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SMALL-SCALE MACHINES

EQUIPPED FOR CHANGE




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THE RIGHT SOLUTION FOR YOU

> A seed is not just a seed and a grain not simply a grain. We will help you find the right solution for your crop and support you in reaching your goals.

Our small-scale machines give you the opportunity to run a small-scale production, equip your research institute or create your own test centre.

During the past 65 years we have run tests on many different types of crops and are always curious to test new seed and grain products to find the machine combination that is exactly right and gives the best results. With our knowledge and experience, we will guide you toward the best process configuration.

Our machines are built to meet your requirements and are set up with specific features to match your needs. Training sessions for you and your staff can be provided so you can achieve the outcome you are looking for. We make sure to provide the information you need to feel confident in your decision.

AIR SEPARATOR
LA-DUAL



FRONT



BACK

> The LA-DUAL small-scale aspirator for batch operation is designed for separation of mixtures in two or three fractions according to the product's aerodynamic characteristics in an air stream.

The LA-DUAL is very well suited for laboratory use as well as for small-scale production.

The LA-DUAL aspirator offers the below features:

> Inlet with open/close shutter and vibrator feeder with start/stop and potentiometer.
> Aspiration chamber with manually adjustable distribution plate.
> Frequency regulation of airflow.
> Manually operated air valve and false air valve.
> Inspection windows.
> Two tight-fitting collecting drawers for light product and one collecting drawer for heavy product.
> Built-on fan with filter sleeve and collecting glass.
> Motor for fan.
> Motor for vibrator feeder.

The machine is of steel construction.

OPTIONS:

> Servo motor for valve; incl. potentiometer
> In construction for continuous flow operation with rotary valves and servo motors, three bottomless collecting drawers and three outlets (instead of tight-fitting collecting drawers)
> Autotransformer for 110 V, 60 Hz

The air separator LA-DUAL is used for small lots to separate light from heavy product. The LA-DUAL is a flexible unit with frequency converter on the motor for an accurate setting of the air volume.

OPTIONAL LA-DUAL FOR CONTINUOUS FLOW OPERATION



MOTOR [V]	1 x 230, 50 Hz

DE-AWNER
LA-P





> The LA-P small-scale de-awner is designed for batch operation; the main purpose of de-awning is to remove awns from barley kernels, loose husks from wheat, etc. However, this machine is not suitable for very small seeds.

The de-awner can be used where heavy de-awning is required but also for products where only a light de-awning is needed as the degree of de-awning depends on the length of time the material stays in the housing.

De-awning takes place when the kernels rub against each other being influenced by the movement of the rotor; secondly when the kernels touch the beaters.

The LA-P de-awner offers the below features:

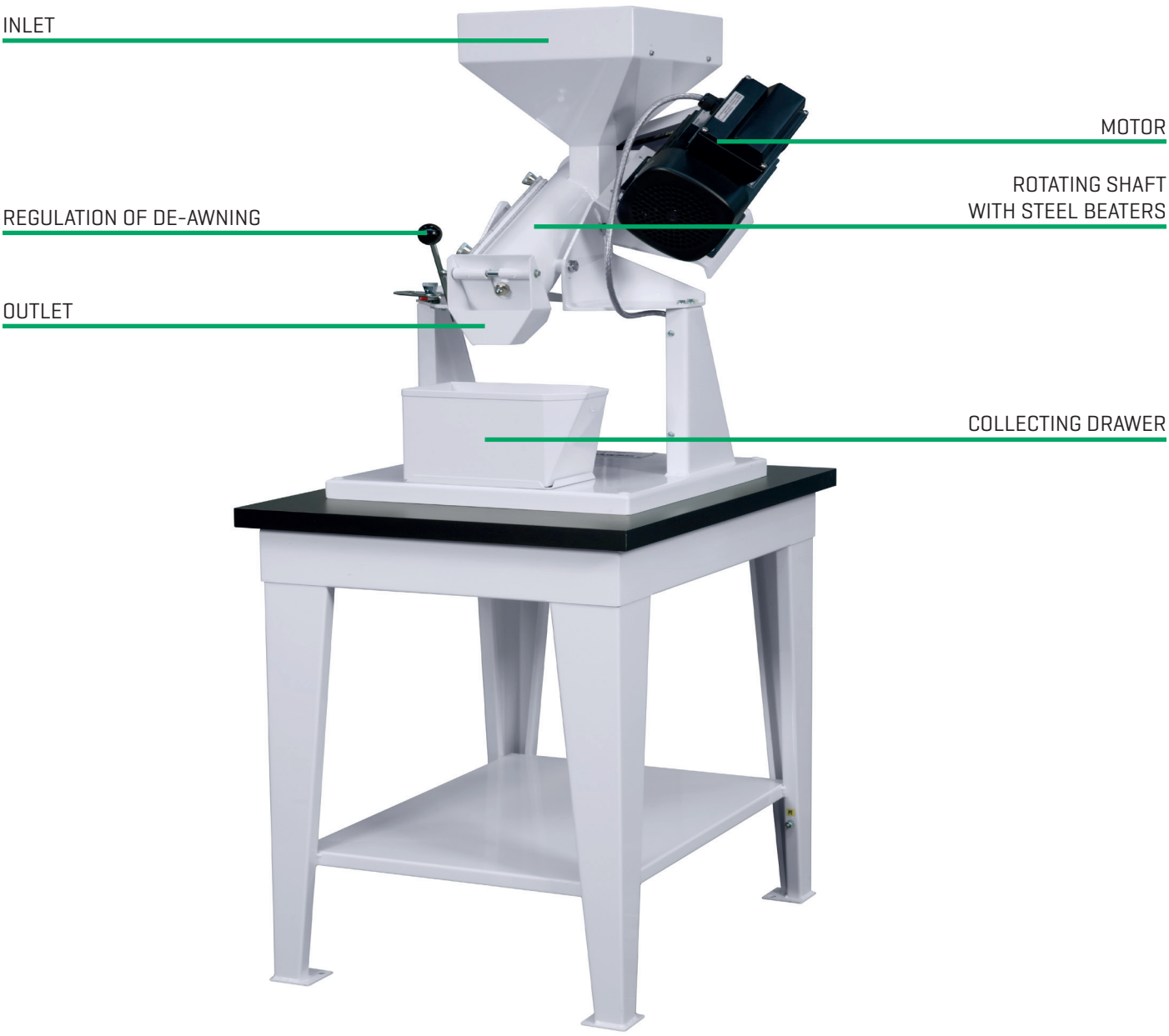
> Inlet.
> Housing with rotating shaft with steel beaters.
> Manually adjustable inclination of housing.
> Manually adjustable spring-loaded outlet valve for regulation of the de-awning degree.
> Collecting drawer for processed product.
> Motor with built-in frequency converter.

The machine is of steel construction.

OPTIONS:

> Autotransformer for 110 V, 60 Hz

The housing of the de-awner LA-P has adjustable inclination ensuring an even feed of product. The rotating shaft with beaters made of hardened steel ensures a highly efficient de-awning process.



MOTOR (V)	1 x 230, 50 Hz

BRUSHING MACHINE
LA-H



STANDARD



ORGANIC

> The LA-H small-scale brushing machine is designed for batch and continuous processing of small volumes of seeds or grain prior to cleaning and grading processes.

The LA-H brushing machine can be used for separation of grass seeds sticking together as well as polishing, de-hulling or peeling of different seed and grain products. It is also suitable for brushing the surface on different seed and grain products (e.g. bunt on wheat, saponin from quinoa, and oats for horse feed). Dust and brushed off particles are removed by air.

The LA-H brushing machine offers the below features:

> Feeding tray with open/close shutter.
> One-section exchangeable standard mantle.
> Rotating shaft with two internally adjustable brushes or steel beaters.
> Manually adjustable brushing degree.
> Inspection window.
> Start/stop switch.
> Drive motor with frequency converter.

The machine is of steel construction.

