



RMS-1500 PACKAGE



The RMS 1500 Modular Package comes pre-plumbed and ready to install for your rainwater harvesting project. This package is designed for below-ground installation.

The ***RMS 1500 Modular Package*** includes:

- **WISY WFF150 Vortex Fine Filter** with extension tube, mounted to tank
- One **1,500-gallon** Roth polyethylene tank with risers, gaskets, manhole covers, bulkhead fittings
- **4" Smoothing Inlet**
- **Multi-function Overflow Device**
- Grundfos **SBA 3-45 1HP Pump** with Floating Filter
 - includes normally open float switch for pump protection, internal pressure switch
- Necessary tank gaskets, bulkheads, and fittings

Storage Tank

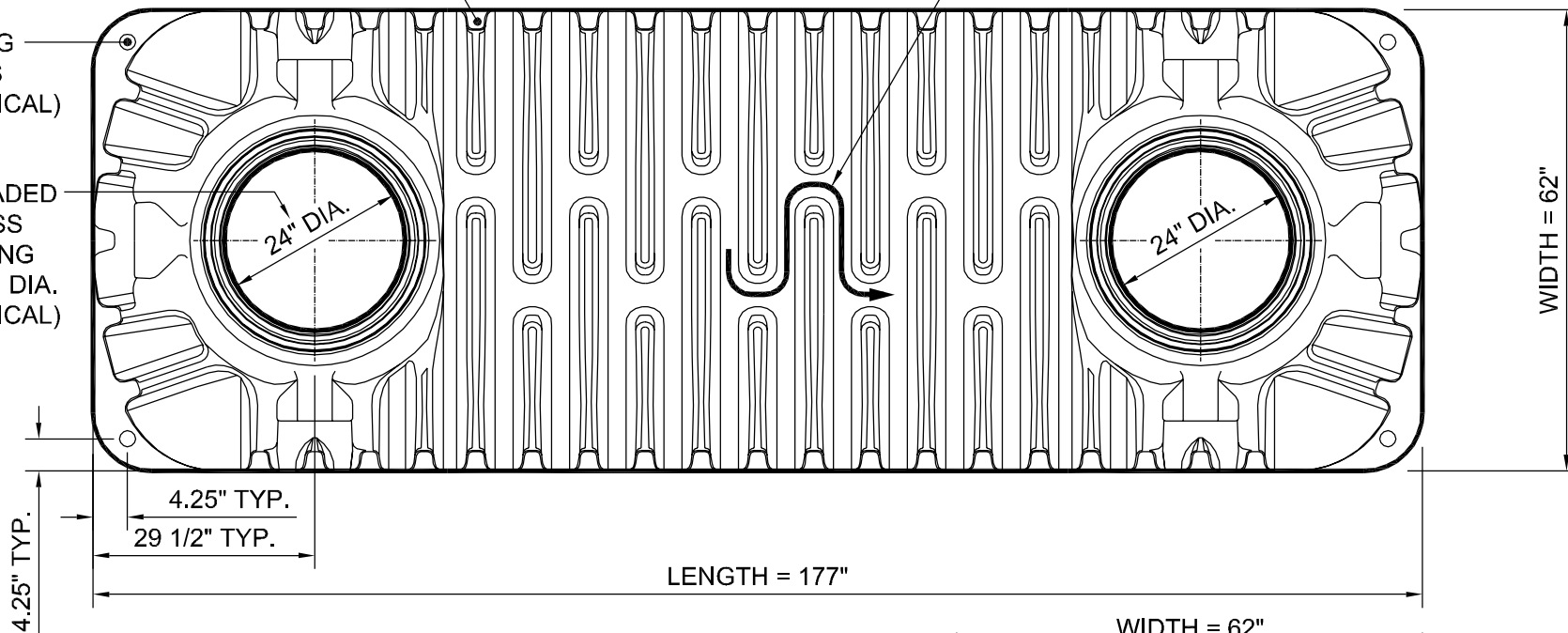
HORIZONTAL STRUCTURAL REINFORCING RIBS
(FULL CIRCUMFERENCE)

GAS (TOP) / LIQUID (BOTTOM)
PASS-THRU SLOT INSIDE TANK

TOP

LIFTING
HOLES
(4 TYPICAL)

THREADED
ACCESS
OPENING
24" I.D. DIA.
(2 TYPICAL)



WIDTH = 62"

8.66"

HEIGHT = 51"

15.27"

