

## Science of Seed Processing



## ORION SERIES PRE-CLEANERS OSCILLATING TYPE

SINCE  
2080

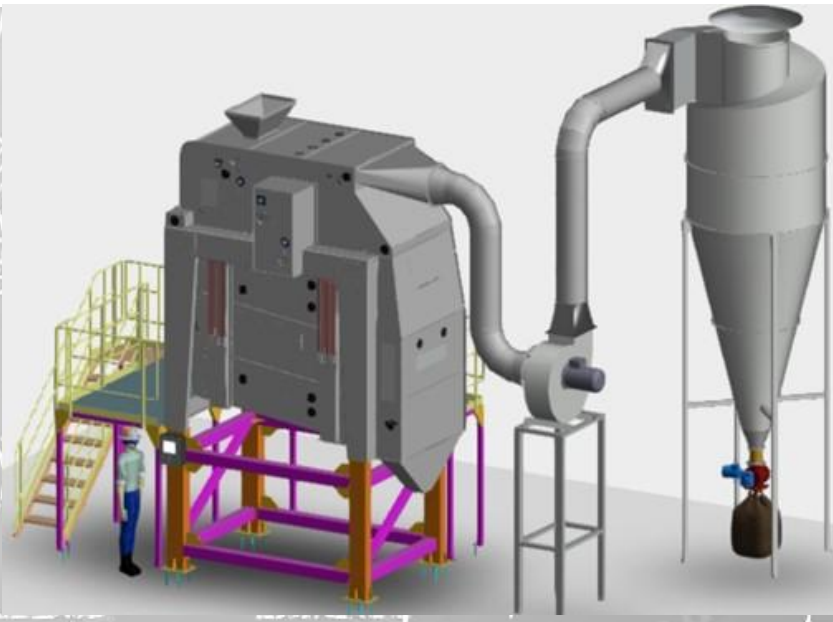
## ORION SERIES SEED PRE-CLEANING MACHINE OSCILLATING TYPE

For more than 15 years, **ADDAMS** has been a fixture institution in the development, design, and production of cleaning and grading machines. Throughout the decades, we have had a significant impact on the technical standards of these systems. Especially when it comes to harvest crop intake systems, as well as pre-cleaning and central cleaning systems for cereal grains, maize, oilseeds, legumes, malt, rice, coffee, and soybeans, a wide range of users rely on technology made by ADDAMS.

Our high-performance machines are used mainly in

- Harvest crop intake and receipt facilities, delivery pre-cleaning operations
- Mills and malting plants
- Silos and storage warehouses
- Seed processing plants

These machine types, although vastly different from one another, have a critical thing in common: Anyone opting for one of the ORION series cleaning and grading machines will get thousand-fold proven technology for cleaning cereal grains, oilseeds, and legumes, and for processing malting barley, malt, and seed grains. And a tried-and-true system with air classification at the infeed end and high-intensity vertical sifting at the outfeed end. Countless companies all over The world is putting these cleaning systems to the test every day.



Seed cleaning machines have been one of ADDAMS's core products right from the outset. Through critical dialogue with our customers and partners, we have consistently received and implemented requests and suggestions, and responded to market demands with targeted developments. The logical result: today's state-of-the-art VEGA series cleaning machines, which leave nothing to be desired, thanks to their functional details and holistic, tailor-made concepts. Quality shows in several features, such as e.g.:

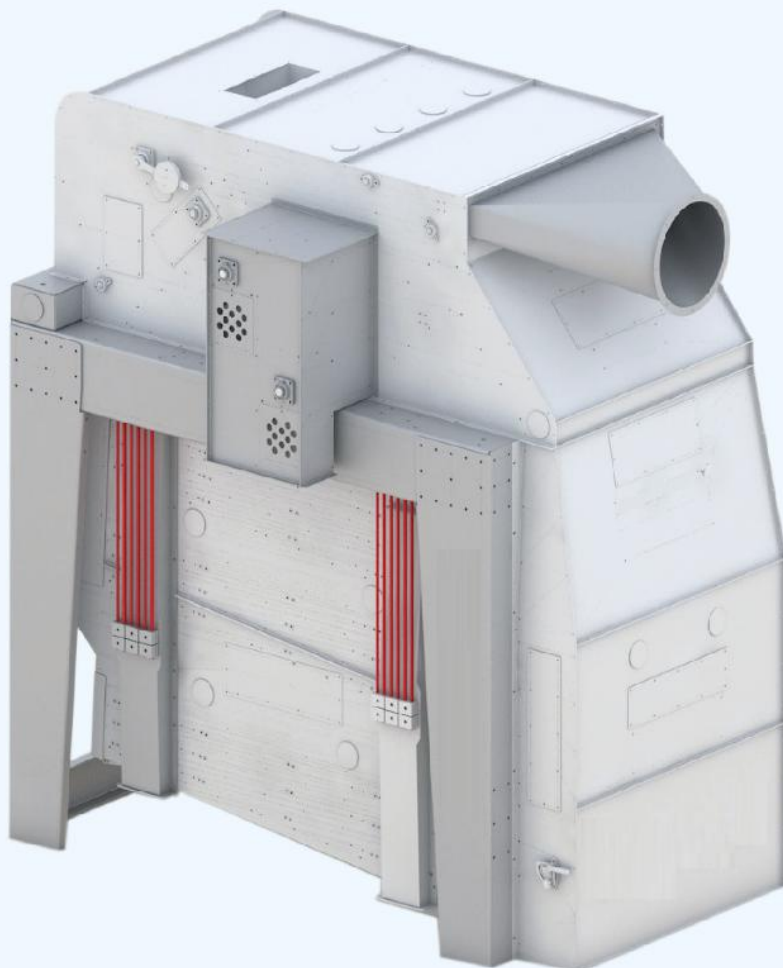
- \* State-of-the-art technology based on decades of experience in the development of high-quality threshing-crop cleaning machines
- \* Double aspiration thanks to vertical sifters at the infeed and outfeed ends, for high-intensity, economical, and environmentally-friendly cleaning through air separation of the fine particles

SINCE  
2080

SINCE  
2080

## APPLICATION & CHARACTERISTICS

- \* High hourly output rates thanks to large screen surfaces, even for very contaminated or wet products
- \* Economical solution for processing one or two different product types without the need for a screen change
- \* Optimized system adaptability to the cleaned product thanks to air volume regulation – either by remote control or directly „hands-on “
- \* Minimum maintenance thanks to optimized design and use of high-quality components



Cleaning machines of the ORION 22A, 222A, 333A, and 2222A series are globally proven universal cleaning machines for single or double product sorting, eliminating the need for screen exchange. They have been developed specifically for handling complex products such as e.g., rape, and are used primarily in silo and processing plants as well as in storage warehouses and malting plants.

### Main features

- \* Economical and highly efficient cleaning system thanks to the twice-over use of the aspiration air
- \* High output rates thanks to the time-tested plan sifter system with circular vibratory movements
- \* Cleaning and grading through course- and grain screens into

4 fractions:

Fraction 1 = Accept seed

Fraction 2 = Undersize Admixtures Waste

Fraction 3 = Oversize Admixtures

Fraction 4 = Infeed and outfeed aspiration lightweight Admixtures

- \* High operational reliability thanks to screens with perforated metal plates on rugged steel frames and a time-tested rubber ball cleaning system

SINCE  
2080

SINCE  
2080

## ORION PRE-CLEANING FEATURES

**1- Product inlet with vibrating tray** for the uniform and gentle distribution of the product across the entire machine width.

**2- Inlet Aspiration:** removes lightweight particles and dust from seed, which reduces the sieve load and increases the cleaning quality

