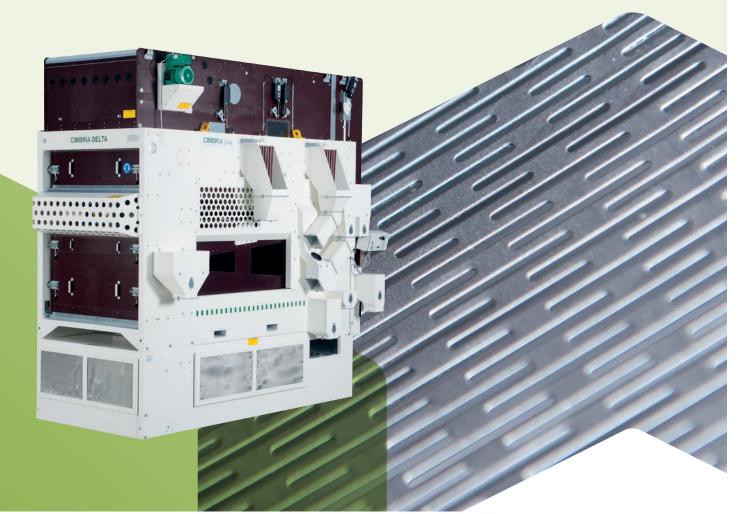
# DELTA CLEANERS 100 110 120 SERIES

SEED PROCESSING







# EFFICIENCY AND PURITY IN THE CLEANING PROCESS

# **CONSULTANCY BASED ON EXPERIENCE**

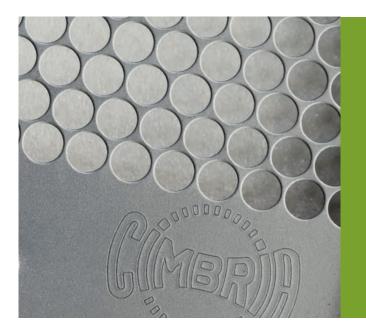
Accuracy and careful cleaning are key words in our development and production of the Cimbria Delta cleaners, and the quality of all material and components is uncompromisingly high. We offer advice and design of plants for all sorts of cleaning purposes based on R&D achievements and many years of experience.

Cimbria has a wide and experienced service network which is continuously informed of the latest technical product developments and cleaning processes. The service organization is at your disposal to ensure the best and quickest service.

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 undesired elements and potentially dangerous impurities with high precision. The efficient and gentle Delta cleaning process ensures the quality and germinating capability of the seed by keeping the quantity of damaged seeds at an absolute minimum. The result is increased product value and higher earnings. The 100-, 110- and 120-series are a combination of series designed for different specific applications. The 100- and 110-series have been developed for high quality fine cleaning of seed grain, malting barley, legumes, grans and garden seeds. The unique air lifting unit makes the 100 Series ideal or the most difficult separations. The 120 Series is developed for precise grading of grain and seed, the gentle flow of product through the machine ensures an excellent grading precision.



# **DELTA CLEANERS**

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

# EXAMPLES OF PRODUCTS CLEANED IN A DELTA CLEANER

WHEAT	OAT	GRASS SEED	
SOYA BEANS	BARLEY	PEAS	
MAIZE	MALT	RICE	
SUN- FLOWER	RAPE SEED	COFFEE	

# DELTA CLEANER CONSTRUCTION

The Cimbria Delta cleaners are constructed of standard modules which can be built together and ensure that specific needs for a particular cleaning process will be met at all times. The wide range of Cimbria Delta screen cleaners ensures excellent efficiency and purity in the cleaning of all kinds of crops by removing undesired elements and potentially dangerous impurities with high precision.

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 a gentle and controlled feeding. The feeding rate is controlled through a stepless speed adjustment, ensuring the required capacity for any application.

All Cimbria 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.

Cimbria Delta cleaners are designed with a flexible flow system which offers the operator the possibility of using the optimum flow for a specific application. With easy changeable outlets and dividers the operator can choose between up to 16 different flow options on specific models. The optimum flow ensures maximum capacity and quality.

