

Safety and Assembly instructions

Roof Systems



Thank you for purchasing a Fliptop AIR

This document includes assembly instructions for Fliptop AIR.

There are variants depending on length, width and the number of arches.

In case of uncertainty or questions, we or the reseller would be happy to provide you with support.

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Important

Transport damage must be reported to the carrier. It is important to check the packaging when the goods arrive, if it is damaged, a notification must be made to the driver at the time of delivery. It is the carrier that is responsible for damage that occurs on the goods during transport. The mounting must be done according to the mounting instructions for the material warranty to apply.

Guarantees

There is a 1 year material and function guarantee from us. For the warranty to apply, the product must be mounted according to our instructions.

Safety

Operating instructions must be read carefully before using the system. When the movable arms are operated without knowledge serious personal injury may occur, or the system itself may be damaged



Handling instructions Fliptop Air 621-010

General information

Fliptop Air is a roof system for covering essentially tipper trucks and containers. Semiautomatic equipment consisting of two side panels with control arms, the ends are connected by steel tubes and covered with PVC fabric. The structure is opened and closed with one or two pneumatic cylinders that run together.

Fliptop Air is mainly intended for the coverage of tipper trucks and containers. This however does not exclude other uses.

Operating instructions

Please read this documentation and familiarize yourself with the equipment before using it.

Fliptop Air systems operated by pneumatic power, usually from a vehicle and can only work if the vehicle is started, at such an installation, the system can be operated from the cab in some cases. The equipment can then either run with radio, push buttons on the electrical cabinet or from the cab. Other options are to operate with a manual valve adjacent to the platform.

This means that the equipment can be operated without the vehicle is started, however, when servicing and maintaining the compressed air shall be switched off so that the equipment can not be operated. This also applies to other work where you can get hurt if the system moves.

When you open and close Fliptop Air you need to oversee and make sure that no one can get damaged. The pneumatic pressure-driven movements are very strong and can cause very serious damage if something or someone becomes pinched or hit. If your Fliptop Air has radio control be extra careful, make sure to keep an eye on the transmitter so that no one inadvertently turn it on and maneuvers when someone is near moving parts. It is also important not to open or close the system during driving. If you must perform service or other work on the system, it is imperative to break the supply of air, so the system have no possibility to move. If the system is locked with straps, do not forget to loosen these before operating.

Important information !

In strong winds, it is necessary to clamp the opening side of Fliptop Air with straps, there is anchor rings in the front and back, use both to avoid the system beeing sucked up because of the negative pressure that occurs when the wind passes the dorsal ridge. The wind can bend the connecting rods and seriously damage the system. During loading and unloading, it is important to keep an eye on the load so it wont end up in the front or rear end's link mechanism, if this happens, a cleaning must be done before using the system. If the load fills the cargo space and tends to crumble into a coherent mass there's a risk of a vacuum forming, this can bend the tubes in the bed and severely damage your system, if this risk exists then open the roof to let in air before unloading.

During loading and unloading of tons of heavy stone, roots, or other things that can smash the ends it must be done with care. Fliptop Air does not tolerate plenty of hits at the rear end of the unloading, if there is a middle support mounted in the center it can also be damaged during loading and unloading. If injuries occur, they shall be repaired immediately in order not to worsen the condition.

Control every week

We recommend that Fliptop Air system is reviewed 1 time per week when using the system continuously, for this check, it is advisable to first check that the fabric is not damaged. Fliptop Air system is secured in all the corners and at the two long sides, make sure the fixings are secure and that no bolts are missing. Open and close the system to control the movements are smooth and quiet, if not adjust the throttles for speed. Open the system and check that the ends are clean of debris and lots that may have ended up there during loading or unloading, it is necessary to clean these. The gables linkage should also be checked for damage and looseness. Fliptop Air has one or two pneumatic cylinders, check for leaks at the cylinders and hoses. If you find damage, it is important to repair as quickly as possible, contact your local dealer or repair shop.

Maintenance every month

We recommend that Fliptop Air is greased up once per month with a grease gun and oilcan, it is important that all the system links go easy. If the system is lubricated and goes easily, it will have a long life and low maintenance cost. Normally there is no other maintenance on a Fliptop Air system.

Safety instructions

The equipment may only be operated by personnel with adequate knowledge of the equipment and understanding of the risks arising from the operation of the pneumatically driven movements.

The minimum requirement shall be review of this documentation, and a review of the equipment before the using of it. At service and maintenance the pneumatics must be switched off and disconnected so that the equipment can not be operated when there is a high risk of crushing when the equipment is operated.

Note that when maneuvering, always keep an eye not to cause damage to equipment or people.

Installation Instructions

The Fliptop Air system can be supplied as a kit or pre assembled.

When buying a kit, a complete installation instruction of the system is included in this documentation. When buying the pre assembled system, there is only installation of the system that remains.

Upon receiving the shipment, it is important to verify that no visible damage or other damage occurred on the equipment, notify in this case the carrier immediately, alternatively the equipment supplier.

