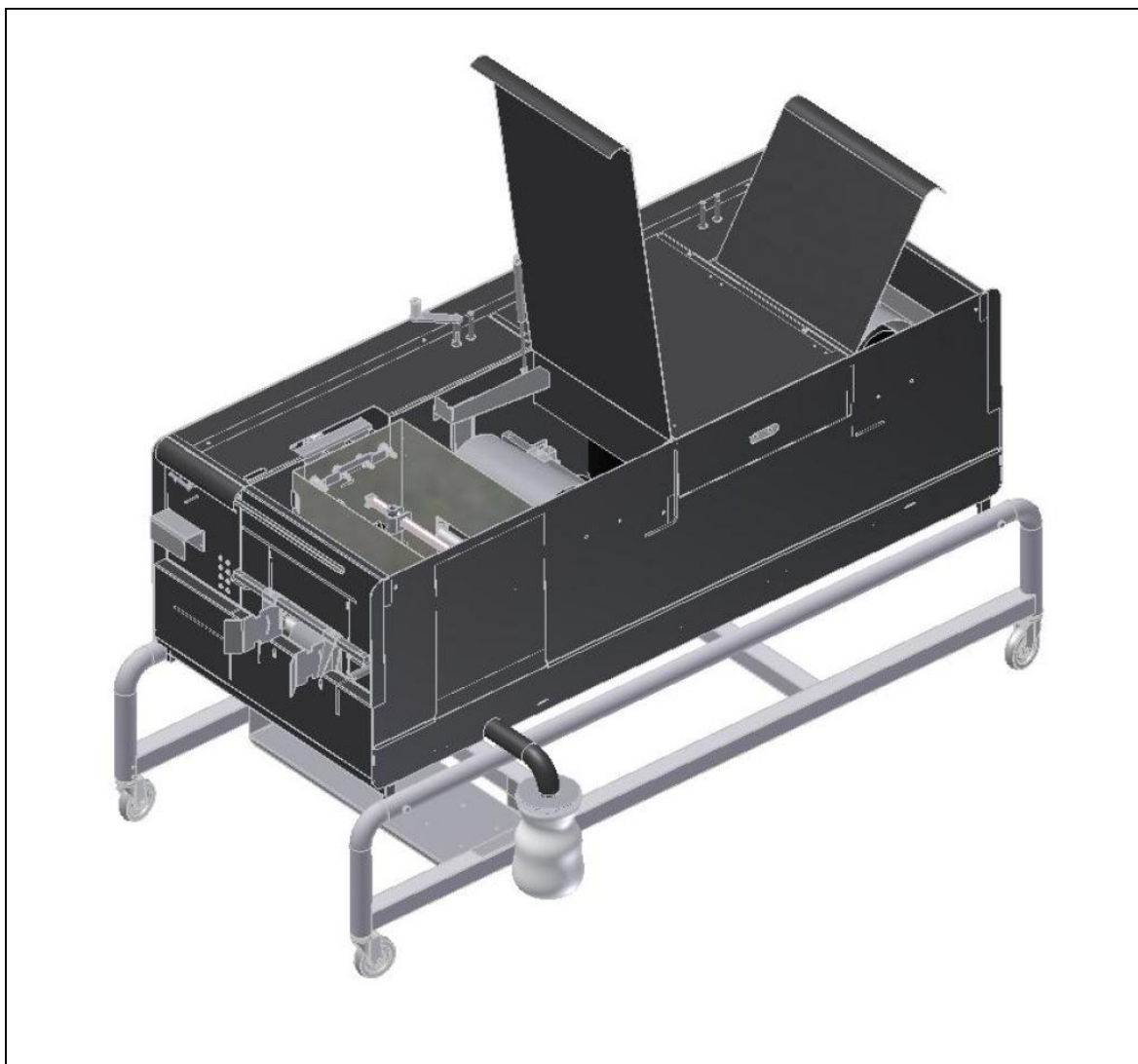


OPERATORS MANUAL – PAINTING MACHINE IP250

Manual version 03. Applicable from 09/09 2011.



Made by:

Ceetec A/S
Industrivej 7
DK-5580 Nr. Aaby
Tel.: +45 6442 1473
e-mail: info@ceetec.dk

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2 General terms of use



The machine may only be used for the purpose agreed in the order confirmation. If the machine is used for other purposes, or if structural changes are made then Ceetec cannot guarantee the safety of the machine and the warranty will be null and void.



The machine must not be set up in an area classified as having explosion danger.



Assembly, service, maintenance and repairs may only be performed by trained personnel with knowledge of the machine and who have read the manual thoroughly! The electricity must be disconnected and secured against re-energisation.



Protective devices and doors must not be overridden or dismantled; if this is done the user of the machine takes full responsibility, and Ceetec disclaims liability for safety and the warranty on the machine.



Only use original spare parts

3 Safety provisions



THE OPERATOR IS RESPONSIBLE FOR HIS OWN AND THE SAFETY OF OTHERS!



ROTATING PARTS! – SCREENING MUST BE CLOSED WHILE THE MACHINE IS IN OPERATION!

3.1 Special training requirements

It is a prerequisite that the user has common knowledge of processing machines.

The user must be familiar with this instruction manual and must have read it thoroughly to familiarise himself with the machine's functions, before using the machine.

Furthermore, any operator must receive special instructions on how to use the machine.

3.2 Limitations to use



The machine may only be used for applying wood preservation/paint to wood articles and must not be used as a washing and cleaning machine.

3.3 Personal protective equipment



Necessary safety equipment/personal protective equipment must be used. Gloves, eye protection and safety shoes are recommended.



Respiratory protection is recommended if there are harmful substances present during processing. See data sheet from the paint/varnish supplier and follow his directions.

3.4 Clothing

The operator must wear appropriate work clothing. Sleeves must end at the wrists so they do not get caught in the moving/rotating parts.

3.5 Cleaning, service and maintenance

Do not perform cleaning, service or maintenance work on the machine while it is in use. For all service and maintenance work it must be ensured that the plant:

- Is free from material (empty)
- The machine is stopped (emergency stop is activated)
- Is disconnected from power supply (plug is removed)

3.6 Screening

Safety screens and equipment must not be overridden or removed from the machine.

3.7 Special conditions

- All screens, grates, covers, safety screening and safety switches must work satisfactorily and be in place and in order.
- Always keep the machine, work surfaces and the work area clean and tidy.
- Only carry out work with the machine when situated in the machine's operator places.
- Do not touch and do not attempt to move items when the machine is working.
- If it is necessary to check parts of the machine which are not protected by a grate and/or safety screens, the machine must be stopped (emergency stop) and the power must be disconnected.
- In case of a shutdown it must be ensured that the plant has stopped completely before attempting to remedy the error.
- Always follow the supplier user manuals for the wood preservation/paint.

4 General information

4.1 Manufacturer

Ceetec A/S
Industrivej 7
DK – 5580 Nr. Aaby
Tel.: +45 64 42 14 73
e-mail: info@ceetec.dk

4.2 Machine information

Machine type:	Painting machine
Type designation:	IP250
Type no.:	053

4.3 Capacity

Max. item dimensions	Width 250mm x height 100mm
Min. item length	1000mm
Capacity:	Not relevant (depends on the operator)

4.4 Technical data

Forward drive speed	App 30-60 meters/min (depending on parameter setup on frequency converter)
Pump capacity	App. 20-80 litres/min (depending on pump type)
Motor connection	3x380V. IP class 54
Power forward drive	0.75 kW. 50 HZ
Power brushes	2 x 0.37 kW. 50 HZ
Power pump	0.37 kW. 50 HZ

4.5 Weight

Own weight:	App. 525kg
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4.6 Noise conditions

Noise level:	The painting machine does not produce noise in excess of the allowed 80 dB (A). Thus, use of hearing protectors is not necessary.
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5 Description of the machine

Ceetec IP250 is made to treat wood with wood protection products (water and oil based). The machine can be used for rough, planed and profiled wood.

The item is led by driving rollers past a set of nozzles which add an overdose of wood protection/paint to the item. After this rotating brushes distribute and work in the wood protection in the item.

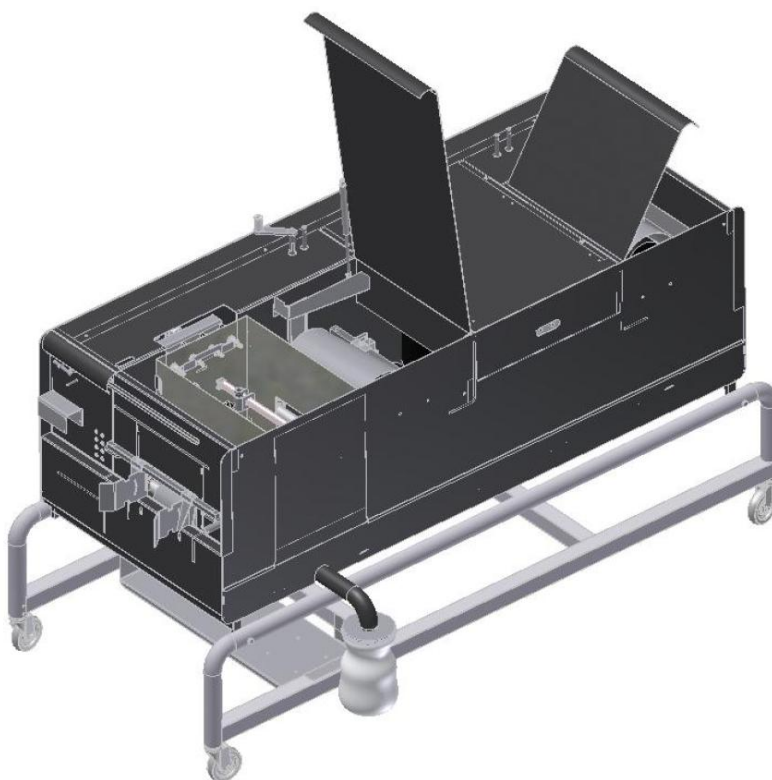
The forward drive speed and the brush speed are stepless adjustable, and the amount of wood protection/paint can also be adjusted by opening/closing the nozzles.

The machine's lid as well as the detachable side plate is equipped with safety switches which make sure the machine will stop if the lids are opened. Note that operation of the pump continues even if these switches are broken.

By taking off the detachable side plate there is easy access to the machine's work area for cleaning, etc.

