STOLZ

Du végétal à la vie

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Cleaning

Destoners
DSTO

STOLZ has designed destoners for decades. Their performance has always been improved and adapted to each specific use in order to guarantee a safe consumption of all types of foods. The destoning is also valuedby industrials as it reduces wear and tear as well as damages to the processing machines.

The DSTO destoner is an extension of our ABMS hammermill feeder. This is a cleaning machine dedicated to separate metals, stones and all foreign bodies from the good product via a weight grading inside a casing swept by a rotary air flow.

Placed head the diagram or downstream the equipment, it protects the unit against foreign bodies. This equipment also ensures a protection against explosion caused by flint sparks.

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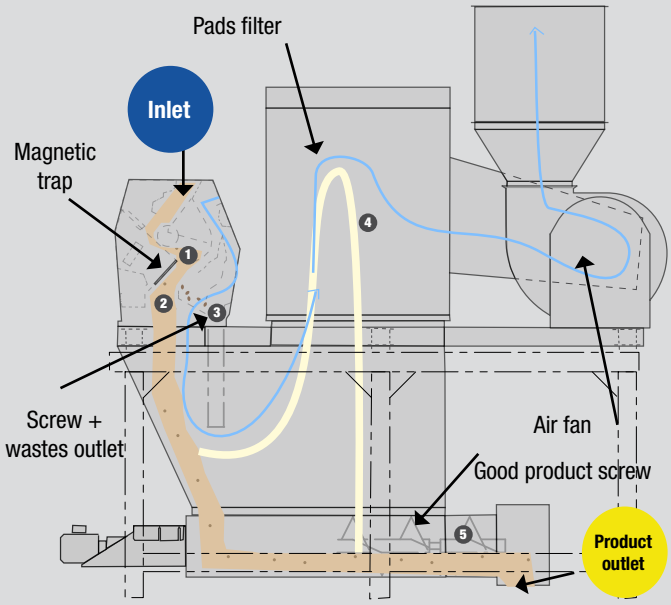
Destoners DSTO

Features

- Single block
- ABMS included (refer to separate datasheet)
- Built-in filter
- Coupled anti-spark fan
- Draining of stones bin with pneumatic cylinder, automatically operated or remote controlled by an operator
- Magnetic separator with pneumatic cylinder, automatically operated or remote controlled by an operator
- Removal of heavy particles, especially stones and non-ferrous metals
- Increase of downstream equipment lifetime thanks to a regular and homogeneous feeding
- Adjustable air flow thanks to internal air flaps (provided to be used with several products)

Operating principle



❶ The product enters the ABMS that removes metal parts from the good product.

❷ The product then falls into a segregation trough to be aspirated by the air flow into the pads filter then falling into the outlet hopper.

❸ The very heavy unwanted products, stones, mild steel or stainless steel various parts, etc... remain in the trough. At the bottom of the trough, an extracting screw is provided for their discharge at an adjustable time (according to capacity and wastes quantity).

❹ The air is filtered by a filter built in the hopper before exhausting.

❺ The good product (heavy and light) is cleaned and then conveyed to the outlet by a screw.

Adjustable flap for air/product segregation

Stones outlet

Type	Usual reached capacities						
	Wheat	Drycorn	Barley	Sunflower	Rapeseed	Soybean	Cocoa
	SW 0.75	SW 0.75	SW 0.7	SW 0.4	SW 0.6	SW 0.7	
	H14%	H15%	H12%	H12%	H12%	H12%	
DSTO 350	14 t/h	11 t/h	13 t/h	8 t/h	10 t/h	12 t/h	6 t/h
DSTO 720	30 t/h	24 t/h	28 t/h	18 t/h	22 t/h	27 t/h	13 t/h
DSTO 1200	50 t/h	40 t/h	47 t/h	32 t/h	40 t/h	48 t/h	24 t/h
DSTO 1900	79 t/h	63 t/h	75 t/h	45 t/h	56 t/h	67 t/h	33 t/h

Lump Breaker
SEMC

The lump breaker is dedicated to the pre-cleaning of dry product (reception safety).