SIDE

TANK SPECIFICATIONS

| DESIGN CAPACITY | | TOTAL CAPACITY | | WEIGHT |
|-----------------|--------|----------------|--------|--------|
| GALLONS | LITERS | GALLONS | LITERS | POUNDS |
| 1500 | 5678 | 1771 | 6692 | 640 |

ROTH MultiTank®

1500 GALLON / MODEL RMT-1500



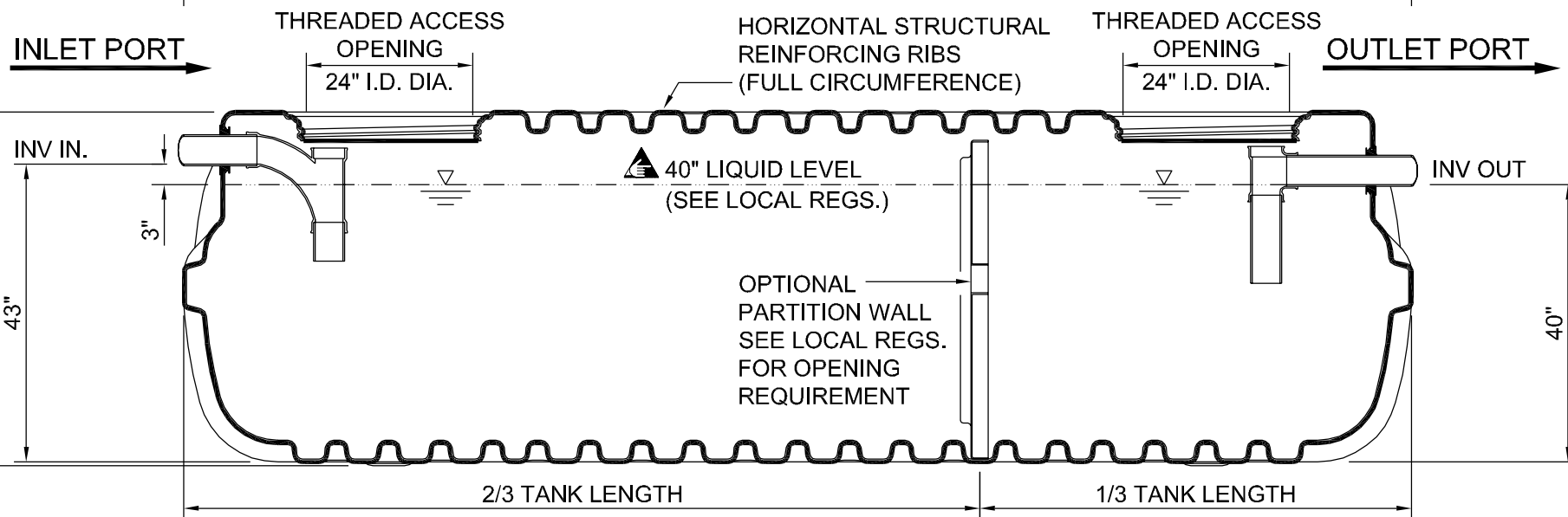
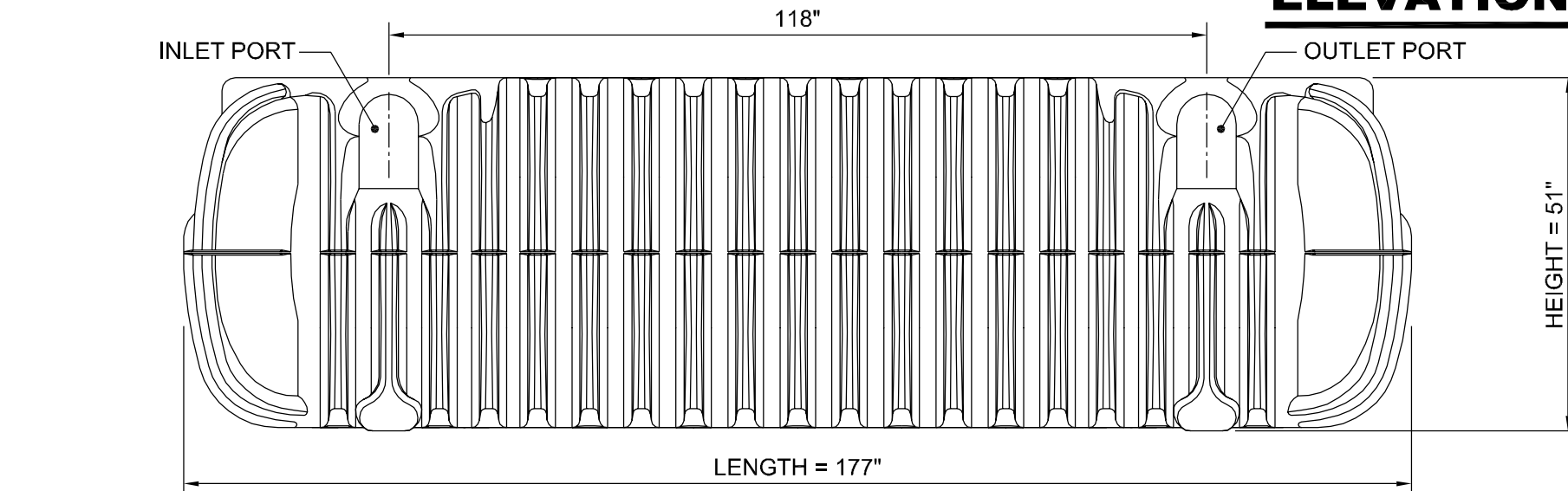
ROTH GLOBAL PLASTICS
One General Motors Drive
Syracuse N.Y. 13206
Call Toll Free 866.943.7256
www.fralo.net