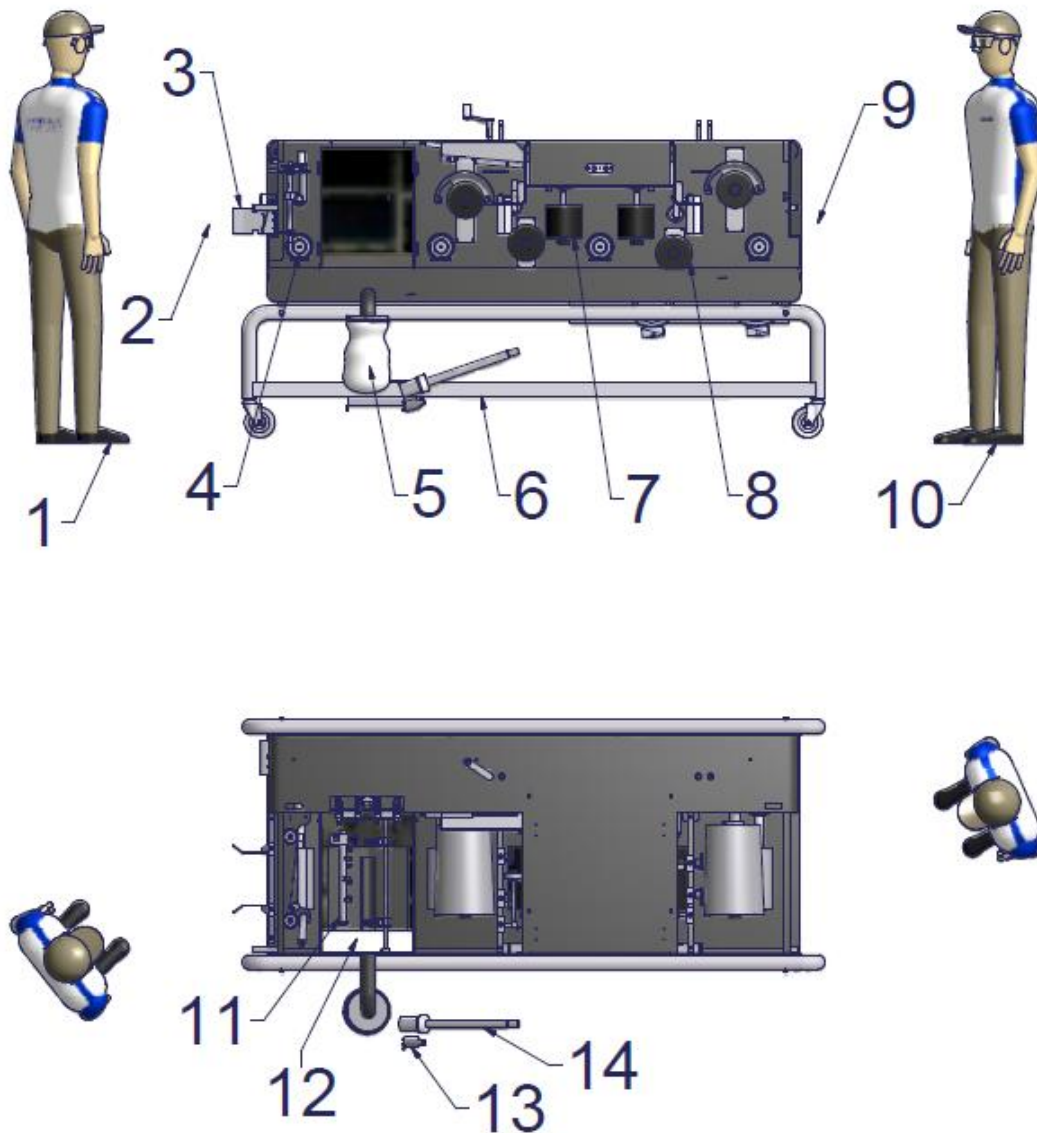
By taking off the side plate where the controls are mounted, fixed locking plate as well as the bottom protective screening there will be easy access to the transmissions for cleaning, maintenance and repairs.

The painting machine is mounted on wheels and thus can be moved very easily.



As an accessory the painting machine can be delivered with a roller conveyor, a larger paint container as well as a short-item guide for short items.

Layout drawing:



1. Operator, intake
2. Intake
3. Intake guide
4. Feed roller
5. Filter bag
6. Frame

7. Vertical brushes
8. Horizontal brushes
9. Outlet
10. Operator, outlet
11. Nozzle pipe

12. Nozzle box w/nozzle pipe
13. Overpressure valve
14. Suction filter

5.1 Mounting



The mechanical mounting must be finished before the electrical can be started.



Make sure the mounted screens mounted correctly and are in order. If the screens are not in place there may be danger of personal injury in connection with moving/rotating parts.

5.2 Lift and handling



The machine must be lifted with a forklift truck. Points of attach on members on the frame are marked with symbols. Do not lift in the motor, controls, shafts, etc.

Always make sure the unit/machine is balanced when lifting it. Never stand or walk underneath the machine when it is being lifted.

5.3 Transport/moving the machine

During transport the machine must be secured against tipping over and against the weather.

Before the machine is moved it must be emptied of liquid/paint.

The machine can be moved on the mounted wheels. Alternatively with a forklift truck in the frame. See section 5.2

When moving the machine manually it must be balanced. Never move the machine manually down a sloping surface.

5.4 Setup

The machine must always be set up on an even and stable foundation.

5.5 Space requirements

During cleaning, repairs and maintenance there must be sufficient space around the machine. It must be ensured that there is sufficient space to avoid the operator being struck by items leaving the machine.

5.6 Electrical connection

The electrical connection must only be carried out by a licensed electrician in accordance with current national rules.

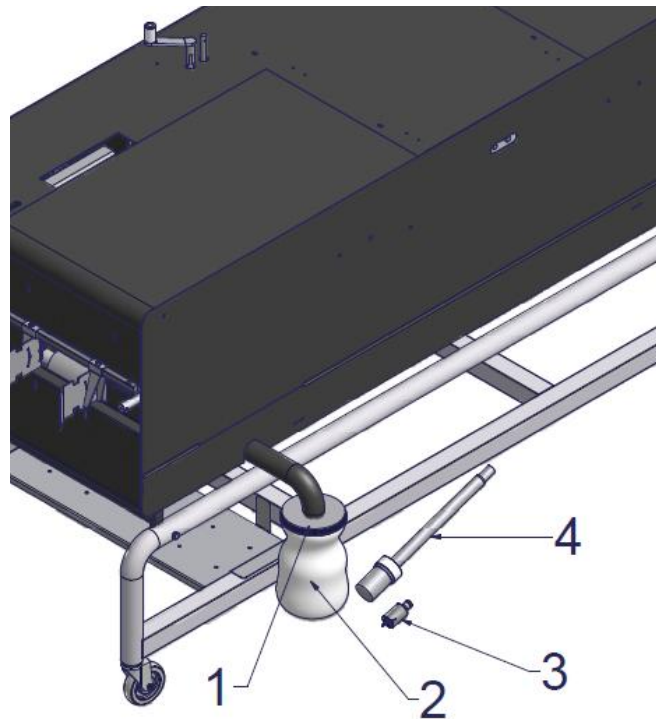
5.7 Dismounting/disposal

The electrical connection must be disconnected by a licensed electrician in accordance with current national rules.

The machine must be disassembled and disposed of in accordance with the national rules in force at the time.

6 Preparation of the machine

1. The machine is placed on an even and firm surface, and the wheels are locked to ensure the machine cannot move.
2. The electricity is connected.
3. Adapter for filter bag (1) is mounted on the drain pipe and the filter bag (2) is mounted to this. The container with wood protection is placed under the filter bag, and the suction (3) and overpressure hose (3) is placed in the container. Note that there is no overpressure valve on machines with special pumps (e.g. air-powered membrane pumps).



7 Operation

7.1 Common functional problems

In case of a shutdown it must be ensured that the plant has stopped completely before attempting to remedy the error.

- Check the setup. If there is no error then call a service employee or contact Ceetec.

7.2 Operation

Before start-up the supplier instruction manual for the paint product must be read in order to make sure any safety precautions in connection with the use of the product can be adhered to.

At all times the temperature of the paint product must not exceed the flash point of minus 10° C.

We recommend using the paint machine in a ventilated room or outdoors. We also refer to the supplier instruction manual for information about necessary ventilation.

When the machine is in use you should avoid putting hands and similar into the intake of the machine as there is a danger of crushing.

Also see sections 8 and 9

8 Control – normal operation

During normal operation the machine has an operator at each end. An operator who pushes the wood items into the machine and another operator who takes the items once they have been painted/treated and come out of the machine.

The painting machine's controls are placed on the side of the machine at the intake. The main switch is placed on the control board.

Start/stop - normal operation:

The machine is started/stopped during normal operation by turning buttons "PUMP", "FORWARD DRIVE" and "BRUSHES" to position 1 and 2 respectively. These are used for normal start/stop at e.g. breaks, change of paint, etc. Please note that the pump function on machines with air powered membrane pump is stopped by disconnecting the air supply to the pump.

Regulation of forward drive speed:

The speed of the forward drive of the items can be adjusted on the button "FORWARD DRIVE".

Regulation of brush speed:

The rotation speed of the brushes can be adjusted on the button "BRUSHES".

Stop:

For stops for moving, repairs, maintenance and disassembly the main switch on the control board must be set to position 0 (the power is disconnected).

8.1 Emergency stop



The machine is equipped with a wire emergency stop at each end which ensures that the machine stops when activated. When emergency stop is activated the brushes and forward drive are stopped.

After emergency stop has been activated the machine can only be restarted with repeated activation of the start button.

NB: Before the machine is started again you must make sure that the accident has been stopped and that the reason for the activation of the emergency stop is known.

**NEVER USE THE EMERGENCY STOPS AS A REGULAR STOP
FUNCTION**

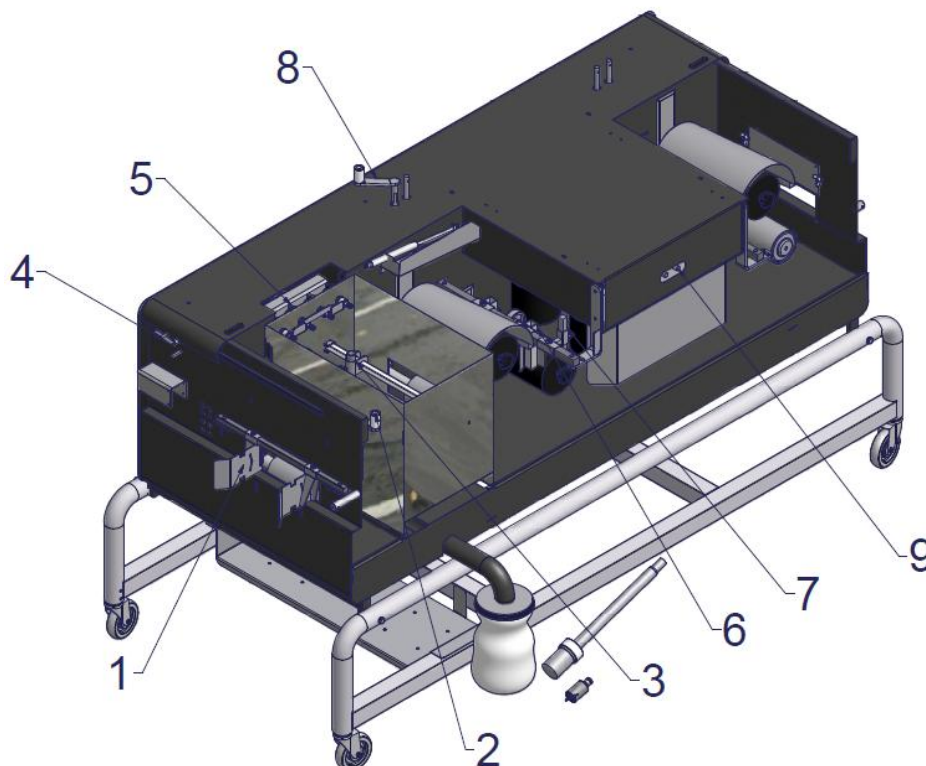
8.2 Setting and test run

Before any start of continuous operation an individual setting and test run of the machine must be carried out.

Setting of the machine is done the following way:

1. Disconnect the power supply
2. The machine is prepared as described in section 6.
3. Dismantle the side plate in order to get access to the machine's work area.
4. Open both lids
5. Insert the desired item in the machine so it rests on the feed rollers. (If necessary the overpressure roller is raised with the handle (2))
6. Set the intake guide (1) so there is app. 10 mm air on both sides of the item.
7. Lower the overpressure roller to the item by turning the handle (2) counter-clockwise. The overpressure roller is pushed towards the item and then turned approximately two revolutions in order to apply pressure to the item.
8. Set the four nozzle tubes (3) on each side of the item at a suitable distance to the item. The distance from the item depends on the viscosity of the wood protection as well as desired result on the finished item.
9. Set the 4 middle guides (6) so there is app. 10 mm air on both sides of the item. The middle guides steer the item through the machine.
10. Set 2 overpressure wheels (7) so they are app. 10 mm between the wheel and the item. The overpressure wheel prevents the horizontal brushes from "lifting" thin items (up to 20 mm).
11. Set the brush pressure on the horizontal brushes by turning the four spindles (8) with the handle.
 - a. When turned clockwise: the brush is raised (respectively less pressure on the top and more pressure on the bottom brushes).
 - b. When turned counter-clockwise: the brush is lowered (respectively more pressure on the top brushes and less pressure on the bottom brushes).
12. Set the brush pressure on the vertical brushes by turning the two spindles (9). Use the same handle to set the horizontal brushes.
 - a. When turned clockwise: The brush is moved away from the operator (respectively more pressure on the left brushes and less pressure on the right brushes).
 - b. When turned counter-clockwise: The brush is moved towards (respectively less pressure on the left brushes and more pressure on the right brushes).