The LA-H comes in two configurations:

STANDARD:

> Collecting drawers for prime product and removed product
> Cover with spout for connection to aspiration

ORGANIC:

> Air intake with filter in full length of mantle
> Outlet hopper
> Outlet with rotary valve for product from the end of mantle
> Connection pipe for external aspiration system

OPTIONS:

> Inlet with vibrator feeder (instead of feeding tray)
> High capacity buckets
> Vacuum cleaner with collecting bucket
> Autotransformer for 110 V, 60 Hz

The feeding tray on the brushing machine LA-H has an open/close shutter ensuring a dust free operation.

ORGANIC OPTION



MOTOR (V)	1 x 230, 50 Hz

AIR/SCREEN CLEANER
LA-LS





> The LA-LS small-scale air/screen cleaner is a precision and fine cleaner for research stations, institutes etc.

The LA-LS can be used for batch and continuous flow separation and is very well suited for cleaning of a large variety of seed types.

The LA-LS air/screen cleaner offers the below features:

> Inlet with capacity shutter and vibrator feeder with start/stop and potentiometer.
> Aspiration system with pre-aspiration and final aspiration connected to an air recirculation system.
> Screen section consisting of one sieveboat with 1 short scalping screen and 2 long grading/sand screen layers; the 2 long screen layers with rubber ball cleaning.
> Inspection windows.
> 4 collecting drawers for removed product.
> Variable drive of sieveboat with frequency converter.

The machine is of steel construction with sieveboat of laminated wood.

OPTIONS:

> Rotary valve for aspiration chamber; incl. 6 W motor
> Air velocity meter in final aspiration channel
> Extension for inlet (25 l)
> Outlet pipes for transport of product to floor level
> Extended outlet trays and plastic sleeves for transport of product to floor level
> Three long screen layers with rubber ball cleaning (1 scalping and 2 grading) (0.4 m2)
> De-awner LA-P built onto the inlet
> Autotransformer for 110 V, 60 Hz

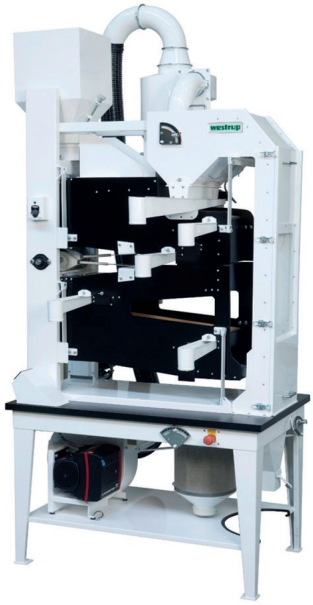
The inlet on the air/screen cleaner LA-LS has an infinitely adjustable vibrator for precise feed control. The highly efficient air recycling system ensures a uniform aspiration and a good product separation.



SCREEN SIZE (L x W), SHORT SCALPING (MM)	275 x 275
SCREEN SIZE (L x W), LONG GRADING/SAND (MM)	275 x 540
SCREEN AREA - M^2	0.34
MOTOR (V)	1 x 230, 50 Hz

AIR/SCREEN CLEANER
LA-LSU





> The LA-LSU small-scale air/screen cleaner is a precision and fine cleaner for research stations, institutes etc.

The LA-LSU can be used for batch and continuous flow separation and is very well suited for cleaning of a large variety of seed types.

The LA-LSU air/screen cleaner offers the below features:

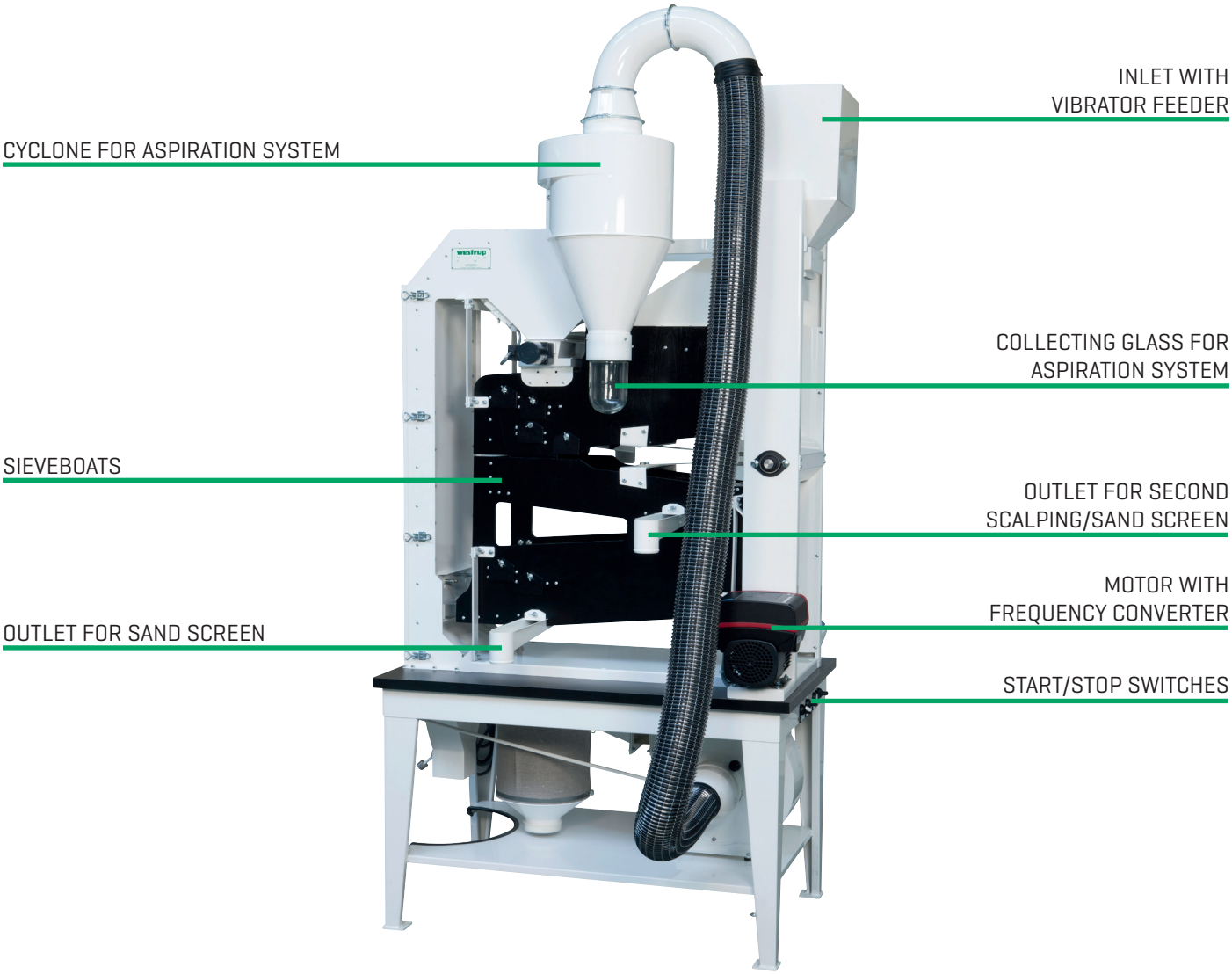
> Inlet with capacity shutter and vibrator feeder with start/stop and potentiometer.
> Aspiration system with pre-aspiration and final aspiration connected to an air recirculation system.
> Screen section consisting of two sieveboats with 2 screen layers in the upper boat, 1 return screen layer, and 2 screen layers in the lower boat; with several screen diagram possibilities.
> All screen segments with rubber ball cleaning.
> Extended outlet trays and plastic sleeves for transport of product to floor level
> Inspection windows.
> Variable drive of sieveboat with frequency converter.

The machine is of steel construction with sieveboats of laminated wood.

OPTIONS:

> Rotary valve for aspiration chamber; incl. 6 W motor
> Extension for inlet (25 l)
> De-awner LA-P built onto the inlet
> Autotransformer for 110 V, 60 Hz

The inlet on air/screen cleaner LA-LSU has an infinitely adjustable vibrator for precise feed control. The multi-flow screen system provides the possiblity of cleaning a large variety of products.



