

RMS-3000 PACKAGE



The RMS 3000 Modular Package comes pre-plumbed and ready to install for your rainwater harvesting project. This package is designed for below-ground installation.

The RMS 3000 Modular Package includes:

- WISY WFF150 Vortex Fine Filter with extension tube, mounted to tank
- Two 1,500-gallon Roth polyethylene tank with risers, gaskets, manhole covers, fittings necessary to create
 equalization lines between tanks
- 4" Smoothing Inlet
- Multi-function Overflow Device
- Goulds 1HP 1SC Pump with 2" Coarse Floating Filter with 7' of food-grade suction hose
- Normally Open float switch for pump protection
- 20 gallon pressure tank with tank tee package
- Necessary tank gaskets, bulkheads, and fittings

Storage Tank

TANK SPECIFICATIONS

DESIGN CA	APACITY	TOTAL CA	WEIGHT							
GALLONS	LITERS	GALLONS	LITERS	POUNDS						
1500	5678	1771	6692	640						

HEIGHT = 51...

15.27...

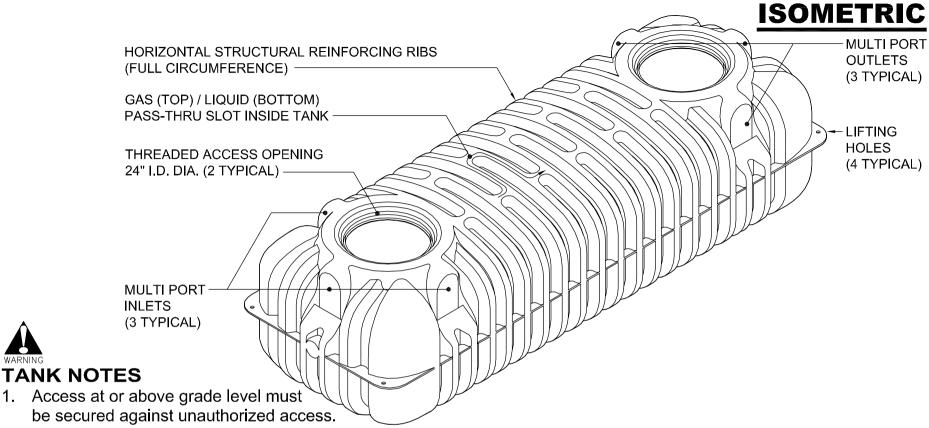
15.27...

DWG SCALE: 1:1 PLOT SCALE: 1:2

SHEET #: 1 OF 3 ROTH MultiTanK® 1500 GALLON / MODEL RMT-1500



ROTH GLOBAL PLASTICS One General Motors Drive Syracuse N.Y. 13206 Call Toll Free 866.943.7256 www.fralo.net



- Tank is not rated for vehicular traffic loading. All resin used is compliant with ASTM D 1248 as required by CSA B66 and IAPMO / ANSI Z1000-2007.
- Tank material of construction is HMW-HDPE.
- 5. Primary dimensions are in inches
- Minimum tank wall thickness is 1/4".
- Labeling will include: manufacturer name, liquid capacity, date, maximum burial depth, and model number.
- Riser cover contains the following: 6" x 3" warning: "Danger - Do not enter - Poison Gas" - written in English, French & Spanish.
- Maximum burial depth from manufacturer is 36" unless specifically instructed otherwise by the factory.
- 10. Models RMT-750, RMT-1060, RMT-1250 and RMT-1500 are all certified to CSA and IAPMO standards.
- 11. Models RMT-500, RMT-900 and RMT-1000E are compliant with CSA and IAPMO standards.

NOTES

DWG SCALE: 1:1 PLOT SCALE: 1:2 SHEET #: 3 OF 3

ROTH MultiTanK® 1500 GALLON / MODEL RMT-1500



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ROTH MultiTank® and FRALO Septic Tank High tech. High quality. High time.



