



# Users guide

-----

## Ceetec<sup>®</sup> IS-250



---

## CONTENTS

<b>1. Introduction .....</b>	<b>3</b>
<b>2. Safety instructions .....</b>	<b>4</b>
2.1 Use of machine.....	4
2.2 Ventilation.....	4
2.3 Risks during use .....	4
2.4 Moving the machine.....	4
<b>3. Technical Specifications.....</b>	<b>6</b>
<b>4. Preparing the machine for use .....</b>	<b>7</b>
<b>5. Adjusting the machine .....</b>	<b>8</b>
5.1 The lid on the machine is opened.....	8
5.2 Feeder guide and the guide in the middle of the machine.....	8
5.3 Sanding heads, brushes and screens/shields.....	8
5.4 Forward drive .....	9
5.5 Test run and flow rate .....	9
5.6 Opening the lid.....	10
5.7 Reversing of circulation direction on the sanding heads.....	10
<b>6. Cleaning.....</b>	<b>11</b>
<b>7. Maintenance.....</b>	<b>12</b>
7.1 V-belts, chains and toothed belts. ....	12
7.2 Greasing .....	12
<b>8. Replacing spare parts.....</b>	<b>13</b>
8.1 Motor v-belt – intermediate shaft I .....	13
8.2 V-belt – vertical brushes .....	13
8.3 V-belt for forward drive engine – intermediate shaft I .....	14
8.4 Toothed belt for horizontal brushes (9015-20510, picture C).....	14
8.5 Toothed belt for forward drive (9015-20525, picture C) .....	14
8.6 Changing of sanding strips (with use of Flextrim sanding heads).....	14
<b>9. Trouble shooting.....</b>	<b>15</b>
<b>10. Spare parts list.....</b>	<b>16</b>
<b>11. Accessories .....</b>	<b>18</b>
<b>12. Production address.....</b>	<b>18</b>
<b>13. Spare-parts overview .....</b>	<b>19</b>



## 1. Introduction

The Ceetec Sandingmachine IS-250 is built to effective sanding of wood like profiles, lists, panels, etc.

The machine is equipped with sanding heads, where one of the advantages, among others is the modular sanding heads, there can be combined in countless ways. Furthermore a replacement of polish can be done without demounting the axles and heads.

The planks will be led all the way through the machine by the automatically forward drive system and the speed can be step less regulated by a frequency changer. Furthermore it is possible to individually adjust the conveying speed, and the sanding heads speed, which gives a perfect result.

The machine is developed by the same concept as our Paintingmachine line, where the keywords are flexibility, efficient and simplicity.

If you wish to both sand and paint, it will be to your advantage to mount a Ceetec IS-250 in front of the Ceetec A-250, and thereby both processes will be done in the same workflow.



## 2. Safety instructions

### Important:

The following safety instructions must be adhered to for reasons of personal safety.

All users must be familiar with these user instructions. Read thoroughly before use to know the machine functions entirely.

**BEFORE** the machine is used, the safety guard delivered with the machine must be mounted in the inlet. See pictures. Affix the safety guard with the bolts supplied. Failure to mount the safety guard or the removal during operation may result in personal injury.



Mount the safety guards in the inlet and outlet.



### 2.1 Use of machine

The machine is only to be used for sanding wood and composites material. The machine is not suitable for sanding metal objects.

### 2.2 Ventilation

Always make sure that relevant ventilation is attached to pipes in lid and bottom of the machine. Misuse can lead to airway genes.

### 2.3 Risks during use

Keep hands, etc., away from the machine inlet when the machine is running to avoid the risk of crushing.

The noise level of the machine during normal use is not over 70 dB. Therefore earplugs are not required during normal use.

Please note that the wood is forwarded in high speed, and thereby can cause personal injury on the operator that receives the polished wood.

If a Ceetec Paintingmachine is mounted in extension of the Sandingmachine, they have to be combined by Ceetec roller conveyors. If this is not respected, there is a risk of the wood colliding on its way into the Paintingmachine, and thereby pushes the sanding machine back, with danger of personal injury.

### 2.4 Moving the machine

The machine can be moved around on the mounted rubber-wheels or by forklift. Before moving the machine all cables and ventilation has to be demounted.



---

When moving by forklift: Be aware that the forklift lifts under the contrived lifting marks.

When moving manually: Be aware that all needless gear has been taken out of the machine, and the machine is in good balance. Never try moving the machine manually on hilly ground.



### 3. Technical Specifications

Type:	IS-250
Dimensions:	L: 1600 mm B: 1060 mm H: 1200 mm
Product number:	IS250x100
Motor, power connection Wattage, forward drive Wattage, brushes/sanding head	3x380 V + IP classification: 54 0.75 kW 0.75kW
Forward drive speed:	Approx. 1-60 m/min
Weight:	Approx. 250kg
Max. item dimensions:	Breadth: 250mm x Height: 100mm (Type IS250x100) Depending on set up, sanding head diameter.
Min. item length	1200 mm - with the special short piece guide for short pieces approx. 200 mm, however the machine has to be equipped with driving rollers.
Sanding heads	Standard Flextrim, ore any other liking fabrics.



## 4. Preparing the machine for use

Place the machine on a flat, firm surface. Lower the four support legs so that the machine stands stable.

