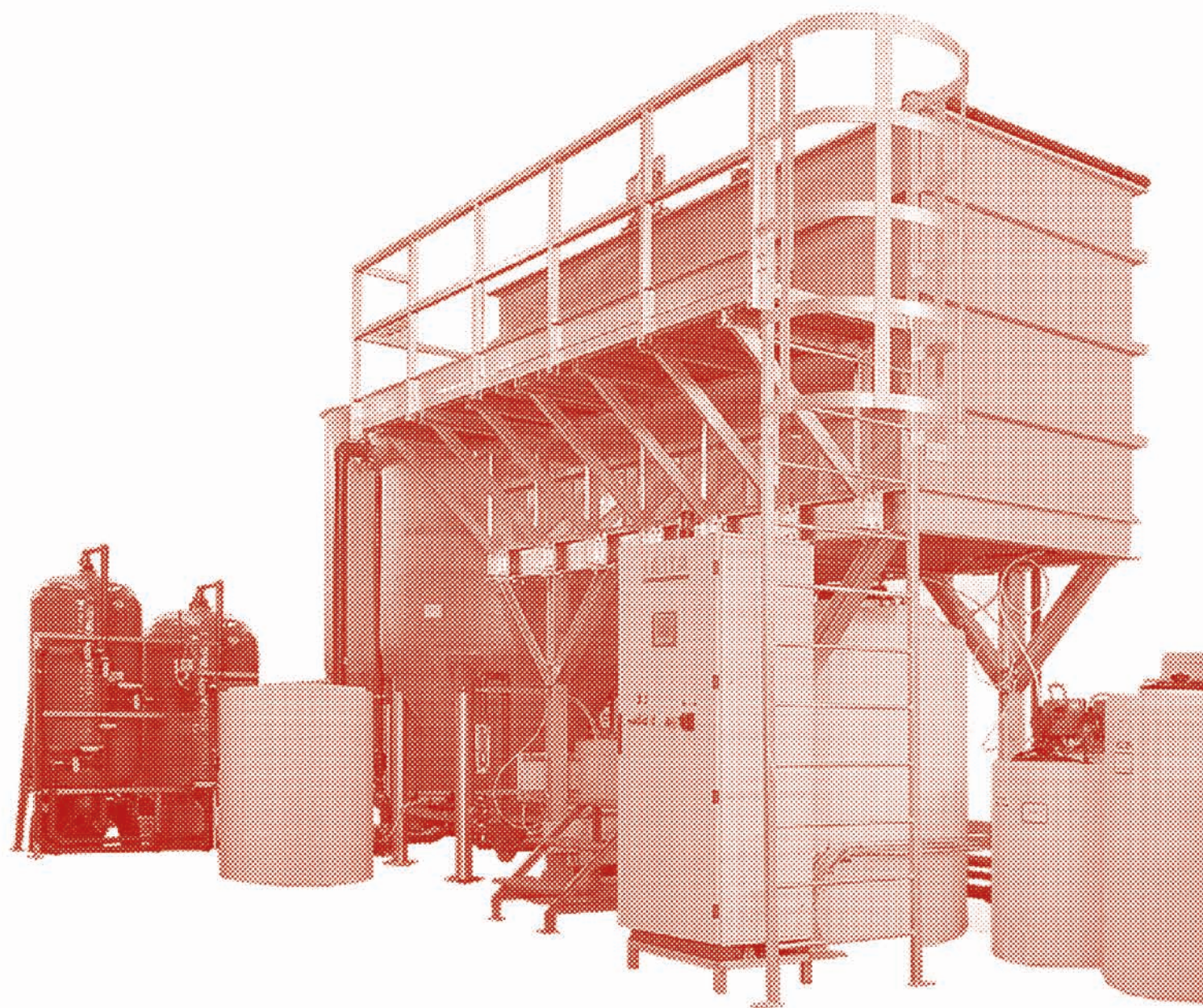


CHEMICAL-PHYSICAL

INDUSTRIAL WASTEWATER TREATMENT



CHEMICAL-PHYSICAL PROCESSES

Chemical-physical systems for the treatment and separation of pollutants contaminating industrial wastewater.

These purification processes are used to treat wastewater containing a high percentage of suspended and dissolved solids.

There are two distinct phases in chemical-physical purification: **CHEMICAL** and **PHYSICAL**.

In the chemical phase, wastewater is conditioned with specific chemical reagents for the pollutants to be separated, producing micro-flakes of insoluble substances.

The physical phase, consists of the separation and subsequent dewatering of the sludge from the clarified water.

The clarified water is then filtered and controlled before being discharged into the sewer system, while the dewatered sludge is sent for disposal.

In some applications, the purified water returns in a closed loop to the production process.

SAITA has been designing and producing chemical-physical plants for more than 40 years, and has wide a range of standard modular systems, fully automated, continuous or discontinuous cycle.



