

Water Balance

INTRODUCTION

Improper water balance and Sanitation can lead to uncomfortable swimming conditions, unsanitary water and deterioration of pool and equipment. There are two essentials every pool must have.

- **Adequate Filtration** - Pool filters and their correct use are vital to the smooth operation of swimming pool.
- **Correct Chemical Treatment**
Balance and Sanitise Water

Balanced water is water, which is neither corrosive nor scaling. Balancing pool water involves maintaining Ph, total alkalinity, and calcium hardness at proper levels. Sanitised water is water, which contains sufficient quantities of a disinfectant to kill bacteria and control algae growth. Sanitising pool water involves maintaining the free chlorine residual and stabilised concentrations at proper levels.

WATER BALANCE

PH INCREASE + OR PH DECREASE -

This is the measure of acidity or alkalinity of water. It is measured on a scale ranging from 1 - 14

A pH of 7.0 is neutral

Above pH 7.0 the water is alkaline

Blow pH 7.0 the water is acid.

PH should be maintained between 7.2 and 7.6

TOTAL ALKALINITY (PH BUFFER)

It refers to the amount of carbonates and hydroxides dissolved in pool water. PH Buffer is measure in parts per million. (P>P>M) (mg/l)

The important of the level of pH Buffer is that it acts as a buffer to change in pH. That is it reduces the reaction to factors that effect water pH. If the pH buffer level is too low the pH of the pool will be susceptible to rapid change. The ideal range can vary between 100 to 200 ppm depending on the pool construction and the type of Sanitizer used.

WATER HARDENER (CALCIUM HARDENER)

Hardness refers to the amount of Calcium and Magnesium salts in the pool water. In fact only calcium Hardness is important for pool water and is measure in parts per million (P>P>M). The desired level should be between 100 and 300 P>P>M. (mg/l)

ACHIEVING WATER BALANCE

A simple guide to water balance is the TAYLOR WATER GRAM, which gives the relationship between Total Alkalinity, pH and Calcium hardness and assumes that the T>D>S (Total dissolved solids) and temperature if the water are within the normal operating range.

Check the levels in the pool of total Alkalinity (pH Buffer) pH and water hardness. Draw an imaginary line between pH Buffer and Hardness to find the pH at which the pool water is balanced.

The pH must be in the range 7.2 - 7.6 since outside this range eye and skin irritation may occur.

Note: If your pool has sloping sides, multiply Total LITRE by 0.85. Make all measurements in metres

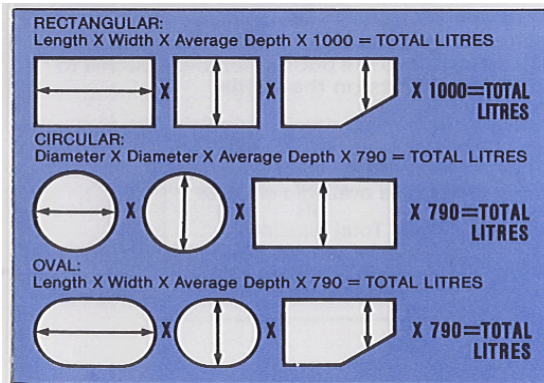
WATER BALANCE PARAMETERS

PH 7.2 to 7.8 (Ideal 7.2 to 7.6)

PH Buffer 100 to 200 p.p.m

Calcium Hardness 100 to 300 p.p.m

POOL SIZE CHART



THE TAYLOR WATERGRAM

