



## Installation Operation & Maintenance Instructions for the PuroPak-CP

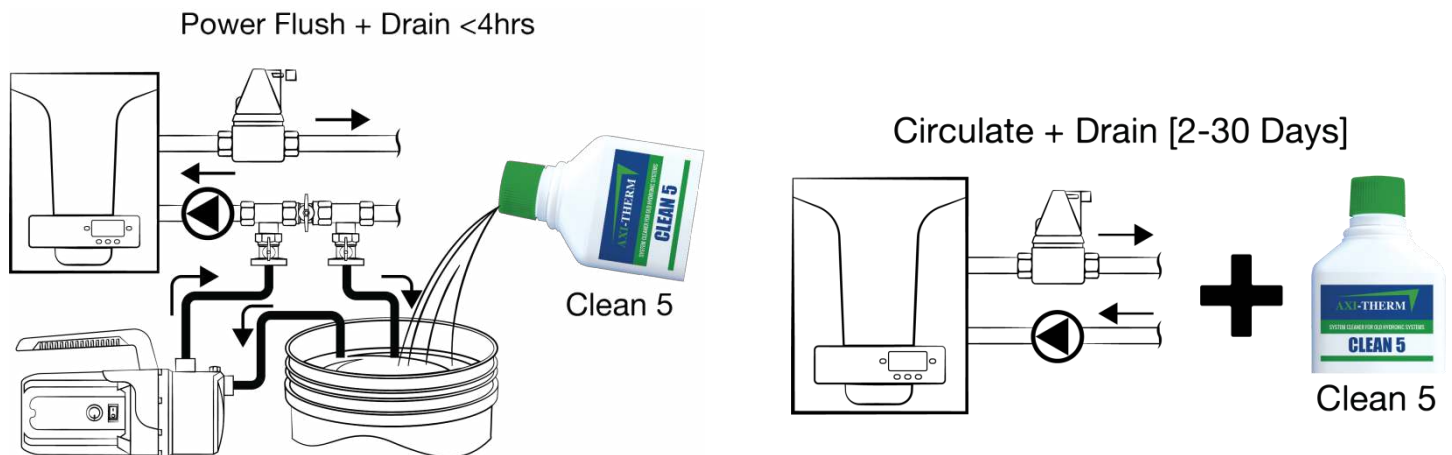
### Step 1: Clean The Closed Loop Hydronic System With Clean 5

Add 1 bottle (500 mL or 16.9 oz.) of AXI-THERM CLEAN 5 for every 100 litres (25 gallons) of water (Dosage: 0.5 %). Lower concentrations do not yield satisfactory results. Higher concentrations have no adverse effects.

Use an AXI-THERM INJET, or a mechanical fill pump to add the product to the system. Clean 5 may be circulated in one of two ways: 1) Power Flushing with external high velocity pump (see Figure 1 'A') or by circulating throughout the entire system using the existing system circulators (see Figure 1 'B').

When Power Flushing, the heating appliance must be off during the entirety of the cleaning process, 2-4 hours, (Figure 1 'A'). When Clean 5 is left to circulate through the entire system it is recommended to shut the heating appliance off only while the solution is being added to the system. Once cleaner has been administered the system operation may be restored and should be circulated for at least 2 days and may remain in the system for up to 30 days (Figure 1 'B').

Once the cleaning operation is completed, the system should be well drained and rinsed. Rinsing should continue until the water runs clear. If the water does not run clean, repeat the cleaning session.



**Figure 1 'A':** Power flush Clean 5 through existing system via mechanical pump. Depending on the severity of encrustations, power flushing may require 2-4 hours of run time

**Figure 1 'B':** Circulate Clean 5 through system via existing system circulators. Circulate for 2-30 days before draining and rinsing.