DWG SCALE: 1:1

PLOT SCALE: 1:2

SHEET #:
1 OF 3

ELEVATION



SECTION

40" LIQUID LEVEL

DWG SCALE: 1:1

PLOT SCALE: 1:2

SHEET #:
2 OF 3

ROTH MultiTank®
1500 GALLON / MODEL RMT-1500



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ISOMETRIC

HORIZONTAL STRUCTURAL REINFORCING RIBS
(FULL CIRCUMFERENCE)

GAS (TOP) / LIQUID (BOTTOM)
PASS-THRU SLOT INSIDE TANK

THREADED ACCESS OPENING
24" I.D. DIA. (2 TYPICAL)

MULTI PORT
INLETS
(3 TYPICAL)

MULTI PORT
OUTLETS
(3 TYPICAL)

LIFTING
HOLES
(4 TYPICAL)



TANK NOTES

1. Access at or above grade level must be secured against unauthorized access.
2. Tank is not rated for vehicular traffic loading.
3. All resin used is compliant with ASTM D 1248 as required by CSA B66 and IAPMO / ANSI Z1000-2007.
4. Tank material of construction is HMW-HDPE.
5. Primary dimensions are in inches
6. Minimum tank wall thickness is 1/4".
7. Labeling will include: manufacturer name, liquid capacity, date, maximum burial depth, and model number.
8. Riser cover contains the following: 6" x 3" warning:
"Danger - Do not enter - Poison Gas" - written in English, French & Spanish.
9. 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

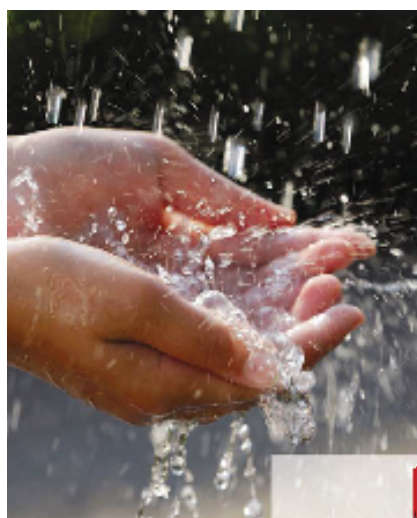
PLOT SCALE: 1:2

SHEET #:
3 OF 3

ROTH MultiTank®
1 500 GALLON / MODEL RMT-1 500



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



TANKS FOR THE
NEXT GENERATION



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

Call 866-943-7256 or visit our web site at www.roth-usa.com



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, rain-water 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 protection.



* 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.



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.



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.



WHY ROTH? WHY BLOW MOLDING?

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 | ST-1500 | 1500 (5678) | 1771 (6703) | 1540 (5830)/1601 (6060) | 51 (1295) | 62 (1575) | 177 (4496) | 640 (290.30) |

Distributed by:



Roth MultiTank®



Fralo Septic Tank

Roth Global Plastics, Inc

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

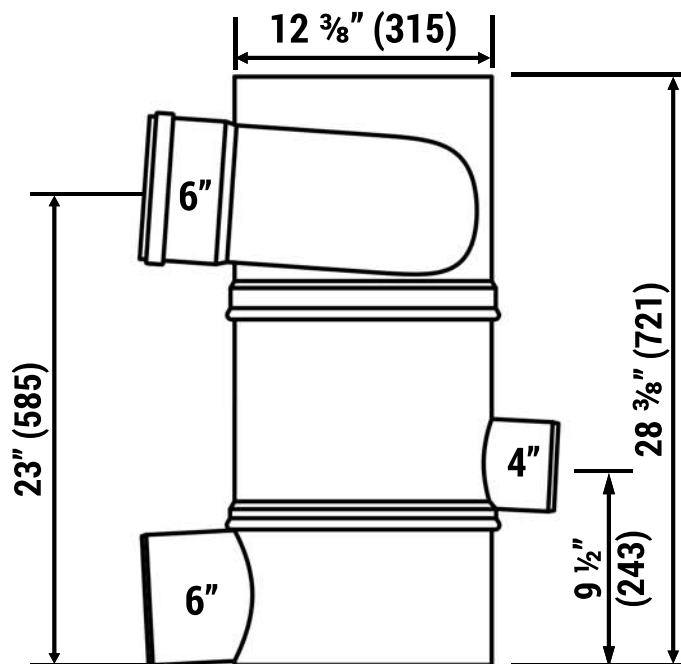
The **WFF 150 Vortex Fine Filter** is used where multiple downspouts are connected together by a single conveyance pipe that gravity feeds the vortex filter. The WFF 150 Filter can filter rainwater to **280 microns** from a collection area up to **5,500 square feet**. The WFF 150 Filter can be installed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

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

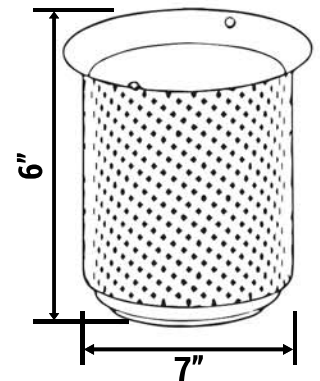
(Dimensions in parentheses are millimeters)



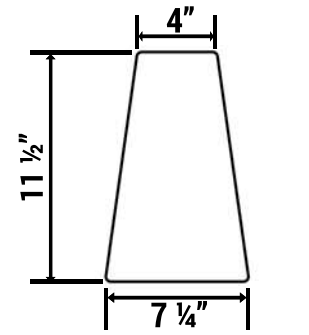
WFF150 VORTEX FILTER



FILTER DIMENSIONS
(WITHOUT TOP)



FILTER INSERT



LIFTING HANDLE

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

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*:

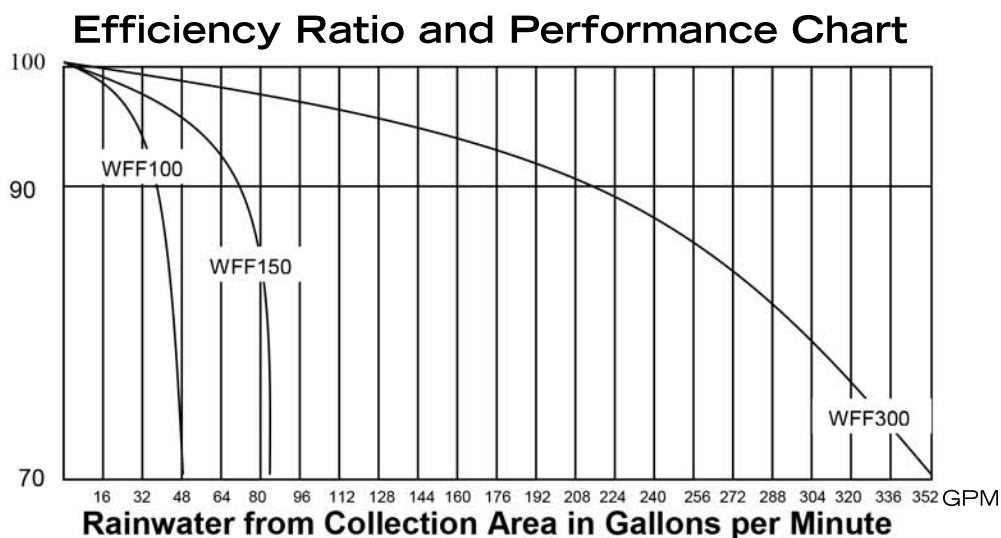
| | | |
|---|---------|-----------|
| The maximum flow rates apply for a conveyance system with a max slope of 1% and a max pipe fill level of 70%. | WFF100: | 66 GPM |
| | WFF150: | 202 GPM |
| | WFF300: | 1,277 GPM |

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 mild 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.



