

Great Waves

Breaking Waves Around The World

www.greatwavesinc.com

System 2020 Wave Generation Equipment In Depth



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Great Waves Patent Pending System 2020

Enjoy faster waves and have a lot more fun at the same time...at the lowest operating cost in the industry! Our new **System 2020** costs less to purchase and operate and is easier to install and maintain than competitive systems. It even offers a reduction in energy consumption of up to *30%* over our **System 2000**. Now, you have a choice!

The **System 2020** concept is years ahead of any wave generation equipment in the world. **System 2020** is fast, reliable, easy to maintain, and efficient, while continuing with *Great Waves* tradition of extremely simple, straight forward design.

System 2020 takes the basics of our **System 2000** and carries it to the next level in terms of efficiency. It requires only one **high efficiency fan** with a unique direct injection design that generates, on average, a 39" (1M) wave. All this, while maintaining safety in a 4'6" (1.4M) depth in your pool.



Systems are available for small and large pools, with smaller or larger waves. A dual wave **FunWave/Small Parallel Wave** system is available as an option. We have even successfully installed the new **System 2020** in a combination **Wave Pool/Lazy River!** Imagine the possibilities for the smaller water park! Because of the new **System 2020** design, no machine room is visible. Thus, you have a smooth, unobstructed view around the entire pool. Machine room size is minimized, reducing construction costs. As with our other systems, **System 2020** is self-cooling due to its method of bringing in cooler outside air. Sufficient ventilation is all that is required.

WAVE FAN

The **wave fan housing** is constructed from high-grade 304 stainless steel. A single outlet directly injects air into the caissons, maximizing the energy output from the motor. Your patrons enjoy a rapid, pleasant wave, while you save by using less energy.

The fan incorporates our **steel airfoil impeller**, the best option on the market.

Anchors, hardware, and mounting plates throughout the entire System 2020 are manufactured from high quality stainless steel for long life.

The entire assembly, including the **inlet cone** and **airfoil impeller**, are powder coated for durability and a nice appearance.



MOTOR

Great Waves **motors** and **airfoil impellers** are dynamically balanced for top performance with no vibration.

We use heavy-duty motors from major manufacturers, with heavy gauge steel frames. These motors have a service factor typically of 1.15-1.25, ensuring high performance and long life. Greased ball bearings and copper windings are standard in our motors.

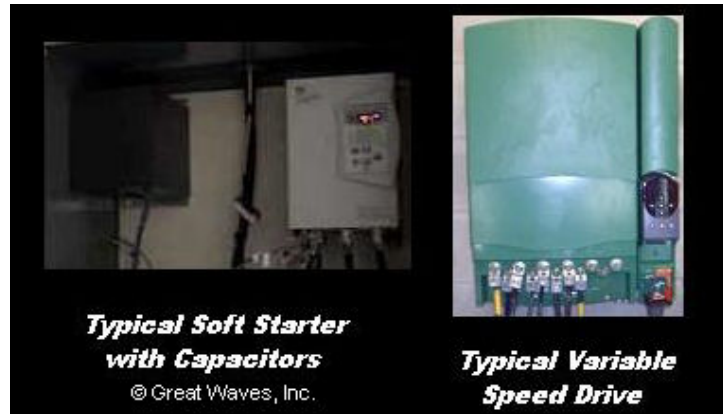
Motor bases are manufactured from strong 1/4" plate steel, and are powder coated for durability and a nice appearance.

STARTER AND CAPACITORS

All systems, except for those equipped with variable speed drives, are equipped with **power factor correction capacitors** to reduce power consumption at startup.

Larger systems are supplied with both a **solid-state soft starter** and **power factor correction capacitors**, reducing power consumption by an average of 7-10% over conventional starters.

Variable speed solid state drives are also available for energy savings and multiple wave heights.



*Typical Soft Starter
with Capacitors*

© Great Waves, Inc.

