

HICAP XL Datasheet

General Description

The HICAPXL Series is Robert B. Hill’s standard offering of high-volume, high-flow water softening systems designed to meet the demanding water treatment needs of industrial, commercial, and municipal applications. Engineered for reliability and performance, this system can also be customized with single, duplex, and multi-tank arrangements to match specific flow requirements and operational demands, making it an ideal choice for high-demand environments.



System Sizes

HICAPXL-X(X)-	4860	4872	5460	5472	6060*	6072
Volume	38 ft ³	45 ft ³	47 ft ³	57 ft ³	49 ft ³	71 ft ³
Area	12.5 ft ²		15.9 ft ²		19.6 ft ²	
Target Flow	65-100 GPM		80-130 GPM		100-160 GPM	
Max Flow	185 GPM		235 GPM		290 GPM	
Min Flow	25 GPM		35 GPM		40 GPM	
Backwash Flow	65 GPM		80 GPM		100 GPM	
Capacity @10lb Salt Dose	950k grain	1125k grain	1175k grain	1425k grain	1225k grain	1775k grain
Capacity @15lb Salt Dose	1140k grain	1350k grain	1410k grain	1710k grain	1470k grain	2130k grain

HICAPXL-X(X)-	7260	7272*	8460	8472	9660	9672
Volume	84 ft ³	101 ft ³	115 ft ³	138 ft ³	150 ft ³	181 ft ³
Area	28.3 ft ²		38.5 ft ²		50.3 ft ²	
Target Flow	140-230 GPM		190-310 GPM		250-405 GPM	
Max Flow	420 GPM		575 GPM		750 GPM	
Min Flow	60 GPM		80 GPM		100 GPM	
Backwash Flow	140 GPM		190 GPM		250 GPM	
Capacity @10lb Salt Dose	2100k grain	2525k grain	2875k grain	3450k grain	3750k grain	4525k grain
Capacity @15lb Salt Dose	2520k grain	3030k grain	3450k grain	4140k grain	4500k grain	5430k grain

- all items listed are just shown for reference specific system capacity may vary

* - standard sizes

** Larger Sizes available upon request

***- Target Flow based on optimal bed contact time range

****- Max Flow based on max flux rate recommended and typically only for periodic use

***** - Min Flow based on recommend rate to avoid channeling for continuous use flow

System Pressures

Standard Pressure ratings are:

- 100 PSI
- 125 PSI
- 150 PSI

ASME Code Stamped Vessels optional but not standard.

Arrays

- **Simplex** – great for periodic high flow application that can accommodate backwash down time
- **Duplex** – good for continuous flow applications
- **Triplex** – great for continuous flow applications, can accommodate an N+1 requirement or can be sized to accommodate a larger range of flow rates
- **Quad** – good for high continuous flow applications for high hardness targets
- *(larger arrays available but not standard)*

Skid Arrangement

- **Fully Skidded**
- **Valve Tree Skid**



Piping

- PVC SCH80 - for standard use and applications
- 304SS SCH10 Welded – for corrosive / harsh environments

Standard Features

- Skid Mounted Valves
- Pneumatic Butterfly Valves
- Paddle Wheel Flowmeter(s) *(* Magnetic flow meter(s) become a required option for larger systems)*
- Inlet / Outlet Pressure Transmitters
- Inlet / Outlet Pressure Gauges
- Inlet / Outlet Sample Valves
- Polypropylene Vacuum Breaker / Air Relief Valve(s)
- NEMA 4/4X Panels

Optional Features

Magnetic Flowmeters

For more accurate means of flow measurement, the paddlewheel flow meters can be readily exchanged for magnetic flow meters. For the larger systems magnetic flow meters become a required option.

ASME Code Stamped Vessels

The softener pressure vessels can be ordered with a certified ASME stamp as an additional quality measure.

NSF-61

NSF 61 certified equipment, valves and instruments can be readily sourced for drinking water applications.

Valve Feedback Switches

Adding feedback switches to the valves is a great troubleshooting tool allowing for easier detecting/troubleshooting in the event of actuator issues.

Drain Flowmeter / Flow Indicator

If you want to actively monitor the flow to drain an active flowmeter can be added.

Hard Water By-Pass

A hard water by-pass is a good option for systems that can handle the feed water quality and cannot handle any down time. Typical for less redundant systems or critical systems that cannot

Hard Water Blend Valve

This option includes additional piping with a flowmeter and flow control valve allowing for some of the feed water to blend with the product water making the final product have a more controlled residual hardness. One benefit of this option is reducing the load on the softeners and reducing a percent of the salt usage.

Backwash/Rinse Conductivity

For applications requiring higher purity product water, a conductivity probe can be installed at the softener discharge. This probe monitors the system, ensuring it returns to normal after a regeneration cycle before the vessel is placed back into operation. *(Note – Conductivity is not a direct way to monitor hardness)*

Active Online Hardness Analyzer

In the event of critical applications or applications that require a higher degree of monitoring of the product water a hardness analyzer can be installed to take active samples of the water product.

Feed Pressure Relief Valve

If there is a risk of high feed pressure a pressure safety valve can be added on the feed of the softener system as an additional layer of protection.

Electrically Actuated Valves

When a pneumatic air supply is unavailable or when electrically actuated valves are preferred, the system can be equipped with electrically actuated valves in place of the pneumatic valves.