SCREEN SIZE (L x W)	275 x 540
SCREEN AREA - M^2	0.66
MOTOR (V)	1 x 230, 50 Hz

AIR/SCREEN CLEANER
LA-LST



> The LA-LST small-scale air/screen cleaner with integrated indented cylinder is a precision and fine cleaner/grader for research stations, institutes etc.

The LA-LST can be used for batch and continuous flow separation and is very well suited for preparation of a large variety of seed types.

The LA-LST air/screen cleaner offers the below features:

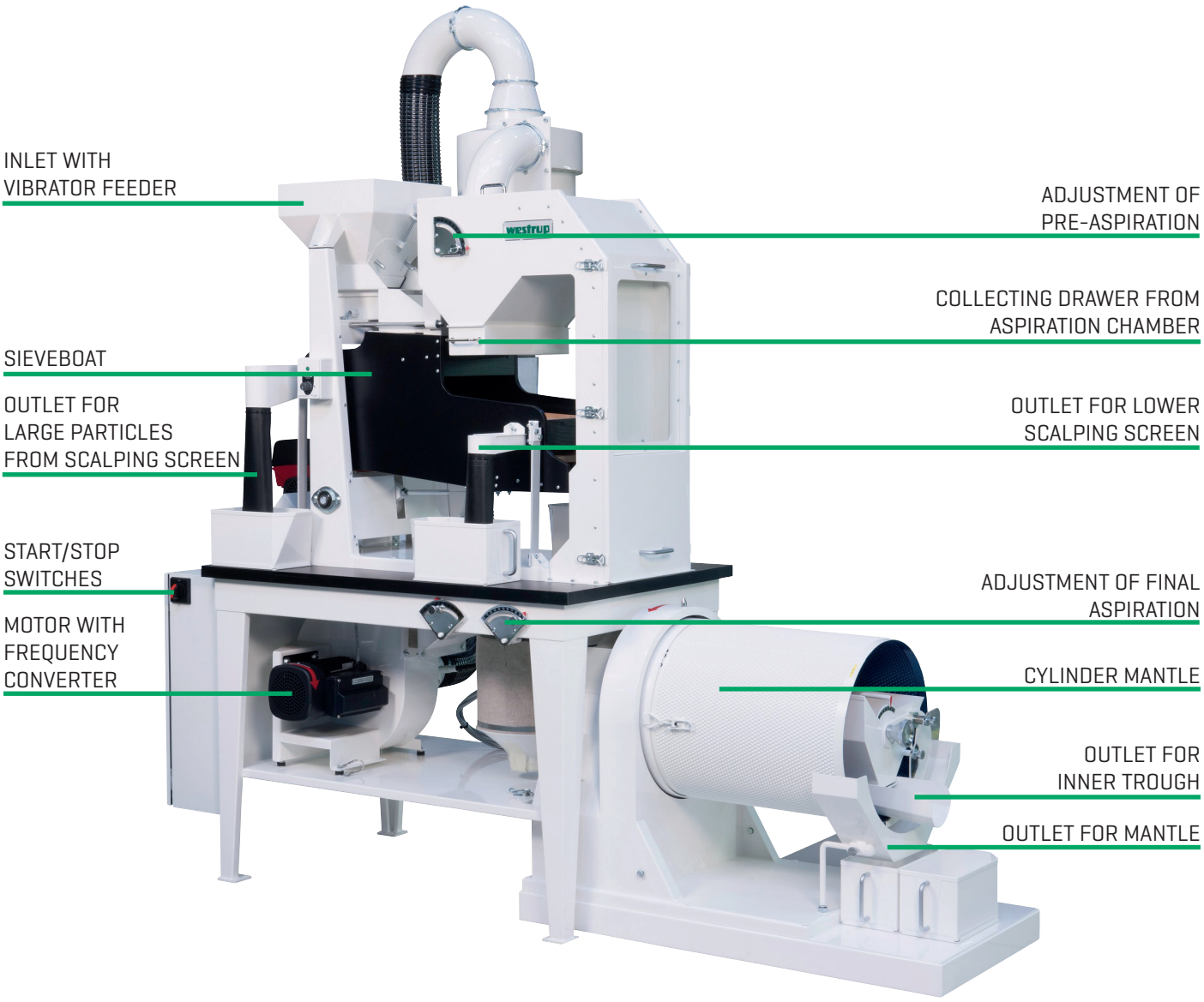
> Inlet with capacity shutter and vibrator feeder with start/stop and potentiometer.
> Aspiration system with pre-aspiration and final aspiration connected to an air recirculation system.
> Screen section consisting of one sieveboat with 1 short scalping screen and 2 long grading/sand screen layers; the 2 long screen layers with rubber ball cleaning.
> Built-on indented cylinder unit with rotating exchangeable mantle with speed regulation.
> Inner trough, which is manually adjustable from the outside, with vibrator tray.
> Outlet from the cylinder for long fraction and outlet for short fraction.
> 5 collecting drawers for prime product and removed product.
> Variable drive of sieveboat with frequency converter.

The machine is of steel construction with sieveboat of laminated wood.

OPTIONS:

> Rotary valve for aspiration chamber; incl. motor
> One long pre-screen and two long grading screens (0.4 m2)
> Outlet pipes for transport of product to floor level
> Extended outlet trays and plastic sleeves for transport of product to floor level.
> Extension for inlet
> De-awner LA-P built onto the inlet
> Loose vibrator feed hopper for indented cylinder (when used separately)
> Autotransformer for 110 V, 60 Hz

The inlet on the air/screen cleaner with indented cylinder LA-LST has an infinitely adjustable vibrator for precise feed control. The rotating cylinder mantle ensures an optimum separation of a large variety of products.



SCREEN SIZE (L x W), SHORT SCALPING (MM)	275 x 275
SCREEN SIZE (L x W), LONG GRADING/SAND (MM)	275 x 540
SCREEN AREA - M^2	0.34
MANTLE DIA. x L (MM)	400 X 500
MOTOR (V)	1 x 230, 50 Hz

INDENTED CYLINDER
LA-T





> The LA-T small-scale indented cylinder is designed for continuous flow or batch separation where kernels with different lengths, but otherwise similar dimensions, can be separated from each other.

For separation of short or broken kernels from long kernels.

The LA-T indented cylinder offers the below features:

