# Chlorine Dioxide System Bello Zon® CDKc

## Bello Zon® CDKc is a deluxe system, persuading customers with its safe handling of chemicals.

**8 – 12,000 g/h chlorine dioxide. Max. flow rate at 0.2 ppm $ClO_2$ metering is 60,000 m³/h**

This chlorine dioxide system includes an intrinsically safe pre-dilution station for concentrated hydrochloric acid. The consumption of hydrochloric acid can therefore be adapted on site to the individual operating conditions. Savings of up to a quarter of the acid quantity are possible. The special reactor concept generates chlorine dioxide safely and simply with maximum output. Food-compatible PVDF is used instead of PVC generally used in the industry. This results in improved operating safety and reliability and improved purity of the chlorine dioxide generated. The central system controller manages the precise production of the chlorine dioxide. All parameters relevant for water treatment are recorded and logged.

The stroke lengths of ProMinent® metering pumps are monitored online. This rules out hazardous operating statuses arising from incorrect pump stroke length adjustments. The precise production of chlorine dioxide is managed by the central system control. Chlorine dioxide, chlorite, pH or ORP potential sensors DULCOTEST® are directly connected to the two mA inputs. The chlorine dioxide is monitored in the treated water and documented. The chlorine dioxide concentrations in the water can be adjusted automatically depending on the measurement by the integrated PID controller. The integrated data logger documents all status messages and measured values, which the screen writer then visualises on the clear colour display. The systems meet all the requirements of the DVGW specifications W 224 and W 624 with regard to construction and operation and are designed for operation with concentrated chemicals chlorite (24.5% $NaClO_2$) and acid (25-36% HCl).

## Your benefits

- Cost saving through minimal acid consumption
- Cost-effective operation by the use of inexpensive concentrated output chemicals
- Efficient operation, thanks to production, metering and monitoring of $ClO_2$ with just one system
- Maximum operating safety and purity of the $ClO_2$ produced through the use of PVDF reactors
- Integrated measuring and control technology
- Perfect quality management, thanks to integrated storage of all operating parameters and measured values

## Field of application

- Municipal potable water and waste water treatment
- Industrial process and cooling water

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## Technical Data

| Type [1] | Chlorine dioxide dosing capacity* [1] | | Max. operating pressure** | Operating temp. | Connection dimensions of chlorite and acid metering pumps | Dimensions of the bypass connector |
|---|---|---|---|---|---|---|
| | min.-max./hour | min./day | | | | |
| | g/h | g/d | bar | °C | | DN |
| CDKc 150 | 8-150 | 56 | 8 | 10–40 | 6x4 | 25 |
| CDKc 400 | 20-400 | 140 | 8 | 10–40 | 8x5 | 25 |
| CDKc 900 | 45-900 | 300 | 8 | 10–40 | 8x5 | 32 |
| CDKc 2000 | 100-2,000 | 700 | 5 | 10–40 | 8x5 | 40 |
| CDKc 2800 | 140-2,800 | 700 | 5 | 15–40 | 8x5 | 40 |
| CDKc 7300 | 365-7,300 | 1,750 | 3 | 15–40 | DN 10 | 40 |
| CDKc 12000 | 600-12,000 | 1,750 | 2 | 18–40 | DN 10 | 40 |

| Type [1] | Dimensions*** H x W x D (mm) | Weight*** | Power consumption (max.) **** | | Power uptake |
|---|---|---|---|---|---|
| | | | 230 V | 115 V | |
| | mm | kg | A | A | W |
| CDKc 150 | 1,380 x 880 x 320 | 55 | 0.7 | 1.2 | 130 |
| CDKc 400 | 1,650 x 880 x 445 | 80 | 0.9 | 1.2 | 180 |
| CDKc 900 | 1,920 x 920 x 510 | 95 | 1.4 | 2.5 | 250 |
| CDKc 2000 | 1,880 x 1,320 x 570 | 160 | 2.2 | 3.5 | 410 |
| CDKc 2800 | 1,880 x 1,320 x 570 | 160 | 2.2 | 3.5 | 410 |
| CDKc 7300 | 2,250 x 1,850 x 460 | 175 | 5.5 | 6.4 | 640 |
| CDKc 12000 | 2,250 x 1,850 x 460 | 180 | 5.5 | 6.4 | 640 |

* The metering figures relate to 5 or 2 bar back pressure and an ambient temperature of 20 °C. The minimum capacity/per hour is based on the fact that when the system is operating at below 5% of the nominal power, continuous metering is no longer possible, due to the correspondingly low pumping frequency of the metering pumps. When systems are not operating continuously, the reactor contents must be changed at least twice daily. The system should not, therefore, be operated below the stated minimum capacity/day.

** At 35 °C ambient temperature

*** Without bypass pump, flushing valve and water supply line

**** 230 V figure with bypass pump (CDKc 150-900), 115 V figures without bypass pump

[1] **Subject to technical and design changes.**

Dimensions of the pre-dilution unit (H x W x D) for CDKc 150 - 12,000: 1,200 x 900 x 300 mm


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