M ROTH MultiTank® **NEW!**

Manufactured for you by the same exacting standards and same certifications as our FRALO brand tanks, Roth has set the bar even higher with the new Roth MultiTank®. The only tank you will ever need.

ROTH MultiTank® Features

Multi Usage

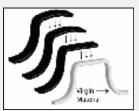
For water cistern, pump, holding, rainwater or septic tank

• Multi Layer:

Inner layer of FDA approved virgin HDPE, two inside layers of PE for improved stability, plus one outer layer of black and UV-stabilized PE

• Multi Coverage

Lifetime* Corrosion Protection and 5 years of Labor Insurance Coverage**



Our multi-layered tank construction, consisting of virgin material surrounded by 3 layers of



- Lifetime is the expected service life. See warranty for details.
- ** Coverage on workmanship and product cost, which includes the replacement and excavation of tank, up to \$2,500. This is subject to proper installation according to Roth's installation manual and the installer must be certified by a Roth Representative. Please contact us for more information on joining our elite group of certified installers.



M ROTH GLOBAL PLASTICS, INC. **BLOW-MOLDED TANKS**

High tech. High quality. High time.

Not all tanks are created equal. Roth's revolutionary process changes everything.

High Tech

State-of-the-art computer controlled multi-layer blow molding process produces perfect parts. Repeatable process, repeatable field performance you can trust.

High Quality

This is not your father's tank.

Roth tanks are the finest money can buy... and tens of thousands do!

High Time

After decades of conventional technology, Roth brings 35 years of blow molding experience to the North American market. In fact, 1 out of every 2 tanks in Europe is of blow-molded construction.

M FRALO Septic Tanks by ROTH

Setting the standard for all other septic tanks, the FRALO tank by Roth offers undisputed best-in-class status and the highest brand recognition of any tank in the market.

FRALO Brand Septic Tank Features

- First-generation blow-molded septic tank
- IAPMO and CSA certified (selected models only)
- · High brand recognition



FRALO brand septic tank by ROTH Global Plastics, Inc.

M WHY ROTH? WHY BLOW MOL<u>DIN</u>G?

Environmentally Sound

- · 100% of scrap is recycled and reused
- The most environmentally-sound methods available (no air, water or solid waste discharge as a result of our process)

Less Worries

- · No cracking
- No corrosion
- Watertight
- Higher life expectancy
- Strongest poly tank on the market
- HDPE the most chemically-resistant material in the world
- True structural integrity
- Quality of tanks are above European standards



Roth Riser System STAR®

Easier Handling

- Lightweight
- · Simple, user-friendly installation
- No water backfill required
- Multi-port inlet/outlet
- Versatile suitable for septic and pump applications
- · Roth offers all accessories to complete a whole system, including the popular STAR® riser systems (left)



SUPERIOR PRODUCTS. ENVIRONMENTALLY-FRIENDLY PROCEDURES, MATERIALS AND INNOVATIONS. YOUR ENVIRONMENT IS OUR BUSINESS.

- "Water Shortage will Leave World in Dire Straits" (www.USAToday.com)
- "Drought afflicts much of the nation" (www.Greatlakesdirectory.org)
- According to the NCDC (National Climate Data Center),

 "2007 was the 6th warmest summer on record, with 2000 new daily high temperatures

 records across the southern and central US. Drought affected almost half of the US". (www.ncdc.noaa.gov)
- "Cities reward lifestyle that conserves water" (USAtoday.com)

Water shortage, mandatory water restrictions and conservation... these are serious issues that are getting discussed on a daily basis. Our contribution as a company is to develop and offer products that help deal with issues like it.

Our mission is to continuously search for better ways to produce our products and invent new products that are both efficient and environmentally friendly. We continuously invest in machinery and R&D to increase efficiency and decrease the usage of non-replenishable resources.



