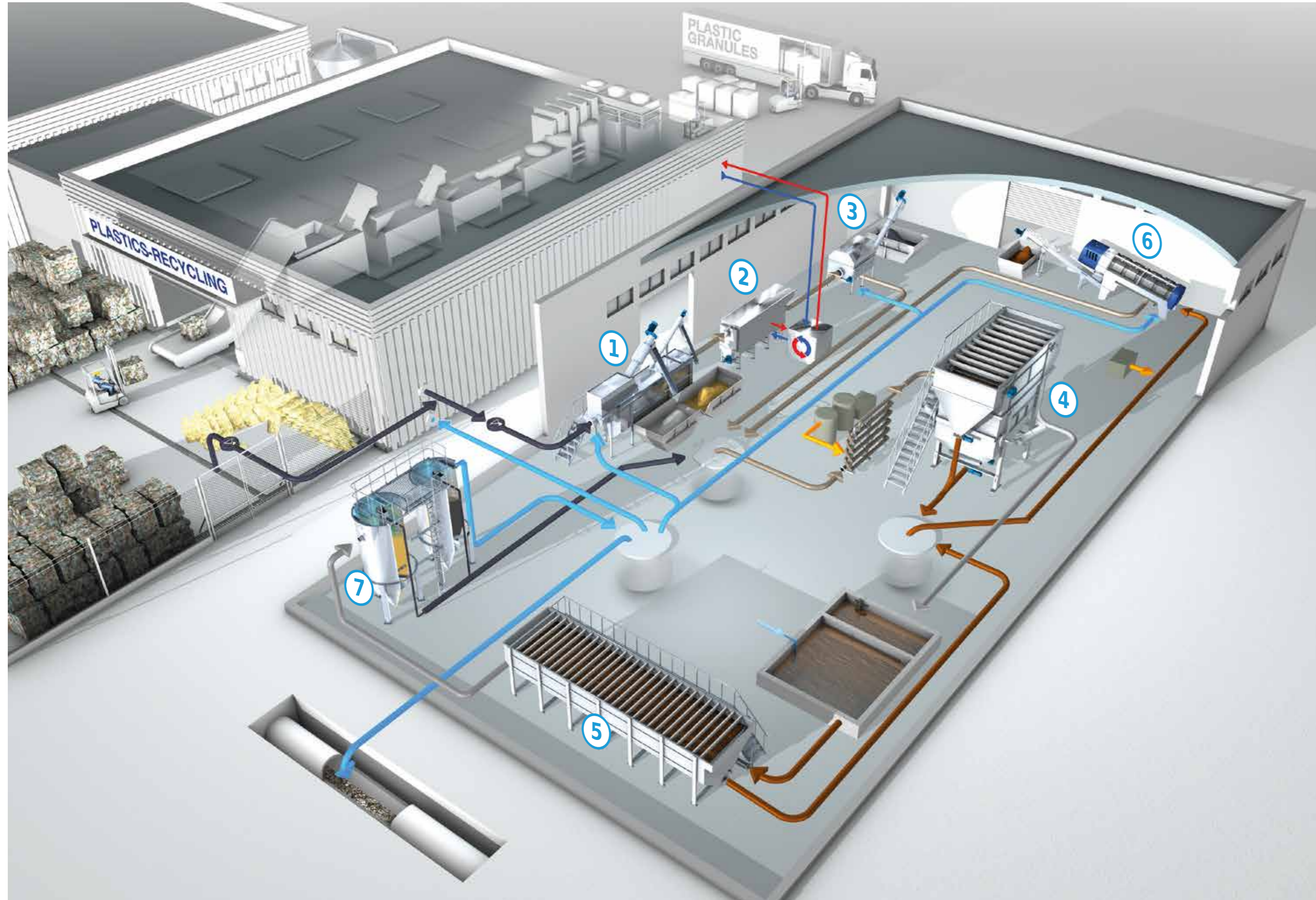


## HUBER Solutions for the Plastics Recycling Industry

Project-specific individual and turnkey system solutions for

- ▶ process water treatment
- ▶ process sludge treatment
- ▶ energy recovery from process wastewater streams



## Mechanical pre-treatment

The HUBER Complete Plant ROTAMAT® Ro5 is designed to perform several process steps simultaneously:

- ▶ Fine screening of process wastewater with integrated screenings compaction and washing
- ▶ Selective separation, dewatering and washing of settleable solids

The multifunctional Complete Plant is a completely encapsulated, odour-free system and can be installed above or below ground.



