freed from trash by up to four cleaning stages (cf. Table 1, Page 19).

The result is a gentle fibre cleaning and opening which only subjects the fibres to as much stress as is necessary for the blowroom process. Compared to conventional blowroom processes, lesser fibre shortening and fewer neps are achieved.

### Process-integrated active dedusting

During the entire blowroom process, dust from the fibre tufts is actively removed by the blowroom machines on numerous occasions. This process begins immediately after the UNIfloc in the dust extractor. Extremely effective is also the dedusting in the B 12 UNIClean pre-cleaner and later in the fine cleaning stage in the B 17 UNIClean. Furthermore, a very efficient dust extracting function with a large screen surface is integrated in the UNImix as well as in the UNIstore. Condensers, which optimize the air balance of the blowroom line, also effectively separate the dust from the fibres and the transport air. The dust is fed into the filter unit. This active dust removal reduces the thread breakages of the spinning machine and provides a substantial contribution towards economic yarn production.

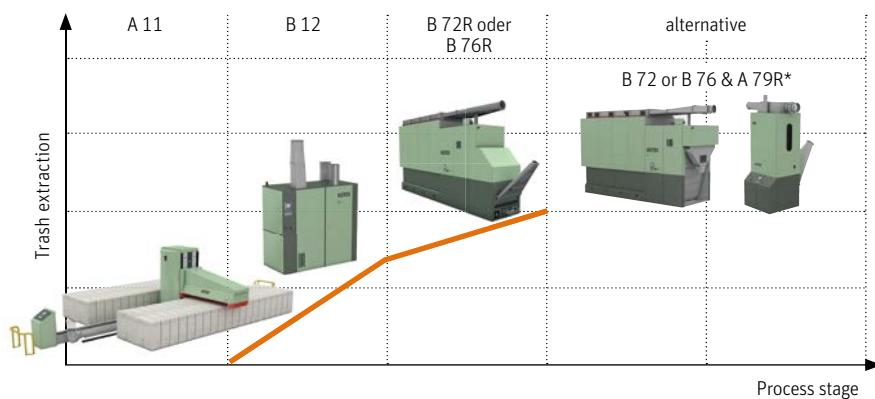
### Single operating philosophy

Operation of all machines is easy. All frequently repeated settings are entered by touch-key on the clearly structured graphic panel. With all Rieter machines, operation is carried out with a single philosophy. This shortens the training required and increases the flexibility of the personnel.



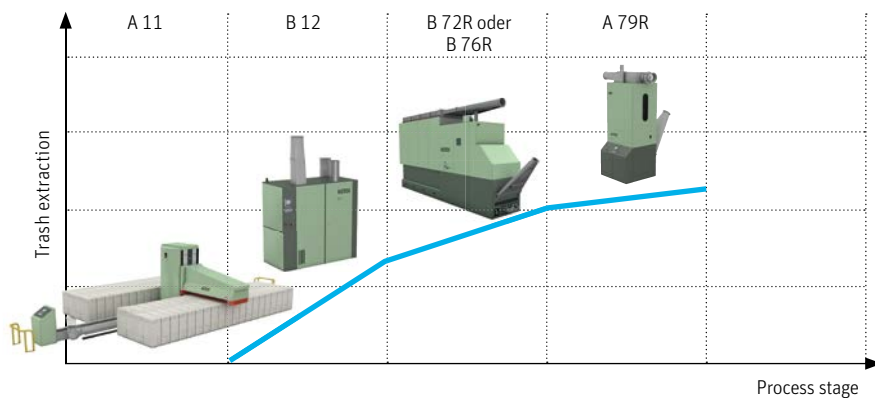
The ratio between trash extraction and retaining good fibres effects economical production

**VARIOline cleaning concept – Slight trash content**



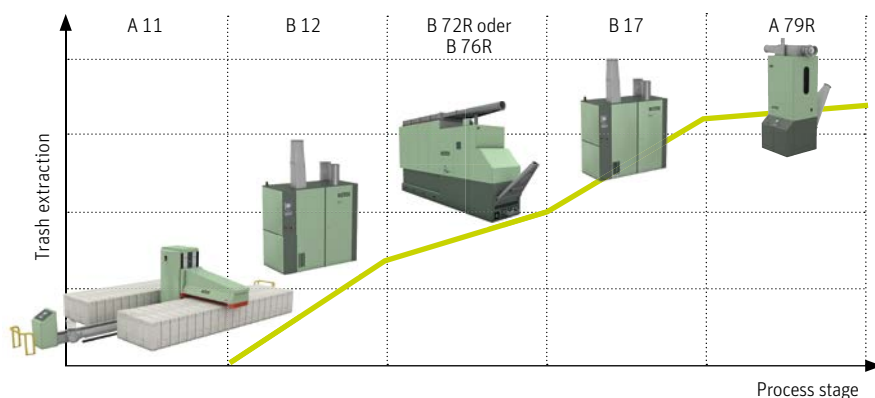
\* Alternative carding line production 800 kg/h with B 72 and A 79R UNIstore  
 Alternative carding line production 1 200 kg/h with B 76 and A 79R UNIstore

**VARIOline cleaning concept – Medium trash content**



\* Carding line production 800 kg/h with B 72R UNImix  
 Carding line production 1 000 kg/h with B 76R UNImix

**VARIOline cleaning concept – High trash content**



\* Carding line production 800 kg/h with B 72R UNImix  
 Carding line production 1 000 kg/h with B 76R UNImix

# Integrated in all Rieter Cleaning Machines

## VARIOset

### High flexibility with VARIOset

With the VARIOline blowroom, the VARIOset function is integrated in all cleaning machines. VARIOset influences the cleaning intensity and relative amount of waste and a rapid and reproducible adjustment of the trash extraction takes place at the touch of a button. VARIOset improves the flexibility of the VARIOline as the machine can be better adapted to the raw material being used.

**Table with VARIOset machines**

Type	Function	S-Modul	R-Modul	VARIOset
B 12 UNIClean	Pre-cleaner	/	/	Yes
B 72 UNImix	Mixer	Yes	Yes	Yes (with R)
B 76 UNImix	Mixer	Yes	Yes	Yes (with R)
B 17 UNIClean	Cleaner	/	/	Yes
A 79 UNIstore	Feeder / Opener / Cleaner	Yes	Yes	Yes (with R)

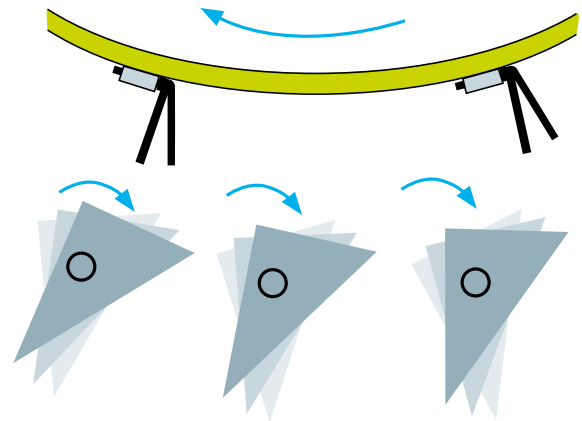
Table 3: Machines in the VARIOline with R- or S-Module

### Simple operation

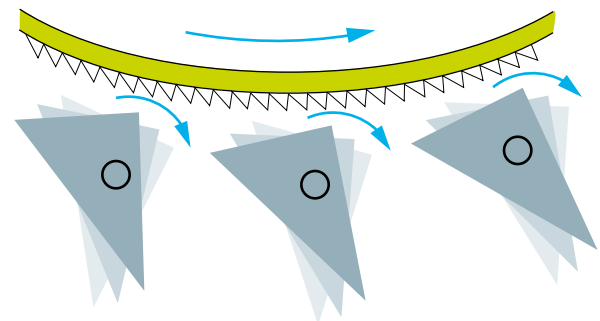
On the VARIOset two values are entered. Cleaning intensity as a value between 0.1 and 1.0 and relative waste amount as a value between 1 and 10. These values are entered direct via the machine operating panel or downloaded from the centralized blowroom control system UNIconrol and also automatically adopted by the machine in operation. The settings are reproducible. This provides high operating convenience when frequent lot changes occur.

### Reproducible settings

Two independent setting parameters, cleaning intensity and relative waste amount are the secret of the selective cleaning by the Rieter cleaning machines. Every working point of the VARIOset corresponds with a setting for the material speed and grid angle. The fibre yield is increased with simultaneously efficient cleaning in comparison to conventional facilities.

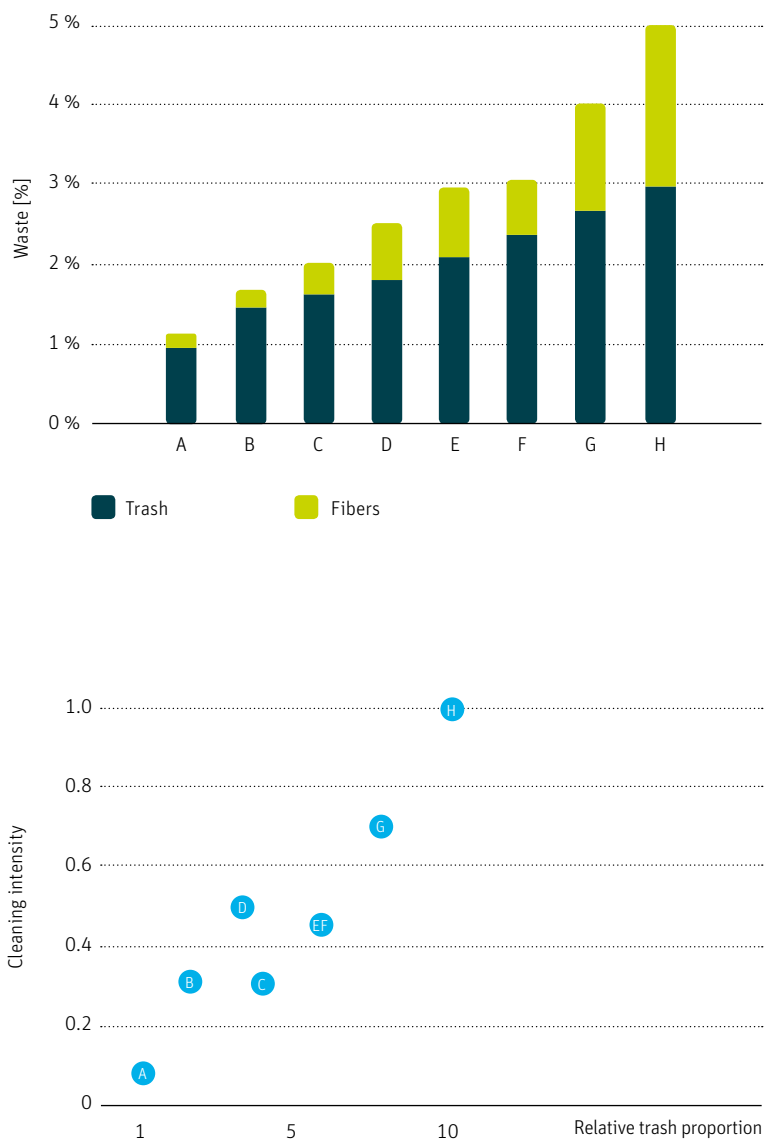


B 12 UNIClean



A 79 UNIstore

Material speed and grid angle determine the cleaning



Practical example for settings on the VARIOset and their effects on the waste amount and the waste composition



Simple setting of the grid bars at the UNIClean B 17 with VARIOset

# The Right Solution for all Applications

## Bale opening

The fibres arrive at the spinning mill as hard compacted bales. Almost all spinning operations, however, need raw material that has been opened to single fibres. The first step is therefore opening. This is carried out in the blowroom to the tuft stage and is continued on the card to the single fibre.

The initial opening creates surfaces for the subsequent coarse cleaning. A purposeful opening ensures that the first cleaning stage achieves the required degree of cleaning. In addition, the tuft size produced is decisive for the following process in the mixer. Small tufts are also easier to blend and thereby guarantee a homogeneous blend. To produce a homogeneous product from inhomogeneous fibre material, good blending of numerous bales is necessary. According to the size of the mill and the raw materials to be processed, automatic bale openers or mixing bale openers are employed. Combinations of both machine types are also quite common in order to meet the specific requirements of the spinning mill. For the controlled feed of spinning waste, the use of a waste opener, for example, is recommended.



# Economical Cleaning Begins with Microtufts

## A 11 UNIfloc automatic bale opener

The foundations for yarn quality and thus the quality of the textile end product are laid in the blowroom process. This is the basis for the successful, worldwide application of the A 11 UNIfloc automatic bale opener. The A 11 UNIfloc processes the fibre material gently and efficiently to produce microtufts that are easily cleaned of impurities in the subsequent processes. This effectively supports the quality and economic efficiency of yarn manufacturing.

### Efficiency

- The UNIfloc is designed for an output of up to 1 200 kg/h (card sliver).
- Depending on the selected machine length, the bale lay-down covers a length of 7.2 to 47.2 meters.
- Work-intensive manual equalizing of the bale height is no longer required thanks to automatic bale profiling.

### Quality

- Bale opening into microtufts provides the basis for the effective cleaning and dust extraction by the subsequent machines.
- The unique Rieter bale profiling results in quality consistency over the entire bale lay-down and consequently in the following processes.
- Thanks to the double tooth profile, gentle removal of the tufts independent of the rotational direction of the take-off roller is guaranteed.

