

Engineering Specification

Job Name _____

Contractor _____

Job Location _____

Approval _____

Engineer _____

Contractor's P.O. No. _____

Approval _____

Representative _____

Series CLS-DM

Locksmith™ Dual Media Residential Water Softener and Filtration System

Connection Size: 1"

Flow Rates: Up to 16 gpm (60 lpm)

Watts Locksmith™ CLS Series water softening systems are highly efficient cation exchange type water softeners. These pre-engineered systems are suitable for residential applications with 30,000 grains of hardness removal and a flow rate up to 16 gpm (60 lpm) gallons per minute. All cycles of regeneration are fully automatic and do not require manual actuation.

The Locksmith controller is a Watts exclusive, highly functional control board that operates 1" simplex softeners with the ability to operate external devices for highly configurable systems to suit the needs of a wide variety of application requirements.

Watts Locksmith CLS-DM Series water softener is designed for point of use or point of entry applications where the benefits of softened water are required. This system exchanges scale forming calcium and magnesium ions with non-scale forming sodium ions to create soft water for a variety of applications. This system contains Granular Activated Carbon (GAC), which reduces the chlorine content of the water, preserving the life of the water softening resin.

Steam boilers make up water heater pretreatment, reverse osmosis pretreatment, cooling tower make up water, sterilizer make up water, washing, and residential homes are all common applications for the Watts CLS Series water softeners. Watts CLS Series are ideal for residential applications for the flow rates and capacities necessary for appliances in the home.

Softened water provides a wide variety of benefits from not introducing scale into pipes, valves, water heating equipment, heat exchangers, and cooling towers to reducing mineral build up in areas that see excessive splashing such as food preparation counters and sink areas. Softened water also conserves soaps and cleaning agents by eliminating the formation of soap curd, so your cleaners can work on cleaning not reacting with the hardness in your water.

Features

- Fully automatic metered demand control valve
- Sophisticated digital electronic controls that store operating history that can be accessed by the user
- Fully adjustable regeneration cycles
- High-capacity A4000 Resin is certified by WQA to NSF/ANSI/ CAN 61, and to NSF/ANSI/CAN 372 for lead free compliance.
- Highly corrosion resistant fiberglass tanks
- Durable polypropylene lower distribution system
- Locksmith™ Controller offering Improved functionality of a basic softener



Series CLS-DM

CLS-DM Features

- Model for capacities of 30,000 grains per tank
- Complete whole house water softening and filtration system
- GAC and Resin are contained in separate chambers
- The softening vessel comes complete with brine tank and meter
- All systems have no hard water bypass valve
- Modbus Capable

⚠ 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.

Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.



Specification

A Watts Locksmith™ Series CLS-DM dual media water softening 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 water heater or other types of equipment needing the protection of softened water. In installations where 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 water softener shall be a down flow regenerated, metered demand, sodium cycle cation exchange type system with all components necessary for proper operation.

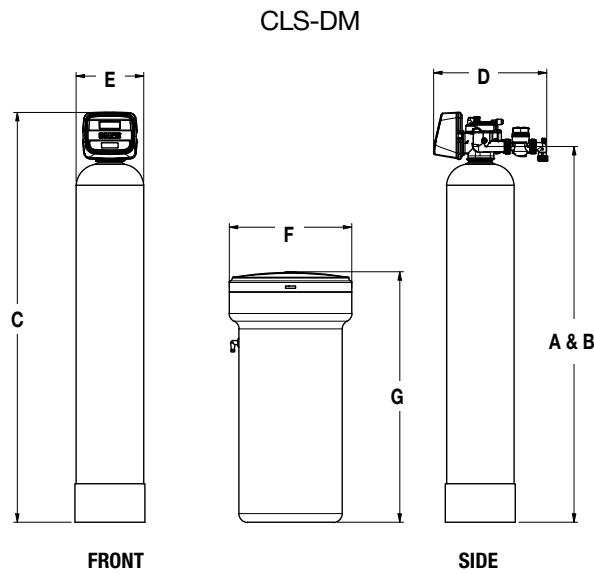
Electrical requirements are 120-bolt 60 hertz. A local drain is required to accept drain water from the system. The feed water pressure must not fall below 25 psi or exceed 125 psi. Water temperature must not fall below 34°F or exceed 110°F (1°C - 43°C). The system shall provide softened water measuring less than one grain per gallon of hardness as Calcium Carbonate when operated within the manufacturer's operational guidelines.

Feed Water Guidelines

pH	6 to 10
Hardness (maximum)	Depends on customers acceptable hardness leakage level.
Water Pressure	25 psi to 125 psi (171 kPa to 8.5 bar)
Temperature	34 - 110°F (1 - 43°C)
Free Chlorine (maximum)	4mg/L
Iron (maximum)	1mg/L
Oil and H ₂ S	None Allowed
Turbidity	Less than 5.0 NTU
Total Dissolved Solid	Must be below 750 mg/l for the softener to produce less than 1 grain per gallon soft water.

For all other guideline information please contact your Watts representative.

Dimensions



Dimensions & Weights

Series CLS-DM

Call customer service if you need assistance with technical details.

MODEL NO.	DIMENSIONS										WEIGHTS					
	A		B		C		D		E		G		lb	kg		
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm				
M3011-L10SM-CR-CMP	57 1/4	1454	57 1/4	1454	62 1/2	1588	12 1/4	311	10 1/2	267	18 1/2	470	37 1/2	953	110	50

Specifications

MODEL NO.	ORDERING CODE	CAPACITY (MAX.)	PIPE SIZE (IN.)	MINERAL TANK			BRINE TANK		FLOW RATE & PRESSURE			SHIP WT. (LBS.)
				TANK SIZE	RESIN FT3	GAC FT3	TANK SIZE	SALT FILL (LBS.)	SERVICE (GPM)	DROP (PSI)	BKW (GPM)	
M3011-L10SM-CR-CMP	68112308	30,000	1	10x54	1	0.5	18x36	350	12-16	15-25	2.2	110

NOTICE

Flow rates listed above are based on pressure drop only. Selecting a system based on pressure drop alone does not guarantee that the system will provide adequately softened water. System selection should be based on resin quantity, capacity required, feed water analysis, and application requirements.

NOTICE

Capacities are based on resin manufacturer's data and are dependent upon influent water TDS, temperature, bed depth, and flow rates. Feed water must be free of oil and color. Pipe size, tank size, and space requirements are in inches. Capacities and flow rates expressed above are per tank. Flow rates listed at 25 psi drops are for intermittent peak flow rates and are not to be used as continuous flows.

⚠ 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.

Ordering Information for 1" Dual Media (CLS-DM) Softeners

MODEL NO.	ORDERING CODE	DESCRIPTION	SPACE REQUIRED D X W X H	SHIPPING WEIGHT (LBS.)
M3011-L10SM-CR-CMP	68112308	1 Cubic Foot 1" Dual Media Softener with Flow Meter	12" x 29" x 63"	110



USA: T: (800) 659-8400 • Watts.com

Canada: T: (905) 332-4090 • Watts.ca

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

