# Pop-A-Plug® P2 High Pressure Tube Plugs

#### **Solution Overview**

Pop-A-Plug P2 tube plugging system maintains a leak tight seal under extreme thermal and pressure cycling. It reduces downtime, eliminates welding and explosives, and will not damage your tubes, tube joints or tube sheet.

#### **Features**

- Operating at pressures up to 7000 PsiG (483 BarG)
- Designed to maintain a helium leak-tight to 1 x 10<sup>-10</sup> cc/sec.
- Available in over 35 alloys to best match your tube material
- ASME PCC-2 identifies PAP for heat exchanger tube plugging

### **Advantages**

- Eliminates welding & need for pre-heat and post-weld stress relieving
- Breakaway ensures quick, easy and tightly controlled installation force, eliminating damage to tube joints and epoxy coated tube sheets
- Ideal for situations where tapered plugs are not appropriate:
  - Shell-side operating pressure 1.5 MPa (200 psi) or more
  - Shell-side operating temperature 205°C (400°F) or more
  - Tube-to-tubesheet joints are expanded but not welded
- Compliant with quality assurance systems including ANSI N45.2, 10 CFR 50 Appx. B, 10 CFR 21; Each lot is performance tested.
- Removable for retubing

# Pop-A-Plug® Sizes

- **P2:** P2-400 to P2-1440 (0.400 1.460", 10.19mm 37.1mm)
- Expansion Range: up to .020" (0.5mm)

#### **Common Questions**

- Q: What options are there for installation tooling?
- **A:** A variety of installation equipment is available to accommodate almost every situation: hydraulic, manual and battery driven solutions.
- Q: Will the Pop-A-Plug P2 damage the tube or tube sheet that it's plugging?
- A: No, the Pop-A-Plug P2 can be installed and removed without damaging your tubes or tubesheet joints.
- Q: Can the Pop-A-Plug P2 and tube materials be different?
- **A:** No. The plug and tube materials must closely match to accommodate thermal expansion and avoid problematic galvanic interaction.
- **Q:** What is the average amount of time required to install a Pop-A-Plug P2 after the tube is prepped?
- A: The average amount of time to do a full stroke and pop the breakaway is less than 15 secs.

# **Cross-sell / Up-sell Opportunity**

- CPI/Perma Pop-A-Plug for broader expansion range
- Pop-A-Plug® Tube Stabilizers
- G-160 Tube Testers
- Installation tools:
  - Smart Ram 640T
  - PAP6600
  - PAP123RK
  - Close Quarter Ram



