

dioxide

PACIFIC

NEW SUBMERGED,
WATER FLUSHED
REACTOR FOR
HIGHEST SAFETY



CD2D & CD2C
Chlorine Dioxide Generators

2-Chemical Acid-Chlorite Generation

If you are concerned about handling acid, take a look at our CDE range of electrochemical chlorine dioxide generators - only one chemical required - no acid. Contact us for a CDE generator brochure or download one from our website www.dioxide.com



Dioxide Pacific can provide the complete disinfection package or just the components you require.

Optional components include:

- Chemical suction lances
- Chlorine dioxide residual analyzers
- Bulk chemical tanks
- ORP (Redox) controllers
- Chemical transfer systems
- Chlorine dioxide gas monitors (leak detection)
- Tank level monitoring
- By-pass pump
- Portable building mounting
- Mech and elec installation
- Commissioning
- Maintenance and chemical supply

CD2D FOR DILUTE CHEMICAL
CD2C FOR CONCENTRATED CHEMICAL

CHLORINE DIOXIDE IS PRODUCED USING
THE ACID-CHLORITE REACTION



Metering pumps for acid and chlorite deliver chemical accurately from customer supplied chemical drums or tanks. Chemical is dosed accurately through the metering pumps, flow switches and injection valves into a reaction chamber. For the CD2C generator, acid is automatically pre-diluted outside the reactor for optimal safety. Acid and chlorite are intimately mixed and undergo reaction time in the reaction chamber, which is optimized for high reactant surface area. The reaction chamber is doubled-contained for highest safety. Dilution water is fed into the bottom of the flushed outer chamber where 2% chlorine dioxide solution and dilution water are mixed. The resultant solution at less than 3,000ppm is safely transported to the dosing point.

By-pass dilution water can either be diverted or pumped to the generator where by-pass pipework, flow meter, check valve and isolation valves are assembled. Dilution water is mixed with generated chlorine dioxide using mixing elements at the top of the flushed outer chamber of the reactor. There is no need for an additional static mixer. Flow through the by-pass is sized to ensure maximum concentration of 3,000 ppm ClO_2 .

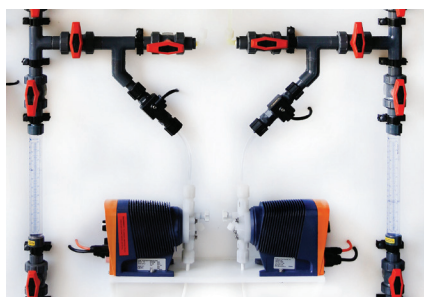
Chlorine dioxide dosing can be flow paced, PID residual controlled, flow paced with residual trim (FPRT), manual or timer controlled. Inputs are available for pulse, stop-start or 4-20mA and the generator controller allows the operator to enter the desired ClO_2 dosing setpoint, view residual, flow and operating status of all devices. Loss of chemical flow or other failure signals will trigger faults and shut the generator down. The CD2D and CD2C generators are operator friendly and can be viewed/controlled remotely via the internet.



THE CD2D AND CD2C GENERATORS ARE THE BEST AVAILABLE.

Take a look at the features.

Feature	Benefit	What this means to you
Metering pumps for chemical dosing and water	Reliable and accurate chemical dosing with large turndown capability	Low chemical consumption per kg (pound) of ClO ₂ and accurate dosing of ClO ₂ for your process.
PLC controlled system with touchscreen HMI	All items are controlled from a central PLC and the touchscreen provides an operator friendly way to view plant operation and status. Fault finding is simple.	It is easy to train operators on how the plant operates. They will feel comfortable using the plant. All the information you need and configuration capability is available.
Dosing pumps have flow monitoring	If dosing pumps are operating and flow is not registered, an alarm will be raised and the generator stopped	If a dosing pump loses prime, the generator won't continue to operate and dose either acid or chlorite into your water circuit. This feature will save chemical and prevent corrosion.
Inbuilt calibration cylinders	Dosing pumps can be properly calibrated so that dosing is accurate. They also act as suction accumulators to prevent loss of prime.	Chemical consumption is minimized and reliability is maximized.
Inputs for level switches from chemical tanks	Generator will provide an alarm on low chemical and stop on low.	The generator will not continue to operate and waste power if chemical has run out.
By-pass assembly for dilution of chlorine dioxide with inbuilt static mixer.	The safety of chlorine dioxide dosing is increased with the CD2C and CD2D generators by immediately diluting the chlorine dioxide solution produced in the generator to less than 3,000 ppm. This dilute solution is safe to transport to the dosing point.	Operator and environmental safety is maximized so the safety risk of the installation is low. You can sleep easy knowing that the generator is operating safely.
Inputs for remote on/off; flow 4-20mA or pulse, analyzer 4-20mA or pulse; outputs for grams of ClO ₂ produced and fault.	Full flexibility of dosing from either flow, stop/start or residual control available.	Whatever way you wish to dose chlorine dioxide, you can do it accurately with this generator.
Remote internet access	Using a secure broadband connection, users can log on to the HMI and view/operate the generator.	The speed of making a change to the generator or fault finding is greatly increased. In most cases, it will not be necessary to send a serviceperson to site and this will save you time and money.
Optimized reaction chamber	Ensures full conversion of chlorite to chlorine dioxide.	You can be assured that excess chlorite will not enter your water. You will comply with regulatory guidelines and minimize chemical consumption.
Reaction chamber is water submerged and flushed using the by-pass water flow inside transparent PVC chamber	Ensures that any leaks from the reaction chamber are dissolved in the dilution water and transported away from the operator. No possibility of chlorine dioxide gas leak at generator	Risk of operator contact with chlorine dioxide is removed. The reduced risk provides your operators with a safer work place.
PVC or PVDF reaction chamber with PVDF injection valves and tube	Complete chemical resistance ensures long life for components and high purity for chlorine dioxide produced	You don't need to worry about the lifetime of the reaction chamber.
Complete system fabricated on frame and backboard, fully plumbed and wired ready for installation on site	Quick and easy installation process so you can be up and running quickly	Your cost of installation and commissioning is low and there will be minimal disruption to your production.