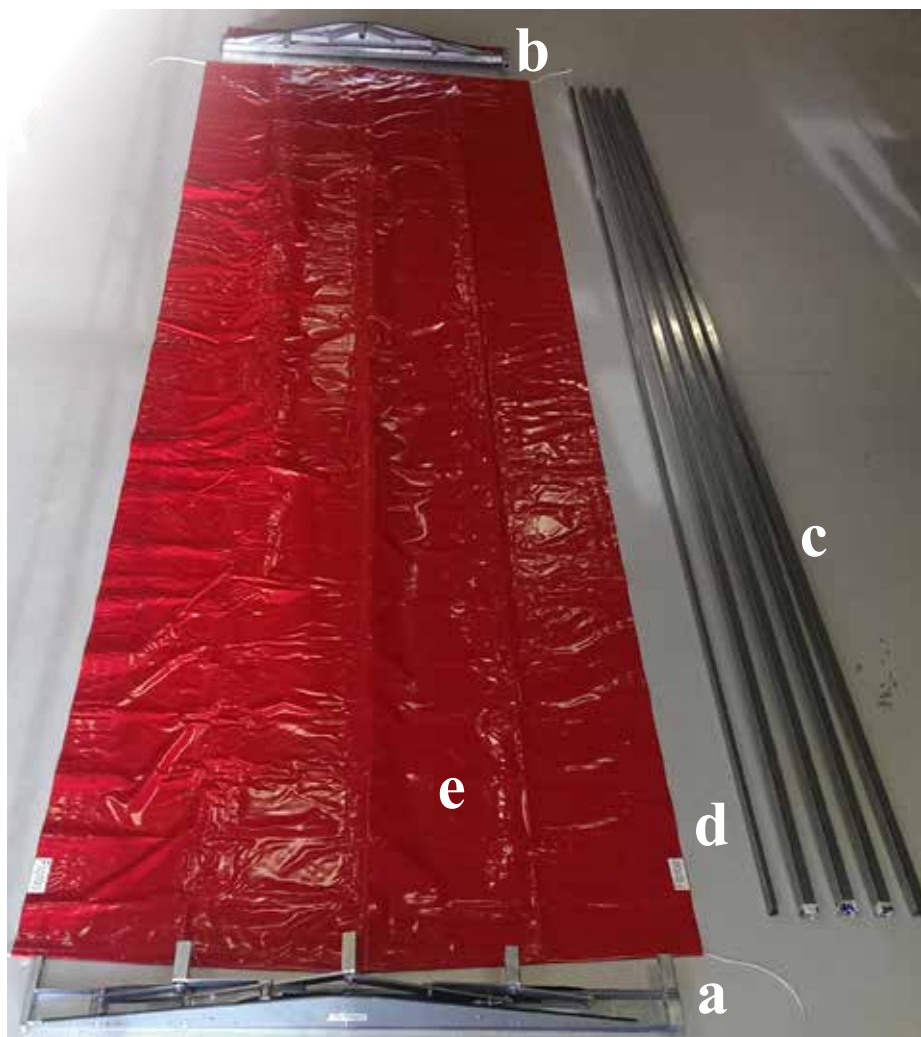
When installing Fliptop Air, it is important to fasten it with at least 2x M8 bolt in both of the two loose corners, and that you put at least 3pc clamp on the tube on the firm side, one at each end and at least one in the middle, depending on length several might be needed. Carefully follow the instructions in the installation instructions.

It is also important to go through all pneumatic fittings and see that they do not have any leaks. You should also check that the pneumatic movements do not go too fast, normally the throttles are included with the delivery of Fliptop Air, with these the rate is adjusted to a peaceful movement, if the system runs smooth, it will have a long life and low maintenance cost.



	Never use the system without good overview to avoid that people get injured or that damage to the system occurs.	
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Article list Fliptop AIR



- a Gable with cylinder
1-2pc
if 2pc: *Then the gable without cylinder is not included, however, a dividing valve is included*
- b Gable without Cylinder
1pc
- c Steel tube 60x60x2
4pc
- d Steel tube 50x30x2
1pc
- e Tarpoulin and montage screw
1pc

*Which set of screws that are included is determined by the configuration being built. At simple arch support **621-314** is used, at connected arch support **621-315** is used, and at montage without arch support **621-301** is being used.*

Screw kit AIR 621-301

Ingår:

M8x20	x4
M8x75	x2
M8 BRB	x2
M8 Nylock	x2
M10x50	x2
M10x75	x12
M10 BRB	x28
M10 Nylock	x14
Tie down ring	x2
Rope clamps	x4
Throttle valve	x2

Screw kit AIR 621-314

Ingår:

