

# **FORCE ROBOTIC NOZZLE SETUP INSTRUCTIONS**

**First start up and calibration of  
UNIFIRE FORCE Robotic Nozzle**

**with Unifire's Ammolite™  
Graphical User Interface**



# **UNIFIRE**

## Introduction

Unifire's Force Robotic Nozzle set up is achieved through our web browser-based graphical user interface (GUI), called **Ammolite™**.

The Unifire TARGA Robotic Nozzle PLC connects to a standard TCP/IP based network. The built-in web server has been set up to be assigned an IP address by an external DHCP server.

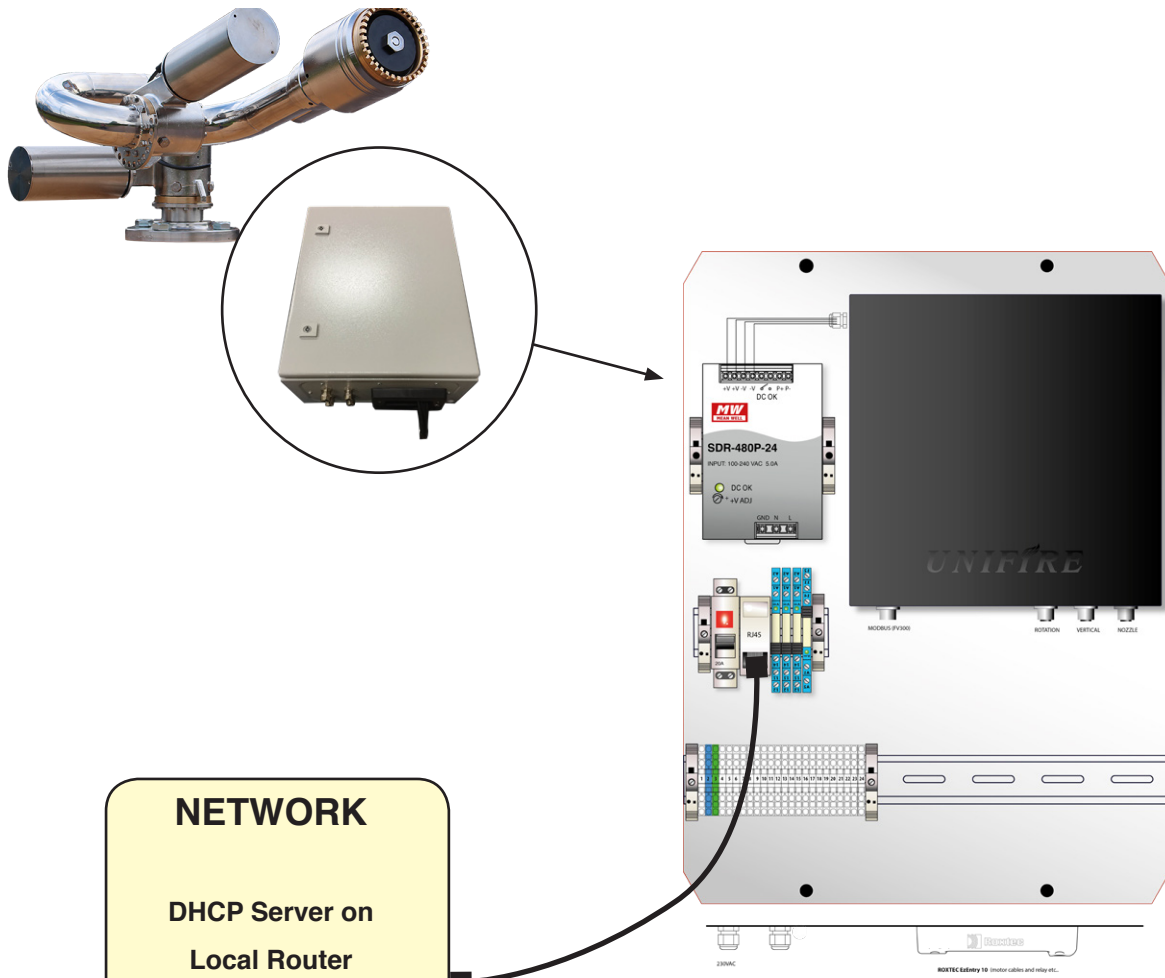
This can be a local router or a dedicated server in a larger network, administered by your IT department or similar.

To connect to the Ammolite setup graphical user interface, open a browser (Chrome, Firefox, Safari, Edge etc) and enter `http://` followed by the IP address and `:81` at the end (for example, if the IP address is `192.168.0.45`, enter into the browser: `http://192.168.0.45:81`).

To access the Ammolite setup environment, enter the username and password, which were provided to you with your system.

It is recommended that you make a note in the service log at login.

For further assistance, send your inquiry to [support@unifire.com](mailto:support@unifire.com) or call +46 303 248 404.



**NETWORK**  
DHCP Server on  
Local Router  
or LAN

Connect your PC or Tablet  
by WiFi or cable to the same network as  
the TARGA PLC.

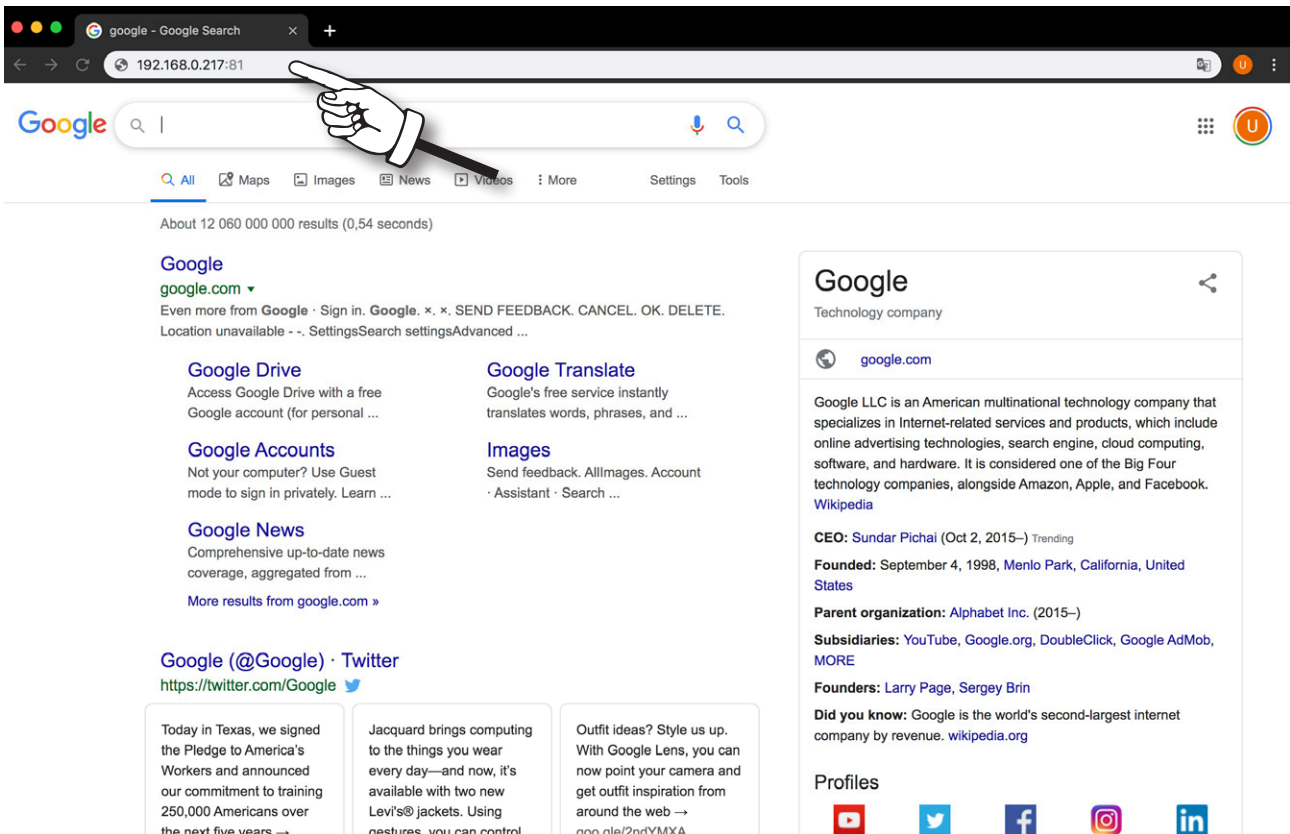
Find IP address of the TARGA PLC as auto-  
matically assigned by the DHCP server

Enter the IP address, followed by :81 in the  
browser window.

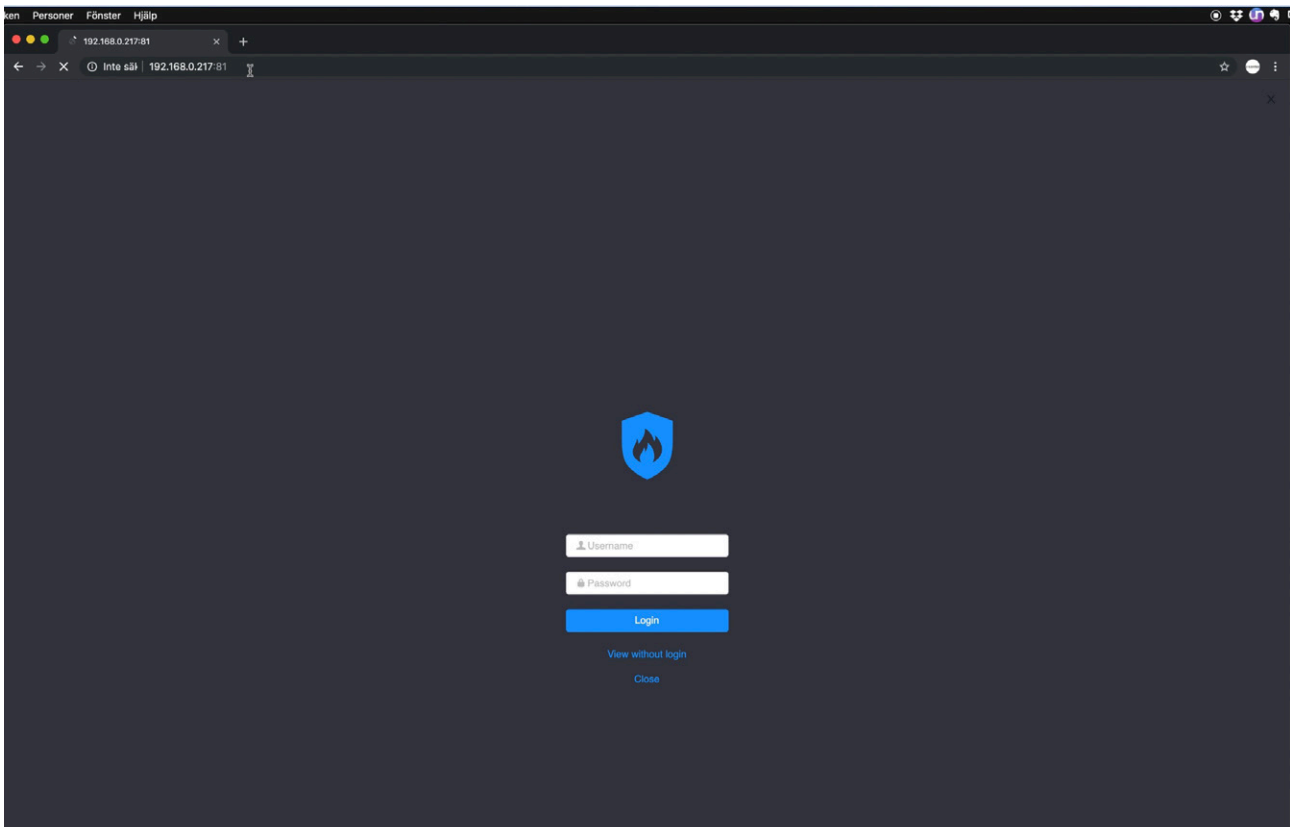
(for example <http://192.168.0.45:81>)

Follow instructions to calibrate  
in this manual.

