

**CURTISS -
WRIGHT**



Smart Ram Plus™

Advanced Heat Exchanger
Tube Plugging Installation System

POP-A-PLUG® TUBE PLUGGING PRODUCT LINE

Patented Tube Plugging Technology

Introducing Smart Ram Plus™ – cutting-edge technology for heat exchanger tube plugging!

As the newest addition to our Pop-A-Plug Tube Plugging System, Smart Ram Plus has been designed to provide fast and reliable tube plug installation with enhanced verification & reporting capabilities. Its patented technology enables the installation of Pop-A-Plug Tube Plugs with advanced confirmation that each plug has been installed properly. The Smart Ram Plus system also offers a range of reporting options, providing complete traceability and installation compliance!

Smart Ram Plus Advantages

- **Ease of Use** – just install the Pull-Rod Assembly and thread on a Pop-A-Plug Tube Plug
- **Ease of Operation** – minimal training requirements, maximizing efficiency & reduced labor costs
- **Real-time Confirmation** – immediate verification of installation parameters for each Pop-A-Plug Tube Plug installed
- **Process Verification** – ensures operational conditions such as pressure and temperature, as well as tube material and ID comply with Pop-A-Plug specifications
- **Comprehensive Reports** – instant reporting with installation confirmation, plug location, pressure graphs and detailed records

Components At-A-Glance

Cordless Smart Ram 640T
Self-contained, no pumps or pressurized hoses
Eliminates tripping hazards
High-accuracy pressure transducer
OLED display with multi-user presets
Quick size changeover, no tools required
Wireless communication enabled
Long-lasting battery (18v/3.0Ah)
Lightweight - 5lbs (2.3kg)

Rugged Industrial Tablet
Tested to MIL-STD-810H Environmental Protocols
IP67* rated enclosure
Long-lasting battery for uninterrupted operation
Bluetooth and Wi-Fi connectivity
Glove-compatible touchscreen
Bundled stylus
8" (203.2 mm) screen
Android OS



*IP (Ingress Protection) Ratings are used to describe different levels of protection against dust, water, and foreign body intrusion for electrical enclosures. An IP67 rating for a tablet means it's completely protected against dust and can withstand temporary immersion in water up to 1 meter for up to 30 minutes. This is a high level of protection, suitable for outdoor use and environments where dust and water are common.

Wireless Communication

Smart Ram Plus incorporates a precision pressure transducer for accurate measurement of installation force and communicates data seamlessly via wireless communication to included Tablet.

- **Patented Software** – quickly verifies proper Pop-A-Plug installation, providing data for analysis and advanced reporting
- **Installation Confirmation** – verify installations via recorded data
- **Installation Ram** – cordless ram unit with capacity to install up to 1,000 tube plugs per full charge, lightweight and ergonomic
- **Industrial-Ready Tablet** – designed for harsh environments with MIL-STD-810 H durability, uninterrupted operation, glove compatible touchscreen and bundled stylus for efficient and precise input
- **Ease of Operation** – minimal training requirements, maximizing efficiency and reducing labor costs

Real Time Reporting

Smart Ram Plus improves traceability by enabling plant personnel and/or on-site contractors to generate comprehensive reports, facilitating organization and completion of high-quality work documentation packages.

- **Real-time Reporting** – immediate confirmation of tube preparation and successful installation
- **Installation Details** – Technician Name, Date, Time with ability to print, email, and/or save reports
- **Pop-A-Plug Data** – scan Pop-A-Plug kit documentation to confirm correct plugs were selected and installed
- **Lot Number & Tube Location Linkage** – ensures complete traceability and OEM integrity
- **Pre-/ Post-Install Images** – provide additional level of documentation and verification

Certificate of Pop-A-Plug Installation

Single Installation Report

Installation Detail		Pop-A-Plug Information	
Job Number	Smart Ram + Curtiss-Wright	Part Number	V524B
Equipment Tag ID	Smart Ram + CW	Plug Material	BRASS 360
Plant Name	Curtiss Wright SR+	Plug Rated Pressure	1000 psi (68.9 bar)
Unit Number	CW 1	Plug Rated Temperature	400 °F (204 °C)
Tube Location	1-1 (I)	Plug Lot Number	02394384
Installation Date / Time	Apr 30, 26	Pin Heat #	8381-1.25
Technician Name	Daniel J Minorelli	Ring Heat #	284442.3.1
Smart Ram Serial No.	101322364TV008	Date of Manufacture	05/30/2023
Smart Ram Firmware	2.2.0	Peak Installation Force	2809 lbf (12498 N)

