

Complete installations Series 400

Customized and compact, ecological and economic



Polydos 412 preparation system for liquid and dry polyelectrolytes

- Fully automatic three-chamber preparation system for polyelectrolyte solutions in the adjusted concentration
- Three-chamber PPH tank with chambers for preparation, ripening and dosing
- Preparation and ripening chamber with electric agitators
- Dosing chamber optionally with an electric agitator
- Dry material feeding system
- Ultrasonic sensor for continuous level control with programmable cut-off points min./max./dry run/overflow
- Water apparatus with shut-off valve, solenoid valve (24 VDC), pressure reducing valve and contact water meter
- Jet mixer for dry polymer
- Injection unit for liquid polymer
- Control panel with PLC-aided control, graphic display with multilingual operating surface
- Input of the solution concentration continuously from 0.05 to 0.5%
- Collective error message for motors, overflow and lack of water, individual error messages for lack of polyelectrolyte and dry run as potential-free contacts

We customise the installation for you. Please indicate the required dry polymer in kg/h, the concentration of the preparation polymer, the concentration of the service solution as well as the ripening time in minutes.

Technical data

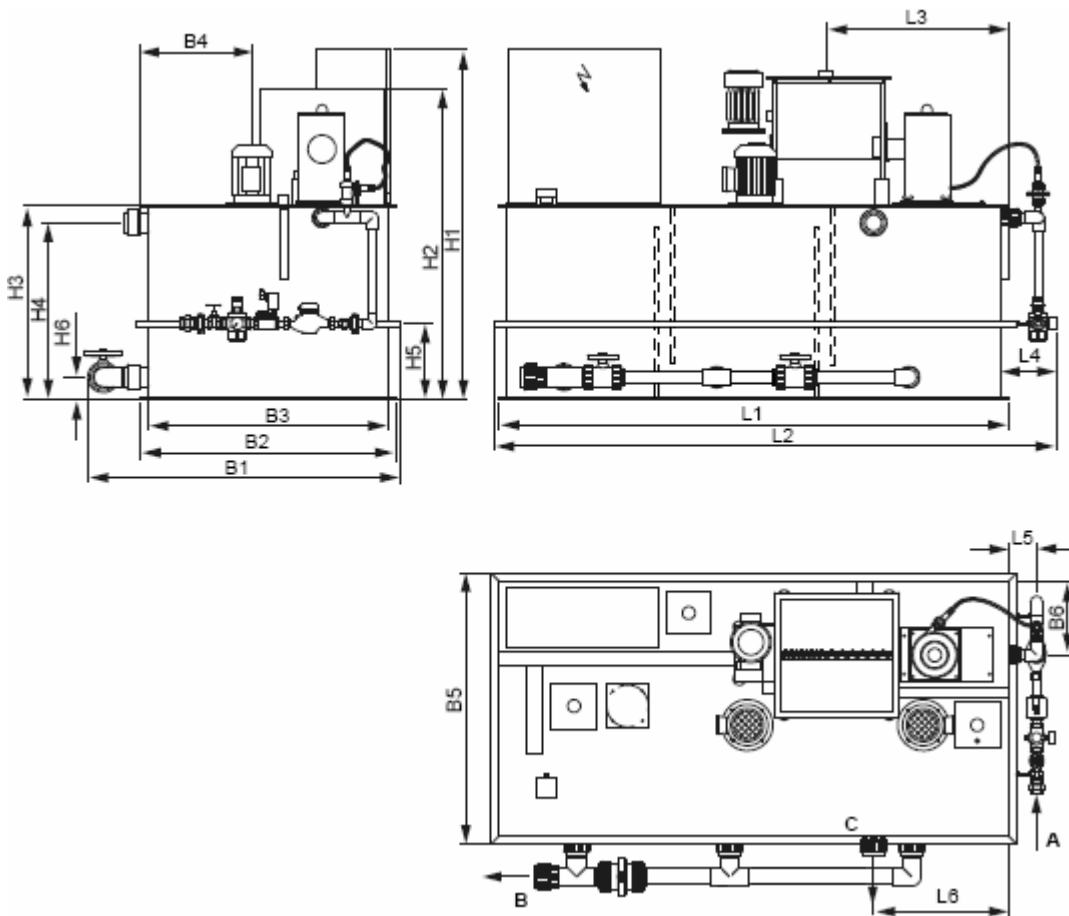
Maximum ripening time in reference with the nominal capacity	The nominal preparation capacity is obtained at a ripening time of 55 minutes. For smaller quantities the ripening time may be correspondingly longer	
Conditions for troublefree operation (solution water having drinking water quality, water pressure 3 to max. 10 bars)	Nominal flow of solution water	Installation type
	2 000 - 3 000 l/h	412-1000
	4 000 - 6 000 l/h	412-2000
	8 000 - 12 000 l/h	412-4000
	12 000 - 18 000 l/h	412-6000
20 000 - 30 000 l/h	412-10000	
Maximum viscosity of the polyelectrolyte solution	2500 mPas	
Protection	Control panel:	IP 65
	Agitators:	IP 55
Rotation speed of the agitators	50Hz	900 1/min
	60Hz	810 1/min
Material	Dry material feeder and feeding worm, agitator shaft and propeller:	Stainless steel
	Solution tank:	PPH
	Lines and connections:	PVC-U