### Flexibility

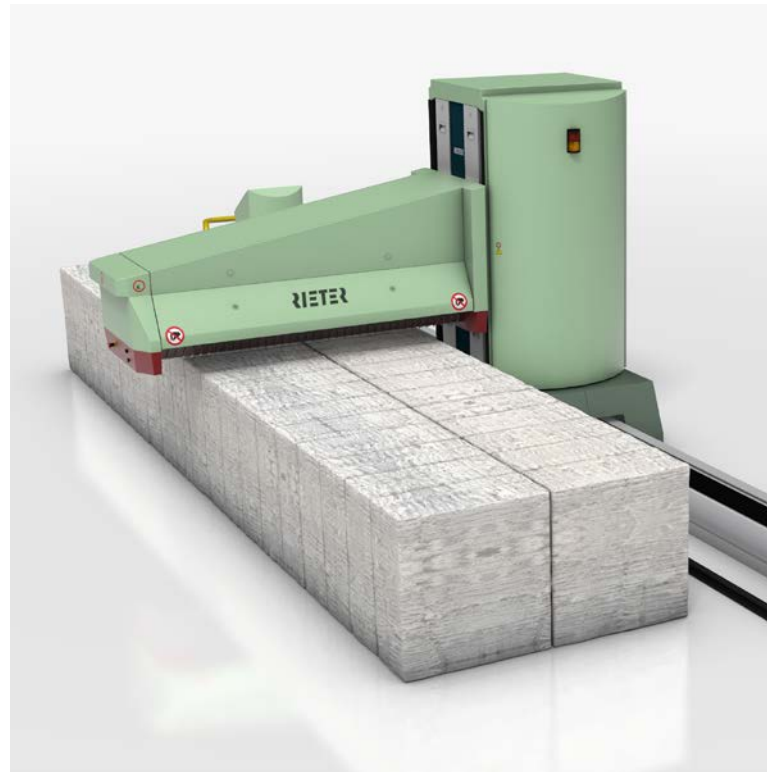
- The UNIfloc can process up to 4 assortments.
- Selection between two sizes of the take-off unit (1 700 or 2 300 mm) allows flexibility in the bale feed and bale size.
- Processing of cotton from all sources and man-made fibres up to 65 mm staple length.



A 11 UNIfloc automatic bale opener

## Functional in every detail

The A 11 UNIfloc processes cotton from all sources and manmade fibres up to 65 mm staple length. The bales being opened are placed lengthwise or transversely on both sides of the bale opener, and the take-off unit can process up to four different assortments. The patented double teeth on the take-off roller and the grid with closely positioned clamping rails ensure the reduction of the raw material to microtufts. With their unique geometry, the double teeth secure the uniform treatment of the entire bale surface. Retaining rollers travelling simultaneously with the take-off unit prevent bale layers from sloughing and ensure a controlled, precise mode of operation across the entire height of the bale. With each passage the takeoff unit is lowered to a pre-selected or calculated value. Running-in and running-out programs compensate for the different hardness of the bales over their cross section and guarantee a uniform level of production. The ventilator fan incorporated in the swivelling tower extracts the opened tufts and feeds them into the tuft channel running between the guide rails. Transport to the following machine is pneumatic.



A 11 UNIfloc

## Microtufts – pre-condition for highest yarn quality

The gentle, efficient cleaning of natural fibres to remove dirt and dust is only possible on the tuft surface. This fact was decisive in the conception of the A 11 UNIfloc. The heart of the system is the take-off unit. The patented take-off roller and the grid construction enable the take-off of small fibre tufts, so-called microtufts. Thanks to the double teeth profile, the uniform, gentle and efficient extraction of the tufts is ensured, irrespective of the rotational direction of the take-off roller.



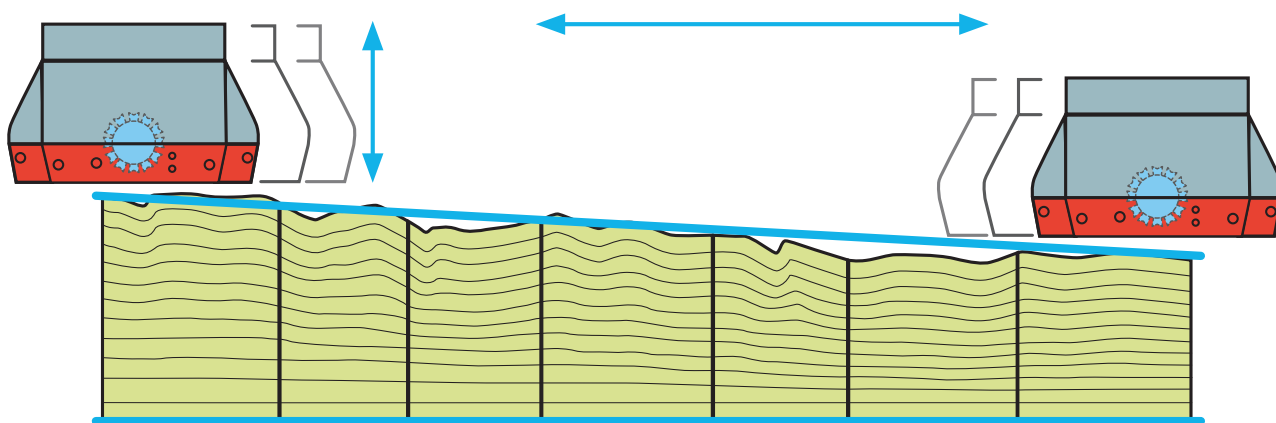
The double tooth profile ensures a gentle tuft extraction

## Integrated bale profiling

Bale profiling guarantees an absolutely uniform bale take-off. The height profile of the bale lay-down is precisely detected by light barriers and memorized. Scanning is performed at a constant speed of 9 m/min. Tufts are already taken off in the profiling phase. Continuous feeding of the subsequent machines is thus ensured from the outset. During the subsequent passages, the bales are opened at the preselected speed of travel and take-off depth. In the process the system automatically compensates for differences in height in the bale profile. Labor-intensive manual leveling is eliminated. After the required height range, take-off depth and speed of travel have been entered for each group of bales, take-off proceeds fully automatically.

## Flexible bale lay-down

Space is available on each side of the A 11 UNIfloc bale opener for laying down up to four groups of bales of different lengths, where up to four assortments can be assigned in optional sequence. Customer requirements are widely catered for with possible bale lay-down lengths of 7.2 m to 47.2 m and two take-off unit lengths of 1 700 mm and 2 300 mm. The maximum version can accommodate up to 40 000 kg of raw material. This ensures flexible, economical and largely autonomous processing on the A 11 UNIfloc bale opener.



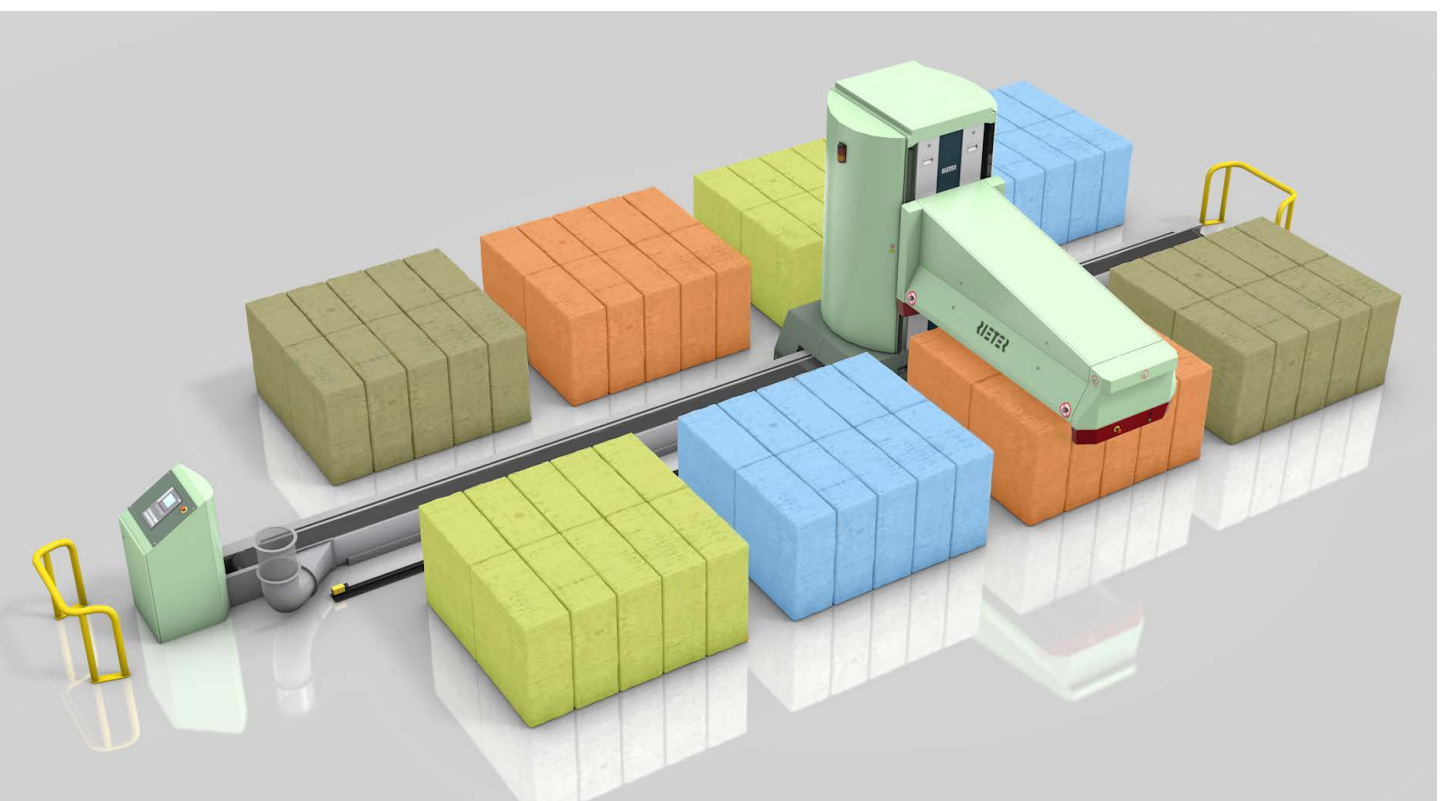
Uniform take-off of the bale lay-down thanks to bale profiling

## Intelligent solutions

Tower rotating programs enable the number of take-off cycles on one side of the bale to be specified before rotation through 180° as required. The tower is rotated via position slides which can be located at any point between the assortments. In the system as a whole, four carding lines can be connected with different assortments.

## Easy operation

The control panel is placed facing the extraction duct, providing a clear view and safety for operating the machine. Setting and control of the A 11 UNIfloc can easily be performed at the screen. In the interests of optimum monitoring of the installation as a whole, this modern machine control unit can be connected to the UNIcontrol system. In turn, UNIcontrol provides the interface to Rieter's higher-level SPIDERweb data monitoring system.



Up to four groups of bales can be arranged on each side

# Mixing Bale Opener for Flexible Bale Opening and Mixing

## B 34 mixing bale opener

The different models of the B 34 mixing bale opener are conceived for manual material positioning. The B 34 opens and cleans. The material is laid on a transport belt that can be supplied in a length from 3 m to 9 m. Typical applications can be found in spinning mills with small production or frequently changing raw materials, with limited space. Here the B 34 is especially suitable as mixing and opening machine for small assortments.

### Economy

- Reduction of raw material costs by specific addition of recyclable spinning waste.
- Production amounts of 600 kg/h can be processed without opening resp. cleaning unit. With an opening resp. cleaning unit, manufacturing performance up to 400 kg/h is possible.

### Quality

- Optimal opening and gentle cleaning of the tufts are the basis for the subsequent yarn quality.
- A high level of cleaning is possible with the B 34R with adjustable grid.
- Extent of the material lay-down and thus the homogeneity of the blend can be specified by selection of the transport belt with a length of 3 m to 9 m.

### Flexibility

- According to the customer's requirements, the machine is available as the B 34 mixer and feeder, B 34S opener or B 34R cleaner.
- By-passing of the opening and cleaning roller on the B 34S and B 34R is possible.
- Application as mixer for small assortments is possible for cotton from all sources and for man-made fibres with a staple length up to 65 mm.



B 34 flexible mixing of small lots

# Economic Raw Material Utilization in the Spinning Process

## B 25 waste opener



Flexible opening and recycling of various fibres

With rising raw material prices, the utilization of the B 25 waste opener for economical yarn production has increased in importance. Various fibre materials, tufts, sliver and opened roving from the production stages in spinning preparation are now specifically integrated in the spinning process. Alongside the reduction of material costs, the continual feeding of reusable fibre material positively influences the yarn quality and increases blowroom production.

### Economy

- Up to 60 kg/h cotton waste can be reused in the spinning process.
- Improved running behavior in the blowroom due to proper feeding of fibre material with the B 25 waste opener.

### Quality

- Uniform distribution of the recycled fibre material in the yarn is achieved by the continual feed of the B 25.

### Flexibility

- Processing of bale residue, sliver, lap, noil and previously opened rovings from cotton and man-made fibres with a maximum staple length of 65 mm.
- Compact design for easy positioning in the blowroom.

## Intensive and Gentle to Fibers

### Rieter cleaning concept

The cleaning philosophy of coarse and fine cleaning is retained with the VARIOline. However, the fine cleaning process has been extended by further possible cleaning levels. This permits an individual approach concerning trash content and ease of cleaning of the cotton to be processed. The coarse cleaning is based on the proven B 12 UNIClean which already removes dust and cleans efficiently at the beginning of the process.

The fine cleaning is carried out by the cleaning modules on the UNImix and UNIstore. For particularly heavily soiled cotton, it is recommended to install the B 17 UNIClean, which is optimized for fine cleaning, between UNImix and UNIstore.

The VARIOset is the key to an efficient and economical cleaning on all cleaning machines in this line.



B 12 UNIClean pre-cleaner

# Efficient and Reliable Pre-Cleaning

## B 12 UNIClean pre-cleaner

The B 12 UNIClean pre-cleaner cleans the microtufts in the initial cleaning stage directly following the A 11 UNIfloc. A machine production of up to 1 400 kg/h is achieved. Cleaning is carried out without nipping and is therefore very gentle for the fibres and, at the same time, efficient. VARIOset facilitates the optimum setting of the waste volume and the waste composition at the touch of a button. This guarantees a high raw material yield.

