

# PS INSTALLATION TINED WEEDER PRO 150-1200 M1

## CONVERSIONINSTRUCTIONS



**PLEASE READ CAREFULLY BEFORE CONVERSION!**

Version: 2.0 EN; item number: 00602-3-454



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# 1 REQUIRED MATERIALS

## 1.1 GENERAL

- A Tined Weeder Pro VS150-1200 M1
- A Pneumatic Seeder PS120-500 M1/M2 or MDP40-100 M1



Figure 1: PS120-500



Figure 2: MD100

## 1.2 FOR VS150-300

- One bracket for installing the pneumatic seeder (PS or MD) on the harrow frame  
07014-2-727 PS installation VS150-300 (ZBK PS120-300 for VS150-300 )  
06008-2-081 MD bracket VS150-300 (ZBK MD for GW)

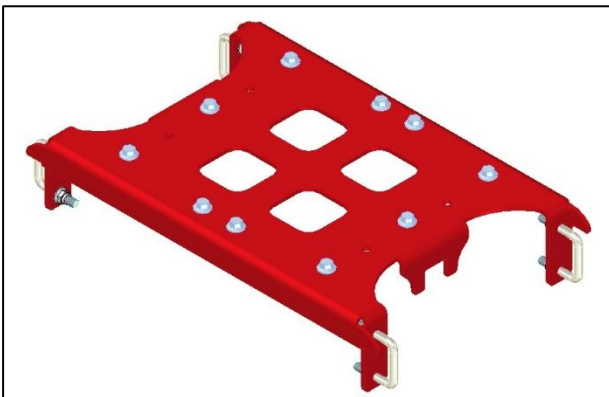


Figure 3: PS bracket

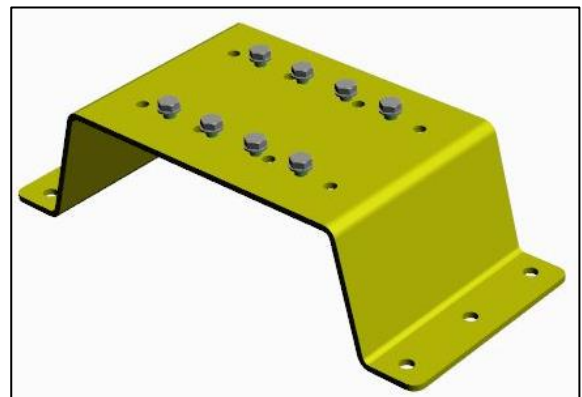


Figure 4: MD bracket

- A platform kit to correctly fill your seeder
  - 07027-2-051 ZBK platform kit VS150
  - 07028-2-036 ZBK platform kit VS300



Figure 5: New platform kit VS150

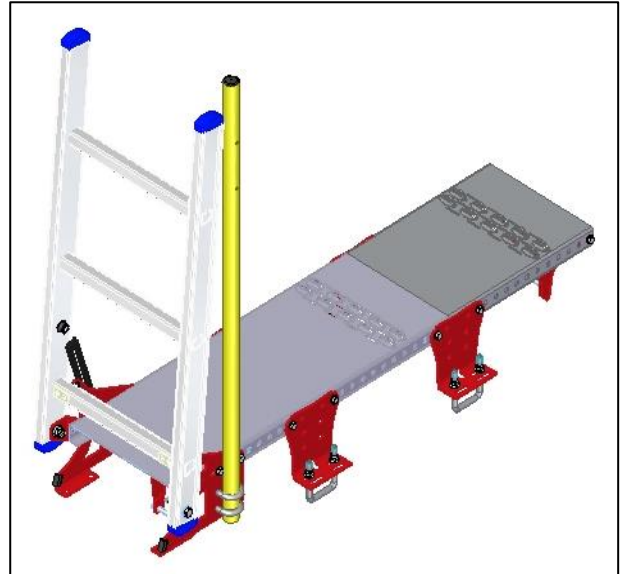


Figure 6: New platform kit VS300

- An accessories kit for the dispersion plate installation, depending on which Tined Weeder Pro is available and how many hose outlets are required
  - 07027-2-052 ZBK dispersion plate installation, 6 outlets VS150
  - 07027-2-053 ZBK dispersion plate installation, 8 outlets VS150
  - 07028-2-037 ZBK dispersion plate installation, 6 outlets VS300
  - 07028-2-038 ZBK dispersion plate installation, 8 outlets VS300

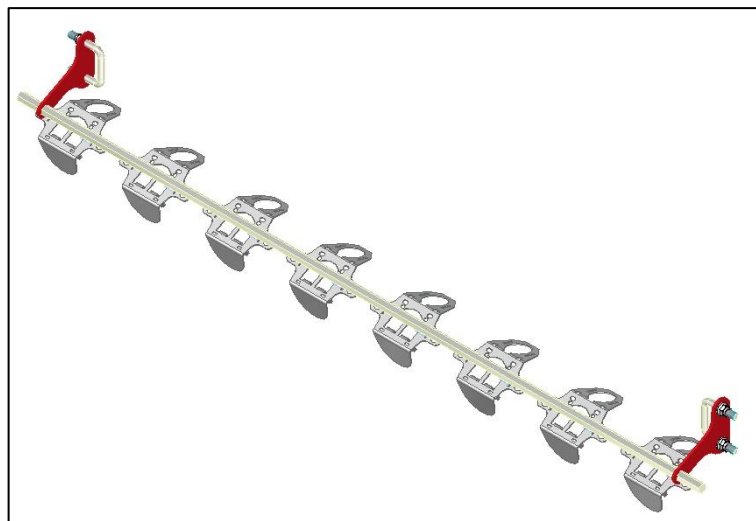


Figure 7: ZBK dispersion plate installation, 8 outlets VS150

### 1.3 FOR VS600-1200

- One bracket for installing the pneumatic seeder (PS) on the harrow frame  
07014-2-385 PS bracket VS600-1200 (ZBK PS bracket VS 2)



Figure 8: PS bracket VS600-1200

- A platform kit to correctly fill your seeder, depending on whether you have installed rear feeler wheels on your harrow or not  
07014-2-697 ZBK platform kit VS 1 (without rear feeler wheels)  
07014-2-698 ZBK platform kit VS rear 1 (with rear feeler wheels)

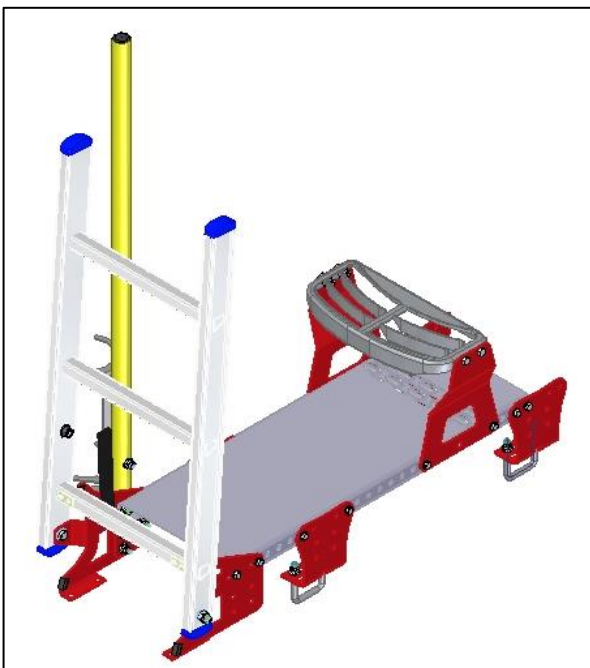


Figure 9: New platform kit VS600-1200 without rear feeler wheels

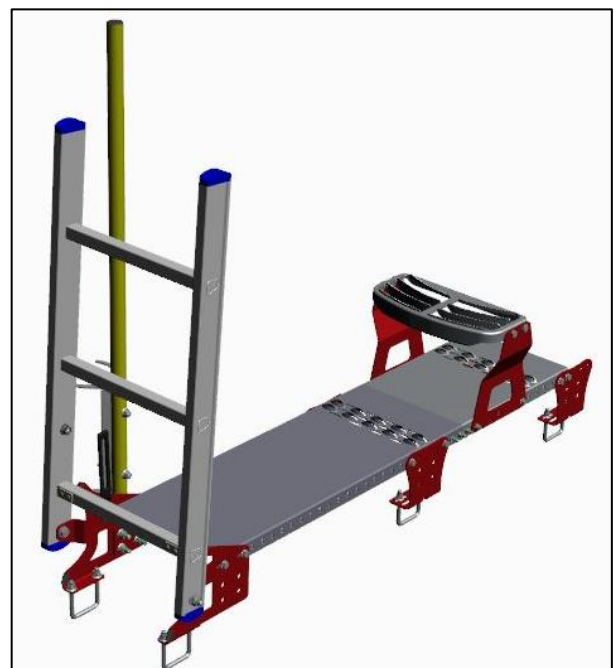


Figure 10: New platform kit VS600-1200 with rear feeler wheels

- An accessories kit for the dispersion plate installation, depending on which Tined Weeder Pro is available

07018-2-033	ZBK dispersion plates VS600
07019-2-011	ZBK dispersion plates VS750
07020-2-035	ZBK dispersion plates VS900
07014-2-298	ZBK dispersion plates VS1200

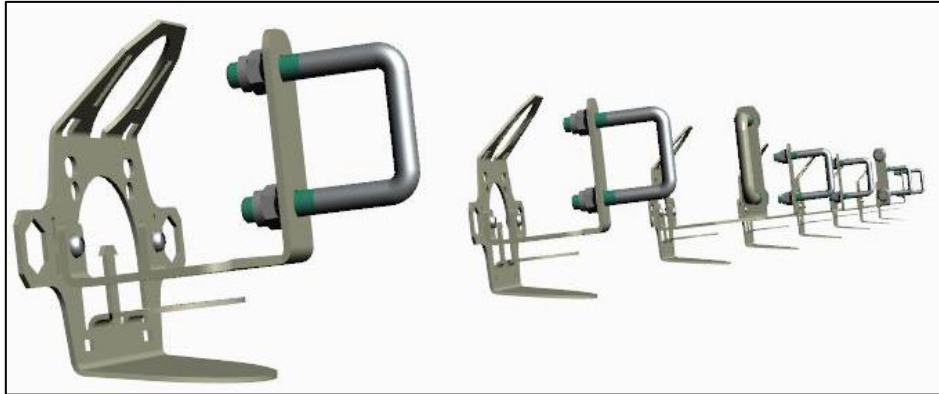


Figure 11: ZBK dispersion plates VS600

- If a PS500 M2 is installed on an VS1200 M1, there is also a separate kit containing anti-slip protective stickers which must be applied to the tank for protection.

07014-2-646	ABK PS500 on VS1200
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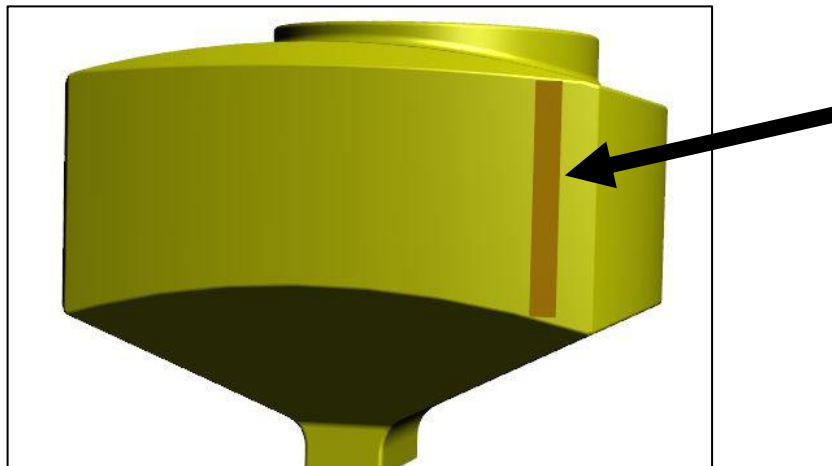


Figure 12: Protective sticker on the hopper of the PS500 M2

## 2 INSTALLATION OF THE PS/MD BRACKET

### 2.1 PS BRACKET VS150-300

The four U-bolts are required to attach the PS bracket to the VS150 and VS300.

These are used to mount the bracket on the two middle hollow profiles of the harrow frame. The bracket must be placed between the two braces of the mounting triangle, as shown in Figure 14. The tightening torque must amount to 40 Nm and may not be exceeded.

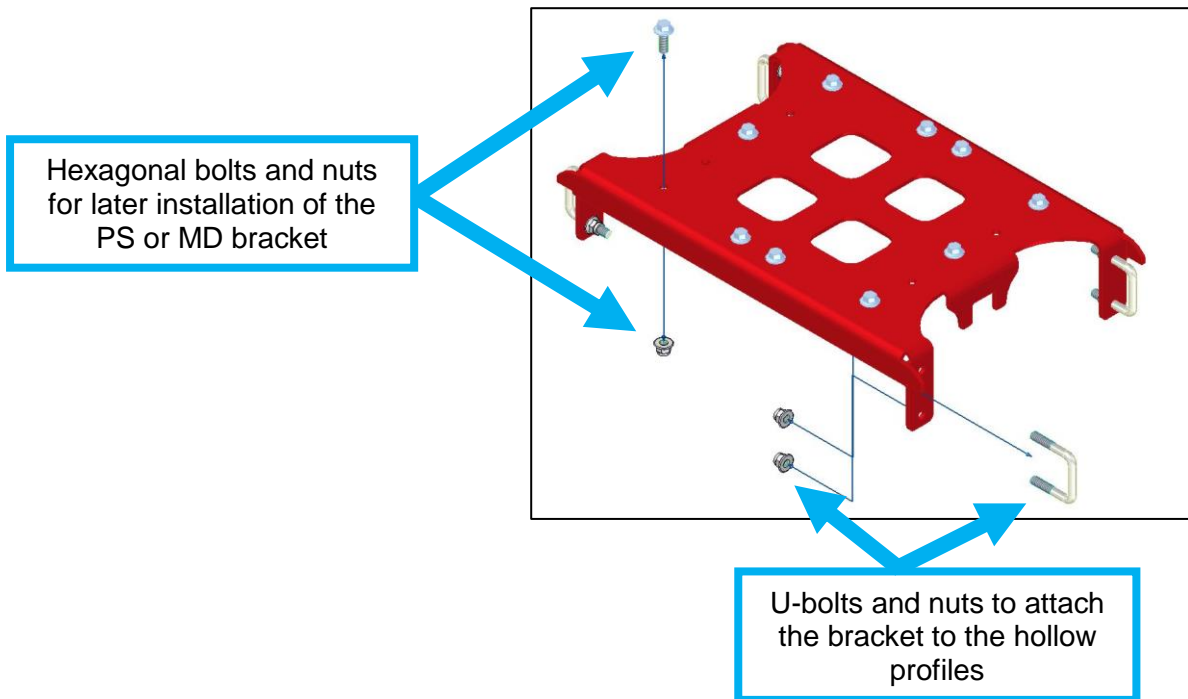


Figure 13: Components of the PS bracket

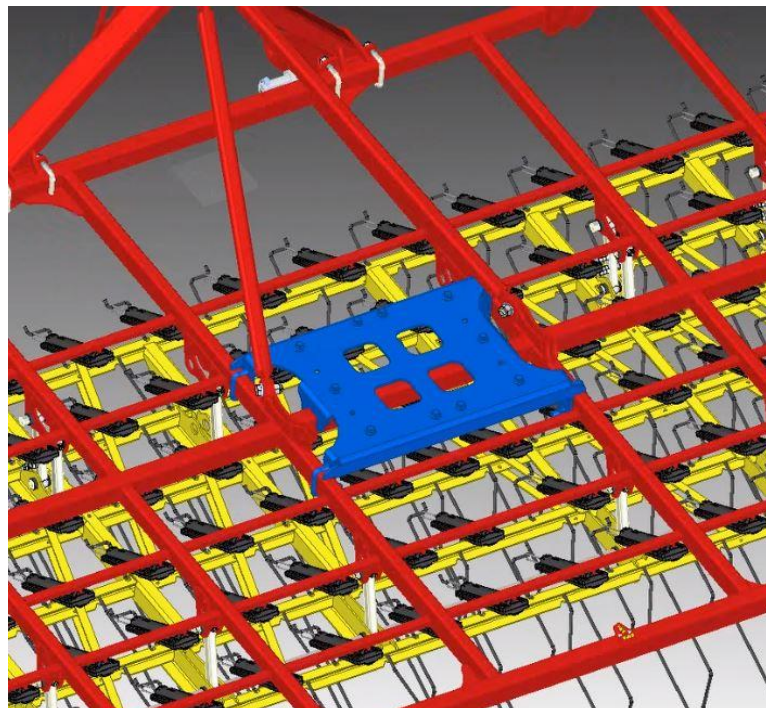


Figure 14: Positioning of the PS bracket on the harrow frame

## 2.2 MD BRACKET VS150-300

In order for the MD bracket to be installed, the PS bracket must already have been attached to the harrow as described in 2.1.

The multi-dose bracket is then attached to the PS bracket with four hexagonal bolts. To do so, the MD bracket must be mounted at the rear end of the PS bracket, in the direction of travel, as shown in the figures below.