Polydos 412 types

Maximum preparation capacity		Power consumption		Connections for lines				Weight	Order Number
ripening 45 min. [l/h]	ripening 60 min. [l/h]	2 agitators [kW]	3 agitators *) [kW]	solution water A	Extraction B	Overflow C	drain	[kg]	
1200	1040	1,50	2,10	R ¾"	DN50	DN50	DN50	appr. 250	412-1000
2200	1800	1,50	2,10	R 1"	DN50	DN50	DN50	appr. 330	412-2000
4500	3700	2,40	2,95	R 1 ¼"	DN65	DN65	DN65	appr. 520	412-4000
7000	5800	3,35	4,85	R 1 ½"	DN65	DN65	DN65	appr. 610	412-6000
11000	9600	4,05	5,55	R 2"	DN80	DN80	DN80	appr. 820	412.10000

*) Third agitator optional

Measurements



Order No	Measurements in mm																
	B1	B2	B3	B4	B5	B6	H1	H2	H3	H4	H5	H6	L1	L2	L3	L4	L5
412-500	~1700	1000	940	435	1090	290	~1254	~1100	630	590	270	90	1500	~1700	850	216	140
412-1000	~1252	1000	940	435	1090	290	~1376	~1220	766	698	270	90	2000	~2206	675	216	110
412-2000	~1252	1000	940	435	1090	290	~1776	~1620	1166	1098	270	90	2000	~2210	675	220	110
412-4000	~1296	1000	940	435	1090	290	~2130	~2015	1520	1420	635	90	3000	~3257	675	267	140
412-6000	~1796	1500	1440	750	1590	290	~2130	~2015	1520	1420	664	90	3000	~3257	675	267	140
412-10000	~2147	1800	1740	900	1890	290	~2130	~2015	1520	1420	690	110	4000	~3257	675	277	140

Selection

Operator language on the display can be selected:

- German, English, French, Spanish, Italian, Russian, Chinese, Turkish.

Mains voltage

- 230 V / 50 Hz, 4- or 5-pole
- 400 V / 50 Hz, 4- or 5-pole
- 415 V / 50 Hz, 4- or 5-pole
- 460 V / 60 Hz, 4- or 5-pole
- 480 V / 60 Hz, 4- or 5-pole
- 500 V / 50 Hz, 4- or 5-pole

Options

With control panel

Without control panel

Without control panel, wired on a terminal box

Control of the liquid polymer pump

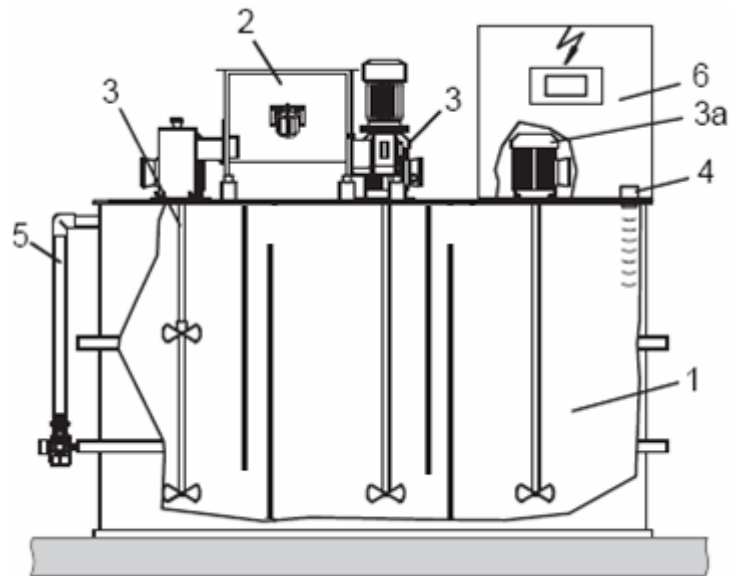
- 0,25 – 0,40 A
- 0,40 – 0,63 A
- 0,63 – 1,0 A
- 1,00 – 1,60 A
- 1,60 – 2,50 A
- 2,50 – 4,00 A
- 4,00 – 6,30 A
- 6,30 – 10,00 A

Bus systems

- Profibus DP
- Modbus
- Ethernet

Scheme of functions Polydos 412

- 1 Three-chamber tank
- 2 Dry material feeder
- 3 Electric agitator
- 3a Electric agitator (option)
- 4 Ultrasonic level sensor
- 5 Solution water apparatus
- 6 Control panel



Polydos 412 ECO preparation system for liquid and dry polyelectrolytes

- Fully automatic three-chamber preparation system for polyelectrolyte solutions in the adjusted concentration
- Three-chamber PPH tank with chambers for preparation, ripening and dosing (low cost design)
- Preparation and ripening chamber with electric agitators
- Dosing chamber optionally with an electric agitator
- Dry material feeding system
- Ultrasonic sensor for continuous level control with programmable cut-off points min./max./dry run/overflow
- Water apparatus with shut-off valve, solenoid valve (24 VDC), pressure reducing valve and contact water meter
- Dosing pipe for dry polymer
- Injection unit for liquid polymer
- Control panel with PLC-aided control, line display
- Input of the solution concentration continuously from 0.1 to 0.5%
- Collective error message for motors, overflow and lack of water, individual error messages for lack of polyelectrolyte potential-free contacts

We customise the installation for you. Please indicate the required dry polymer in kg/h, the concentration of the preparation polymer, the concentration of the service solution as well as the ripening time in minutes.