HUBER Complete Plant ROTAMAT® Ro5.

## Energy recovery

The modular HUBER Heat Exchanger RoWin is specially designed for the highly loaded hot wash water streams from the plastics recycling process. Due to its integrated, fully automated self-cleaning system, the heat transfer surfaces are kept free and maximum energy transfer is continuously ensured. The recovered energy is available free of charge for reuse in the plastics recycling process or for heating the factory buildings. The wastewater heat exchanger can be installed either in the tank or in the channel.



HUBER Heat Exchanger RoWin.

## Microscreening

The HUBER Drum Screen RoMesh® with a mesh size of up to 80 µm reliably separates all sediment and suspended matter particles.

The integrated high-pressure cleaning nozzle (120 bar) ensures trouble-free operation. In addition, service water consumption is reduced to a minimum through internal wash water circulation. Furthermore, the HUBER Drum Screen RoMesh® is characterised by its enclosed and compact design.



HUBER Drum Screen RoMesh®.

## Internal water recycling

The HUBER Dissolved Air Flotation HDF is the solution for advanced process wastewater treatment to reuse the recovered clear water for the plastics recycling process.

The innovative HUBER Chemical Dosing DIGIT-DOSE system reduces precipitant consumption – and thus operating costs for the flotation plant and disposal costs for the flotation sludge – to a minimum.



HUBER Dissolved Air Flotation Plant HDF.

## Separation of process and activated sludge

In addition to the compact HUBER Dissolved Air Flotation HDF (No. 4), a flatter HUBER Dissolved Air Flotation HDF S (No. 5) is available for defined separation of highly contaminated wastewater and sludge. The letter "S" stands for sludge.

The HDF S flotation plant thus relieves or replaces space-intensive secondary clarifiers.

The HUBER Chemicals Dosing DIGIT-DOSE system reduces investment, operating and disposal costs to a minimum.



*HUBER Dissolved Air Flotation Plant HDF S.*

## Sludge Treatment

The HUBER Screw Press Q-PRESS® dewateres the process sludge fully automatically and continuously, reducing disposal costs to a minimum.

The energy-efficient screw drive with low speed (< 1 rpm) allows almost wear-free operation with optimum dewatering performance. The user-friendly and easy-to-maintain machine is compact and space-saving as well as vibration-free and virtually noiseless in operation.

An innovative control system enables unattended operation even with fluctuating sludge properties.



*HUBER Screw Press Q-PRESS®.*

## Advanced wastewater treatment

Where demands on wastewater treatment are more stringent, machines and process technology of advanced wastewater treatment are used.

One variant is the reliable retention of filterable substances in the HUBER Sandfilter CONTIFLOW® and the subsequent elimination of trace substances and dissolved COD compounds by adsorption in the HUBER Activated Carbon Filter CONTIFLOW GAK.