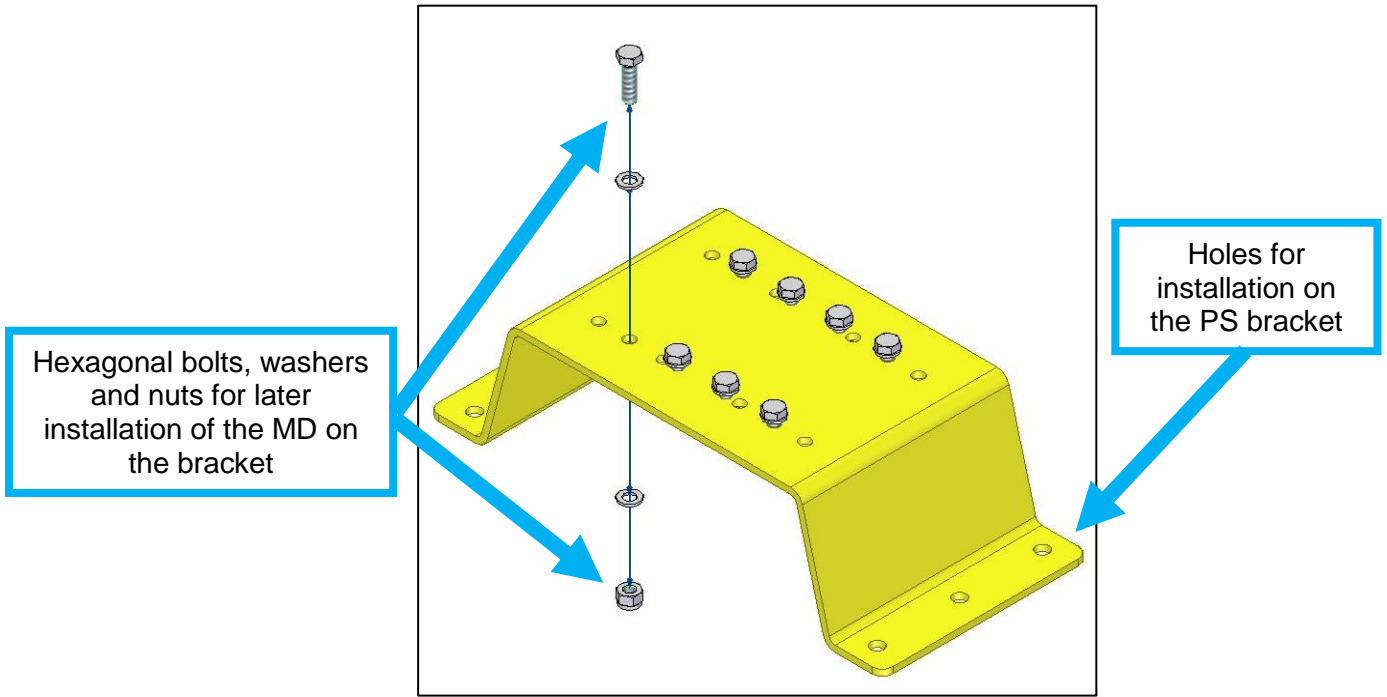


Figure 15: Components of the MD bracket

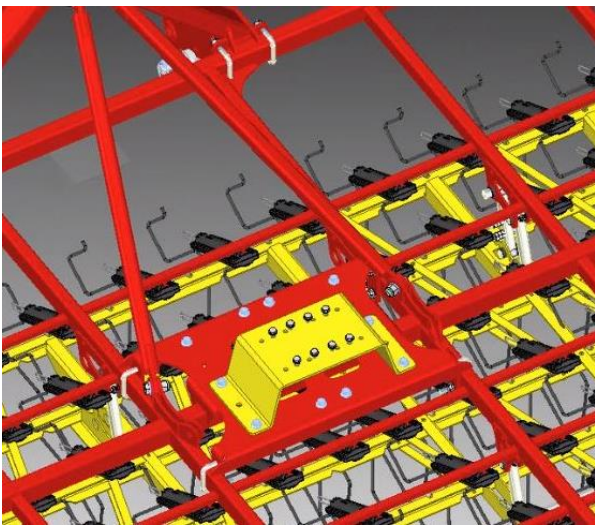


Figure 16: MD bracket installed on the PS bracket

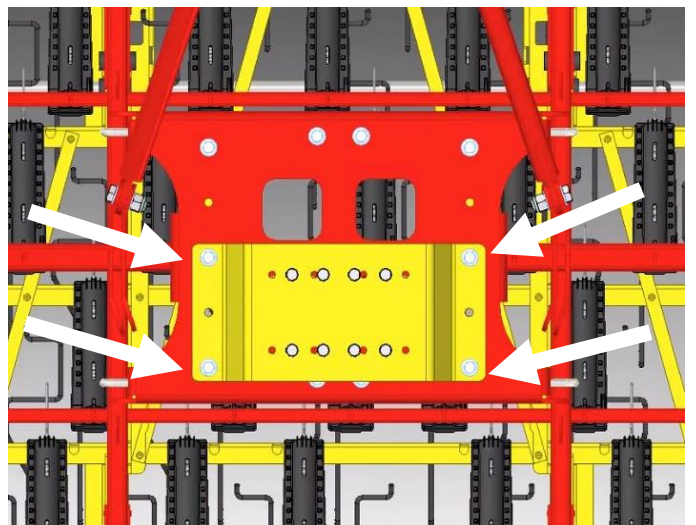


Figure 17: MD bracket secured with the four screws



## 2.3 PS BRACKET VS600-1200

The PS bracket for VS600 to VS1200 is secured by means of a U-bolt, placed between the two braces of the mounting triangle.

The bracket must be installed on the hollow profile between the folding cylinder points using four U-bolts. Another two U-bolts are used to mount the lower front hollow profile measuring 60x60 mm. The tightening torque must amount to 40 Nm and may not be exceeded.

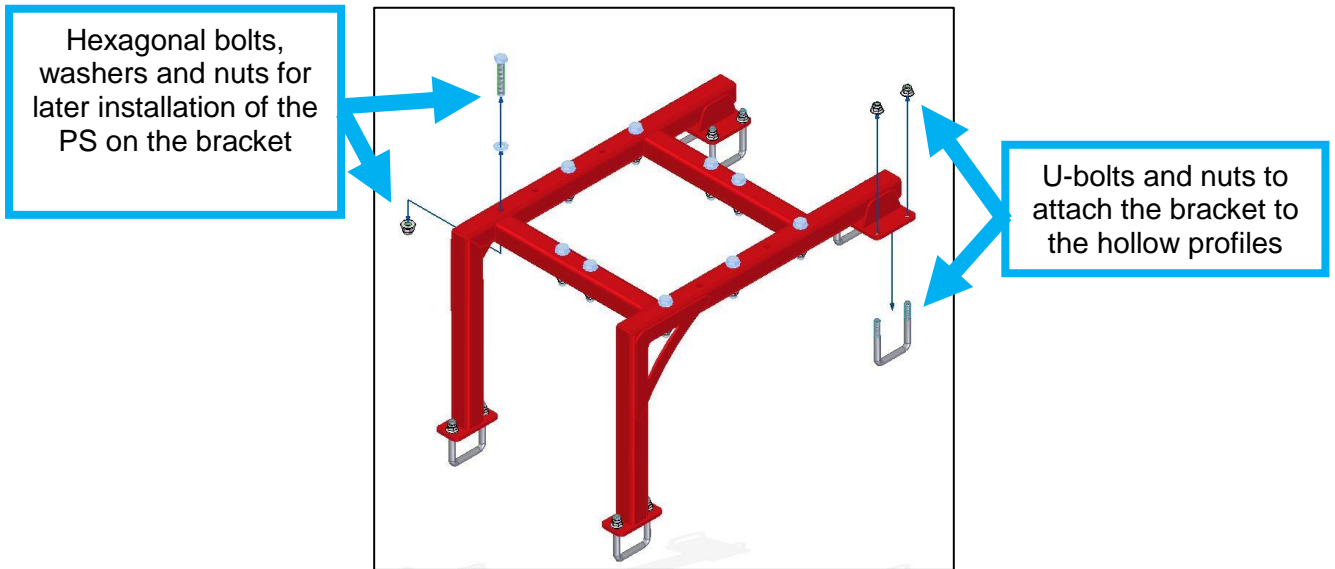


Figure 18: Components of the PS bracket

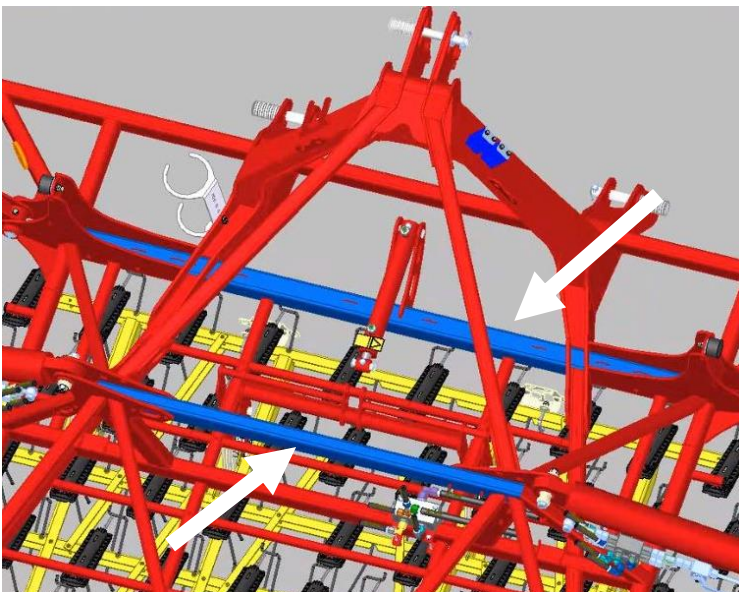


Figure 19: Fixing the bracket on the two marked hollow profiles

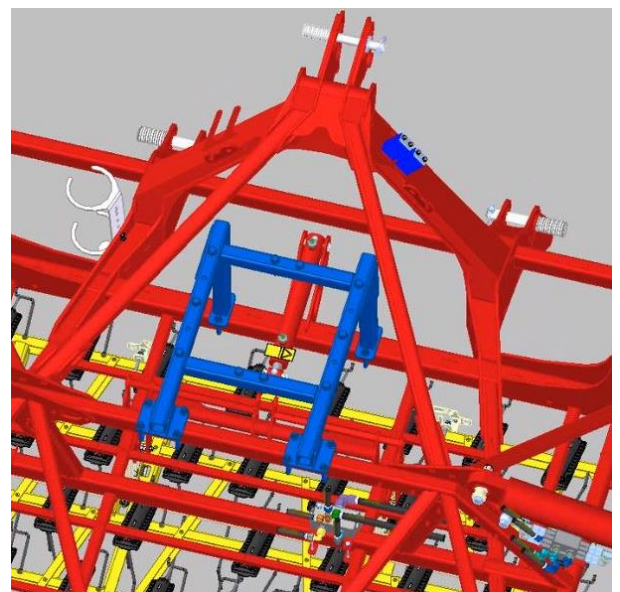


Figure 20: PS bracket installed on the VS

### 3 INSTALLATION OF THE PLATFORM KIT

#### 3.1 PLATFORM KIT VS150

On the VS150 Tined Weeder Pro, the platform kit is attached to the harrow frame, at a right angle to the direction of travel. With the two U-bolts, the platform is mounted on the outermost hollow profile which runs lengthwise to the direction of travel, and, using the screw, it is mounted on the hollow profile which runs crosswise to the direction of travel, in the centre of the harrow. When mounting, it is also important to ensure that a collision with the spring packages does not occur.

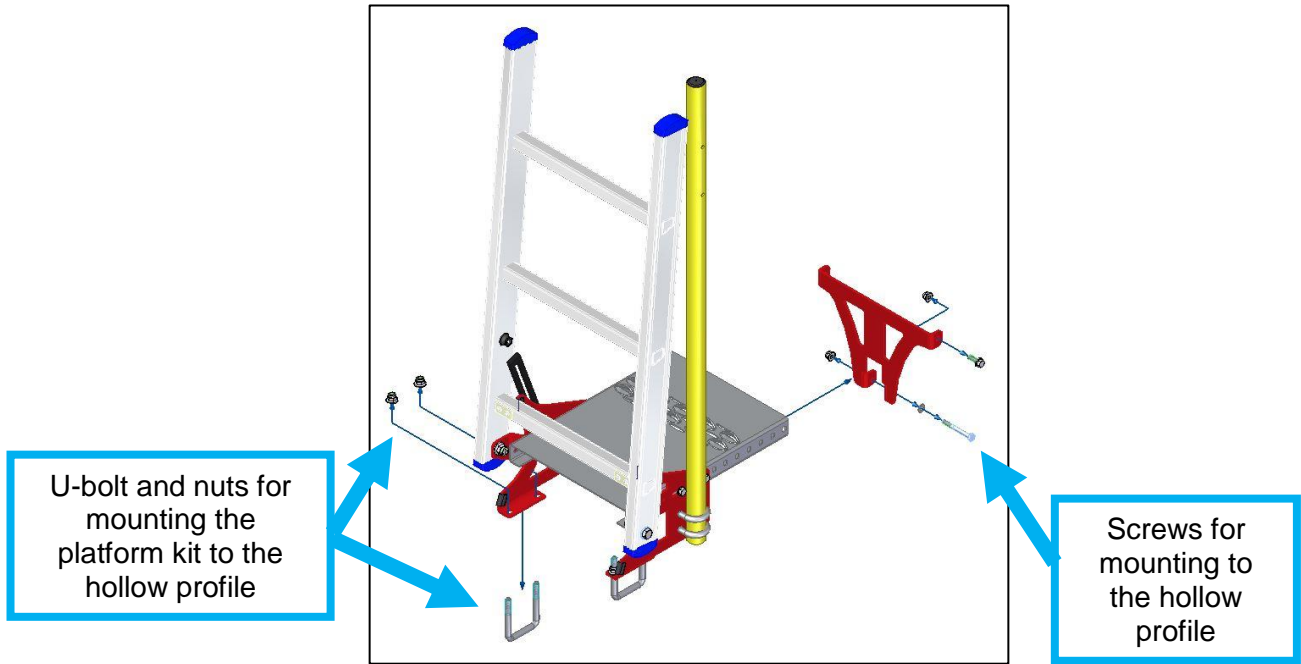


Figure 21: Components of the platform kit VS150

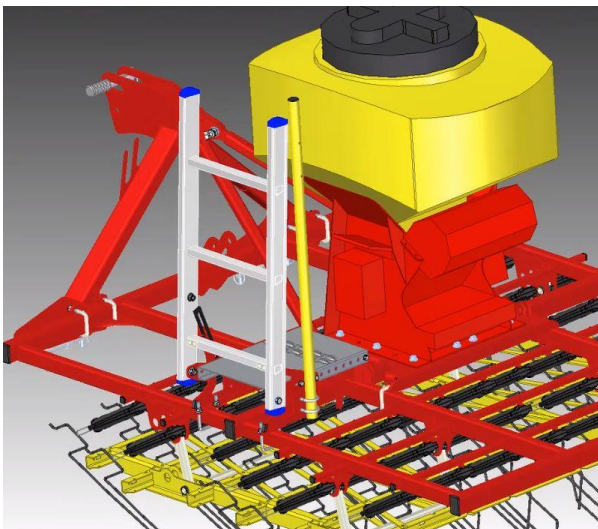


Figure 22: The platform kit is mounted laterally on the harrow

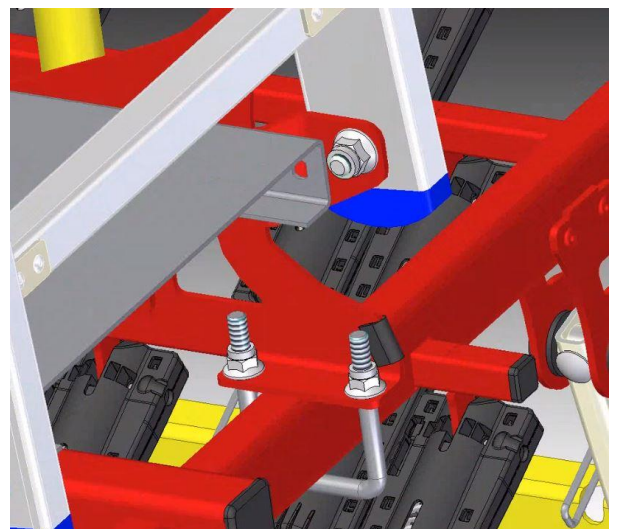


Figure 23: Mounting on the hollow profile with the U-bolts

### 3.2 PLATFORM KIT VS300

On the VS300, the platform kit is also attached to the harrow frame at right angles to the direction of travel. Similarly to the VS150, the platform is attached to the hollow profiles running lengthwise to the direction of travel, using the four U-bolts. The two screws are used to fix the harrow to the hollow profiles running transversely to the direction of travel, once at the outermost hollow profile, and once in the centre of the harrow.

