PRODUCT INFORMATION

POLYLINE

The simple water treatment solution

POLYLINE – THE SIMPLE AND EFFICIENT WATER TREATMENT SOLUTION

Polymer solutions are used everywhere where sedimentation or flotation of suspended solids in water is to be accelerated and the dewatering behaviour of thickened sludge improved, such as in wastewater treatment, paper manufacture, drinking water treatment, and sewage sludge dewatering.

PolyLine® from **sera** is a series of simple and flexible, economical and powerful systems for preparing polymers. The series covers preparation systems that can be used with dry or liquid polymers.

The systems are equipped with a precise flow measurement for solution preparation and filling level measurement, to ensure the efficient and economical operation of the systems.

SAMPLE APPLICATIONS

- Sludge dewatering / conditioning
- Wastewater treatment
- Paper manufacturing
- Drinking water treatment
- Chemical industry
- Process water treatment
- Power stations
- Shipbuilding

FEATURES

- Client and application-specific, modular polymer preparation systems
- High-grade PP tanks
- Versatile use with powdery or liquid polymer, or powdery/liquid composite polymer
- High process efficiency due to a virtually complete solution of newly prepared polymer
- The solution concentration is accurately adhered to, as the dry material feeder and the liquid concentrate pump can be calibrated in a reproducible manner
- Low-maintenance filling level measurement due to a continuous, contactless ultrasound sensor
- Very easy to use thanks to its compact PLC and built-in process visualisation and touchscreen
- Modular design based on an intelligent modular system
- Can be optionally customised and expanded with products from the **sera** range

SYSTEM CONCEPTS

PolyLine Flow

In the 3-chamber system, the polymer is dissolved with water in the first chamber. The product matures in the second chamber. The finished solution reaches the third chamber via the overflow, where removal takes place. Product entrainment is minimised by a process that is optimally tailored to the task.

PolyLine Swing

The pendulum system tank consists of two separate chambers. The polymer solution is prepared successively in the chambers. After a defined maturing time, the polymer solution is available for extraction. Product entrainment is excluded.

PolyLine Double

In the double-deck variant, the chambers are arranged one on top of the other. The polymer is prepared in the upper chamber. After the maturing time is complete, the fully matured product is drained into the lower chamber. Product entrainment is prevented through the process.

