

Engineering Specification

Job Name _____

Contractor _____

Job Location _____

Approval _____

Engineer _____

Contractor's P.O. No. _____

Approval _____

Representative _____

Series FLL

Locksmith™ Commercial Filox® Filter Systems

Connection Sizes: 1 1/2" & 2"

Flow Rates: Up to 60 gpm

Watts Locksmith™ Series FLL Filox® filters are time tested, highly effective backwashing media filtration systems for the removal of iron, manganese and hydrogen sulfide from water.

The Locksmith™ controller is a Watts exclusive, highly functional control board that operates 1.5" & 2" single, duplex alternating and multi tank progressive flow softeners and filters without the need of additional controller, with the ability to operate external devices for highly configurable systems to suit the needs or a wide variety of application requirements.

These systems are designed for commercial applications with flow rates up to 60 gpm with media bed sizes ranging from 2 to 10 cubic feet in size. If higher flow rates are required, multiple units can be installed in parallel. The media bed is cleaned of captured sediment by periodic backwashing and flushing. This cleaning cycle is time clock demand initiated and can be programmed to occur at any time that is convenient for the user. All steps of the cleaning cycle as well as returning to service are fully automatic and do not require manual actuation.

Filox® media filter systems are a unique, chemical free, approach to reducing red staining iron, rotten egg smelling hydrogen sulfide, and black staining manganese in your water. These systems utilize the natural dissolved oxygen (DO) in the water as oxidation agents. Additional oxidizers such as chlorine can also be introduced when DO is lacking. Together the oxidants and contaminants are introduced onto the surface of our catalytic filtration media. The media catalyzes the oxidation of the contaminants and then traps the impurities. Our Filox® media is an advanced form of manganese dioxide (MD). Virtually all iron, hydrogen sulfide, and manganese removal medias have some percentage of MD. At 80% or greater, Filox boasts the highest percentage of MD and the highest flow rates per cubic foot of all of the iron removal medias on the market today



FLL-150 & FLL-200

Features

- Durable brass bodied control valve for years of service
- WQA Certified fully automatic time clock initiated control valve
- Filox® has highest flow rate of any iron removal media
- Fully adjustable backwash and flush cycles
- Dry contact lock out switch for remote interface is standard
- Highly corrosion resistant WQA or NSF Certified fiberglass tanks
- Durable polypropylene lower distribution system

Standards

Control Valve- Certified to NSF/ANSI Std. 61 and 372

Mineral Tank- Certified to NSF/ANSI Std. 44 or 61

⚠ WARNING

Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

Specification

A Watts Locksmith™ Series FLL Filox® filter system shall be installed on the building's main water line just after it enters the building. The installation point shall be after any backflow prevention or pressure regulating valves. Other installation options are to install a system just before the plumbing equipment or processes requiring filtered water. In installations where the dedicated cold water make up to a water heater is the installation point, a backflow preventer and a thermal expansion tank must be installed as well. The system shall be installed with a bypass valve to allow for the shut down and removal of the unit without interrupting the water supply to the building.

The filter system shall be a backwashing granular media bed type with digital programmable time clock initiated backwash and high capacity manganese dioxide coated filter media. The filtration media shall be rated at 12 x 40 mesh size. The system shall include all components necessary for proper operation. Electrical requirements are 120 volt 60 hertz. A local drain is required to accept drain water from the system. The feed water pressure must not fall below 30 psi or exceed 125 psi. Water temperature must not fall below 34°F or exceed 110°F (1 m- 43°C).

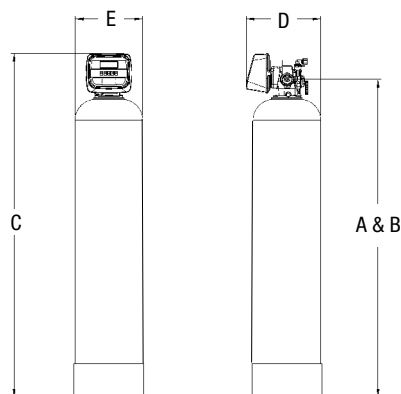
Feed Water Guidelines

pH	6.56 to 9
Water Pressure	30 psi to 125 psi (205 kPa to 8.5 bar)
Temperature	34 - 110°F (1 - 43°C)
H2S	Up to 3 ppm
Iron.	Up to 10 ppm
Manganese	Up to 5 ppm

*For all other guideline information please contact your Watts representative.