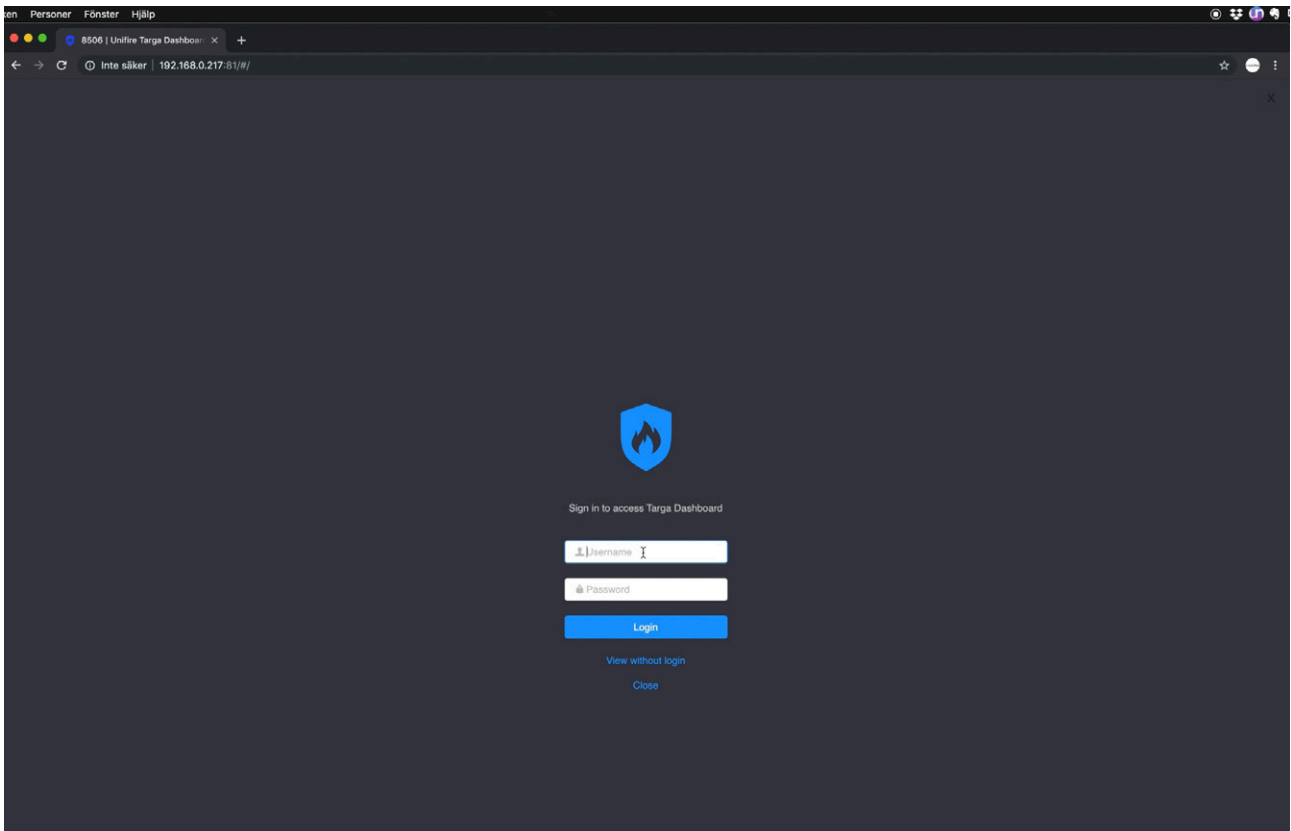




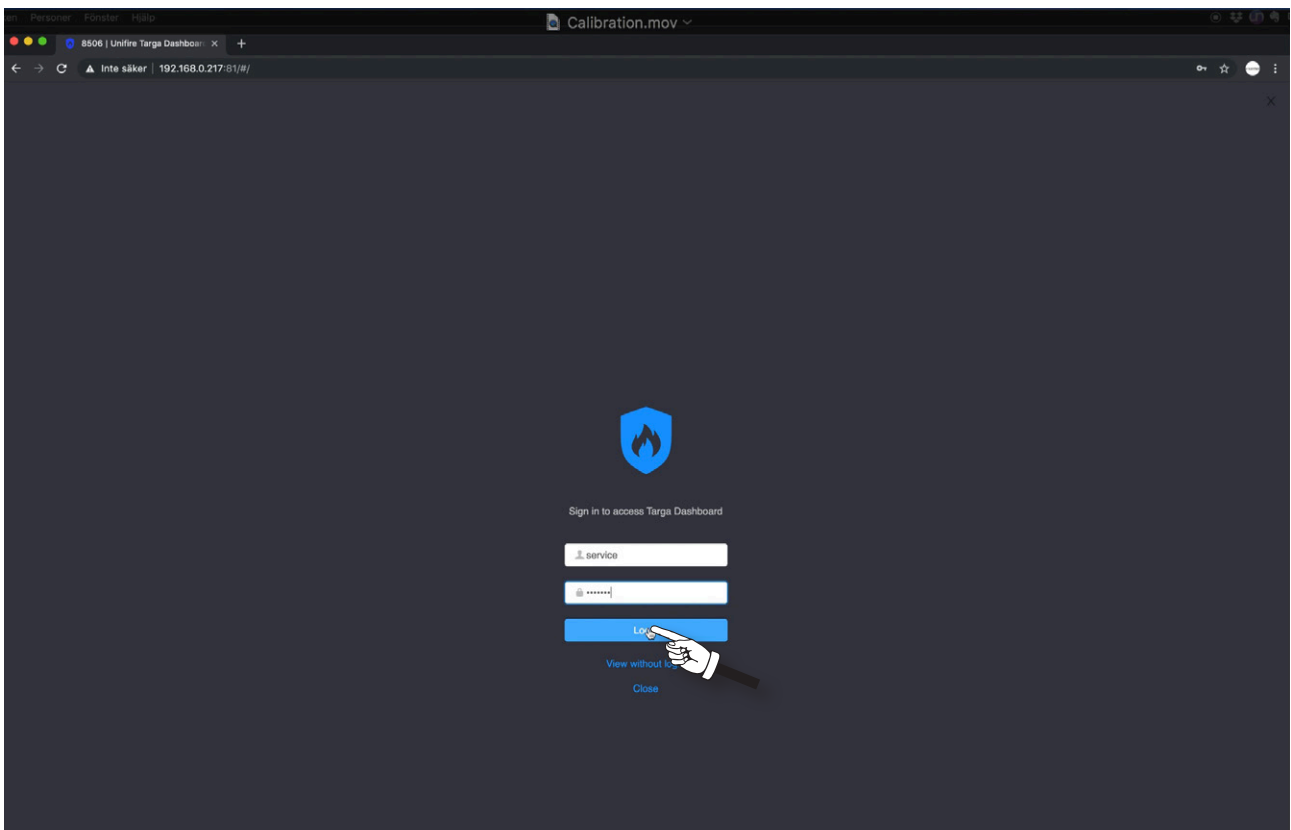
1) Open your web-browser (Safari, Chrome, Firefox or other).



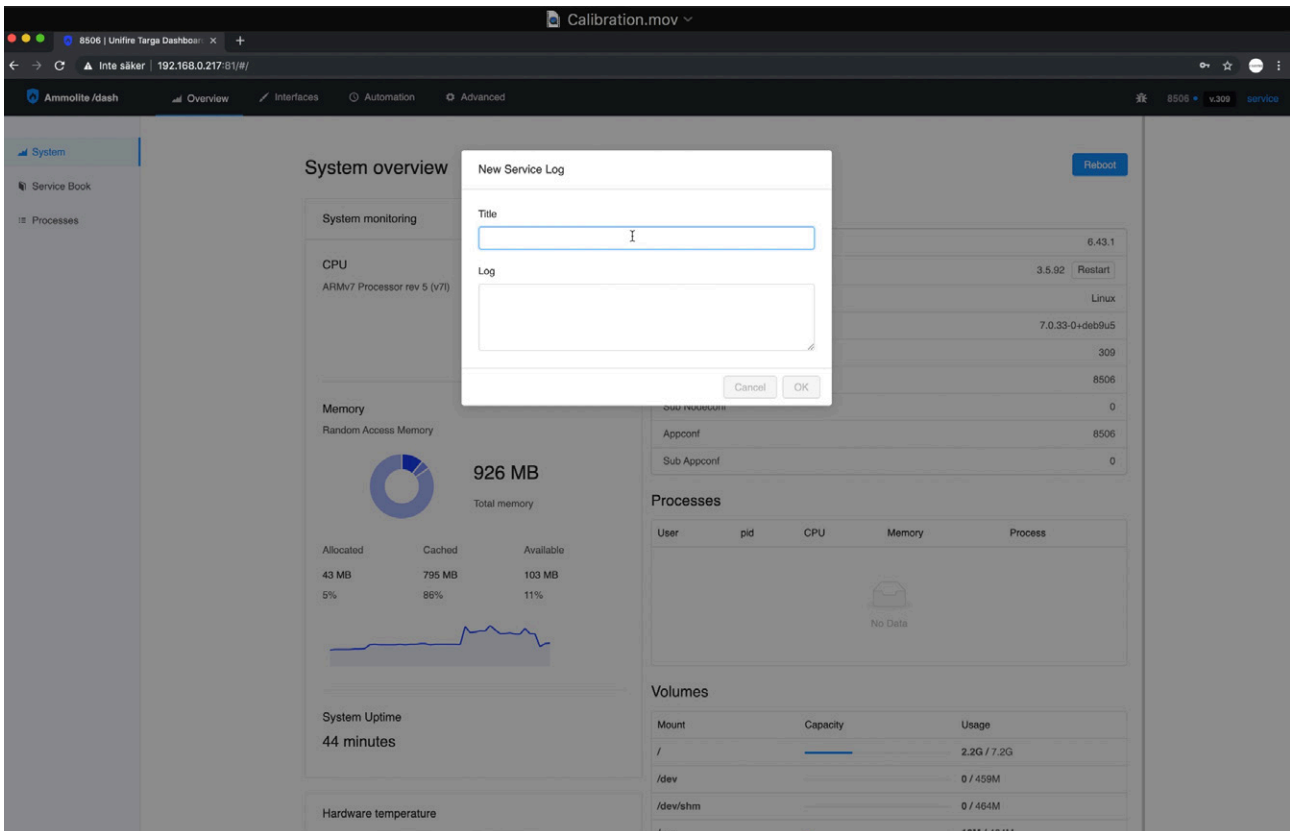
2) Enter the IP Address of the TARGA PLC, followed by :81 (for example http://192.168.0.217:81). Push Enter.



