

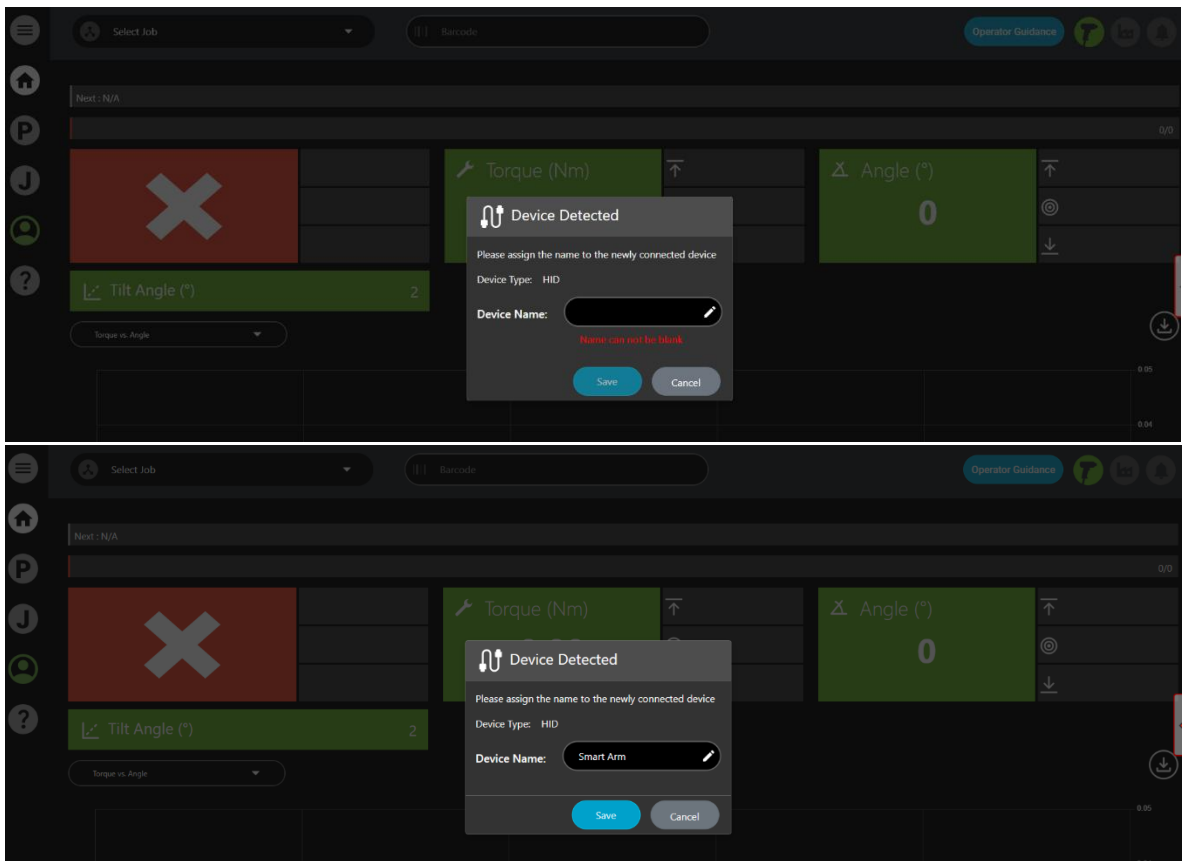
How to Setup and Configure a Smart Arm with the IQi Series Controllers

Setup and Configuration through the Controller

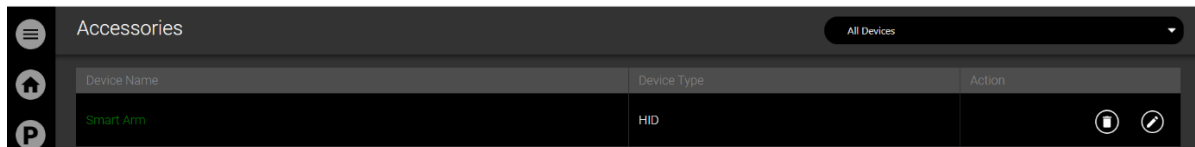
1. Log into the controller.
2. Connect the Smart Torque Arm to the controller using the USB cable from the Smart Arm Connect Module.