The control panel can be placed under the machine during transportation to protect it from impact. The control panel is mounted on the side of the machine using 4 screws.

The machine must NOT be used before the safety tunnels are mounted. The safety tunnels are placed under the machine during transport to protect them. Mount the tunnels at each end of the machine, using 4 screws on each tunnel. If it is not mounted or demounted during use, personal injury can occur.



Mount the safety guards in the inlet and outlet.



The machine is attached to the power station following the local regulations. If it turns out to be necessary changing the plug, the directions from the supplier must be followed. This job is only to be done by a competent electrical specialist.

**OBS! Please note that the machine needs 3 x 380 V and 0.**

### Emergency stop

Normally a person on each end operates the machine. In case of accident either by the inlet or in danger of getting hit or getting caught by wood on its way in or out of the machine, you can prevent this by activating the emergency stops, which are placed by the operator on both ends.

When an emergency stop is activated the forward drive is stopped.

After activating the emergency stop, the machine can only be restarted by unlocking the emergency stop and activating the start button again. NB: Before starting the machine again make sure that the incident has come to an end, and that the reason for activating the emergency stop is known.

### Stop

During normal use, the machine is stopped by the buttons "FREMTRÆK/PULL" and "BØRSTER/SANDING" put in "0" position.

This function is normally used with stop with beaks, change of dimensions etc.

When the machine is stopped, in order to be moved, repaired e.g. the main switch on the control panel must be turned to position "0". (Power is off.)



## 5. Adjusting the machine

The main switch on the control panel must be in position "O". (The machine is disconnected from all power.)

**NB: During the process, you have to take notice of scarp edges in the machine, which may cause personal injury.**

### 5.1 The lid on the machine is opened

Set the feeder guide, guide, backpressure roller and brushes to the outer position. Feed the item into the machine.

### 5.2 Feeder guide and the guide in the middle of the machine

The feeder guides (pos 9015-20535, picture B/C) guides the item sideways and the roller in front of the machine guides the item horizontally. Adjust the guides by loosening the wing screws and moving them towards the item. There must be a 2-3 mm gap on both sides.

### 5.3 Sanding heads, brushes and screens/shields

The rotating sanding heads (horizontally and vertical) is adjusted so the wanted sanding effect is achieved. The brush pressure is individually and depends of the treatment and the items profile. Ask if necessary your sanding supplier for guidance.

The brushing (pos 9011-20567, picture A) is adjusted with the needed pressure, so dust will be removed and collected in the brush shield (pos 9015-20538, picture D). Also here the brushing pressure is individually. The brushing is produced in durable nylon.

The brushes can be mounted and demounted with a single grip. (See picture E)

The sanding heads can be mounted and demounted by loosen the 3 stopscrews and pull the lock washer of. (See picture F and G)

The adjustment of the horizontally sanding heads and brushes is done by leading the pole into the square pipe on the brush module. (See picture H)

The adjustment of the vertical sanding heads is done by leading the square pipe, plus the pole down over the square pipe on the sanding head module. (See picture I)





## 5.4 Forward drive

The forward drive propels the item through the machine. Adjust the backpressure roller by turning the spindle using the handle. (See picture J)

Turning clockwise: the backpressure roller is moved upwards

Turning anti-clockwise: the backpressure roller is moved downwards

Bring the backpressure roller into contact with the item and tighten up approx. 1 turn, depending on how hard the item is.

## 5.5 Test run and flow rate

1) Pull the item out.

Position the main switch on the control panel to "I" (power is connected). (See picture K)

2) Aktiver knappen "Børster/Sanding" og hovederne begynder at rotere. Indstil den ønskede hastighed på knap (See picture K)

3) Activate the button "Fremtræk/Pull" and adjust the forward drive to the desired speed with the adjusting knob. (See picture K)

Feed the item into the inlet and check that the forward drive is running evenly.

If forward drive is not running evenly, adjust the backpressure roller. (See picture J)

The item can stop moving, if it hits the feeder guide, guide or brushes. In that case they should be re-adjusted.

If the wood bends a lot, a problem can occur in the passage, because the wood will get stuck between brush heads and guide. Therefore the wood has to be as plain as possible.

Test-drive with the same item 2-3 times. This is to make sure, that the machine is adjusted correctly. Then make a test with a new item. If the result is satisfying, the machine is ready to use. Afterwards the running is normal, however it is a good idea to check an item from time to time.



## 5.6 Opening the lid

NOTE THAT THE MACHINE, FOR SAFETY REASONS STOPS, WHEN YOU OPEN THE LID.

Attention: The lid on the forward drive and brushes is hinged and can be opened. The lid is connected to a switch, which stops the forward drive, if the lid is open.

To start the forward drive the lid must be closed. If the lid is opened while the machine is activated the forward drive stops immediately. To restart the machine the lid must be closed and a new start command must be given on the start button.

## 5.7 Reversing of circulation direction on the sanding heads

To obtain the wanted sanding result, the circulation direction on the 2<sup>nd</sup> horizontally sanding can be reversed (the sanding head is attached to the arrangement with pos. 9015-20522, spare part picture A)

As standard, the machine is configured to both horizontal sanding heads running *against* the item's travelling direction.

