

SETTELE SPORTSYSTEMS

START GATE SX WORLD CUP

START GATE SX WORLDCUP

- electric Random System -

MANUAL



Die Geräte sind patentgeschützt.

SETTELE SPORTSYSTEMS

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15.01.2026

SETTELE SPORTSYSTEMS START GATE SX WORLD CUP

SETTELE SPORTSYSTEMS

SETTELE SPORTSYSTEMS offers different systems for the latest demands in Skicross and Boardercross. Through our own experience in professional winter-sports we are always striving to develop the materials, and the mechanical system further, to target optimal performance for the respective area of application.

Since 2005 our company is an OFFICIAL PARTNER OF THE FIS (International Ski Federation). We work closely together with the FIS in the development of new systems, to do justice to the high requirements of the professional racing sport. The start system is used successfully on FIS point races, European Cups, World Cups, World Championships, and national events. After Vancouver in 2010, SETTELE SPORTSYSTEMS is also the supplier for Sochi in 2014 and Pyeongchang 2018.

SETTELE SPORTSYSTEM stands for high-quality products for professional winter-sports. We develop our existing systems and products constantly, in order to match the growing requirements.

Thus, we are the first company to offer our START GATE SX WORLD CUP random generator.

Please check out our website at www.settele-sportssystem.com for more skicross and boardercross products.

START GATE SX WORLD CUP

The SETTELE START SYSTEMS START GATE SX World Cup is the best choice for professional skicross and boardercross events.

Modular concept

... regardless if 2, 3, 4, 6 or 8 starters - the installation can be fixed at will, as the modules are intermateable. The startgate can be extended at any time depending on the requirement.

Made in Germany

High quality warranted by daily experience in construction and certified factory. The SETTELE start gate is patent-protected.

Recommended by FIS

SETTELE START SYSTEMS was the first recommended start gate by FIS. The start gate was developed with FIS and will be adapt to the newest challenges of ski- and boardercross.

Easy assembly and dismantling

The start gate is easy to assemble and dismantle. Space-saving packing and storing is guaranteed

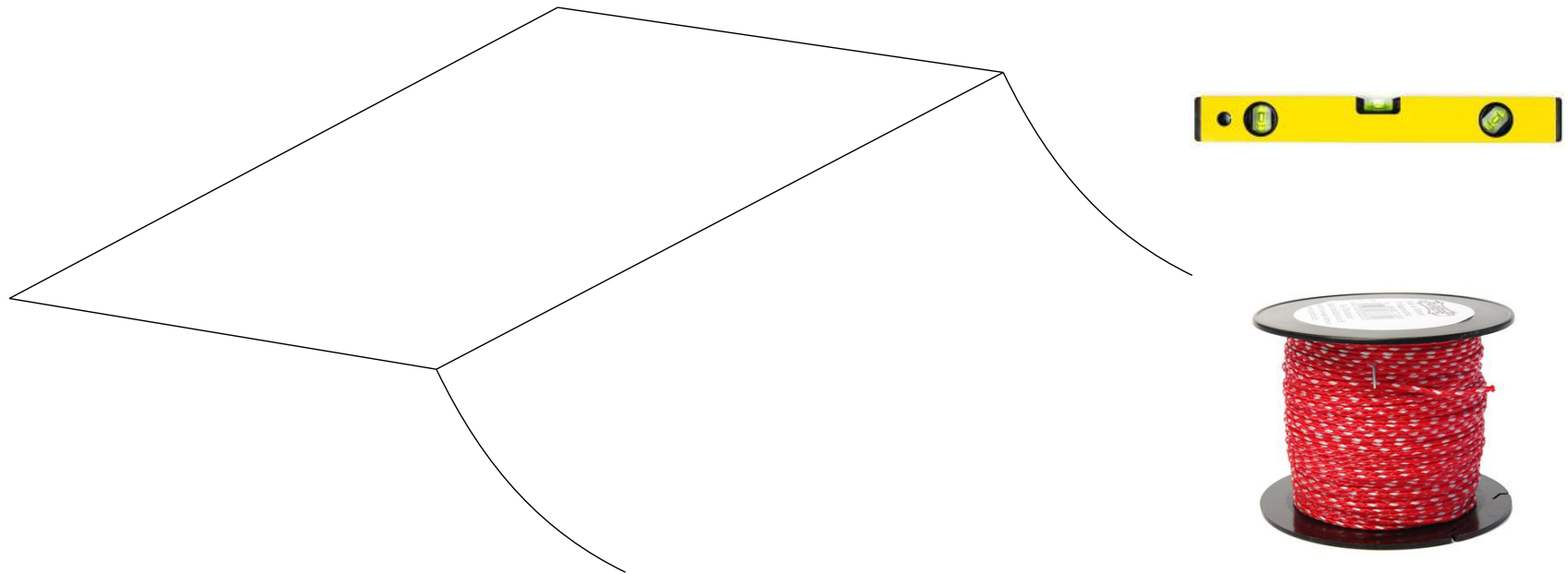
Advertising space

The start gate offers advertising space at the gates and in intermediate areas of the starting positions.

Training equipment

The starting installation can also be used as a training installation, possibly only as a 1,2 or 3 module.

SNOWCAT INSTRUCTION



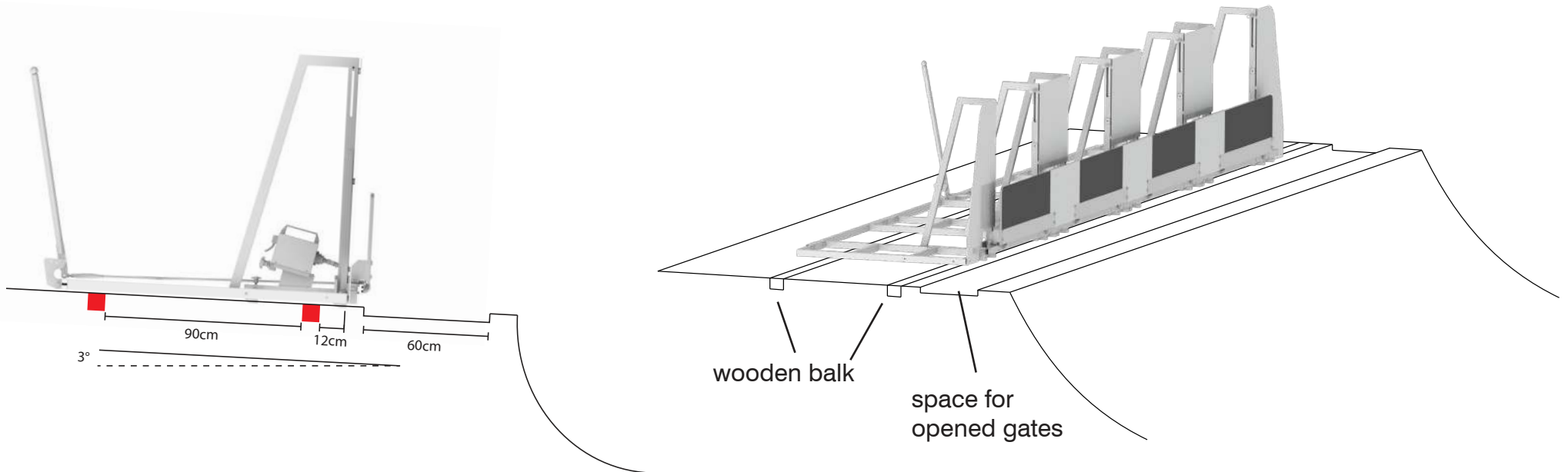
The starting point have to be shaped flat, because the gate work much easier if there is no twist or torsion. The more accurate the work is heard, the more accurate is the structure of the Start Gate.

Width:

4x starter gates about 10m

6x starter gates about 13m

SLOPE SETTINGS



The Start Gate have to be 3° downgraded so place the balk in the background a little bit higher.

For better stability place two lines of wooden balks under the Start Gate. The length should be on each side 50cm longer than the Start Gate length.

