



**eVOQUA**  
WATER TECHNOLOGIES



## CDI-LX™ SYSTEMS

### CONTINUOUS ELECTRODEIONIZATION SYSTEMS FOR HIGH-PURITY WATER PRODUCTION

Evoqua Water Technologies CDI-LX™ systems are pre-engineered and specifically designed to meet the demands of the pharmaceutical, power, microelectronics, and general industry customer. The standard CDI-LX systems come in flow rates from 1.7 to 180 gpm (0.39 to 40.88 m<sup>3</sup>/hr), combining single or multiple (up to 8) CDI-LX modules on a frame with power supplies, controllers, piping, sample valves, cleaning connections, and flow and quality monitoring instrumentation. Select CDI-LX systems can be hot water sanitized at up to 185° F (85° C).

Continuous electrodeionization is a safe, chemical-free way to take RO (reverse osmosis) water to a higher level of purity. CDI-LX systems use our proven proprietary process to continuously produce an uninterrupted supply of high purity water, up to 18 megohm-cm, without the need for regeneration chemicals.

#### CDI-LX System Features:

- Reliable, compact design
- Quick installation
- Low maintenance
- Easy validation
- Hot water sanitizable (HWS) units available up to 185° F (85° C)
- High operating temperature (up to 100 psig feed)
- Completely leak-free operation
- Ideal for loop applications
- Low power consumption
- Individual power supplies and controls

## SYSTEM SPECIFICATIONS

| Model Number CDILX_                      | 1001         | 2401         | 3001         | 3002         | 3003           | 3004           | 3006           | 3008           |
|------------------------------------------|--------------|--------------|--------------|--------------|----------------|----------------|----------------|----------------|
| Number of Modules on Skid                | 1            | 1            | 1            | 2            | 3              | 4              | 6              | 8              |
| Maximum Product, gpm(m <sup>3</sup> /hr) | 7.5 (1.70)   | 18.75 (4.26) | 22.5 (5.11)  | 45 (10.22)   | 67.5 (15.33)   | 90 (20.44)     | 135 (30.66)    | 180 (40.88)    |
| Nominal Product, gpm(m <sup>3</sup> /hr) | 5.0 (1.13)   | 12.5 (2.84)  | 15.0 (3.41)  | 30.0 (6.81)  | 45.0 (10.22)   | 60 (13.63)     | 90 (20.44)     | 120 (27.25)    |
| Minimum Product, gpm(m <sup>3</sup> /hr) | 2.5 (0.5)    | 6.25 (1.42)  | 7.5 (1.70)   | 15 (3.41)    | 22.5 (5.11)    | 30 (6.81)      | 45 (10.22)     | 60 (13.63)     |
| Typical Recovery %                       | 90 - 95      | 90 - 95      | 90 - 95      | 90 - 95      | 90 - 95        | 90 - 95        | 90 - 95        | 90 - 95        |
| <b>Connections</b>                       |              |              |              |              |                |                |                |                |
| Feed                                     | 3/4"         | 1"           | 1"           | 1-1/2"       | 2"             | 2"             | 3"             | 3"             |
| Product                                  | 3/4"         | 1"           | 1"           | 1-1/2"       | 2"             | 2"             | 3"             | 3"             |
| Reject                                   | 1/2"         | 1/2"         | 1/2"         | 1/2"         | 1"             | 1"             | 1-1/2"         | 1-1/2"         |
| <b>Electrical Service Required</b>       |              |              |              |              |                |                |                |                |
| Voltage                                  | 208          | 208          | 208          | 480          | 480            | 480            | 480            | 480            |
| Frequency (Hz)                           | 50/60        | 50/60        | 50/60        | 50/60        | 50/60          | 50/60          | 50/60          | 50/60          |
| <b>System Dimensions</b>                 |              |              |              |              |                |                |                |                |
| L x D x H (inches)                       | 40x33x77     | 40x33x77     | 40x33x77     | 40x33x77     | 75x40x83       | 75x40x83       | 140x40x78      | 140x40x78      |
| (cm)                                     | 102x83x196   | 102x83x196   | 102x83x196   | 102x83x196   | 191x102x211    | 191x102x211    | 330x102x211    | 330x102x211    |
| Shipping Weight lb (kg) (est)            | 500<br>(227) | 530<br>(240) | 550<br>(250) | 900<br>(409) | 3000<br>(1361) | 3300<br>(1497) | 5000<br>(2267) | 5600<br>(2540) |

## COMMON SPECIFICATIONS

| <b>Design Parameters</b>              |                                                    |
|---------------------------------------|----------------------------------------------------|
| Configurations                        | Skids with 1, 2,3,4,6 and 12 modules               |
| System Recovery (typical)             | 90%                                                |
| <b>General Specifications</b>         |                                                    |
| Frame Materials                       | Welded structural carbon steel                     |
| Module Model                          | LX10 + LX24 + LX30                                 |
| Plumbing, Valves, and Instrumentation | Market specific                                    |
| <b>Operating Limits*</b>              |                                                    |
| Maximum Feed Temperature              | 113° F (45° C)                                     |
| Minimum Feed Temperature              | 41° F (5° C)                                       |
| Maximum Sanitization Temperature**    | 194° F (90° C)                                     |
| Maximum Feed Pressure                 | 100 PSIG (7 bar) at 113 F (45° C) max. temperature |
| Pressure Drop at Minimum Flow Rate    | 10 - 15 psid (0.69-1.03 bar)                       |
| Pressure Drop at Nominal Flow Rate    | 25 - 35 psid (1.72-2.41 bar)                       |
| Pressure Drop at Maximum Flow Rate    | 40 - 50 psid (2.76-3.45 bar)                       |

\*If any of the operating conditions are not within the limits given, consult technical support for application assistance.

\*\*If equipped with hot water sanitizable (HWS) modules and plumbing.

## FEED WATER REQUIREMENTS\*

| Feed Water Source                                            | RO Permeate |
|--------------------------------------------------------------|-------------|
| Feed Water Conductivity Equivalent including CO <sub>2</sub> | <40 µS/cm   |
| Silica (SiO <sub>2</sub> )                                   | <1 ppm      |
| Iron, Mn, H <sub>2</sub> S                                   | <0.01 ppm   |
| Total Chlorine (as Cl <sub>2</sub> )                         | <0.02 ppm   |
| Hardness (as CaCO <sub>3</sub> )                             | <1.0 ppm    |
| Dissolved Organics (TOC as C)                                | <0.5 ppm    |
| Operating pH Range                                           | 4 - 11      |

\*If any of the feed water parameters are not within the limits given, consult Evoqua Water Technologies Technical Support for application assistance.



210 Sixth Avenue, Suite 3300, Pittsburgh, PA 15222

+1 (866) 926-8420 (toll-free) +1 (978) 614-7233 (toll) [www.evoqua.com](http://www.evoqua.com)

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