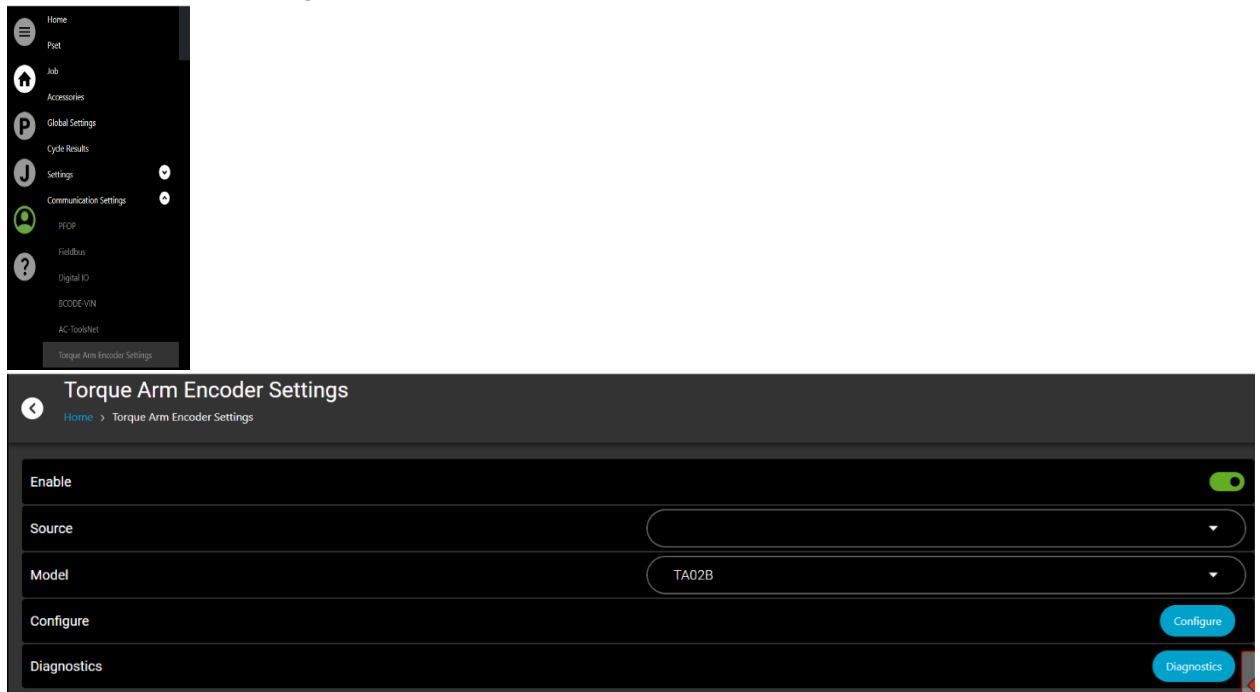
3. Once connected, a prompt will appear asking you to name the device. Enter a recognizable name, such as “Smart Arm,” and confirm.



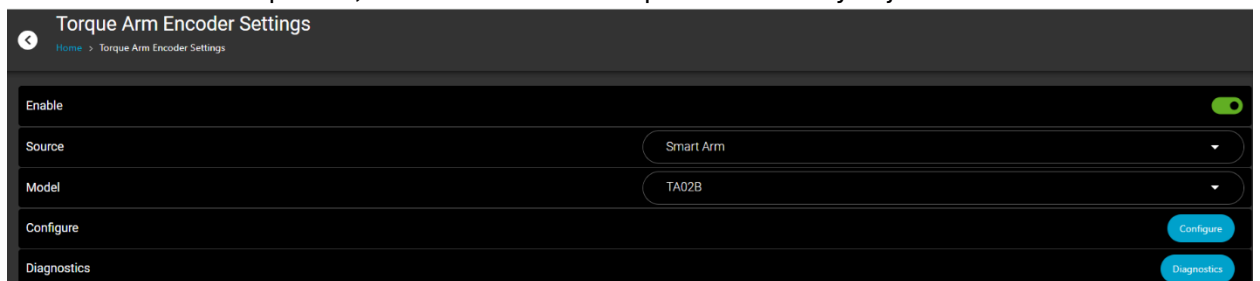
4. Navigate to the **Accessories** menu to verify that your Smart Torque Arm is successfully connected.



