

- ✓ Automatic pressure and temperature compensation allows direct entry of ozone dosage in mg/L in manual mode
- ✓ Maintains dissolved ozone concentration setpoint in auto mode
- ✓ Automatic calculation of ozone transfer efficiency and applied dosage
- ✓ Integrated oxygen generation system
- ✓ Ambient ozone concentration transmitter for ozone leak detection and automatic shutdown
- ✓ Feed pump with automatic flow control
- ✓ Chemical feed systems configurable for flow-pacing, closed-loop PID, or trim control
- ✓ Chemical feed pump configurable as a composite sampler
- ✓ Twenty-five equally-spaced sampling ports in contactor for decay analysis
- ✓ Influent piping weir eliminates need for feed tank
- ✓ All equipment integrated onto one skid for plug-and-play operation
- ✓ Designed for automatic un-manned operation
- ✓ Monitored and controlled remotely via wireless cellular connection
- ✓ Data logging to formatted text file for importing into spreadsheet and charting applications
- ✓ Historical and real-time trending visualization tool
- ✓ Alarm notification via email or text messaging
- ✓ IoT network of sensors provides exceptional diagnostic information



All information presented in this data sheet is for configuration code Z11-1PC-1GC-2OS-1TM-2DO-0PH-2CF. See ordering section for other configurations.

Specifications

Flow Rate	2...10 gpm	7.6...37.9 L/min
Contactator Volume	130 gallon	492 L
Maximum Ozone Delivery	80 (mg/L)(gpm)	303 (mg/L)(L/min)
Ozone Concentration	8...13 %W	117...194 g/Nm ³
Chemical Feed Systems	2	2
Chemical Feed Rate	0.02...16.5 mL/min	0.02...16.5 mL/min
Chemical Tank Volume	4 gallon	15.1 L
Operating Dimensions	90 X 48 X 74.5 inch	2286 X 1219 X 1892 mm
Operating Weight	2800 lbs	1270 kg
Electrical Supply	Single Phase	Single Phase
Voltage	120 / 240 V	230 V
Frequency	60 Hz	50 Hz
Maximum Current	13.8 / 6.9 A	8.6 A

Operation

Simple

Operation of ozone water treatment systems can be complex but our automatic control system makes it simple. In manual mode the dosage is entered directly in mg/L, eliminating the need for complex pressure, temperature, and concentration calculations. In auto mode the controller will vary the dosage to maintain a dissolved ozone concentration setpoint. The resulting transfer efficiency is calculated and displayed on the operator interface.

Safe

Most people can smell an ozone leak before it reaches a dangerous level, but the automatic control system includes an ambient ozone concentration analyzer that is used to shut down the ozone generator if a leak is detected. If the module is installed in an Intuitech Pilot Enclosure the automatic control system will run the ventilation system at maximum capacity until the ozone concentration is reduced to a safe level.

