

POLYLINE®

POLYMER PREPARATION AND DOSING SYSTEMS



Agitación
Dosificación
Bombeo

THE SIMPLE AND EFFICIENT SOLUTION FOR WATER TREATMENT

Polymer preparations are used everywhere where the sedimentation or flotation of suspended solids in water has to be fastened, and where the dewatering behavior of thickened sludge has to be improved, such as in the waste water treatment, paper industry, water treatment and sludge dewatering.

The PolyLine® by **sera** is a series of easy and flexible, as well as economic and efficient systems, for the preparation of polymers. The series covers preparation systems which can be run with dry or liquid polymers.

The systems are equipped with a precise flow through measurement for the solution preparation and fluid level measurement, to ensure the economic operation of the systems.

The polymer preparation and dosing systems of the PolyLine® series are specially designed for the production of polymer-derived solutions and stock solutions.

Applications can be found in the following areas:

- Sludge dewatering/ -conditioning
- Waste water treatment
- Paper Industry
- Treatment of drinking water
- Chemical industry
- Treatment of industrial water
- Power plant
- Shipbuilding

PRODUCT FEATURES:

- Modular customer- and application-specific polymer system
- High-quality PP tank
- Versatile application: Solid, liquid or a combination of solid/ liquid polymer
- High process efficiency by dissolving the prepared polymer almost completely
- Exact preservation of the solvent concentration through reproducible calibration of the dry-material dosing feeder or the liquid concentrate pump
- Low-maintenance level measurement by continuous and contact-free ultrasonic sensor
- Ease of operation via a compact PLC with integrated process visualization and touchscreen
- Modular construction can be optionally expanded with many items from the sera product range according to specific needs of the customer
- Available as ex-design

IDEALLY MATURED POLYMER ECONOMICAL, SAFE TO OPERATE AND EFFICIENT

ADVANTAGES IN AN OVERVIEW

- Economical and high process efficiency
- Ideally matured polymer and thus low product carryover
- Durable and robust systems
- Compact PLC with touchscreen and process visualization according to industrial standard
- Simple installation and start-up through the use of industrial standards at the interfaces
- High flexibility for customer- and application-specific solutions
- Modularly extensible by versatile options and accessories
- Possible combinations with other systems and **sera** products or pump types (e. g. eccentric screw pumps)
- Suitable for applications in potentially explosive areas (ATEX)

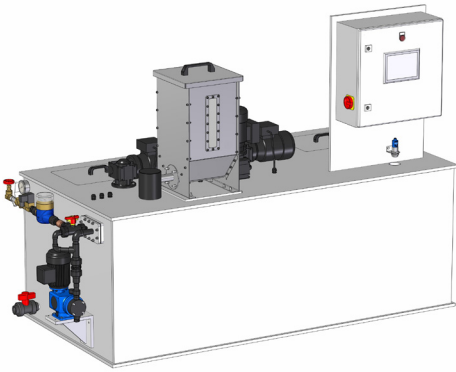
CUSTOMER BENEFITS

- Low-cost investment
- Economical operation
- Safe process and production
- Short delivery times
- Ideally designed as per customer request and application
- Robust and durable industrial construction
- Easy commissioning and operation
- High product quality
- Everything from a single source



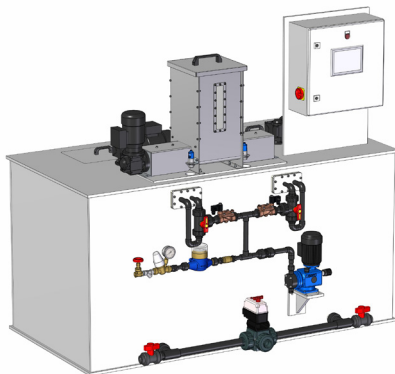
SYSTEM VERSIONS

PolyLine® - Flow



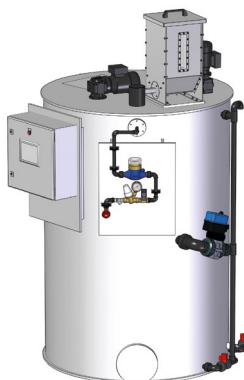
With the 3-chamber system, the polymer is dissolved with water in the first chamber. The product then matures in the second chamber. The prepared solution is transferred into the third chamber via the overflow and then removed. Since the process fits optimally to the demand, a product carryover is kept at a minimum.

