

# DELTA CLEANERS

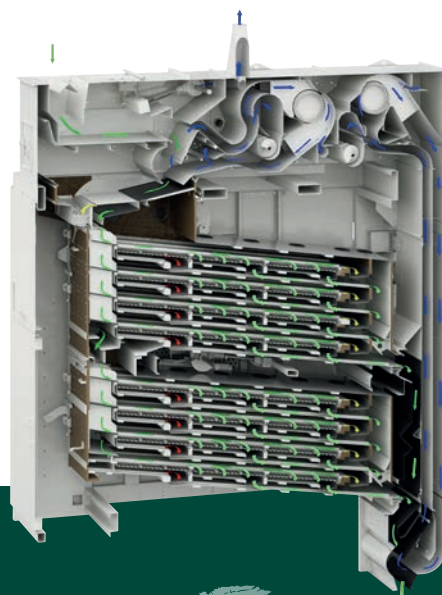
## 150 SERIES

SEED PROCESSING 





# EFFICIENCY AND PURITY IN THE CLEANING PROCESS



## CONSULTANCY BASED ON EXPERIENCE

Accuracy and careful cleaning are key words in our development and production of Cimbria Delta cleaners, and the quality of all material and components is uncompromisingly high. We offer advice and design of plants for all sorts of cleaning purposes based on R&D achievements and many years of experience.

Cimbria has a wide and experienced service network which always remains fully up to date with regard to the latest technical product developments and cleaning processes.

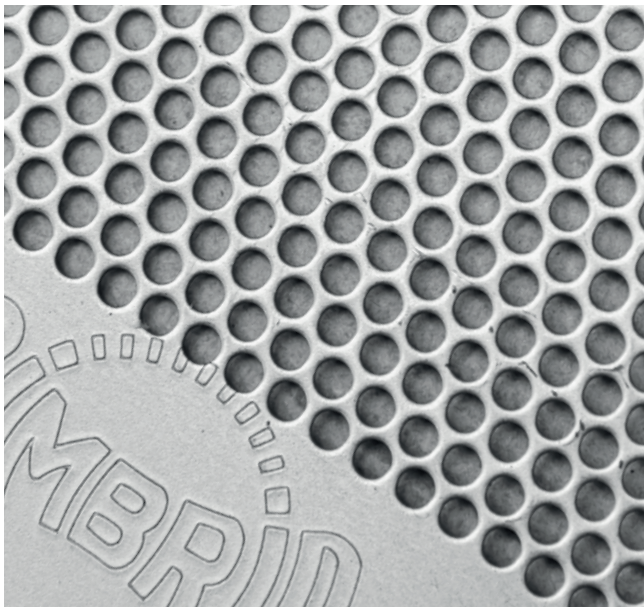
The service organization is at your disposal to ensure the best and quickest service.

[CIMBRIA.COM](http://CIMBRIA.COM)

## TECHNICAL KNOWLEDGE AND EXPERIENCE

The wide range of Cimbria Delta screen cleaners ensures excellent efficiency and purity in the cleaning of all kinds of crops by removing unwanted elements and potentially dangerous impurities with high precision. The efficient and gentle Delta cleaning process secures the quality and germinating capability of the seed by keeping the quantity of damaged seeds to an absolute minimum. The result is increased product value and higher earnings.

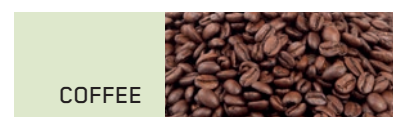
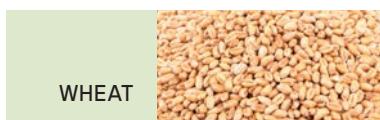
The Delta cleaner 150 series has been developed for the high capacity pre-cleaning of grain, peas and rape seed, as well as industrial cleaning of grain for milling and malting barley. The machine's large screen area with its accurately matched stroke and frequency is complemented by Cimbria's highly efficient pre-suction and after-suction system.



