

# 4.3

DRINKS INDUSTRY



Water and wastewater technology for the alcohol-free drinks industry and breweries



# Water and wastewater technology for the alcohol-free drinks industry and breweries

## Wastewater quality and process concepts

The alcohol-free drinks industry (soft drinks and fruit juice industry, mineral wells and springs) and breweries mainly produce production wastewater, cooling water and sanitary wastewater from various areas of origin. The wastewater constituents from the soft drinks industry and mineral wells and springs are: Glue and fibrous substances, alkali and acidic cleaning solutions with organic contamination, sugar and product losses as well as product residues from returnable bottles. The wastewater of breweries, depending on the drinks produced, contains different concentrations of carbohydrates and proteins.

The wastewater from the alcohol-free drinks industry and breweries is mainly fed into public mechanical-biological wastewater plants. The organic substances in the above-named wastewater are readily biologically degradable and can therefore be treated successfully together with household wastewater.

In-house treatment of the production wastewater with subsequent direct discharge into a receiving water in Germany requires compliance with the minimum requirements of the wastewater regulations (Abwasserordnung - AbwV) Annex 6 (production of soft drinks and bottling) / Annex 10 (breweries).

The following **process steps** are used generally for treatment of **wastewater from drinks industry and breweries**:

- Mechanical wastewater pretreatment
- Grease separation/flotation
- Storage and homogenisation
- Neutralisation
- Biological treatment
  - Anaerobic wastewater treatment
  - Aerobic wastewater treatment (SBR/MBR plants)
- Filtration
- Sludge treatment and energy generation from biogas
- Waste air treatment
- Automation (E-I&C technology, process and remote monitoring, etc.)

## We have the optimum solution

The **wks group** offers **turnkey, integrated solutions** and **individual concepts** for water and wastewater treatment in the **drinks industry and breweries**.

The optimum process technology is selected, taking into consideration the operational requirements, the need to minimise disposal quantities and energy consumption and/or to generate energy. This technology can be used for the respective wastewater composition and results in the required discharge limits.

**Process engineering, mechanical engineering and automation:** The **wks group** of companies unites all technical know-how required to implement technical industrial water treatment tasks.

From individual advice, development, to production, installation, commissioning, through to maintenance/service and optimisation, we work with strong partners.

The **wks group** supplies **products and plant components from its own production facility**. Here the focus is on fittings, pipes and vessels made of stainless steel. Experienced engineers, and specialised fitters and welders ensure effective project completion, from the production of individual products through to mechanical equipment for complete, turnkey plants. In all projects we guarantee reliability, on schedule completion and flexibility.



## Range of services

- Turnkey plant construction
- Consulting and planning
- Process engineering
- Construction work
- Mechanical engineering
- Automation
- Installation
- Maintenance and service
- Training
- Optimisation
- Operation management

## Range of products

- Filter screens
- Mixing and balancing tanks
- Grease separators/flotation plants
- Anaerobic wastewater treatment
- Energy generation from biogas
- Aerobic biological treatment (incl. nitrification and denitrification)
- Chemical P precipitation
- Flocculation filtration
- Chemical metering and storage
- Sludge treatment
  - Sludge dehydration
  - Sludge thickening
  - Sludge drying

## Our experience – your advantage






Our know-how acquired from almost **25 years' of successful water industry plant construction**, our knowledge, our technologies and innovations in **industrial water treatment** are the **guarantor** for an important part of **your economic business success!**

We develop and offer cross-product and cross-system solutions for new build, reconstruction and optimisation of **water and wastewater plants for the drinks industry and breweries.**

**Your advantage:** Our expertise in processing and mechanical engineering, automation systems, products and plants – we have precisely what you need or develop it for you!



## Products and systems

 WATER	Equipment components	Waterworks	Drinking water treatment	Water storage plants	
	 WASTE WATER	Screens	Flushing equipment	Weirs	Scumboards
		Flow controllers	Valves		
 STORMWATER TREATMENT	Stormwater overflow tanks	Stormwater treatment plants	Combined waste- and floodwater	Special structures for airports	
	 WASTE WATER TREATMENT	Precipitants with metering stations	SBR clean water decanters	SBR vertical agitators	Floating sludge decanters
Municipal wastewater treatment plants		Industrial wastewater treatment plants	Reconstruction and optimisation	SBR plants	TRIUNO compact wastewater treatment plants
Equipment components		Sludge treatment / digestion			
 AUTO-MATION	PLC technology / process control technology	Complete electrical/ I&C systems	Remote control (telecontrol) systems	Evaluation / logging	Web-based camera system
	Process control loop block	Outdoor cabinet systems	Monitoring small wastewater treatment plants	Energy data recording	
	Testing explosion protection	Energy monitoring	Medium-voltage switching autorisation		