GENERATOR MODELS AND TECHNICAL DATA

Dilute Chemicals: Electricide-DC and Electricide-DA

Model	Capacity	Pressure	Dimensions	Weight	Power Supply	Chemical Consumption Each Component		By-pass Flow
	g/hr	Bar	H x W x D (cm)	kg		L/kg ClO ₂	L/hr	Min L/hr
CD2D-1	46	10	120 x 120 x 30	20	220-240V, 50/60Hz	25	1.15	23
CD2D-2	60	10	120 x 120 x 30	20	220-240V, 50/60Hz	25	1.50	30
CD2D-3	120	10	120 x 120 x 30	20	220-240V, 50/60Hz	25	3.00	60
CD2D-4	220	7	120 x 120 x 35	45	220-240V, 50/60Hz	25	5.50	110
CD2D-5	400	7	120 x 120 x 35	45	220-240V, 50/60Hz	25	10.00	200
CD2D-6	800	10	120 x 120 x 35	45	220-240V, 50/60Hz	25	20.00	400

	Capacity	Pressure	Dimensions	Weight	Power Supply	Chemical Consumption Each Component		By-pass Flow
	PPD	Psi	H x W x D (in)	lb		Gal/lb ClO ₂	Gal/hr	Min Gal/hr
CD2D-1	2.4	145	47 x 47 x 12	44	110V, 50/60Hz	3	0.30	6
CD2D-2	3.2	145	47 x 47 x 12	44	110V, 50/60Hz	3	0.40	8
CD2D-3	6.3	145	47 x 47 x 12	44	110V, 50/60Hz	3	0.79	16
CD2D-4	11.6	101.5	47 x 47 x 14	99	110V, 50/60Hz	3	1.45	29
CD2D-5	21.1	101.5	47 x 47 x 14	99	110V, 50/60Hz	3	2.64	53
CD2D-6	42.2	145	47 x 47 x 14	99	110V, 50/60Hz	3	5.28	106

Concentrated Chemicals: Electricide-P2, 30-33% hydrochloric acid and dilution water

Model	Capacity	Pressure	Dimensions	Weight	Power Supply	Chemical Consumption Each Component		Water Dilution		By-pass Flow
	g/hr	Bar	H x W x D (cm)	kg		L/kg ClO ₂	L/hr	L/kg ClO ₂	L/hr	Min L/hr
CD2C-1	150	7	120 x 120 x 30	20	220-240V, 50/60Hz	5.26	0.79	36	5.40	75
CD2C-2	420	10	150 x 150 x 40	40	220-240V, 50/60Hz	5.26	2.21	36	15.12	210
CD2C-3	750	7	160 x 150 x 40	70	220-240V, 50/60Hz	5.26	3.95	36	27.00	375
CD2C-4	1500	7	180 x 150 x 43	120	220-240V, 50/60Hz	5.26	7.89	36	54.00	750
CD2C-7	2250	4	180 x 150 x 43	120	220-240V, 50/60Hz	5.26	11.84	36	81.00	1125
CD2C-5	6000	7	300 x 150 x 50	260	220-240V, 50/60Hz	5.26	31.56	36	216.00	3000
CD2C-6	10000	4	300 x 150 x 50	260	220-240V, 50/60Hz	5.26	52.60	36	360.00	5000

	Capacity	Pressure	Dimensions	Weight	Power Supply	Chemical Consumption Each Component		Water Dilution		By-pass Flow
	PPD	Psi	H x W x D (in)	lb		Gal/lb ClO ₂	Gal/hr	Gal/lb ClO ₂	Min Gal/hr	Min Gal/hr
CD2C-1	7.9	101.5	47 x 47 x 12	44	110V, 50/60Hz	0.63	0.21	4.3	1.43	20
CD2C-2	22.2	145	59 x 59 x 16	88	110V, 50/60Hz	0.63	0.58	4.3	3.99	55
CD2C-3	39.6	101.5	63 x 59 x 17	154	110V, 50/60Hz	0.63	1.04	4.3	7.13	99
CD2C-4	79.2	101.5	71 x 59 x 17	264	110V, 50/60Hz	0.63	2.08	4.3	14.27	198
CD2C-7	118.8	58	71 x 59 x 17	264	110V, 50/60Hz	0.63	3.13	4.3	21.40	297
CD2C-5	316.8	101.5	71 x 59 x 17	572	110V, 50/60Hz	0.63	8.34	4.3	57.07	793
CD2C-6	528.0	58	118 x 59 x 20	572	110V, 50/60Hz	0.63	13.89	4.3	95.11	1321

Electricide-DA = 9% hydrochloric acid
 Electricide-DC = 7.5% sodium chlorite
 Electricide-P2 = 25-31% sodium chlorite



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