PolyLine® - Swing



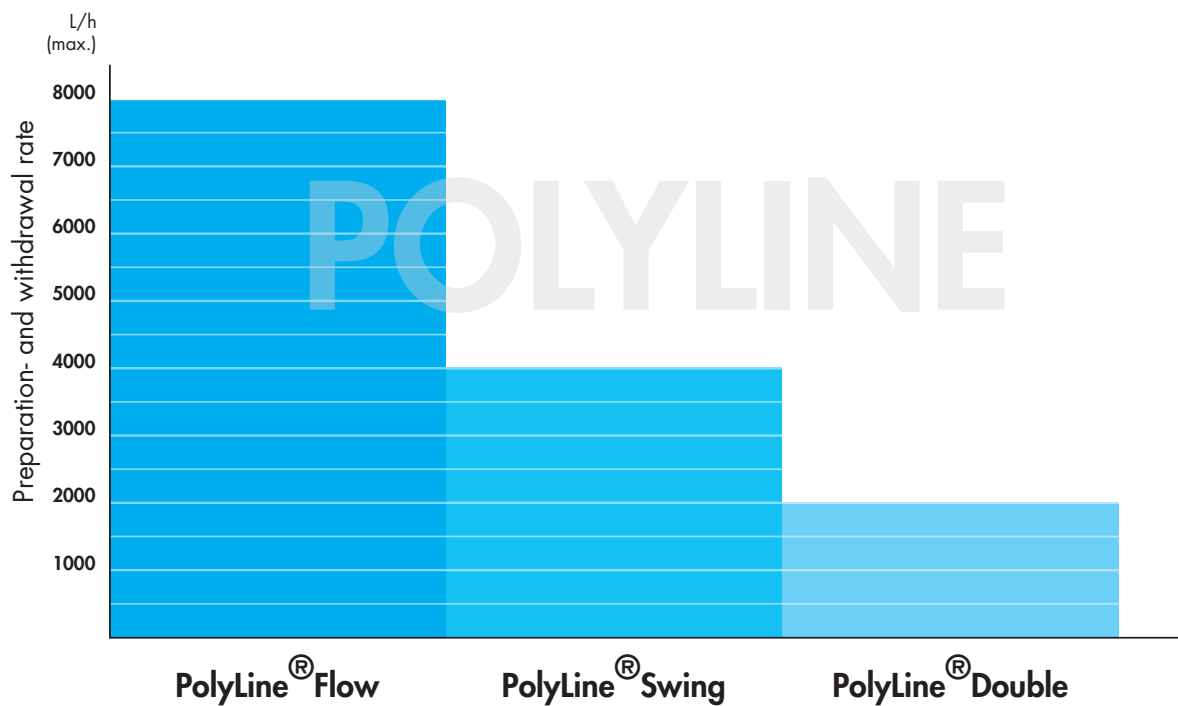
The tank of the batch system consists of 2 separate chambers. The polymer solution is prepared successively in the chambers. After a defined maturing time, the polymer solution can be used. Product carryover is ruled out.

PolyLine® - Double



In the case of the double decker variant, the chambers are installed one above the other. Preparation of the polymer is effected in the top chamber. The matured product is drained into the lower chamber after the maturing time has ended. Because of this process, a product carryover is prevented.

PERFORMANCE RANGE



DESIGNS

Design of PolyLine Preparation- and Dosing units

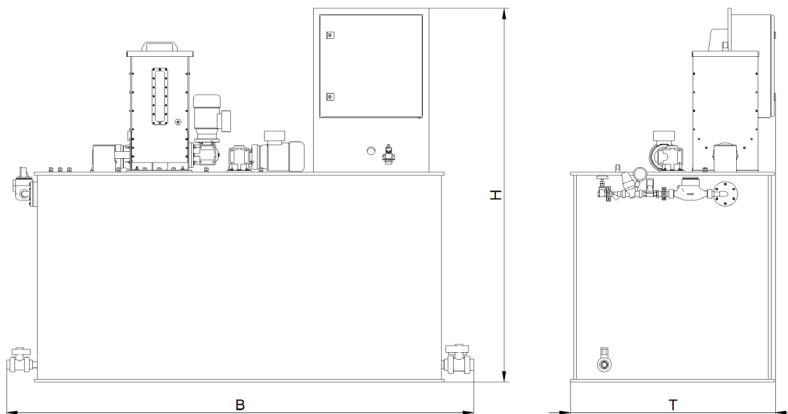
- S** Polymer solid
- L** Polymer liquid
- SL** Polymer solid and liquid