MODEL (MultiTank)	MODEL (Fralo)	DESIGN CAPAC- ITY US Gallons (Liters)	TOTAL CA- PACITY US Gallons (Liters)	ACTUAL CAPACITY US Gallons (Liters) 40"/42" Liquid level	HEIGHT Inches (mm)	WIDTH Inches (mm)	LENGTH Inches (mm)	WEIGHT Pounds (kilogram)
RMT-300 (single layer)	ST-300	300 (1136)	325 (1230)	273 (1033)/284 (1075)	54 (1372)	45 (1143)	50 (1270)	120 (54.43)
RMT-500	ST-500	500 (1893)	535 (2025)	452 (1710)/474 (1794)	51 (1295)	62 (1575)	60 (1524)	225 (102.06)
RMT-750	ST-750	750 (2840)	1000 (3785)	853 (3229)/898 (3399)	51 (1295)	62 (1575)	103 (2616)	360 (163.29)
RMT-900	ST-900	900 (3407)	1161 (4394)	990 (3747)/1028 (3891)	51 (1295)	62 (1575)	118 (2997)	450 (204.12)
RMT-1000E	ST-1000E	1000 (3785)	1161 (4394)	990 (3747)/1028 (3891)	51 (1295)	62 (1575)	118 (2997)	450 (204.12)
RMT-1060	ST-1060	1060 (4012)	1337 (5061)	1177 (4455)/1227 (4645)	51 (1295)	62 (1575)	133 (3378)	520 (235.87)
RMT-1250	ST-1250	1250 (4730)	1469 (5560)	1259 (4766)/1319 (4992)	51 (1295)	62 (1575)	148 (3759)	560 (254.01)
RMT-1500	S <mark>T-1500</mark>	(1500 (5678)	1771 (6703)	(1540 (5830)/1601 (6060)	(51 (1295))	(62 (1575)	(177 (4496))	640 (290.30)

Distributed by:









Roth MultiTank® Fralo Septic Tan

P.O. Box 245 Syracuse, NY 13211 P: 866-943-7256 F: 315-475-0200 www.roth-usa.com

VORTEX FILTER

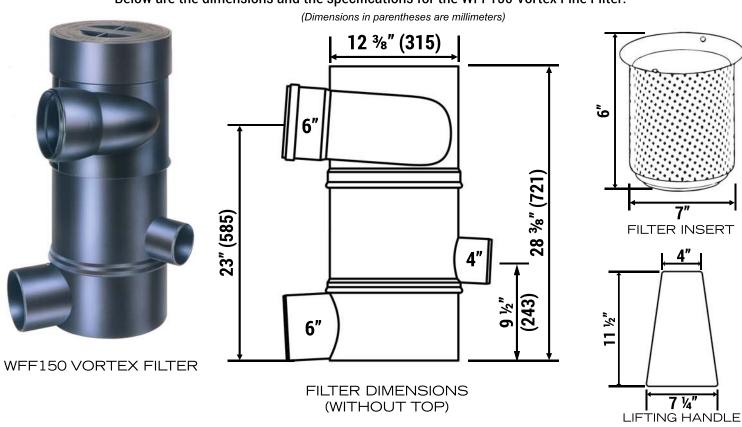
WISY WFF 150 VORTEX FINE FILTER

RAINWATER MANAGEMENT SOLUTIONS



The WFF 150 Vortex Fine Filter is used where multiple downspouts are connected together by a single conveyance pipe that gravity feeds the vortex filter. The WFF 150 Filter can filter rainwater to 280 microns from a collection area up to 5,500 square feet. The WFF 150 Filter can be installed above or below ground to meet your rainwater harvesting needs.

Below are the dimensions and the specifications for the WFF150 Vortex Fine Filter:



Regularly Furnished:

Polypropylene Filter Housing, Upper Ring, Housing Lid, Stainless Steel Fine Mesh Filter, and 11.5" Stainless Steel Lift Handle.

Additional Components Available:

Extension Tube, 25" or 39" Lifting Handle, Blind Insert, Seepage Basket, Stainless Steel Wall Bracket, Fixing Set. All measurements are converted from metric to standard. Some pipe connections may take a coupling to connect the filter to standard pipe sizes.

Installation Note:

- All Vortex Filters must be installed level and plumb for proper operation. Straight pipe with minimum length of 40" must be plumbed into the filter inlet for proper calming area.