Reliable



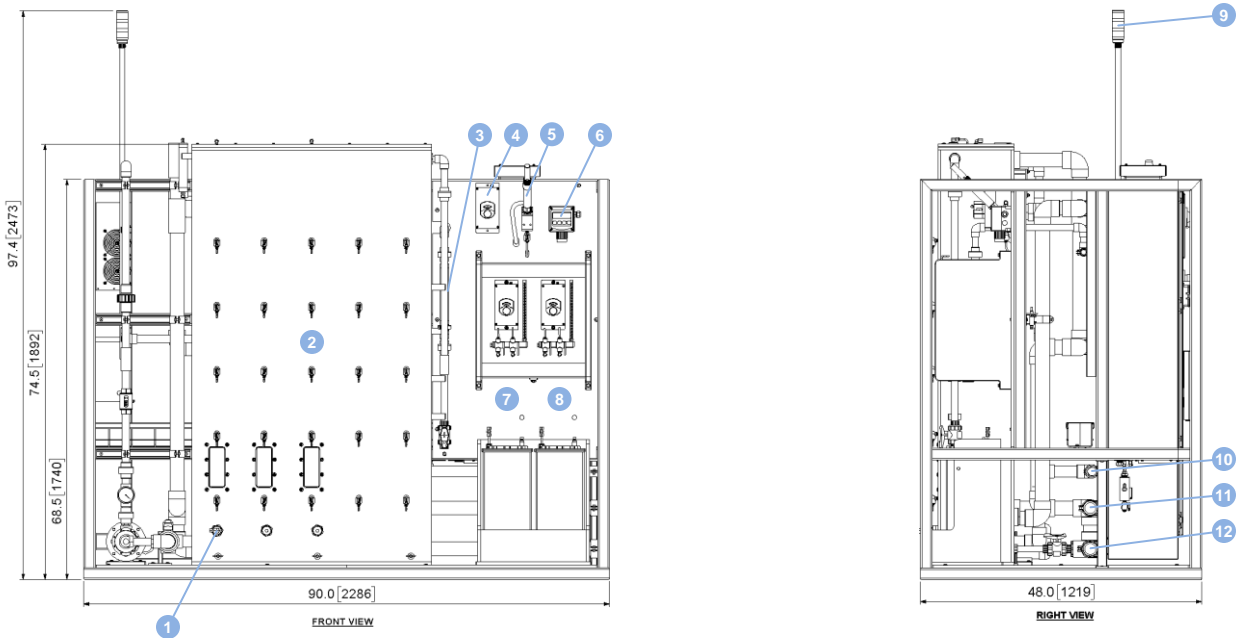
Oxygen Generation Panel

The ozone gas system consists of an oxygen generation panel and an ozone generation panel. The oxygen generation panel includes a compressor, heat exchanger, particle filter, air dryer, and oxygen concentrator. The ozone generation panel consists of an ozone generator, particle filters, ozone concentration analyzer with automatic zeroing, and a pressure and temperature compensated mass flow controller. Both panels are monitored with an extensive network of diagnostic sensors including temperature, pressure, humidity, and oxygen concentration. This information is used for predictive maintenance to ensure reliability.



Ozone Generation Panel

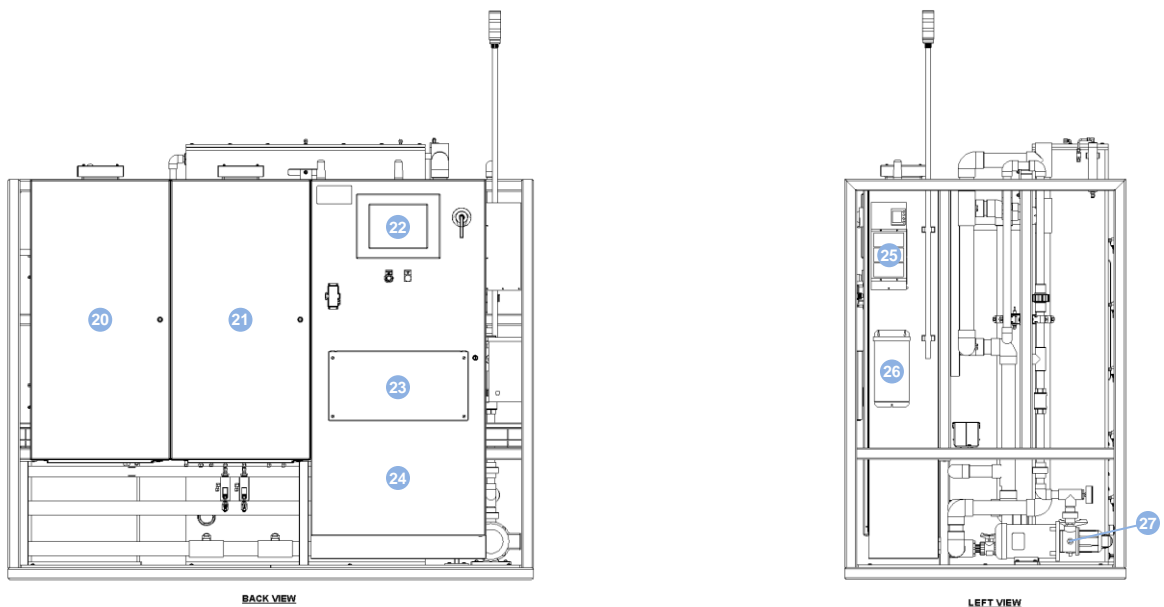
General Arrangement Drawings



1	Fine Bubble Diffuser
2	Contactor
3	Ozone Destruct Unit
4	Contactor Sample Pump
5	Dissolved Ozone Transmitter

6	Ambient Ozone Transmitter
7	Chemical Feed System 1
8	Chemical Feed System 2
9	Status Beacon
10	Inlet, 1½" MPT

11	Outlet, 2" MPT
12	Drain Waste, 2" MPT



20	Oxygen Panel
21	Ozone Panel
22	Operator Interface
23	Folding Shelf
24	Control Panel

25	Air Conditioner
26	Power Transformer
27	Feed Pump

Dimensions: inch [mm]

Data Logging

The following parameters are automatically collected and stored for analysis. The collection is performed at a user-specified frequency from once per second to once per twelve hours. The values are time and data stamped and simultaneously written to a formatted text file on a removable flash drive and to a backup file on the internal solid state drive. These files can be transferred by removing the flash drive or using file transfer protocol over a remote connection.

