



PRODUCT CATALOGUE





HERBAS d.o.o.

**Kolodvorska 23/a, Budančevica
48362, Kloštar Podravski
Croatia**

**herbas@herbas.hr
+385 48 816 107**



Made in European Union (EU).

ABOUT US

We are the leading Croatian company specialized in designing and producing custom-made agricultural equipment. In our production there are processing equipment for industry: for processing of medicinal and aromatic herbs, equipment for food industry, oil mills for pumpkin seed oil, systems for dedusting and separation.

Herbas d.o.o. is specialised in drying and processing of medicinal herbs (with emphasis on chamomile and industrial hemp), aromatic herbs, spice herbs. We are also designing and producing transporting equipment, thermal generators and heating systems on bio-mass fuel, dryers for herbs, fruits, vegetables, seeds, mushrooms and wood.

We have been working in this field with experience of over 25 years and we have a lot of knowledge and experience in machining technology, specifications and quality demands of these products. Taking into account the specificities of each customer, together we come to the most acceptable solution.

Production of machines for technological processes in the processing and process industry, with special emphasis on the development of chamomile and herb processing machines.



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HARVESTING EQUIPMENT

Herbas offers harvesting solutions for medicinal and aromatic herbs including chamomile, mallow, nettle, mint and also pumpkins and hemp.

Ideal for small to medium producers.

Harvesters are towed and for the connection to the tractor a cardan or hydraulics is used.

HARVESTING EQUIPMENT

HARVESTER KVH-2000EH



VIDEO

The KVH-2000EH is specially designed for high quality German or Roman chamomile harvesting. With an optional mowing cutter-bar system, KVH series proved itself to be excellent for mint, nettle, mallow and all similiar plants.

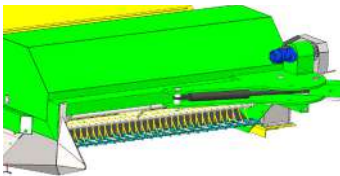
High quality harvest

Along with good agricultural practice, KVH achieves high quality harvest with favorable ratio of flower head and stem (herba). Producers should achieve uniform and upright chamomile in the field, adjust the working height, run it with recommended driving and rotating speeds and mind the weather conditions to be appropriate.

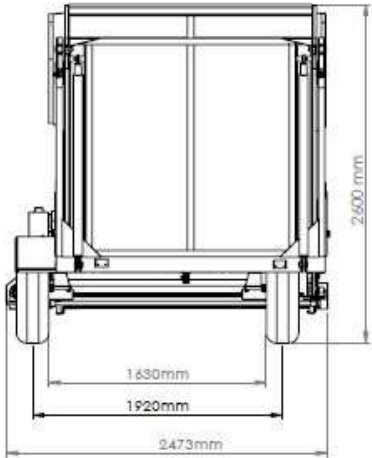
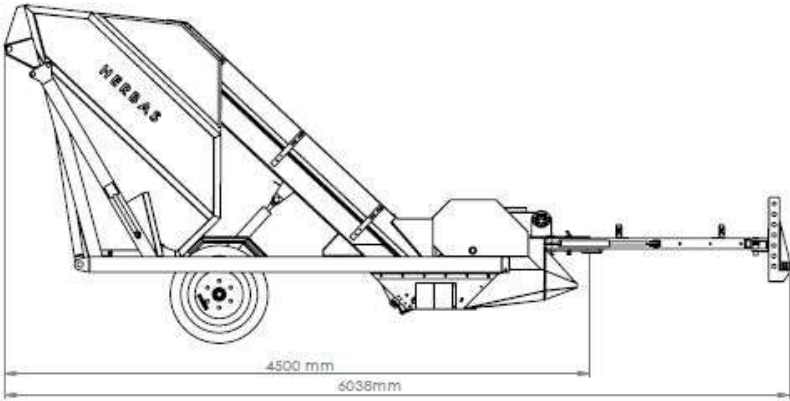
drive type:	traction - tractor
capacity:	0.25 – 0.35 ha / h
harvesting width:	1850 mm
bunker capacity:	2.7 m³
required tractor power for traction and drive:	30 kW
reel drive:	hydraulic motor
bunker tipping drive:	hydraulic cylinder
weight	1600 kg

Features

- Strong chassis
- Transport and harvesting mode
- Operation from the cab
- Hydraulicaly driven
- Easy switch between harvest and transport mode
- Around 1 acre/hour



OPTIONAL MOWING SYSTEM



HARVESTING EQUIPMENT

HARVESTER K VH-2000EHT



VIDEO

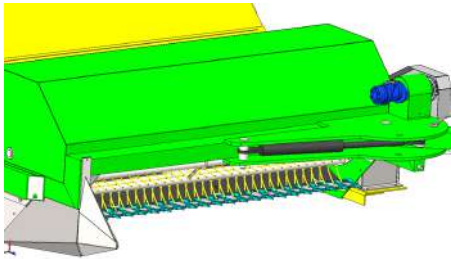
The KVH-2000EHT is specially designed for high quality German or Roman chamomile harvesting. With optional mowing cutter-bar system, KVH series proved itself to be excellent for mint, nettle, mallow and all similiar plants.

Improved capacity

At the rear end, EHT model employs a rotatable and telescopic conveyor, that during harvest transports harvested material directly to tractor trailer.

Along with good agricultural practice, KVH achieves high quality harvest with favorable ratio of flower head and stem (herba). Producers should achieve uniform and upright chamomile in the field, adjust the working height, run it with recommended driving and rotating speeds and mind the weather conditions to be appropriate.

drive type:	traction - tractor
capacity:	0.7 – 1 ha/h
harvesting width:	1850 mm
required tractor power for traction and drive:	30 kW
reel drive:	hydraulic motor
belt conveyors drive:	hydraulic motor
weight	2000 kg



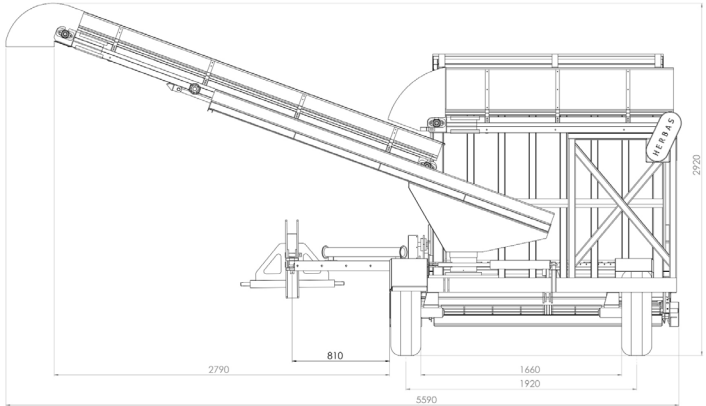
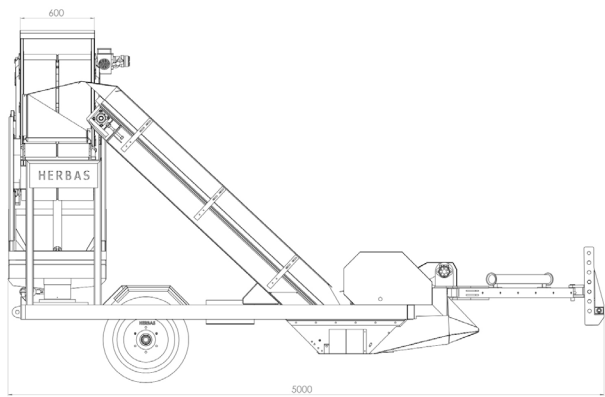
OPTIONAL MOWING SYSTEM



HARVESTING MODE



TRANSPORT MODE



HARVESTING EQUIPMENT

PUMPKIN SEED HARVESTER HKV-70



VIDEO

Extracting seeds as you harvest!

Type HKV 70 – tractor-pulled harvester collects pumpkins, smashes them and extract seeds - all as you harvest. Pumpkins are best formed in rows beforehand by using a front blade (plow) attached to the front of the tractor.

Key element for any pumpkin grower

Pumpkin seed harvesters are a vital piece of equipment for farmers who grow pumpkins for their seeds, which are used for in human and animal food culinary, agronomical and industrial purposes.

Harvester connects to the tractor’s PTO drive which drives all the elements including rotating drum for seeds separation from the rest of the pumpkin and a vacuum cleaning system that removes other impurities. Simple and solid design ensures good working performance, low maintenance and reliable operation.

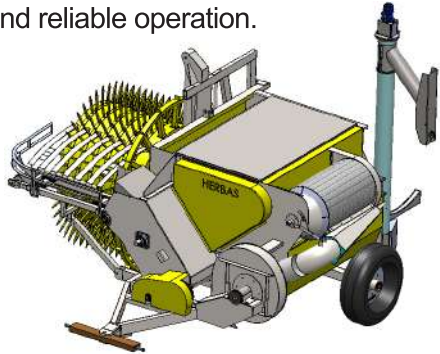
Features

PTO driven

Very efficient collecting, milling and separation right on the spot

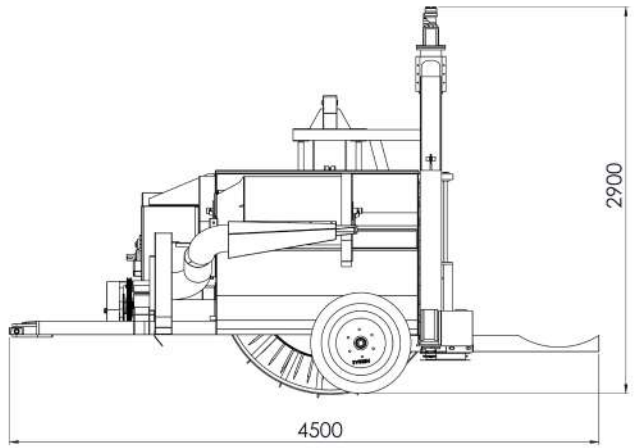
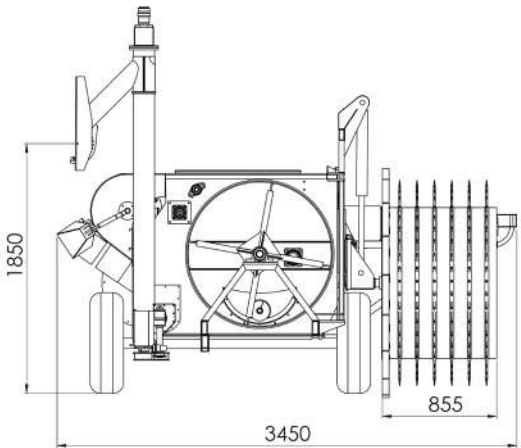
Seed conveying to another tractor trailer

drive type:	traction - tractor
capacity:	1 ha/5 h
length of drum for cleaning seeds:	1500 mm



Foldable design

The foldable design allow easy transport of harvester.



DRYERS FOR AGRICULTURAL PRODUCTS

Fruit is most commonly dried inside trolley dryers, with horizontal air circulation between the different shelves of the trolley. Vegetables are normally dried inside trolley dryers, but it is not uncommon to use floor chamber dryers as well, with either a stable or segmented moving floor. A floor chamber dryer is also commonly used for drying medicinal herbs, although good efficiency is also attainable using a continuous flow dryer. Tobacco is dried inside a standard floor trolley dryer equipped with racks for loading tobacco leaves or, in the case of machine harvesting, chamber dryers that enable loading into specially designed containers.

Along with the solutions above, we also offer accompanying thermal generators powered by the following energy sources: biomass, natural/liquefied gas or heating oil.



DRYING EQUIPMENT

UNIVERSAL FLOOR CONTAINER DRYER HKS-12/60



VIDEO

Floor container dryer is designed for drying of herbs, grains, hemp, pumpkin seeds, vegetables, mushrooms etc. Dryer HKS -12/60 is produced in 3 sizes with an effective surface area of the floor 24 m², 32 m² or 40 m² meters.

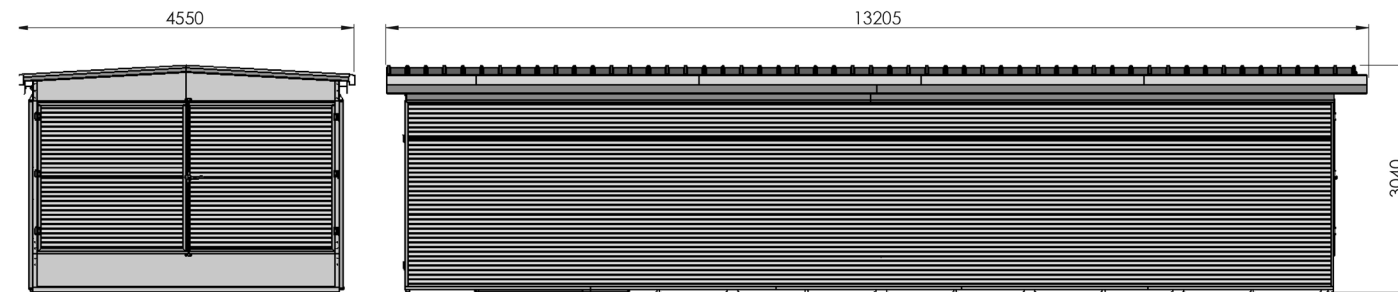
Galvanized steel frame design makes the dryer sturdy and stable, and it's assembly straightforward. Thermo-insulating 50 mm thick panels with polyurethane filling ensure minimum heat loss through walls, floor and roof. The dryer is container type and certificated as machine, rather than the building.

The dryer floor is made of perforated galvanized segments 1.5 mm thick with Ø 3.2 mm perforations. While static floor is a standard option, movable floor contributes to short loading and unloading times, lower risk of contamination, less manual work and more uniform layer. It is especially suited and recommended for granular materials like grain, corn, rosehip, pumpkin seeds, etc. Recommended package with movable floor in such cases is a hopper and screw conveyor on wheels which enables direct packaging, and loading with a loader.

Different mixer types are another option, mostly with granular materials, effectively solving the issue of otherwise non-uniform drying.

Dimensions of the dryer: height: 2800 mm / width: 4000 mm

Effective layout length: 6 meters for the dryer of 24 m² / 8 meters for the dryer of 32 m² / 10 meters for the dryer of 40 m²



MOVABLE FLOOR



MIXER

DRYING EQUIPMENT

PORTABLE CONTAINER DRYER



VIDEO

Designed for drying of herbs, grains, pumpkin seeds, vegetables, mushrooms etc. in several location during the season.

Shipping container frame makes the dryer sturdy, stable and portable. It can be lifted with a 9 ton forklift.

Thermo-insulating 50 mm thick panels with polyurethane filling ensure minimum heat loss.

The front double door provide enough room for loading and unloading the material even with front tractor loaders or telescopic loaders.

The dryer floor is made of perforated galvanized segments 1.5 mm thick with $\varnothing$ 3.2 mm perforations. While static floor is a standard option, movable floor contributes to short loading and unloading times, lower risk of contamination, less manual work and more uniform layer. It is especially suited and recommended for granular materials like grain, corn, rosehip, pumpkin seeds, etc.

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FILLING AND EMPTYING



DRYING EQUIPMENT

PORTABLE CONDENSATION DRYER - KSP 22

Excels in conserving essential oils

The type KSP 22 condensation dryer is again universal, suitable for different herbs, but comes to the forefront when drying herbs with volatile essential oils in low temperature.

Drying at lower temperatures

Essential oils losses become significant at temperatures over 30°C due to characteristic volatility of such substances. Organoleptic and curative properties are lost with them. In condensation dryers the drying process is executed between 20 and 30 °C. Complete recirculation ensures no outside air entering the chamber, and no contamination.

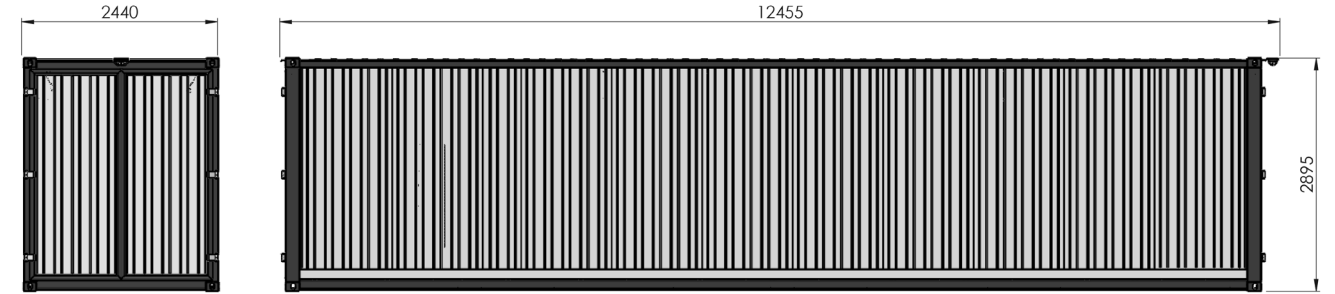
Moisture condensation and extraction from the chamber is conducted by air passing through a capacitor. In other words, during recirculation the air captures the moisture from the plant mass being dried and supplies it in the form of water in the capacitor.

The dryer is designed as both a trolley and floor dryer, i.e. the plant mass can be supplied through the perforated dryer floor or into shelves (frames with a permeable bottom) on one or more levels. Supplying through the floor or one or more levels depends on the type of material, density and layer height.

This method of drying with the same air being recirculated and without adding fresh air leads to significant energy savings, but above all, it improves the quality of the final product. The lower temperature drying inevitably results in longer drying times for the same quantity of plants due to lower molecular and atomic activity. More specifically, the drying time in the condensation dryer is from 30 to 48 hours.



VIDEO



DRYING EQUIPMENT

TROLLEY DRYER - HRS 1000-2

Convection fruit drying

The trolley dryer is designed specifically to dry raw green plant material, fruits, and vegetables effectively.

The material to be dried is laid upon shelves of trolleys in an even layer before going into the dryer. With horizontal airflow across the dryer, air streams between shelves and over the material being dried.

Heating unit options

Electric forced convection heater employs a resistance heater and a fan to provide the warm air used for drying provided that the energy comes from renewable source. Standard option with a gas or fuel oil thermal generator provides a classic solution.