The circulation direction can only be reversed by the before mentioned horizontal sanding head. Thus can the circulation direction not be changed on any on the vertical sanding heads.

Procedure for changing the circulation direction (when configured to running against the wood):

Before the replacement can begin, the main switch must be turned to position "0" and the plug removed.

1. Demount the sideplate, so access to the machines transmissions elements is achieved (spare part picture C)
2. The tightenwheel is loosen from pos. A (see picture N). The toothed belt (pos. 9015-20525) is demounted and placed in the opposite direction around the pulley (see picture Q). The tighten roll is then mounted again in pos. B (see picture P) and the belt is tighten.

### Picture O

Standard belt mounting. Belt tightener in pos A.

This mounting gives the following result:

Vertical sanding heads: running against the item

1. horizontal sanding head: running against the item
2. horizontal sanding head: running against the item

Brushing device: running against the item

### Picture Q

Reversed belt mounting. Belt tightener in pos B.

This mounting gives the following results:

Vertical sanding heads: running against the item

1. horizontal sanding head: running against the item
2. horizontal sanding head: running **with** the item

Brushing device: running against the item

Check and adjust if necessary the belt after approx. 20 hours of operation.



---

## **6. Cleaning**

The machine should be cleaned as needed. Dust is removed by a vacuum cleaner.

Make sure that all suction tubes, always is free and in function.



## 7. Maintenance

Switch the main switch to "0" and unplug before commencing maintenance work.

All adjustable mechanical parts are easily accessed, by removing the side panel and/or the lower protective caps.

When the adjustments are done, assembling is done in reverse order. Do NOT start the machine before all safety guards are put back into place.

### 7.1 V-belts, chains and toothed belts.

Tighten the v-belts, toothed belts and chains after approx. 14 days of use (excluding those in the brush arrangements, if the machine is made with long arrangements).

The v-belts and toothed belts are supplied with tension rollers and must be checked at least once a year or after 1700 hours of operation.

### 7.2 Greasing

All grease nipples on the side of the machine and the brush arrangements must be regularly greased with a grease gun.



## 8. Replacing spare parts

Switch the main switch to "0" and unplug, before replacing any parts.

Removing the side panel, shield on the rear and/or the removing the lower protection cap can easily access all replaceable parts.

When the adjustments are done, assembling is done in reverse order. Do NOT start the machine before all safety guards are put back into place.

### 8.1 Motor v-belt – intermediate shaft I

The motor (pos. 9015-20528, picture B) is loosened and shifted. Then the v-belt can be removed (pos 9015-20505, picture B) by loosening the intermediate shaft. (pos. 9015-20502)

When the new belt is mounted, the procedure is done backwards to tighten the belt correctly.

Check and adjust if necessary the belt after approx. 20 hours of drift.

### 8.2 V-belt – vertical brushes

Repeat the procedure from the part " Motor v-belt – intermediate shaft I"

Then loosen the 2 standing bearings (pos. 9015-20509) and remove the belts from the pulley on the intermediate shaft (Pos. 9015-20506) That loosens the v-belts. Then follow one of the two possible procedures:

1. Loosen the 2 standing bearings (pos. 9015-20509) from the intermediate shaft (pos. 9015-20502) and pull the v-belt beyond the end of the intermediate shaft.

2. As an alternative the standing bearings (pos. 9015-20509) and the intermediate shaft (pos. 9015-20502) can be pulled of as one unit (you don't separate the bearing and the intermediate shaft) and the v-belt is pulled over both the intermediate shaft and the standing bearing (9015-20502 and 9015-20509)

When the new belts are mounted, the procedure is done backwards to tighten the belts correctly.

Check and adjust if necessary the belts after approx. 20 hours of drift.



### 8.3 V-belt for forward drive engine – intermediate shaft I

The motor (pos. 9015-20528) is loosened and shifted. Then the v-belt (pos 9015-20519) can be removed, by loosen the intermediate shaft (pos. 9015-20504)

When the new belt is mounted, the procedure is done backwards to tighten the belt correctly.

Check and adjust if necessary the belt after approx. 20 hours of drift.

### 8.4 Toothed belt for horizontal brushes (9015-20510, picture C)

The tightenwheel (pos. 9015-20514) is loosen and rotated so the belt become slack. The belt is demounted.

When the new belt is mounted, the procedure is done backwards to tighten the belt correctly.

Check and adjust if necessary the belt after approx. 20 hours of drift.

### 8.5 Toothed belt for forward drive (9015-20525, picture C)

The tightenwheel (pos. 9015-20526) is loosen and rotated so the belt become slack. The belt is demounted.

When the new belt is mounted, the procedure is done backwards to tighten the belt correctly.

Check and adjust if necessary the belt after approx. 20 hours of drift.