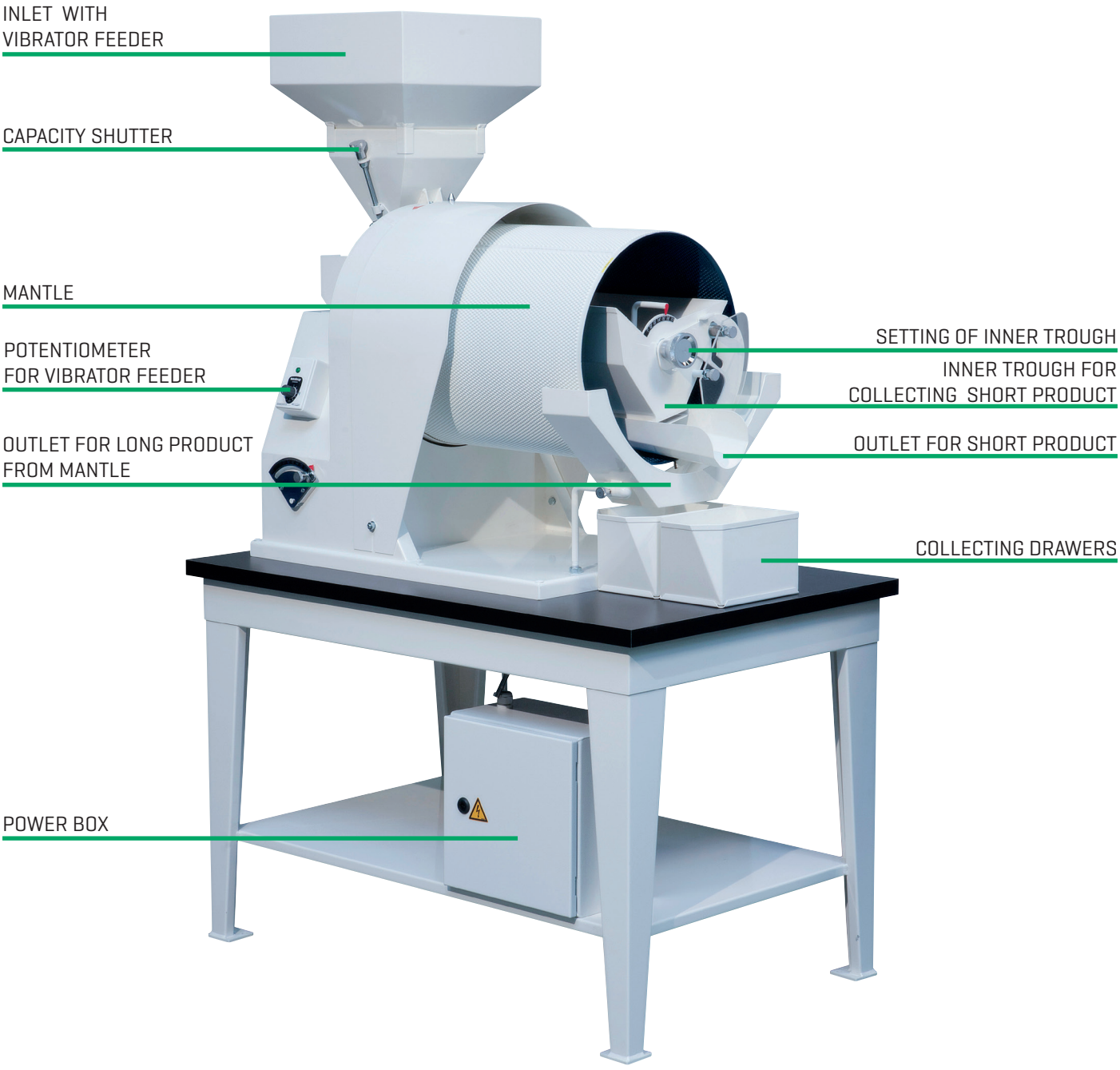
> Inlet with capacity shutter and vibrator feeder with start/stop and potentiometer.
> Rotating exchangeable mantle with speed regulation.
> Inner trough, which is manually adjustable from the outside, with vibrator tray.
> Outlet for long fraction and outlet for short fraction.
> Collecting drawers for prime product and removed product.
> Drive motor with frequency converter.
> Motor for vibrator feeder.

The machine is of steel construction.

OPTIONS:

> Extension for inlet (25 l)
> Outlet pipes for transport of product to floor level
> Autotransformer for 110 V, 60 Hz
> Two cylinders built together in construction one over one; incl. pipe connections

The rotating mantle on the indented cylinder LA-T ensures an optimum separation of a wide variety of products, which can otherwise be difficult to separate.



MANTLE DIA x L [MM]	400 x 500
MOTOR [V]	1 x 230, 50 Hz

GRAVITY SEPARATOR
LA-K





> The LA-K small scale gravity separator is designed for continuous flow separation of small volumes of seed and grain, which have already been fine cleaned.

The gravity separator exploits the smallest differences in the specific weight of a product and it is therefore possible to separate heavy kernels with high germination ability from light and less valuable kernels.

The LA-K gravity separator offers the below features:

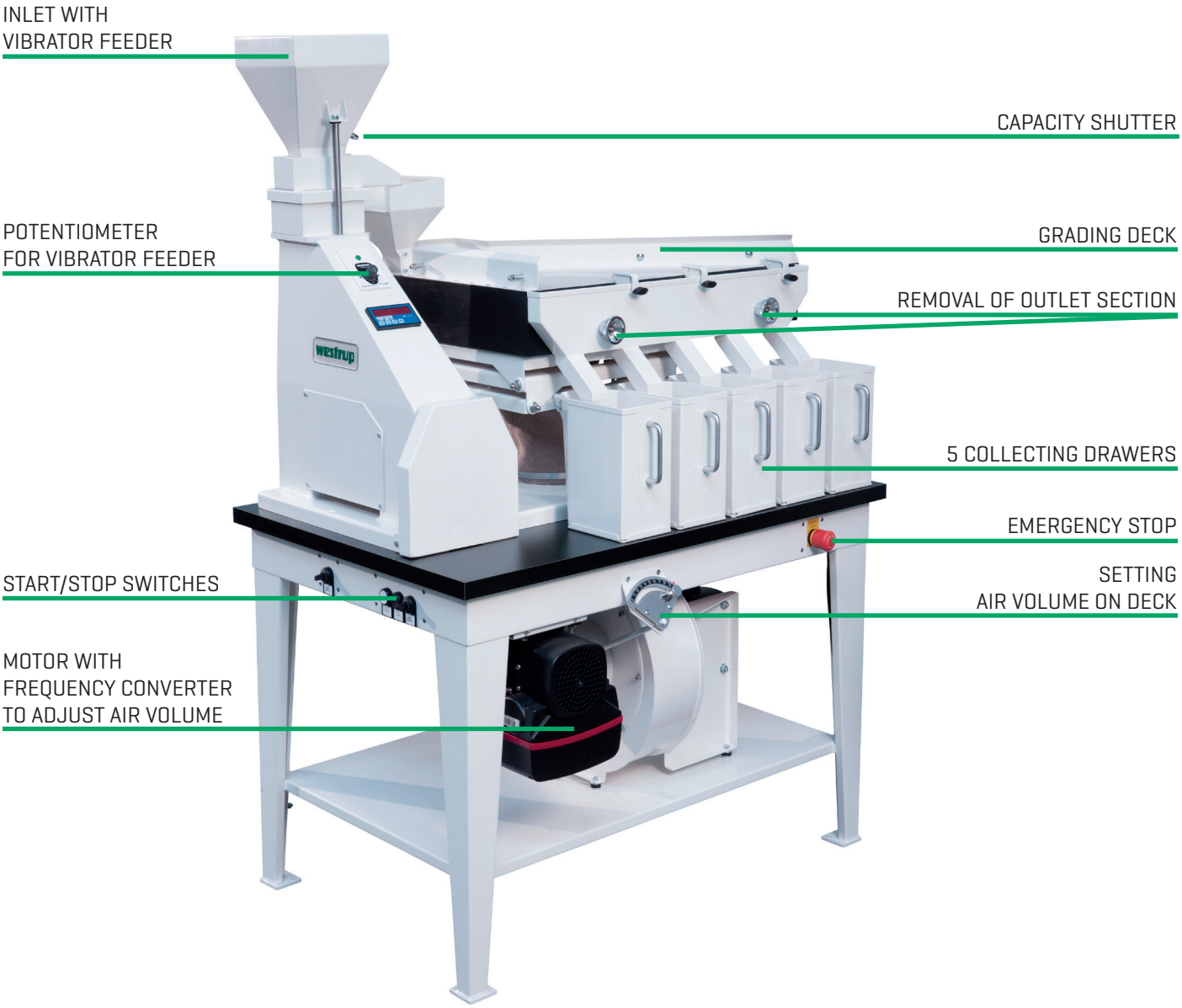
> Inlet with capacity shutter and vibrator feeder with start/stop and potentiometer.
> Oscillating triangular grading deck with air distribution plate and standard covering.
> Eccentric shaft with digital readout.
> Manually adjustable:
  - deck stroke length
  - deck speed
  -air volume
  - deck inclinations lengthwise and crosswise
> Outlet section with manually adjustable product guide plates.
> Integrated fan with frequency converter.
> Collecting drawers for 5 fractions.
> Motors.

The machine is of steel construction with the grading deck of laminated wood.