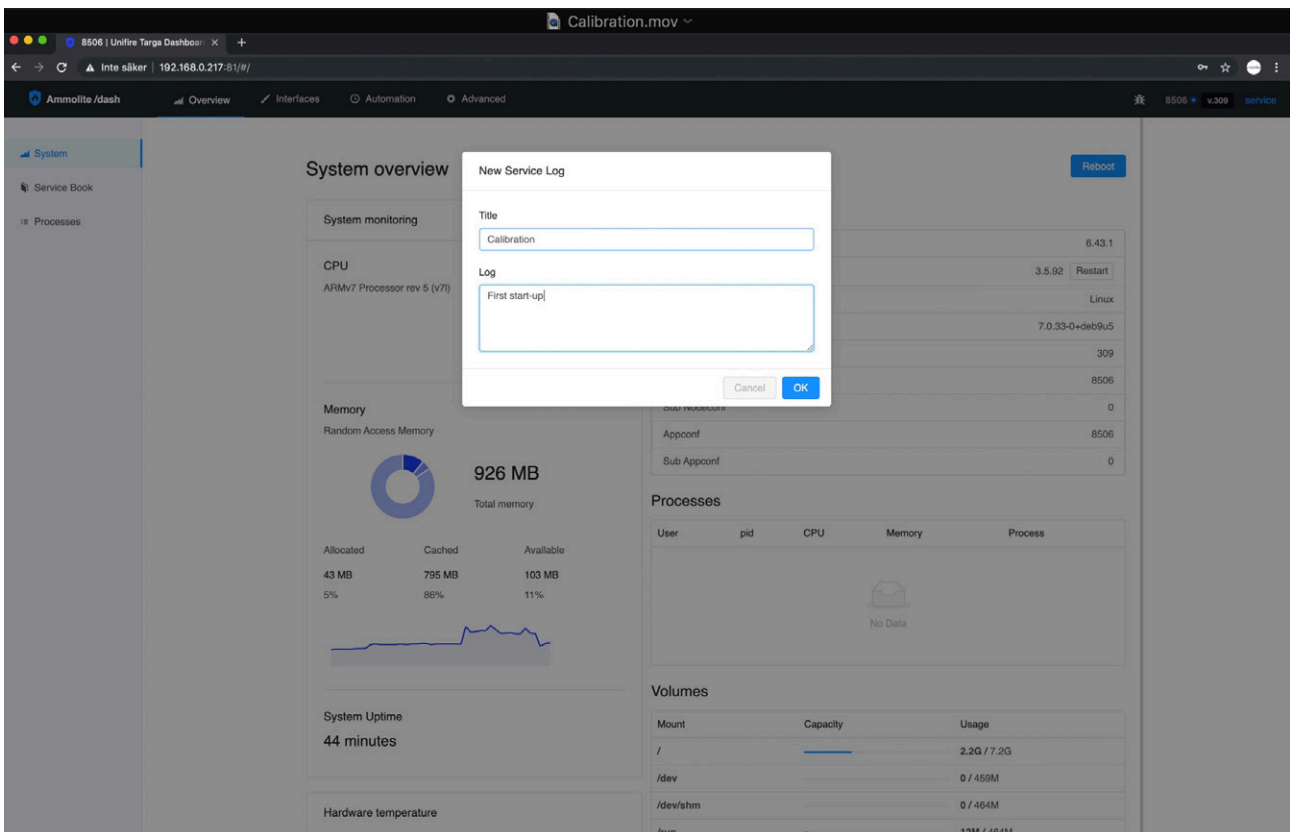
3) Enter the username and password provided with your delivery.



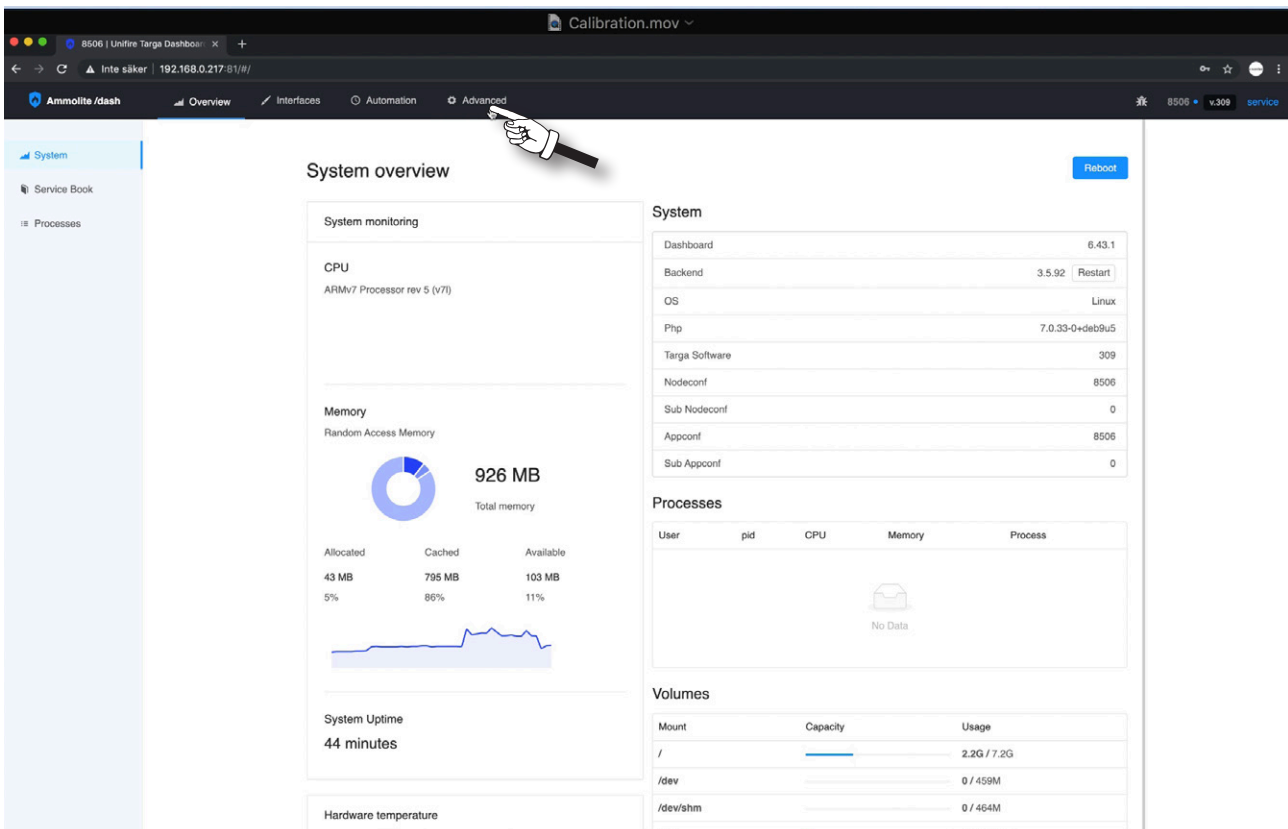
4) In this example, both the username and password are "service". Click Login.



5) You are now requested to make a note in the service log.



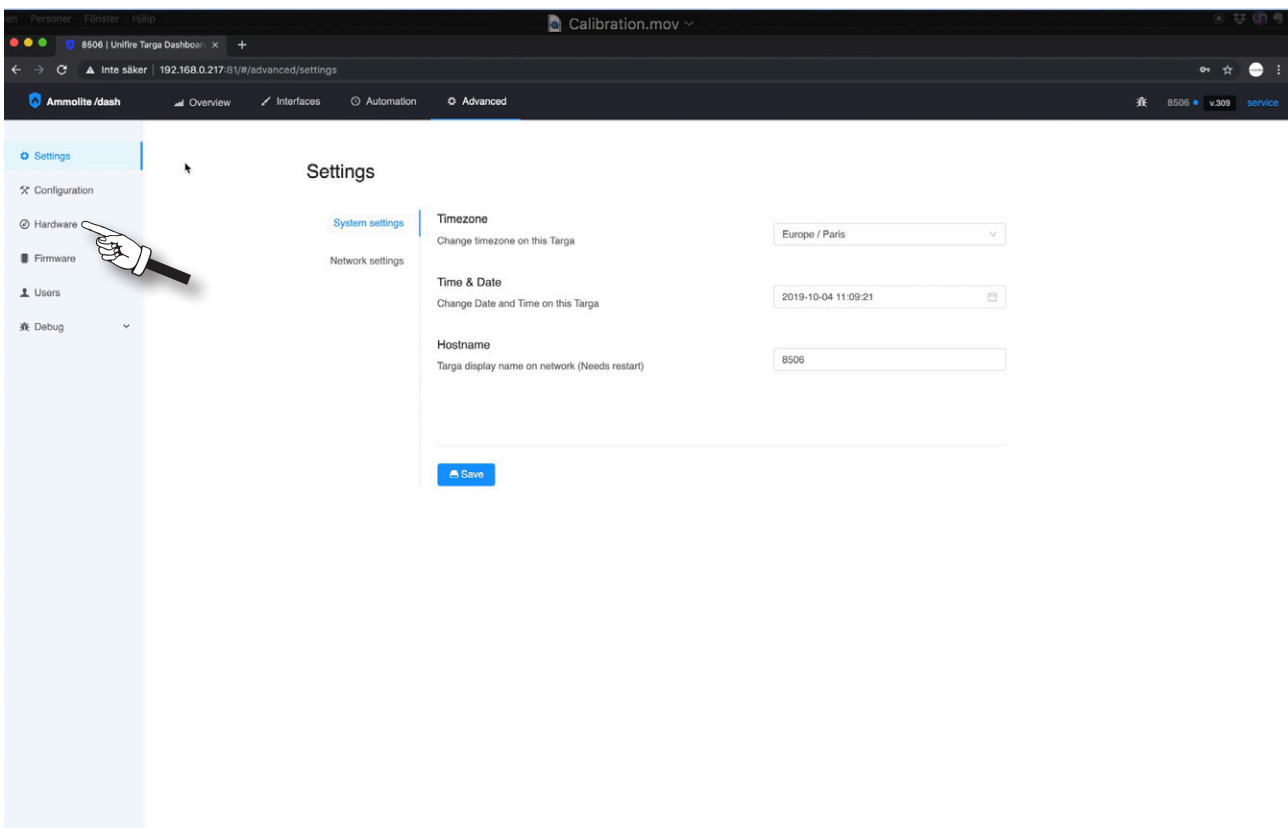
6) In this example we wrote, "Calibration" in the title, and "First start up" in the Log. Any text can be entered. After entering, this information, click **OK**.



The screenshot shows the Ammolite dashboard with the 'System overview' page. The top navigation bar includes 'Overview', 'Interfaces', 'Automation', and 'Advanced'. A hand icon points to the 'Advanced' tab. The main content area is divided into several sections:

- System monitoring:** CPU (ARMv7 Processor rev 5 (v7l)), Memory (926 MB Total memory), System Uptime (44 minutes), and Hardware temperature.
- System:** Dashboard (6.43.1), Backend (3.5.92), OS (Linux), Php (7.0.33-0+deb9u5), Targa Software (309), Nodeconf (8506), Sub Nodeconf (0), Appconf (8506), and Sub Appconf (0).
- Processes:** A table with columns for User, pid, CPU, Memory, and Process, showing 'No Data'.
- Volumes:** A table with columns for Mount, Capacity, and Usage, showing usage for /, /dev, and /dev/shm.