### 8.6 Changing of sanding strips (with use of Flextrim sanding heads)

In need of replacement of the sanding strips, you do not have to demount the entire sanding head. You just loosen the rubber packing around the lock washer, and pull the strips out. (See picture L and M)



## 9. Trouble shooting

Fault	Possible cause	Action
A. Pumps/forward drive/brushes will not start	<p>The machine is not connected to the power source</p> <p>The main switch is turned off</p> <p>There has been a thermal cut-out</p>	<p>Connect the power</p> <p>Switch the main switch to position "I"</p> <p>Check the frequency converter in the electrics cabinet</p>
B. Forward drive roller and brushes are not rotating	<p>The power supply to the motor for the forward drive is interrupted</p> <p>The V-belts/toothed belts are too loose or damaged</p> <p>A belt is broken</p> <p>The forward drive roller, V-belt/pulley is not fastened to the axel</p>	<p>See "A"</p> <p>Tighten/replace the belt (-s)</p> <p>Replace the belts</p> <p>Fasten them to the axel</p>
C. The motor for forward drive/brushes cuts out	<p>The motor is overloaded; there can be defective parts in the transmission, or another blocking in the machine.</p>	<p>Check if all visible machine parts can spin free. If not, repair if possible. Open the electrics cabinet and reset the motor protecting switch. Wait 10 min. and then start the machine.</p>



## 10. Spare parts list

Number guide:

The last 3 numbers refer to the item numbers on the detail pictures placed in the back of this manual.

E.g. v-belt pulley 9015-20501 = pos 501)

Item number	Description	Pieces/machine	Picture
9011-20567	1/1 Module brush	2	A
9011-20591	Sealing ring for sandingheads	5	A
9011-20595	Grip for setting of brushes	1	A
9012-50584	Thread spindle for backpressure roller	4	A
9015-20501	V-belt pulley for sanding engine with taperlock	1	B/C
9015-20502	Middleshaft for sandingheads	1	B
9015-20503	V-belt pulley for middleshaft for sandingheads	1	B
9015-20504	Middleshaft for forward drive	1	B
9015-20505	V-belt sanding engine-middle shaft	1	B
9015-20506	V-belt pulley for middleshaft for sanding heads	2	B
9015-20507	Backpressure roller without shaft	2	A
9015-20508	V-belt middle shaft-device	2	B
9015-20509	Bearing for middleshafts	4	B
9015-20510	Toothbelt pulley for middleshaft for sandingheads	1	C
9015-20511	Shaft for back pressure roller	2	A
9015-20512	Toothed belt for sanding heads	1	C
9015-20513	Toothbelt pulley for sanding devices	3	C
9015-20514	Belt tightener for sandingheads, without mounting plate	1	C
9015-20515	V-belt pulley for forward drive engine	1	B/C
9015-20516	Shaft for forward roller	2	A
9015-20517	V-belt pulley for middleshaft for forward drive	1	B
9015-20518	Shaft for sanding device, bottom	2	A
9015-20519	V-belt engine-middle shaft	1	B
9015-20520	Sanding device, bottom, left	1	A
9015-20521	Toothbelt pulley for middleshaft for forward drive	1	C
9015-20522	Sanding device, horisontal, complete	2	A





Itemnumber	Description	Pieces/machine	Picture
9015-20523	Toothbelt pulley for forward drive	2	C
9015-20524	Brushing device	1	A
9015-20525	Toothed belt for forward drive	1	C
9015-20526	Belt tightener for forward drive	1	C
9015-20527	Rollers (free) in machine	4	A
9015-20528	Engine for forward drive and sanding	2	B
9015-20529	Bearing for forward rollers	4	A
9015-20530	Shaft for brushing device	1	A
9015-20532	Sanding device, bottom, right	1	A
9015-20533	Forward drive roller (without shaft)	2	A
9015-20534	Shaft for horisontal sanding device	2	A
9015-20535	Guides for inlet	1	B/C
9015-20536	Handle for backpressure roller	1	A
9015-20537	Polycarbonateplate for lid	1	D
9015-20538	Air-box for lid	1	D



## 11. Accessories

The following accessories are available for the Ceetec Industrial (250)

9011-20503	1 set	1 set of conveyers á 2 m	
9015-20556	1 set	Guide for short blanks	
Sanding heads		Various sanding heads	

