



## FACT SHEET 22

### CHEMICAL CONTROLLERS

Automatic controllers can now monitor and adjust pool chemical balance with a high degree of accuracy.

Automatic chemical controllers are designed to take the potential for human error out of the chemical management of a pool and spa.

They automatically measure and accurately control the set levels of the two chemical components of pool and spa water that require constant attention: the sanitiser (chlorine or bromine) and pH balance.

The manufacturers claim that they reduce waterborne infections, and that constant small doses supplied by the system mean no chemical smell or taste. Backwash water can then be used for watering your garden or lawn.

#### **AUTOMATIC CONTROL**

Conditions in and outside the pool or spa are always changing and that affects the demand for sanitiser and pH balance. On hot windy days when the pool or spa is full of people, the demand for sanitiser is far greater than on a cool overcast day when in use by, say, only one or two people.

Chemical controllers are truly automatic. They are programmed to consistently monitor and maintain chlorine and pH levels at all times while the system is running.

#### **SET POINTS**

Most modern controllers are highly user friendly, with the set points usually adjusted by pressing a touch pad button on a clearly marked faceplate. These set points are the levels you select to achieve the correct chlorine and pH level in your pool or spa. Once the levels are set, the unit will automatically maintain the levels set.

#### **PROBES AND SENSORS**

Some controllers use two sensors, one for chlorine (ORP) measurement and the other for pH.

Others combine both into one probe containing both the ORP and pH sensor. In both cases the probes sense sanitiser levels and pH and transmit these signals to the controller.

#### **DOSING SYSTEMS**

Chlorine and acid, which are readily available from pool shops, are injected into the water either by dosing pumps or solenoid valves.

#### **DOSING PUMPS**

Generally, these are peristaltic pumps that employ a squeeze tube system (the tube will eventually need to be replaced). With higher pressures there can be issues with the injection-point back pressure. Diaphragm pumps are more expensive, but can inject into higher-pressure applications and are claimed to be more reliable, especially with automatic bleed valves fitted.

#### **SOLENOID VALVES**

These are very reliable and low maintenance as they have only two moving parts.

They require suction to operate. Installation is before the filter, on the suction side of the circulating pump, or after by using a venture system.

#### **MAINTENANCE**

Modern automatic chemical controllers have low maintenance requirements.

If an adjustment or calibration of the unit is required, there are easy-to-follow prompts on the controller screen. In domestic situations, probes do not generally require regular cleaning.