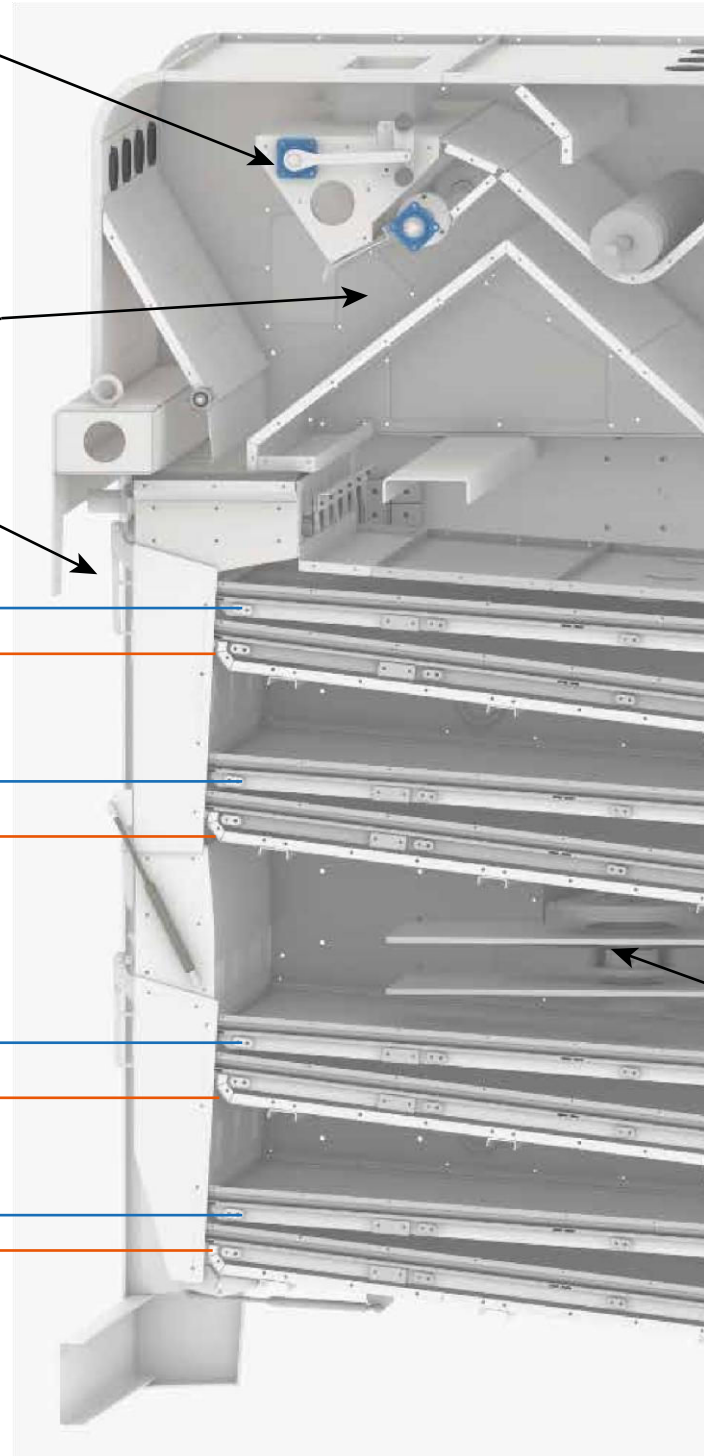
**3- Screen door:** easiest access to all screen layers in no time.

