



DIOX-A 10K CHLORINE DIOXIDE GENERATOR

WALLACE & TIERNAN® PROCESS SYSTEMS

The DIOX-A 10K generator is the synonym of reliability in chlorine dioxide technology combining high safety performance with durability, simplicity and low maintenance. Chlorine dioxide is produced as an aqueous solution of stable strength up to 10 kg/h. For the generation, concentrated solutions of sodium chlorite (24.5 % NaClO_2) and hydrochloric acid (30 - 38 % HCl) are used. The concentration can be adjusted in the range of 1.5 to 3.0 g/l (2.0 to 3.0 g/l: DIOX-A 10K).

The DIOX-A 10K generator delivers all the benefits of chlorine dioxide with safety and efficiency in mind. The powerful disinfectant prevents trihalomethane (THM) formation and will not react with ammonia to form less active chloramines. The DIOX-A 10K generator is known for the effective elimination of chlorophenols, oxidation of inorganic compounds such as iron and manganese, and successful control of taste, odor and color. It is highly effective against biofilm formation as well as viruses, bacteria, protozoa and cysts; including Legionella.

RANGE OF APPLICATIONS

- **Drinking water:** disinfection, oxidation of iron and manganese, removal of odour and taste causing compounds, prevention and elimination of Legionella, residual disinfection of distribution networks
- **Industry:** disinfection of process and product water, prevention and elimination of legionella, control of biofilms, treatment of coolant
- **Waste water** disinfection and odour control

Key Benefits

- Inherent safe operation with double injector for chemical aspiration
- Monitoring of temperature and vent gas aspiration in the product tank
- High level of accuracy with V-notch control of precursors
- Intuitive user-friendly colour touch panel
- Extended communication capabilities

METHOD OF OPERATION

The precursor chemicals, hydrochloric acid and sodium chlorite are simultaneously aspirated using a common flow rate controlled injector, diluted with water and combined. As a result of this inherently safe operational mode, the concentrated chemicals cannot be mixed and react in the undiluted state. The flow rate control in the aspiration lines means that level differences in the tanks of the basic chemicals have no influence on the process. Expensive reagent transfer equipment is not required.

A reaction tank designed according to DVGW W 624 ensures a max. conversion rate to chlorine dioxide. As a result of the constant supply to the reactor a consistently high quality of the prepared solution is achieved at all times.

The generator works intermittently depending on the filling level of an external storage tank. During the filling process the displaced air-gas mixture is aspirated by a vent gas aspiration injector. For safety reasons, the gas phase in the product tank is permanently monitored with regard to temperature.

The chlorine dioxide system is available with an optional integrated booster pump.

All flow rates are continuously measured and can be displayed on the touch panel. The control system continuously monitors and regulates the preparation process.

Chlorine dioxide preparation capacity	1000 g/h	2500 g/h	5000 g/h	10 kg/h*
Flow sodium chlorite solution	6.6 l/h	16.5 l/h	33 l/h	66 l/h
Flow hydrochloric acid solution	6.6 l/h	16.5 l/h	33 l/h	66 l/h
Weight (without/with booster pump)	190/240 kg	190/240 kg	190/240 kg	200 kg

*DIOX-A 10K: ONLY WITHOUT BOOSTER PUMP.

TECHNICAL DATA

Power supply (without booster pump):

1/N/PE AC 230 V 50 Hz

Power supply (with booster pump):

3/N/PE AC 400/230 V 50 Hz

Power consumption (without/with booster pump):

approx. 0.3 kVA/4.1 kVA

Back up fuse max. (without booster pump): 1 x 20 A

Back up fuse max.(with booster pump): 3 x 20 A

Enclosure rating: IP 54

Dimensions (W x H x D): 1350 x 1880 x 790 mm

Safety equipment:

Shut-off valve for operating water feed, shut-off in the event of power failure, critical faults like leaks or an overflowing product tank, monitoring of the vent gas aspiration in the product tank



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