

## Hayward® HeatPro® and SUMHEAT Fi Variable Speed Heat Pumps



Now available in two capacities, the **Hayward HeatPro® VS** heat pump ships from the US and is the first AHRI-certified inverter-driven variable-speed heat and cool pump in North America designed to run smoother and last longer.

Variable-speed technology allows it to adapt its power to the climatic constraints and energy requirements of the pool with up to 30% energy saving.



The updated intuitive control panel provides a seamless user experience via touchscreen digital display.

A vertical discharge fan allows for easy installation and a titanium heat exchanger operates powerfully and efficiently.

The defrost function manages evaporator coil frosting for low ambient temperature operation.

A similar range of energy saving inverter type heat pumps ships from Europe including the **SUMHEAT Fi** heat pump available up to 30kW which has the combination of an inverter CPS Mitsubishi / Panasonic compressor and a DC inverter fan.



Scan or click to learn more about the range of inverter heat pumps.

The **SUMHEAT Fi** heat pump range uses fluid R32 that is easy to use and recycle and has no impact on the ozone layer.



**SUMHEAT Fi**  
Heat Pump

The **SUMHEAT Fi** includes a WIFI module that can be used with a smartphone, tablet or PC to view the main information and change the temperature, operating times and operating mode parameters in real time.

**WIFI Module**



## AquaVac® 250Li

- Cordless Robotic Cleaner

The **AquaVac® 250 Li** is the first of its kind in the Hayward® robotic cleaner family that provides superior performance without the hassle of tangled cords or getting stuck.

After full charge the battery lasts up to two hours -longer than most other cordless cleaners.



A patented drive system provides complete coverage for above-ground pools and small flat-bottomed in-ground pools (with a slope of less than 15° and less than 5' deep) and works on all finishes.



Scan the QR code to watch the AquaVac 250Li in action

# Chlorination and Chloramines

TECH NOTE

## Paramount ClearO<sub>3</sub>

– Ozonation System

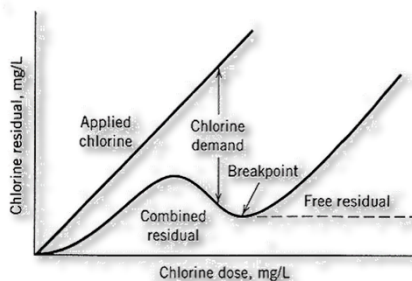
Any type of chlorine that is added to water will result in the formation of hypochlorous acid (HOCl) and hypochlorite ions (OCl<sup>-</sup>), which are the main disinfecting compounds in chlorinated water. Hypochlorous acid is the most effective.

### Chlorine + H<sub>2</sub>O -> HOCl + OCl<sup>-</sup>

The amount of each compound present in the water is dependent on the pH level of the water prior to addition of chlorine. At lower pH levels, the hypochlorous acid will dominate. The combination of hypochlorous acid and hypochlorite ions makes up what is called 'free chlorine.' Free chlorine which can be measured by a DPD1 test, has a high oxidation potential and is a more effective disinfectant.

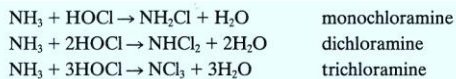
Hypochlorous acid (HOCl) reacts with ammonia (NH<sub>3</sub>), found in organic matter, to produce combined chlorine known as CHLORAMINES. Hypochlorous acid reacts with ammonia at its most rapid rate at a pH level around 8.3.

Dichloramine has the strongest odor and Trichloramine is the least stable.

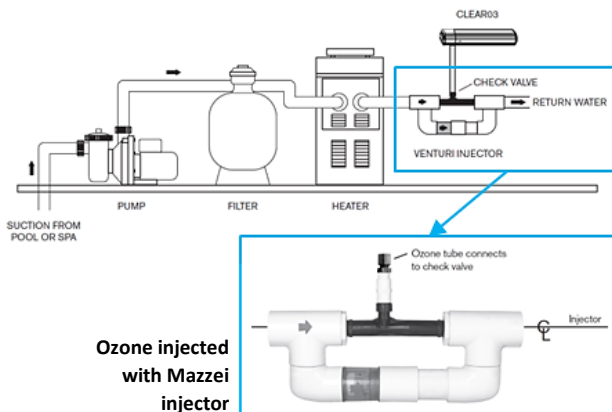


Breakpoint chlorination is the technique used to remove combined chlorine by adding free available chlorine. To reach breakpoint, sufficient chlorine must be added to the pool to raise the free available chlorine level to 10-15 times the amount of combined chlorine. This is known as shocking or super-chlorination.

Secondary sanitizer systems like ozone help water quality immensely. Ozone is a powerful oxidizer that can destroy monochloramine and dichloramine on contact. Ozone also destroys precursors to chloramines, like urea, other nitrogen compounds, and non-living organics.



Chloramines are not as effective at disinfecting water as free chlorine. Chloramines last a long time in the water and the "chlorine smell" in an indoor pool room is the smell of chloramine.



The Paramount ClearO<sub>3</sub> water purifying system can be added to any new or existing pool. The patented ClearO<sub>3</sub> consists of an extruded aluminum main body with fiber-filled ppo resin end caps engineered to survive in the pool equipment environment. The cylindrical chamber is optimized for maximum ozone generation and sealed to minimize ozone leakage.

The ClearO<sub>3</sub> water purifying system creates ozone using a proprietary UV bulb specially designed to excite ozone molecules from the oxygen in the air. Ozone is injected into the water through a Mazzei injector. A proprietary flow meter establishes the ideal flow of air for efficient ozone production.

Radiant ribs dissipate heat to maintain ozone output at peak operating temperatures and the side panel is removable, making maintenance and bulb replacement easy.

A single unit works effectively on pools up to 55,000 gallons.

» For more information on the products featured in this NEWPLASH, email [img@hayward.com](mailto:img@hayward.com) or fax +1.909.444.0327 » [hayward.com](http://hayward.com)

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