Located at the inlet, it removes all the foreign bodies which may be in cereals and flours.

With barley and winter barley, it breaks and removes a great part of silks on dry malt, it removes malt culms. In most cases for high capacity receptions, the lump breaker ensures a proper preservation of the storage before going to the cleaner-separator.

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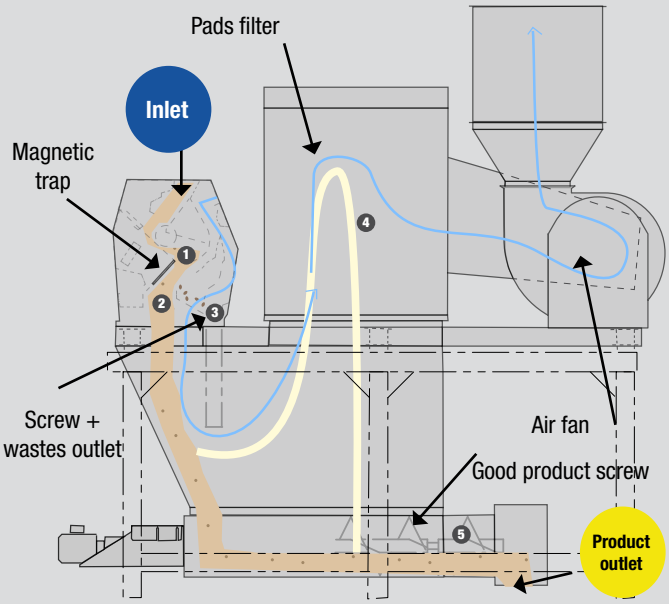

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DSTO 720	30 t/h	24 t/h	28 t/h	18 t/h	22 t/h	27 t/h	13 t/h
DSTO 1200	50 t/h	40 t/h	47 t/h	32 t/h	40 t/h	48 t/h	24 t/h
DSTO 1900	79 t/h	63 t/h	75 t/h	45 t/h	56 t/h	67 t/h	33 t/h

Pre - cleaner drum
SEMB

The pre-cleaner drum provides a high capacity pre-cleaning at bulk product reception before storage for all powdery products, cereals, etc...

The SEMB is essential in the corn drying storage facilities to remove most of cobs, leaves, stems, stones, etc…

It reduces the number of dryers cleaning operations and limits clogging significantly.

Installed downstream a cleaning line, it protects the handling equipment and lower the work load of the cleaners in order to maximize their capacity.

The SEMB ensures the removal of very small particles (dust in cereals) and undesirable large sized foreign materials.

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Pre - cleaner drum SEMB

Features and options

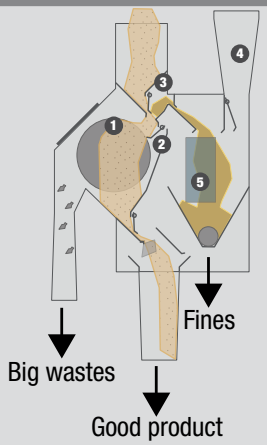
Features

- Continuous operation without shocks.
- Inlet with dispatcher and pre-suction at upper part
- Size of sieve mesh according to use
- Feeding flap with adjustable slope.
- Suction channel catching the fine wastes.
- Expansion chamber collecting the light wastes
- Screw equipped with a check valve at the end

Options

- Discharge hopper of good product, coarse and fine wastes
- Suction nozzle
- Possible damping bend at inlet for products to be treated
- Anti-filling sensor with probe
- Built-in pad filter
- Dispatcher for offset feeding with controlled flow rate

Operating principle



The removal of large wastes is obtained from the good product passing through the mesh of rotary drum ❶, from the outside to the inside of the drum. The size of the sieve mesh will be adjusted to your requirements.

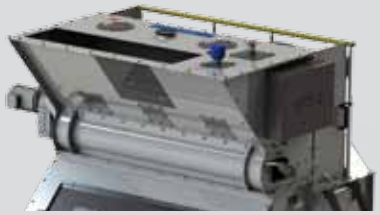
The rotary cylindrical sieve is fitted with an adjustable deflector ❷ and a rotary brush for cleaning. A wastes screw and a check valve are provided at the outlet.