An energy efficient design

In an effort to reduce energy consumption, a significant portion of the airflow is recirculated. Moisture-saturated air is expelled through exhaust duct, while unsaturated outdoor air is pulled in through suction duct to replace it the expelled air. The regulation of the recirculation ratio is achieved by manipulating the balancing dampers, adjusting their positions to control the flow. Temperature and humidity probes within the drying chamber, through the interaction with a controller and servo drive, regulate the balancing dampers to ensure seamless working conditions.

Metal frame and structure is made of stainless steel INOX AISI 304, while walls and roof are from thermal insulation panels 50 mm thick with PU filling.



DRYING EQUIPMENT

THERMAL GENERATOR - NATURAL GAS or FUEL OIL

Thermal generators type HT-P90, HT-U90 and HTG-160P, HTG-160U are designed for heating the space with warm air, often use for drying but could also be adjusted for heating.

Thermal generator with power of 50 – 160 kW can be equipped with an axial or radial fan, his capacity is 14.000 to 30.000 m³ of air, with single-gas burner, gas ramp, electronic thermostat with temperature probe and electrical cabinet.

Every fuel choice comes with unique requirements, necessitating a suitable burner that must be configured to accommodate the specific fuel type. In the case of natural gas, prior site preparation is essential for installation, yet maintenance is straightforward, and the supply remains consistent, alleviating any further concerns.

The LNG or LPG options require tanks and specific rules have to be followed. Gas presents a more environmentally conscious alternative, contributing only to CO2 emissions.

The fuel oil option has simpler installation and less investment cost. In each case, a specific country regulations need to followed and to comission a certified gas or fuel oil burner installer has to come, and connect the burner with the tank or pipeline.

FUEL	MODEL	POWER
NATURAL GAS	HT-90P	up to 90 KW
	HTG-160P	up to 160 KW
FUEL OIL	HT-90U	up to 90 KW
	HTG-160U	up to 160 KW



DRYING EQUIPMENT

THERMAL GENERATOR - BIOMASS WITH AUTOMATIC DOSING



VIDEO

Thermal generator type HT-AD is designed for heating spaces with warm air, often used for drying.
Energy source: wood chips G20 or wood pellets. The fuel is put into the input hopper which is 1 m³ of capacity, through which it is transported by a screw conveyor system into the furnace.

Thermal generator furnace is made out of sheet metal and the parts that are exposed to intensive heat are made out of fireproof sheet metal.

Thermal generator of power of 10 – 150 kW can be equipped with an axial or radial fan, his capacity is 14,000 to 30,000 m³ of air, electronic thermostat with temperature probe and electrical control cabinet.
The removal of ash is done manually by emptying ash-container.



PROCESSING EQUIPMENT

Whether it is tea and infusiones industry, herbs and spices industry, processing for pharmaceutical industry, or any other in relation to these same raw materials, we provide some universal and well-proven processing equipment that can enhance or complement your production process.

Every process is unique, but to get to finished products like: flower, leaves, seeds, milled material, powder and dust as byproduct, we utilize more or less same operations: washing, destoning, cutting, milling, grinding, different extraction and separation techniques, filtration, conveying, pressing, mixing and blending.



PROCESSING EQUIPMENT

CHAMOMILE FLOWER SEPARATOR RGK-H 600

Well-proven solution for chamomile industry

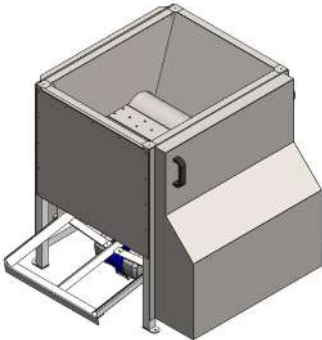
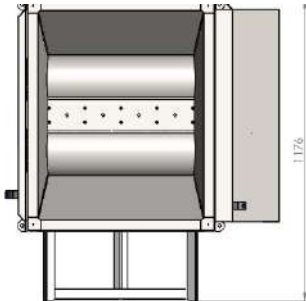
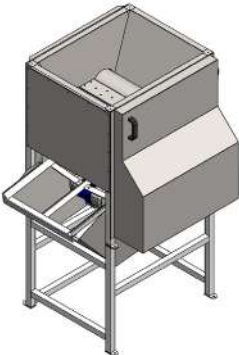
Chamomile flower separator has a unique and important function - to separate with high efficiency the delicate chamomile flower head from the herb, that is, stem with leaves.

Processing material is dosed through the hopper of the separator (manually or via belt transporter). Special elements cut and separate the whole flower head from smaller fractions (herb, petals, pulvis). With the input capacity of 70-100 kg/h per machine, it presents a compact but efficient solution. Depending on the needed capacity, one or multiple units are required. Multiple units are usually incorporated in one production line, stacked next to each other in a row.

Total length of the flower with the rest of the stalk is approx. 16 mm.

Solid and simple construction ensures quality and reliable machine operation.

Roller width:	600 mm
Capacity:	70-100 kg/h
Electric Power::	0,67 kW
Weight:	280 kg



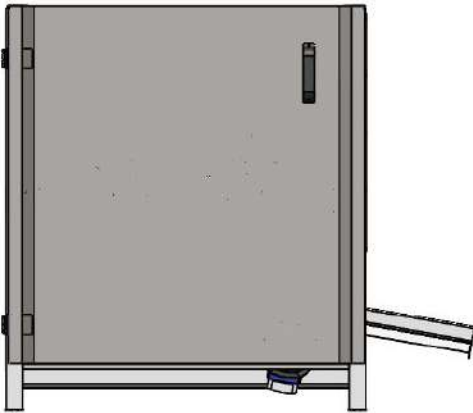
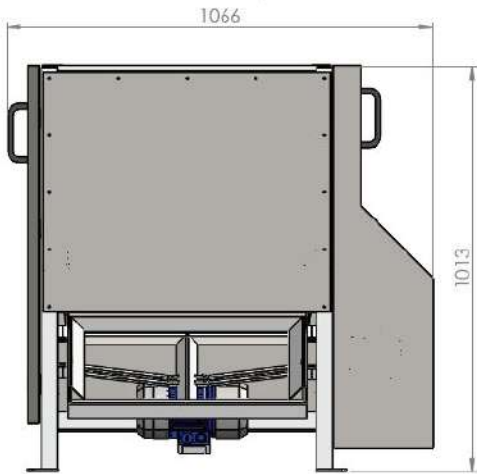
INOX VERSION



OUTPUT MATERIAL



AS A PART OF PROCESSING LINE



PROCESSING EQUIPMENT

HERB CUTTER RBG-200



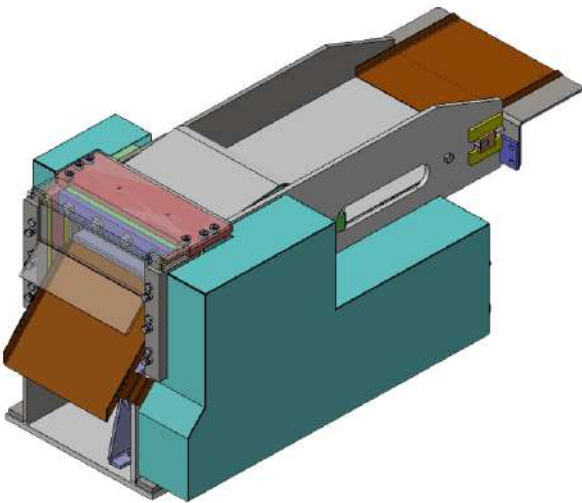
Compact guillotine-type cutter

The RBG-200 is designed for cutting different types of herbs in fresh or dry state, with adjustable cut length according to the process requirements. It achieves a clean cut, with absolute minimum of

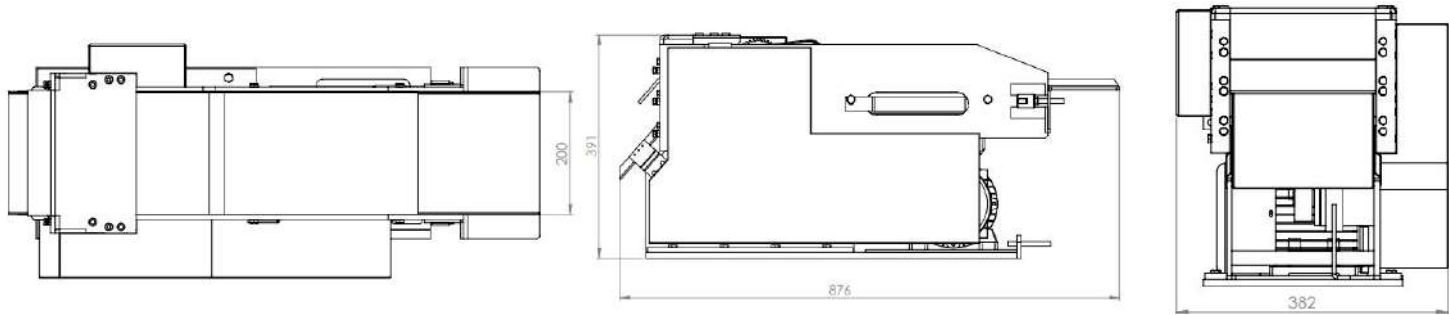
The length of the cut is defined by a forward step of the input belt conveyor and the orientation of the herb material right before the cut. The forward step is adjustable, in the range from less than 1 to 20 mm, while the material orientation is something that every processor needs to take into account.

The herb cutter type RBG-200 has a dosing belt width of 200 mm.

Ideal for smaller scale producers



Dosing belt width:	200 mm
Capacity:	50 kg/h of dry material
Electric Power:	0.55 kW
Weight:	90 kg



PROCESSING EQUIPMENT

HERB CUTTER RB-200

Widely applicable rotational cutter

The RB-200 is a rotational cutter ideal for slicing different types of herbs in fresh (raw) or dry state to the required size. The cut length is adjustable to the customer's technology requirements. A combination of a 2-way cutting and an integrated sieve, provides high capacity and unique results.

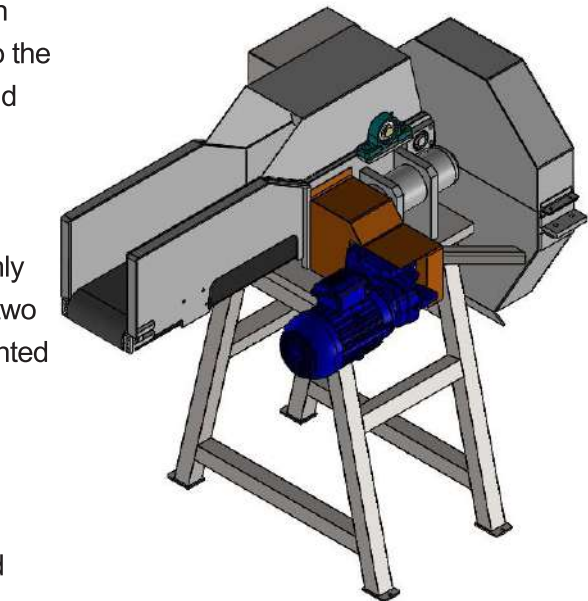
2-way cutting

A channel on the input side holds the material that travels forward uniformly on input belt conveyor 200 mm wide. Material is carried to the rotor with two rotating knives for cutting across the material. Another pair of knives mounted on the same rotor cut the material in another direction before it passes through the sieve. The minimum achievable cut length is 3 - 5 mm.

Adjustable cut length

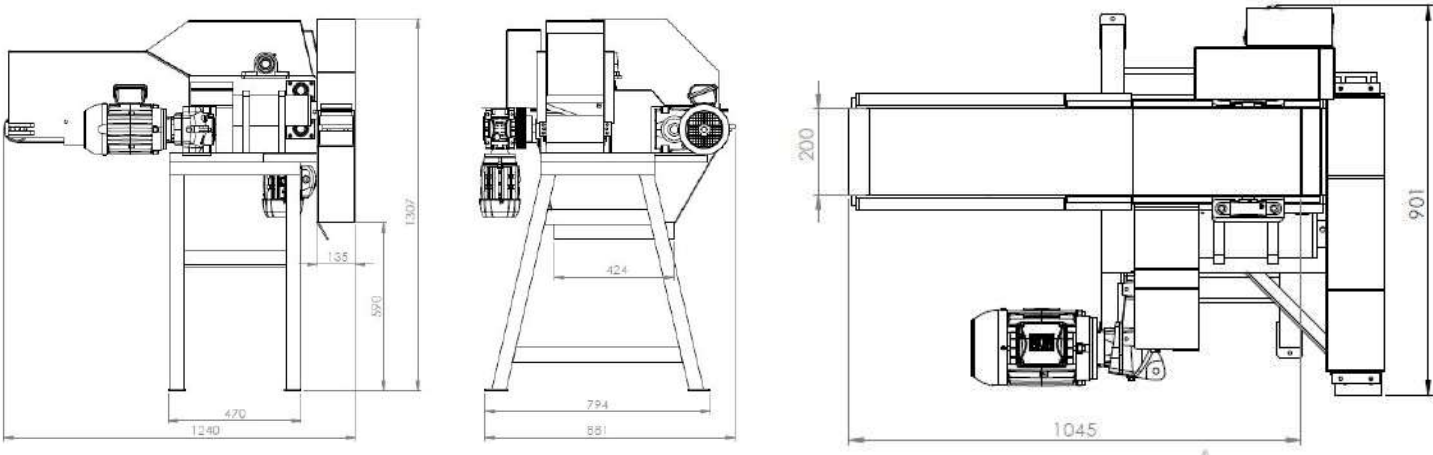
The cutting length is determined by the rotation frequency of the rotor and the speed of input belt conveyor. As the output options, a chute or a screw conveyor can be installed.

Cutting in fresh produces less dust, while cutting dry enables the use of integrated sieve.



VIDEO

Dosing belt width:	200 mm
Capacity:	up to 2000 kg/h of fresh herbs and up to 200 kg/h of dried herbs
Electric Power::	1.35-2.5 kW



RB-200 (MILD STEEL)



RB-200 (INOX)

PROCESSING EQUIPMENT

HERB CUTTER RB-400

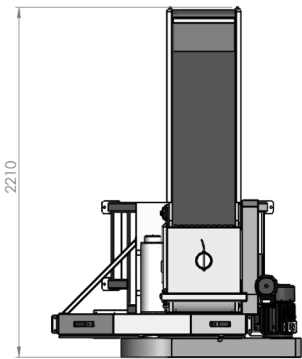
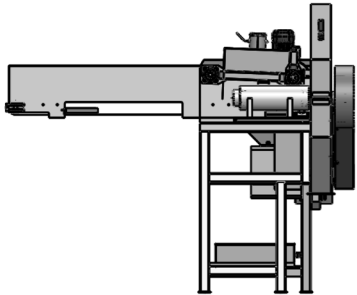
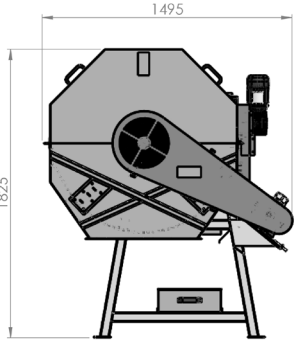
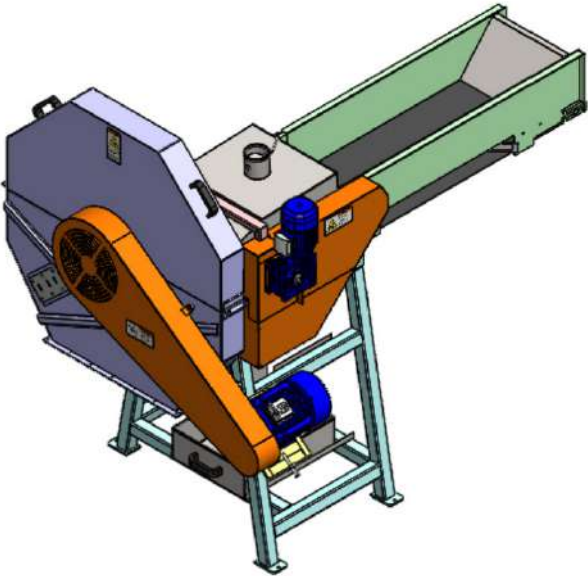


VIDEO

Designed for cutting different types of herbs in fresh (raw) or dry state. The cut length depends of technology requirements. Cutter is made with dosing conveyer width of 400 mm and knife length of 400 mm. Rotating knife cuts herbal mass held compressed by dosing system. Cut length is defined by ratio between speed of dosing conveyer and rotary speed of knives. Cutter is equipped with a large hopper for work with raw green material. Maximum capacity is 5000 kg of raw green herbal mass/h.

- Machine components:
- Dosing conveyor – width 400 mm
 - Cutter housing with static knife (cutter opening after dosing conveyor)
 - Rotor with knife holder
 - Output ramp
 - Machine mount

Dosing belt width:	400 mm
Capacity:	up to 5000 kg/h of fresh herbs and up to 500 kg/h of dried herbs
Electric Power::	4,37 kW
Weight:	600 kg



RB-400 (INOX)

PROCESSING EQUIPMENT

HERBS CUTTER URH 50-6 WITH INTERCHANGEABLE SIEVES

Excellent capacity for any small scale production

Herbs cutter with interchangeable sieves, type: URH 50-6 is designed for preparation of the plant/herb material for grinding or milling for bulk packaging of tea of minimum size of fractions 3 mm.

When you start bulk

The rotor and stator are made with slots for knives attachment. Size of fraction is changed by changing sieves on the stator. Our URH cutter can process a lot - from 50 - 300 kg/h. Higher end capacities specified are achievable with bigger fractions.

Cutter is standardly supplied with a set of three sieves (according to customer's demands), the same or different size of perforations, made of INOX AISI 304.

The action of rotor knives and counter-knives on the stator, in combination with the screen sieve, result in a uniform output fraction. Material is easily and safely dosed manually through the large mouth-like hopper.

Capacity:	50-300 kg/h (depending on material and the size of fractions)
Electric Power::	1,5 kW
Weight:	200 kg



PROCESSING EQUIPMENT

REBLER - REB 100



VIDEO

Rebler, type REB-100 is designed for separation of leaf blade form the stalk.

Processing material is dosed through the opening on the top of the rebler from where it enters into conical sieve where is rotating brush that is shredding the leaf on fractions according to the mesh openings.

