PPU water systems

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Data sheet:

Automatic polymer preparation station ASP

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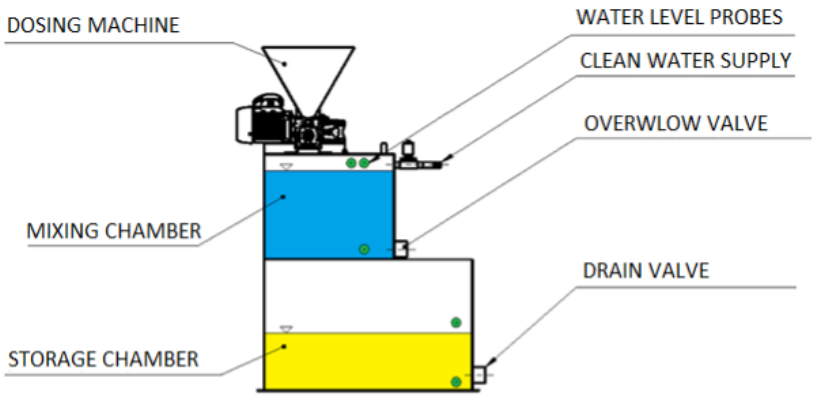
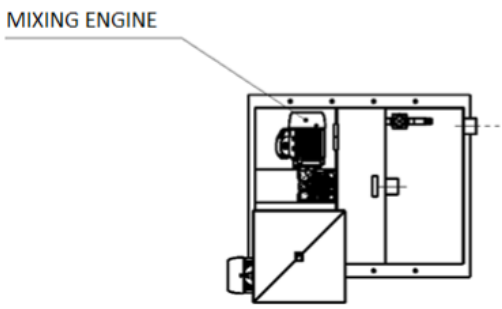
Description:

Automatic polymer station is used for preparing polymer solution for subsequent dosing to dewatering machines.
Station consists of storage and mixing chambers. Storage chamber is source of polymer solution for use in dewatering, upper (mixing) chamber is used for preparing solution.
Both chambers are equipped with level probes. Once polymer in storage chamber drops below certain level, new preparation cycle is triggered.
After starting new preparation cycle, bypass valve between both chambers is closed, clean water valve (solenoid valve) is open. After mixing chamber is filled with clean water, dosing device of polymer (pump for liquid concentrate or powder dispenser) switches on, as well as mixing motor. After mixing of content of chamber is finished (time defined), content of chamber is transferred to storage chamber by opening the bypass valve.
Solution concentration is defined by duration of operation of dosing device.ASP (Automatic polymer station) is equipped with dedicated control box with HMI (touch screen panel) for controlling the device, setting up operation times and alarms debugging. ASP is either equipped with with liquid polymer concentrate or screw powder dispenser for usage with powder-based polymers. When powder polymer version is used, hopper of powder dispenser is equipped with heating cables to avoid wetting of polymer powder and solenoid for knocking of hopper.





Application:

All kinds of domestic and municipal waste water.

Technical Specifications:

Model	Tank material	Platform shape	Mixing tank [l]	Storage tank [l]	Polymer type	Max. solution output [l/h]	Weight [kg]	El. power [kW]
ASP220/110-SS-C	DIN1.4301 (AISI304)	Rectangle	110	220	Liquid	**300**	150	1
ASP220/110-SS-P	DIN1.4301 (AISI304)	Rectangle	110	220	Powder	**80**	170	1.1
ASP250/150-PP-C	PP - polypropylene	Circle	150	250	Liquid	**430**	120	1
ASP250/150-PP-P	PP – polypropylene	Circle	150	250	Powder	**130**	140	1.1
ASP700/450-PP-C	PP – polypropylene	Circle	450	700	Liquid	**1200**	200	1
ASP700/450-PP-P	PP - polypropylene	Circle	450	700	Powder	**400**	230	1.1
ASP750/400-SS-C	DIN1.4301 (AISI304)	Rectangle	400	750	Liquid	**1100**	290	1
ASP750/400-SS-P	DIN1.4301 (AISI304)	Rectangle	400	750	Powder	**400**	320	1.1
ASP1500/1450-SS-C	DIN1.4301 (AISI304)	Rectangle	1400	1550	Liquid	**4200**	500	1
ASP1500/1450-SS-P	DIN1.4301 (AISI304)	Rectangle	1400	1550	Powder	**1300**	530	1.1