❸ the feeding flap has an adjustable angle with possible product by-pass.

The inlet is provided with a dispatcher, with pre-suction at the upper part to ensure maximum efficiency.

Such equipment is fitted with a suction duct ❹ producing a strong airflow to bring the fine wastes to an expansion chamber ❺ , collected wastes are then discharged by a screw fitted with a seal valve at its end.

The cellular dispatcher



In case of misaligned as it often occurs in existing plants, it is not always easy to bring the product in line with the pre-cleaner.

The cellular dispatcher is provided to supply the offset pre-cleaner while ensuring a perfect distribution of the product all over the SEMB drum width. In addition, it ensures a perfect flow regulation and the transit of foreign bodies to be discharged through a specific outlet

Type	Usual reached capacities							
	Wheat	Drycorn	Corn Moisture	Barley	Sunflower	Rapeseed	Soybean	Cocoa
	SW 0.75	SW 0.75	SW 0.73	SW 0.7	SW 0.4	SW 0.6	SW 0.7	
	H14%	H15%	H35%	H12%	H8%	H12%	H12%	
SEMB 750	200 t/h	170 t/h	130 t/h	180 t/h	160 t/h	180 t/h	120 t/h	60 t/h
SEMB 900	300 t/h	250 t/h	200 t/h	270 t/h	240 t/h	260 t/h	180 t/h	100 t/h
SEMB 1250	500 t/h	420 t/h	300 t/h	440 t/h	380 t/h	450 t/h	300 t/h	170 t/h

Cleaner-Separator
SNST

The operating principle of the SNST is simple and effective. The seed or other product comes by a dispatching device over the whole width of the sieve. The efficiency of screening is increased significantly by weighted rubber balls to ensure the cleaning of the whole working surface area without wearing screens.

The cleaning pipe is designed for an efficient, complete and immediate extraction and recovery of light parts: shells, hollow grain, light grain, broken kernels thanks to a counter-current air flow through grains falling onto a convex ramp called flow diverter.

This newly designed dust extractor-sifter-lump breaker combines the most reliable techniques.

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Cleaner-Separator SNST

Features and options

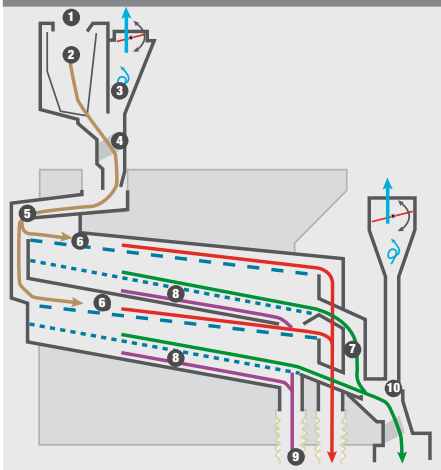
Features

- Continuous operation without shocks
- Suspended casing with circular movement for a better efficiency
- Coarse and screening sieves (quantity according to the type of the machine)
- Screaning surface at 9°
- Lumpbreaking surface at 12°
- Weighted cleaning balls
- Motor power: 0.75 to 7.5 kW

Options

- Rotary feeder with air dust aspiration (DR)
- Cleaning pipe

Operating principle



The product introduced into inlet ❶ drops into a distribution trough ❷ balanced with counterweight then slides in layer into a suction duct ❸ equipped with four diverters ❹. The sifting module is subjected to a circular movement. It includes a spreading chamber followed by two sifting levels. The product goes through a spreading device with 2 levels ❺ feeding the coarse sieves ❻ tilted at 9°.

The residues are directed downwards and discharged through the exit ❼. Then the product falls onto the coarse sieves ❽ tilted at 12 ° to be collected at the good product outlet.

After passing through sieves, fine impurities are collected by cleaning bottoms and directed to the screenings outlet ❾.

The sifter outlet feeds the cleaning pipe inlet in layer. The product slides under the valve ❿ towards the duct.

