

PRODUCT DATA SHEET



Polymer Preparation System (ASP)

water | wastewater | sewage

OVERVIEW

MAK Water's Polymer Preparation System (ASP) is a packaged plant used for automated batching of matured polymer solution from liquid concentrate polymer (C-type) or powder polymer (P-type). The ASP is ideal for mechanical sludge dewatering applications and small to medium water and wastewater treatment processes, including clarification and thickening.

Both the C-type and P-type ASP systems have a mixing tank fitted with a mixer, and a solution storage tank. Both tanks are fitted with level probes used for control purposes. There are actuated valves on the water inlet, and on the discharge of matured polymer solution between mixing and storage tanks. The P-type has a powder hopper with heated feeder that feeds powder polymer into the mixing tank. The C-type has a feed pump to transfer concentrated liquid polymer from a bulk tank (by others) into the mixing tank. The powder hopper for the P-type is filled manually.

FEATURES

- Simple and robust design
- Fully automated control
- Ease of installation & operation
- Low investment cost



STANDARD SPECIFICATIONS

Parameter	Units	ASP-1C	ASP-1P	ASP-2C	ASP-2P	ASP-3C	ASP-3P	ASP-4C	ASP-4P	ASP-5C	ASP-5P
Polymer type	-	Liquid concentrate	Powder	Liquid concentrate	Powder	Liquid concentrate	Powder	Liquid concentrate	Powder	Liquid concentrate	Powder
Maximum polymer solution output*1	L/hr	300	80	430	130	1,200	400	1,100	380	4,200	1,300
Mixing tank volume	L	110	110	150	150	450	450	450	450	1,400	1,400
Storage tank volume	L	220	220	250	250	700	700	750	750	1,550	1,550
Powder hopper capacity	kg	-	10	-	10	-	30	-	30	-	30
Mixer	kW	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Powder feeder*2	kW	-	0.37	-	0.37	-	0.37	-	0.37	-	0.37
Polymer concentrate feed pump*3	kW	0.25	-	0.25	-	0.25	-	0.25	-	0.25	-
Length	mm	800	919	1,129	1,133	1,317	1,282	1,560	1,654	1,860	1,954
Width	mm	708	678	1,031	1,032	1,218	1,218	930	860	1,190	1,160
Height	mm	1,280	1,316	1,311	1,348	2,071	2,180	1,761	1,871	2,461	2,571
Weight	kg	150	170	120	140	200	230	290	320	500	530
Water inlet connection	mm	DN15	DN15	DN25	DN25	DN25	DN25	DN25	DN25	DN40	DN40
Storage tank outlet connection, pipe stub	mm	DN50	DN50	DN50	DN50	DN50	DN50	DN50	DN50	DN50	DN50

*1Maximum solution output is based on the time required to prepare a batch of matured polymer (where polymer chains are fully unrolled) and assumes using standard municipal water pressure to fill the mixing tank. Liquid concentrate polymer requires approx. 20-25 min/batch to mix and mature, and powder polymer requires approx. 65-75 min/batch. Example calculations:

- ASP-1C: 110 L mixing tank @ 3 - 2.4 batches/hr gives 330 - 264 L of matured polymer solution per hour, i.e. rated max 300 L/h
- ASP-2P: 150 L mixing tank @ 0.9 - 0.8 batches/hr gives 135 - 120 L of matured polymer solution per hour, i.e. rated max 130 L/h

*2Powder feeder: speed 56 rpm, heating power 10W (230V AC), knock system solenoid 40W, 20N

*3Polymer concentrate polymer feed pump: INJECTA piston pump, piston dia 48mm, max flow 85 L/h, max 100 m head, manual stroke adjustment