### Economy

- The UNIClean is designed for a production of up to 1 400 kg/h (carding sliver).
- A more efficient cleaning compared to conventional units increases the fibre yield by up to 2 %.
- The intermittent suction reduces the energy consumption for the waste transport.

### Quality

- Fiber-gentle cleaning of the raw material due to free fibre fly and the application of adjustable grid knives.
- Large dedusting area guarantees intensive dust extraction even at high production speeds.
- Easy visual control allows a rapid quality assessment of the waste composition.

### Flexibility

- When the bale opener is processing different assortments, the specific material working point is automatically selected on the B 12 UNIClean.
- Simple machine setting during operation by means of VARIOset.
- Connection to the UNIconrol blowroom control system.

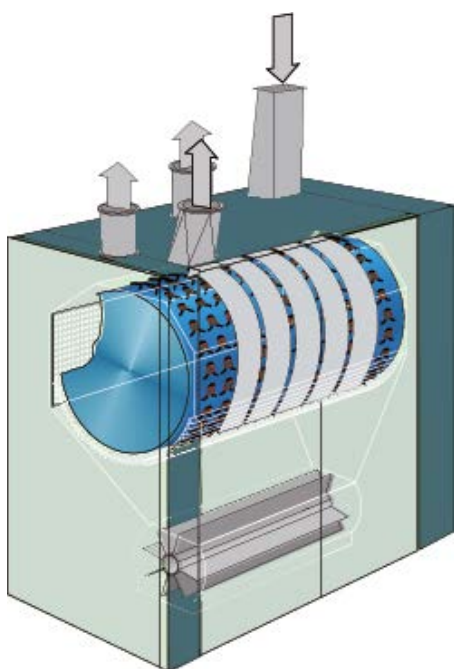


Easy operation

## The unique working principle

After the feeding process to the B 12 UNIClean, special pins pick up the material and guide it mechanically five times over the cleaning grid. This draws the raw material across the integrated dedusting areas so that dust, fibre fragments and fine trash particles are mechanically stripped off.

Modified grid bars in combination with the optimized material flow and the large dedusting area guarantee an efficient cleaning effect, even at high production speeds. The cleaning process takes place unaffected by air currents and is thus controlled and effective. Consequently, only approx. 0.5 m<sup>3</sup>/s of dust-laden air results. The extracted trash drops into the waste chamber and is transferred to the waste removal system by an airlock cylinder. Suction removal takes place sporadically and thereby contributes towards a reduction of the energy consumption.



B 12 UNIClean efficient and reliable pre-cleaning



The composition of the pre-cleaning waste can be manually controlled on the B 12 UNIClean simply by a few quick motions

As the B 12 UNIClean only requires little space, it can easily be incorporated into other manufacturers' lines. This improves the cleaning performance of existing installations.

## Optimal cleaning

High cleaning performance and low loss of good fibres can be quickly assessed by the visual waste control. The quality of the waste expulsion can also be assessed during machine operation.

## Unique multi-assortment operation

If the UNIfloc is processing differing assortments, the specific material working point is automatically selected on the UNIClean.

# The Right Choice for Efficient and Gentle Fiber Cleaning and Opening

## UNIstore A 79

### A 79 UNIstore combined storage, opening and cleaning machine

The A 79 UNIstore with an output of up to 1 000 kg/h is a high-performance machine incorporating a combination of the most important blowroom functions. Storage volumes of up to 15 kg ensure uniform feeding of the carding lines. In the two basic versions the A 79S UNIstore serves the opening process while the A 79R additionally cleans the tufts. At the same time as being intensively but gently opened, the tufts are freed from dust. VARIOset allows selection of the economically optimal setting for each fibre material.

### Economy

- Designed for a production output of up to 1 000 kg/h.
- VARIOset with variably adjustable cleaning increases raw material utilization.
- Efficient supplementary dust removal from the fibre material by large-surface screens enhances the spinning mill's performance.
- With up to 15 kg storage volume, autonomous card production is ensured.

### Quality

- Gentle opening and cleaning of the tufts for quality yarns prevents nep formation.
- Electronic control of the feed rollers in combination with the opening roller creates the prerequisites for thoroughly opened tufts. This is particularly important for the subsequent detection of foreign matter.
- Smartfeed provides for constant filling of the card feed chute which ensures a uniform, homogeneous feed lap.

### Flexibility

- With VARIOset the machine can be adjusted at any time to the specific features of the raw material being processed.
- Central control and coordination of the UNIstore to the cards via UNIcontrol system blowroom control and Smartfeed for continuous card feeding.
- Simple conversion from opening module to cleaning module results in a high degree of flexibility which allows a response to changing market conditions.
- Modules for foreign matter detection can be easily added.



A 79 UNIstore with TVS foreign fibre detection

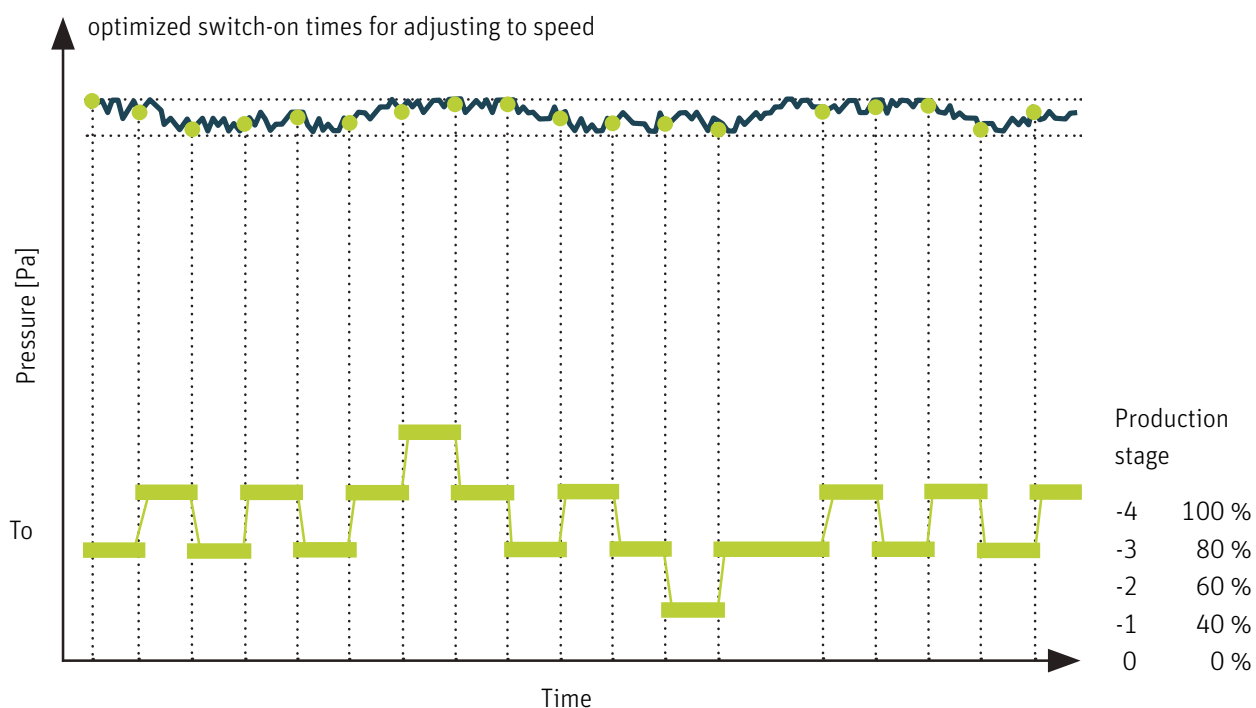
## Smartfeed – constant feed and tuft size

The Smartfeed function is integrated in the UNIcontrol system control unit. Smartfeed is a software-based function that records the changes in pressure conditions in the first card chute by means of a pressure sensor. Using these measurements, Smartfeed calculates the optimal switching on and off points of the feed. A continuous filling of the card feed chute and a uniform, homogeneous lap feed is thus guaranteed.

With a change in production, where cards in the line either commence production or are taken out of production, feeding performance is regulated in stages. The speed of the feed roller in the R or S modules of the A 79 UNIstore, as well as the B 72 UNImix or B 76 UNImix, is adjusted to the new conditions, and the settings stored in the A 79 UNIstore for the tuft size adapt the speed of the opening roller to the new production conditions, thereby ensuring a constant tuft size.

The optimized, continuous material delivery and the uniform lap feed create the basis for high yarn quality as well as energy efficiency.

### Multi-stage feed with smartfeed



# Cleaner for Natural Fibers with High Trash Ratio

## B 17 UNIClean cleaner

The B 17 UNIClean is designed as a cleaner for heavily contaminated natural fibres at production up to 1 200 kg/h. Following the mixing machine, it efficiently and gently cleans and extracts dust. The pre-opened tufts are passed without nipping seven times over the adjustable grid. The integrated VARIOset allows optimal setting of the waste volume and the waste composition at the touch of a button. This guarantees high raw material utilization.



B 17 UNIClean cleaner

## Economy

- The B 17 UNIClean is designed for a production of up to 1 200 kg/h (carding sliver).
- High raw material utilization by VARIOset. The cleaning intensity and trash extraction can thereby be adjusted.
- Efficient cleaning in the B 17 UNIClean raises the performance in the downstream processes.

## Quality

- Gentle fibre cleaning of the raw material thanks to free fibre flight and the use of adjustable grid bars.
- Intensive dedusting effect due to the large dust removal areas in the B 17 UNIClean, even at high production speeds.
- High cleaning performance achieved by seven material cycles across the adjustable grid as well as the additional turning of the tuft material at the apex of rotation.
- Easy visual control enables a quick quality assessment of the waste composition.

## Flexibility

- Simple modification of machine settings according to raw material properties during operation by means of VARIOset.
- For raw materials with a low trash content the B 17 UNIClean can be bypassed.
- Connection to the UNIControl system blowroom control.



The cleaning roller

## Mixing and Cleaning

### Homogeneous and precise

The homogeneous mixing of the raw fibre material, especially cotton, is a necessary precondition for yarn manufacture from the aspects of economy and quality.

Already the composition of the cotton bales in the bale lay-down, according to a suitable bale management which takes into account the various fibre characteristics such as color, fineness and trash content, provides a constant quality. Take-off of the small tufts by the A 11 UNIfloc belongs equally to the requirements that enable the inhomogeneous raw material to be uniformly distributed across the production lot. Only this sort of distribution provides homogeneity and thus constant yarn values. The more inhomogeneous the blend, the greater the deviations in the yarn characteristics will be, also with regard to yarn fineness.

Feeding by layers into the UNImix mixer with its 8 chambers, the subsequent shift in layers and then the guid-



B 76S UNImix mixer



A 81 UNIBlend precision blender

ing over a spiked feed lattice result in an intensive and thorough mixing of the raw material being processed.

For precise metering of small weight ratios, the A 81 UNIBlend is recommended as it combines accurate percentage ratios to form a blend of fibres.

# Effective Mixing in the Smallest Space

## B 72 / B 76 UNImix Mixing System



B 72 UNImix with unique mixing technology

The B 72 / B 76 mixer guarantees a thorough homogeneous mixing of the bale lay-down in the smallest space, even when bales are not optimally positioned. The unique 3-point mixing process is equally suitable for cotton and man-made fibres. Eight mixing chambers ensure not only effective mixing but also a high production performance. The large storage volume of the UNImix provides the ideal precondition for high operational autonomy of the blowroom.

### Economy

- The production rate of 800 kg/h (B 72) or 1 200 kg/h (B 76) leads to an excellent price-performance ratio with a comparatively small space requirement.
- The large storage capacity ensures regular feeding of the downstream blowroom machines and is the pre-condition for uninterrupted production of quality yarn.
- Settings of the UNImix are entered by push button quickly, easily and reproducibly. Short setting times result in a high efficiency level.

### Quality

- The unique 3-point mixing principle with eight mixing chambers achieves a good and lasting homogeneous fibre mix. This is the pre-condition for a constantly high yarn quality.
- The tuft size can be set at the mixing roller, according to the raw material and the application, and this guarantees optimal opening and homogeneous feeding to the downstream processes.
- By the integrated dedusting, the dust-laden conveying air is separated from the fibre material. This treatment is extremely gentle and consequently improves the operational behavior of the spinning machine and therefore the yarn quality.

### Flexibility

- Easy optional addition of an opening or cleaning module permits swift response to changed market conditions.
- Cotton, blends and man-made fibres can be processed without limitations.
- Option to bypass the cleaner module (e.g. with man-made fibres) for a rapid assortment change.

## The principle of the 3-point mixing process

The fed fibre tufts are distributed at random in thin layers to the eight chambers. Subsequently homogeneous mixing of the fibre material takes place at three different points:

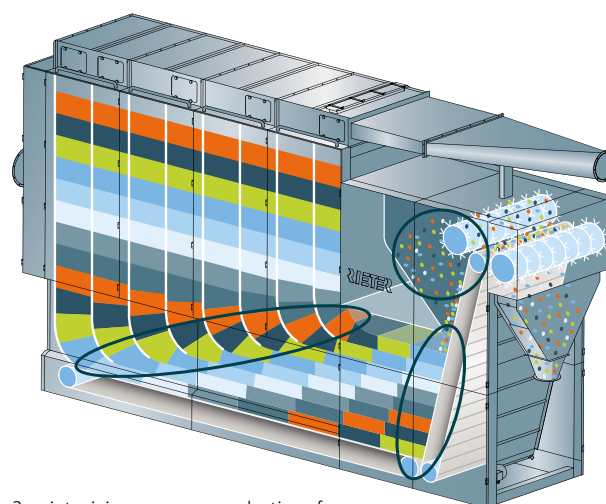
- Diversion of the tuft mass through 90° in the UNImix causes a shift in these layers in terms of space and time. The result is defined, long-term blending.
- The spiked feed lattice simultaneously extracts tufts from all eight layers. This gentle opening process inevitably results in a second, random mixing of the tufts. The blend is already homogeneous at this stage.
- The free tufts undergo a third, intensive mixing process on the opening roller zone. This additional thorough mixing process ensures the constant homogeneity of the fibre blend.

