

Smart Ram Plus Pop-A-Plug® Installation App User's Guide

Galaxy Tab Active Layout



To power on the Tablet, press and hold the Side Key for a few seconds.

Ref US patents #11,788,663 and #11,965,619












valves.curtisswright.com/EST

North, Central & South America
 2701 Township Line Rd.
 Hatfield, PA 19440-1770 USA
 +1.215.721.1100 | +1.800.355.7044
est-info@curtisswright.com

Europe / Middle East / Africa
 Hoorn 312D, 2404 HL Alphen aan den Rijn
 The Netherlands
 +31.172.418841
est-emea@curtisswright.com

Singapore
 +65.3158.5052
est-asia@curtisswright.com
Korea
 +82.10.9279.7132
est-asia@curtisswright.com

Icons and Alerts

	PASS – Plug was installed successfully.
	FAIL – Plugging error, potential Remove & Replug.
	Confirmed – Plug criteria matches heat exchanger and tube data.
	Size Warning – The Pop-A-Plug size selected may not match the tube ID. Verify correct plug has been chosen.
	Pressure Warning – The Pop-A-Plug pressure rating may not be sufficient based on the heat exchanger information provided. Verify correct plug has been chosen.
	Temperature Warning – The Plug temperature rating may not be sufficient based on the heat exchanger information provided. Verify correct plug has been chosen.
	Material Warning – The Plug material may not be correct for the tube and heat exchanger based on the information provided. Verify correct plug has been chosen.
	Material Other – The Plug material for the tube and heat exchanger is not listed so can not verify if selected plugs are appropriate. Verify correct plug has been chosen.
	Tube Plugged on One Side Only – The tube has had only one side plugged in this Job. Verify that other side does not need plugging.

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Basic Setup and App Function Locations

To open the Smart Ram Plus App, power up the tablet (Side Key button) and press the Pop-A-Plug Installation App icon or press the Active Key. Product registration is required the first time the App is started; a Wi-Fi connection will need to be functioning for the registration process.

The bottom ribbon of the App shows the 4 main areas of operation:



Process Flow Summary

1. Complete software registration upon opening the application for the first time. The E-mail address entered here will be used for software update notifications and other system related correspondence.
2. Add Technician (Section 1) and Equipment (Section 2) to the app library.
3. Create a new job (Section 3) or resume a job in progress on the Jobs menu.
4. Recording Plug installation data (Section 4) during plug installations.
 - I. For Smart Ram instructions, see DC1230.
 - II. For CPI installation, see DC1220.
 - III. For P2 installation, see DC4010.
5. View installation and job reports (Section 5).

Options and functions of main areas of operation:

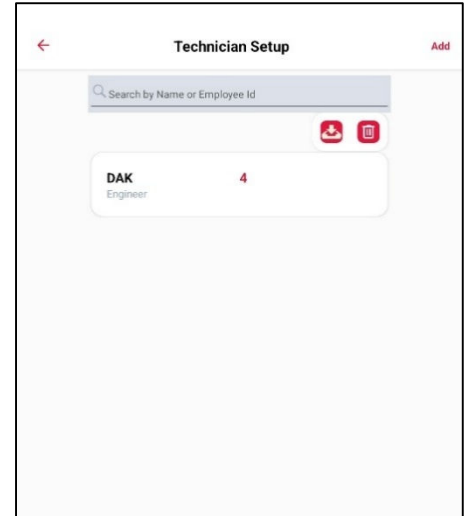
Jobs	Reports	Setup	More
List of current Jobs Add New Job	Full Report Job Report Details	Technician Setup Equipment Setup Application Setup Customize Report Setup Connect Tool Software Registration	Unarchive Jobs Unarchive Technicians Unarchive Equipment About



Section 1 – Technician Setup

Reach the Technician Setup menu through the Setup tab of the bottom ribbon.

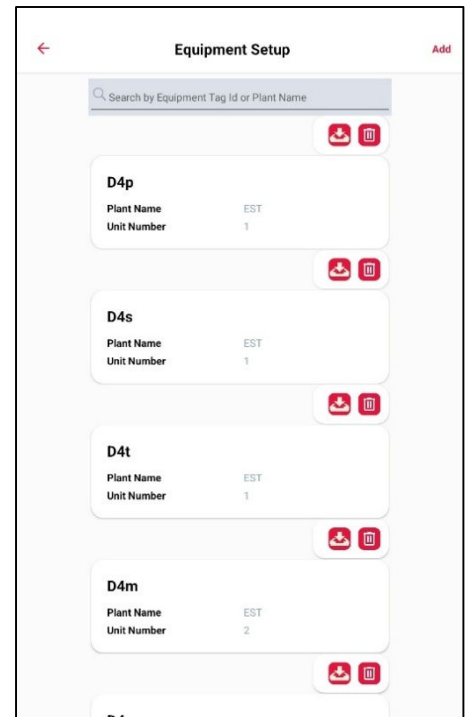
1. To add a new technician, select Add in the top right corner. On the Add Technician screen, fill out the fields with information relevant to the technician and tap Create to add the technician to the app's local database. The Add Technician screen can also be reached by tapping Add in the Technician Setup menu when creating a new job.
2. Tap on a technician to view their stored information.
3. Use Edit in the top right corner to begin changing information, then Save in the same position to save the changes made. The back arrow will change the screen back to the Technician Setup menu.



