

Engineering Specification

Job Name _____

Contractor _____

Job Location _____

Approval _____

Engineer _____

Contractor's P.O. No. _____

Approval _____

Representative _____

LEAD FREE*

Model BB-S101

A Complete Whole Home Solution for the Reduction of Lead, PFOA/PFOS, Cysts, and Chlorine Taste & Odor

Connection Size: 1"

Flow Rates: Up to 4 gpm (15 lpm)

The Watts® Big Bubba® Model BB-S101 is a smart and connected, complete whole home system solution that helps consumers who want to reduce lead, and Per- and polyfluoroalkyl substances, also known as PFOA/PFOS, cysts, and chlorine taste and odor from the water entering their home. This system boasts high flow rates and capacities all while being simple to operate and maintain.

This smart and connected whole home solution monitors its own service schedule as well as water usage. The user is automatically notified by email or text when replacement of the filter cartridge is necessary.

Lead contamination of drinking water can originate from the use of lead service lines that were used to connect houses to a city water main. PFOA/PFOS contamination, can come from the manufacturing of non-stick cookware, the use of fire fighting foams and landfills.

Lead and PFOA/PFOS contamination of drinking water is a major concern for many consumers due to the health issues they may cause. According to the USEPA, lead can cause behavior, learning, and low IQ problems in children as well as kidney and cardiovascular issues in adults. While the risks associated with PFOA/PFOS chemicals are still largely unknown, the USEPA says studies indicate exposure to PFOS and PFOA can cause reproductive and developmental, liver and kidney, and immunological effects, as well as tumors, in laboratory animals.

Both lead and PFOA/PFOS are not easily broken down by the body and can accumulate overtime.

Watts' BB-S101 system is certified to NSF/ANSI Standards 42 and 53 for the reduction of Lead, PFOA/PFOS, Cysts, and Chlorine.

This system is rated for whole home point of entry applications with certified continuous flow rates up to 4 gpm (15 lpm) and has a filter cartridge lifespan of up to 84,480 gallons for lead, PFOA/PFOS and chlorine. If higher flow rates or capacities are required, multiple systems can be installed in parallel.

The Watts BB-S101 whole home filter system includes our robust Big Bubba filter housing, smart and connected volumetric flow monitor, carbon block filter cartridge (0.5 um), drain port, dual outlets for plumbing options, union style 1" NPT connections, and floor mounting anchoring hardware.



System Model BB-S101
Includes Volumetric Flow Monitor and
Carbon Block Filter Cartridge



Certified by IAPMO R&T to NSF/ANSI 42 and 53, for the reduction of claims verified and substantiated by test data as specified on the performance data sheet. The system is also certified to CSA B483.1, and NSF/ANSI 372 for Lead Free compliance.



#Z64-CC3100MODR1
Meets Class B: ICES & FCC Part 15

WARNING

Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system. System certified for cyst reduction may be used on disinfected waters that may contain filterable cysts.

*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.

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.

Features

- Automatically notifies user via email or text alerts when filter cartridge replacement is necessary
- Displays percent filter cartridge life remaining, consumed, and volume remaining
- Certified to NSF/ANSI standards 42 and 53 for the reduction of dissolved and particulate Lead, PFOA/PFOS, Cysts and Chlorine
- High capacity carbon block filter cartridge with 0.5 micron nominal particle size reduction and 84,480 gallon rated filter cartridge life span
- Single filter cartridge to replace for speed and ease of service
- Double O-ring style filter cartridge seal prevents unfiltered water bypass
- Filter cartridge only needs a quarter turn to lock into position
- Rated for whole home Point of Entry applications
- System includes Watts' robust Big Bubba filter housing made of glass reinforced polypropylene for trusted and dependable performance
- Union style plumbing connections with 1" NPT ports for fast installation and removal of plumbing
- Dual outlets to accommodate a multitude of plumbing configurations
- Includes floor anchoring hardware and inlet water pressure gauge