Technical data

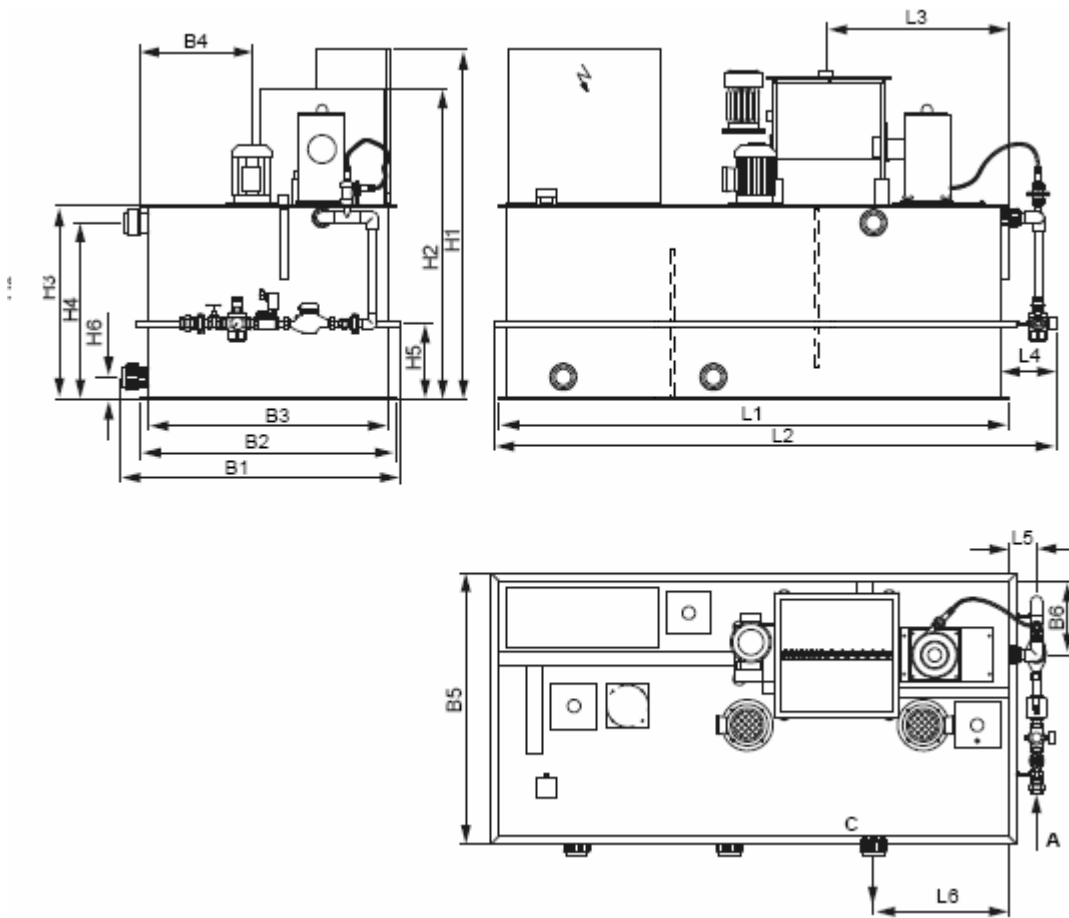
Maximum ripening time in reference with the nominal capacity	The nominal preparation capacity is obtained at a ripening time of 55 minutes. For smaller quantities the ripening time may be correspondingly longer	
Conditions for troublefree operation (solution water having drinking water quality, water pressure 3 to max. 10 bars)	Nominal flow of solution water 2 000 - 3 000 l/h 4 000 - 6 000 l/h 8 000 - 12 000 l/h 12 000 - 18 000 l/h 20 000 - 30 000 l/h	Installation type 412-1000 412-2000 412-4000 412-6000 412-10000
Maximum viscosity of the polyelectrolyte solution	2500 mPas	
Protection	Control panel: Agitators:	IP 65 IP 55
Rotation speed of the agitators	50Hz 60Hz	900 1/min 810 1/min
Material	Dry material feeder and feeding worm, agitator shaft and propeller: Solution tank: Lines and connections:	Stainless steel PPH PVC-U

Polydos 412ECO types

Maximum preparation capacity		Power consumption		Connections for lines				Weight	Order Number
ripening 45 min. [l/h]	ripening 60 min. [l/h]	2 agitators [kW]	3 agitators *) [kW]	solution water A	Extraction B	Overflow C	drain	[kg]	
1200	1040	1,50	2,10	R ¾"	DN50	DN50	DN50	appr. 250	412-1000ECO
2200	1800	1,50	2,10	R 1"	DN50	DN50	DN50	appr. 330	412-2000ECO
4500	3700	2,40	2,95	R 1 ¼"	DN65	DN65	DN65	appr. 520	412-4000ECO
7000	5800	3,35	4,85	R 1 ½"	DN65	DN65	DN65	appr. 610	412-6000ECO
11000	9600	4,05	5,55	R 2"	DN80	DN80	DN80	appr. 820	412_1000 ECO

