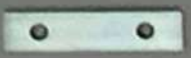
INSTRUCTIONS FOR INSTALATION AND USE

ST44M2V4P - a dual axis sun tracker

SAT CONTROL



8 pcs

2 pcs

16 pcs

4 pcs

2 pcs

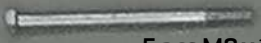
1 pcs

2 pcs

1 pcs

1 pcs

8 pcs



5 pcs M8 x 110mm

4 pcs M8 x 80mm

4 pcs M8 x 50mm

2 pcs M12 x 90mm

6 pcs M8 x 30mm

1 pcs M10 x 50mm

8 pcs M8 x 16mm

24 pcs M6 x 12mm

8 pcs M12 x 20mm

4 pcs M8 x 40mm

4 pcs M8 x 30mm

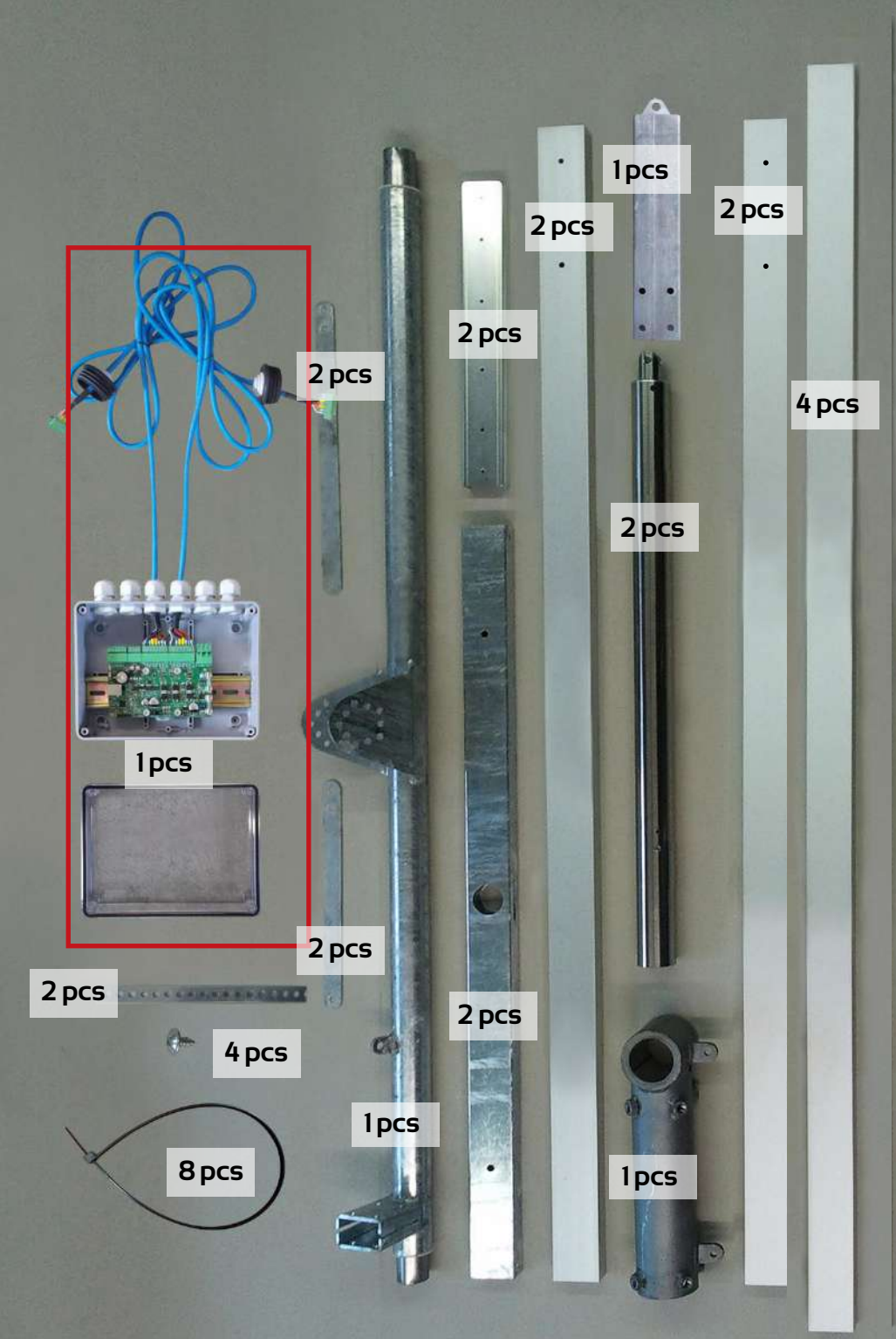
4 pcs M12

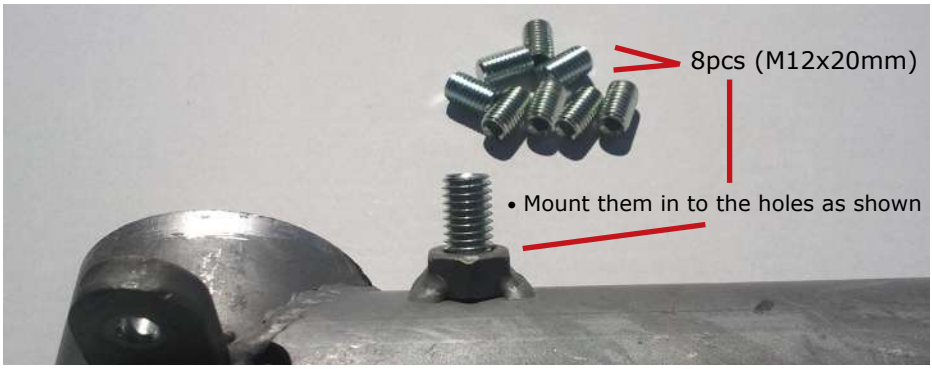
46 pcs M8

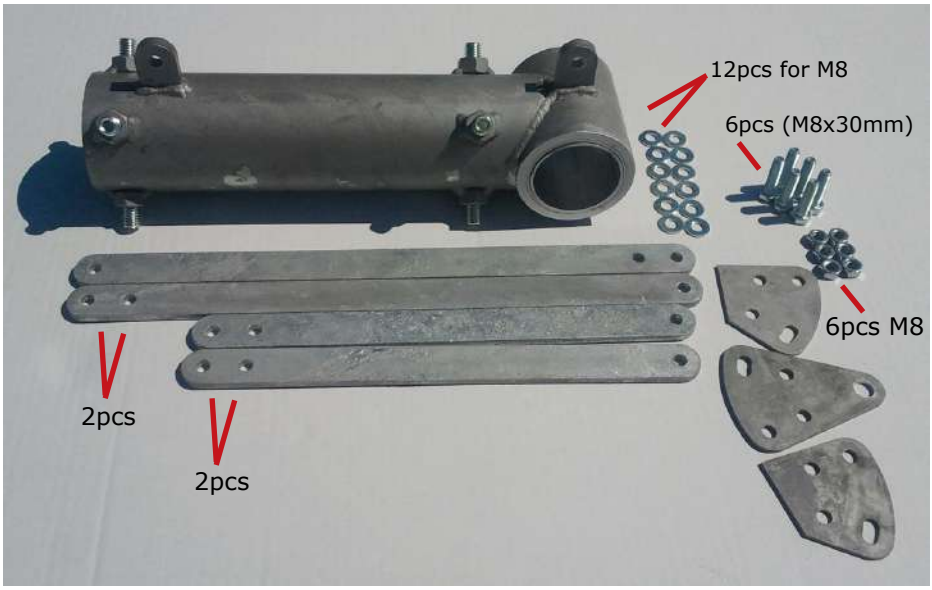
2 pcs M12

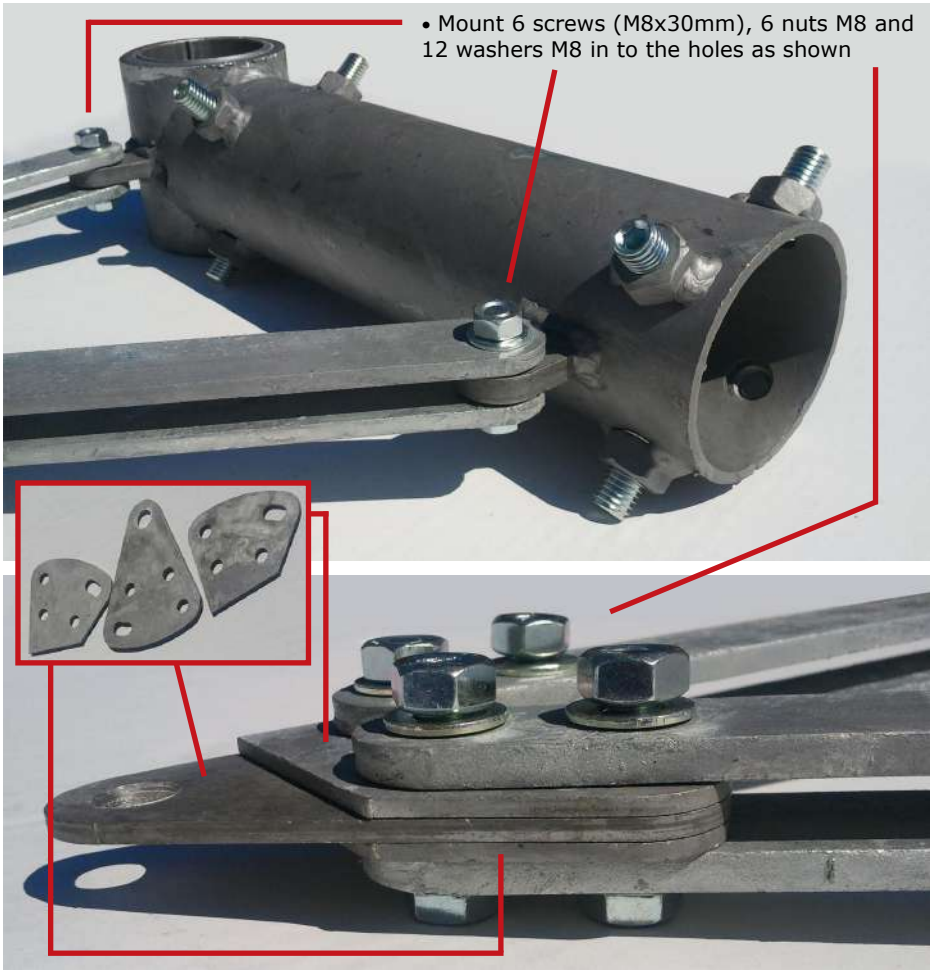
45 pcs M8

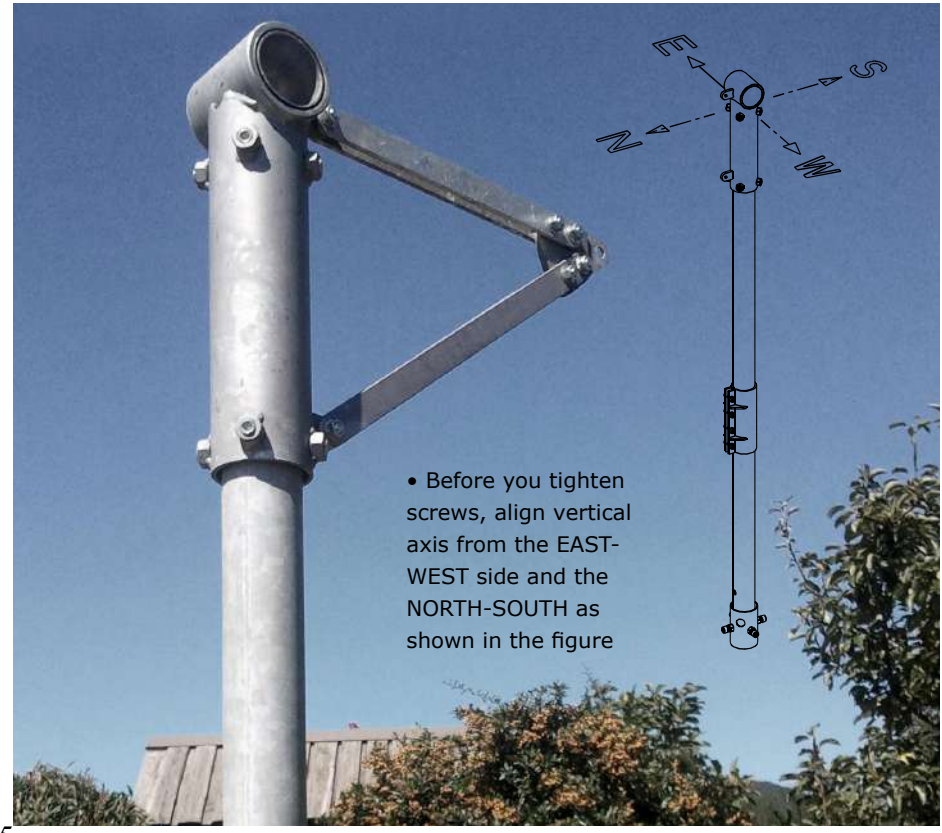
3 pcs Ø7mm


2 pcs
1 pcs
2 pcs
2 pcs
4 pcs
2 pcs
4 pcs
8 pcs
2 pcs
2 pcs
1 pcs
1 pcs
2 pcs
1 pcs
2 pcs
4 pcs