Smoothing Inlet



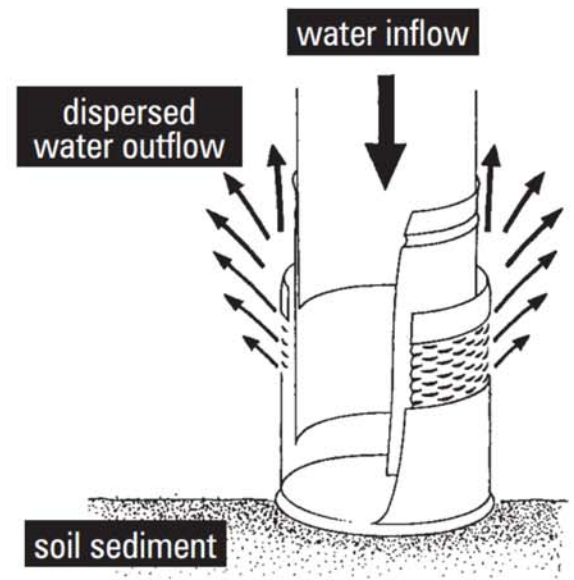
WISY SMOOTHING INLET (4")

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:



(Dimensions in parentheses are millimeters)



PART NUMBER: EB0300US

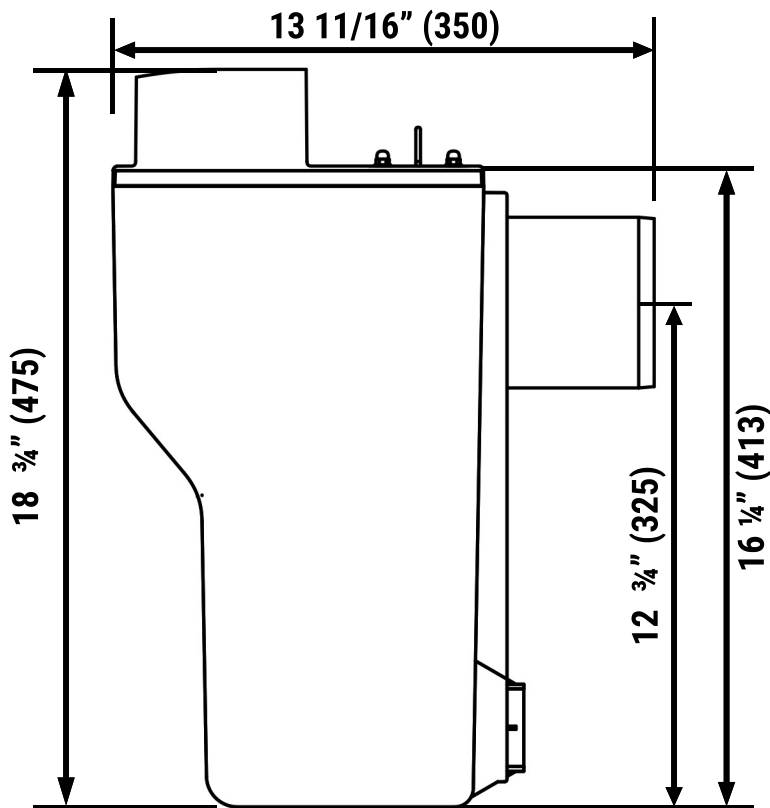
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Salem, VA 24153

Overflow Device

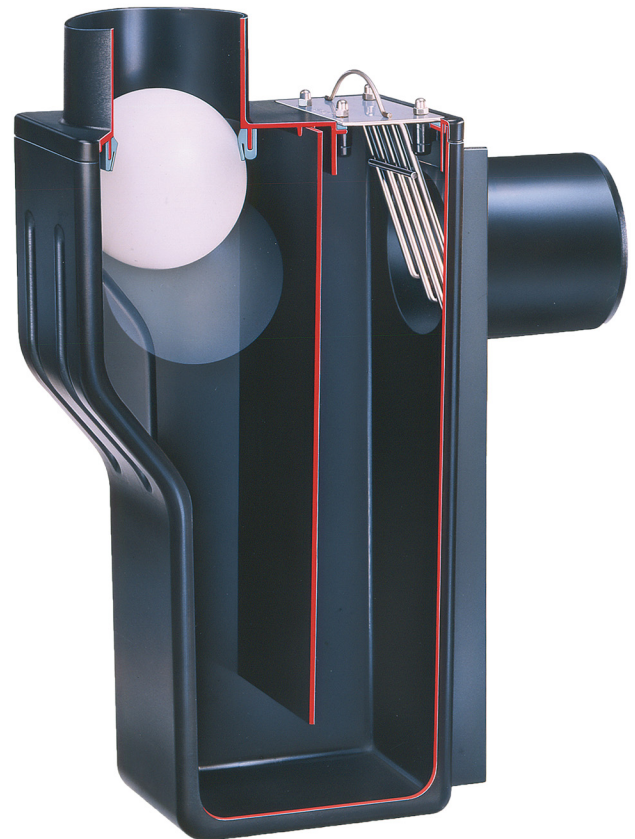
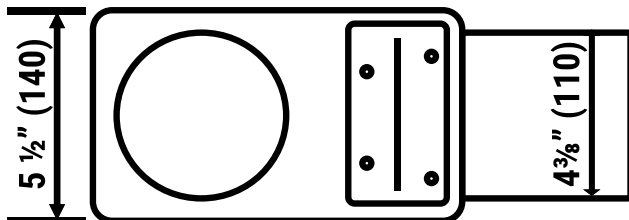