*) Third agitator optional

Measurements



Order No	Measurements in mm																
	B1	B2	B3	B4	B5	B6	H1	H2	H3	H4	H5	H6	L1	L2	L3	L4	L5
412-500ECO	~1700	1000	940	435	1090	290	~1254	~1100	630	590	270	90	1500	~1700	850	216	140
412-1000ECO	~1252	1000	940	435	1090	290	~1376	~1220	766	698	270	90	2000	~2206	675	216	110
412-2000ECO	~1252	1000	940	435	1090	290	~1776	~1620	1166	1098	270	90	2000	~2210	675	220	110
412-4000ECO	~1296	1000	940	435	1090	290	~2130	~2015	1520	1420	635	90	3000	~3257	675	267	140
412-6000ECO	~1796	1500	1440	750	1590	290	~2130	~2015	1520	1420	664	90	3000	~3257	675	267	140
412-10000ECO	~2147	1800	1740	900	1890	290	~2130	~2015	1520	1420	690	110	4000	~3257	675	277	140

Selection

Language (only one for display):

- German, English, French, Spanish, Italian, Russian

Mains voltage

- 400 V / 50 Hz, 4- or 5-pole
- 415 V / 50 Hz, 4- or 5-pole
- 460 V / 60 Hz, 4- or 5-pole
- 480 V / 60 Hz, 4- or 5-pole

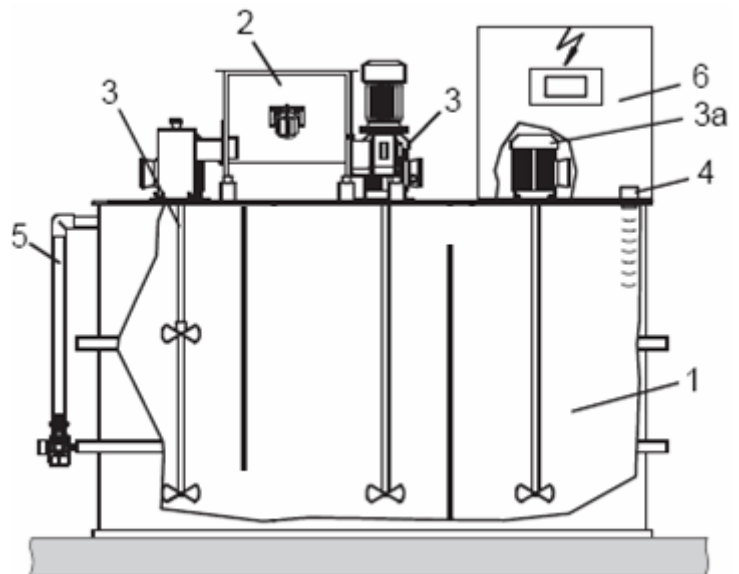
Options

With control panel

Control of the liquid polymer pump

- 0,25 – 0,40 A
- 0,40 – 0,63 A
- 0,63 – 1,0 A
- 1,00 – 1,60 A

Scheme of functions Polydos 412ECO



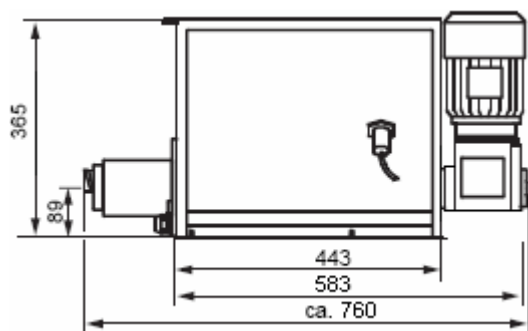
- 1 Three-chamber tank
- 2 Dry material feeder
- 3 Electric agitator
- 3a Electric agitator (option)
- 4 Ultrasonic level sensor
- 5 Solution water apparatus
- 6 Control panel

Dry material feeding system TD423

- Feeding system for constant or varying quantities of powders or granules, e.g. lime hydrate, aluminium sulphate, diatomite, phosphate, activated carbon or polyelectrolytes
- Large-volume hopper
- Feeding worm specially developed for steady discharge
- Calorific protection zone against humidity intrusion into the hopper

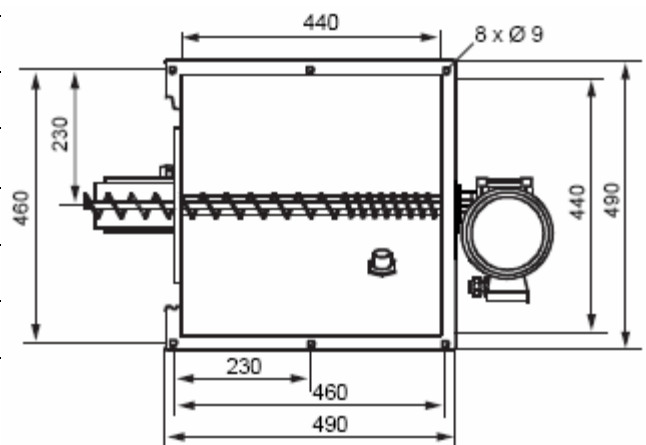
We customise the dry material feeding system for you. Please indicate the feeding material, its apparent weight as well as the necessary feeding quantity per hour.

