

# O<sub>3</sub> Systems Type SMA/SMO



Efficient systems for generating ozone from air and oxygen

**WEDECO**

Umwelttechnologie

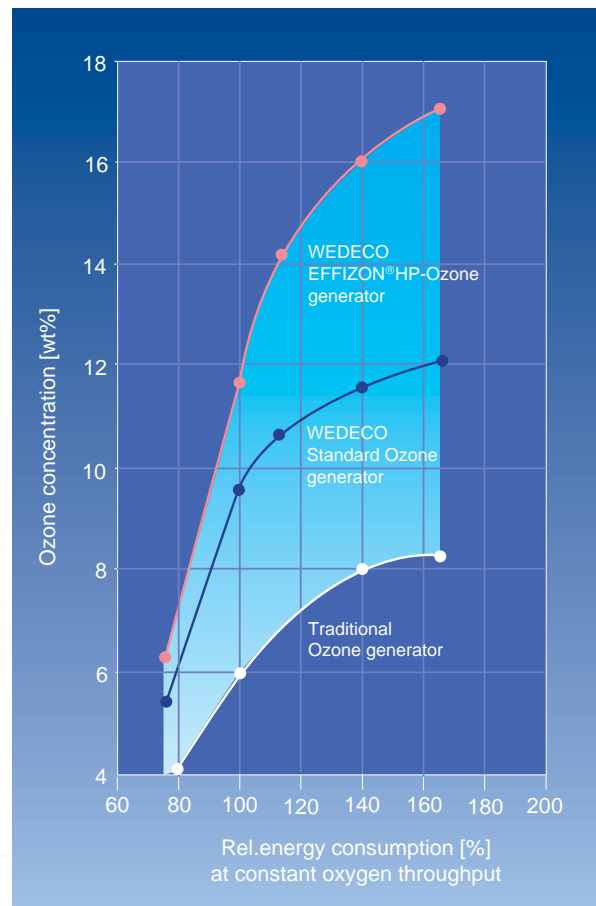
## Compact ozone generation systems for the medium capacity range

WEDECO EFFIZON®HP ozone generation systems in the SMA/SMO ranges (feed gas air/feed gas oxygen) reflect the state of the art in research and technology.

They can be used wherever compact design, a high performance profile and outstanding reliability are a must.

### EFFIZON®HP – Efficient ozone generation for high concentrations

EFFIZON®HP systems offer users the highest levels of ozone generation with minimal levels of power consumption. Together with their excellent reliability and ease of operation, they provide users with optimal economic benefit. The systems, consisting of an ozone generator, power supply unit and programmable logic controller (PLC), including fittings, pipes and wiring, are compactly constructed on a baseframe. A wide range of options enables the systems to be optimally adjusted to specific applications (water treatment, product treatment, etc.).



## Electronic system control

A PLC takes care of the monitoring and control of all key operation parameters. Smooth variation of the amount of ozone produced (from 10 to 100%) and of the ozone concentration is possible. The systems can thus be adjusted precisely to changed operating conditions. Customer-specific system control requirements, e.g. control through process variables (water flow volume, etc.), can be satisfied without any difficulty.



HC-500 ozone monitor

## Advantages

- Reduced power consumption
- Drastically reduced oxygen and air consumption through high ozone concentrations
- Low space requirement
- High level of operating and maintenance friendliness
- Automatic operation
- Low investment and running costs
- Modular design
- Maximum operating reliability and minimum costs for replacement and wear parts



SMA/SMO-type ozone system with optional dual gas distribution and operation panel

## Optional accessories



### Compact ozone destructor

Ozone is harmful even in small concentrations. It is therefore important that no ozone-containing gas is emitted into the atmosphere. WEDECO has developed the catalytic ozone destructor (COD) to prevent such emissions. Residual concentrations are below  $0.02 \text{ mg/m}^3$ , thus complying with the safety regulations.

The destructor is made entirely of high-grade steel 1.4571 and incorporates gas heating, the catalyst and a junction box for electrical connections.



### Efficient ozone introduction system

WEDECO offers a large number of efficient ozone introduction systems.

WEDECO ozone introduction systems are characterized by their flexibility. They can be individually configured for all applications without any loss of efficiency.