## 12. Production address

Nr. Aaby Maskinfabrik A/S  
Ceetec  
Industrivej 7  
5580 Nr. Aaby  
Danmark

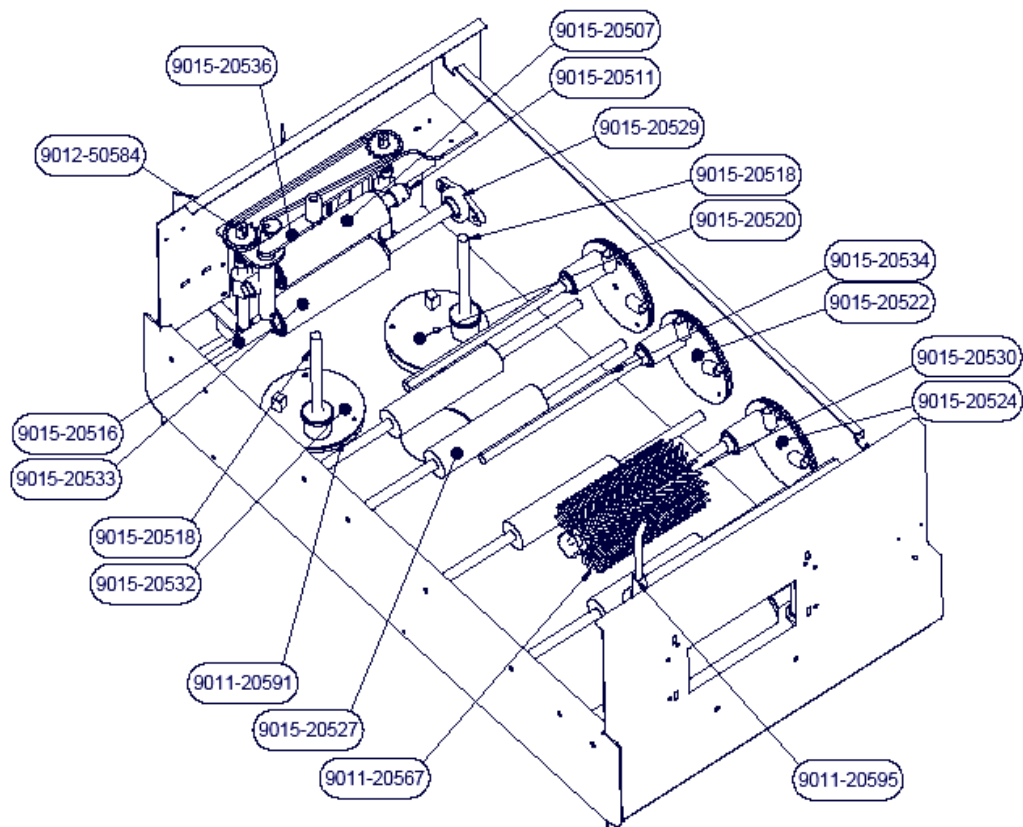
Phone +45 6442 1473  
Fax +45 6442 1472



### 13. Spare-parts overview

Picture A: The machine seen from above

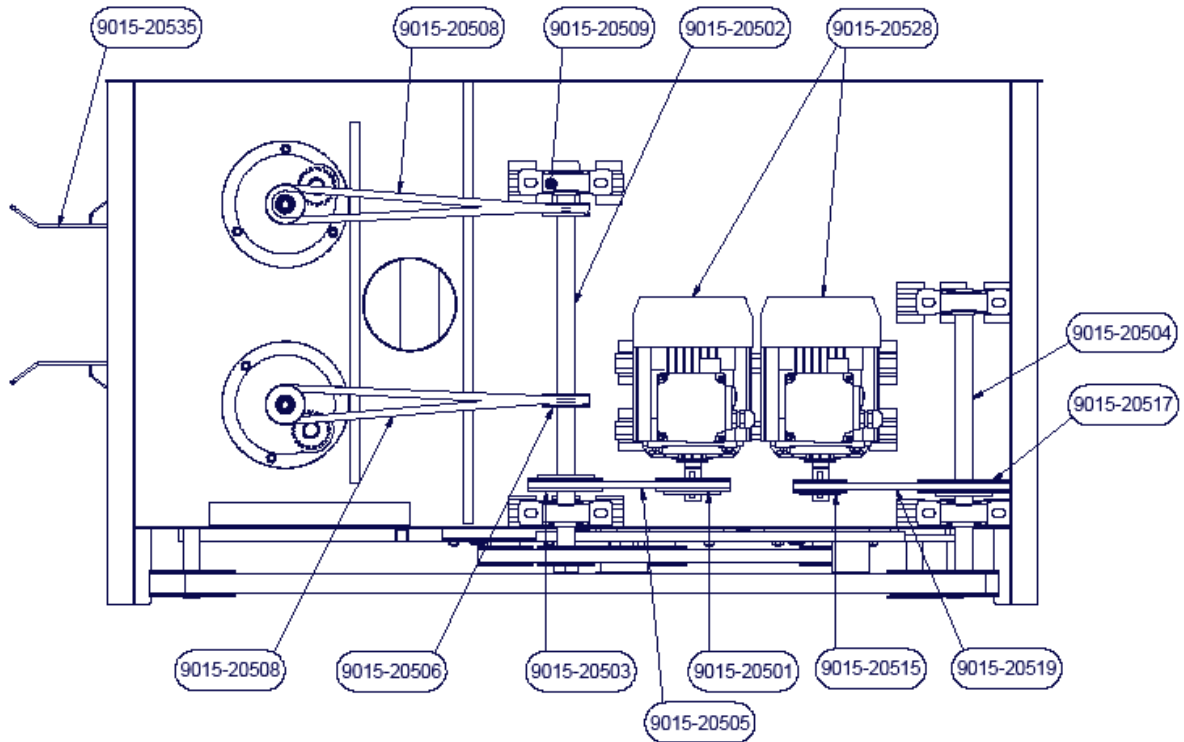
## IS 250





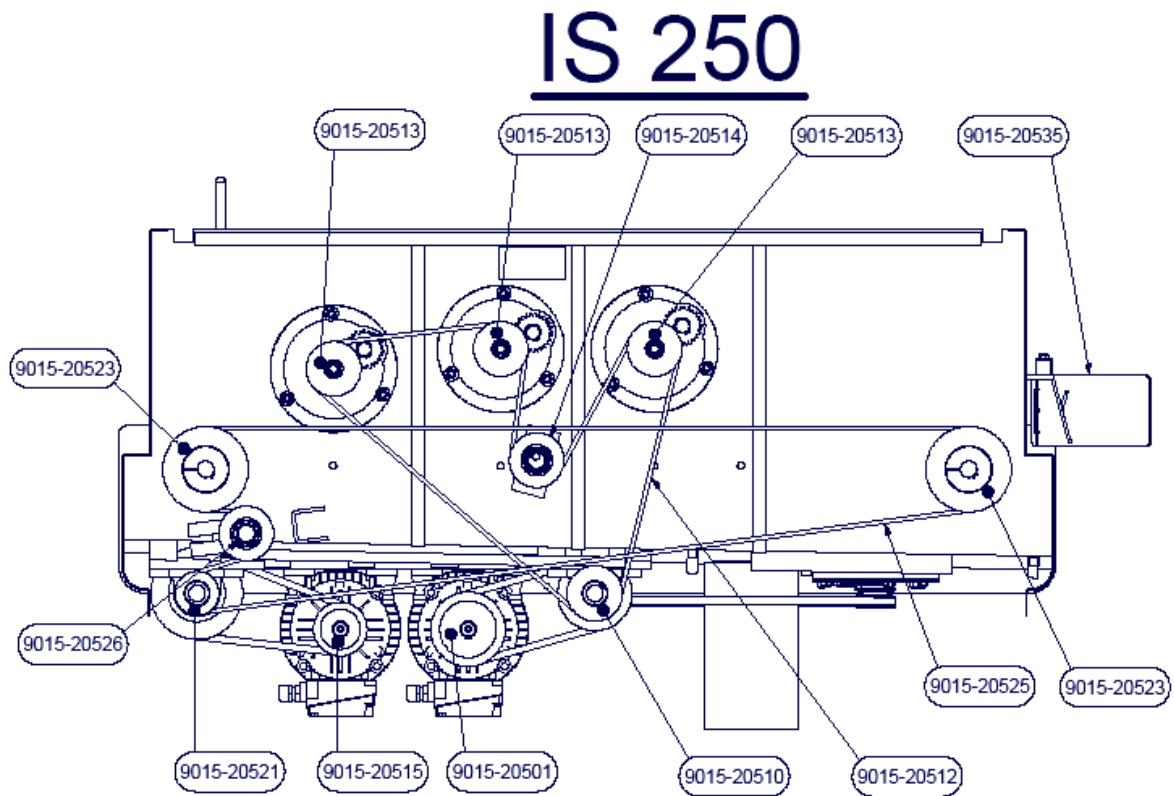