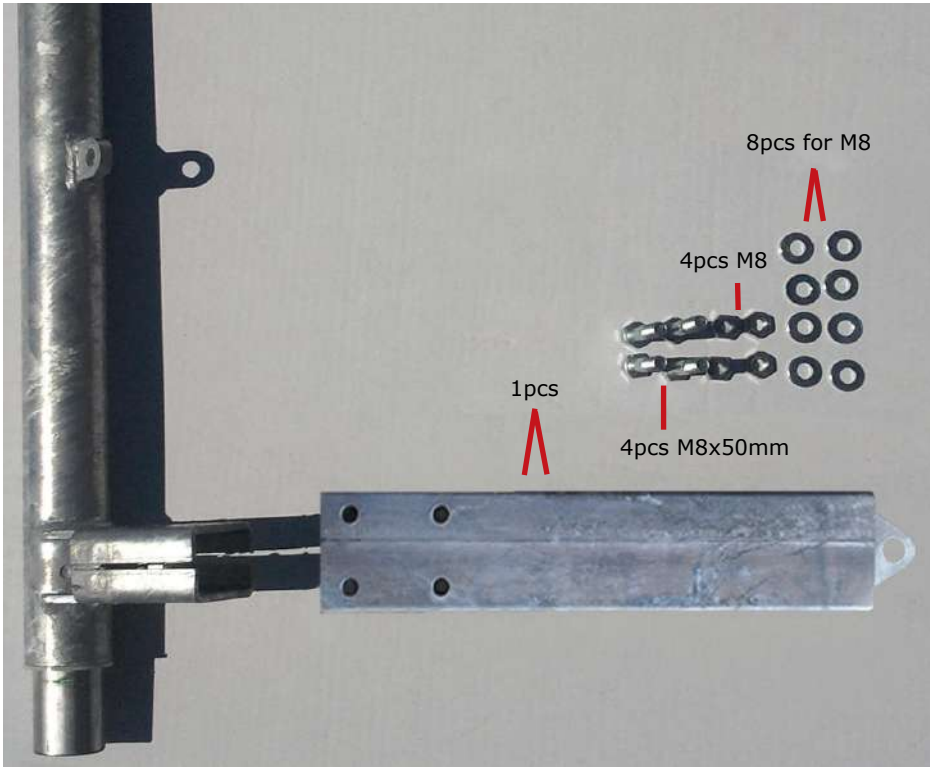

8pcs (M12x20mm)
• Mount them in to the holes as shown

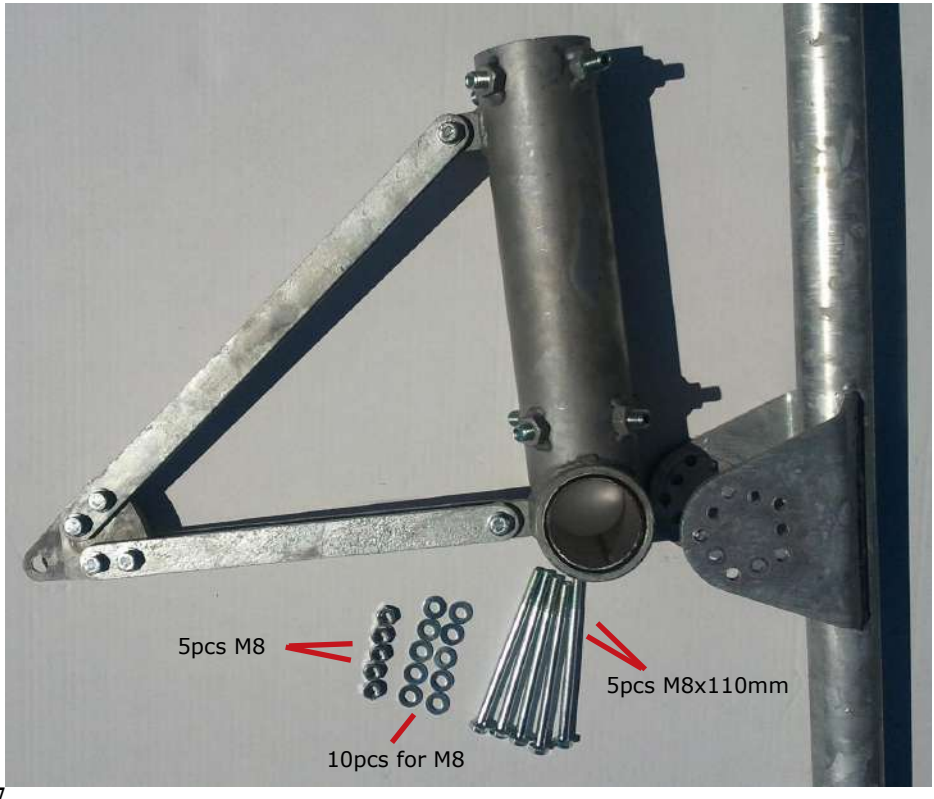

12pcs for M8
6pcs (M8x30mm)
6pcs M8
2pcs
2pcs

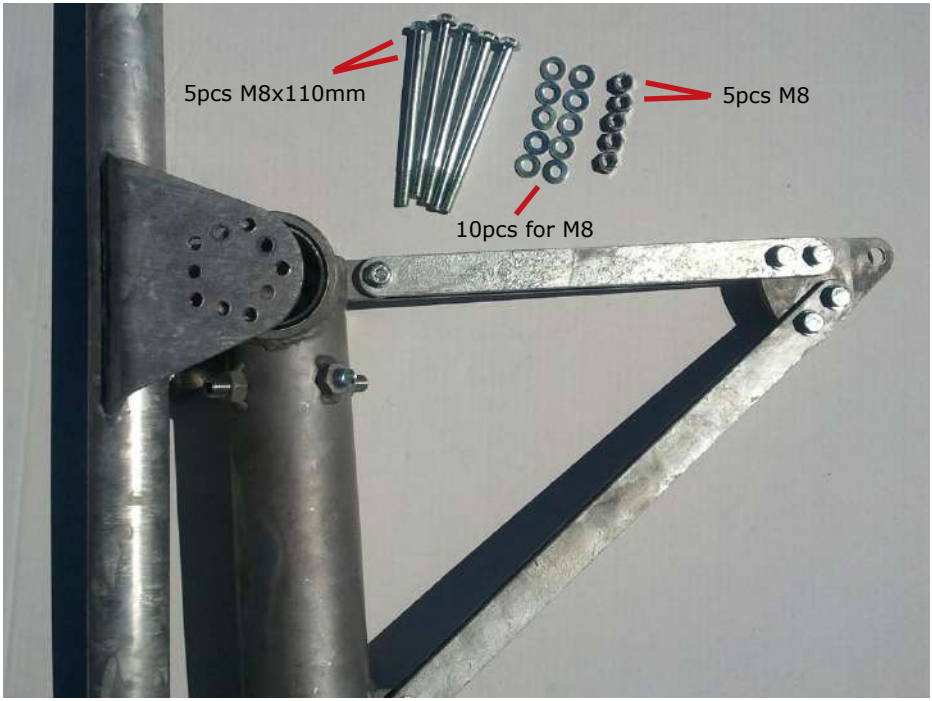

• Mount 6 screws (M8x30mm), 6 nuts M8 and 12 washers M8 in to the holes as shown

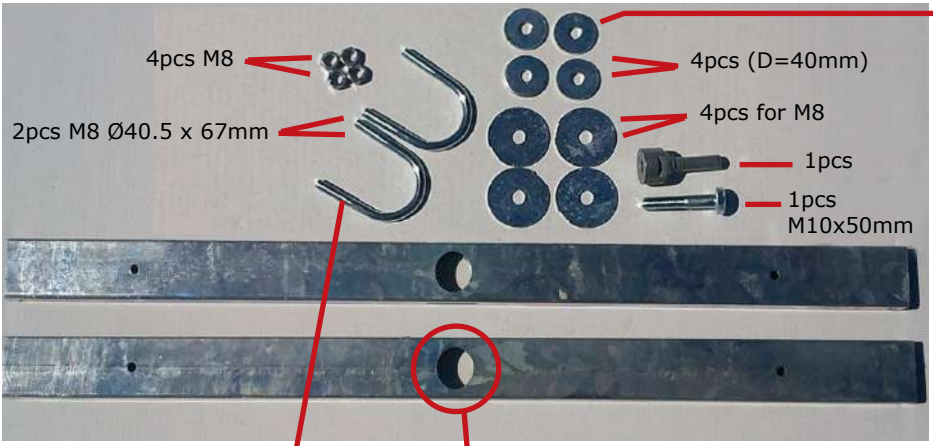


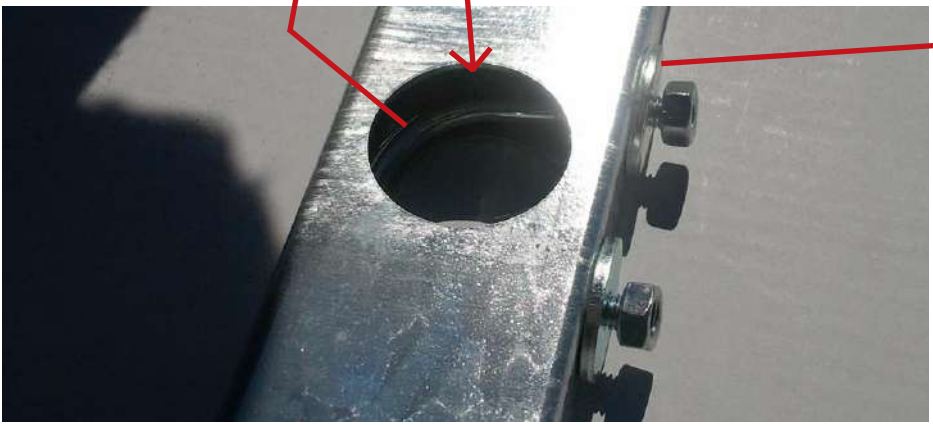
• Before you tighten screws, align vertical axis from the EAST-WEST side and the NORTH-SOUTH as shown in the figure

