



PadEx adsorption column

BiAqua PRT™

Product datasheet PadEx P-125 - PadEx P-1600

PadEx series

The PadEx systems (Phosphate adsorber Exchanger) have been designed to remove phosphate from water using BiAqua proprietary bio-based adsorbent.

BiAqua PRT™ (Phosphate Removal Technology) is a disruptive solution to prevent biofouling in reverse osmosis membrane-based water treatment plants.

The unique properties of BiAqua adsorbent result in extremely low phosphate concentrations after the treatment. At such low concentrations, bacterial growth is nearly stopped.

The technology has been developed specifically to limit bacterial growth in reverse osmosis membrane, therefore preventing biofouling.

The technology may be applied in oil and gas industry to prevent reservoir souring or in cooling water system to prevent the metabolism of legionella bacteria.

BiAqua phosphate removal technology is also the ideal polishing step in phosphate removal for water bodies treatment (waste water, surface water).

PadEx series - Pre-engineered

(Large scale series under design)

PadEx	Specific capacity (m ³ /h)	Estimated adsorption capacity (m ³)		
		Case 1	Case 2	Case 3
P-125	2,5	19.125	1.434	57
P-165	3,3	25.245	1.893	76
P-255	5,1	39.015	2.926	117
P-340	6,8	52.020	3.902	156
P-410	8,2	62.730	4.705	188
P-630	12,6	96.390	7.229	289
P-780	15,6	119.340	8.951	358
P-910	18,2	139.230	10.442	418
P-1080	21,6	165.240	12.393	496
P-1180	23,6	180.540	13.541	542
P-1400	28,0	214.200	16.065	643
P-1600	32,0	244.800	18.360	734

Case 1: Membrane systems pre-treatment (Phosphate content: 0,15 ppm)

Case 2: Wastewater effluent treatment (Phosphate content: 2 ppm)

Case 3: Horticulture (Phosphate content: 50 ppm)

Features and benefits

The PadEx series is a Phosphate adsorber Exchanger system with capacities ranging from 2.5 to 32 m³/h. The system includes a regeneration station which make possible to recover the removed phosphate. The regenerative process fully reactivates the adsorbent.

Typical performances

A consistent removal >95 % is achieved for phosphate concentrations ranging between 0.1 and 25 ppm.

Phosphate concentrations are reduced to ultra-low levels (below 1 ppb).

The adsorbent is tolerant to temperatures up to 60 degrees Celsius and can be operated in a pH range of 4-10.



PadEx regeneration station