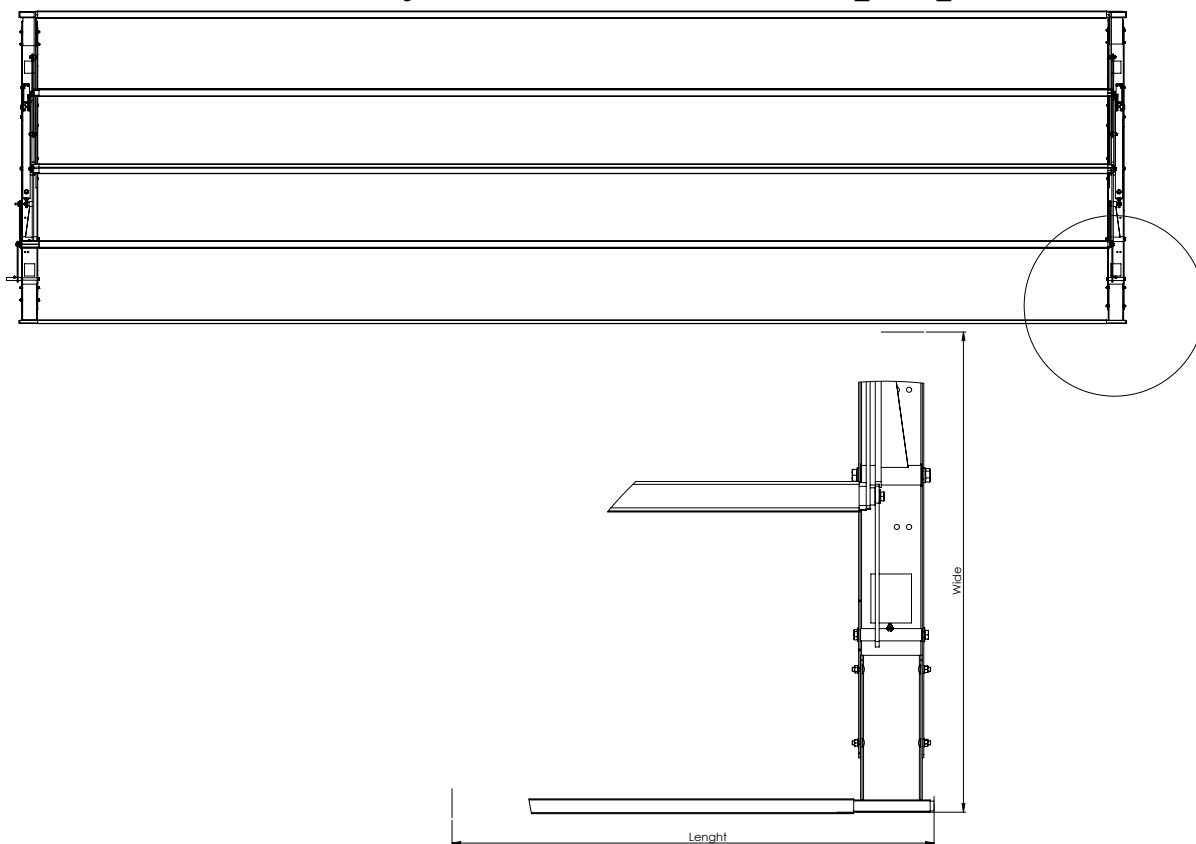
M8x20	x4
M8x75	x2
M8 BRB	x2
M8 Nylock	x2
M10x50	x4
M10x75	x12
M10 BRB	x36
M10 Nylock	x18
Tie down ring	x2
Rope clamps	x4
Throttle valve	x2

Screw kit AIR 621-315

Ingår:

M8x20	x4
M8x75	x2
M8 BRB	x2
M8 Nylock	x2
M10x50	x4
M10x75	x24
M10 BRB	x56
M10 Nylock	x28
Tie down ring	x2
Rope clamps	x4
Throttle valve	x2