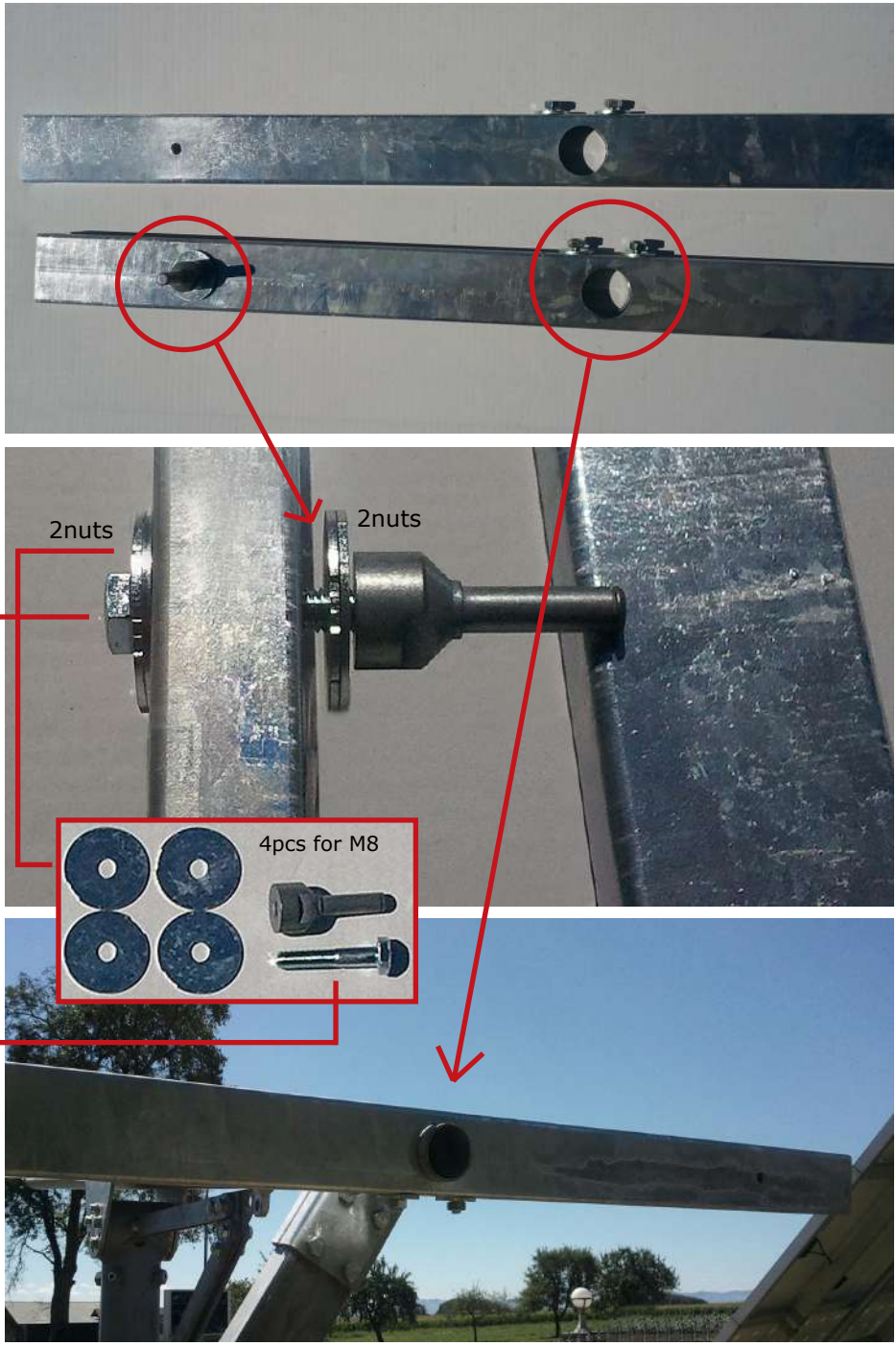

8pcs for M8
4pcs M8
1pcs
4pcs M8x50mm


5pcs M8
5pcs M8x110mm
10pcs for M8

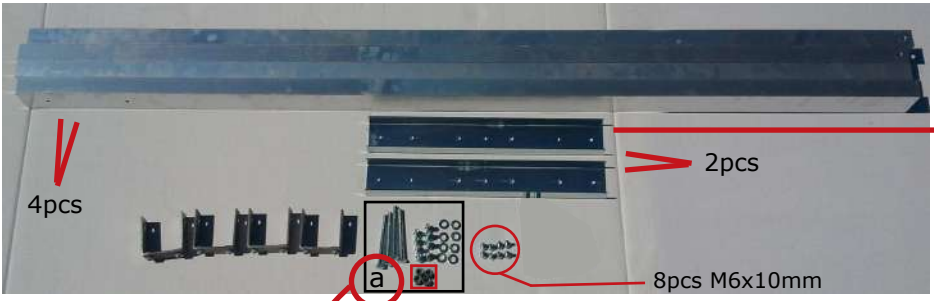

5pcs M8x110mm
5pcs M8
10pcs for M8

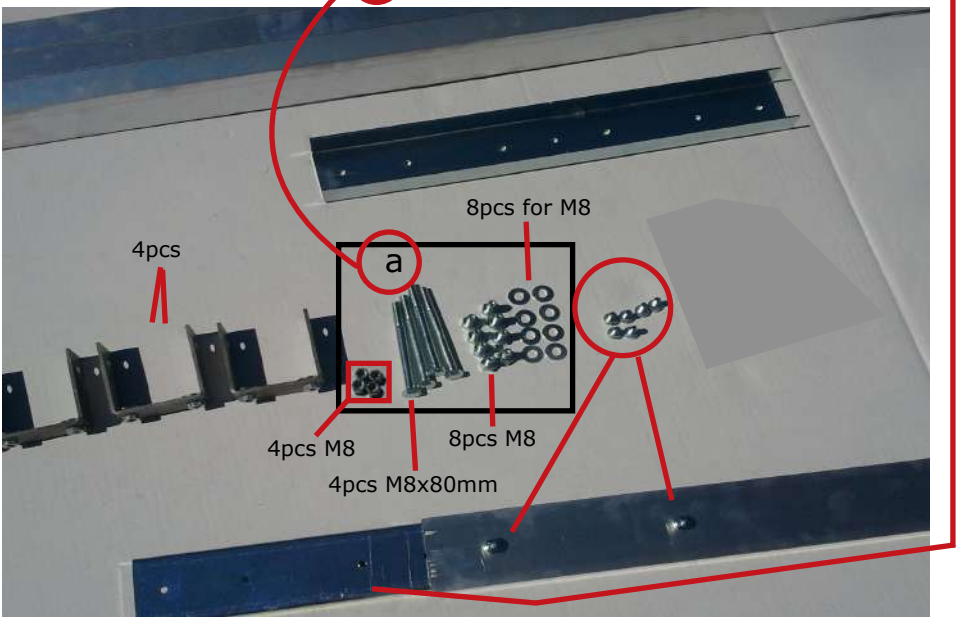

4pcs M8
4pcs (D=40mm)
2pcs M8 Ø40.5 x 67mm
4pcs for M8
1pcs
1pcs
M10x50mm

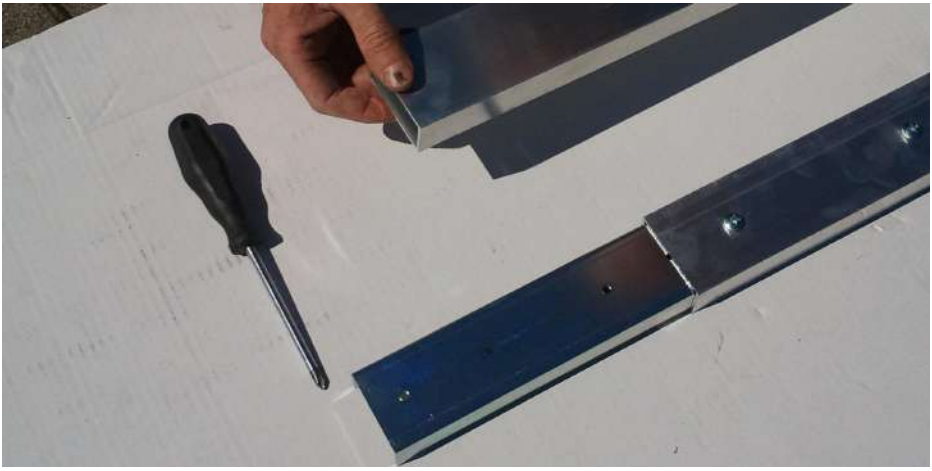


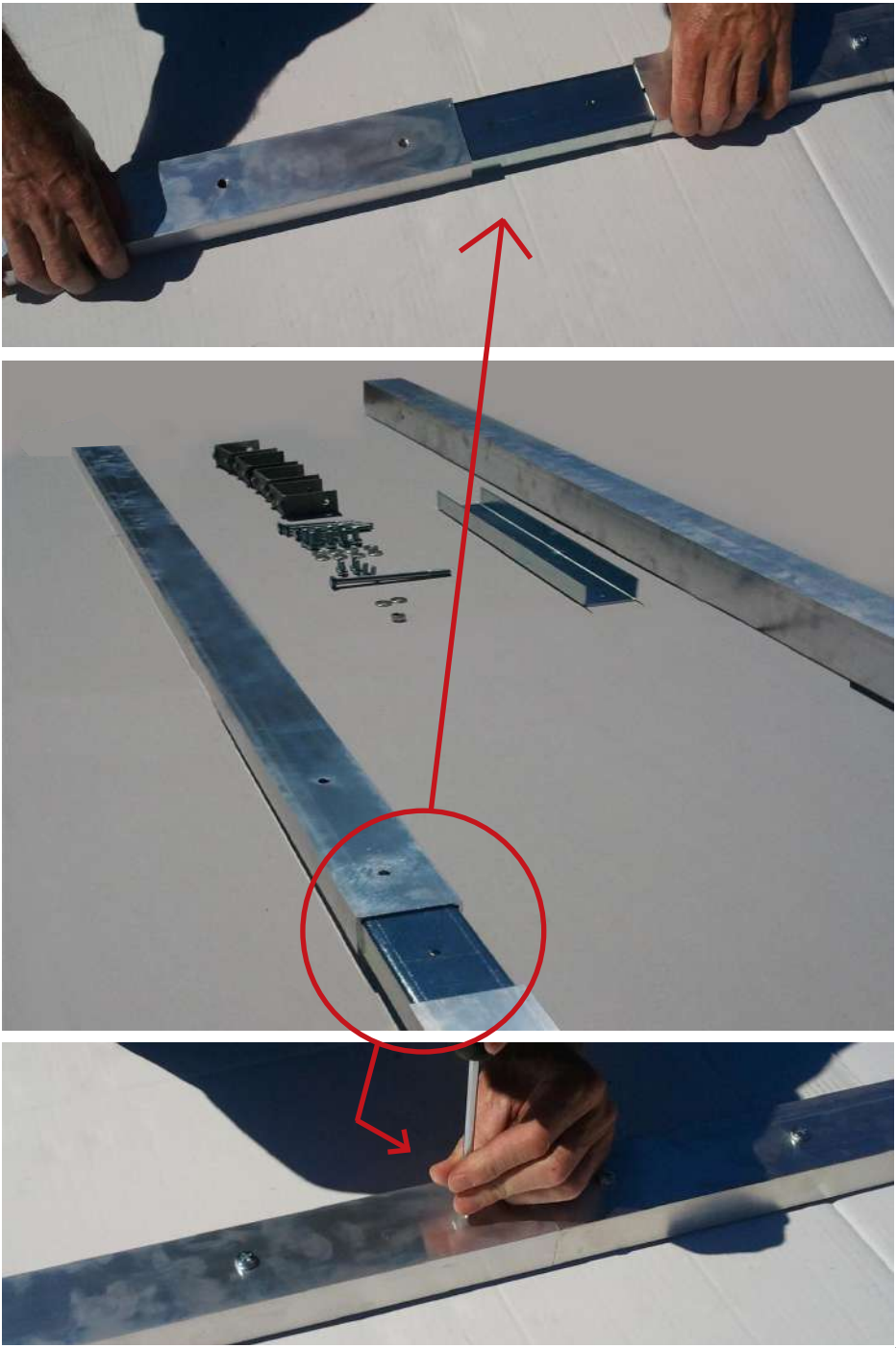

2nuts
2nuts
4pcs for M8

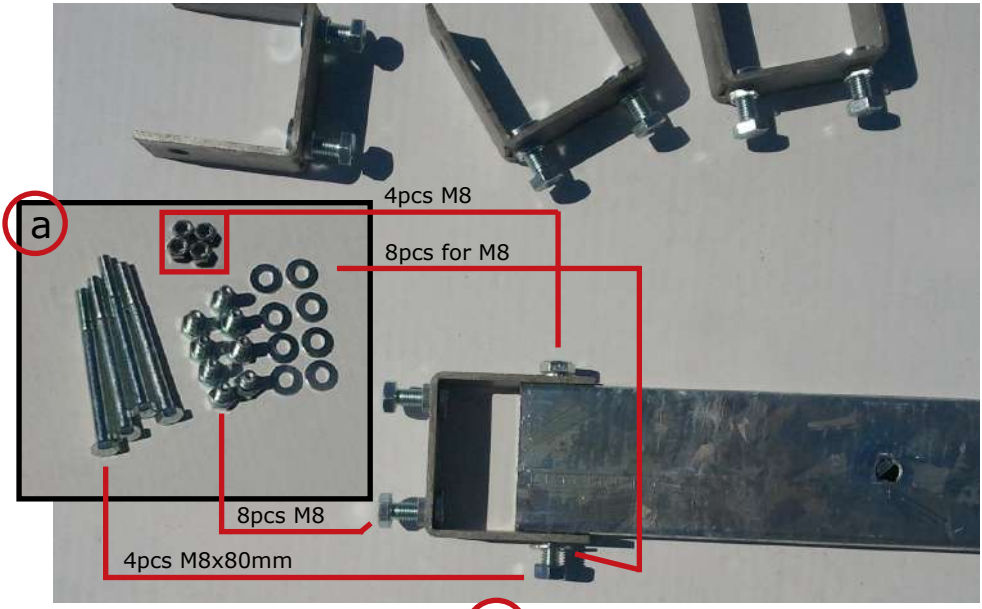
• Make sure that the two arms are perfectly parallel

