



Wasser als Werkzeug  
für eine saubere Umwelt

# *Water Treatment*

**Modular Water Treatment System**



# Modular Water Treatment System

The modular WOMA system for the treatment of waste water and sewage water is suitable for the following areas:

- ▶ Cleaning
- ▶ Decontamination
- ▶ Decoating and paint stripping
- ▶ Surface preparation



**Storage module:**  
vacuum vessel

## Basic aspects:

After water jetting, a suspension that consists of jetting water and removed solid particles is produced. For environmental reasons and health reasons, this suspension needs to be collected and processed.

This is a job for the modular water treatment system.

## Working principle:

The suspension is sucked off by a bypass-channel compressor directly at the water tool, and is collected in a vacuum vessel. Then, the suspension is guided into a reaction vessel by a diaphragm pump. In order to avoid the sedimentation of the solid particles, the pulp is permanently moved by an agitating machine. During the agitating period, a precipitation/ flocculation agent is metered. After the agitation, the sedimentation of the slurry in the reaction vessel starts. Via a clear-water outlet and a slurry outlet, the suspension enters the band-pass filter. During the filtration, a vacuum is generated at the filter fabric by two air-driven diaphragm pumps.



**Transport module:**  
diaphragm pumps

The water that is cleaned due to the filtration, is pumped into the sewage by the diaphragm pump via a filter based on sand or on activated carbon, respectively.

The solids separated during the filtration generate a filter cake on the fibrous web. This cake is removed by a peel-knife and falls into a catcher.



**Filter module:**  
activated carbon filter



**Decontamination of buildings and facilities**



**Cleaning of industrial floors**



**Surface preparation for corrosion protection**



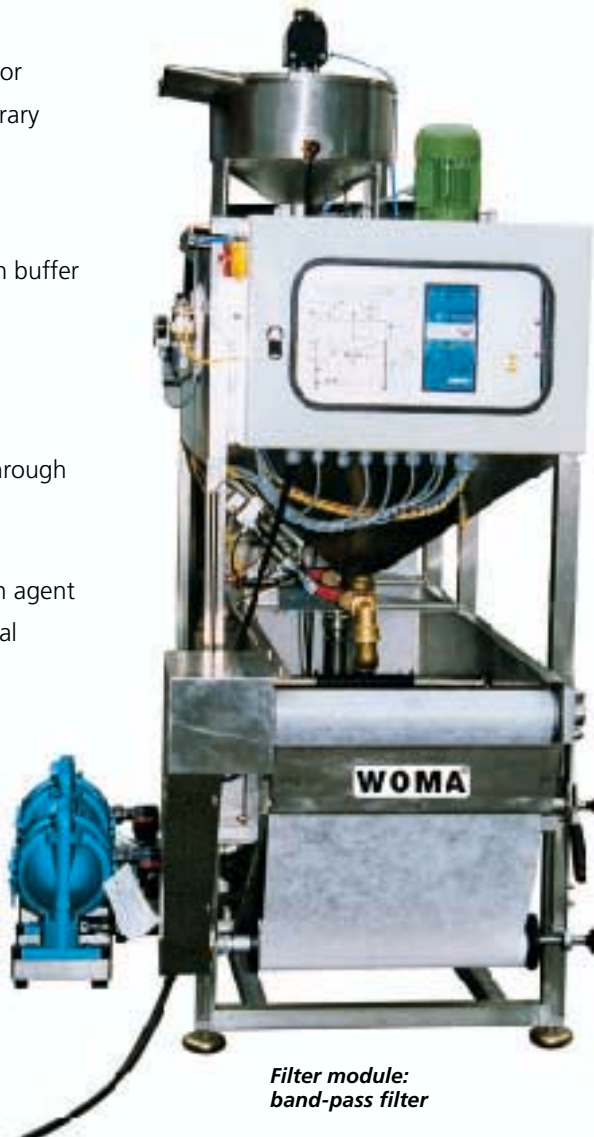
Water as a tool  
for a clean environment

#### Accessories:

- ▶ Bypass-channel compressor
- ▶ Vacuum vessel for temporary storage of the sewage
- ▶ Buffer vessel as a catcher
- ▶ Double-diaphragm pump for the transport between buffer vessel and reaction vessel
- ▶ Sand filter
- ▶ Activated carbon filter
- ▶ Double-diaphragm pump for pumping the water through the filter
- ▶ Compressor
- ▶ Precipitation / flocculation agent
- ▶ Containers for the disposal of the final products

