

Blowroom
Machines

Filter & Auto-Waste
Removal Systems

Conversions



Estd. 1956

Precision . Performance . Perfection

Solutions

Blowroom Machines

Circular Bale Plucker

Bale Opener

Permanent Magnet in Line

Step Cleaner 4/6

Maxi-flow

Heavy Part Separator

Multi-mixer

Condenser

Fine Opener

Saw Tooth Opener

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Blowroom Machines

Primary Disc Filter

Secondary Filter

Fibre Compactor

Material / Dust Transport Fans

Blowroom Machines

Axi-flow to Maxi-flow Conversions

Dust Bag to Dust Compactor

Contifeed System

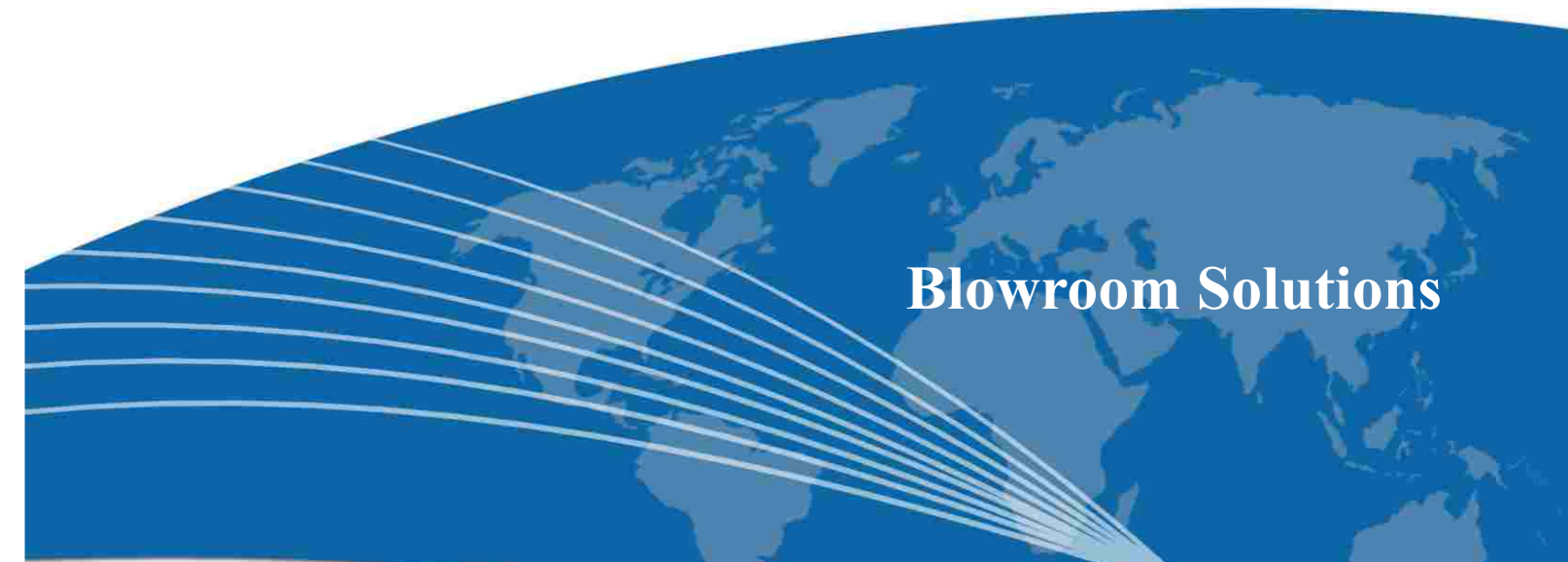
Lap to Chute / Chute to Lap Feed

Auto-lap Pulling for NSE Scutcher

PIV Conversion

Conversion of Filter for Positive Exhaust

Dustex Oscillating Damper Drive System



Blowroom Solutions



- Blowroom Machines
- Filter & Auto Waste Removal Systems
- Conversions



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PATCO EXPORTS PVT. LTD.

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About Us

Patco specializes in world class Textile Blowroom Machinery and Filter & Auto-waste Removal Systems. Over the years we have built strong relationships with customers worldwide based on the foundation of trust and integrity. Whether it is our manufacturing process or our after sales support, we are committed to deliver only the highest quality products and services to our customers.

We offer customized Blowroom and Filter solutions to suit our customer's requirements irrespective of the make of their machines. We also offer various conversions to upgrade existing Blowroom Lines and Filter Systems for continuous and intermittent collection of waste for Blowroom and Carding Machines.

