



# Protect Your Processes, Production & Critical Equipment – Reduce Your Liability.

Minimize risk from hard water with new patent pending failsafe water softener technology from Nancrede Engineering.

## 'ZH' ZERO HARDNESS FAILSAFE HIGH EFFICIENCY SOFTENER SYSTEMS



The Nancrede Engineering 'ZH' Zero Hardness Failsafe water softeners reduce chance of failure and hardness leakage by always having two softener tanks online in series and eliminating stagnant water in offline tanks and piping.

- Worker polisher tanks running in series eliminate hard water caused by one softener not functioning or failing to regenerate correctly.
- Piping and valving optimization minimizes dead legs and hardness leaching into the water.
- Lower hardness leakage & salt savings are achieved by running the softeners in a double pass worker polisher softener flow configuration.
- Hardness leakage and high efficiency are optimized with adjustable salt level settings.

### STANDARD FEATURES

- Failsafe, high efficiency design
- 100% soft water uptime configuration
- Anti-fouling, high flow resin
- Distribution and controls to reduce hardness leakage
- Bi-directional flow with continuous soft water polishing
- Skid Mounted, pre-piped and pre-wired
- Parallel mode for peak flow rates
- Factory hydro-tested at 100 psig
- Systems are all NSF 61 rated

### INSTRUMENTATION / CONTROLS

- Butterfly valves with air or electric actuators
- AB 1400 PLC with BMS communication
- 304 stainless steel piping and distribution
- Metered regeneration with timed override
- Inlet/Outlet pressure gauges & sample ports
- Adjustable brining settings from 4 – 15 lbs



### OPERATING PARAMETERS

- Inlet pressure: 30 – 100 psig
- Electrical 120 – 240 VAC, 50 - 60 Hz
- Temperature: 35 – 110 °F

### OPTIONS

- Regeneration failure early detection system
- Low flow hardness elimination system
- Triple stage pressure transducer arrangement
- Premium online hardness monitor with 4-20 output
- High pressure and temperature systems
- ASME code and stamped resin tanks
- 304 and 316 Stainless steel tank construction
- Additional piping materials, including CPVC
- Fully integrated sanitization system
- Seismic zone rated tanks and systems
- Ultraviolet light and Cartridge filter system