NOTE: The brush pressure depends on shape of item, size of item, paint type and desired treatment, and so must be set individually from item to item.



13. Connect power
14. Start the pump. The electrical pump is started on the button "PUMP" which is turned to 1. The air-powered pump is started by connecting air and possibly regulating it.
15. Carefully open the main tap (4) in order to put paint in the nozzle box.
16. Carefully open the desired number of taps (5). Always open the top nozzles first. The machine can treat 1, 2, 3 or 4 sides of the item at once. Only open for the liquid on the sides to be treated. It is only necessary to open the vertical nozzles if the item is more than 20 mm high, or if there is a groove or similar which has to be treated.
17. Mount the side plate and close the doors.
18. Activate the button "brushes" and adjust the brush speed with the button to the desired speed.
19. Activate the button "forward drive" and adjust the forward drive with the button to the desired speed.
20. Take the item from the machine's outlet. Note: The item will come out on its own if the machine is set correctly! If the item stops it may be because the item has hit an intake guide, guide, nozzles or brushes. Adjust them.
21. Have a test run with the same item 2-3 times. This ensures that the brushes are moisturised.
22. Then have a test run with an untreated item and make sure the result is as intended. Then the machine is ready for normal operation. Check the items regularly. If necessary adjust:
 - a. Paint amount
 - b. Forward drive speed
 - c. Brush speed
 - d. Brush pressure

9 Adjustment/setting of the machine



Do not make adjustments while the machine is running. For every adjustment it must be ensured that the machine is:

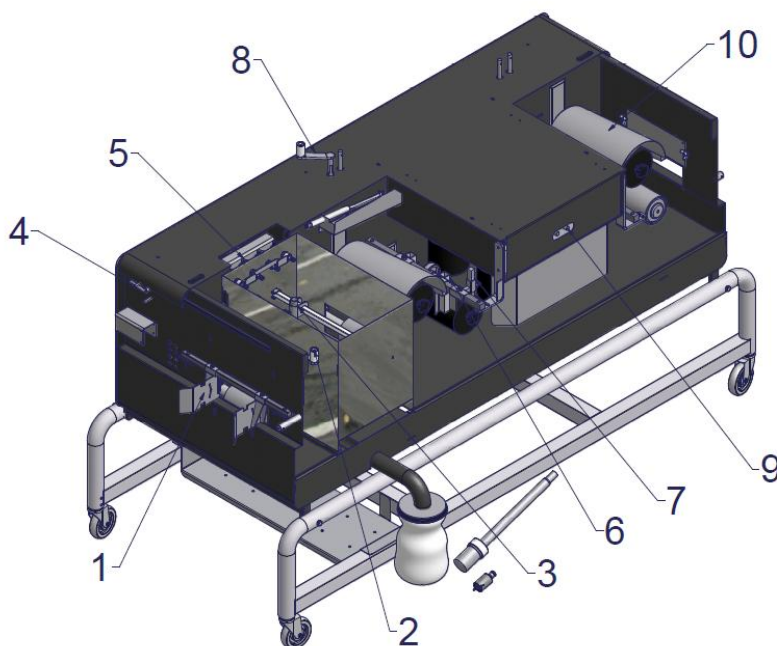
- Free of items (empty)
- Not moving (emergency stop is activated)
- Power supply is disconnected



We recommend that operators use rubber gloves and eye protection during work. Also check the product sheet/supplier user manual for requirements to other protective equipment.

9.1 Intake guide, middle guide and overpressure roller

The intake guides (1) and the middle guides (6) steer the item sideways. The guides are set by loosening the finger screws (5) and moving them towards the item. There must be 2-3 mm “air” at both sides. The overpressure rollers (6) must prevent the bottom horizontal brushes from “lifting” thin items (up to 20 mm). The rollers are set by loosening the finger screws and moving them towards the item. There must be app. 5-10 mm “air” over the item.



9.2 Nozzles

The nozzles (3) are placed app. 50 mm from the item. The amount of wood protection is regulated by opening or closing the taps (5)

9.3 Brushes and screens

The rotating brushes distribute the liquid evenly and brush away the superfluous liquid/paint.

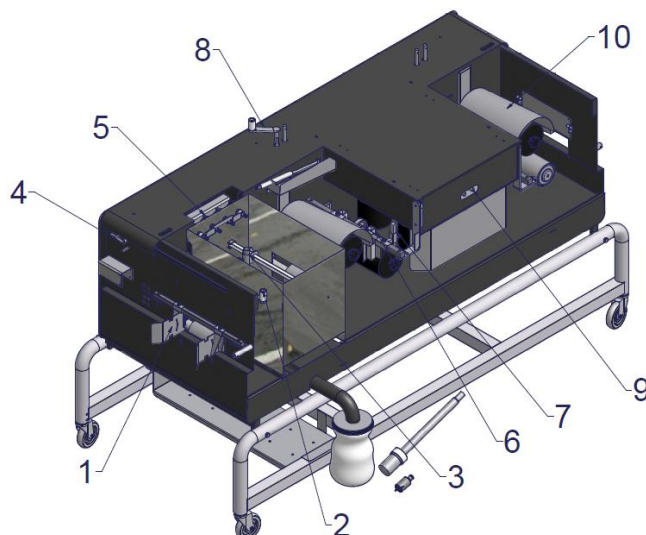
The brushes are similar and made from durable nylon. The brushes are easy to mount and dismount for cleaning. The setting of the brushes depends on the treatment and profile of the item.

The setting of the brush pressure on the horizontal brushes is carried out by turning the four spindles (8) with the handle.

- e. When turned clockwise: the brush is raised (respectively less pressure on the top and more pressure on the bottom brushes).
- a. When turned counter-clockwise: the brush is lowered (respectively more pressure on the top brushes and less pressure on the bottom brushes).

The setting of the brush pressure on the vertical brushes is carried out by tuning the two spindles (9). Use the same handle as for the horizontal brushes.

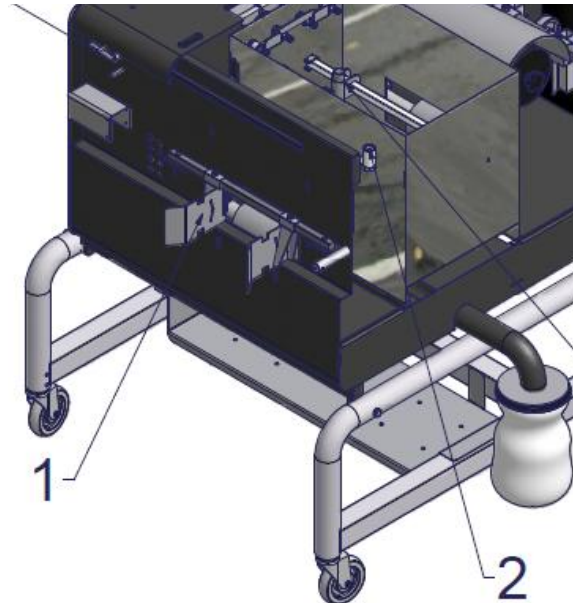
- f. When turned clockwise: The brush is moved away from the operator (respectively more pressure on the left brushes and less pressure on the right brushes).
- b. When turned counter-clockwise: The brush is moved towards (respectively less pressure on the left brushes and more pressure on the right brushes).



The screens (10) prevent spray from the brushes and drips on the treated surface, and so they must always be mounted before the machine is started. The screens are set so there is app. 10 mm "air" between the item and the front edge.

9.4 Forward drive

The forward drive pulls the item through the machine. The back-pressure roller is regulated by turning the spindle with the handle.



Turning clockwise: The back-pressure roller is lifted

Turning counter-clockwise: The back-pressure roller is lowered

The back-pressure roller is brought in contact with the item and tightened app. 1 revolution, depending on the item.

9.5 Dismantling side plate and opening lid



Note that the pump can be activated even if the side plate is dismantled.

The side plate (1) on the right side of the machine is mounted with locks which make it easier to dismantle it without the use of tools. The side plate is monitored by a contact which means that forward drive and brushes cannot run when the side plate is not mounted – however the machine's pump is not affected by this function.

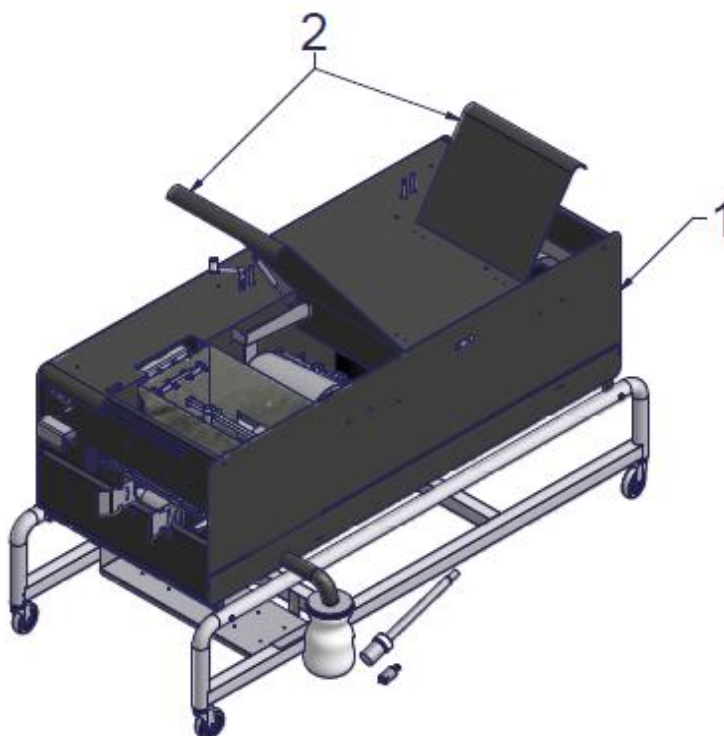
In order to start the machine's forward drive and the rotation of the brushes the side plate must be mounted correctly. If the door is opened while the machine is running, the machine's forward drive and the rotation of the brushes is stopped immediately. In order to restart the plate must be mounted correctly, and a new start command is given with the start button.



Note that the pump can be activated even if the lids are open.

Lids (2) over forward drive and brushes are hinged and can be opened. The lids are monitored by a contact which means that forward drive and brushes cannot run when the lids are open – however the machine's pump is not affected by this function.

In order to start the machine's forward drive and the rotation of the brushes the lids must be closed. If the door is opened while the machine is running, the machine's forward drive and the rotation of the brushes is stopped immediately. In order to restart the lids must be closed, and a new start command is given with the start button.



10 Cleaning



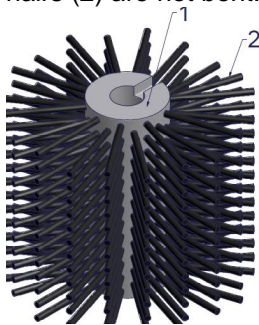
We recommend that operators use rubber gloves and eye protection during work. Also check the product sheet/supplier user manual for requirements to other protective equipment.

For safety reasons it is important to keep signs and operating handles clean and free from paint.

After finished operation and at colour change it is important that the machine is cleaned thoroughly.

10.1 Components

Brush screens, brushes, supporting rollers, curtain, guides and other components are dismantled and cleaned under running water. After cleaning the parts are remounted. Brushes are dried prior to mounting. Note that it is important that the brushes are always stacked/placed on the brush hub (1) during drying so the hairs (2) are not bent.



10.2 The machine

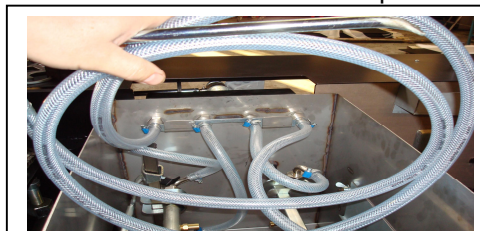
The machine can be cleaned either with water or another cleaning agent depending on the type of paint used in the machine.