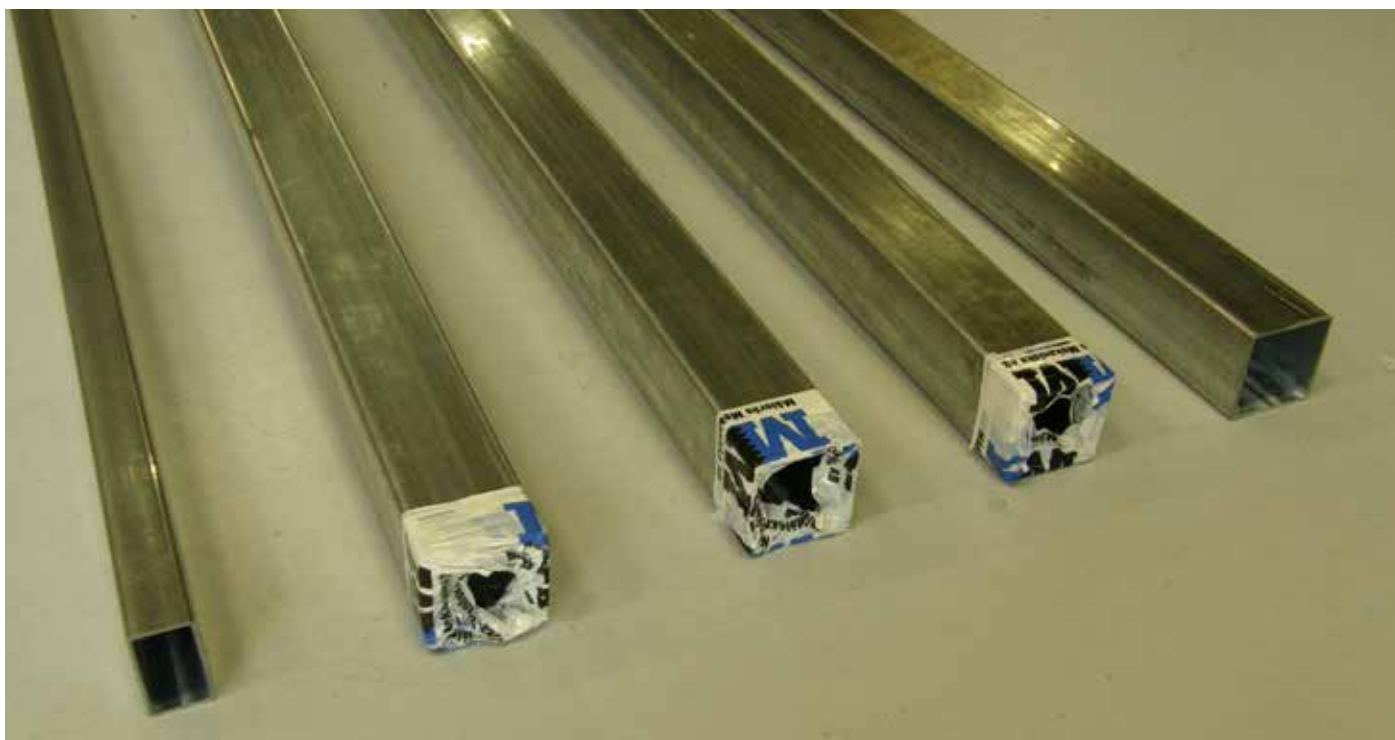
Assembly instructions Fliptop AIR



Adjust the width of the end pieces by first adjusting the fixed side.

Then cut the tubes (60x60x2 4pc and 50x30x2 1pc) Length = $L - 330\text{mm}$ at one cylinder.

When two cylinders is the deduction Length = $L - 440\text{mm}$.



Remove burrs from the pipes inside and outside, and tape 3 of 60x60x2 tubes like the picture above



Place the tarpoulin with the outside up and push in the three 60x60x2 tubes with tape ends first.
(not to damage the fabric)
(if your Fliptop Includes Arch support you should carefully read the instructions provided)



Thereafter bring one of the gables, start to shoot in the fixed tube (50x30x2)



Then push the other tubes in the first gable.



Bring the other gable and push in the tubes into it.
if you must have a flap on the end should be installed before this step.



When pushing the pipes into the gable, it is good to have a hammer to knock in the last bit.



Be very careful when measure the distance before drilling holes and mounting it together.

The side with 50x30x2 steel tube shall be mounted with M10x45 (1pc) and a M10 locknut (1pc).

NOTE! Dont screw the bolts to tight, cause they will be taken out and back again when the tarpoulin will be mounted.



Be sure to measure both sides thoroughly.



The side with 60x60x2 shall be mounted with M10x75 (1pc), Tie down clamps (1pc) and M10 locknut (1pc).

NOTE! Dont screw the bolts to tight, cause they will be taken out and back again when the tarpoulin will be mounted.



When the outer tubes are mounted, the inner tubes can be in need of some adjustment.
when the outer tubes is fixed, the outer tubes shall be drilled and screwed, first check that all the arms are parallel, if not this should be corrected.



Each tube (the three inner 60x60x2) must now be drilled like the picture, and stuck together with M10x75 (1p), 11x28x2 (2p) M10 lock nut (1p) per tube.
Be screwed from the side, the tarpoulin shall not be screwed to the tubes.



Center the tarpoulin, equal overhang front and rear, and an equal measure of the sides.

Plastic strips montage instruction



Begin with inserting the plastic strips into the pocket for the tube, the middle plastic strip shall go outside the gable, as seen on the picture.

NOTE ! *it is very important that the bending of the strips are facing each other.*



The Side Tubes plastic shall go out to the gable edge, as seen on the picture.



The Middle Tubes Plastic strips shall be further out then the sides. the lower plastic shall be same as the sides, but the upper shall go 50 mm over the gable edge.



NOTE !

2 plastic strips per pocket is required, thats mean 6 strips per gable.

make an incision in the tarpoulin and insert the plastic strips into the tarpoulin.

Screw the plastic strips through the steel tubes somewhere in the middle of the plastic strips, see picture for example.



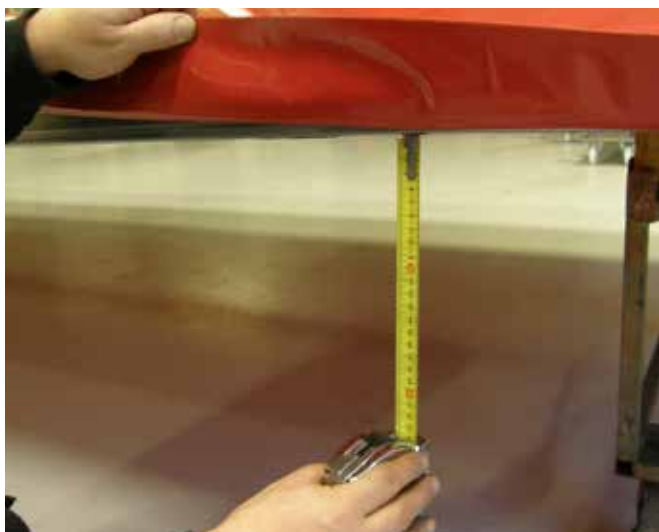
This only applies to the gable with cylinder



Drill holes in the tarpoulin and mount the rope clamps on both sides of the gable. Cut the tarpoulin accordingly to the pictures.