# 'ZH' ZERO HARDNESS FAILSAFE HIGH EFFICIENCY SOFTENER SYSTEMS

| CATALOG NUMBER | EXCHANGE CAPACITY/(Grains)<br>SALT DOSAGE/(Pounds)<br>SALT USAGE/(Pounds)<br>MAX. MIN. |                               | FLOW RATES |          |                 | PIPE SIZE      |              | RESIN<br>CU. FT. | TANK SIZES      |              | SALT STORAGE<br>LBS |
|----------------|--|-------------------------------|------------|----------|-----------------|----------------|--------------|------------------|-----------------|--------------|---------------------|
|                |  |                               | SERVICE    |          | BACKWASH<br>GPM | SERVICE<br>IN. | DRAIN<br>IN. |                  | SOFTENER<br>IN. | BRINE<br>IN. |                     |
|                |  |                               | CONT. GPM  | PEAK GPM |                 |                |              |                  |                 |              |                     |
| LC-150-1       | 150,000/<br>75/<br>75  | 100,000/<br>30/<br>30         | 21         | 64       | 10              | 1              | 1            | 5                | 20 x 54         | 24 x 50      | 700                 |
| 1-1/4          |  |                               | 28         | 86       |                 | 1-1/4          | 1            |                  |                 |              |                     |
| 1-1/2          |  |                               | 36         | 110      |                 | 1-1/2          | 1            |                  |                 |              |                     |
| 2              |  |                               | 46         | 138      |                 | 2              | 1            |                  |                 |              |                     |
| LC-210-1-1/4   | 210,000/<br>105/<br>105  | 140,000/<br>42/<br>42         | 27         | 82       | 15              | 1-1/4          | 1            | 7                | 24 x 54         | 24 x 50      | 600                 |
| 1-1/2          |  |                               | 42         | 128      |                 | 1-1/2          | 1            |                  |                 |              |                     |
| 2              |  |                               | 53         | 160      |                 | 2              | 1            |                  |                 |              |                     |
| 2-1/2          |  |                               | 76         | 230      |                 | 2-1/2          | 1            |                  |                 |              |                     |
| LC-300-1-1/2   | 300,000/<br>150/<br>150  | 200,000/<br>60/<br>60         | 45         | 136      | 20              | 1-1/2          | 1            | 10               | 30 x 54         | 24 x 60      | 600                 |
| 2              |  |                               | 61         | 184      |                 | 2              | 1            |                  |                 |              |                     |
| 2-1/2          |  |                               | 92         | 280      |                 | 2-1/2          | 1            |                  |                 |              |                     |
| 3              |  |                               | 109        | 330      |                 | 3              | 1            |                  |                 |              |                     |
| LC-450-1-1/2   | 450,000/<br>225/<br>225  | 300,000/<br>90/<br>90         | 42         | 126      | 20              | 1-1/2          | 1            | 15               | 30 x 60         | 30 x 60      | 1000                |
| 2              |  |                               | 54         | 164      |                 | 2              | 1            |                  |                 |              |                     |
| 2-1/2          |  |                               | 79         | 240      |                 | 2-1/2          | 1            |                  |                 |              |                     |
| 3              |  |                               | 92         | 280      |                 | 3              | 1            |                  |                 |              |                     |
| LC-600-1-1/2   | 600,000/<br>300/<br>300  | 400,000/<br>120/<br>120       | 48         | 144      | 30              | 1-1/2          | 1-1/2        | 20               | 36 x 60         | 39 x 60      | 1900                |
| 2              |  |                               | 73         | 220      |                 | 2              | 1-1/2        |                  |                 |              |                     |
| 2-1/2          |  |                               | 92         | 280      |                 | 2-1/2          | 1-1/2        |                  |                 |              |                     |
| 3              |  |                               | 116        | 350      |                 | 3              | 1-1/2        |                  |                 |              |                     |
| LC-750-2       | 750,000/<br>375/<br>375  | 500,000/<br>150/<br>150       | 59         | 180      | 30              | 2              | 1-1/2        | 25               | 36 x 72         | 39 x 60      | 1700                |
| 2-1/2          |  |                               | 92         | 280      |                 | 2-1/2          | 1-1/2        |                  |                 |              |                     |
| 3              |  |                               | 106        | 320      |                 | 3              | 1-1/2        |                  |                 |              |                     |
| LC-900-2       | 900,000/<br>450/<br>375  | 600,000/<br>180/<br>180       | 69         | 210      | 45              | 2              | 2            | 30               | 42 x 60         | 42 x 60      | 1900                |
| 2-1/2          |  |                               | 99         | 300      |                 | 2-1/2          | 2            |                  |                 |              |                     |
| 3              |  |                               | 124        | 376      |                 | 3              | 2            |                  |                 |              |                     |
| LC-1050-2      | 1,050,000/<br>525/<br>525  | 700,000/<br>210/<br>210       | 63         | 190      | 45              | 2              | 2            | 35               | 42 x 72         | 50 x 60      | 2300                |