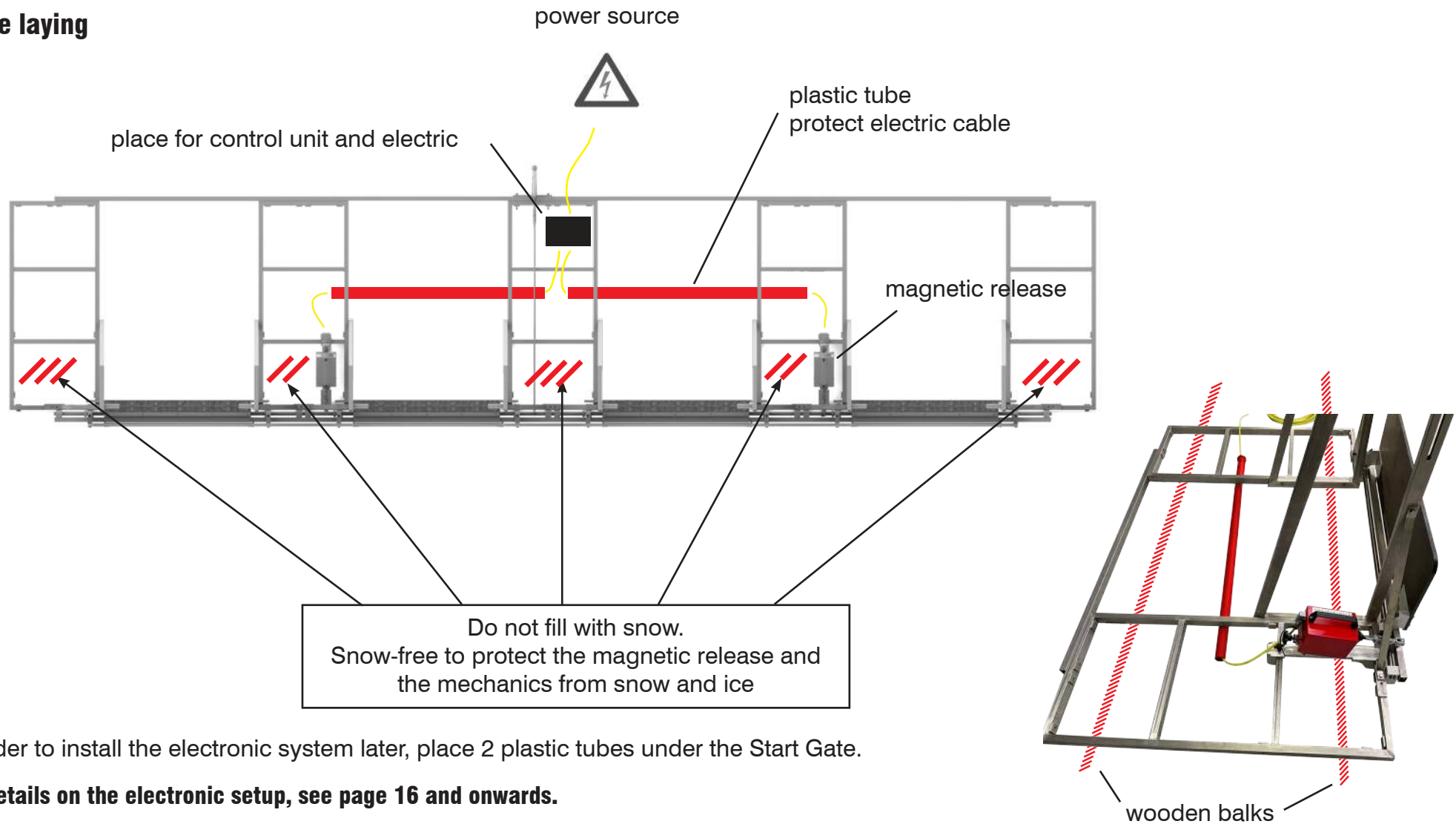
Full balks length:

4x starter gates about 50cm + 7240cm + 50cm = 7340 cm wooden balk

6x starter gates about 50cm + 10560cm + 50cm = 11560 cm wooden balk

SLOPE SETTINGS

Cable laying



In order to install the electronic system later, place 2 plastic tubes under the Start Gate.

For details on the electronic setup, see page 16 and onwards.

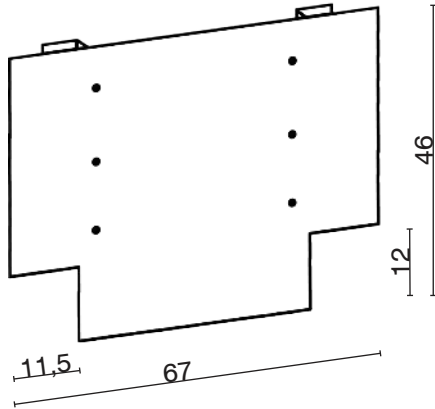
SETTELE SPORTSYSTEMS
START GATE SX WORLD CUP

ADVERTISING

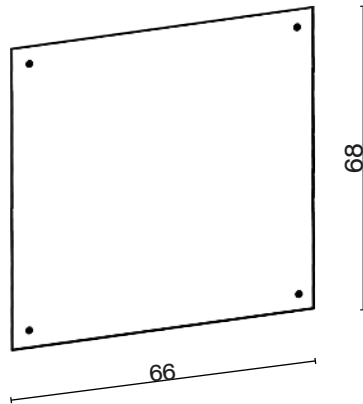
Advertising Space

Unit: cm

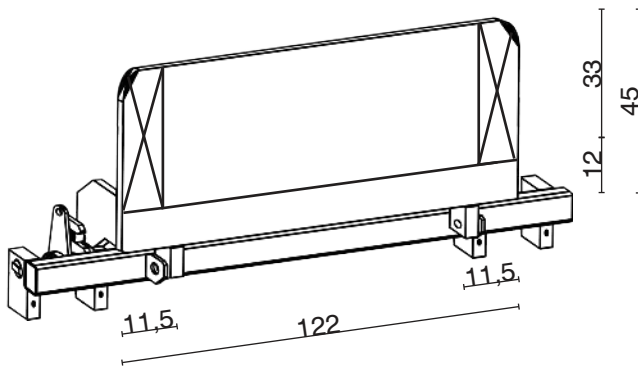
gate panel



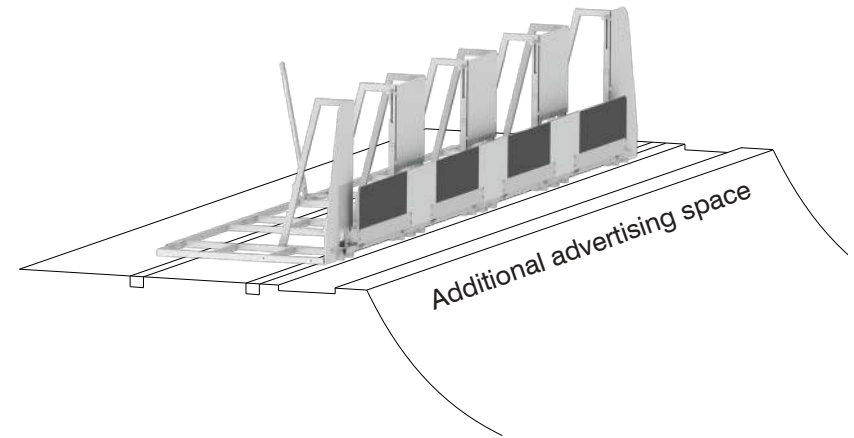
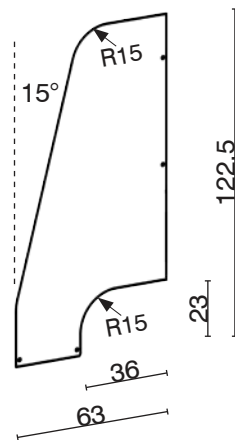
frame panel



gate



Optional: side panel



Some parts of the gate will be covered by the gate panel after full installation.

SETTELE SPORTSYSTEMS
START GATE SX WORLD CUP

COMPONENTS

Delivered (4 modul standard edition):

Screws:

- 8x hexagon screw M 10x20
- 8x hexagon screw M 10x50
- 30x hexagon screw M 10x70
- 18x hexagon screw M 10x90
- 12x M 6x25
- 12x M 6 washer
- 8x star knob screw
- 72x M 10 washer

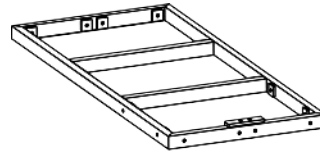
Start Gate Parts:

- 5x base frame (001)
- 4x connecting profile (002)
- 8x upright frame (left and right) (003)
- 8x handle (004)
- 8x long bearing (005)
- 4x gate (006) (incl. 1 with short release lever for manual release and 4 long release lever for electr. Random System)
- 1x connection rod (007)
- 1x release rod (008)
- 4x protective cover (009)
- 3x frame panel (010)
- 3x gate panel (011)

You need:

- ratch, hexagon socket screw key

base frame (001)



connecting profile (002)



upright frame (003)



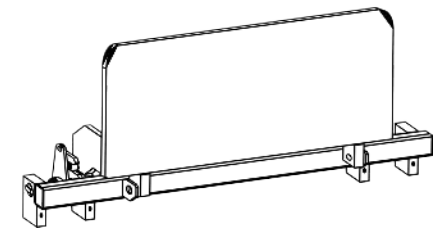
handle (004)



long bearing (005)



gate (006)



connection rod (007)



