

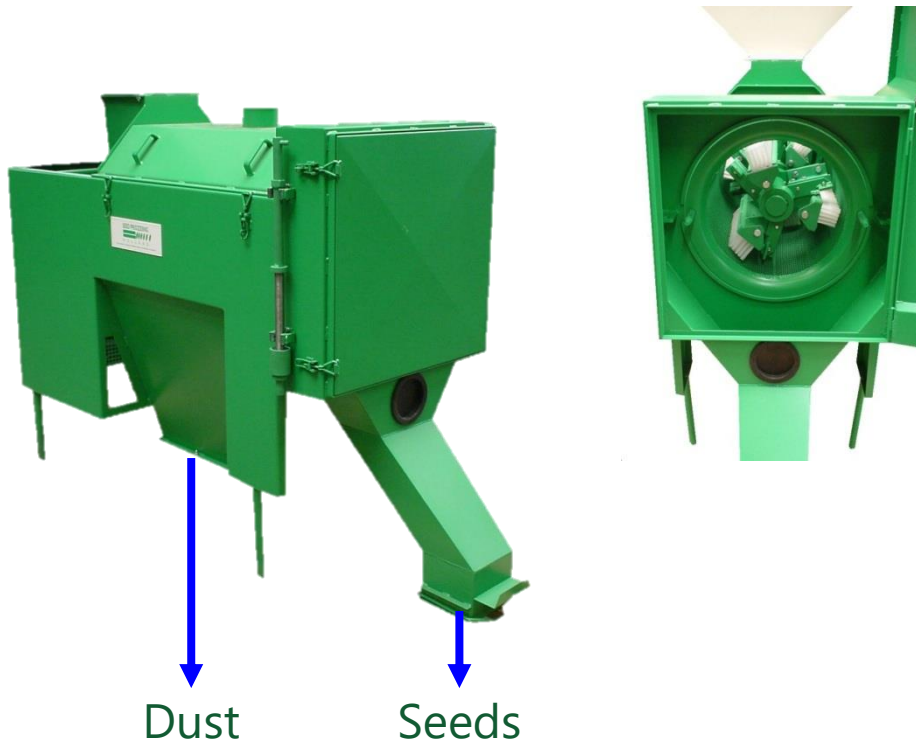
Seed Fine Cleaning equipment



**seed fine cleaning
equipment**

Seed Fine Cleaning Equipment

Seed Brushing Machines: high capacity, polishing of seeds like carrot, watermelon and beet.



Seed Fine Cleaning Equipment

Seed Brushing Machines: high capacity, polishing of seeds like carrot, watermelon and beet.



Option: belt feeder



Seed Fine Cleaning Equipment

Seed De-Awner Machines: high capacity, polishing of seeds like carrot, spinach.

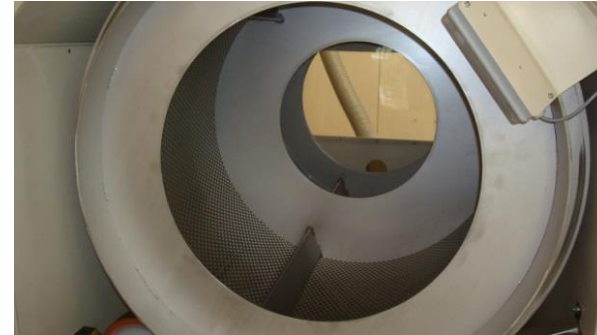


Complete set up frame for seed container.
Collecting polished seeds in dust free environment.



Seed Fine Cleaning Equipment

Seed Polishing Machine: polishing of squash, melons, cucumber and tomato seeds.



Polishing seeds inside a bag.
Slow rotation of bag inside large perforated cylinder (30 – 60 minutes process time)
Closed environment, dust exhaustion connectable



Seed Fine Cleaning Equipment

Seed Polishing Machine: polishing of squash, melons, cucumber and tomato seeds.



Seed Fine Cleaning Equipment

Seed Air Separators: different capacity density grading



Front side

- 4-5 weight fractions
- 3-4 individual air chambers
- No static issues
- Glass hinge-able door
- Aluminium anodized



3 different models available:

SAS-020 < 5 Kg p/h
SAS-140 < 60 Kg p/h
SAS-160 < 100 Kg p/h



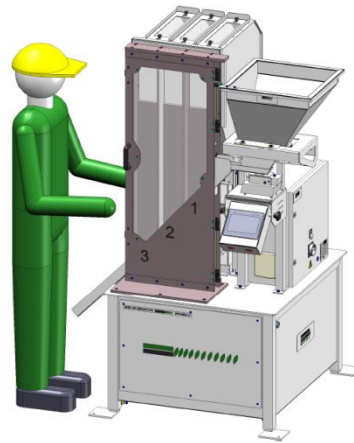
Back side

Seed Fine Cleaning Equipment

Seed Air Separator SAS-020: low capacity density grading.



This model has 3 individual air chambers



Suitable for small lots of high value flower and or vegetable seeds.



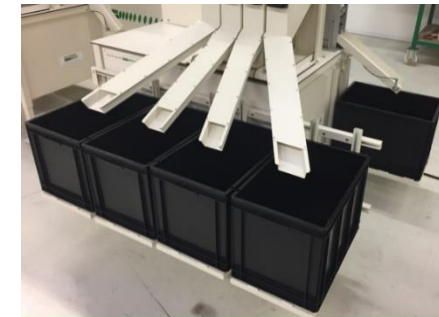
seed fine cleaning
equipment

Seed Fine Cleaning Equipment

Seed Air Separator SAS-140: medium capacity density grading.