## Homogeneous feeding adjustable on display panel

Depending to the raw material used and the intended application, the tuft size can be optimized at the mixing roller. Homogeneous feeding to the downstream



Machine settings are easy and reproducible



3-point mixing process – production of a consistently homogeneous fibre blend

process is thus ensured. The degree of tuft opening is defined via optimization of the speed and adjustment of rotation in the same or opposite directions. This can all be set easily at the display panel.

## Operation and maintenance

The UNImix has no mechanical change points. The gap between the mixing cylinder and the upright lattice as well as the required output is set electronically. In contrast to mechanical setting methods, this ensures that the values can be entered and changed at the control panel while the machine is running. This results in a high degree of flexibility and very easy adjustment to changes in raw material or production conditions. The settings are reproducible and thus support modern quality management.

## Safe operation

With its large active storage volumes and intelligent monitoring devices, the UNImix achieves a high degree of availability and thus ensures excellent operating autonomy of the blowroom as a whole.

# Rapid Adjustment to New Raw Materials

## UNImix with R / S modules

### Opening or cleaning module as optional extra

As an option, the B 72 or B 76 UNImix can be equipped with an opening module (S) or a cleaning module (R). If required, it is possible to easily retrofit these S and R modules on the B 72 and B 76 UNImix.

Due to the ability to configure the machine with an opening or cleaning module and with the bypass for the B 72, an ideal combination is always available for the optimal process in terms of quality, regardless of raw material.

### Flexibility and gentle fibre treatment with bypass module

For the B 72 UNImix a bypass module is available with which the opening or cleaning module can be bypassed during full operation of the UNImix. The fibres are then only opened and/or cleaned with the necessary intensity. This allows cleaning and opening compatible with the raw material being processed and ensures that excellent quality values are achieved.



Flexibility by using an opening or cleaning module



B 72 UNImix bypassing the R or S module with the help of the bypass module

# Economic and Precise Metering for Quality Yarns

## A 81 UNIBlend precision blender

The A 81 UNIBlend precision blender sets the highest standards for multi-component blending with a precision of less than 1 % deviation. The A 81 UNIBlend allows the feeding of up to four separate carding lines with different blend compositions. The maximal production performance of the A 81 is 1 000 kg/h. A rapid and economical response to fashion trends is facilitated by the processing of a variety of different staple fibres.

### Economy

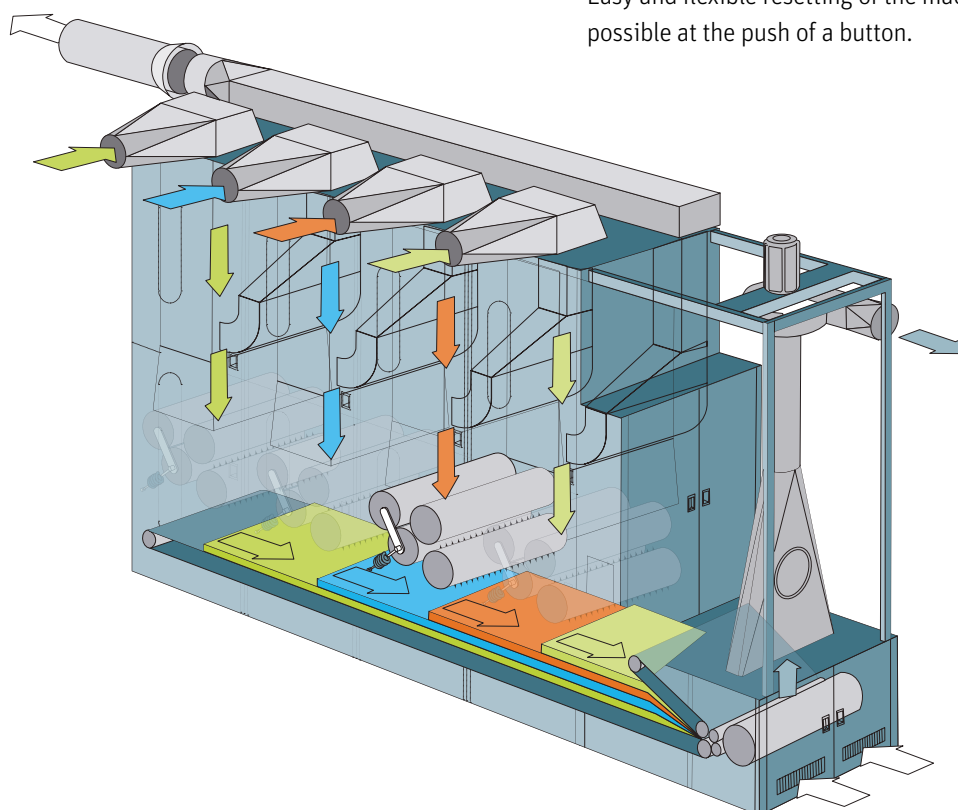
- The precise blending of different raw materials allows optimization of the material costs.
- In comparison to the draw frame blend, one drafting passage can be saved with the UNIBlend tuft blend.

### Quality

- The homogeneous fibre blend of the UNIBlend permits highest yarn quality.
- Homogeneous fabric appearance in the end product even with difficult color combinations or dyes.
- Constant blend quality is ensured by an online calibrating system.

### Flexibility

- The A 81 UNIBlend is able to produce four different blends with the same components.
- The UNIBlend is available with 2 to 8 blending modules, each with a production range of 3 to 300 kg/h.
- Easy and flexible resetting of the machine parameters is possible at the push of a button.



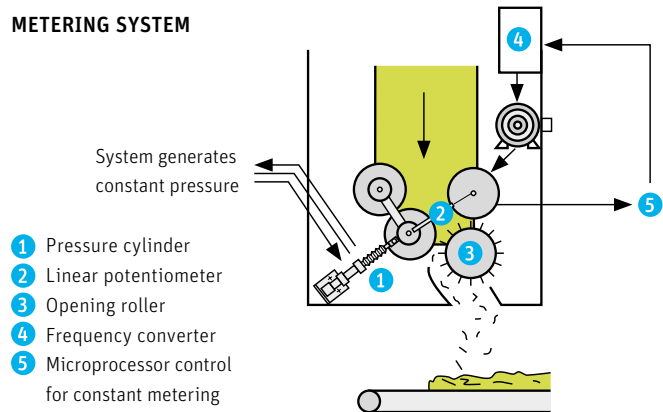
A 81 UNIBlend economical and precisely metered blending for quality yarns

## Wide area of application

An extremely flexible machine is required to respond to rapid changes in fashion on the one hand and to balance raw material changes and costs promptly on the other. The A 81 UNIBlend is capable of processing cotton, man-made fibres, blends of cottons of different origins, waste material and a wide range of staple fibres such as flax with a fibre length of up to 65 mm. The enormous diversity of applications of the A 81 UNIBlend also opens up a wide range of possibilities for optimizing costs and for innovation, as described in the following four examples:

- High-volume blends, for example 50 % cotton, 50 % polyester.
- High, consistent quality at high production rates over a long period.
- Special-effect fabrics. A 81 customers use various sometimes very exotic fibres, dyed cotton or extremely one-sided blends (e.g. 98 % to 2 %).
- Recycling a precisely defined amount of waste fibres into the process reduces costs, since closer tolerances are worked with.
- Blending of cottons of different origins and different prices in order to reduce costs for the required yarn quality.

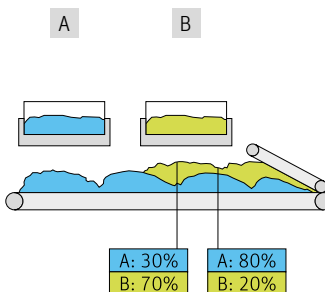
### METERING SYSTEM



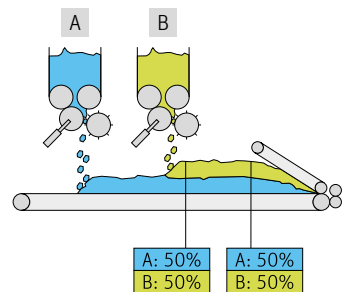
A high-speed control system ensures precise, reliable metering

### COMPONENT BLENDING

Weighing hopper system



A 81 UNIBlend



Comparison between weighing hopper system and metered blending with A 81 UNIBlend

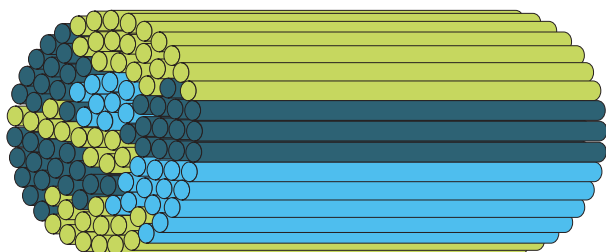
## Unique metering system

Based on a Rieter patent, each module incorporates an independent metering system. This generates a constant flow of material. One of the feed rollers is movable and is pressed with constant force against the other, fixed roller. Variations in the diameter of the material due to differences in density are compensated by immediate adjustments in the roller speeds. The mass of the material flow thus remains constant at all times.

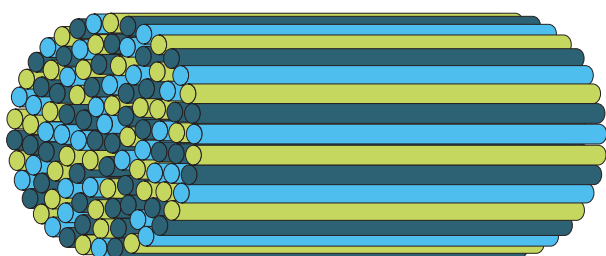
## Blending quality

The homogeneity of a A 81 UNIBlend yarn cannot be achieved with any other blending method. Extensive dyeing trials with different fabrics have shown that the accuracy achieved by this system sets amazing new standards of dyeing uniformity. Homogeneity generates other positive side effects, such as higher yarn tenacity and thus fewer stoppages on the spinning machine and fewer ends down in downstream weaving and knitting processes. The superiority of the A 81 UNIBlend in blending different components has become generally accepted for ring, compact, rotor and air-jet yarns.

Yarn produced on the draw frame



Yarn produced with A 81 UNIBlend

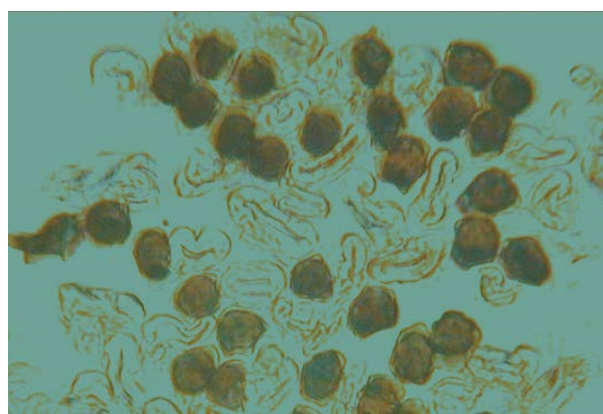
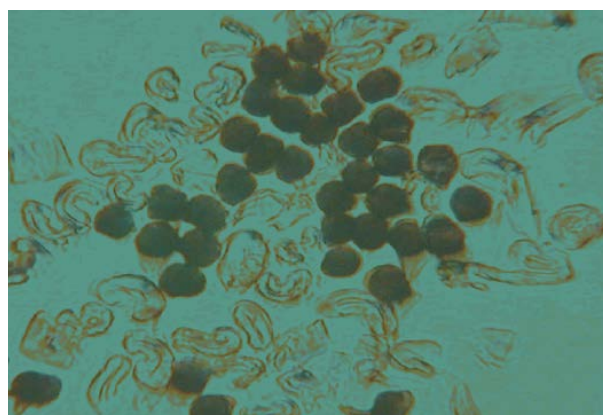


Cross section of fibre distribution in a blended yarn

## Advantages of metered blending

Compared to the conventional weighing hopper system, metered blending in the A 81 UNIBlend has decisive advantages:

- Highest precision with minimal deviations of +/- 1 % in blend ratios.
- Wide range of blend ratios from 1 to 99 %; even small ratios are reliably blended.
- Easy, flexible changeover at the push of a button.
- Excellent yarn values ensure good operational results in weaving and knitting.
- Homogeneous fabric appearance in the end product, even with “difficult” dyes.



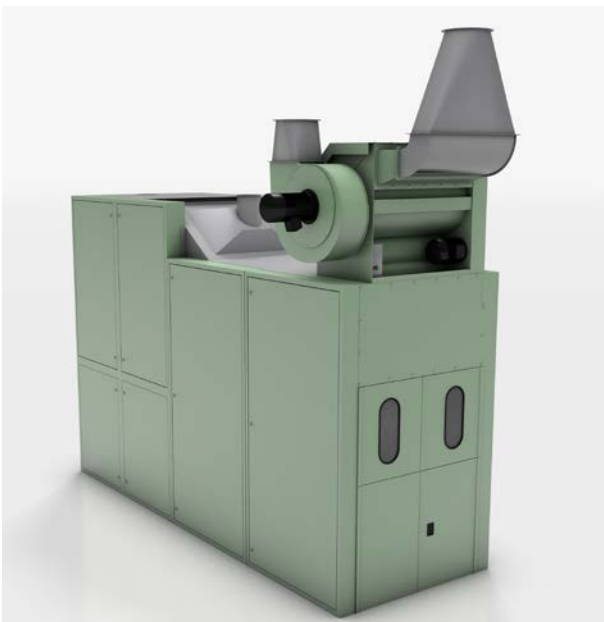
# Versatile Machine for Opening, Cleaning and Feeding

## B 33 mixing opener

The mixing opener stands out by its high reliability and simple maintenance. The blender for small assortments can be optionally delivered with opening and cleaning units. Cotton and man-made fibres are reliably cleaned and opened. For the fibre material in use, the most economically optimal setting can be selected. In addition, the B 33 mixing opener can be implemented as feeding machine to the subsequent blowroom machines or direct to the cards. Equipped with an intermediate storage unit, the material storage volume and thereby the autonomous operation of the blowroom is increased.

