

PRODUCT DATA SHEET

pH Adjustment - Batch (PAB)

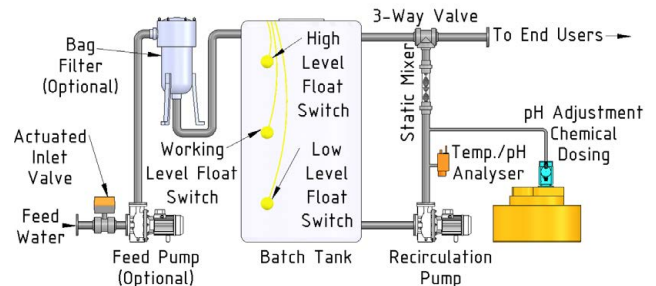
water | wastewater | sewage



OVERVIEW

MAK Water's pH Adjustment - Batch (PAB) plants are designed to automatically adjust and maintain the pH level of waste water in a batch tank prior to discharge to sewer/environment or reuse/recycling. The standard treatment process includes a batch tank, a recirculation pump to turn over the contents of the batch tank, a temperature sensor, an inline pH analyser which monitors the pH level and a dosing pump to automatically dose liquid alkali and/or acid. The recirculation pump is also used to discharge the treated water at the end of each batch cycle. Dual chemical dosing pumps (alkali and acid) are available for when the water pH varies to allow for correction of both low and high pH water.

The system components are sized to suit the batch tank and to allow for a 30-60 minute complete batch cycle. Optional equipment upgrades include; a feed pump, bag filter, duty standby recirculation and dosing pumps, materials upgrade for high/low pH levels, dual chemical dosing pumps (alkali and acid). MAK Water's PAB plants are available as skid mounted or containerised systems for easy deployment to remote locations.



STANDARD SPECIFICATIONS

Parameter	Units	PAB-1	PAB-2	PAB-5	PAB-10	PAB-15	PAB-22	PAB-30
Batch Tank Size	m ³	1	2.45	5	10	15	22.5	30
Batch Cycle Time	min	30 - 60						
Recirculation Pump Flow Rate	L/min	100	165	335	650	1,100	1,500	2,000
Recirculation Discharge Pressure	mH ₂ O	15 - 25						
Dosing Pump Flow Rate	L/h	10			20			30
pH Level (target)	pH	6 ~ 8 (pH neutral) or as required						
pH Range (influent)	pH	4 ~ 10 (1 - 14 optional)						
Alkalinity (assumed)	mg/L as CaCO ₃	10 (consult MAK Water if higher influent alkalinity is expected)						
Particle Size	mm	≤2 (consult MAK Water if larger particles or debris are expected)						
Total Suspended Solids	mg/L	1,000 (<50 with optional Bag Filter)						
Raw Water Temperature	°C	1 - 40						
Ambient Design Temperature	°C	0 - 45						
Power Supply	-	AC 240V, 1P, 50Hz or AC 415V, 3P, 50Hz				AC 415V, 3P, 50Hz		
Power Consumption (approx.)	kW	1.1	1.5	3	4	7.5	11	
Bunded Chemical Storage Tank	L	110	210			600	1,000	
Container Size (optional)	ft	10	10	10	10	10	10	
Skid Size (excl. Tank)	mm	1,300 x 600 x 1,500				2,000 x 1,500 x 1,500		

STANDARD INCLUSIONS + OPTIONS

√ = Standard Supply o = Optional Supply - = Not Applicable

Equipment	PAB-1	PAB-2	PAB-5	PAB-10	PAB-15	PAB-22	PAB-30
Skid Mounted Plant	√	√	√	√	√	√	√
Batch Tank (standard pH range)	√	√	√	√	√	√	√
Recirculation Pump	√	√	√	√	√	√	√
Chemical Dosing Pump	√	√	√	√	√	√	√
Bunded Chemical Storage Tank	√	√	√	√	√	√	√
Alarm Signal Output for Client Interface	√	√	√	√	√	√	√
Automated Control System	√	√	√	√	√	√	√
PLC Control System with HMI	o	o	o	o	o	o	o
Containerised System, c/w A/C & Lights	o	o	o	o	o	o	o
Container Insulation (walls & ceiling)	o	o	o	o	o	o	o
Feed Pump	o	o	o	o	o	o	o
100µm Bag Filter	o	o	o	-	-	-	-
Duty Standby Recirculation Pumps	o	o	o	o	o	o	o
Duty Standby Dosing Pumps	o	o	o	o	o	o	o
pH 1 - 14 Range Recirculation Pump	o	o	o	o	o	o	o
pH 1 - 14 Range Batch Tank	o	o	o	o	o	o	o
Dual Dosing Pumps (alkali and acid) comes with Dual Bunded Chemical Storage Tanks	o	o	o	o	o	o	o
Safety Shower & Eyewash Station	o	o	o	o	o	o	o
Premium Instrumentation Package	o	o	o	o	o	o	o

Instrumentation	Standard Package	Premium Package
Pressure Gauge (pump discharge)	√	√
Pressure Gauge (optional Bag Filter discharge)	√	√
Flow Switch	√	√
Float Switch (batch tank & chemical storage tank)	√	√
pH Analyser (4-20 mA)	√	√
Data Logger (pH level)	√	√
Temperature Sensor	√	√
Level Transmitter (4-20 mA, batch tank & chemical storage tank)	-	√
Remote Monitoring & Control Capabilities	-	√

MODEL SELECTION

- PAB 01 1 m³ Batch tank size
- PAB 02 2.45 m³ Batch tank size
- PAB 05 5 m³ Batch tank size
- PAB 10 10 m³ Batch tank size
- PAB 15 15 m³ Batch tank size
- PAB 22 22.5 m³ Batch tank size
- PAB 30 30 m³ Batch tank size

Transfer model size below:

PAB __

OPTIONS

- PAB __ - FPU Feed Pump
- PAB __ - SPU Duty / Standby Feed Pump
- PAB __ - SRP Duty / Standby Recirculation Pump
- PAB __ - SDP Duty / Standby Dosing Pump
- PAB __ - DCD Dual Chemical Dosing
- PAB __ - HPU Feed Pump pH 1 - 14
- PAB __ - SHPU Duty / Standby Feed Pump pH 1 - 14
- PAB __ - HRP Recirculation Pump pH 1 - 14
- PAB __ - SHRP Duty / Standby Recirculation Pump pH 1 - 14
- PAB __ - HBT Batch Tank pH 1 - 14
- PAB __ - BAG 100µm Bag Filter
- PAB __ - CUS Custom Specifications

NEED A QUOTE?

COMPLETE THIS TABLE AND EMAIL TO...

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