OPTIONS:

> Extension for inlet (25 l)
> Aspiration hood above the deck
> Outlet pipes for transport of product to floor level
> Autotransformer for 110 V, 60 Hz

The gravity separator LA-K's air system with integrated fan ensures a uniform air distribution across the entire grading deck. The oscillating triangular deck accurately splits the product into light and heavy fractions in one operation.



GRADING DECK - CM^2	1,600
MOTORS (V)	1 x 230, 50 Hz

DESTONER
LA-KS



> The LA-KS small scale de-stoner is designed to perform a grading in two fractions according to specific weight.

The de-stoner can also be used in research institutes and laboratories but is also suitable for small production plants.

The LA-KS de-stoner offers the below features:

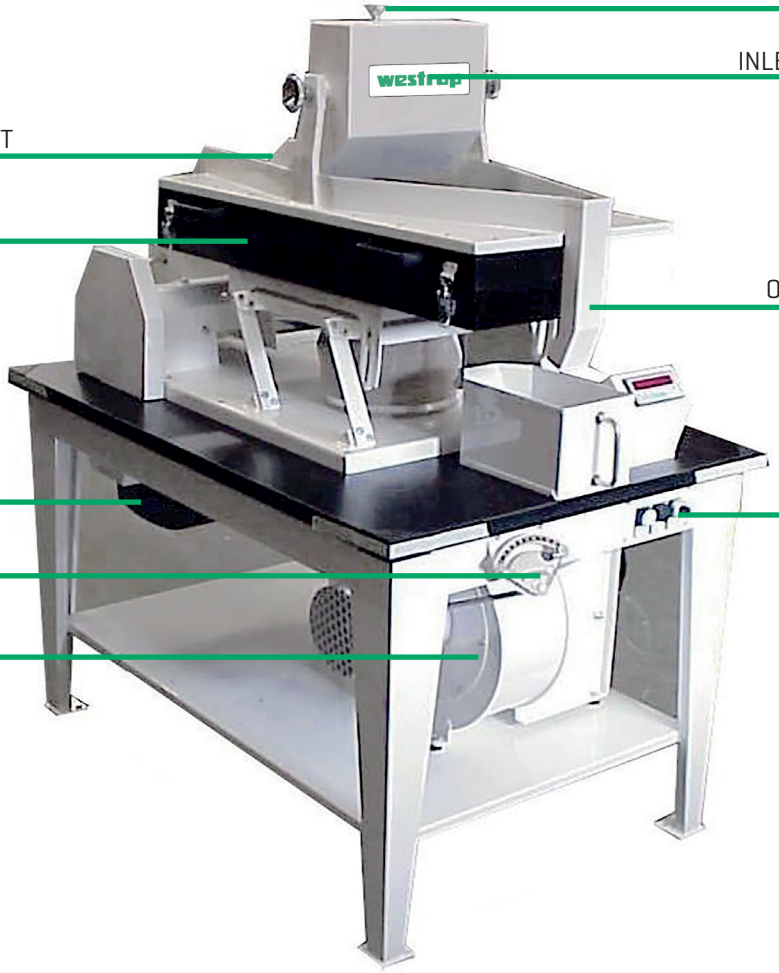
> Inlet with capacity shutter and vibrator feeder with start/stop and potentiometer.
> Oscillating grading deck with standard covering.
> Manually adjustable:
  - deck stroke length
  - deck speed
  - air volume
  - deck inclination lengthwise
> Outlet for light product and outlet for heavy product.
> Integrated fan with frequency converter.
> Collecting drawers for 2 fractions.
> Motors.

The machine is of steel construction with the grading deck of laminated wood.

OPTIONS:

> Autotransformer for 110 V, 60 Hz

The destoner LA-KS is for processing small lots and is used to separate heavy product (like stones) from the main product. The LA-KS has an easy setting of speed and air volume.



MOTORS (V)	1 x 230, 50 Hz
FAN MOTOR (kW)	0.75
DRIVE MOTOR (kW)	0.37

FLAT SCREEN SIZER
LA-VBS





> The LA-VBS/2 & LA-VBS/4 small-scale flat screen sizers are designed for precision sizing of grain samples according to thickness.

The LA-VBS can be used for grading, pre-cleaning, as well as for fine cleaning depending on the product.

The LA-VBS flat screen sizer offers the below features:

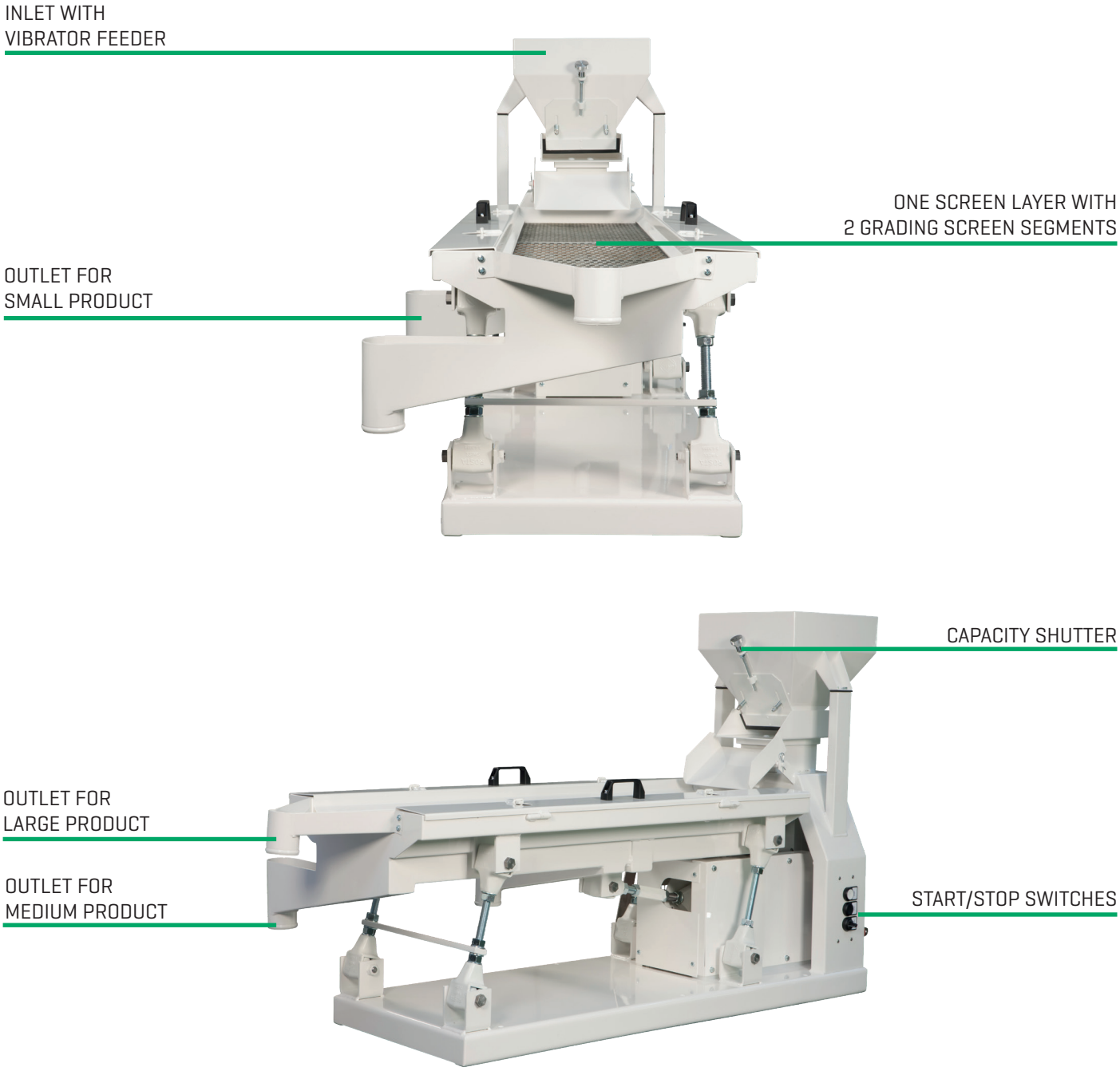
> Inlet with capacity shutter and vibrator feeder with start/stop and potentiometer.
> LA-VBS/2: Sieveboat with one screen layer with two grading screen segments and three outlets.
> LA-VBS/4: Sieveboat with one screen layer with four grading screen segments and five outlets.
> All screens with rubber ball cleaning.
> Quick-change system for the sieveboat.
> Motor for sieveboat with built-in frequency converter, incl. start/stop and potentiometer.
> Motor for vibrator feeder.

