

# Ozonía\* CFS

## Compact Ozone Generators

### FACT SHEET

The **Ozonía CFS** range is designed for small to medium sized ozone applications and uses the same robust industrial ozone production technology as larger **Ozonía** systems

### Product Overview

The **Ozonía CFS** range is ideal for small to medium-sized ozone applications. Our design is based on feedback from hundreds of operators and includes the latest technology to ensure continuous operation at full-load in industrial environments.

An **Ozonía CFS** compact ozone generator includes the ozone generator, the medium-voltage power supply to the generator, control system, process related control equipment and interconnections. The control system ensures flexible operation and allows integration into all types of plant concepts.

### 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. When high voltage is applied to this arrangement, a silent electrical discharge occurs in the gap. This excites the oxygen molecules in the feed gas flowing through the gap, which causes them to split and combine with other oxygen molecules to form ozone.



## Applications

- Drinking water
- Bottling water plants
- Aquaculture
- Food & beverage
- Cooling towers

## Product Highlights

- High output performance
- Compact & versatile
- Simple operations
- Efficient operation
- User friendly controls
- Easily integrated
- Low service requirement
- CFS-28/42 modular design with automated failure response

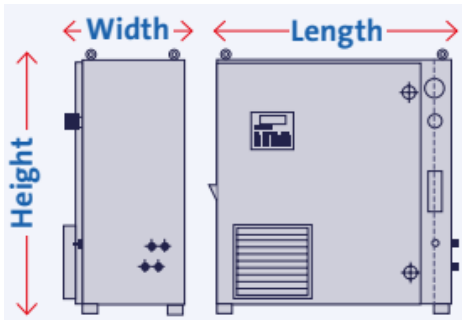


Figure 1: Ozonia CFS-1, 3 and 7

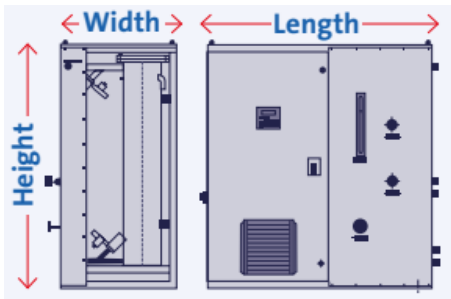


Figure 2: Ozonia CFS-14-42

## Product Features

- Larger models feature the **Ozonia SmartO3** controller with Modbus TCP/IP connectivity
- Robust **Ozonia** advanced technology (AT) dielectrics
- Very compact dimensions for easy integration
- Low maintenance and service requirement
- Flexible operation: ozone production range 4-100%

Table 1: Measurements

Model	L x H x W		weight	
	inch	mm	lb	kg
Ozonia CFS-1	28.4 x 31.5 x 14.6	720 x 800 x 370	154	70
Ozonia CFS-3	28.4 x 31.5 x 14.6	720 x 800 x 370	187	85
Ozonia CFS-7	39.4 x 31.5 x 17.7	1,000 x 800 x 450	440	200
Ozonia CFS-14	51.2 x 57.1 x 26.4	1,300 x 1,450 x 670	965	420
Ozonia CFS-28	53.5 x 57.1 x 34.4	1,359 x 1,452 x 874	1605	728
Ozonia CFS-42	61.3 x 71.0 x 38.4	1,557 x 1,802 x 974	2386	1082

## Technical features

- **Voltage Ozonia CFS-1, 3:** 1 x 230/207 VAC  $\pm$  10%
- **Voltage Ozonia CFS-7, 14, 28, 42:** 3 x 400/480 VAC  $\pm$  10%
- **Frequency:** 50/60 Hz
- **Ambient temperature:** +5 to 40°C
- **Design altitude:** < 1,000 m.a.s.l.
- **Humidity:** RH < 65% (yearly average)
- **Feed gas inlet pressure:** 3 to 8 barg
- **Cooling water pressure:** 2 to 6 barg

## Materials

- **Enclosure:** Powder coated mild steel
- **In contact with ozone:** Stainless steel 316, PTFE, PVDF, Viton
- **In contact with water:** PE, brass, stainless steel 304/316

## Control

### All models

- Ozone production on/off
- Set value (4 to 20 mA)
- Gas valve open
- Hardwire

### CFS-28, CFS-42

- 7" TFT color touch screen
- Ozonia SOC – smart ozone controller
- Modbus TCP/IP connectivity
- Profinet, OPC UA comm. Available

**Table 2 : Technical Data**

Model	Ozone production				Oxygen requirement		Air requirement		Outlet pressure (psig)			
	Oxygen 6 wt%		Air 3 wt%		Oxygen 6 wt%		Air 3 wt%		Oxygen 6 wt%		Air 3 wt%	
	lb/d	g/h	lb/d	g/h	scfm	Nm <sup>3</sup> /h	scfm	Nm <sup>3</sup> /h	psig	barg	psig	barg
Ozonia CFS-1	3.86	73	1.96	37	0.53	0.85	0.6	0.96	10.15	0.7	29.01	2
Ozonia CFS-3	11.59	219	5.93	112	1.58	2.54	1.8	2.89	10.15	0.7	29.01	2
Ozonia CFS-7	26.98	510	13.86	262	3.69	5.93	4.2	6.74	14.50	1	29.01	2
Ozonia CFS-14	53.97	1020	27.67	523	7.39	11.86	8.4	13.49	14.50	1	29.01	2
Ozonia CFS-28	108.47	2050	55.34	1046	14.82	23.78	16.79	26.98	14.50	1	29.01	2
Ozonia CFS-42	162.44	3070	83.02	1569	22.20	35.63	25.20	40.45	14.50	1	29.01	2