### Economy

- Without opening respectively cleaning unit, production amounts of 600 kg/h can be processed. With an opening respectively cleaning unit, performance levels up to 400 kg/h are possible.
- The great reliability and easy maintenance of the B 33 result in a high degree of efficiency.



B 33 mixing opener for cleaning and feeding



Good opening of tufts is the basis for later yarn quality

### Quality

- Good opening and gentle cleaning of the tufts provide the basis for the later yarn quality.
- The B 33R with its adjustable grid makes a high degree of cleaning possible.

### Flexibility

- The machine is available as a mixing and feeding machine, as an opener B 33S or a cleaner B 33R.
- The mixing opener can be implemented as a feeder in which case it is delivered with an infinitely adjustable regulation of the feed roller speed.
- Application as a mixer for small assortments is possible for cotton of all origins and man-made fibres with a staple length of up to 65 mm.

# Maximal Dust Extraction with Optimal Tuft Transport

## A 21 condenser

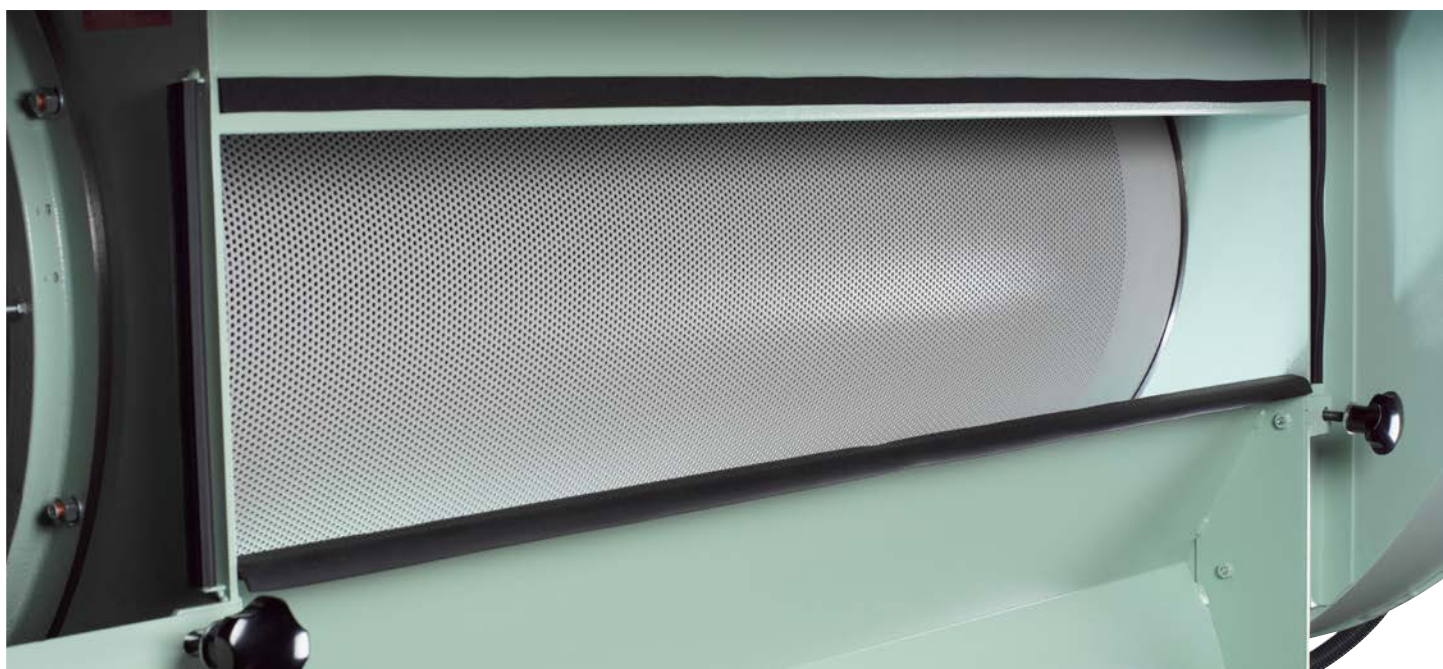
The microtufts with large tuft surfaces form the pre-condition for an intensive dust extraction at various points in the blowroom. In the A 21 condenser, the fibre tufts meet the dust cage at high speed and are freed of dust, microdust and trash particles. Dust and trash are directly led by the exhaust air to the blowroom filter unit.

### Features

- High economic efficiency due to good operating behavior in rotor spinning and in downstream yarn processing.
- Maintenance-friendly design.
- As interface in the material flow between two machines, it generates optimal air conditions for transport of the tufts.



A 21 efficient tuft transport with integrated dedusting



Maximal dedusting at optimal tuft transport with the A 21 condenser

# Flexible, Reliable and Safe

## Pneumatic fibre transport

The Rieter VARIOline blowroom processes up to 1 000 kg/h in one line. Together with the JUMBO AEROfeed system, feeding of up to 10 C 60 and C 70 cards with 1 000 kg/h is possible, so that a continuous, fully coordinated line from bale opener to the carding section is created. Secure and efficient feeding of the fibre material to the blowroom machines is ensured by a complete selection of distributors, ventilators for the fibre and waste transport and separators. For the pneumatic fibre and waste transport, a choice of ventilators is available to convey the material in the blowroom line in an energy-efficient and gentle way.

## Foreign particle separator and safety systems

Different types of foreign matter and materials are found in cotton from all origins. Contamination of the cotton differs greatly from country to country, irrespective of whether the cotton is picked manually or by machines. Foreign fibres and foreign matter in cotton have been considered for decades as one of the greatest problems for yarn quality and the safe operation of a spinning mill.

The variable concept of the VARIOline enables all modern foreign particle extraction systems as well as foreign fibre detection and extracting systems to be placed at suitable points in the blowroom. Extraction is efficient, the yarn quality is improved and the number of clearer cuts in the spinning mill and the winding section are reduced, thereby improving the economic efficiency and guaranteeing safe operation of the plant.



A 79 UNIstore in combination with THE VISION SHIELD and MAGIC EYE



A 48 Heavy particle extractor

## A 48 heavy particle extractor

With the A 48 Solid Particle Extractor, heavy particles of metal, stone, wood, plastic, rubber etc. as well as pieces of rope and string are reliably extracted at full production. The A 48 is installed in the blowroom after the UNIfloc, accordingly also after the mixing bale opener.

## Metal and spark elimination

THE COMBO SHIELD is a compact system to detect and eliminate metal particles, sparks and burning material in fibre tufts by means of metal and infra-red detectors. According to situation and space conditions, THE METAL SHIELD metal extractor or THE FIRE SHIELD spark extractor can be individually placed in the line according to the customer's requirements.



THE FIRE SHIELD

## Foreign fibre detection

THE VISION SHIELD with MAGIC EYE can be flexibly installed in the line, preferably after a UNImix or UNIstore.



THE COMBO SHIELD



THE METAL SHIELD

# UNIcontrol – The Modern Control System for Rieter Blowroom and Carding

## UNIcontrol – blowroom and card control

The modern control system, UNIcontrol, simplifies operation and facilitates an overview of the installation and controls all blowroom machinery automatically. The Rieter blowroom machines with their modern machine control system are optimally integrated in the UNIcontrol blowroom control system.

### Economy

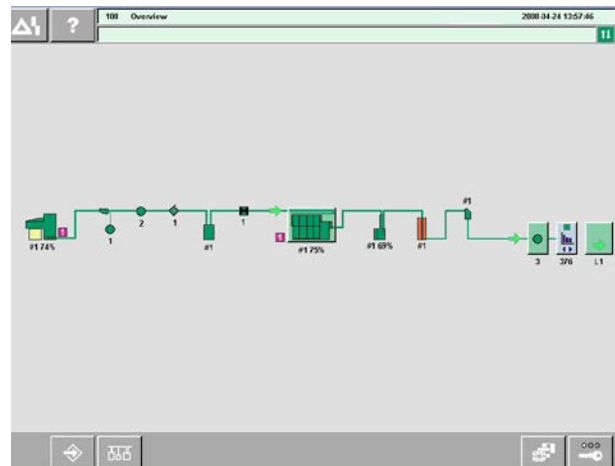
- Exact customized adjustment of UNIcontrol to the installed machines in the customer's plant keeps investment costs low.
- Simple software modification with extensions of the blowroom and carding section.
- The Smartfeed function continually controls and optimizes the material flow. This reduces energy consumption.

### Quality

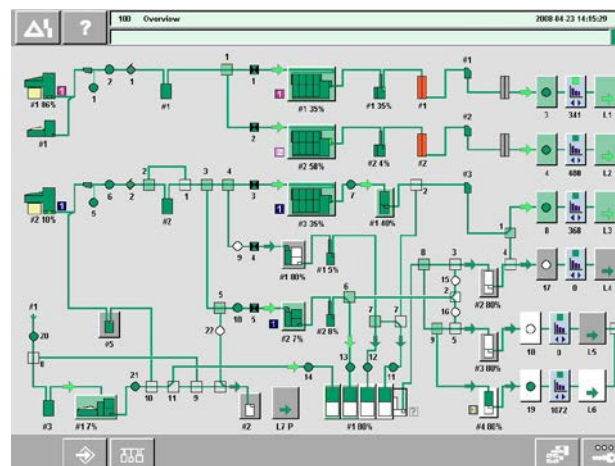
- Smartfeed achieves a constant filling of the card feed chutes and thus ensures a uniform, homogeneous lap sheet – the basis for the high-quality spinning process.
- High process security with documentation in form of the operator logbook data and storage of the process parameters.
- Process optimization by means of graphic statistics and documentation of events (event history).

### Flexibility

- Subsequent extensions of the carding section can be easily made on the UNIcontrol. In addition, the customer can allocate plant-specific numbers to the machines.
- Easy and local configuration of the waste transport.



Layout of a simple blowroom



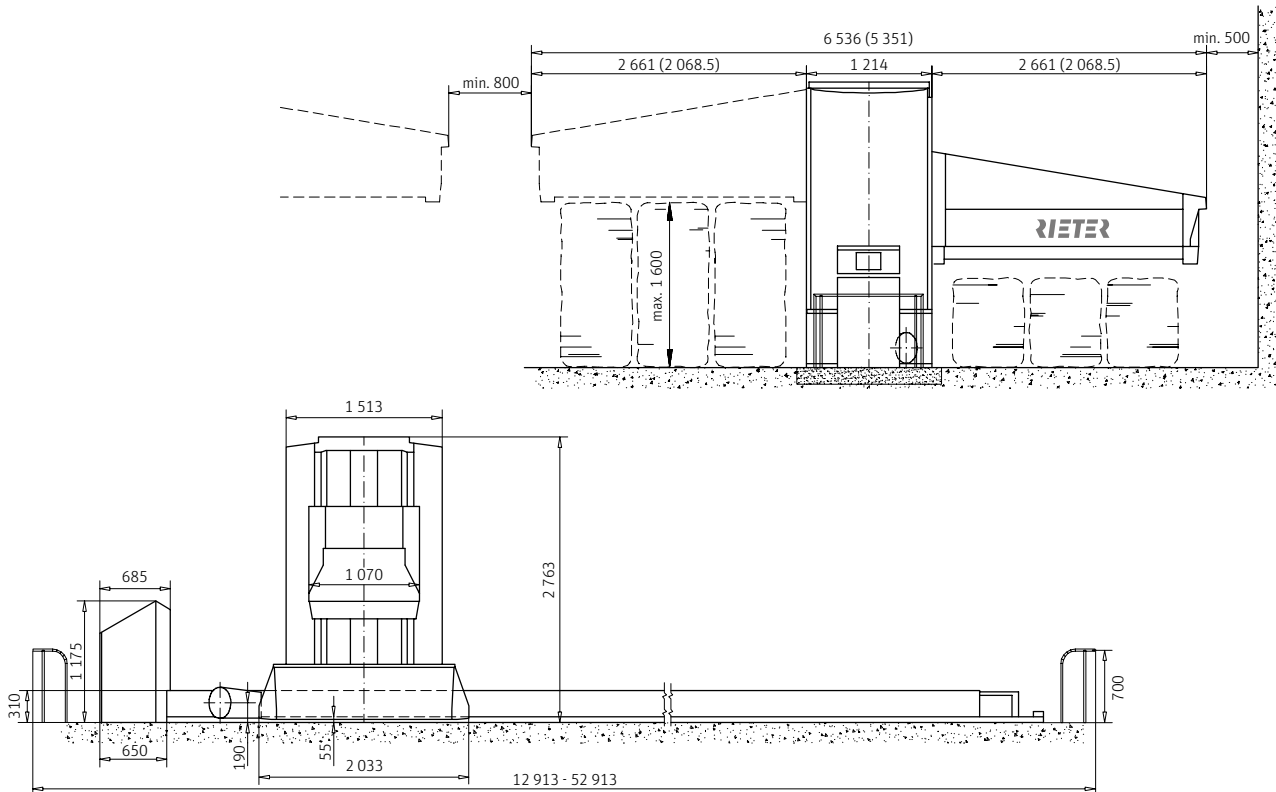
Layout of a complex blowroom

- Process modifications are securely implemented within the shortest time due to the storage of the process versions on the control or the USB memory stick.
- As an extra option, a machine remote control (Rieter Remote Panel) and a secondary operating station are available.



