

COMMERCIAL

Natural Water Treatment System

**PZ2-4 Skid Mount System - Commercial Pools
Ozone Generator Systems**

*INSTALLATION GUIDE and
OPERATION MANUAL*



T·O₃ NATURAL TECHNOLOGY

Reduces Chemical Usage,
Improves Sanitation
Produces Crystal Clear Water

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PZ2-4 Skid Mount Systems

IMPORTANT SAFETY INSTRUCTIONS

Read and Follow All Safety Instructions

1. Read and be familiar with this manual before installing, operating, or performing maintenance on the PZ2-4 Skid Mount System.
2. Voltage must be determined before unit is installed.
3. Wear safety glasses when drilling and/or tapping holes for installation of system.
4. PZ2-4 Skid Mount System should be securely bolted or fastened down to a flat level surface.

WARNING: Short term inhalation of high concentrations of ozone and long term inhalation of low concentrations of ozone can cause serious harmful physiological effects. Do not inhale ozone gas produced by this device.



WARNING: Disconnect all power to pool equipment prior to installation, maintenance, or removal of the PZ2-4 skid mount system.



WARNING: Do not permit children to operate this product



WARNING: To avoid risk of electric shock, fire, or injury, service should only be performed by a qualified pool service professional.



WARNING: Installation must be performed in accordance with the National Electric Code and any applicable local or state installation codes.



WARNING: When mixing acid with water, ALWAYS ADD ACID TO WATER, NEVER WATER TO ACID.

NOTE: The instructions in this document provide general installation guides. Consult your dealer for specific installation instructions. Additional information is available at www.prozoneint.com. Check system for any visible shipping damage. If damage has occurred, contact the delivery company and your dealer immediately. Before beginning installation, please turn to the Installation Kit Inventory Section and verify that all listed parts are on hand.

SAVE THESE INSTRUCTIONS

INTRODUCTION TO OZONE

Ozone (O₃) is generated by irradiating air or oxygen (O₂) with ultraviolet radiation. Ozone is a molecule of oxygen that is formed when three atoms of oxygen are bound together instead of the normal two atoms. The extra oxygen atom makes ozone the most powerful oxidizer and sanitizer readily available.

Since ozone is unstable and quickly decomposes to normal oxygen under normal conditions, it cannot be shipped or stored. Therefore, it must be manufactured on site for immediate use. In normal air it lasts about an hour. In normal pool water it lasts just long enough to purify the water - less than 1 second.

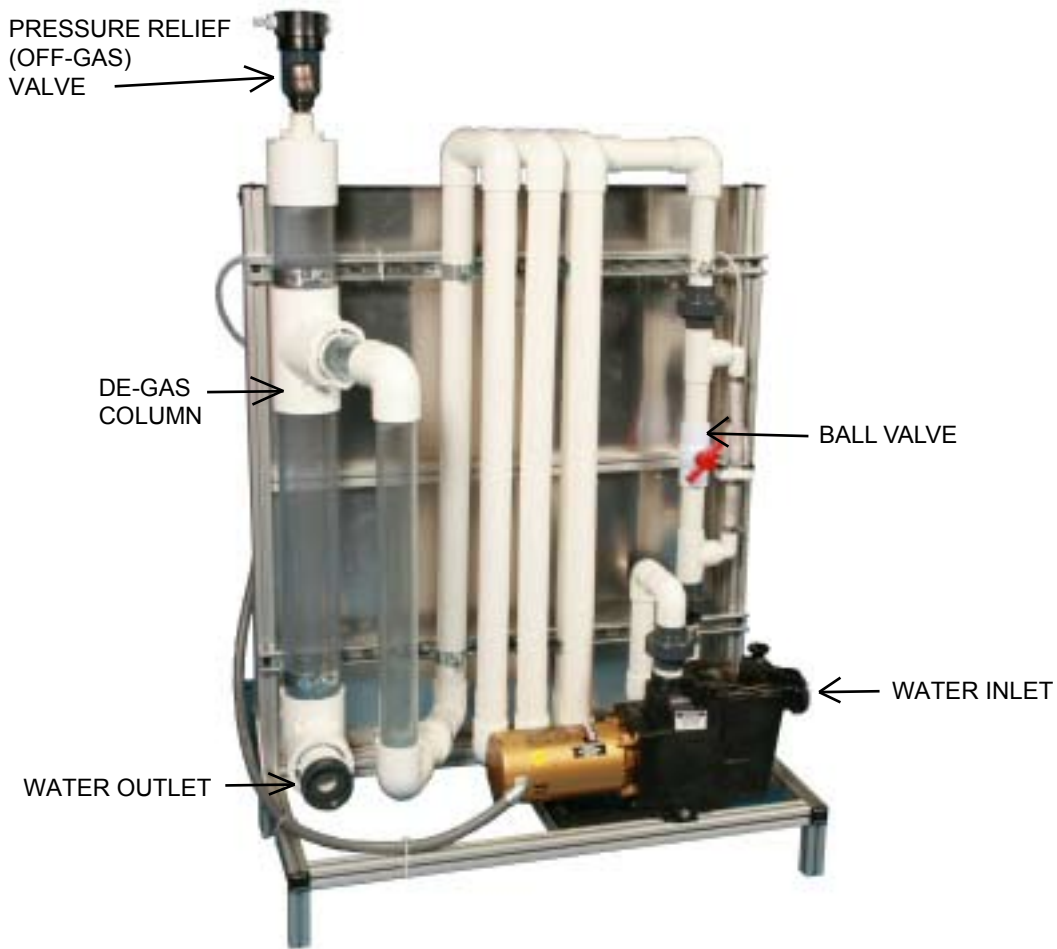
Although ozone is mainly thought of as a sanitizer, it acts primarily as an oxidizer in the pool environment. In a typical pool run on chlorine only, up to 90 percent of the chlorine may be used up in reactions unrelated to disinfection. The byproducts of these reactions are combined chlorines. Combined chlorines are the cause of eye irritation, odor, and the other unpleasant side effects of chlorination. When ozone is used, it oxidizes a large portion of the contaminants (usually referred to as bather load) which result in the formation of combined chlorines. The result is that more chlorine is available for disinfection and less chlorine is required to maintain the pool. Ozone also provides some disinfection, but an ozone residual cannot be established, so the use of chlorine or bromine is always recommended.