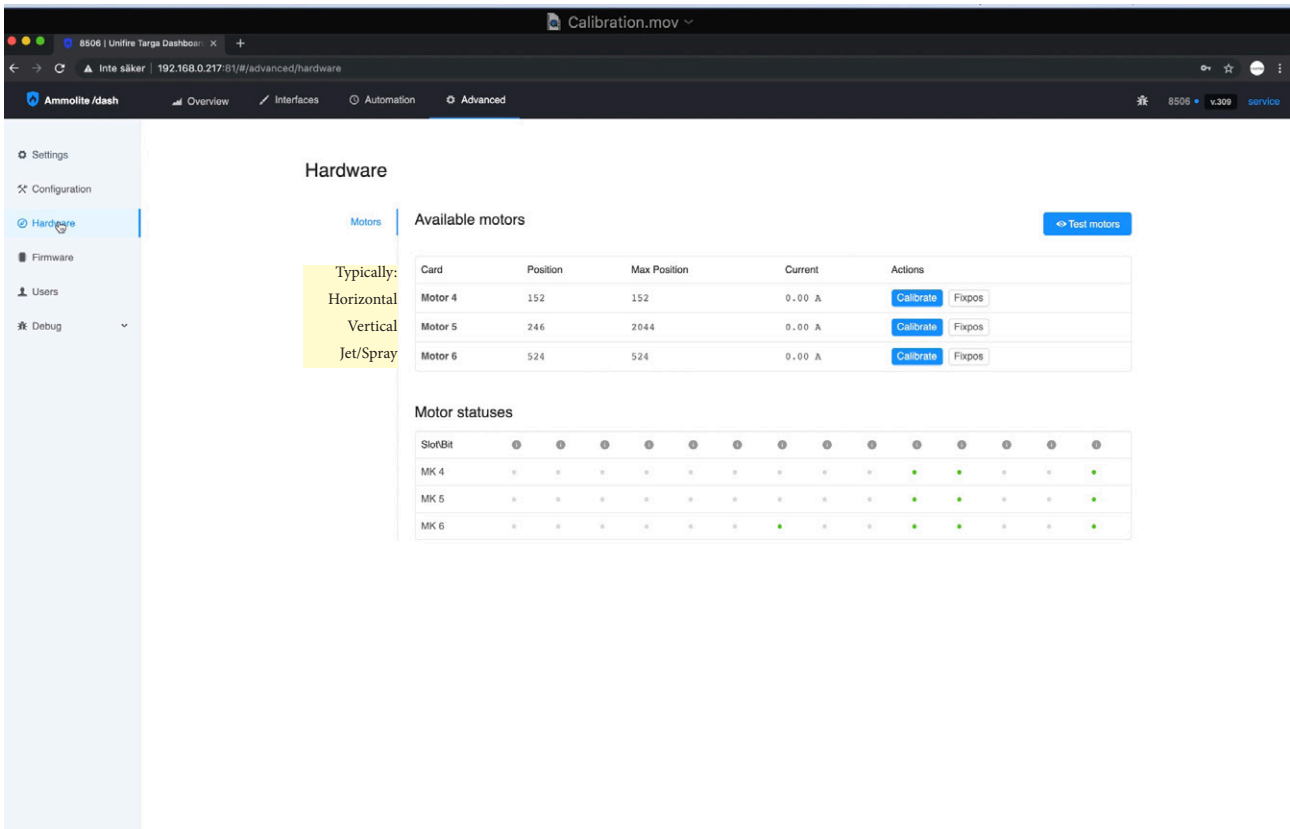
7) This opens up the start page of Ammolite. To initiate calibration of the operating range, click **“Advanced”**.



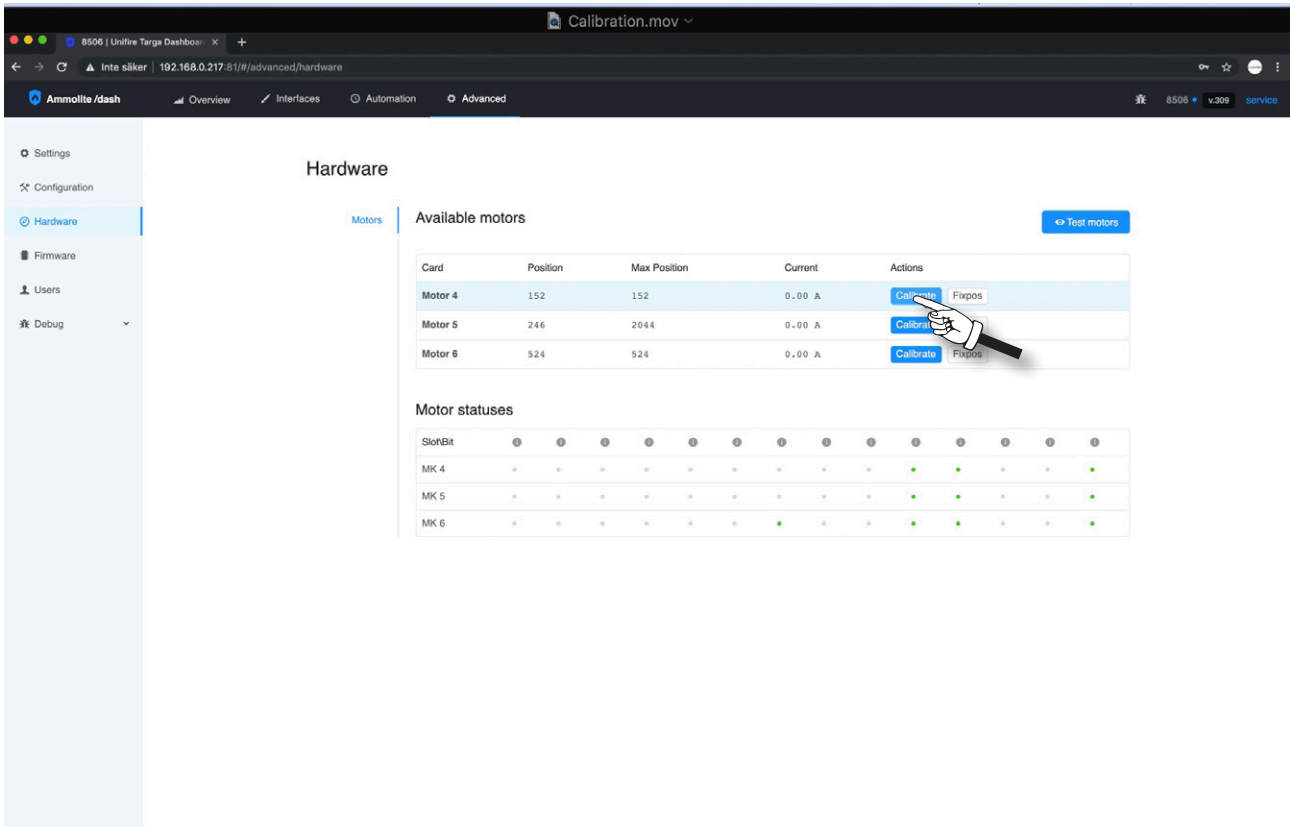
The screenshot shows the Ammolite dashboard with the 'Settings' page. The top navigation bar includes 'Overview', 'Interfaces', 'Automation', and 'Advanced'. The left sidebar has 'Settings', 'Configuration', 'Hardware', 'Firmware', 'Users', and 'Debug'. A hand icon points to the 'Hardware' tab. The main content area is divided into several sections:

- System settings:** Timezone (Europe / Paris), Time & Date (2019-10-04 11:09:21), and Hostname (8506).
- Network settings:** (Empty section)

8) This opens up the section Advanced settings. Next click **“Hardware”**.

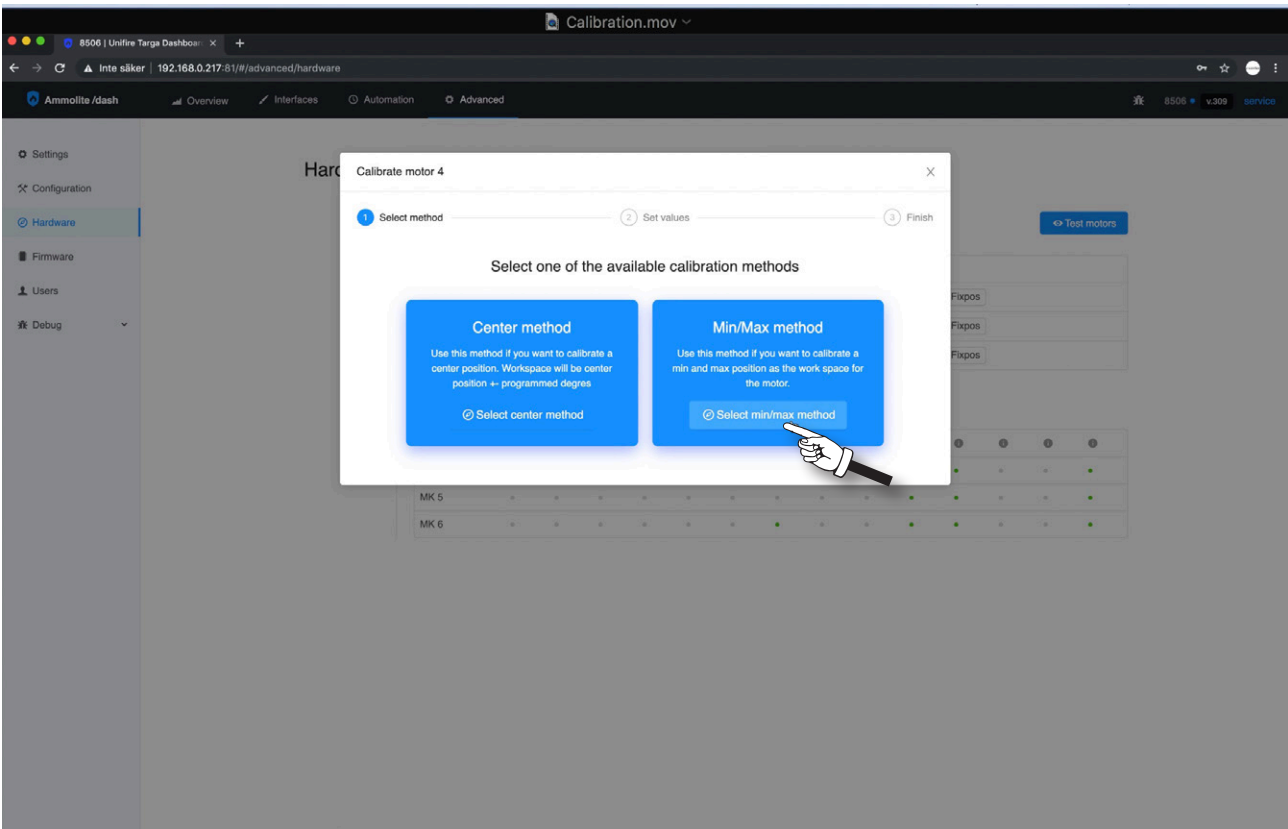


9) This opens up the Motor page. You can read the Position of the motors, calibrated max, actual real-time current draw (A), and Motor Status. MK4 is usually horizontal, MK5 usually vertical, and MK6 usually nozzle jet/spray).