Picture B: The machine seen from below

## IS 250





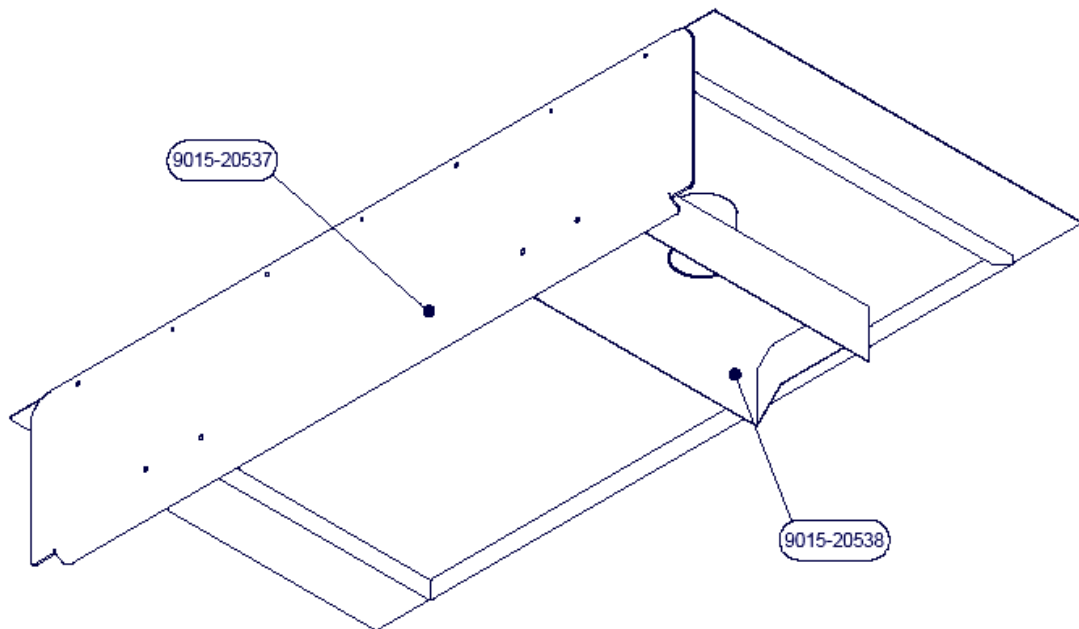
Picture C: The machine seen from the side





Picture D: The lid of the machine

## IS 250





Picture E: The brushes can easily be mounted and demounted by loosen the black thumbscrew.



Picture F: Demounting the horizontally sanding heads.