Section 2 – Equipment Setup

The Equipment Setup menu can be found on the Setup tab of the bottom ribbon.

1. To add a new piece of equipment, select Add in the top right corner. On the Add Equipment screen, fill out the fields with information relevant to the equipment and tap Create to add the equipment to the app's local database. The Add Equipment screen can also be reached by tapping Add in the Equipment Setup menu when creating a new job.
 - a. For tube material, use the drop-down menu available. If the material is not listed, use "OTHER" at the bottom of the menu.
 - b. The Avg Wall Tube and Min Wall Tube entry mode has the user select Tube OD, whether the tube is rolled, and either tube BWG or WT (selecting one field will automatically fill out the other), from dropdown menus. In either case, if the tube is rolled, a 10% reduction to wall thickness is applied.
Manual mode has the user input Nominal Tube ID directly into the respective field.



2. Tap on an equipment tag to view the equipment's stored information.
3. Use Edit in the top right corner to begin changing information, then Save in the same position to save the changes made. The back arrow will change the screen back to the Equipment Setup menu.

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Section 3 – Creating a new Job

1. Select the Jobs tab on the bottom ribbon and tap New Job in the top right corner of the menu.
2. Tap the Job Number field and input a number that will identify the job. Numeric and alphabetic characters can be used in this field; it is recommended to avoid special characters as they may be incompatible with generated report file names.
3. Tap the Equipment Tag ID button and choose the equipment being serviced, then press Select. If the equipment has not been added to the app previously, use Add in the top right corner to enter its information. See Section 2 – Equipment Setup for more details.
4. Tap the Technician Name button and choose the technician performing the job, then press Select. If the technician has not been added to the app previously, use Add in the top right corner to enter their information. See Section 1 – Technician Setup for more details.
5. Select the additional Tube Preparation steps to require before plug installation. Any selected options will be necessary to check off as completed before proceeding to the Plug Installation screen for every plug installed as part of the job.
6. Select whether the operator will be required to take photos before and after plug installation.
7. Tap Create Job. This will open the Job Details page. To continue and install Pop-A-Plugs, press Next Plug.



When installations are complete, tap Complete Job to close it out.

8. To return to the main Jobs screen, press the back arrow in the upper left-hand corner; the new job will now be visible.

To access an already created job, select the appropriate job from the Jobs list to edit or install plugs.

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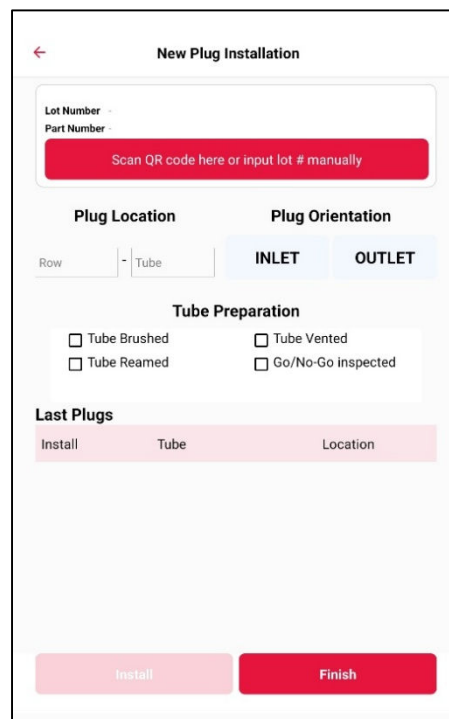
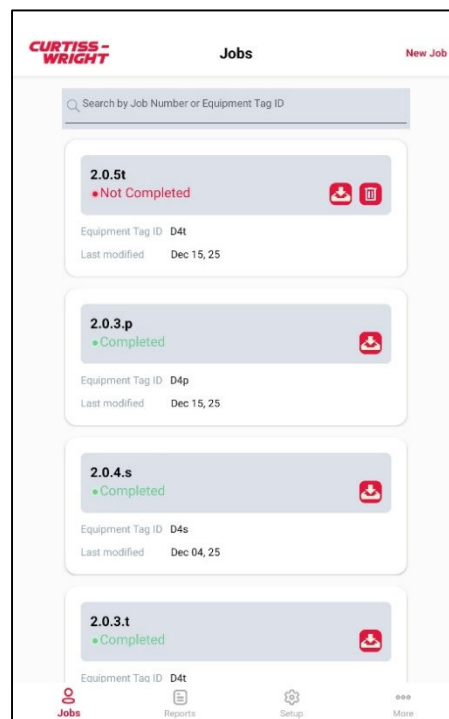
Korea