Material: carbon steel or INOX AISI 304 (according to Customer demands)

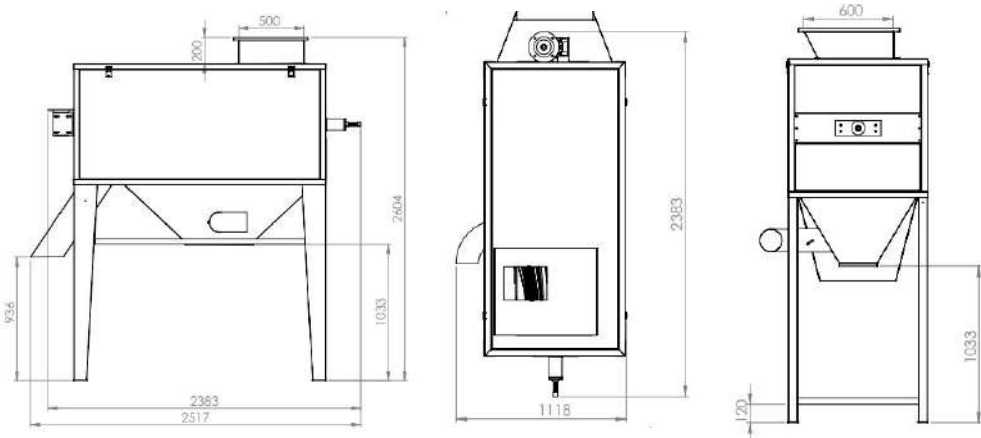
Brushes: from polyamide fibers.

Color: RAL 9002 or other, according to Customer

Option: Additional conical sieves with a sieve mesh on demand

Working platform of ‘rebler’: Platform heighth is 1500 mm, made of standard carbon steel with an anti-slip surface of the ribbed aluminum sheet or grid floor, protective railing, climber with a back protection and the protection from the rebound.

Sieve length:	1000 mm
Capacity:	500 kg/h
Electric Power::	1.5 kW
Weight:	250 kg



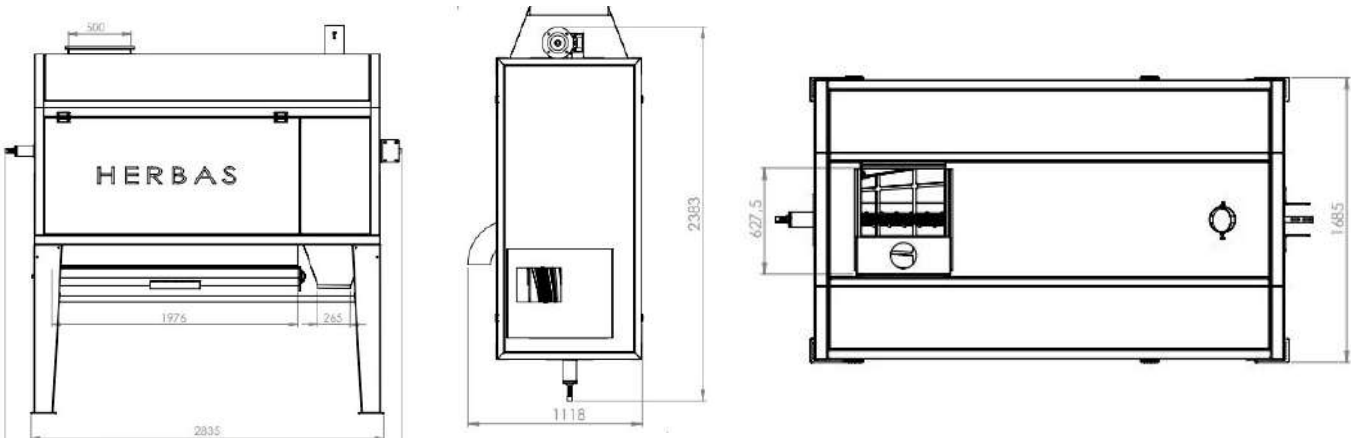
PROCESSING EQUIPMENT

REBLER - REB 200



VIDEO

Rebler, type: REB-200, is designed for separating the leaf blade from the stem. The processing material is dosed through the hopper at the top of the separator from where it enters the conical-semi-circular screen. In a screen the leaf blade is mechanically separated from the small stalk by rotating brushes, where the leaf and the part separated from the stem, is shredded into a fraction defined by the size of the mesh opening of the sieve. On the back part of the separator, behind the perforated or mesh part of the conical semi-circular screen, there is an outlet for the separated parts of the stem and stalk, while below the screen is an outlet for separated leaf parts. An conical replaceable sieve for the rebler, in a different mesh opening size, defines a different maximum size of the output material.



Sieve length:	2000 mm
Capacity:	up to 1000 kg/h
Electric Power::	1.5 kW
Weight:	550 kg



PROCESSING EQUIPMENT

THRESHER

Thresher is designed for mechanical separation of leaf from stalk, stems and midrib.

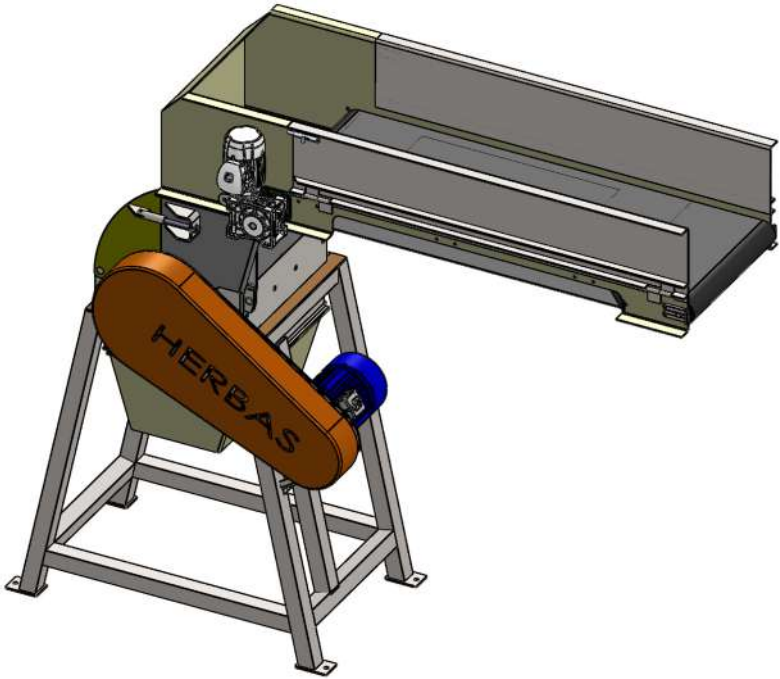
Processing material is dosed onto dosing conveyor of tresher and to the separational part to the machine where is performed mechanical separation of leaf from the stalk, stems and midrib and all in order to get as big leaf fractions as possible.

Size of the separated leaf is defined by sort of processing material and size of the sieve along with quality preparation of processing material.

A working platform for dosing material into the thresher can be supplied with the machine if the dosing is done manually. It is also recommended to use a conveyor for dosing to ensure uniform feeding and efficient machine operation.



VIDEO



Capacity:	up to 1000 kg/h
Electric Power::	1.5 kW
Weight:	500 kg



PROCESSING EQUIPMENT

PLANETARY SIEVE - RS SERIES

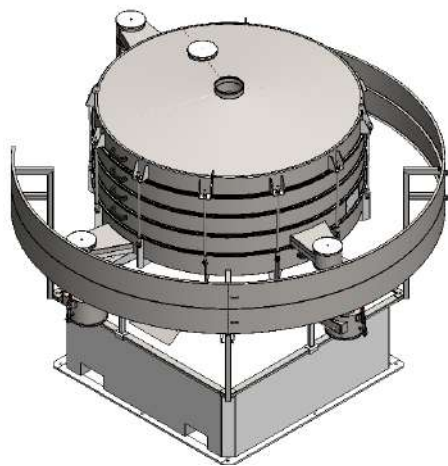
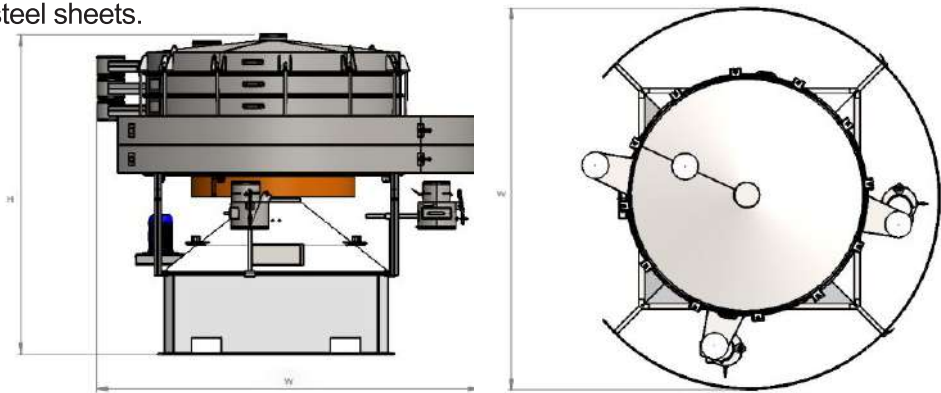


RS series planetary sieves are designed for separation of materials by particle size, typically in 2 to 5 fractions, depending on the number of exchangeable sieves inserts, which is from 1 to 4, respectively. The size distributions of sieved materials are defined by sieve insert openings. Number of levels and opening size is made according to the application and customer requirements.

Application

Due to specific 3D motion, such type of planetary sieves are known for very sharp cut points, that is a very precise distinction with minimal overlapping of two bordering fractions, especially with tiny particles. That is why they are used in chamomile and other pulvis or fine cut separation, in closed-circuit with HM series milling machines. If increased capacity is needed, one or more floors could be connected into a common output. The construction and sieve inserts are made of INOX AISI 304 or structural carbon steel, depending on the application and customer requirements. The sieve levels are made of technical meshes or perforated steel sheets.

Standard sieve diameter:
1450 mm and 1850 mm



PROCESSING EQUIPMENT

VIBRATING SIEVE - VS SERIES



VIDEO

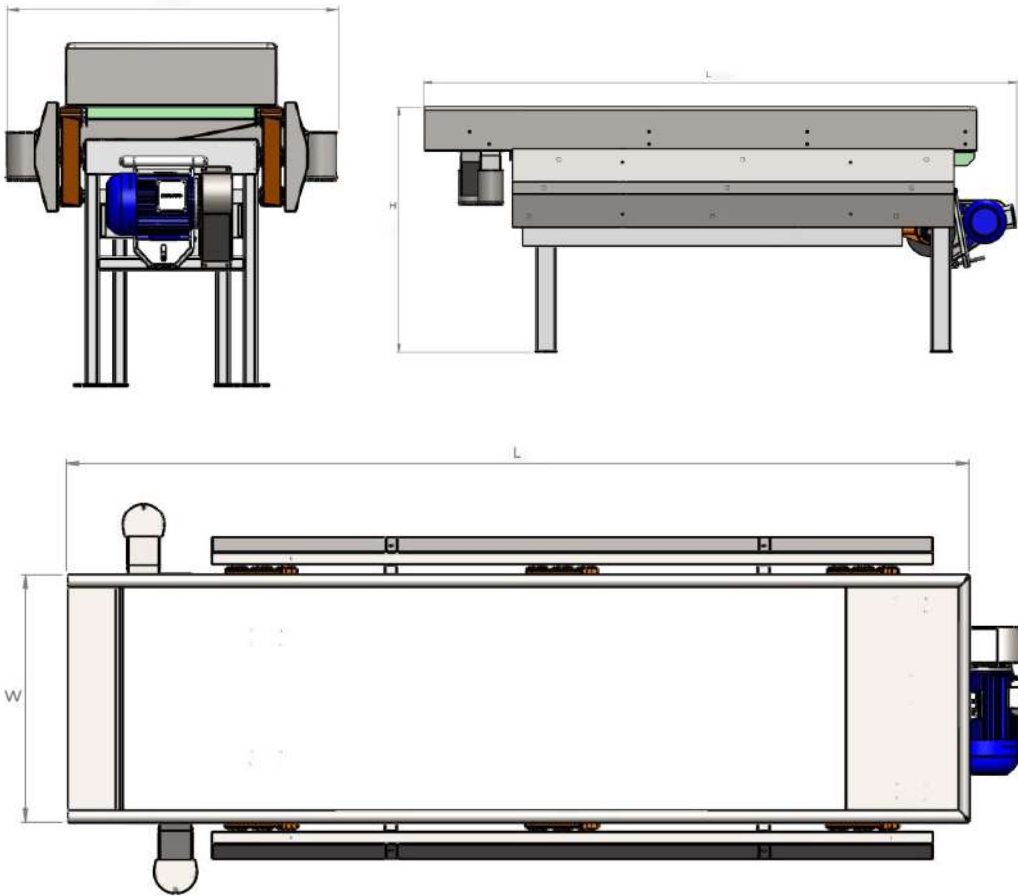
Vibrational sieves of the **VS series** are designed for separation of materials by particle size, typically in 2 to 4 fractions, depending on the number of sieve inserts (screen levels), which is from 1 to 3, respectively. The size distributions of sieved materials are defined by sieve insert openings on each level. The construction and sieve inserts are made of INOX AISI 304 or structural carbon steel, depending on the application and customer requirements. The sieve levels are made of technical meshes or perforated steel sheets.

Dosing to the sieve should be uniform. It is usually performed by belt, screw, vibrational or pneumatic conveyors in processing lines or via an integrated dispenser on the sieve, or manually.

On the back side are mounted doors, for easy sieve insert replacement and cleaning. Optionally, caster wheels can be installed for mobility, with stabilizers in working mode. For each sieve level, a continuous cleaning can be performed with rubber balls.

Due to their balanced design which cancels out forces, they are quiet and still, not particularly heavy, and very durable. Vibration is adjustable by amplitude, frequency and throwing angle.

VIBRATION SIEVE TYPE	WIDTH (W)	LENGHT (L)	NUMBER OF FLOORS
VS 6	600 mm	from 1400 mm to 2250 mm	1 or 2
VS 9	900 mm	from 2350 mm to 3000 mm	1,2 or 3
VS 12	1200 mm	from 3000 mm to 4000 mm	1,2 or 3



PROCESSING EQUIPMENT

CYLINDRICAL SEPARATOR - SEP SERIES



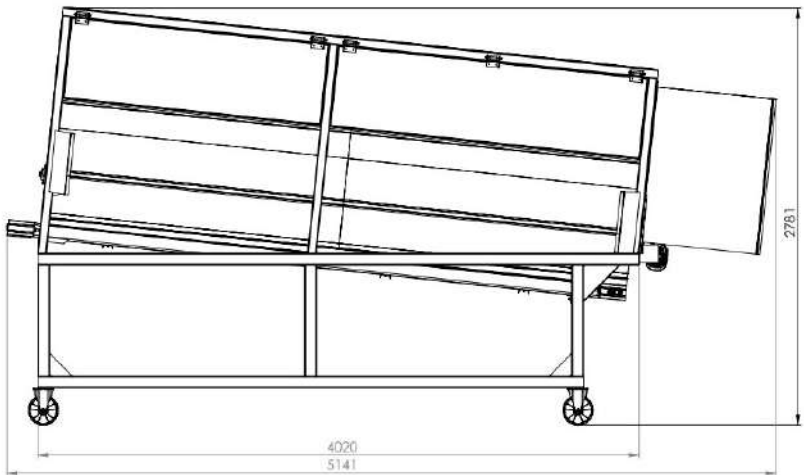
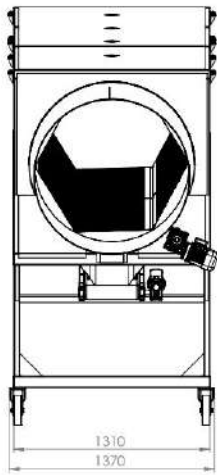
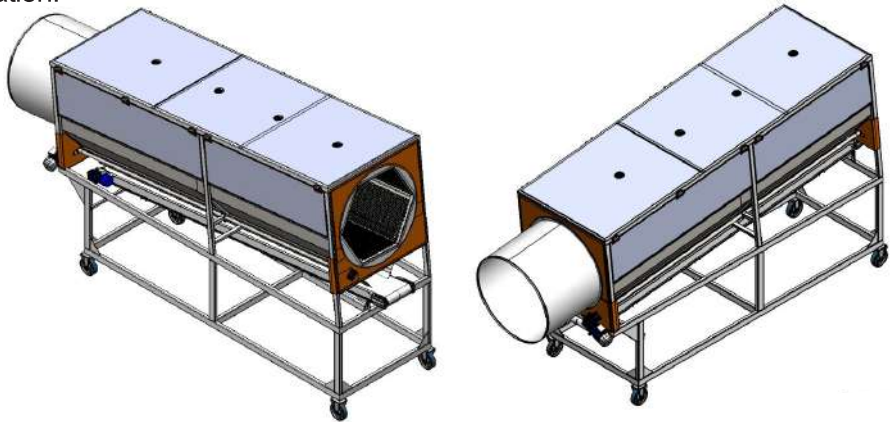
VIDEO

The cylindrical separator of the SEP series is designed for screening, separating, and sorting materials based on particle size, and it is successfully used in many fields. The sizes of the separated fractions are predefined by the openings size on the cylindrical sieve. The sieve holes can be automatically cleaned by various means.

Applications

A cylindrical separator is often used for separation of freshly harvested chamomile before drying. Such a technique can reduce the cost of drying with prior cutting of the oversize fraction or to increase the total value of the harvested chamomile flowers, making processing in the facility more effective. The machine is also used to clean tobacco or herbs from dust and impurities after drying with a tumbling action, to separate electronic waste into 5 different fractions, to separate grape seed and skin, etc. The cylindrical separator is movable - mounted on caster wheels with brakes, easy to use, very reliable, durable and quiet in operation.