The suction hose is removed from the bucket of wood protection. The pump is started, the nozzle valves are opened (always remember to open the top nozzle first), the end plugs on the nozzles are removed, and the final residue of liquid/paint is pumped into the machine and back in the container. After app. 2 min. the nozzle valves are closed. Possibly stop the pump and dismantle the detachable side plate.

The nozzle system is empty when air is pressed out of the overpressure valve (air bubbles in the container). The end plugs are remounted on the nozzle pipes.

The suction hose is placed in a bucket with water (possibly tepid water), and the overpressure hose is placed in an empty bucket which is placed under the drain. The pump is started and the nozzle valves are opened (always remember to open the top nozzle first). Stop the pump when only clean water comes out of the nozzles.

The detachable side plate is dismantled. Close all nozzle valves. A washdown hose is mounted on valve no. 1. The pump is started and the machine is washed by opening valve no. 1. Then the machine is wiped and finally filter bag, suction filter and overpressure valve is cleaned.



11 Maintenance

For any service and maintenance task it must be ensured that the machine is:

- Free of items (empty)
- Not moving (emergency stop is activated)
- Power supply is disconnected



Never try to touch parts of the machine during operation

11.1 Regular maintenance

In general the machine must be checked and lubricated at least 12 times a year or after approximately 100 operating hours.

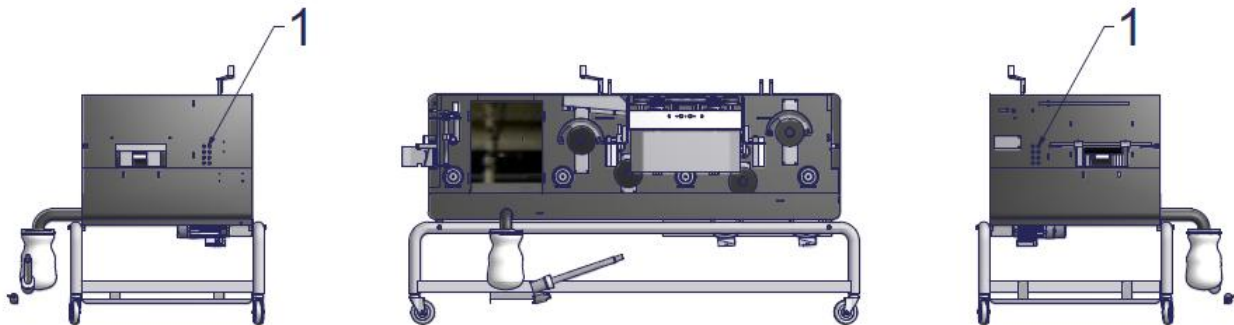
Some of the machine's moving parts are equipped with external lubricating nipples which make the regular maintenance easier for the operator.

11.2 Bearings

The bearings must be checked and replaced in case of defect. The bearings are lubricated as follows:

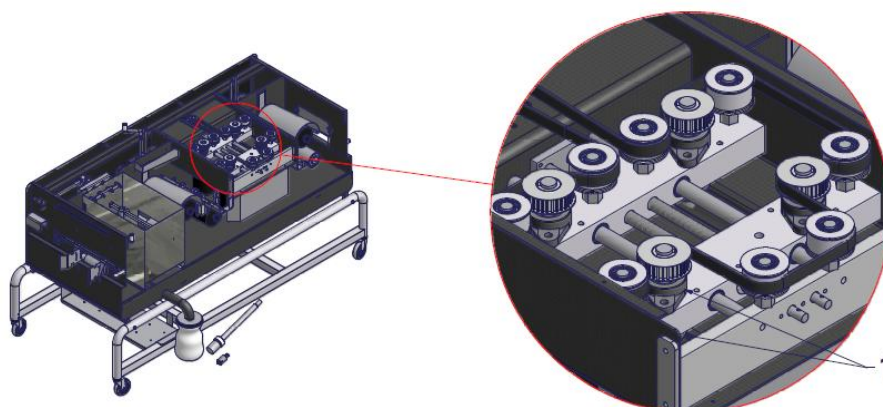
Lubricating nipples (1) on the ends of the machine are greased. Pump 5 times on each lubricating nipple. These lubricating nipples are for bearings and other moving components for:

- Forward drive
- Horizontal brushes



Lubricating nipples for vertical brushes are lubricated the following way:

- Dismount the machine's fixed lid by loosening the screws
- 8 lubricating nipples (1) on bearings are greased. Pump 5 times on each lubricating nipple
- Remount the machine's fixed lid

**Grease specifications:**

We recommend multi-purpose grease with good water resistance, like e.g. FINA LICAL EP 2, or a similar product. There is free choice between grease manufacturers. Do not mix synthetic grease and mineral grease. Choice of unmarketable grease may lead to fire, corrosion or insufficient maintenance of the unit with subsequent reduced life.

11.3 Toothed belts

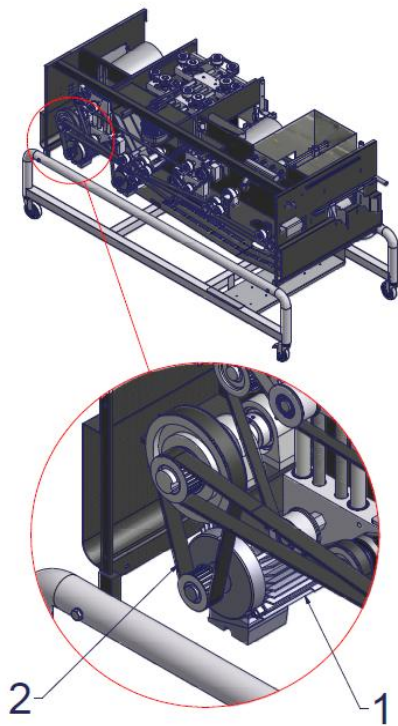
All the machine's rotating parts are driven by toothed belts.

All toothed belts are equipped with tension pulleys and must be checked for the first time after app. 50 hours operation. After this the belts must be checked at least once a year or after 1,700 hours operation.

11.3.1 Toothed belt for motor – feed roller

Tensioning of belt for motor – feed roller is carried out the following way:

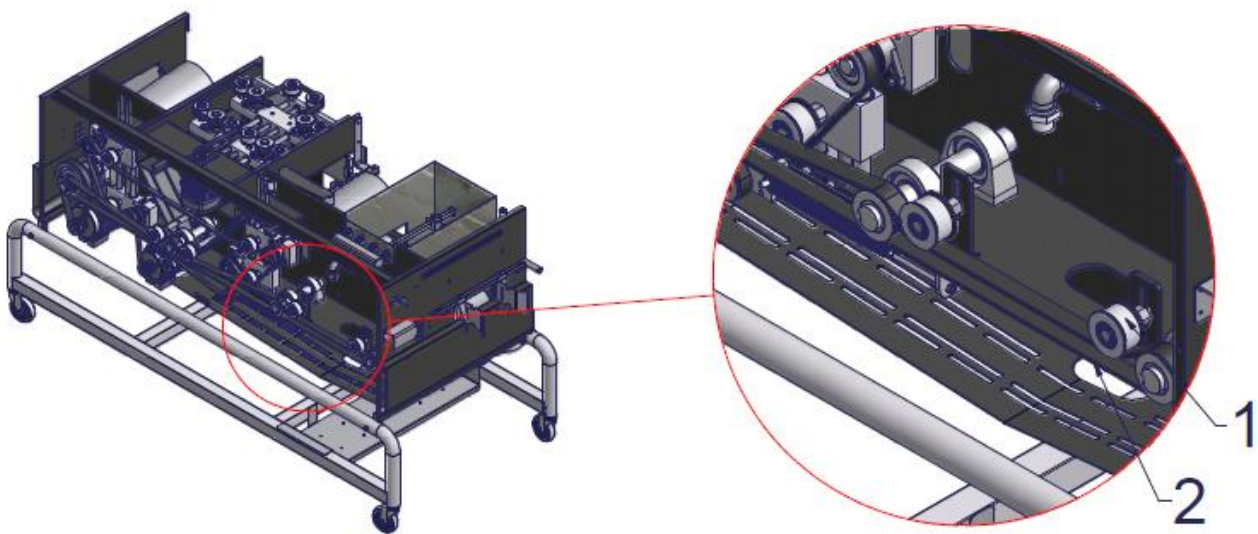
- Dismantle the side plate
- 4 bolts on motor (1) are loosened
- Motor is displaced until belt (2) has sufficient tension
- 4 bolts on motor are tightened
- The side plate is remounted



11.3.2 Toothed belt for forward drive

Tensioning of belt for forward drive is carried out the following way:

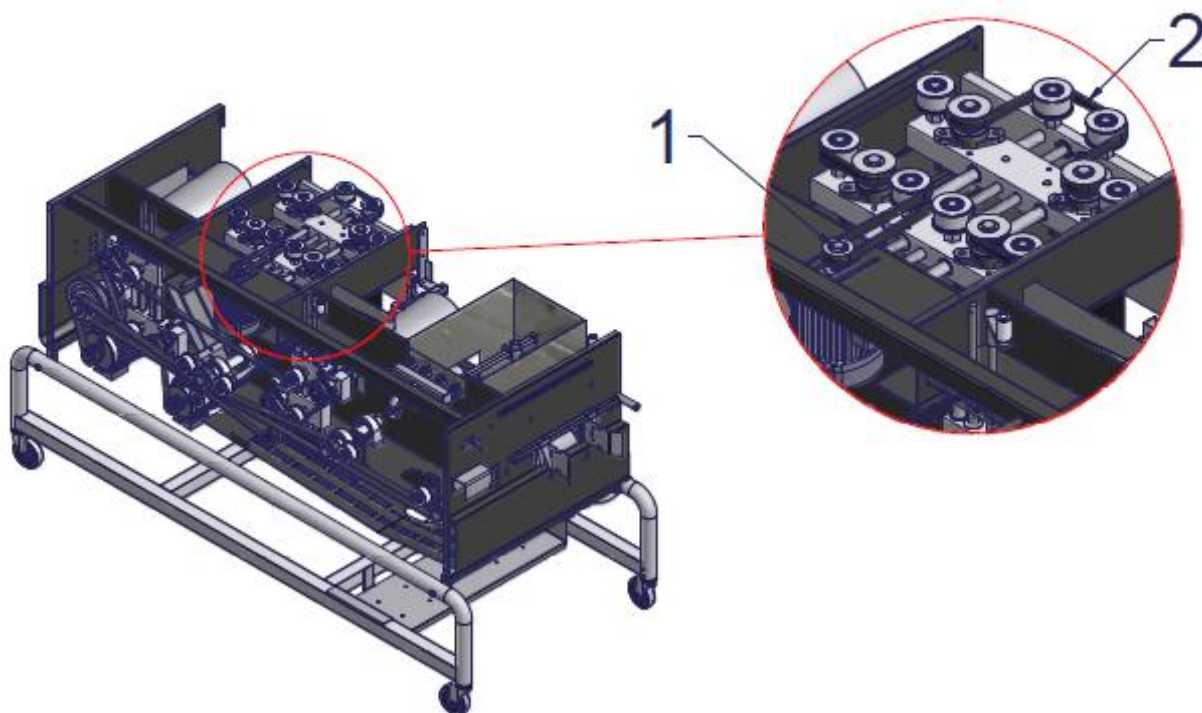
- The side plate is dismantled
- Bolt on tension pulley (1) is loosened
- The tension pulley is displaced until belt (2) has sufficient tension
- Bolt on tension pulley is tightened
- The side plate is remounted