Do this on both sides.

Screwed with M8x20



Screw the tarpoulin along with the long sides with montage screws (5,5x20 + washer) that came with the tarpoulin.

CC measurement is recommended to not more than 350mm.

Take away the screws that hold the outer tubes and fit through the tarpoulin.

*The tarpoulin shall be smooth on the top side, **NB !** At the center of the long side, it is easy to bend the tubes into the tarpoulin and get a waist measurement, measure the protrusion of the chapel during the tube to the fitting on the platform to get even tension on the chapel.*



The easiest way to stretch the rope is to open the gable about 100 cm , fasten the rope with the rope clamps. Then cut the rope to fitting lenght





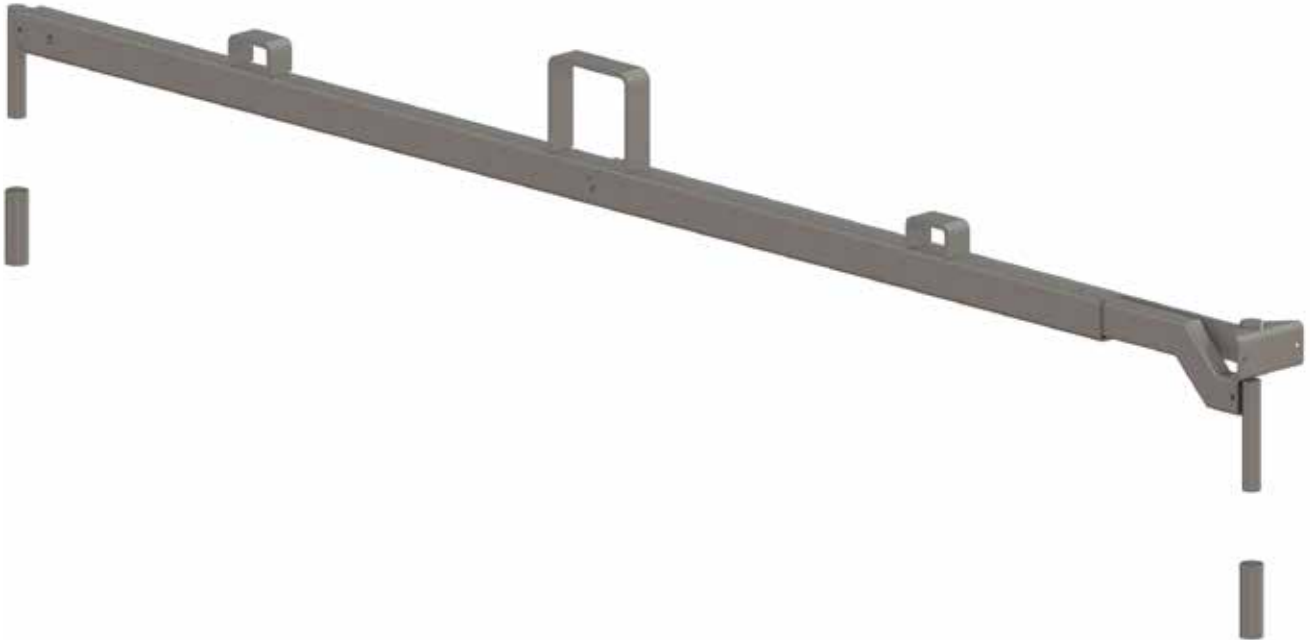


Fliptop AIR is now fully assembled, the system should now be lifted up and mounted on the top of the truck.

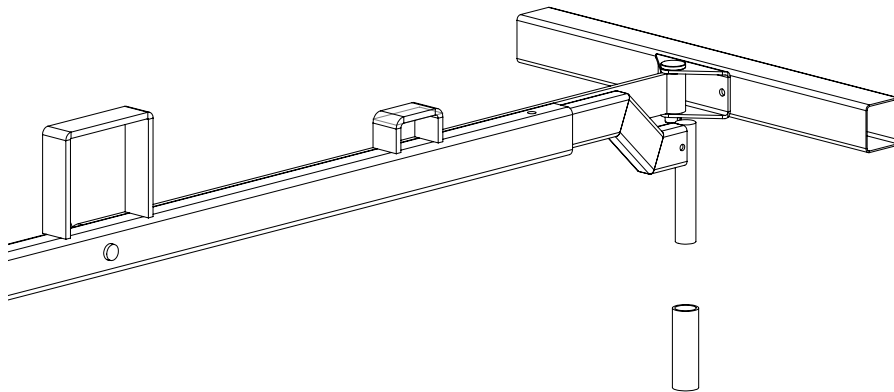
Ensure that it is placed at the right place and screw it in all the corners. On the fixed side, 188-569-2 and 188-570-2 is used to fasten the system. On the mobile side screwed the mounting plate, front and rear fixed with two screws / end (at least M8).