Measurements



Technical data

Volumetric dosing capacity	5 to 500 l/h
Accuracy	+/- 4%
Hopper capacity	32 dm ³
Material	Stainless steel
Power consumption	250 W 370 W (with frequency converter)
Weight	28 kg



measurements in mm

Selection TD 423

Motor speed 1400 1/min

- 220-240/380-420 V, 50/60 Hz, 440 – 460V, 60Hz, IP 55 / F, 0.25 kW with or without PTC resistor
- 500-550 V, 50 Hz, IP 55/F, 0.25 kW
- 690 V, 50 Hz, IP 55/F, 0.25 kW

Feeding worms incl. ejection pipe with calorific protection zone

- Diameter 24 mm
- Diameter 30 mm
- Diameter 40 mm
- Diameter 60 mm

Gear step-down ratio

- $i = 10 : 1$
- $i = 20 : 1$
- $i = 40 : 1$
- $i = 80 : 1$
- $i = 100 : 1$

Options TD 423

Emergency shut-down switch

Min. sensor

- 90-250 V, 2-conductor version, thyristor output
- 24 VDC, 3-conductor version

Vibrator

- 230 V, 50 Hz, 0.08 cmkg
- 230 V, 50 Hz, 0.43 cmkg
- 115 V, 50 Hz, 0.08 cmkg
- 115 V, 50 Hz, 0.43 cmkg

Cover for the hopper

Polydos 460 preparation system for liquid polyelectrolytes

- Fully automatic two-chamber preparation system for polyelectrolyte solutions in the adjusted concentration out of liquid concentrates
 - Two-chamber PPH tank with preparation and ripening chamber
 - Preparation chamber with an electric agitator
 - Ripening chamber optionally with an electric agitator
 - Ultrasonic sensor for continuous level control with programmable cut-off points min./max./dry run/overflow
 - Water apparatus with shut-off valve, solenoid valve (24 VDC), pressure reducing valve and contact water meter
 - Dosing pump for liquid concentrate with flow controller (24 VDC, pnp)
 - Injection unit for liquid concentrate
 - Control panel with PLC-aided control, graphic display with multilingual operating surface
 - Input of the solution concentration continuously from 0.05 to 0.5%
 - Collective error message for motors, overflow and lack of water, individual error messages for lack of polyelectrolyte and dry run as potential-free contacts
- We customise the installation for you. Please indicate the required poly-mer in kg/h, the concentration of the preparation polymer, the concentration of the service solution as well as the ripening time in minutes.