Picture G: Demounting the vertical sanding heads

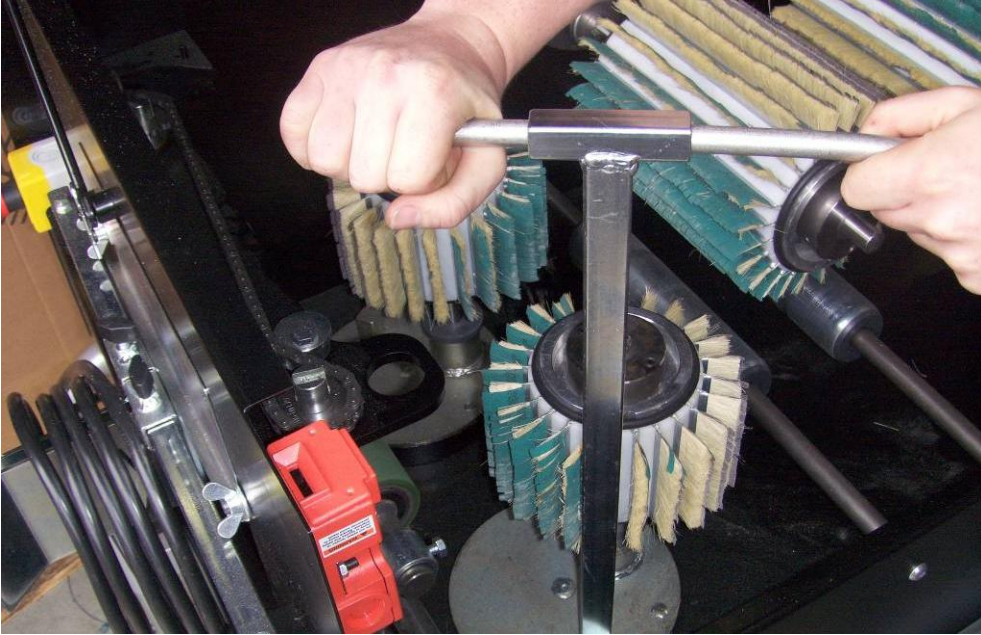


Picture H: Adjusting the vertically sanding heads





Picture I: Adjusting the horizontally sanding heads



Picture J: Adjusting the Counter-pressure roller

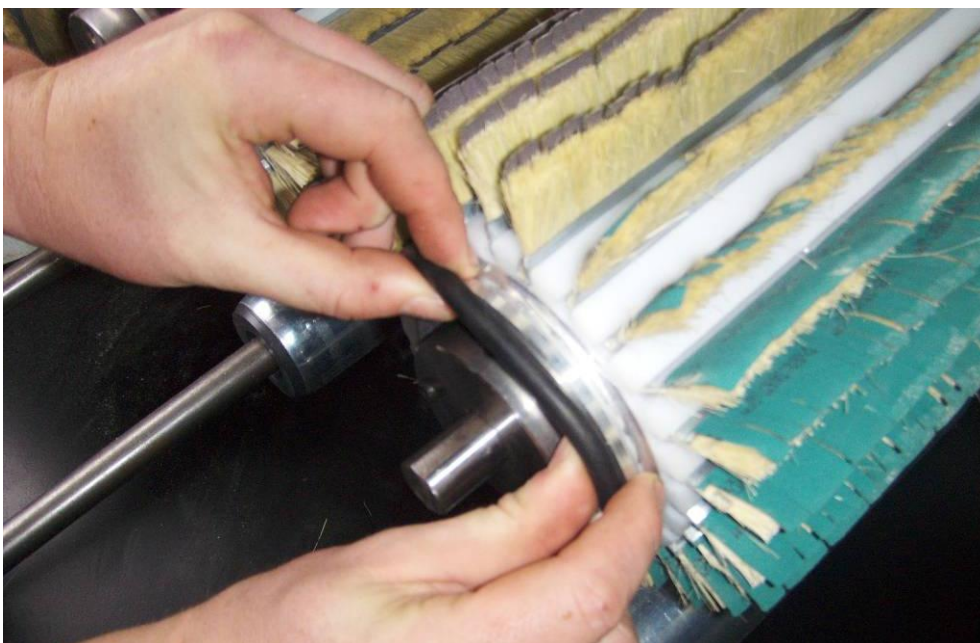




Picture K: Steering board



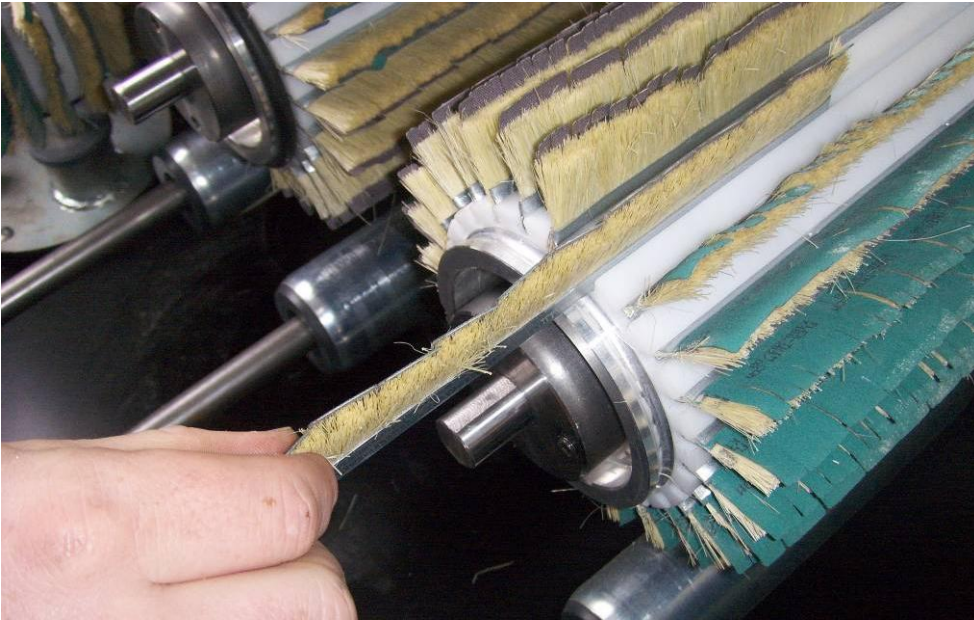
Picture L: Changing the sanding strips