Possibly, it is good to screw through the bottom of the gables by platform edge, and at least two bolts per corner.

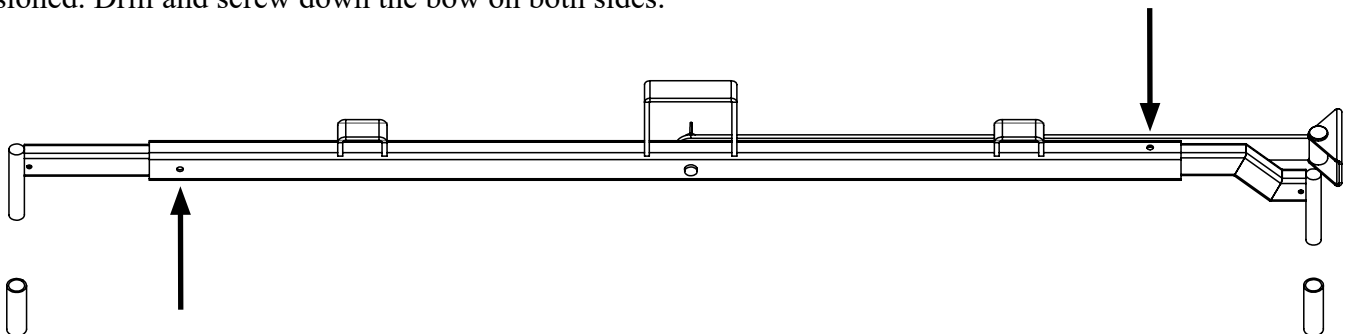
The simple arch support is mounted where the length of the tubes make them bend.
The arch support also have an articulated, removable arm that is attached to the movable side tube.



Suitably mounted support in the middle of the platform. Screw or weld the mounting sleeves first, after that the arm is attached to of the side tube.



Therafter adjust the arc support so that the side tube is in line with the platforms outer surface and tarpoulin tensioned. Drill and screw down the bow on both sides.



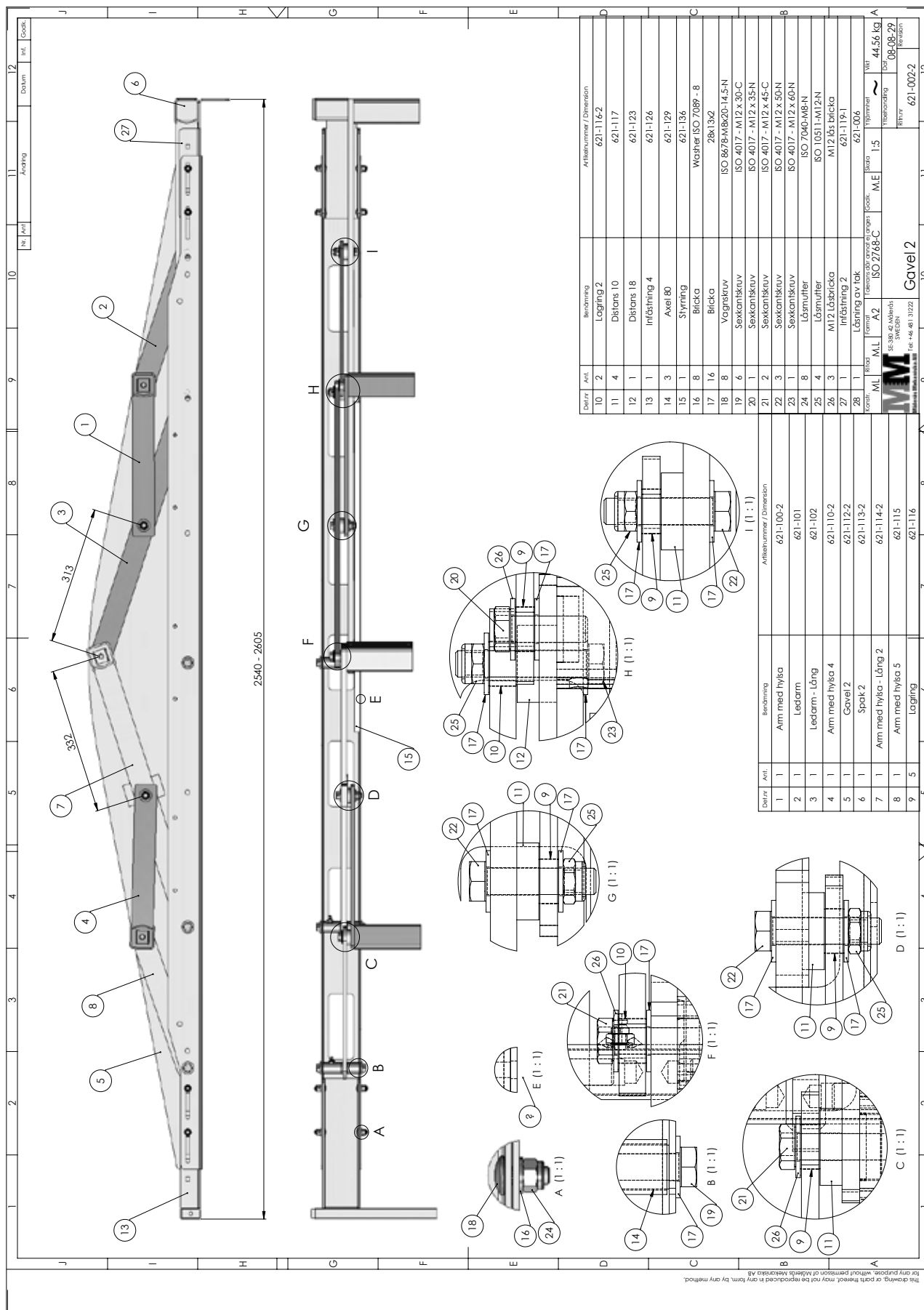
When you install the arch support, follow these instructions