*HUBER CONTIFLOW® sand and activated carbon filter.*

# Advantages of HUBER solutions for the plastics recycling industry

## Global...

- ▶ Global network through 22 subsidiaries, 32 representatives, 6 sales offices and other partners as well as cooperating engineering companies
- ▶ HUBER Global Service 24/7
- ▶ 4 production sites worldwide
- ▶ Highest stainless steel quality, acid-treated in a pickling bath

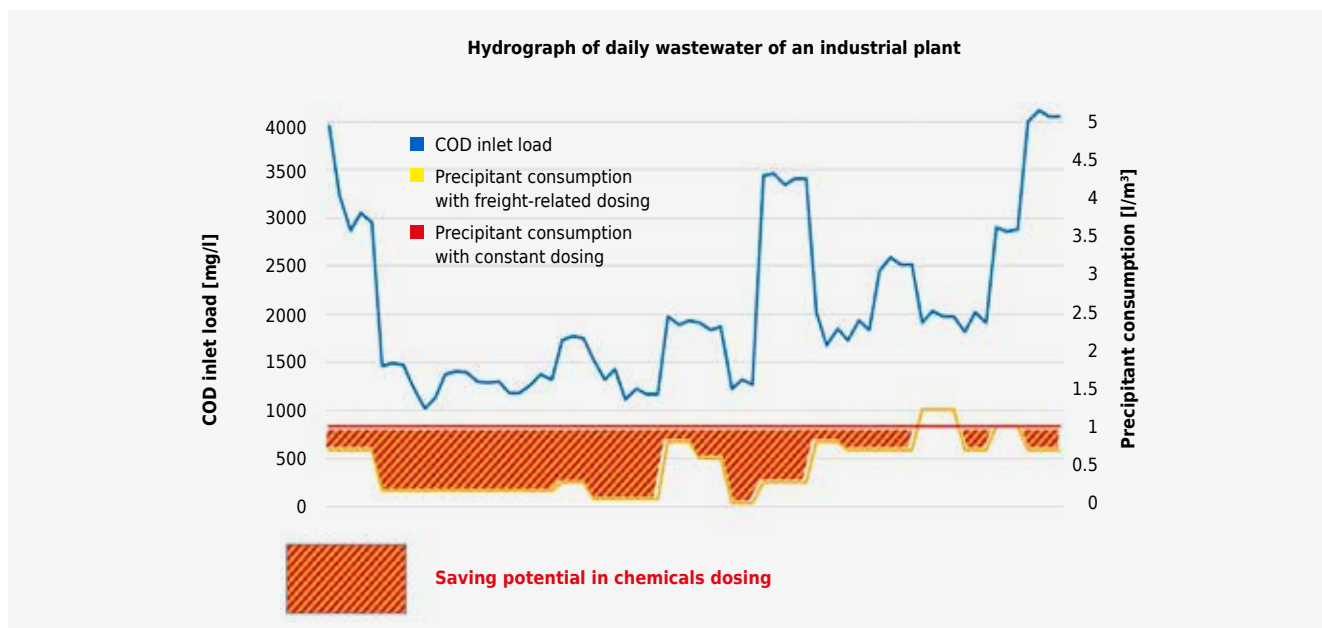
## ... and yet project-specific

- ▶ Comprehensive product portfolio as a basis for project-specific individual as well as turnkey system solutions
- ▶ HUBER process solutions are independent of hydraulics (several 100 m<sup>3</sup>/h per treatment line easily possible)

- ▶ HUBER process solutions are independent of the plastics recycling process (post-consumer and post-industrial plastics)
- ▶ Intelligent and fully automated treatment processes designed for highly fluctuating wastewater characteristics and concentrations
- ▶ Maximum flexibility due to the possibility of mobile container or frame construction
- ▶ Process reliability due to:
  - ▶ analyses in the HUBER laboratory
  - ▶ pilot plants for on-site analysis (transportable by Euro pallet)
  - ▶ large-scale technical tests using containerised demonstration units

# Advantages of HUBER Chemicals Dosing DIGIT-DOSE

- ▶ Up to 30 % reduction in chemicals consumption
- ▶ Support and relief for operating staff
- ▶ Up to 20 % reduced flotatae sludge volumes
- ▶ Integrated automatic cleaning of the measuring equipment used
- ▶ Low investments costs and space requirements for mixing and balancing tanks
- ▶ Return on investment within few months



## HUBER SE

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HUBER Solutions for the Plastics Recycling Industry  
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