# A 11 UNIfloc Automatic Bale Opener

## Machine data and technical data



### TECHNOLOGICAL DATA

Material	cotton, man-made fibres up to 65 mm (2 1/2")	
Production* performance (maximum, A 11 - 2 300 mm)	cotton	man-made fibres***
1 assortment	1 200 kg/h	1 000 kg/h
2 assortments	1 000 kg/h	850 kg/h
3 assortments	840 kg/h	710 kg/h
4 assortments	640 kg/h	540 kg/h

### TECHNICAL DATA

Take-off unit versions	A 11 - 1 700 mm	A 11 - 2 300 mm
Installed power	11.5 kW	18.0 kW
Number of bales per side	$\frac{ML}{B}$ or $\frac{2ML}{L}$	$\frac{1.5ML}{B}$ or $\frac{3ML}{L}$
Net weight (12.91 m)	3 230 kg	3 320 kg
Additional channel length	+80 kg/m	+80 kg/m

### MACHINE DATA

Material lay-down (ML)	7.2 - 47.2 m**
Channel length	10 - 50 m**

\* Card line output

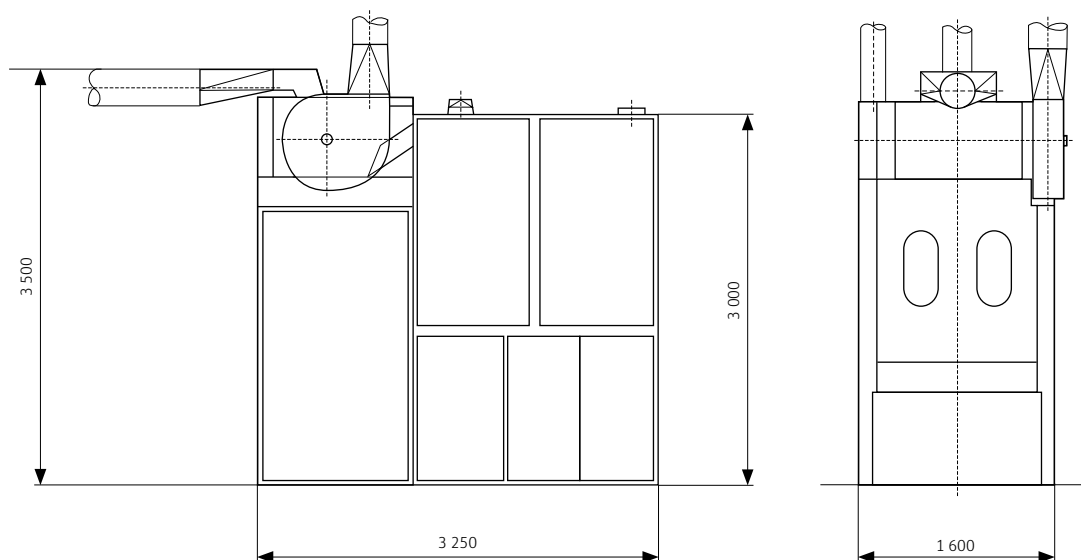
\*\* in steps of 2.5 m

\*\*\* Depending on type of man-made fibres, production can be lower

Abbreviations: ML material lay-down length, B bale width, L bale length

# B 33 Mixing Opener

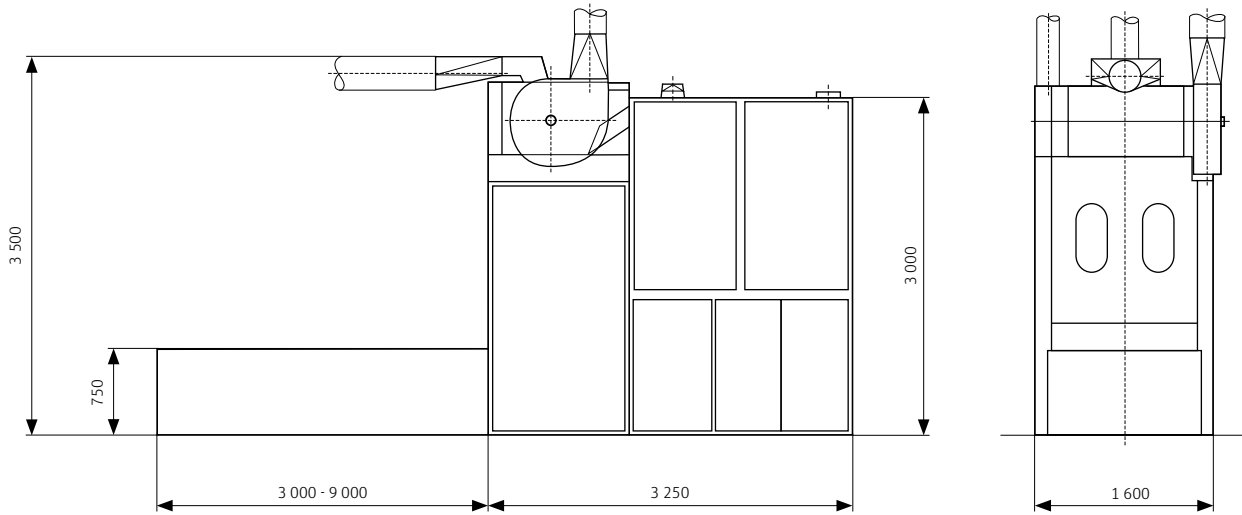
## Machine data and technical data



<b>TECHNOLOGICAL DATA</b>	
Material	cotton, man-made fibres and blends up to 65 mm (2 1/2")
Production:	
- Typ B 33	up to 600 kg/h
- Typ B 33R / B 33S	up to 400 kg/h
<b>TECHNICAL DATA</b>	
Installed power (without A 21 condenser):	
- Typ B 33	2.4 kW
- Typ B 33R / B 33S	7.0 kW
<b>MACHINE DATA</b>	
Working width	1 200 mm
Storage capacity mixing chamber	25 - 40 kg
Dimensions:	
- length	3 250 mm
- width	1 600 mm
- height	3 000 mm
Weight (incl. A 21 condenser):	
- Typ B 33	3 160 kg
- Typ B 33R / B 33S	3 660 kg / 3 560 kg

# B 34 Mixing Bale Opener

## Machine data and technical data



### TECHNOLOGICAL DATA

Material	cotton, man-made fibres and blends up to 65 mm (2 1/2")
Production:	
- Typ B 34	up to 600 kg/h
- Typ B 34R / B 34S	up to 400 kg/h

### TECHNICAL DATA

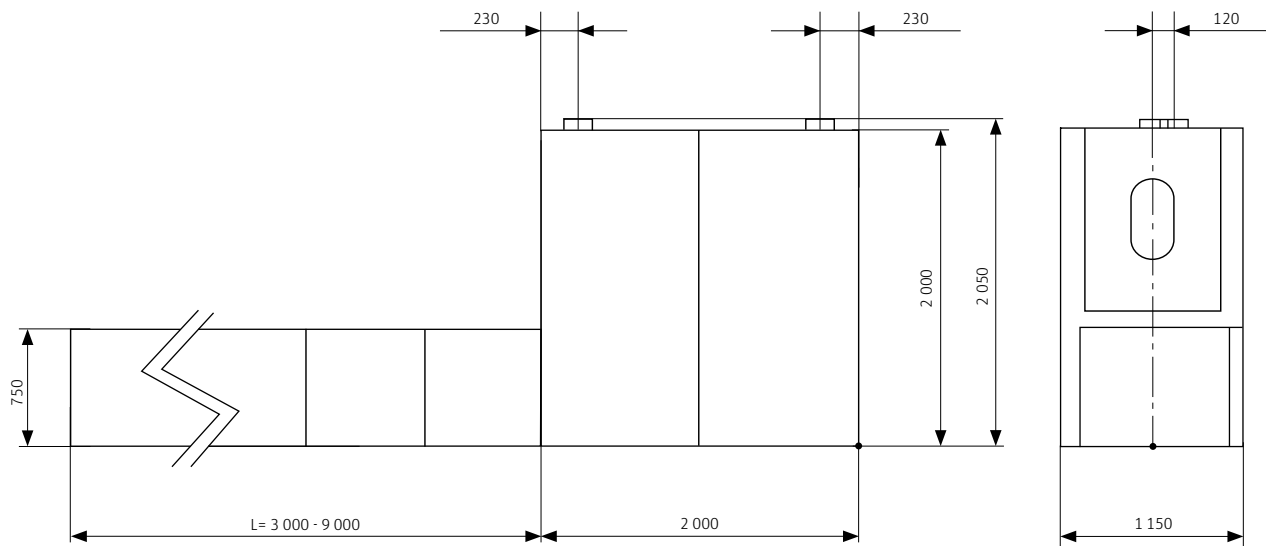
Installed power (without A 12 condenser):	
- Typ B 34	2.4 kW
- Typ B 34R / B 34S	7.0 kW

### MACHINE DATA

Working width	1 200 mm
Storage capacity mixing chamber	25 - 40 kg
Dimensions:	
- length	3 250 mm
- feed table	3 / 4.5 / 6 / 7.5 / 9 m
- width	1 600 mm
- height	3 000 mm
Weight (incl. A 21 condenser):	
- Typ B 34	3 160 kg
- Typ B 34R / B 34S	3 660 kg / 3 560 kg
- feed table	170 kg / segment with 1.5 m

# B 25 Waste Opener

## Machine data and technical data



**TECHNOLOGICAL DATA**

Material	cotton and man-made fibres up to 65 mm (2 1/2"), bale parts, slivers, laps, noil, pre-opened roving
Production	3 to 60 kg/h

**TECHNICAL DATA**

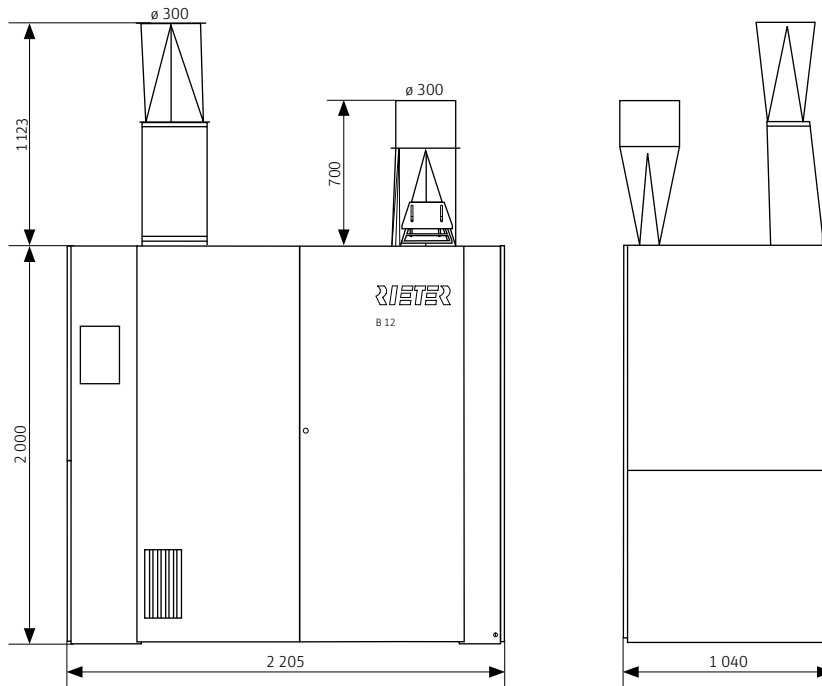
Installed power	3.15 kW
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**MACHINE DATA**

Working width	750 mm
Dimensions:	
- length	5 000 mm (incl. 3 m feed table)
- feed table	3 / 4.5 / 6 / 7.5 / 9 m
- width	1 150 mm
- height	2 050 mm
Weight:	1 770 kg
- feed table extension	150 kg / segment with 1.5 m

# B 12 UNIclean Pre-Cleaner

## Machine data and technical data



### TECHNOLOGICAL DATA

Material	cotton, cotton waste, linen
Production	up to 1 400 kg/h

### TECHNICAL DATA

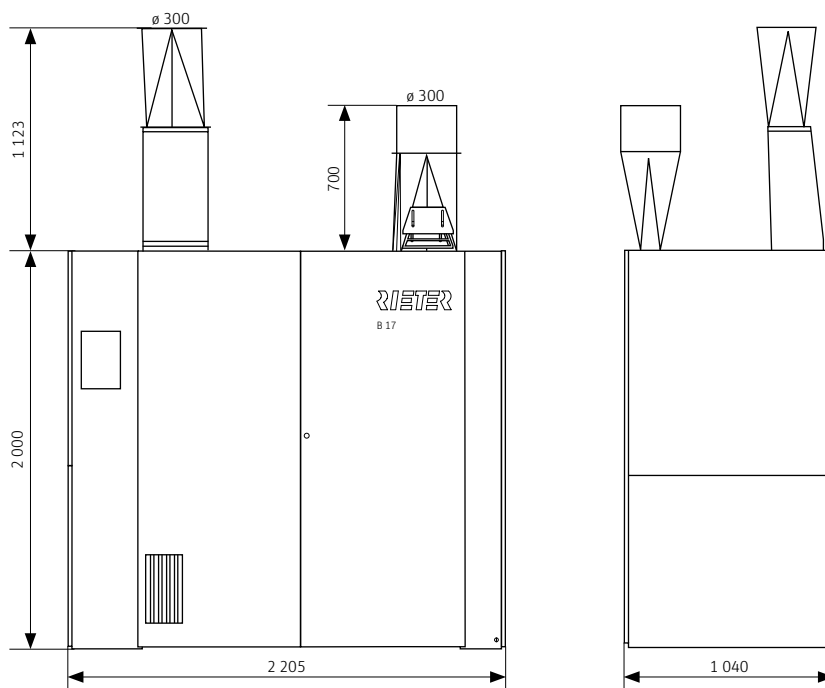
Installed power	15.25 kW
Power input at	300 kg/h production, approx. 2.0 - 2.5 kW 600 kg/h production, approx. 2.5 - 3.0 kW 1 200 kg/h production, approx. 6.0 - 8.0 kW
Power supply	380/400 V, 50 and 60 Hz

