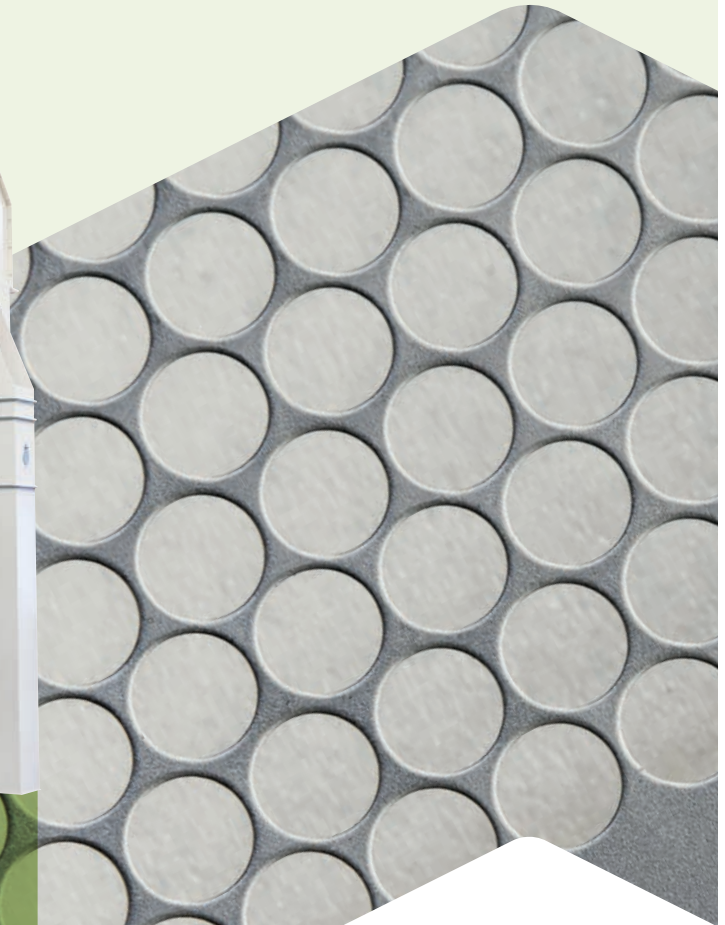


# DELTA CLEANERS

## 140 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.

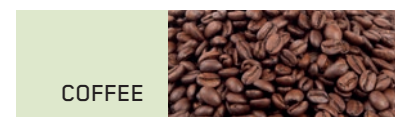
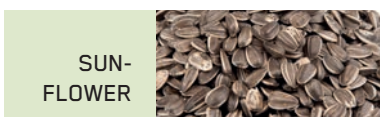
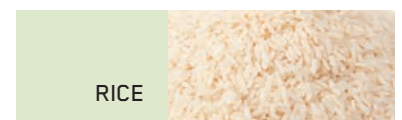
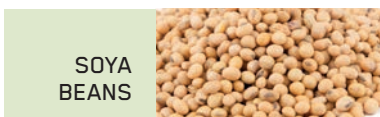
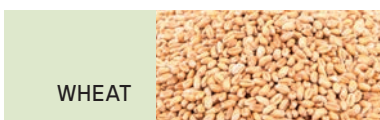
The Delta cleaners 140 series is a versatile series of screen cleaners designed for many different cleaning purposes, ranging from pre-cleaning of all cereals, peas, and rape seed to fine-cleaning of bread cereals, seed grain and malting barley, using the ideal screen area in conjunction with a sophisticated aspiration system.



### DELTA CLEANERS

- Research, test and training takes 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 featuring 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

## HIGH QUALITY MATERIAL AND COMPONENTS

### 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.



### FLOW

Cimbria Delta cleaners are designed with a fixed flow system which offers the operator the possibility of using the optimum flow for a specific application. The optimum flow ensures maximum capacity and quality.



### SCREEN SHOES

The screen shoes are manufactured 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. Several Cimbria Delta cleaners are equipped with screen shoes with flexible inclination from 6 to 12°.



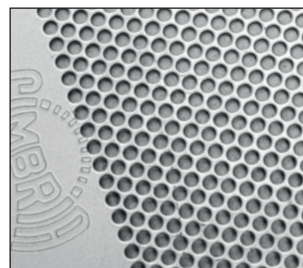
### PRE-SUCTION & AFTER-SUCTION

All Cimbria 140 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.



### 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.



### 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. When supplied with a flywheel, it can recapture the force created by the movement of the screens shoes and reduce power consumption.



### OPERATOR SAFETY

Operator safety is our highest priority. Cimbria cleaners are designed with covers to protect the operator from all moving parts. Samples from each outlet of the machine can be obtained with a specially designed sampler to ensure user-friendly and safe operation.



## DELTA CLEANER MODELS

The Delta cleaner 140 series is designed for ideal usage of the screen area in conjunction with a sophisticated aspiration system. The screen cleaning effect of the total screen area is increased by Cimbria's highly effective pre-suction and after-suction system, extracting 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.



DELTA 142 MODEL

### DELTA 142 CLEANER

Screen area: 5 m<sup>2</sup> & 7 m<sup>2</sup>  
 kW consumption: 2.25 kW  
 Required air volume: 6400 m<sup>3</sup>/h

The Delta cleaner model 142.1 has a total screen area of 5 m<sup>2</sup>  
 The Delta cleaner model 142.2 has a total screen area of 7 m<sup>2</sup>



DELTA 143 MODEL

### DELTA 143 CLEANER

Screen area: 7m<sup>2</sup>  
 kW consumption: 2.95 kW  
 Required air volume: 10600 m<sup>3</sup>/h

The Delta cleaner model 143.1 has a variable cleaner screen shoe inclination between 6 and 12°  
 The Delta cleaner model 143.2 has a fixed cleaner screen shoe inclination at 12°

## DELTA CLEANER MODELS



DELTA 144 MODEL

### DELTA 144 CLEANER

Screen area: 10 m<sup>2</sup>  
 kW consumption: 2.95 kW  
 Required air volume: 10600 m<sup>3</sup>/h

The Delta cleaner model 144.1 has a variable cleaner screen shoe inclination between 6 and 12°  
 The Delta cleaner model 144.2 has a fixed screen shoe inclination at 12°



DELTA 145 MODEL

### DELTA 145 CLEANER

Screen area: 13 m<sup>2</sup>  
 kW consumption: 2.6 kW  
 Required air volume: 11000 m<sup>3</sup>/h

The Delta cleaner model 145 has a fixed screen shoe inclination at 12° on both screen shoes.



DELTA 146 MODEL

### DELTA 146 CLEANER

Screen area: 15 m<sup>2</sup>  
 kW consumption: 3.3 kW  
 Required air volume: 15000 m<sup>3</sup>/h

The 146 cleaner screen shoe inclination is fixed on the upper screen shoe at 8°, but variable on the lower screen shoe between 6 and 12°.





## 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.

### ELECTRONIC CONTROL SYSTEM

Cimbria 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.

### 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 with 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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