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est-asia@curtisswright.com

Section 4 – Tracking plug installation

Tap on the job in progress on the Jobs screen and press Next Plug on the bottom of the screen. If the job has not been created, use New Job in the top right corner to create it. See more information on creating a new job in the section.

1. If required, tap the Before Job Photo button to attach a picture of the exchanger before any work is performed to the job. After a photo is taken, select Next Plug to proceed to installation or Before Job Photo to re-take.
2. Press the red button near the top of the screen to input the information on plugs being installed. From this menu, tap Scan and, using the tablet camera, scan the QR code on the top right of the certificate included in the Pop-A-Plug kit. If and only if the certificate does not have a QR code, use the Lot Number field to search for the kit of plugs. Tap confirm once the plug information has been entered and return to the New Plug Installation menu.
3. Input the location of the tube of the equipment being plugged using the Row and Tube fields. Select whether the Inlet or Outlet of the tube is being plugged. Tube/Row configuration and counting method can vary from Plant to Plant.
4. Check Tube Preparation steps performed.
5. Check that all information on the installation screen is correct, then press Install to move to the Plug Installation screen.
6. Take a photo of the tube being plugged before installation, if necessary.
7. Tap the trigger of the Smart Ram to turn it on. The tablet screen will indicate that it is ready to record the installation, and a “BT” icon will display on the Smart Ram OLED screen. Note that Location must be enabled in the tablet’s settings for the Ram to establish a connection. See Section 11 for more details on connecting a Smart Ram.



Ram connected and ready to install	Ram not connected, not ready for installation
<p>Pop-A-Plug Installation Graph Lot Number: 0154981 Part Number: V5548 Connected Press and hold trigger when ready to install.</p>	<p>Pop-A-Plug Installation Graph Lot Number: 0154981 Part Number: V5548 Not Connected Activate Tool trigger to attempt re-connection.</p>



8. Proceed with installation, as per DC1230. After starting the ram cycle, do not release the trigger until the installation is complete. If the Ram trigger is accidentally depressed and released, wait until the green check mark becomes visible on the App prior to completing the installation.
9. Once plug has been installed, take a photo of the tube with the plug installed and/or record any notes, if necessary, then tap Next Plug to set up the next installation.
10. Repeat process for each plug until service is complete. It is not necessary to re-enter the plug lot unless installing a plug from a different lot as the previous plug.
11. To complete work, tap Finish on the New Plug Installation menu. If no more plugs are to be installed on this job, take a photo of the equipment after work is completed, then tap Complete Job at the bottom of the screen and Confirm in the popup menu.

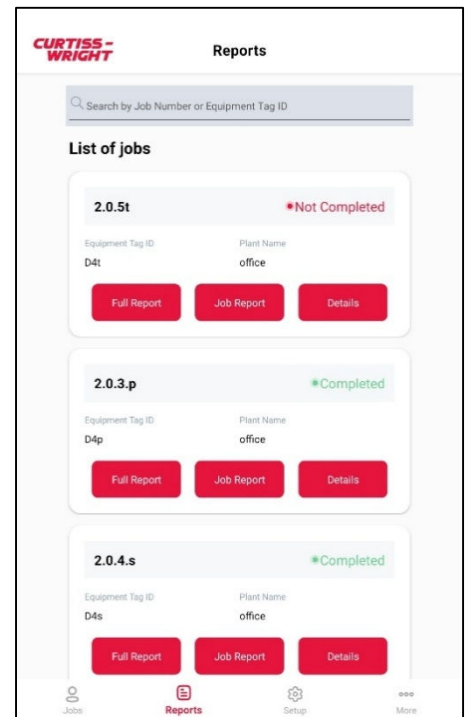
Section 5 – Viewing service Reports

On the Reports tab of the main menu, a list of jobs is displayed.

- The Full Report button generates a report with a title page, followed by the summary job report and a detailed report for every installation.
- The Job Report button generates a summary report for the job performed.
- The Details button allows the user to select individual plugs installed during the job and create a document detailing each selected installation, up to 20 plugs per document.

