

B13 AND B23 TUFT BLENDING INSTALLATION

The quality of blending
is far better than other systems



Marzoli

Complete spinning line,
components and digitalized
solutions for the best performance
of the spinning process



THE ONE SOURCE FOR A FULLY-AUTOMATED AND DIGITALIZED SPINNING MILL



Marzoli, one of the major brands of the textile sector worldwide, is a unique European manufacturer of the complete line of machines for the opening, preparation and spinning of short-staple fiber. From the bale opener to the ring spinning frame, Marzoli offers the most advanced technology for a completely-automated spinning mill. Through its global sales and service network, its expertise on each type of fiber and application and the competence on the entire process, Marzoli represents a competent and reliable partner. And through its experience, know-how and commitment, it provides its customers with:

- Advanced spinning solutions through a careful activity of textile engineering. Marzoli assists its customers from the study of the spinning plan, throughout sourcing, erection and commissioning, up to maintenance of the resulting turnkey spinning plant, which can comprise Marzoli but also third-party machinery. The customer can rely on the competence and capability of a unique partner, responsible for the quality and productivity of the entire spinning mill.
- The advantages of smart spinning. No matter what the brand(s) of the machinery is, Marzoli can install its software platforms, YarNet and MRM, its hardware applications for gathering data on waste percentages and its composition, quality values, productivity indexes and other kpi data to let the customer build on the potential of Industry 4.0, optimize the entire spinning process through well-informed decisions and reach the highest performance in production operations.

OVER
170 ■ YEARS
OF SUCCESSES

OVER
70 ■ COUNTRIES
WITH ACTIVE CLIENTS



OPENING SECTION

- Openers & Cleaners
- Mixers & Blenders
- Card



COMBING SECTION

- Draw Frames
- Lap Winder
- Comber
- Lap Transport



SPINNING SECTION

- Roving Frame
- Ring Spinning Frame
- Bobbin Transport System

B13 AND B23 TUFT BLENDING INSTALLATION

The quality of blending is far better than other systems

An effective solution for tuft blending is the combination of two or more B13 weighing bale openers and one B23 tuft blender.

Thanks to the optimum weighing precision and self-calibration of the weighing pan this solution ensures perfect blends. The operator, through a display presets the target weights for each B13 in order to achieve the desired tuft blend. Once production has begun, each B13 works until it reaches its target weight and then it stops. Once all B13 stop, they discharge the processed material which falls on the conveyor belt of the B23, placed underneath. After all the B13 have discharged, the conveyor belt of the B23 moves and carries each layer of material under the next B13; then it stops and awaits the B13 to discharge again. Through this process the first B13 creates the first layer on the conveyor belt; the second B13 creates the second layer which lies on the first one and so on. Once the last layer is created, the conveyor belt of the B23 carries the two (or more) layers to the pressure table and the pincer roll. The layers are then opened through an opening roll and sent through a duct to the mixer.

KEY POINTS

- PERFECT TUFT BLENDING
- HIGH WEIGHING ACCURACY
- HIGH PRODUCTIONS
- SELF CALIBRATION OF THE BALANCES
- UP TO 5 COMPONENTS IN THE BLEND
- PERFECT SOLUTION FOR FLEXIBLE PRODUCTION PROGRAMS



High weighing accuracy

The B13 weighing bale opener fills up at high speed and then reduces the speed as it approaches the pre-set target weight. Thanks to this system, the B13 weighing bale opener achieves the maximum weighing accuracy, with an average weighing discrepancy of less than 1%.

The weighing accuracy is not affected by variations in density, volume or type of fiber being processed.