Installation:	Tube Preparation	Plug Confirmation
Installation: <input checked="" type="checkbox"/> PASS (Plug Installed Successfully)	<input checked="" type="checkbox"/> Brush <input checked="" type="checkbox"/> Ream <input checked="" type="checkbox"/> Pierce <input checked="" type="checkbox"/> Gauge	<input checked="" type="checkbox"/> Size <input checked="" type="checkbox"/> Pressure <input checked="" type="checkbox"/> Temp <input checked="" type="checkbox"/> Material

Before Installation

After Installation

Quality Statement
Pop-A-Plugs are manufactured, sampled, inspected and tested accordance with Curtiss-Wright EST Group's Quality Assurance Program registered to ISO9001-2015

Questions? Contact EST Group Customer Service at any of the following locations.

<p>CURTISS-WRIGHT</p> <p>North, Central & South America 2701 Township Line Rd. Hartsville, PA 19440-1770 USA +1.215.721.1100 +1.800.355.7044 est-info@curtisswright.com</p>	<p>Europe / Middle East / Africa Room 312D, 2404 HL Alphen aan den Rijn The Netherlands +31.172.418841 est-emad@curtisswright.com</p>	<p>Singapore +65.3158.5052 est-sing@curtisswright.com</p> <p>Korea +82.10.9279.7132 est-ohk@curtisswright.com</p>
--	---	---

©2026 Curtiss-Wright

Certificate of Pop-A-Plug Installation

Job Report

Equipment & Job Summary		Plug Summary	
Equipment Tag ID	Smart Ram + CW	Pop-A-Plug Part Number	V524B
Plant Name	Curtiss Wright SR+	Plug Material	BRASS 360
Unit Number	CW 1	Plug Rated Pressure	1000 psi (68.9 bar)
Unit Rated Pressure	1000 psi (68.9 bar)	Plug Rated Temperature	400 °F (204 °C)
Unit Rated Temperature	105 °F (41 °C)	Plug Minimum Tube ID	0.525 in (13.33 mm)
Job number	Smart Ram + Curtiss-Wright	Plug Maximum Tube ID	0.585 in (14.86 mm)
Tube ID	533	Number of Plugged Tubes	2
Job Status	Completed	Number of Installed Plugs	4

Pop-A-Plug Installation Details													
Plug Installation						Tube Preparation			Plug Confirmation				
Plug Location	Install Date	Technician Name	Lot Number	Inst. Force	Inst. Status	B5H	Ream	Pierce	Gage	Size	Pres	Temp	Matl
1-1 (I)	Apr 30, 26	Daniel J Minorelli	02394384	2809 lbf (12498 N)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1-1 (O)	Apr 30, 26	Daniel J Minorelli	02394384	2809 lbf (12498 N)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2-2 (I)	Apr 30, 26	Daniel J Minorelli	02394384	2831 lbf (12594 N)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2-2 (O)	Apr 30, 26	Daniel J Minorelli	02394384	2809 lbf (12498 N)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Pass (Plug installed successfully)

Fail (Remove & Replug)

Tube plugged on one side only

Confirmed

Size Warning

Pressure Warning

Temperature Warning

Material Warning

Material Other

Quality Statement
Pop-A-Plugs are manufactured, sampled, inspected and tested accordance with Curtiss-Wright EST Group's Quality Assurance Program registered to ISO9001-2015

Questions? Contact EST Group Customer Service at any of the following locations.

<p>CURTISS-WRIGHT</p> <p>North, Central & South America 2701 Township Line Rd. Hartsville, PA 19440-1770 USA +1.215.721.1100 +1.800.355.7044 est-info@curtisswright.com</p>	<p>Europe / Middle East / Africa Room 312D, 2404 HL Alphen aan den Rijn The Netherlands +31.172.418841 est-emad@curtisswright.com</p>	<p>Singapore +65.3158.5052 est-sing@curtisswright.com</p> <p>Korea +82.10.9279.7132 est-ohk@curtisswright.com</p>
--	---	---

©2026 Curtiss-Wright

To learn more about Smart Ram Plus, contact EST-Sales@curtisswright.com or call +1.800.355.7044



North, Central & South America

2701 Township Line Rd
Hatfield, PA 19440

T: (+1) 215.721.1100 | (+1) 1.800.355.7044
E: est-info@curtisswright.com

Europe, Middle East, Africa (EMEA)

Hoorn 312D, 2404 HL Alphen aan den Rijn
The Netherlands

T: (+31) 172.418841
E: est-emea@curtisswright.com

Asia

Singapore
T: (+65) 3158.5052
E: est-asia@curtisswright.com

Korea
+82.10.9279.7132
est-asia@curtisswright.com

valves.curtisswright.com/EST