11.3.3 Toothed belt for vertical brushes

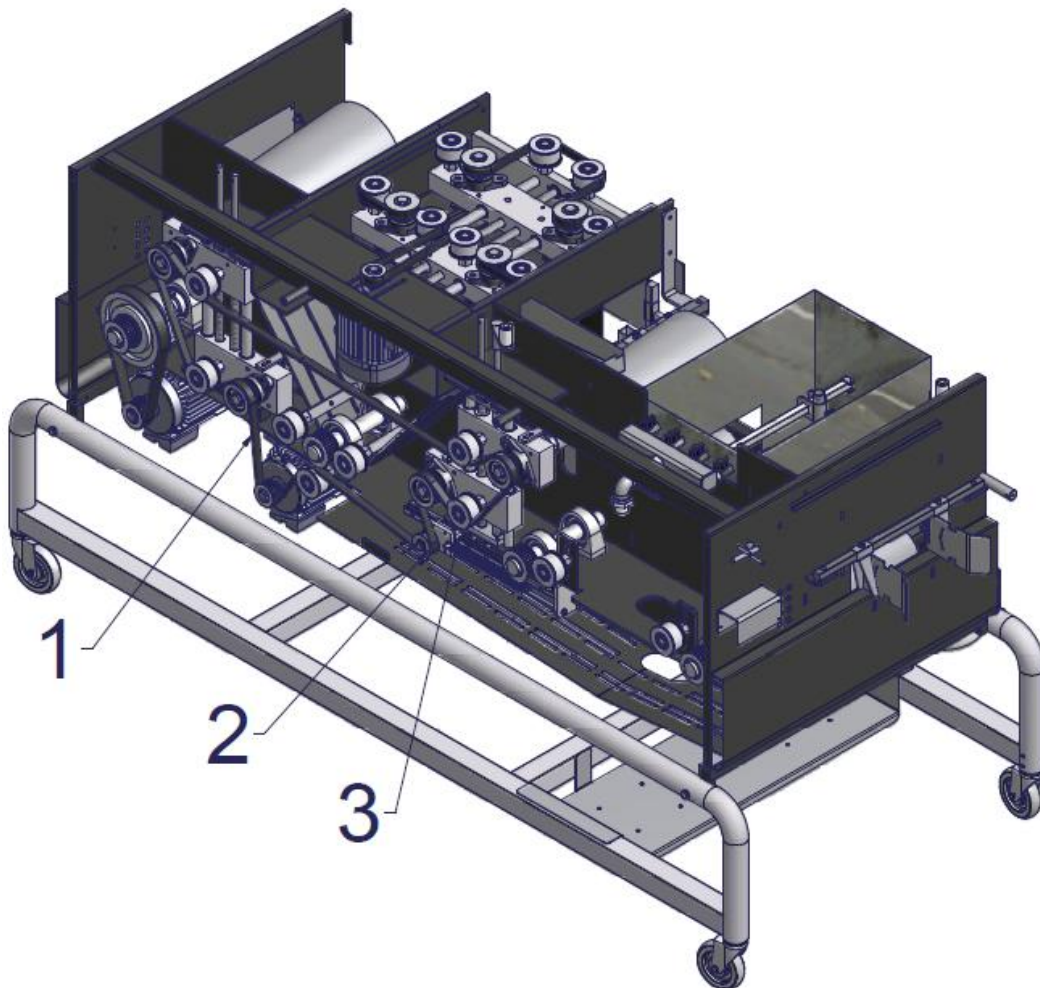
Tensioning of belt for vertical brushes is carried out the following way:

- The fixed lid is dismantled
- 4 bolts on motor (1) are loosened
- Motor is displaced until belt (2) has sufficient tension
- 4 bolts on motor are tightened
- The fixed lid is remounted



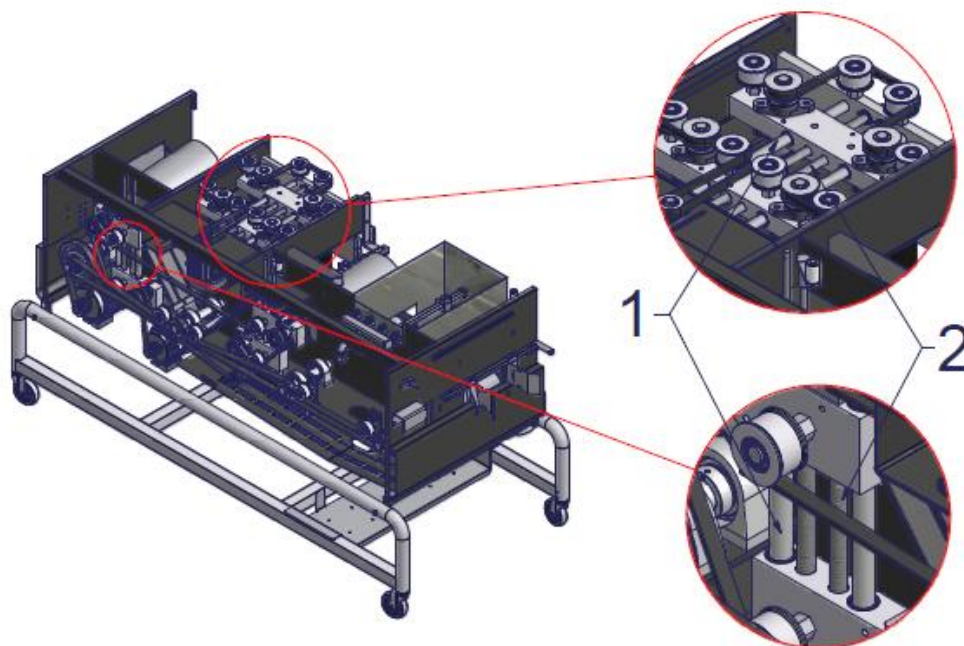
11.3.4 Toothed belt for horizontal brushes

The belt (1) which drives the machine's horizontal brushes is tensioned with a spring system (2) which makes tensioning of the belt unnecessary. However, we recommend checking the belt for wear/breaks regularly and possibly replace it. We also recommend adding grease to the ball cart (3) at least once every 3 months or after 500 operating hours.



11.4 Lubricating guides/spindles for brush arrangements

1. Hardened axles + spherical bushing: 4 on horizontal brush arrangements and 2 on vertical brush arrangements: Lubricate with spray grease every 3 months or after 500 operating hours. We suggest using a spray with grease of the type: NKL Molycote chain grease. Alternatively lubricate with oil.
2. Spindles: 4 on horizontal brush arrangements and 2 on vertical brush arrangements: Lubricate with spray grease every 3 months or after 500 operating hours. We suggest using a spray with grease of the type: NKL Molycote chain grease. Alternatively lubricate with oil.



There is free choice between oil manufacturers. Do not mix synthetic oil and mineral oil. Choice of unmarketable oil may lead to fire, corrosion or insufficient maintenance of the unit with subsequent reduced life.

11.5 Motors, gear and pump

- Motors: The motors must be kept clean and free from dust and paint residue. Any grease, oil or similar products which may bind dust and subsequently reduce the cooling effect must be removed.
The motor must be maintained in accordance with the supplier's directions.
- Gear (pump): (If the machine is equipped with a Ceetec membrane pump) Carry out monthly checks of oil level on gear.
The gear must be maintained in accordance with the supplier's directions.
- Pump: (If the machine is equipped with a different pump than a Ceetec membrane pump) The pump must be maintained in accordance with the subsupplier's directions.

11.6 Hoses

The hoses must be checked for leaks and replaced if necessary.

Troubleshooting

Fault	Possible cause	Remedy
A. Pump/Forward drive/brushes are not starting	The machine is not connected to the power supply	Connect power supply
	Main switch is disconnected	Main switch is set to position 1
	There may be thermal failure	Check frequency converter in electrical cabinet
B. Feed roller and brushes are not rotating/starting	Power supply for motor for forward drive is disconnected	See under "A"
	V-belts/toothed belts are not tensioned enough or damaged	Tension/replace
	Belts are broken	Replace belts
	The feed roller, V-belt/discs are not attached to axle	Tension belts
	Emergency stop is activated and/or lid is open	Deactivate emergency stop and/or close lid(s)
C. No/too little liquid is coming out of the nozzles	Power supply for motor for pump is disconnected	See under "A"
	Nozzle valves are closed	Open nozzle valves
	Dirt in the suction filter	Unscrew filter basket and clean. Possibly clean it with compressed air
	Nozzles are clogged	Flow nozzle and end plug is dismantled and cleaned. The nozzle pipes are cleaned. Check all hoses for dirt. Make sure the hose couplings are tight so the pump does not take in "false" air.
	Spring in overpressure valve is not tensioned enough	Open all nozzle valves. Take overpressure valves out of the container. If a lot of liquid comes out the spring must be tensioned (prolonged)
D. Motor for pump drops out	Motor is overloaded due to clogged overpressure valve	Overpressure valve and hose are cleaned. When assembling the overpressure valve the grey piece must face the valve. Wait app. 10 min. before the motor for the pump is reset.

E. Motor for forward drive drops out	Motor is overloaded due to back-pressure roller and/or guide being set too closely to the item	Adjust the setting. Wait app. 10 min. before the motor for the forward drive is reset.
F. Motor for brushes drops out	Motors are overloaded due to brushes being set too closely to the item	Adjust the setting. Wait app. 10 min. before the motor for the brushes is reset.

12 Replacing spare parts

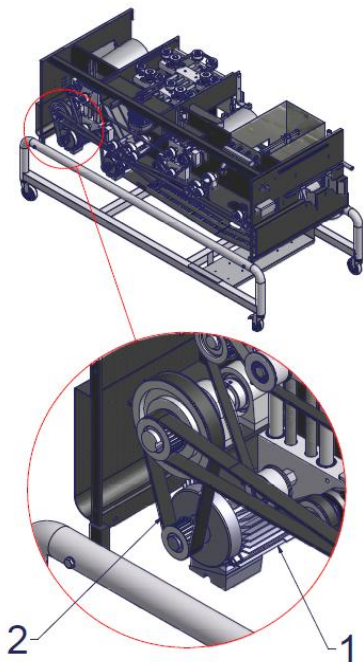
All replaceable parts can be accessed easily when the side plate, shield on the back lid and/or the bottom protection cover is dismantled.

When replacements have been made the assembly must take place in reverse order. DO NOT START the machine until all protective devices are mounted.

12.1 Toothed belt for motor – feed roller

Replacement of belt for motor – feed roller is carried out the following way:

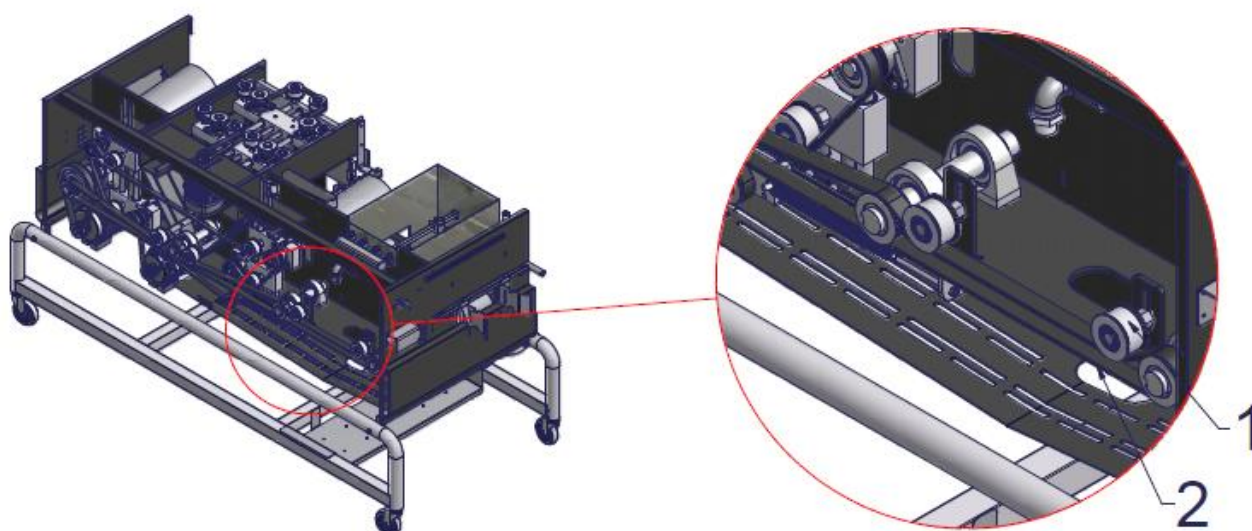
- 4 bolts on motor (1) are loosened
- Motor is displaced (belt is loosened)
- Old belt (2) is dismantled and new belt is mounted
- Motor is displaced (belt is tensioned)
- 4 bolts on motor are tightened