The machine is of steel construction.

OPTIONS:

> Supporting frame, 500 mm high, with adjustable inclination
> Autotransformer for 110 V, 60 Hz

The flat screen sizer LA-VBS functions as a grader, pre-cleaner and fine cleaner depending on the purpose of the product. LA-VBS is without an aspiration system and offers a good overlook of the process due to the open unit.



GRADING SCREENS (L x W) (MM)	530 x 280
MOTORS (V)	1 x 230, 50 Hz

BELT GRADER
LA-BG



> The LA-BG small-scale belt grader is designed for separation of round from flat seeds – for instance vegetable seeds such as beet seeds and flower seeds such as primula and begonia seeds

The LA-BG belt grader offers the below features:

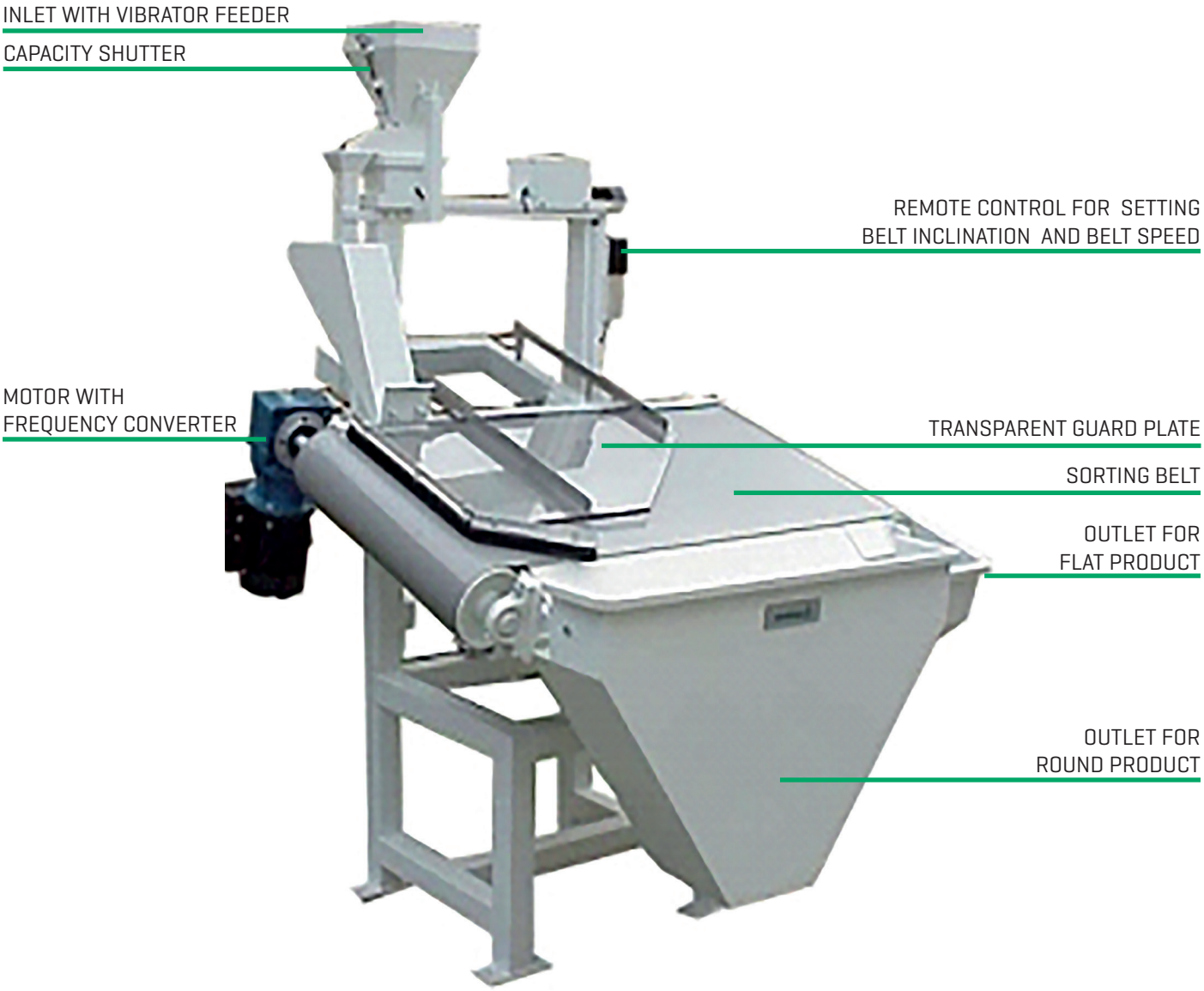
> Inlet with capacity shutter and vibrator feeder with start/stop and potentiometer.
> Smooth PVC belt.
> Transparent guard plate over the inlet section of the belt.
> Manually adjustable belt speed.
> Remote control for adjustment of belt inclination.
> Outlet hopper for round product and end outlet hopper for other products; with manually adjustable product divider.
> Motor for belt drive with built-in frequency converter, incl. start/stop and potentiometer.
> Motor for vibrator feeder.

The machine is of steel construction.

OPTIONS:

> Special belt to separate seeds with different types of surface (black soft belt)
> Indented PVC belt (white)
> Autotransformer for 110 V, 60 Hz

The belt grader LA-BG is a flexible unit for separation of round product from flat. Due to different belt types, the LA-BG can also separate products by different types of surface.



BELT - WIDTH=MM	600
MOTOR (V)	1 x 230, 50 Hz

SPIRAL SEPARATOR
LA-HT





> The LA-HT small-scale spiral separator is designed to separate round seeds from flat seeds by means of gravity.

The separation process is done with the product's own gravity and is therefore without any mechanical system.

The LA-HT spiral separator offers the below features:

> Inlet with capacity shutter and vibrator feeder with start/stop and potentiometer.
> Separator cabinet including one spiral with 43° inclination and 8 flights.
> Manually adjustable slide gate at the bottom.
> Two outlets – one for prime product and one for removed product settling in the collecting drawer.
> Motor for vibrator feeder.

The machine is of steel construction.

OPTIONS:

> Spiral with inclination of 37°, 46° or 49°
> Product brake unit with nylon flaps
> Product brake unit with magnets
> Autotransformer for 110 V, 60 Hz

The spiral separator LA-HT is a spiral unit for separation of round product from flat. The process is done with the product's own gravity and is therefore without any mechanical system.



MOTOR (V)	1 x 230, 50 Hz

BLOWER
LA-MAXIBLOWER





> The small-scale LA-MAXIBLOWER is a testing machine used for separation of a sample according to the floating speed (aerodynamic behavior) of the particles in an air stream.