Specifications

A Watts Big Bubba Model # BB-S101 whole home filter system shall be installed on the building's main water line just after it enters the building for the reduction of Lead, PFOA/PFOS, Cysts, and Chlorine taste and odor. The system shall be certified to NSF/ANSI standards 42 and 53 for the reduction of Lead, PFOA/PFOS, Chlorine and Cysts and be certified to NSF/ANSI 372 for lead free compliance. The system shall also be certified to CSA B483.1 to comply with Canadian requirements. The system shall include a volumetric filter cartridge life monitor that automatically alerts the user when filter cartridge changes are due. The monitor shall connect to Wi-Fi and send automatic alerts through email and text notifications. The installation point shall be after any back-flow prevention or pressure regulating valves. Other installation options are to install a system just before the point of use needing the protection of filtered water. The system shall be installed with a bypass valve to allow for the shut down and servicing of the system without interrupting the water supply to the building. The filter system shall be a replaceable single cartridge filter type. The filter housing shall be constructed of glass reinforced polypropylene, have 1" NPT PVC union plumbing connections, and a housing drain port. The filter housing shall have a removable lid for replacing the filter cartridge. The filter cartridge shall engage and secure into the filter housing with a 90 degree turn and shall have a double O-ring end seal to prevent bypassing of raw water around the filter cartridge. The filter cartridge shall be a carbon block with a 0.5 micron nominal particle reduction size filtration efficiency rating. The filter system shall not require water for backwashing. The feed water pressure must not exceed 125psi (861 kPa). Water temperature must not fall below 34°F or exceed 125°F at 80psi (1°C - 52°C).

Feed Water Requirements

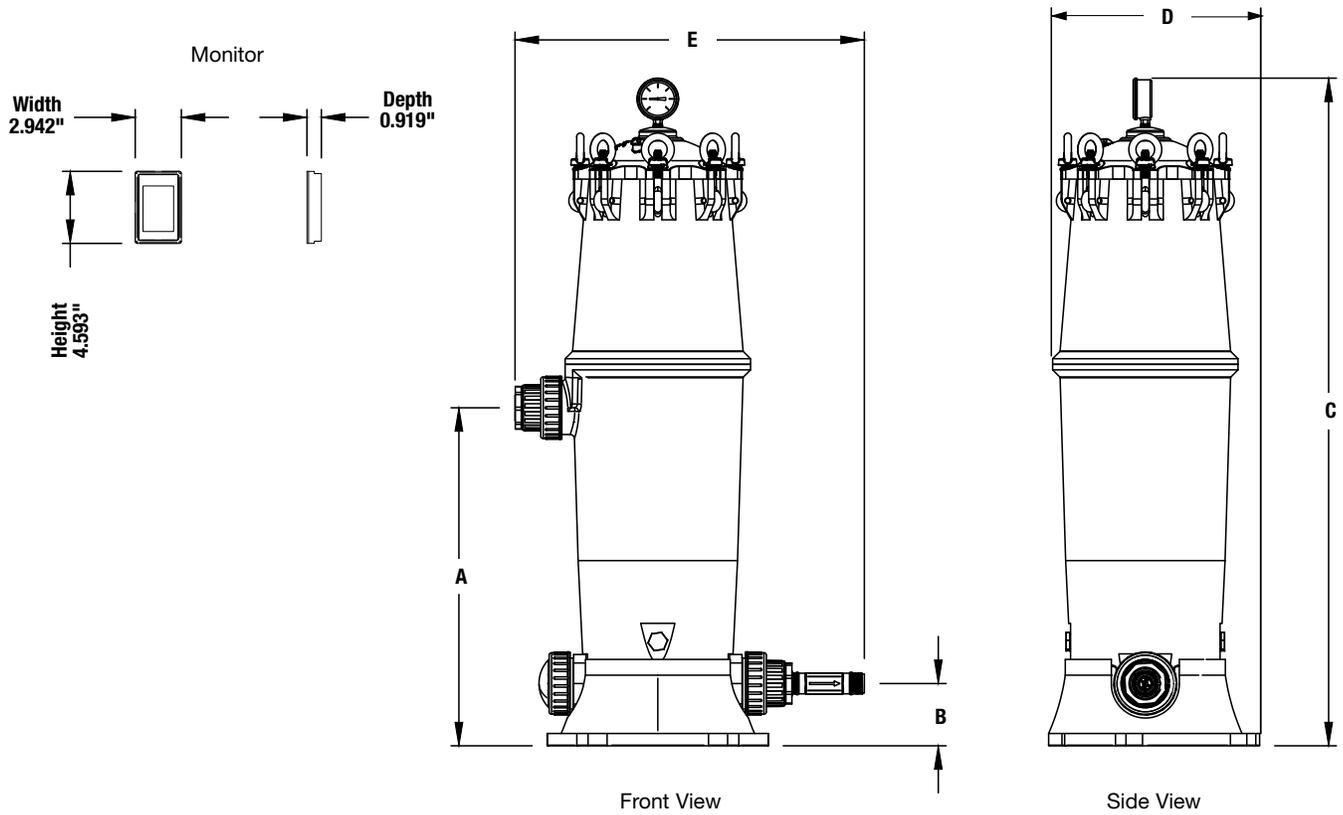
Please review operating pressures, temperatures and water chemistry limitations to ensure compatibility.

