

## Pop-A-Plug® Air Cooled HX Tube Plugging System

### Repair Leaking ACHE Tubes without Damaging Plug Sheets

#### Description

EST Group's Pop-A-Plug Heat Exchanger Tube Plugging System has been further developed for use in the Air Cooled Heat Exchanger (ACHE) or Fin-Fan® market. ACHE units require extended tools as pneumatic tube testing and mechanical tube plugging needs to be done "at depth" through the narrow entry of the plug sheet in the deeper tube sheet.

EST Group's approach of supplying Pop-A-Plug Tube Plugs and related tooling to perform tube testing and plugging as a standard package which allows the technicians to test and plug tubes very quickly without any need for hammering or welding.

Unlike hammered in (welded) tapered plugs which are troublesome to weld and require weld permits the tube testing and plugging become a simple and controlled operation.

Once Pop-A-Plugs are installed they will remain leak tight throughout your heat exchanger's life cycle. In service for 20 years, the Pop-A-Plug P2 (High Pressures up to 7000 PsiG (483 BarG) and Pop-A-Plug CPI/PERMA (Medium Pressures up to 1000 PsiG (69 BarG) are a proven long-term performer in Air Cooled Heat Exchangers operating at pressures up to 7000 PsiG (483 BarG).



**Pop-A-Plugs are the ideal tube plugging solution for Air Cooled Heat Exchangers.**



#### Competitive Advantages

- Provides an ASME PCC-2 compliant plugging solution for shell & tube heat exchangers
- Lowest installed cost of any tube plugging method
- Quick Installation – typical Pop-A-Plug installation time takes less than 15 seconds, maximizing plant uptime
- Permanent & Reliable – engineered for optimal performance throughout the life cycle of the asset
- Metal to metal sealing eliminates plug degradation concerns due to thermal expansion and corrosion resulting from galvanic interaction
- Eliminates the need to attempt welding in tapered pins through header boxes
- Controlled and repeatable installation minimizes installer fatigue
- Safer, more cost effective than welding tapered pins

#### Quick Installation

- Go/No Go Gages confirming proper plug sizing and come with threaded connections that allow for easy extension in standard 1 foot (30cm) increments using – EXT extension tool.
- Extended Tapered Reamers available to remove protruding weld droop (if necessary).
- Tube Preparation Brush (to remove pitting and tube defects & roughen tube surface to maximize pressure hold capability of Pop-A-Plug) comes with threaded connections allowing easy extension in standard 1 foot (30cm) increments using –EXT extension.
- Extended Pull Rod Assemblies in standard 1 foot (30cm) increments with stand-off ring ensuring uniform installation "at depth" in the tube sheet through the narrow entrance of the plug sheet.
- Easy to install with Hydraulic or manual rams.
- Position Pop-A-Plug in the expanded portion of the tube end within tubesheet and activate Hydraulic Ram to install.
- The Pop-A-Plug is properly installed when Breakaway "Pops" and separates from Pull Rod Assembly.
- Remove Breakaway stub from the installed Pop-A-Plug.



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

**Europe / Middle East / Africa EST Group B.V.** Hoorn 312a 2404 HL Alphen aan den Rijn The Netherlands | +31.172.418841 | est-emea@curtisswright.com

**China** +86.400.636.5077 | est-china@curtisswright.cn | **Singapore** +65.3158.5052 | est-asia@curtisswright.com