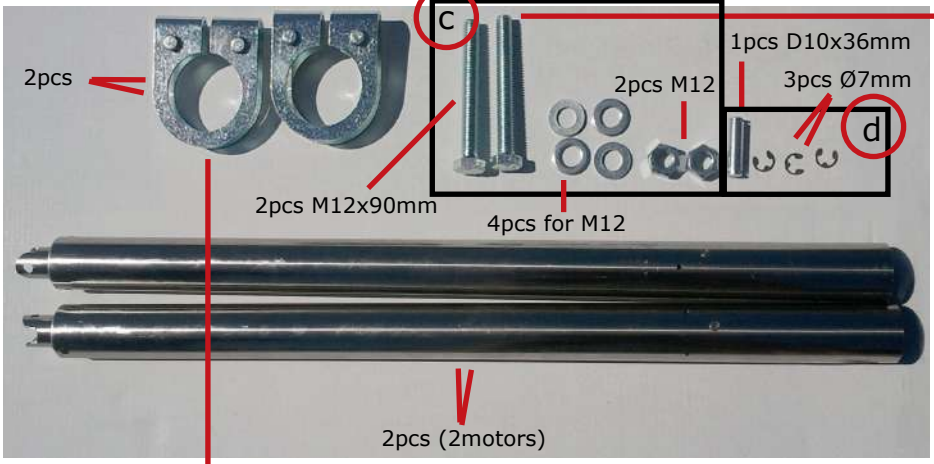

4pcs
2pcs
a
8pcs M6x10mm

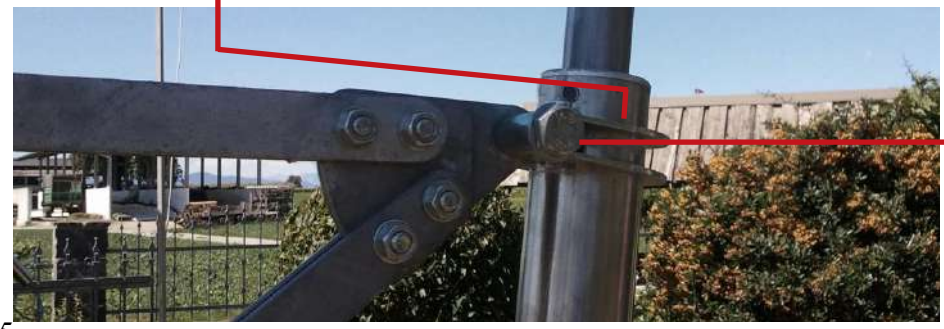

8pcs for M8
4pcs
a
4pcs M8
8pcs M8
4pcs M8x80mm

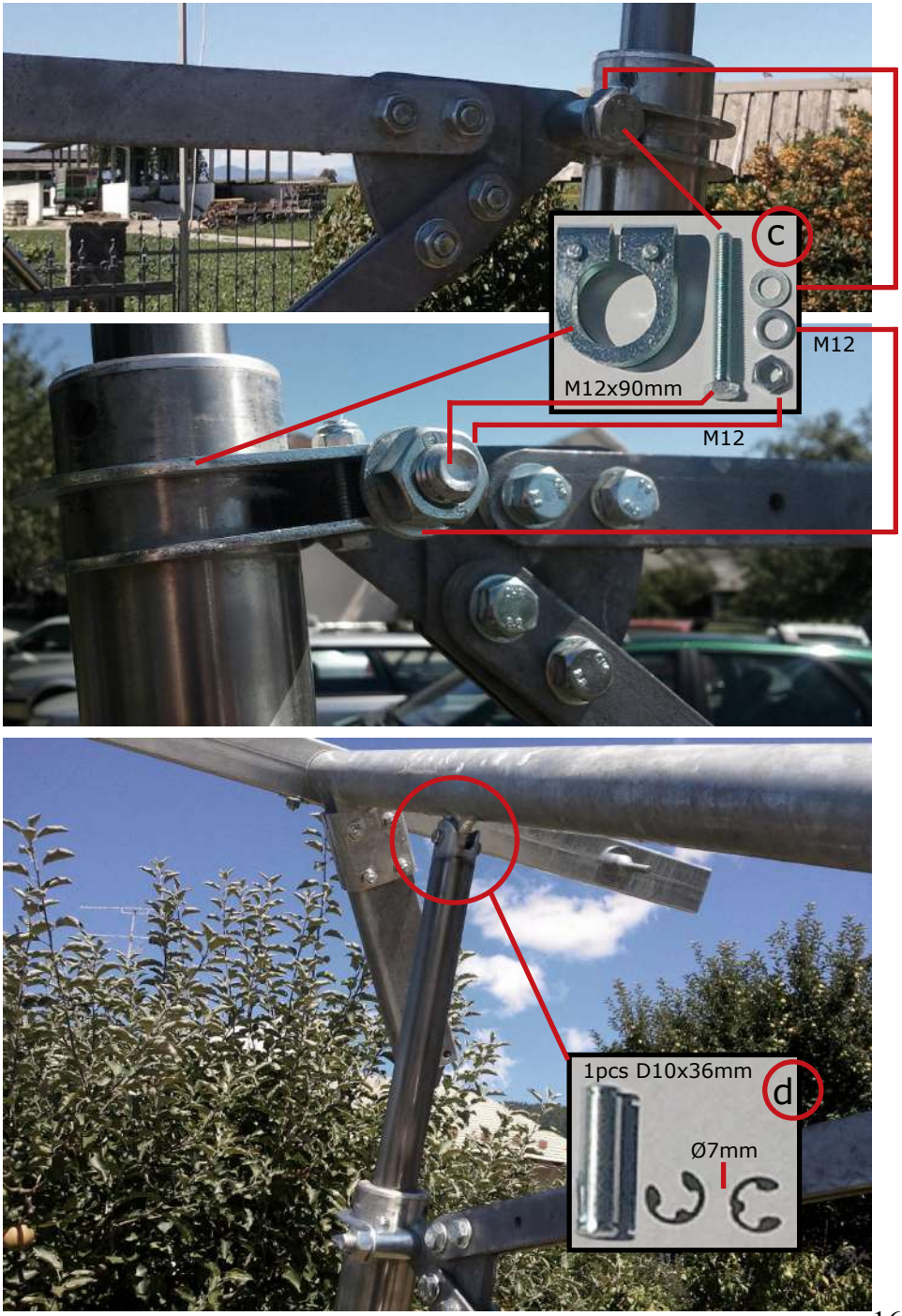


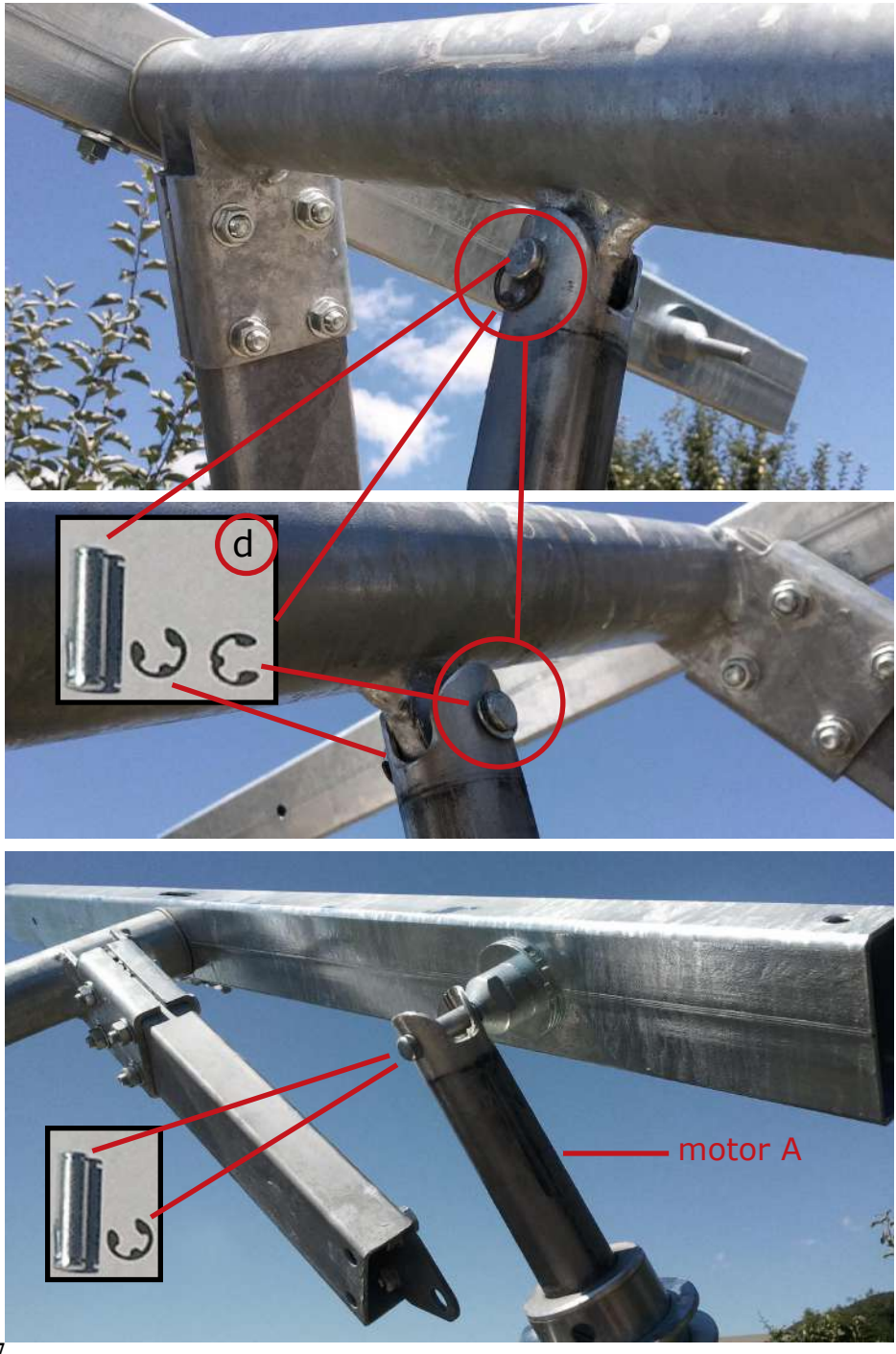


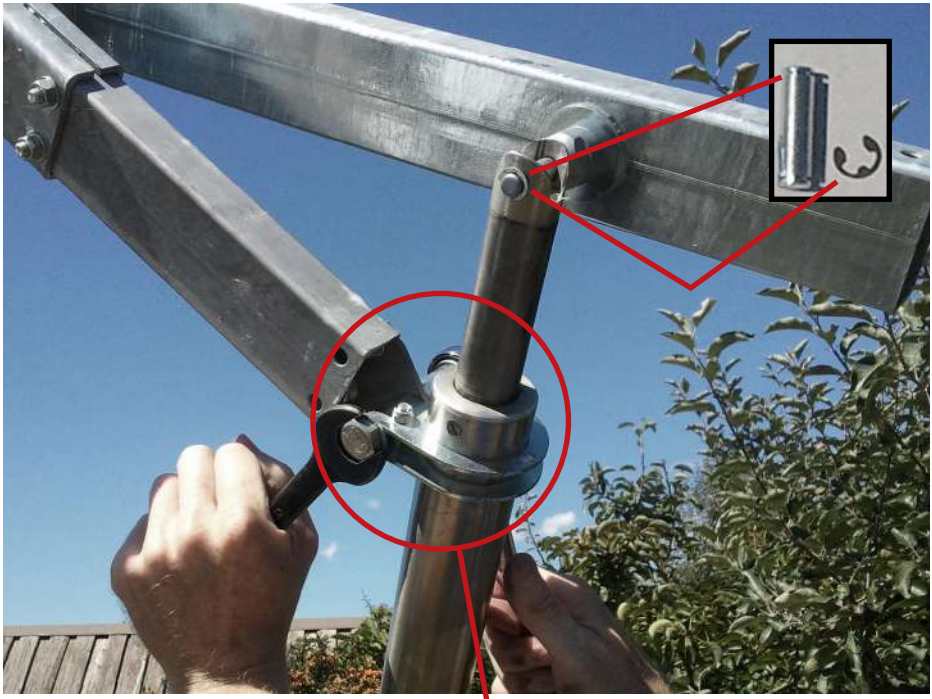

a
4pcs M8
8pcs for M8
8pcs M8
4pcs M8x80mm

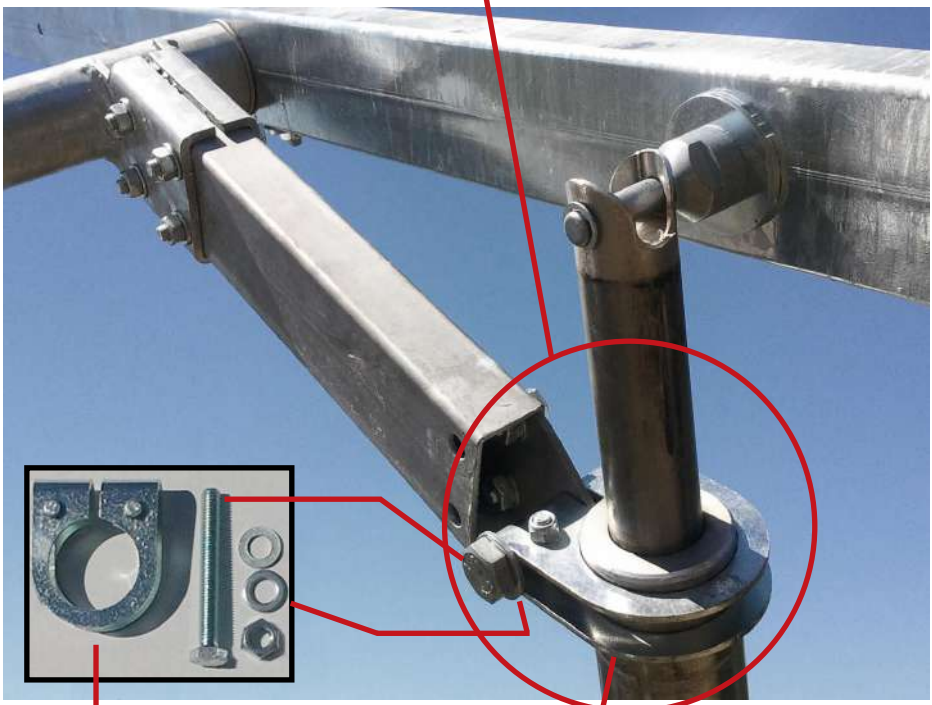

c
d
2pcs
1pcs D10x36mm
3pcs Ø7mm
2pcs M12
2pcs M12x90mm
4pcs for M12
2pcs (2motors)