## Step 2: Demineralize The Supply Water

The PuroPal-1 cartridge filters lime and aggressive dissolved substances such as sulfates, nitrates and chlorides out of the local domestic water. This method does not release any chemical additives into the water. The PuroPal-1 operates on the basis of a mixed bed ion exchange resin that demineralizes the water. In doing so, the water is demineralized, which meets fill water specifications of glycol and boiler manufacturers. Treated water through the PuroPal-1 is not intended for use as drinking water.

The capacity of the PuroPal-1 is determined based on the conductivity (salt and mineral) content of the incoming water supply (see Figure 2). Higher conductivity content in the site water supply results in a lower yield of treated water. The PuroPal-1 resin is designed to change colour from blue to beige once the resin has expired and will no longer provide demineralization of the incoming water. When the resin has a complete colour phase from inlet to outlet the cartridge has expired and can be disposed of with the household waste.



The cartridge may only be under pressure during the duration of the fill-up and must be constantly monitored while in use. The maximum temporary pressure is 100 psi (6.8 bar) at 140 °F (60 °C).



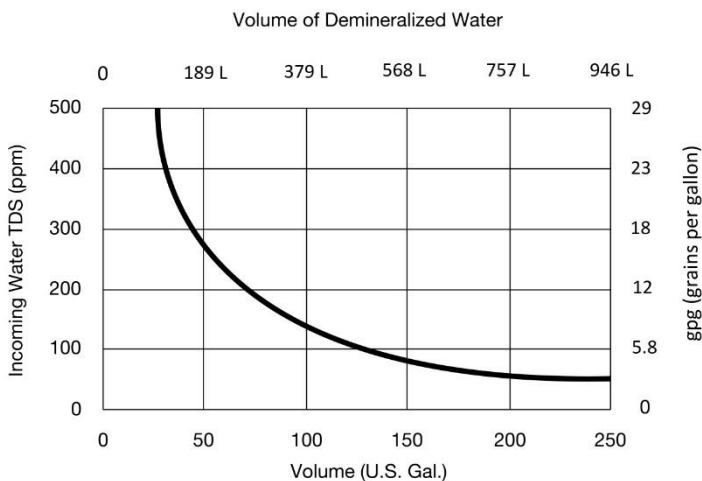
Demineralize system fill water prior to blending fluid with glycol and/or inhibitor (see Figure 3)



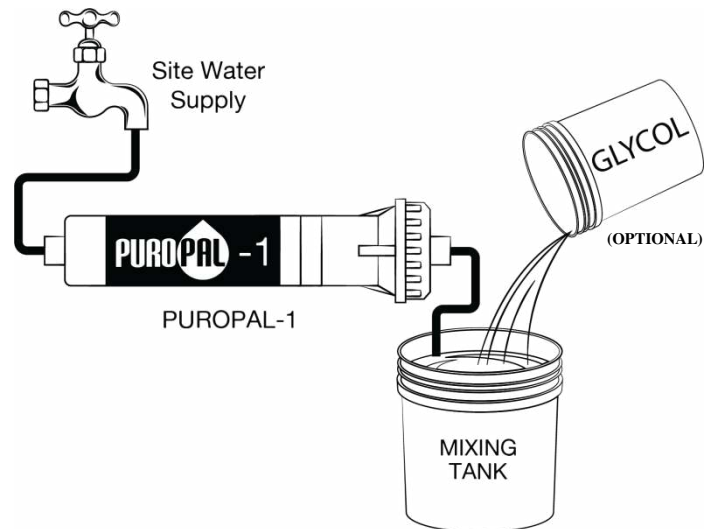
The resin from the cartridge must not enter the heating system. Before each use, check the retention sieves on both sides of the cartridge. The cartridge must always be monitored while in use.

### Directions:

- 1) Connect the PuroPal-1 via Female Garden Hose Connection to site water supply.
- 2) Connect garden hose to outlet of PuroPal-1 (Female Garden Hose) and run hose to mixing tank/reservoir (see Figure 3)
- 3) Confirm hose(s) are secure prior to opening site water supply
- 4) Fill mixing tank/reservoir to the appropriate volume based on glycol and/or inhibitor dilution proportion
- 5) Disconnect PuroPal-1 from site water supply after system has been filled.



