

# ozonia<sup>®</sup> CFV

## ozone generators



The **ozonia<sup>®</sup> CFV** range of ozone generators incorporate Veolia's (AT) Advanced Technology dielectric segments combined with state of the art IGBT power supply units.

### applications

- ▶ drinking water
- ▶ wastewater
- ▶ process water
- ▶ micropollutants
- ▶ COD removal
- ▶ oxydation and advanced oxydation

# ozone technology: ozonia® CFV



ozonia® fused dielectrics provide the industry's highest reliability and availability.

The **ozonia® CFV range** is Veolia's latest development for medium-sized ozone applications. The design is based on feedback from hundreds of operators and includes the latest technology to ensure continuous operation at full-load in industrial environments. A feature of the ozonia® CFV units is the fused dielectric tubes which provides high availability. ozonia® CFV units are particularly suitable for remote service in drinking water plants.

An ozonia® CFV unit is an integrated package including the ozone generator, the power supply, PLC control, process related control equipment and skid interconnections. The PLC system and optional bus ensures flexibility of operation and enables easy integration into many types of plant concepts.

**ozonia® CFV** ozone generators can be used with oxygen or air feed gases.

## how it works

Ozone, the triatomic form of oxygen, is generated by recombining oxygen atoms with oxygen molecules. This process takes place in the gap between the dielectric layer on the high voltage electrode, and an earth electrode in the ozone generator vessel. When high voltage is applied to this arrangement, a silent electrical discharge occurs in the gap which then excites the oxygen molecules in the feed gas flowing through the gap. This causes them to split and combine with other oxygen molecules to form ozone.

## Veolia provides full ozone systems including:

- ▶ air preparation systems
- ▶ ozone generation
- ▶ ozone contacting
- ▶ ozone destruction
- ▶ control systems including monitoring

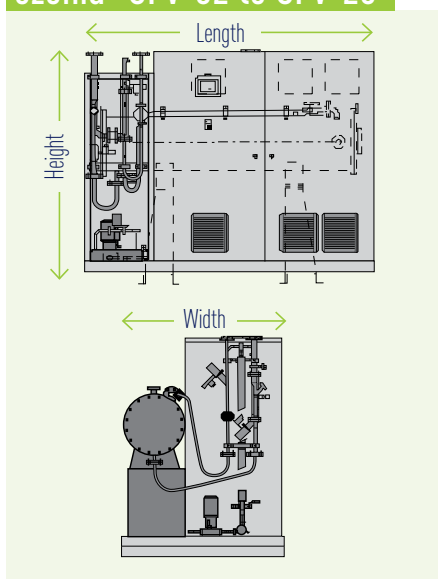
## main features

- ▶ the industry's most robust electrodes
- ▶ fused dielectrics allows the industry's highest availability
- ▶ manufacturing facilities: Europe, China and North America
- ▶ globally adaptable standards
- ▶ industry-leading engineering capabilities
- ▶ reliability & long service life

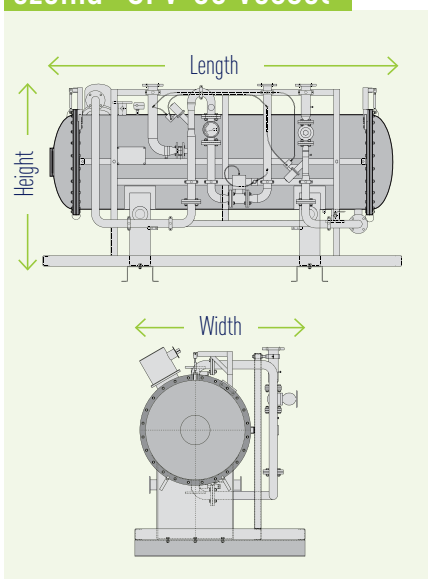
model	max production O <sub>2</sub>		concentration O <sub>2</sub>	O <sub>2</sub> demand*		cooling water *	
	lb/d	kg/h	(%-wt)	scfm	Nm <sup>3</sup> /h	US gpm	m <sup>3</sup> /h
ozonia® CFV-02	100.5	1.9	6 to 14	5.09	8.654	8.81	2
ozonia® CFV-03	148.2	2.8	6 to 14	7.63	12.96	13.21	3
ozonia® CFV-04	195.8	3.7	6 to 14	9.98	16.96	17.61	4
ozonia® CFV-05	301.6	5.7	6 to 14	13.94	23.69	26.42	6
ozonia® CFV-10	597.9	11.3	6 to 14	28.21	47.93	52.83	12
ozonia® CFV-15	904.8	17.1	6 to 14	42.90	72.88	74.85	17
ozonia® CFV-20	1,153.5	21.8	6 to 14	54.44	92.5	96.86	22
ozonia® CFV-30	1,899.5	35.9	6 to 14	89.93	152.8	154.10	35