> Rainwater Management Solutions 1260 W Riverside Drive Salem, VA 24153



WISY WFF 150 VORTEX FINE FILTER

RAINWATER MANAGEMENT SOLUTIONS

FUNCTION: The WISY WFF 150 Vortex Pre-Filter is used where multiple downspouts are connected together by a single conveyance pipe that gravity feeds the vortex filter to remove debris or particulate larger than 280 microns. The WFF 150 can be installed above or below ground – indoors or outdoors. An appropriately sized drain must be provided for the 6" outlet of the Vortex Filter for both indoor and outdoor installations. Because the Vortex Pre-Filter is part of the conveyance system used to remove rainwater from a roof area the filter must be sized according to flow rates to ensure safe roof drainage is achieved. See the Flow Rate Table below to determine the correct size filter for your rainwater harvesting system.

Table for max flow rates using the WISY Pre-Filter System, according to DIN EN 12056*:

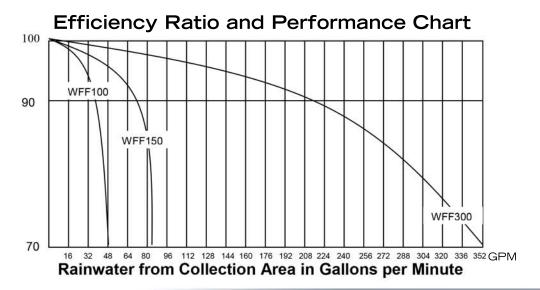
The maximum flow rates apply for a	WFF100:	66 GPM
conveyance system with a max slope	WFF150:	202 GPM
of 1% and a max pipe fill level of 70%.	WFF300:	1,277 GPM

The WISY WFF 150 Vortex Filter is the only commercial vertical filter made in the world and provides the highest quality of rainwater with minimal maintenance. Because of the vertical design, the filter has a self cleaning effect so dirt and debris are discharged from the filter along with excess water necessary to carry debris to storm or grade.

Because the filters works on capillary action, there are no baskets to clean or additional sprayers that require water and electricity necessary to "rinse" the filter. The filter should be inspected two to three times a year to ensure the natural flow of water in the filter is not obstructed. The stainless steel filter inserts need to be cleaned once or twice a year by hand cleaning with a mind detergent and soft brush. Depending on the debris filtered, additional cleanings may be necessary to maximize efficiency.

EFFICIENCY of the WISY PRE-FILTER SYSTEM

WISY estimates the average efficiency of the WFF 150 Vortex Pre-Filter is 90% which applies to 99% of precipitation events in Germany and Central Europe. Although the precipitation rates and events vary across the United States the efficiency (hydraulic efficiency) chart shown below shows the efficiency of each of the Vortex Pre-Filter.



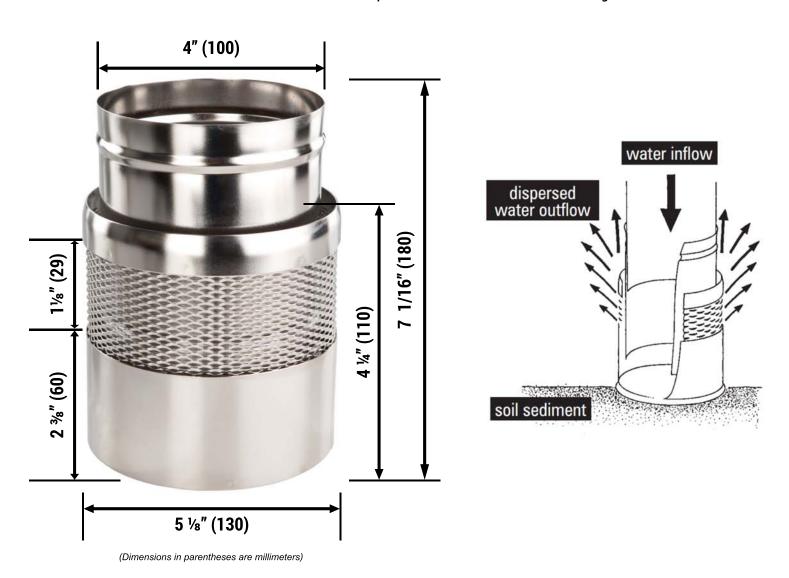
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Smoothing Inlet