#### Installation:

- ▶ Containerized
- ▶ Mobile version



*Filter module:  
band-pass filter*

**WOMA's modular water treatment system is suitable for treating process waters from the following applications:**

- ▶ Internal cleaning of vessels and containers
- ▶ Cleaning of small-diameter pipelines, tube bundles, etc.
- ▶ Paint stripping from gridirons and body skids
- ▶ Rehabilitation of structures and buildings
- ▶ Maintenance of buildings and heavy technical equipment
- ▶ Environmentally-friendly surface preparation
- ▶ Emission-free enamel stripping and surface decoating
- ▶ Decontamination of surfaces



*Stripping of sensitive surfaces*



*Decoating of concrete surfaces*



*Cleaning of tube bundles with simultaneous waste recovery*

## Technical Characteristics

### The technique:

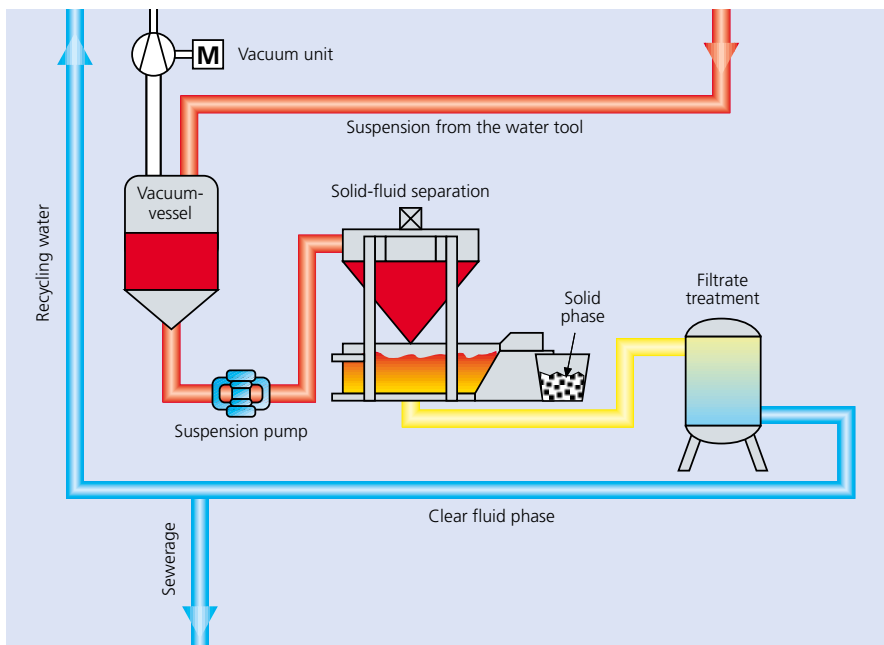
The system consists of the following components

- ▶ Fully automated control system
- ▶ Pre-fractionator (conditioning)
- ▶ Agitation machine
- ▶ Metering unit with precipitation / flocculation agent
- ▶ Surface filtration
- ▶ Ozone treatment (if necessary)
- ▶ Activated carbon filtration
- ▶ Catalytic after-treatment (if necessary)

### Technical data

- ▶ Suspension throughput: 800 l/h to 2,500 l/h (211 USG ph to 660 USG ph)
- ▶ Filter cake moisture: about 25 % to 30 %
- ▶ Electric power rating: about 15 kW (20 hp)
- ▶ Required space: about 9 m<sup>2</sup> (98 sq.ft)
- ▶ Total weight: about 1,000 kg
- ▶ Feeding device: plug 380 V/50 Hz

### Modular system design



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### Delivery Programme

High-pressure plunger pumps  
High-pressure water jet systems  
High-pressure water tools  
and accessories

### Fields of Application

Agriculture  
Automotive and aviation industry  
Beverage industry  
Cement industry  
Chemical industry  
Construction and concrete industry  
Engineering industry  
Food industry  
Glass, porcelain, ceramic industry  
Iron, steel and metal industry  
Mining  
Municipal services  
Offshore industry  
Power industry  
Public transport  
Pulp and paper industry  
Ship building  
Wood working industry