Drum length:	4000 mm or 3000 mm
Capacity:	5000 kg/h of fresh herbs
Electric Power:	0.75 kW – 1.6 kW
Weight:	550 kg



SEP/DK-4000 (INOX)



SEP/DK-4000 (MILD STEEL)



PROCESSING EQUIPMENT

PNEUMATIC SEPARATOR - HPS 630



VIDEO

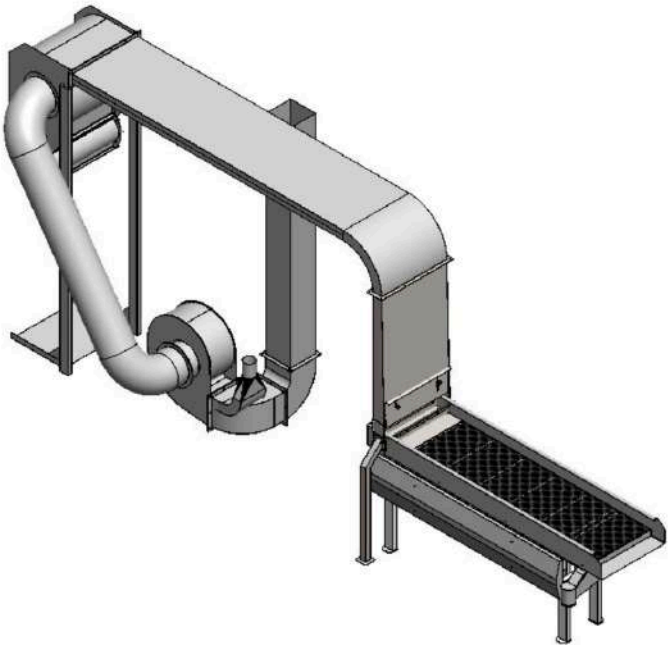
Type HPS-630 pneumatic separator, with precise vibrational conveyor dosing, is designed for separating processing material into two fractions by floatability. Separation is performed according to the different density, size and shape of individual fractions, which will be called here “lighter” and “heavier” fraction.

The processing material is dosed uniformly onto the vibrating conveyor via any other type of conveyor, from where the material travels towards the vertical air tunnel of the pneumatic separator. In the air tunnel, the lighter fraction is lifted by the air flow and transported pneumatically to the outlet. The lighter particles are deposited by the centrifugal separator and air lock valve. The heavier fraction is discharged by gravity and collected to the drawer in a closed type system, while in an open type system it is collected into a receptacle (e.g. box pallet, cardboard box) or discharged onto a conveyor. Airflow and material flow are adjustable.

Application

These are successfully used in many fields - in seed cleaning, destoning, metal objects removal, separation of leaves from stems, etc. In destoning and metal objects removal, a closed type system is usually used.

Tunnel width:	630 mm
Capacity:	500 kg/h - 1000 kg/h
Electric Power:	4,5 kW
Weight:	450 kg



PROCESSING EQUIPMENT

PNEUMATIC SEPARATOR - CFS 800

The CFS-800 pneumatic separator is designed for the highest quality and high capacity separation of processing material into two fractions by floatability. Separation is performed according to the different density, size and shape of individual fractions, which will be called here “lighter” and “heavier” fraction.

The processing material is loaded into the hopper of the separator, from where it is introduced evenly into the air chamber of the separator. The introduction process is adjustable through the HMI display.

Once inside the air chamber, the material is subjected to an air flow generated by a VFD controlled and powerful fan, which causes the lighter fractions to be lifted and transported to the outlet, usually straight to the vibrational sieve for further separation. Meanwhile, the heavier fractions are transported to the conveyor integrated with the separator. The adjustments of the parameters are done over HMI display integrated in the control cabinet, usually powering the whole processing line. This allows for fine-tuning of the separation process to ensure the best final result.

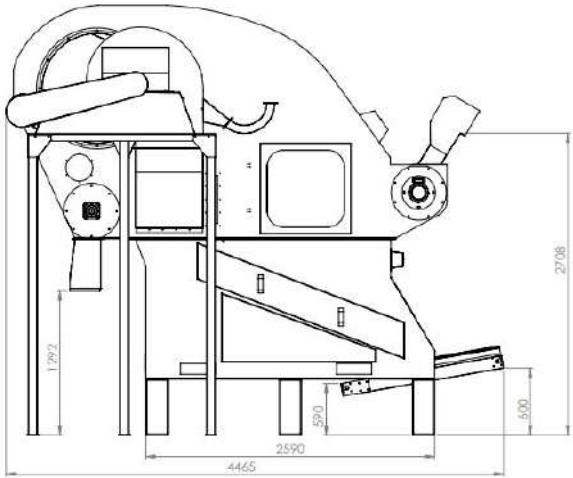
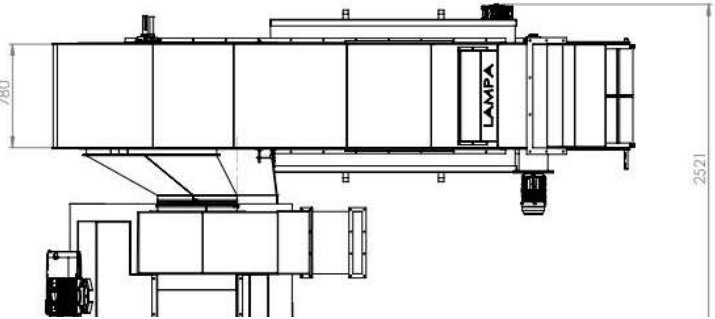
Applications:

stem and rib removal from leaf blades (sage, mint, tobacco, ...), destoning and metal removal, dedusting, etc.

Tunnel width:	800 mm
Capacity:	2000 kg/h
Electric Power:	16 kW
Weight:	1500 kg



VIDEO



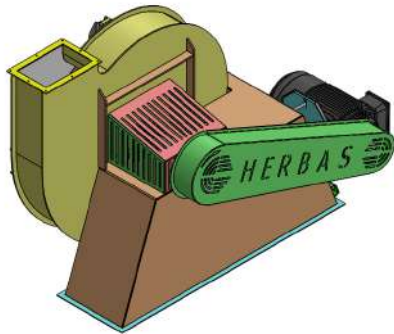
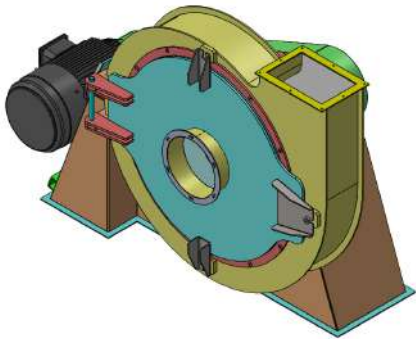
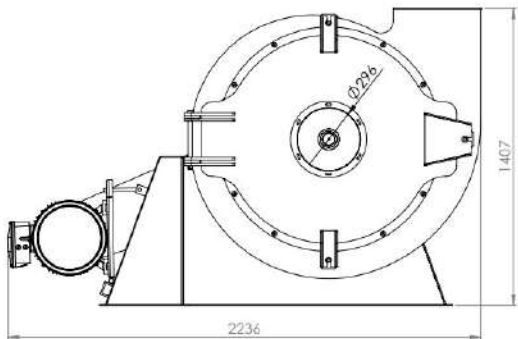
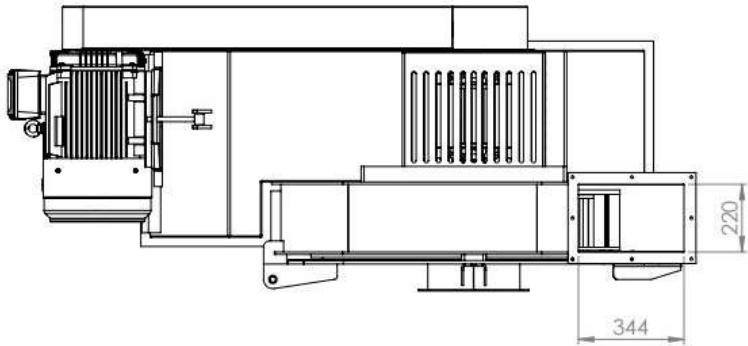
PROCESSING EQUIPMENT

MILL - HM 815

The mill for dry herb mass, type HM-815 is designed for shredding of dried herb mass to the size of the fractions according to the mesh opening of the sieve. Screen cleaning is achieved by air flow.

The fractions that are shredded to the defined size are passing through a sieve and are separated from the rest of the material. After separation the shredded fractions are transported by pneumatic transport to the next stage of processing. The upper size limit of the output materials is defined by the size of the mesh opening of the mill screen.

Capacity:	1000 kg/h
Electric Power:	22 kW
Weight:	950 kg



PROCESSING EQUIPMENT

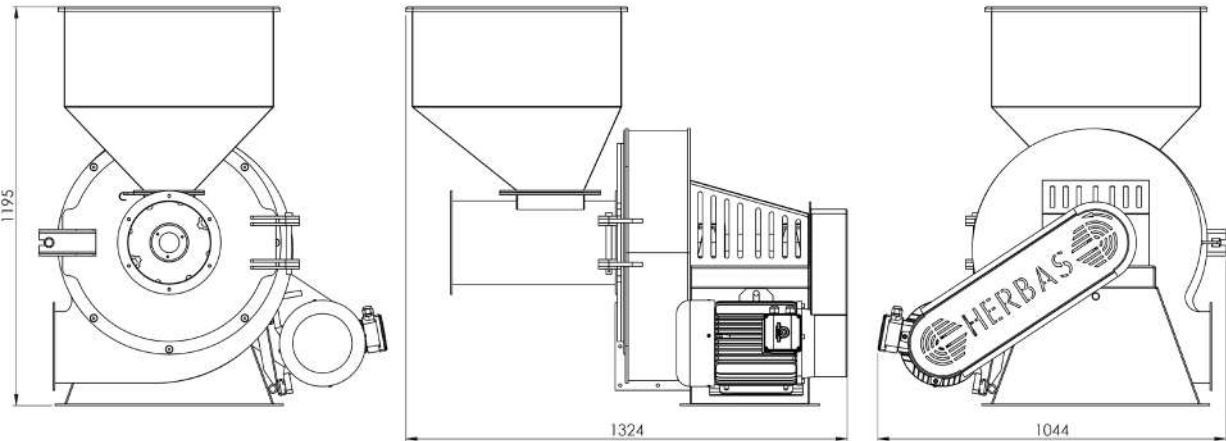
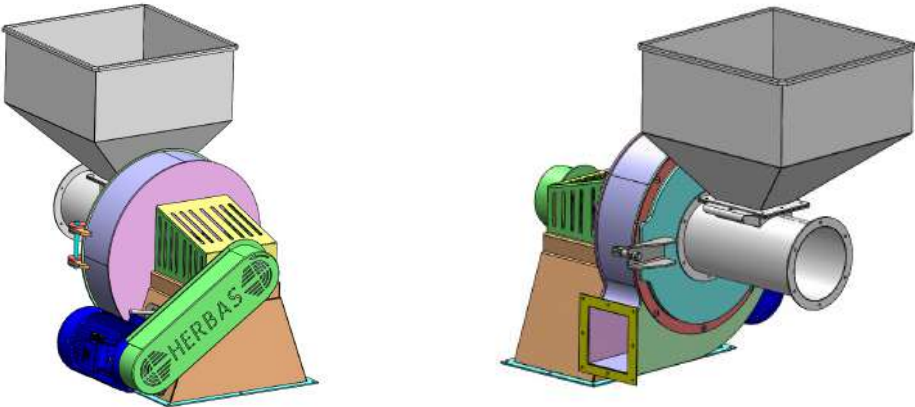
MILL - HM 600

Designed for grinding and milling of processing material with integrated anti sound tunnel, integrated fan for air transport of material into planetary rotational sieve.

Mill is equipped with pipes for air transport and pipes for transport of the material, anti-acoustic box around mill (to prevent exaggerated noise), cyclone separator and air lock.

Rotor of the mill is in horizontal position and ‘hammers’ are mounted on it. On stator part/housing of mill is mounted sieve (size of sieve opening is according to customers demand). Air from cyclone separator is in recirculation.

Whole mill system should be connected to filter unit.



PROCESSING EQUIPMENT

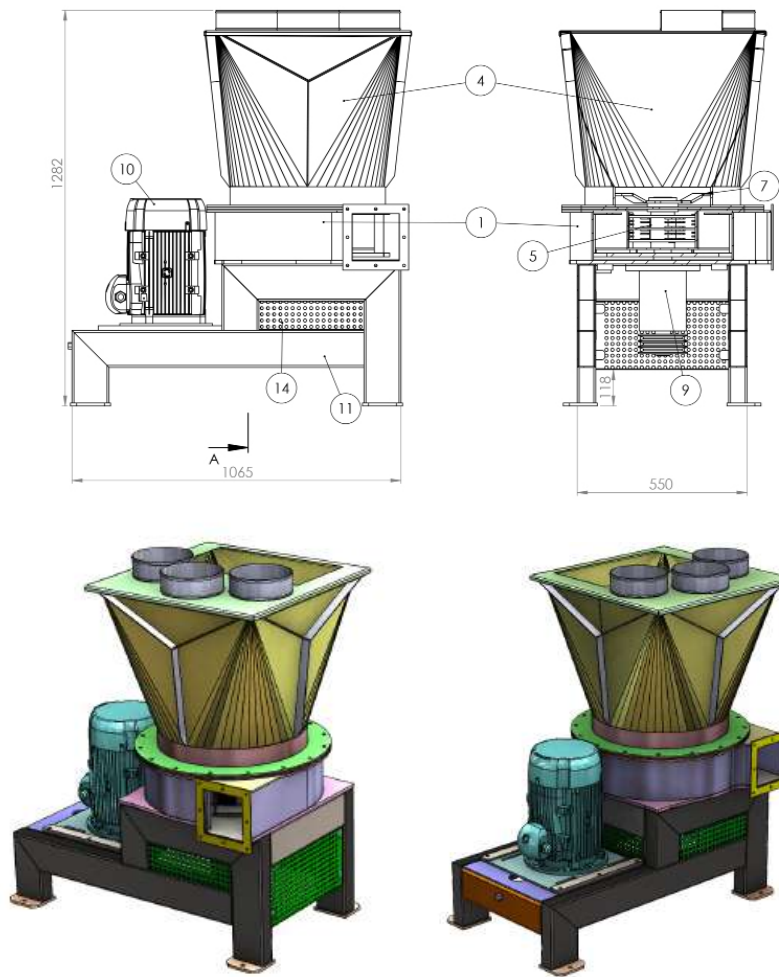
MILL - HM 500

Intended for shredding and grinding process material, to the size of the fractions according to the sieve mesh opening. The mill is also used as a fan of integrated pneumatic transport. Pneumatic transport pipes connect the mill with a cyclone separator on which a cell dispenser is mounted for even dosing of the processing material into the rotary sieve.

The cyclone separator is mounted above the rotary-planetary screen on a tripod stand. An anti-sound box is mounted around the mill, while a magnetic metal separator is mounted before the mill. The rotor of the mill is positioned horizontally and ‘hammers’ are mounted on it.

A mill sieve is mounted on the stator part (the mesh opening on the sieve is according to the customer’s wishes). It is preferable to connect the mill with an air filtration system

Capacity:	300-500 kg/h (depending on material and the size of fractions)
Electric Power:	11 kW
Weight:	320 kg



PROCESSING EQUIPMENT

MILL FOR DRIED PLANT MASS MB-100

Designed for shredding of dried herbs, according to the size of installed mesh screen.

The airflow cleans the sieve.

Fractions which have achieved the aquired size of fractions are beeing separated form the rest of the processing material and by the pneumatic separator are transported to another processing phase.

Capacity:	180 kg/h
Electric Power:	9,5 kW
Weight:	240 kg



MB-100 (MILD STEEL)



MB-100 (INOX)

PROCESSING EQUIPMENT

MIXER



VIDEO

Our HMP mixer series covers a wide range of needs through 5 different models of volumes spanning from 100 L to 6 m3. These machines are versatile, highly effective and practical, designed for the homogenization of different materials or fractions. They are proven in a wide range of applications: blending herb mixtures for the tea or spice industry, making chamomile pulvis blends of exact content, mixing seeds and pulvis in chamomile seeding applications, applying powdered aromas, etc.

The 100 L and 300 L are ideal for small manufacturers of tea blends or spice mixtures and as laboratory equipment. On the other side of the spectrum, the 6 m3 mixers are perfectly suited for blending and quality equalization across the batch during production, ensuring that the final product meets the highest standards and expected quality.

The charging, discharging and cleaning is an important part of operating batch mixers. That is why for charging and discharging, for the larger models (from 300 L to 6 m3), a central diverter valve system is used. This enables effortless switching from filling and mixing mode to discharge mode by simple operation of a lever and reversing rotation. A screw conveyor with a big hopper is typically used alongside. Cleaning is performed through a large door using a pressure washer or filling a mixer with disinfection solution. Optionally, an automated clean-in-place solution is available. On discharge, material can be directly packed into bags or via the screw conveyor lifted to containers - e.g. silo.

The mixing duration depends on the required homogeneity of the final product, which is best determined by experiment. Mixing duration can be reduced by simultaneously dosing different materials. For herbal mixtures, a complete cycle usually takes 45 min - 1 h, while mixing typically takes from 15 to 30 min.

The mixer is constructed of stainless or structural carbon steel, depending on the application and customer requirements. The bearing arrangement is carefully designed to achieve long service life. Optionally, motor speed can be regulated by VFD, adding the possibility to increase capacity or provide more gentle operation.

