

# Engineering Specification

Job Name \_\_\_\_\_  
 Job Location \_\_\_\_\_  
 Engineer \_\_\_\_\_  
 Approval \_\_\_\_\_

Contractor \_\_\_\_\_  
 Approval \_\_\_\_\_  
 Contractor's P.O. No. \_\_\_\_\_  
 Rep Agency & Sales Agent \_\_\_\_\_

## RainCycle™ RCS-7500

### Rainwater System Package - Direct Pumping, Below Grade Cistern, Suction Lift Pump Overview

**RainCycle™ RCS-7000 Series** packages are stand-alone building scale systems for collecting, storing, filtering, and treating roof-collected rainwater for non-potable end uses. This series integrates all the rainwater system functions in a single package.

#### Specification

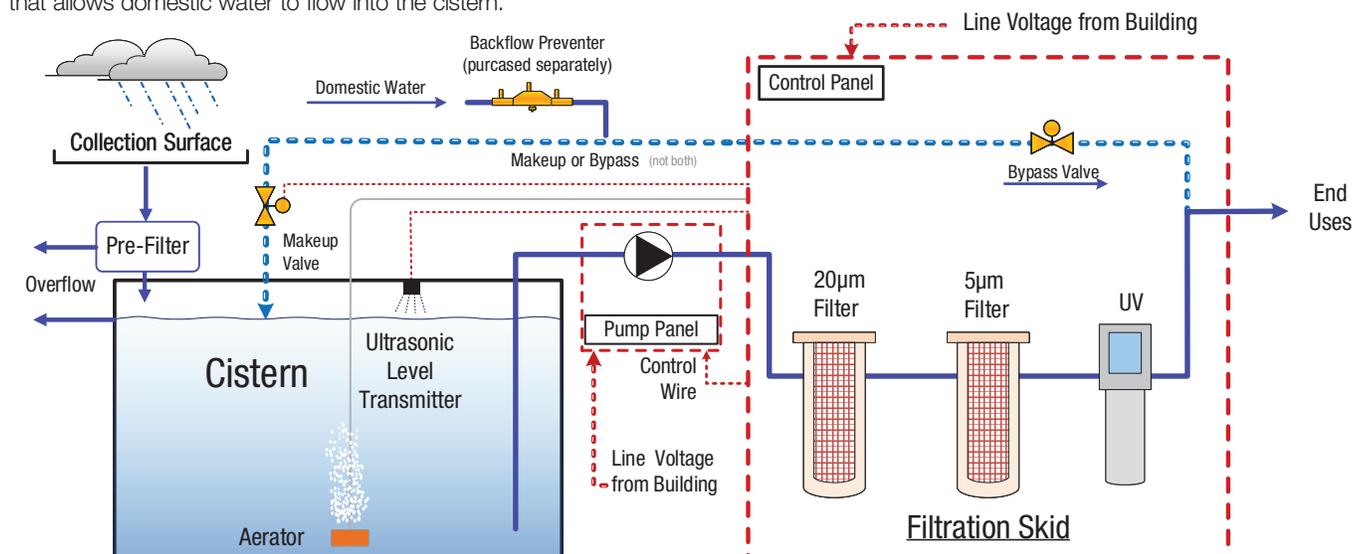
The **7500 Series** captures, stores, filters, treats, and distributes roof-collected rainwater. Rainwater flowing from a clean roof surface is routed to an inlet pre-filter and then to an above grade cistern. The pre-filter mitigates the intrusion of larger coarser material such as leaves and twigs. A suction lift pump, located external to the cistern, boosts rainwater through the filtration skid directly to the end use. A foot valve located in the cistern maintains prime on the suction line during the off cycle. There are two options for providing a secondary water supply for the end uses in the event of low water levels in the cistern. The default option employs a factory installed automatic bypass valve located on the filtration skid that when opened, allows domestic water to flow directly to the end use. The second option is a field-installed motorized makeup valve that allows domestic water to flow into the cistern.