TECHNICAL DATA

PolyLine® - Flow



3 Chamber unit



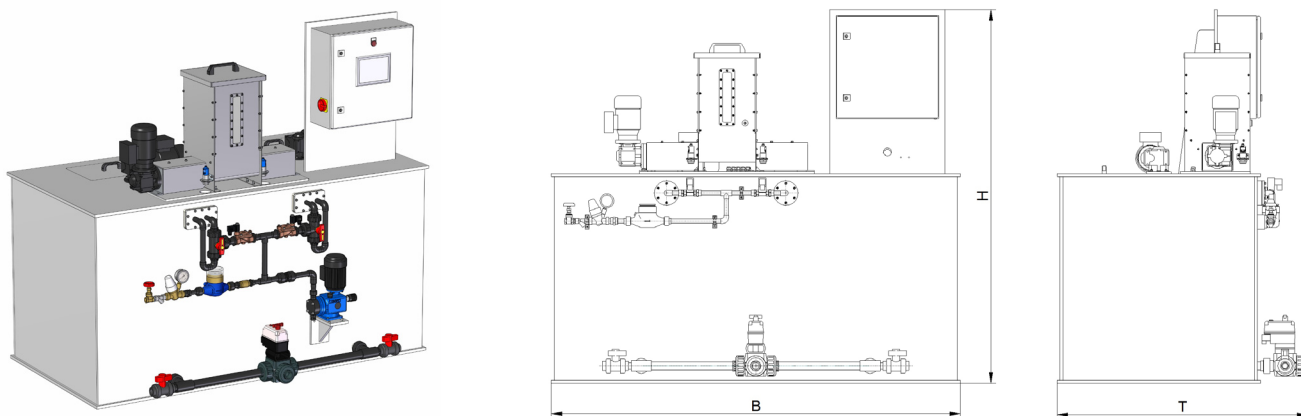
| Type | Version | Tank volume | System volume | Polymer concentration | Viscosity | System rating(*) | Maturing time |
|---------------------|---------------------|-------------|---------------|-----------------------|-----------|------------------|---------------|
| PolyLine® Flow 500 | S (Solid) | 500L | 500L | 0,05..1% | 500mPas | 500L/h | 45 Min. |
| | L (Liquid) | | | | | | |
| | SL (Liquid & Solid) | | | | | | |
| PolyLine® Flow 1000 | S (Solid) | 1000L | 1000L | 0,05..1% | 500mPas | 1000L/ h | 45 Min. |
| | L (Liquid) | | | | | | |
| | SL (Liquid & Solid) | | | | | | |
| PolyLine® Flow 2000 | S (Solid) | 2000L | 2000L | 0,05..1% | 500mPas | 2000L/ h | 45 Min. |
| | L (Liquid) | | | | | | |
| | SL (Liquid & Solid) | | | | | | |
| PolyLine® Flow 4000 | S (Solid) | 4000L | 4000L | 0,05..1% | 500mPas | 4000L/ h | 45 Min. |
| | L (Liquid) | | | | | | |
| | SL (Liquid & Solid) | | | | | | |
| PolyLine® Flow 8000 | S (Solid) | 8000L | 8000L | 0,05..1% | 500mPas | 8000L/ h | 45 Min. |
| | L (Liquid) | | | | | | |
| | SL (Liquid & Solid) | | | | | | |