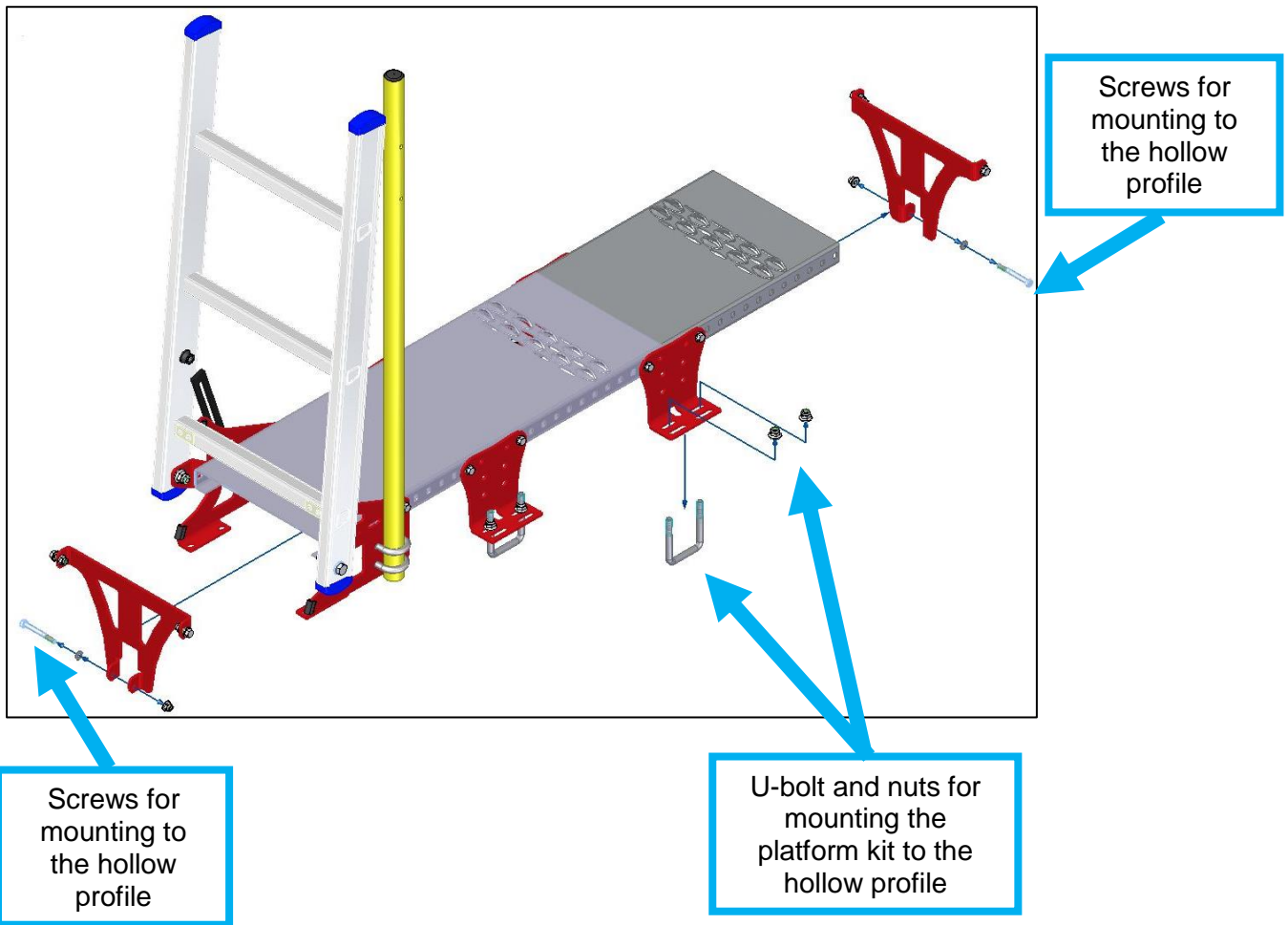


Figure 24: Components of the platform kit VS300

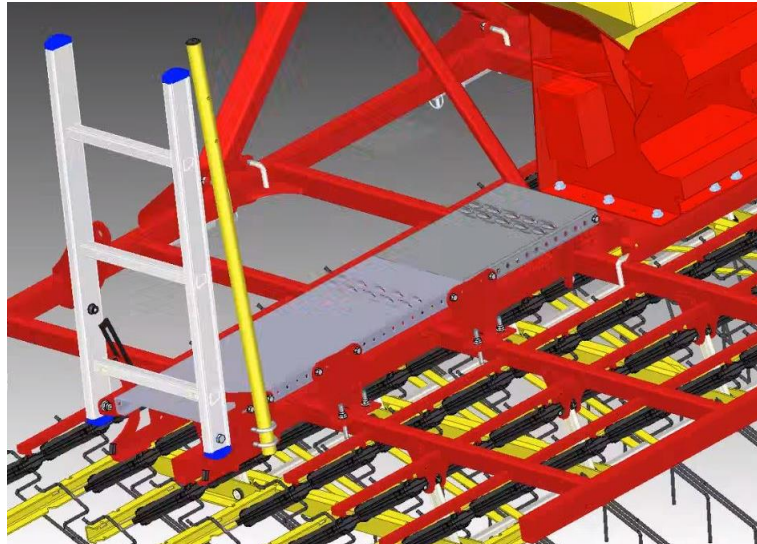


Figure 25: The platform kit is mounted laterally on VS300

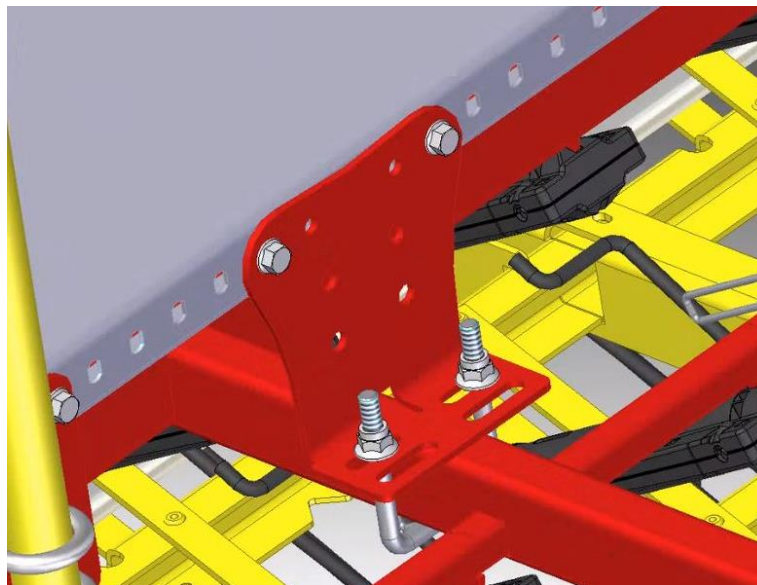


Figure 26: Fastening via U-bolt



Figure 27: Fixing the platform with the screws on the hollow profile

### 3.3 PLATFORM KIT VS600-1200 WITHOUT REAR FEELER WHEELS

On the VS600-1200 Tined Weeder Pro, the platform kit is mounted in the direction of travel behind the seeder or its bracket. The attachment is made with four U-bolts on the hollow profiles running transversely to the direction of travel.

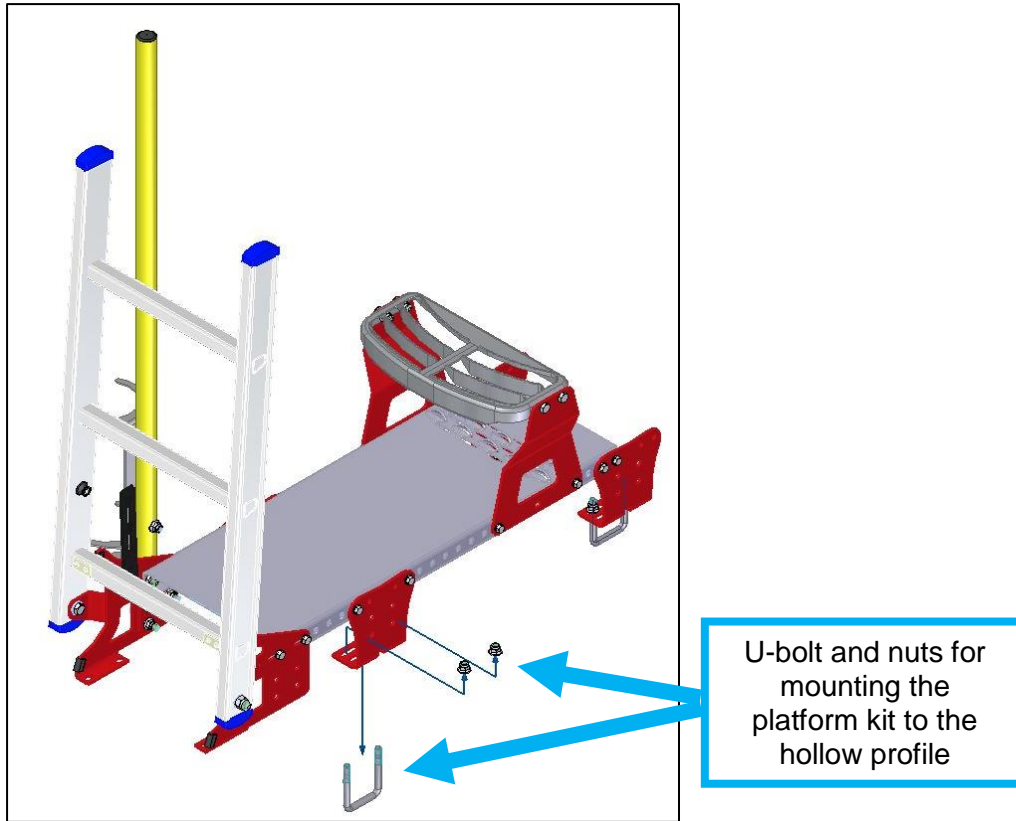


Figure 28: Components of the platform kit VS600-1200 without rear feeler wheels

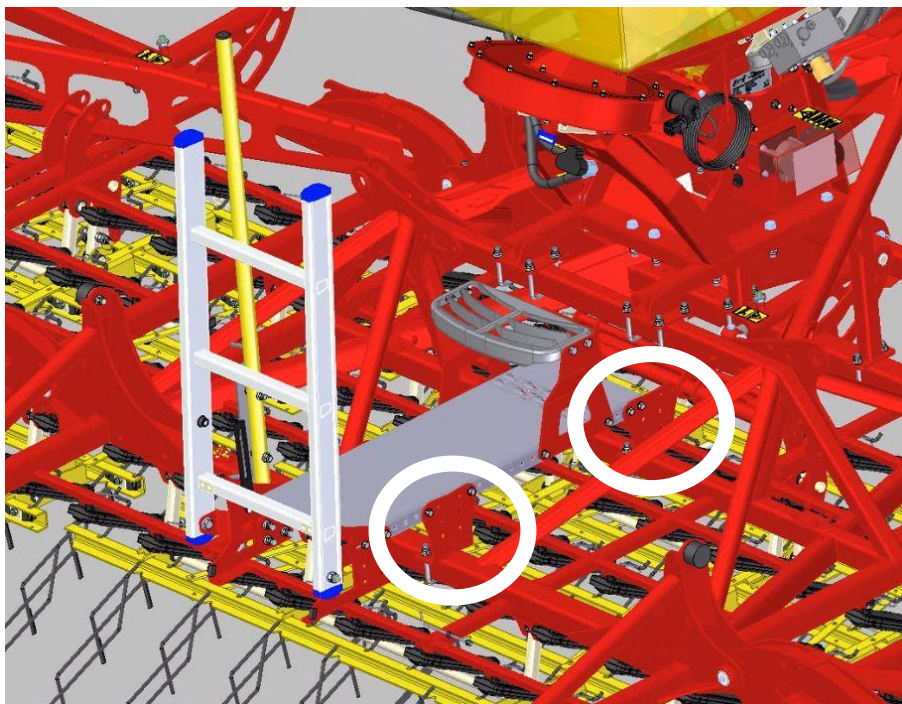


Figure 29: Fastening via U-bolt on the harrow frame

### 3.4 PLATFORM KIT VS600-1200 WITH REAR FEELER WHEELS

If a VS600-1200 is operated with rear feeler wheels, assembly is similar to if there were no rear feeler wheels. Here, too, the platform kit is mounted in the direction of travel behind the seeder or its bracket, and the attachment is made with four U-bolts on the hollow profiles running transversely to the direction of travel.

In addition, here, the platform kit is fixed to the hollow profile of the rear feeler wheels, using two U-bolts, as can be seen in Figure 31.

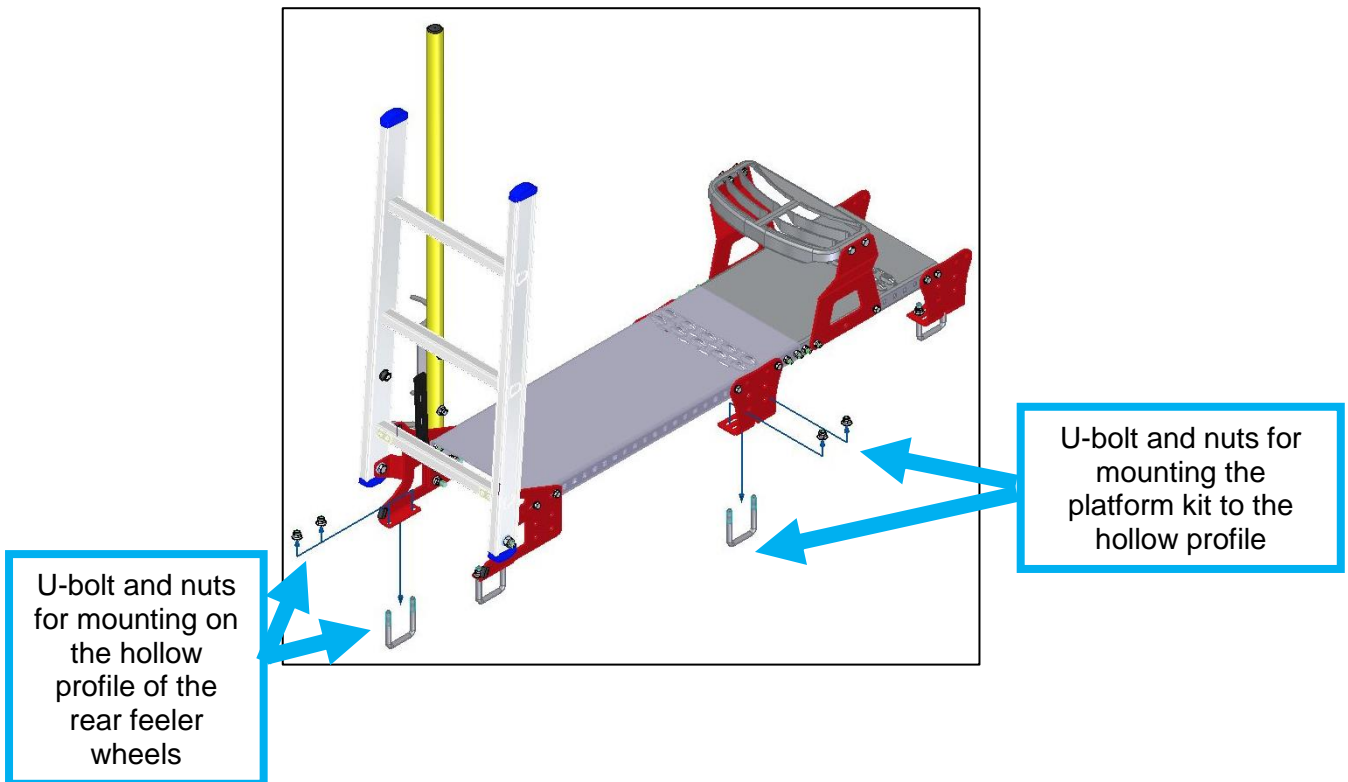


Figure 30: Components of the platform kit VS600-1200 with rear feeler wheels

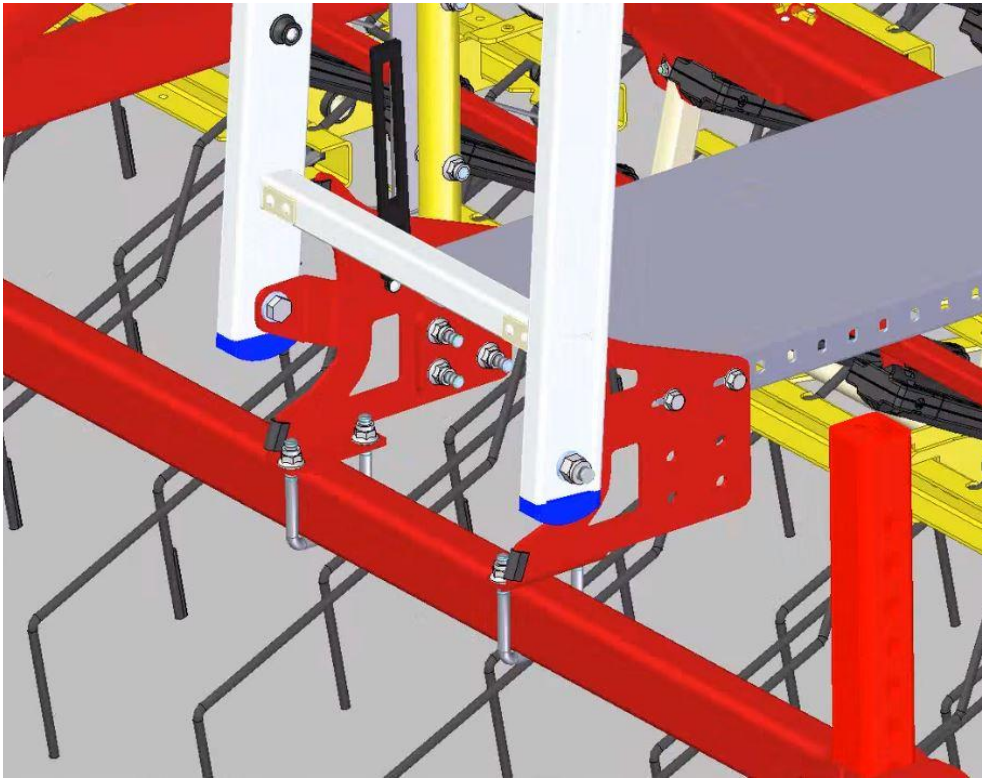


Figure 31: Installation of the platform on the hollow profile of the feeler wheels

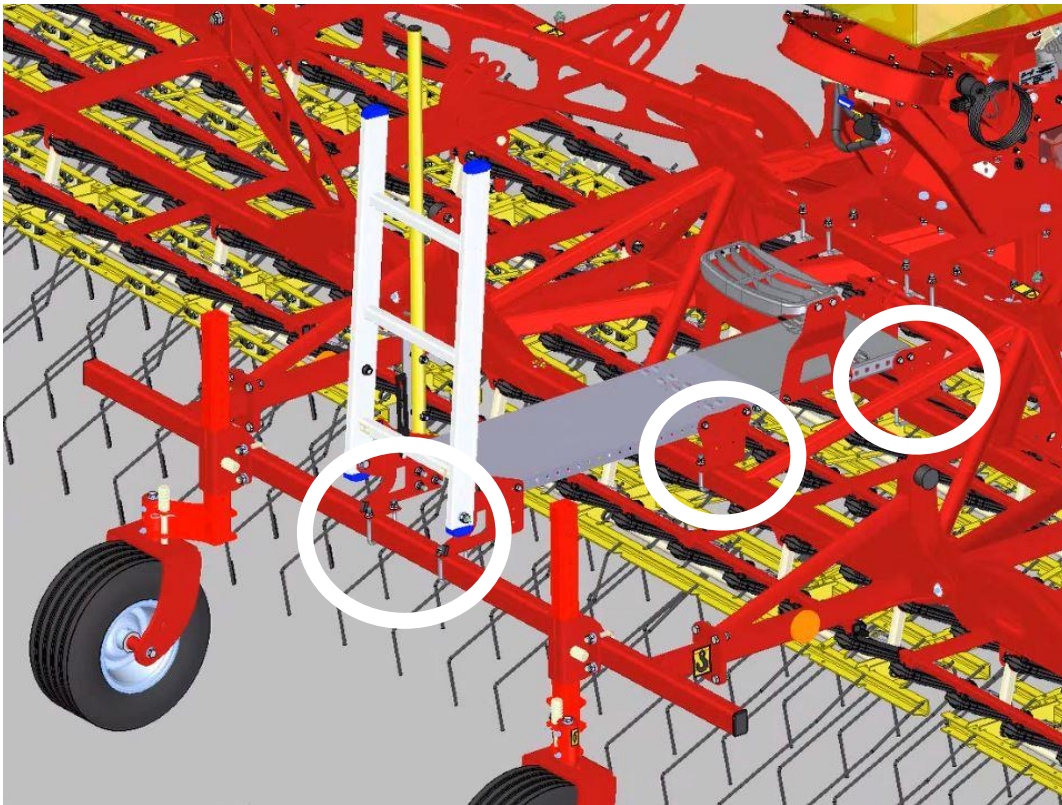


Figure 32: Securing at the marked points

## 4 ADJUSTING THE FOLDING LOCK

If a Tined Weeder Pro is equipped with a pneumatic seeder, it is necessary to make some adjustments to the folding lock. For example, kit 07014-2-488 ABK Folding lock VS1200 1 must be installed.

### 4.1 ATTACHING THE RUBBER BUFFERS

To enable the side frames to be folded closer together without causing damage to the paintwork or frame, additional rubber buffers must be fitted. These are to be mounted at the centres of the two reinforcement crosses on the first side frames, as shown in the two figures below. Pre-cut threads are already on the harrow for this purpose. The correct installation depth of the rubber buffers must be set by the customer and must be selected in such a way that no collisions occur during the folding process.

