

# Combi Cleaner DELTA 146



**Cimbria Delta Combi Cleaner 146** 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 large screen area in conjunction with a sophisticated aspiration system. The flexibility of this machine is due amongst other things to its readily adjustable screen inclination from 6 to 12 degrees. The screen inclination has essentially different cleaning purposes:

**1. Pre-cleaning of wheat and barley:**

Screen inclination 12°, hourly capacity 100 tph.

**2. Cleaning of malting barley:**

Screen inclination 8°, hourly capacity 15-25 tph (depending on the quality of the pure malt).

**3. Cleaning of rape seed:**

Screen inclination 7°, hourly capacity 20 tph (cleaning efficiency approx. 98%).

**4. Cleaning and grading of cereal seeds:**

Screen inclination 6°, hourly capacity 8-12 tph.

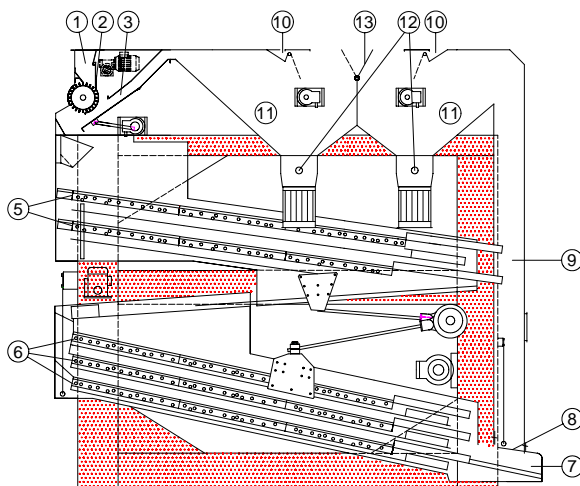
The screen cleaning effect of the 15 m<sup>2</sup> total screen area is increased by Cimbria's highly effective pre and after suction system, extracting light impurities from the material both at the machine inlet and outlet. Both screen boats, containing a total of 5 screen rows, are oscillated via a double eccentric system producing a vibration free motion.

The two-pre-screens, (operating in parallel) separate coarse impurities while the three bottom sieves (operating in parallel) can be utilized as grading screens or sand sieves according to the material to be cleaned.

The self cleaning screens with ball boxes containing rubber balls are manufactured in a standard size so that they fit all other types of Delta screen cleaners and are available with various round or oblong perforations according to the material to be cleaned.

The ball boxes are designed so that it is not necessary to take out the boxes when changing the screens.

Like all other Delta screen cleaners the base and the frame of the 146 is built from heavy gauge pressed steel and is a very rigid construction. The screen boats are manufactured of selected insect and moisture resistant marine plywood.



**1. Inlet**

The inlet is equipped with a feeding roller dispersing the material to be cleaned equally over the entire width of the machine. Stepless speed adjustment of the feed roller is achieved with a separate adjustable gear motor. In addition to this is the feed roller equipped with a 3-step sprocket wheel regulation. This enables the throughput to be adjusted very precisely to suit the particular material being cleaned.

**1a. Alternative inlet**

Optimal feed over the width of the machine is achieved by a shaker feeder with stepless adjustment via frequency regulating. 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. Max. capacity 50 t/h.

**2. Feed Valve**

Spring loaded safety flap.

**3. 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 Screens**

Two pre screens, operating in parallel, separate coarse impurities and deliver the product to the lower triple sieves for further treatment.

**6. Grading Screens/Sand Sieves**

The three lower rows of screens can be utilized as grading screens or sand sieves according to cleaning purpose. The screen inclination can be adjusted from 6 to 12 degrees through a worm with hand wheel.

**7. Outlet for Cleaned Product**

**8. 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.

**9. After Suction Channel**

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

**10. False Air Intake**

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

**11. Expansion Chambers**

**12. Screw Conveyors**

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

**13. Air Divider Shutter (suction point)**

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

<b>Capacity Guide</b>	
Wheat and Barley - Pre cleaning - (20% moisture)	100 t/h
Malting barley (15% moisture)	15-25 t/h
Rape seed (9% moisture)	20 t/h
Seed grain (14% moisture)	8-12 t/h
The capacity may vary depending on the waste quantity and the moisture content	
<b>Overall Dimensions</b>	
Height (without fan)	3230 mm
Length	3625 mm
Width (with motor)	1958 mm
Screen area	15 m <sup>2</sup>
<b>Motors</b>	
Feeding roller	1.1 kW
Alternative shaker feeder, max. capacity 50 t/h	0.75 kW
Screens	2.2 kW
<b>Accessories</b>	
Exhaust fan type CM or Cyclofan. Inlet hopper DD 001180	
<b>Air volume:</b> Pre- and after suction	15000 m <sup>3</sup>
<b>Weight</b>	3035 kg
Freight volume	25 m <sup>3</sup>
<b>Dynamic load (4.8 Hz)</b>	
P <sub>H</sub> = +/- 993 N	P <sub>V</sub> = +/- 2675 N (10 N = 1 kg)

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