

HFX Standard Duplex Recycling Systems include on integrated skids with centralized control

- Two (2) Goulds SSH System Feed Pumps w/ optional VFD
- Two (2) minimum Hydrus Carbon Filters for chlorine & organics
- Two (2) minimum 5-micron Bag Filter Housings for TSS
- Two (2) Cation Exchangers with 3-way actuated control valves
- Two (2) Anion Exchangers with 3-way actuated control valves
- One (1) inlet uS & flow sensor for Feed-forward regeneration
- One (1) outlet uS & pH sensor for Feed-back regeneration
- One (1) automatic make-up water supply valve
- One (1) 3-way actuated product & off-spec water control valve
- One (1) each uS sensor & 3-way valve for regeneration waste
- Two (2) Goulds SSH DI Water Pumps w/ optional VFD
- One (1) Ultra-violet (UV) Sterilizer for min. 4-hour tank turnover
- One (1) Allen Bradley (AB) CompactLogix PAC Controller
- One (1) AB 10.4" color Panelview for Human-Machine Interface
- High Purity (HP) includes 2nd cation exchanger for 3 to 5 MegOhm
- Enhanced Pretreatment (EP) includes Hydrus Macrolite® filters



System Selection

1. System Size?

- 35-gpm, 55-gpm, 75-gpm, 115-gpm, or 135-gpm

2. Requirement for continuous DI Water?

- If "Yes" a Duplex provides one cation & anion vessel in service at all times even during regeneration
- If "No" a Simplex with one cation & anion vessels only requires system to be off-line for regeneration

3. Is the analytical data of feed water?

- If "Yes" supply water data for review
- If "No" provide application details to confirm suitability

4. Is Total Dissolved Solids (TDS) in feed water <600 mg/L?

- If "Yes" this is a suitable application
- If "No" but is <800 mg/l provide flow to confirm suitability

5. Are there Specifications for the Recycled Water Quality?

- If "Yes" answer the following questions
- If "No" specifications provided in system datasheets apply

A. Is the required water quality better than 3 uS/cm?

- If "Yes" the HP is required and will produce 3-5 Meg-Ohm
- If >3-5 Meg-Ohm, mixed-bed polishing resin is required

B. Are there specifications for pH, TOC, silica, or particles?

- If "Yes", provide specifications to confirm suitability
- If "No" specifications provided in datasheets apply

6. Is there an existing wastewater treatment system?

- Neutralization is required for non-metal bearing feed water
- Metals precipitation is required for metal-bearing feed water
- If there is no treatment system, we can specify and propose

7. Volume of System Feed and DI Water Tanks?

- DI water tank must be sized to meet production & regeneration DI water consumption per datasheets

Tank Volume	Dimensions	Comment
2,000 gallons	64"D x 160"H	Minimum for HFX35d
4,000 gallons	95"D x 140"H	Minimum for HFX55d
5,000 gallons	102"D x 152"H	Minimum for HFX75d
8,400 gallons	119"D x 188"H	Minimum for HFX115d
10,000 gallons	141"D x 160"H	Minimum for HFX135d

8. Systems

- Standard - includes all components detailed on the page 1
- Optional Adders - EP with Macrolite or HP with Polishing Cation
- Required Adders - System Feed & DI Water Tanks at above cost

System	Macrolite Filter	Carbon	Bag Filter	Cation	Anion	Polishing Cation	Flow	Quality
HFX35S	N	Y	Y	Y	Y	N	35-GPM	< 5 Us/CM
HFX35EP	Y	Y	Y	Y	Y	N	35-GPM	< 5 Us/CM
HFX35HP	N	Y	Y	Y	Y	Y	35-GPM	< 5 MgOhm
HFX55S	N	Y	Y	Y	Y	N	55-GPM	< 5 Us/CM
HFX55EP	Y	Y	Y	Y	Y	N	55-GPM	< 5 Us/CM
HFX55HP	N	Y	Y	Y	Y	Y	55-GPM	< 5 MgOhm
HFX75S	N	Y	Y	Y	Y	N	75-GPM	< 5 Us/CM
HFX75EP	Y	Y	Y	Y	Y	N	75-GPM	< 5 Us/CM
HFX75HP	N	Y	Y	Y	Y	Y	75-GPM	< 5 MgOhm
HFX115S	N	Y	Y	Y	Y	N	115-GPM	< 5 Us/CM
HFX115EP	Y	Y	Y	Y	Y	N	115-GPM	< 5 Us/CM
HFX115HP	N	Y	Y	Y	Y	Y	115-GPM	< 5 MgOhm
HFX135S	N	Y	Y	Y	Y	N	135-GPM	< 5 Us/CM
HFX135EP	Y	Y	Y	Y	Y	N	135-GPM	< 5 Us/CM
HFX135HP	N	Y	Y	Y	Y	Y	135-GPM	< 5 MgOhm

9. Installation and Deliverables

- Typical lead-time is 8 to 10 weeks from receipt of purchase order and initial payment
- Deliverables include electrical schematics, Installation Manual, and O&M Manual
- Warranty is 12-months from date of installation as detailed in proposal Terms & Conditions