12.2 Toothed belt for forward drive

Replacement of belt for forward drive is carried out the following way:

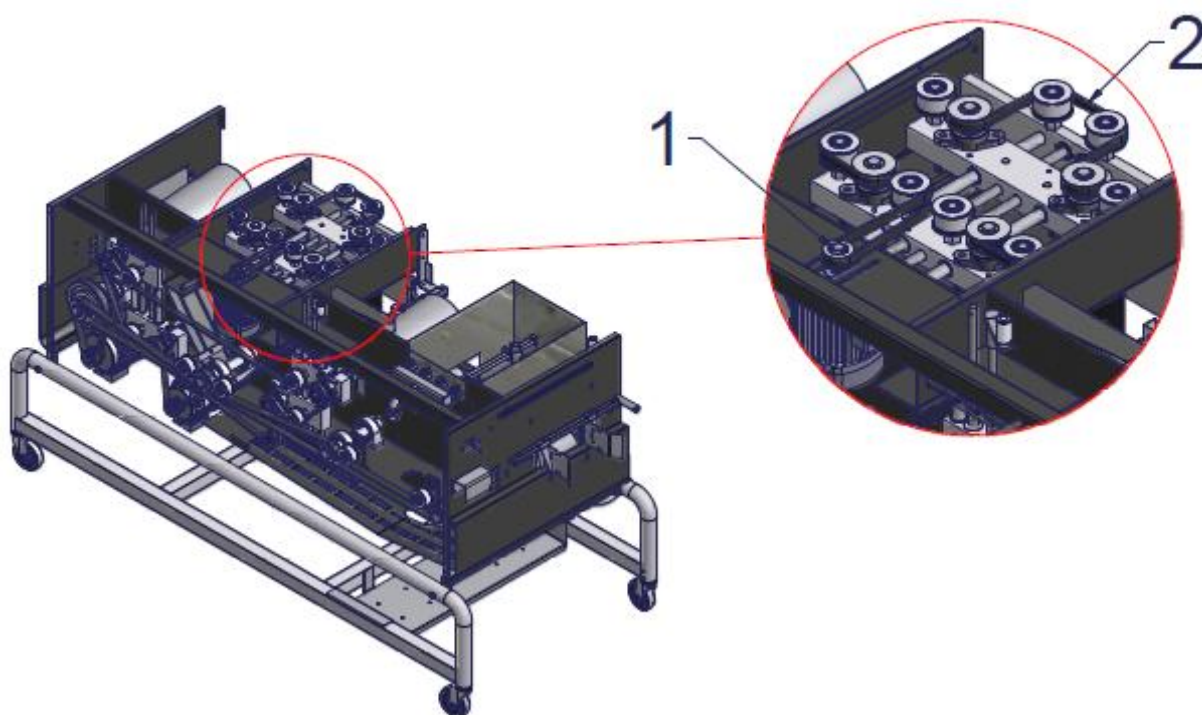
- Bolt on tension pulley (1) is loosened
- The tension pulley is loosened until the belt (2) is loose
- Old belt (2) is dismounted and new belt is mounted
- Tension pulley is tensioned (belt is tensioned)
- Bolt on tension pulley is tightened



12.3 Toothed belt for vertical brushes

Replacement of belt for vertical brushes is carried out the following way:

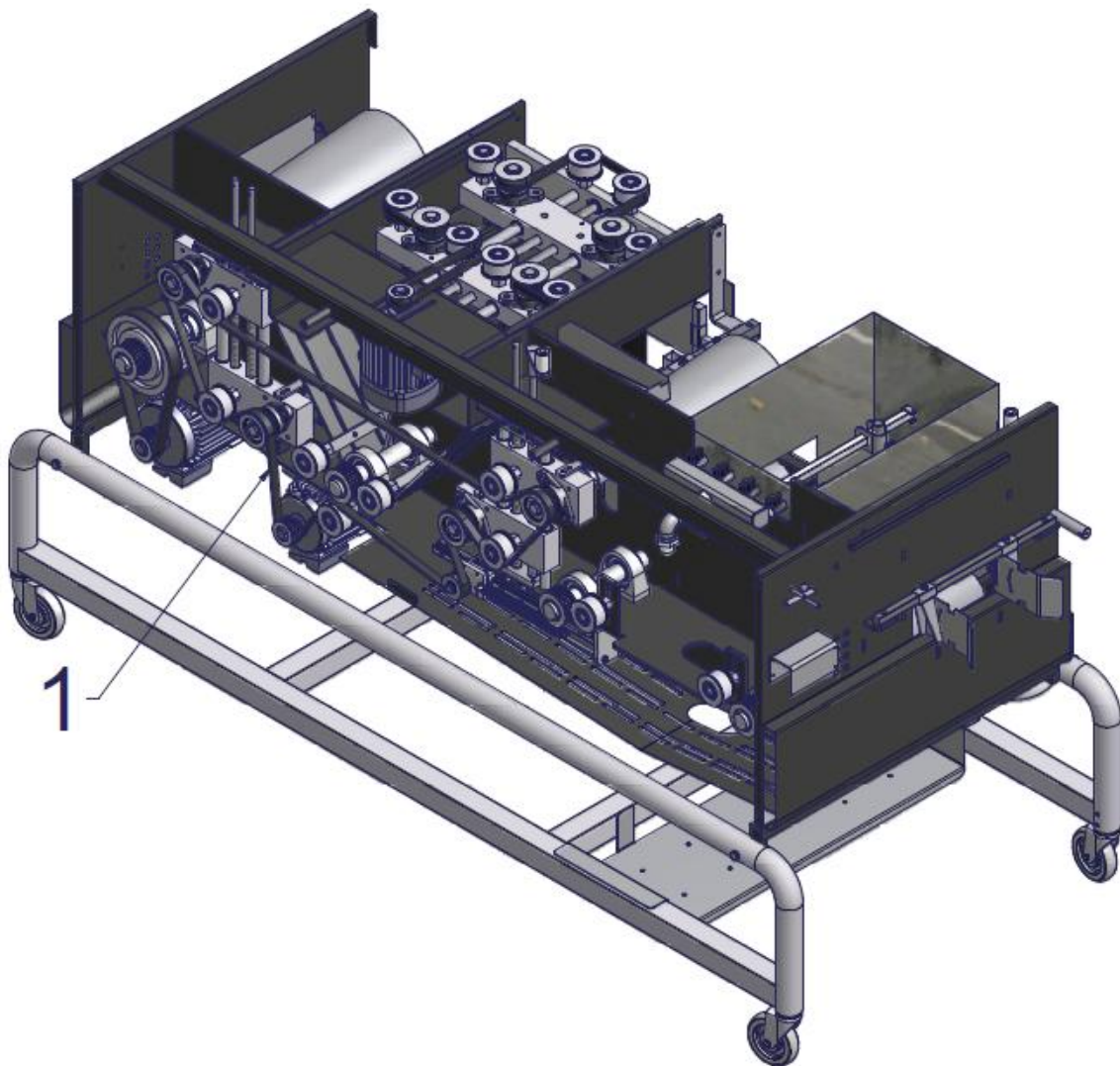
- The fixed lid is dismantled
- 4 bolts on motor (1) are loosened
- Motor is displaced (belt is loosened) and the belt (2) is dismantled
- New belt is mounted
- Motor is displaced (belt is tensioned)
- 4 bolts on motor are tightened
- The fixed lid is mounted



12.4 Toothed belt for horizontal brushes

Replacement of belt for horizontal brushes is carried out the following way:

- Pull off the belt (tensioning of the belt is spring loaded, and thus the belt can be pulled off without loosening tension pulleys or similar)
- Mount new belt and pull it around all belt wheels



13 Spare parts overview

See general views after the list

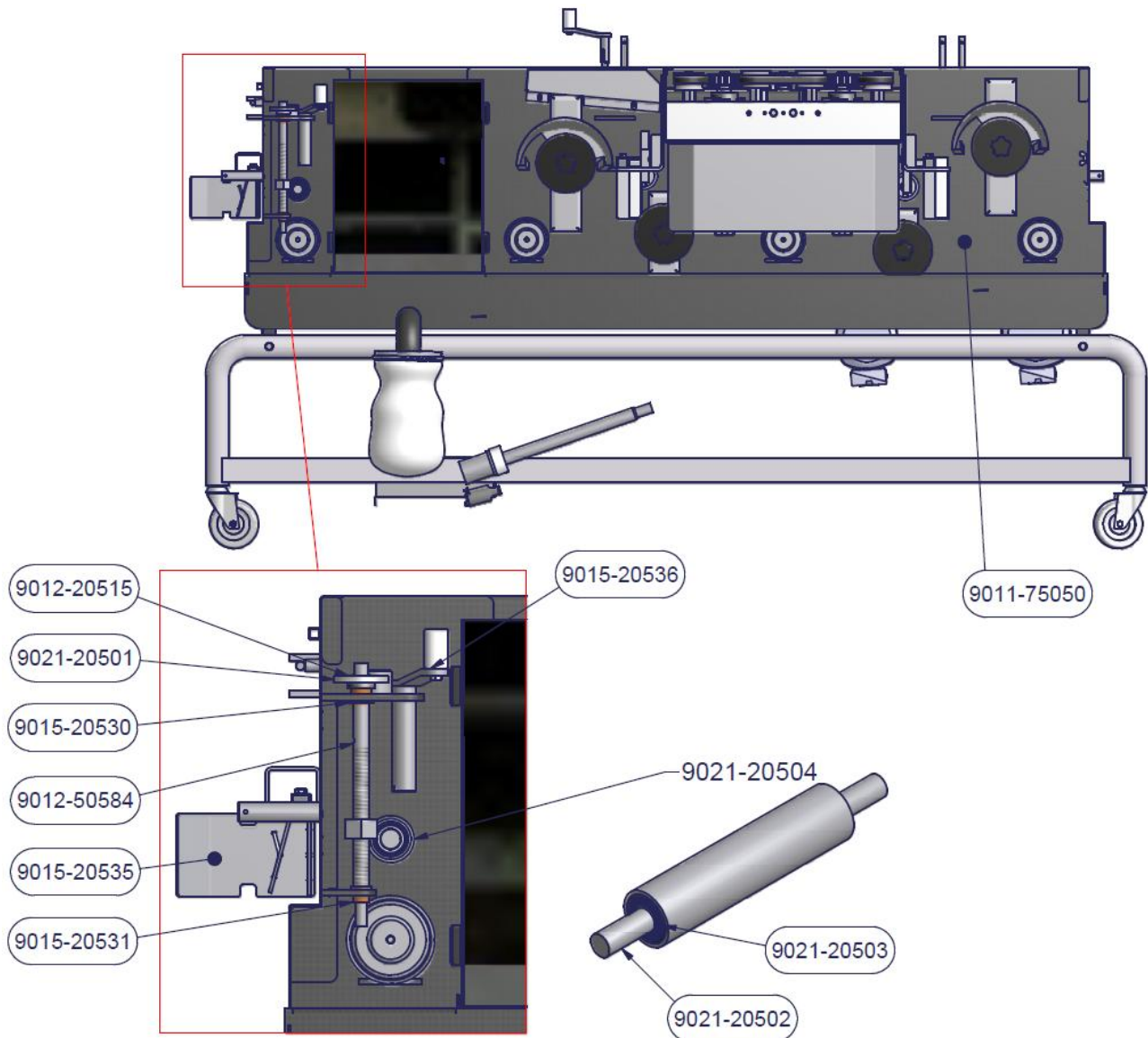
Item no.	Description	Amount/machine	Picture
9021-20500	Ceetec IP250	1	
9015-20535	Intake guide – 1 set	1	A
9012-50584	Spindle for overpressure roller	2	A
9012-20515	Chain wheel for overpressure roller	2	A
9021-20501	Chain for overpressure roller	1	A
9015-20531	Bronze bush for spindle for overpressure roller - bottom	2	A
9015-20530	Bronze bush for spindle for overpressure roller – top	2	A
9021-20502	Axle for overpressure roller	1	A
9021-20503	Bearing for overpressure roller	2	A
9021-20504	Overpressure roller, complete	1	A
9015-20536	Handle for overpressure roller	1	A
9011-20645	Nozzle - 3 mm (std.)	9	B
9011-20642	End sleeve (end plug) for nozzle pipe	4	B
9011-20652	Nozzle pipe, top, complete	1	B
9011-20692	Nozzle pipe, bottom, complete	1	B
9011-20691	Nozzle pipe, vertical, complete	2	B
0450302	Instant coupling, alu – female	4	B
0450011	Instant coupling NV 24 (male)	4	B
9011-20593	Valve for nozzles	4	B
9021-20505	Instant coupling for nozzle box (large) female	1	B
9021-20506	O-ring for large instant coupling on nozzle box	1	B
9021-20507	Nozzle box, complete	1	B

