

## Engineering Specification

Job Name \_\_\_\_\_

Contractor \_\_\_\_\_

Job Location \_\_\_\_\_

Approval \_\_\_\_\_

Engineer \_\_\_\_\_

Contractor's P.O. No. \_\_\_\_\_

Approval \_\_\_\_\_

Representative \_\_\_\_\_

# Locksmith™ Series CAL-100

## Locksmith™ Residential Acidic Water Neutralizing Systems

Connection Sizes: 1"

Flow Rates: Up to 21 gpm (79 lpm)

Watts Locksmith™ Series CAL acid neutralizing systems are designed for residential applications to stop the corrosion of metal components and fixtures within a plumbing system by neutralizing the acidic nature of the supply water.

The Locksmith™ controller is a Watts exclusive, highly functional control board that operates 1" 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 intermittent flow rates up to 21 gpm (79 lpm) with media bed sizes ranging from 1 to 4 cubic feet in size. If higher flow rates are required, multiple units can be installed in parallel. The media bed is cleaned of captured impurities 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 CAL acid neutralizing systems are designed for point of entry applications where water has a pH of less than 7. These systems use a high quality granular calcite (calcium carbonate) media to accomplish the neutralization process. As low pH water flows down through the media bed it reacts with the calcite media and dissolves it. This causes the pH of the water to move from an acidic state to a neutral state. This dissolving of the calcite media will require calcite to be added to the bed over time.



CAL-100

### Features

- Locksmith™ Controller offering Improved functionality
- Increases the pH of acidic water to a neutral level
- Reduces the corrosion of plumbing and fixtures caused by low pH water
- No more "green stain" copper deposits in tubs, toilets, and sinks
- Better tasting pH balanced water
- User-friendly equipment
- Low maintenance due to automatic operation

### ⚠ 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 CAL acid neutralizing 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 neutral pH 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 calcite media bed type with digital programmable time clock initiated backwash and calcite and flowmag filter media. 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).

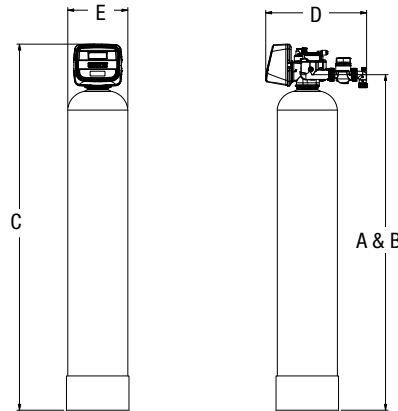
## Feed Water Guidelines

Water Pressure        30 psi to 125 psi (205 kPa to 8.5 bar)  
 Temperature         34 - 110°F (1 - 43°C)

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

## Dimensions & Weights

### Series CAL-100



## Series CAL-100

Call customer service if you need assistance with technical details.

MODEL NO.	DIMENSIONS										WEIGHTS	
	A		B		C		D		E		lb	kg
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm		
NN09-L10F	50 1/2	1283	50 1/2	1283	55 1/2	1410	11 3/4	298	9 1/2	241	100	45
NN10-L10F	56 1/2	1435	56 1/2	1435	61 3/4	1568	12 1/4	311	10 1/2	267	105	48
NN12-L10F	55	1397	55	1397	60	1524	13 1/4	337	12 1/2	318	145	66
NN14-L10F	66	1676	66	1676	71	1803	14 1/2	368	14 3/4	375	200	91
NN16-L10F	68 1/4	1734	68 1/4	1734	73 1/2	1867	15 1/4	387	16 3/4	425	265	120

## Specification and Ordering Information

MODEL NO.	ORDERING CODE	TANK SIZE	CALCITE MEDIA (CU FT)	FLOMAG MEDIA (CU FT)	SERVICE FLOW (GPM)	PEAK SERVICE FLOW (GPM)	BACKWASH (GPM)	FLOOR SPACE (DXWXH)	SHIP WT. (LBS.)
NN09-L10F	68112328	9x48	0.55	0.66	2.5	6.5	4.2	12" x 10" x 56"	100
NN10-L10F	68112329	10x54	0.825	0.66	3.5	8	5.3	12" x 11" x 62"	105
NN12-L10F	68112330	12x52	1.1	0.66	5	12	9	13" x 13" x 60"	145
NN14-L10F	68112331	14x65	1.65	1.32	6.5	16	10	15" x 15" x 71"	200
NN16-L10F	68112332	16x65	2.2	1.32	8.5	21	15	15" x 17" x 74"	265

### NOTICE

Peak service flow rate is for intermittent use only and is not to be interpreted as continuous service flow rate capability. These systems are designed to treat the domestic water used in a single family dwelling. For irrigation water treatment or higher volume applications please contact your Watts representative. Peak service flow rates are based on a 15 psi drop. Optimum service flow rate is specific to water chemistry and will vary.

