



TECHNICAL INFORMATION

FLUORIDE SATURATOR

This up-flow type saturator is for use with powder grades of sodium fluoride. Operation is automatic, requiring only periodic addition of chemical. The saturator is capable of treating flows to 57 ML of water per day with 1mg/L of fluoride ion.

FEATURES

Convenient, Rugged, Assembled Package

The saturator consists of a 270 litre PE tank with a sturdy PVC hinged cover. The cover easily supports a low capacity metering pump and a float type level switch. The switch is connected to a solenoid valve for automatic water filling. Delivered assembled, the unit occupies only about 1m² of floor space.

Corrosion-Resistant Construction

Plastic wetted parts give maximum corrosion resistance. All openings are covered to minimise dusting.

Many Grades of Sodium Fluoride

The saturator is designed to operate efficiently with all grades of sodium fluoride.



Close up of floating
suction connection

Anti-Syphon and Overflow Protection

An ASSE approved anti-syphon vacuum breaker is designed to prevent chemical syphoning back into the water supply. An overflow connection is also provided.

Dependable Operation

As well as the anti-syphon vacuum breaker, the saturator has other features designed for reliability. They include the up-flow design and a regulator at the water inlet which limits flow to 15 L/min.

Easy to Install and Maintain

The saturator is fully piped and wired. Installation requires only piping to the drain, overflow, and water inlet connections and providing a 240-volt outlet.

The unit is easily moved when empty. A hinged lid permits easy chemical addition.



Australia

DESIGN AND OPERATION

FLUORIDE SATURATOR

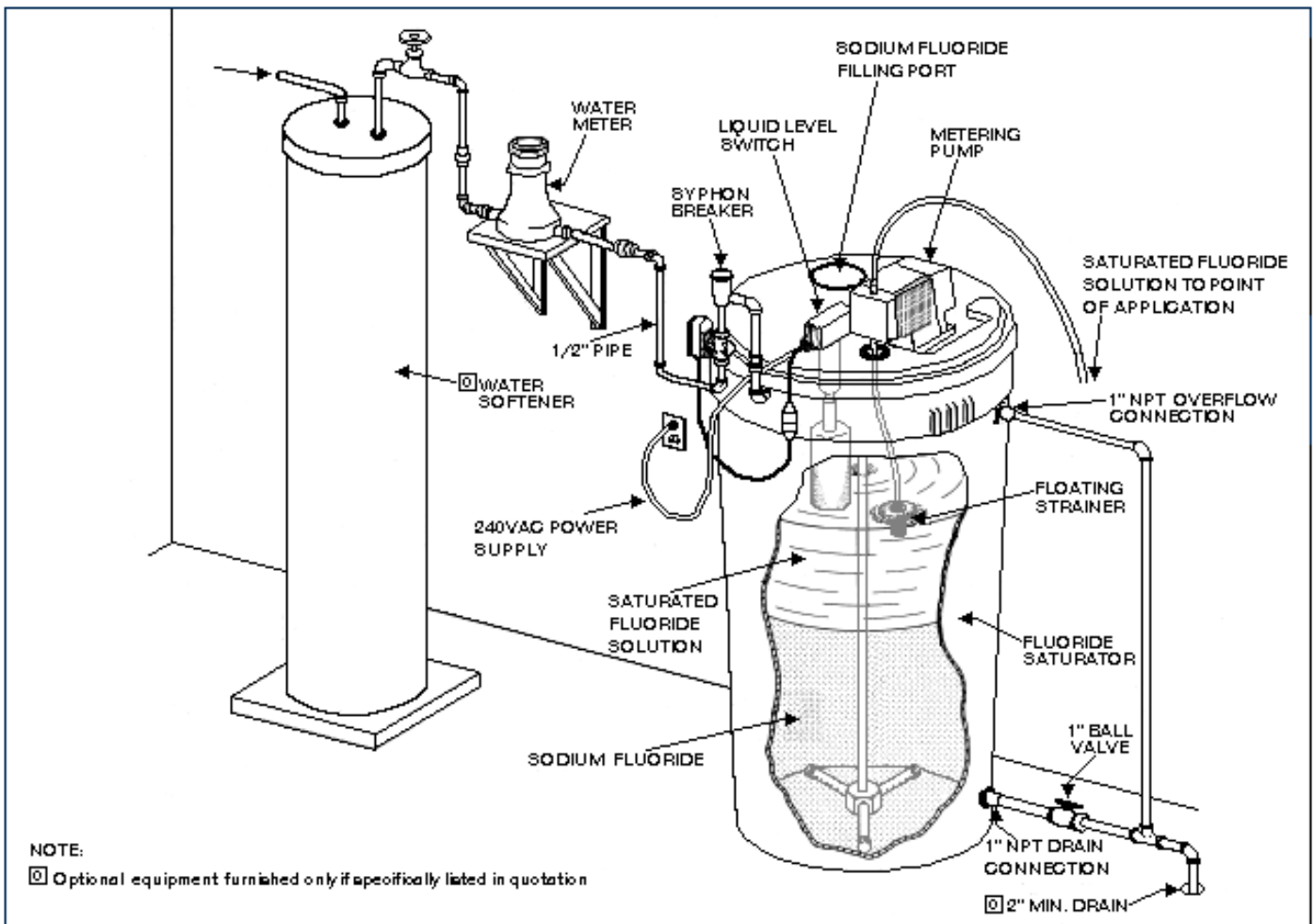
The saturator has a free standing, 270 Litre, polyethylene tank. The translucent tank wall has graduations every 20 litres for easy checking of solution levels. The ½" (15mm) inlet water piping is manifolded in the tank for optimum water dispersion through the chemical bed. The tank wall has ¾" (20mm) drain and overflow connections. It also has a ½" (15mm) inlet water connection with a solenoid valve. A vacuum breaker and a flow regulator (set to pass 15 l/min, maximum) are in the inlet water line. The cover supports a level switch and a metering pump.