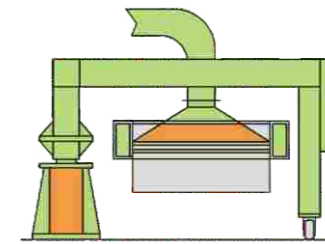
Our vision is to bring High Quality, High Technology based machines at affordable prices to the world of textile market. So the next time you are looking to expand, improve or upgrade your existing Blowroom or Filter Systems, please give us a call or mail us and let us put our expertise and knowledge to work for you.



Blowroom Machines

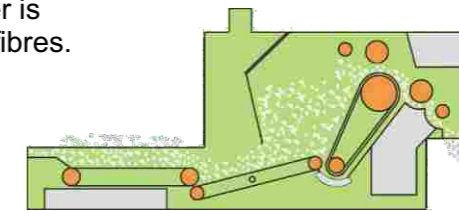
Circular Bale Plucker

The Circular Bale Plucker is a simple and effective machine for homogenous mixing of fibers from different bales. In this machine, the carriage holding the plucking and feed rollers rotates in a circular motion. The Bale Plucker can have an arrangement of either 22 or 32 bales, making it ideal for small spinning mills.



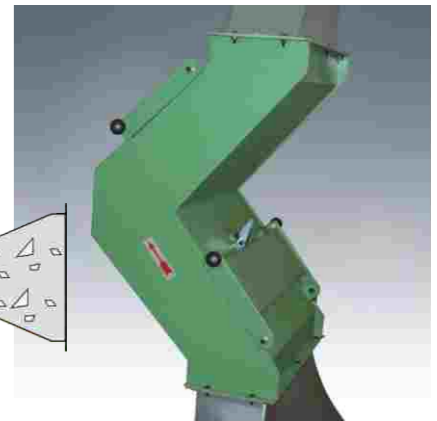
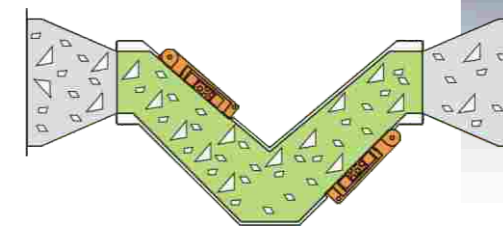
Bale Opener

Heavy Duty Bale Opener is the first machine in blowroom line, where the fiber is opened thoroughly into small tufts. The related impurities are removed by integral double roller cleaners with individual adjustable grid section. This helps in better cleaning in the subsequent beating points. The Bale Opener is also used for opening and mixing synthetic fibres.



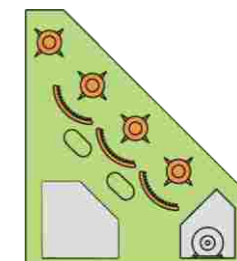
Permanent Magnet in Line

The Permanent Magnet in Line ensures that even the smallest metal pieces are detected and separated from the fibre. We use powerful, imported magnets with a high gauss value for high performance. We also offer retrofitting of Magnet Plates in existing machines such as the Bale Opener.



Step Cleaner 4/6

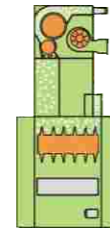
The material fed to the step cleaner is led through a feed funnel to the first roller. All rollers run in the same direction and consist of steel cylinders welded with four rows of steel beater blades. The material caught by the beater blades is led over a grid underneath the roller where the heavier impurities, dust and dirt particles, and short fibres contained in the material are extracted by means of centrifugal force. The grid under each roller can be adjusted individually from the outside.



Blowroom Machines

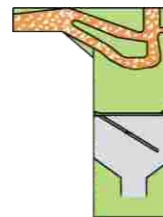
Maxi-flow

Maxi-flow is an improved version of its predecessor - the Axi-flow. The material is dropped in the machine by gravity through a Condenser and advances with the beater action. The material is removed from Maxi-flow with the help of suction from the next machine



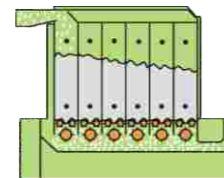
Heavy Part Separator

Heavy Part Separator is a simple equipment working on aero dynamic principle. The machine removes contaminations in the mixing used for open-end spinning such as plastic bobbins, metal parts and other heavy impurities which may otherwise cause damage to expensive blowroom and carding machinery. It can be easily installed even in existing blowroom lines of any make by simply changing the material transport pipeline.