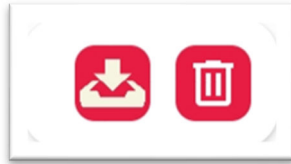
Once any type of report is created, choose an app to view (Samsung Notes is recommended), save as pdf and/or share the document.

In the Setup menu, found on the bottom ribbon, use Customize Report Setup to include a custom company name and logo on any reports generated (see Section 10).



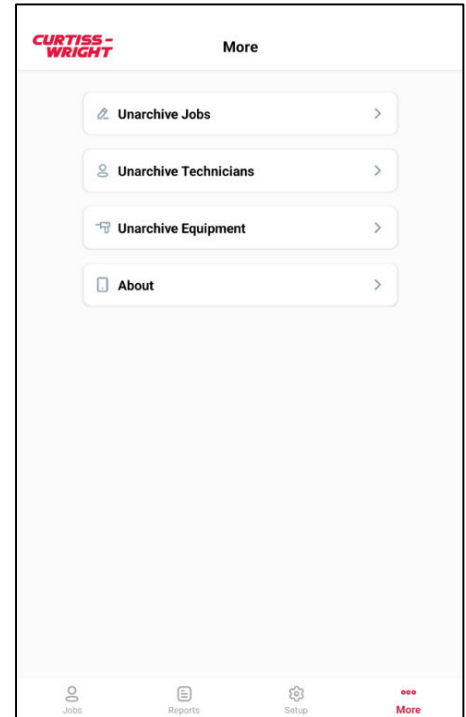
Section 6 – Archiving and Unarchiving

Jobs, Technicians, and Equipment can be archived from the Jobs, Technician Setup, and Equipment Setup menus, respectively, using the down arrow and drawer icon:



This will allow inactive items to be removed from the menus while keeping them stored in the app's library.

To retrieve items from the archive, navigate to the More tab, select Unarchive Jobs/Technicians/Equipment, as necessary, and use the red box and up arrow icon to unarchive the desired item.



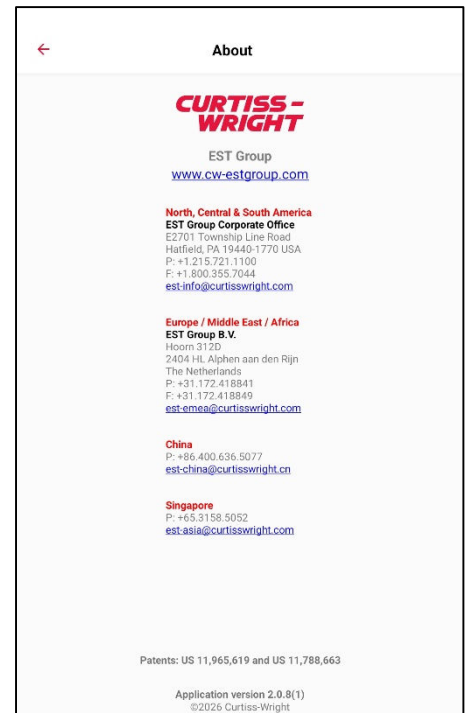
Section 7 – Checking software version

Navigate to the More tab on the main menu and tap About. Application version is listed at the bottom of the About screen.

Section 8 – Updating software version

Connect tablet to PC using the tablet's USB-C connection.

1. Open File Explorer and locate the tablet under "Devices and drives".
2. Copy .apk file into tablet's files.
3. In the tablet's Files app, navigate to where the .apk file is stored and run the .apk file. The app library, including all jobs, equipment, and technicians, will be maintained between versions.



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Section 9 – Changing units and date format

On the Setup tab of the main menu, select Application Setup. From this menu, select whether the app will use imperial or metric units and whether job reports will display date and time or date only. Once selections have been made, press Save at the bottom of the screen to proceed.

Section 10 – Entering Company Logo

On the Setup tab, select Customize Report Setup, select main or alternative company logo and upload an image from the tablet's storage. Two logos can be stored in the app at once. Only the logo selected when a report is generated will be included. To add more logos, the ones currently added must first be deleted.

Section 11 – Connecting a Smart Ram

To connect a Smart Ram, ensure Location is enabled in the tablet settings. On the main menu, navigate to the Setup tab and select Connect Tool. Tap the trigger of the Smart Ram quickly once to turn it on, and it will connect automatically. If it does not connect on its own, use the Connect button. The tool will stay connected through multiple installations until the tool turns off after a five-minute period of disuse, the tool's battery is removed, or the app is closed. The Smart Ram can also be connected from the Plug Installation menu by turning it on and waiting until a connection is indicated. Use Purge / Reset to end connections with any connected Smart Rams.

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