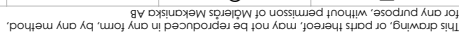


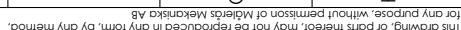
When ordering Fliptop AIR with arch support with all tubes connected the center of the tarpoulin fabric without thimbles, here will the arch support be placed. The tarpoulin should be folded lengthwise until the outermost tube pockets is uncovered from one direction

(**Note** that the thimbles must still be faced towards the ground), insert 2 tubes through the tarpoulin into the arch support (one front and one rear). Pull the tarpoulin further and insert 2 more through the thimbles and into the arch support, repeat until the arch support is fully connected.

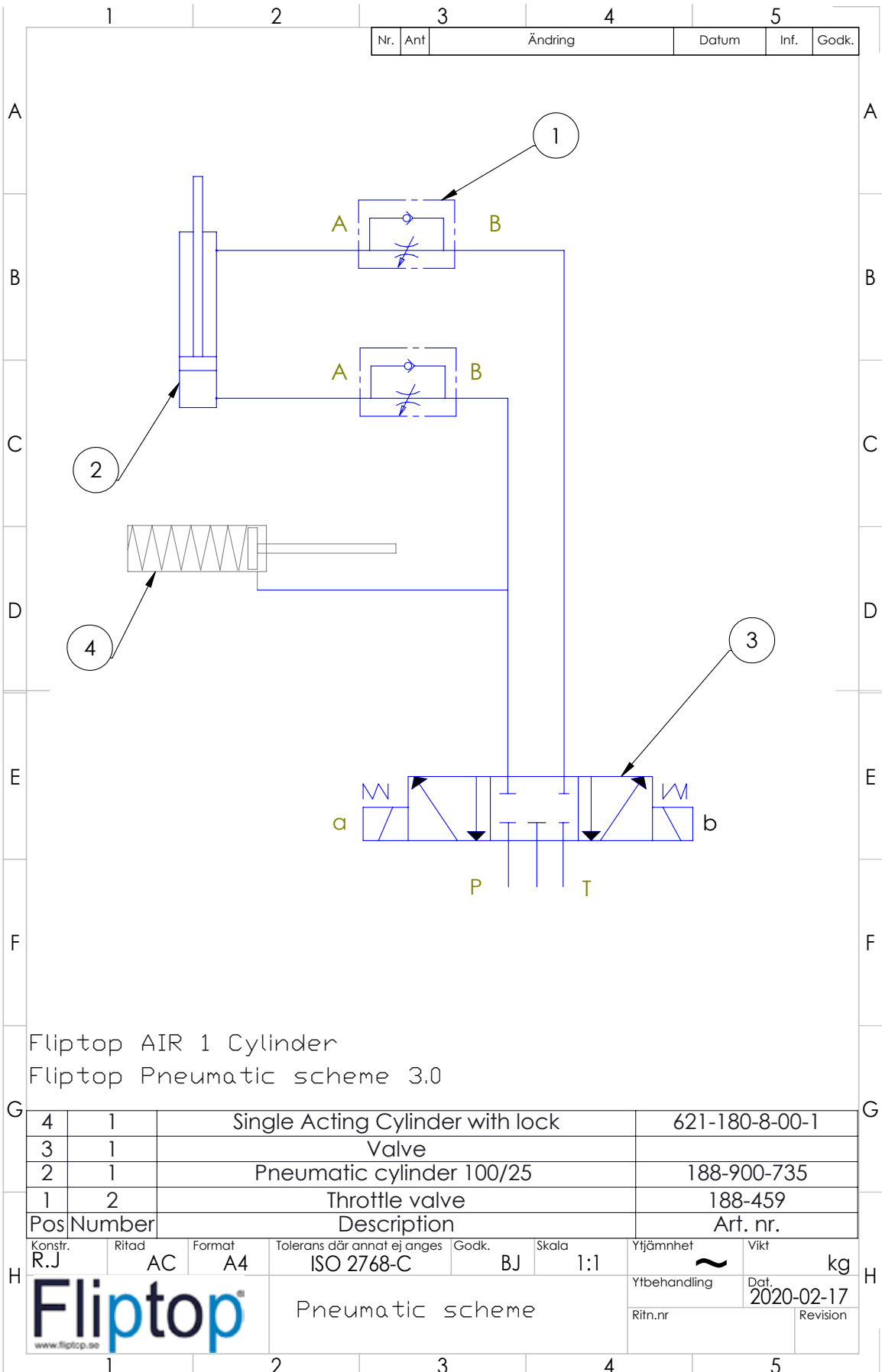
Screwing together the arch support is difficult in this position and is not recommended, wait until the Fliptop system is mounted before screwing together the tubes and the arch support.