**Figure 2:** PuroPal-1 capacity based on incoming water TDS (Total Dissolved Solids) or GPG (Grains Per Gallon)



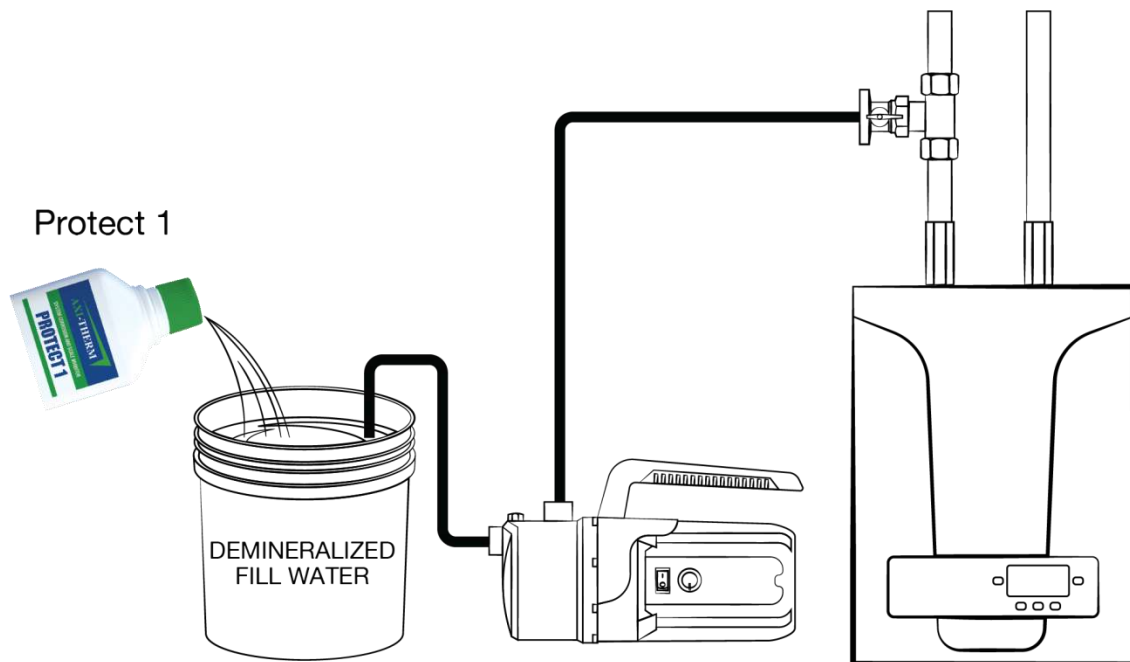
**Figure 3:** Mix demineralized fill water with glycol and/or Protect 1 Inhibitor prior to filling system

### Step 3: Add Protect 1 And Fill the System

#### Directions:

Add 1 bottle (500 ml or 16.9 oz.) of AXI-THERM PROTECT 1 for every 100 litres (25 gallons) of water (Dosage: 0.5%). Lower concentrations do not yield satisfactory results. Higher concentrations have no adverse effects.

Use an AXI-THERM INJET or mechanical fill pump to add the product to the system. Complete the label provided and affix it to the system at a visible location.



**Figure 4:** Add Protect 1 and fill the system

#### Maintenance:

Test system fluid inhibitor strength annually using the AXI-THERM “P1-TEST” kit. Add additional PROTECT 1 as required.

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#### Protect 1 and Clean 5 Environmental And Safety Information:

Do not use in potable water systems. Do not ingest. Do not dispose of waste through the environment. Keep out of reach of children. The product is not classified according to the Globally Harmonized System (GHS).