| Type | Version | H(**) | B | D | Weight kg ca. | Connection removal | Connection supply |
|---------------------|---------------------|-------|------|------|---------------|--------------------|-------------------|
| PolyLine® Flow 500 | S (Solid) | 1550 | 1990 | 990 | 225 | DN25 | DN15 |
| | L (Liquid) | | | | 210 | | |
| | SL (Liquid & Solid) | | | | 245 | | |
| PolyLine® Flow 1000 | S (Solid) | 1550 | 1990 | 990 | 225 | DN25 | DN15 |
| | L (Liquid) | | | | 210 | | |
| | SL (Liquid & Solid) | | | | 245 | | |
| PolyLine® Flow 2000 | S (Solid) | 1820 | 1990 | 990 | 260 | DN32 | DN15 |
| | L (Liquid) | | | | 240 | | |
| | SL (Liquid & Solid) | | | | 275 | | |
| PolyLine® Flow 4000 | S (Solid) | 2110 | 2990 | 1280 | 440 | DN40 | DN25 |
| | L (Liquid) | | | | 420 | | |
| | SL (Liquid & Solid) | | | | 465 | | |
| PolyLine® Flow 8000 | S (Solid) | 2330 | 4000 | 1570 | 740 | DN50 | DN25 |
| | L (Liquid) | | | | 720 | | |
| | SL (Liquid & Solid) | | | | 765 | | |

(*) depending on maturing time (**) depending on the construction head of the dry material feeder

TECHNICAL DATA

PolyLine® - Swing



2 Chamber pendulum unit

| Type | Variante | Tank volume | System volume | Polymer concentration | Viscosity | System rating(*) | Maturing time |
|----------------------|---------------------|-------------|---------------|-----------------------|-----------|------------------|---------------|
| PolyLine® Swing 500 | S (Solid) | 2 x 500L | 1000L | 0,05..1% | 500mPas | 500L/h | 45 Min. |
| | L (Liquid) | | | | | | |
| | SL (Liquid & Solid) | | | | | | |
| PolyLine® Swing 1000 | S (Solid) | 2 x 1000L | 2000L | 0,05..1% | 500mPas | 1000L/ h | 45 Min. |
| | L (Liquid) | | | | | | |
| | SL (Liquid & Solid) | | | | | | |
| PolyLine® Swing 2000 | S (Solid) | 2 x 2000L | 4000L | 0,05..1% | 500mPas | 2000L/ h | 45 Min. |
| | L (Liquid) | | | | | | |
| | SL (Liquid & Solid) | | | | | | |
| PolyLine® Swing 4000 | S (Solid) | 2 x 4000L | 8000L | 0,05..1% | 500mPas | 4000L/ h | 45 Min. |
| | L (Liquid) | | | | | | |
| | SL (Liquid & Solid) | | | | | | |