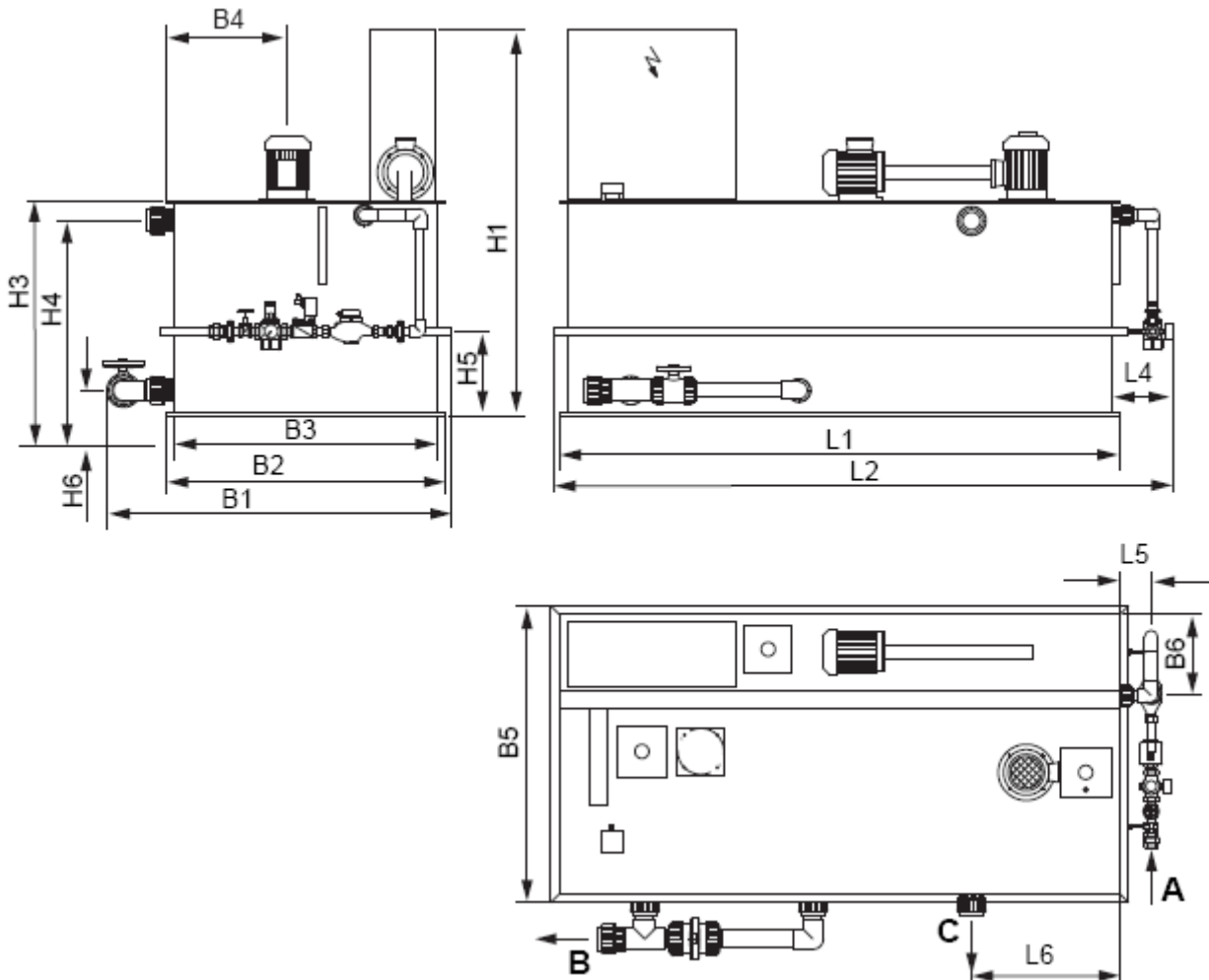
Technical data

Maximum ripening time in reference with the nominal capacity	The nominal preparation capacity is obtained at a ripening time of 15 minutes. For smaller quantities the ripening time may be correspondingly longer	
Conditions for troublefree operation (solution water having drinking water quality, water pressure 3 to max. 10 bars)	Nominal flow of solution water 3 000 - 6 000 l/h 6 000 - 12 000 l/h 15 000 - 24 000 l/h	Installation type 460-1000 460-2000 41604000
Maximum viscosity of the polyelectrolyte solution	2500 mPas	
Protection	Control panel: Agitators:	IP 65 IP 55
Rotation speed of the agitators	50Hz 60Hz	900 1/min 810 1/min
Material	Agitator shaft and propeller: Solution tank: Lines and connections:	Stainless steel PPH PVC-U

Polydos 460 types

Maximum preparation capacity ripening 15 min. [l/h]	Power consumption [kW]	Connections for lines				Weight [kg]	Order Number
		solution water A	Extraction B	Overflow C	drain		
3000	1,00	R 1"	DN50	DN50	DN50	appr. 250	460-1000
6000	1,00	R 1 ¼"	DN65	DN65	DN65	appr. 330	460-2000
12000	1,95	R 2"	DN80	DN80	DN80	appr. 520	460-4000

Measurements



Order No	Measurements in mm															
	B1	B2	B3	B4	B5	B6	H1	H3	H4	H5	H6	L1	L2	L4	L5	L6
412-1000	~1252	1000	940	435	1090	290	~1376	766	698	270	90	2000	~2206	216	110	530
412-2000	~1252	1000	940	435	1090	290	~1776	1166	1098	270	90	2000	~2210	220	110	530
412-4000	~1296	1000	940	435	1090	290	~2130	1520	1420	635	90	3000	~3257	267	140	820

Selection

Operator language on the display can be selected:

- German, English, French, Spanish, Italian, Russian, Chinese, Turkish.

Mains voltage

- 230 V / 50 Hz, 4- or 5-pole
- 400 V / 50 Hz, 4- or 5-pole
- 415 V / 50 Hz, 4- or 5-pole
- 460 V / 60 Hz, 4- or 5-pole
- 480 V / 60 Hz, 4- or 5-pole
- 500 V / 50 Hz, 4- or 5-pole