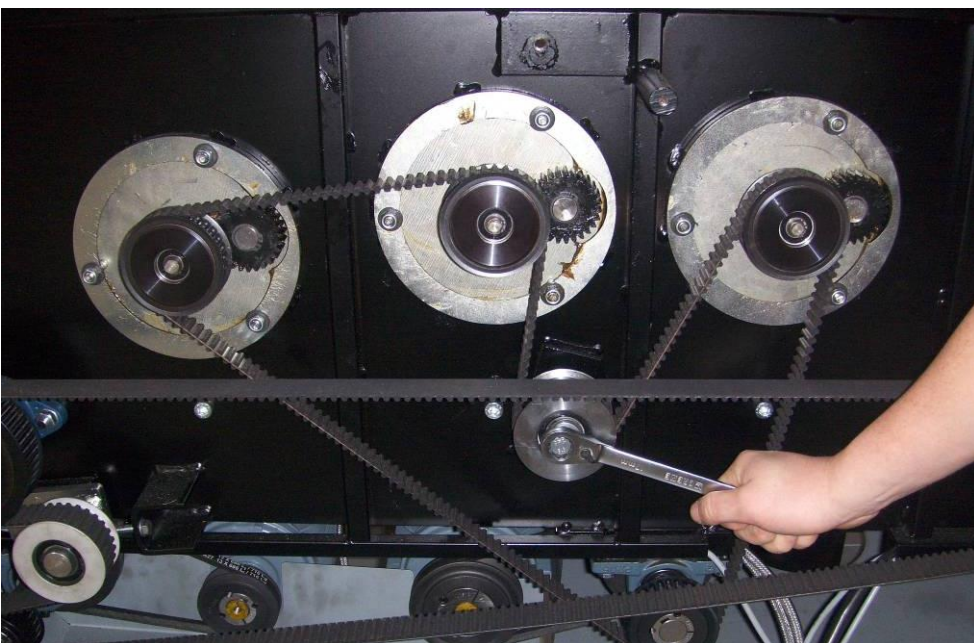




Picture M: Changing the sanding strips

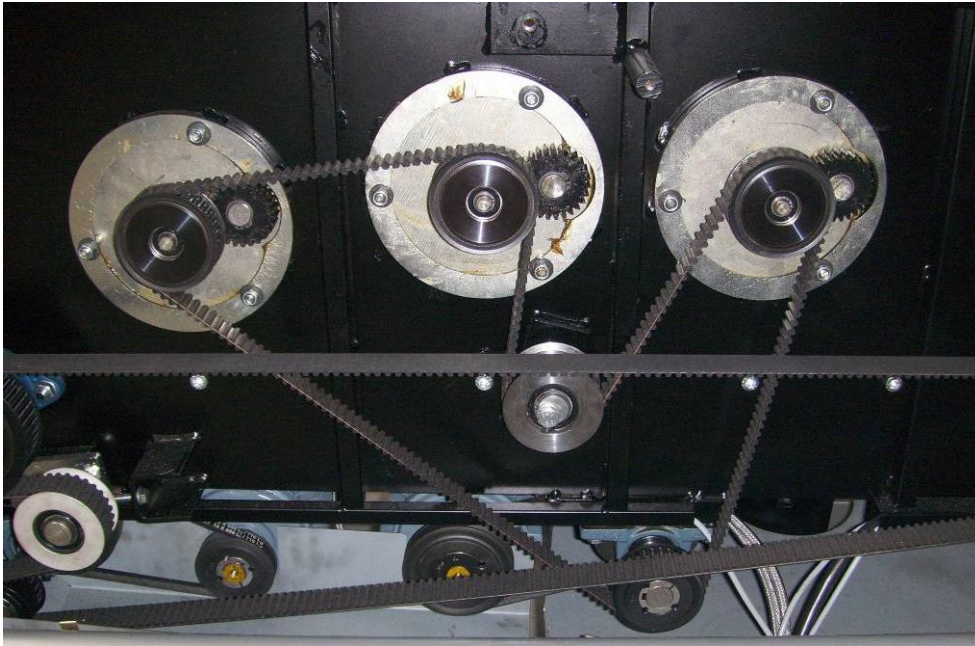


Picture N: Reversing of circulation direction on sanding head





Billede O: Reversing the circulation direction – standard setup



Picture P: Reversing the circulation direction on sanding head







Picture Q: Reversing of circulation direction on sanding head