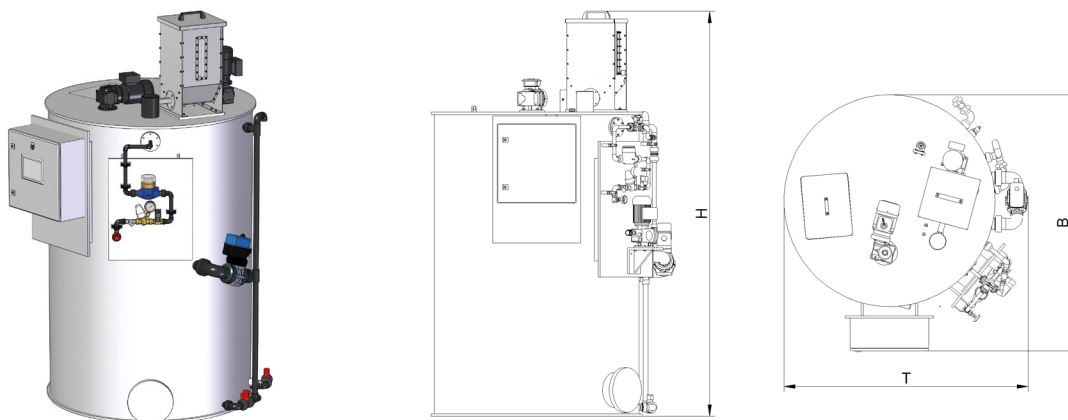
(*) depending on maturing time

| Type | Version | H(**) | B | D | Weight kg ca. | Connection removal | Connection supply |
|----------------------|---------------------|-------|------|------|---------------|--------------------|-------------------|
| PolyLine® Swing 500 | S (Solid) | 1550 | 1990 | 1210 | 240 | DN25 | DN15 |
| | L (Liquid) | | | | 230 | | |
| | SL (Liquid & Solid) | | | | 260 | | |
| PolyLine® Swing 1000 | S (Solid) | 1820 | 1990 | 1220 | 245 | DN32 | DN15 |
| | L (Liquid) | | | | 230 | | |
| | SL (Liquid & Solid) | | | | 260 | | |
| PolyLine® Swing 2000 | S (Solid) | 2110 | 2990 | 1520 | 280 | DN40 | DN15 |
| | L (Liquid) | | | | 260 | | |
| | SL (Liquid & Solid) | | | | 300 | | |
| PolyLine® Swing 4000 | S (Solid) | 2330 | 4000 | 1520 | 460 | DN50 | DN25 |
| | L (Liquid) | | | | 440 | | |
| | SL (Liquid & Solid) | | | | 480 | | |

(**) depending on the construction head of the dry material feeder

TECHNICAL DATA

PolyLine® - Double



2 Chamber unit

| Type | Version | Tank volume | System volume | Polymer concentration | Viscosity | System rating(*) | Maturing time |
|-----------------------|---------------------|-------------|---------------|-----------------------|-----------|------------------|---------------|
| PolyLine® Double 500 | S (Solid) | 2 x 500L | 1000L | 0,05..1% | 500mPas | 500L/h | 45 Min. |
| | L (Liquid) | | | | | | |
| | SL (Liquid & Solid) | | | | | | |
| PolyLine® Double1000 | S (Solid) | 2 x 1000L | 2000L | 0,05..1% | 500mPas | 1000L/ h | 45 Min. |
| | L (Liquid) | | | | | | |
| | SL (Liquid & Solid) | | | | | | |
| PolyLine® Double 2000 | S (Solid) | 2 x 2000L | 4000L | 0,05..1% | 500mPas | 2000L/ h | 45 Min. |
| | L (Liquid) | | | | | | |
| | SL (Liquid & Solid) | | | | | | |