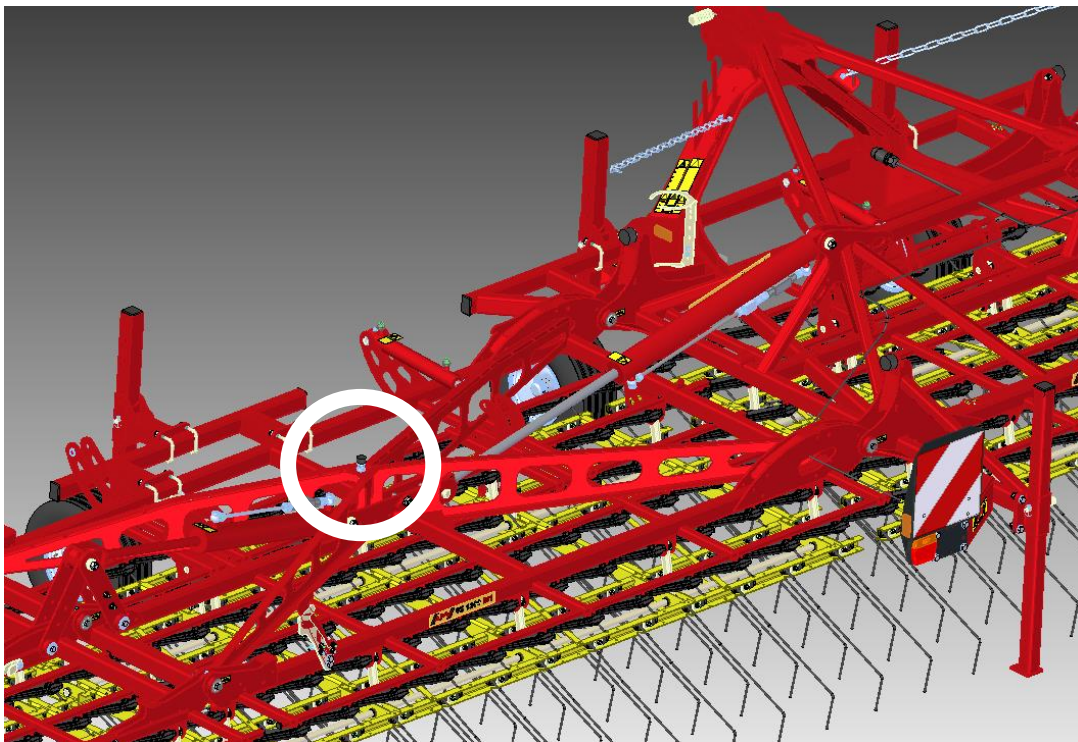


Figure 33: Location of rubber buffer installation

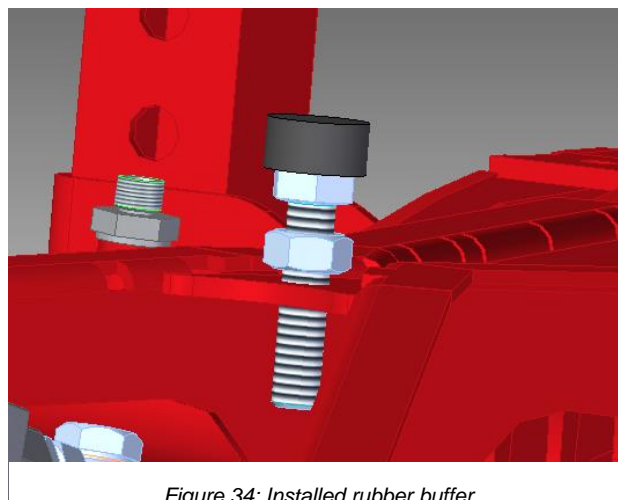


Figure 34: Installed rubber buffer



## 4.2 REPLACING THE SHEET METAL PROFILES OF THE FOLDING SAFETY DEVICE

Replacing the sheet metal profiles of the folding safety device is also required in order to be able to fold the side frames closer together. The profiles are located on the outside of the 1st side frame in the area of the folding points at the rear of the harrow. The standard sheet metal profile must be removed and a new, somewhat shorter one installed. Visually, however, the two sheet metal profiles can be distinguished not only by their length, but also by the fact that the new one is galvanised, while the standard one has a red paint finish.

The new sheet metal profile is mounted in the same way as the old one, by means of an M12 hexagonal bolt through the hollow profile of the harrow. It is also important to ensure that the two M8 hexagonal bolts of the new profile are also covered again with plastic hoses, so that paint damage to the frame can be prevented.

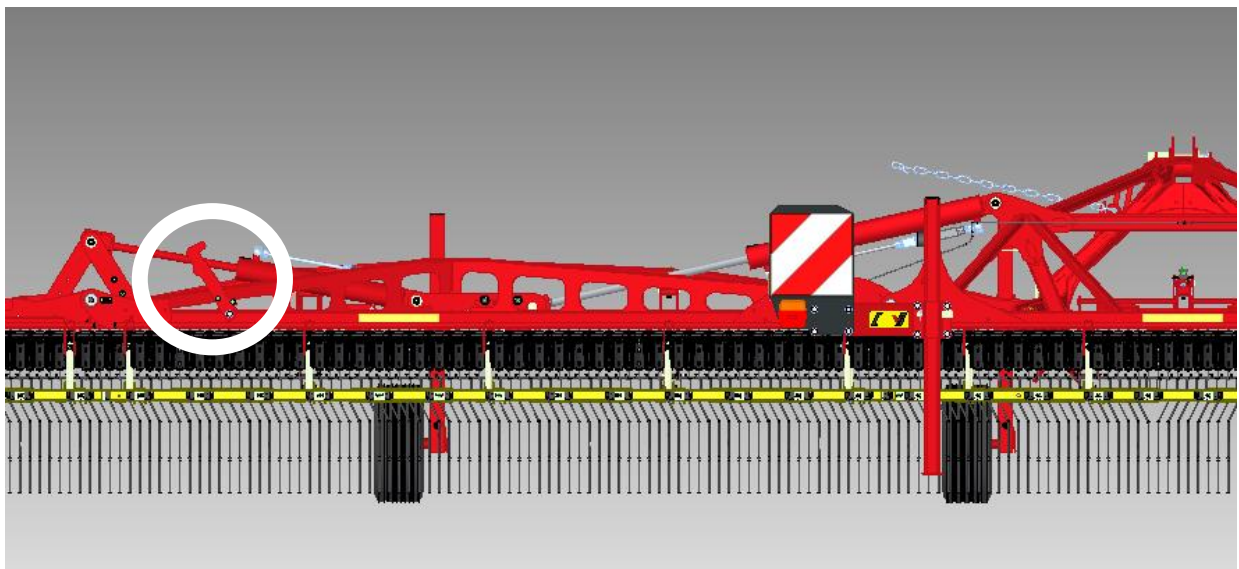


Figure 35: Position of the sheet metal profile on the harrow

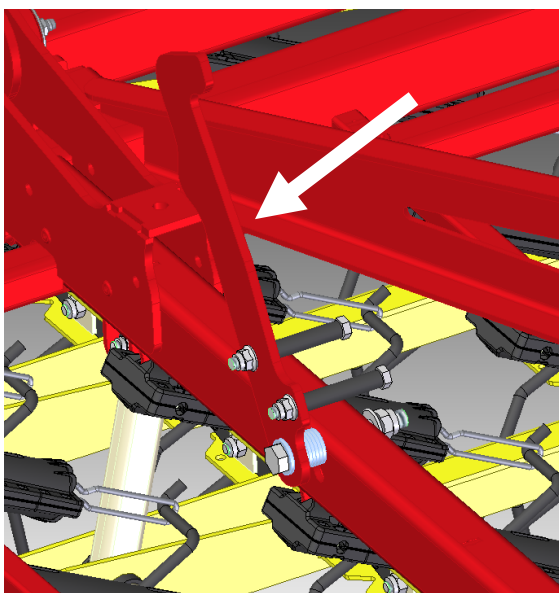


Figure 36: The sheet metal profile installed as standard

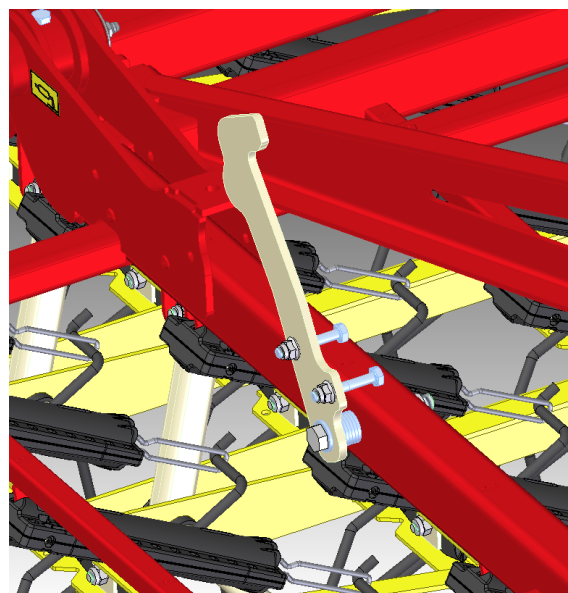


Figure 37: Newly galvanised sheet metal profile

### 4.3 REMOVING THE LIMITATION OF THE FOLDING CYLINDERS

To mount a seeder on a Tined Weeder Pro, the limitation of the two folding cylinders must also be removed. To do this, first remove the pin from the cylinder eye.



#### PLEASE NOTE!

To remove the bolt, it must be free of tension, i.e. loose in the hole. Also secure the cylinder from falling down when you remove the bolt, so that no damage can occur to the cylinder.

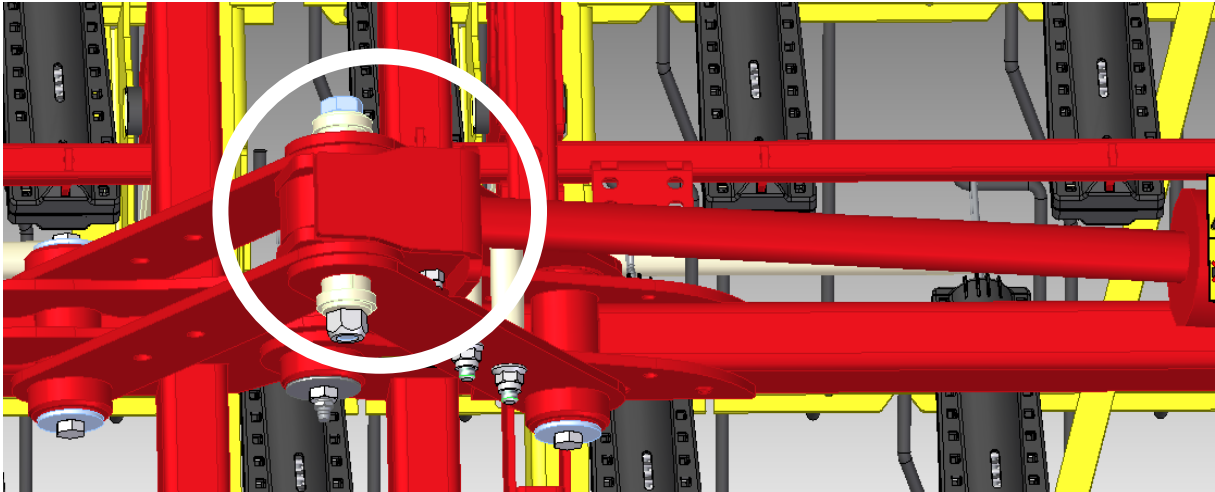


Figure 38: The limitation is mounted on the cylinder eye by means of bolts

After the bolt has been removed, the locking screw must still be removed, after which the limiting plate can simply be removed from the cylinder eye. The limiting plate can be put aside, it is no longer needed.

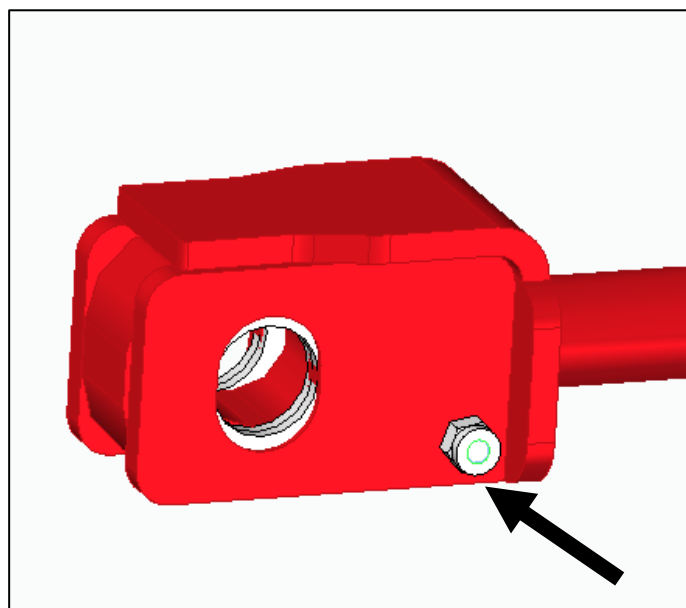


Figure 39: Removal of the locking screw is required

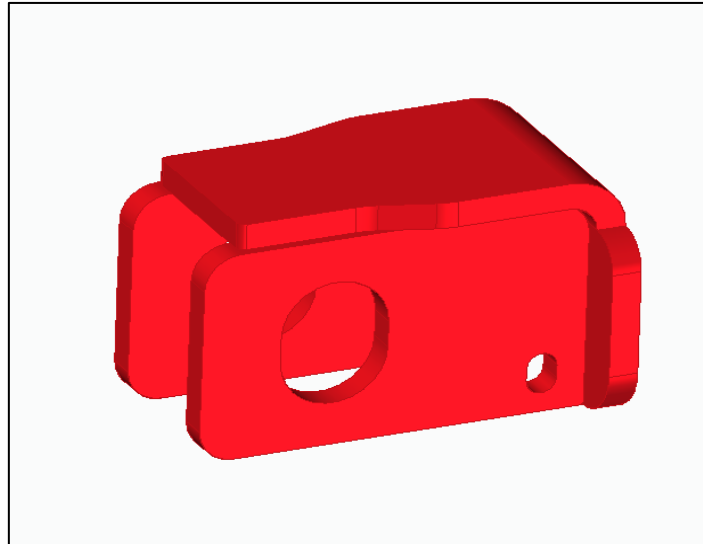


Figure 40: The removed limitation profile

The cylinder must then be secured back in the frame with the bolt. Make sure that the bolt components are installed exactly as they were mounted beforehand; a picture of the installation is also provided below.

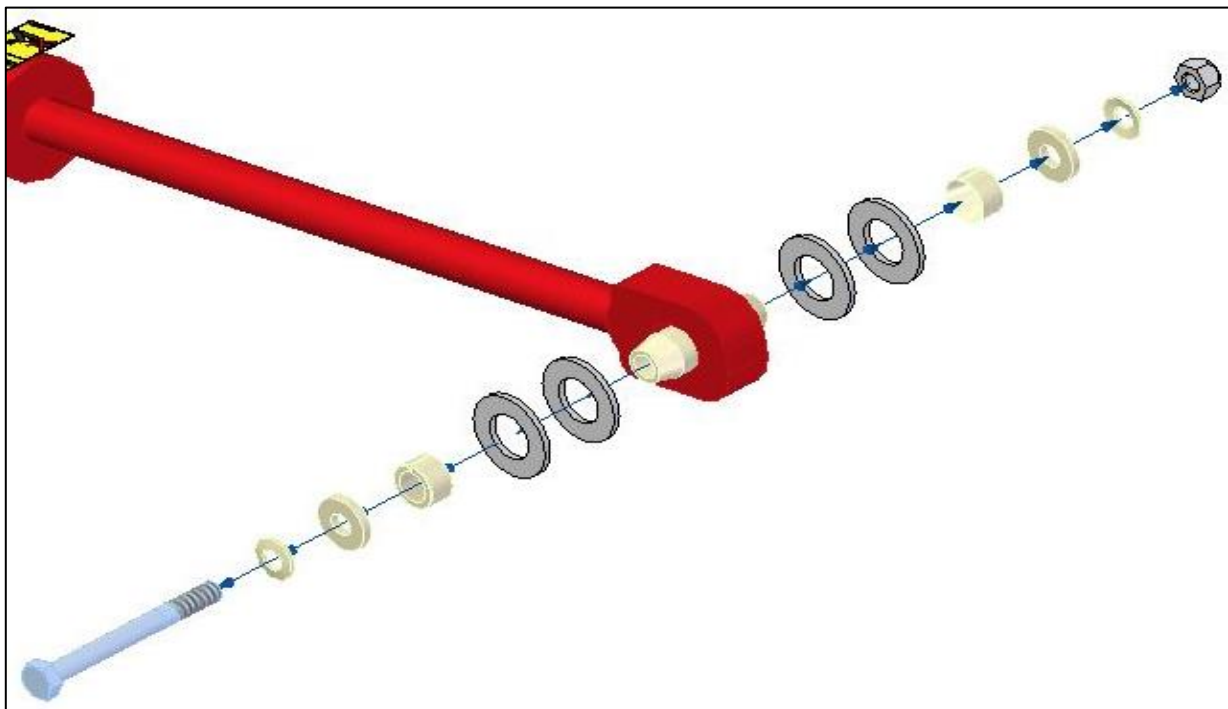


Figure 41: Arrangement of the bolt components

## 5 POSITIONING THE SEEDER

### 5.1 PS ON VS150-300

The seeder is attached to the PS bracket using the ten hexagonal bolts.

To ensure a good fit of the spreader, a counter plate must also be positioned between the spreader and the bracket. The hole patterns of the bracket, PS and counter plate are identical, so that everything can be screwed together at the same time.

#### CAUTION!

To place the pneumatic seeder (PS) on the bracket, take it by the side handles and make sure that no damage is caused by the spreader possibly falling down.

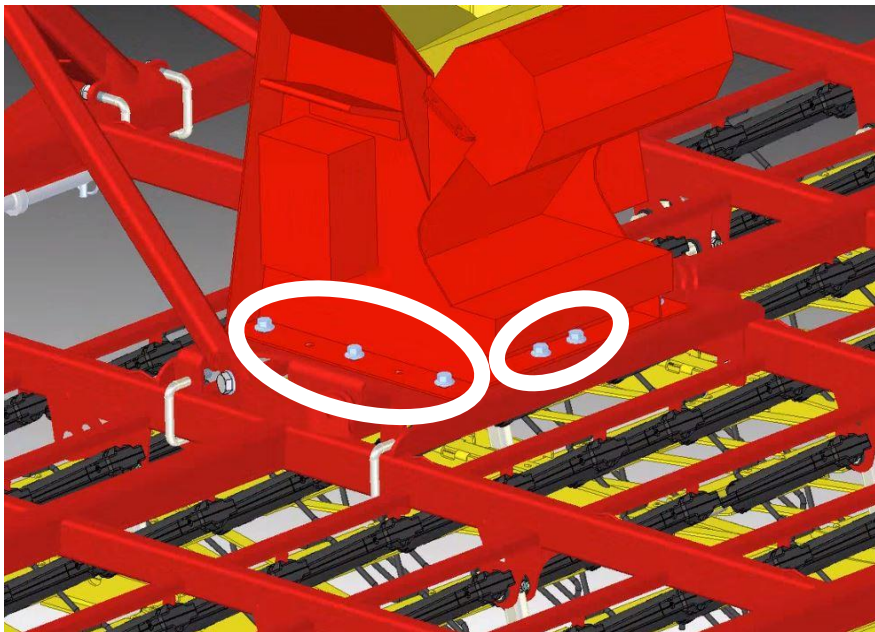


Figure 42: Securing the PS by means of hexagonal bolts on the bracket

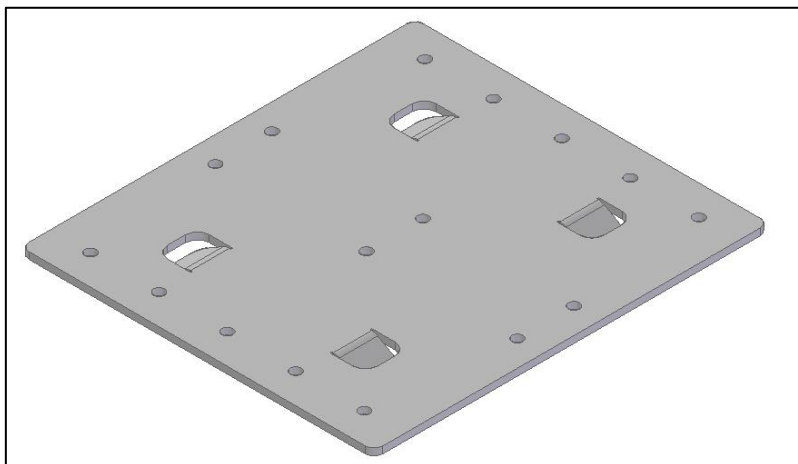


Figure 43: PS counter plate

## 5.2 MD ON VS150-300

The seeder is attached to the MD bracket using the eight hexagonal bolts.