5. Go to **Communication Settings**, followed by **Torque Arm Encoder Settings**, and enable the encoder by selecting **Enable**.



6. From the **Source** dropdown, choose the Smart Torque Arm device you just connected.



7. Select the appropriate model number for your torque arm and save your settings.

Torque Arm Encoder Settings

Home > Torque Arm Encoder Settings

Enable ☒

Source Smart Arm

Model TA02B

Configure

Diagnostics

8. Before proceeding, ensure that a **PSET and Job** have been created.
9. Navigate to the **Jobs** menu. Under **Interlocks**, enable the **Torque Arm interlock** to activate guided fastening.

Interlocks

Home > List Jobs > Edit Job > Interlocks

Valid Job ☒

BCODE / VIN ☐

Lock On Re-Scan ☐

Tool Enable ☐

Smart Socket ☐

Reverse Disable ☐

Torque Arm ☒

10. Under **Add PSETs**, select the edit icon for the PSET you will use for tightening.

Add Pset

Home > List Jobs > Edit Job > Add Pset

Search

Status	Pset Name	Strategy	Target	Steps
☒	P1	Torque	0.5	1

11. Set the **Batch Count** to match the number of fasteners in your application. For example, if your assembly has four screws, set the batch count to four.

P1

Home > List Jobs > Edit Job > P1

Batch Count 4

Socket Assignment None

Reset to Pset None

Max Attempts Enable ☐

Max NOK Enable ☐

Fail Rules

Add Fail Rules

Screw Pattern

12. Define the positional tolerance using the **Screw Position** dropdown. This determines the acceptable positioning accuracy for each fastening point.

P1

Home > List Jobs > Edit Job > P1

Batch Count: 4

Socket Assignment: None

Reset to Part: None

Max Attempts Enable: ☐

Max NOK Enable: ☐

Fail Rules:

Screw Pattern:

Tolerance (mm): 15

ID	Label	Position	Action
1	A1	(0.00, 0.00)	Edit Delete

13. To record fastening locations, move the torque arm to each screw position one at a time.
14. At each position, tap the **plus icon** to capture and store that location in the system.
15. Repeat this process until all screw positions have been defined.

P1

Home > List Jobs > Edit Job > P1

Batch Count: 4

Socket Assignment: None

Reset to Part: None

Max Attempts Enable: ☐

Max NOK Enable: ☐

Fail Rules:

Screw Pattern:

Tolerance (mm): 15

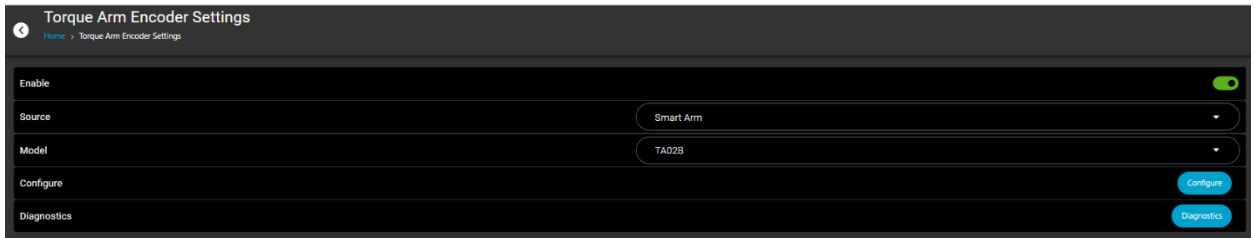
ID	Label	Position	Action
1	A1	(-0.04, 0.76)	Edit Delete
2	A2	(1.00, 0.00)	Edit Delete
3	A3	(4.01, -0.30)	Edit Delete
4	A4	(0.00, -0.04)	Edit Delete

16. Once setup is complete, go back one screen and select Save. The Smart Torque Arm is ready to guide the operator through a fully controlled and error-proofed fastening sequence.
17. Go to the Home screen, select the Job. The tool will not run until in the correct position based on the Screw Pattern.