**4- Over size Screen layers:** reliable removal of coarse or bigger particles.

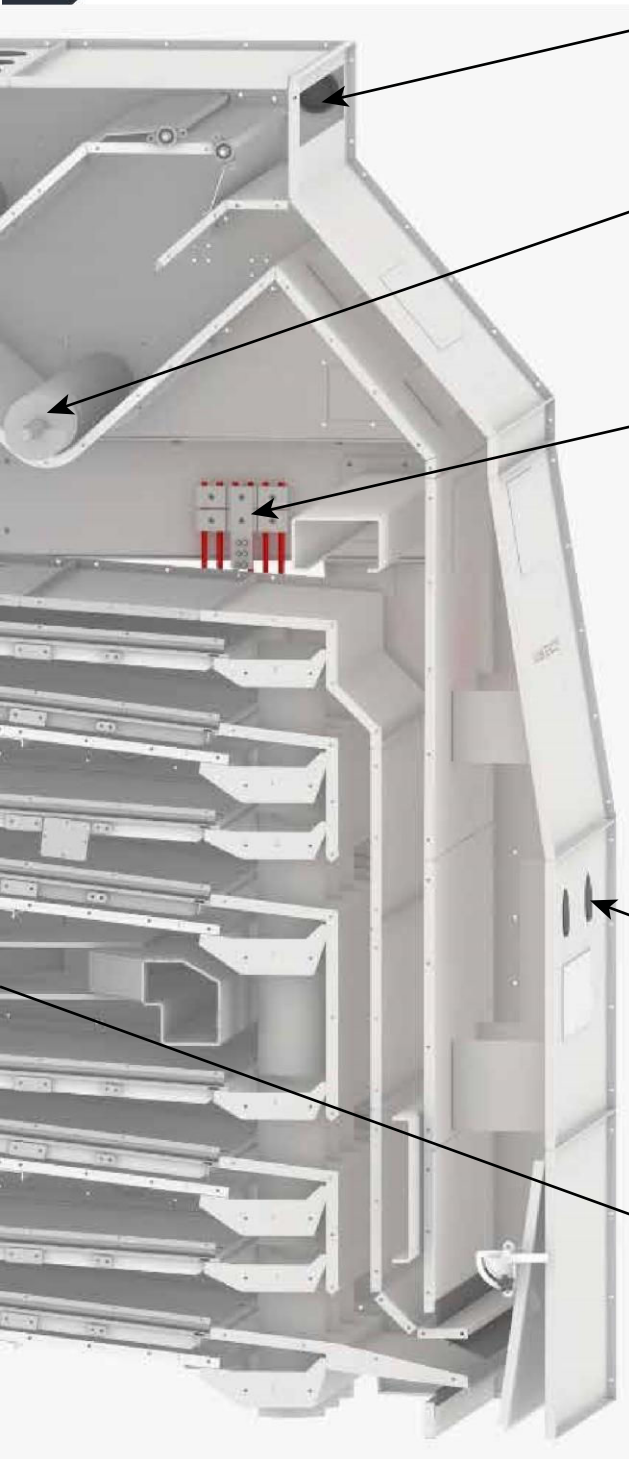
**5- Under size screen layers:** precise separation in;  
1st grade (accept product) and  
2nd grade (broken, sand, small grain, etc.)

**6- Rubber ball screen cleaning** under all screen area.

**13- Dust -proof rubber cover:** for quick and easy maintenance and accessibility to the interior of the machine.



SINCE  
2080



**9- Exhaust air connection: guides the dusty air to the connected de-dusting system to ensure clean air in the machine**

**10- Aspiration Chamber with discharge screw discharge of light material from inlet and outlet aspiration to reduce the filter load and to provide a perfect checking point for aspiration settings.**

**11- Polyamide rods: safe suspension of the sieve box without the transmission of vibrations onto the sieve frame; with special shape for easy installation**

**8- Oscillation monitor: safety equipment that leads to the immediate shutdown of the sieving machine in case of irregular screen box movement and thus ensures safe operation.**

**12- Vertical sifter / Outlet aspiration: integrated, easy to adjust and illuminated aspiration channel with large inspection windows for optimal adjustment of the air volume to the product.**

**7- Flywheel and brake motor: drive designed for continuous operation which ensures the gentle circular movement of the sieve box according to the proven plan sifter principle.**

**Intake capacity (up to 4 % of impurities)**

Product	Screens*	OC-22A	OC-2222A	OC-333A
Wheat 0,75 t/m <sup>3</sup> 18% H <sub>2</sub> O	PS: D8 MS: 2,25 x 25	60 t/h	120 t/h	90 t/h
Feed Barley 0,65 t/m <sup>3</sup> 18% H <sub>2</sub> O	PS: D8 MS: 2,25 x 25	50 t/h	100 t/h	75 t/h
Rapeseed 0,6 t/m <sup>3</sup> 14% H <sub>2</sub> O	PS: D3,5 MS: 1 x 25	45 t/h	90 t/h	65 t/h
Maize (corn) 0,75 t/m <sup>3</sup> 15% H <sub>2</sub> O	PS: D13 MS: 2,25 x 25	60 t/h	120 t/h	90 t/h
Maize (corn) 0,75 t/m <sup>3</sup> 35% H <sub>2</sub> O	PS: D13 MS: ---	30 t/h	60 t/h	45 t/h
Soya Beans 0,75 t/m <sup>3</sup> 18% H <sub>2</sub> O	PS: D13 MS: 2,25 x 25	65 t/h	130 t/h	95 t/h
Paddy 0,55 t/m <sup>3</sup> 18% H <sub>2</sub> O	PS: 5,5 x 25 MS: 1,4 x 25	22 t/h	45 t/h	33 t/h
White Rice 0,75 t/m <sup>3</sup> 12% H <sub>2</sub> O	PS: 5,0 x 25 MS: 1,25 x 25	20 t/h	40 t/h	30 t/h