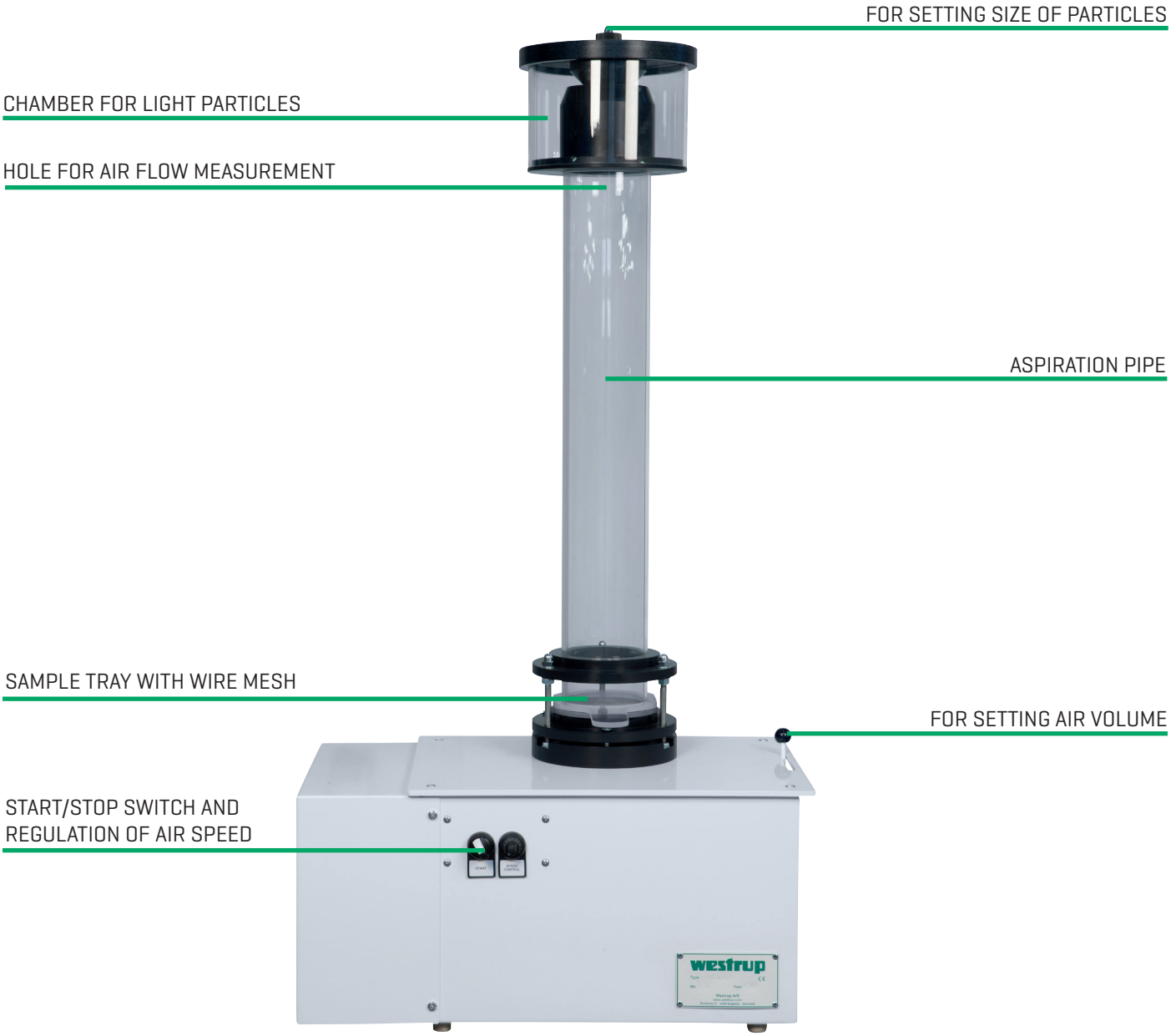
The sample is divided into two fractions – light particles settle in the top chamber and heavy particles settle in the sample tray.

The LA-MAXIBLOWER offers the below features:

> Sample tray with wire mesh in the bottom.
> Transparent vertical aspiration pipe with hole for air flow measurement.
> Removable top chamber for light particles.
> Air chamber with integrated fan.
> Manually adjustable air speed and air volume.
> Start-/stop switch.
> Motor.

The machine is of steel construction.

The LA-MAXIBLOWER is a small-scale unit exploiting the floating speed of a product.



ASPIRATION PIPE - DIA. MM	100
MOTOR (V)	1 x 230, 50 Hz

LABORATORY
SEED TREATERS

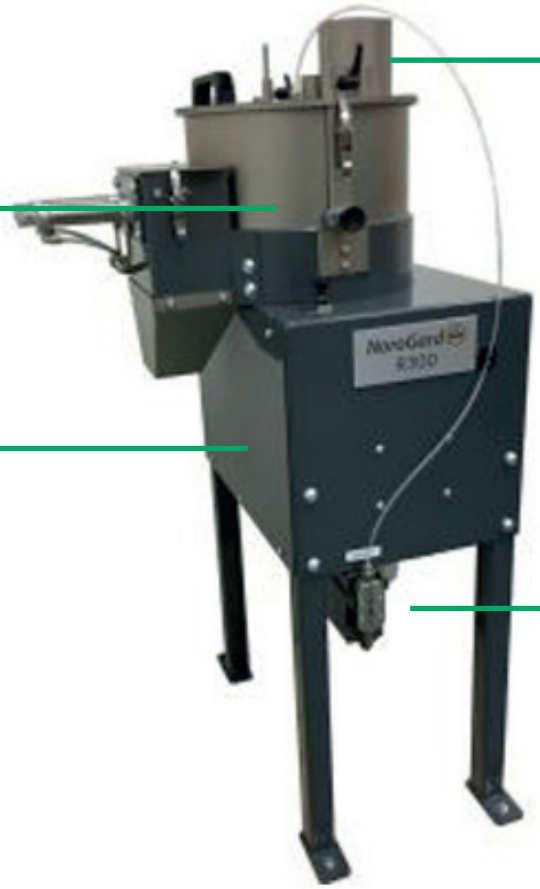




> NoroGard R300 is a 300mm diameter laboratory batch seed treater designed for treating a wide range of seeds with a range of products, formulated as liquids, flowables, slurries, gels and powders. It treats seeds in batches up to 3000ml.

The NoroGard R300 offers the below features:
> Sample tray with wire mesh in the bottom.
> Capacity of 0,3 – 3,0 liters per batch.
> Available with dosing system
> Removable top chamber for light particles.
> Hatch opening time
> Pneumatic air control.
> Start-/stop switch.
> Motor.

The machine is of steel construction.



TWO CONNECTIONS FOR AIR EXTRACTION
AND ONE INLET FOR SEED.

ROTOR AND HANDLE

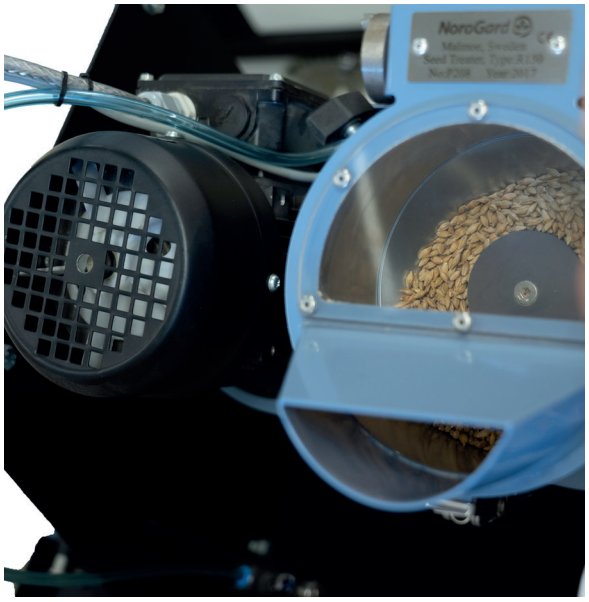
MOTOR

RUN DOSING PUMP

CAPACITIES	0,3 - 3,0 LITERS/ BATCH
DOSAGE RATE	0-1300 G/MIN.