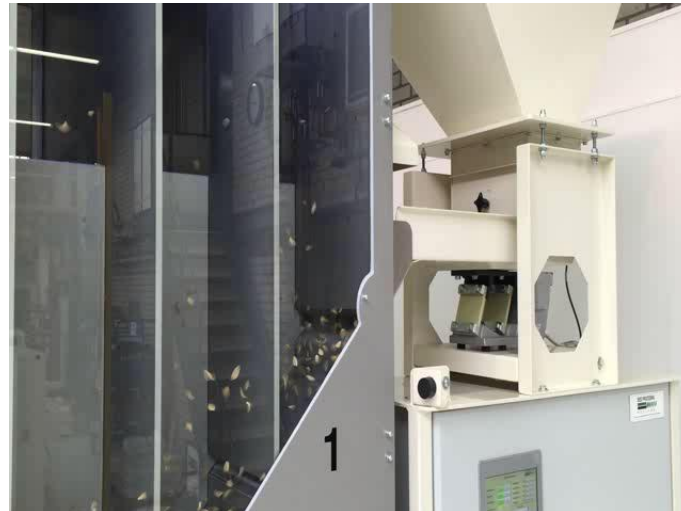
Option: touch screen control



Option: Extended outlets in combination with Extended outlet for heaviest seeds and Foldable plateau (rear side)

Seed Fine Cleaning Equipment

Seed Air Separator SAS-160: high capacity density grading.



Seed Fine Cleaning Equipment

Seed Air Separator SAS-160: high capacity density grading.



Outlets to seed containers or buckets

Seed Fine Cleaning Equipment

Seed Air Separator (de-stoner) 4200



Separation of, soil, stones and other parts (wheats) from seeds

Seed Fine Cleaning Equipment

Seed Air Screen Machine: medium high capacity, separating stones, sand, empty seeds etc.



**Adjustable screen
boat inclination
between 3 - 10 degrees**



**Easy screen closing
(locking) & opening
system**



Seed Fine Cleaning Equipment

Seed Air Screen Machines: installed underneath a platform



All separations can be collected in bags or containers

Speed control feeding belt



Option:
pre-aspirator
(for dirty seeds)

Speed control screen boat



Seed Fine Cleaning Equipment

Seed Air Screen Machines: 4 models available



- 1) Model 4400.30.00: 3 screen levels (l x w) 1000 x 600 mm (total 1.8 m²)
- 2) Model 4400.35.00: 3 screen levels (l x w) 1050 x 740 mm (total 2.3 m²)
- 3) Model 4400.36.00 : 3 screen levels (l x w) 1515 x 1050 mm (total 4.7 m²)

Model 2 and 3 suitable for Selecta screens type, **Standard 1 and 2**

- 4) Model 4400.37.00: 3 screen levels (l x w) 800 x 1000 mm (total 4.8 m²)



Option:
heavy seeds
transported to
higher level with
seed elevator



Seed Fine Cleaning Equipment

Seed Air Screen Machines: high capacity separating seeds from, weeds, stones and empty seeds.



Seed Fine Cleaning Equipment

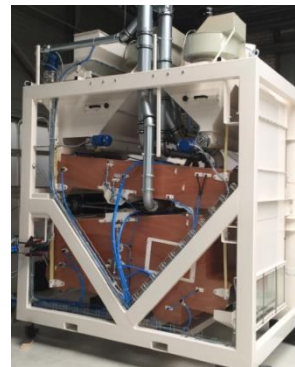
Seed Air Screen Machines: high capacity separating seeds from, weeds, stones and empty seeds.



Air separation
(density) channel

Seed Fine Cleaning Equipment

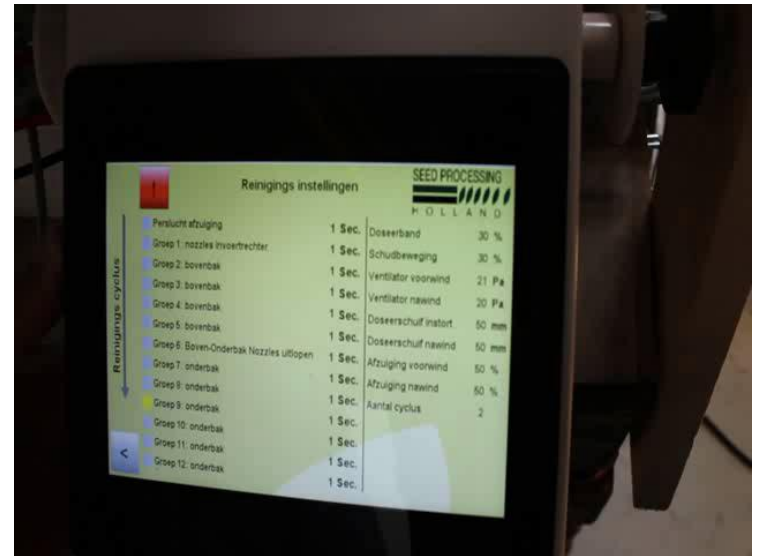
Seed Air Screen Machines: New generation – auto compressed air cleaning, sound insulation etc



Seed Fine Cleaning Equipment

Seed Air Screen Machines: New generation – auto compressed air cleaning

Auto screen locking system



Compressed air cleaning inside machine



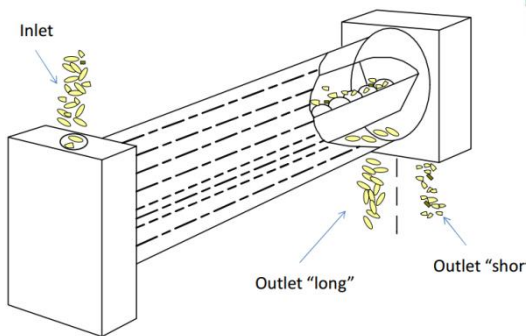
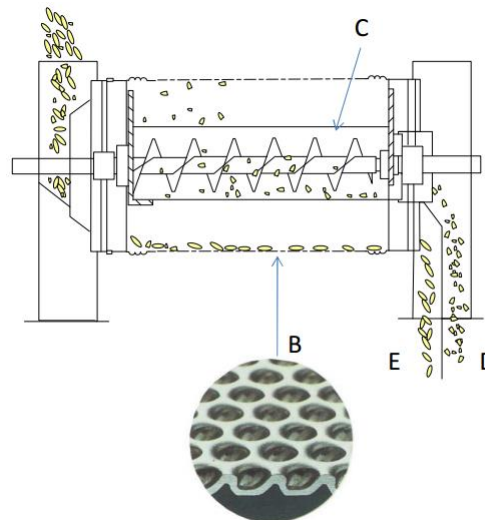
Seed Fine Cleaning Equipment

Seed Indent Cylinders: high capacity separating based on length, like carrots, lettuce, melons etc.



