



DEFENDER II™

Whole House Lead, PFOS/PFOA & Chlorine Reduction System

HALO Smart Monitor

Displays Filter Life with Multi-colored LED



FILTER
GOOD



CHANGE
SOON



CHANGE
NOW



3 AAA BATTERIES
NOT INCLUDED



Defend against soluble and insoluble lead, PFOS/PFOA, cysts, chlorine & chloramine.*

Lead and PFOS/PFOA in drinking water are a major concern for many homeowners because of the health issues they are known to be linked to.

The HALO DEFENDER II™ is a certified whole home solution for the reduction of lead, PFOS/PFOA & cysts. A flow meter tracks water usage and the Smart Monitor tells the user when a new filter cartridge is needed.*

High Efficiency 0.5 Micron Filter

- Massive 93,250 Gallon Capacity*
- Single Filter to Replace
- 0.5 Micron: Reduces Lead, PFOS/PFOA, Cysts, Chlorine & Chloramine

Inlet and Outlet Connections

- 1" MNPT Plumbing Connection
- Bypass valve and flow meter is included

Replacement Filter Cartridge

H-DFR2-PFLD

Model	Description	Peak Flow Rate*	Maximum Capacity*	Pipe Size	Weight/Dims. D x W x H
H-DFR2	DEFENDER II™	4.21 GPM	93,250 Gallons	1" MNPT	37 LBS/15"x9"x40"

* Flow rate and capacity shown is for certified reduction of cysts, lead, PFOS/PFOA. For chlorine and chloramine flow rate and capacity, see specifications on next page.

Operating Conditions

Iron: .3 Parts per Million (PPM) Max, **Manganese:** .05 PPM Max, **Hydrogen Sulfide:** 0.0 PPM Max, **pH:** 6.5-8.5, **Sediment:** HALO SG-520 Pre-filter Required, **Environment:** Indoor Only, **Power Requirement:** 120V 60Hz & 3 AAA Batteries, **Temperature:** 34F Min / 120F Max, **Pressure:** 20PSI Min / 125PSI Max.



HALO Sediment Guard™ filter system (SG-520) is required as a prefilter for all installations.

WARNING: Do not use with water that is micro-biologically unsafe or of unknown quality without adequate disinfection before or after the system. Intended for treatment of cold water only. Do not exceed 125 psi. Intended for residential use only. Do not allow system to freeze. Maintain a temperature range between 34°F - 120°F



PFOA/PFOS & LEAD FILTER CARTRIDGE

Thank you for choosing HALO Defender II™

SPECIFICATIONS

Defender II Name and Part Number	Micron Rating	Rated Capacity and Flow Rate	Peak Flow and % Reduction of Lead and PFOA/PFOS	Chlorine/Chloramine Taste and Odor Reduction Capacity*	Pressure Drop Spec
DEFENDER II System and Filter					
DEFENDER II System H-DFR2	0.5 Microns	Lead Reduction and PFOA/PFOS 93,250 gallons @ 4.21 GPM (352,989 Liters @ 15.9 lpm) @ 99.62% lead reduction @ 97.9% PFOA/PFOS reduction	7.46 GPM (28.24 lpm) @ 99.62% lead reduction >88,000 gallons at 7.46 GPM* (333,116 Liters @ 28.24 lpm)	>300,000 gallons @ 15 GPM (1,135,623 Liters @ 56.8 lpm) with greater than 90% reduction, estimated capacity using 2 ppm of free chlorine >150,000 gallons @ 8 GPM (567,812 Liters @ 30.3 lpm) with greater than 85% reduction, estimated using 3 ppm of chloramine	9 psid @ 4.21 GPM

Replacement Cartridge Filters Are Listed as DEFENDER II—0.5 Micron High Capacity Carbon Block // PART NUMBER: H-DFR2-PFLD

*Claims are not performance tested by IAPMO or NSF. Performance claims are based on independent laboratory and manufacturer's internal test data. Actual performance is dependent on influent water quality, flow rates, system design and application. Results may vary. The model number of the system in which the filter component is to be used in is H-DFR2.