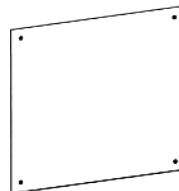
release rod (008)



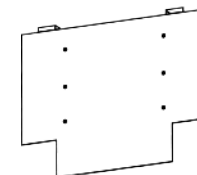
protective cover (009)



frame panel (010)



gate panel (011)



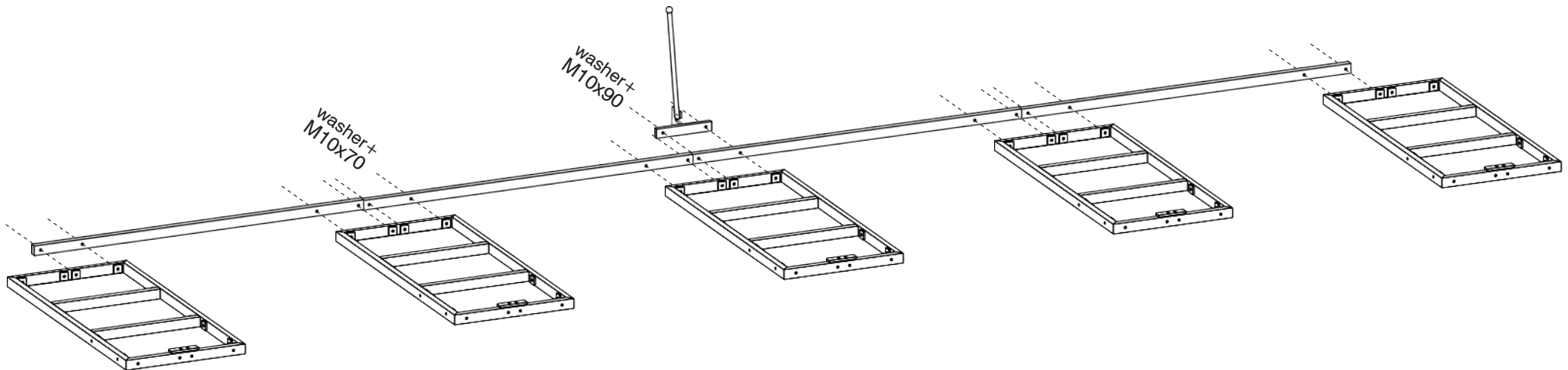
Optional: side panel (012)





Tighten all screws at the very end for an easier and correct assembly.

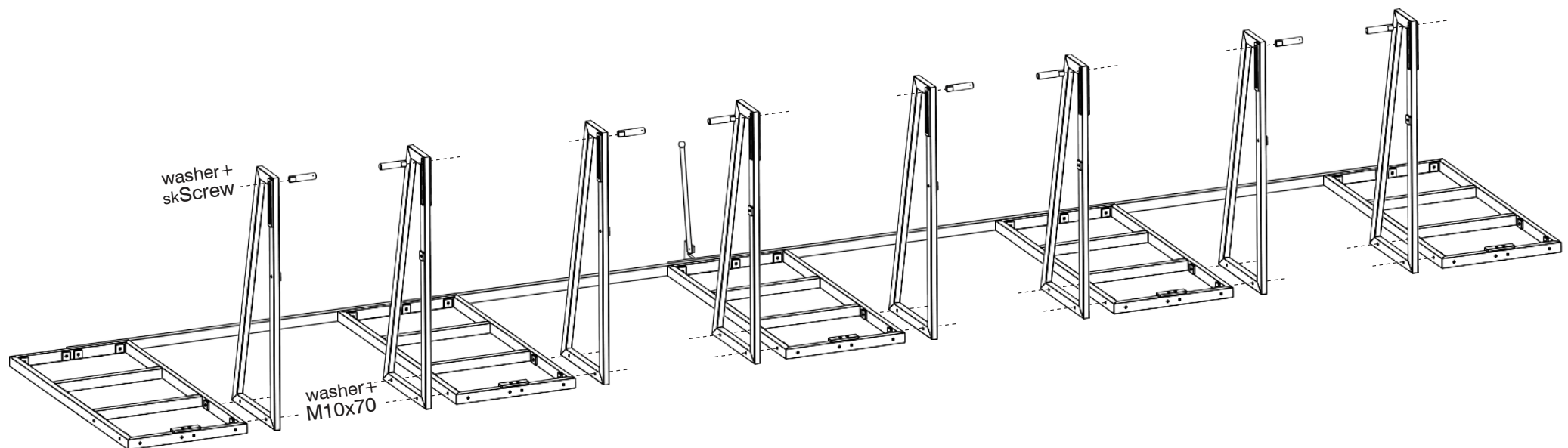
1. Put the base frames (001) parallel on the ground.



2. Bolt the connecting profile (002) to the middle of the back of the base frame using a washer and a hexagon screw M 10x70.

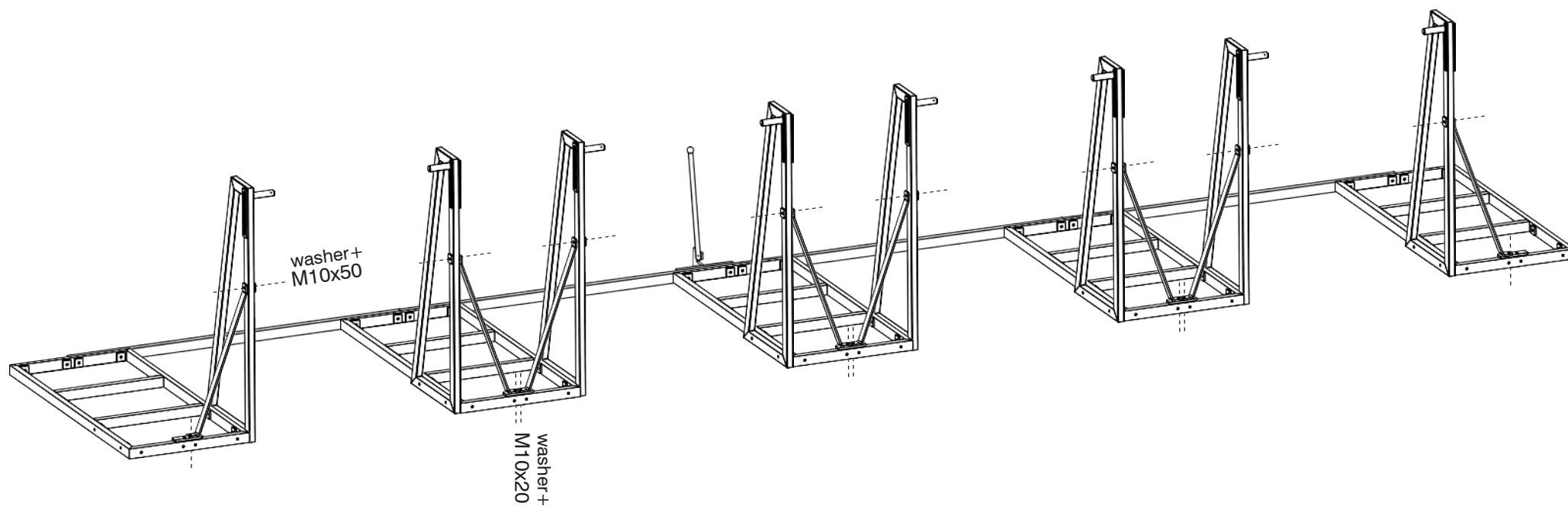
3. Bolt the release rod (008) to the back of the connecting profil with M 10x90. The release rod can be bolt to the 2., 3. or 4. base frame (001). The middle position as in the picture is the best.