Different lengths (capacity)
cylinders available

Single or double (1 over 1)



Option: protection covers
with safety switches



Seed Fine Cleaning Equipment

Seed Indent Cylinders: high capacity separating based on length, like carrots, lettuce, melons etc.



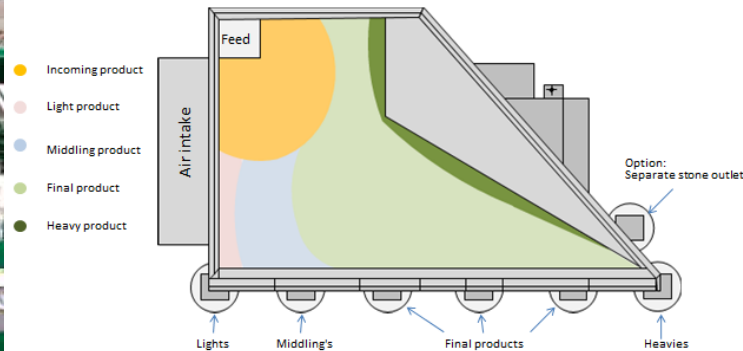
Seed Fine Cleaning Equipment

Seed Gravity Separators: high capacity, density grading, increasing seed quality.



Seed Fine Cleaning Equipment

Seed Gravity Separators: high capacity, density grading, increasing seed quality.



Seed Fine Cleaning Equipment

Seed Gravity Separators: high capacity, density grading, increasing seed quality.



Option: automatic
hydraulic
deck inclination
With remote control



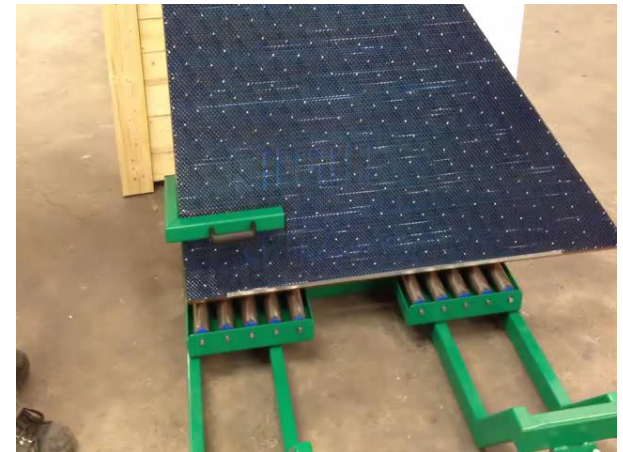
Option:
special outlet for direct
collection of seeds into
seed containers



Seed Fine Cleaning Equipment

Seed Gravity Separators: to support the deck when changing deck type. HSE reduce lifting weights for operators

Option: deck tilting cart



In up-right position the deck can be rolled to for example a deck storage rack

Seed Fine Cleaning Equipment

Seed Gravity Separators: complete installations.

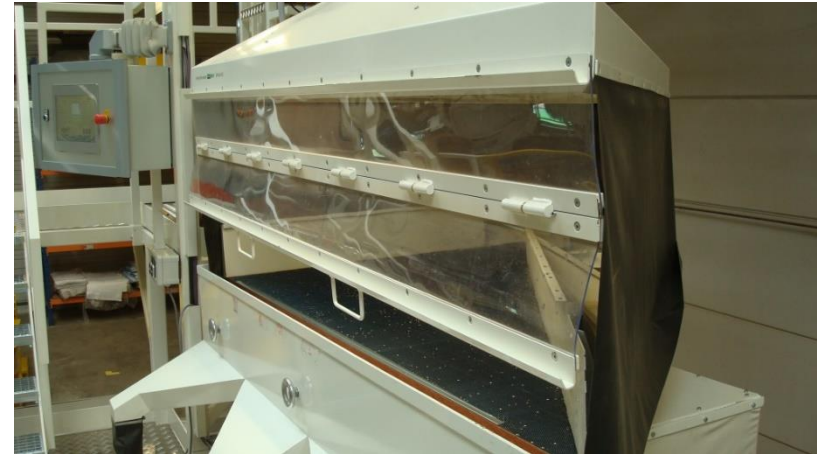


- Dust free box turning (tipping)
- Vacuum transport to separator
- Gravity separator (2000 kg p/h)
- Automatic switch with valves to containers
- Dust free environment (HSE)
- Operating after working hours



Seed Fine Cleaning Equipment

Seed Gravity Separators: complete installations.



Details:

- Closed dust exhaustion hood
- Automatic (recipe) menu
- Vacuum transport system



Seed Fine Cleaning Equipment

Seed Calibrating Machine: high capacity, accuracy sizing of cabbage, spinach, carrot and/or melons.



3 screen machine. Using stainless steel perforated screens. Tolerance ± 0.02 mm!!



Sound insulation / dust hood

2 machines installed behind each other, with box turner feeding

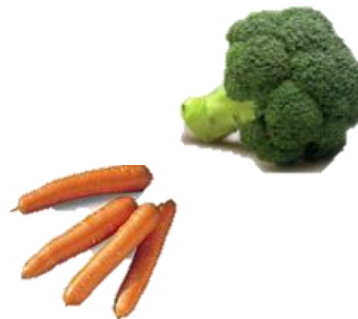


Seed Fine Cleaning Equipment

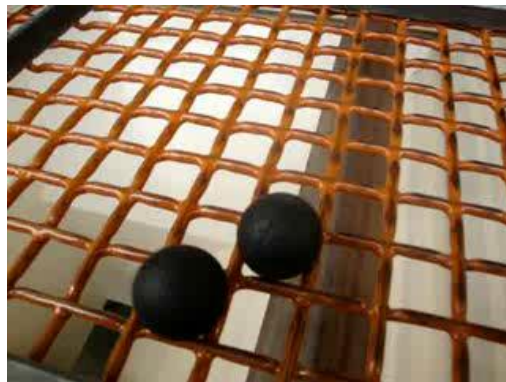
Seed Calibrating Machine: high capacity, accuracy sizing of cabbage, spinach, carrot and/or melons.



