



LINX™ 120 Drinking Water System

1.0 General

The LINX 120 Drinking Water System includes sediment and carbon block prefilters and two LINX deionization cells. This combination provides 90% total dissolved solids (TDS) reduction as well as filtering chlorine and organic compounds. The product is fully automated so that drinking water is delivered without interruption, on demand, and without a storage tank. The LINX 120 product includes the Dial-a-Taste™ feature to provide drinking water with a chosen TDS to suit a customer's taste. Indicator lights on the product inform the customer that system operation is normal and when it is time to replace cartridges.

2.0 Relevant Specifications

- 2.1 Underwriters Laboratories (UL)
 - 2.1.1 UL 979 (Water Softeners and Demineralizers)
 - 2.1.2 UL 73 (Motor Operated Appliances)
- 2.2 National Sanitation Foundation (NSF)
 - 2.2.1 NSF/ANSI 42 (Aesthetic Effects)
 - 2.2.2 NSF/ANSI 53 (Health Effects)

The LINX 120 product will be certified to the appropriate UL and NSF standards to meet their flammability, electrical, structural, extraction and performance requirements

3.0 Materials

- LINX cell housings: Noryl
- Valve: Noryl
- Tubing: Polypropylene, polyethylene
- System enclosure: ABS
- Fittings: Polypropylene

These materials provide a LINX 120 product which will meet all UL and NSF requirements.

4.0 Installation and Maintenance

4.1 Electrical

The system operates on a grounded 120 V/15 A circuit. The product is equipped with all necessary safety features and is simply plugged into the circuit outlet to provide power.



4.2 Plumbing

Incoming (source) water, waste water, and drinking (product) water connections are made to the LINX 120 product via simple push-seal connections in the rear of the device (3/8 inch polyethylene tubings; tubing is provided). It is necessary to connect the source water tubing to the pressurized supply water, the waste water tubing to the drain plumbing, and the drinking water tubing to the dedicated faucet.

4.3 Maintenance

The two LINX 120 cartridges will provide 1000 gallons of drinking water before requiring replacement. The carbon filter requires replacement after 500 gallons. It is suggested that the sediment filter be replaced at the time of carbon filter replacement. The LINX 120 product is designed for quick replacement of cartridges without tools and with minimal water spillage. The product is equipped with indicator lights to inform the user when it is time to change the carbon (and sediment) filters and the LINX cartridges.

5.0 Performance

5.1 Refer to Table 1 for performance characteristics

6.0 Other Documents

6.1 Patents

6.1.1 U.S. Patent 5,788,826, “Electrochemically Assisted Ion Exchange” assigned to Pionetics describes the technology used in the LINX 120 Drinking Water System.

6.2 Trademarks

6.2.1 “Pionetics”, “LINX” and “Dial-a-Taste” are registered trademarks of Pionetics Corporation.

Table 1: LINX 120 Drinking Water System Performance Characteristics

Parameter	Specification
System Dimensions	Width: 7.25 inch (18 cm); Depth: 17 inch (43 cm) Height: 13 inch (33 cm)
System Weight	25 lbs (11 kg) (Full of water)
Supply Water	<1500 ppm TDS; <35 grains hardness (600 ppm as CaCO ₃); pH 4 - 10
TDS Rejection	90% rejection Selectable product water TDS (50 to 250 ppm)



Parameter	Specification
Product Water pH	6.5 – 8.5 (NSF standard 61)
Water Recovery	60%, minimum
Flow Rate	0.5 gallon/minute (1.9 liter/minute)
Capacity	1 gallon (3.8 liters)/20 minutes
Operating Pressure Range	20 to 120 psi
Operating Temperature Range	5 to 40°C (40 – 100°F)
LINX Cartridge Life	1000 gallons drinking water (3780 liters)
Cartridge Storage Life	>12 months (damp)
Energy Consumption	0.03 kW-hr/gallon product water (\$0.03/gallon at \$0.10/kW-hr)
Arsenic (III) and (V) Reduction	Meets EPA recommended level: <0.05 ppm (existing NSF standard)
Barium	Meets EPA recommended levels: <1 ppm (Cal EPA Requirement)
Cadmium	Meets EPA recommended levels: <0.005 ppm (NSF standard 53)
Chromium (total, III, and VI)	Meets EPA recommended levels: <0.05 ppm (Cal EPA Requirement)
Copper	Meets EPA recommended levels: <1.3 ppm (NSF standard 53)
Fluoride	Meets EPA recommended levels: <1.5 ppm (NSF standard 53)
Nickel	Meets EPA recommended levels: <0.1 ppm (NSF standard 53)
Nitrate/Nitrite and Nitrite	Meets EPA recommended level: <10 ppm; <1 ppm (NSF standard 53)
Radium 226 and 228	Meets EPA recommended levels: <5 ppm (NSF standard 53)
Turbidity	Meets EPA recommended levels: <0.5 NTU ² (NSF standard 53)
Chlorine	Meets NSF performance level: 50% reduction ³ (NSF standard 53)
Volatile Organic Compounds (VOC)	Meets NSF performance level: 95% reduction ⁵ (NSF Standard 53)