A floating pump-suction connection has a strainer, and for some pumps, a foot valve.

The tank holds 150 kg of sodium fluoride and requires refilling (manual) at the 50 kg level.

Water is automatically admitted by the float-level switch and solenoid valve. A drop pipe carries it to the tank bottom where it is discharged through manifold piping. It flows up through the chemical to produce a saturated solution. The pump suction and strainer floats on this solution. Solution is drawn into the pump head and metered to point of application.

To record solution prepared and applied, an optional water meter may be installed in the inlet water line. It totals the amount of water added in a given period which is the equivalent of solution fed. Fluoride will combine with calcium and magnesium hardness in the make up water. Since both calcium and magnesium fluoride are only slightly soluble, they will precipitate causing loss of fluoride and clogging of internal piping. The use of softened water will eliminate this precipitation. If hardness exceeds 75 mg/L, a water softener is required.





TECHNICAL DATA

FLUORIDE SATURATOR

Chemical

Powder grades of sodium fluoride.

Chemical Capacity

Sodium fluoride: 150 kg total, with manual refill at 50 kg level.

Solution Feed Rate

To 3m³/day of 4% saturated sodium fluoride solution (treats flows to 57 ML per day with 1mg/L fluoride ion).

Inlet Water

Fixed at 15 L/min; pressure range of 1 to 10 Bar.

Connections

¾" (20mm) female NPT fittings from drain and overflow connections; ½" (15mm) female NPT for water inlet; pump connections are for 6/9mm tubing at the pump; standard tubing connection at the strainer is 6/9mm tube connection.

Electrical Requirements

240 Volt, 50Hz outlet

Metering Pump/s

Digital Dosing Series: capacity range of 2.5 L/hr up to 48 L/hr.

Pumps include PVDF liquid end with viton seals; 4-20mA or pulse input.