MODEL DEFINITIONS

PolyLine ... S

S = solid

for use with powdery polymer

PolyLine Flow S

PolyLine ... L

L = liquid

for use with liquid polymer

PolyLine Flow L

PolyLine ... SL

SL = solid/liquid

for use with powdery and liquid polymer

PolyLine Flow SL

MODEL DEFINITIONS

PolyLine Swing S

PolyLine Double S

PolyLine Swing L

PolyLine Double L

PolyLine Swing SL

PolyLine Double SL

TECHNICAL DATA

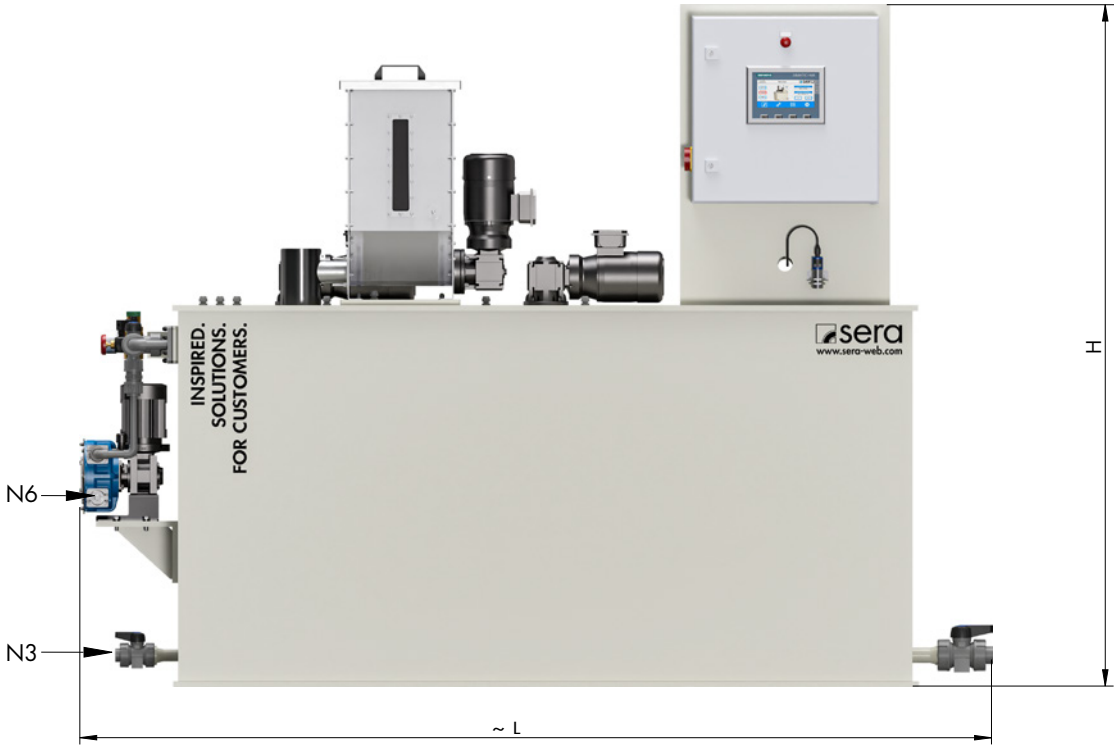
UNIT DATA			PolyLine Flow 500	PolyLine Flow 1000	PolyLine Flow 2000	PolyLine Flow 4000	PolyLine Flow 8000
Preparation capacity (at **45** min. maturing time)	l/h		500	1.000	2.000	4.000	8.000
Weight (empty)	kg	S	250	270	300	380	470
		L	230	240	280	360	450
		SL	270	290	340	410	520

UNIT DATA			PolyLine Swing 500	PolyLine Swing 1000	PolyLine Swing 2000	PolyLine Swing 4000
Preparation capacity (at **30** min. maturing time)	l/h		500	1.000	2.000	4.000
Weight (empty)	kg	S	240	240	280	460
		L	230	230	260	440
		SL	260	260	295	480

UNIT DATA			PolyLine Double 500	PolyLine Double 1000	PolyLine Double 2000
Preparation capacity (at **45** min. maturing time)	l/h		500	1.000	2.000
Weight (empty)	kg	S	200	240	325
		L	160	200	285
		SL	210	250	335