SNST 550

Rotary feeder with air suction

Installed at the machine inlet, it is designed to spread seeds uniformly.

Fitted with an air intake to a fan, this duct provides a pre-suction of fines ahead the products using a counter-current air flow through seeds as they fall onto a convex metal ramp. These panels give access to the hopper and control the air inlet section adjustment.

Type	Usual reached capacities							Sieve surface
	Wheat	Drycorn	Barley	Sunflower	Rapeseed	Soybean	Cocoa	
	PS 0.75	PS 0.75	PS 0.7	PS0.4	PS 0.6	PS 0.7		
	H14%	H15%	H12%	H12%	H12%	H12%		
SNST 550	50 t/h	40 t/h	40 t/h	21 t/h	27 t/h	28 t/h	14 t/h	4 m²
SNST 1150	100 t/h	80 t/h	80 t/h	42 t/h	54 t/h	56 t/h	28 t/h	8 m²
SNST 2150	200 t/h	160 t/h	160 t/h	84 t/h	108 t/h	113 t/h	56 t/h	16 m²
SNST 3150	300 t/h	240 t/h	240 t/h	126 t/h	162 t/h	170 t/h	84 t/h	24 m²
SNST 4150	400 t/h	320 t/h	320 t/h	168 t/h	216 t/h	227 t/h	112t/h	32 m²

Rotary sifters
Turbosifter

The need to separate a product batch into 2 different and regular particle sizes, especially in the field of bioethanol, starch, cement, petfood, and fishfeed has lead STOLZ to design a range of high performance rotative sifters called «turbosifter».

Specifically designed for the separation of fine ground products

- Cleaning of screens by air blowing and rotation of screens supports (BCMT version)
- Limited risk of cross-contamination
- Quick change of screens through large sized side doors
- Limited maintenance
- BCMF version with fixed screens for standard products not requiring any specific cleaning
- Screens from 5 mm to 0.4 mm, or from 4 to 40 mesh

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Rotary sifters Turbosifter

Features and options

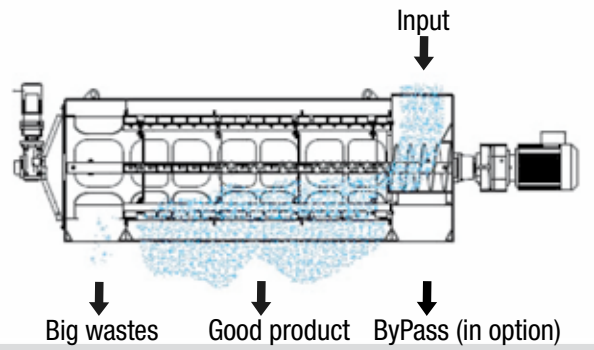
Features

- Bi-rotor innovative technology for the sifting of clogging powders sifting
- Robust structure and ATEX compliance
- High performance separation of fatty and fine products
- Drive by motor and belts, or direct gear-motor

Sieving products

- Various mealy or puwdery products : phosphates - salts - chalk - talc - casein – milk powder – dietetic products – desiccate products - aromatic - cacao – washing powder – colouring materials – insect-powder - pesticides - fertiliser - resins - PVC – paint powder – fire-extinguisher powder – pharmaceutics products - etc...
- Granular products like sugar, rubber, plastic granulates, etc…

Operating principle



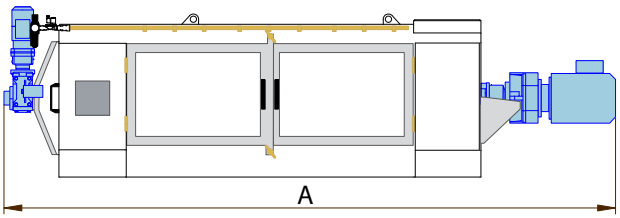
A feeding spout receives material to be processed which is introduced by a worm screw into a rotary sieve. A rotor equipped with paddles dispatches the product over the entire sieve surface area passing through holes or mesh. Rolling wastes are driven to the outlet whereas the fine grains pass through the sieve.