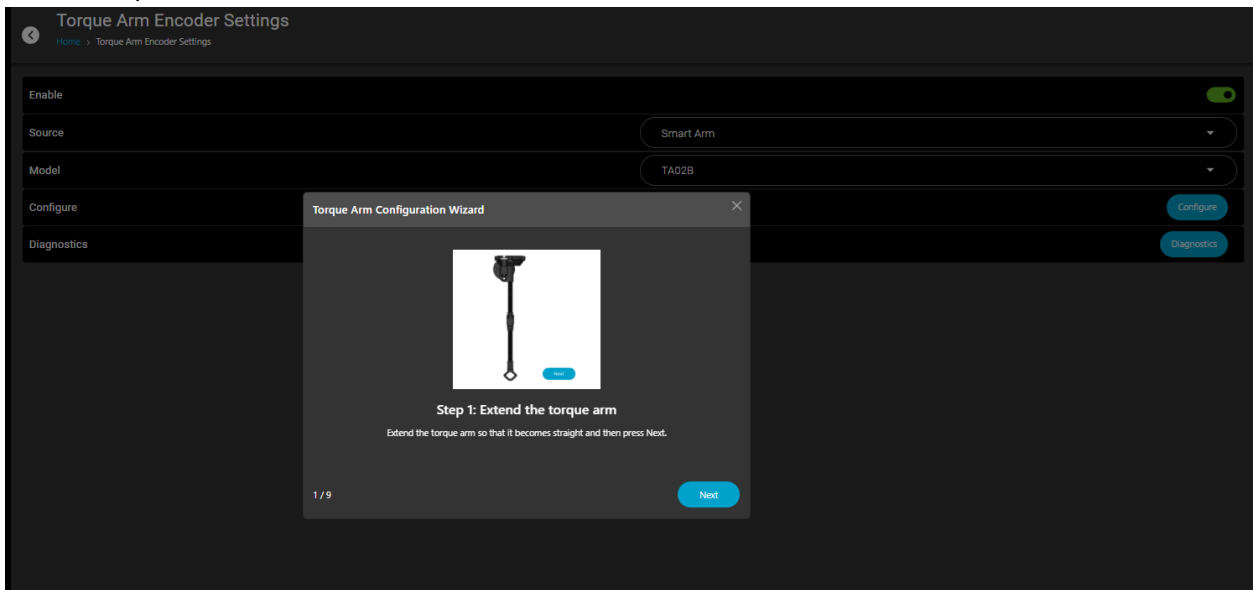
Operator Guidance through Remote Browser