The **4" WISY Smoothing Inlet** is an all stainless steel device that fits on the 4" inlet pipe in the storage tank. It is used to prevent the agitation of sediment at the rainwater inlet into the storage tank. The smoothing inlet also helps aerate the water as it enters the tank. The inlet pipe rests in the inner diameter of the smoothing inlet. The smoothing inlet should rest on the bottom of the tank.

Below are the dimensions and the specifications for the WISY Smoothing Inlet:



PART NUMBER: EB0300US

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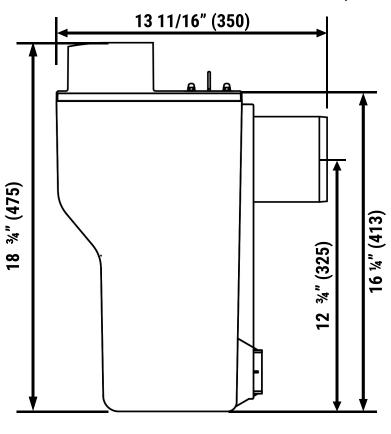
Overflow Device

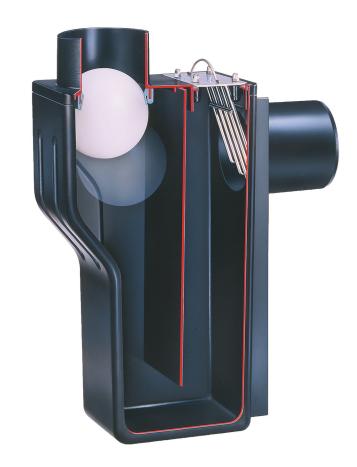
RAINWATER MANAGEMENT SOLUTIONS



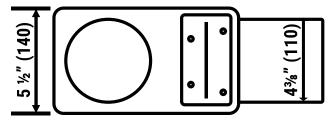
The **4" WISY Multi-function Overflow Device** is connected to the overflow pipe within the storage container or cistern. The multi-functional overflow device is made of impact-resistant ABS plastic that eliminates drain odors in the tank, provides vermin and backflow protection, and skims surface debris. Device comes with support strut, clamp, and fits 4" overflow piping.

Below are the dimensions and the specifications for the WISY Overflow Device:





(Dimensions in parentheses are millimeters)



PART NUMBER: US1002

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Floating Filter



STORAGE TANK FLOATING FILTERS WITH HOSE



The **WISY Floating Filter** will take water from just below the surface. Water at this depth is of the highest quality in the tank, because any particulate that enters the tank either floats on the surface or settles to the bottom.

The floating filter consists of a polyethylene ball and stainless steel filter and is supplied with a standard 7 ft. length of food-grade suction hose. The nozzle connections are available in 1 1/4" and 2" sizes. The filter is available separately or as part of a kit for both submersible and booster pumps. Hose lengths greater than 7 feet are available through RMS.

COARSE FLOATING FILTER

Coarse filter housing with 1.2 mm mesh

SIZE	PART NUMBER
1"	SZ9927+
1-1/4"	SZ9928+
2"	SZ9991+)



FINE FLOATING FILTER

Fine floating filter housing with 0.3 mm mesh

SIZE	PART NUMBER
1-1/4"	SZ9936+
2"	SZ9931+



Regularly furnished: Stainless Steel Floating Filter, Polyethylene Float Ball, 7' Long Food-Grade Suction Hose

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Submersible Pump



Residential Water Systems

Goulds Pumps

1SC Submersible Water Pump



FEATURES

- Casing: AISI 304 SS. Corrosion resistant, non-toxic, non-leaching.
- Impeller: FDA compliant, glass filled Noryl®. Corrosion and abrasion resistant.
- Mechanical Seal: Silicon/carbide sealing faces; all metal components of AISI type 300 stainless steel running in protected oil chamber.
- Elastomers: BUNA-N.
- Motor Shell and Lifting Handle: Constructed of AISI type 304 series stainless steel.
- Shaft: AISI type 304 stainless steel high strength keyed pump shaft with impeller locking cap screw.
- **Discharge:** 1¼" NPT vertical discharge connection.
- Suction Strainer: Detachable for easy clean out.