STANDARD INCLUSIONS + OPTIONS

✓ = Standard Supply ○ = Optional Supply - = Not applicable

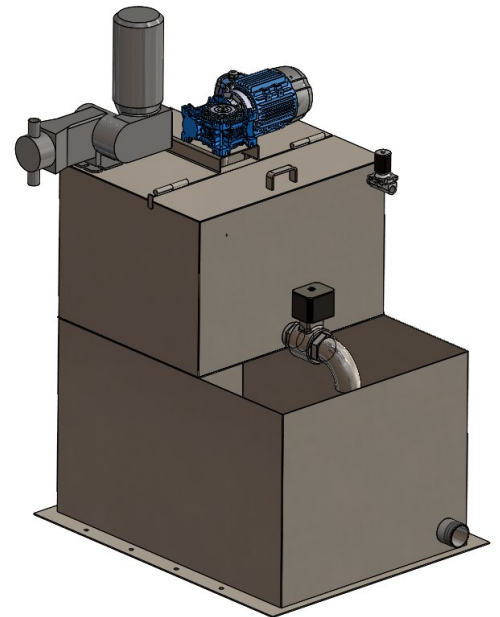
Equipment		ASP-1C	ASP-1P	ASP-2C	ASP-2P	ASP-3C	ASP-3P	ASP-4C	ASP-4P	ASP-5C	ASP-5P
Skid mounted plant		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Containerised plant		○	○	○	○	○	○	○	○	○	○
Tank shape	Rectangular	✓	✓	-	-	-	-	✓	✓	✓	✓
	Round	-	-	✓	✓	✓	✓	-	-	-	-
Tanks	SS304L	✓	✓	-	-	-	-	✓	✓	✓	✓
	SS316L	○	○	-	-	-	-	○	○	○	○
	Polypropylene	-	-	✓	✓	✓	✓	-	-	-	-
Powder hopper	SS304L	-	✓	-	✓	-	✓	-	✓	-	✓
	SS316L	-	○	-	○	-	○	-	○	-	○
Powder feeder w/ heating & knock system		-	✓	-	✓	-	✓	-	✓	-	✓
Mixing tank mixer		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mixer shaft & blades in SS304		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Polymer concentrate feed pump		✓	-	✓	-	✓	-	✓	-	✓	-
Storage tank manual drain valve		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Polymer solution dosing pump(s)		○	○	○	○	○	○	○	○	○	○

Instrumentation & Controls	Standard supply
Conductivity level probes in mixing & storage tanks	✓
Solenoid valve or electrically actuated water inlet valve	✓
Electrically actuated bypass valve (between mixing & storage tanks)	✓
Control panel to AS/NZS 3000 with touch screen for standalone control	✓

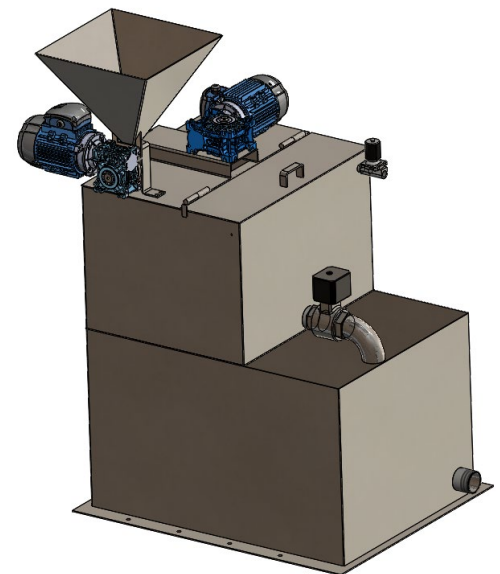
MODEL SELECTION

- 1C** Max polymer solution output capacity 300 L/h
- 1P** Max polymer solution output capacity 80 L/h
- 2C** Max polymer solution output capacity 430 L/h
- 2P** Max polymer solution output capacity 130 L/h
- 3C** Max polymer solution output capacity 1,200 L/h
- 3P** Max polymer solution output capacity 400 L/h
- 4C** Max polymer solution output capacity 1,100 L/h
- 4P** Max polymer solution output capacity 380 L/h
- 5C** Max polymer solution output capacity 4,200 L/h
- 5P** Max polymer solution output capacity 1,300 L/h

- XX** Assembly - skid mounted
- CX** Assembly - containerised - standard
- CF** Assembly - containerised - with floor coatings
- CP** Assembly - containerised - with floor coatings & insulation
- 4** Tanks in SS304L
- 6** Tanks in SS316L
- P** Tanks in polypropylene
- 4** Powder hopper in SS304L (P-type only)
- 6** Powder hopper in SS316L (P-type only)
- X** Without powder hopper (C-type only)
- X** Polymer solution dosing pump, without (standard)
- D** Polymer solution dosing pump
- X** Specifications - standard
- C** Specifications - custom



Typical ASP C-type



Typical ASP P-type

ASP - _____

NEED A QUOTE?

COMPLETE THIS TABLE AND EMAIL TO...

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