### DELTA CLEANERS

- Research, test and training take place at Cimbria's full-scale seed-grain plant. On request, local test centres carry out test cleaning of any given product and determine the optimum screen perforations for special processes.
- Delta Cleaners are available in different series with more than 30 different models to choose from offering capacities from 1 t/h fine-cleaning up to 450 t/h pre-cleaning.

## EXAMPLES OF PRODUCTS CLEANED IN A DELTA CLEANER





## DELTA CLEANER CONSTRUCTION

The Delta cleaners 150 series are constructed with large screen areas and Cimbria's highly efficient pre-suction and after-suction system. The suction system extracts light impurities from the material both at the machine inlet and outlet. The exhausted waste, dust and lightweight waste are deposited in expansion chambers and conveyed to the machine outlets by discharge augers equipped with a multi-flap air system to prevent false

air from entering the machine. The expansion chambers are designed for connection to a separate exhaust fan. The self-cleaning screens with ball boxes, containing rubber balls, are manufactured in a standard size which makes them fit all other types of Delta screen cleaners. They are available with various round or oblong perforations according to the material to be cleaned.

### INLET WITH SHAKER FEEDER

Optimal feed over the full width of the cleaner is achieved with a shaker feeder. The shaker feeder is designed to handle all kinds of grain and seed through gentle and controlled feeding. The feeding rate is controlled through step-less speed adjustment, thus ensuring the required capacity for any application.



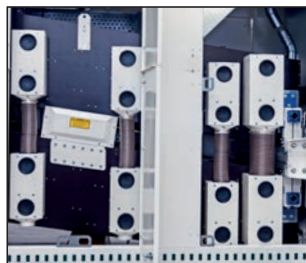
### PRE- & AFTER-SUCTION

The 150 series cleaners are equipped with a two-pass air separation system. The pre-suction is designed to remove dust and light foreign material at the inlet of the machine to reduce the amount of dust and fines inside the machine. This ensures a nice and even flow of product on the screens. The after-suction is designed to collect remaining husk and fines in the clean grain at the final outlet of the cleaner.



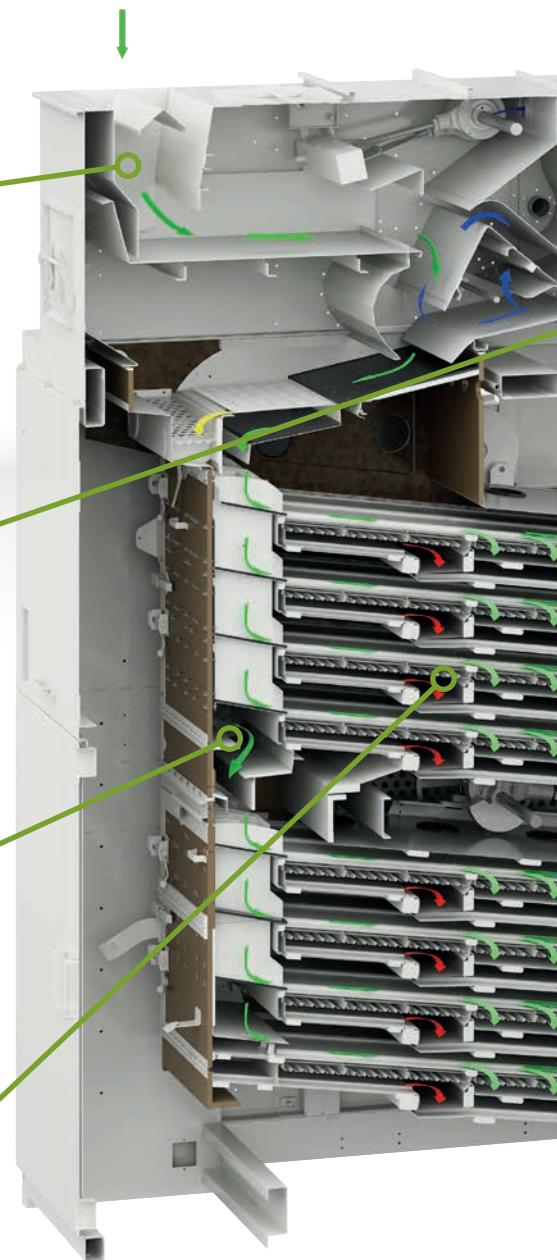
### FLOW

The 150 series cleaners are designed with the option of a flexible flow system which offers the operator the possibility of using the optimum flow for a specific application. With changeable outlets and dividers the operator can change between different flows. The optimum flow ensures maximum capacity and quality.