Goulds Pumps is a brand of ITT Corporation.

www.goulds.com

Engineered for life



GOULDS PUMPS Residential Water Systems

APPLICATIONS

Submersible water pumps designed for pumping out of reservoirs and storage tanks:

- · Homes and farms
- · Mobile home parks and motels
- · Schools and hospitals
- · Municipal applications
- · Industrial applications
- · Commercial applications

SPECIFICATIONS

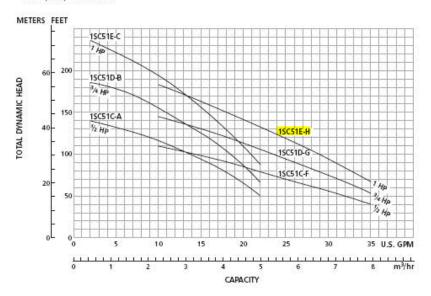
Pump:

- 11/4" NPT discharge and open suction.
- Maximum suspended solids 1/8°.
- Capacities: to 35 U.S. GPM (7.9 m³/h).
- Total heads: to 240 feet TDH (70 m).
- Temperature: 104°F (40°C) continuous 140°F (60°C) intermittent.

- . Maximum submergence: to 65 feet (20 m).
- Continuous duty rated, non-overloading motor.

 Motor:
- Single phase: 3450 RPM, 115 and 230 V, 60 Hz.
- Three phase: 3450 RPM, 230 V, 60 Hz.
- · Non-overloading.
- · Class Finsulation.
- Thermal overload protection: built-in with automatic reset on single phase.
- Three phase models require external overloads in panel.
- Power cord: All 30' long.
 Single phase 16/3, with 115 V or 230 V plug.
 Three phase 16/4 STO, bare leads

NOTE: See accessory section for separate control panels.



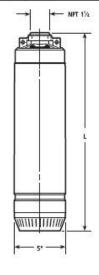


GOULDS PUMPS Residential Water Systems

MECHANICAL DATA

Series	Number of Stages	HP	Volts	Phase	Maximum Amps	RPM	Weight (lbs.)
1SC51C0AA	70 70 1		115	1	10.6		21
1SC51C1AA	3	1/4	230	11/23	4.5		
1SC51C3AA			230	3	3.0		
1SC51C0FA		53	115	210	10.7		31
1SC51C1FA		1/4	230		4.5		
1SC51C3FA	7	10000	250	3	3.0	3450	
1SC51D1BA			3/4 230	1	5.4		33
1SC51D3BA	4	3/4		3	3.5		
19C51D1GA	- 3 I			1	5.3		
1SC51D3GA				3	3.5		
1SC51E1CA	5		1 230	11	6.4		
1SC51E3CA				3	4.1		
1SC51E1HA		0.40		1	6.8		30
1SC51E3HA	7			3	4.3		

DIMENSIONS



Series	HP	Phase	"L" Dimensions in inches	Discharge Size
	1/2	1,3	19%	
1SC	3/4	1,3	20%	11/4
	1	1,3	213/4	



Residential Water Systems

Component	Material
Outer Casing and UpperSupport	Stainless Steel (AISI 304)
Motor Casing	Stainless Steel (AISI 304)
Suction Strainer	Stainless Steel (AISI 304)
Motor Shaft	Stainless Steel (AISI 304)
Impeller	Noryl
Diffuser	Stainless Steel (AISI 304)
Upper Cover	Technopolymer
Mechanical Seal Housing	Technopolymer
Lower Bearing Support	Aluminum Die Cast
Lower Bearing	Urethane Resin
Elastomers	Buna-N
Lower Mechanical Seal	Silicon Carbide/Silicon Carbide
Upper Lip Seal	Nitrile Rubber



Goulds Pumps and the IFT Engineered Blocks Symbol are registered trademarks and tradenames of IFT Corporation.