PREPARING FOR INSTALLATION

1. The Prozone Skid Mount System is normally shipped with the ozone side, and plumbing side, bolted together in a back-to-back configuration. The two halves may be unbolted and placed side-by-side if desired, requiring less floor space depth but doubling floor space width.
2. A flat level surface is required for placement of the PZ2-4 Skid Mount System. Minimum of 48" by 40" for back-to-back placement or 90" by 20" for side-by-side placement.
3. 2" PVC plumbing, (or adapters if your plumbing is other than 2"), is required for Inlet and Outlet connections.
4. Check electrical system: 220/240VAC double switched per N.E.C. standards.
5. Balance the pH.
6. Shock the pool with a non-lithium based material. The use of calcium hypochlorite or sodium hypochlorite is recommended.

The Table below summarizes the levels that are recommended by The Association of Pool and Spa Professionals (APSP). It is important to maintain these levels in order to prevent corrosion or scaling and to ensure maximum enjoyment of the pool. Test your water periodically. Take a water sample in to be professionally tested by a Pool and Spa Professional at least once a month. See our web site for more information on Basic Pool Water Chemistry.

pH	7.2 – 7.6
Alkalinity	80 – 120 ppm
TDS	< 1,000
Cyanuric Acid	30 – 70 ppm
Free Chlorine	0.5 – 1.5 ppm
Calcium Hardness	60 – 400 ppm
Metals	0 ppm
Nitrates / Phosphates	< 30 ppm



INSTALLATION

1. Place the PZ2-4 System on a flat level surface. System should be tied down using an appropriate tie-down system and may be placed back-to-back or side-by-side.
2. The PZ2-4 System is to be installed as a bypass system with the entrance of the bypass being after the main pool circulation pump but before the filter, and the exit of the bypass being after the filter/heater.
3. Install the pressure relief (off-gas) valve to the top of the de-gas column
4. Connect a 3/8" hose to the valve and run the hose to a vented location for the ozone off-gas.
5. Locate section of plumbing in which you choose to install the ENTRANCE leg of the bypass. Location should be in any accessible area after the pool circulation pump, but before the filter.
6. Connect the INLET side of the PZ2-4 boost pump to this location.
7. Locate section of plumbing in which you choose to install the EXIT leg of the bypass. Location should be in any accessible area after the filter, and heater (if equipped).
8. Connect the OULET, (coming out of the de-gas column), side of the bypass to this location.
9. Electrical Installation: Prozone PZ2-4 System is a 220/240VAC system. Do not connect system to any other voltage! Use N.E.C. or local code grounding installation procedures for swimming pool equipment.

PZ2-4 Skid Mount Systems

OPERATION

1. Turn on PZ2-4 Boost Pump, (top breaker), and allow water to fill the PZ2-4 plumbing and begin to flow completely through the system.
2. Close the Ball Valve, in between the Venturi Injector(s), by rotating it clockwise fully and allow the system fo run for a minute or two to stabilize.
3. Turn on PZ2-4 Ozone Generator, (bottom breaker).
4. Verify compressor and compressor fan are both running.
5. Open Ball Valve half-way by rotating it counter-clockwise until it points to approximately the one O'clock position.

TROUBLESHOOTING GUIDE

PROBLEM	PROBABLE CAUSE	REMEDY
No light from Prozone unit(s)	Loose wiring	Check all wiring connections
	No power to unit	Check voltage compatibility Check power source
	Defective lamp or other internal component	Return unit to dealer
No bubbles from injector or no evidence of ozone in pool	Excessive back pressure	Check for kinks or clogs in hose or plumbing
	Leak in fitting	Replace fitting
	Filter not working	Check filter
Water in Ozone Generator	Check Valve failure	Verify Check Valve is operating properly
Cloudy water; foamy water; scum	Water chemistry out of balance	Check readings and balance accordingly
	Total Dissolved Solids (TDS) level too high	Refer to dealer for proper water testing
	Filter not working	Clean or replace filter

NOTE: Cloudy water may occur when the ozone generator is started. Filter and backwash as necessary.