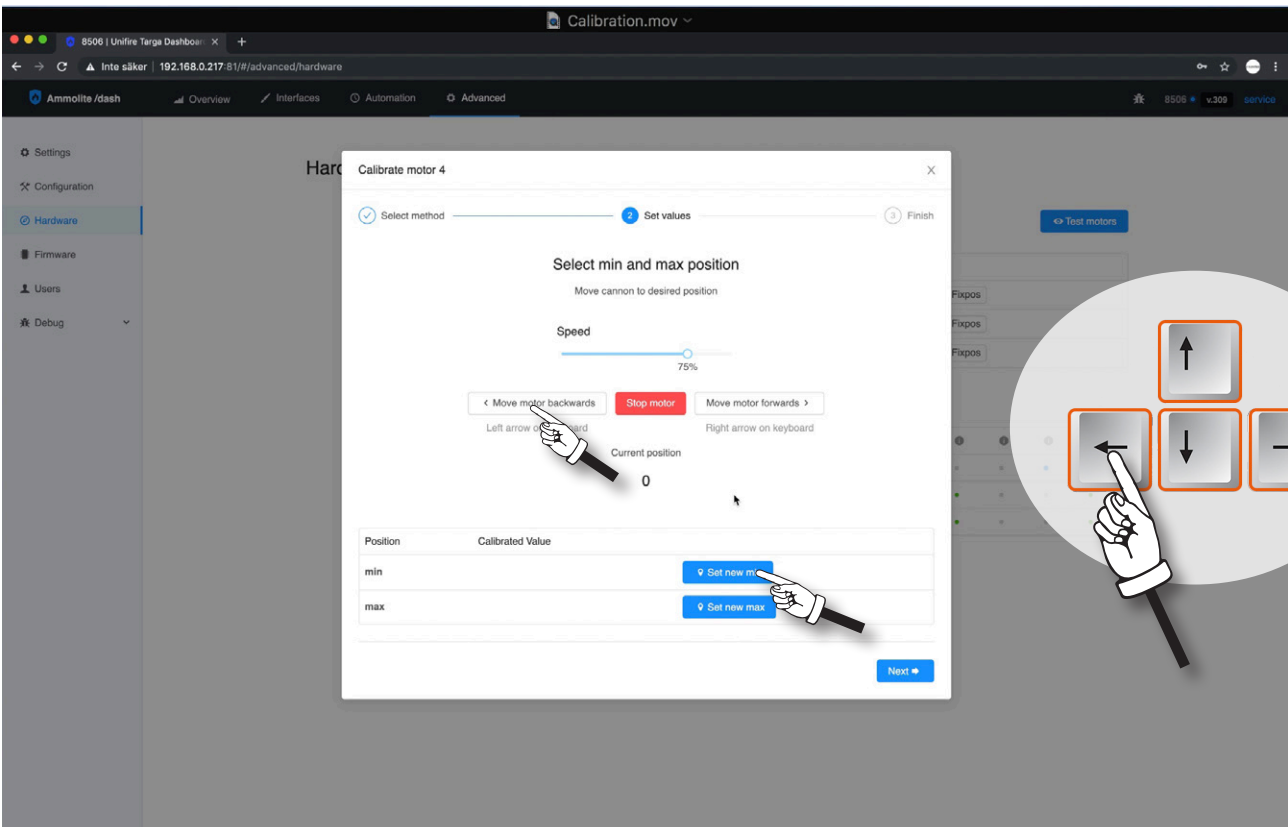


10) To calibrate Motor 4 (horizontal), click “Calibrate”.

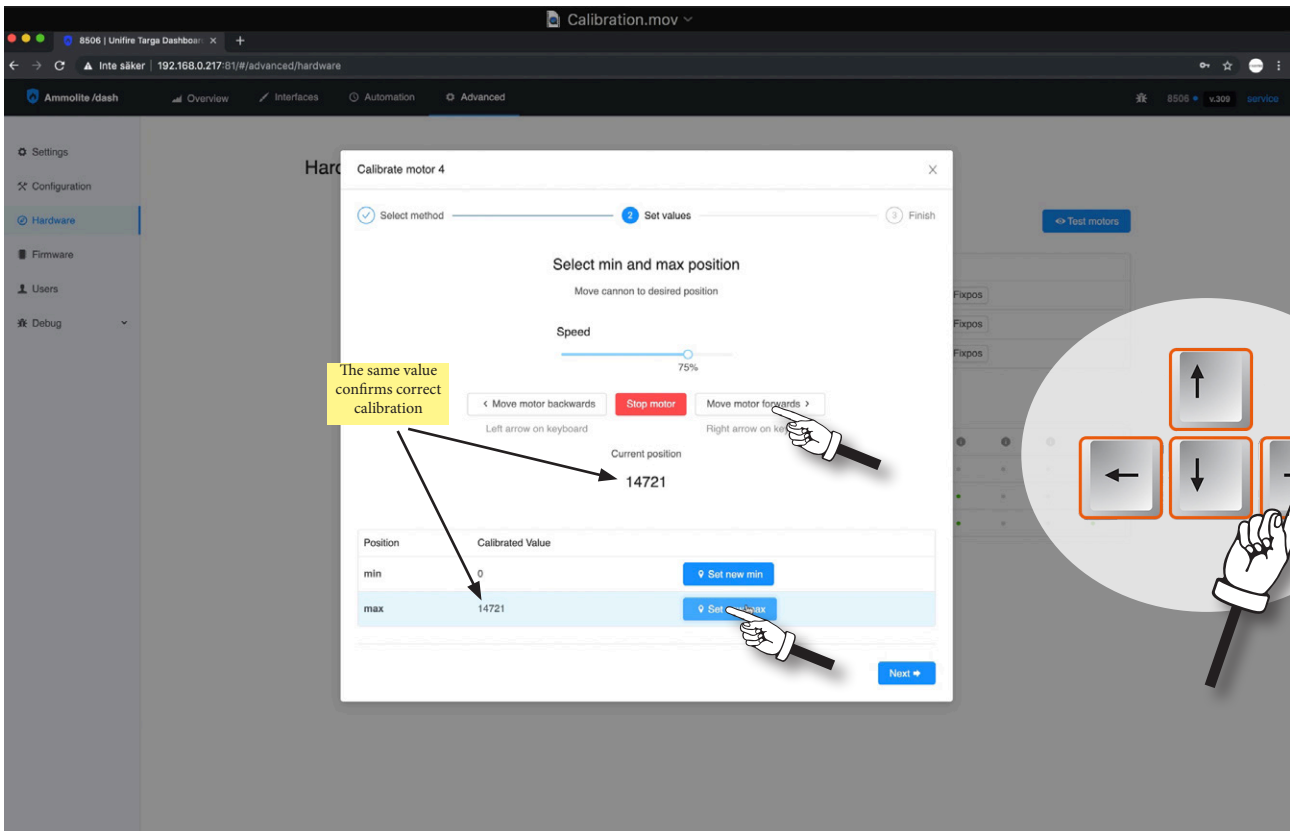




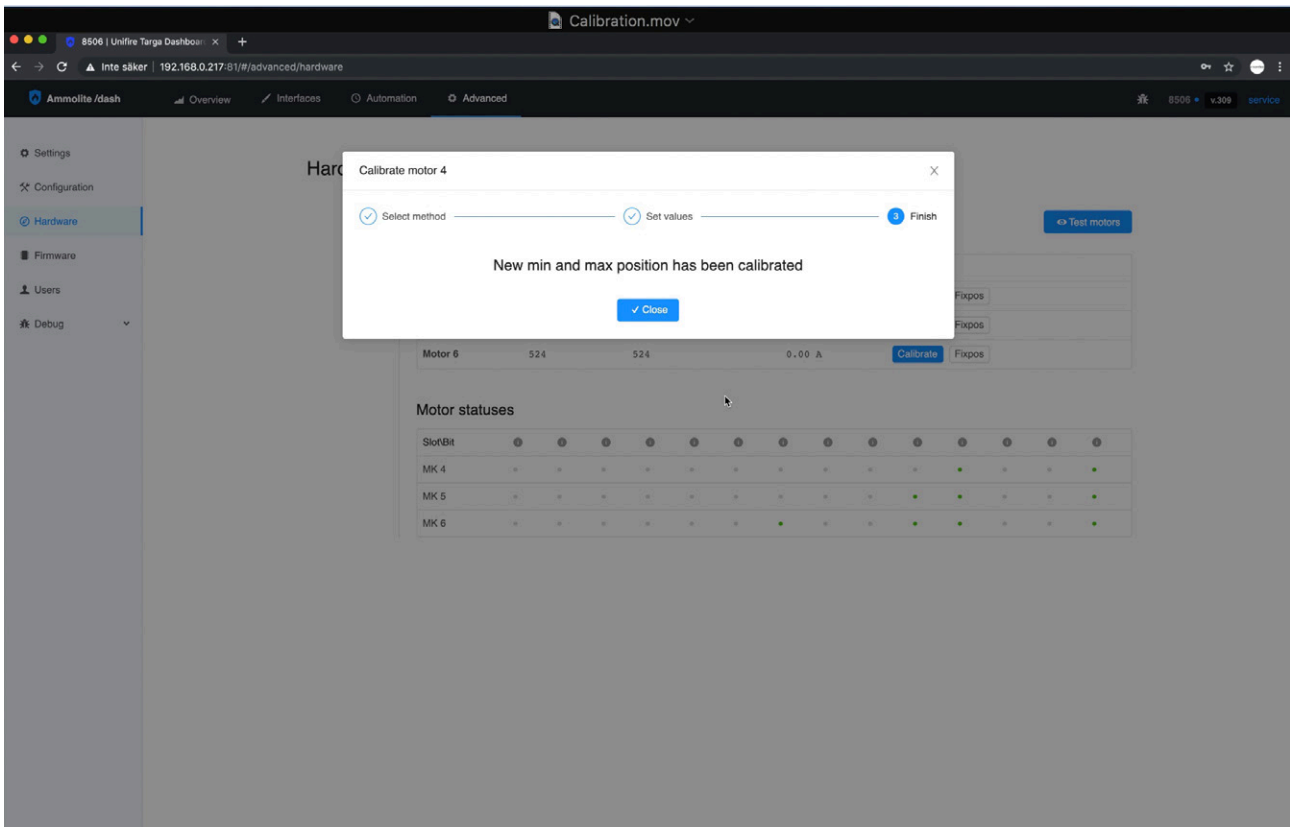
11) Select Min/Max method that allows you to freely select any operating range. (The Center method is used only for special applications when the operating range is pre-set in the software.)