\*PS: Preliminary Screen; MS: Main Screen

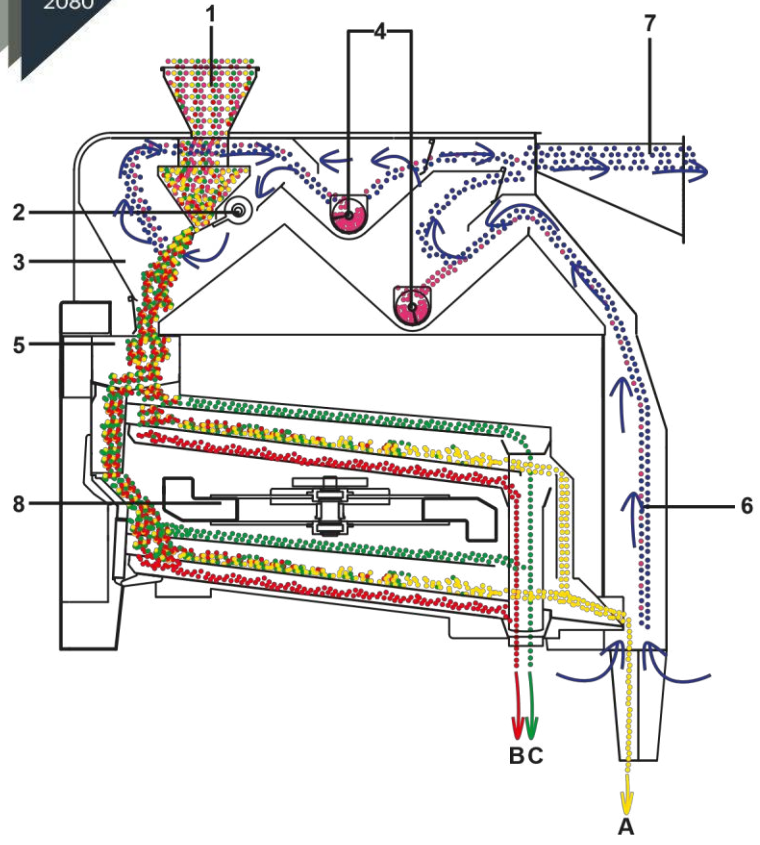
## ORION PRE-CLEANER DATA SHEET

	Unit	OC - 22A	OC - 2222A	OC - 333A
<b>Working Width</b>	mm	1.500	1.500	1.500
<b>Screen Area</b>				
Total		12	24	27
Preliminary screen area		6	12	9
Main screen area		6	12	9
Finishing screen area	m <sup>2</sup>	---	---	9
<b>Connected load Screen box</b>				
Others	kW	2,2 0,75	3,0 0,75	3,0 0,75
<b>Aspiration connection</b>				
Exhaust air (at 90 mm WC)	m <sup>3</sup> /min	140	195	260
Screen box (at 30 mm WC)		12	12	12
<b>Drive side</b>				
<b>Total weight</b>	Kg	ca. 4.500	ca. 6.000	ca. 7.000
<b>Dimensions Length</b>				
Width	mm	3.450	3.450	3.450
Height		2.590 2.500	2.590 3.270	2.590 3.270
<b>Optional screen switching</b>		yes	yes	yes