## Technical data - SMO-type range (feed gas oxygen)\*

Type	Max. ozone production Basic HP (g/h) T <sub>cw</sub> = 15 °C	Oxygen demand (m <sup>3</sup> /h NTP)	Cooling water demand (m <sup>3</sup> /h)	<sup>(1)</sup> Total power consumption of the ozone system at T <sub>cw</sub> = 15 °C at maximum performance (Kwh)	Frame dimensions H/L/W (mm)	Weight approx. (kg)
<b>SMO 150</b>	400	4.0	0.7	3.8	1,700x1,350x700	400
<b>SMO 160-3</b>	630	6.3	0.9	4.6	2,300x1,600x550	680
<b>SMO 160-4</b>	830	8.1	1.2	6.1	2,300x1,600x550	680
<b>SMO 160-5</b>	1,060	10.3	1.6	7.7	2,300x1,600x550	680
<b>SMO 200</b>	1,430	14.0	2.1	10.5	2,300x2,300x1,350	1,400
<b>SMO 250</b>	1,720	16.9	2.6	12.7	2,300x2,300x1,350	1,450
<b>SMO 300</b>	2,500	24.4	3.7	18.3	2,300x2,300x1,350	1,750
<b>SMO 350</b>	3,150	30.8	4.7	23.1	2,300x2,300x1,350	1.950
<b>SMO 400</b>	4,280	41.9	6.4	31.4	2,350x3,000x1,350	2.450
<b>SMO 450</b>	5,600	54.8	8.3	41.1	2,350x3,000x1,350	2.750
<b>SMO 500</b>	7,000	68.2	10.4	51.1	2,400x3,000x1,350	2.950
<b>SMO 550</b>	8,000	78.9	12.0	59.1	2,400x3,600x1,350	3.250
<b>SMO 600</b>	9,900	97.0	14.7	72.7	2,400x3,600x1,350	3.800
<b>SMO 650</b>	11,500	112.3	17.1	84.6	2,450x4,000x1,350	4.300
<b>SMO 700</b>	13,700	134.2	20.4	100.6	2,450x4,000x1,350	4.300
<b>SMO 750</b>	15,600	152.9	23.2	114.7	2,500x4,000x1,350	4.550

\* Ozone concentration 7wt% (102 g/m<sup>3</sup> NPT)

<sup>(1)</sup> Without additional users such as pumps, compressors, etc.

## Options

### Oxygen supply

- Liquid oxygen (LOX)
- PSA (oxygen treatment system)

### Feed and reaction systems

- Pump/injector, diffusers, column gassing
- Closed reactors, contact tanks, stirred reactors

### Residual ozone destructors

- Catalytic
- Thermal

## Measurement and safety technology

- Ozone concentration measurement (gas/water)
- Dew-point measurement
- Redox measurement
- Ambient-air monitoring and alarm system

## Electronic operating devices

- Operation panel
- Process control system (PCS)

## Technical data - SMA-type range (feed gas air)\*

Type	Max. ozone production Basic HP (g/h) T <sub>cw</sub> = 15°C	Air demand (m <sup>3</sup> /h NTP)	Cooling water demand (m <sup>3</sup> /h)	<sup>(1)</sup> Total power consumption of the ozone system at T <sub>cw</sub> = 15 °C at maximum performance (Kwh)	Frame dimensions H/L/W (mm)	Weight approx. (kg)
<b>SMA 150</b>	180	6.0	0.7	3.8	1,700x1,350x700	400
<b>SMA 160-3</b>	340	11.2	0.9	4.4	2,300x1,600x550	680
<b>SMA 160-4</b>	440	14.7	1.2	5.8	2,300x1,600x550	680
<b>SMA 160-5</b>	560	18.7	1.5	7.4	2,300x1,600x550	680
<b>SMA 200</b>	760	25.3	2.0	10.0	2,300x2,300x1,350	1,400
<b>SMA 250</b>	900	30.6	2.5	12.1	2,300x2,300x1,350	1,450
<b>SMA 300</b>	1,300	44.2	3.5	17.5	2,300x2,300x1,350	1,750
<b>SMA 350</b>	1,650	55.7	4.5	22.0	2,300x2,300x1,350	1,950
<b>SMA 400</b>	2,250	75.8	6.1	30.0	2,350x3,000x1,350	2,450
<b>SMA 450</b>	2,900	99.2	8.0	39.2	2,350x3,000x1,350	2,750
<b>SMA 500</b>	3,700	123.4	9.9	48.8	2,400x3,000x1,350	2,950
<b>SMA 550</b>	4,300	142.8	11.5	56.5	2,400x3,600x1,350	3,250
<b>SMA 600</b>	5,200	175.6	14.1	69.4	2,400x3,600x1,350	3,800
<b>SMA 650</b>	6,100	204.2	16.4	80.7	2,450x4,000x1,350	4,300
<b>SMA 700</b>	7,300	242.9	19.5	96.0	2,450x4,000x1,350	4,300
<b>SMA 750</b>	8,300	276.8	22.2	109.4	2,500x4,000x1,350	4,550

\* Ozone concentration 2.3 wt% (30 g/m<sup>3</sup> NPT)

<sup>(1)</sup> Without pump or other consumer

### Options

- Air treatment

### Feed and reaction systems

- Pump/injector, diffusers, column gassing
- Closed reactors, contact tanks, stirred reactors

### Residual ozone destructors

- Thermal
- Catalytic

### Electronic operating devices

- Operation panel
- Process control system (PCS)

### Measurement and safety technology

- Ozone concentration measurement (gas/water)
- Dew-point measurement
- Redox measurement
- Ambient-air monitoring and alarm system

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