### SCREENS

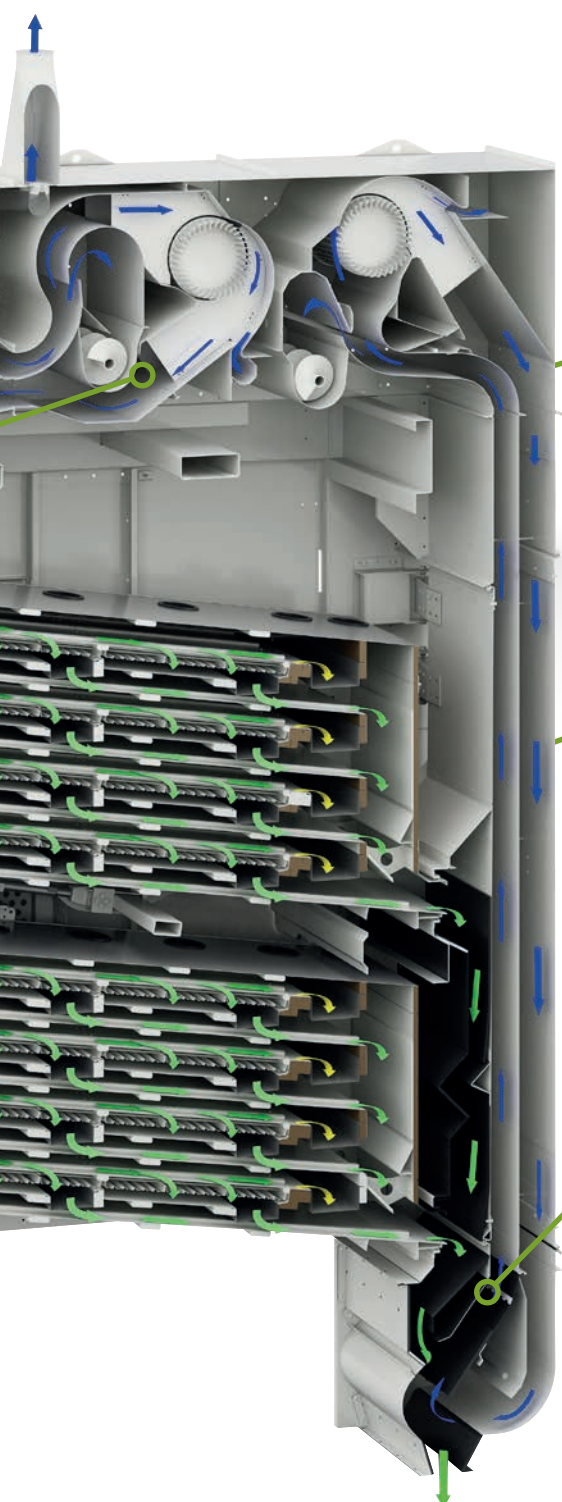
Cimbria screens are designed for the highest possible efficiency and are effectively kept clean by rubber balls in specially designed ball boxes. A high percentage of open area ensures maximum capacity in the machine.



## COMPLETE RANGE OF PRODUCTS AND TOTAL SOLUTIONS

The ball boxes are designed so that it is not necessary to remove the boxes for changing the screens.

Like all other Delta screen cleaners the base and the frame of the 150 series screen cleaners is a very rigid construction built from heavy gauge pressed steel. The screen boats are manufactured from selected insect-resistant and moisture-resistant marine plywood.