- 1 MFL is Million Fibers Less than 10 microns in length
- 2 NTU is Nephelometric Turbidity Units
- 3 From a challenge solution containing 2.0 mg/liter free available chlorine (FAC)
- 4 From a challenge solution of >50,000/liter, using microspheres
- 5 From a challenge solution of 300 ppm chloroform as surrogate



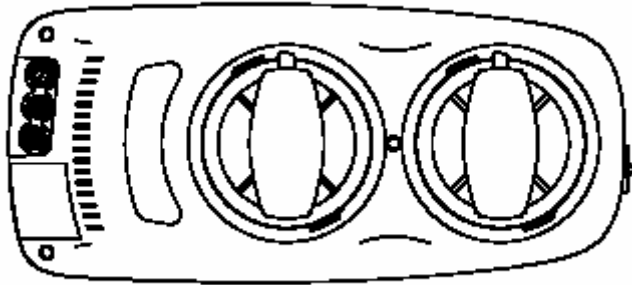
Figure 1:

The LINX 120 Drinking Water System.

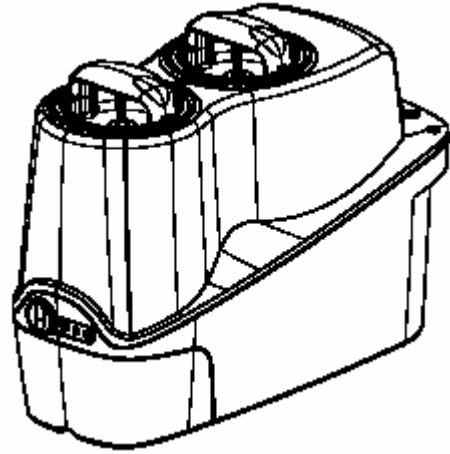


Figure 2.

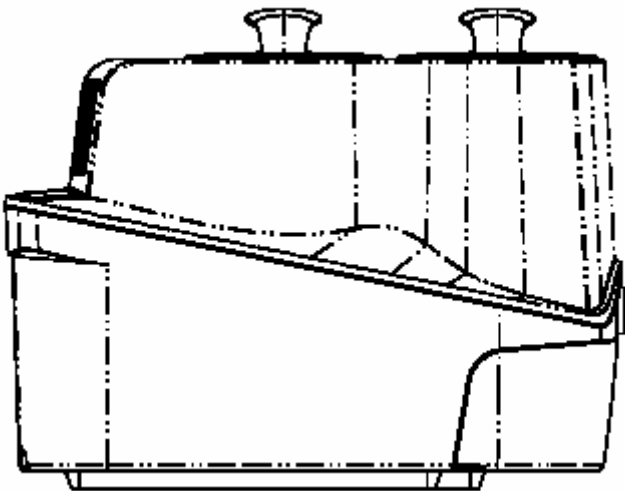
The two LINX 120 cartridges are replaced from the top. A sediment and carbon filter, or other media, are installed at the bottom.



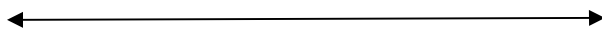
Top View



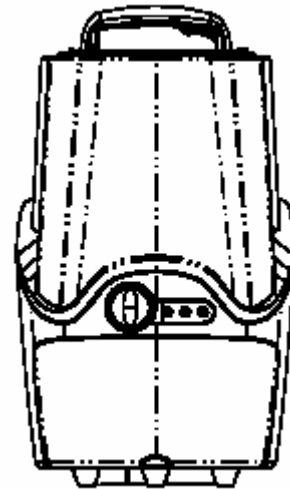
Perspective View



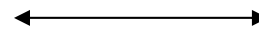
Side View



17.0 in



Front View



7.25 in



13.0 in