*Typical Variable
Speed Drive*



CPU

WAVE VALVES

Great Waves Caisson Pressurization Unit (CPU), manufactured from 304 stainless steel, is the most advanced valve for producing waves in the world. It has the ability to allow air in and out of the caisson in less than a second.

The **Atmospheric Relief Unit (ARU)**, also manufactured from 304 stainless steel, allows us to release air from the caissons faster thus helping shape the waves.

Great Waves also offers a **Multiple Pattern Unit with ARU (MPU)** for dual-pattern systems. These valves are fabricated from the same high quality 304 stainless steel for long life and superior performance.

To provide smooth movement throughout the valve's life, they are driven by flow controlled high quality stainless steel **pneumatic cylinders**.

All units are also powder coated for durability and a nice appearance.



ARU

CONTROL PANEL

Using the **Programmable Control Panel**, you can easily adjust the timing of the on/off cycles of your pool. This unit is the ultimate in simplicity and security.

The controller provides the low voltage 24V signal for the **stop stations**, and each has a **key start switch** and a **stop button** on the front. Also included is a master disconnect switch that can be locked with a padlock in the off position to prevent unauthorized use of the equipment.

This unit is custom designed, manufactured, and backed by a strong leader in the electronic controls industry exclusively for *Great Waves*, and are programmed jointly by the manufacturer and *Great Waves*.



Programmable Control Panel



AIR COMPRESSOR

Solid Forged Iron Compressors with efficient motors provide air for the pneumatics throughout the system. **Automatic drain systems** and **refrigerated air dryers**, now standard, help reduce maintenance on the system.

START/STOP STATIONS

Chair Mounted **Stop Stations** are mounted on every lifeguard chair.

Our patented **REGARD Remote Guard Stop Units** are provided to be worn by lifeguards to stop the system from *anywhere the pool area*. This station, located at your head lifeguard's chair, also contains a **remote key start switch**, which allows your head lifeguard to control restart of the system without having to leave the pool area. Safety is maintained around your pool, as well as security in your machine room.



REGARD Remote Stop



Chair Mounted Stations

POOL DESIGN AND CAD DRAWINGS

Great Waves will provide you with a complete set of drawings of your pool design. These can be used to construct your pool, or as a plan to be developed by your facility engineers and architects to meet local codes and your aesthetic requirements. As your engineers, architects, and builders design and construct your facility, we will work with them to make sure the pool is designed properly to provide optimum wave generation. We also provide drawings of the machine room and caisson layout.

INSTALLATION AND COMMISSIONING

We will send technicians to your facility to supervise the installation of your equipment. They will remain through the installation and start-up of your wave generation equipment, and will fine-tune your equipment until you are satisfied with the waves being generated.

WARRANTY AND SERVICE

Our standard TWO-YEAR WARRANTY will cover your equipment.

A **spare parts box** will be given to you. This includes small items needed to maintain your system in the event there should be any complications or routine maintenance needs. Your personnel will be taught how to change out any parts should they have to. These procedures are also described in your **owner's manual**. We custom manufacture our equipment to the highest specifications, using 'off the shelf' components wherever possible. These components, such as **cylinders** and **air valves**, are available from industrial suppliers. We also maintain an inventory of spare parts in our warehouse should you have difficulties obtaining locally or desire to purchase from us.

We provide **checklists** for **daily, weekly, monthly, and annual maintenance**. We recommend placing copies of these checklists on a clipboard in the machine room to assist your maintenance personnel in performing their duties. Space is provided next to each item for your personnel to 'sign off' when completed. These can be then be placed in your files with other required checklists for chlorination levels, etc., to provide a written record for management and inspectors if desired or required by regulation.

MADE IN THE U.S.A.

We are proud to say that we manufacture our equipment in The United States of America.

All components are selected for quality from American and International manufacturers.



System 2020

Simply put, the most efficient wave generation system in the world.