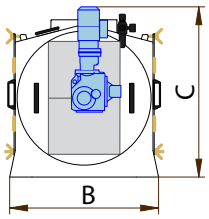
The sifter is fitted with a compressed air blowing system providing a cleaning of screens at the end of each batch or every five minutes on difficult products.

Rotor
with pre-adjusted paddles

By-pass at machine inlet
right or left hand side (optional)

Nozzles
for screens pneumatic cleaning





Type	Dimensions (mm)			Rotor/Screens power	Mass	Effective area
	A	B	C	(kW)	(kg)	(m²)
BCMT 400	2330	650	730	5,5/0,37	285	0,6
BCMT 600	3500	900	1050	9,2/0,37	970	1,7
BCMT 750	4100	1000	1150	15/0,55	1520	3,0
BCMT 1250	4100	1600	1400	22-30/1,5	3700	4,5
BCMT 1250+	4700	1600	2100	45-55/2,2	4500	7,0

Plane sifters
PTAG

The PTAG sifter is designed to collect the fines from the pellets to improve the quality of the final product. These fines are redirected to the pellet mill in order to limit product wastes.

The PTAG sifter is based on the principle of suspended casing moved by a circular and horizontal movement.

This sifter is mainly used to process products dedicated to animal feeding and other applications are possible.

The size of the processed products may vary from 0.5 mm to 25 mm.

The amplitude of the movement is adjustable and then may adapt the speed to the downstream product.

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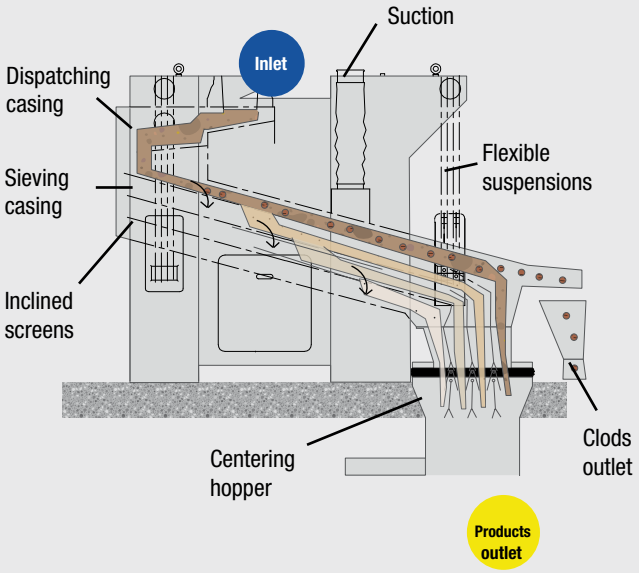
Plane sifters PTAG

Features

Features

- Specific self-balancing system to optimize the product distribution while reducing the dynamic stress.
- Suitable to all particle sizes from large pellets to small crumbs.
- Discharge sieved product are directed to a mono or multi directional box with flexible circular junction.
- Low pressure inside the machine recommended.
- Also available with a crumbler built-in at sifter inlet.

Operating principle



The product is introduced into the sifter into a dispatching casing. The inclined bottom ensures the layering to the sieving casing.

The whole unit is moved by an horizontal circular movement. The sieving casing contain 1 to 3 screen levels.

The finest products flow through the screens. Weighted balls ensure the cleaning of screens.
Uppers screens are followed by a lumb breaking grid to remove the large wastes.

Calibrated products are driven to a 4 compartments

centering hopper.

An outlet linked to the floor ensure the connection to the downstream installation.
As an option a suction inlet can be provided with that equipment.

Boxes under sifters

The PBSS box fitted at sifter outlet is designed to adjust to the various combinations of a manufacturing diagram thanks to the adjustment of 2 flaps.

The 2 flaps are driven by pneumatic cylinders. There are 9 possible combinations.

The control is provided by distributors driven by solenoid valves.

The position monitoring is carried out by inductive sensors fitted on sides.

