Engineering Specification

Job Name _____ Contractor _____

Job Location _____ Approval _____

Engineer _____ Contractor's P.O. No. _____

Approval _____ Representative _____

Locksmith™ Series ACL-100 & ACL-125

Locksmith™ Residential Carbon Filter Systems

Connection Sizes: 1" & 1 1/4"
Flow Rates: Up to 20 gpm (76 lpm)

Watts Locksmith™ Series ACL activated carbon filtration systems are time tested, highly effective backwashing media filtration systems for the removal of chlorine as well as taste, odor, and color caused by organics from water.

The Locksmith controller is a Watts exclusive, highly functional control board that operates 1" & 1.25" 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 of a wide variety of application requirements.

These systems are designed for residential applications with dechlorination flow rates up to 20 gpm (76 lpm) with media bed sizes ranging from 1 to 5 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.

Series ACL activated carbon filtration systems are designed for point of entry residential applications where dechlorinated water is required. Chlorine, an oxidizing agent, is added to municipal water to destroy micro-organisms. Chlorine causes the destruction of reverse osmosis membranes and polymer based ion exchange resins. Chlorine also causes objectionable tastes and odors in certain applications. Activated carbon in general is used for dechlorination, removal of taste, color, and odor caused by organics, as well as trace hydrocarbon removal from water. For applications involving trace hydrocarbon removal or taste, color, and odor removal due to organics, consult your Watts representative for proper sizing and carbon system selection. Series ACL activated carbon filtration systems utilize 12 x 40 mesh coconut shell carbon granules which are tailored for chlorine removal. Coconut shell carbon media has a high micro-porosity which makes it ideally suited for the removal of low molecular weight contaminants such as chlorine. Another advantage of this carbon is its superior hardness, which combined with a de-dusting process in its production, creates an exceptionally clean product with low fines.

ACL-100 & ACL-125

Features

- Locksmith Controller offering Improved functionality
- Fully adjustable backwash and flush cycles
- Dry contact lock out switch for remote interface is standard
- High surface area, with a minimum of 1,050 m2/g, low carbon fines, and coconut shell carbon
- Highly corrosion resistant fiberglass tanks
- Durable polypropylene lower distribution system

⚠ 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 ACL activated carbon filtration 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 dechlorinated 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 filtration system shall be a backwashing granular media bed type with digital programmable time clock initiated backwash and high capacity coconut shell carbon filter media. The carbon media shall be rated at 1,050 m2/g minimum surface area and have a minimum iodine number of 1,000. 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 - 43°C).

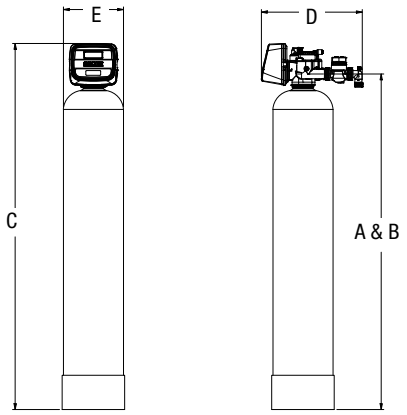
Feed Water Guidelines

pH	6 to 8.5
Water Pressure	30 psi to 125 psi (205 kPa to 8.5 bar)
Temperature	34 - 110°F (1 - 43°C)
Oil and H2S	None Allowed
Iron	Less than 1 ppm
Total Chlorine	Less than 5 ppm

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

Dimensions & Weights

Series ACL-100 & ACL-125



Series ACL-100

Call customer service if you need assistance with technical details.

MODEL NO.	DIMENSIONS										WEIGHTS	
	A		B		C		D		E			
	in.	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*lb*	*kg*
NC09-L10F	50 1/2	1283	50 1/2	1283	55 1/2	1410	11 3/4	298	9 1/2	241	80	36
NC10-L10F	56 1/2	1435	56 1/2	1435	61 3/4	1568	12 1/4	311	10 1/2	267	105	48
NC12-L10F	55	1397	55	1397	60	1524	13 1/4	337	12 1/2	318	145	66
NC14-L10F	66	1676	66	1676	71	1803	14 1/2	368	14 3/4	375	200	91
NC16-L10F	68 1/4	1734	68 1/4	1734	73 1/2	1867	15 1/4	387	16 3/4	425	265	120
NC21-L10F	69 3/4	1772	69 3/4	1772	74 3/4	1899	22 1/4	565	22 1/4	565	365	166

Series ACL-125

MODEL NO.	DIMENSIONS										WEIGHTS	
	A		B		C		D		E			
	in.	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*lb*	*kg*
N2051-L125	50 1/2	1283	50 1/2	1283	55 1/2	1410	11 3/4	298	9 1/2	241	105	48
N2052-L125	56 1/2	1435	56 1/2	1435	61 3/4	1568	12 1/4	311	10 1/2	267	117	53
N2056-L125	67 3/4	1721	67 3/4	1721	72 3/4	1848	14 1/4	362	14 1/2	368	194	88

Specification and Ordering Information

MODEL NO.	ORDERING CODE	TANK SIZE	MEDIA (CU FT)	PEAK SERVICE FLOW (GPM)	BACKWASH (GPM)	FLOOR SPACE (DXWXH)	SHIP WT. (LBS.)
NC09-L10F	68112313	9x48	1	4	4.2	12" x 10" x 56"	80
NC10-L10F	68112314	10x54	1.5	6	5.3	12" x 11" x 62"	105
NC12-L10F	68112315	12x52	2	8	7.5	13" x 13" x 60"	145
NC14-L10F	68112316	14x65	3	11	10	15" x 15" x 71"	200
NC16-L10F	68112317	16x65	4	14	10	15" x 17" x 74"	265
NC21-L10F	68112318	21x62	5	20	25	22" x 22" x 75"	365
N2051-L125	68112346	10x54	1.5	6	5.3	12" x 10" x 56"	105
N2052-L125	68112347	12x52	2	7.4	7.5	12" x 11" x 62"	117
N2056-L125	68112348	14x65	3	11.1	10	14" x 15" x 73"	194

NOTICE

The service flow rates listed for the carbon filtration systems are for dechlorination. Slower flow rates may be required depending on the specific contaminant and concentration of the contaminant.

⚠ WARNING

Wet activated carbon preferentially removes oxygen from air. In closed or partially closed containers and vessels, oxygen depletion may reach hazardous levels. If workers are to enter a vessel containing carbon, appropriate procedures for potentially low-oxygen environment should be followed.

USA: T: (800) 659-8400 • Watts.com
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