To ensure a good fit of the spreader, a counter plate must also be positioned between the spreader and the bracket. The hole patterns of the bracket, Multi-Metering System and counter plate are identical, so that everything can be screwed together at the same time.

### CAUTION!

To place the Multi-Metering System (MD) on the bracket, make sure that no damage is caused by the spreader possibly falling down.

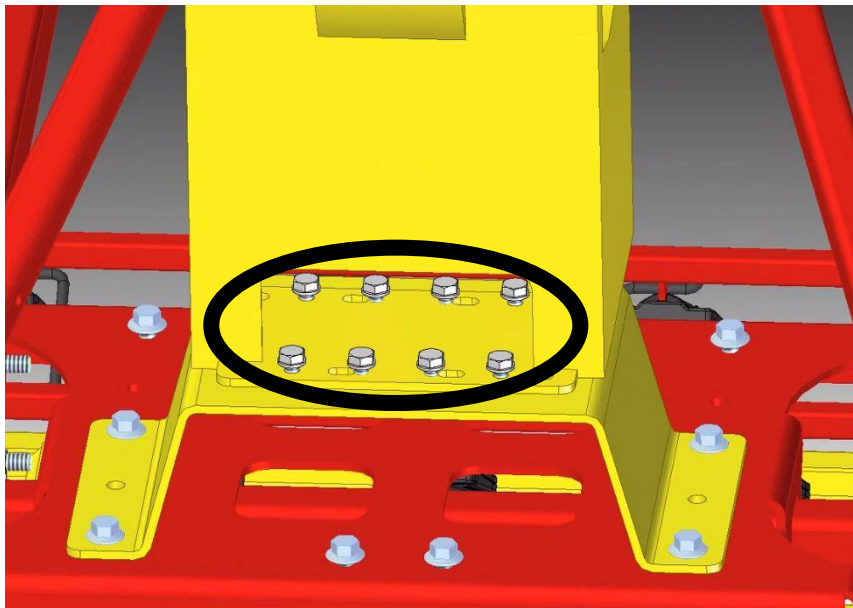


Figure 44: Securing the MD by means of hexagonal bolts on the bracket

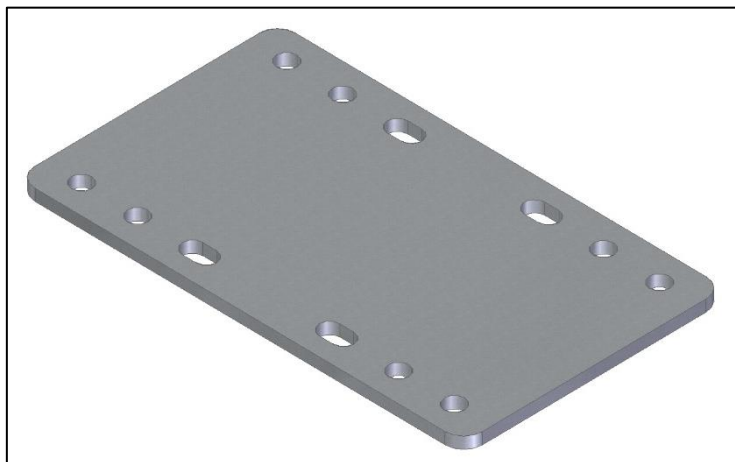


Figure 45: MD counter plate

### 5.3 PS ON VS600-1200

The seeder is attached to the PS bracket using the ten hexagonal bolts. To ensure a good fit of the spreader, a counter plate must also be positioned between the spreader and the bracket. The hole patterns of the bracket, PS and counter plate are identical, so that everything can be screwed together at the same time.

#### CAUTION!

To place the pneumatic seeder (PS) on the bracket, take it by the side handles and make sure that no damage is caused by the spreader possibly falling down.

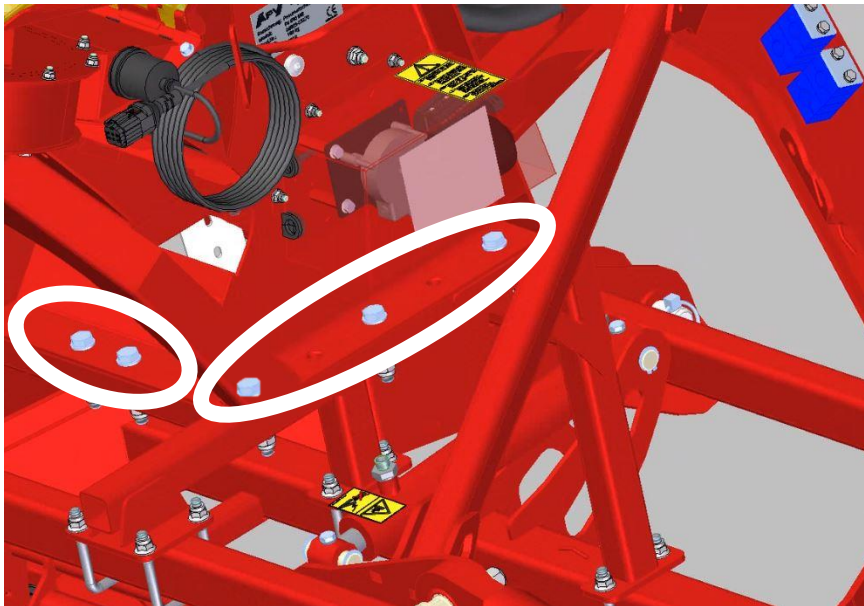


Figure 46: Securing the PS by means of hexagonal bolts on bracket 1

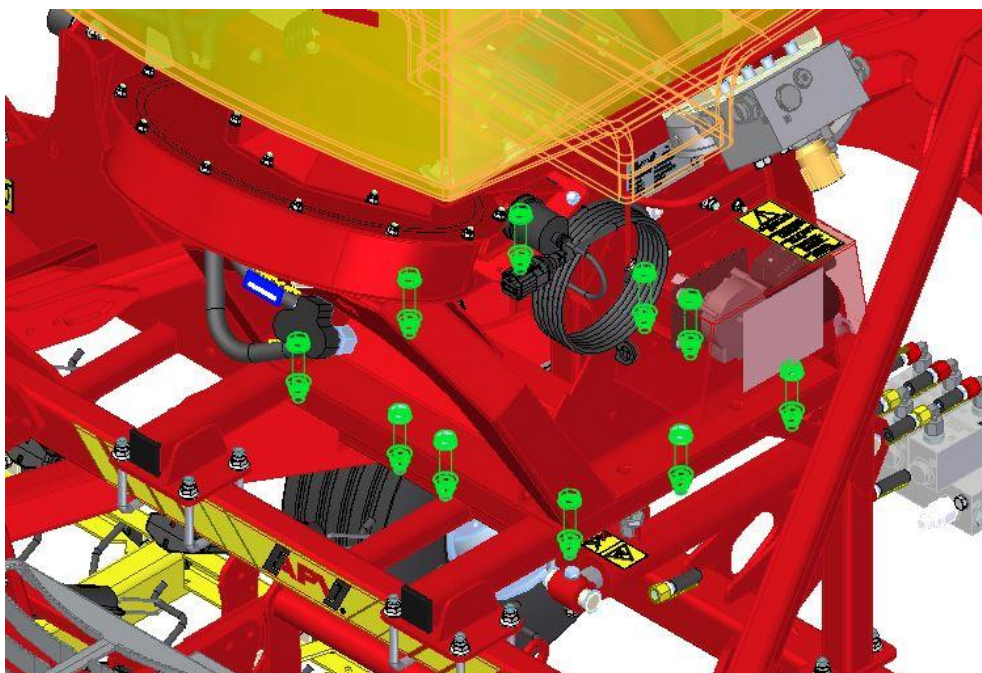


Figure 47: Securing the PS by means of hexagonal bolts on bracket 2

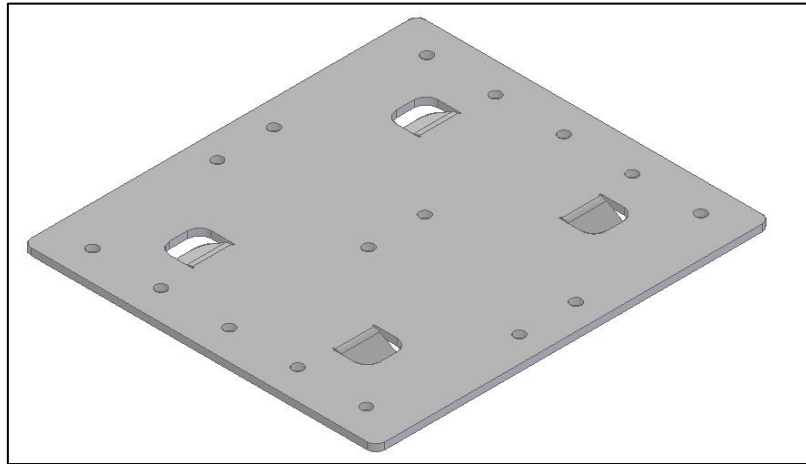


Figure 48: PS counter plate

## 6 DISPERSION PLATE INSTALLATION

Please note that the distances indicated from point 6.3 to 6.8 are only guidelines.

Due to installation conditions, it may not be possible to maintain the distances shown.

It is important to mount the dispersion plates in such a way that there are no collisions with tines, spring packages etc. when adjusting the cylinders for tine pressure, even if the distance from dispersion plate to dispersion plate is then not exactly the same as the values in these instructions.

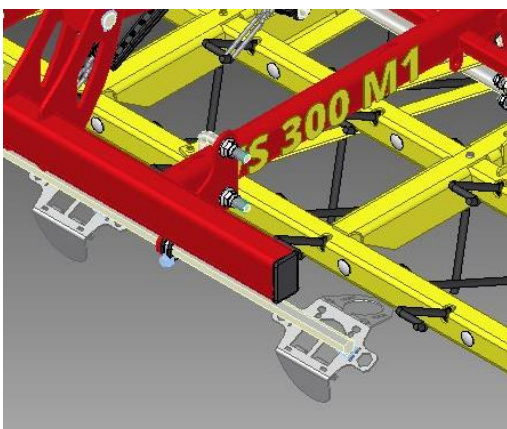


Figure 49: Dispersion plate installation by means of hexagonal bar on VS150-300

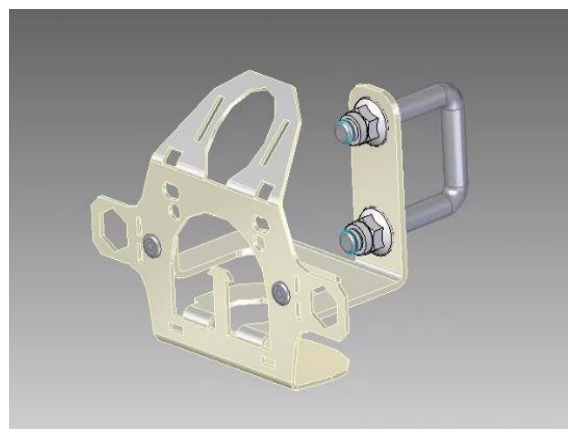


Figure 50: Dispersion plate with bracket and U-bolt for VS600-1200

## 6.1 GENERAL MOUNTING FOR VS150-300

On the VS150-300, the dispersion plate installation is mounted using hexagonal bars on which the dispersion plates are threaded.

To do this, first of all bend the side lugs of the dispersion plates downwards by 80° using pliers (Figure 51). Then the dispersion plates can be placed on the hexagonal bar by pushing the hexagonal bar through the two hexagonal holes provided in the side lugs of the dispersion plates. Then fix the dispersion plates to the hexagonal bar using the screws and washers.



Figure 51: Bending the lateral dispersion plates



Figure 52: Dispersion plate threaded and fixed on the hexagonal bar

The hexagonal bar itself is then mounted on the frame of the harrow, using the dispersion plate brackets and U-bolts, as shown in Figure 53.

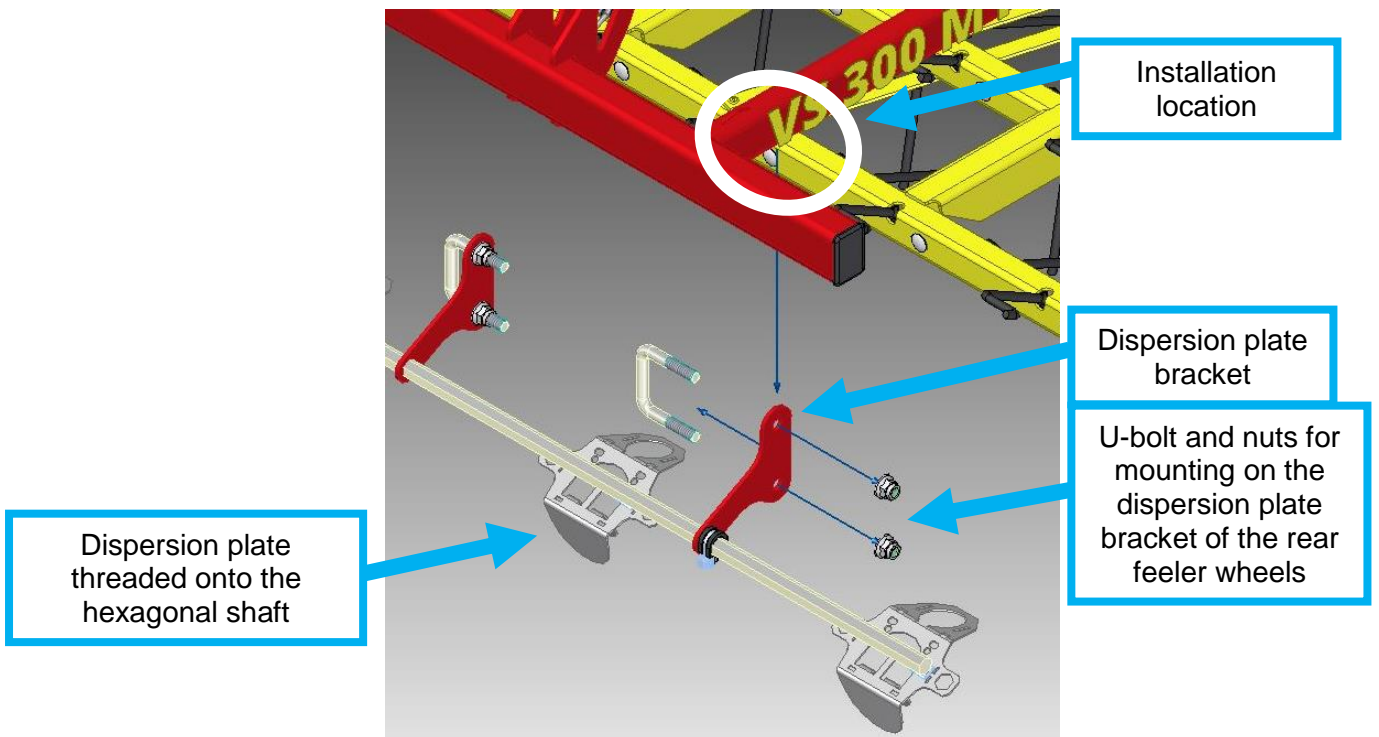


Figure 53: Mounting the hexagonal bar on the harrow frame



## 6.2 GENERAL MOUNTING FOR VS600-1200

On the VS600-1200, the dispersion plates are attached to the foremost adjustment rail of the tine section (Figure 54).

The dispersion plates, together with the riveted brackets, are attached to the harrow using U-bolts and nuts.

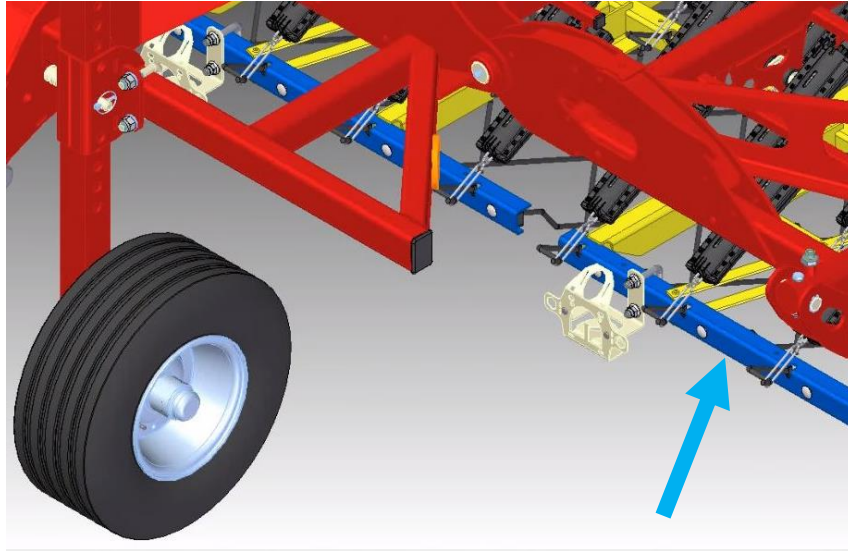


Figure 54: Mounting the dispersion plates on the adjustment rail of the tine section for VS600-1200

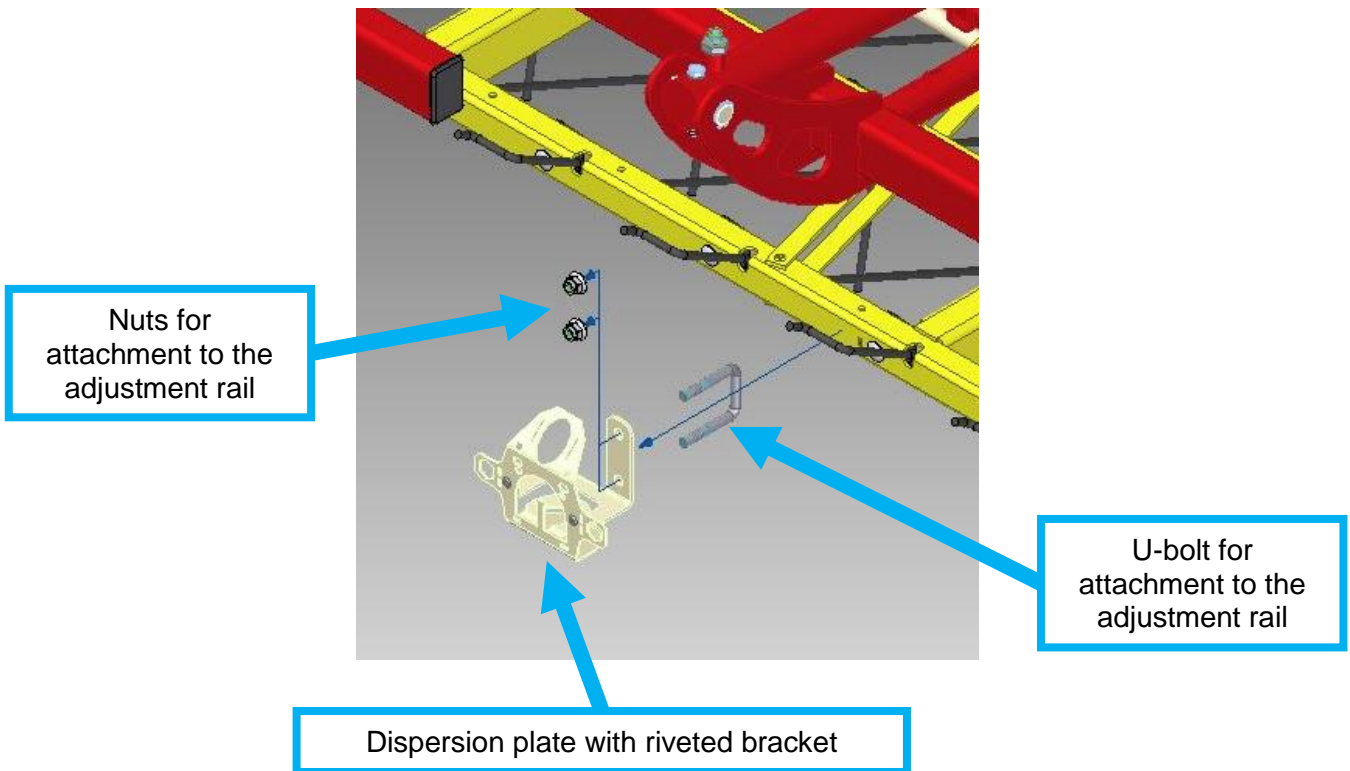


Figure 55: Components of dispersion plate installation on VS600-1200

### 6.3 DISPERSION PLATE POSITIONING ON VS150

If a PS with 8 outlets is set up on the VS150, mount the dispersion plates at the distances shown.