4. Connect the upright frame (003) with the base frame (001) using a washer and a hexagon screw M 10x70.

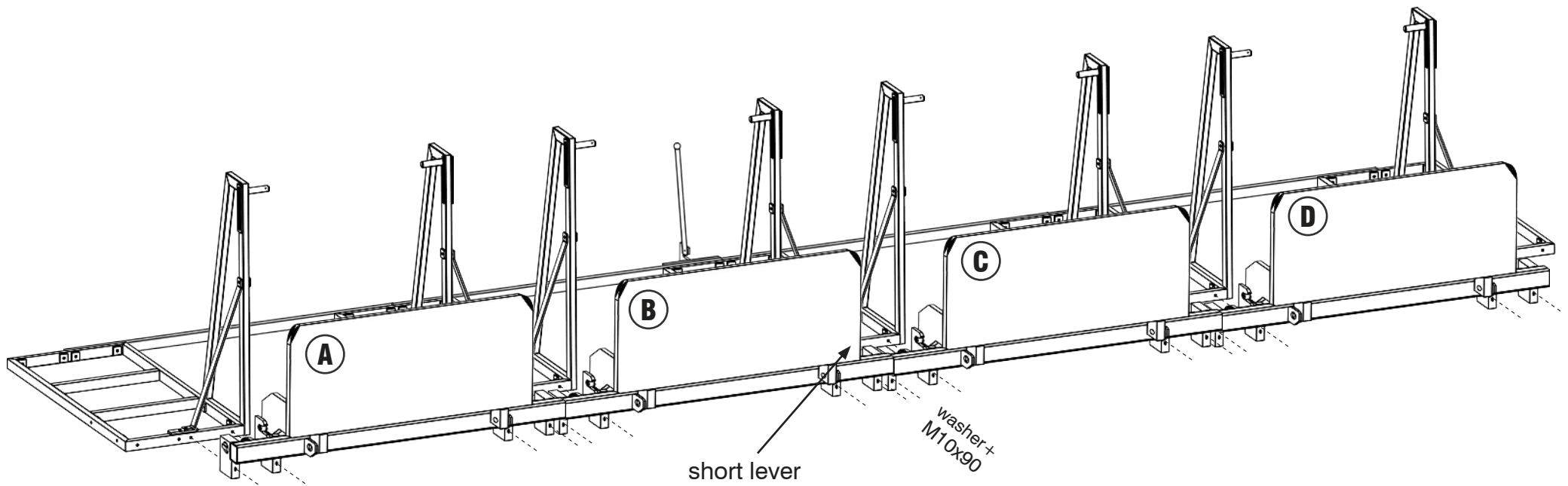


5. Connect the handles (004) with the upright frame (003) using a washer and a star knob screw.

6. Connect the long bearing (005) with the base frame (001) (washer + M 10x20) and the upright frame (003) (washer + M 10x50).

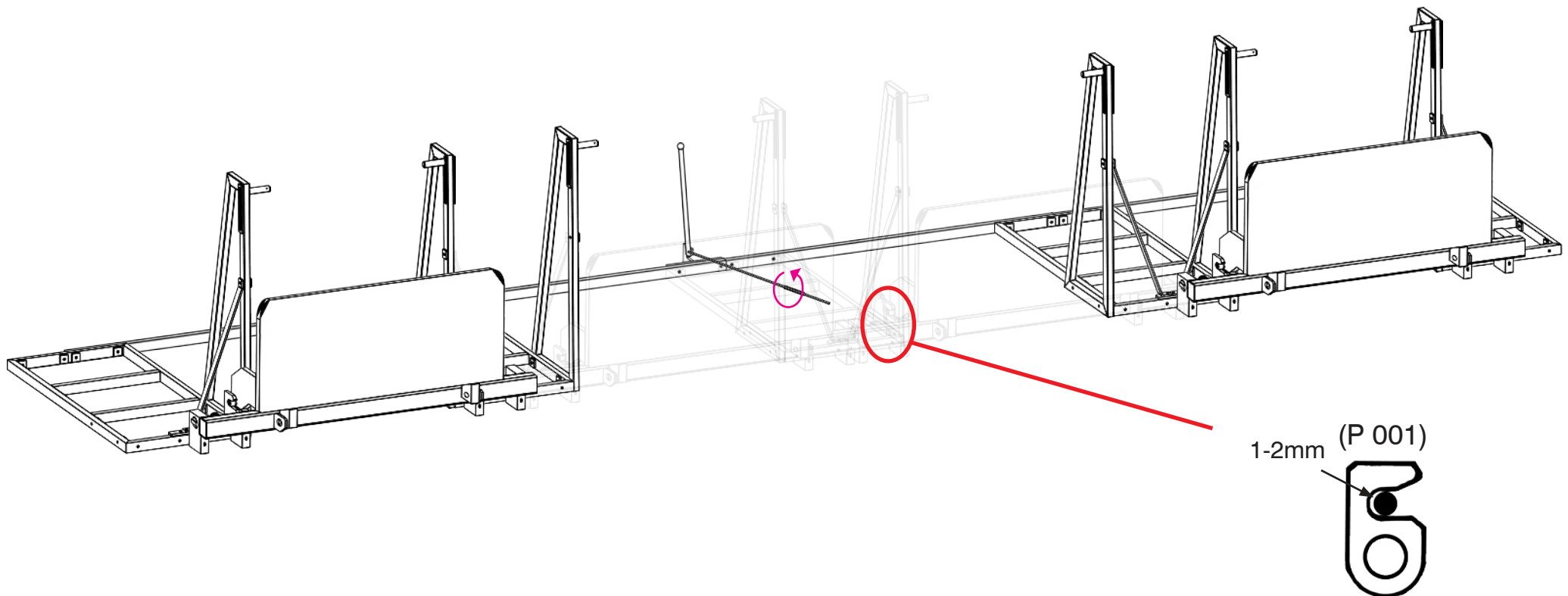


7. Fix the gates (006) on the base frame with M 10x90. The gates have to be closed. Begin on the right or left side and be sure that the key and the slot on the shafts fit.



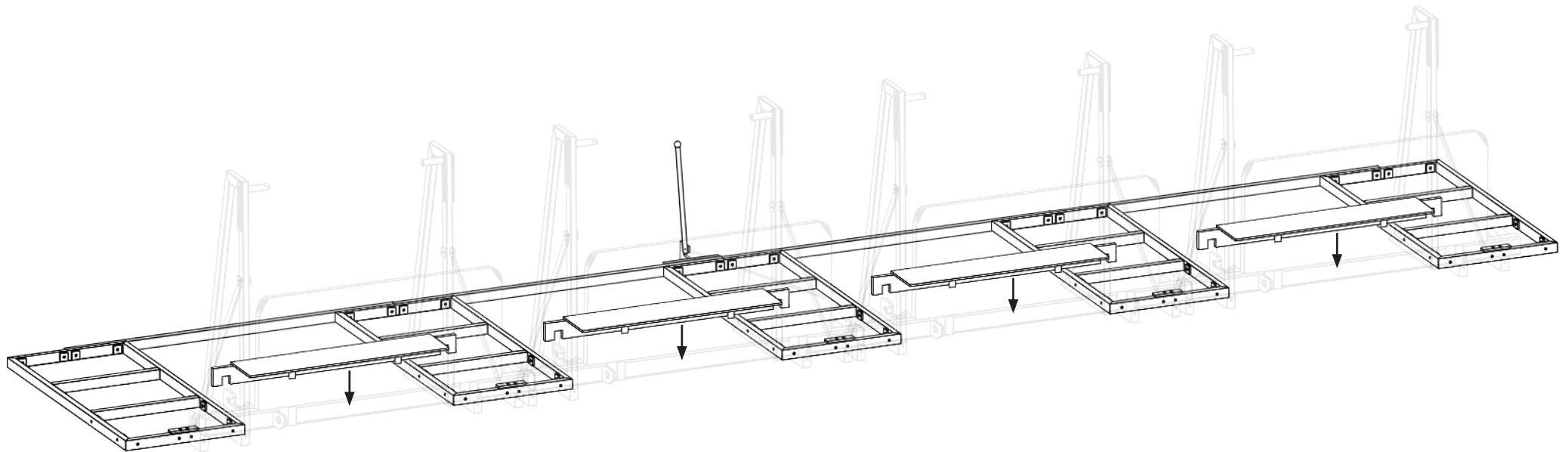
The gate with the short release lever should have the same position as the release rod (008).
The 4 long release lever are needed at the optional electric random release System.
In this case the manual release can be used as a backup.

8. Put the connection rod (007) between release rod (008) and the short release lever in the front. Adjust the release mechanism with the rod strainer.