To reduce vibration of the machine to the floor we use shock absorbers



To reduce the noise level of the rubber balls during cleaning of the screens, we have coated the ball box with PU (rubber coating)

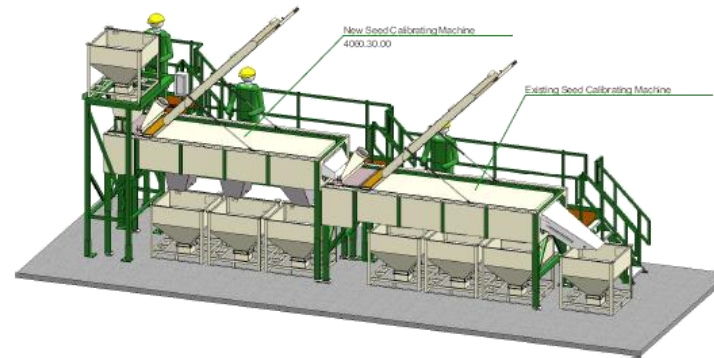


Separate controlled variable, interval speed of ball cleaning !



Seed Fine Cleaning Equipment

Seed Calibrating Machine: Eccentric drive of screens and ball box. Independent speed controls.



Seed Fine Cleaning Equipment

Seed Calibrating Machine: Un balance drive screens and ball box.



Vacuum transport system

Seed Fine Cleaning Equipment

Seed Calibrating Machine: Un balance drive screens and ball box.



Installation with 6 screens = 7 sizes

Seed Fine Cleaning Equipment

Seed Calibrating Machine: Un balance drive screens and ball box.



Dust suction hoods – pneumatic opening
Automatic screen clamping system

Please note: part/machine filmed is open for video presentation. Machine will be closed in real process / working situation.

Seed Fine Cleaning Equipment

Seed Calibrating Machine: Un balance drive screens and ball box.



Quick and easy inspection

Please note: part/machine filmed is open for video presentation. Machine will be closed in real process / working situation.

Seed Fine Cleaning Equipment

Seed Spiral Separator: separating round from flat seeds.



Turning left or right
or just stationary



Seed Fine Cleaning Equipment

Seed Spiral Separator: separating round from flat seeds.



Turning left or right
or just stationary



Seed Fine Cleaning Equipment

Seed Spiral Separator: complete installations



**Platforms, with
safe access to
different levels**



Seed Fine Cleaning Equipment

Seed Belt Graders: high capacity separating round from flat seeds.

1 belt



2 belts



3 belts



Seed Fine Cleaning Equipment

Seed Belt Graders: separating round from flat seeds.



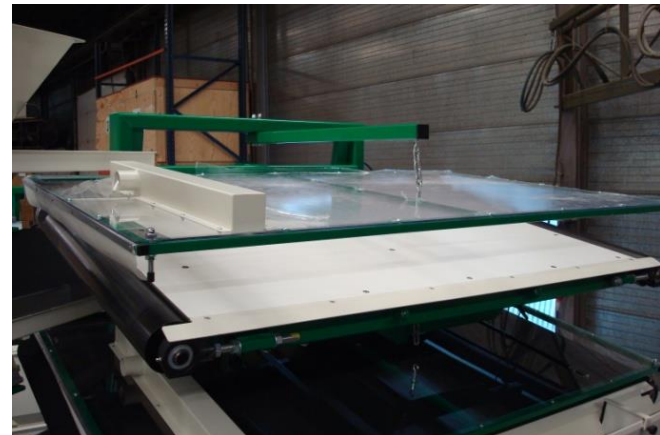
Option:
longer outlets to
the floor

Automatic (remote control) belt,
inclination, adjustable between
0 - 45 degrees



Central inlet hopper and
vibratory feeders,
to feed each belt with
seeds

Option:
Plexiglas dust
suction hoods



Seed Fine Cleaning Equipment

Magnetic Seed Separator: separating seeds with threshing damage (cracks) or fish mouth.



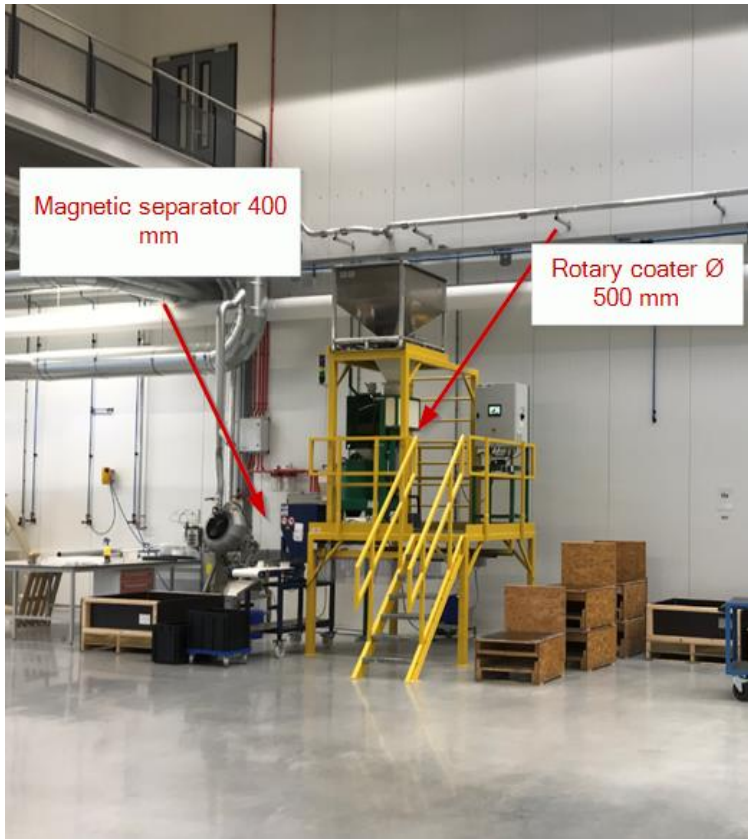
Manual mixing : mixing / blending in a pan or the seeds with water and iron powder for \pm 3 minutes is needed.



