



Method statement for cleaning and commissioning GSHP systems

For pipework that may remain dormant before final commissioning.

Initial fill

Flush through with mains water. Mix mains water with one litre of **Fernox HP Fill** per 600 linear metres of 40mm diameter pipework (one litre per 600 litres). Note that it is better to overdose than to underdose with this product to achieve biocidal control.

Pre-commissioning clean

If **Fernox HP Fill** has been used during the ground loop installation phase and there is no evidence of bacterial contamination, it is not necessary to use **Fernox HP Cleaner** before filling the system with a product from the **Fernox HP** range. Otherwise add one litre of **Fernox HP Cleaner** per 600 metres of 40mm diameter pipework (one litre per 600 litres). Circulate for a minimum of one hour and flush out with fresh mains water. If evidence of bacterial growth is still present after one hour consider double dosing and circulate for further one hour. Flush out with the mains water until the water runs clear.

Final fill

Fill with **Fernox HP-15** premix, or **Fernox HP-15c** concentrate diluted to the concentration required for the desired frost protection, according to the tables to the right.

Circulate the fluid to ensure that air is purged from the system according to the equipment manufacturers' instructions.

Check frost protection levels using a **Fernox Refractometer**. Adjust the level as required with the addition of **Fernox HP-15c***

* Even if **Fernox HP-15** premix is used, this can be under-dosed for frost protection if all of the flushing water is not completely removed with or before the addition of the premix.

Concentration HP-5c	10%	20%	30%
Frost Protection	-4°C	-9°C	-14°C

Length of piping (m)	Drums of Fernox HP-15c
250	4
300	5
400	6
500	8
600	9
700	10
800	11
900	13
1000	14
1100	15
1200	17
1300	18
1400	19
1500	21
1600	22
1700	23
1800	25
1900	26
2000	27