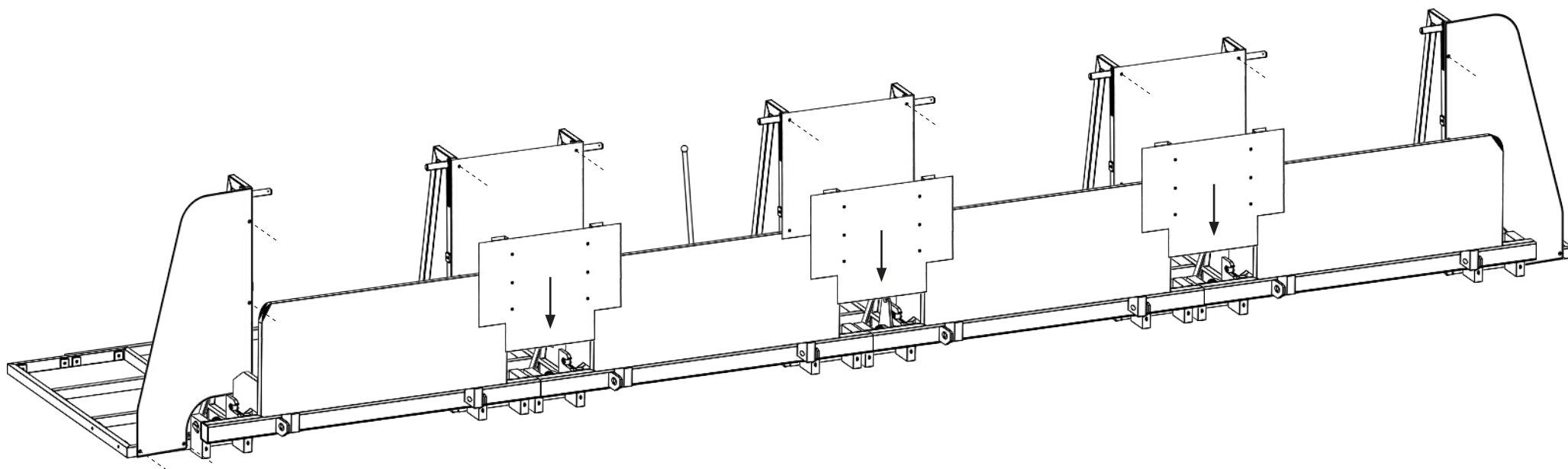


Adjust the length of the connection rod so that the short release lever and the two locking bars at each gate are pulled backwards about 1-2mm (P 001). The gates opening/closing should be easier this way.
Tighten the nuts on the rod, otherwise the setting will change over time.

9. Put the protective cover(009) over the gate and the base frame.



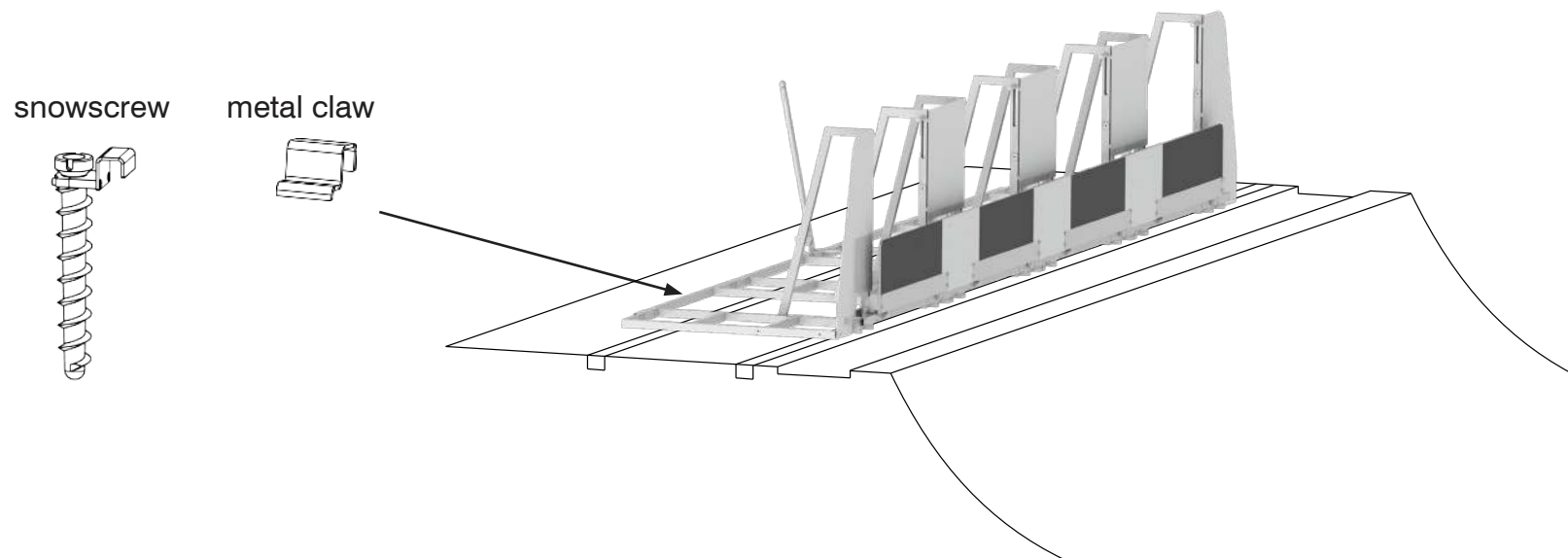
10. Connect the frame panels (010) with the upright frame (003) using washers and M 6 x 25 screws.



11. Stuck the gate panels (011) on the gates and thighten the screws. For timetrail single starter remove the gate panels accordingly.

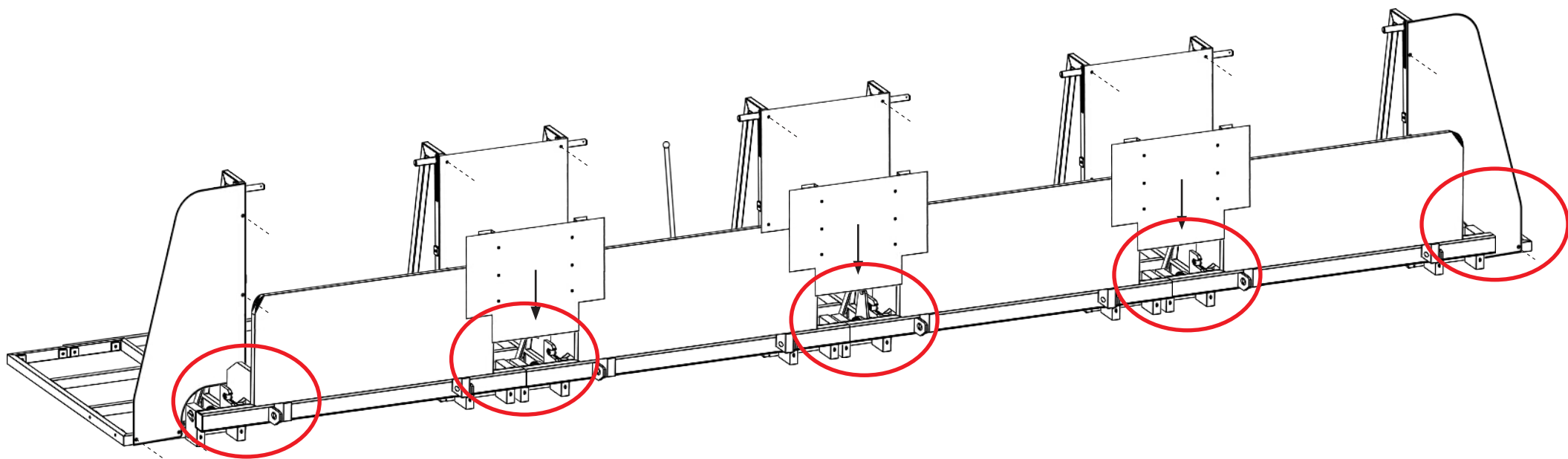
Optional: Connect the side panels (012) with the upright frame (003) using washers and M 6 x 25 screws. To connect the side panels (012) and the base frame (001) use washers and M10 x 20 screws.

Start Gate fixation



Fix the Start Gate to the wood with metal claws and screws or use snowscrews.
At the end cover the starting lanes with snow.

SETTELE SPORTSYSTEMS
START GATE SX WORLD CUP



Please protect the mechanical release mechanism from ice and snow

RANDOM SYSTEM MANUAL

-random start-

26.01.2021

SETTELE START SYSTEMS

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SETTELE SPORTSYSTEMS RANDOM SYSTEM

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RANDOM SYSTEM

The SETTELE RANDOM SYSTEM is an expansion for the START GATE SX World Cup for automatic starting.

Our reliable and robust RANDOM SYSTEM distinguishes itself by its compatibility with all SETTELE SPORTSYSTEMS.

The RANDOM SYSTEM can be used with all start systems and by an easy press of a button, releases the start gate randomly, at time delays between 0.5 and 5 seconds.

By the mechanical construction method which works without magnets, our RANDOM SYSTEM is especially not affected on weather conditions, and a correct start is therefore guaranteed any time. The system co-operates with the Mains powers supply (230 V in Europe or 110 V of North America) or with Battery power, available from us called ACCU POWERPACKS.

Signal light arrangement:

A signal light arrangement can be connected any time to our SYSTEM RANDOM to provide an optical start signal.

Optional voice output:

A voice output delivers optional steady acoustic start signals. A Sound-system is necessary for this.