The 4" **WISY Multi-function Overflow Device** is connected to the overflow pipe within the storage container or cistern. The multi-functional overflow device is made of impact-resistant ABS plastic that eliminates drain odors in the tank, provides vermin and backflow protection, and skims surface debris.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



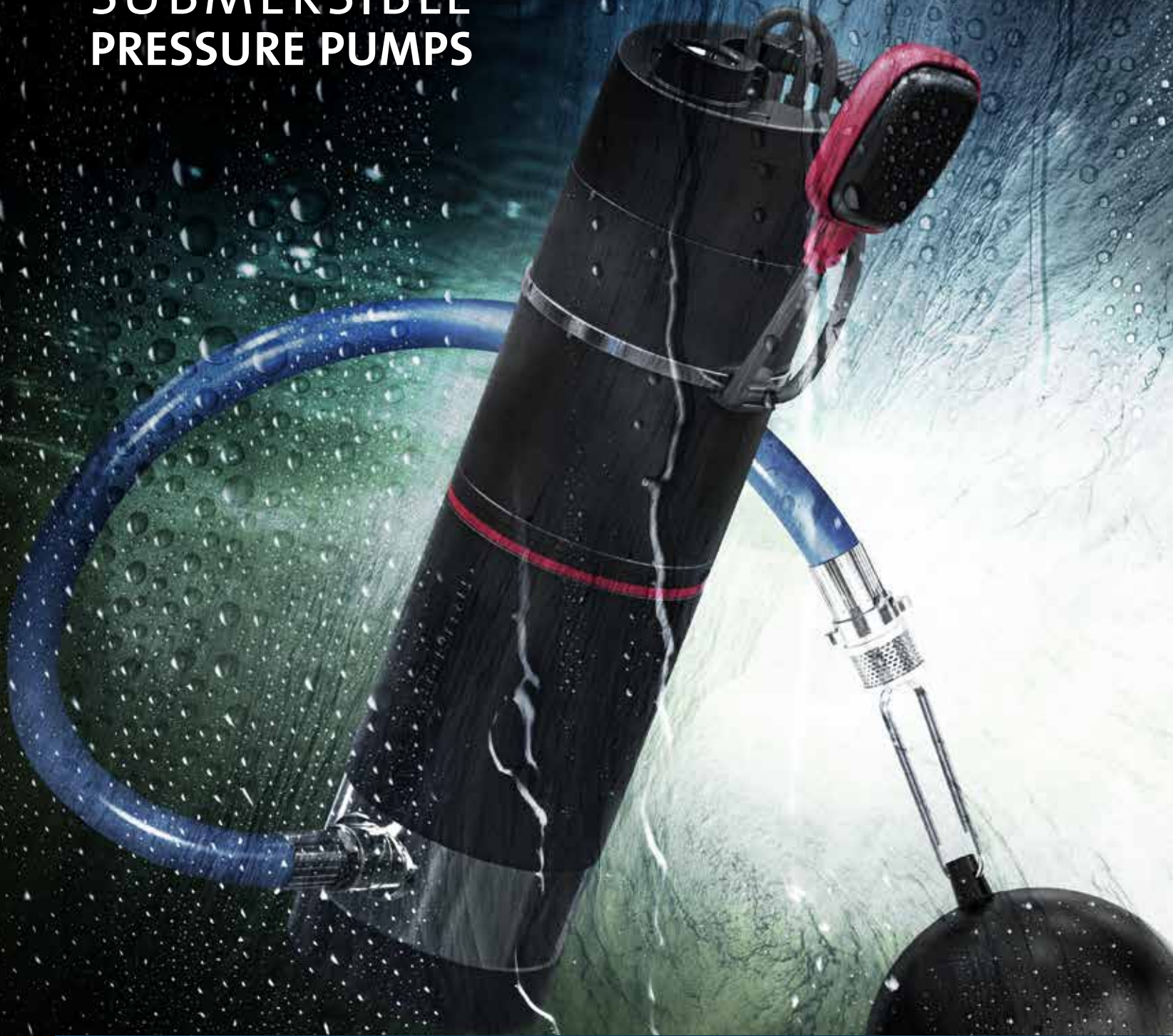
PART NUMBER: US1002