High production

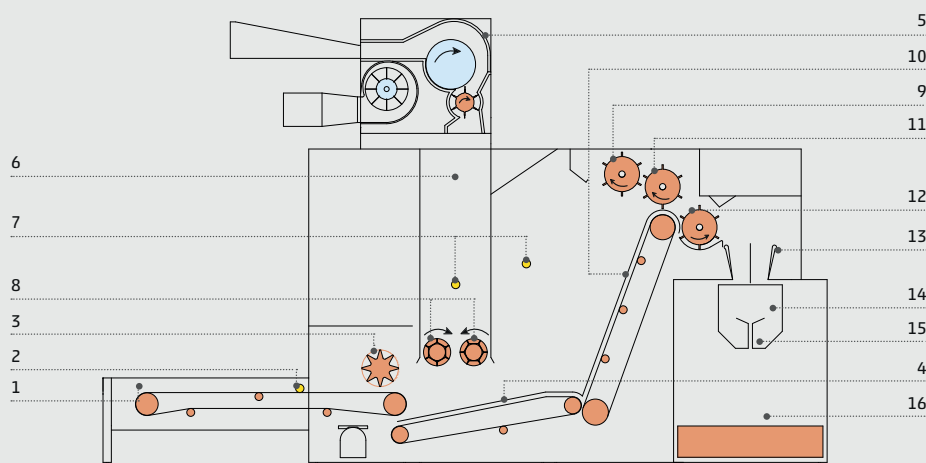
Thanks to the large capacity of the weigh-pans, the B13 weighing bale opener allows to reduce the number of weighing operations. The abundant material reserve reduces machine downtimes. All this guarantees excellent productivity.

USER-FRIENDLY INTERFACE

Simple operations and monitoring

- The microcomputer controls and guides the operator with simple messages;
- the microcomputer identifies malfunctions and suggests remedies;
- working programs can be stored and repeated;
- the display shows target and actual weights, cv values, production rates of shifts;
- automatic actual weight correction.





MACHINE DESCRIPTION - LEGEND

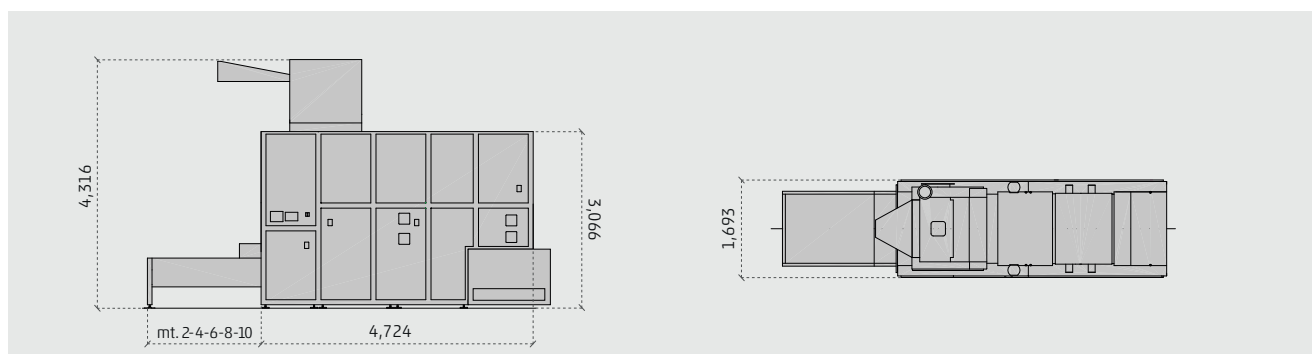
- 1 Feed conveyor
- 2 Feed conveyor photocell
- 3 Retaining roll
- 4 Feed lattice
- 5 Cage Condenser
- 6 Material reserve trunk
- 7 Photocell
- 8 Delivery rolls
- 9 Roll clearer
- 10 Spiked lattice
- 11 Evener roll
- 12 Stripper roll
- 13 Closing flaps
- 14 Weight pan
- 15 Bottom traps
- 16 Tuft blender B23

TUFT BLENDING INSTALLATION FOR ALL NATURAL AND MAN-MADE FIBERS

The B13 Weighing Bale Opener

- Automatic calculation of the production and of the weights;
- every 50 weighings (the number of weighings is settable) the CV calculation is automatically activated (CV%). The machine automatically adjusts the setting when the CV is beyond the preset tolerance value;
- automatic control of the turbulences produced by the fall of the material on the balance;
- possibility to operate continuously with open balance;
- possibility to choose up to 10 working programs;
- possibility to automatically set the machine production with the evener roll;
- automatic emptying of the B13 + B23 systems;
- frame width: 1,200 mm;
- the B13 Weighing Bale Opener can be fed manually and is therefore suitable for processing small lots. The length of the feed table can be adapted to the space available;
- the B13 Weighing Bale Opener can be fed also automatically (through the B450L Cage Condenser) and is therefore also suitable for processing large lots;
- consequently the B13 is the ideal solution for highly flexible installations which can be used to process large lots as well as occasional small lots;
- indirect discharge of the tufts into the weigh pan avoids weighing mistakes.