Weight and Shipping Weight

27 - 40 kg

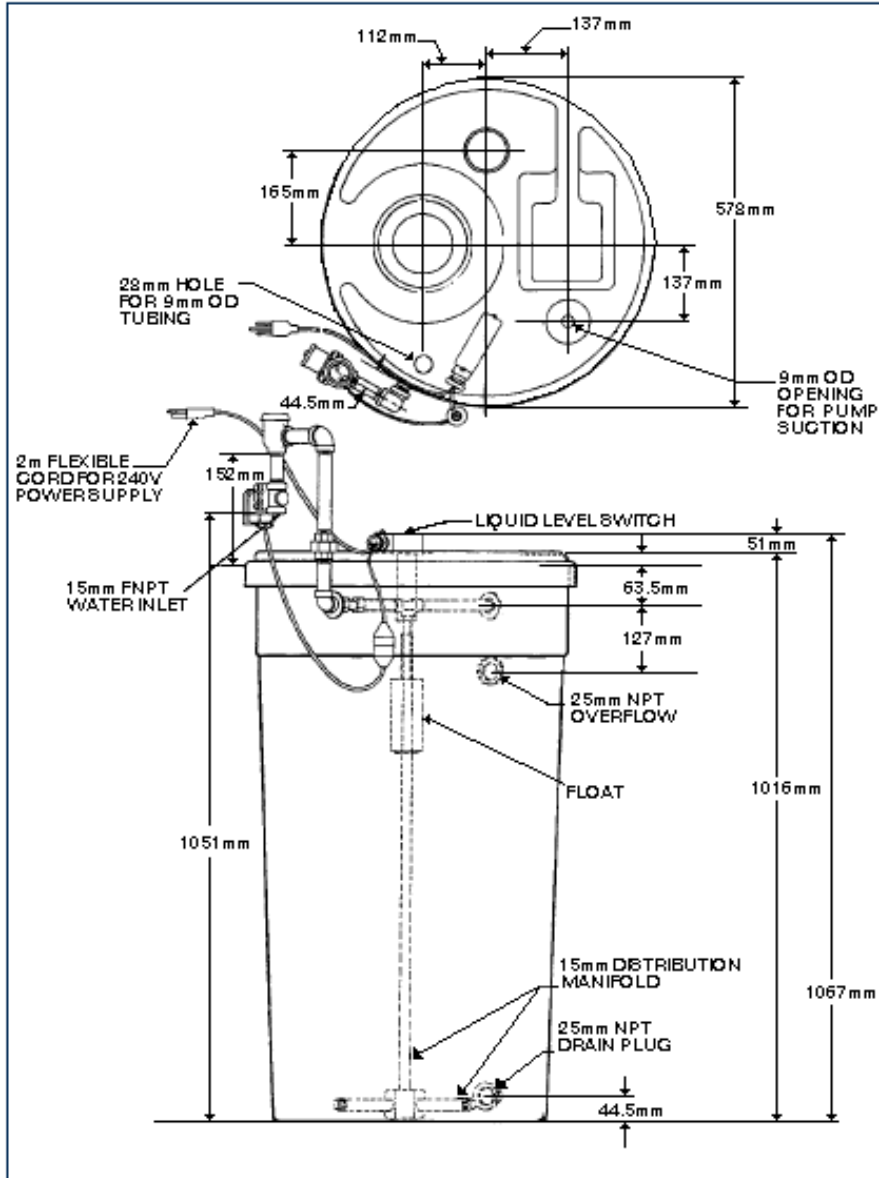
NOTE: Not for use with sodium silico-fluoride.

Prices

Basic Unit	\$
------------	-------	----

Options

- | | | |
|--|-------|----|
| • Water Meter (Inlet Line) | ..... | \$ |
| • Water Softener | ..... | \$ |
| • PE Bund with Galvanized Frame | ..... | \$ |
| • Tank Leakage Alarm | ..... | \$ |
| • Dilution Water Facility | ..... | \$ |
| • Standby Dosing Pump | ..... | \$ |
| • Duty/Standby Control of Dosing Pumps | ..... | \$ |
| • Step Rate Control of Dosing Pump | ..... | \$ |
| • Fluoride Analyser | ..... | \$ |
| • Calgon Dosing System | ..... | \$ |
| • Building | ..... | \$ |



Progressive changes in design may be made without prior announcement

WESTERN AUSTRALIA

28 Sorbonne Crescent
 Canning Vale WA 6155
Telephone: (08) 9251 5200
Fax: (08) 9455 4224
 Email: hydramet@hydramet.com.au

SOUTH AUSTRALIA

29 Deloraine Road
 Edwardstown SA 5039
Telephone: (08) 8374 7800
Fax: (08) 8374 7899
 Email: hydrasa@hydramet.com.au

VICTORIA

Unit 4, 47-51 Little Boundary Road
 Laverton North VIC 3026
Telephone: (03) 9315 3088
Fax: (03) 9318 9653
 Email: hydravic@hydramet.com.au