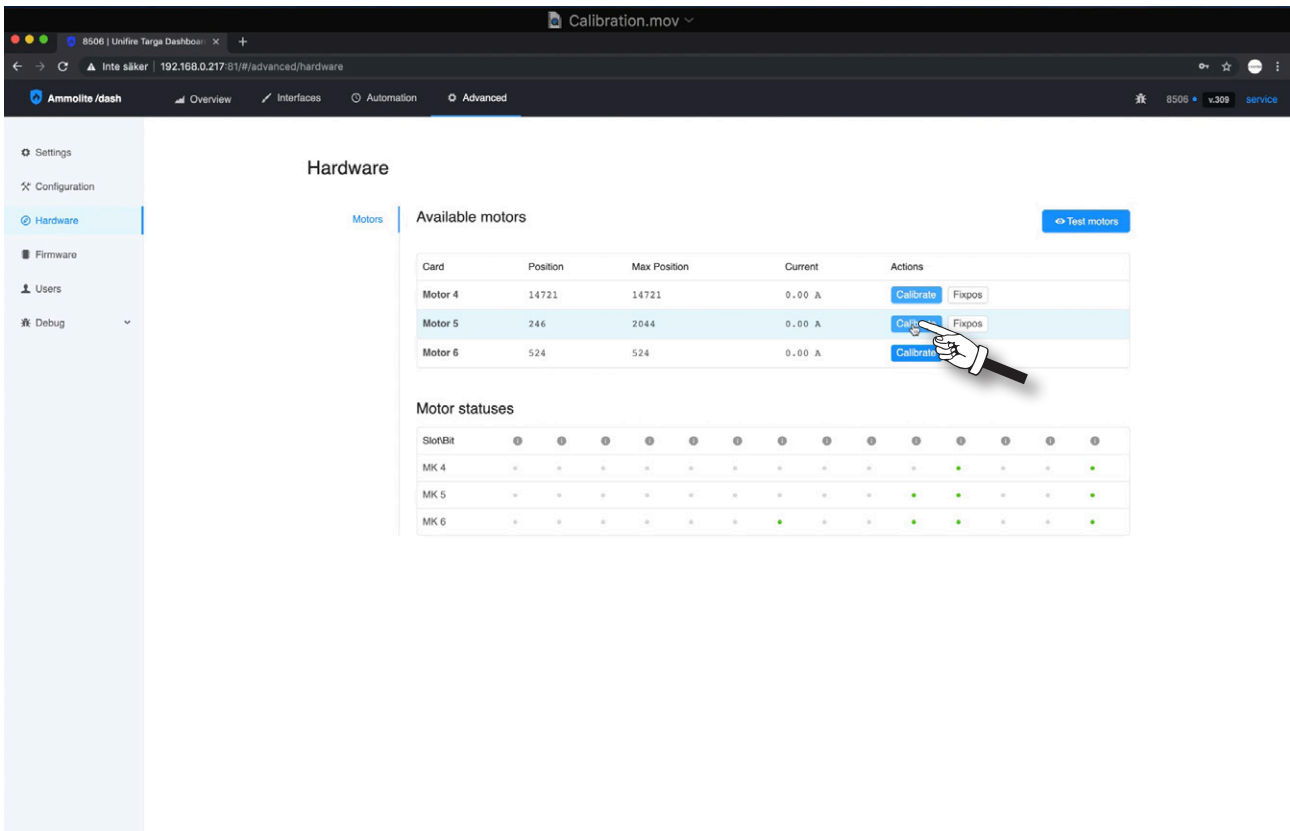
12) Run the motor to the required Min position (left arrow), by using either the buttons on the screen (for tablets), or using the right/left arrow keys on your PC Keyboard. Once you have the position, Click “Set new min”



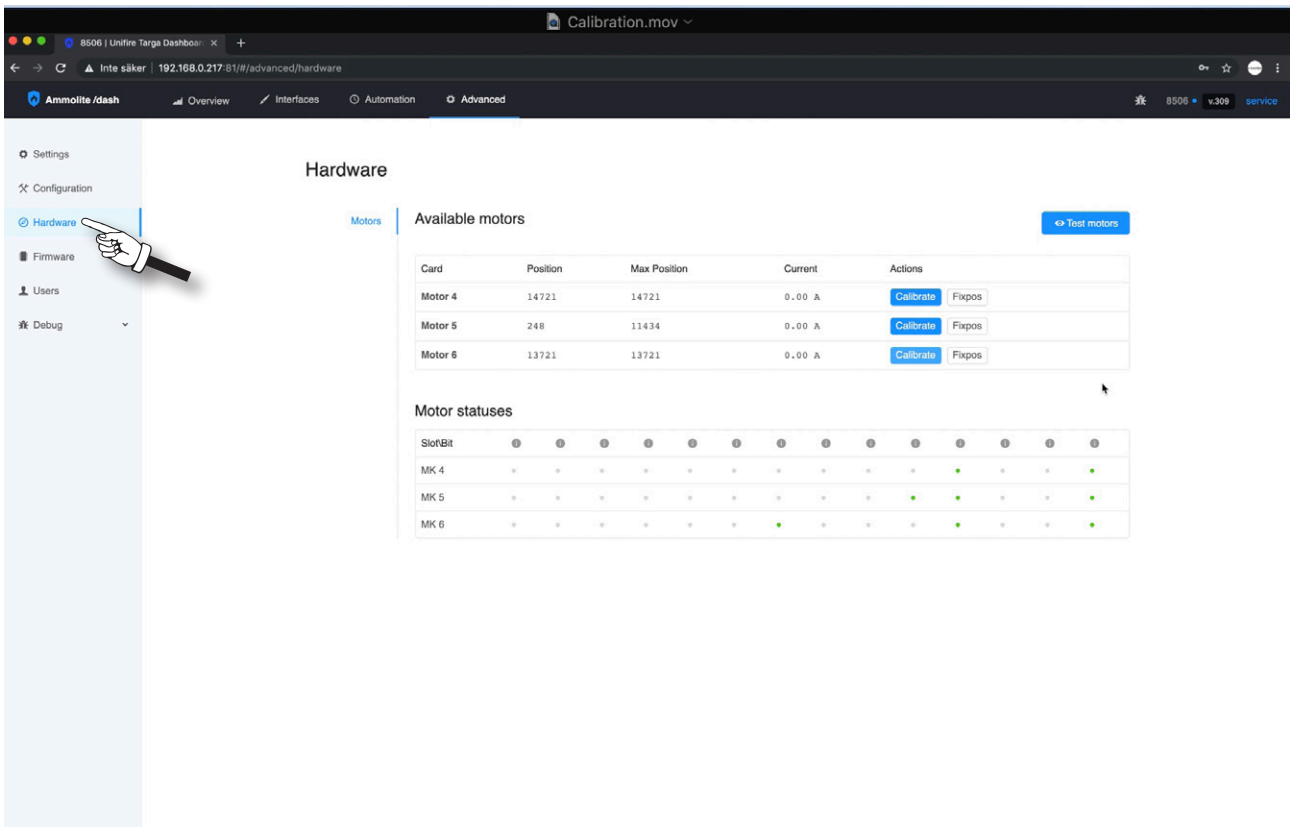
13) Run the motor to the required Max position (right arrow). Now the “Current position should read a value typically between 2 000 and 50 000. Click "set new Max".



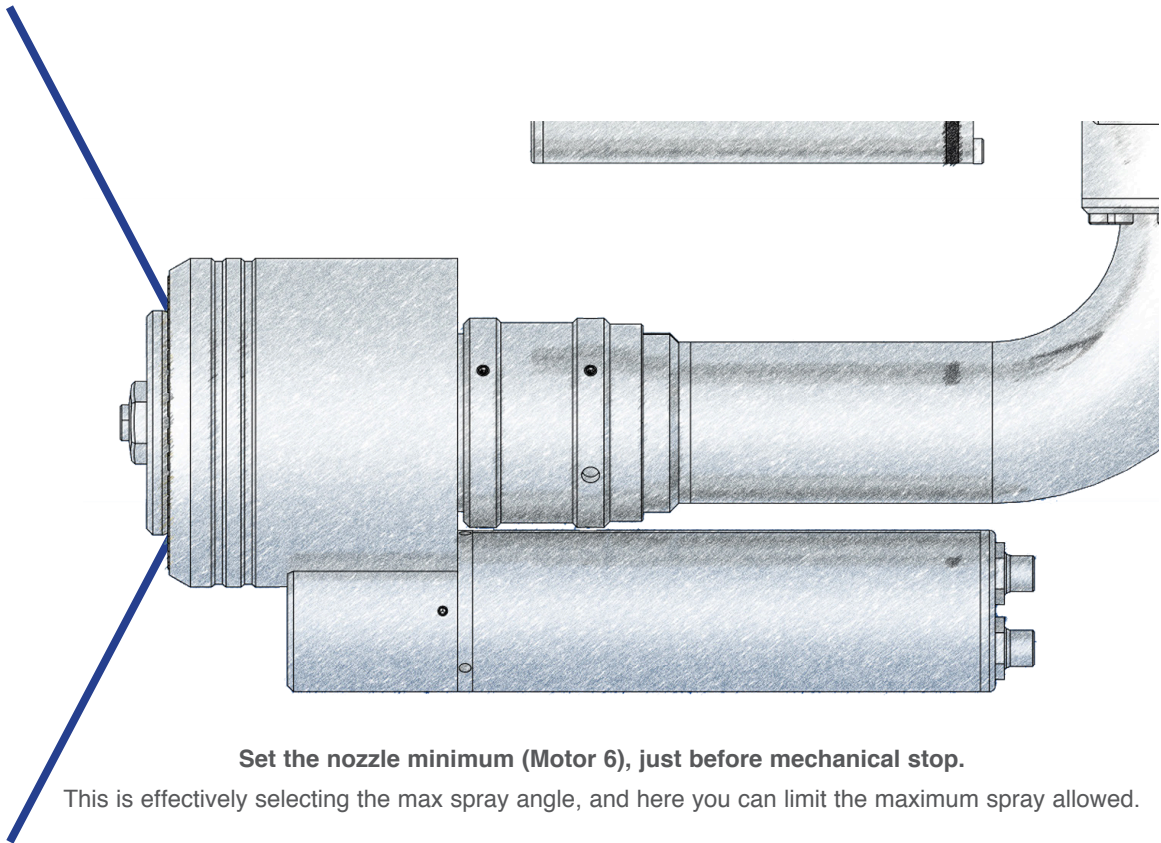
14) Next, you see this notice, confirming successful calibration.