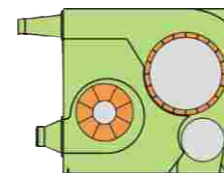
Multi-mixer

The Multi-mixer assures a good blending at the beginning of the spinning process which is essential for a uniform distribution and representation of all fibre components in the yarn cross-section. This needs to be achieved by the later processes alone. Proper blending avoids variation in running conditions, yarn strength, uniformity and dye take-up. The Multi-mixer is available in 4, 6 or 8 chambers.



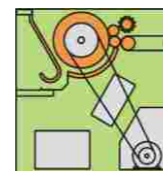
Condenser

The condenser is one of the most important machines in the blowroom line. It is used for transporting the fibre from one machine to the next. We have many incremental changes to the condenser over the past 20 years and the latest model has a very robust and maintenance free design.



Fine Opener

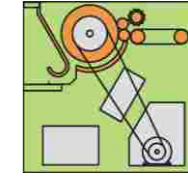
This machine is mainly used in synthetic mills for opening polyester/viscose fibres either at the pre-mixing stage or in the blowroom line for material supply to Scutcher or Chute Feed. The cleaning point comprises of either "Kirschner Beater" or a "fully spiked beater", depending on the type of fibre to open. This machine can either be supplied to fit in with the Bale Opener or as an individual machine with an extended feed table of 2m. A Condenser or a Material Transport Fan is required to draw the material from this machine.



Blowroom Machines

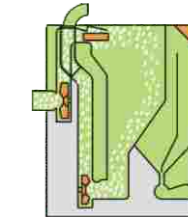
Saw Tooth Opener

This machine is most suited for open-end plants and coarse and medium counts in spinning mills. The cleaning efficiency of this machine is around 35% without damage to the fibre. It also reduces the load on the carding machine. The machine is accompanied with a Condenser and a Feed Trunk.



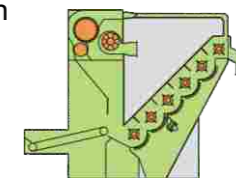
Micro-dust Remover

The Micro-dust Remover is used exclusively after thorough opening of material in Fine Openers so as to efficiently extract the micro-dust. In view of the few rotating parts that the machine has, it is easy to maintain and has a high level of operational reliability. The addition of the Micro-dust Remover in the blowroom line is of special importance to open-end spinning mills for achieving significant reduction in end breaks and yarn imperfections.



Willow Mat

The Willow Mat machine consists mainly of three basic machines: Feed System, Step Cleaner and High Speed Condenser. The production of the machine depends upon the quality of the material fed into it. In case of higher lint, the production is more and in case of lower lint, the production is less. Production capacity of the Willow Mat for blowroom droppings and lick-in waste is about 80 to 100 Kg/hr, while that for flat strip is about 300 to 400 Kg/hr.



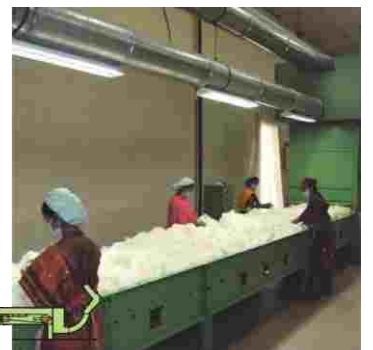
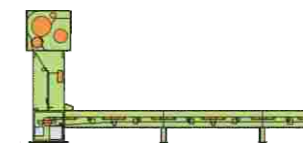
Seed Remover

Sometimes improper ginning leads to a lot of contamination and seeds in the mixings used for open-end spinning. This contamination can cause severe damage to the beaters in the blowroom line as well as expensive card clothing. A Seed Remover is a simple equipment based on the aero dynamic principle which can be used to solve this problem. It can be easily installed even in existing blowroom lines of any make by simply changing the material transport pipeline.



Manual Contamination Removal System

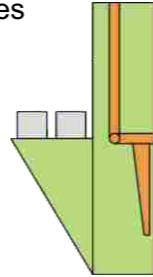
The electric contamination removal systems can only sense the foreign objects once the material is thoroughly opened and are hence placed after the last grip beating point in the blowroom line. This reduces the efficiency of the system to about 50% to 60% as the foreign objects are further torn into tiny pieces resulting in rejected finished goods. To overcome this problem, we suggest a manual check of the fibre after it has passed through the first open beater. The sequence of machines to carry out this check is a Condenser, Hopper Feeder and a 9m long Conveyor. Four workers, two on each side of the conveyor, remove the contamination while the conveyor is moving.