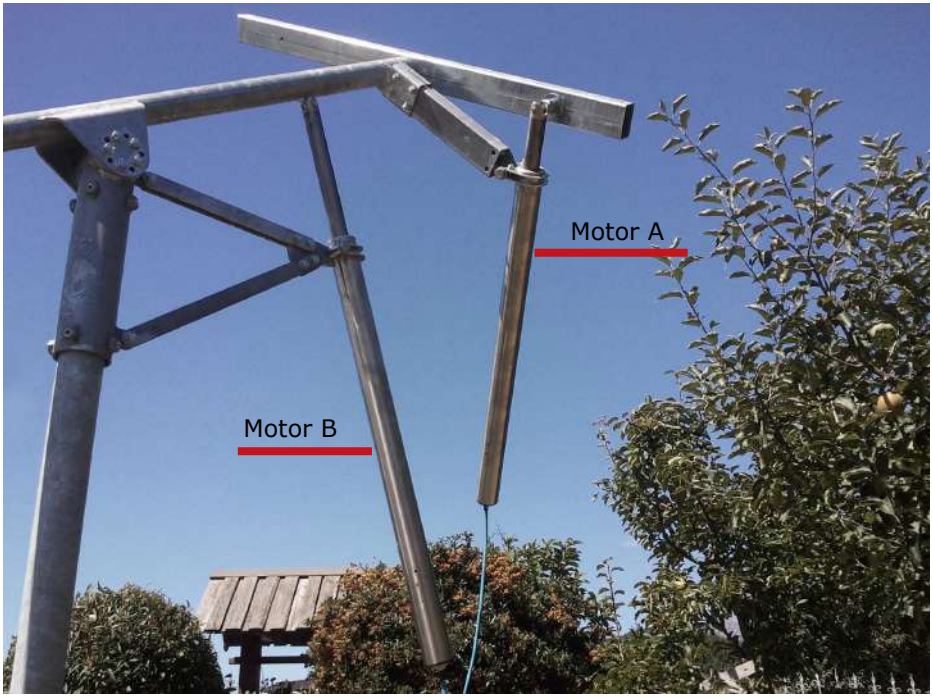



c
M12
M12x90mm
M12
1pcs D10x36mm
d
Ø7mm

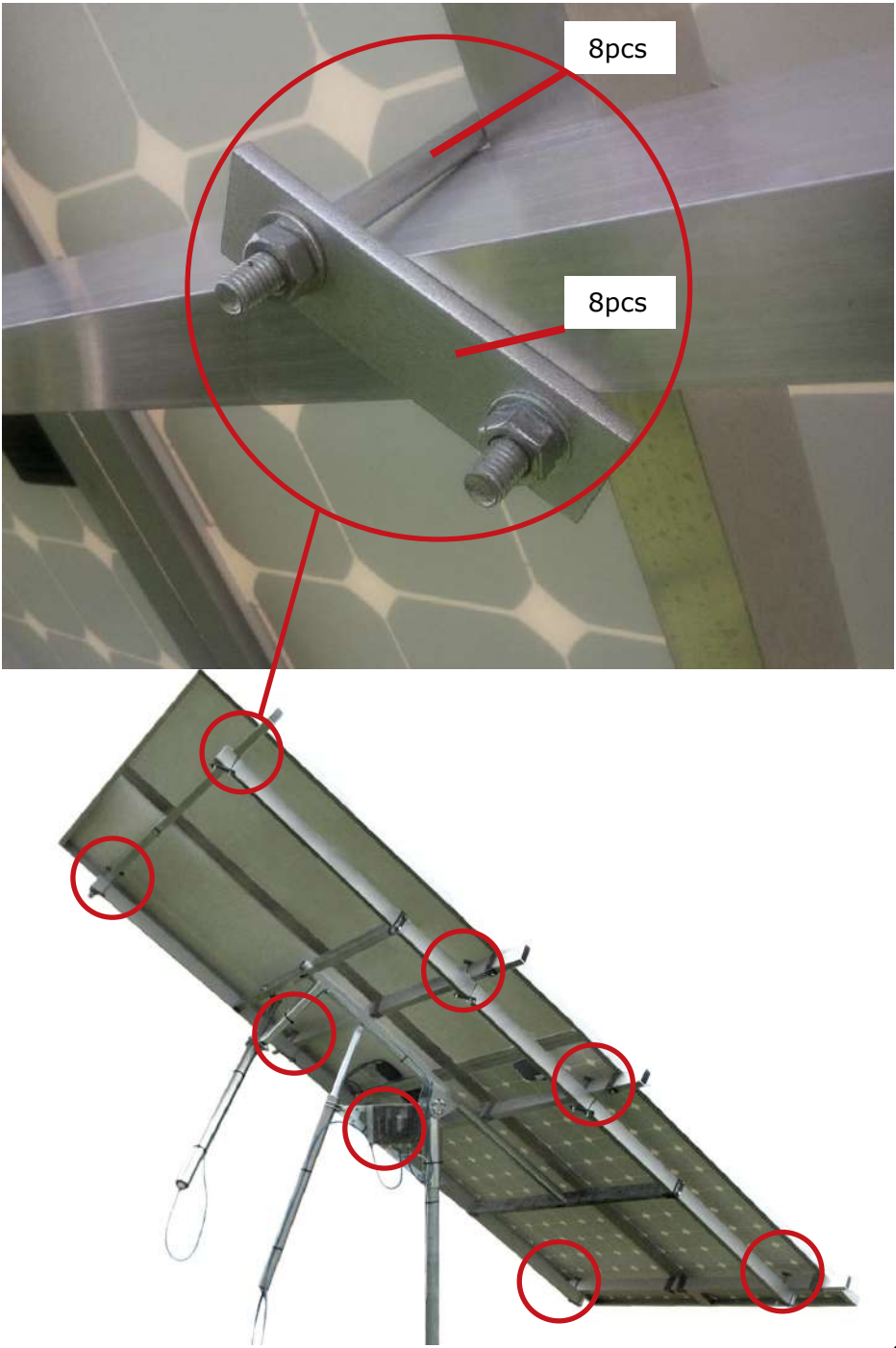

d
motor A

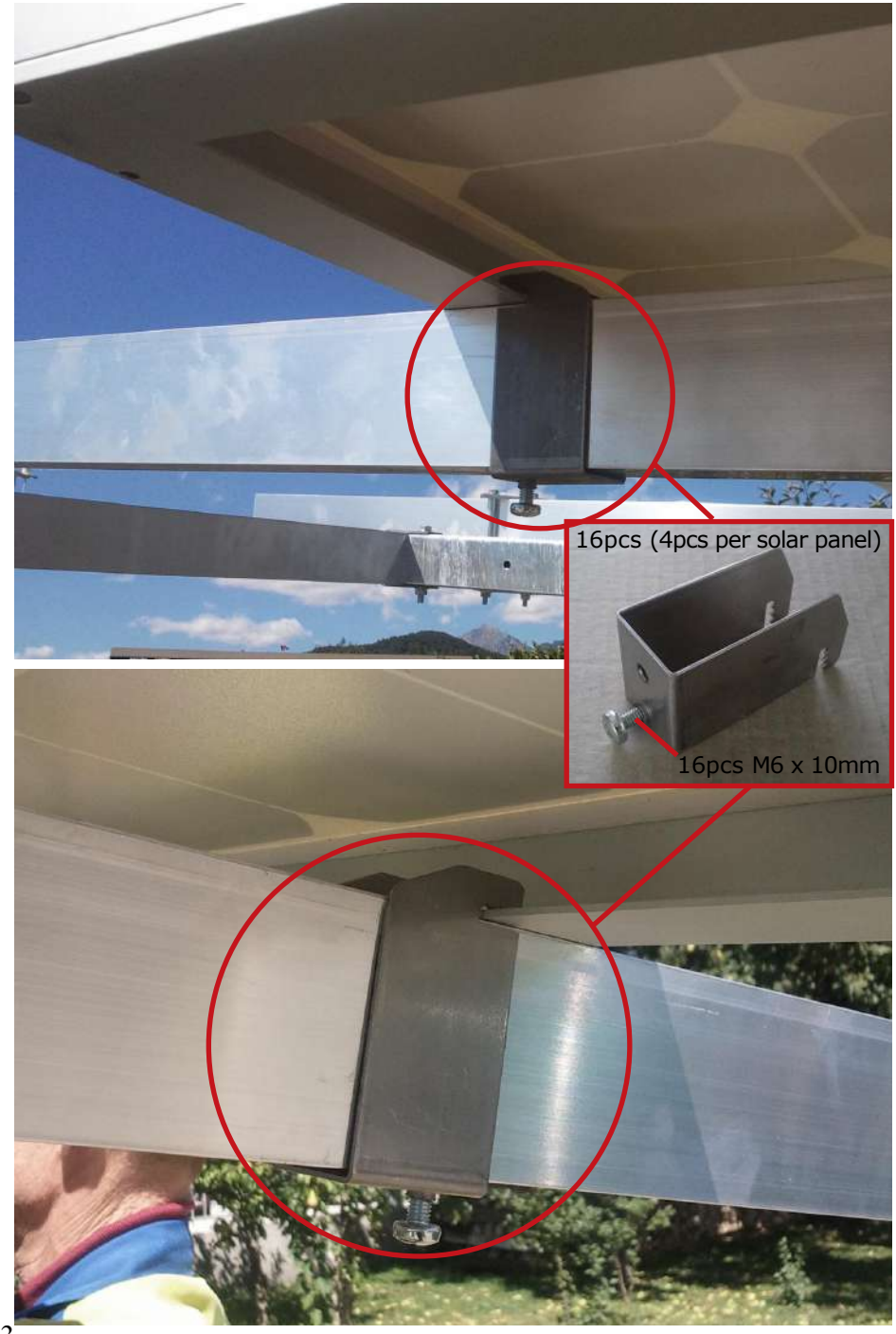


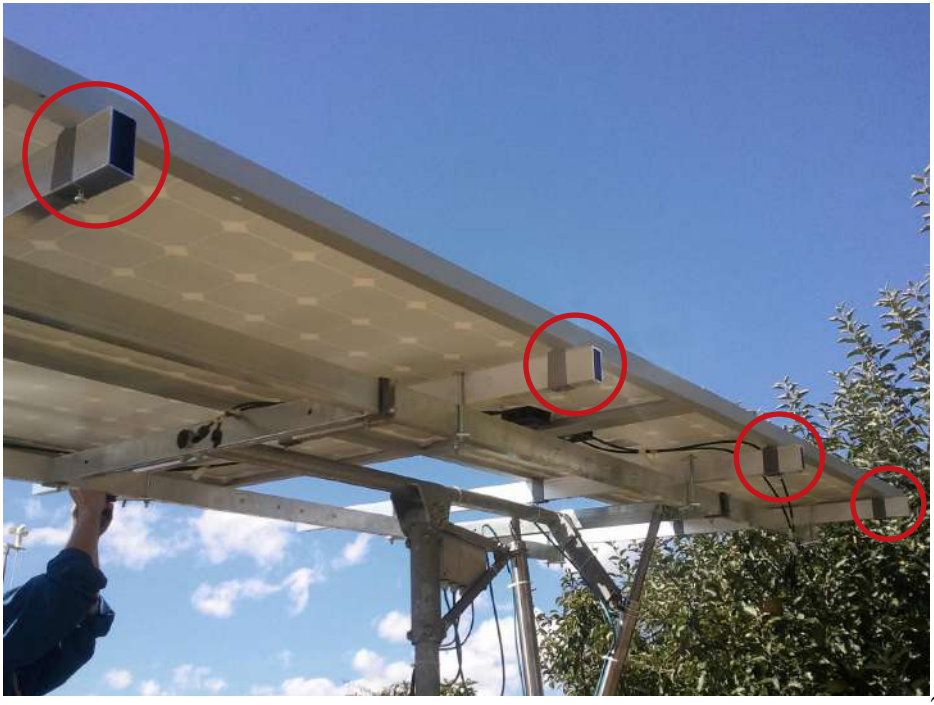



Motor A
Motor B


4pcs