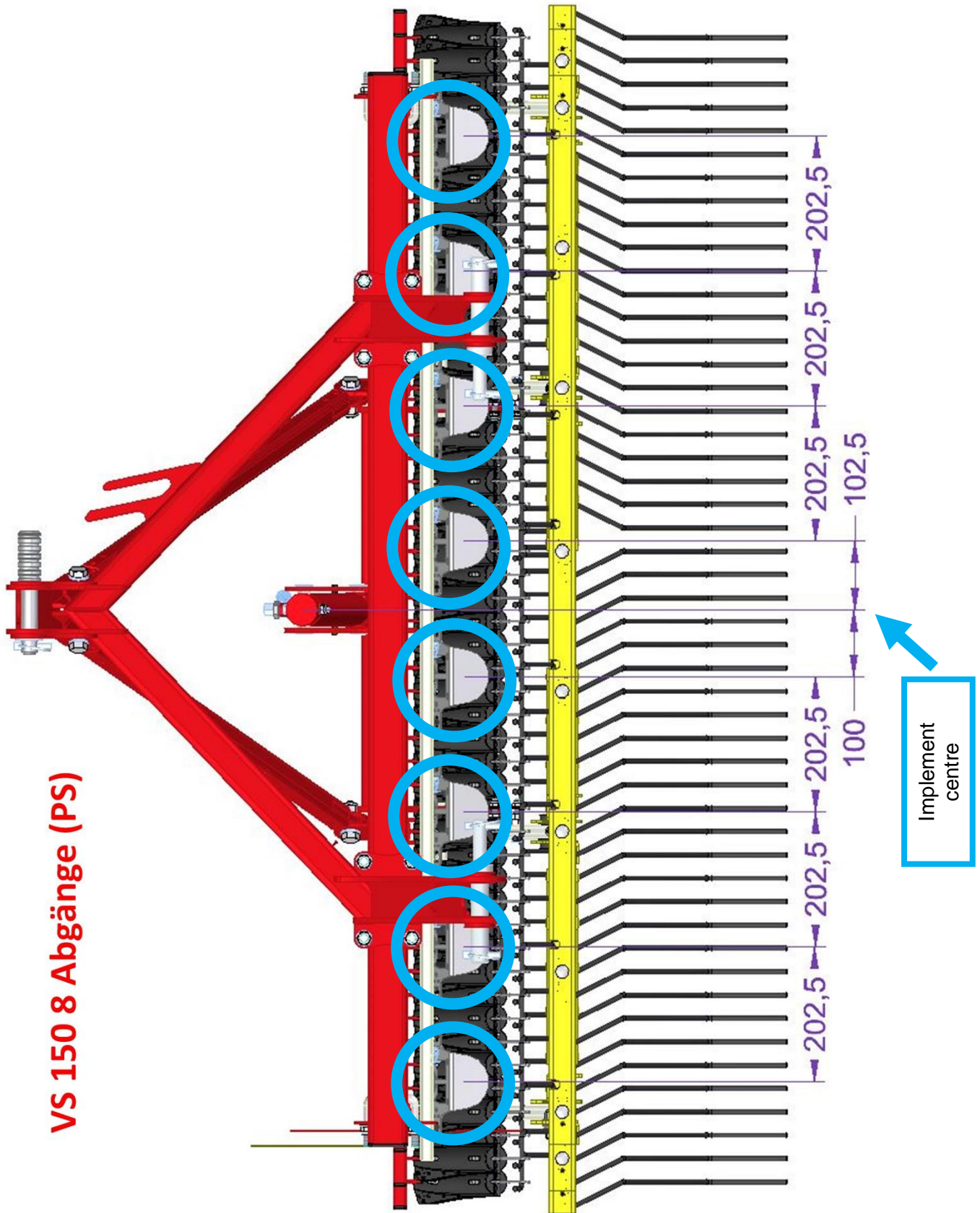


Figure 56: Dispersion plate positioning on VS150 and 8 outlets (PS)

If an MDP with 6 outlets is set up on the VS150, the following distances must be observed.

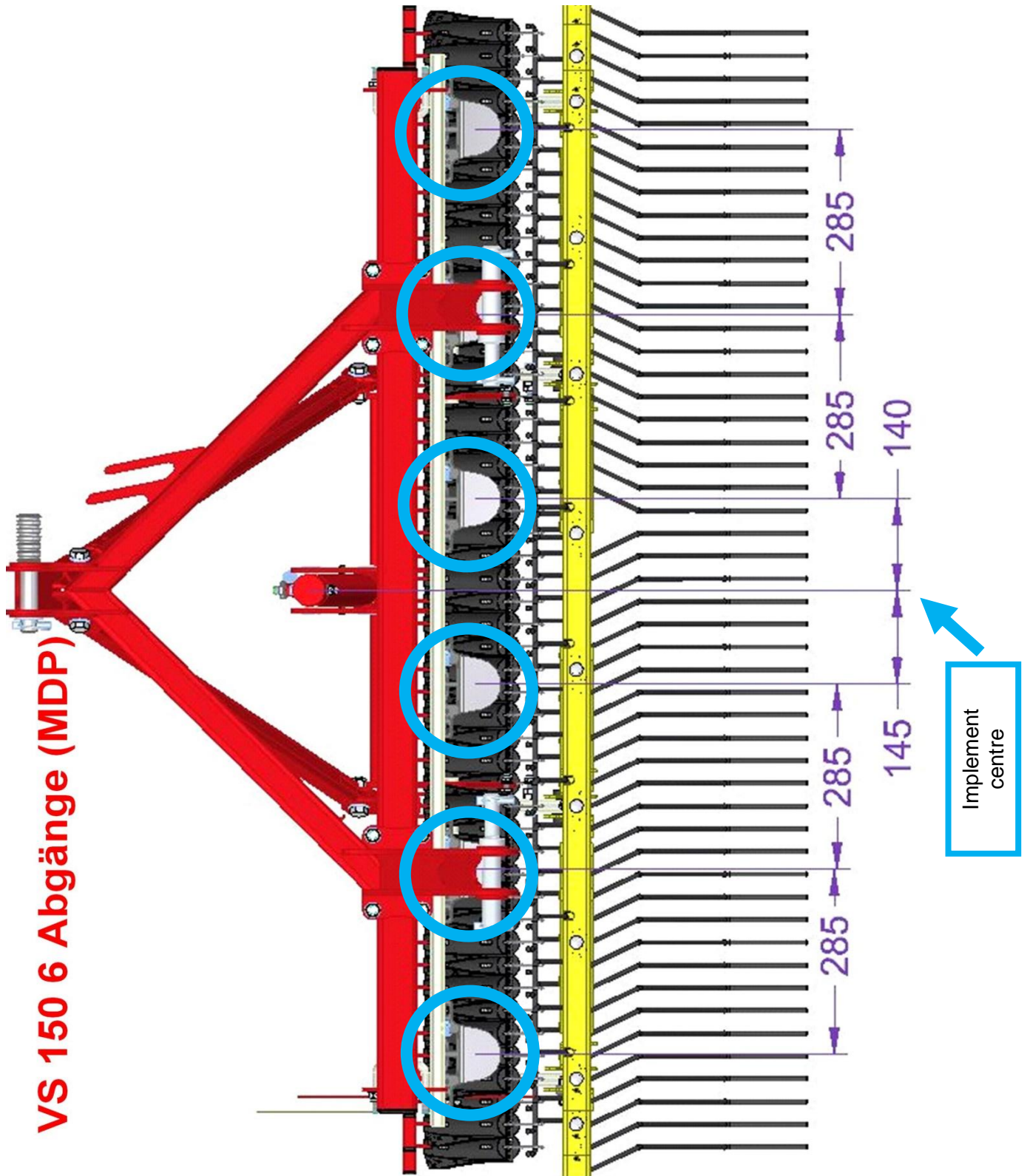


Figure 57: Dispersion plate positioning on VS150 and 6 outlets (MD)

## 6.4 DISPERSION PLATE POSITIONING ON VS300

If a PS with 8 outlets is set up on the VS300, mount the dispersion plates at the distances shown.

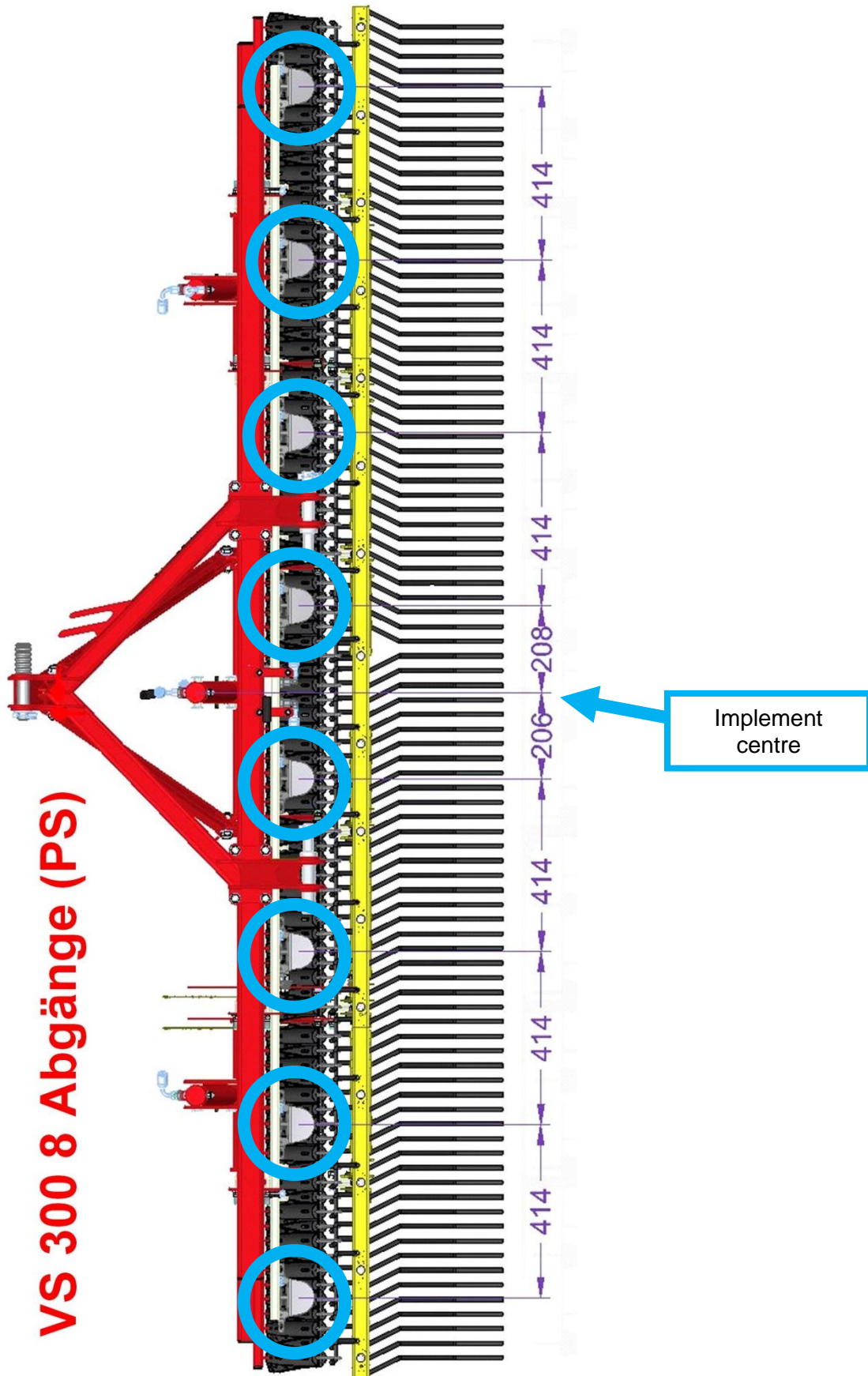


Figure 58: Dispersion plate positioning on VS300 and 8 outlets (PS)

If an MDP with 6 outlets is set up on the VS300, the following distances must be observed.

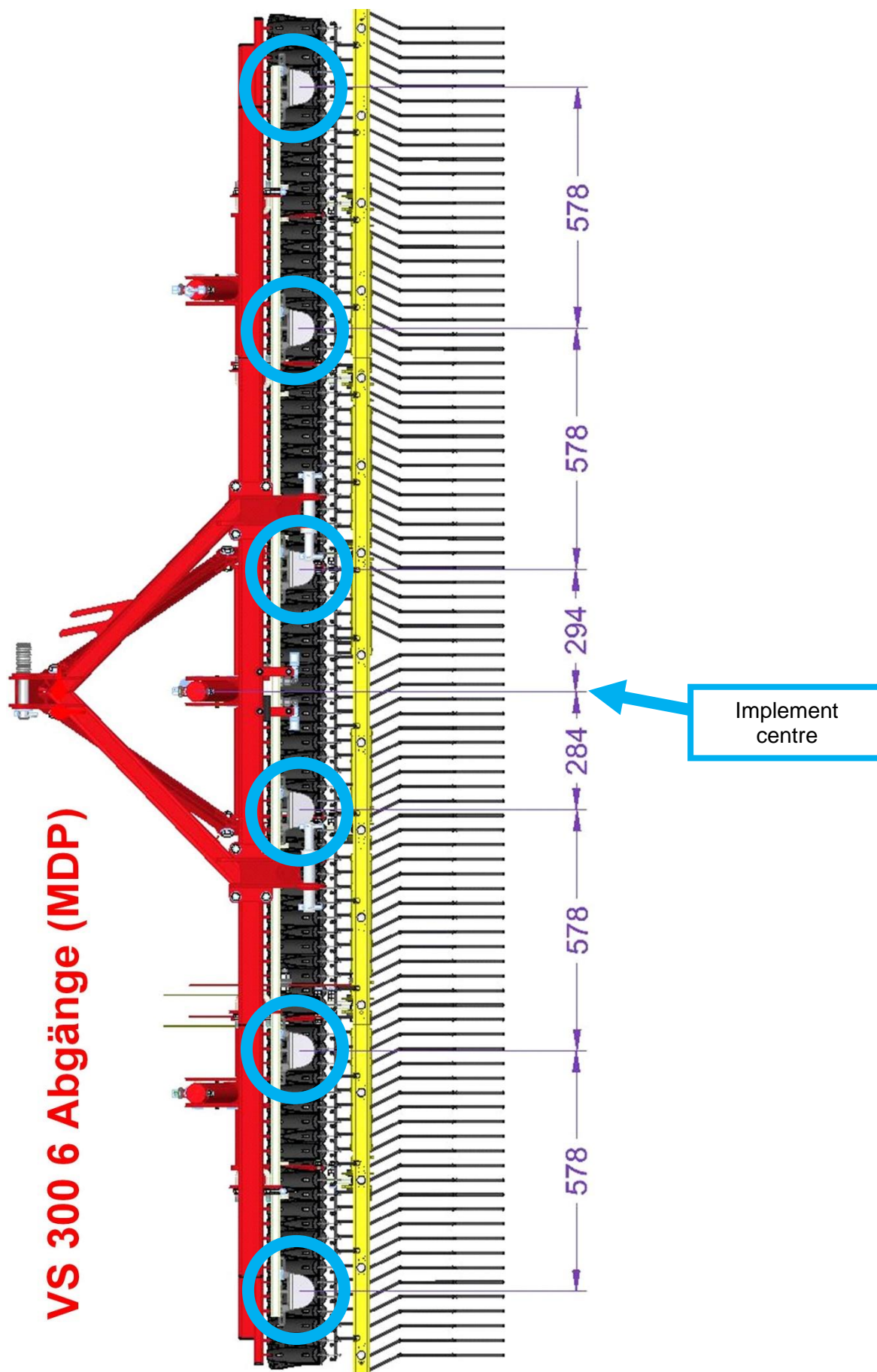


Figure 59: Dispersion plate positioning on VS300 and 6 outlets (MD)