TECHNICAL DATA



B13

Processed material	Cotton, man-made fibers and blends up to 350 kg/h Production depending on the processed fiber
Installed power	4.43 kW excluding B450
Weigh	4,100 kg excluding feeding lattice

Power Consumption to process 100 kg of raw material 1.26 kW

TUFT BLENDER B23

Up to 5 components can be weighed for precise blends

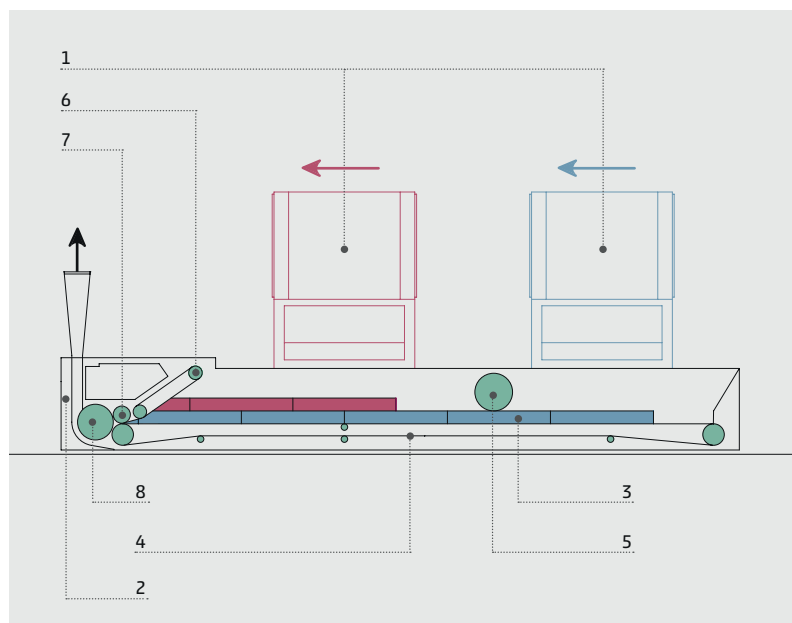


B23 Tuft blender with one delivery

- Maximum production up to 1,000 kg/h with a frame width of 1,000 mm;
- The B23 Tuft Blender can be fed by up to five B13 weighing bale openers. The weighing feeders discharge the material on the conveyor belt of the tuft blender; the different blend components are placed on top of each other in layers.