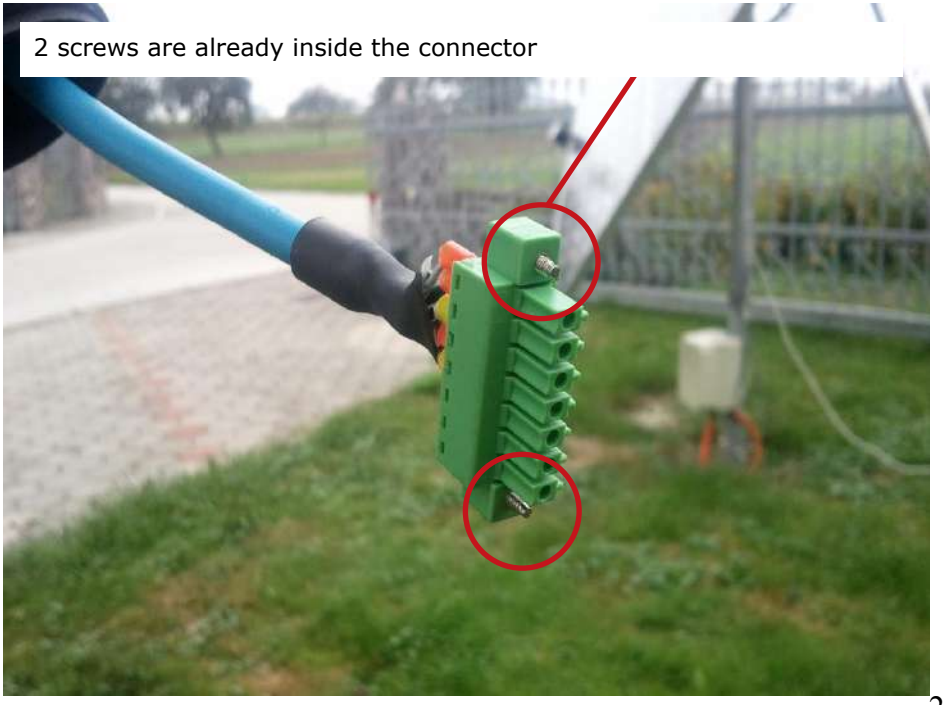

8pcs
8pcs


16pcs (4pcs per solar panel)
16pcs M6 x 10mm



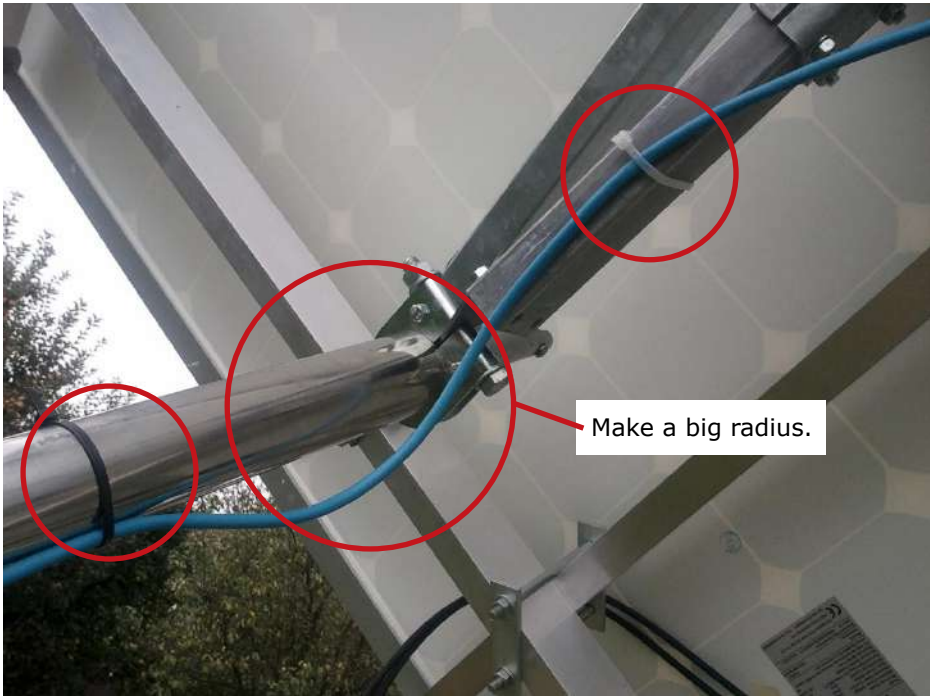
How to set the Motor Box!

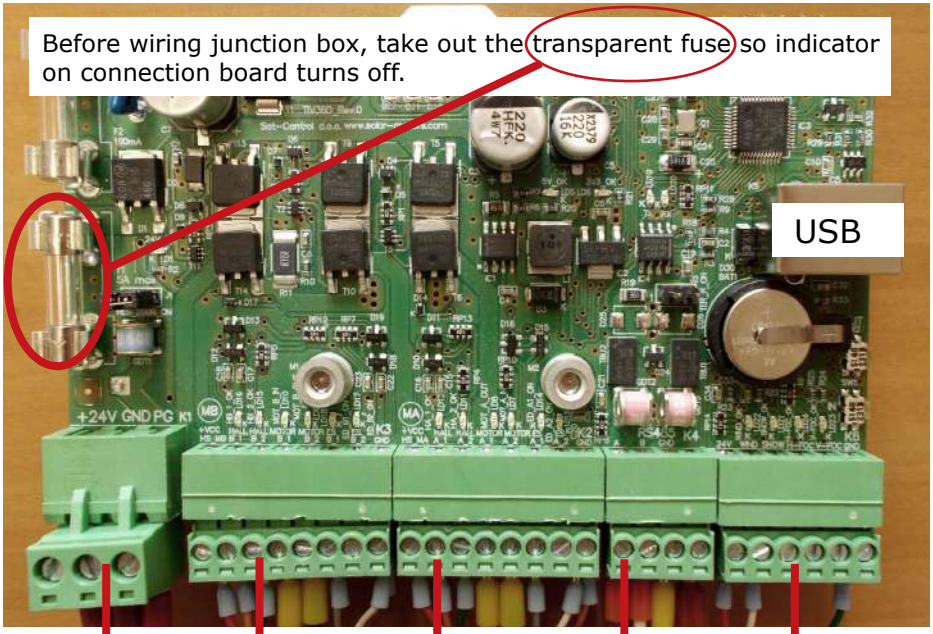
2 screws are already inside the connector