Sectors

- Electroplating
- Vibrofinishing
- Powder coating
- Aluminium anodizing
- Cataphoresis and electrophoresis
- Chemical industry
- Pharmaceutical
- Electronics and semiconductors
- Landfill leachate
- Contaminated site reclamation
- First rain

Applications

- Metal hydroxides precipitation
- Chromium 6+ reduction
- Cyanides oxidation
- Oil removal
- Adsorption
- Clariflocculation
- Oxidation - Fenton Reaction
- Sulfate Precipitation - Desulfate
- **NEW! Boron Precipitation**

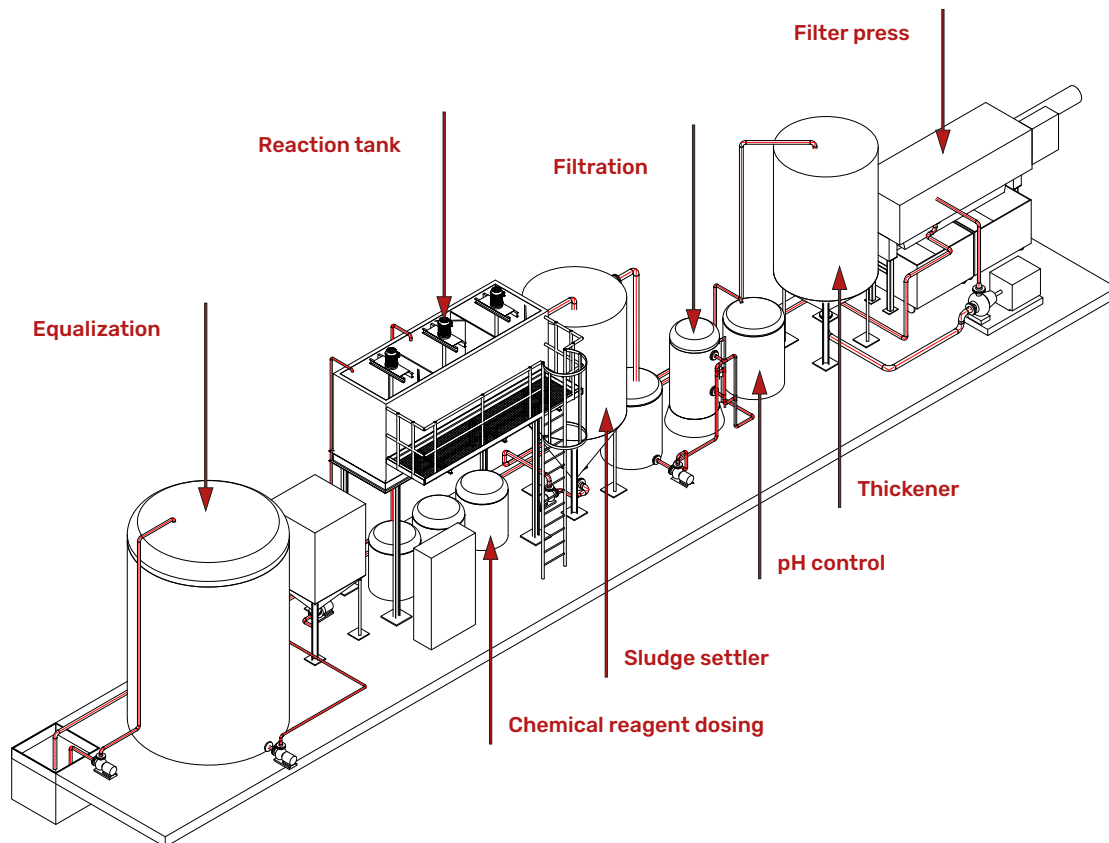
Specifications

Chemical-physical plants can be designed with **continuous** or **discontinuous** (batch) cycles. In the first stages of the treatment process, wastewater is collected and balanced (**equalization**), in some cases it is stored separately and treated in balanced and controlled volumes.

The **chemical reaction** stages features one or more sequential tanks in which chemical reagents are added using **automated dosing** stations. Dosages are controlled by volume or by pH. The next stage is

the settling (**sedimentation**) when the sludge is separated from the clarified water. The clarified water passes to the **filtration** stage and subsequent final **pH control and adjustment**.

Settled sludge, on the other hand, is dewatered using **sludge treatment** technologies including: **filter press, rotary vacuum filter, gravity filters** or **centrifuges**. Dewatering reduces the volume and weight of the sludge to be disposed resulting in cost savings.



CF Series

CF series are continuous systems used with high flow rates of wastewater to be treated. The process design and reagent dosages are always selected to the specific characteristics of the water to be treated.

MODELS CF	FLOW RATE (Lt/h)
CF1000	1000
CF2000	2000
CF4000	5000
CF6000	6000
CF10000	10000



BR Series

The BR series are batch or discontinuous cycle systems. A given volume of water is treated in a single reaction tank in which all stages of the chemical-physical process take place. Batch plants can be integrated into continuous plants to treat small volumes or highly contaminated wastewater.

MODELS BR	CYCLE CAPACITY
BR500	500
BR1000	1000
BR2500	2500
BR4000	4000
BR6000	6000
BR8000	8000



Optionals

- Turbidity meter
- In-line analyser for COD
- In-line selective analyser for specific ions
- Ion selective resin filters for metals
- DAF units
- Containerized modules
- Industry 4.0 Ready