pH	6.5 to 8.5
Min/Max Water Pressure	25psi to 125psi /172 kPa to 861 kPa
Min/Max Water Temperature	34 to 125°F / 1 to 52°C (125°F / 52°C at 80psi maximum pressure)
Free Chlorine (maximum)	2.0 mg/L
Iron (maximum)	0.3 mg/L
Manganese (maximum)	0.05 mg/L
Oil and H2S	None Allowed
Turbidity/Sediment	Pre-filter inlet water with 5 micron sediment filter if sediment/turbidity prevents BB-S101 filter cartridge from achieving full volume capacity

Min/Max Ambient Temperature	34°F to 120°F / 1°C to 48°C
Maximum Humidity	75%
Power Supply Input Voltage/Frequency	115 VAC / 60Hz
Power Supply Output Voltage	12 VDC
Power Supply Output Current	0.4 amps
Maximum Altitude	2,000 meters above sea level
Wi-Fi Signal Type	2.4 GHz

For all other guideline information please contact your Watts representative. Water that does not meet the above guidelines will require additional pre-treatment.

Dimensions - Weights



Dimension — Weights

MODEL NO.	DIMENSIONS										SHIPPING WEIGHTS		OPERATING WEIGHT	
	A		B		C*		D		E		lbs.	kgs	lbs.	kgs
	<i>in.</i>	<i>mm</i>												
BB-S101	21.6	549	3.9	99	42.6	1082	14.2	361	22.3	566.4	66	30	125	57

*Allow 36" clearance above the top of the system for filter cartridge replacement.
 All dimensions are +/- 1" and are subject to change without notice.

Performance Data Sheet

Certified Substance Reduction

RECOMMENDED REPLACEMENT PARTS AND CHANGE INTERVAL:

Depending on incoming feed water conditions, replacement gallon capacity may vary.

Description

Big Bubba BB-S101 Complete Whole Home Solution for the Reduction of Lead, PFOA/PFOS, Cysts, and Chlorine Taste & Odor

System Model/Part Number

BB-S101/ 7100996

Capacity

84,480 Gallons / 319,791 Liters

Replacement Filter Cartridge

Carbon Block Filter Cartridge for the Reduction of Lead, PFOA/PFOS, Cysts, and Chlorine Taste & Odor Model Number BB-C100 / Part Number 7100980

Minimum/Maximum Operating Water Temperature

34 to 125°F / 1 to 52°C (125°F / 52°C at 80psi maximum pressure)

Minimum/Maximum Water Pressure

25psi to 125psi / 1.75 Kg/cm² to 8.78 Kg/cm²

Rated Service Flow

4 GPM (15 LPM)

Pressure Drop of System at Rated Service Flow

10psig

BB-S101 system has been certified by IAPMO R&T against NSF/ANSI 42 and 53 for the reduction of substances listed below. The concentration of the indicated substances in water entering the system was reduced to a concentration less than or equal to the permissible limit for water leaving the system, as specified in NSF/ANSI 42 and 53. The system is certified to CSA B483.1 and NSF/ANSI 372 for Lead Free compliance.

Treated water from system should be tested at regular intervals to ensure quality and safety at point of use.

Contact:

USA

Watts
815 Chestnut Street
North Andover, MA 01845-6098
Phone: 978-689-6066
Fax: 978-975-8350
Watts.com

Canada

Watts
5435 North Service Road
Burlington, ON L7L 5H7
Phone: 888-208-8927
Fax: 905-481-2316
Watts.ca

For Purchases Made In Iowa

Buyers Name: _____

Date: _____

Sellers Name: _____

Date _____

The seller shall retain the signed PDS on file at the seller's place of business for at least two years.