AVAILABLE SIZES:

m3 or L
100 L
300 L
1 m3
3 m3
6 m3

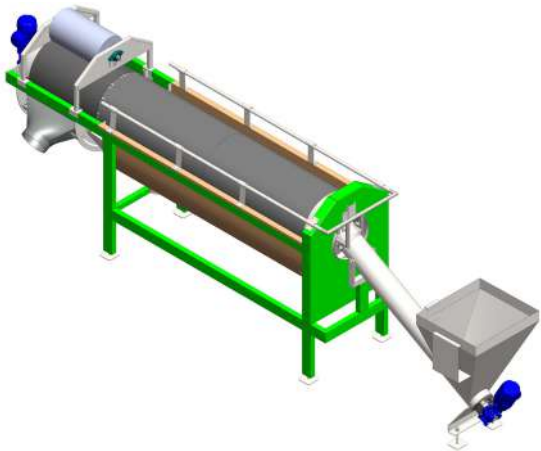
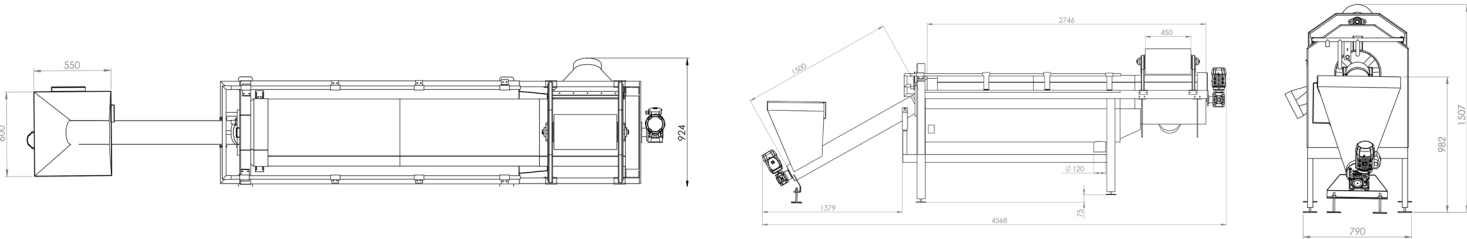


PROCESSING EQUIPMENT

WASCHING MACHINE FOR PUMPKIN SEEDS HPBK - 50/270

Washing machine, type HPBK-50/270 is designed for washing of pumpkin or grape seeds after harvest and before drying, in order to remove pulp and mucus residue from the processing material. Seeds are, via a screw conveyor, dosed in a rotating cylinder of perforated sheet metal. The material travels through the cylinder due to inclination. During the rotation of the cylinder, the processing material is washed with a pressurized water jet. The rotating brushes continuously clean the perforations from clogged seeds. A ventilator at the end collects lighter dirt particles and excess moisture in the form of mist and surface moisture.

Cylinder width:	500 mm
Capacity:	2000 kg/h
Electric Power:	0,92 kW
Weight:	480 kg



PROCESSING EQUIPMENT

MACHINE FOR POLISHING OF PUMPKIN SEEDS PSB-25 X 56

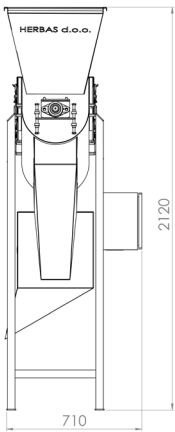
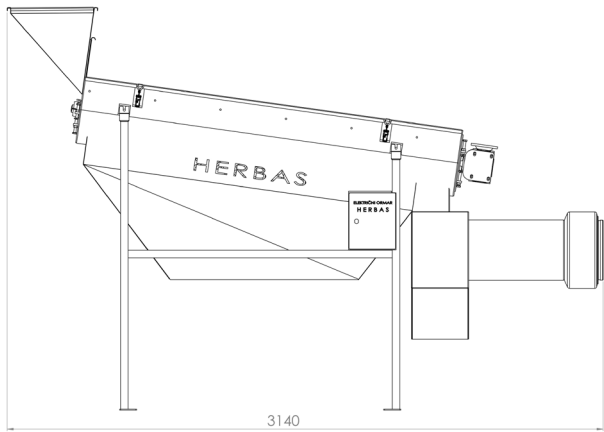


VIDEO

The PSB-25 × 56 is a highly specialized machine that is designed for polishing and cleaning seeds to remove impurities. The machine is specifically engineered to provide a high level of surface gloss on the seeds by passing them through the machine and separating lighter impurities through pneumatic separation. This process not only removes impurities but also enhances the appearance of the seeds.

The machine has a capacity of 500-800 kg of dried seeds per hour, making it an efficient and productive solution for seed processing. This high capacity allows for large quantities of seeds to be polished and cleaned in a short amount of time, which can help to increase productivity and reduce labor costs.

The PSB-25 × 56 machine is an essential piece of equipment for seed processors, farmers, and other related industries. It is built with durability and longevity in mind, ensuring that it can withstand the rigors of regular use. The machine is easy to operate and maintain, which makes it an ideal solution for seed processing.



PROCESSING EQUIPMENT

HYDRAULIC PRESS HP-20

Ideal for small scale production

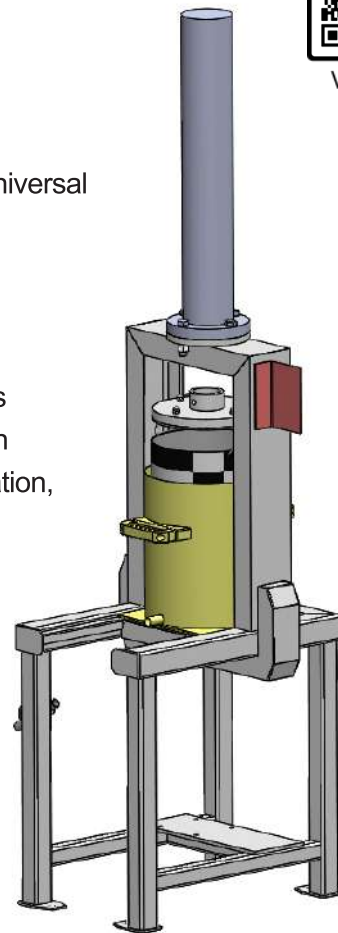
Hydraulic 5-ton press HP-20 is designed to press macerated herbs to extract different bioactive components for medicinal or pharmaceutical preparations, but is practically universal and can be used for other purposes.

Compact but packs a punch

A 5-ton of force achieved in a hydraulic cylinder is generated by a pump driven by a single-phase electric motor. Joystick provides effortless pressing operation and governs up and down motion. A manometer at the operator side shows the achieved pressure in the cylinder. To prevent unsafe or incorrect position of cylindrical container during operation, a safety function prevents piston's downward motion.

Features:

- compact,
- manometer for pressure feedback,
- 50 kN (5 ton) of force with 65 bar in hydraulic cylinder,
- single phase power supply required,
- 20 liter (5.3 gallons) stainless steel perforated cylinder for macerated herbs,
- sliding feature ensures easy material manipulation,
- safety switch prevents incorrect or unsafe operation.
- joystick for simple operation.



VIDEO



PROCESSING EQUIPMENT

HYDRAULIC PRESS HP-300

Hot (roasted) pumpkin seed oil

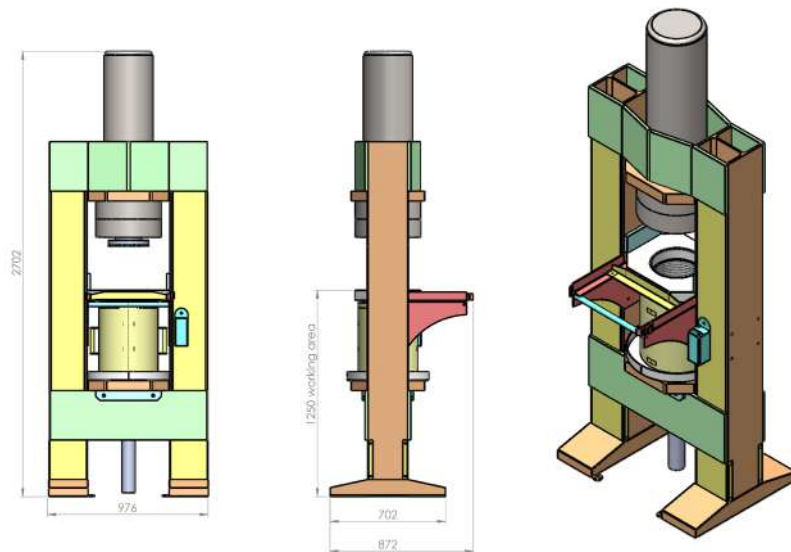
HP-300-2 are designed for pressing of prepared and cooked ground mass of pumpkin seeds, macadamia and all other similar materials.

Straightforward and productive workflow

Hydraulic press is equipped with hydraulic aggregate, electrical control cabinet, cylinder for filling and pressing of material.

The conditioned and heat-treated mass is put into a perforated cylindrical bin underneath the main hydraulic cylinder which presses the mass to extract the oil.

Every 1 - 2 L of mass placed to the bin, a round steel plate has to be put, so that pressure is better distributed.



PROCESSING EQUIPMENT

COLD PRESS MACHINE HHP series

During cold pressing, three products are obtained:unrefined oil, oily residue, oil cake

HHP oil presses are carefully designed to process oilseeds of varying hardness, ensuring superior results every time. Their powerful drive and exceptional durability make extracting oil from even the most challenging oilseeds effortless. What sets the HHP presses apart is their ability to operate continuously, enabling an uninterrupted oil extraction process. Increase your productivity and rely on the unmatched performance of these outstanding machines.

HHP 20	HHP 20 S	HHP 40	HHP 40 S
5-20 kg of raw material	5-20 kg of raw material	10-40 kg/h of raw material	10-40 kg/h of raw material
878 mm x 559 mm x 796 mm	877 mm x 559 mm x 806 mm	1012 mm x 559 mm x 824 mm	1124 mm x 559 mm x 844 mm
1,5 kW	2,2 kW	2,2 kW	4 kW
66 kg	78 kg	95 kg	118 kg



PROCESSING EQUIPMENT

CELERY WASHER HPBK-C150



Adjustable to different sizes

Celery washer HPBK-C150 is an convenient piece of equipment that can help any farmer with the challange of improving their cleaning process of celery root or any other rounded root vegetables. After being harvested from the ground, celery root is covered with soil and mud that needs to be removed in order to maintain its quality and appearance.

Starting small but ambitious

The HPBK-C150 celery washer uses a combination of brushing and water splashing to clean the product thoroughly. The celery is placed manually at the one side of the machine, while the nylon brushes rotating, removing all the dirt, mud and soil particles from the surface of the celery root. During the brushing process, water is splashed along the machine to improve the cleaning process. It helps to remove any remaining particles and rinses the celery to make it ready for packaging.

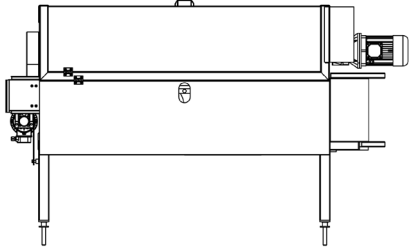
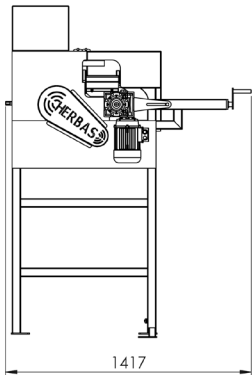
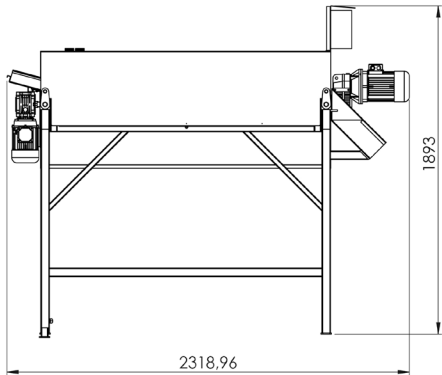
An optional system can collect and recycle water, reducing the water consumption and costs.



BEFORE WASHING



AFTER WASHING



PROCESSING EQUIPMENT

BARBOTER WASHING MACHINE



VIDEO

Universal solution

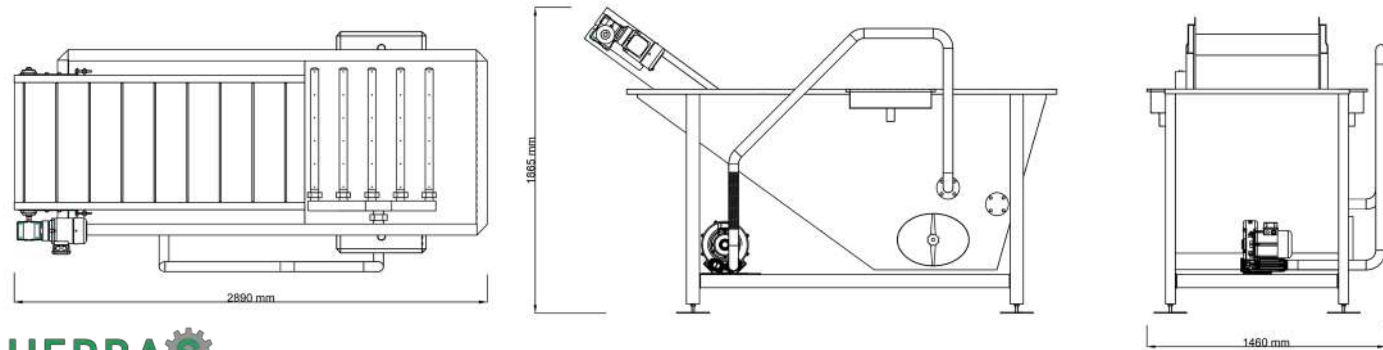
The barboter is a universal solution for effective and efficient washing of fruits and vegetables with water, removing surface dirt, stains and water-soluble pesticides. Batch or continuous - barboter is suited for both modes of operation. It is used in a pre-wash operation after harvest (dried apple chips) or before packaging and shipping (fresh apples).

Food application

Complete stainless steel design and porous modular belt ensures durability, compliance with food standards and easy washing and cleaning.

Gentle operation

Fruit or vegetables are introduced via an inclined conveyor or manually into the tank filled with water. A powerful pump of a dynamic/kinetic type introduces air bubbles that gently and effectively rotate and tumble the fruits and vegetables during the washing process and propels them towards. An additional conveyor from above can be provided to submerge the fruits and push them forward in case of harder to clean materials.



PROCESSING EQUIPMENT

MACHINE FOR REMOVING OLIVE LEAVES FROM THE BRANCH - SSL-M/60



VIDEO

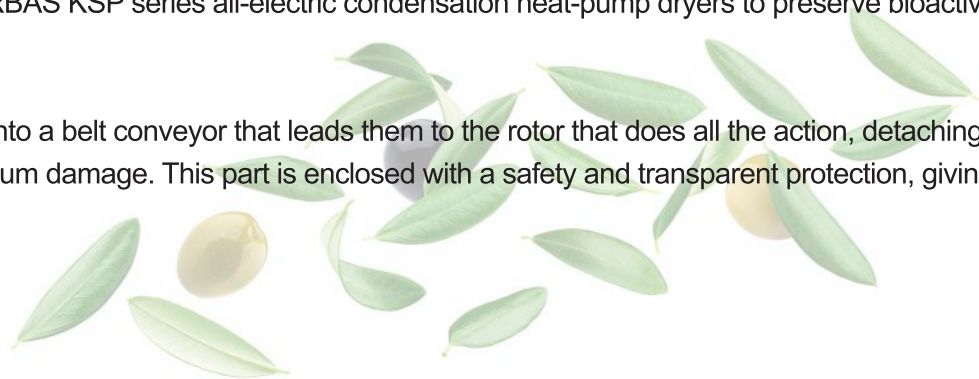
Did you know?

Olive tree leaves contain interesting bioactive components and can be used in making flavorful infusions or as a basis in the pharmaceutical, cosmetics or food industry. Utilize this valuable byproduct from organic cultivation and generate new revenue streams! The machine has already proven its use in an industrial setting, aiding several Mediterranean companies in removing leaves before extraction or final drying.

Operational considerations

The SSL-M handles olive branches with ease, removing more than 90 % of the leaves in the first pass. HERBAS pneumatic separators HPS 630 can easily separate leaves from the mass, while branches can be taken for another pass. This can be done with no additional manipulation steps between operations. It is recommended that branches are first dried to about 10% M.C. w.b., usually leaving them on a shady and windy spot, or through low temperature and 100% recirculated drying in HERBAS KSP series all-electric condensation heat-pump dryers to preserve bioactive components as much as possible.

The branches are manually dosed onto a belt conveyor that leads them to the rotor that does all the action, detaching leaves from the branches with minimum damage. This part is enclosed with a safety and transparent protection, giving great visibility of the process.





PROCESSING LINES

In the processing of a dried product, that is cutting, threshing, screen separation and airblow classification we offer custom designed units that can work separately or combined with other machines in one processing line.

With our integrated line it is possible to separate in continuous all those components of a medicinal herb or plant. We can separate heavy from light (seeds from husks), long from short (leaves from stems), little from big (tea cut from tea-bag-cut).

This allows the producer to collect in automatic the best of his production.

PROCESSING LINES

PROCESSING LINE FOR GRAPE POMACE



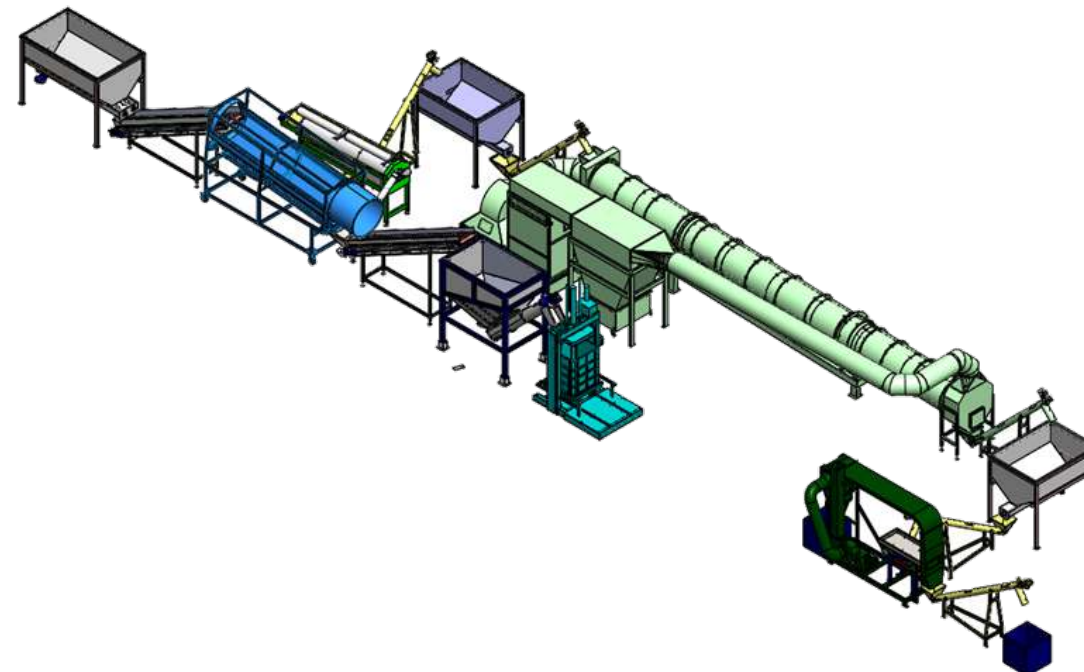
VIDEO

Easy handling: A tractor fitted with a front-loader, a telehandler, or a forklift – equipped with a bucket or a fork rotator attachment - can quickly and efficiently fill hopper of a first dosing machine.