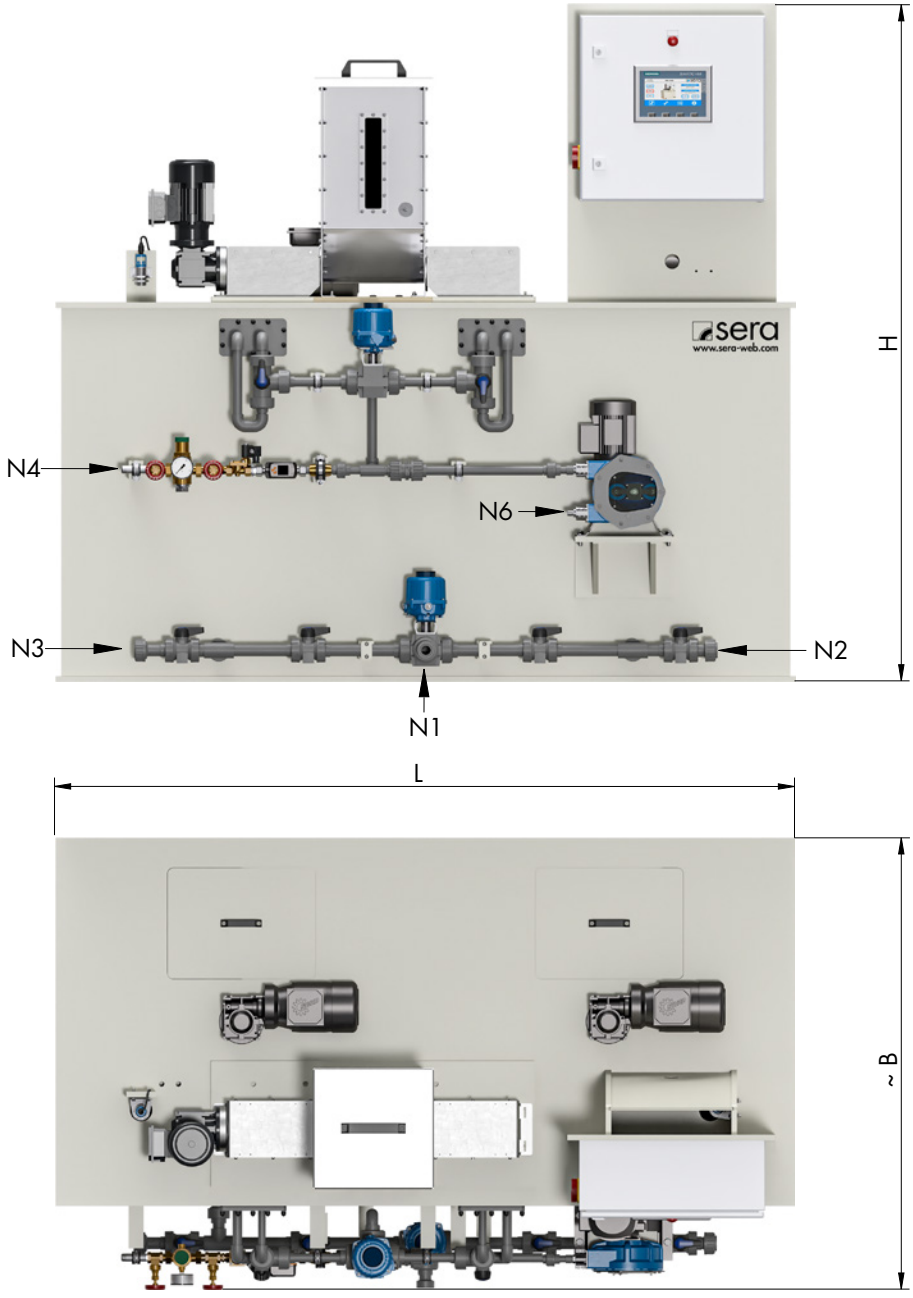
ELECTRICAL DATA		PolyLine ...
Connection voltage		~3/400 V /Hz + N + PE
Power consumption	approx. kW	2.0
Control voltage	V DC	24
Protection class	Control cabinet	IP 54
	elec. consumers	IP 55