SUBSTANCE	AVERAGE INFLUENT	NSF/ANSI INFLUENT CHALLENGE CONCENTRATION	PERCENT REDUCTION REQUIREMENT/MAXIMUM PERMISSIBLE PRODUCT WATER CONCENTRATION	AVERAGE % REDUCTION @ FLOW RATE GPM (LPM)	PEAK FLOW & % REDUCTION OF LEAD	
NSF/ANSI 42 — Aesthetic Effects						
Chlorine	2.0 mg/L	2.0 mg/L ± 10%	≥ 50%	97.90% @4 GPM (15 lpm)	7 GPM (26.4 lpm) @ 99.62% reduction (*) >74,000 gallons at 8 GPM (280,120 Liters @ 26.4 lpm)	
NSF/ANSI 53 — Health Effects						
Cyst	126,000/L	Minimum 50,000/L	> 99.95%	99.97% @4 GPM (15 lpm)		
Lead pH 6.5	0.15 mg/L ± 10%	0.15 mg/L ± 10%	0.005 mg/L	99.62% @4 GPM (15 lpm)		
Lead pH 8.5	0.15 mg/L ± 10%	0.15 mg/L ± 10%	0.005 mg/L	99.62% @4 GPM (15 lpm)		
PFOA/PFOS	.0015 mg/L ± 10%	.0015 mg/L ± 10%	0.00007 mg/L	98.26% @4 GPM (15 lpm)		

Not all water will contain contaminants listed. Testing performed under standard laboratory conditions; actual performance may vary. Filter system usage must comply with all state and local laws. Filter system is only to be used with cold water. Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system. Systems certified for cyst reduction may be used on disinfected water that may contain filterable cysts. Flush new filter cartridge for 10 minutes to prepare it for use. Spent adsorption media shall not be regenerated and used.

Non-Certified Substance Reduction*

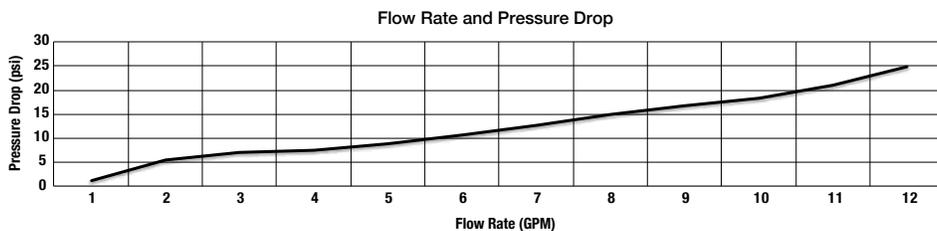
SUBSTANCE	AVERAGE INFLUENT CONCENTRATION	INTERMITTENT PEAK FEED FLOW RATE GPM (LPM)	ESTIMATED GALLON CAPACITY @ INTERMITTENT PEAK FEED FLOW RATE	ESTIMATED NEW CARTRIDGE PERCENT REDUCTION OF SUBSTANCE @ INTERMITTENT PEAK FLOW RATE
Chlorine	2.0 mg/L Free Chlorine	13 GPM (49.2 lpm)	264,000 Gallons (999,348 liters)	90%
Chloramine	3.0 mg/L Free Chloramine	7 GPM (26.4 lpm)	132,000 Gallons (499,674 liters)	85%

*Claims are not performance tested or certified by IAPMO. 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.

Refer to Owner's Manual and Installation instructions for installation, operation, maintenance, and warranty information.

Flow Rate and Pressure Drop



Low Pressure Drop

The Watts BB-S101 system uses a large, high capacity carbon block filter cartridge to ensure the highest degree of performance while offering the highest possible flow rate at the lowest possible pressure drop.

Pressure drop testing conducted at Watts' Peoria, AZ facility using approximately 73°F water. Test results reflect new filter cartridge flow rate and pressure drop performance.