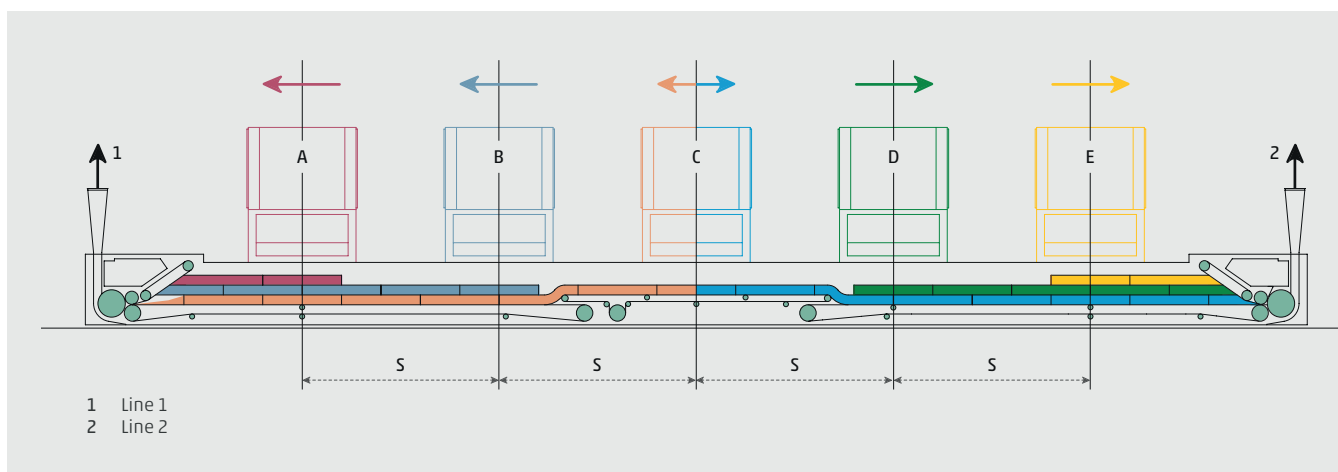
MACHINE DESCRIPTION - LEGEND

- | | |
|----------------------------|------------------|
| 1 B13 Weighing Bale Opener | 5 Pressure roll |
| 2 B23 Tuft Blender | 6 Pressure table |
| 3 Blending table | 7 Pincer roll |
| 4 Conveyor belt | 8 Opening roll |

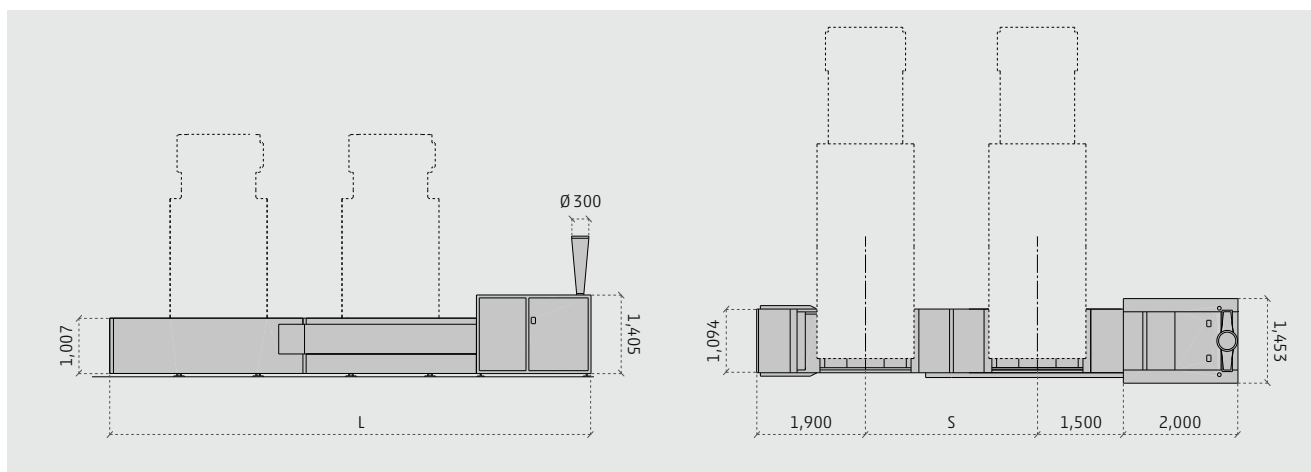


B23 TUFT BLENDER WITH TWO DELIVERIES

- The B23 with two deliveries with an additional B13 feeder (c) is the ideal solution for a better flexibility of the installation and for plants where blends frequently change.
- Line 1 can comprise three feeders (A, B and C) while line 2 includes the other two (D and E). Alternatively Line 1 can comprise two feeders (A and B) while line 2 includes the other three (C, D and E).
- In this case the minimum gauge (S) between the B13 feeders is 4,200 mm and the maximum gauge (S) is 5,400 mm;
- the 3,000 mm gauge (S) is not available.