### MACHINE DATA

Working width	1 600 mm
Cleaning cylinder diameter	750 mm
Speed	480 - 960 rpm
Length	2 205 mm
Width	1 040 mm
Height	2 000 mm
Weight	1 180 kg

# B 17 UNIclean Cleaner

## Machine data and technical data



### TECHNOLOGICAL DATA

Material	cotton, cotton waste
Production	up to 1 200 kg/h

### TECHNICAL DATA

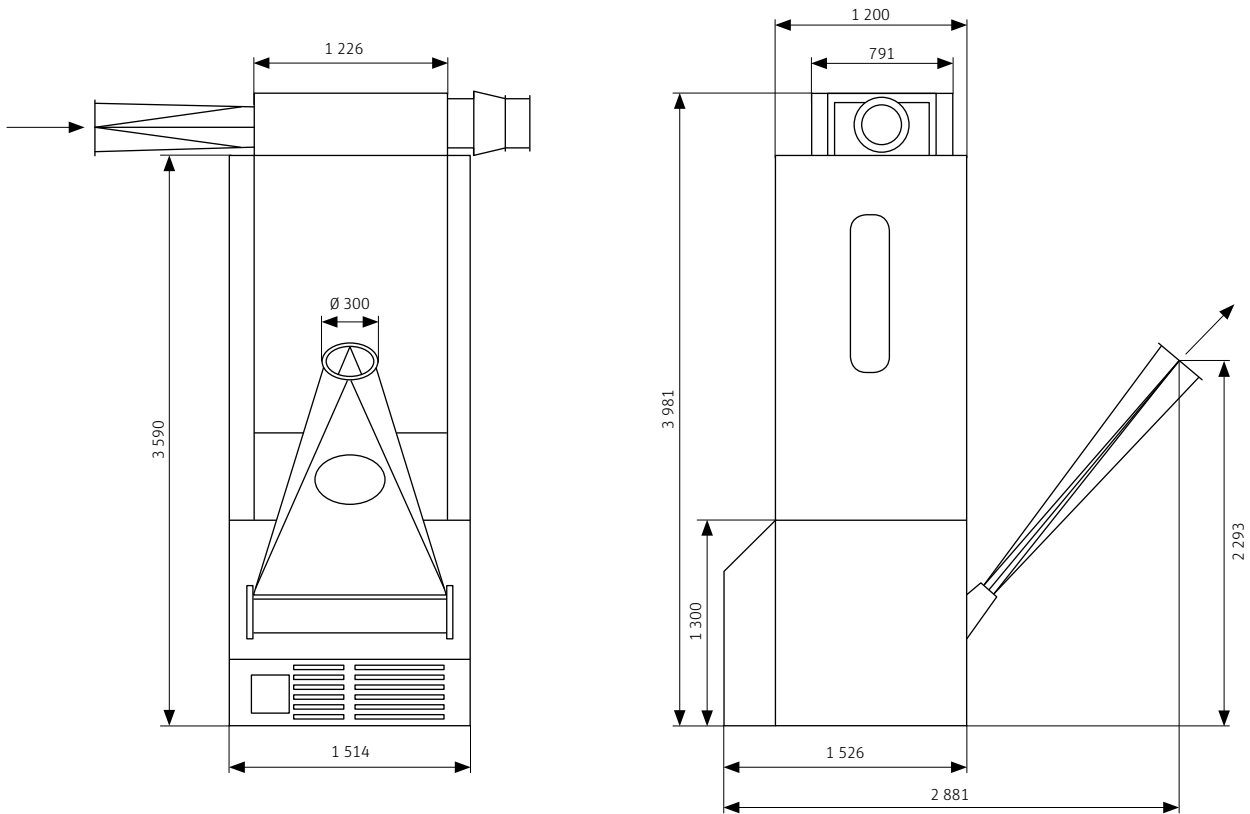
Installed power	11.25 kW
Power input at	300 kg/h production, approx. 2.0 - 2.5 kW 600 kg/h production, approx. 2.5 - 3.0 kW 1 200 kg/h production, approx. 6.0 - 8.0 kW
Power supply	380/400 V, 50 and 60 Hz

### MACHINE DATA

Working width	1 600 mm
Cleaning cylinder diameter	750 mm
Speed	480 - 960 rpm
Length	2 205 mm
Width	1 040 mm
Height	2 000 mm
Weight	1 180 kg

# A 79 UNIstore Combined Storage, Opening and Cleaning Machine

## Machine data and technical data



### TECHNOLOGICAL DATA

Material	cotton, man-made fibres and regenerate up to 65 mm (2 1/2") staple length
Production*	up to 1 000 kg/h

### TECHNICAL DATA

Installed power	12.6 kW
Air volume at material entry	0.60 - 1.00 m <sup>3</sup> /s
Air volume at material exit	0.60 - 1.00 m <sup>3</sup> /s

### MACHINE DATA

Working width	1 200 mm
Opening roller Ø	320 mm
Storage capacity	20 kg cotton 15 kg man-made fibres

### DIMENSIONS

Machine length	1 526 mm
Width	1 514 mm
Height	3 981 mm

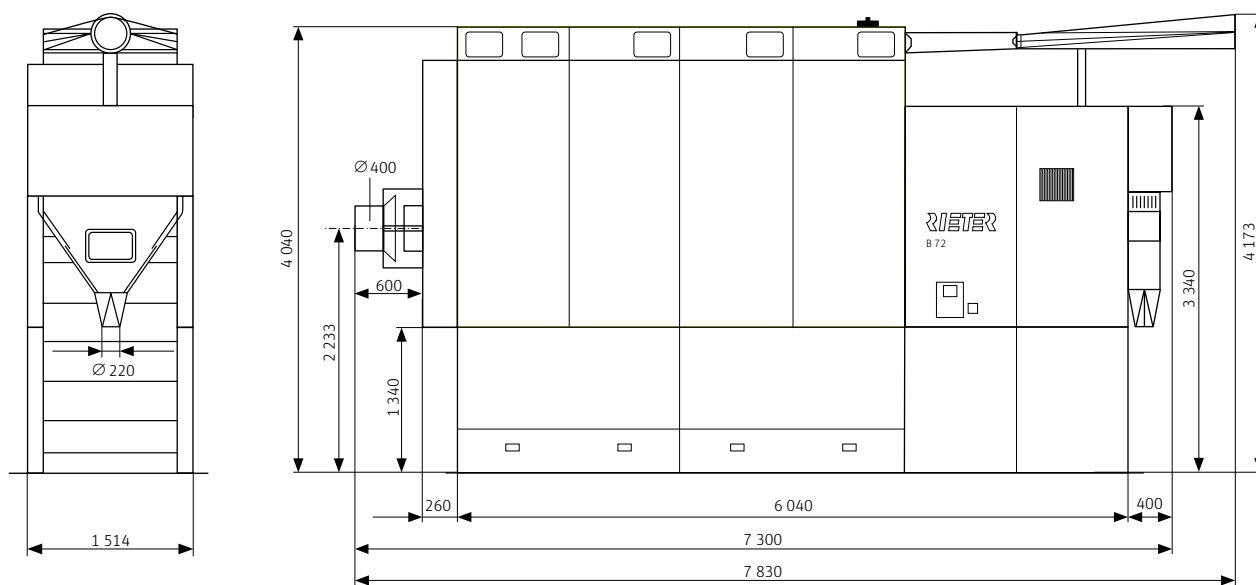
### NET WEIGHT

A 79S	1 820 kg**
A 79R	1 870 kg**

\* Card line production  
\*\* with saw tooth roller

# B 72 UNImix Homogeneous Mixer

## Machine data and technical data



TECHNOLOGICAL DATA	
Material	cotton, man-made fibres and blends
Output <sup>1) 2)</sup>	cotton, man-made fibres and blends up to 800 kg/h
Number of chambers	8
TECHNICAL DATA	
Installed power	4.4 kW
Opening roller speed	500 - 610 rpm
Take-off roller speed	660 rpm (constant)
Upright lattice	21.6 - 216 m/min
Feed belt	0.0 - 0.7 m/min
Exhaust air approx.	1.2 m <sup>3</sup> /s
Material feed	1.1 - 1.3 m <sup>3</sup> /s
Material delivery	0.4 - 0.6 m <sup>3</sup> /s

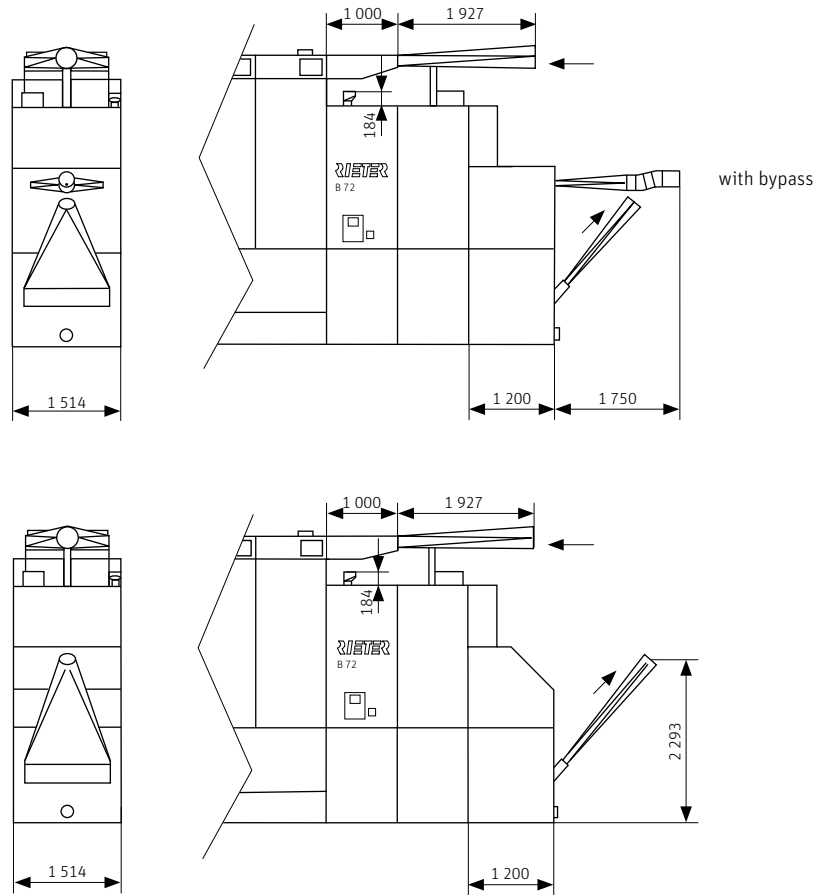
MACHINE DATA	
Length	7 830 mm
Width	1 514 mm
Height	4 173 mm
Working width	1 200 mm
Net weight	3 850 kg

<sup>1)</sup> Line output (card output)

<sup>2)</sup> If the blend has a high proportion of waste or noil, i.e. more than 40 % short fibres, maximum output is 600 kg/h.

# B 72R/S UNImix Homogeneous Mixer with Cleaning or Opening Module

## Machine data and technical data



TECHNOLOGICAL DATA	
Material	cotton, man-made fibres and blends
Output <sup>1) 2) 3)</sup>	cotton, man-made fibres and blends up to 800 kg/h
Option bypass	Yes
TECHNICAL DATA	
Installed power B 72 R/S	17.0 kW
Net weight feeding unit	240 kg
Net weight bypass unit	300 kg

MACHINE DATA MODULE	
Length	1 200 mm
Width	1 514 mm
Height	1 340 mm
Working width	1 200 mm
Net weight R/S module	1 100 kg

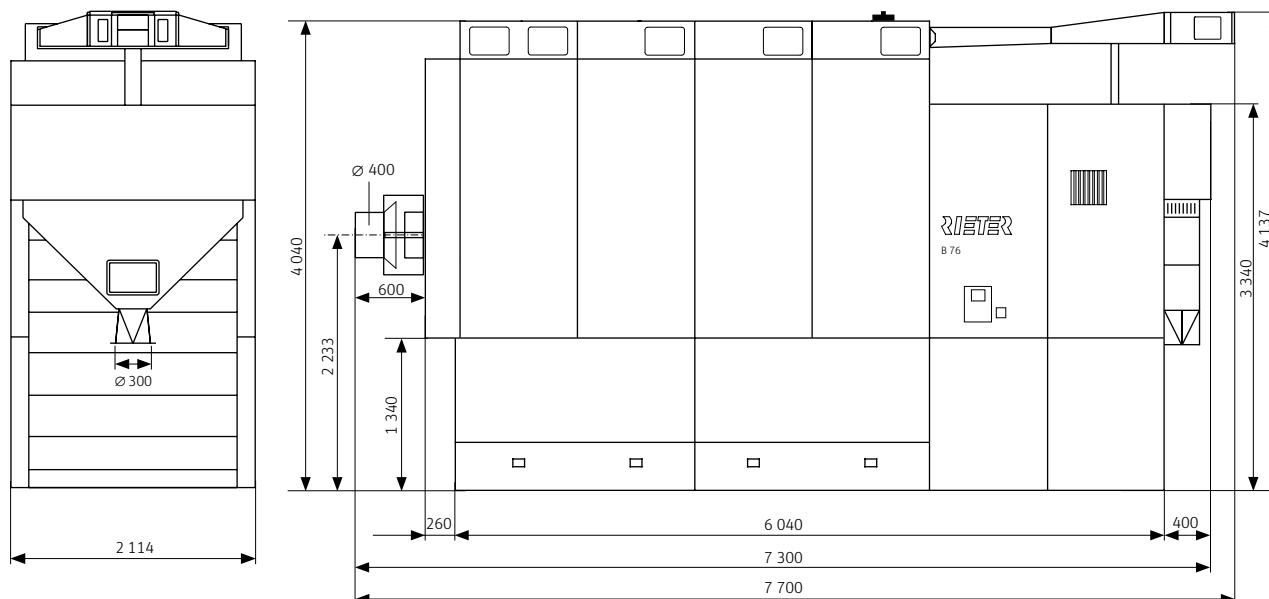
<sup>1)</sup> Line output (card output)