Type	Capacity on pellet SW 0.5	Number of cuts	Working area
PTAG-1 101	6,5 t/h	1	1 m²
PTAG-1 202	6,5 t/h	2	2 m²
PTAG-1 304	6,5 t/h	3	4 m²
PTAG-1 102	14 t/h	1	2 m²
PTAG-1 204	14 t/h	2	4 m²
PTAG-1 306	14 t/h	3	6 m²
PTAG-1 104	20 t/h	1	4 m²
PTAG-1 208	20 t/h	2	8 m²
PTAG-1 312	20 t/h	3	12 m²
PTAG-2 108	40 t/h	1	8 m²
PTAG-2 216	40 t/h	2	16 m²
PTAG-2 324	40 t/h	3	24 m²

Circular centrifugal sifters
PTA

STOLZ circular centrifugal sifters are used to provide a centrifugal segregation for:

- Sieving before grinding.
- Safety sieving after grinding and before mixing.
- Pellets sieving for fines and broken grains extraction.

Options:

- Side outlet with deflector,
- Large wastes grid and outlet,
- Atex area 22

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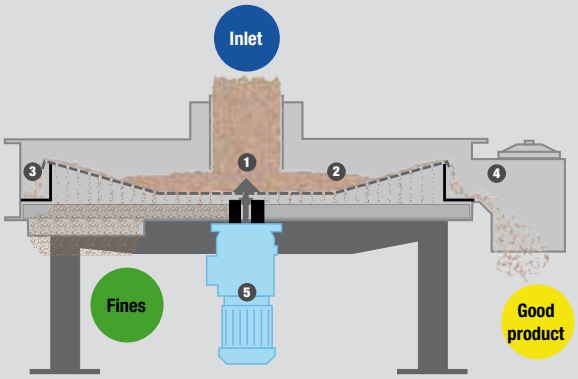
Circular centrifugal sifters PTA

Features and options

Features

- Sealed machine with circular movement for a segregation by centrifugal force
- Suitable for all types of pellets or dry grains sieving
- Internal flow adjustment at inlet
- Scrapping bottom with fines outlet
- Rotor with scrapping blades assembled at end shaft of a vertical gear-motor
- Screen mesh according to material specifications

Operating principle



Material to be sieved is introduced at inlet.

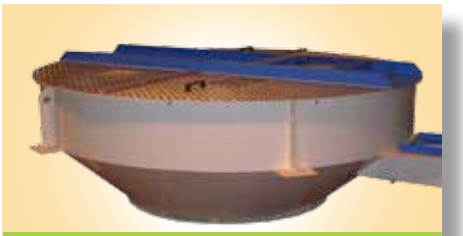
A cone ❶ dispatches the product over the rotary sieving screen ❷.

By a centrifual effect, the product layer slides to the edge while droping out the fines parts : flour, crumbs...

The sieved product then falls into a circular «passage» ❸, then into the «good product» outlet ❹.

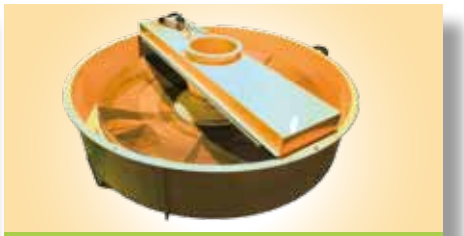
After crossing the screen the fines are collected on the scrapping bottom by scrappers and are rejected to the «fines» outlet.

The rotor is driven by a gear-motor ❺ located in the centre with a shaft directly supporting the rotor.



Circular centrifugal sifter

Product inlet



Centrifugal screen

Type	Usual reached capacities		Number of screens
	Pellets Ø4 mm SW 0.5	Pellets Ø8 mm SW 0.5	
PTAA 16	12 t/h	25/50 t/h	1
PTAA 25	25 t/h	80/100 t/h	1
PTAV 20	50 t/h	50/75 t/h	1
PTAV 25	100 t/h	80/100 t/h	1
PTAV 225	100 t/h	80/100 t/h	2
PTAVP 25	80/100 t/h	50/80 t/h	1
PTAP 30	150/180 t/h	120/150 t/h	1

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