Seed Fine Cleaning Equipment

Magnetic Seed Separator:

Automatic mixing : mixing / blending the seeds with water and iron powder for ± 3 minutes is needed.



Seed Fine Cleaning Equipment

Magnetic Seed Separator: separating seeds with threshing damage (cracks) or fish mouth.

Then use the separator:

Easy adjustable level slide



The magnetic force is created at the end of the belt

2 models
available:
400 and 800
mm belt
width



Seed Fine Cleaning Equipment

Magnetic Seed Separator: separating pumpkin seeds with extraction damage (cracks) or fish mouth.



Seed Fine Cleaning Equipment

Seed Colour Sorters: separating seeds with colour differences.



CCD camera detecting technology



Seed Fine Cleaning Equipment

Seed Colour Sorters: high capacity separation of seeds with colour differences.



Touch Screen Controls



Feeding



Sample taking



Sorting process

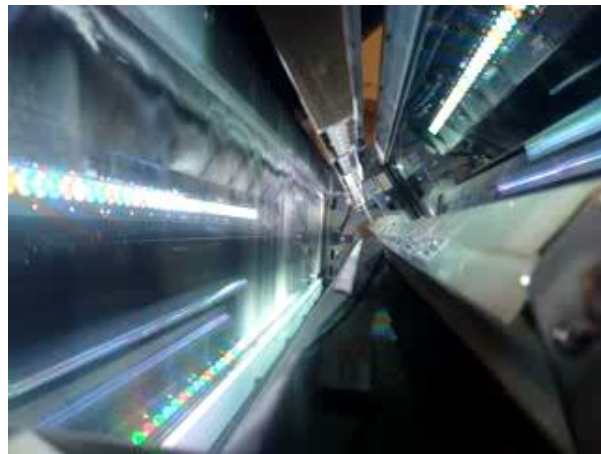
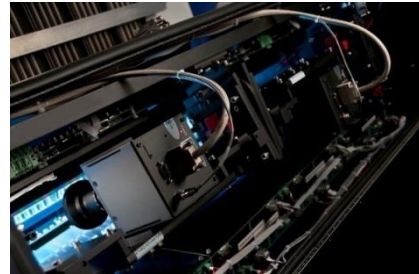
Seed Fine Cleaning Equipment

Seed Colour Sorters: high capacity separation of seeds with colour differences.



RGB camera detecting technology

Touch screen controls



Compared with CCD technology:

- Real colour sorting camera's
- Higher accuracy
- Higher capacity
- Led lightning colour lightning technology



Seed Fine Cleaning Equipment

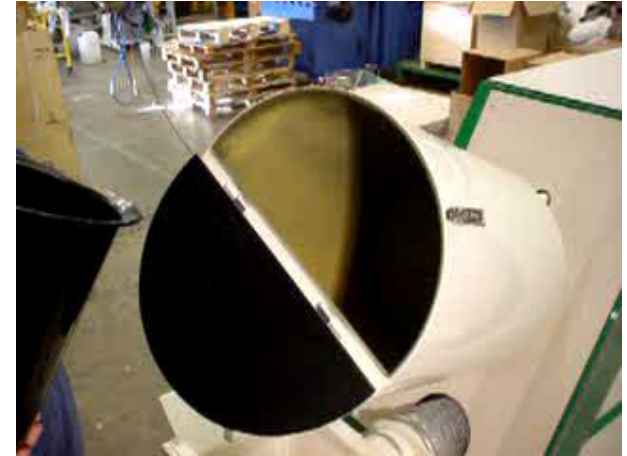
Seed Mixing/Blending Machines: mixing different seed lots homogeneous together.

Different capacities batch blenders available:

Net:
8 litres
75 litres
350 litres
800 litres
1600 litres
4000 litres



Manually filling



Mixing/blending process



75 litres machine



Emptying

Seed Fine Cleaning Equipment

Seed Mixing/Blending Machines: mixing different seed lots homogeneous together.



Filling and emptying position

Machines are completely protected by covers and doors.



350 litres machine



Emptying (discharging) in a bag

Seed Fine Cleaning Equipment

Seed Mixing/Blending Machines: mixing different seed lots homogeneous together.



Protected by covers and safety switches

A- symmetric rotation for a good blending process



Emptying the drum, by a pneumatic valve



Please note: part/machine filmed is open for video presentation. Machine will be closed in real process / working situation.

Seed Fine Cleaning Equipment

Seed Mixing/Blending Machines: mixing different seed lots homogeneous together.



For emptying the system: seed containers can be sided underneath the discharge by means of a roller conveyor



Seed Fine Cleaning Equipment

Seed Mixing/Blending Machines: mixing different seed lots homogeneous together.

Box turners and weighing belts for mixing different lots continuously.
High capacity possible 2 - 6 tons per hour.



Laboratory Seed Cleaning



**laboratory seed
cleaning equipment**

Seed Cleaning Equipment

Laboratory Seed Cleaning Equipment



Seed Cleaning Equipment

Seed Hand Screens: used for manual sizing of seeds, or using a screening machine.



