

Operating Instruction Pool Check



Pool safety check

Free chlorine should be between	0.2 to 1.0 mg/l
Total Chlorine be should be less than	3.0 mg/l
Combined Chlorine, less than	2.0mg/l
pH should be between	6.8 and 7.6
Phosphate levels (separate kit)	less than 0.1 mg/l
TDS (separate instrument)	less than 1 ppt (1000mg/l)
DPD2 (separate tablets, same kit)	less than 0.5mg/l (mono & dichloramine)

Your safety

Testing of your swimming pool or spa water is very important for your safety and comfort. Chlorine needs to be used as a means of disinfecting the water and preventing the spread of disease. There are a number of products now available that are chlorine free, however none of them offer the same protection as chlorine. For example chlorine will kill all known bacteria and viruses in the pool water in 30 seconds, but copper based disinfectants and peroxides can take up to 2 hours and are ineffective against many pathogenic organisms. Considering that the water is probably recycled every 4 to 8 hours in private pools, it is important that the water has a residual of chlorine to prevent the spread of disease between bathers in the pool, especially if the pool is used by children or by more than one family.

Chlorine has received complaints in recent years because of the nasty smell, sore eyes and skin irritation. However the problems with chlorine are caused by poor water treatment systems and maintenance. A chlorinated pool does not have a smell of chlorine, chlorine does not cause sore eyes or skin irritation. These problems are caused by chlorine reactions products such as trichloramine. The solution to the problem is simple, basic guidelines are presented below;

Your pool operating guidelines

1. Recycle all of the water in the pool every 5 hours, never turn the pumps off or slow the system down at night
2. Water flowrate through the sand filters should not exceed 15m/hr. The slower the water flow the better the performance of the filter. By way of example if your filter is 30 inches in diameter, this equates 0.76 square meters. The water flow for this filter should be less than 11.4 cubm/hr.
3. The filter should be back-washed at a flowrate 3 times the run phase flow. For a 30 inch (0.76m diam) filter this is a water flow of 33 cubm/hr, for a period of 2 minutes at least once a week.
4. Sand should not be used in the filter, change the filter media to AFM. Details from www.AFM.eu use grade 3 AFM on the base of the filter and grade 1 on top. The proportion is 20% grade 3 and 80% grade 1. A 30 inch filter (0.76m diam) will take 2 x 25 kg bags of grade 3 and 4 x 25kg bags of grade 1
5. Add NoPhos to the pool water. Ideally you should add 1 g of NoPhos per week for every cubic metre of water in your pool. For example if your pool has a volume of 60 cubic metres, then you will need 60g per week of NoPhos. The NoPhos may be added to the water once a week, or added continuously to the water with a peristaltic dosing pump.

Useful points

1. Chlorine is affected by strong sun-light so try and keep the pool in the shade. Cyanuric acid may be added to the water to stabilise the chlorine when pools are exposed to strong sunlight.
2. Avoid the use of UVc disinfection and Ozonation systems, the systems can actually generate more chlorine reaction products.
3. NoPhos removes phosphate from the water, if you have zero phosphate then no algae or bacteria will be able to grow in the water.
4. Do not allow any cleaning chemicals containing surfactants to enter the water (very important)
5. Always shower before entering the water (very important)
6. AFM and NoPhos can be used to improve the performance of any pool, but best results will be achieved by following our guidelines

What to do when things go wrong

The answer to most problems is to dilute the water with clean freshwater, this applies to too high a level of total chlorine or TDS. If the free chlorine level is too high, it will come down naturally if you give the pool a few days to rest. If the level of free chlorine is still too high and you do not want to dump water, then we can provide a product to reduce the chlorine concentration, contact your Dryden Aqua authorized dealer. If the phosphate level is over 0.1mg/l, then increase to dose rate of NoPhos.

Water Analysis Procedure

The first step in looking after your swimming pool is to know what is going on with the water chemistry. The Dryden Aqua Pool Check system gives you an easy way to test the water.

Maintenance and storage

The tester and lid should be completely clean, ideally you should rinse with clean freshwater or distilled water after use. Do not use any cleaning chemicals containing chlorine or surfactants, rinse with clean water 3 times and drip dry before use. Store the equipment and reagents in a cool dry place.

Step 1

Rinse the tester 3 times in the swimming pool water, on the 4th occasion hold the tester about 20 cm below the surface of the water and then invert to fill the unit with the water.

Remove the tester from the water and sit it on a table, or flat surface. Try and keep it out of direct sunlight.



Step 2

Press the tablet strip with the tablets directly into the opening of the test chamber. The pH table goes into the 2nd clear chamber from the left. The DPD1 tablets go into the 4th clear chamber from the left. The tablet falls into the test chamber, it is important that you do not touch the tablet, as this would spoil the test and give you the wrong reading. DPD1 table for free chlorine and Phenol Red for pH



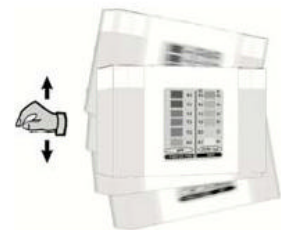
Step 3

Close the tester using the lid



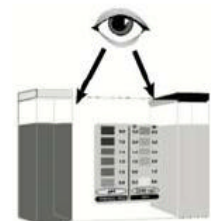
Step 4

Move the tester back and forth until the tablet dissolves



Step 5

After 2 minutes compare the colours of the test fluid with the scale on the reference chart. Read off the free chlorine level and pH, and record the readings in a diary.



Note 1. It is important to keep the test out of direct sunlight or strong sunlight as this will bleach the reaction and give a low reading. When trying to match the colours, use North facing sunlight. Under no circumstances look directly at the sun as this may damage your eyes.

Step 6

Remove the lid, and add one DPD3 tablet to the 4th clear chamber in which you added the DPD1 for free chlorine. The colour will intensify even further. After 2 minutes read off the colour for the reference chart. The reading with the DPD3 table is the total chlorine level. If you subtract the Free Chlorine level from the Total Chlorine level this gives you the Combined Chlorine level. Ideally you want the combined chlorine level to be as low as possible. Please refer to Note 1 in step 5.

Step 7

For the technically minded, DPD2 tablets can be purchased separately and supplied with the kit. DPD3 tablets react with all chlorine matter including organochloramines so they tend to give an over estimate of the true reading. For a more accurate measurement use DPD2 on a sample of water, the result gives the mono and dichloramine level. Multiply this figure by 1.4 to give Combined chlorine (total chloramine level). The value should be less than 1.0mg/l.