Noryl is a registered tracemark of GE Plastic.

SPECIFICATIONS ARE SUBJECTTO CHANGE WITHOUT NOTICE.

B15C August, 2007 © 2007 ITT Corporation

Engineered for life

Float Switch

SJE SIGNALMASTER® Control Switch

Mechanically-activated, narrow-angle float switch designed to activate pump control panels and alarms.

This narrow-angle sensing device is used to accurately monitor liquid levels in:

potable water

water

sewage applications

The SJE SignalMaster[®] control switch is not sensitive to rotation.

Normally Open Model (high level) Model 1002715

The control switch turns on (closes) when the float tips slightly above horizontal signaling a high level, and turns off (opens) when the float drops slightly below horizontal.

Normally Closed Model (low level)

The control switch turns on (closes) when the float tips slightly below horizontal signaling a low level, and turns off (opens) when the float tips slightly above horizontal.

FEATURES

Passed NSF Standard 61 protocol by an approved Water Quality Association laboratory.

Mechanically-activated, snap action contacts.

High impact, corrosion resistant, polypropylene float housing.

Not sensitive to rotation.

Control differential of 1.5 inches (4 cm) above or below horizontal.

Hvdraulic

UL Listed for use in water and sewage.

CSA Certified.

Three-year limited warranty.











OPTIONS

This switch is available:

CE certified unit available upon request.

for normally open (high level) applications or normally closed (low level) applications.

in standard cable lengths of 10, 15, 20, or 30 feet and 3, 5, 6, or 10 meters (longer lengths available)

with two mounting options that allow for flexibility in installation:

Mounting Clamp: for applications where the switch can be attached to a discharge pipe or similar mounting device.

Externally Weighted: for applications where the switch can be suspended from above.

SPECIFICATIONS

CABLE: flexible 18 gauge, 2 conductor (UL, CSA) SJOW, water-resistant (CPE)

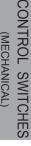
FLOAT: 2.74 inch diameter x 4.83 inch long (7.0 x 12.3 cm) high impact, corrosion resistant, polypropylene housing for use in sewage and water up to 140°F (60°C)

MAXIMUM WATER DEPTH: 30 feet (9 meters), 13 psi (90 kPa)

ELECTRICAL: 5 amp, 125/250 VAC, 50/60 Hz

NOTE: This switch is not recommended for controlling:

> electric loads less than 100 milliamps, 12 VAC non-arcing electric loads





PO Box 1708, Detroit Lakes, MN 56502 1-888-DIAL-SJE • 1-218-847-1317 1-218-847-4617 Fax email: sje@sjerhombus.com www.sjerhombus.com

Pressure Tank



MATERIALS OF CONSTRUCTION

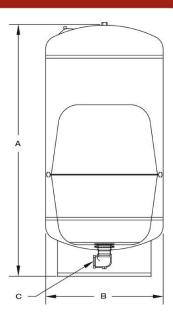
- Tank: 16 gauge cold rolled steel
- Finish: Appliance quality paint for indoor or outdoor installation
- Water chambers: Top chamber is 100% butyl rubber, lower water chamber is copolymer polypropylene
- Connection: Welded steel NPT thread
- Testing: High pressure, seam weld, helium, final precharge check
- Air valve: Brass valve with o-ring seal
- Warranty: Five year