## 6.5 DISPERSION PLATE POSITIONING ON VS600

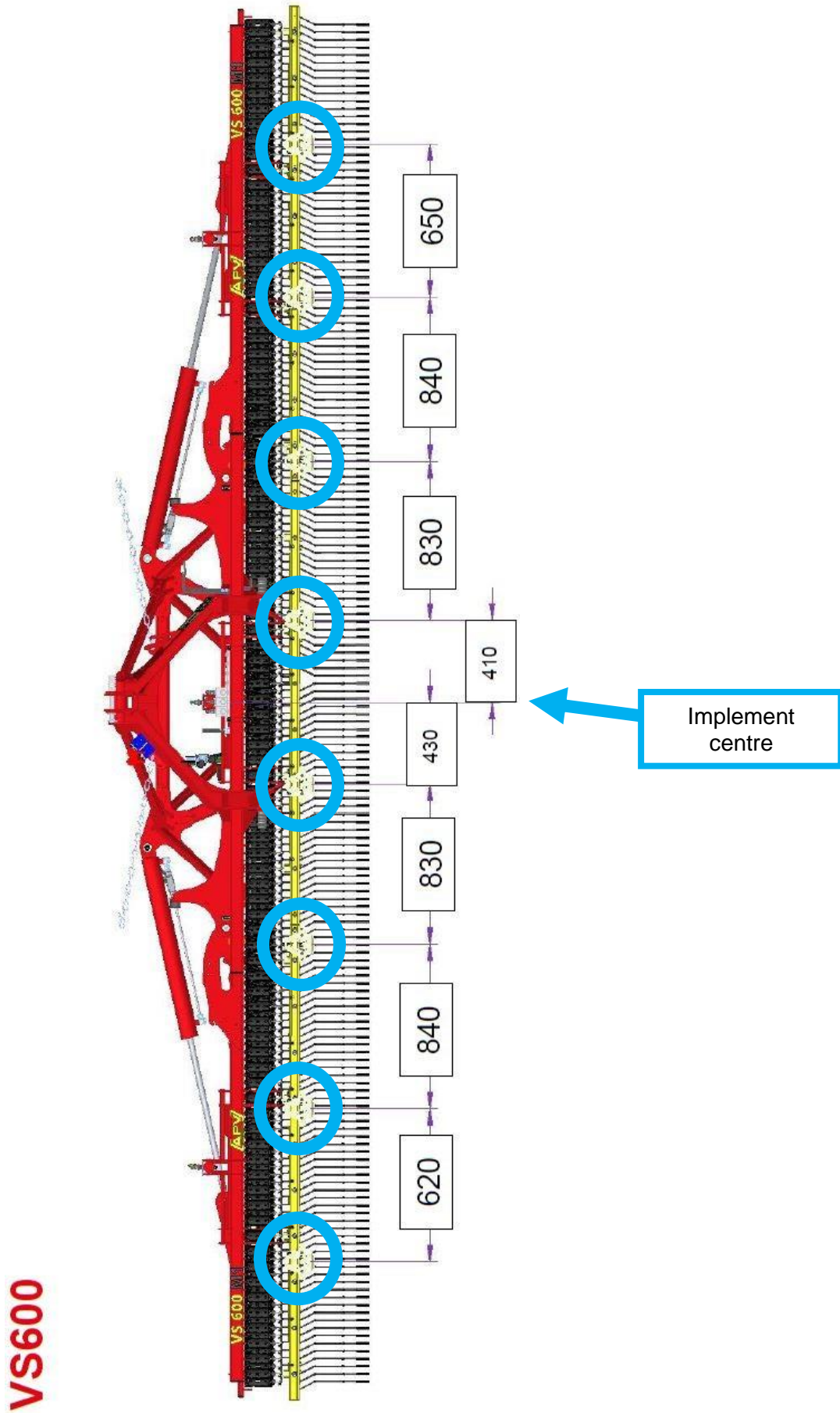


Figure 60: Dispersion plate positioning on VS600

## 6.6 DISPERSION PLATE POSITIONING ON VS750

### VS750

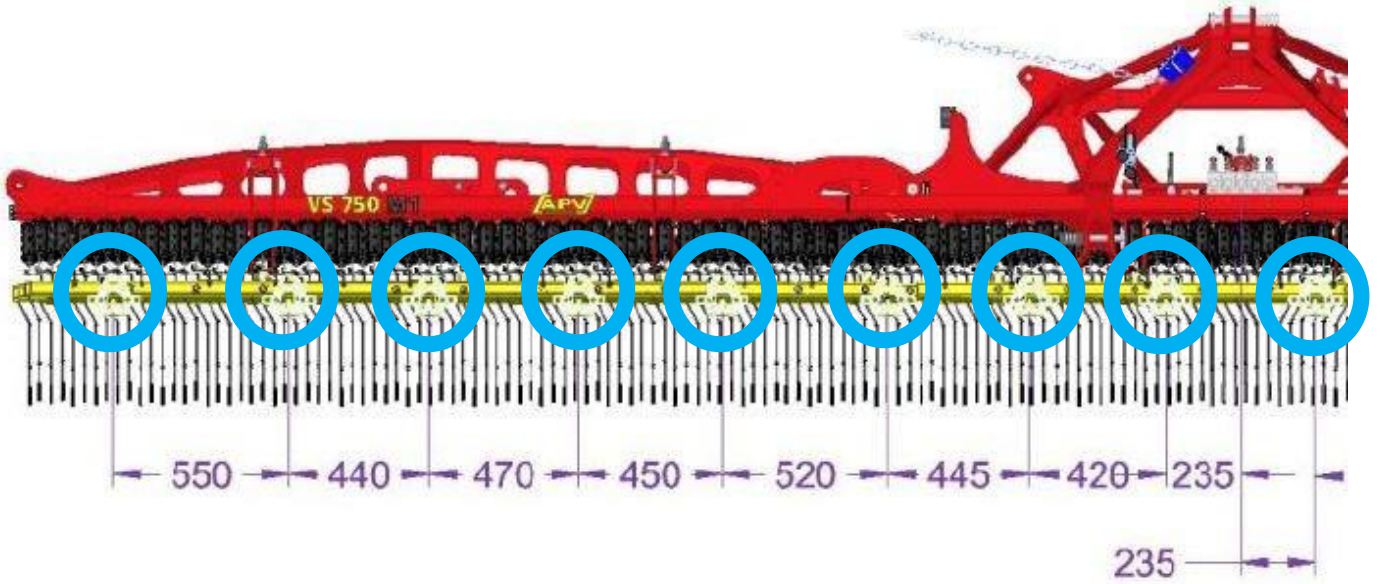


Figure 61: Dispersion plate positioning on VS750 in the right-hand travel direction

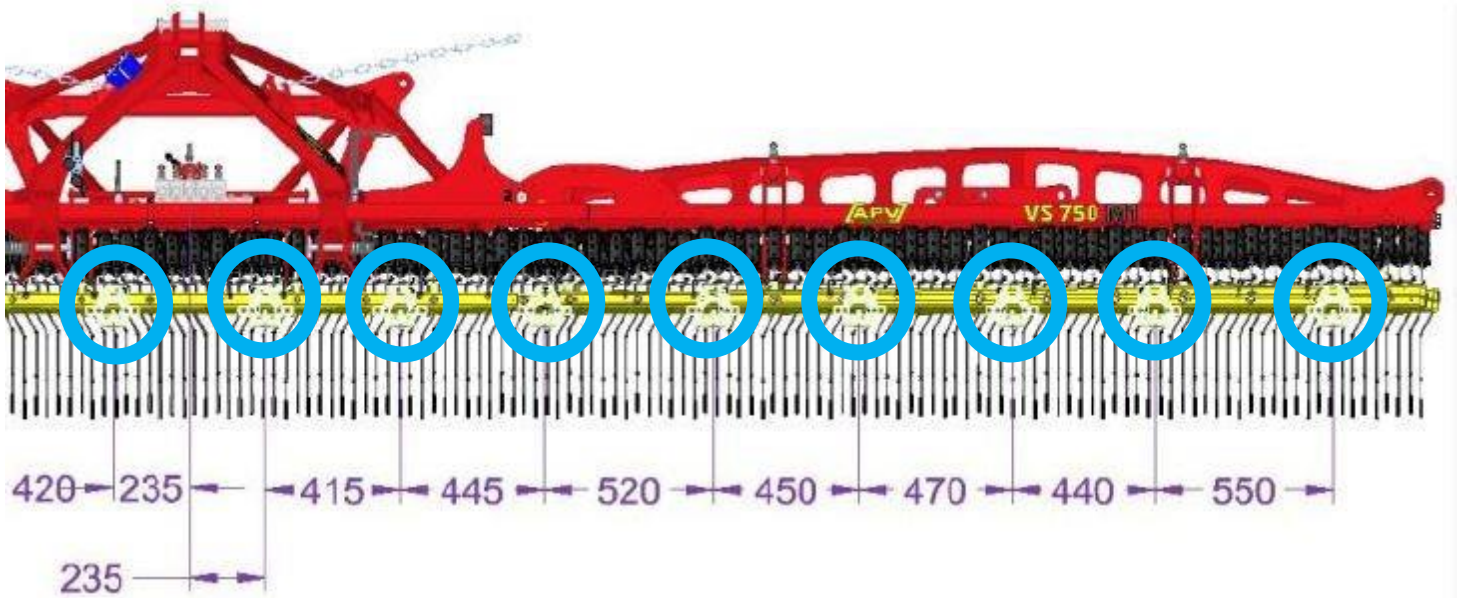


Figure 62: Dispersion plate positioning on VS750 in the left-hand travel direction

## 6.7 DISPERSION PLATE POSITIONING ON VS900

### VS900

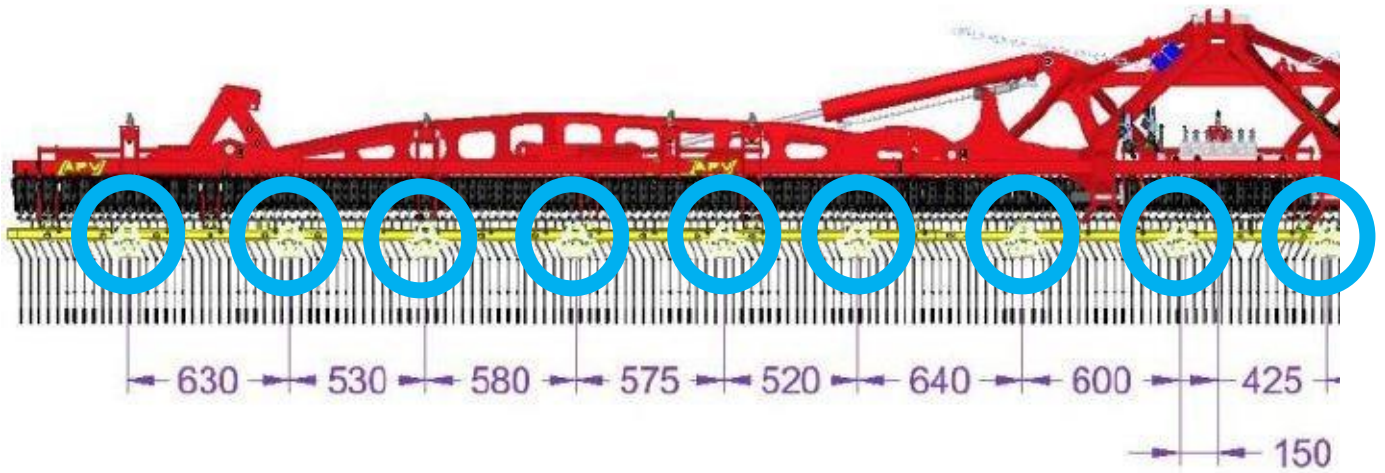


Figure 63: Dispersion plate positioning on VS900 in the right-hand travel direction

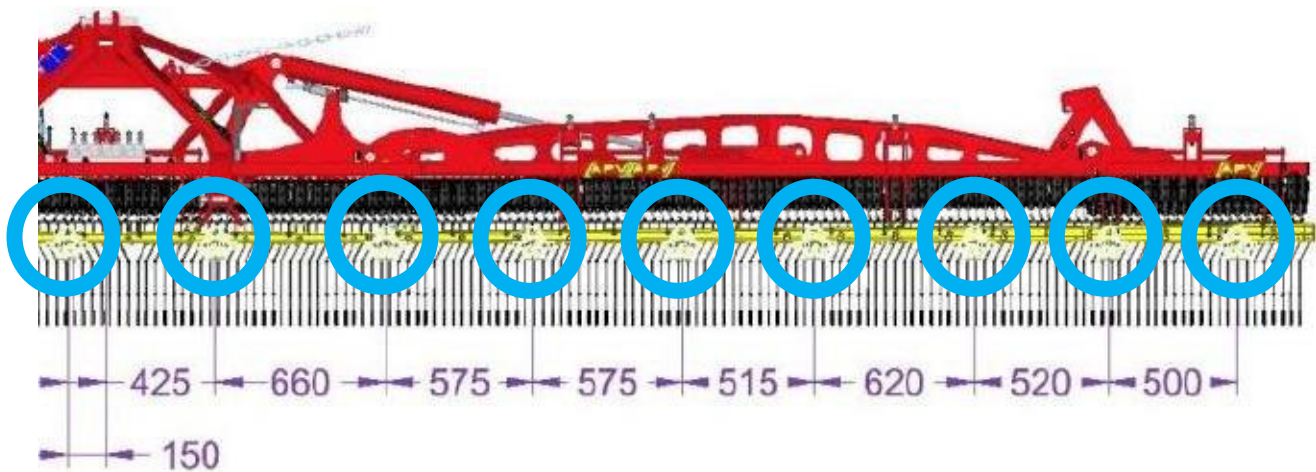
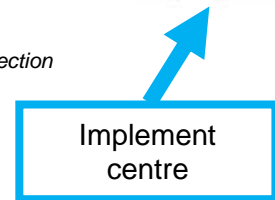
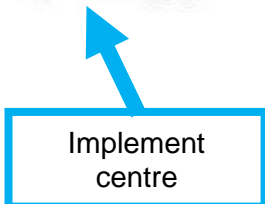


Figure 64: Dispersion plate positioning on VS900 in the left-hand travel direction





## 6.8 DISPERSION PLATE POSITIONING ON VS1200

### VS1200

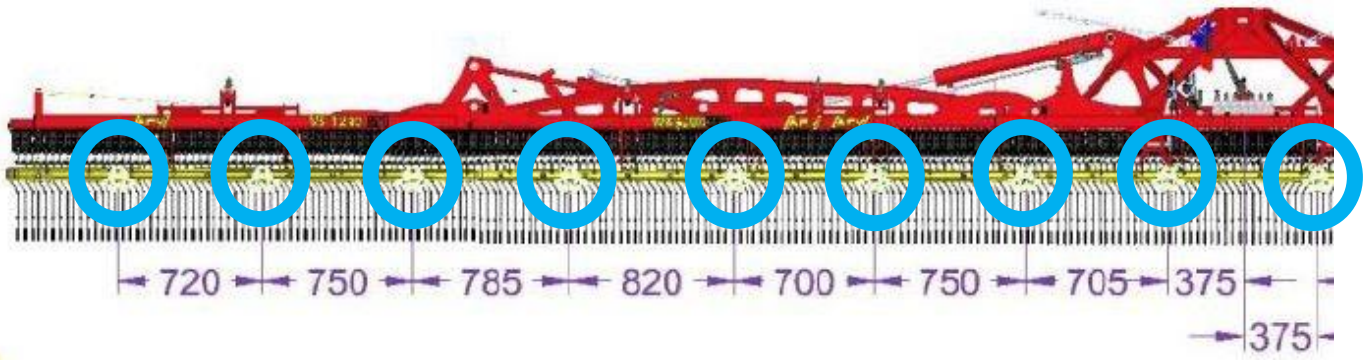


Figure 65: Dispersion plate positioning on VS1200 in the right-hand travel direction

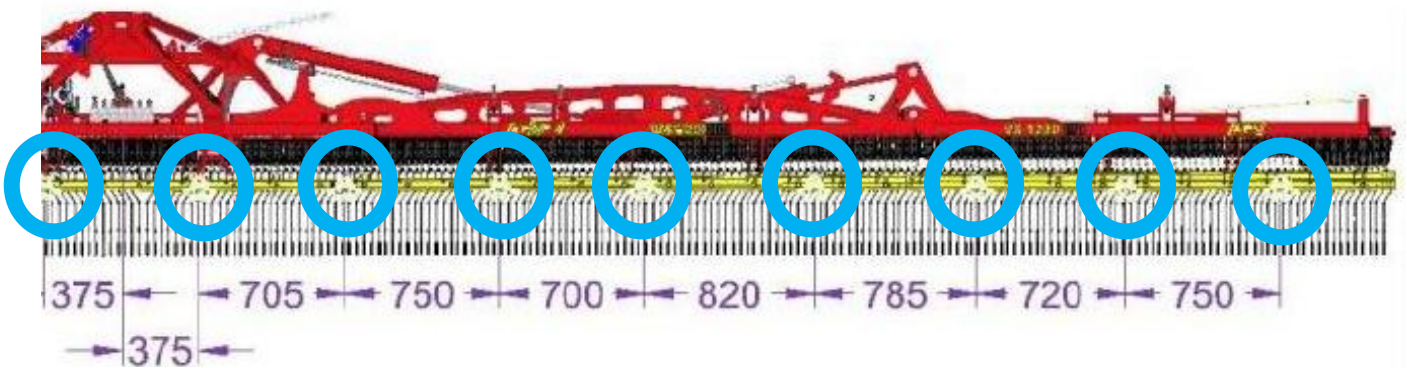
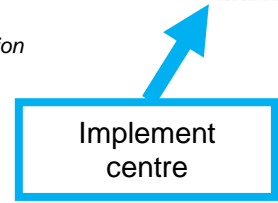
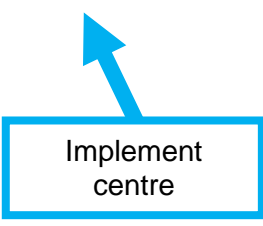


Figure 66: Dispersion plate positioning on VS1200 in the left-hand travel direction



## 7 HOSE LENGTHS

Due to different implement types and different revision statuses of frame elements and assemblies, it is difficult to specify exact hose lengths for all Tined Weeder Pros on the market.

Consequently, the length of the respective hoses must be adapted to each implement individually.



### PLEASE NOTE!

When cutting the hoses, make sure to cut straight.

To do this we recommend laying out the hoses, one after the other, along the route specified under Point 8 and then cutting them off in such a manner that a connection to the seeder or to the dispersion plates is possible. You can work either from the seeder to the dispersion plates, or from the dispersion plates to the seeder; it does not matter.



### CAUTION!

It is important to ensure that enough space is left at the folding points, so that the hoses cannot be crushed during the pre-tensioning and folding processes.

## 8 HOSE ROUTING

### 8.1 CONNECTION OF THE HOSES ON THE PS

In order for the hoses to be connected to the seeder, the clamping screws on the clamping plate must firstly be loosened. The number and type of clamping screws depends on the PS model that you have (refer to Figure 67 and Figure 68). Then, the ends of the hoses must be inserted into the black transition pieces up to the stop(!). Then re-tighten the clamping screws.



#### PLEASE NOTE!

If it is too difficult to insert the hoses, using silicone spray on the outside of the hose can help.

On the other hand, if there is a certain amount of play between the hoses and the black transition pieces, this is not a problem. Tighten the clamping screws to fix the ends of the hoses in place.

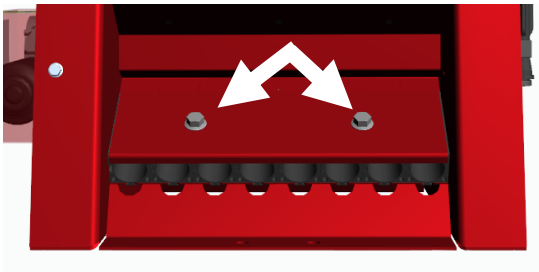


Figure 67: 2 clamping screws on the normal PS

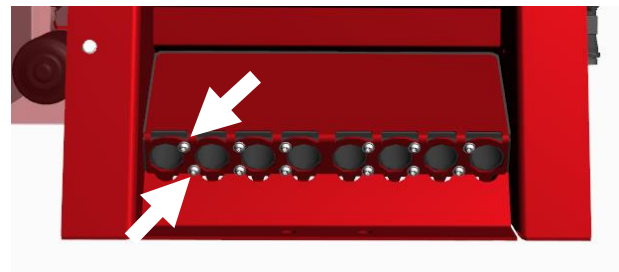


Figure 68: 12 clamping screws on a Fertiliser PS

### 8.2 CONNECTION OF THE HOSES ON AN MD

Connection on an MD is made according to the same principle as for a PS.