Options

With control panel

Without control panel

Without control panel, wired on a terminal box

Control of the liquid polymer pump

- 0,25 – 0,40 A
- 0,40 – 0,63 A
- 0,63 – 1,0 A
- 1,00 – 1,60 A
- 1,60 – 2,50 A

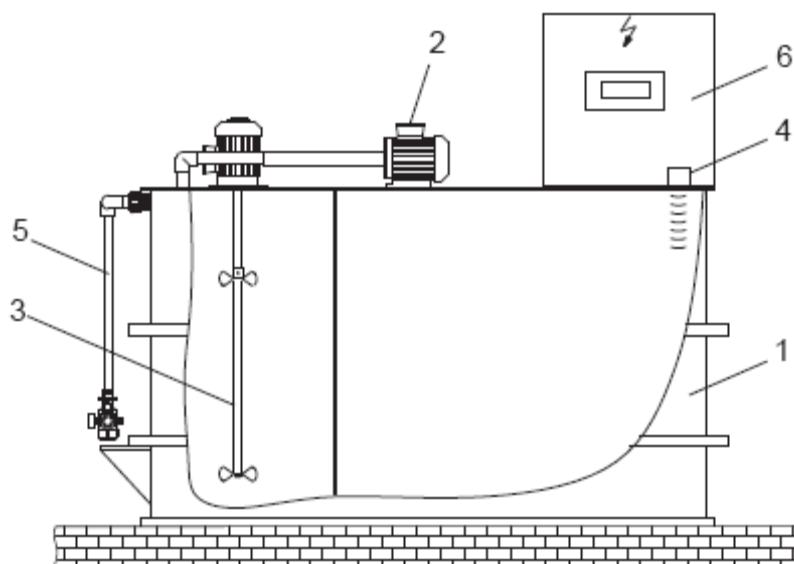
Bus systems

- Profibus DP
- Modbus
- Ethernet

- 2,50 – 4,00 A
- 4,00 – 6,30 A
- 6,30 – 10,00 A

Scheme of functions Polydos 460

- 1 Two-chamber tank
- 2 Dosing pump
- 3 Electric agitator
- 4 Ultrasonic level sensor
- 5 Solution water apparatus
- 6 Control panel



KD 440 dry material preparation system

- Fully automatic one-chamber system for solutions in the adjusted concentration out of dry materials
- One-chamber PPH tank
- Preparation chamber with electric agitator
- Dry material feeding system
- Capacitive sensor for level control for min./max./overflow
- Water apparatus with shut-off valve, solenoid valve (24 VDC), pressure reducing valve and contact water meter
- Jet mixer for dry material

Technical data

Conditions for troublefree operation (solution water having drinking water quality, water pressure 3 to max. 10 bars)	Nominal flow of solution water 2 000 - 3 000 l/h 6 000 - 8 000 l/h	Installation type 440-1000 440-4000
Protection	Control panel: Agitators:	IP 65 IP 55
Rotation speed of the agitators	50Hz 60Hz	900 1/min 810 1/min
Material	Dry material feeder and worm, agitator shaft and propeller: Solution tank: Lines and connections:	Stainless steel PPH PVC-U

KD440 types

Maximum preparation capacity [l/h]	Power consumption [kW]	Connections for lines			Weight [kg]	Order Number
		solution water	Extractio n	drain		
1000	1,00	R 3/4"	DN40	DN40	appr. 205	440-1000
4000	1,95	R 1 1/2"	DN65	DN65	appr. 400	440-4000

Selection

Operator language on the display can be selected:

- German, English, French, Spanish, Italian, Russian, Chinese, Turkish.

Mains voltage

- 230 V / 50 Hz, 4- or 5-pole
- 400 V / 50 Hz, 4- or 5-pole
- 415 V / 50 Hz, 4- or 5-pole
- 460 V / 60 Hz, 4- or 5-pole
- 480 V / 60 Hz, 4- or 5-pole
- 500 V / 50 Hz, 4- or 5-pole