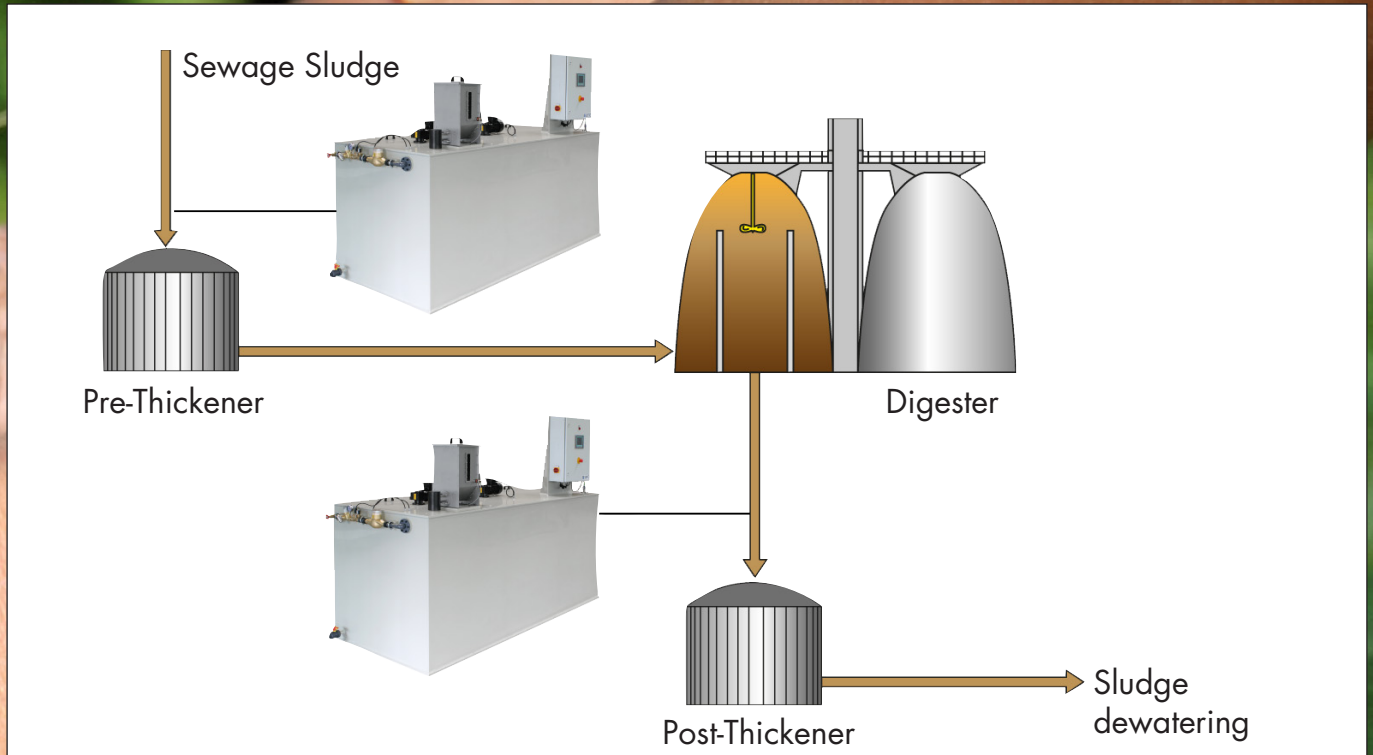
(*) depending on maturing time

| Type | Version | H(**) | B | D | Weight kg ca. | Connection removal | Connection supply |
|-----------------------|---------------------|-------|------|------|---------------|--------------------|-------------------|
| PolyLine® Double 500 | S (Solid) | 2000 | 1400 | 1300 | 270 | DN25 | DN25 |
| | L (Liquid) | | | | 240 | | |
| | SL (Liquid & Solid) | | | | 290 | | |
| PolyLine® Double1000 | S (Solid) | 2600 | 1600 | 1500 | 300 | DN25 | DN25 |
| | L (Liquid) | | | | 280 | | |
| | SL (Liquid & Solid) | | | | 340 | | |
| PolyLine® Double 2000 | S (Solid) | 3000 | 1800 | 1700 | 380 | DN32 | DN25 |
| | L (Liquid) | | | | 360 | | |
| | SL (Liquid & Solid) | | | | 410 | | |

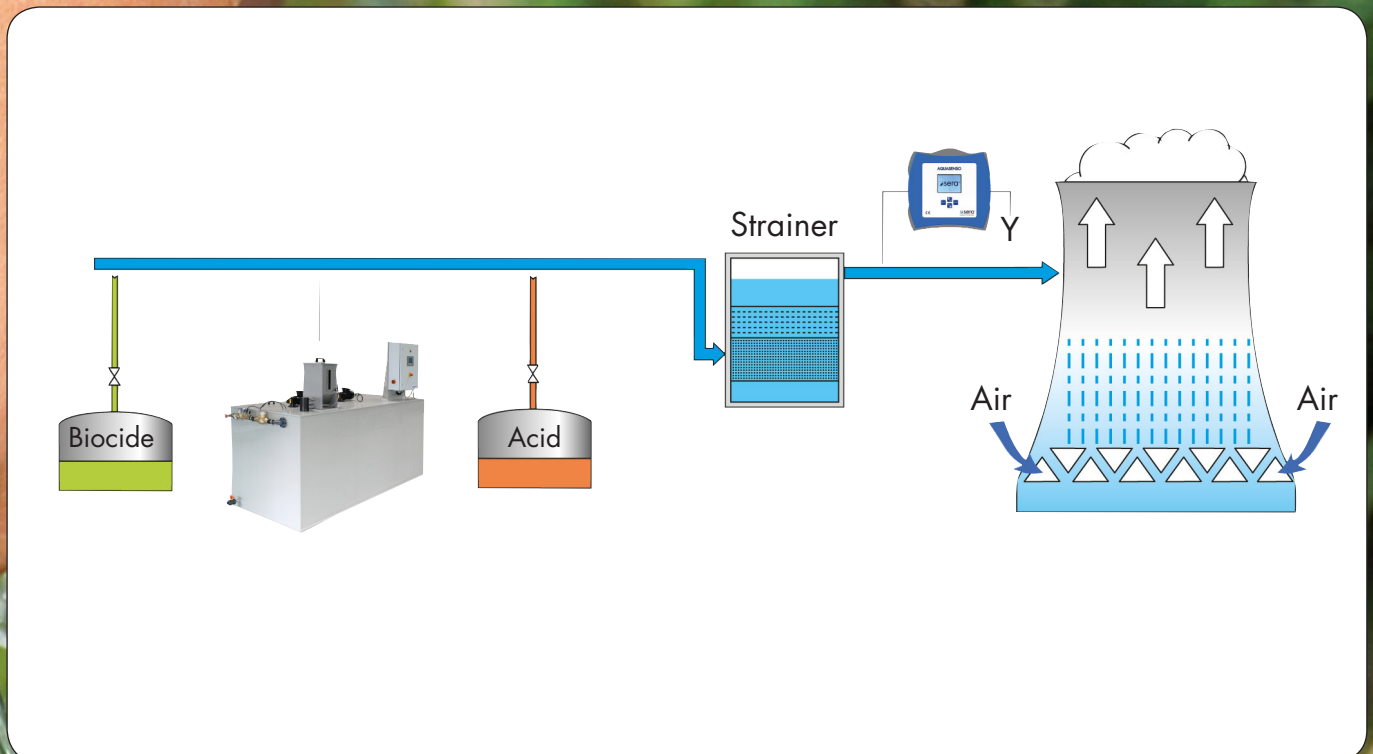
(**) depending on the construction head of the dry material feeder