1. Follow Steps 1 through 7 above.

2. Go to Communications Settings->Torque Arm Encoder Settings.

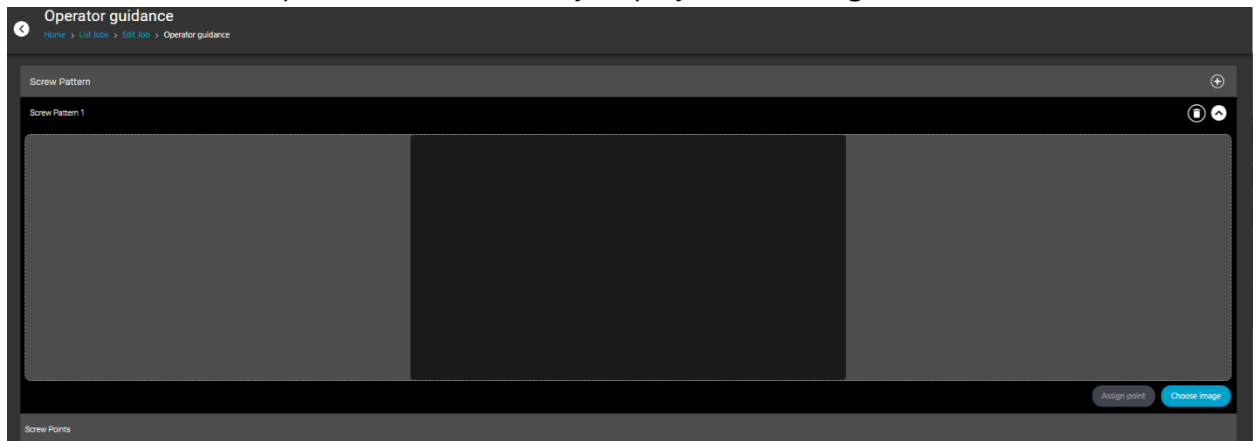


3. Select Configure. Follow the on-screen wizard to calibrate the positioning system of the Smart Torque Arm.

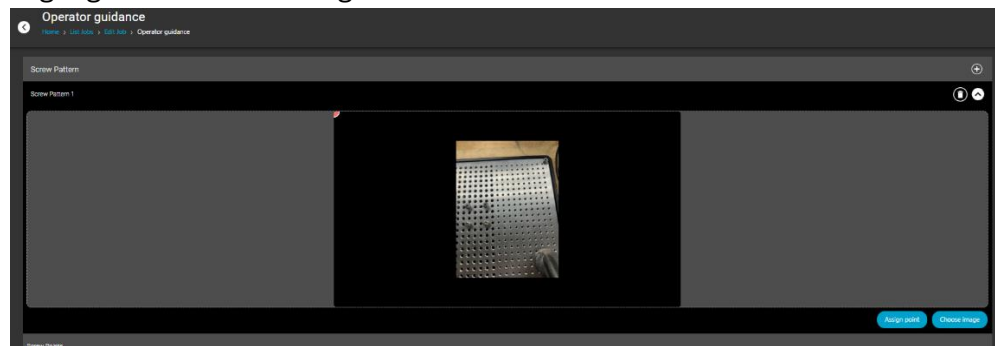


4. Once the configuration is complete, click Complete, and then Save to confirm your settings.
5. Before proceeding, ensure that a PSET and Job have already been created.
6. Navigate to the Jobs menu. Under Interlocks, enable the Torque Arm interlock.
7. Under Add PSETs, select the edit icon for the PSET you will use.
8. Set the Batch Count based on the number of fasteners in your application. For example, if your assembly requires four screws, set the batch count to four.
9. Once the batch count is defined, go back and select Operator Guidance.
 - a. This is where you will upload an image of the joint or workpiece to visually guide the operator.

10. Under Screw Patterns, you will see a default pattern already created (Screw Pattern 1). Select it from the dropdown, this will initially display a blank image.

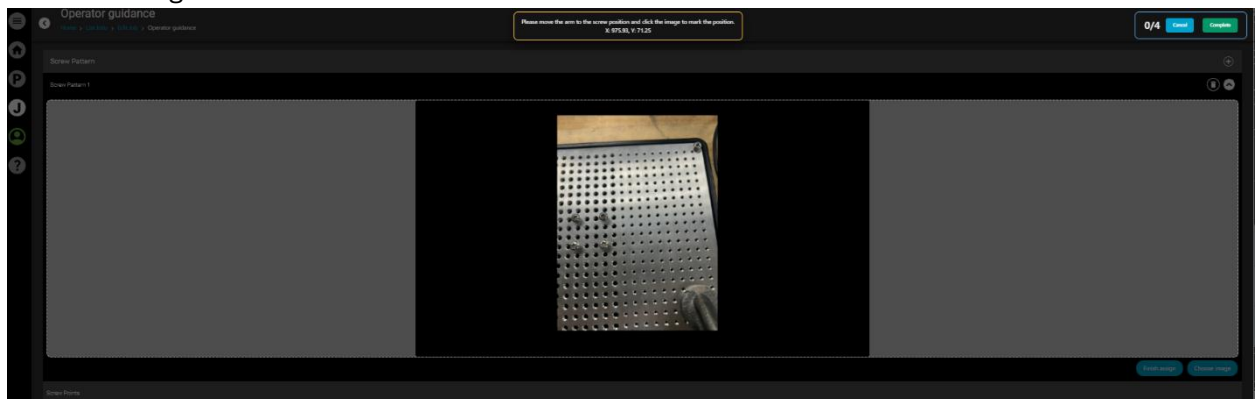


11. Click Choose Image and choose a pre-captured image of your joint or workpiece from your computer.
- Upload Image. Crop and Rotate if necessary. Select Apply.
 - Highlight the desired image and click on Select.