Dimensions & Weights

Series FLL-150 & FLL-200



Series FLL-150

Model No.		Dimensions										Shipping Weight	
	A		B		C		D		E				
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm			
NF12FL150	53.25	1353	53.25	1353	61	1550	12	305	12	305	161	73	
NF14FL150	68.25	1734	68.25	1734	73.63	1869	14	356	14	356	259	117	
NF16FL150	68.25	1734	68.25	1734	73.63	1869	16	406	16	406	314	142	
NF18FL150	68.25	1734	68.25	1734	73.63	1869	18	457	18	457	424	192	
NF21FL150	65.25	1657	65.25	1657	70.63	1793	21	533	21	533	547	248	

Series FLL-200

Model No.		Dimensions								Shipping Weight		
	A		B		C		D		E		lb	kg
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm		
NF12FL200	53.5	1359	53.5	1359	61.63	1567	14	356	12	305	169	77
NF14FL200	68.5	1740	68.5	1740	74.25	1886	15	381	14	381	267	121
NF16FL200	68.5	1740	68.5	1740	74.25	1886	16	406	16	406	322	146
NF18FL200	68.5	1740	68.5	1740	74.25	1886	18	457	18	457	432	196
NF21FL200	65.5	1664	65.5	1664	73	1854	21	533	21	533	555	252
NF24FL200	75.5	1918	75.5	1918	83	2108	24	610	24	610	827	375

Specifications

Model No.	Mineral Tank		Flow Rates For Service And Backwash		
	Tank Size	Tank Size	Filox®	Service GPM	Backwash GPM
		FT2	FT3	Max	19 GPM FT2
NF12FL150	12 X 52	0.79	2	12	15
NF14FL150	14 x 65	1.07	3	18	20
NF16FL150	16 x 65	1.40	4	24	26
NF18FL150	18 x 65	1.77	5	30	34
NF21FL150	21 x 62	2.40	7	42	46
NF12FL200	12 x 52	0.79	2	12	15
NF14FL200	14 x 65	1.07	3	18	20
NF16FL200	16 x 65	1.40	4	24	26
NF18FL200	18 x 65	1.77	5	30	34
NF21FL200	21x 62	2.40	7	42	46
NF24FL200	24 x 72	3.14	10	60	60

Ordering Information

Model No.	Ordering Codes	Description	Pipe Size	Space Required W X D X H	Weight	
			In.		lb	kg
NF12FL150	68110905	2 Cubic Foot 1 1/2" Filox with Auto Backwash	1.5	15 x 13 x 64	161	73
NF14FL150	68110906	3 Cubic Foot 1 1/2" Filox with Auto Backwash	1.5	16 x 15 x 77	259	117
NF16FL150	68110907	4 Cubic Foot 1 1/2" Filox with Auto Backwash	1.5	18 x 17 x 77	314	142
NF18FL150	68110908	5 Cubic Foot 1 1/2" Filox with Auto Backwash	1.5	19 x 19 x 77	424	192
NF21FL150	68110909	7 Cubic Foot 1 1/2" Filox with Auto Backwash	1.5	24 x 23 x 84	547	248
NF12FL200	68110912	2 Cubic Foot 2" Filox with Auto Backwash	2	16 x 13 x 64	169	77
NF14FL200	68110913	3 Cubic Foot 2" Filox with Auto Backwash	2	17 x 15 x 77	267	121
NF16FL200	68110914	4 Cubic Foot 2" Filox with Auto Backwash	2	18 x 17 x 79	322	146
NF18FL200	68110915	5 Cubic Foot 2" Filox with Auto Backwash	2	20 x 19 x 77	432	196
NF21FL200	68110916	7 Cubic Foot 2" Filox with Auto Backwash	2	23 x 22 x 77	555	252
NF24FL200	68110917	10 Cubic Foot 2" Filox with Auto Backwash	2	25 x 25 x 88	827	375

NOTICE

Flow rates, dimensions, and capacities are per tank. Pipe size, tank size, and space requirements are in inches. Backwash flow rate may vary depending on temperature changes or specific bed expansion requirements.

NOTICE

The use of additional oxidizing agents (oxygen, chlorine, ozone, hydrogen peroxide, potassium permanganate, etc) is recommended. Oxidizers will enhance the performance of Filox™. They oxidize the media, which enables Filox™ to perform quicker and keep cleaner. It is always a safe practice to install an oxidation method upstream (in front) of the Filox™ bed. Do not exceed 4 ppm free chlorine in the feed water stream or bed damage may occur.



USA: T: (800) 659-8400 • Watts.com

Canada: T: (888) 208-8927 • Watts.ca

Latin America: T: (52) 55-4122-0138 • Watts.com