Options

With control panel

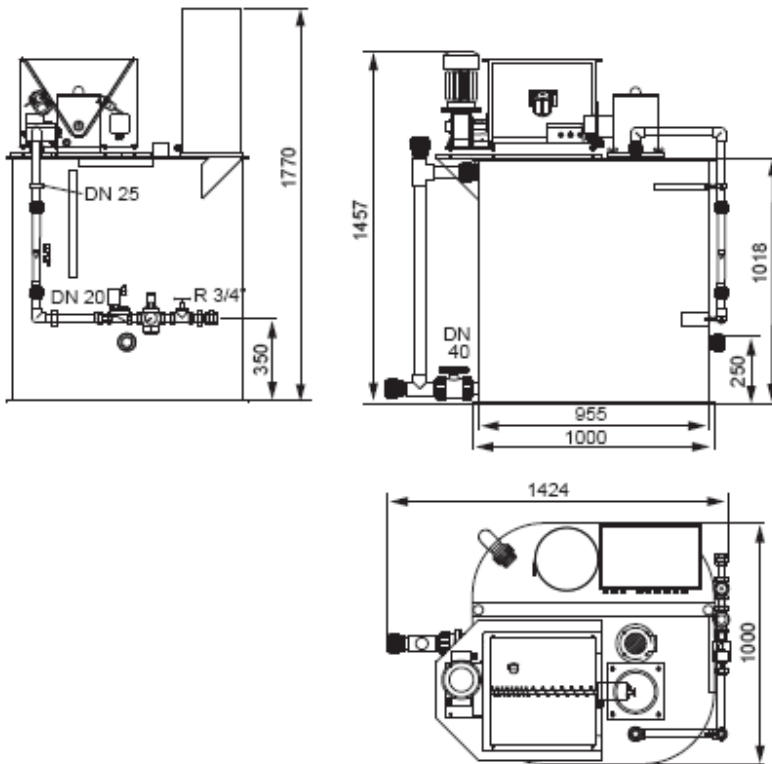
Without control panel

Without control panel, wired on a terminal box

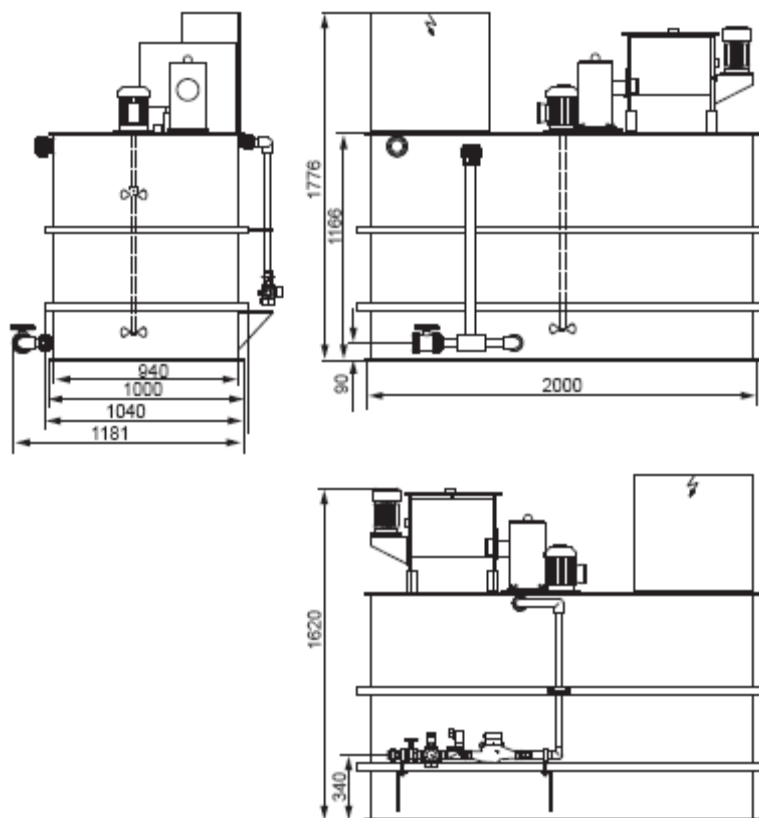
Bus systems

- Profibus DP
- Modbus
- Ethernet

Measurements KD 440-1000



Measurements KD 440-4000



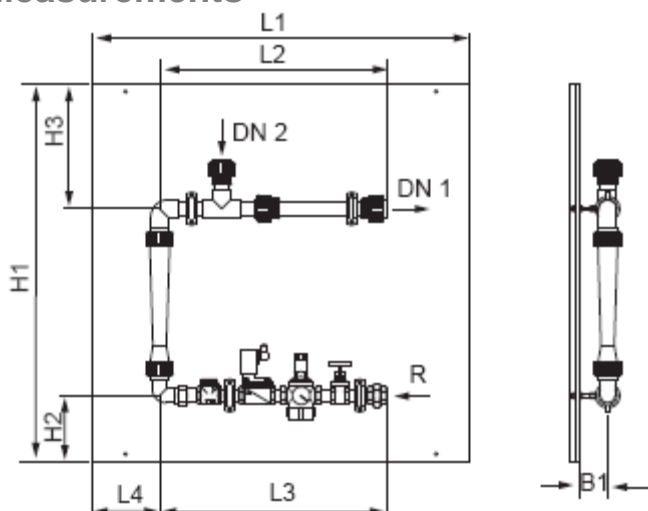
Measurements in mm

550 Post-dilution device

Series 400

- Mounted on a PPH base plate
- With shut-off valve, dirt trap, check valve and pressure reducing valve (brass)
- Flowmeter with MIN contact and special mixer (PVC-U)
- Solenoid valve 230 V, 115 V or 24 V DC (brass)
- The post-dilution device can be mounted on the front side of the Polydos tank on demand.

Measurements



Order number		l/h	Measurements in mm										
without flow control	with flow control		R	DN1	DN2	L1	L2	L3	L4	H1	H2	H3	B1
550-110	550-210	2500	1"	32	32	1000	600	600	180	1000	175	330	75
550-120	550-220	4000	1 ¼"	40	32	1000	710	710	85	1000	160	300	75
550-130	550-230	6300	1 ½"	50	32	1000	750	750	85	1000	100	300	75
550-140	550-240	10000	1 ½"	50	32	1000	750	940	55	1000	100	280	75
550-150	550-250	20000	2"	65	50	1000	800	1000	50	1000	100	200	75

Accessories for all installations

Description	Order Number
Cover for metering hopper , stainless steel	514-40
Storage hopper 50 l for installation on the metering hopper, stainless steel	514-55
Storage hopper 100 l for installation on the metering hopper, stainless steel	514-56
Storage hopper 200 l for installation on the metering hopper, stainless steel	514-57
Pneumatic hopper loader 40 kg/h with fan commutator loader 230 V, 50 Hz, 600 W, 4.3 A, compensator and sound damper, container for the material to be fed in transparent polyamide, granular size of the material $d_k > 50$ mm, complete with integrated mounting cover for installation on the dry material feeder and 4 m suction hose 38 x 1	514-50



Accessories for storage in silos

Description	Order Number
Elastic connection with mounting cover for installation on the dry material feeder, with inspection port, connecting flange DN 150	514-110
Cellular wheel sluice with connecting flanges DN 150, cellular wheel with 6 cubicles and 6 replaceable rubber gaskets, motor: 230/400 V, 50 Hz, 0.18 kW, 5.5 1/min, capacity: 4.5 l per revolution, IP 54	514-111
Gate valve , connecting flange DN 150 with stuffing box and hand wheel, constructional steel	514-112