POLYLINE FLOW DIMENSIONS



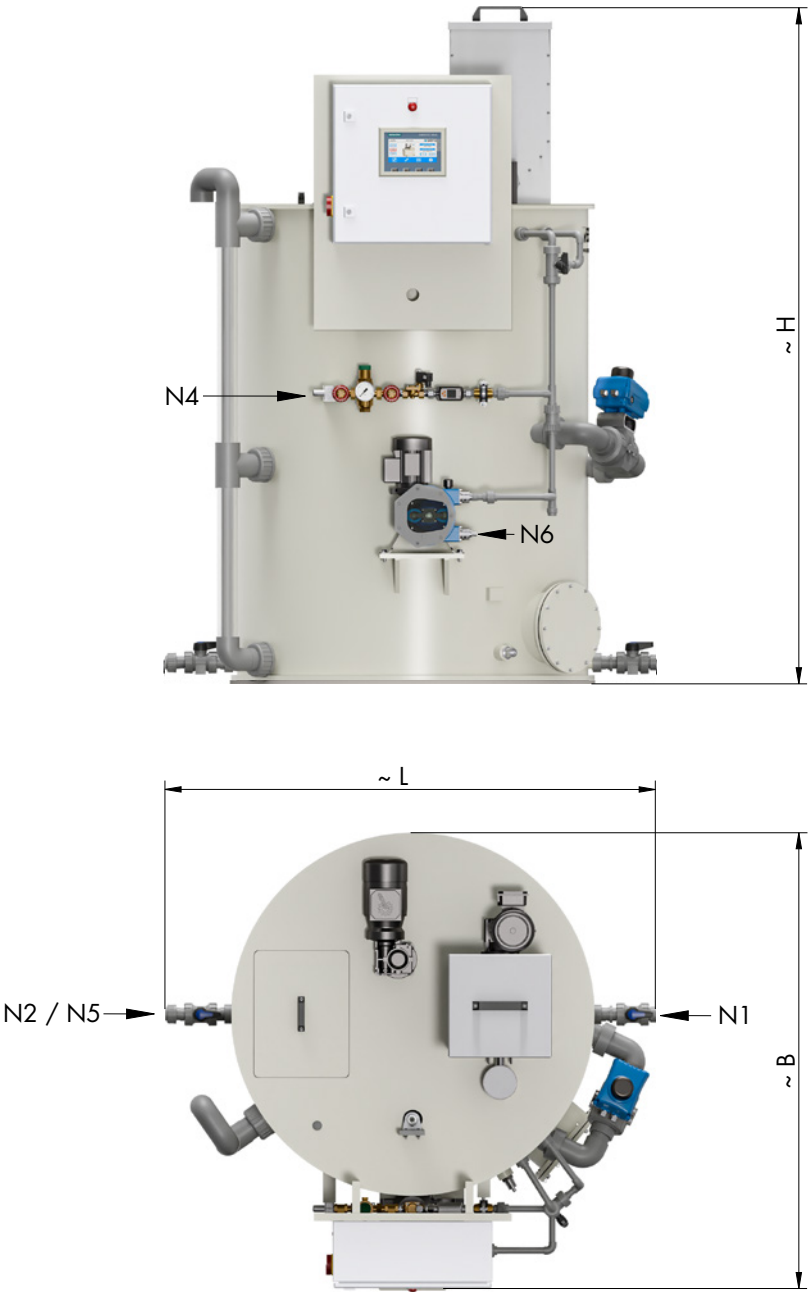
		PolyLine Flow- ...				
		500	1000	2000	4000	8000
W		990	990	990	1280	1570
H		1552	1552	1822	2112	2327
L	Max. length	2370	2370	2370	3430	4470
N1	Product removal	DN25	DN25	DN32	DN40	DN50
N2	Tank drainage	DN25	DN25	DN25	DN25	DN25
N3	Tank drainage	DN25	DN25	DN25	DN25	DN25
N4	Water supply	DN15/IG½	DN15/IG½	DN15/IG½	DN15/IG1	DN15/IG1
N6	Liquid polymer supply (SL, L variant)	DN5 (G ¾)	DN5 (G ¾)	DN8 (G ¾)	DN8 (G ¾)	DN15 (G1)

POLYLINE SWING DIMENSIONS



		PolyLine Swing- ...			
		500	1000	2000	4000
W		1208	1208	1511	1804
H		1552	1822	2112	2327
L		1990	1990	2990	4000
N1	Product removal	DN25	DN25	DN32	DN40
N2	Tank drainage	DN25	DN25	DN25	DN25
N3	Tank drainage	DN25	DN25	DN25	DN25
N4	Water supply	DN15/IG½	DN15/IG½	DN15/IG½	DN15/IG1
N6	Liquid polymer supply (SL, L variant)	DN5 (G ¾)	DN5 (G ¾)	DN8 (G ¾)	DN8 (G ¾)