TECHNICAL DATA



B23	
Processed material	Cotton, man-made fibers and blends up to 1.000kg/h Production depending on the processed fiber
Installed power	2.75 kW
Weigth	From 2,210 kg to 4,110 kg according to the width
Power Consumption to process 100 kg of raw material	
	0.27 kW

Gauge S	3,000	4,200	5,400
N° B13	L	L	L
2	8,400	9,600	10,800
3	11,400	13,800	16,200
4	14,400	18,000	21,600
5	17,400	22,200	27,000

SOFTWARE PLATFORMS

END2END PRODUCTION MANAGEMENT PLATFORM: YARNET

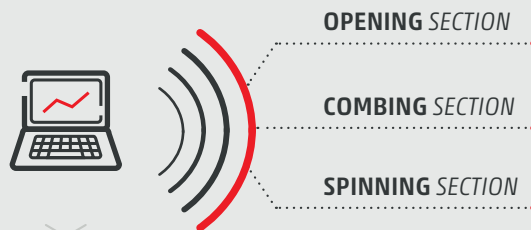
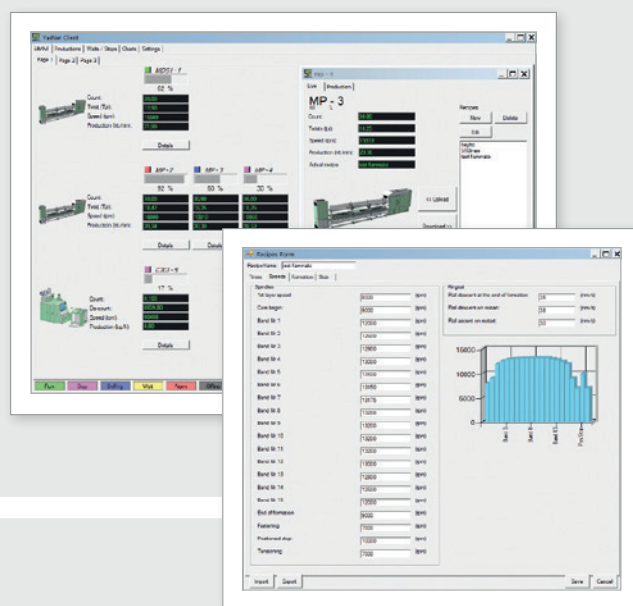
YarNet is Marzoli production management software. It enables the monitoring of production levels, efficiency rates and downtime for both individual machines and the entire spinning mill. Comparisons between machines on selected periods of time are made very simple so that improvement opportunities can be easily identified. YarNet enables the operator to edit production recipes, downloading and uploading them between any machine and their computer. He can also export them in Excel format to share with colleagues as necessary. YarNet gathers and analyses data about production and energy consumption, giving a visual representation of the tradeoffs (kW/kg).

MRM

MRM is Marzoli software to continuously monitor the operating conditions of textile machines. It can identify developing malfunctions before a fault occurs and highlight improvement opportunities on efficiency rates and energy consumption levels. Data about temperature, power consumption, speed and vibration are collected from PLCs (programmable logic controllers) and sensors installed on each machine. The software verifies the monitored parameters are within the nominal operating ranges; it can even adjust for room temperature variations to ensure continuous optimisation. If any parameter is out of tolerance, an automatic email alert is sent to the customer. The customer can also access the dedicated online portal to see information for predictive maintenance and of the overall efficiency of the plant. Through dedicated modules (Optimisation Tools) it is possible to optimise the performance of every machine, in particular on energy consumption and levels of efficiency. If required, Marzoli's customer service team can access the data to diagnose actual and developing problems and recommend appropriate actions.

KEY POINTS

- EASY & FAST CONTROL OF EVERY STAGE OF THE SPINNING PROCESS
- IMPROVED SPEED OF RESPONSE IN PRODUCTION OPERATIONS
- EASY MANAGEMENT OF PRODUCTION RECIPES
- SUPERIOR, EASIER AND FASTER MAINTENANCE



BENEFITS

- Higher productivity
- No machines unplanned downtimes
- Prevention from major machine failures
- Longer plant lifespan
- Higher efficiency
- Complete reliability
- Trouble free spinning experience
- Better maintenance planning



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