The POWERPACK batteries were developed by us for the RANDOM SYSTEM. It weighs approximately 8kg. A suitable battery charger with overcharge protection has been integrated.

IMPORTANT SAFETY INSTRUCTIONS:



The exclamation point is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



The lightning flash is intended to alert the user to the presence of uninsulated „dangerous voltage“ within the product's enclosure that may be sufficient magnitude to constitute a risk of electric shock to persons.

BEFORE EACH USE

1. inspect the condition of the units. Check for loose screws, misalignment or binding of moving parts, the condition of the electric wire and its plug, and any other condition that may affect its safe operation.
2. check if all electric contacts are dry, clean and not twisted.
3. check all cables for damage.
4. check all units for damage.

SAFETY INSTRUCTIONS

1. read these instructions.
2. keep these instructions.
3. heed all warnings.
4. follow all instructions.
5. prevent strong vibrations .
6. the temperature range must be between maximum +30 degrees Celsius and minimum - 30 degrees Celsius.
7. to reduce the risk of electric shock, do not remove any cover.
8. do not install near any heat sources such as stoves.

Refer assembling and servicing to qualified service personnel.

IMPORTANT SAFETY INSTRUCTIONS:

9. do not install near any heat sources such as stoves.

10. protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the units.

11. plugging the power adapter have always to be the last step of installation to avoid system damage and electric shock!

12. follow the right connecting order.

13. install the units on dry ground.

14. the unit are protected against splash water, but avoid any wetness.

15. all moving parts have to be freestanding.

16. Do not get too close to moving parts.

AFTER EACH USE

1. first disconnect the power supply (power source and/or ACCU powerpack) to avoid system damage and electric shock!

2. follow the connecting order in the opposite way.

3. check if all electric contacts are dry, clean and not twisted.

4. check all cables for damage.

5. check all units for damage.

6. all units have to be dry and clean.

7. put the random system in the provided box and store the system at a dry place.

Please make sure that the connection plugs are not wet or covered with snow.

Protect all electric and mechanical parts from wetness and ice.

On cold and wet days, it is better to put the magnetic release and the control box in the warm overnight so that they do not freeze.

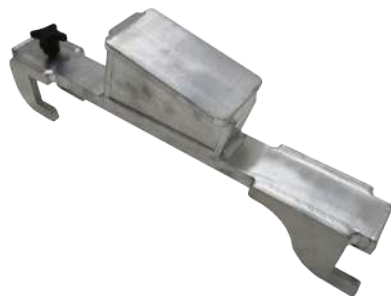
If you have a short circuit, check all the plugs and reinsert the fuse.