DIMENSIONS & CAPACITIES

Model	Total	Tank		A		В	С	Total Weight	
[PC-TRADITIONAL BLUE]	Vol	Volume		Height		Diameter			3
[APC-ALMOND]	gal liters		in cm		in cm			lbs	kilos
PC/APC 44	14	60	22	55.88	16	40.64	1" NPT	28.0	12.7
PC/APC 66	20	80	29	73.66	16	40.64	1" NPT	36.0	16.3
PC/APC 88	26	100	34.5	87.63	16	40.64	1" NPT	41.0	18.6
PC/APC 111	32	120	27.75	70.48	21	53.34	1 1/4" NPT	54.0	24.5
PC/APC 122	33.4	130	42.75	108.58	16	40.64	1 NPT	49.0	22.2
PC/APC 144	44	170	36.25	92.07	21	53.34	1 1/4" NPT	67.0	30.4
PC/APC 211	62	240	48	121.92	21	53.34	1 1/4" NPT	82.0	37.2
PC/APC 244	81	310	62	157.48	21	53.34	1 1/4" NPT	99.0	44.9
PC/APC 266	85	325	44.5	113.03	26	66.04	1 1/4" NPT	121.0	54.9
PC/APC 366	119	450	59.75	150.49	26	66.04	1 1/4" NPT	153.0	69.5

Maximum working pressure 125 psig. Maximum working temperature, internal & external 140° F. Tank pre-charge 38 psig.

QUICK SIZING CHART

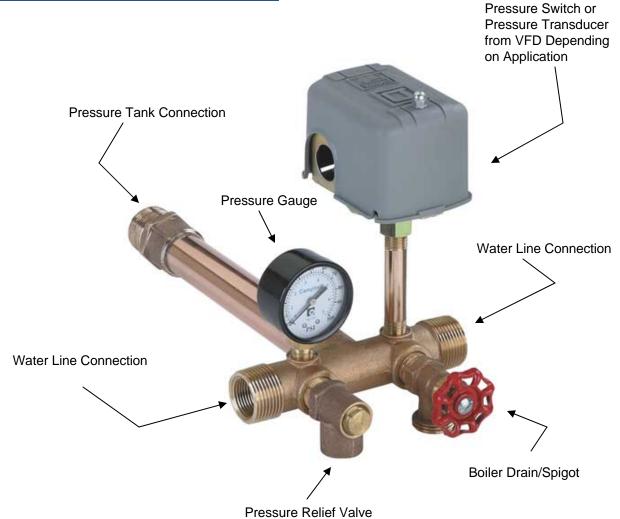
Model	Total	Tank			Total Dra	awdown*	ıwdown*			
[PC-TRADITIONAL BLUE]	Volume		20	20/40		/50	40/60			
[APC-ALMOND]	gal	liters	gal	liters	gal	liters	gal	liters		
PC/APC 44	14	60	5.6	21.4	4.8	18.1	4.1	15.6		
PC/APC 66	20	80	8.1	30.5	6.8	25.8	5.9	22.3		
PC/APC 88	26	100	10.5	39.7	8.9	33.6	7.7	29.0		
PC/APC 111	32	120	12.9	48.8	10.9	41.3	9.4	35.7		
PC/APC 122	33.4	130	13.3	50.3	11.3	42.6	9.7	36.8		
PC/APC 144	44	170	17.7	67.1	15.0	56.8	13.0	49.1		
PC/APC 211	62	240	25.0	94.6	21.1	80.0	18.3	69.2		
PC/APC 244	81	310	32.6	123.6	27.6	104.5	23.9	90.4		
PC/APC 266	85	325	34.3	129.7	29.0	109.7	25.1	94.9		
PC/APC 366	119	450	48.0	181.5	40.6	153.6	35.1	132.9		

*Total drawdown assumes tank pre-charge set at 2 psi below cut-in pressure. Drawdown can be affected by many factors, including temperature, pressure, and elevation.





RMS PRESSURE TANK TEE KIT



RMS Pressure Tank TEE Kit Consist of a Threaded Connection to the Pressure Tank, 40 – 60 PSI Pressure Switch Relief Valve, Pressure Gauge and Boiler Drain. If a VFD Variable Frequency Drive is used the Pressure Switch is Replaced with the Pressure Transducer from the VFD.