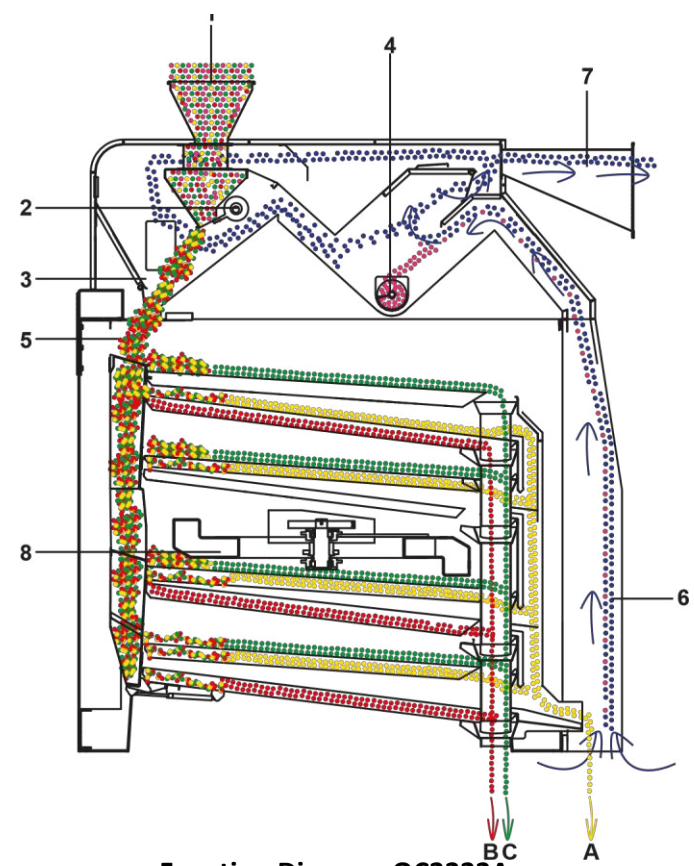
The values are non-binding, technical changes reserved. In cramped mounting conditions, the dimensions of the universal aspirators should be reviewed again.

SINCE 2080

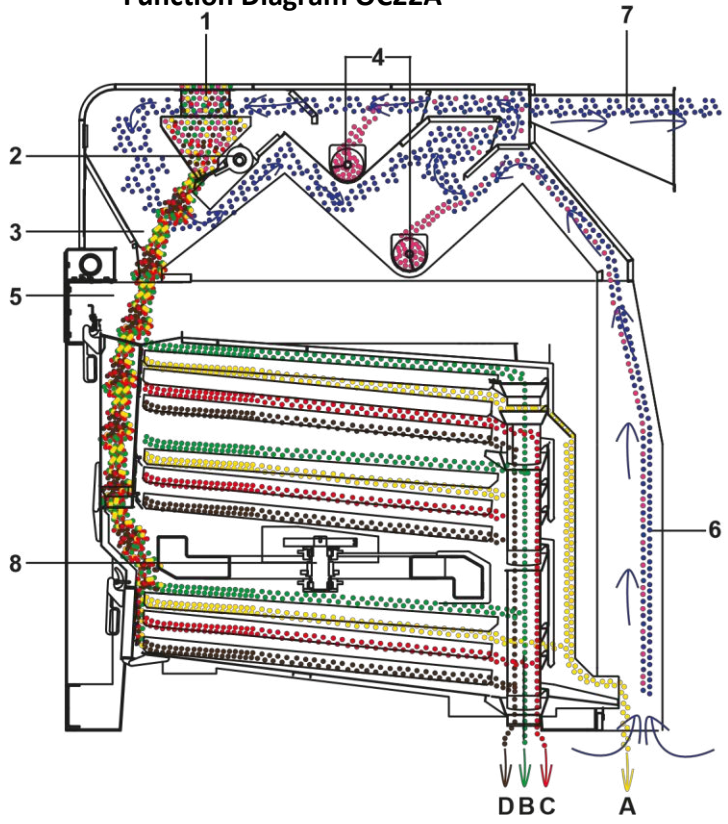
# ORION PRE-CLEANER FUNCTION DIAGRAM



Function Diagram OC22A



Function Diagram OC2222A



Function Diagram OC333A

- 1) Product inlet
- 2) Distribution gate
- 3) Inlet aspiration
- 4) Expansion chambers with discharge screws
- 5) Product distribution onto screens
- 6) Vertical sifter
- 7) Exhaust air
- 8) Screen box drive
  
- A) Cleaned Seed
- B) Undersize
- C) Oversize
- D) Undersize 2

SINCE 2080