<sup>2)</sup> If the blend has a high proportion of waste or noil, i.e. more than 40 % short fibres, maximum output is 600 kg/h

<sup>3)</sup> Depending on type of man-made fibres, production can be lower

# B 76 UNImix Homogeneous Mixer

## Machine data and technical data



TECHNOLOGICAL DATA	
Material	cotton, man-made fibres and blends
Output <sup>1) 2)</sup>	cotton up to 1 200 kg/h, man-made fibres up to 1 000 kg/h
Number of chambers	8
TECHNICAL DATA	
Installed power	6.4 kW
Opening roller speed	500 - 610 rpm
Take-off roller speed	660 rpm (constant)
Upright lattice	21.6 - 216 m/min
Feed belt	0.0 - 0.7 m/min
Exhaust air approx.	1.2 m <sup>3</sup> /s
Material feed	1.1 - 1.3 m <sup>3</sup> /s
Material delivery	0.6 - 0.9 m <sup>3</sup> /s

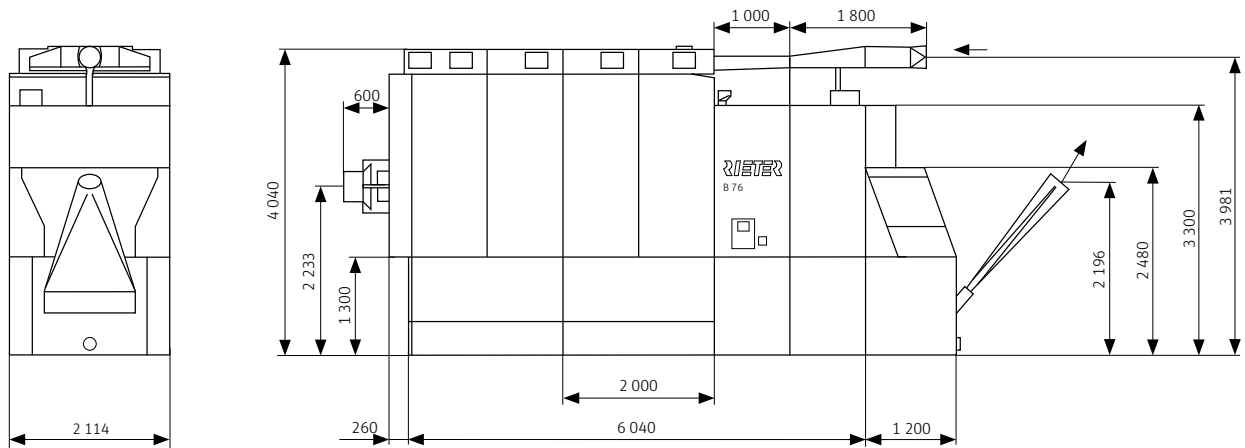
MACHINE DATA	
Length	7 700 mm
Width	2 115 mm
Height	4 173 mm
Working width	1 800 mm
Net weight	5 300 kg

<sup>1)</sup> Line output (card output)

<sup>2)</sup> If the blend has a high proportion of waste or noil,  
i.e. more than 40 % short fibres, maximum output is 800 kg/h

# B 76R/S UNImix Homogeneous Mixer with Cleaning or Opening Module

## Machine data and technical data



TECHNOLOGICAL DATA	
Material	cotton, man-made fibres and blends
Output <sup>1) 2) 3)</sup>	cotton up to 1 000 kg/h, man-made fibres up to 1 000 kg/h
Option bypass	No
TECHNICAL DATA	
Installed power B 76R/S	19.0 kW
Net weight feeding unit	100 kg

MACHINE DATA MODULE	
Length	1 200 mm
Width	1 514 mm
Height	1 340 mm
Working width	1 200 mm
Net weight R/S module	1 100 kg

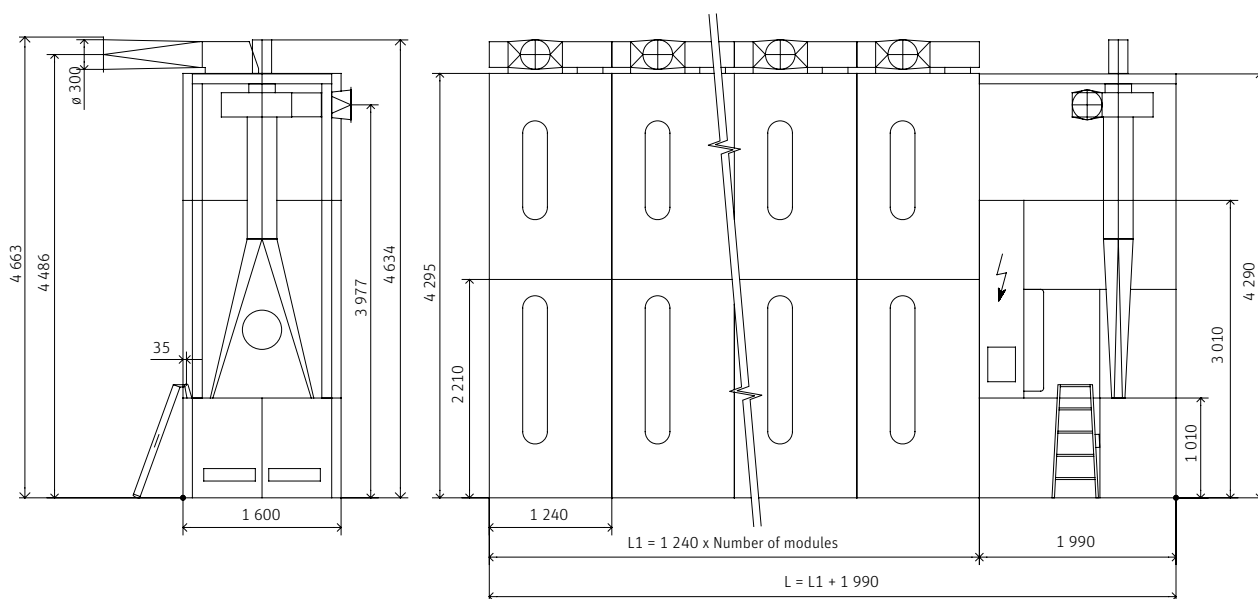
<sup>1)</sup> Line output (card output)

<sup>2)</sup> If the blend has a high proportion of waste or noil, i.e. more than 40 % short fibres, maximum output is 800 kg/h

<sup>3)</sup> Depending on type of man-made fibres, production can be lower

# A 81 UNIBlend Precision Blender

## Machine data and technical data



TECHNOLOGICAL DATA	
Material:	various staple fibres up to 65 mm (2 1/2")
Production (depending on blending ratios):	
- module	3 to 300 kg/h
- machine	up to 1 000 kg/h
TECHNICAL DATA	
Installed power:	
machine + 2 modules	10.9 kW
plus per additional module	2.3 kW
AIR REQUIREMENTS	
Feed/module:	0.4 to 0.6 m <sup>3</sup> /s
	300 Pa
Exhaust/module:	0.5 to 0.7 m <sup>3</sup> /s
	- 100 Pa
Material transport:	0.6 to 0.9 m <sup>3</sup> /s
	approx. 600 Pa

MACHINE DATA	
Working width:	1 200 mm
Length:	
- 2 modules	4 470 mm
- 3 modules	5 710 mm
- 4 modules	6 950 mm
- 5 modules	8 190 mm
- 6 modules	9 430 mm
- 7 modules	10 670 mm
- 8 modules	11 940 mm
Width:	1 600 mm
Height:	
- low version	3 919 mm
- standard version	4 663 mm
Weight:	
- 1 module	1 560 kg
- opening unit	1 210 kg



## The Comfort of Competence

Put your confidence in Rieter's competence and enjoy the comfort of partnership!

Rieter is the leading supplier of installations for manufacturing yarns from short staple fibres. As a competent partner, Rieter makes customers' lives easier. It provides advice and support from the initial investment discussions to the successful operation of their spinning mills. Rieter's comprehensive know-how from fibre through yarn to the finished textile is the basis for innovative machines and consistent yarn quality.

Settle back and relax thanks to Rieter.

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Rieter is the only textile machine manufacturer to offer four spinning technologies and to advise customers competently, independently and with tailor-made solutions. Investments in Rieter machines are exceptionally attractive due to the outstanding price/performance ratio, the low conversion costs and the longevity of the products, which remain competitive by means of retrofits. Since the company was established in Switzerland in 1795 Rieter has developed high quality standards. All manufacturing facilities are ISO 9001 certified.

### Rieter's Services

- Investment planning
- Plant planning
- Project planning and realization
- Installation and maintenance
- Preventive inspection
- Wide range of wear-and-tear, technology and spare parts

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Rieter possesses comprehensive textile and technology expertise and covers the four spinning processes through to the textile end product. Alongside the most sophisticated machines and plants, Rieter offers extensive services in the field of textile technology. Customers profit from examinations and tests in Rieter's spinning centres and laboratories and thus ensure the excellent quality of their yarns at high production capacity.

### Rieter's Services

- Spinning trials based on the 4 spinning systems
- Spinning mill analysis to optimize quality and productivity
- Textile laboratory services
- Professional textile technological publications

## Supportive Partnership

Numerous sales and service centres support customers throughout the world. For decades, customers have enjoyed the advantages of one responsible contact partner for the entire spinning operation.

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- Training for management and operating personnel
- Com4® yarn marketing (yarn licenses)
- Marketing support of reference customers
- Rieter Award to confer a distinction on the best students in the textile industry
- Support for universities
- Symposia and roadshows close to customers



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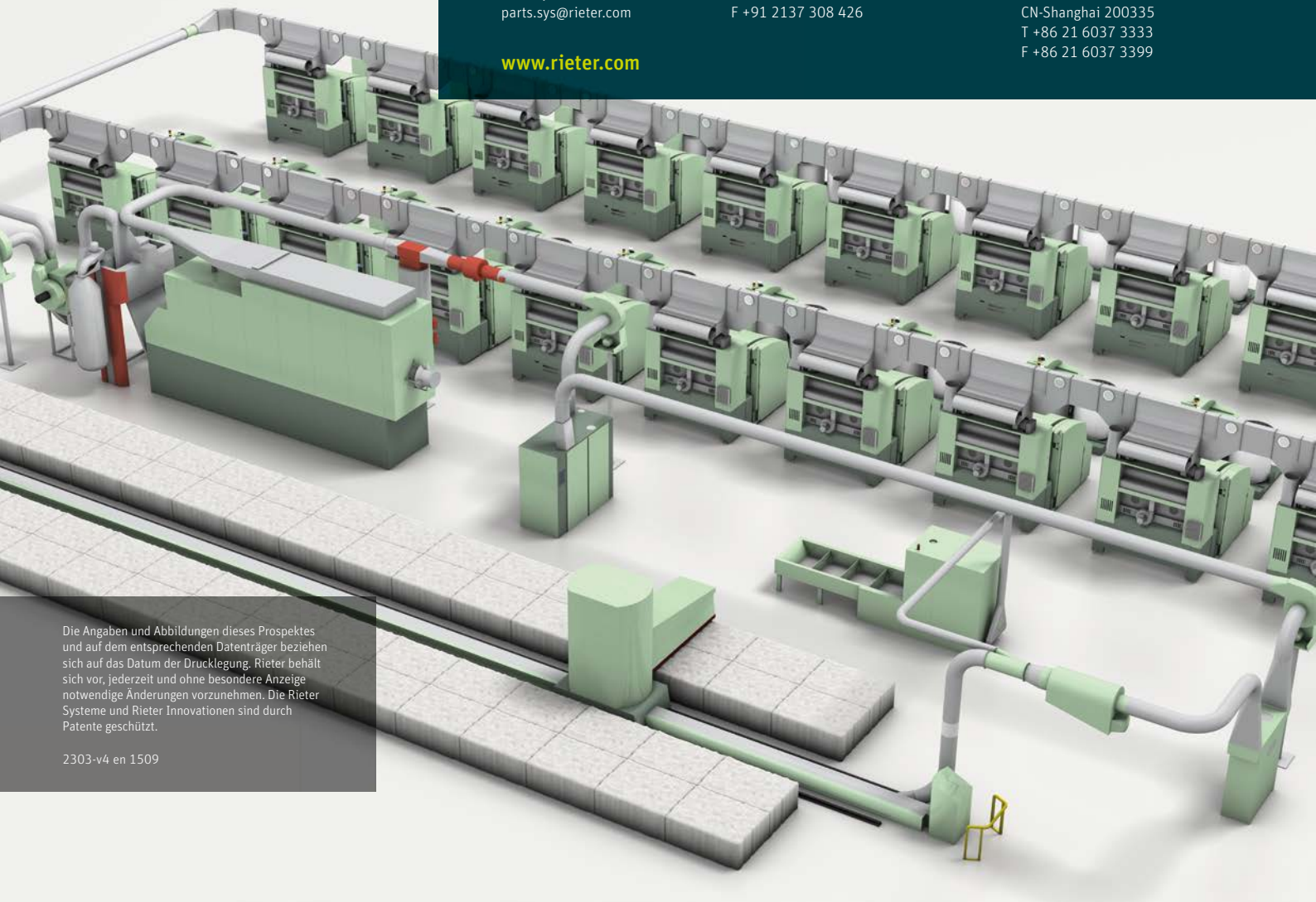
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