Specifications Continued

SYSTEM MODEL NO. BB-S101	
Minimum/Maximum Operating Temperature*	34 to 125°F / 1 to 52°C (125°F / 52°C at 80psi Maximum Pressure)
Minimum/Maximum Operating Pressure*	25psi to 125psi / 172 kPa to 861 kPa
Maximum Continuous Flow Rate for Lead & PFOA/PFOS Reduction**	4 GPM (15 lpm)
Maximum Flow Rate for Chlorine Reduction***	13 GPM (49.2 lpm)
Maximum Flow Rate for Chloramine Reduction***	7 GPM (26.4 lpm)
Inlet and Outlet Connection Size/Type	1" NPT
Unfiltered Water Housing Drain Port Connection Size/Type	½" FNPT
Filter Housing Body Material	Glass Reinforced Polypropylene
Inlet Pressure Gauge Port	¼" FNPT Brass Reinforced
Inlet Pressure Gauge Included	Yes
Swing Bolts (Lid) Material	304 Stainless Steel
O-ring (Lid) Material	EPDM
O-ring (Plumbing Adaptors) Material	EPDM
Nominal Micron Rating	0.5 Micron Nominal
Filter Housing Anchor Kit Included	Yes- ¾" Concrete Anchors (X3)
Number of Filter Cartridges	1
Filter Cartridge Media Type	Lead Adsorption Carbon Block
Filter Cartridge End Cap Material/Color	Glass Reinforced Polypropylene/Green
Filter Cartridge Top Endcap Includes Handle	Yes
Filter Cartridge O-ring (Dual) Material	EPDM
Maximum Allowable Filter Cartridge Pressure Drop	40psi Drop
Flow Monitor Display Type	Color Touch Screen- % Filter Life Consumed / % Filter Life Remaining / Volume Remaining
Flow Monitor Capacity	84,480 Gallons / 319,791 Liters (Resettable / Non Programmable)
Positive Indication of Flow	Yes- Flow Wave Icon On Display
BB-M101 Alarm Set Points	Visual Text/Email/on Screen: User Selected @ 50%/90%/95% Filter Life Consumed / @ 100% Mandatory
Flow Monitor Power Supply	115 VAC / 60Hz
No Wi-Fi Connectivity Alarm	Yes- Visual Alarm Icon on Display Screen
Flow Meter Type	Inline Flow Through Turbine Meter
Flow Meter Connection Size/Type	1" x 1" MNPT
Flow Meter Body Material	Glass Reinforced Polymer

*Minimum and Maximum Operating Temperatures and Pressures listed above apply to complete system as well as all individual components including filter housing, filter cartridge and volumetric flow monitor/meter. Do not allow system or any of the components to freeze.

** See Certified Substance Reduction for specific flow and reduction claims.

***Claims are not performance tested or certified by IAPMO. Performance claims are based on independent laboratory and manufacturer's internal test data.

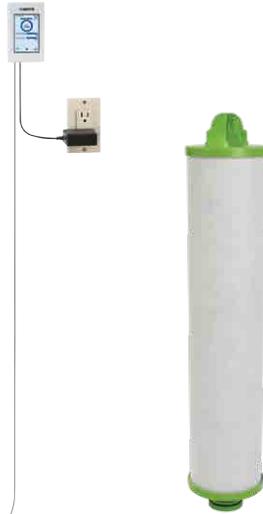
Actual performance is dependent on influent water quality, flow rates, system design and application. Results may vary. See Certified Substance Reduction for certified chlorine flow and reduction claims.

Ordering Information

MODEL NO.	ORDERING CODE	DESCRIPTION	PACKAGING DIMENSION	SHIPPING WEIGHT	
			W X D X H	LBS	KGS
BB-S101	7100996	Big Bubba Complete Whole Home Solution for the Reduction of Lead, PFOA/PFOS, Cysts, and Chlorine Taste & Odor	16.5" x 16.5" x 43"	64	29
BB-C100	7100980	Big Bubba Carbon Block Filter Cartridge for the Reduction of Lead, PFOA/PFOS, Cysts, and Chlorine Taste & Odor	10.75" x 35" x 10.75"	20	9
BB-M101	7100991	Volumetric Flow Monitor With 1" Inline Flow Meter and 84480 Gallon Capacity	6" x 3.5" x 3.5"	1	0.5



Model No. BB-S101



Model No. BB-C100



Model No. BB-M101

Components

MODEL NO.	ORDERING CODE	DESCRIPTION
BB-H101	7100997	Replacement Filter Housing without Inlet/Outlet BB-Bushings
BB-ADAPTER	68100608	Plumbing Adapter 2" PVC Grey
BB-BUSHING	7100978	2" Male Glue X 1" FNPT Plumbing Bushing PVC Grey
BB-COUPLER-OR	68100611	O-ring for Filter Housing Coupler
BB-DPOR	68100612	O-ring for Drain Plug
BB-DRAINPLUG	68100613	Drain Plug 1/2" NPT
BB-ENDCAP	68100614	Filter Housing Coupler Cap 2" PVC Grey
BB-NUT	68100618	Plumbing Adapter Union Nut
BB-ORING-E	68100619	Filter Housing Lid O-ring
BB-PR-ASSY	68100621	Pressure Relief Button Assembly

For replacement components and service please contact the Watts Dealer/Distributor that installed the system. If Dealer/Distributor cannot be reached, contact Watts Customer Service at 978-689-6066.

NOTICE

Flow rates, dimensions, and capacities are per system. Pipe size, system size, and space requirements are in inches. Inquire with governing authorities for local installation requirements. For additional installation information see Watts Big Bubba Installation document IOM-WQ-BB-S101.

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 is not responsible for the failure of alerts due to connectivity or power issues.



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