\* at standard conditions

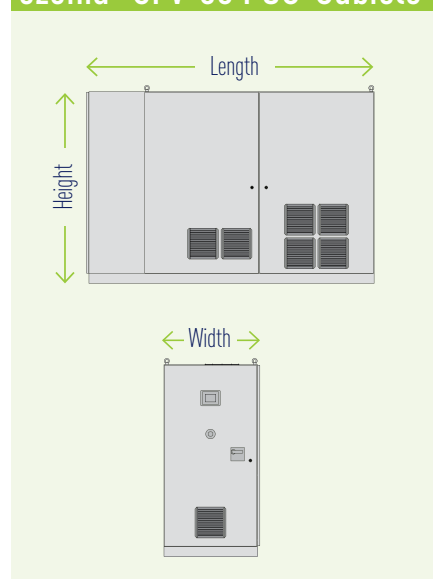
### ozonia® CFV-02 to CFV-20



### ozonia® CFV-30 Vessel



### ozonia® CFV-30 PSU-Cubicle



## technical features

- ▶ **ambient temperature:** +5 to 40°C
- ▶ **design altitude:** < 1,000m.a.s.l.
- ▶ **humidity:** RH < 65% (yearly average)
- ▶ **voltage:** 3 x 360 to 495 VAC
- ▶ **frequency:** 50 / 60 Hz

## options

- ▶ **profinet (Siemens PLC)**
- ▶ **modbus TCP (Allen Bradley PLC)**
- ▶ **modbus TCP (Schneider PLC)**
- ▶ **power-cut and lightning protection**
- ▶ **power analyser**

## remote control and alarms

- ▶ **supply ON/OFF**
- ▶ **enable REMOTE**
- ▶ **alarm RESET**
- ▶ **emergency STOP**
- ▶ **gasflow ON**
- ▶ **collective ALARM**
- ▶ **setpoint current (4-20 mA)**

model	L x H x W		weight	
	inch	mm	lb	kg
ozonia® CFV-02	78.74 x 78.74 x 45.27	2,000 x 2,000 x 1,150	~ 1653	~750
ozonia® CFV-03	78.74 x 78.74 x 45.27	2,000 x 2,000 x 1,150	~1874	~ 850
ozonia® CFV-04	78.74 x 78.74 x 45.27	2,000 x 2,000 x 1,150	~ 2,094	~ 950
ozonia® CFV-05	98.42 x 78.74 x 45.27	2,500 x 2,000 x 1,500	~ 4,409	~ 2,000
ozonia® CFV-10	114.17 x 78.74 x 74.80	2,900 x 2,000 x 1,900	~ 4,519	~ 2,050
ozonia® CFV-15	114.17 x 78.74 x 74.80	2,900 x 2,000 x 1,900	~ 5,511	~ 2,500
ozonia® CFV-20	114.17 x 78.74 x 74.80	2,900 x 2,000 x 1,900	~ 6,614	~ 3,000
ozonia® CFV-30 Vessel	135.82 x 74.80 x 61.02	3,450 x 1,900 x 1,550	~ 8,377	~ 3,800
ozonia® CFV-30 PSU-Cubicle	118.11 x 78.74 x 39.37	3,000 x 2,000 x 1,000	~ 4,960	~ 2,250

Veolia's **ozonia**® ozone technology portfolio includes products from the laboratory scale to the largest ozone systems ever built. From our company's roots in Switzerland, we have been the ozone industry pioneer for over 25 years. Veolia uses our extensive ozone technology experience to provide the industry's most reliable and robust products.

Our unique ability to deliver the industry's most reliable and robust systems is why thousands of customers around the world have chosen **ozonia**® ozone systems.

We have been the ozone industry pioneer for over 25 years. Trust Veolia to deliver the highest quality ozone solutions to meet your treatment challenges.

**7**  
product ranges  
certified to  
international  
standards

over  
**10,000**  
installations

over  
**25**  
years of  
experience



★ production centres and offices  
● offices

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