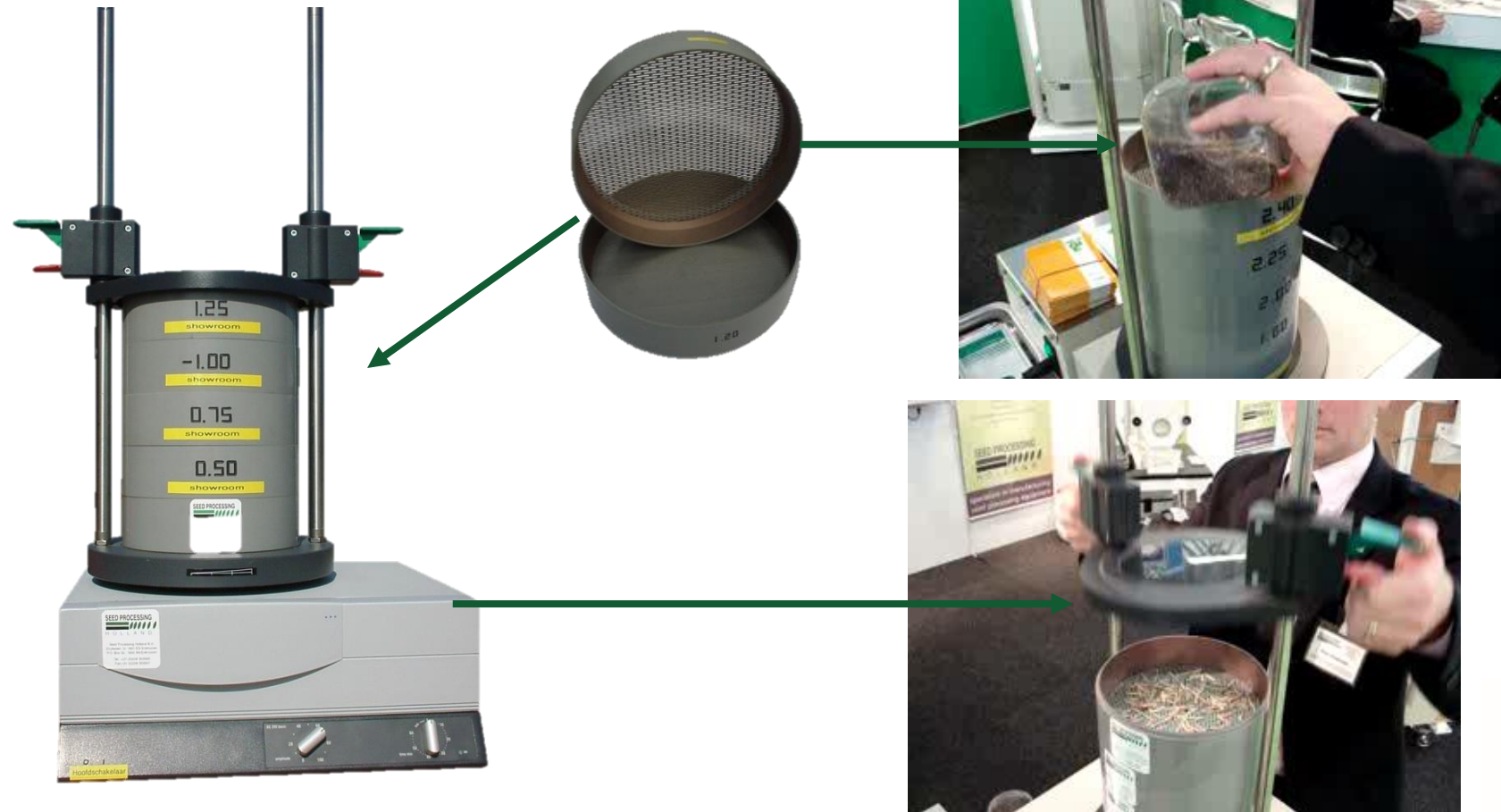
Option: Hand Screen Ø 200 transportable storage rack



- Manual sieving of seeds.
- Stainless steel perforated plates
- Round, slotted and square perforations
- Ø 200 – 300 – 400 and 500 mm screens
- Anti-static frame (light in weight!)

Seed Cleaning Equipment

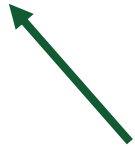
Seed Hand Screens: used for manual sizing of seeds, or using a screening machine.



Seed Cleaning Equipment

Seed Winnower: used for air separation of seeds. Used at breeding stations.

Husks, plant parts
and empty seeds



Heavy seeds



Cleaning of seeds at research stations



Seed Cleaning Equipment

Seed Winnower: used for air separation of seeds. Used at breeding stations.

Higher capacity winnower



Husks, plant parts and empty seeds



Cleaning of medium large seed lots, for example after threshing



Heavy "clean" seeds

Seed Cleaning Equipment

Seed Blower Ø 100: used for air separation of small seed lots. For example breeding stations.



Seed Blower suitable for separating small (light) seeds like tomato, lettuce, begonia etc breeding lots

Glass tube (antistatic), timer & automatic clean out button!



Ø 100 mm tube (± max 100 gram)

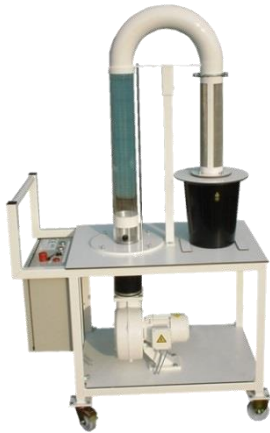


Option: dust exhaust hood



Seed Cleaning Equipment

Seed Blower Ø 200: used for air separation of small lots of large seeds.



Ø 200 mm tube (\pm max 500 gram)

Seed Blower suitable for separating large (heavy) seeds like beans and squash breeding lots



Seed Cleaning Equipment

Lab. Seed Air Separator: used for air separation of medium small seed lots.



Seed Cleaning Equipment

Lab. Seed Air Separator: used for air separation of medium small seed lots.



