

dioxide

PACIFIC



O3Pure Ozone Systems



SYSTEM IDENT CODE SELECTION

Use the data sheets on pages 3-4 to select ident codes for

- O3P (O3Pure Reactor)
- O3C (O3Pure Control)

Once the codes are selected, we can quickly provide a quotation. If you need assistance with selection of the codes, please contact us.

INTEGRATION AND INSTALLATION

All systems are provided with documentation for integration of the system into your process: GA (General Arrangement) drawings; 3D Model; Electrical Wiring Diagram and Operation Manual.

All systems are tested and pre-commissioned prior to delivery to ensure quick start-up without faults.

Installation and commissioning can be done by your staff using the documentation provided. If you would like Dioxide Pacific to install and commission, we are happy to help.

HIGHEST QUALITY COMPONENTS

Dioxide Pacific systems use high quality, industrial grade components for lowest life cycle cost.

MAINTENANCE AND SPARE PARTS

All systems are provided with a comprehensive spare parts list and Dioxide Pacific maintains a large spare parts inventory.

O3Pure Reactor

| | | | | | | | | |
|------------|------------------------------------|---|------------|----------|----------|-----------|-----------|----------|
| O3P | O3Pure Reactor | | | | | | | |
| | Flow | | | | | | | |
| | Specify flow in m ³ /hr | | | | | | | |
| | Type | | | | | | | |
| | P | Production | | | | | | |
| | S | Production with ozone sanitization step (1.0 – 2.0 ppm) | | | | | | |
| | R | Bottle rinse | | | | | | |
| | C | Cap rinse | | | | | | |
| | I | CIP | | | | | | |
| | | Reactor C _t value (mg/L.min) | | | | | | |
| | 0.5 | C _t of 0.5 | | | | | | |
| | 1.0 | C _t of 1.0 | | | | | | |
| | 2.0 | C _t of 2.0 | | | | | | |
| | 4.0 | C _t of 4.0 | | | | | | |
| | - | Other (specify) | | | | | | |
| | | Ozone Generator | | | | | | |
| | P | ProMinent | | | | | | |
| | W | Wedeco | | | | | | |
| | O | Pacific Ozone | | | | | | |
| | | Reactor type | | | | | | |
| | V | Vertical atmospheric tower | | | | | | |
| | P | In-line pressure vessel | | | | | | |
| | | Method of ozone injection | | | | | | |
| | BM | By-pass static mixer | | | | | | |
| | BV | By-pass venturi | | | | | | |
| | DS | Diffuser stone | | | | | | |
| | | Ozone residual analyser | | | | | | |
| | PO | ProMinent Dialog ozone residual | | | | | | |
| | EO | Emerson ozone residual | | | | | | |
| | PR | ProMinent redox | | | | | | |
| | ER | Emerson redox | | | | | | |
| | | Analyser sample return system | | | | | | |
| | 0 | Not included | | | | | | |
| | 1 | Included | | | | | | |
| O3P | ___ | P | 1.0 | P | V | BM | PO | 1 |

O3Pure Control

| | | | | | | | | | |
|------------|-----------------------|----------|----------|------------|-----------|-----------|----------|----------|--|
| O3C | O3Pure Control | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | Drain valve |
| | | | | | | | | 1 | Manual butterfly valve |
| | | | | | | | | 2 | Pneumatically actuated butterfly valve |
| | | | | | | | | | Reactor supply pump |
| | | | | | | | | 0 | Customer supplied |
| | | | | | | | | 1 | Fristam Hygienic on/off |
| | | | | | | | | 2 | Fristam Hygienic with VSD speed control |
| | | | | | | | | | Fill line valve |
| | | | | | | | | 0 | Customer supplied |
| | | | | | | | | 1 | Pneumatically actuated butterfly valve |
| | | | | | | | | 2 | Pneumatically actuated control valve (4-20mA) |
| | | | | | | | | | Filler supply pump |
| | | | | | | | | FP0 | Customer supplied |
| | | | | | | | | FP1 | Fristam Hygienic on/off |
| | | | | | | | | FP2 | Fristam Hygienic with VSD speed control |
| | | | | | | | | | Vent filter for ozone reactor vent line |
| | | | | | | | | V0 | Not included |
| | | | | | | | | V1 | Included |
| | | | | | | | | | Closed circuit chiller for ozone generator cooling |
| | | | | | | | | C0 | Not included |
| | | | | | | | | C1 | Included |
| | | | | | | | | | Ozone destruct canister |
| | | | | | | | | 0 | Not included |
| | | | | | | | | 1 | Included |
| | | | | | | | | | Control panel PLC & HMI |
| | | | | | | | | 0 | Allen Bradley ML1400 PLC and Red Lion 7.5 inch HMI |
| | | | | | | | | 1 | Allen Bradley ML1400 PLC and Panelview Plus 700 HMI |
| | | | | | | | | 2 | Allen Bradley ControlLogix PLC and Panelview Plus 1250 HMI |
| | | | | | | | | 3 | Allen Bradley CompactLogix PLC and Panelview Plus 1250 HMI |
| | | | | | | | | | Gas Monitor |
| | | | | | | | | 0 | Not Included |
| | | | | | | | | 1 | Loop powered transmitter with alarm on HMI |
| | | | | | | | | 2 | 100-240V powered transmitter with panel meter alarms |
| O3C | 1 | 2 | 2 | FP2 | V1 | C1 | 1 | 2 | 1 |

