



SPA WATER BALANCE & SANITATION

Water balance

For personal comfort and health and for the protection of equipment the objective is to achieve water balance with the following characteristics:

- Calcium Hardness in the range of 150-300 parts per million (ppm).
- Total Alkalinity (TA) in the range of 120-150 ppm.
- A pH in the range of 7.2-7.8: 7.5 is ideal.

Sanitation

The objective is to disinfect the water by the killing of bacteria and controlling algae growth using one of several methods.

- Most methods are water-soluble sanitisers that kill bacteria by oxidation.
- The most common method is by using chlorine: an alternative is Bromine. In some circumstances Potassium Peroxymonosulphate may be used. These processes are described below.

New water balance

- Add half a cupful (about 200 gms per 1000L) of Calcium Hardener (unless in a very hard water area).
- Test the water for Total Alkalinity (TA). Add about ¼ cup (about 100 gms) of Sodium Bicarbonate or pH Buffer for every 50ppm change required.
- Test the water again and check for TA and pH.
- If, after the desired TA is reached, the pH is too high then add 1 teaspoon of pH Decrease at a time and retest. Each teaspoon of pH Decrease will reduce the pH by about 0.2.



Spa Chlorine or Dichlor (Sodium Dichloroisocyanurate 56%)

- The recommended level of “Free Chlorine” (F.A.C.) is 3-5 ppm.
- After water balancing, shock dose with 5 teaspoons of Dichlor.
- If used frequently apply a teaspoon of Dichlor per person after use.
- If used infrequently, shock dose with about 5 teaspoons of Dichlor weekly and run the pump for about two hours so that the water is filtrated.

Bromine Tablets (Bromo-3-Chloro-5, 5-Dimethylhydantoin)

- The recommended level of residual active Bromine is 4-8 ppm.
- Maintain desired water balance for at least four hours before sanitising with bromine.
- Place 2-3 tablets in the filter cavity or in a flotation device (feeder). Replace as dissolved – normally 1-2 weeks.

Potassium Peroxymonosulphate (Oxygen Shock)

- This formulation is a non-chlorine process. It is non toxic and non allergic and instantly sanitises the water but no residual sanitiser remains after application. It can be used as a “shock dose” with Chlorine or Bromine.
- After water balancing apply two teaspoons every 2-3 days when used regularly.
- The regularity of application may be reduced with infrequent use.
- After application wait 15 minutes before bathing.

Other

- Test the water at least weekly for water balance and residual sanitiser.
- Replace the water about every 6-8 weeks. The level of maintenance and frequency of use will influence the change cycle.
- Bore water or extra hard water may require alternative care.
- When adding chemicals to the spa, it is recommended that the chemicals be dissolved in a container of water and then tipped into the spa. Add water to chemicals and not the other way around.