Rainwater Management Solutions
1260 W Riverside Drive
Salem, VA 24153

Submersible Pump

SBA

SUBMERSIBLE PRESSURE PUMPS



be
think
innovate

GRUNDFOS 

GRUNDFOS PUMP SOLUTIONS

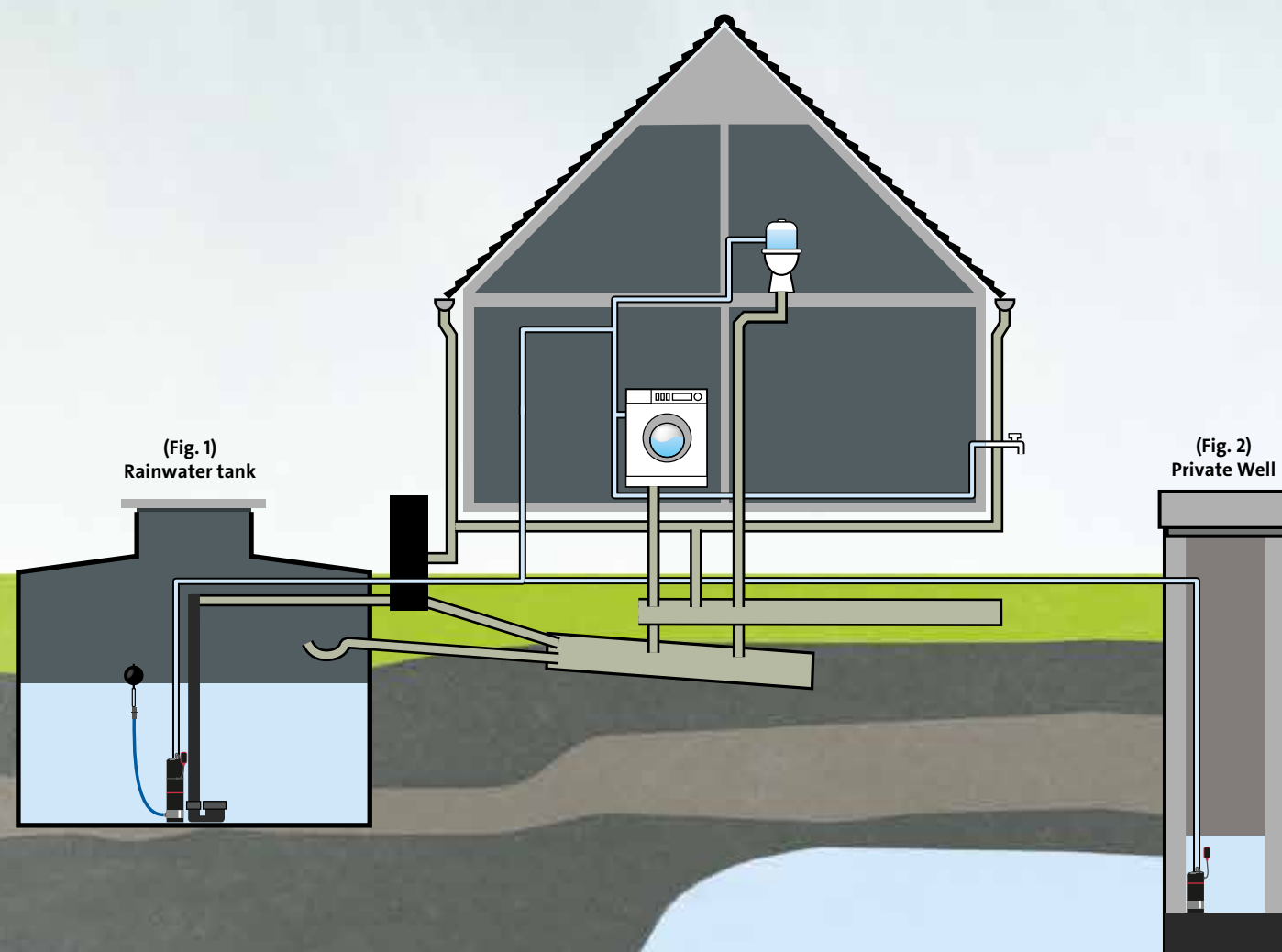
The Grundfos SBA are submersible pressure pumps. They offer simple installation and turn rainwater in collecting tanks or water from wells into a reliable source of water for domestic and commercial applications.