| 2-1/2          |  |                               | 96         | 300      |                 | 2-1/2          | 2            |                  |                 |              |                     |
| 3              |  |                               | 124        | 346      |                 | 3              | 2            |                  |                 |              |                     |
| LC-1200-2-1/2  | 1,200,000/<br>600/<br>600  | 800,000/<br>240/<br>240       | 106        | 320      | 60              | 2-1/2          | 2            | 40               | 48 x 60         | 52 x 60      | 2600                |
| 3              |  |                               | 142        | 430      |                 | 3              | 2            |                  |                 |              |                     |
| 4              |  |                               | 205        | 620      |                 | 4              | 2            |                  |                 |              |                     |
| LC-1500-2-1/2  | 1,500,000/<br>750/<br>750  | 1,000,000/<br>300/<br>300     | 109        | 330      | 80              | 2-1/2          | 2            | 50               | 54 x 60         | 66 x 46      | 3300                |
| 3              |  |                               | 149        | 450      |                 | 3              | 2            |                  |                 |              |                     |
| 4              |  |                               | 267        | 620      |                 | 4              | 2            |                  |                 |              |                     |
| LC-1950-2-1/2  | 1,950,000/<br>975/<br>975  | 1,300,000/<br>390/<br>390     | 111        | 336      | 100             | 2-1/2          | 2-1/2        | 65               | 60 x 60         | 60 x 66      | 4000                |
| 3              |  |                               | 155        | 470      |                 | 3              | 2-1/2        |                  |                 |              |                     |
| 4              |  |                               | 294        | 890      |                 | 4              | 2-1/2        |                  |                 |              |                     |
| LC-2400-3      | 2,400,000/<br>1,200/<br>1,200  | 1,600,000/<br>480/<br>480     | 162        | 490      | 120             | 3              | 3            | 80               | 66 x 72         | 66 x 72      | 5800                |
| 4              |  |                               | 317        | 960      |                 | 4              | 3            |                  |                 |              |                     |
| 6              |  |                               | 429        | 1300     |                 | 6              | 3            |                  |                 |              |                     |
| LC-3000-3      | 3,000,000/<br>1,500/<br>1,500  | 2,000,000/<br>600/<br>600     | 168        | 510      | 140             | 3              | 3            | 100              | 72 x 72         | 82 x 60      | 7300                |
| 4              |  |                               | 330        | 1000     |                 | 4              | 3            |                  |                 |              |                     |
| 6              |  |                               | 462        | 1400     |                 | 6              | 3            |                  |                 |              |                     |
| LC-3600-4      | 3,600,000/<br>1,800/<br>1,800  | 2,400,000/<br>720/<br>720     | 343        | 1040     | 165             | 4              | 3            | 120              | 78 x 72         | 82 x 60      | 6000                |
| 6              |  |                               | 495        | 1500     |                 | 6              | 3            |                  |                 |              |                     |
| 8              |  |                               | 627        | 1900     |                 | 8              | 3            |                  |                 |              |                     |
| LC-4200-4      | 4,200,000/<br>2,100/<br>2,100  | 2,800,000/<br>840/<br>840     | 356        | 1080     | 190             | 4              | 3            | 140              | 84 x 72         | 90 x 60      | 7500                |
| 6              |  |                               | 515        | 1560     |                 | 6              | 3            |                  |                 |              |                     |
| 8              |  |                               | 660        | 2000     |                 | 8              | 3            |                  |                 |              |                     |
| LC-4800-4      | 4,800,000/<br>2,400/<br>2,400  | 3,200,000/<br>960/<br>960     | 396        | 1200     | 220             | 4              | 4            | 160              | 90 x 72         | 90 x 60      | 6500                |
| 6              |  |                               | 528        | 1600     |                 | 6              | 4            |                  |                 |              |                     |
| 8              |  |                               | 700        | 2120     |                 | 8              | 4            |                  |                 |              |                     |
| LC-5400-4      | 5,400,000/<br>2,700/<br>2,700  | 3,600,000/<br>1,080/<br>1,080 | 446        | 1350     | 250             | 4              | 4            | 180              | 96 x 72         | 96 x 60      | 7700                |
| 6              |  |                               | 581        | 1760     |                 | 6              | 4            |                  |                 |              |                     |
| 8              |  |                               | 769        | 2300     |                 | 8              | 4            |                  |                 |              |                     |

Non-chemical and chemical water treatment systems can be packaged with the ZH Water Softener System to optimize water purity and chemistry for your organization. Consulting for current and planned water treatment systems and services are also available.

## NON-CHEMICAL AUXILIARY WATER TREATMENT SYSTEMS

- RO & Nanofiltration Systems
- IX/EDI Deionization Systems
- Backwashable Filter Systems
- Ultrafilter (UF) Systems
- Microfiltration Systems

## CHEMICAL AUXILIARY WATER TREATMENT SYSTEMS

- Mixed Oxidant Generation Systems
- Chlorine Dioxide Generation Systems
- Chlorine Injection Systems
- Monochloramine Injection Systems
- Advanced Oxidation Process Systems