#### Exclusive Features

- A proprietary control algorithm allows the booster pumps to function without a hydropneumatic tank.
- Field adjustable pipe break detection technology is included in the controller to shutdown pumps during unusually high flow conditions which are indicative of a pipe break.
- Factory changes require rolling passwords. This allows only authorized users to make factory setting changes.

#### Other System Features:

- Filtration RateS up to 80 GPM
- 304 Stainless Steel Headers, Branch Piping and Frame
- 2-stage Cartridge-Type, Low Maintenance Filtration in a Non-Metallic Filter Body
- Fully Controlled, Auto-Dim UV
- Filtration Differential Pressure Monitoring
- Tank Level Monitoring
- UL 508a Control Panel with PLC and 7" Color Touch Screen
- All Alarms with Audio/Visual Display, Time-Delayed Proof of Condition, Auto-Reset and Control Logging
- RS485, Modbus/BACNet/LonWorks/OPC-UA (native) Communication



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.





## Filtration Skid

### Roofing Surface Material

Description	Check One
Asphalt Shingle	<input type="checkbox"/>
Metal	<input type="checkbox"/>
Membrane Type	<input type="checkbox"/>
Green Roof	<input type="checkbox"/>
Other (Describe)	<input type="text"/>

### Pre-Filter

Suffix	Description	Check One
FBO	Pre-filter (by others)	<input type="checkbox"/>
FIB	Inside Building	<input type="checkbox"/>
FOV	Outside Building in Vault	<input type="checkbox"/>
FOB	Outside Building Direct Bury	<input type="checkbox"/>
Diameter/Area		
Inlet Pipe size to Pre-Filter		<input type="text"/>
Roof Collection Area		<input type="text"/>

### Cistern (Tank)

Suffix	Description	Check One
CBO	Cistern (by others)	<input type="checkbox"/>
CAG	Above Grade	<input type="checkbox"/>
CBG	Below Grade	<input type="checkbox"/>
Volume		
Tank Volume (gallons)		<input type="text"/>

### Filtration Flow Rate

Suffix	Description	Check One
010	10 GPM	<input type="checkbox"/>
015	15 GPM	<input type="checkbox"/>
025	25 GPM	<input type="checkbox"/>
040	40 GPM	<input type="checkbox"/>
080	80 GPM	<input type="checkbox"/>

### System Voltage

Suffix	Description	Check One
115	115V/1ph/60hz Supply Power	<input type="checkbox"/>
208	208V or 230V/3ph/60hz Supply Power	<input type="checkbox"/>
460	460V/3ph/60hz Supply Power	<input type="checkbox"/>
575	575V/3ph/60hz Supply Power	<input type="checkbox"/>

### Communication

Suffix	Description	Check One
NC	None	<input type="checkbox"/>
MB	Modbus RTU (RS-485)	<input type="checkbox"/>
BN	BACnet IP or MSTP	<input type="checkbox"/>
CU	OPC-UA	<input type="checkbox"/>

### Booster Pump

Suffix	Description	Check One
BPO	Booster Pump (by others)	<input type="checkbox"/>
BPW	Include Booster Pump Skid	<input type="checkbox"/>
Elevation Height from Booster Pump Outlet to Highest Fixture in Building (In Feet)		<input type="text"/>

### End Use & Fixture Count

Description	Quantity
Toilets (flush type)	<input type="checkbox"/>
Urinals (flush type)	<input type="checkbox"/>
Toilets (tank type)	<input type="checkbox"/>
Cooling Tower	Yes/No <input type="checkbox"/>
Irrigation	Yes/No <input type="checkbox"/>
Spray	<input type="checkbox"/>
Drip	<input type="checkbox"/>
Other	<input type="text"/>

### 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.

### WARNING

Rainwater supplied by Watts rainwater systems is non-potable water and is not intended for potable water applications. DO NOT DRINK WATER supplied from Watts rainwater systems and related equipment. Users shall determine the suitability of the product for the intended application before using.