LABORATORY
SEED TREATERS

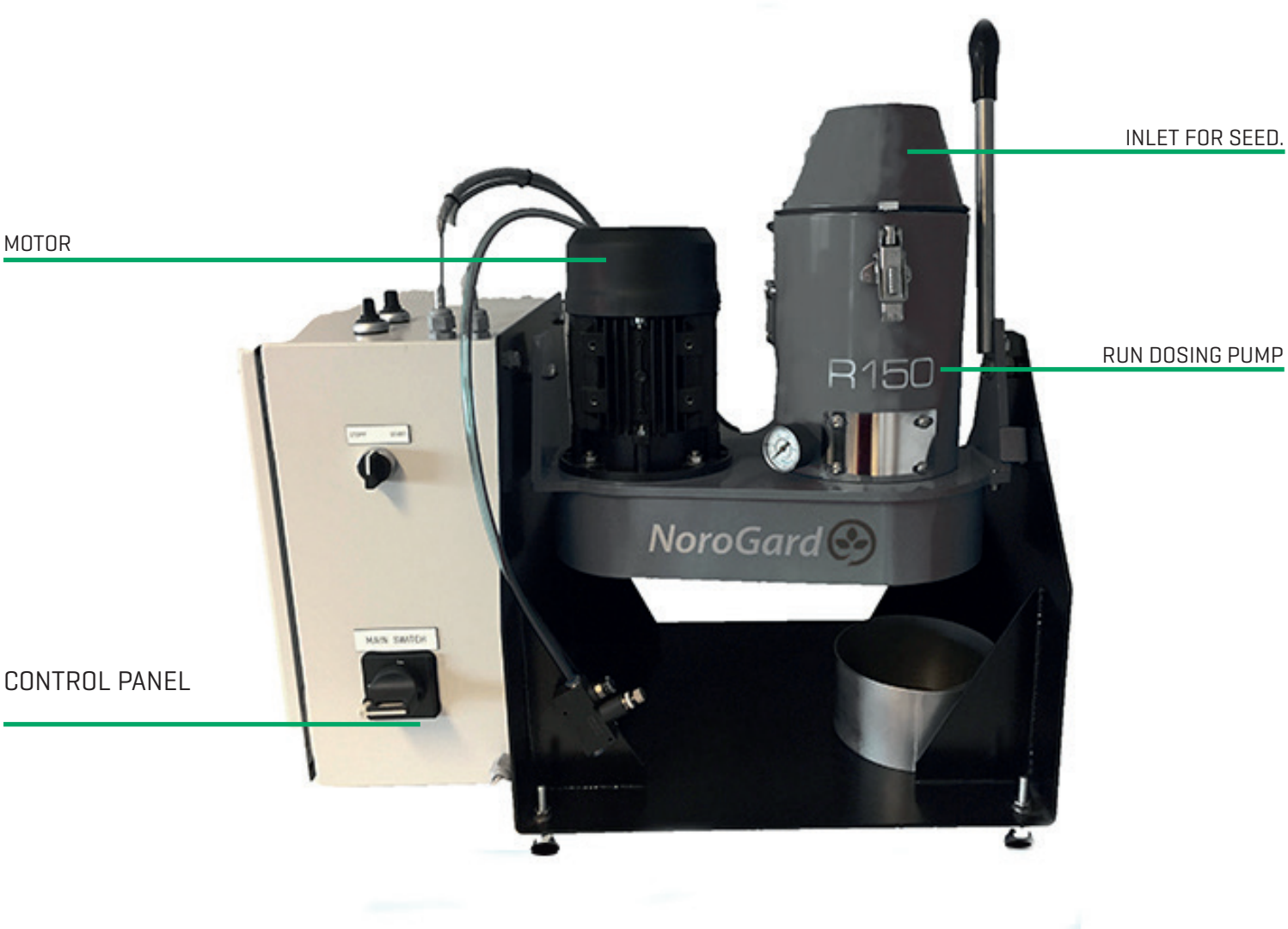




> The small-scale laboratory seed treaters are r designed for treating a wide range of seeds with a range of products, formulated as liquids, powders, flowables, slurries, gels, etc. It treats in batches up to 3000 ml.

The application time varies depending on the amount of product that is to be applied and the type of seed to be treated.

The seed treater is driven by two belts and the hatch opening time is controlled by pneumatic air. The stator is made of stainless steel and provided with features to help making the cleaning process more effortless.



CAPACITIES	0-450 ML

SCREENS
HAND/TEST SCREENS

LA-HAND SCREENS



> The framed hand screens are delivered with standard perforations from 0.5 mm and up; a frame with blind plate is also available.

Dimension: 300 x 300 mm (12" x 12").

LA-TEST SCREEN BOX



> The LA-TEST SCREEN BOX is delivered with top and bottom, 3 frames and 6 loose screen plates.

Grading can be made with 1 to 4 screens. The box has a width of 230 mm and a length of 160 mm.

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westrup

HEAD OFFICE
Denmark

SOROEVEJ 21
DK-4200 SLAGELSE
DENMARK

PHONE : +45 58 52 25 64
E-MAIL: INFO@WESTRUP.COM

WESTRUP FRANCE
Christine Coutard

PHONE: +33 (0)2 41 66 08 19
MOBILE: +33 (0)7 84 19 73 93
MAIL: FRANCE@WESTRUP.COM

WESTRUP GERMANY
Frank Düing

PHONE: +49 171 1897 340
PHONE: +49 322 2500 2722
MAIL: GERMANY@WESTRUP.COM

WESTRUP USA

PHONE: +1 972 881 8557
MAIL: WESTRUPUS@WESTRUP.COM

WESTRUP KAZAKHSTAN
Kanat Sagumbayev

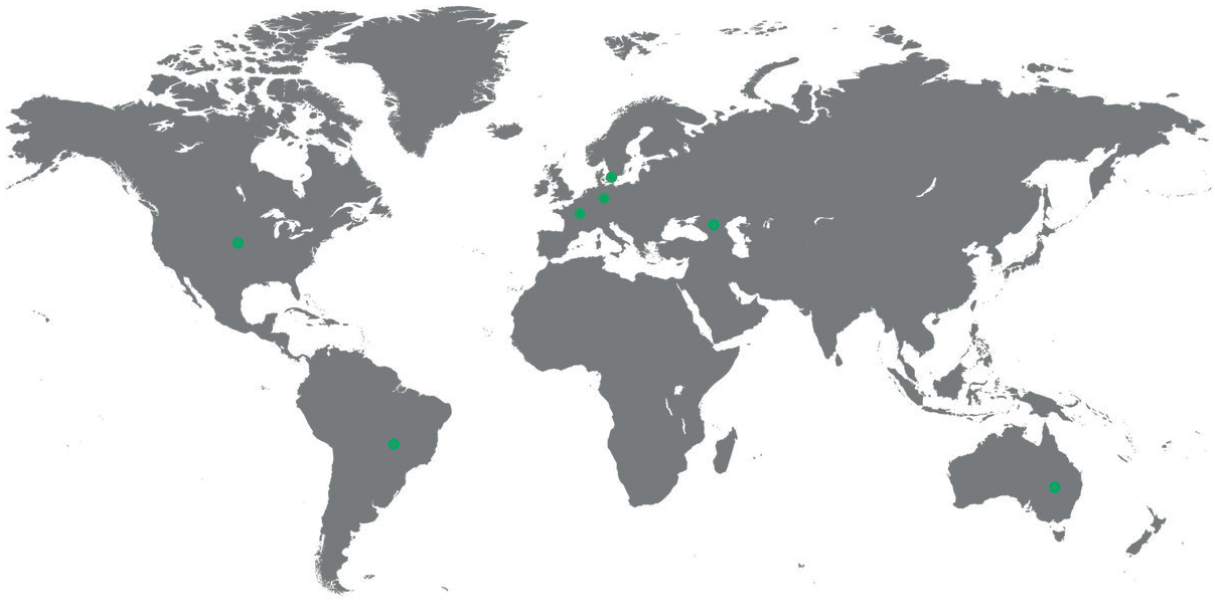
PHONE: +8 701-190-66-74
MAIL: KAZ@WESTRUP.COM

WESTRUP SOUTH AMERICA
Ian Ely

PHONE: +55 (51) 99988-0015
MAIL: INFO@OLIVERWESTRUP.COM

WESTRUP SOUTH PACIFIC
Jim Hole

PHONE: +61 (0) 298 445 430
MOBILE: +61 (4000) 35 326
MAIL: AUSTRALIA@WESTRUP.COM



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