Hinge able glass door, for easy and quick access for cleaning in between lots

Seed Cleaning Equipment

Lab. Seed Air Separator



Option: Sound insulation

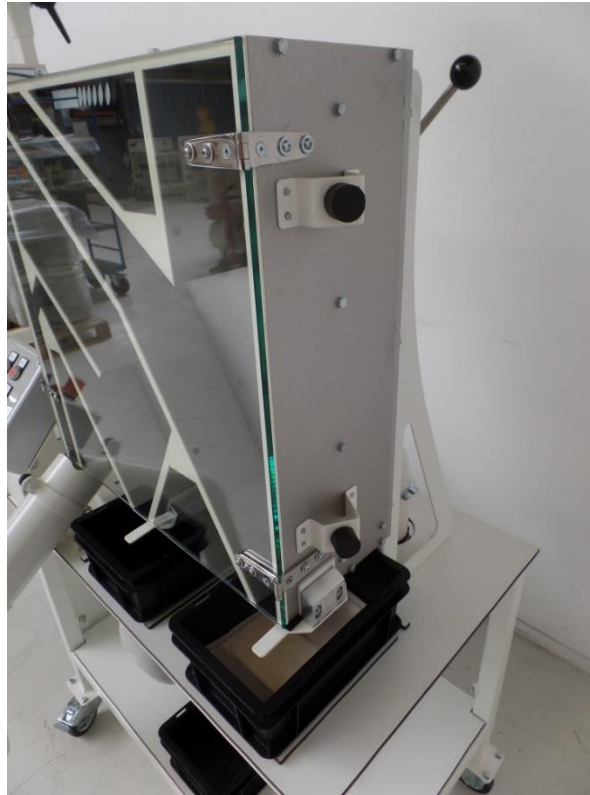


Dust collection bin is easy accessible



Seed Cleaning Equipment

Lab. Seed Air Separator



Option: Aluminium (anodized) air chamber

Objective: possibility for using disinfectant liquids on machine materials

Seed Cleaning Equipment

Seed Lab. Brushing Machine: used for flower seed threshing or vegetable seed polishing.



Used in breeding stations.
Used for very small seed lots
e.g. 5 - 20 grams.



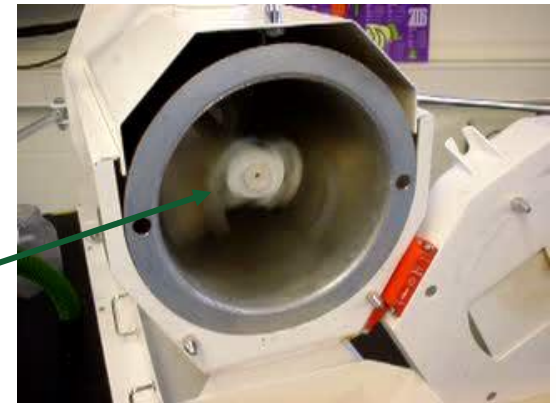
Seed Cleaning Equipment

Seed Brushing Machine: used for flower seed threshing or vegetable seed polishing.



Option:
larger inlet feeding table

Option:
vibratory feeder



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Seed Cleaning Equipment

Seed de-awner Machine: used for flower or vegetable seed polishing.



Seed and dust will leave the machine together



Seed Cleaning Equipment

Seed Air Screen Machine : used for separating seeds from stones, dust and empty seeds.



Option: anti-static bin for collecting the heavy "good" seeds



Seed Cleaning Equipment

Seed Air Screen Machine : used for separating seeds from stones, dust and empty seeds.



Option:
belt feeder
(standard = vibratory feeder)



Option: sound insulation

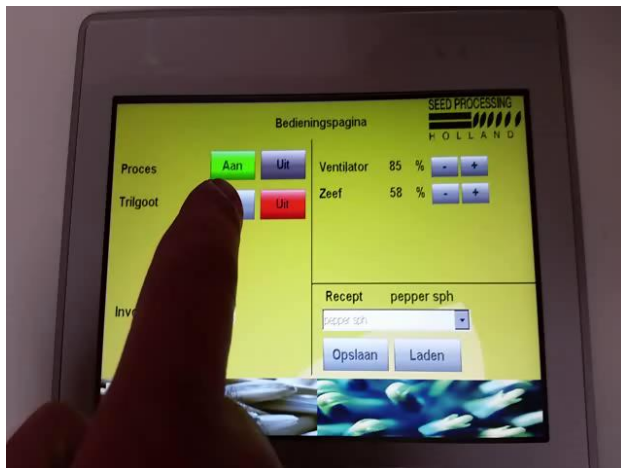
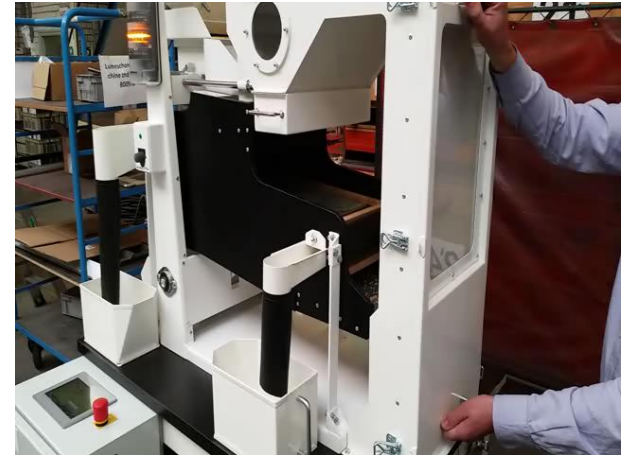


Seed Cleaning Equipment

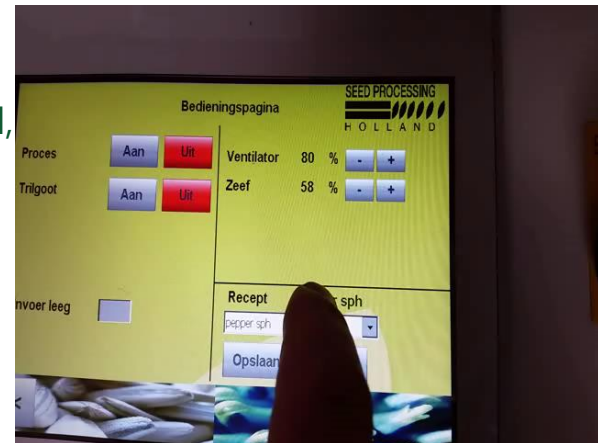
Seed Air Screen Machine : used for separating seeds from stones, dust and empty seeds.