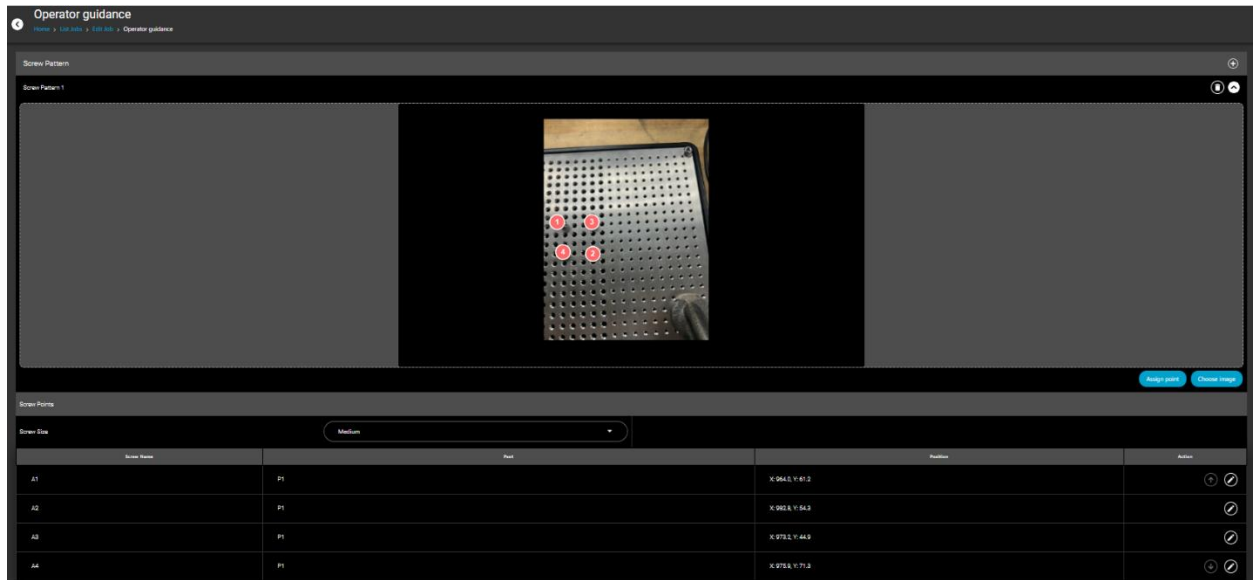


12. There are two ways to assign screw positions.
- Assigning points dynamically by moving the Smart Torque Arm to each screw position.
 - Applying previously defined points from the PSET.

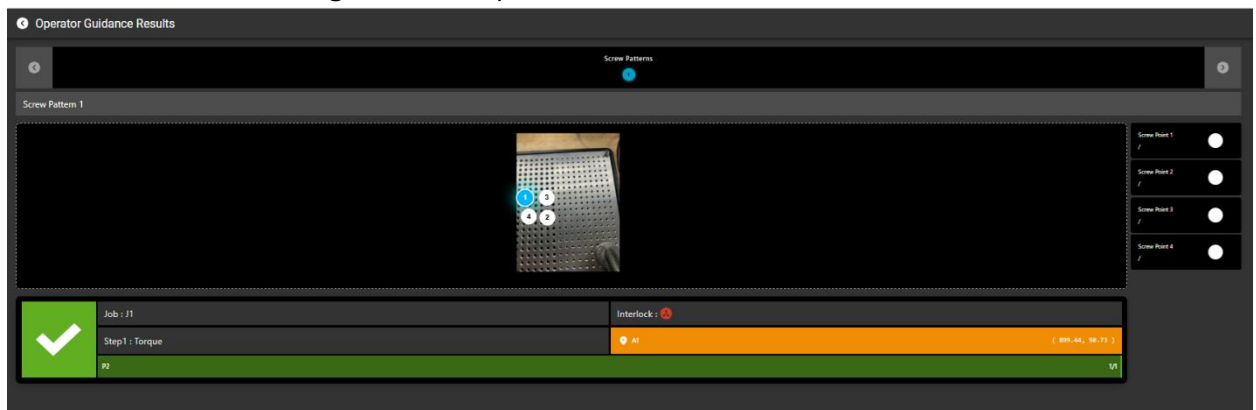
13. Click on Assign Point.