Precise Separation: With a combination of drum separators in multiple steps and pneumatic separation, this line efficiently and precisely separate seeds from pomace residue.

Energy-Efficient Drying: The rotary dryer uses a thermal generator on natural gas, fuel oil or biomass (nut shells, wood chips, wood pellets, etc.), along with electric energy, providing you flexibility and with possibility to cut down energy expenses choosing the most suitable energy source in the given moment. Carefully regulated air recirculation and thermal insulation of the whole drying system results in energy-saving operation. A two energy source system is available: one of the aforementioned fuel + electricity offering for a green solar panel compatibility, as well as coverage in the days when there is not enough sun radiation coming through clouds. Renewables are definitely a future to come, but because of their inconsistency, now they have a practical back-up!

Automated Process from start to finish: The need for manual labor and handling is minimal, which increases efficiency and work safety. The line is operated by 2 operators. For larger systems, the line can be upgraded with additional solutions according to the customer's preferences.



FINAL PRODUCTS



PROCESSING LINES

CHAMOMILE PROCESSING LINE- basic assembly



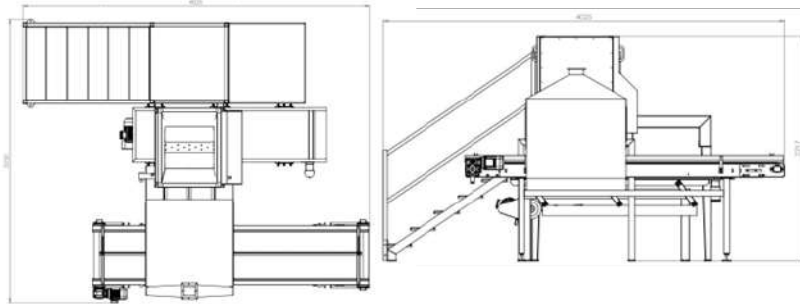
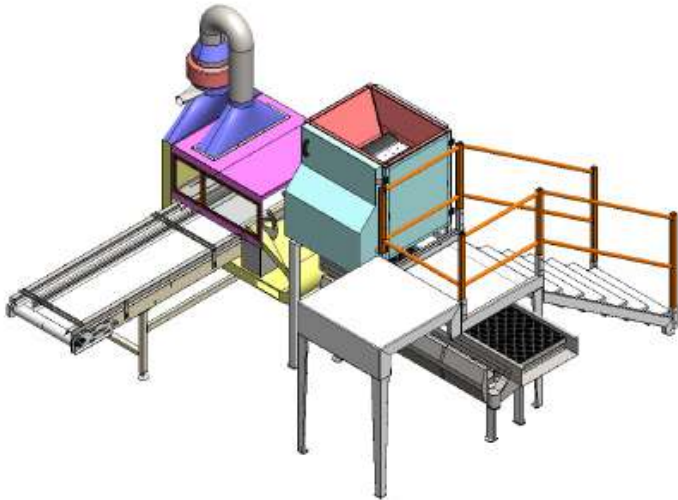
VIDEO

The processing material is placed manually into the hopper of chamomile flower head cutter where is performed separation of chamomile flowers from the rest of the stem. Separated herb stem is cut into the smaller fractions of size 10 – 20 mm (16 mm preferable).

Separated chamomile flowers are falling onto the string sieve of the chamomile flower head separator and into the pneumatic separator for a pneumatic separation. Pneumatic separator separates the chamomile flower heads on 1st class chamomile flower heads from the 2nd class chamomile flower heads. Separator separates also impurities (dust, rock, metal) and all according to the weight of fractions, with tangential separation of dust. After the pneumatic separator, as a part of this machine, there is belt conveyor for transport of classified processing material into the final boxes/containers prepared from the Customer. Also organioleptic inspection could be done on the same conveyor.

The mixture of the rest of the herb from the chamomile flower head separator is dosed onto the vibrational sieve and is being separated on three fractions: dust, extra pulvis, herba+petals.

Capacity:	up to 85 kg/h
Electric Power:	3 kW



INPUT MATERIAL



OUTPUT MATERIAL



PROCESSING LINES

COMPLETELY AUTOMATIZED CHAMOMILE PROCESSING LINE



VIDEO

Raw material handling

Dry chamomile is dosed onto the input buffer of the buffer-feeder system in bulk from carton boxes or otherwise. The feeder works in conjunction with the buffer giving uniform flow of the material, while being regulated via PLC and sensor data. This behavior is programmable according to the state of the raw material due to preselection, type of harvest, etc.

First separation stage - extracting flower heads

In the cylindrical separator, chamomile is separated into two distinct fractions, the first one rich in flower heads and pulvis and the second one mostly consisting of stem and leaves. The second one is directed towards the RB-400 cutter, where it is coarsely cut. The cut material is returned again to be passed through the second cylindrical separator to further catch any remaining and intact flower heads. From here - two streams continue.

Milling and Pulverization

The mostly-stem fraction is diverted to the mill HM 600, where it is turned into a fine cut fraction called “industrial pulvis” or “herbal pulvis.” The mill is coupled with the RS planetary sieve in closed-circuit milling, with oversize being returned to the mill.

Destoning

The first fraction rich in flower heads is subjected to the pneumatic separator. Here, heavier impurities such as metal, stones, and soil are removed, reducing potential system stoppages.

Capacity:	up to 300 kg/h
Electric Power:	up to 40 kW

THE CORE OF THE LINE - flower separation and classification

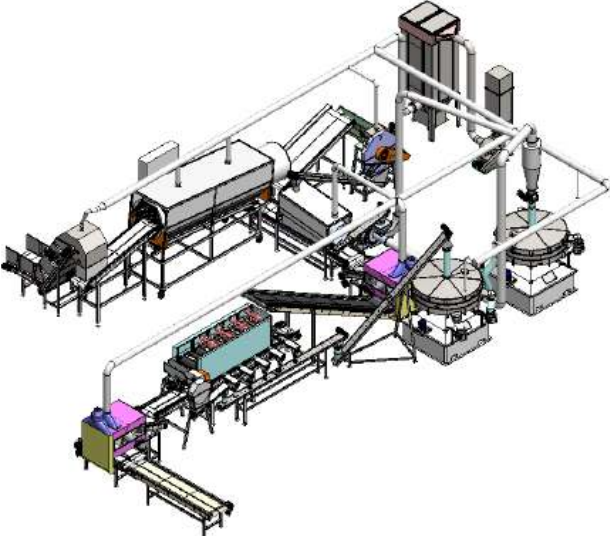
The flowers are transported by an inclined conveyor to the specially automatized RGK series chamomile flower head separator. The resulting flower head fraction is reduced to a length of 16 mm. The remaining stalks are chopped in the RB-200 cutter into small fractions (0-10 mm) and, along with stalk and petals, are sent back to the second planetary sieve. The flower heads are directed to the second pneumatic separator for classification into first- and second-grade flowers. First-grade flowers can then undergo optical sorting with combination of manual visual inspection ensuring the highest quality possible. The mixture of stems, fine powder, and petals is transported to the RS series planetary sieve.

Filtration

The filtration system collects the dust in a pulse-jet dry bag filter from different points along the process. Pulse-jet action does periodic self-cleaning pneumatically, shaking dust off the bags using short pressure bursts of compressed air.

Resulting fractions are:

First and second class flower heads
Extra pulvis: (e.g., 0.25–1 mm).
Industrial pulvis: (e.g., 0.25–1 mm).
Dust: < 0.25 mm.



PROCESSING LINES

THRESHING, REBLING AND SEPARATION



VIDEO

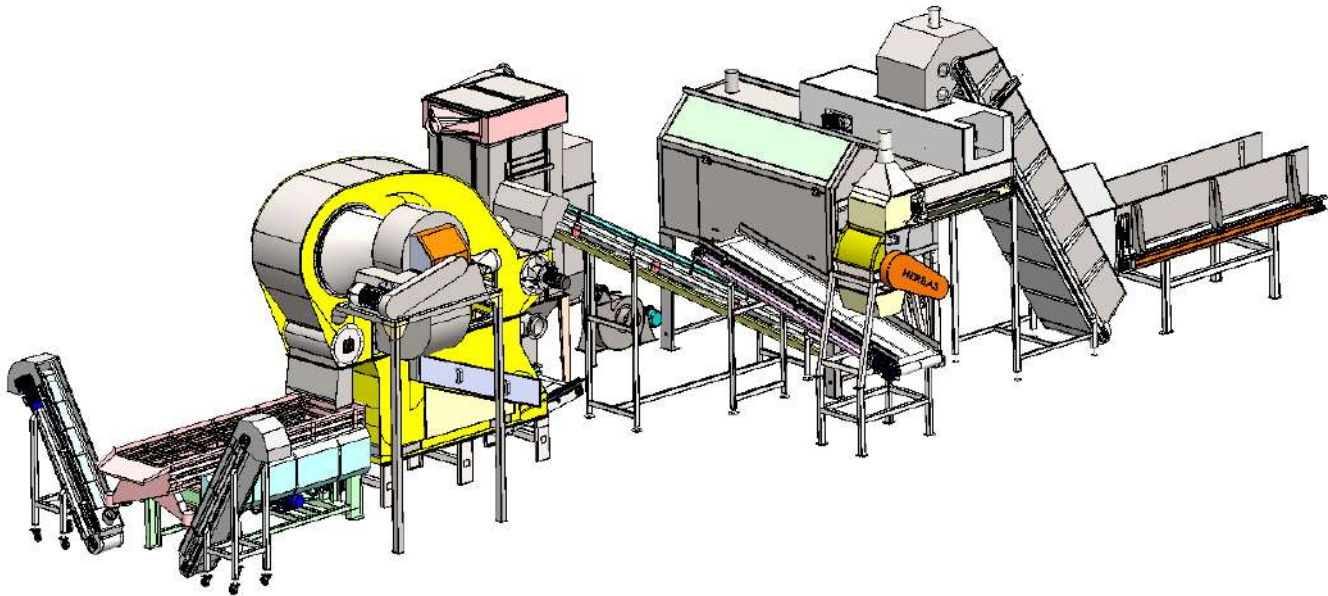
Herbas line for threshing, rebling and separation is a complete and universal processing line for different medicinal and aromatic plants like: mint (*Mentha*), sage (*Salvia officinalis*), lemon balm (*Melissa officinalis*), nettle (*Urtica*), stevia (*Stevia rebaudiana*), etc. This automatic line employs only 1-2 operators and converts these herbs into more valuable products. The output material is ideal for further extraction, and bulk tea packages. One huge advantages is that it produces minimal destruction and resulting dust.

Uniform dosing is achieved by a combination of a buffer and a feeder. The input buffer can be simply filled using various methods: forklifts, loaders, conveyors, etc. On this line, you can choose between the threshing and the rebling process in any moment by redirecting material flow to one or the other side. Both processes separate the leaf from the stalk. While threshing produces larger fractions, rebling, on the other hand, also grinds the material to a specified and desired size. This gives you another advantage. Working on one side gives you enough time to adjust the machine working on the other sized for a different herb material or product, so you don't lose time. For example, you can adjust your rebler while threshing some products, and vice versa.

In any case, the input material must be dried to the desired moisture content prior to processing.

Pneumatic separation on our CFS-800, in combination with sieving on a vibrational sieve, efficiently separates and cleanses the product.

Sieves can be made according to request and are easily changed between working with different materials or products. The material is then directly packed into bags for storage and transport.



Capacity:	up to 1000 kg/h
Electric Power::	up to 30 kW

PROCESSING LINES

REBLING PROCESSING LINE WITH BATCH INPUT MATERIAL



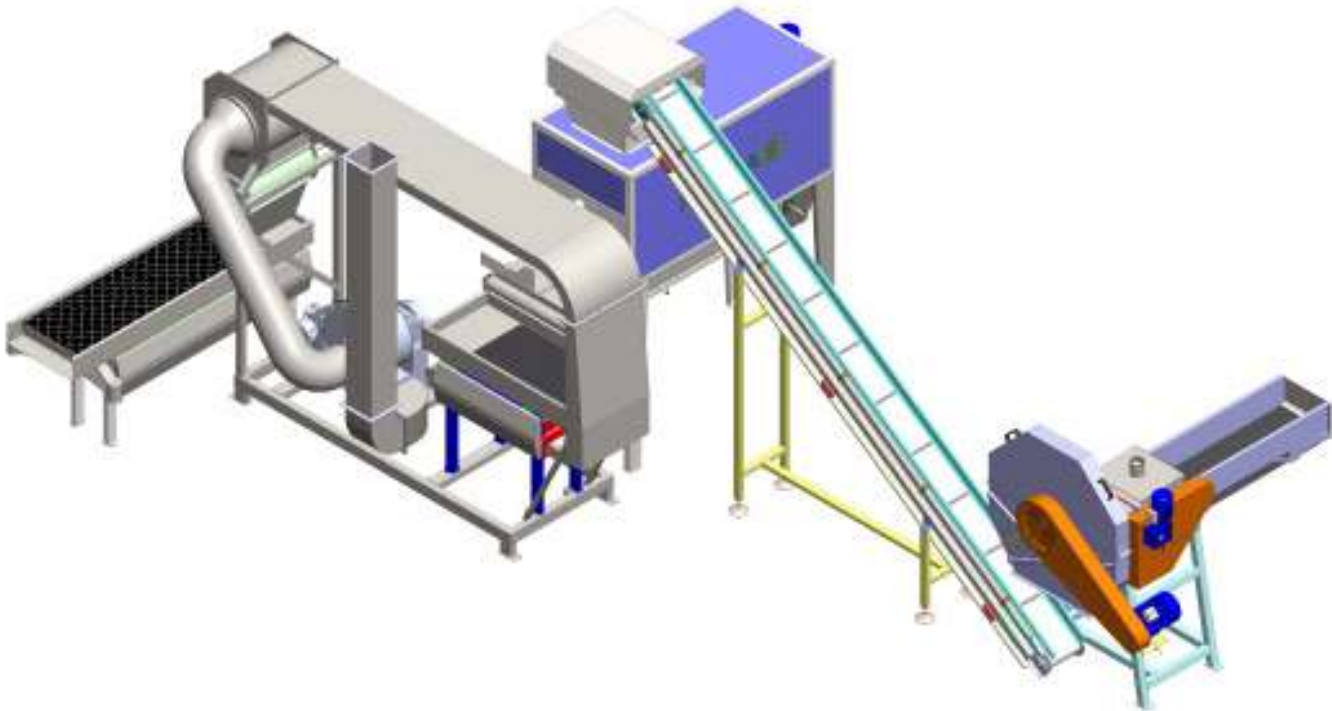
VIDEO

Dried processing material is dosed onto the input belt conveyor of herb cutter where is cut on size of maximum 100 mm. After cutting, processing material is dosed onto the conveyor for filling the rebler and dosed into a hopper of rebler. In rebler is performed mechanical separation of stem from the leaf.

The big fractions of the stem on back output of the rebler are transported through hopper tube with free fall into the container prepared by Customer. Smaller fractions of the stem, along with separated leaf material, are dosed on vibrational conveyor, where processing material is spreading through whole it's surface in order to be dosed equal into the pneumatic separator.

In pneumatic separator, using air flow produced by a fan, the processing material is separated according to the weight, on two fractions. The limit of separation is defined with parameters for air flow speed on the electronic control cabinet. The pneumatic separator has two outlets: one for heavier fractions and one for lighter fractions. The heavier fractions like stem, stone and metal are falling through nearest output hopper tube with free fall into the container prepared by Customer.

The fan of the pneumatic separator vacuums smaller fractions which are via airlock dosed on a two-levelled vibrational sieve and sieved on three fractions, according to the size of mesh screen.



Capacity:	up to 200-300 kg/h
Electric Power::	up to 15 kW

PROCESSING LINES

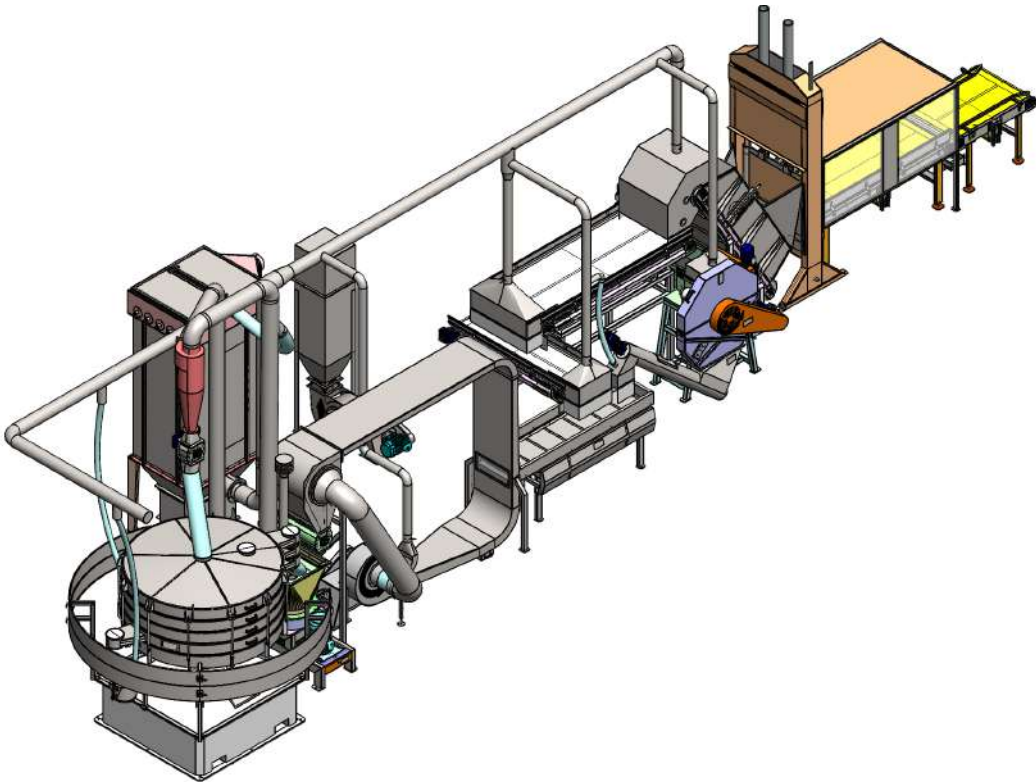
TBC PROCESSING LINE



Dried processing material is dosed onto the input belt conveyor. The material could be either in bales, either bulk material. Processing material is further transported into the dosing conveyor which transport material into the herb cutter where is cut on size of 20-50 mm. After cutting, material is dosed onto the belt conveyor for dosing the vibrational conveyor. Vibrational conveyor is spreading the processing material through whole it's surface in order to dose it equal into the pneumatic separator.