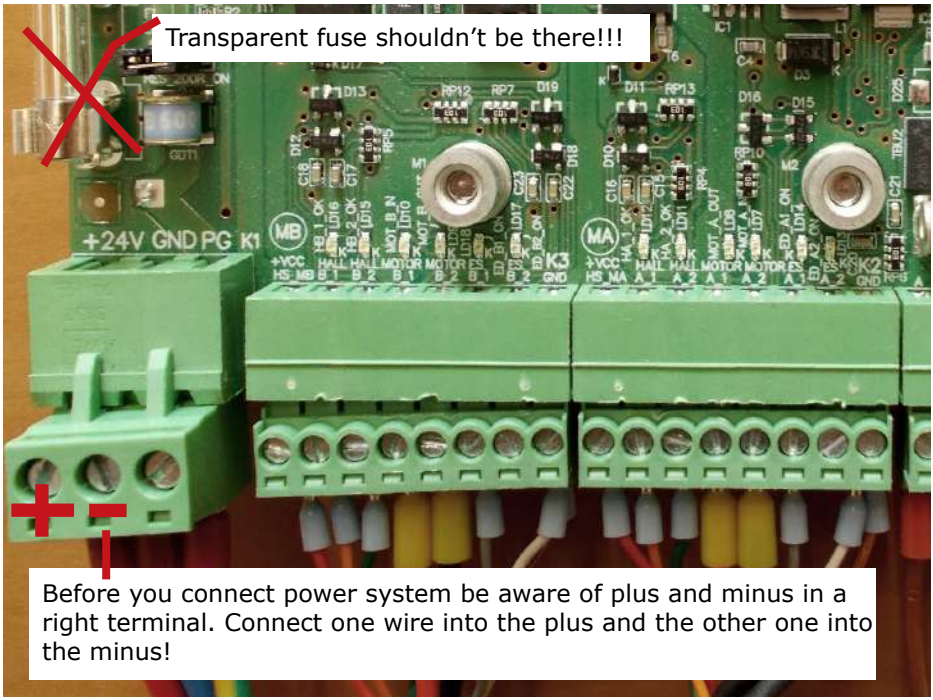


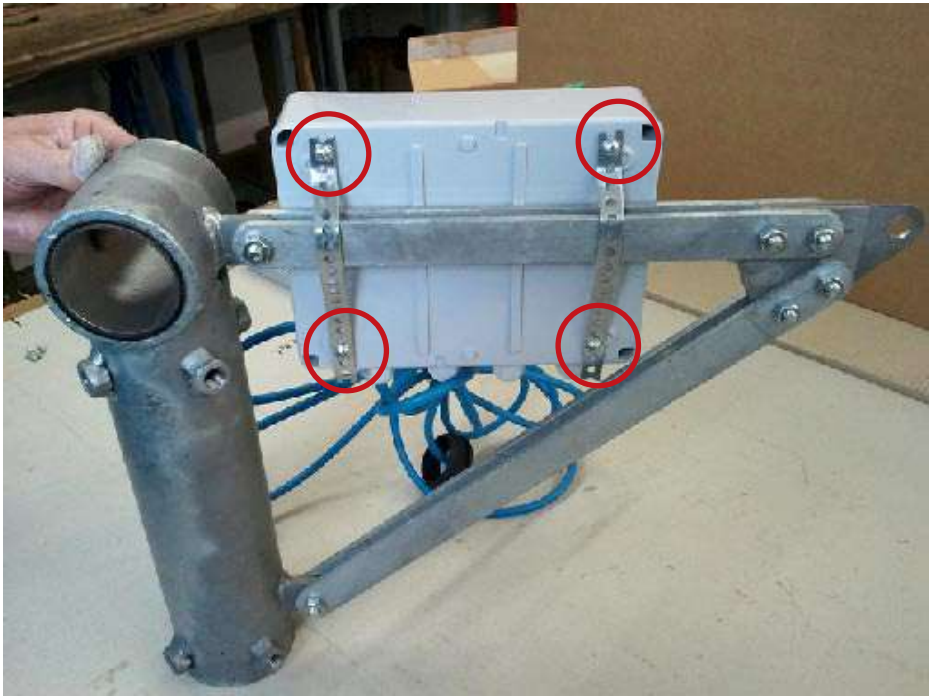

Tight screws like it’s shown

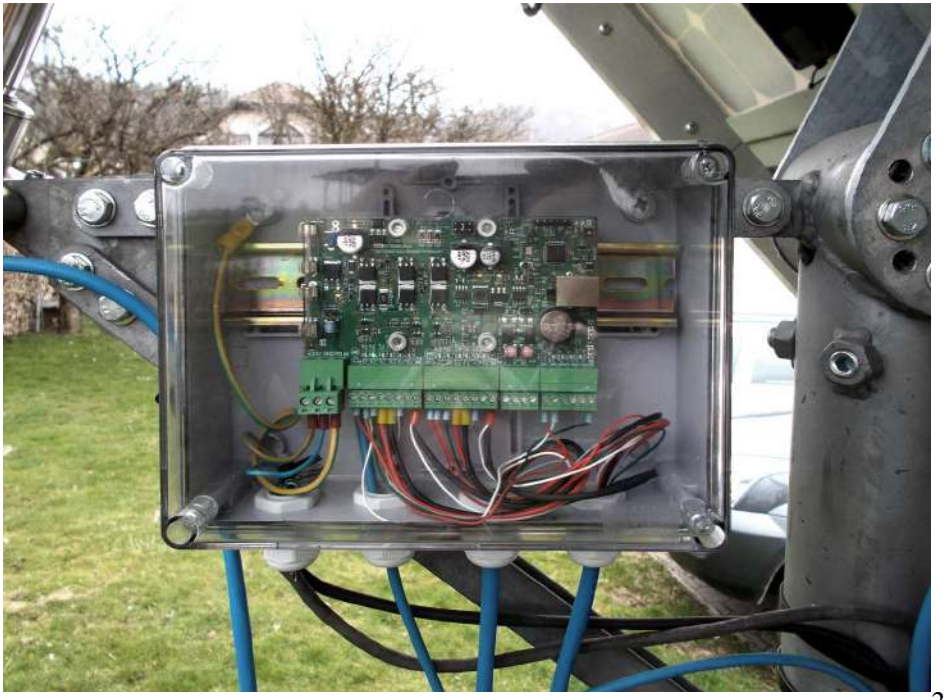

Use cable ties as it ‘s shown.


Make a big radius.


Before wiring junction box, take out the transparent fuse so indicator on connection board turns off.
USB
power supply
motor B
motor A
RS485
wind sensor & optionally optical sensor

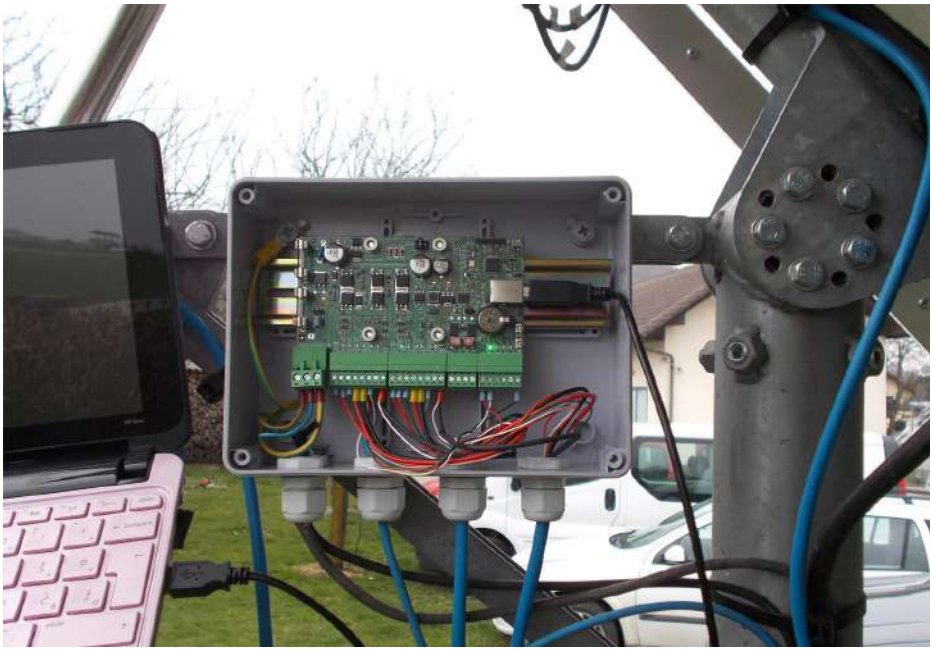

Transparent fuse shouldn't be there!!!
+24V GND PG K1
+
-
Before you connect power system be aware of plus and minus in a right terminal. Connect one wire into the plus and the other one into the minus!





FIRST CONNECTION OF TRACKER TO A PC OVER AN USB CONNECTION DRIVER INSTALLING

• Connect your PC to the tracker using the enclosed communication cable. Use the USB port on your computer.



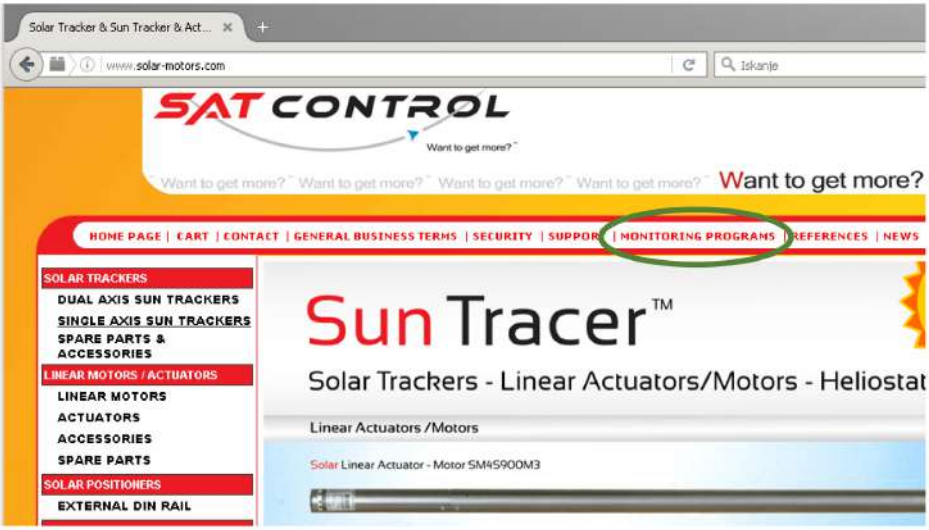
• Computer will require its driver installation. Let windows choose your driver automatically. When the driver is not found install latest custom windows updates.

• When the next window appear, click on "No, not this time" and than Install the software automatically .

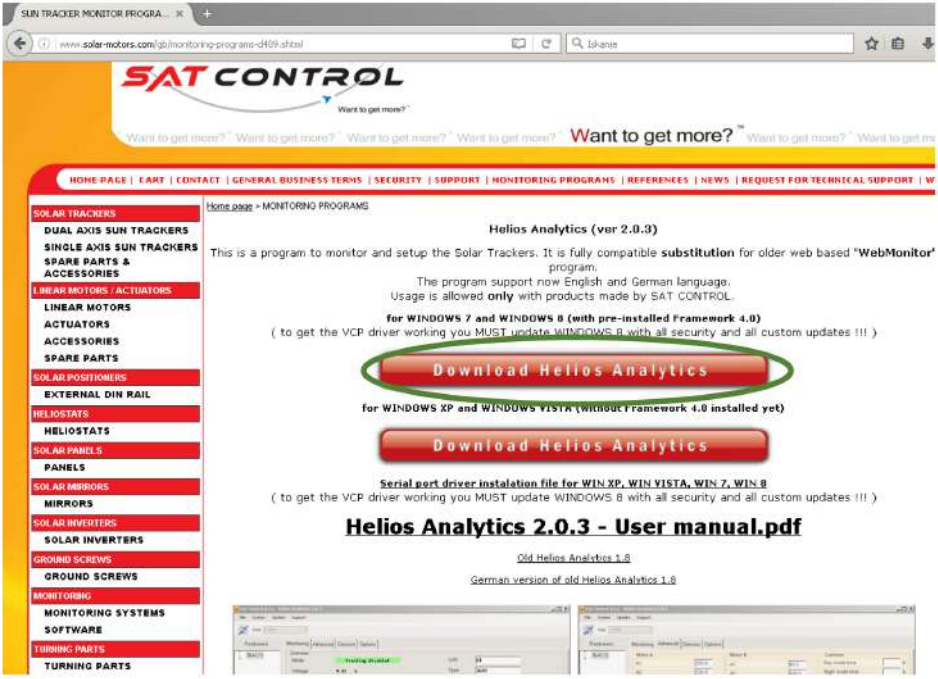
HOW TO SETUP HELIOS ANALYTICS

STEP-BY-STEP INSTRUCTIONS:

1. DownloadHelios analytics from www.solar-motors.com to C:\Users\USER\Downloads

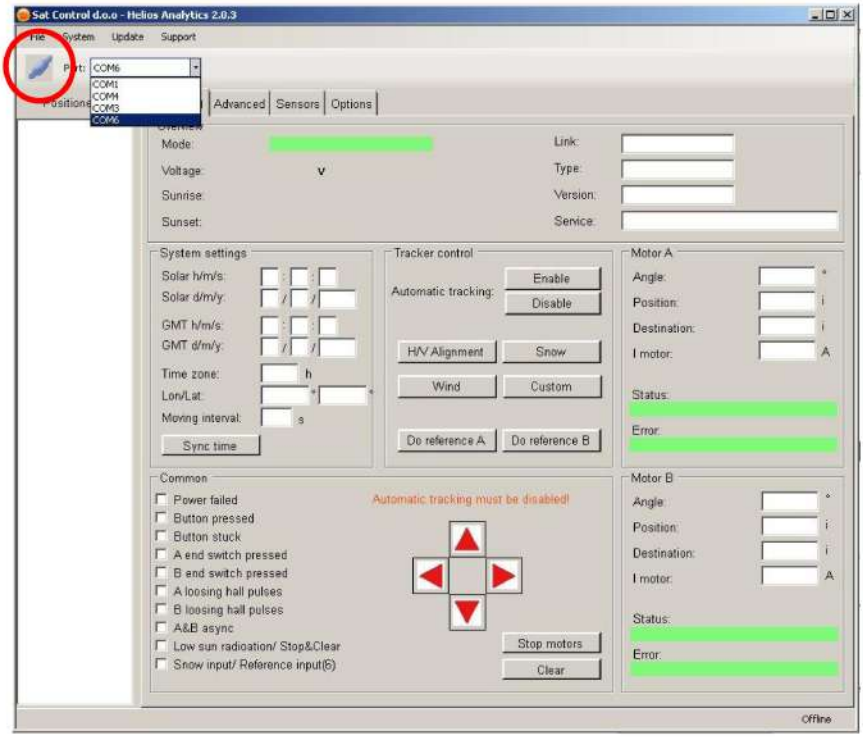


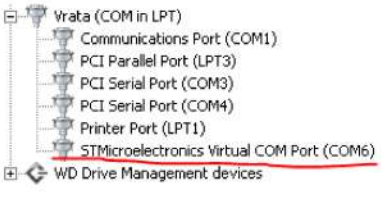
http://www.solar-motors.com/gb/monitoring-programs-d489.shtml



2. Extract downloaded file to disk C:\Program Files (x86)\HELIOS

3. Runor openHeliosAnalytics.exe from the folder where all other original files and folders are. If you want to run from desktop, make shortcut on desktop! Do not copy this file on desktop, because will not work!