Water from rainwater tanks (Fig. 1)

The harvesting of rainwater involves filtration of roof run-off and subsequent storage for later use. The water is collected from the roofs of buildings and stored in rainwater tanks. Collected and stored rainwater is ideal for garden watering, toilet flushing, washing machines and car washing

Water from private wells (Fig. 2)

Water from private well, typically supplies drinking water to areas that are not connected to the municipal water supply. Or serves as a supplement to traditional water supply and used for irrigation, flushing toilets, washing machines in private homes and weekend cottages.



SBA

The new Grundfos SBA is a complete all-in-one unit. It comes with an integrated control unit – eliminating the need for an external pump controller.

With the new SBA, everything you need to guarantee reliable pumping of water is included.

Built to your needs

Many installers and home-owners want simple but reliable pump solutions that require only a minimum of changes to the original installation.

The SBA is literally a plug- and pump solution. Once installed and connected to the piping, all you need to do is switch on the pump. The result is a reliable solution and greatly reduced installation costs.

SBA two main versions:

SBA pumps are available in the following configurations:

- With integrated suction strainer .04 in (1 mm) mesh
- Or with side inlet/flexible suction hose with floating suction strainer .04 in (1 mm) mesh.

All variants are available with float switch. The float switch offers stop at low water level, ensuring that surface fragments do not enter the strainer.

SBA AW
(floating suction strainer
& float switch)



SBA A
(fixed strainer &
float switch)



SBA in-brief:

- Simplicity – all-in-one unit
- Easy installation – no external control unit
- Integrated dry-running protection
- Automatic restart after dry-running
- Lifting eye

SBA overview:

Noiseless operation

The SBA pump emits no noise when submerged and is therefore a noiseless alternative to non-submersible pumps.

High reliability

The SBA pump is built from composite and stainless-steel materials which are resistant to corrosion. Furthermore, the pump has a stainless-steel strainer which prevents large particles from entering the pump housing.

Floating suction strainer

The model with floating suction strainer always draws the water from just below the water surface where the water is clean and free from solid particles.

Longer life

The SBA features integrated dry-running protection. A Grundfos float switch prevents air from entering the system as a result of dry running. All pumps are available with float switches for low water stop. SBA with float switch automatically restarts when water is added. SBA without float switch will try to restart every 24 hours.

Integrated protection

Built-in thermal overload protection immediately stops the pump if it overheats. The pump automatically restarts when it has returned to normal temperature.

TECHNICAL INFORMATION

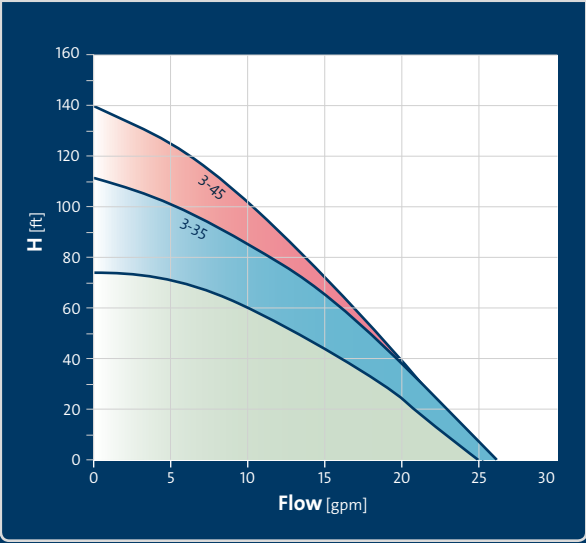
SBA pump range

| Pump type | Max head / nominal flow |
|-----------|-------------------------|
| 3-35 | 115 ft / 13 gpm |
| 3-45 | 148 ft / 13 gpm |

Technical data

| | |
|--------------------|----------|
| Max depth | 33 ft |
| Liquid temperature | 32-104°F |

Performance: SBA (60 hz)



L-SBA-SL-01 07/15 (US)

GRUNDFOS North America
2001 ButterField Rd, Ste 1700
Downers Grove, IL 60515

www.grundfos.us

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