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

# INLET WITH SHAKER FEEDER



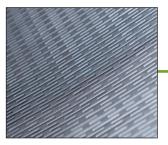
# **PRE- & AFTER-SUCTION**



### **FLOW**

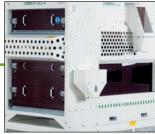


# SCREENS



# **COMPLETE RANGE** OF PRODUCTS AND **TOTAL SOLUTIONS**

# SCREEN SHOES



## ECCENTRIC SYSTEM



**ELECTRONIC** CONTROL SYSTEM



### AIRLIFTING SYSTEM



# **OPERATOR SAFETY**



The screens shoes are made in coated marine plywood to ensure a long lifetime. With its strong and flexible structure, this material is extremely resistant against the constant movement in the machine.

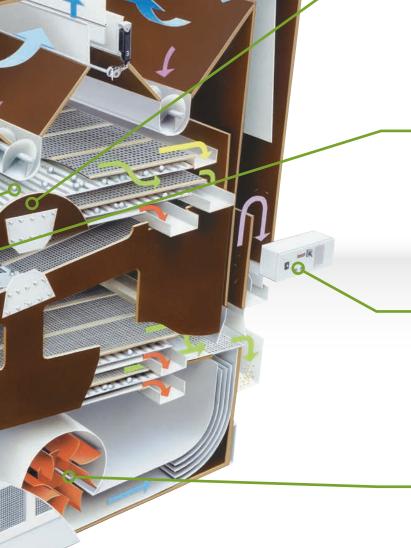
Wear areas inside the screen shoes are protected by easy replaceable plates in hardened steel.

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 wellbalanced and smooth motion. Supplied as standard with flywheel to recapture the force created by the movement of the screens shoes and reduce the power consumption.

Cimbria fine cleaners are 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 in the settings are very high.

The airlifting system consist of the airlifting unit providing a positive air flow from below the product and the negative air from the after-suction above. The unit is equipped with two staggered fans which ensures a homogenous air flow through the product on the final air screen. This combined with the electronic control system provides the most precise air separation adjustments on the market.

Operator safety is our highest priority. The 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 special designed sample takers to ensure a user friendly and safe operation.



# DELTA CLEANER MODELS



# **CIMBRIA DELTA SUPER CLEANERS**

The Delta 100 Series has the most advanced air system on the market. This series is suitable for cleaning of all kinds of grain and seed. Ideal for difficult separations.

- ☑ Shaker feeder
- ☑ Air lifting fan
- ☑ Pre- and After-suction
- $\blacksquare$  Electronic control system
- $\ensuremath{\ensuremath{\boxtimes}}$  Flexible screen flow



# **CIMBRIA DELTA FINE CLEANERS**

The Delta 110 Series is similar in design to the 100 Series, except it does not include the air lifting fans. This series is suitable for cleaning of grain and seed.

- Shaker feeder
- □ Air lifting fan
- Pre- and After-suction
- ☑ Electronic control system
- ☑ Flexible screen flow



# **CIMBRIA DELTA SCREEN GRADERS**

The Delta 120 Series is designed for a precise grading of grain and seed.

- ☑ Shaker feeder
- □ Air lifting fan
- Pre- and After-suction
- □ Electronic control system
- ☑ Flexible screen flow

# **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 in the full width of the cleaner. Buffer bin capacity of up to 2,5 m3 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 aspirations systems are available, and the solution for any application can be found within our range of fans.

# SPOUTING

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 ensuring the space needed to install conveyors for waste and clean product. Stands in different standard heights are available and customised stands can be offered to fit height requirements in a plant.

# PLATFORM

An access platform can be supplied with the Delta cleaner;. This ensures safe access to all needed areas of the cleaner. A platform will help ensuring 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 customised platforms can be offered to fit layout requirements in a plant.





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