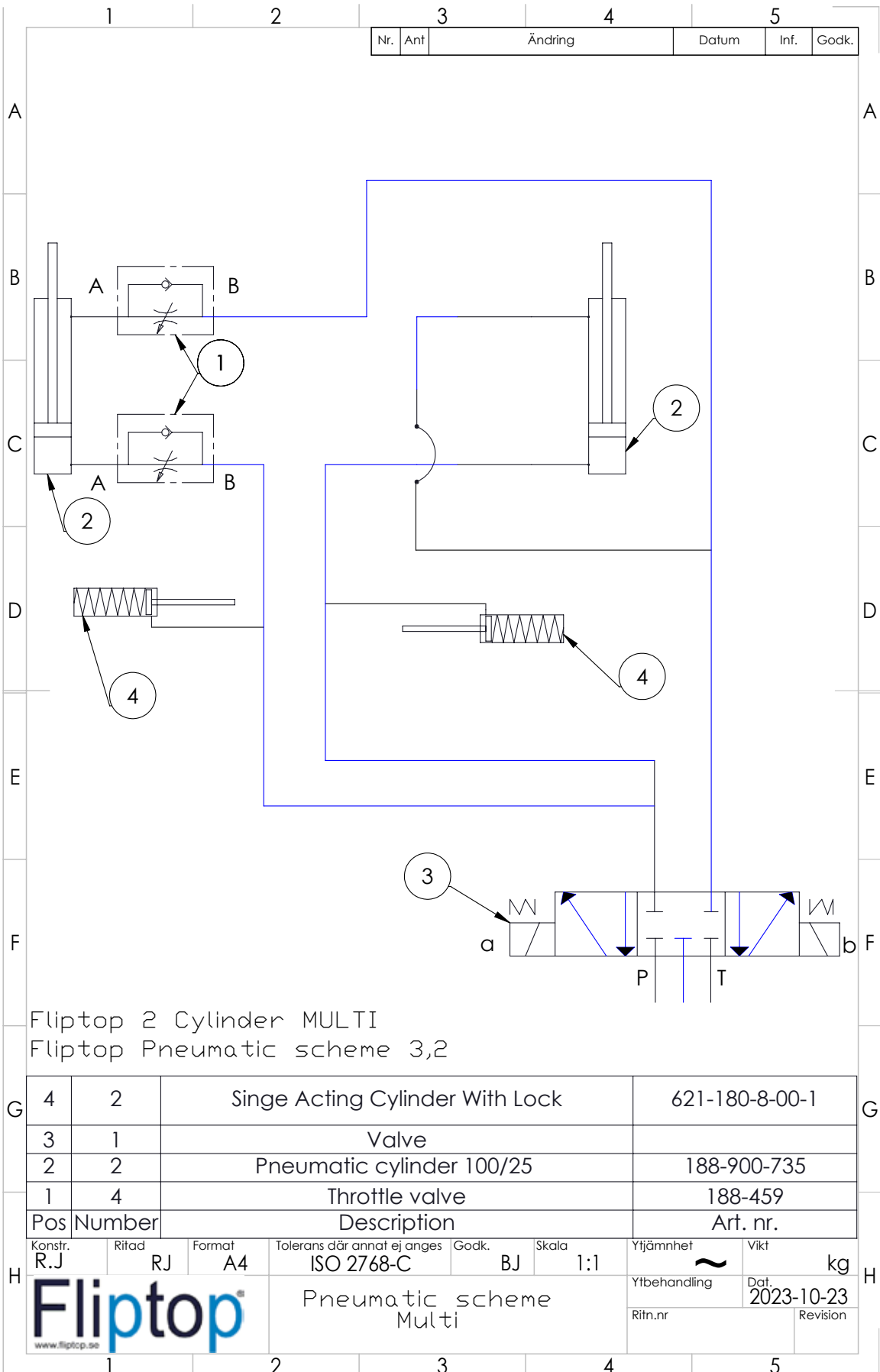




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This sign should be pasted on visible!



CE-DECLARATION

Manufacturer :

MÅLERÅS MEKANISKA AB
INDUSTRIGATAN 1
382 76 MÅLERÅS
SWEDEN

Hereby declare that the following equipment:

Fliptop Air
Nr: 621-010

Is made in accordance with regulations of the European Machinery Directive 2006/42/EG

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2023-08-28

Björn Johansson / CEO