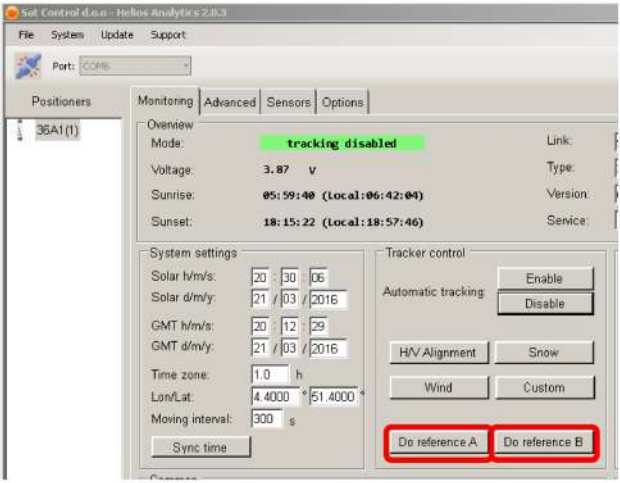


4. Choose right COM port.You can check which COM port in ->START -> COMPUTER -> PROPERTIES -> DEVICE MANAGER -> PORTS COM & LPT -> check for STMicroelectronics Virtual COM port (COMx) (x is a number). In our case, we choose COM6 and press connect. (the button left beside COM ports.

5. The numbers appear and link is counting; now disable tracking in case tracking enabled.

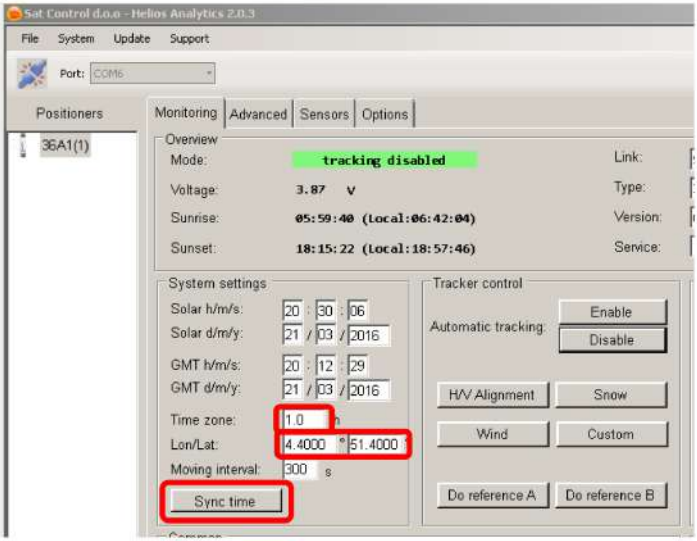
6. Click "Do reference A" and confirm action to initiate a position calibrating for motor A. When motor A stops, click "Do reference B" and confirm action to initiate a position calibrating for motor B

WARNING: Before proceeding to this step, make sure that all connectors are plugged in all wires and screws are properly tied in junction box and on motor's side! If not, all further actions can lead to serious damage of tracker! The power 24VDC must be on!

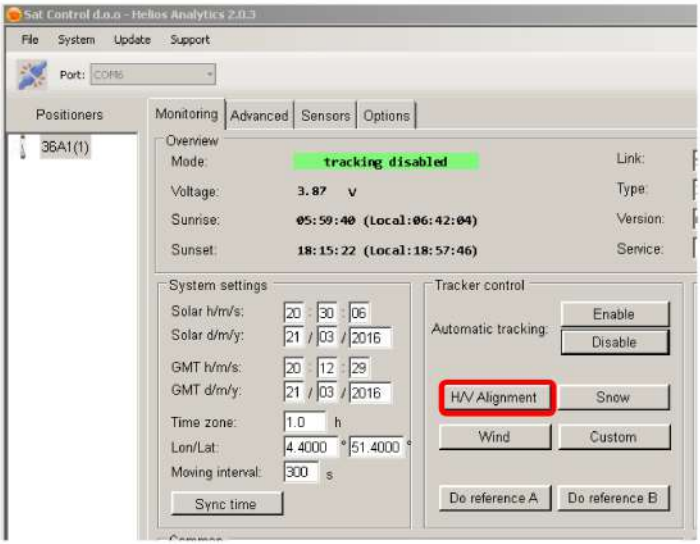


Click “Do reference A” and confirm action. When motor A stops, click “Do reference B”. You can proceed when motor stops moving and both positions are same as parameter “min range A” and “min range B” under tab Advanced parameters. Important Note: The motor fully retracts then goes to “min range A/B”. Check whether motor position is “0” (or “min range A/B” in case it is different from 0) when motor stops. In case it is not, please contact us. For additional information, refer to Helios Analytics manual.

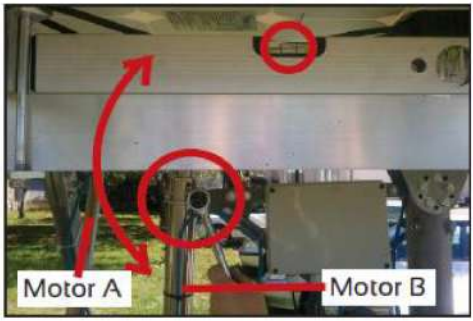
7. Sync time, set Longitude and Latitude and time zone of yours’s solar tracker position. (minus sign is WEST)



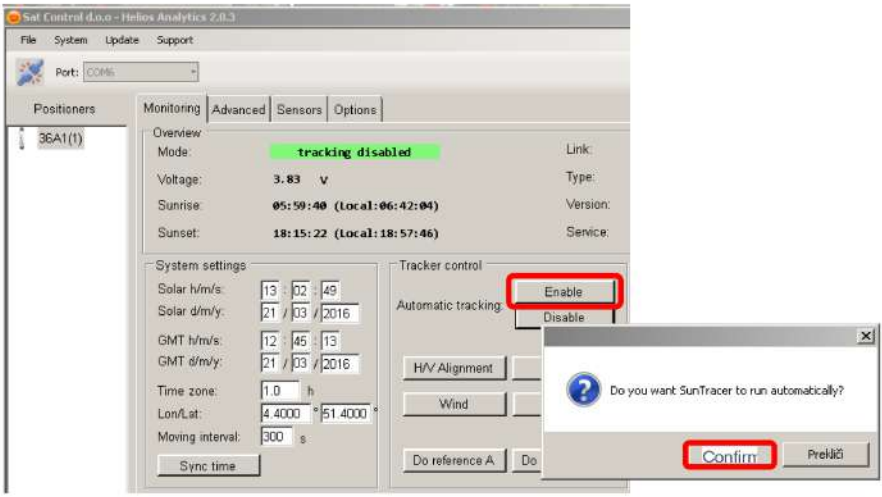
8. After the calibration is finished and motors stops, press H/V alignmento initiate horizontal alignment
After motors stops, make mechanical calibration so, that you loosen the clamp of stator part of linear motor; adjust plate with solar panels fully horizontally with help of spirit level, then tight clamp back. Do it so by both linear motors. WARNING : At the time of horizontal alignment, check if parameter Min. range A is zero and parameter Min. range B is zero in Advanced tab. When are not zero, then set it to zero (both).



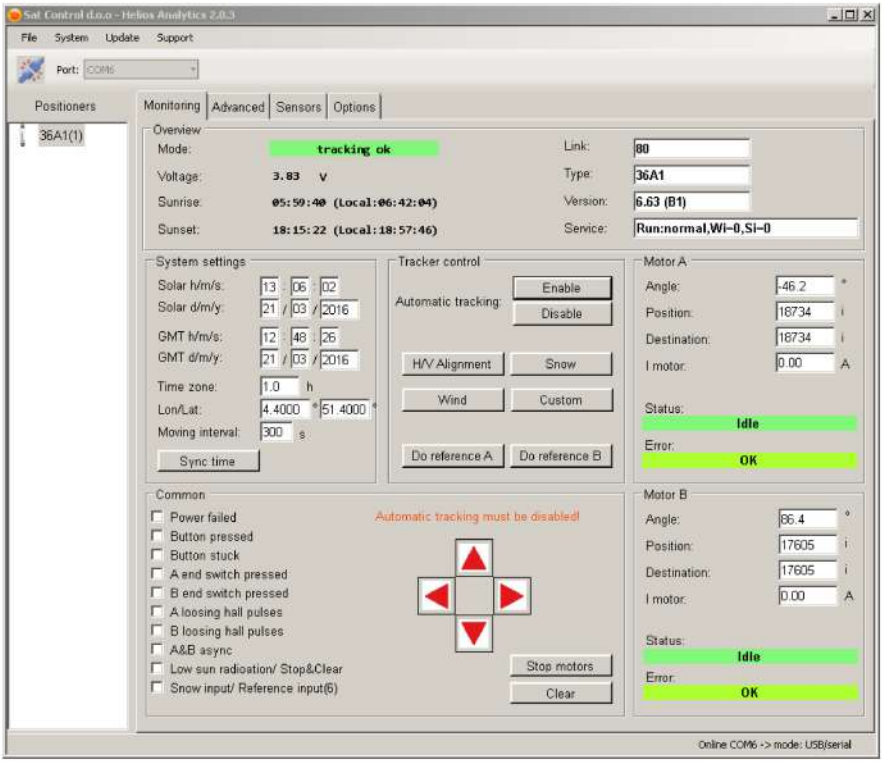
See photos of horizontal aligning.



9. Enable tracking



Start to use the Helios analytics and discover the advantages and benefits with help of user manual for Helios analytics.



DECLARATION OF CONFORMITY
according to ISO/IEC Guide 22 and EN 45014

Company/Manufacturer's Name: Sat Control d.o.o.

Address: Poženik 10, SI-4207 Cerklje, Slovenia / EU

declares under its sole responsibility, that the product

Product name: Solar Tracker

Model number: ST44M2V4P, ST44M2V3P, ST44M2V2P, ST40M2V3P, ST40M2V2P

Product options: (+) All

conforms to the following directives and/or standards

- EN 55013 :97 +A12 :97 +A13 :97 +A14 :00
- EN 55020 :95 +A11 :97 +A12 :00 +A13 :00 +A14 :00
- EN61000-3-3 :97
- SIST EN 61000-3-2 :97 +A1 :99 +A2 :00
- IEC 60065 :98

Supplementary Information:

The product herewith complies with the requirements of the following Directives and carries the CE-marking accordingly:

- the Electromagnetic compatibility (EMC) directive 89/336/EEC
- Low voltage equipment directive 73/23/EEC

CE

Signed for and on behalf of:
Director of
Sat Control d.o.o.
Bogdan Bolka

SAT CONTROL PROIZVODNO IN TRGOVSKO PODJETJE, d.o.o. Poženik 10, 4207 Cerklje

(name, function) (signature, stamp)

Place and date of issue

Cerklje, 1st June 2010

027-2310

File name: Declaration of Conformity for Solar Tracker - SunTracer SM44M1V3P and derivates dated 01-06-2010.doc

Declaration of conformity no: .

Sat Control d.o.o., Poženik 10, 4207 Cerklje, SLOVENIA
Phone: +386 4 281 62 00, Fax. +386 4 281 62 13, www.solar-motors.com, info@solar-motors.com