

## Combi Cleaner & Pre Cleaner DELTA 143.1 & 143.2



**Cimbria DELTA Cleaner type 143** is an extremely versatile screen cleaner specifically designed for many different cleaning purposes, ranging from pre cleaning of all cereals, peas, rape seed to fine cleaning of bread cereals, seed grain and malting barley, using a 7 m<sup>2</sup> screen area in conjunction with a sophisticated aspiration system.

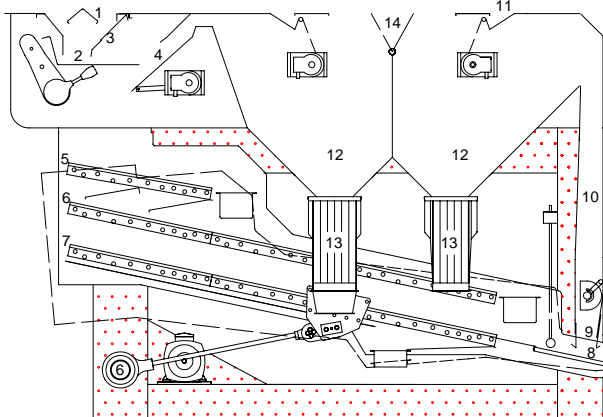
Like all other DELTA screen cleaners the base and the frame of type 143 are built in heavy gauge pressed steel of a very rigid construction. The screen boat is manufactured of selected insect and moisture resistant marine plywood.

The 143 type are available in two versions: The 143.1 Combi Cleaner with adjustable screen inclination. The 143.2 Pre-Cleaner having same size and accessories, but without adjustable screen inclination.

1. Pre-cleaning of wheat and barley: screen inclination 12°, hourly capacity 45 tons.
2. Cleaning of malting barley: Screen inclination 8°, hourly capacity 5-8 tons (depending on the quality of the pure malt).
3. Cleaning of rape seed: Screen inclination 7°, hourly capacity 3-6 tons (cleaning efficiency approx. 98%).
4. Cleaning and grading of cereal seeds: Screen inclination 6°, hourly capacity 3-5 tons.

### Screens and aspiration

The screen cleaning effect of the 7 m<sup>2</sup> total screen area is increased by Cimbria's highly effective pre and after suction system, extracting light impurities from the material both at the machine inlet and outlet. The exhausted waste, dust and light weight trash is deposited in two separate expansion chambers and conveyed to the machine outlets by two discharge augers which are equipped with a multiflap air system to prevent ingress of air i.e. false air. The expansion chambers are designed for connection to a separate exhaust fan. The 1 m<sup>2</sup> scalping screen separates coarse impurities while the 3 m<sup>2</sup> pre-screen separates oversize material. The 3 m<sup>2</sup> bottom sieve can be utilized as grading screen or sand sieve separating undersize material. The ball boxes are designed so that is not necessary to take out the boxes when changing the screens. The self cleaning screens with ball boxes containing rubber balls are manufactured in a standard size so that they nearly fit all other types of DELTA screen cleaners and are available with various round or oblong perforations according to the material to be cleaned.



### 1. Inlet

Optimal feed over the width of the machine is achieved by a shaker feeder with stepless adjustment via frequency regulating.

### 2. Shaker feeder

Ensures an uniform feeding on the entire width of the machine also when cleaning difficult flowing products, i.e. grass seed, in

addition the shaker feeder also prevent the product from flowing when the shaker feeder has stopped.

### 3. Adjustable feed gate

The feed gate will only be adjusted when the opening need to be bigger due to difficult flowing products, i.e. grass seed.

### 4. Pre Suction System

The pre suction system removes dust and light weight trash before screening. The aspiration opening of the pre suction channel is adjustable thus achieving a variable air velocity.

### 5. Pre screen

The 1 m<sup>2</sup> pre screen for separation of coarse impurities.

### 6. Scalping Screen

The 3 m<sup>2</sup> scalping screen separates oversize material.

### 7. Grading screen / sand sieve

The lowest row of screens (3 m<sup>2</sup>) can be utilized as grading screen or sand sieve according to cleaning purpose.

### 8. Outlet for Cleaned Product

### 9. Air screen

Light weight particles are "air separated" at the screen which is positioned under the suction opening of the after suction channel. Air screens are delivered with two different types of wire mesh.

### 10. After Suction Channel

The light weight product separated at the air screen is conveyed in the after suction channel to the expansion chamber.

### 11. False air intake

Two false air flaps for controlling the air quantity in both the pre and after suction system.

### 12. Expansion Chambers

### 13. Screw Conveyors

Two screw conveyors discharge the products separated in the expansion chamber to the sacking off points.

### 14. Air divider Shutter: (suction point)

Distribution of the air quantity for respectively pre and after suction system.

### CAPACITY GUIDE

#### Pre cleaning: (max. 20% moisture content)

Wheat and barley	45 t/h
Maize, peas and rape seed	35 t/h
Industrial cleaning	25 t/h

#### Fine Cleaning: (max. 15% moisture content) (type 143.1 only)

Malting barley	5-8 t/h
Seed Grain	3-5 t/h
Rape Seed (98% purity)	3-6 t/h
Maize and peas	3-4 t/h

The capacity may vary depending on the waste quantity and the moisture content.

#### Overall Dimensions:

Height (without fan)	2246 mm
Length	3310 mm
Width (incl. motor)	1913 mm
Screen area	7 m <sup>2</sup>

#### Motors

Shaker feeder	0.75 kW
Screens	2.2 kW

#### Air volume:

Pre- and after suction	10600 m <sup>3</sup>
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#### Weight

Freight volume	1935 kg
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#### Dynamic load (4.8 Hz)

P <sub>H</sub> =+/-2353N	P <sub>V1</sub> =+/-2720N	P <sub>V2</sub> =+/-1367N	(10N= 1 kg)
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#### Accessories:

Exhaust fan type CM 84 and Cyclone CS11, Inlet hopper

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