

Water Technologies

CDI-LX™ Systems

Continuous electrodeionization systems for high-purity water production

SIEMENS

Siemens 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 m³/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 patented 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_ Number of Modules on Skid	1001 1	2401 1	3001 1	3002 2	3003 3	3004 4	3006 6	3008 8
Maximum product, gpm(m ³ /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 ³ /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 ³ /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
Connections								
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"
Electrical Service Required								
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
System Dimensions								
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 (227)	530 (240)	550 (250)	900 (409)	3000 (1361)	3300 (1497)	5000 (2267)	5600 (2540)

Common Specifications

DESIGN PARAMETERS	
Configurations	Skids with 1,2,3,4,6 and 8 modules
System Recovery (typical)	90%
GENERAL SPECIFICATIONS	
Frame Materials	Welded structural carbon steel
Module Model	LX10 + LX24 + LX30
Plumbing, Valves, and Instrumentation	Market specific
OPERATING LIMITS*	
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 ₂	<40 µS/cm
Silica (SiO ₂)	<1 ppm
Iron, Mn, H ₂ S	<0.01 ppm
Total Chlorine (as Cl ₂)	<0.02 ppm
Hardness (as CaCO ₃)	<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 Siemens Water Technologies Technical Support for application assistance.

The information provided in this brochure contains merely general descriptions or characteristics of performance which in actual case of use do not always apply as described or which may change as a result of further development of the products. An obligation to provide the respective characteristics shall only exist if expressly agreed in the terms of contract.
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