Contactor Water Flow	Ambient Ozone Concentration	Air Dryer Inlet Pressure
Contactor Dissolved Ozone Concentration	Oxygen Concentrator Inlet Pressure	Chemical 1 Dosage
Contactor Off-Gas Ozone Concentration	Oxygen Concentrator Inlet Dewpoint	Chemical 1 Flow
Diffuser Ozone Flow	Ozone Generator Inlet Oxygen Concentration	Chemical 1 Tank Level
Diffuser Ozone Pressure	Ozone Generator Pre-filter Inlet Pressure	Chemical 2 Dosage
Air Compressor Inlet Pressure	Ozone Generator Pre-filter Outlet Pressure	Chemical 2 Flow
Air Compressor Outlet Pressure	Ozone Generator Post-filter Inlet Pressure	Chemical 2 Tank Level
Air Compressor Outlet Temperature	Ozone Generator Post-filter Outlet Pressure	System Diagnostic Data

Remote Operation

The pilot module is designed for fully automatic un-manned operation and can be monitored and controlled remotely. A wireless cellular router is installed in the control panel. This device can provide remote access to the pilot module in locations where adequate cellular data service is available. The router can be configured for the Verizon or AT&T networks depending on which network has the best service at the installed location. Data service is included during the warranty period. Data service beyond the warranty period can be purchased from Intuitech in one year blocks. Any task normally performed using the operator interface can also be performed remotely using a laptop computer, tablet, or smartphone. The operator interface can also be configured to send alarm notifications via email or text messaging.



Warranty

Equipment manufactured by Intuitech is warranted to be free from defects in material and workmanship for a period of one year from the date of manufacture. In the event of any defect in material or workmanship, Intuitech will repair and/or replace, at its option, part or parts, which are proven to have been defective, provided the Buyer provides written notice of the defect during the warranty period. The Buyer shall notify Intuitech of the preferred location of repair. If the defective equipment is returned to Intuitech's manufacturing facility, the Buyer is liable for all costs associated with removal, shipping and re-installation of the equipment. The Buyer must obtain authorization from Intuitech prior to return of the equipment. If the defective equipment is repaired at the Buyer's site, the Buyer is liable for travel costs, including, but not limited to, airfare, auto rental, hotel, meal per diem and transit time to and from the site charged at a rate of \$125 per hour. The Buyer must provide a purchase order for the amount of the estimated charges before travel arrangements will be made. If the defect has resulted from improper storage, installation, operation or maintenance of the equipment, Intuitech reserves the right to reject the warranty claim. Intuitech makes no warranty, express or implied, other than the foregoing express warranties.

Ordering

Our standard Ozonation Pilot Module can be configured as shown below. It can also be customized to meet specific requirements for an additional cost. Please contact Intuitech for more information.

Z	-	PC	-	GC	-	OS	-	TM	-	DO	-	PH	-	CF	-	Options:
																RPS (reusable packaging system)
																UPS (uninterruptible DC power supply)
																SIU (SI units)
																EIP (EthernetIP SCADA connection)
																SAI (spare analog input module)
																Number of Chemical Feed Systems: 0, 1, 2, 3
																Number of pH Transmitters: 0, 1, 2, 3, 4
																Number of Dissolved Ozone Transmitters: 1, 2, 3, 4
																Transfer Method: 1 (Fine Bubble Diffuser), 2 (Side Stream), 3 (Both)
																Oxygen Source: 0 (None), 1 (Dual CG Cylinders), 2 (Oxygen Generator)
																Ozone Generator Capacity: 1 (20 g/h)
																Feed Pump Capacity: 1 (2.0...12.2 gpm)
																Contactant Configuration: 1 (6 feet high, 130 gallons), 2 (15 feet high, 130 gallons)
																Number of Trains: 1, 2