IMPORTANT

DO NOT USE extra lubricants, unapproved sealants and tools to tighten hand-tighten only parts. Use of tools other than hand-tighten only parts voids warranty. Testing was performed under standard laboratory conditions; actual performance may vary. Flush the system and change the filter as suggested. The contaminants or other substances removed or reduced by this water filter are not necessarily in all users' water.

PERFORMANCE

Performance claims are based on independent lab results and manufacturer's internal test data*. Actual performance is dependent on influent water quality, flow rates, system design and applications. Your results may vary. Performance claims are based on a complete system, including a filter, housing, and connection to a pressurized water source. This filter must be operated according to the system's specifications in order to deliver the claimed performance. It is essential to follow operational, maintenance, and filter replacement requirements, as directed for each application, for this filter and system to perform correctly. Read the Manufacturer's Performance Data Sheet accompanying the system and change the filter as suggested. The contaminants or other substances removed or reduced by this water filter are not necessarily in all users' water. Test filtered water intermittently to ensure adequate quality for use.

WARRANTY

LIMITED LIABILITY: HALO Water Systems makes no warranties of any kind, expressed or implied, statutory or otherwise, and expressly disclaims all warranties of every kind, concerning the product, including, without limitation, warranties of merchantability and fitness for a particular purpose, except that this product should be capable of performing as described in this product's data sheet. HALO Water System's obligation shall be limited solely to the replacement of the product proven defective, in HALO Water System's sole discretion. Determination of suitability of this product for uses and applications contemplated by Buyer shall be the sole responsibility of Buyer. Use of this product constitutes Buyer's acceptance of this Limited Liability.

This system has been tested for the reduction of the substances listed below. The concentration of the indicated substances in water entering the system was reduced to a concentration less than equal to the permissible limit for water leaving the system, as specified in NSF/ANSI 53 and P473. Minimum substance reductions are as follows:

Substance	Influent Challenge Concentration (MG/L)	Maximum Permissible Product Water Concentration (MG/L) or Minimum % Reduction	NSF/ANSI Standard
Lead	0.15 +/- 10%	0.005	53
Cyst	Minimum 50,000/L	99.95%	53
PFOA/PFOS	.0015 +/- 10%	0.00002	53

Minimum Operating Temperature: 34 °F / 1 °C
Maximum Operating Temperature: 120 °F / 50 °C
Minimum Operating Pressure: 20 psig / 1.38 bar
Maximum Operating Pressure: 125 psig / 8.6 bar
Electrical Requirements: Grounded and unswitched 115 V outlet and 3-AAA Batteries

Filter Replacement Operating Instructions: New cartridges must be flushed for a minimum of 10 minutes prior to use. System, installation, and disposal of used filter cartridge to comply with state and local laws and regulations. Do not use with water that is microbiologically unsafe or unknown quality without adequate disinfection before or after the system. Systems certified for cyst reduction may be used on disinfected waters that may contain filterable cysts. Manufactured from NSF/ANSI standard 61 and California Prop 65 Compliant certified coconut shell carbon and raw materials. Spent adsorption media may not be regenerated and reused.

CERTIFICATIONS



Certified by IAPMO R&T to NSF/ANSI 53 for Material Safety, Structural Integrity, and for the reduction of claims specified on the Performance Data Sheet.

MANUFACTURED BY



For more information, visit www.HALOWater.com

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NOTICE: HALO Water Systems, LLC reserves the right to make product design modifications resulting in changes to product and operating specifications without prior notice and is under no obligation to implement such changes to HALO product previously or subsequently sold. The information contained herein is not an installation instruction. Please read and follow all installation instructions before beginning the installation of any HALO Water System's product. Contact HALO Water Systems for any additional product information.