HAYWARD®

GOLDLINE®

Sense and Dispense®

CHEMISTRY AUTOMATION

AUTOMATION

Spend more time enjoying your pool and less time working on it.

Chemistry Automation

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Properly sanitized and balanced water is important for swimmer comfort and safety. It dramatically extends the life of the pool, materials and equipment. A typical misconception is that clear water is good water. While it's true that good water will always be clear, clear water isn't always good. Striking the right chemical balance when just about anything can affect the water can be a daunting task. Wind, rain, sun and swimmers themselves all affect water quality and balance.

WHY IS WATER CHEMISTRY IMPORTANT?

Continuous filtration, cleaning and sanitization are not enough – balancing pH (potential hydrogen) is vital. Chlorination should keep germs and algae at bay but when pH is unbalanced, it can't do its job. Let the pH drop too low and the water becomes acidic and attacks anything it touches. When pH drifts up, the water becomes alkaline and creates an environment where mineral deposits (scale) can form. Furthermore, when pH is high, chlorine becomes less effective at its primary task – killing bacteria and algae.

ORP (oxidation reduction potential) measures the oxidizing capacity in water. It is a proven measurement and maintenance technology mandated for commercial pool sanitization. Unlike most home-test processes, ORP is not fooled by the effects of pH, Total Dissolved Solids (TDS) and other factors. Most home-test kits and strips only report free chlorine and other less effective forms of chlorine. Only ORP can deliver further detailed analysis of the more important free chlorine. It differentiates free chlorine's components HOCl (hypochlorous acid) and OCl^- (hypochlorite ion). OCl^- is a slow-acting sanitizer, and HOCl is up to 300 times more effective. ORP targets HOCl, a more fine-tuned measurement of the effectiveness of chlorine and water quality.

Studies have reported on the relationship between ORP and chlorine's activity with germs and bacteria. They've concluded that ORP significantly predicts water bacterial quality better than other methods. As a result, in most states, the highly regulated commercial pool industry requires ORP testing.

WHAT IS BALANCED WATER?

Water balance is composed of several key factors – pH, total alkalinity, calcium hardness and TDS. All of these factors are important, but none more so than pH. pH is a measurement of the concentration of hydrogen ions in water. It is measured using a logarithmic scale from 0 to 14, with pH 7 being neutral.

For pool water to be in balance, all factors must be in their proper range. That range may vary slightly depending on the finish of the pool and the average temperature of the pool water. The one value that never changes is pH. It must be maintained between 7.2 and 7.8 for a pool to be considered "balanced."

Water Quality Parameter	Ideal Levels
pH	7.2 to 7.8
Free Chlorine	1.0 to 3.0 ppm
Total Alkalinity	80 to 120 ppm
Salt	2,700 to 3,400 ppm
Stabilizer	60 to 80 ppm
Calcium Hardness	200 to 400 ppm
Total Dissolved Solids	Less than 6,000 ppm

HOW TO ACHIEVE BALANCED WATER

Achieving optimal water quality can be time consuming and frustrating. Most pool owners test their water daily and add the chemicals required to get and keep the water clean and in balance. Get it wrong, and you could swing the balance the other way, increasing your maintenance time and causing unnecessary chemical costs.

WHAT IF?

What if your pool could self adjust, automatically test its own chemistry, and balance and sanitize your water? What if it always knew what the water needed and adjusted continuously, eliminating unhealthy highs and lows? Ensuring brilliant, balanced water all the time, automatically. You can get your water and maintenance time in balance with Sense and Dispense®.

SENSE AND DISPENSE, CHEMISTRY AUTOMATION.

This professional-grade ORP and pH Sense and Dispense technology was previously only available for commercial pools. Hayward now offers an economical approach, with the same level of accuracy, for residential pools. Unlike others on the market, Sense and Dispense uses a proportional feed algorithm that continuously tests the water, sampling pH and sanitizer activity, and adjusting chemical feeding on a basis proportional to the demand. Other approaches don't sample the water often enough and release larger doses, which is far less effective and can create highs and lows similar to a manual approach.

Adding Sense and Dispense to your Pro Logic®*, Aqua Plus® or Aqua Rite® Pro is a fully integrated solution – not an additional box that resides on your pool pad – eliminating additional installation costs. It also provides a single source for status reporting and control.

Sense and Dispense consists of two kits. The first kit senses pH and ORP levels and dispenses a self-renewing supply of pure chlorine generated from salt. pH dispense can be achieved using the second kit, which includes a manifold that connects to a CO_2 tank. CO_2 is highly effective in lowering pH. With salt-chlorinated pools, pH tends to drift up. CO_2 reduces pH to recommended levels by forming H_2CO_3 (carbonic acid), a safe acid that does not require handling. As an alternative to CO_2, Sense and Dispense also supports the Stenner Pump acid feed system - a proven solution and approach to chemical delivery. It's robust, safe and reliable.

**Requires optional salt-chlorination kit*

COMMERCIAL-GRADE SENSORS

Unlike laboratory-rated sensors, commercial-grade sensors are rugged and rated for large, high-demand commercial pools and outdoor conditions. Sense and Dispense® uses only commercial-grade sensors.

Sense and Dispense is optional for the following products:

PRO LOGIC® AUTOMATION

All the control you need to create the ultimate pool and spa experience.

Manage all pool and spa functions, as well as other backyard features, effortlessly. This flexible and scalable professional-grade series is the only Total Pool Management® line in the industry to offer integrated water chemistry automation, tie-in to home automation, salt chlorination and control of up to 16 devices. A variety of models lets you choose the level of control that best fits your environment and add options that allow you to work less and play more. You can control your pool from the unit or from one or more of our optional remote controllers – indoors, poolside or in the water with our waterproof Aqua Pod™.

AQUA PLUS® — AUTOMATION

All-in-one automation and salt chlorination.

Aqua Plus is one easy-to-install, easy-to-operate package that does everything for you. It automatically chlorinates your water using salt and controls pH and sanitization. It controls custom-programmed schedules for water temperature, filtration, lighting, spa jets, landscape lighting, water features, sprinklers and more. Plus, it gives you fingertip control of all those things. You get a choice of optional remote controllers.

AQUA RITE® PRO SALT CHLORINATION

It's amazing what a little salt can do to enhance the pool experience.

Aqua Rite Pro is the simple, safe and affordable approach to sanitize pools and spas. It turns ordinary salt into a regenerating supply of fresh, pure chlorine, automatically. Adding Sense and Dispense makes owning a pool even easier by automating water chemistry for pool and spa water that's clean, clear and luxuriously soft.

Sense and Dispense, Total Pool Chemistry®	
AQL-CHEM	Chemistry Automation ORP and pH Sense, ORP Dispense
AQL-CHEM2	Chemistry Automation pH Dispense Solenoid Valve for CO2, 120V
AQL-CHEM2-240	Chemistry Automation pH Dispense Solenoid Valve for CO2, 240V
AQL-CHEM3-120	Chemistry Automation pH Dispense for Acid Feed, 120V
AQL-CHEM3-240	Chemistry Automation pH Dispense for Acid Feed, 240V

To take a closer look at Hayward Automation, go to
www.haywardnet.com

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