In pneumatic separator, using air flow produced by a fan, the processing material is separated, according to the weight, on two fractions. The limit of separation is defined with parameters for air flow speed on the electronic control cabinet. The pneumatic separator has two outlets: one for heavier fractions and one for lighter fractions. The heavier fractions like stem, stone and metal are falling through nearest output hopper tube with free fall into the container prepared by Customer. The fan vacuums smaller fractions which are via airlock dosed on a two-levelled rotating-planetary sieve and sieved on three fractions, according to the size of mesh screen. Final processed material is dosed into the prepared bags via final screw conveyor.

Processing line is attached to filtration system in order to avoid the dust in working area around the processing line. Dry filter system, with pipeline is design like pulse jet bag filter for dedusting of processing line at the points of the process. Pulse jet bag filter, is a self-cleaning dry filtration system. The pulse jet dust collector cleaning system removes particulate matter and dust from the surface of internal filter media with bursts of compressed air.



Capacity:	up to 400-500 kg/h
Electric Power::	up to 35 kW

PROCESSING LINES

ROSE HIP SEPARATION LINE



VIDEO

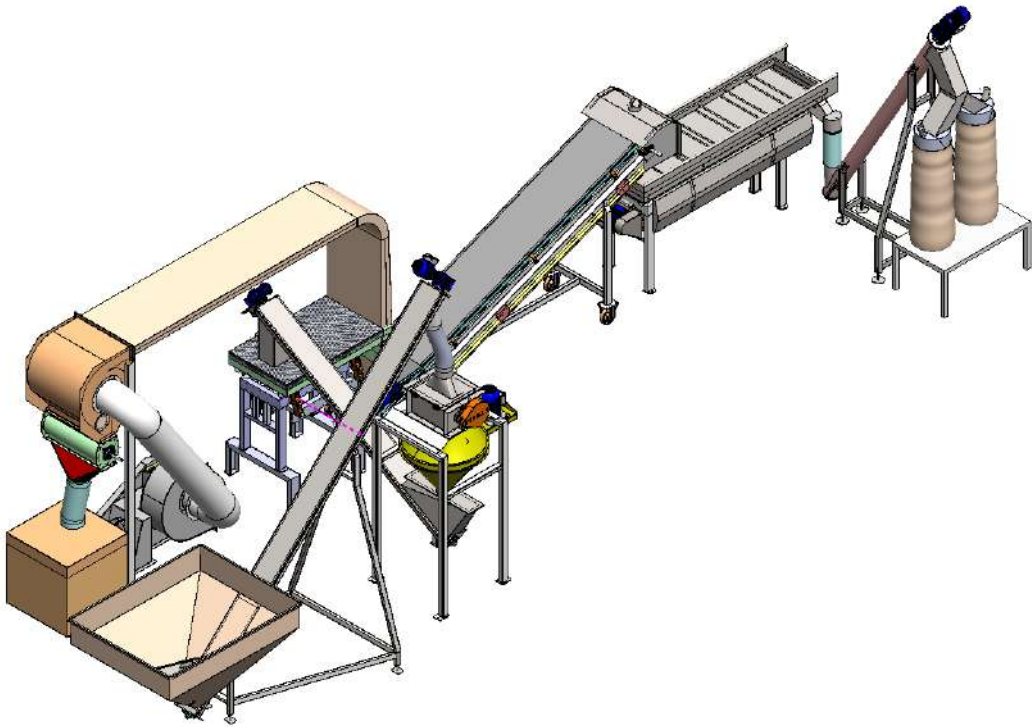
Hairs and seed separation solution

Whole dried rose-hip fruits is put in a screw conveyor hopper which doses it to rose hip grinder/separator of special design. The fruit comes out in three distinct parts: flesh, seed and hair. These are then transported to the vibrational conveyor of the HPS 630 pneumatic separator. The vibrational conveyor spreads the material in a constant layer for effective pneumatic separation on HPS 630. When material enters the vertical air tunnel, the lighter fraction (hairs) is lifted by the air flow and transported pneumatically to the outlet and dumped into a closed container. Airflow and material flow are adjustable, making it applicable for different products. The dust is separated as well and directed towards the filter. The heavier fraction is discharged by gravity in an open type system directly onto a conveyor that takes it to the vibrational sieve. Here seeds are separated as undersize fraction, while oversize fraction of rose hip flesh parts is directly dosed to the box pallet or other receptacle.

There is also possibility to install the magnets on final outputs, in order to catch ferromagnetic metals.

Can be used for other fruits as well

This arrangement can be used with some other dried fruits as well where seed separation is needed, possibly without the need for pneumatic separation.



Capacity:	up to 400 kg/h
Electric Power::	up to 10 kW

PROCESSING LINES

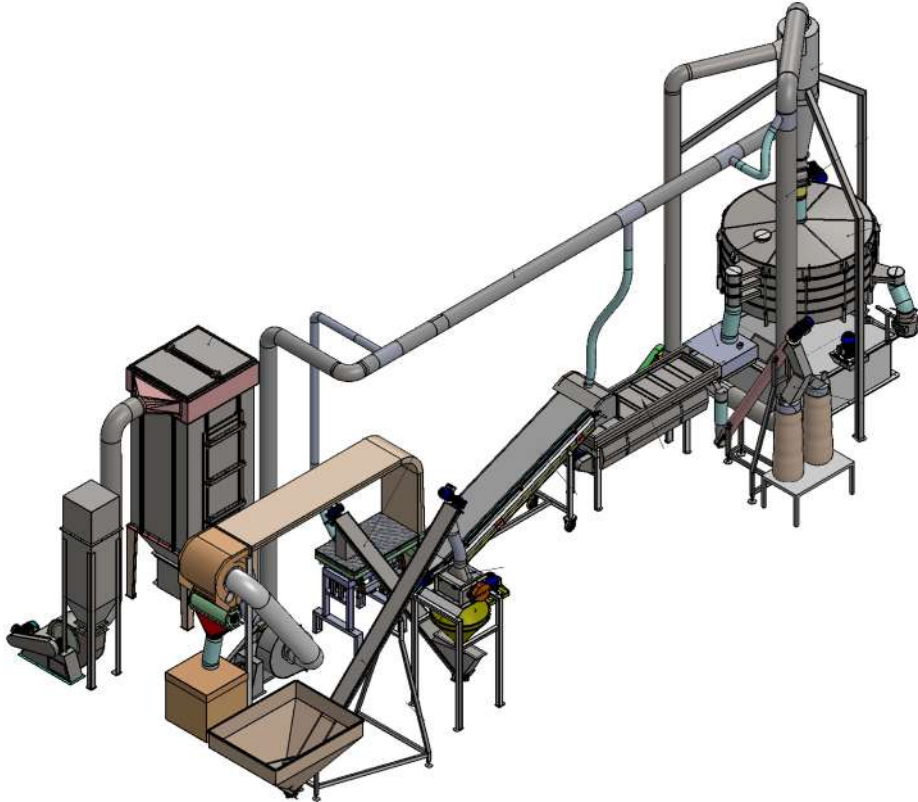
TBC/FINECUT ROSE HIP PROCESSING LINE

Hairs and seed separation coupled with our standard fine cut solution

Whole dried rose-hip fruits is put in a screw conveyor hopper which doses it to rose hip grinder/separator of special design. The fruit comes out in three distinct parts: flesh, seed and hair. These are then transported to the vibrational conveyor of the HPS 630 pneumatic separator. The vibrational conveyor spreads the material in a constant layer for effective pneumatic separation on HPS 630. When material enters the vertical air tunnel, the lighter fraction (hairs) is lifted by the air flow and transported pneumatically to the outlet and dumped into a closed container. Airflow and material flow are adjustable, making it applicable for different products. The dust is separated as well and directed towards the filter. The heavier fraction are discharged by gravity in an open type system directly onto a conveyor that takes it to the vibrational sieve.

Oversize fraction - rose hip flesh parts are dosed directly into the HM series mill.

Coupled with RS series planetary sieve in a closed-circuit milling process, oversized fraction are returned automatically to the milling, while good fractions are directly packaged into bags. Dust is again separated at the lowest level on the sieve, and pneumatically through the filtration system. Due to specific 3D motion, such type of planetary sieves are known for a very precise separation with minimal overlapping of two bordering fractions, especially with tiny particles. Multi-level planetary sieve can have up to 5 levels, depending on required capacities and fractions (see pages 30-31). There is also possibility to install the magnets on final outputs, in order to catch ferromagnetic metals.



Capacity:	up to 900 kg/h
Electric Power::	up to 18 kW

PROCESSING LINES

PROCESSING LINE FOR BALED AND BULK HERBAL MATERIAL

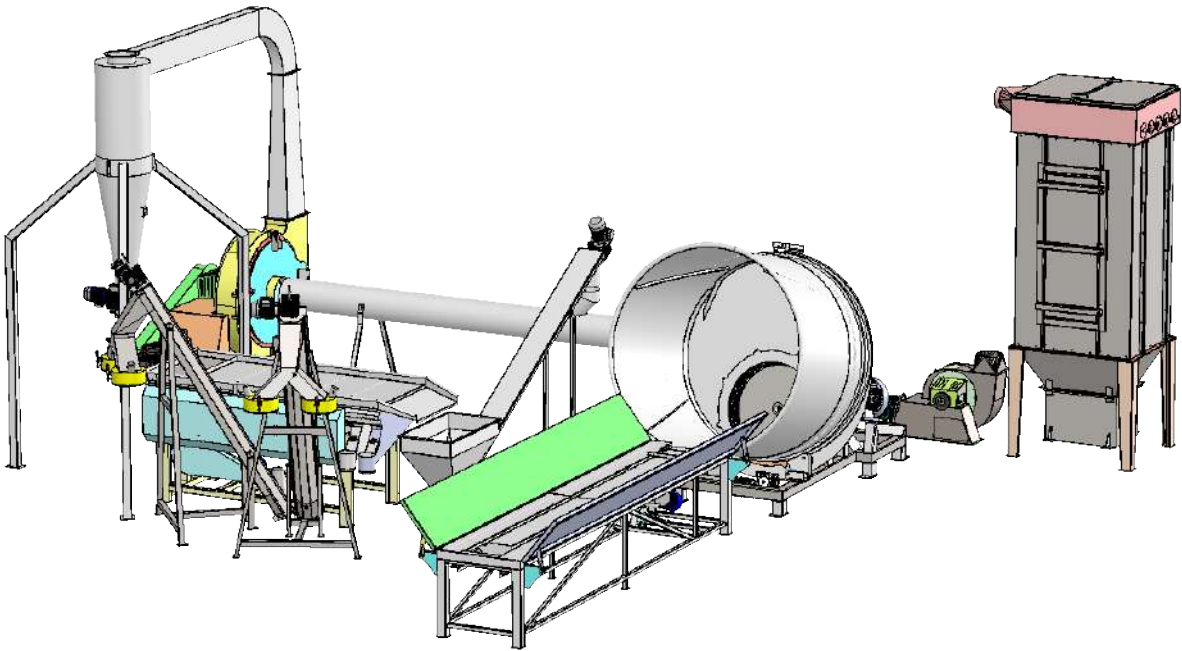


VIDEO

On this line straws and stalks baled or in bulk are efficiently milled right down to the fraction you require. Baled material is less expensive to transport and store and easily manipulated, so why not to take advantage of this? This line offers unique ability in that you can take whole bales right from your storage, and process it down to required size in a admirable capacity of up to 3 t per 6-8h shift. Proven! Depending on the bale density, dosing and milling speed can be adjusted in order to ensure good working conditions. Only two workers are necessary to feed the line and to pack the finished product and transport it to storage!

Line is started at a click of a button on an HMI display through which all necessary parameters are adjustable and controlled. Bales can be placed on lifting and tilting platform, so you can use simple forklifts. Material is placed on a wide chain conveyor with high sides which can take a lot of volume. Chain conveyor also acts as a buffer - with length as customer requests. So, you can stack the bales on it, and as one bale is being milled on it, another one is waiting. This way, one worker has free time to do other things. The first mill/debaler is the main workhorse and a centerpiece of this line. He disintegrates the bale and mills the material. Material is then pneumatically transported to the second stage mill which mills to the required size. Via pneumatic transport system, air is cleaned from very fine dust, and ends up on a vibratory sieve.

Sieve selects larger fractions that are returned again to the second stage milling. Sieve fraction can be determined and installed as customer demands. Sieves can also be replaced quickly and effortlessly. Filtration system helps in minimizing air contamination by dust particles. This way, the working environment is kept clean and safe.



Capacity:	up to 400 kg/h
Electric Power::	up to 80 kW

PROCESSING LINES

REBLING PROCESSING LINE WITH BALLED INPUT MATERIAL

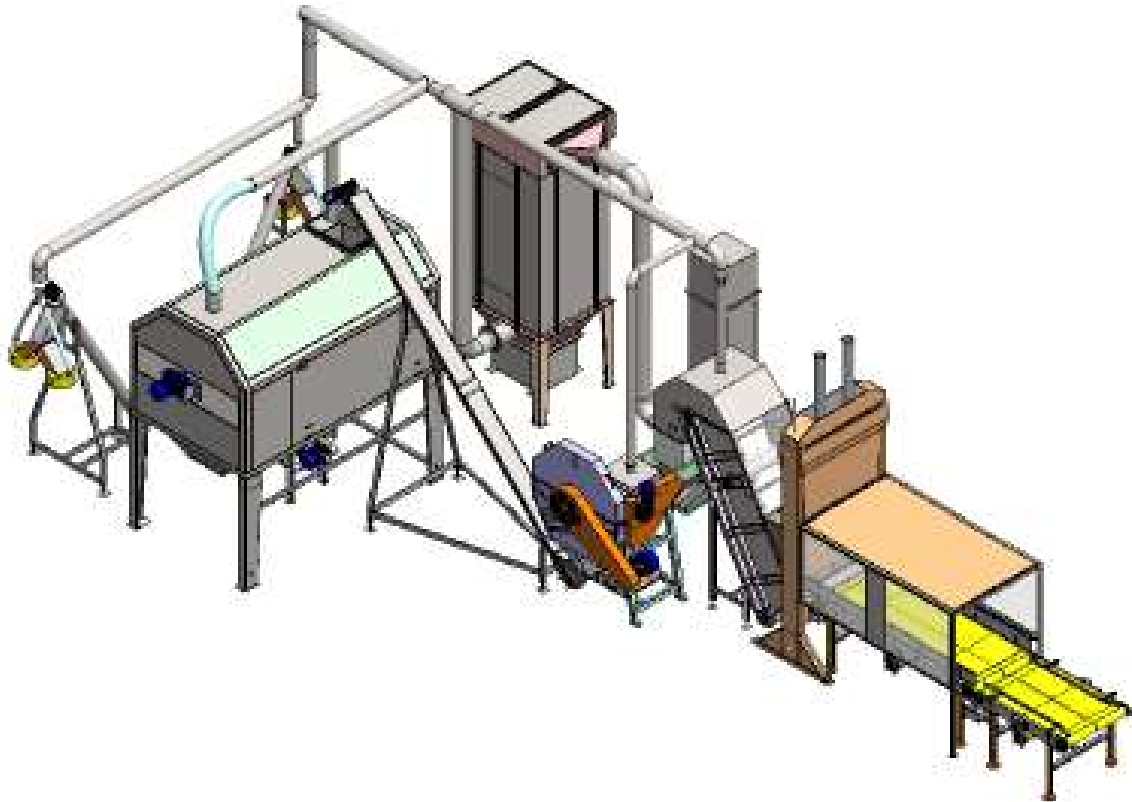
Bulk or baled material

Dried raw material is dosed onto the input belt conveyor as square bales or in bulk. In case of square bales, the following slicer cuts the bales in slices of 20-50 mm thickness, allowing further processing. The feeder doses material uniformly to the RB-400 cutter, which prepares material for the rebling operation. During this operation, the leaf blades come to be separated from the stalk and reduced in size to a desired fraction, usually up to 5 mm. This arrangement is applicable for many plants like: stevia, mint, lemon balm, nettle, etc.

REB-100 is a more compact version for lesser capacities, while REB-200 is for higher capacities.

Following VS series vibrational sieve separates the material on up to four fractions. Sieve levels are deployed according to the customer requirements. They are easily inserted and replaced with different ones. Y-screw conveyors for bag packaging connected to the sieve outlets allow easy switch between full and empty bag. Final processed material is dosed into the prepared bags via a final screw conveyor. The processing line is attached to a filtration system in order to avoid the dust in the working area around the processing line. The dust can be utilized as well (see pages 86-87).

The filtration system is designed around a pulse-jet dry bag filter, with pipeline sucking fine dust from different points along the process. Pulse-jet action does periodic self-cleaning pneumatically, shaking dust off the bags using short pressure bursts of compressed air.