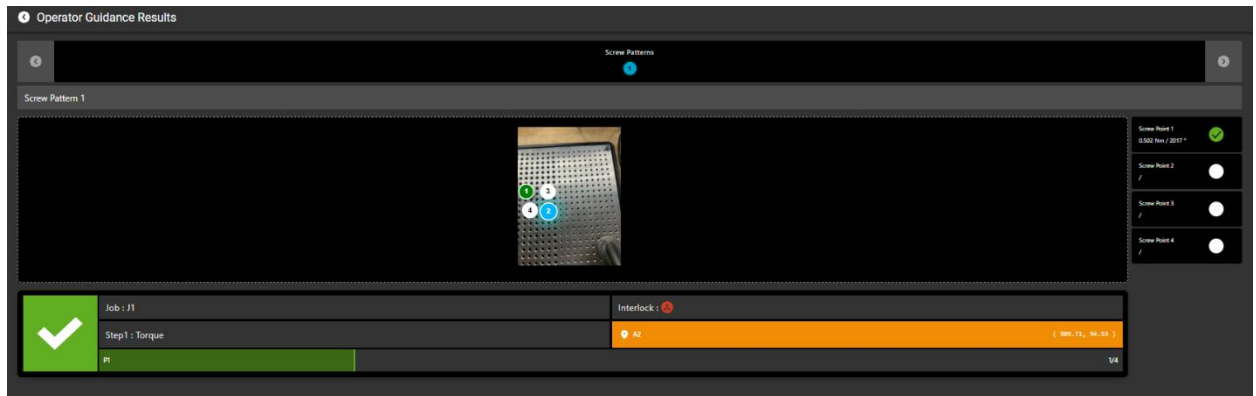
14. For dynamic assignment, the system will capture coordinates in real time as you move the Smart Torque Arm to each fastening location.
15. As points are assigned, they will appear both on the image and in the coordinate table. You can edit any point by selecting the edit icon next to it.



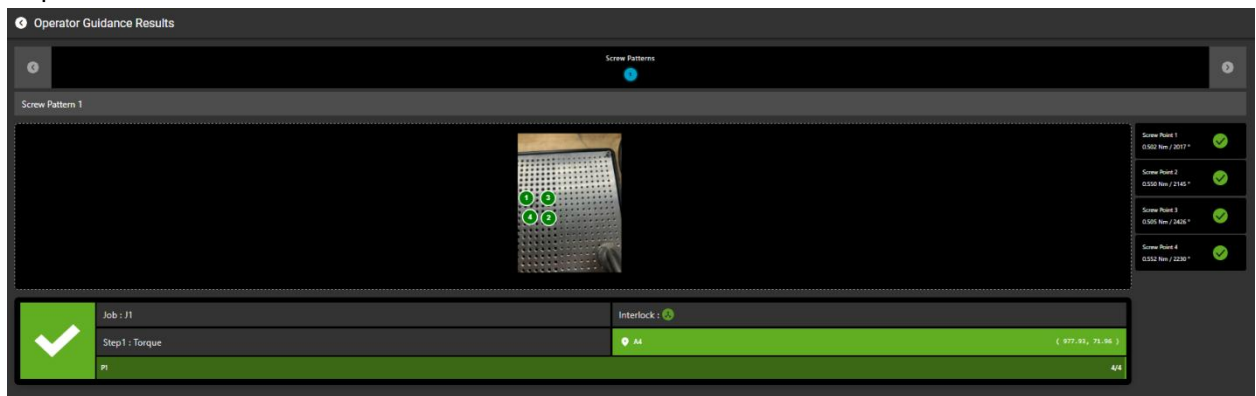
16. Go back one screen and Save.
17. Go to the Home screen and select the Job.
18. Select Operator Guidance (top right of the screen).
19. Screw Position 1 will flash until the tool is on the correct fastener. Then the tool will be Enabled, and the fastening can be completed.



20. Once Screw 1 is complete (Pass Cycle), Screw Position 2 will flash until the tool is on the correct fastener. Then the tool will be Enabled, and the fastening can be completed for Screw 2.



21. Repeat for all fasteners.



Managing Multiple Psets and Screw Patterns

1. If your Job includes multiple PSETs, all screw points will initially be assigned to a single screw pattern by default.
2. If needed, you can create additional screw patterns and organize points between them using the up and down arrows.

Note: The tightening sequence will always follow the order defined by the PSETs.