

BOILER EXPRESS COMMISSIONING KIT

- **Maintain the design specification and energy efficiency**
- **Restore energy efficiency**
- **Inhibit the formation of scale and sludge**
- **Minimize corrosion of system metals**
- **Express format for easy use**



Good practice dictates that hydronic central heating systems should be thoroughly cleaned and flushed before installing a new boiler, after which a chemical inhibitor should be added to ensure the system is protected from corrosion, scale and sludge build-up. These procedures should also be employed when major work is carried out on a system. A clean, protected system helps ensure that the heat generated by the boiler is transmitted efficiently into the house over the long term

Test Procedure

1. Prior to cleaning and flushing, use the enclosed pH test strips and color coded chart to measure the initial pH of the system water as a reference guide.
2. Check boiler manufacturer's instructions regarding system cleaning prior to commencing work.
3. Best practice is to clean and flush the heating system with the old boiler still installed prior to installation of a new boiler.
4. Drain the system water.
5. Fill the system with fresh water.
6. Add FernoX Cleaner F3 into the system.
7. Run up to temperature for a minimum of one hour. Ensure that all the system is fully open to allow complete cleaning. Check that all zones including all radiators (if present), are heating up and there are no cold spots. If heating the system is not possible, activate the circulating pumps and allow to run for up to 9 days for a thorough clean.
8. Drain and flush the system thoroughly in both directions to remove the cleaning agent and any debris until the water runs clean. Use of a powerflusher is preferred.
9. Fill the system with fresh water.
10. Add FernoX Protector F1 to provide long term protection against corrosion and limescale, and maintain efficiency. Circulate around the system for equal distribution.



11. Test the inhibitor levels present using the Fernox Protector Test Kit.

Shake Reagent bottle before use.

- Fill the 30ml graduated test vessel to the 10ml mark with tap water.
- Holding the Protector Reagent bottle exactly vertically upside down, add one drop (the solution should turn blue). If the solution does not turn blue but remains clear or turns yellow immediately, count number of drops as 0 and move to step 4.
- Continue to add Reagent dropwise, mixing between each addition. Count the number of drops required to turn the solution yellow/orange.
- Repeat steps 1 to 3 above with a sample of the system water.
- Deduct the number of drops of tap water from the number of drops of system water to give the difference.
- If the difference is less than the optimum given below, add additional Protector

	Recommended Dose/100L	No of drops difference*
Alphi 11	6.5 US gallons - 25 liters (-11°C/12.2°F)	10 minimum
	7.8 US gallons - 30 liters (-15°C/5°F)	12 minimum
	9.1 US gallons - 35 liters (-18°C/-0.4°F)	14 minimum
	10.4 US gallons - 40 liters (-22°C/-7.6°F)	16 maximum
Protector F1	1 pint - 500ml	9 optimum

*Difference between system water and mains water.
(Number drops system water sample – number drops mains water sample)

12. Check the system pH level using a pH test strip provided and color coded chart. The pH value of the system water must be between 7 and 8.5.

13. If the Fernox Protector Test Kit and/or the pH test strip do not show positive results, add additional Fernox Protector F1. Repeat both tests using a fresh pH test strip until achieving the desired results.

Packaging, Handling and Storage

The Fernox Boiler Commissioning Kit is supplied as with full instructions and is non-hazardous reagents. Keep out of reach of children.

Contents:

- 1 x Fernox Protector F1 17.6oz (500ml)
- 1 x Fernox Cleaner F3 17.6oz (500ml)
- 4 x Fernox pH Test Strips
- Instruction Leaflet