Item no.	Description	Amount/machine	Picture
9011-20567	Brush, 130 mm, nylon	12	C
9011-20600	Screen over brushes	2	C
9021-20508	Screen for groove in side plate – long, complete	2	C
9021-20509	Screen for groove in side plate – short, complete	2	C
9012-20360	Sling disc - Ø25 without pin	4	C
9011-20454	Simmer ring for brush axle	4	C
9011-20662	Star handle for brushes	8	C
9021-20510	Middle guide - 1 set	2	C
9021-20511	Overpressure wheel, complete incl. suspension	2	C
9021-20512	Brush screen for vertical brushes	1	C
9011-20660	Screen at outlet	1	C
9021-20513	Gas cylinder for lid	1	C
9021-20514	Handle for lid + side plate	4	C
9021-20515	Motor for vertical brushes	1	D
9021-20516	Toothed belt disc for vertical brush motor	1	D
9021-20517	Toothed belt disc for brush axles	8	D
9021-20518	Flanged bearing for brush axles	16	D
9021-20519	Brush axle, vertical	4	D
9021-20520	Reversing wheel for toothed belt, complete	17	D
9011-20553	Ball bearing for reversing wheel	34	D
9021-20521	Spherical bushing for brush arrangement	24	D
9021-20522	Trapezoidal nut for brush arrangement	6	D

Item no.	Description	Amount/machine	Picture
9021-20523	Brush arrangement, vertical, right, complete	1	D
9021-20524	Brush arrangement, vertical, left, complete	1	D
9021-20525	Toothed belt for vertical brushes	1	D
9021-20526	Hardened axle for vertical brush arrangement	2	E
9021-20527	Trapezoidal spindle for vertical brush arrangement	2	E
9021-20528	Ball bearing for trapezoidal spindle for brush arrangement	12	D/E
9021-20529	Housing for ball bearings for trapezoidal spindle for brush arrangement.	5	D
9021-20530	Sealing lip for vertical brush axle (1 pcs. of 450 mm)	4	D
9021-20531	Motor for horizontal brushes	1	E
9021-20532	Toothed belt disc for horizontal brush motor	1	E
9021-20517	Toothed belt disc for brush axles	8	D/E
9021-20518	Flanged bearing for brush axles	16	D/E
9021-20533	Brush axle, horizontal	1	E
9021-20520	Reversing wheel for toothed belt, complete	17	D/E
9011-20553	Ball bearing for reversing wheel	34	E
9021-20521	Spherical bushing for brush arrangement	24	D/E
9021-20522	Trapezoidal nut for brush arrangement	6	D/E
9021-20534	Brush arrangement, horizontal, complete	4	E
9021-20535	Toothed belt for horizontal brushes	1	E
9021-20536	Hardened axle for horizontal brush arrangement	4	E
9021-20537	Trapezoidal spindle for horizontal brush arrangement	4	E
9021-20528	Ball bearing for trapezoidal spindle for brush arrangement	12	D/E
9021-20529	Housing for ball bearings for trapezoidal spindle for brush arrangement.	5	D/E
9011-20541	Tension pulley for toothed belt for horizontal brushes	1	E

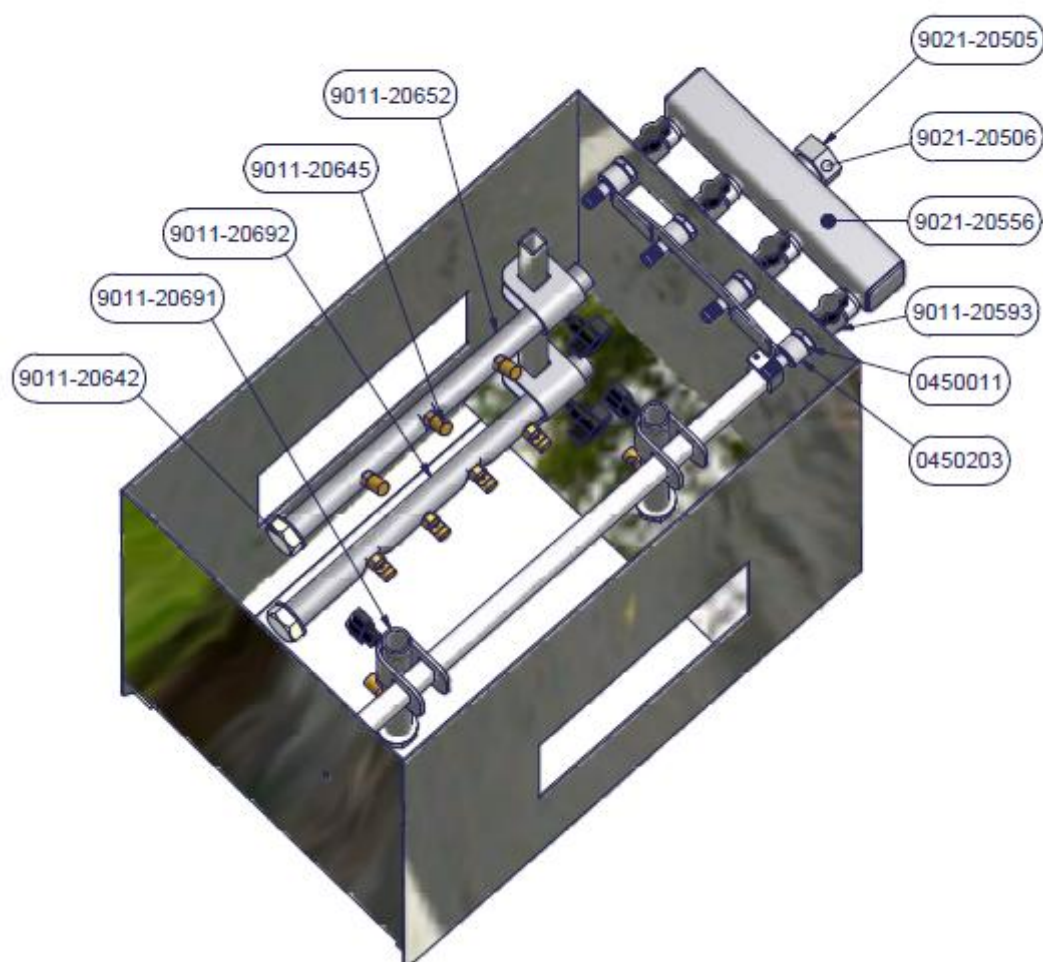
Item no.	Description	Amount/machine	Picture
9011-20552	Ball bearing for tension pulley for horizontal brushes	2	E
9021-20538	Ball cart for tension pulley	1	E
9021-20539	Ball rail for tension pulley	1	E
9011-20597	Spring for tension pulley		E
9021-20540	Motor for forward drive	1	E
9021-20541	Toothed belt disc for forward drive motor	1	E
9021-20542	Toothed belt disc for feed roller no. 4 (gearing)	1	E
9021-20543	Toothed belt for motor – feed roller no. 4	1	E
9021-20544	Toothed belt for feed rollers	4	E
9021-20545	Steel bearing for feed rollers	8	E
9021-20546	Axle for feed roller	4	E
9021-20547	Feed roller	4	E
9021-20548	Feed roller, complete	4	E
9021-20549	Toothed belt for forward drive	1	E
9021-20550	Wheel for frame	4	E
9021-20551	Lock for detachable side plate	3	C
9021-20552	Handle for adjustment of brushes	1	C/E
9021-20553	Ball valve (large) for nozzle box	1	E
9021-20554	Instant coupling (large) for nozzle box, male	1	E
9011-20590	Suction filter, complete	1	C
9011-20542	Overpressure valve, complete	1	C
9011-20517	Filter bag, 600 my (std.)	1	C
9021-20555	Belt set IP250, complete	1	
9021-20556	Distributor chamber IP250, complete	1	B
9011-75050	Teflon foil for box (1 meter)		A
9012-50592	Adapter head for filter 2"	1	C
9021-20557	Sling disc for forward drive axle	4	E
9021-20558	Simmer ring for forward drive axle	4	E