15) Repeat steps 10 - 15 for Motor 5 (vertical)

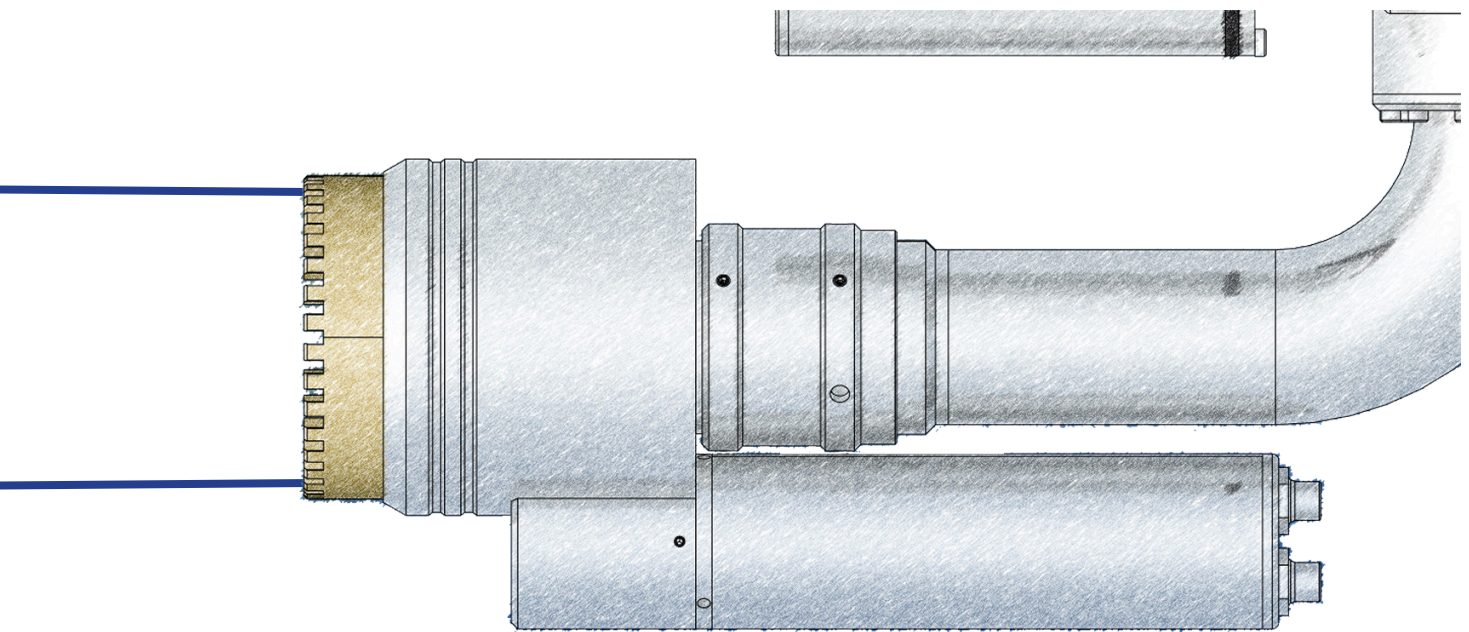


16) Calibrate Motor 6 (nozzle jet/spray) in the same manner as you did the other motors, but follow the instructions in step 17 on the next page.



**Set the nozzle minimum (Motor 6), just before mechanical stop.**

This is effectively selecting the max spray angle, and here you can limit the maximum spray allowed.



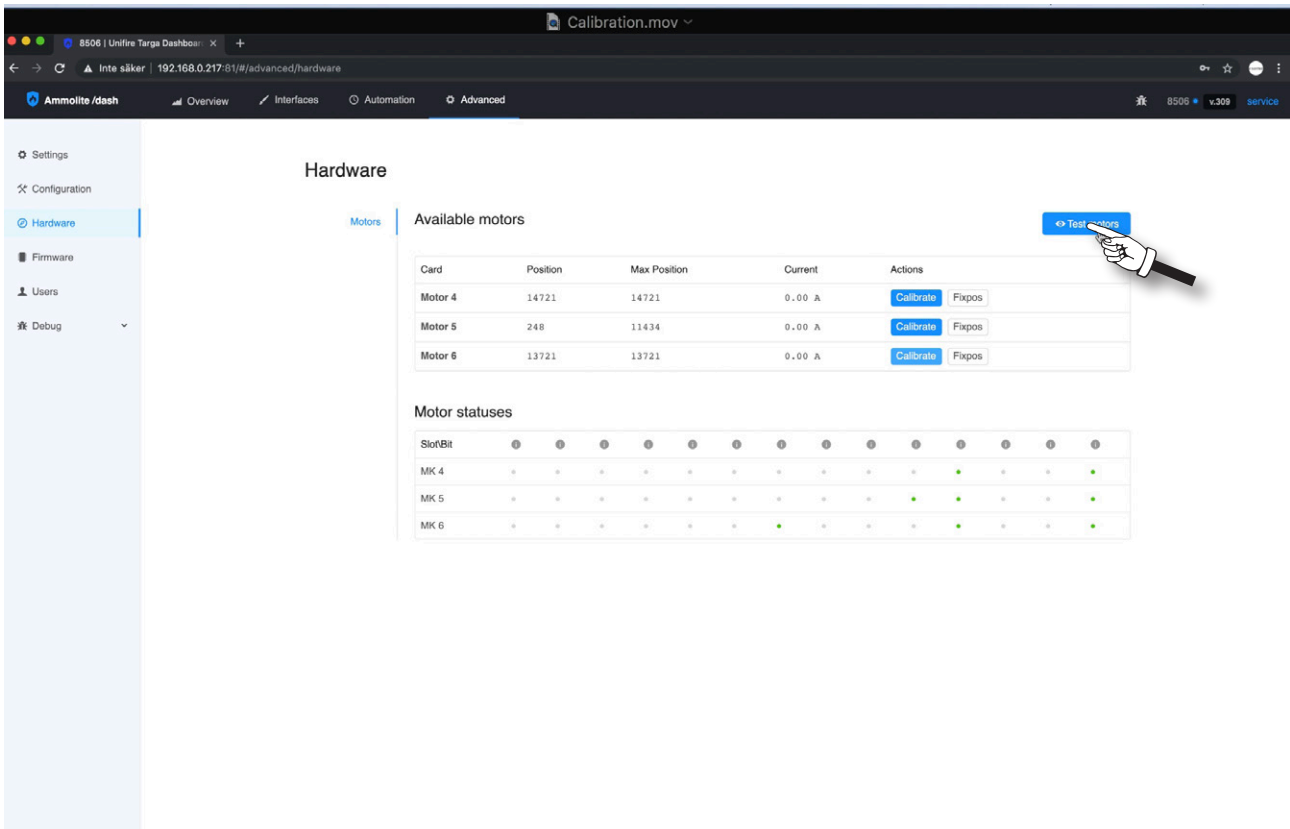
**Set nozzle maximum (Motor 6), just before mechanical stop.**

This is effectively selecting the straight stream.

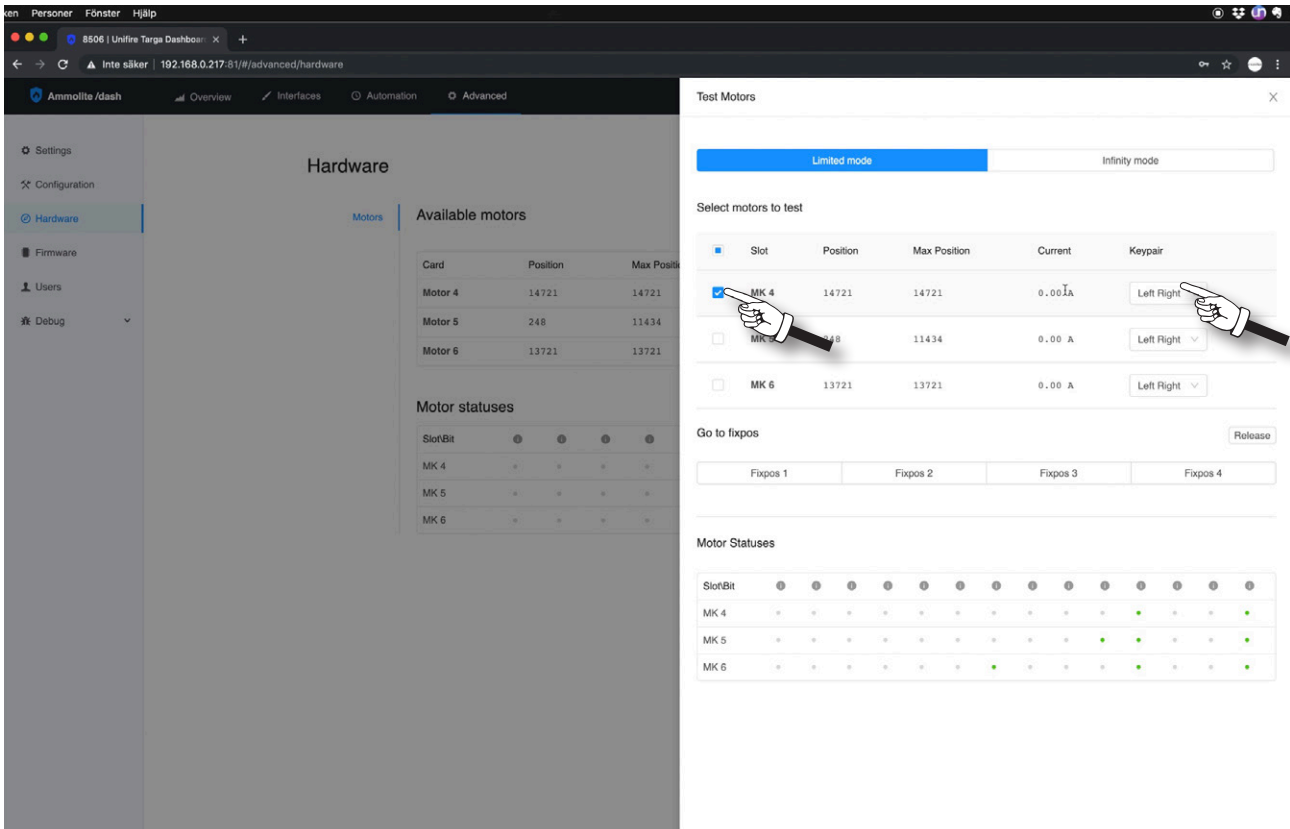
Here you can block the straight stream by setting the maximum to - say - 10 ° spray, and thereby avoid a straight steam.

This is useful when the required reach is short, and you want to avoid a hard-hitting straight steam altogether.

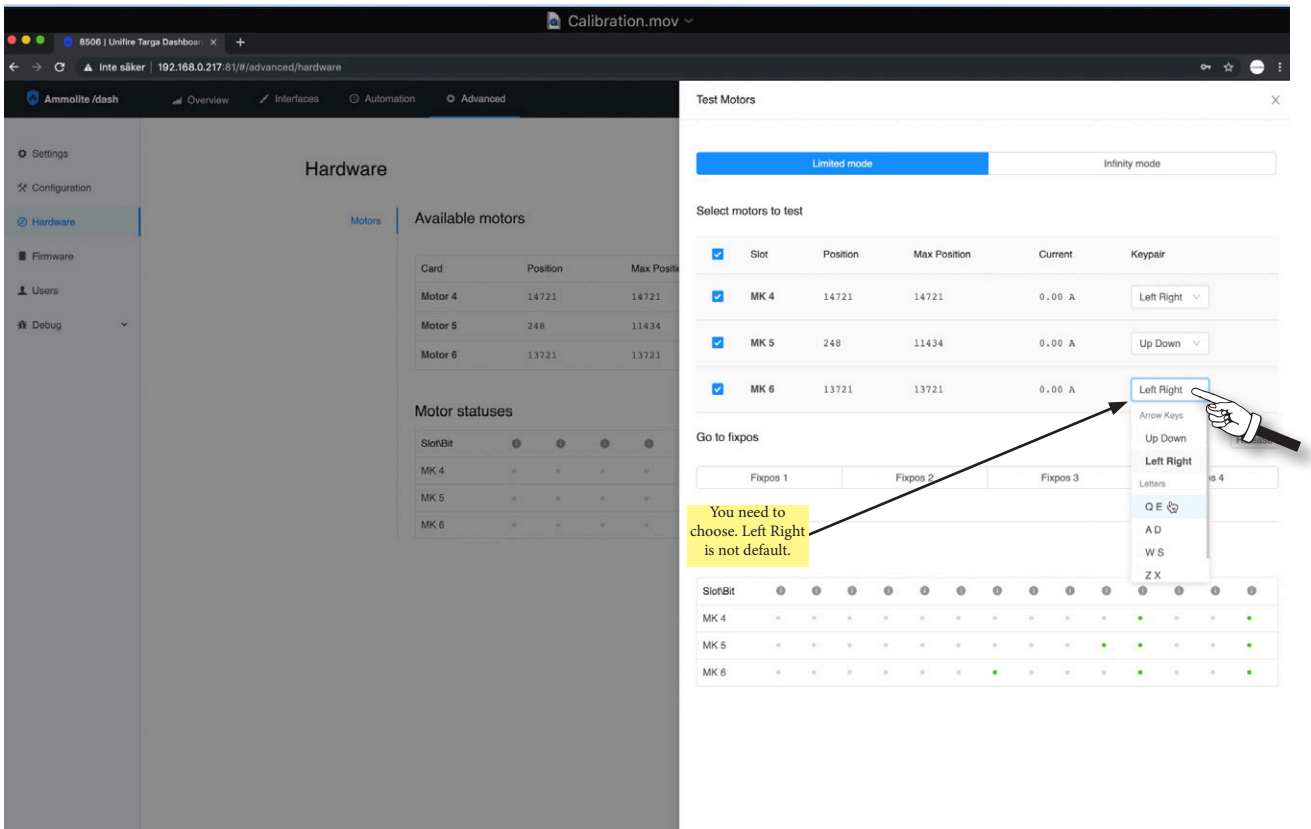
17) Calibrate Motor 6 (jet/spray nozzle) as Motor 4 and Motor 5