Air separation channel:
Easy inspection possible



Option:
Touch screen control,
with recipe memory



Seed Cleaning Equipment

Seed Indent Cylinder: separating on length of seeds, like for lettuce, marigolds, melons etc.



Ø 400 x 500 mm



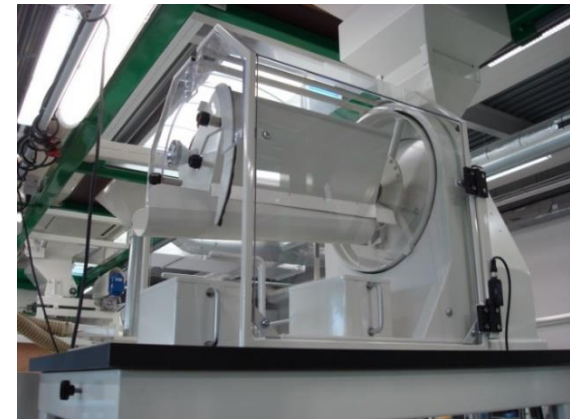
Seed Cleaning Equipment

Seed Indent Cylinder 1:1: used for sizing long shaped seeds, like lettuce, melons etc.

Two mantles (upper and lower) to increase capacity
or to have 3 separations in one process



Option:
Transparent safety
covers



Seed Cleaning Equipment

Seed Gravity Separator: used for density grading of seeds, increasing the seed quality.

Designed for separating
very small seed lots
(stock seeds / foundation
seeds, flower seed lots)



Option:
stainless steel Mesh deck



300 gram - 5 kg per hour

Option:
dust exhaustion hood



Seed Cleaning Equipment

Seed Gravity Separator: used for density grading of seeds, increasing the seed quality.

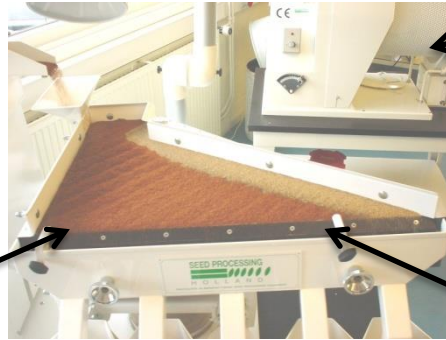
Option: special outlets



$\pm 2 - 25$ kg per hour

Seed Cleaning Equipment

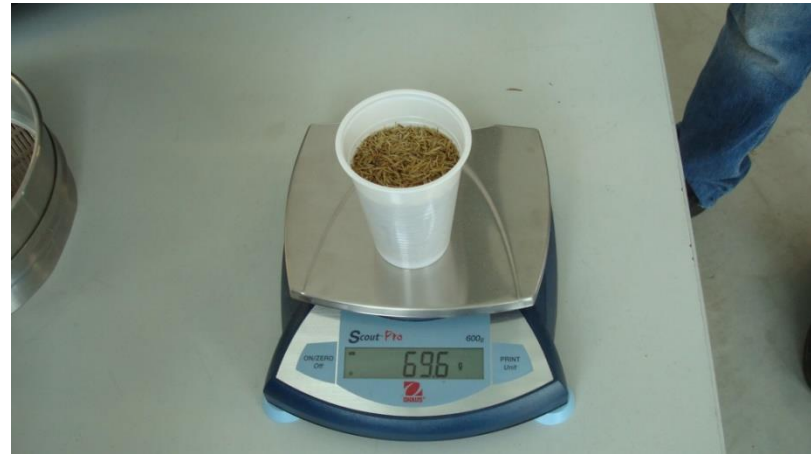
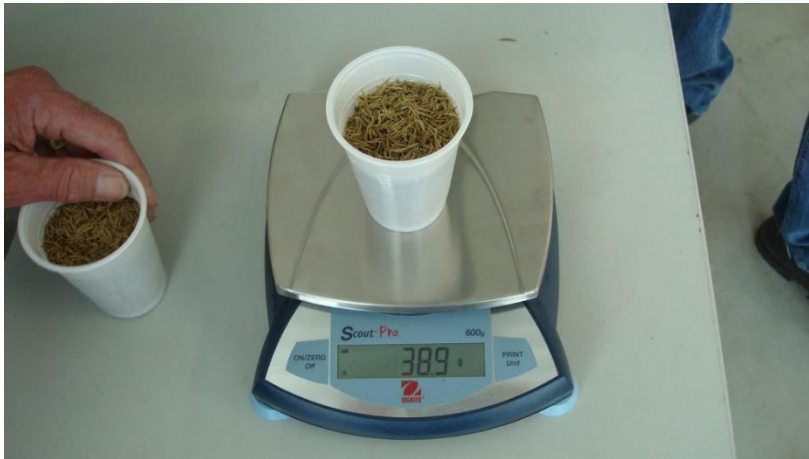
Seed Gravity Separator: used for density grading of seeds, increasing the seed quality.



Sand / soil

Light / empty low quality seeds

"Heavy" quality seeds



Seed Cleaning Equipment

Seed Belt Grader: used for separating round and flat seeds. For example petunia or begonia seeds.



Easy adjustment of
belt inclination



Seed Cleaning Equipment

Seed Belt Grader: used for separating round and flat seeds. For example petunia or begonia seeds.



Seed Cleaning Equipment

Seed Calibrating Machine : used for accurate sizing of seeds, to create plant uniformity.



3 or 4 screen machines available



Seed Cleaning Equipment

Seed Calibrating Machine : used for accurate sizing of seeds, to create plant uniformity.



Option:
transparent or
sound
insulated dust
exhaustion
hoods



Option: belt feeder for better
feeding of difficult to dose seeds
(seeds with chaffs, gerbera's,
carrots etc)



Seed Cleaning Equipment

Lab. Cleaning Operation