Spare parts image A

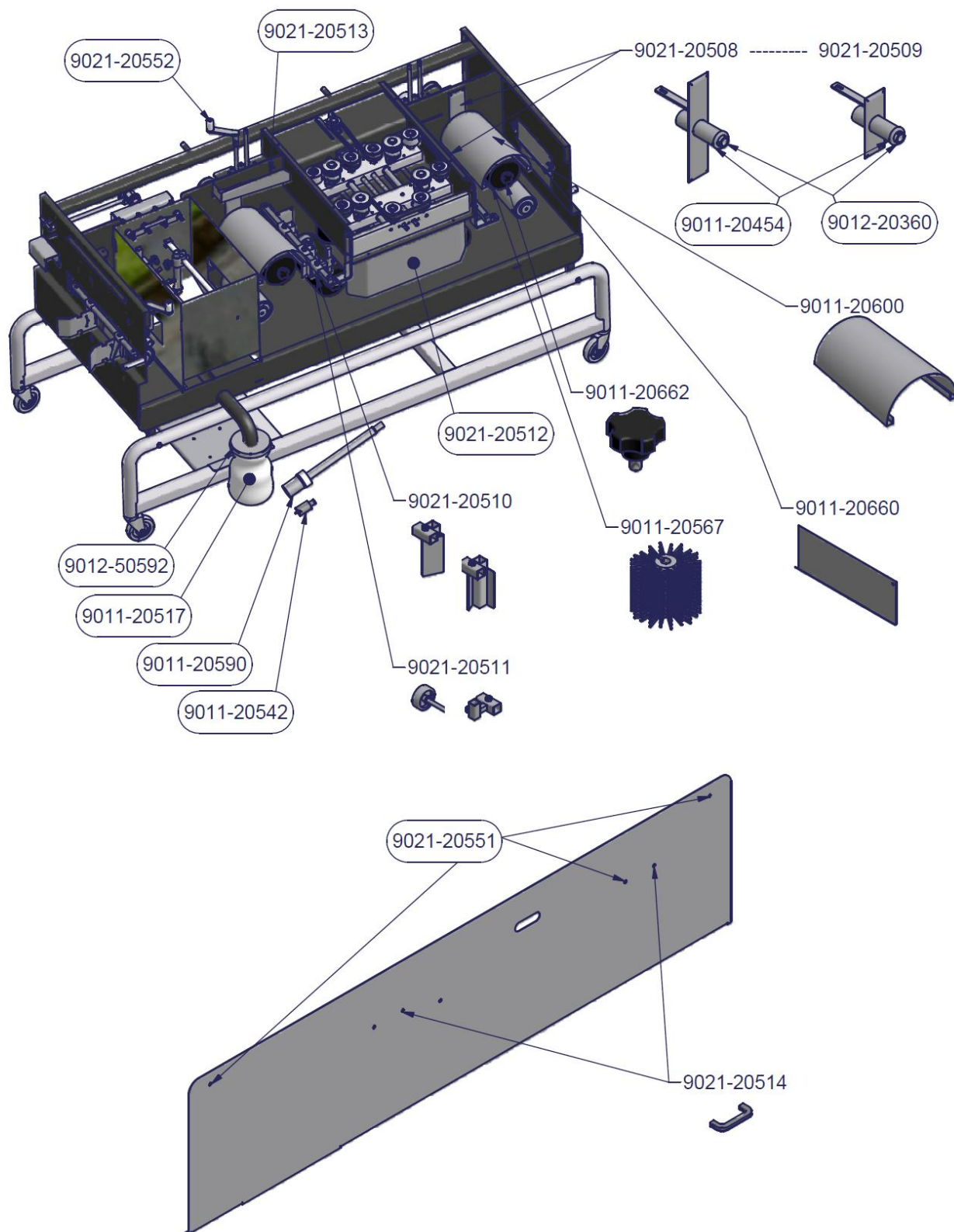


Spare parts image B

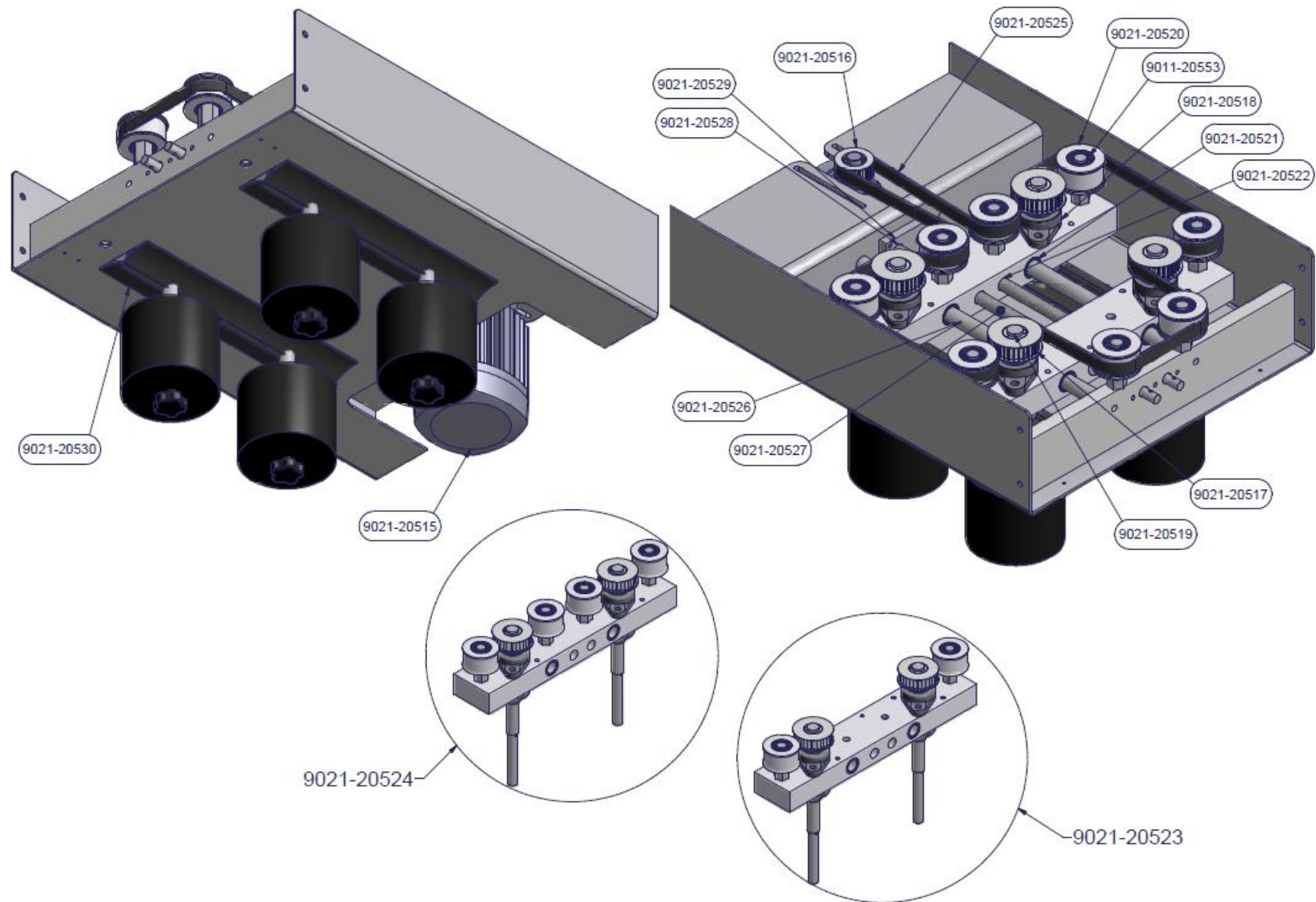
9021-20507



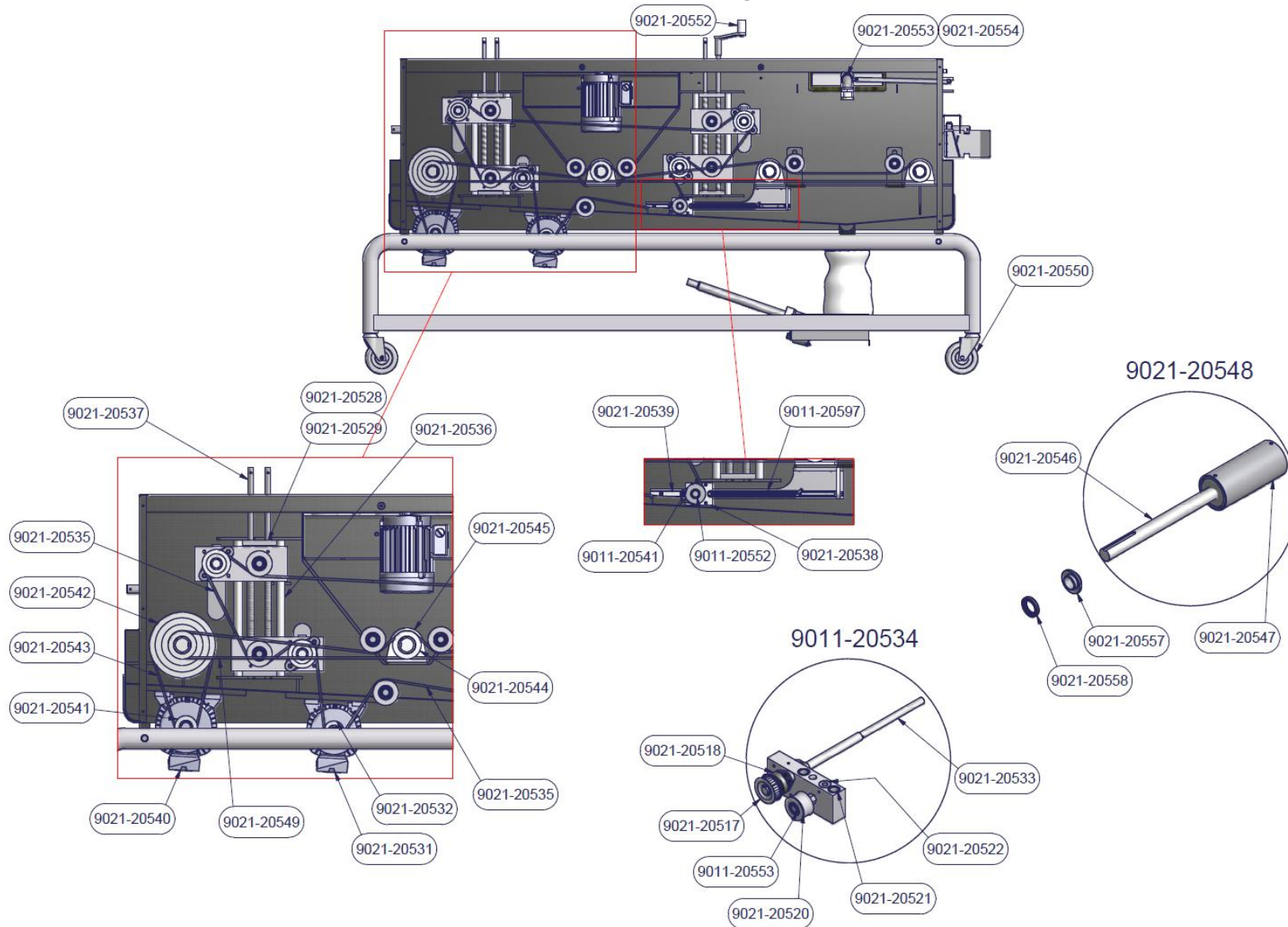
Spare parts image C



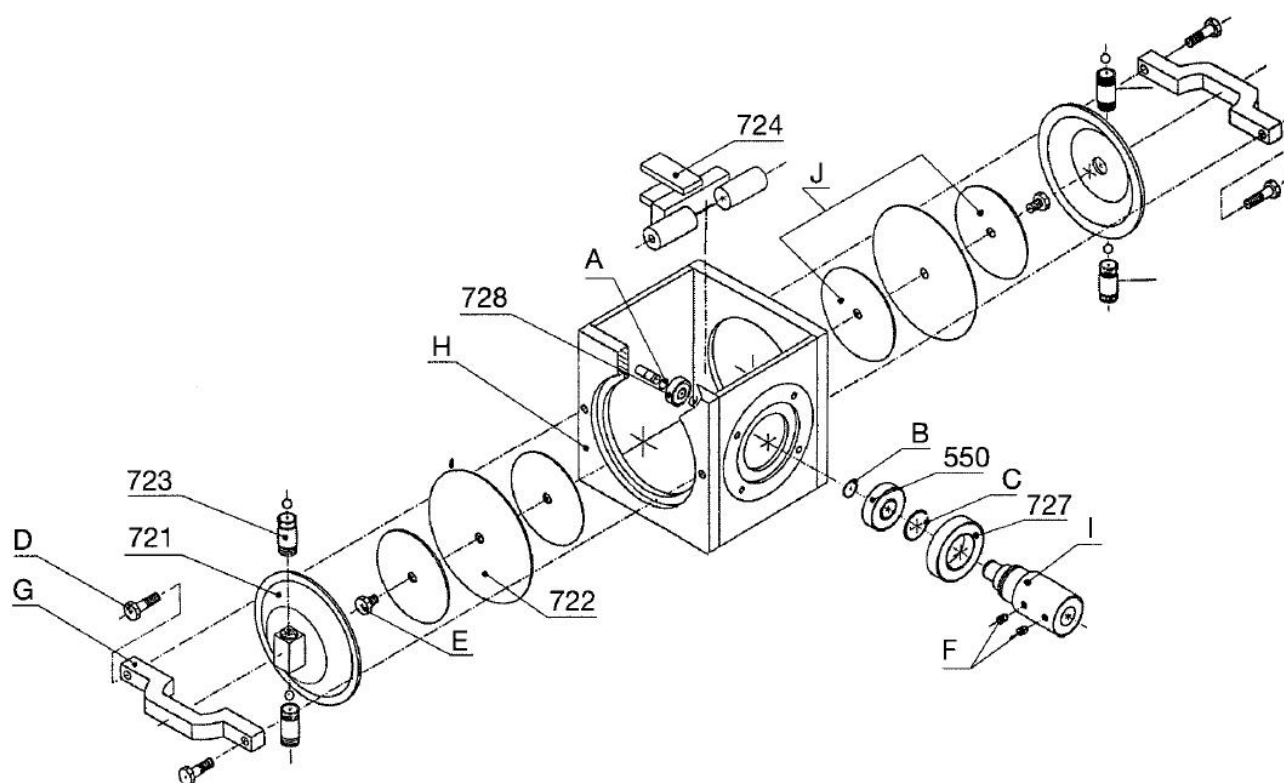
Spare parts image D



Spare parts image E



Spare parts image pump



Pos. No.	Amount per machine	Designation
9011-20720	1	Membrane pump, complete, with motor
9011-20721	2	Pump lid with non-return valve
9011-20722	2	Membrane set
9011-20723	4	Non-return valve, stainless
9011-20724	1	Pump rod/slider with pressure plates
9011-20727	1	Support bearing 6008
9011-20728	1	Guide bearing
9011-20550	1	Ball bearing for pump
9011-20563	1	Motor for pump

14 EC Declaration of conformity

The CE declaration of conformity for the machine is enclosed as an appendix.