Capacity:	up to 600 kg/h
Electric Power::	up to 18 kW

PROCESSING LINES

FINECUT PELLETIZATION LINE



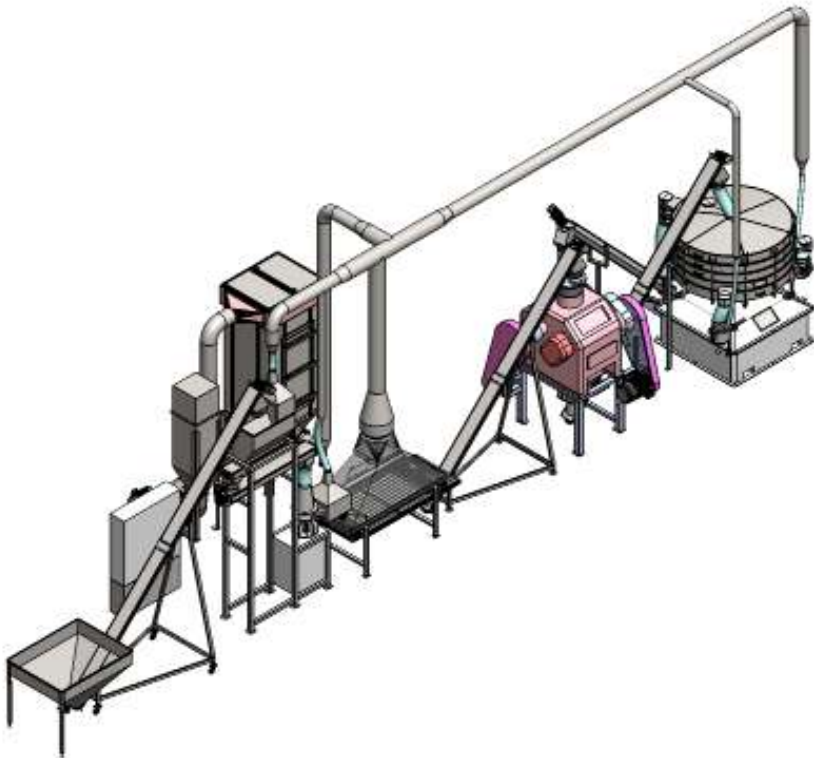
VIDEO

Faster tea bag packaging through pelletization

The purpose of this line is twofold: **increasing true density for faster packaging of certain goods and dust utilization.**

The raw material (powdered or milled) is put in a screw conveyor hopper which doses to a pelletizing machine. The pelletizing process inevitably raises temperature during compression. Therefore, pellets are immediately subjected to cooling via an air stream, reducing their temperature and minimizing loss of quality. Next, an incredibly sturdy and reliable roller mill is used for grinding pellets into required fractions in one or several passes. Distance between rollers is adjustable, which changes particle size distribution of output fractions. Together with RS series planetary sieve, it is arranged in closed-circuit milling process. Oversized fraction are returned automatically to the milling, while good fractions are directly packaged into bags. Dust is again separated at the lowest level on the sieve, and pneumatically through the filtration system. Due to specific 3D motion, such type of planetary sieves are known for a very precise separation with minimal overlapping of two bordering fractions, especially with tiny particles. Multi-level planetary sieve can have up to 5 levels, depending on required capacities and fractions (see pages 30-31).

The filtration system is designed around a pulse-jet dry bag filter, with pipeline sucking fine dust from different points along the process, ensuring clean air. Pulse-jet action does periodic self-cleaning pneumatically, shaking dust off the bags using short pressure bursts of compressed air. Dust can be reused again.



Capacity:	up to 400-500 kg/h
Electric Power::	up to 35 kW



TRANSPORT EQUIPMENT

Our transport equipment production programme includes various standard transporters and transport systems.

We design and manufacture belt conveyors with standard or modular belts, screw conveyors, roller conveyors, chain conveyors, bucket elevators, elements or complete pneumatic conveyor systems according to the specific requirements and project assignment and in cooperation with the client.

All of these can be made in either mild or stainless steel variant.

TRANSPORT EQUIPMENT

BELT CONVEYOR

Belt conveyors are designed for transport of bulk and unit loads.
Depending on the purpose, they are used in processing lines or as a standalone machine.

According to the purpose, selection for the conveyor belts is carried out, for which we provide all the necessary certificates (FDA standards, etc.).

Dimensions of conveyors:

Width: 200-1200 mm (according to the technology and Customer requirements)

Length: up to 30 meters (according to the Customer's requirements)



VIDEO

ROLLER CONVEYOR

Roller conveyors are designed for the transport of various compact cargo, mostly in production and packaging lines and transports to storages.

We produce roller conveyors with a drive and without drive.

Dimensions of conveyors:

Width: 100-1500 mm (according to the technology and Customer requirement)

Length: According to the Customer requirement



TRANSPORT EQUIPMENT

SCREW CONVEYOR

Screw conveyors are an essential tool in the material handling industry, providing a reliable and efficient method for transporting bulk materials, powders, and seeds from one point to another. These conveyors are commonly used in a wide range of industries, including agriculture, food processing, and manufacturing.

One of the key advantages of screw conveyors is their ability to handle both dry and semi-dry materials, making them suitable for a wide range of applications. They are also known for their ability to accurately and evenly dose transport materials, ensuring consistent and precise movement of materials.

Our company specializes in the production of standard screw conveyors, with diameters ranging from 60mm to 400mm. Our conveyors are built with high-quality materials and are designed to withstand the rigors of heavy-duty industrial use.



CHAIN CONVEYOR

Chain conveyors are an efficient and versatile option for transporting various types of compact cargo in production and packaging lines. They are particularly useful for handling cargo at parallel processing lines, as they can easily adapt to different dimensions and technology requirements.

The width and length of the conveyor can be customized to meet the specific needs of the application.

Additionally, chain conveyors are durable and require minimal maintenance, making them a cost-effective solution for a wide range of industries.



TRANSPORT EQUIPMENT

PNEUMATIC TRANSPORT

Pneumatic transport is designed for the transport of powder, fine grain and granular materials, with particle size up to 15 mm.

The system is made of structural steel, and is consisting of a dosing system, the hopper, piping, tangential horizontal or vertical cyclone separator, airlocks and fan cell. Dosing starts in the hopper of pneumatic transport where the processing material is transported by pipeline to the separator.

Separation system consists of a tangential horizontal or cyclone separator.

In closed pneumatic transports with most of the air in recirculation, with tangential separator on fan drive is performed dedusting of pipes and maintenance of



VIBRATIONAL CONVEYORS

Vibrational conveyors are a versatile and efficient means of material transportation. They work by utilizing vibrations to move materials from the input to the output of the conveyor.

This allows for the efficient and equal distribution of materials, making it ideal for use as a preparation step in processing operations.

The transport speed of the vibrational conveyor can be adjusted by adjusting the amplitude and frequency of the vibrations, allowing for optimal performance with different types of materials. They are commonly used in a variety of industries such as food processing, mining, and manufacturing.



INDUSTRIAL EQUIPMENT

Our company specializes in providing top-of-the-line industrial equipment for a variety of industries.

Our product portfolio include CO2 desinsection solutions, steam pasteurization in vacuum chambers, efficient pelletization lines, metal detection, electronic waste separation and other essential equipment for the food industry.

With years of experience and a commitment to quality, our products are designed to meet the specific needs of each industry and enhance the production processes.



CHAMBERS FOR DISINSECTION WITH CO2

HIGH-PRESSURE CHAMBER FOR DISINSECTION WITH GAS CO2

Two cycles a day!

The high-pressure disinsection chambers are designed for very efficient and environmentally-friendly pest control in bulk packaged herbs and food raw materials by using CO2 gas. Due to high absolute pressures of approx. 12 bar, gas quickly penetrates the packaging and enters the material, quickly suffocating insects, destroying eggs and larvae. The recommended duration of the treatment cycle is 12 hours, but industry test proven even 8 hour cycles can be applied with complete success! The control system constantly measures CO2 concentration, and when permitted levels are reached, doors of the chamber can be opened and emptying can be started.

With the diameter of 1.9 m and a total length of 10 m, the volumetric capacity of the chamber is about 20 m³. It can process 12 EURO pallets per batch.

Environmentally friendly option

The CO2 agent is polluting the environment or food/herbal material, as it is not creating ne. Regarding the fact this chambers come in pair, approx. 50% of CO2 is reused from the previous cycle.

Such a , requires strict certification and very careful manufacturing and quality control. On the front side of the chamber are concave doors with breach (bayonet) type closure system. Doors are attached to a bracket on a moving frame so that they can be moved to the side. Other side is welded shut with similar concave cap. The door is sealed with gasket of special construction. After the cycle is finished, CO2 is released into the atmosphere. These system can be incorporated with CO2 capture systems, being even CO2 negative!



CHAMBERS FOR DISINSECTION WITH CO2

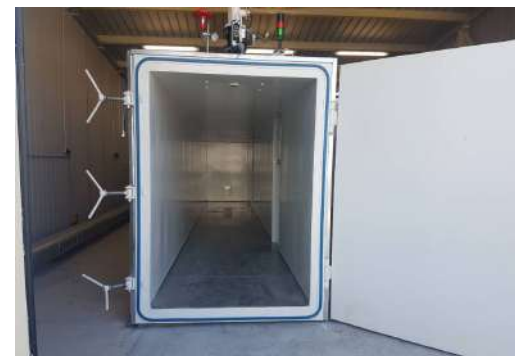
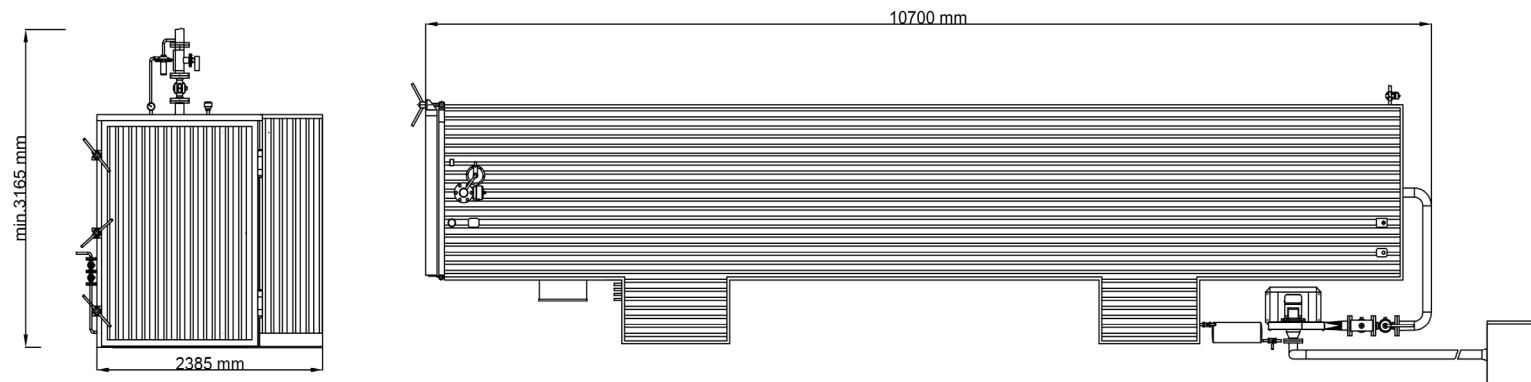
LOW-PRESSURE CHAMBER FOR DISINSECTION WITH GAS CO2



VIDEO

Using low pressure CO2 treatment, the recommended duration of the cycle is 72 hrs, with 0,2 bar overpressure. During the treatment, a concentration reaches more than 900 000 ppm effectively destroying eggs, larvae and insects. Due to specific and combined action of CO2 and other parameters, a complete 100 % success rate is achieved. The design is proven in practice and it's effectiveness confirmed by an experiment carried out by a state body with beetle eggs and insects sample placed on different positions in the chamber.

The volumetric capacity of the chamber is about 22 m3. Material packed in bags is usually placed on EURO pallets. **One batch can fit 12 EURO pallets maximum.** On a front side of the chamber are doors with the seal of special design for charging the material into the chamber. Everything can be remotely controlled and supervised, with all parameters showing.



VACUUM CHAMBERS

VACUUM CHAMBERS FOR PASTEURIZATION WITH STEAM

The purpose of the chamber for steam pasteurization is to reduce bacterial contamination to allowed level.

Processed medicinal herbs are fed into permeable bags in maximum layer of 80 mm, which are placed on the shelves of trolleys. The process of pasteurization begins with vacuuming or drawing the air out from the space of vacuum chamber. Vacuuming is performed by using a vacuum pump with water ring to a minimum level of 80% of vacuum. Upon attaining the desired level of negative pressure, in the space is put dry steam that penetrates deeply into the material layer for pasteurization and in a short period of time the temperature of the layer rises to the desired level, usually in the range of 70-80 ° C. The maximum possible temperature is 94 ° C and then transfers to overpressure.

After reaching the set temperature and the flow of time required for successfully carried out process of pasteurization, equalization of the internal pressure of the chamber with the external pressure is carried out and with that ends the process. With pressure equalization of chamber pressure with environment pressure the intake of outside air is performed and due to preventing contamination of the treated material must be filtered through a HEPA filter.



FILTRATION EQUIPMENT

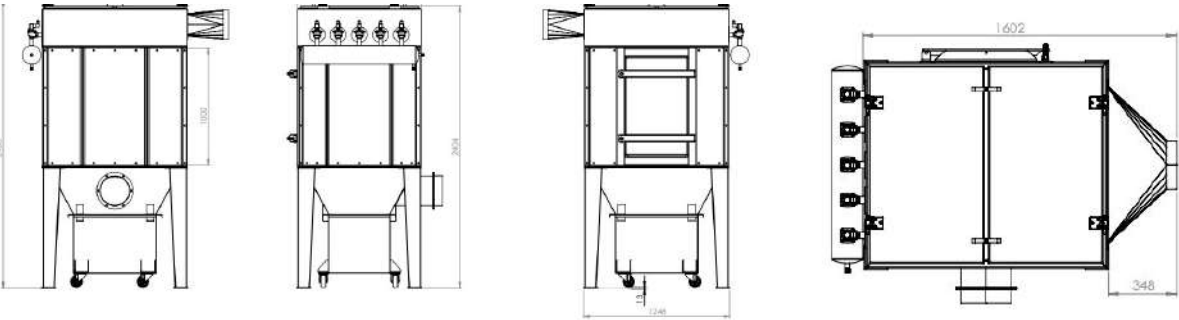
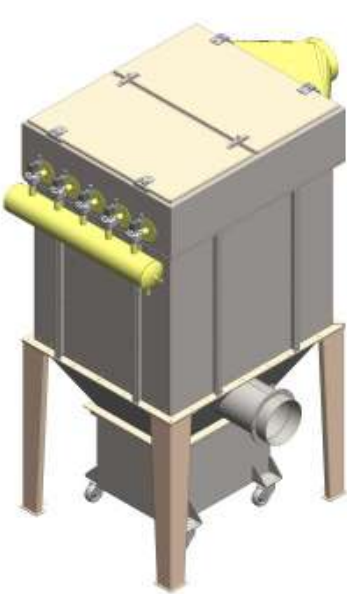
FILTER - HVF 24

The filter, type: HVF-24, is designed for collecting the dust generated during processing. The filter is connected to the processing equipment by a filtration pipeline.

Dry filter system, with pipeline is design like pulse jet bag filter for dedusting of processing line at the points of the process. Pulse jet bag filter, is a self-cleaning dry filtration system. The pulse jet dust collector cleaning system removes particulate matter and dust from the surface of internal filter media with bursts of compressed air.

For the proper work of the filter, it should be connected to the compressor owned by the User.

Number of bags:	30 pcs
Capacity:	5-10 suction points
Electric Power:	4 kW
Weight:	650 kg



HEATING EQUIPMENT

Buildings, factory floors, storages, greenhouses, hangars - HERBAS heating equipment can be your next solution to provide comfortable working environment or protect your assets.

We offer thermal generators and hot water boiler systems.

Thermal generators come in different thermal power ranges, and they produce warm or hot air stream that is blown directly or through distribution ducts. They come as a standing or hanging version, depending on the situation and customers preferences.

Boiler systems produce hot water for central heating systems, with hot water flowing to the radiators or air heaters with ventilators and water-air heat exchangers that are distributed throughout the heated space.

Available fuel sources options are natural or LPG gas, fuel oil and biomass (G-20 wood chips, wood pellets, nut shells, etc.)



HEATING EQUIPMENT

THERMAL GENERATOR - HANGING

Great solution for industry and agriculture

The TGH thermal generator is great heating solution for buildings like: factory floors, greenhouses, hangars, large garages and other industrial buildings, storage places. It features a high-performance axial fan with a capacity of 14000 m³ of air per hour, as well as a single-stage gas burner, gas ramp, electronic thermostat with temperature probe and a control electrical cabinet.

With air distribution system, warm air can be brought right on the spot where it is needed. In case of smaller spaces, air distribution system is not necessary.

Fuel options

Natural Gas

Fuel Oil

Standard or standing thermal generators are available on all three different fuel sources: gas, fuel oil and biomass. Air is blown directly or through a distribution channels or ducts - this depends on customers requirements and the specific situation. Read more on pages: 98-99



HEATING EQUIPMENT

HOT WATER BOILER - AUTOMATIC FEEDING



VIDEO

Hot-water boilers TKH – 90 A/D and TKH – 600 A/D are designed for heating rooms and halls, greenhouses and hothouses. Available fuel options depending on the model are: biomass (G20 wood chips or pellets).

Simple operation and control

The fully automatic dosage of fuel with wood pellets or wood chips makes it simple and worry-free. Simply fill the container or a hopper, and PLC controlled screw conveyor will take the fuel to the combustion chamber through a safety airlock device, preventing return of the flame. Automatic ash cleaning and extraction system takes out another hassle.

Energy efficient

The complete fuel combustion with minimal residues of unburned combustible material is achieved by the careful and precise parameters metering of air, and matching fuel and air ratio. Set temperature is automatically controlled by measuring heated space temperature.



REST OF OUR PRODUCT PORTFOLIO



GAS STOVE FOR THERMAL
TREATMENT OF THE MILLED MASS



SMASHER OF PUMPKIN RESIDUE MASS
AFTER MOLDING



MIXER FOR CONDITIONING OF GROUND
MASS OF PUMPKIN SEED



PACKING MACHINE



HYDRAULIC PRESS MB-300



ELECTRONIC WASTE SEPARATOR



HERBS CUTTER SB-100



MILL FOR DRIED PLANT MASS



REVISORY CONVEYOR



AIRLOCK



METAL DETECTION



TOBACCO DRYERS

NOTES

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HERBAS d.o.o.

Kolodvorska 23/a, Budančevica
48362, Kloštar Podravski
Croatia

herbas@herbas.hr
+385 48 816 107



Made in European Union (EU).