SETTELE STARTSYSTEMS
START GATE SX WORLD CUP

Random System

Electronic components

2x (3x) Base carrier



2x (3x) Magnetic release



Power connection
cable number 6



Control unit



Start buzzer
cable number 1



2x (3x) Magnetic release connection
cable number 3/5



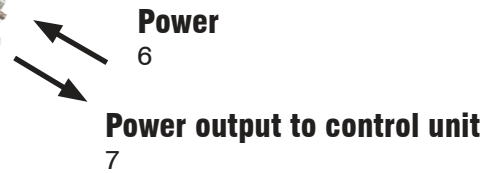
Optional electronic components

ACCUMUALTOR POWERPACK

Accu connection
cable number 7->6

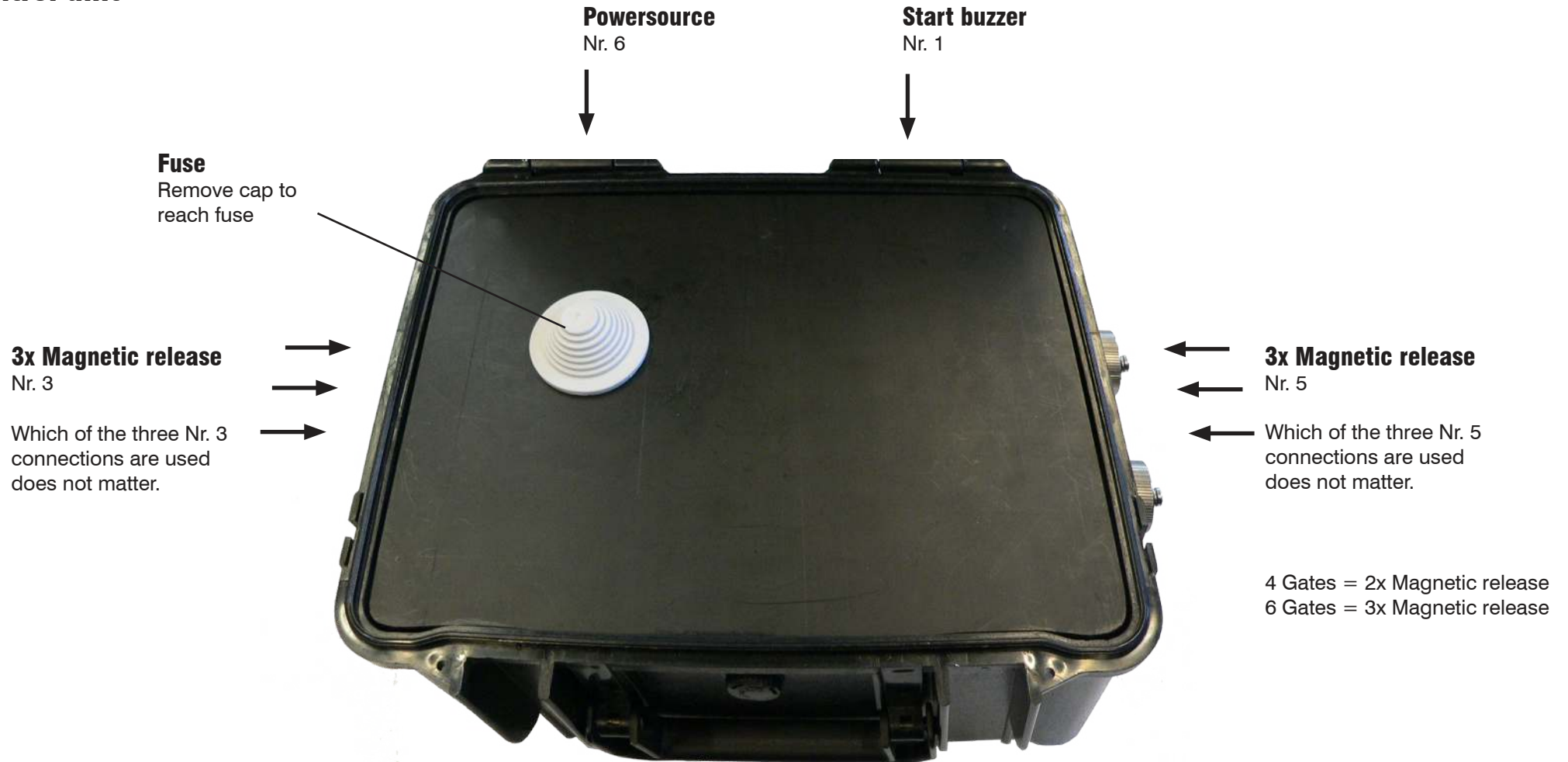


Power connection
cable number 6



110V voltage transformer

Control unit

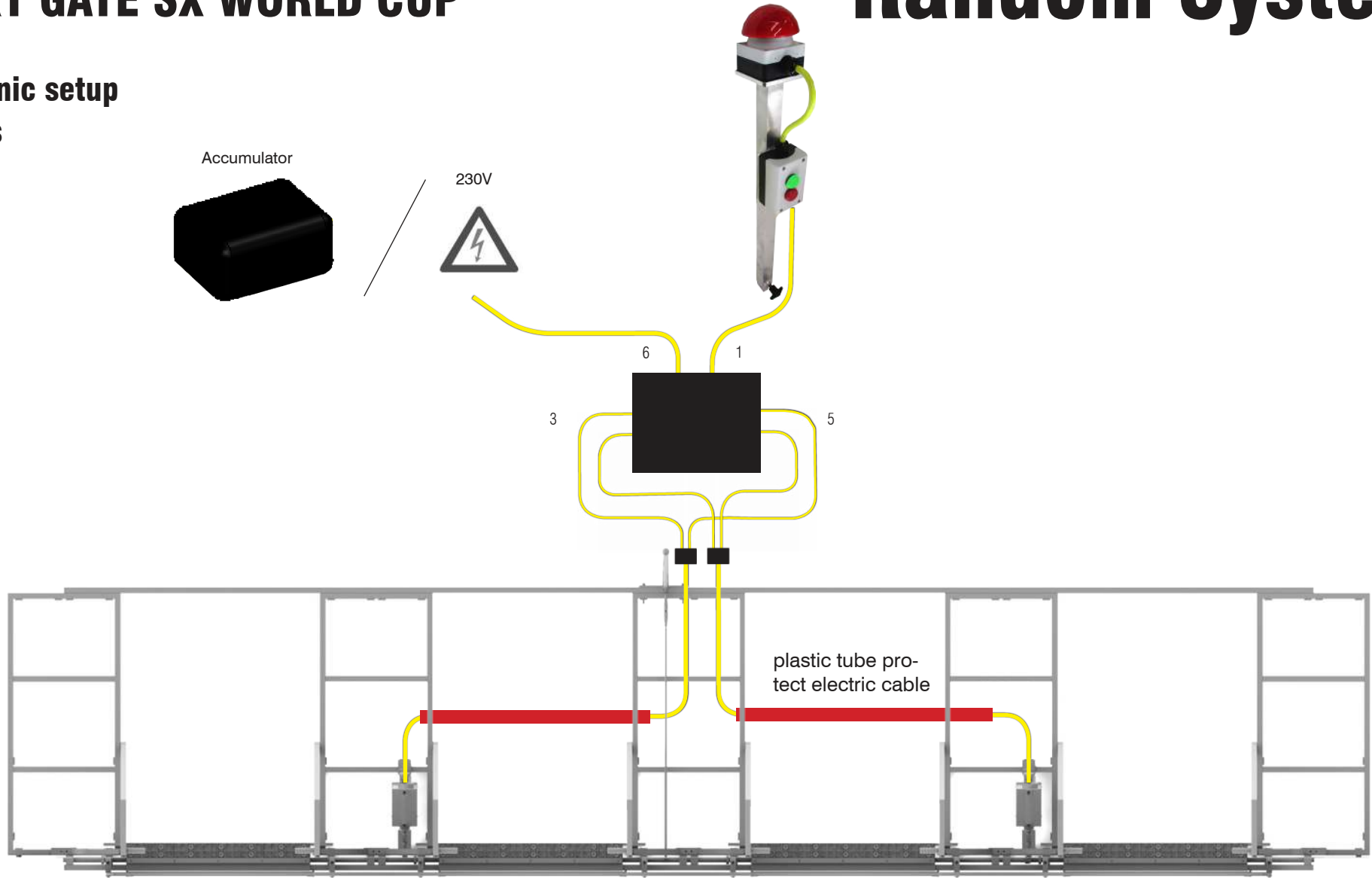


Please note: the electronic parts cable number should be the same as the control socket number
Example: Plug the Start buzzer (cable number 1) to the Start buzzer (number 1) on control unit

SETTELE STARTSYSTEMS
START GATE SX WORLD CUP

Random System

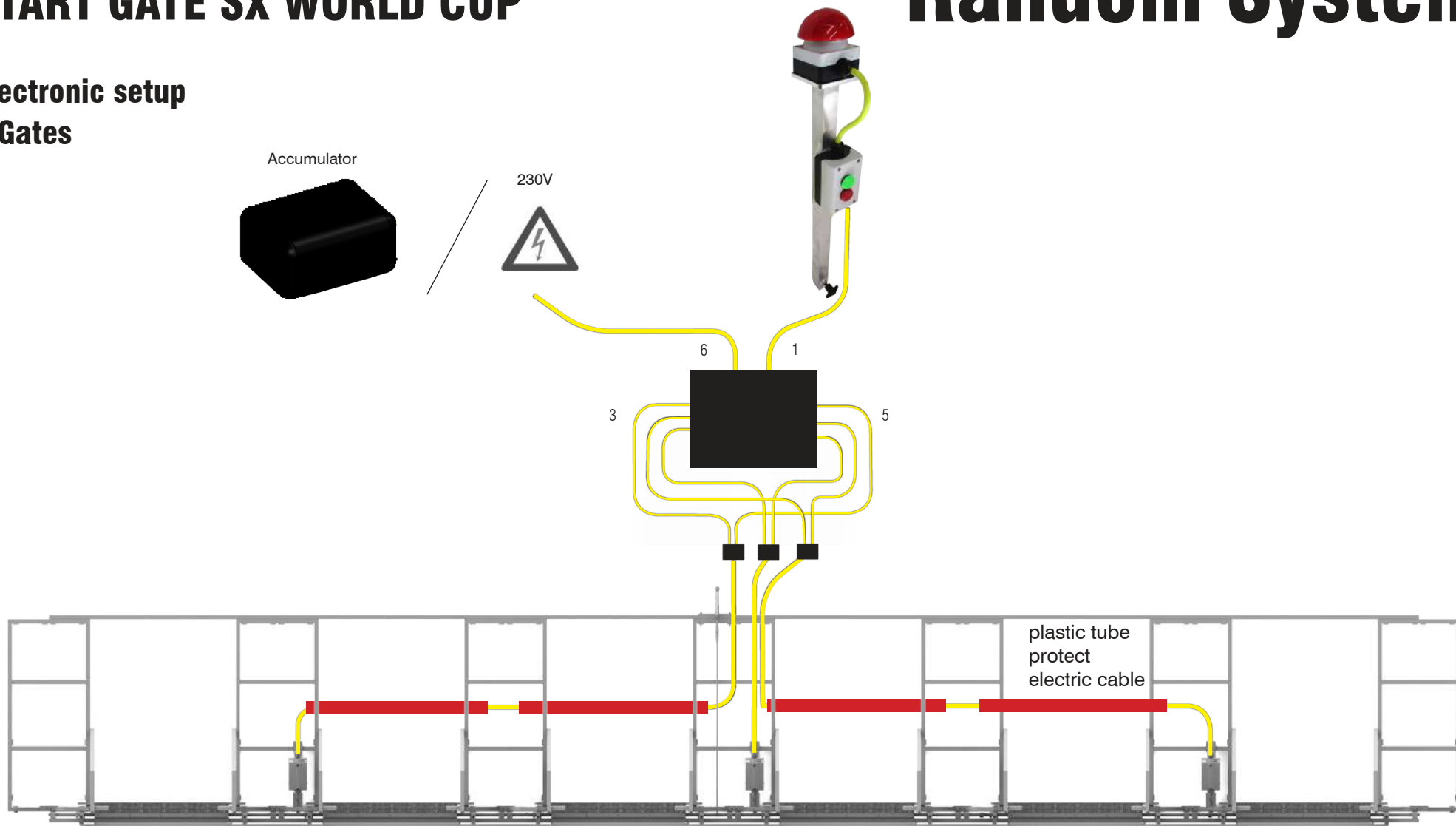
Electronic setup
4 Gates



SETTELE STARTSYSTEMS
START GATE SX WORLD CUP

Random System

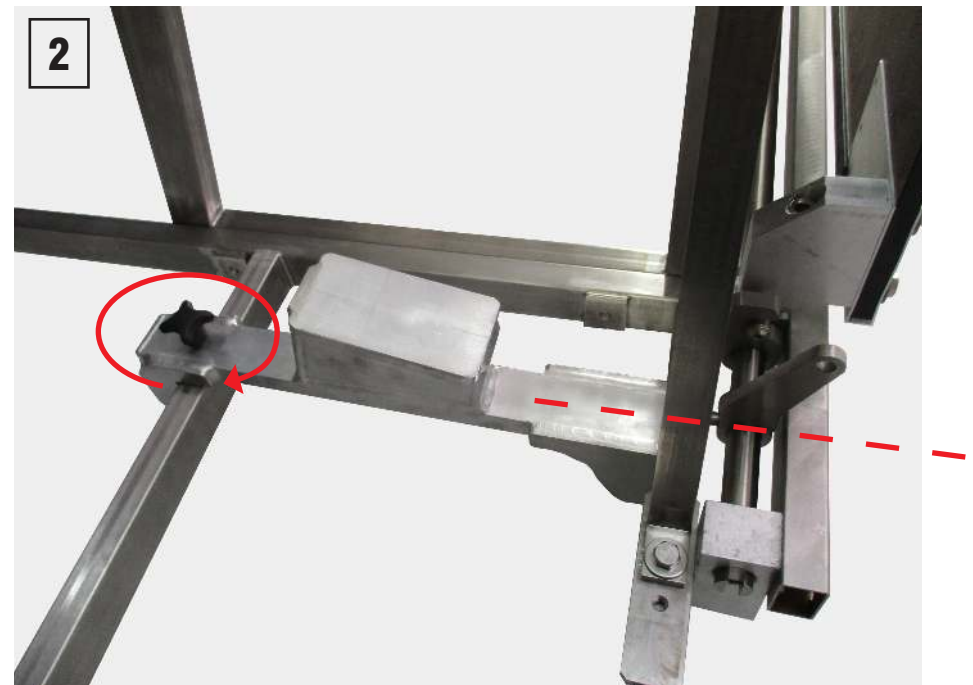
Electronic setup
6 Gates



Assembly



Connect the base carrier with the base frame. The position can be found at „electronic setup“.