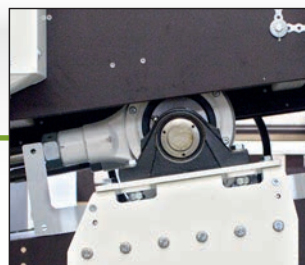


### SCREEN SHOES



The screens shoes are made in coated marine plywood to ensure a long lifetime. With its strong and flexible structure, this material is highly resistant to the constant movement in the machine. Wear areas inside the screen shoes are protected by wear plates.

### ECCENTRIC SYSTEM



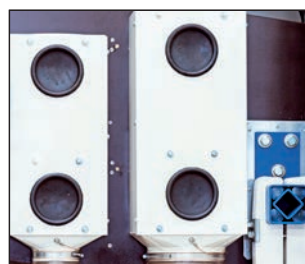
The eccentric system is designed to drive the screen shoes and create a gentle flow of product through the machine. The weight of each screen shoe is optimized to ensure a well-balanced and smooth motion. Supplied as standard with a flywheel to recapture the force created by the movement of the screens shoes and reduce power consumption.

### ELECTRONIC CONTROL SYSTEM



The 150 series cleaners can be supplied with an electronic control system. The system consists of a control panel which operates actuators and motors with integrated frequency control. The actuators operate numerous air gates inside the machine, and with digital adjustment settings ranging from 0-100, the accuracy of the settings is very high. The electronic control system includes adjustment of the shaker feeder.

### OPERATOR SAFETY



Operator safety is our highest priority. The Cimbia cleaners are designed with covers to protect the operator from all moving parts. Samples from each outlet of the machine can be obtained through a specially designed sample port which ensures user-friendly and safe operation.

## DELTA CLEANER MODELS



DELTA 157 MODEL

### DELTA 157 CLEANER

Screen area: 12 m<sup>2</sup>  
 kW consumption: 9.95 kW  
 Required air volume: 3600 m<sup>3</sup>/h

The Delta 157 cleaner is equipped with recirculating air units for pre-suction and after-suction which provide a total internal air volume of 16,000 m<sup>3</sup>/h .



DELTA 159 MODEL

### DELTA 159 CLEANER

Screen area: 24 m<sup>2</sup>  
 kW consumption: 4.50 kW  
 Required air volume: 12,000-18,000 m<sup>3</sup>/h

The Delta 159 Cleaner is equipped with an open air system for pre-suction and after-suction. This model is available in an all galvanized version with a bolted frame.



DELTA 159.1 MODEL

### DELTA 159.1 CLEANER

Screen area: 24 m<sup>2</sup>  
 kW consumption: 11.50 kW  
 Required air volume: 3600 m<sup>3</sup>/h

The Delta 159.1 cleaner is equipped with recirculating air units for pre-suction and after-suction which provide a total internal air volume of 16,000 m<sup>3</sup>/h .





## OPTIONAL ACCESSORIES

### INLET HOPPER & BUFFER BINS

Inlet hopper and buffer bins can be supplied with the Delta cleaner. This helps to ensure an even distribution of product across the full width of the cleaner. Buffer bin capacity of up to 2.5 m<sup>3</sup> can be installed, supported only by the frame of the cleaner. Further buffer bin capacity is available but will need additional external support.

### FANS

Aspiration can be supplied with the Delta cleaner; several different aspiration systems are available, and the solution for any application can be found within our range of fans.

### SPOUTS

Spouting can be supplied with the Delta cleaner for easy connection to other equipment in the plant. Outlets on the Cimbria cleaners interconnect with the comprehensive Cimbria Q-spout system.

### STAND

A stand can be supplied with the Delta cleaner to ensure a solid and steady foundation for the installation. A stand can help ensure the space needed to install conveyors for waste and clean product. Stands in different standard heights are available and customized stands can be offered to fit height requirements in a plant.

### PLATFORM AND STAIRS

An access platform can be supplied with the Delta cleaner. This ensures safe access to all necessary areas of the cleaner. A platform will help ensure a safe environment for the operator and can help reduce the time needed for service and maintenance, as well as the time needed to change screens. Platforms in different layouts are available, and customized platforms can be offered to fit layout requirements in a plant.





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