

Engineering Specification

Job Name _____

Contractor _____

Job Location _____

Approval _____

Engineer _____

Contractor's P.O. No. _____

Approval _____

Representative _____

Series PWCL15 & PWCL20

Locksmith® Commercial Carbon Filter Systems

Connection Sizes: 1 1/2" & 2"

Flow Rates: Up to 75 gpm

Watts Pure Water Locksmith® Series PWCL15 and PWCL20 activated carbon filters 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 1.5" & 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 of a wide variety of application requirements.

These systems are designed for commercial applications with dechlorination flow rates up to 75 gpm with media bed sizes ranging from 2 to 20 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 PWCL15 and PWCL20 activated carbon filters are designed for point of use or point of entry 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 PWCL15 and PWCL20 activated carbon filters 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.



PWCL15 & PWCL20

Series PWCL15 and PWCL20 systems are ideal for food and bottled water processing, restaurant drink station water treatment, commercial ice production, soft drink water processing, reverse osmosis pretreatment, ion exchange resin pretreatment, and general dechlorination of municipal water.

Features

- Durable brass bodied control valve for years of service
- Fully automatic time clock initiated control valve
- 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 Pure Water Locksmith® Series PWCL15 and PWCL20 activated carbon 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 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 filter 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.

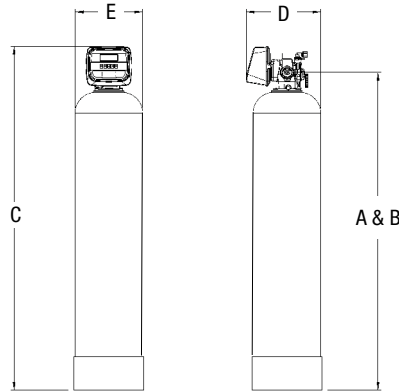
Feed Water Guidelines

| | |
|--------------------------|--|
| pH | 6 to 8.5 |
| Water Pressure | 30 psi to 125 psi (205 kPa to 8.5 bar) |
| Water Temperature | 34 - 110°F (1 - 43°C) |
| Oil and H ₂ S | None Allowed |
| Iron | Less than 1 ppm |
| Total Chlorine | Less than 5 ppm |

*For all other guideline information please contact your Pure Water representative.

Dimensions & Weights

Series PWCL15 & PWCL20



Series PWCL15

| Model No. | Dimensions | | | | | | | | | | Shipping Weight | |
|-------------|------------|------|-------|------|-------|------|-----|-----|-----|-----|-----------------|-----|
| | A | | B | | C | | D | | E | | lb | kg |
| | in. | mm | in. | mm | in. | mm | in. | mm | in. | mm | | |
| PWC151L1C11 | 53.25 | 1353 | 53.25 | 1353 | 61 | 1550 | 12 | 305 | 12 | 305 | 161 | 73 |
| PWC151L1D11 | 68.25 | 1734 | 68.25 | 1734 | 73.63 | 1869 | 14 | 356 | 14 | 356 | 259 | 117 |
| PWC151L1E11 | 68.25 | 1734 | 68.25 | 1734 | 73.63 | 1869 | 16 | 406 | 16 | 406 | 314 | 142 |
| PWC151L1F11 | 68.25 | 1734 | 68.25 | 1734 | 73.63 | 1869 | 18 | 457 | 18 | 457 | 424 | 192 |
| PWC151L1G11 | 65.25 | 1657 | 65.25 | 1657 | 70.63 | 1793 | 21 | 533 | 21 | 533 | 547 | 248 |
| PWC151L1H11 | 75.25 | 1911 | 75.25 | 1911 | 80.63 | 2047 | 24 | 610 | 24 | 610 | 819 | 372 |

Series PWCL20

| Model No. | Dimensions | | | | | | | | | | Shipping Weight | |
|-------------|------------|------|------|------|-------|------|-----|-----|-----|-----|-----------------|-----|
| | A | | B | | C | | D | | E | | lb | kg |
| | in. | mm | in. | mm | in. | mm | in. | mm | in. | mm | | |
| PWC201L1C11 | 53.5 | 1359 | 53.5 | 1359 | 61.63 | 1567 | 14 | 356 | 12 | 305 | 169 | 77 |
| PWC201L1D11 | 68.5 | 1740 | 68.5 | 1740 | 74.25 | 1886 | 15 | 381 | 14 | 381 | 267 | 121 |
| PWC201L1E11 | 68.5 | 1740 | 68.5 | 1740 | 74.25 | 1886 | 16 | 406 | 16 | 406 | 322 | 146 |
| PWC201L1F11 | 68.5 | 1740 | 68.5 | 1740 | 74.25 | 1886 | 18 | 457 | 18 | 457 | 432 | 196 |
| PWC201L1G11 | 65.5 | 1664 | 65.5 | 1664 | 73 | 1854 | 21 | 533 | 21 | 533 | 555 | 252 |
| PWC201L1H11 | 75.5 | 1918 | 75.5 | 1918 | 83 | 2108 | 24 | 610 | 24 | 610 | 827 | 375 |
| PWC201L1I11 | 75.5 | 1918 | 75.5 | 1918 | 83 | 2108 | 30 | 762 | 30 | 762 | 1195 | 542 |
| PWC201L1J11 | 75.5 | 1918 | 75.5 | 1918 | 83 | 2108 | 36 | 914 | 36 | 914 | 1669 | 769 |

