

Packaged Batch DI Regeneration Plants



Overview

IWS Packaged Batch DI Regeneration Plants support the providers of a portable exchange deionization (PEDI) service business with an operator friendly, pre-engineered design to regenerate exhausted mixed-bed resin at their facility. The standard system includes a resin separation vessel which allows for the transfer of the cation and anion resin into separate vessels to be regenerated simultaneously. After regeneration and rinse to quality, the cation and anion resins are sent to a final vessel to remix before being placed back into the exchange tanks and returned to service.

Operating Parameters

- Electrical Power: 120 VAC, 1-phase, 60 Hz
- Compressed Air: 80-100 psig (valve actuation)
- Remix Air Supply: 8-10 psig (see specifications table)
- Cation Resin regenerant: HCL (30%)
- Anion Resin Regenerant: NaOH (50%)

Materials of Construction

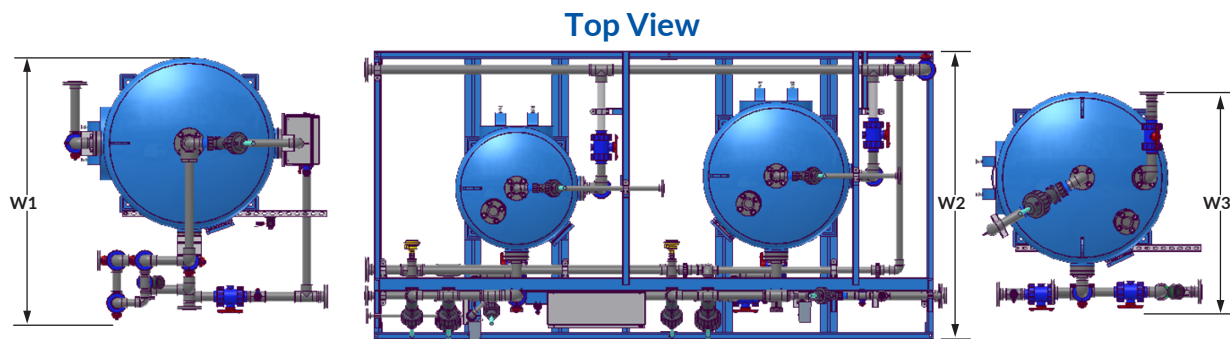
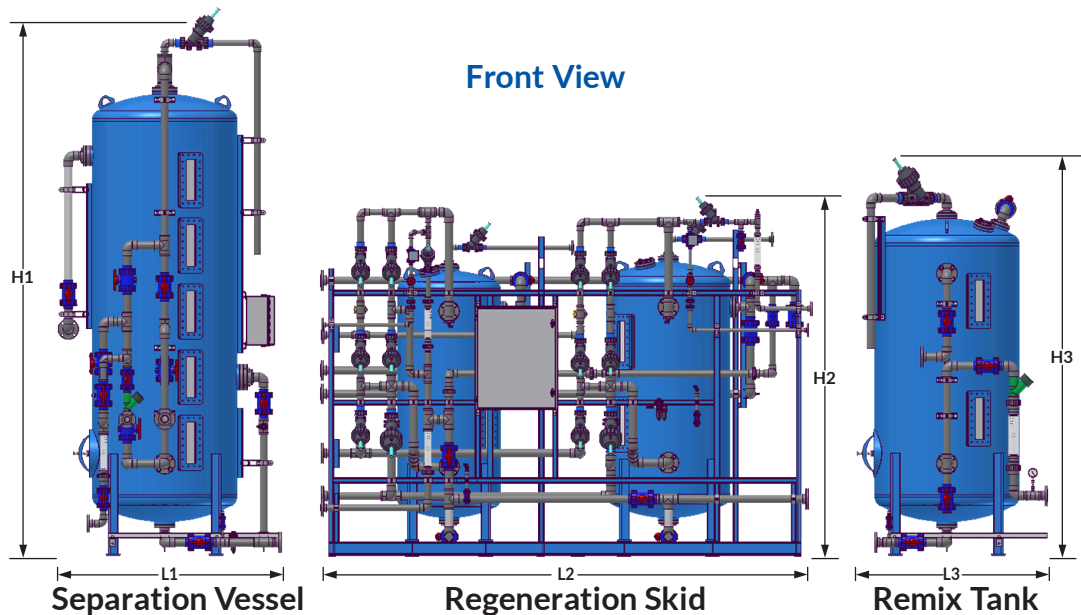
- Resin Tanks: Carbon steel with Safety Blue exterior paint
- Tank Lining: Vinylester (applied at 40-50 mils DFT)
- Exterior Piping: Sch 80 PVC
- Internal Distributors: Sch 80 PVC / ABS
- Control Valves: Noryl Thermoplastic
- Chemical Eductors: PVC
- Skid: Painted, Carbon Steel
- Manual Valves: PVC

Standard Features

- Allen Bradley Micrologix 1400 PLC System
- Allen Bradley PanelView 800 Interface
- Semi-Automatic Resin Regeneration
- Manual Operation for Separation and Remix
- Simultaneous Regeneration of Cation & Anion Resins
- Aquamatic K53 Diaphragm Control Valves
- Conductivity Monitor for Quality Rinse
- Visual Flow Meters for Water Inlet Lines
- Visual Flow Meter for Air Inlet (Remix Vessel)
- 316SS Pressure Gauges
- Full Sideshell Sight Windows (3"x12")
- NEMA-4X Electrical Enclosures (FRP)
- Brine Rinse Function for Separation Vessel
- Clear Piping Sections for Resin Transfer Links
- Venturi Eductors for Chemical Inlets
- Temperature Gauge for Hot Water Inlet
- Automatic Air Vent Valves for Separation & Remix Vessels
- Junction Panels for Separation & Remix Vessels
- Flexible Design for Multiple Resin Types

SPECIFICATIONS

MODEL NUMBER	RESIN QUANTITY (CU. FT.)		SEPARATION VESSEL DIA. x SS (INCHES)	CATION REGEN VESSEL DIA. x SS (INCHES)	ANION REGEN VESSEL DIA. x SS (INCHES)	REMIX VESSEL DIA. x SS (INCHES)	REMIX VESSEL AIR SUPPLY (SCFM)	OVERALL DIMENSIONS (INCHES)			SHIPPING WEIGHT (LBS.)		
	CATION	ANION						SEPARATION VESSEL (L1xW1xH1)	REGEN SKID (L2xW2xH2)	REMIX TANK (L3xW3xH3)	SEPARATION VESSEL	REGEN SKID	REMIX TANK
MRP-40	16	24	42x108	30x60	36x60	42x72	70	62x64x133	137x72x104	48x54x101	2,050	3,800	1,900
MRP-60	24	36	54x108	42x60	48x60	48x72	90	76x78x133	161x84x104	54x60x101	3,100	4,200	2,600
MRP-100	40	60	60x120	42x72	48x72	60x84	140	84x84x178	145x76x110	66x72x133	3,600	4,600	3,100
MRP-200	80	120	84x120	60x72	72x72	84x72	270	108x108x110	188x96x110	90x96x120	5,900	6,900	5,100



Notes

- ① All dimensions and weights shown are approximate and dependent on options selected. Weights listed do not include resin.
- ② Equipment for wastewater neutralization is not included.
- ③ Equipment for regeneration supply water (Softened, RO, DI) is not included.
- ④ Air Blower for Remix Vessel is not included.
- ⑤ Interconnecting piping and resin transfer valves between the individual equipment is not included.



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