Filter & Auto-waste Removal Systems

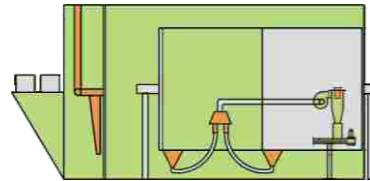
Primary Disc Filter

This machine can be used as an independent unit for synthetic material or in conjunction with the Secondary Filter for processing cotton. It consists of circular filter media and a rotating nozzle. The impurities are either thrown on to the screen by fans or a centrifugal fan is placed behind the filter to suck the impurities from different points. A 7.5 HP blower is provided to collect and compact the dropping thus collected



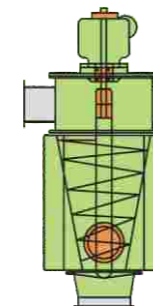
Secondary Filter

The Secondary Filter consists of rotary drums of varying sizes designed for collecting fine particles which might have escaped through the primary filter. It consists of a nozzle, fan and a dust compactor with cyclone. The centrifugal fan is designed for a required volume and pressure depending on the sequence of machines and the number of cards the system is supposed to support.



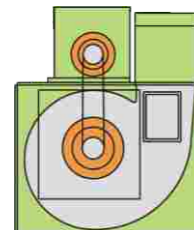
Fibre Compactor

Fibre Compactors ensure a trouble free and an environment friendly way of waste collection. The compacted waste falls right into the cloth bags and the dusty air goes back into the filter system. The compactor saves storage and transport costs and can easily replace existing condenser units connected for waste collection.



Material / Dust Transport Fans

The Material/Dust Transport Fans are used for various purposes such as boosting air pressure when required, to carry or deposit synthetic or cotton fibres, and for removal of heavy waste such as blowroom or card waste. These fans come in different sizes such as Ø 425, Ø 500 and Ø650 and with different motor ratings to suit their specific application.



Conversions

Axi-flow to Maxi-flow Conversion

In Axi-flow, higher suction is necessary at material entry point for transportation of cotton from the preceding machine to the next. Due to this higher suction, cotton passes through the beater very quickly thus resulting in bigger tuft size and less cleaning.

In Maxi-flow, the material is dropped in the machine by gravity through a Condenser and advances with the beater action. The material is removed from Maxi-flow with the help of suction from the next machine.

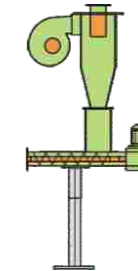
Converting the Axi-flow machine to Maxi-flow improves its cleaning efficiency by upto 40 to 50%.



Dust Bag to Dust Compactor

The dust bags used to collect the dust on secondary side of the filter plant require manual dust removal, during which a lot of dust is spread in the room. This poses a health hazard to the workers cleaning the filter installation. Also, the bags need to be thoroughly cleaned once a week which sometimes leads to tearing and replacement of the bags. If not cleaned, the bags clog up and drop the suction pressure at the nozzle which in turn clogs the secondary filter media.

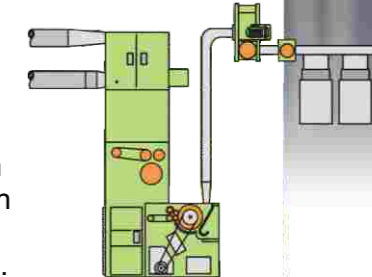
To overcome these problems, we have developed a Dust Compactor which fits at the end of the cyclone. The air from the cyclone is diverted back into the Secondary Filter and the dust collected from the bottom of the cyclone is compacted by the Dust Compactor in a ball form which is collected in a drum placed underneath.



Contifed System

Conventional blowroom lines have the motor working on the start/stop principle. So the quantity of material delivered from the blowroom is constant irrespective of the requirement from the cards.

In Contifed System, the material requirement is matched with the material supplied by varying the delivery motor speed of last beating point. The pressure transducer senses the air pressure of main duct line supplying the material from blowroom to the chutes. The supply motor speed depends on quantity of the material required by the chutes thus ensuring an even feed from top reserve box of the chutes to the cards.



Lap to Chute / Chute to Lap Feed

The Lap to Chute Feed System is employed to feed the cards uninterrupted directly from blowroom thus removing the need to carry laps from blowroom to the carding department. When fitted with cards, an auto levelling device for the cards is recommended.

We also offer conversion of Chute to Lap Feed Systems.