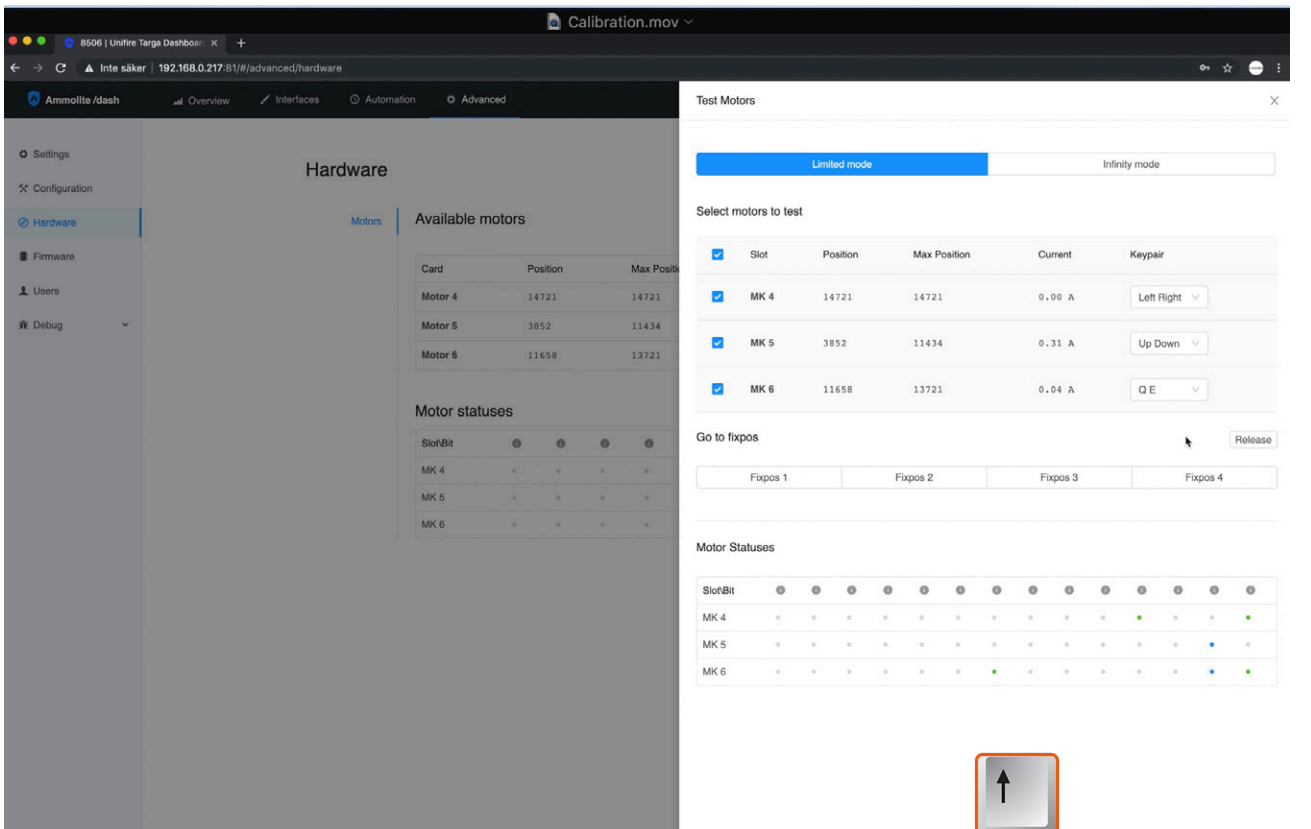
18) Next, you can test the motors and calibrated range directly from your PC. Click “Test motors”.



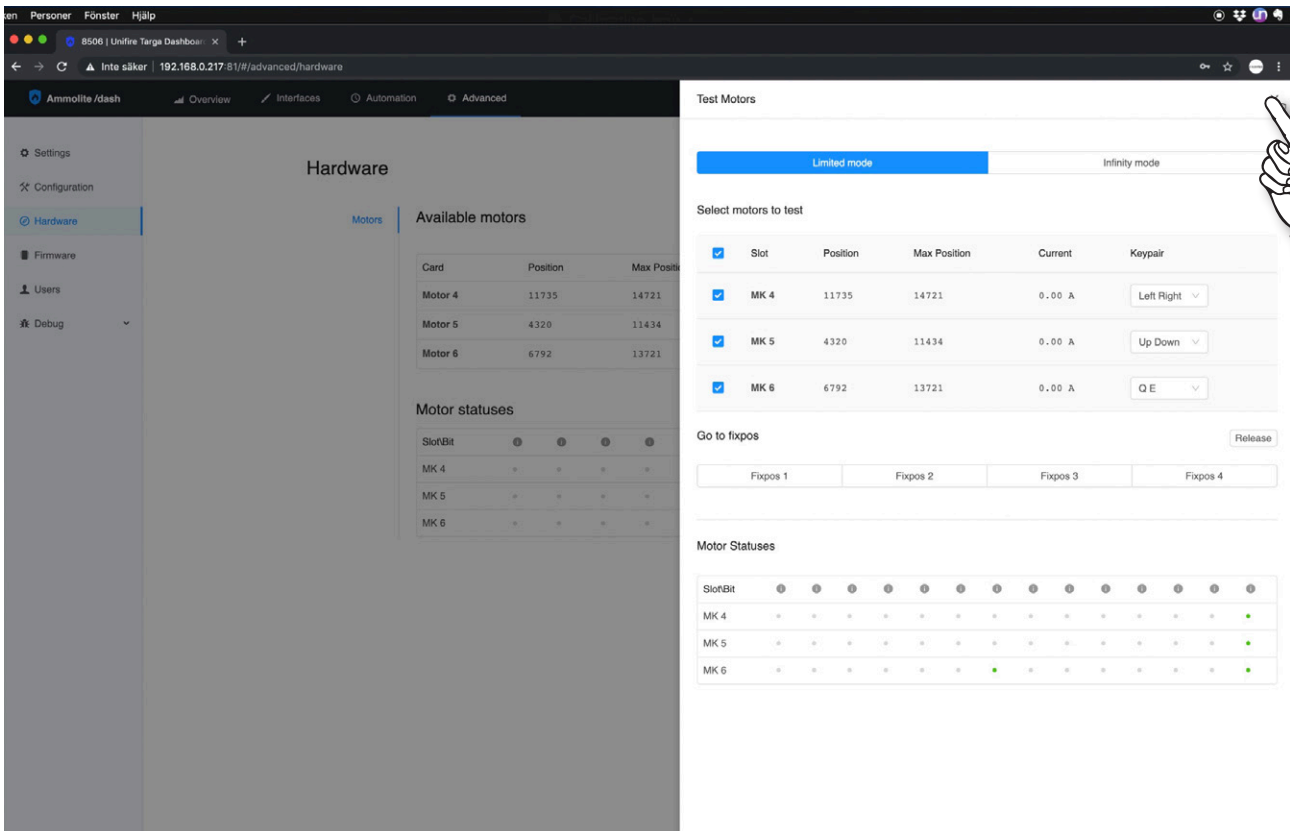
19) Check the box for each motor you want to run.



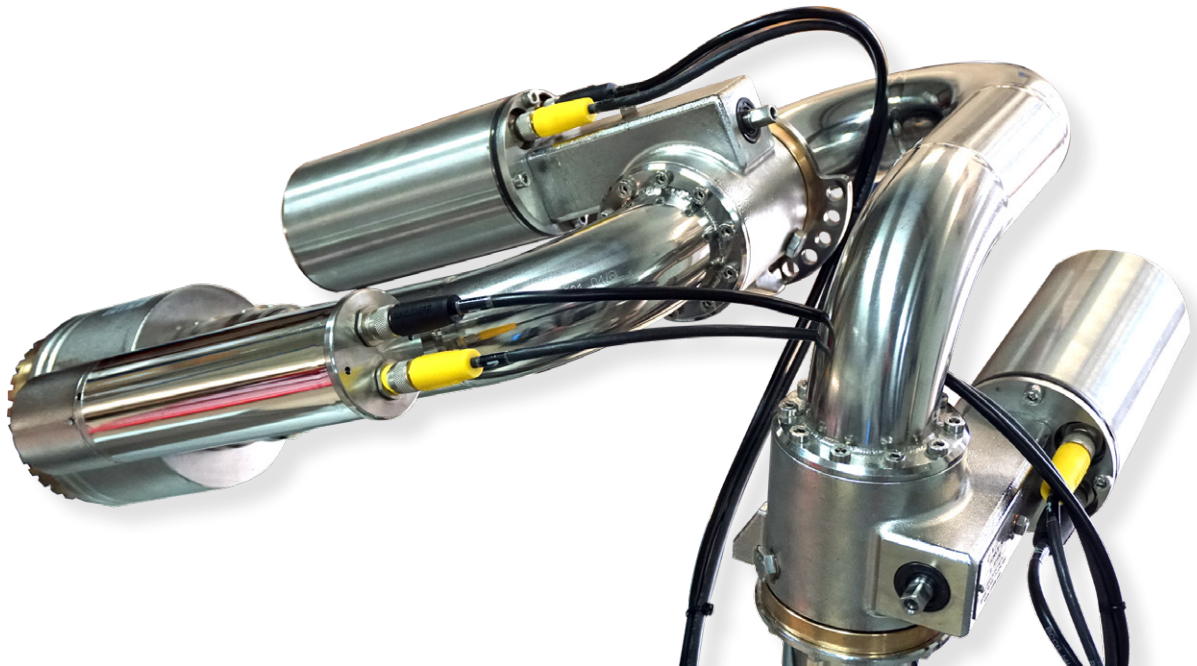
20) Then actively choose key pair. (This must be done.)



21) Now you can run the motors with the selected key pair.



22) Calibration is now complete and you can exit Test Motors and Ammolite.



If you require further assistance, contact support@unifire.com or call +46 303 248 404.