POLYLINE DOUBLE DIMENSIONS



		PolyLine Double- ...		
		500	1000	2000
W		1470	1621	2179
H	Max. height	2001	2562	2531
L		1540	1750	2200
N1	Product removal	DN25	DN25	DN32
N2	Tank drainage	DN25	DN25	DN25
N4	Water supply	DN15/IG½	DN15/IG½	DN15/IG½
N5	Overflow	DN25	DN25	DN25
N6	Liquid polymer supply (SL, L variant)	DN5 (G ¾)	DN5 (G ¾)	DN8 (G ¾)

POLYLINE FLOW BASIC DESIGN

1st electric agitator

2nd electric agitator

PLC control system

for fully automatic preparation

PolyLine Flow ... S

Supply unit

PolyLine Flow ... SL

Supply unit

PolyLine Flow ... L

Supply unit

Three-chamber tank

PolyLine Flow ... S/SL

Dry material feeder DMF

with 25 litre feed hopper

Ultrasound sensor

POLYLINE FLOW ADDITIONAL FEATURES

PolyLine Flow ... S/SL

Sensor with indicator for when the hopper is full

PolyLine Flow ... S/SL

Small-part conveyor device

incl. hose pack and mounting cover for DMF

3rd electric agitator

PolyLine Flow ... S/SL

Hopper design

Volume expansion: 25 litres

PolyLine Flow ... S/SL

Sensor with indicator for when the hopper is empty

PolyLine Flow ... S/SL

Suction nozzle

for small-part conveyor devices

(no illustration)

BUS connection

- PROFIBUS DP/slave
- Industrial Ethernet

(no illustration)

PolyLine Flow ... S/SL

Vibrator

Overfill prevention device

Overflow

POLYLINE SWING BASIC DESIGN

PolyLine Swing ... S/SL
Dry material feeder DMF
with 25 litre feed hopper

2nd electric agitator

PLC control system
for fully automatic preparation

1st electric agitator

Ultrasound sensor

PolyLine Swing ... SL
Supply unit

PolyLine Swing ... L
Supply unit

PolyLine Swing ... S
Supply unit

POLYLINE SWING ADDITIONAL FEATURES

PolyLine Swing ... S/SL

Sensor with indicator for when the hopper is full

PolyLine Swing ... S/SL

Small-part conveyor device

incl. hose pack and mounting cover for DMF

Overfill prevention device

PolyLine Swing ... S/SL

Hopper design

Volume expansion: 25 litres

PolyLine Swing ... S/SL

Sensor with indicator for when the hopper is empty

PolyLine Swing ... S/SL

Suction nozzle

for small-part conveyor devices

(no illustration)

BUS connection

- PROFIBUS DP/slave
- Industrial Ethernet

(no illustration)

PolyLine Swing ... S/SL

Vibrator

Overflow

POLYLINE DOUBLE BASIC DESIGN

PLC control system
for fully automatic preparation

Ultrasound sensor

PolyLine Double ...S/SL
Dry material feeder DMF
with 25 litre feed hopper

PolyLine Double ... S
Supply unit

PolyLine Double ... SL
Supply unit

PolyLine Double ... L
Supply unit

Tank

Drain valve

Electric agitator

POLYLINE DOUBLE ADDITIONAL FEATURES

PolyLine Double ...S/SL

Sensor with indicator for when the hopper is full

Overfill prevention device

PolyLine Double ...S/SL

Small-part conveyor device

incl. hose pack and mounting cover for DMF

PolyLine Double ...S/SL

Hopper design

Volume expansion: 25 litres

PolyLine Double ...S/SL

Sensor with indicator for when the hopper is empty

BUS connection

- PROFIBUS DP/slave
- Industrial Ethernet

(no illustration)

PolyLine Double ...S/SL

Suction nozzle

for small-part conveyor devices

(no illustration)

PolyLine Double ...S/SL

Vibrator

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