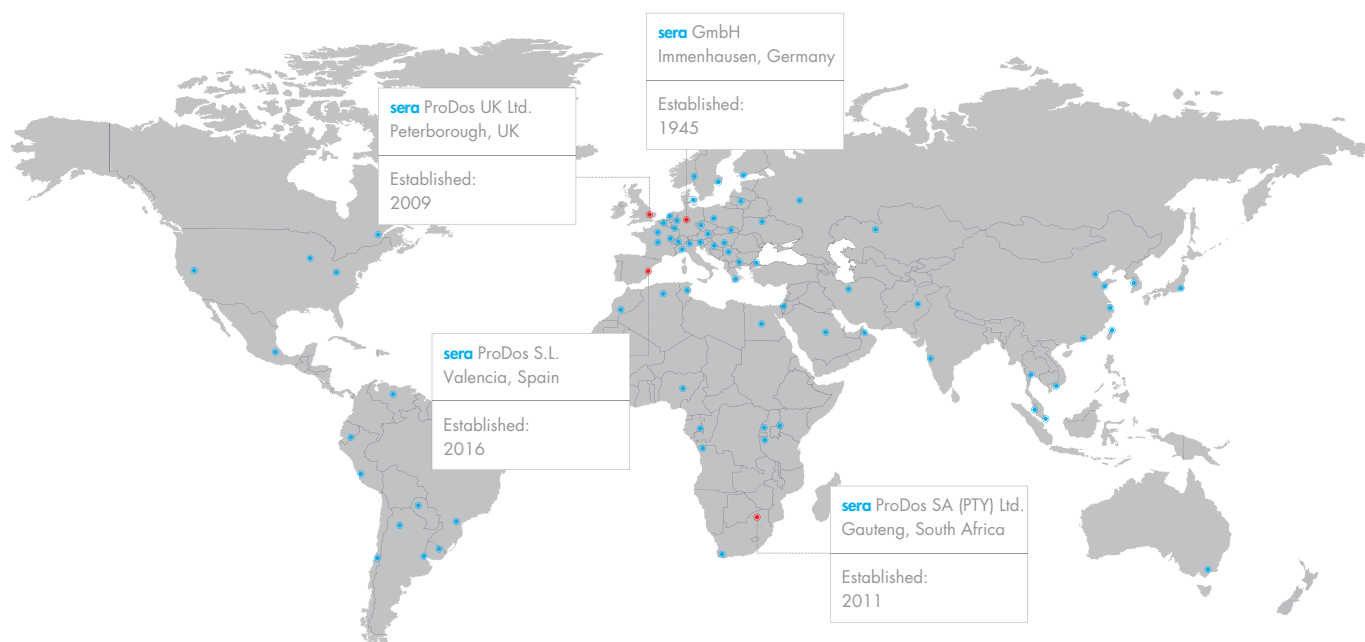
EXAMPLES OF APPLICATION

Water preparation sludge thickening:



Cooling water preparation additional water:





WORLDWIDE.

With a headquarter in Germany and local offices in England, Spain and South Africa and a worldwide sales and service network with more than 30 foreign representatives in more than 80 countries across all continents, **sera** guarantees optimum support for customers locally.



Local **sera** contact



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