



The purification mechanism of modular systems of wastewater treatment Facet SMS Series is based on a biological process of active sludge with extended aeration: the microorganisms in the biomass purify the water, so that no additional chemical treatment throughout the process is necessary.

Manufactured in compliance with the requirements of the standard 97/271/EEC, Facet SMS plants consist of a single steel module closed with the exterior dimensions of a 20' container. This modular design allows to increase treatment capacity by installing multiple units in parallel, while eases their transportation, relocation and installation (enabling installation in a single day).

The interior is divided into three chambers (aeration, settling and discharge/disinfection), each of them with their respective inspection access.

In the aeration chamber are housed the air diffusers which provide the necessary oxygenation for the microorganisms and generate the agitation that homogenizes the content of the reactor.

The settling chamber, pressurized to improve the process of deposition of solids, contains the biological filter and the sludge recirculation connections and greases toward the aeration chamber.

To facilitate control of the operation of the unit, all control elements and instruments are supplied fitted behind the access doors.

The low records of noise in operation (less than 55 dB (A) to 6 meters from the equipment) and that they do not generate odors or sludge that should be removed, make our plants one of the equipment with less environmental impact of the market.

### Standard Features

- Meet the performance requirements of 91/271/EEC regulation
- The effluent can be reused
- Sound level < 55 dB(A) (6 meters from the equipment)
- No sludge generation
- No odour generation
- Automatic operation driven by PLC
- Inner protection: 250 micron epoxy paint
- External protection: three layers of 250 micron paint and RAL 6016 finish
- Aeration system composed by blower, air supply pipe, bubble diffusers, filter and air relief valve
- Automatic sludge recirculation system
- Access and inspection manholes
- IP-55 electric control panel, including operation synoptic panel
- Integrated steel ladder to access the top

# SMS Series

## Population Areas

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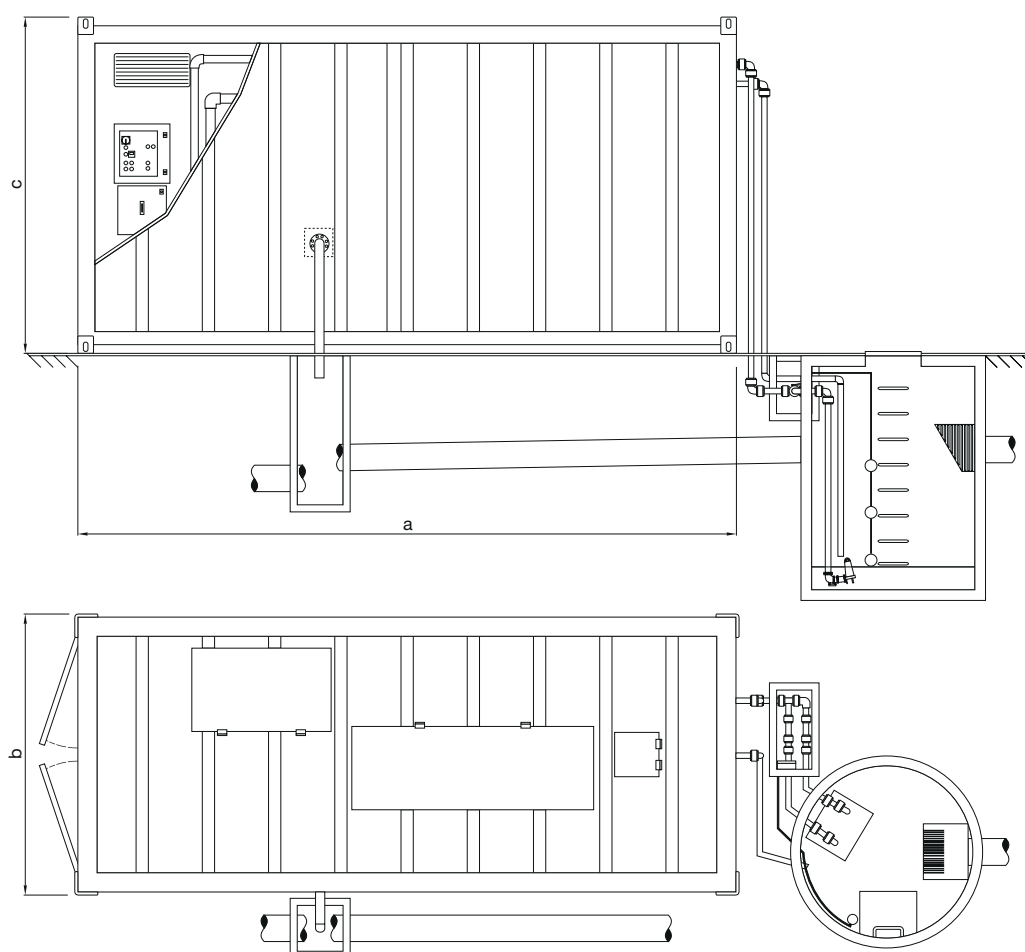
### Materials