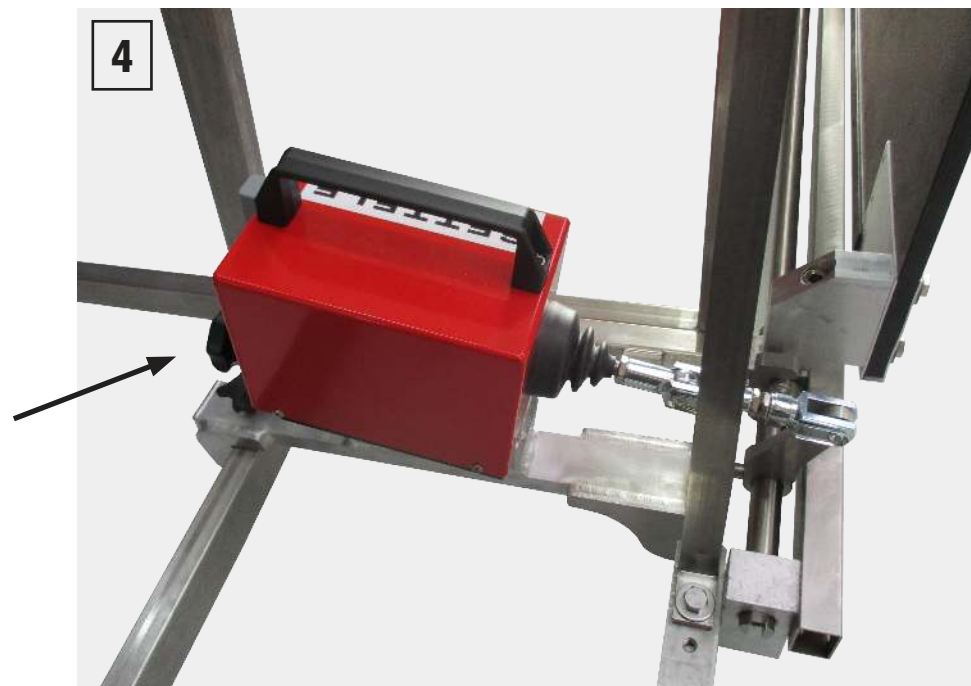


Align the base carrier with the base frame so that it is in the same alignment as the large lever.
Turn the star knob screw until the base carrier is tight.

Assembly

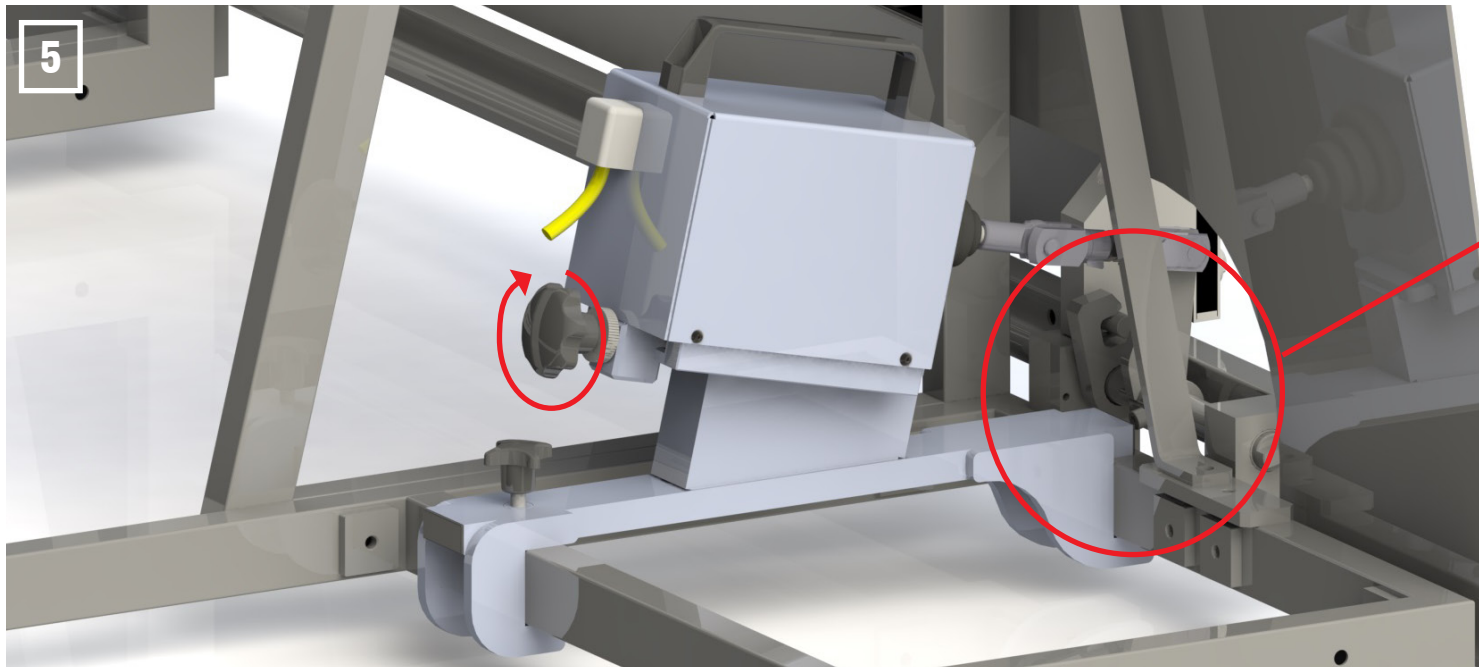


Slide the magnetic release onto the base carrier.



Connect the magnetic release to the long lever. Make sure it is aligned straight to the long lever.
If necessary, open the screw on the magnetic release to get closer to the long lever.

Assembly



Adjust the magnetic release:



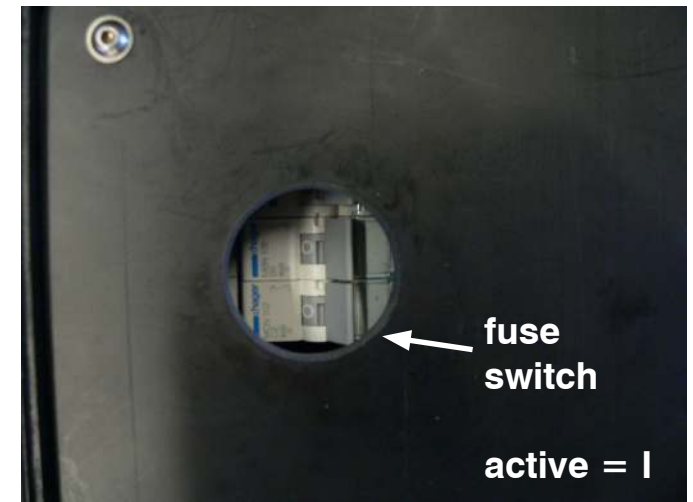
Turn the large black screw until the magnetic release cylinder rod pulls back the long lever and pulls the two locking bars at each gate back about 1-2mm. Similar to manual release. Counter the black screw with the knurled screw.


After pressing the buzzer the long lever is pulled back by the magnetic release and the gate opens. Sensors are built inside the magnetic release that measure the position of the cylinder rod. While the magnetic release pulls, the light at the buzzer shortly turns red. If the cylinder rod won't get back in starting position the light stays red (e.g. snow blocks). Otherwise the light turns green and another start is possible.



Continue with the wiring as seen at „electric setup“

Solving problems:



-  1. Before solving problems disconnect the control unit from the powers ource and/or the ACCU powerpack!
2. check all connectors for right order and correct locking.
 3. open the control unit (do not mistake with the ACCU powerpack).
 4. remove the cover to reach the fuse switch.
 5. check if all fuse switch are active (I).
 6. if a fuse switch is inactive (0), press the right direction.
 7. if everything is alright again, close the control unit and restore the power connection.

START INSTRUCTION

INSTRUCTION FOR START PERSONAL:



Signals at the start buzzer:

Red Light: release mechanism not ready

Green Light: release mechanism ready

You can immediately use the release rod if electric failure happens during competition.

If the red sign lights check the release unit. Perhaps the release mechanism was not automatically pushed back to starting position (e.g. snow blocking). You can manually push the mechanism by pulling the black ball at the release unit.

Check for failure as described under „**Solving Problems**“.

Advice:

For better and easier release push the release rod just a little bit before pressing the start button.

Thank you very much and have fun with your new

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