Specifications

| Model No. | Tank Size | Mineral Tank | | Flow Rates for Service and Backwash | |
|-------------|-----------|--------------|---|-------------------------------------|--------------|
| | | Carbon FT3 | Underbed 1/2 x 1/4 - 1/4 x 1/8 - #20 | Service GPM 15 GPM FT2 | Backwash GPM |
| PWC151L1C11 | 12 x 52 | 2 | 20 | 7.4 | 7 |
| PWC151L1D11 | 14 x 65 | 3 | 50 | 11.1 | 10 |
| PWC151L1E11 | 16 x 65 | 4 | 50 | 14.8 | 12 |
| PWC151L1F11 | 18 x 65 | 5 | 100 | 18.5 | 16 |
| PWC151L1G11 | 21 x 62 | 7 | 100 | 25.9 | 25 |
| PWC151L1H11 | 24 x 72 | 10 | 200 | 37 | 30 |
| PWC201L1C11 | 12 x 52 | 2 | 20 | 7.4 | 7 |
| PWC201L1D11 | 14 x 65 | 3 | 50 | 11.1 | 10 |
| PWC201L1E11 | 16 x 65 | 4 | 50 | 14.8 | 12 |
| PWC201L1F11 | 18 x 65 | 5 | 100 | 18.5 | 16 |
| PWC201L1G11 | 21 x 62 | 7 | 100 | 25.9 | 25 |
| PWC201L1H11 | 24 x 72 | 10 | 200 | 37 | 30 |
| PWC201L1I11 | 30 x 72 | 15 | 300 | 55.5 | 50 |
| PWC201L1J11 | 36 x 72 | 20 | 500 | 74 | 70 |

Ordering Information

| Model No. | Ordering Codes | Description | Pipe Size | Space Required | Weight | |
|-------------|----------------|---|-----------|----------------|--------|-----|
| | | | In. | W X D X H | lb. | kg |
| PWC151L1C11 | 7101353 | 2 Cubic Foot 1 1/2" Carbon Filter with Auto Backwash | 1.5 | 15 x 13 x 64 | 161 | 73 |
| PWC151L1D11 | 7101354 | 3 Cubic Foot 1 1/2" Carbon Filter with Auto Backwash | 1.5 | 16 x 15 x 77 | 259 | 117 |
| PWC151L1E11 | 7101355 | 4 Cubic Foot 1 1/2" Carbon Filter with Auto Backwash | 1.5 | 18 x 17 x 77 | 314 | 142 |
| PWC151L1F11 | 7101356 | 5 Cubic Foot 1 1/2" Carbon Filter with Auto Backwash | 1.5 | 19 x 19 x 77 | 424 | 192 |
| PWC151L1G11 | 7101357 | 7 Cubic Foot 1 1/2" Carbon Filter with Auto Backwash | 1.5 | 24 x 23 x 84 | 547 | 248 |
| PWC151L1H11 | 7101358 | 10 Cubic Foot 1 1/2" Carbon Filter with Auto Backwash | 1.5 | 26 x 25 x 92 | 819 | 372 |
| PWC201L1C11 | 7101359 | 2 Cubic Foot 2" Carbon Filter with Auto Backwash | 2 | 16 x 13 x 64 | 169 | 77 |
| PWC201L1D11 | 7101360 | 3 Cubic Foot 2" Carbon Filter with Auto Backwash | 2 | 17 x 15 x 77 | 267 | 121 |
| PWC201L1E11 | 7101361 | 4 Cubic Foot 2" Carbon Filter with Auto Backwash | 2 | 18 x 17x 79 | 322 | 146 |
| PWC201L1F11 | 7101362 | 5 Cubic Foot 2" Carbon Filter with Auto Backwash | 2 | 20 x 19 x 77 | 432 | 196 |
| PWC201L1G11 | 7101363 | 7 Cubic Foot 2" Carbon Filter with Auto Backwash | 2 | 23 x 22 x 77 | 555 | 252 |
| PWC201L1H11 | 7101364 | 10 Cubic Foot 2" Carbon Filter with Auto Backwash | 2 | 25 x 25 x 88 | 827 | 375 |
| PWC201L1I11 | 7101365 | 15 Cubic Foot 2" Carbon Filter with Auto Backwash | 2 | 38 x 30 x 107 | 1195 | 542 |
| PWC201L1J11 | 7101366 | 20 Cubic Foot 2" Carbon Filter with Auto Backwash | 2 | 48 x 40 x 107 | 1669 | 769 |

NOTICE

The service flow rates listed for the carbon filters 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.