Other parameters

Agitator speed	**193 RPM**
Water level probes	5x conductivity-based water level probes
Bypass valve	Electro actuator – with ball valve
Clean water inlet valve	solenoid valve or actuator with ball valve
Storage chamber drainage	Manual ball valve
Visual water level indication	Transparent pipe

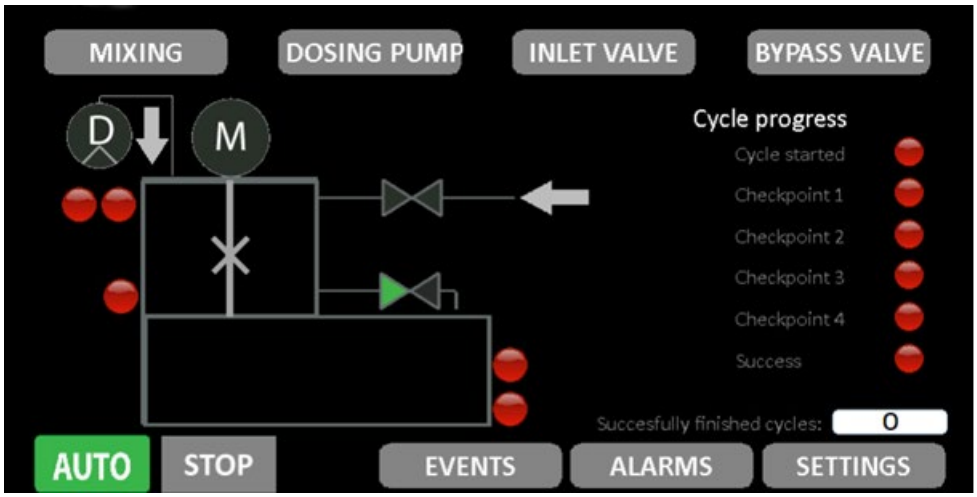
Powder dispenser parameters

Speed	**56 RPM**
Hopper material	DIN 1.4301 (AISI 304)
Heating power	10 W (230V AC)
Knock system	Solenoid 40W – 20 N
Heating cables switching	By measured hopper temperature (-20 ~ +95 °C)
Hopper capacity	10 [dm^3] or 30 [dm^3]

Liquid concentrate dosing pumps parameters

Type	Piston pump
Manufacturer	INJECTA
Max. flow	85 l/h
Piston diameter	48 mm
Max. head	10 bar
Speed	58 RPM
Stroke regulation	Manual

Control:



After connecting the control box to the electricity assure that STOP press button is not closed, then the under-voltage release on main circuit breaker inside the control box must be switched on manually.

Red circles are relevant probes. When the valve is closed = there is appropriate water level, the circle turns green and the relevant chamber will be half/completely filled (blue colour).
When the dosing pump or the mixing engine is on, the component turns green. When the valve is gray, it is closed. When the valve is green, it is open. The ball valve can be half and half gray and green, which means that it is currently changing the position and it is neither open or closed.

There is some information about current mixing cycle on the right side of the home page:
The cycle goes in check points and this is how it can be watched in which phase the cycle currently is and in case of voltage drop station continues from last point.

POINT	CONDITION
Check point 1	Mixing chamber is empty and closed.
Check point 2	Mixing chamber is full of clean water = filled.
Check point 3	Dosing successfully finished.
Check point 4	Mixing successfully finished.
Successful finish.	Overflow valve is open and mixing chamber is empty. Successfully drained.

Example drawing ASP 750/400-SS-P