Here, too, the clamping screws must first of all be loosened and then the hoses pushed into the black transition pieces as far as the stop (!). Then, tighten the clamping screws once again.

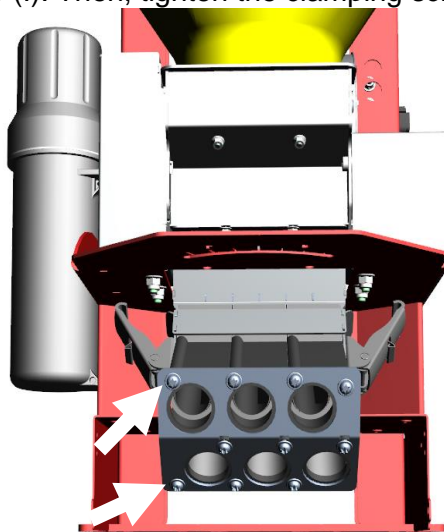


Figure 69: Clamping screws on a Multi-Metering System

### 8.3 LAYING THE HOSES ALONG THE HARROW

In general, when laying the seed hoses, make sure that there are no inclines on the way to the dispersion plates. In the areas of the folding points, however, this cannot be entirely ensured; here, slight upward loops can be tolerated.

However, it is also important to position the hoses in such a way that no crushing can occur during the folding process. A tight fit of the hoses both in the dispersion plates and on the seeder is also necessary.

In general, laying the hoses is identical for the right and left harrow halves, so the following pages only show the laying of one half of the harrow. The other side is then to be laid according to the same principles, just back-to-front.

Furthermore, the procedure is illustrated in these instructions using a VS600; for larger working widths, the installation must be continued analogously on the other side frames.

For the left side of the harrow, the left outlets of the PS are used and for the right side of the harrow, the right outlets of the PS. The hoses should then be laid in an even curve.



Figure 70: Hose laying starting from the PS outwards 1



Figure 71: Hose laying starting from the PS outwards 2

The hoses for the centre frame can be routed to the dispersion plates shortly after the seeder, sloping steeply, as can be seen in the following two figures.



*Figure 72: Hoses to the dispersion plates on centre frame 1*



*Figure 73: Hoses to the dispersion plates on centre frame 2*

Subsequent hose laying takes place along the front hollow profile of the harrow frame. Attaching the hoses to the frame at suitable points with cable ties is advisable. It is also possible to go through the holes in the cylinder linkage, as seen in Figure 79 and Figure 80. Use the following photos to help you attach the hoses.



Figure 74: Hose laying along the harrow 1



Figure 75: Hose laying along the harrow 2



Figure 76: Hose laying along the harrow 3

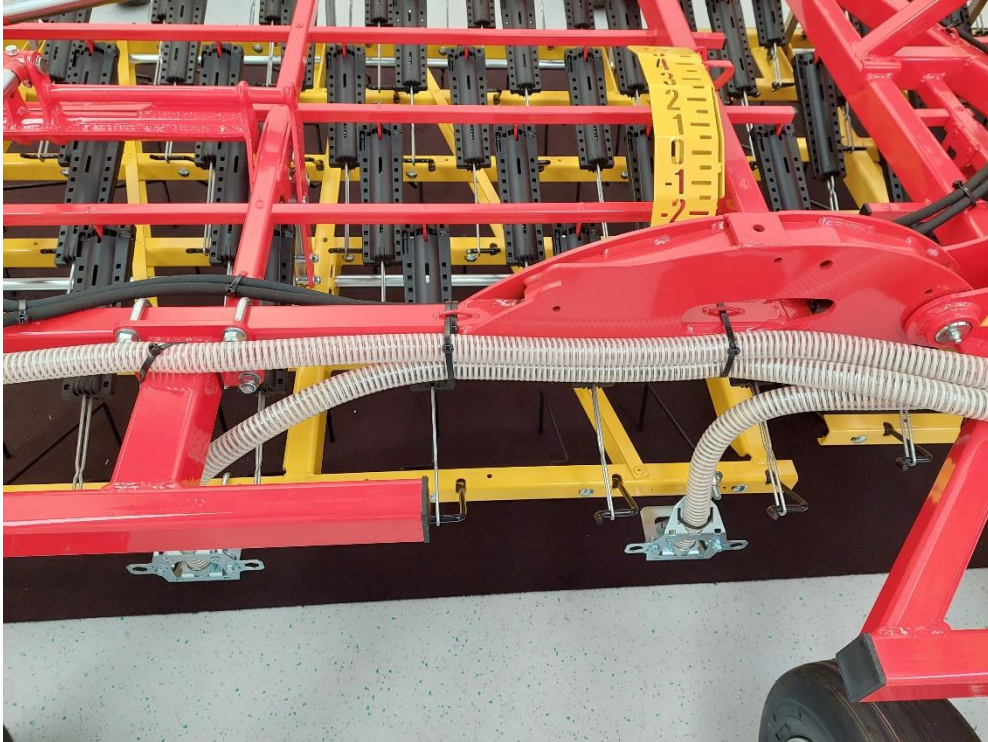


Figure 77: Hose laying along the harrow 4



Figure 78: Hose laying along the harrow 5



Figure 79: Hose laying along the harrow 6





*Figure 80: Hose laying along the harrow 7*



*Figure 81: Hose laying along the harrow 8*

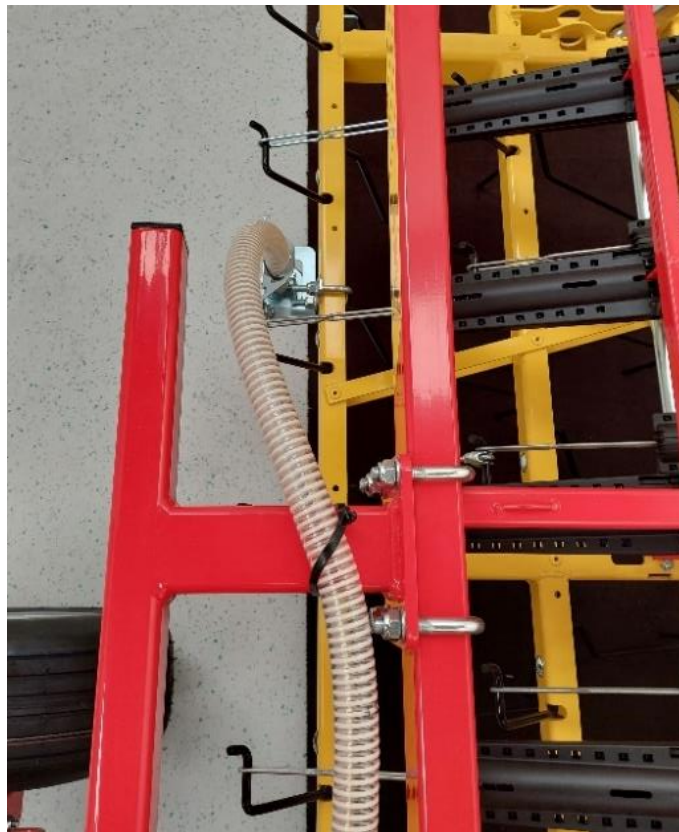


Figure 82: Hose laying along the harrow 9



Figure 83: Hose laying along the harrow 10

## 9 CONNECTING THE HOSES TO THE DISPERSION PLATES

When the hoses are all laid, they can now be installed on the dispersion plates.

To do so, insert the ends of the hose through the openings in the large tab of the dispersion plate and slide the fastening clip (00600-3-331 Hinge bolt clamp 32-35 20) onto the hose.

Now push the end of the hose through the opening in the small tab on the dispersion plate.

In the next step, put the fastening clip on the dispersion plate in such a way that the holding finger is positioned between the hose and the fastening clip and is fixed by the hook of the holding finger.



### PLEASE NOTE!

The hose may only protrude into the dispersion plate by 1-2 mm to prevent seed blockages (see Figure 84).

When the hose is correctly positioned, the fastening clip can be tightened and the hose at the large tab can be additionally secured with a cable tie.

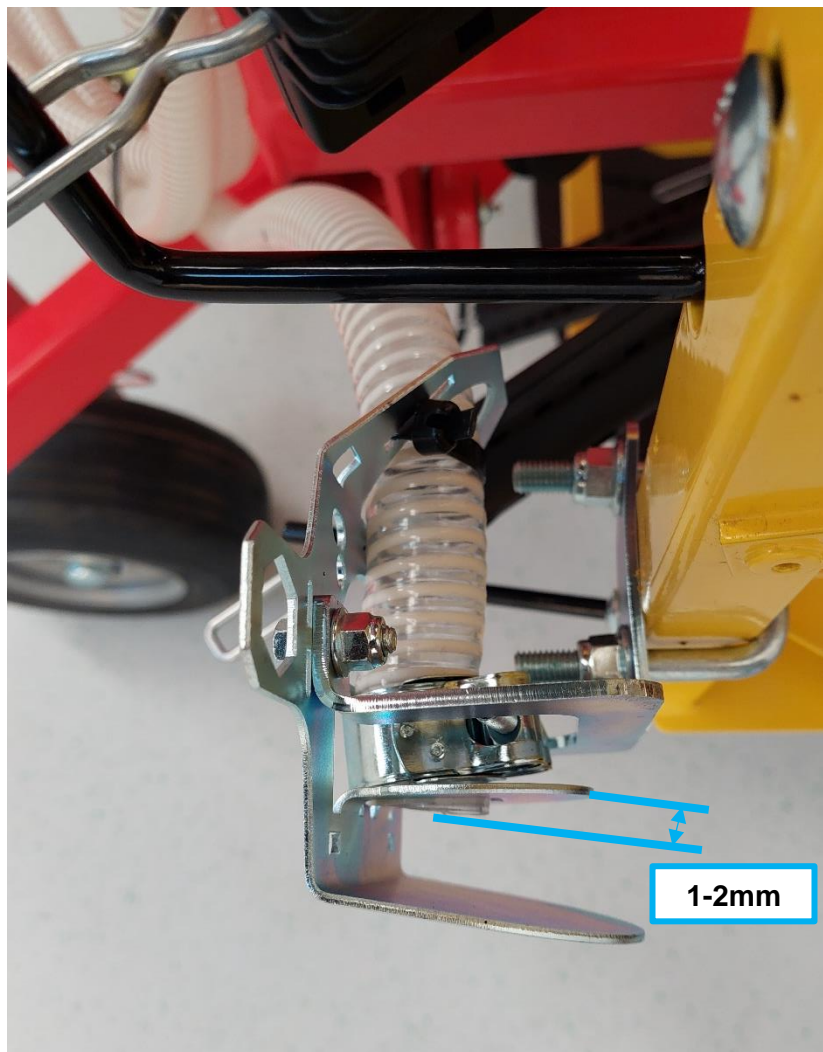


Figure 84: Correct connection of the seed hose and dispersion plate

## 10 FINAL CHECK

Finally, check once again whether smooth folding is possible without crushing the seed hoses. The tight fit of the hoses in the dispersion plates and on the seeder can also be checked.

In the working position, all hoses should run as horizontally as possible to the dispersion plates.

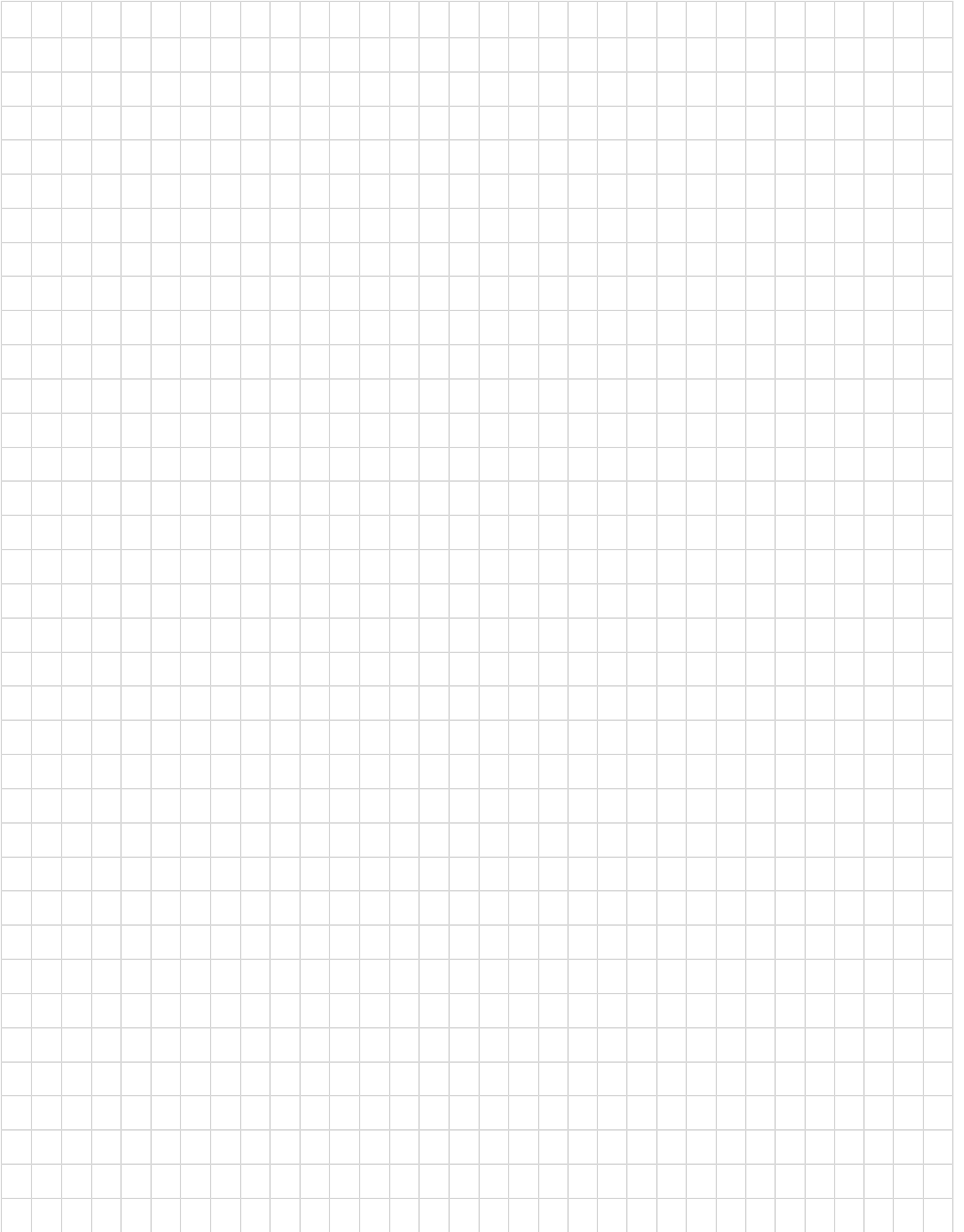


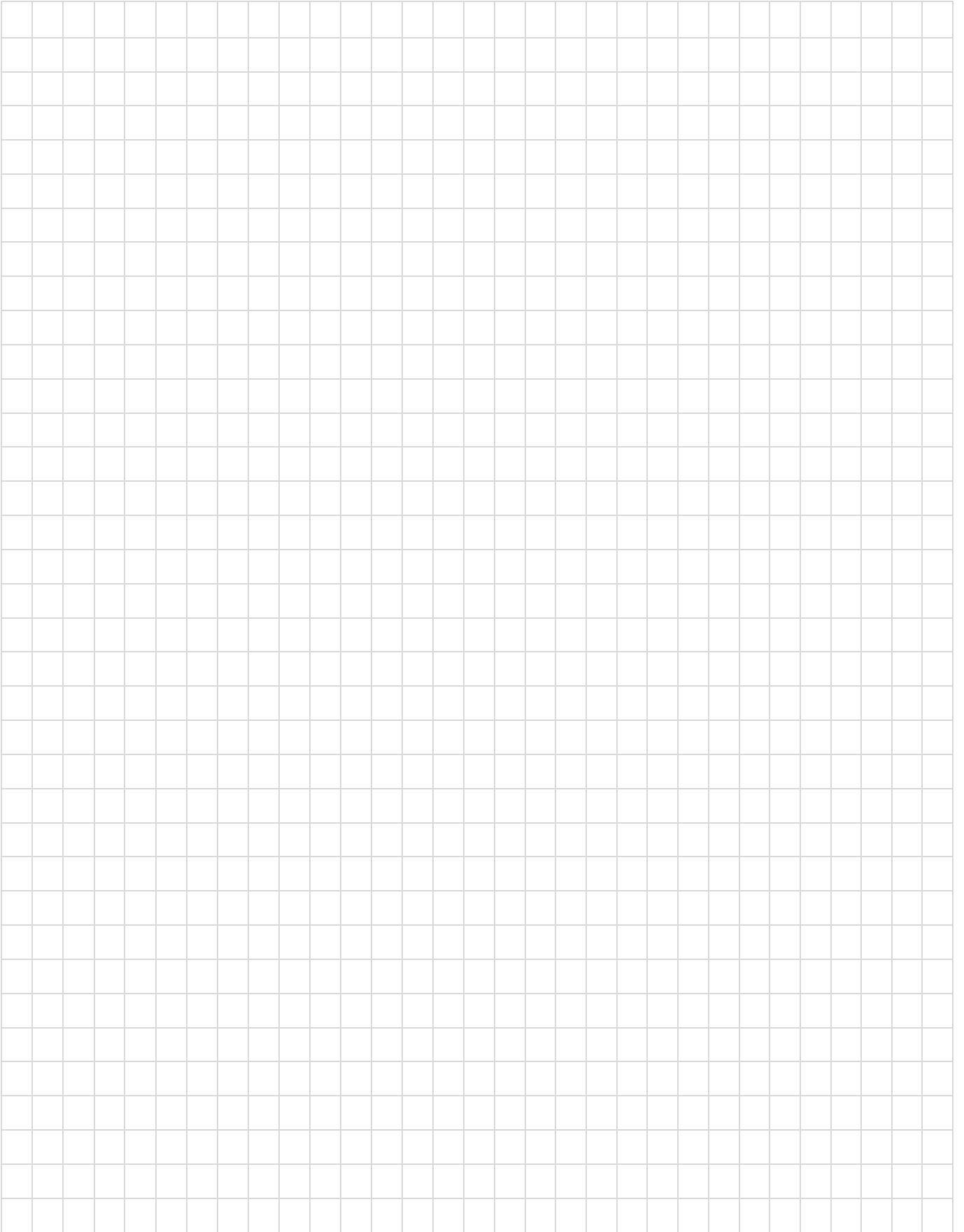
Figure 85: VS600 with PS in folded state



Figure 86: VS1200 with PS in field operation









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