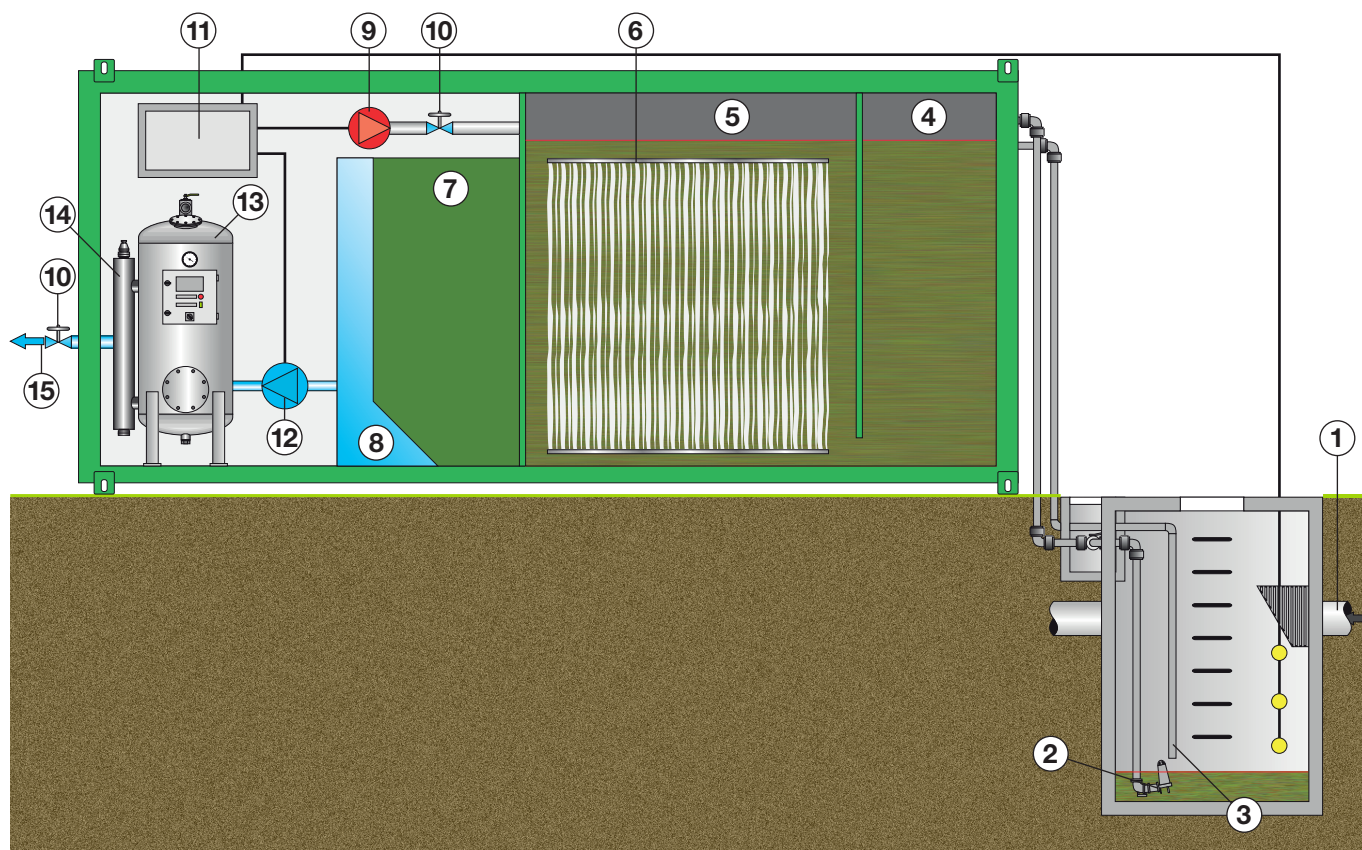
- Vessel: S-275-JR carbon steel
- Air diffusers: AISI-304 stainless steel
- Air diffusers pipe: AISI-304 stainless steel

### Options

- Two elevating grinding-pumping group of submersible type, with level start up/stop automatic control
- Electromagnetic flow rate meter and flow totalizer
- Disinfection circuit by ozonization, composed by air refrigerated ozone generator, blower, and ceramic diffusers
- Disinfection circuit by UV: UV generator, sand filter and motorpump
- Anoxic chamber
- BioFAS

MODEL	DIMENSIONS (mm)			CONNECTIONS		
	Length	Width	Height	A	B	C
SMS-16	6058	2438	2591	DN32	DN80	DN80





## Technical Specifications

### Influent characteristics

- Equivalent inhabitants: 160
- Maximum daily flow rate: 40 m<sup>3</sup>/day
- BOD (Kg/day) according to 91/271/EC: 9.6

### Capacities

- Aeration chamber: 17.4 m<sup>3</sup>
- Settling chamber: 2.85 m<sup>3</sup>
- Discharge chamber: 1.7 m<sup>3</sup>

### Effluent characteristics

- pH: 6-8
- DBO<sub>5</sub>: <20 - <25 mg/l
- DQO: <125 mg/l
- TSS: <20 - <35 mg/l
- O<sub>2</sub> dissolved: 6-10 mg/l
- Temperature: Ambient
- Aspect: Odourless and transparent

ITEM	DESCRIPTION
1	Black water inlet
2	Submersible elevating grinding-pump (one operation, one stand by)
3	Overflow
4	Anoxic chamber
5	Aeration chamber
6	BioFAS
7	Settling chamber
8	Discharge chamber
9	Blower
10	Manual valve
11	PLC (Program Logic Controller)
12	Circulation pump
13	Sand filter
14	UV generator
15	Discharge