Features and Benefits

| FEATURE | BENEFIT | WHAT THIS MEANS FOR YOU |
|---|--|--|
| Amperometric ozone residual sensor. | High accuracy measurement of ozone residual in ozone reactor. | Accurate measurement of ozone residual enables tight control of ozone residual and therefore disinfection. |
| Control modes for Production and Sanitization. | Choice for selection of Production mode at low ozone residual or Sanitization mode. Sanitization mode provides short term high ozone residual for sanitization of the ozone reactor internal surfaces, valves, pumps and pipework. | You have one system with all required modes built in – Production and Sanitization. |
| 316 stainless steel construction. | The ozone reactor, pipework, pumps, valves are all 316 s/s for 100% corrosion resistance | Low frequency of component replacement leads to low life cycle cost. |
| O3Pure Reactor perfect combination of plug flow and CSTR. | The O3Pure system combines plug flow and mixing at the base, to obtain accurate residual control under the full range of flows (zero to maximum) and still achieve CT value. | You will be able to achieve desired log reductions of bacteria, viruses and cysts with excellent ozone residual control. |
| O3Pure system is fully sanitary in construction. | All internal stainless steel weld surfaces are 2B standard and polished. All valves and pumps are sanitary construction. Stainless steel tube welds are purged and passivated. | Your O3Pure system is constructed to food grade, sanitary standards |
| Corona discharge ozone generator with current control. | Ozone generators have greater than 20:1 linear turndown via 4-20mA control input. Air flow is kept constant and ozone concentration in air varies. | Your O3Pure system can obtain very accurate ozone residual control through feedback control of the ozone generator. |
| Ozone injection via sanitary static mixer or venturi | Ozone gas is injected into a by-pass arrangement using a 316 s/s static mixer or venturi. The static mixer or venturi provides perfect conditions of flow and pressure for dissolution of ozone and for ozone generation efficiency. | You will obtain high efficiency dissolution of ozone into your water. |
| Dual vacuum relief and pressure relief valves on ozone vent line from top of ozone reactor. | The ozone reactor is protected from blockages in the off-gas line or overflowing with water by dual vacuum relief valves and a pressure relief valve. | Ozone reactor is protected from high vacuum or pressure conditions |
| PLC controlled system with touchscreen HMI. | Standard program for PLC and HMI on all O3Pure systems. | Your O3Pure system is easy to operate, gather data from and troubleshoot. |
| PID control of ozone residual via self-tuning PID controller. | The controller automatically calculates PID constants to obtain the best control available. | You don't need to manually calculate PID constants to gain optimal control. |

| | | |
|---|---|--|
| Fristam hygienic centrifugal pumps used. | Fristam pumps are the highest quality hygienic pumps available. | Low maintenance costs and low life cycle cost. |
| Ozone destruction from Watermation OD catalytic destruction canister. Stainless steel housing, catalytic media and thermostatically controlled heating element. | Catalytic media does not require replacement for the lifetime of the system as it is not consumed. Heating element and thermostat keep the media dry. | Ozone destruction of vent gas is maintained to provide safe environment for operators. |
| Ozone gas monitor | An amperometric ozone gas monitor will be constantly monitoring the ozone concentration in air around the O3Pure system. If the concentration exceeds the TLV, the generator will shut down. | Your operators are protected from high ozone concentration in air. |
| Ozone destruction canister for sample water. | Sample water for ozone analyzers has ozone in it and can contribute to high ambient ozone concentration if discharged to open drain. The O3Pure system has a destruction canister to remove this ozone. | No ozone will be present in the air around sample line discharge point. |
| Skid mount system, fully wired and plumbed | The system will be quick to install as it is ready to go. | When you install the system, your production can be up and running quickly. |
| Remote internet access. | Using an internet connection, you can log on to the HMI and view/operate the system. | For troubleshooting and program updates, it will not be necessary to send a serviceperson to site, thereby reducing maintenance costs. |
| Email alarms. | The O3Pure system will provide email alarms to designated users. | Alarms can be quickly acknowledged and rectified. |
| Optional closed circuit chiller for ozone generator cooling water. (only necessary for water cooled ozone generator) | Instead of wasting water for cooling the generator, you can use a closed circuit chiller, pre-installed and mounted on the O3Pure system skid. | Water used for cooling is not wasted. Your utility costs can be reduced. |
| Optional sample return system. | Instead of wasting sample water for the ozone analysers, you can capture it and send it back into the system for use. | Production water can be bottled instead of wasted. |
| Inbuilt control for filler supply pump. | VSD control of filler supply pump speed from remote signal to provide flow control of ozonated water at your filler. | You don't need to do additional wiring and control for your filler supply pump. It is all included in the O3Pure system. |
| Inbuilt level control of O3Pure reactor. | Using a pressure transmitter and a butterfly valve on the reactor fill line, accurate level control is obtained in the reactor. | You can simply connect the fill line to the fill valve and all level control is included in the O3Pure system. |



dioxide

PACIFIC

www.dioxide.com

Sydney (NSW)

P: + 61 2 9999 4594

F: +61 2 9999 4534

Perth (WA)

P: + 61 8 9337 5415

F: +61 2 9999 4534

Melbourne (VIC)

P: + 61 3 9005 1681

F: +61 2 9999 4534

PO Box 791 Narrabeen
NSW 2101 Australia

E: sales@dioxide.com

E: saleswa@dioxide.com

E: salesvic@dioxide.com

United States

P: 702-938-6418

F: 702-938-4118

Suite B-562 / 2654 W Horizon Ridge Pkwy
Henderson NV 89052-2803

E: salesus@dioxide.com