

July

2009

ONSITE

# Installer

Latest in Alarms and Controls

Page 20

Sprucing Up Pickups

Page 16

Draining Media Filters

Page 8

PROMOTING WASTEWATER TREATMENT QUALITY AND PROFESSIONAL EXCELLENCE [www.onsiteinstaller.com](http://www.onsiteinstaller.com)

## Soils and Savvy

Roggenkamp & Sons thrives on site knowledge and customer communication

Page 12



CHANGE SERVICE REQUESTED

COLE PUBLISHING INC.  
1720 MAPLE LAKE DAM RD., PO BOX 220  
THREE LAKES WI 54982

PAID  
U.S. POSTAGE  
PRSTD STD  
COLE  
PUBLISHING

# contents

July 2009



12

## COVER STORY

### Soils and Savvy

By Dee Goerge

**ON THE COVER:** Roggenkamp & Sons in Wadena, Minn., serves customers well by keeping them informed and by carefully matching systems to the soil and the site. Here, Girard Brezinka of Wippler Precast and Louis Roggenkamp and Nathan Riedel of Roggenkamp & Sons lower a septic tank into position. (Photography by Dee Goerge)

6

### Breaking Ground: Are You Participating?

The recession affects everyone, but you don't have to be part of the doom and gloom. A positive attitude and positive action are more essential now than ever.

By Ted J. Rulseh

8

### Basic Training: Draining It Right

Effective media filter performance depends on taking great care when designing and installing a watertight underdrain system.

By Jim Anderson, Ph.D., and David Gustafson, P.E.

16

### Machine Matters: Pick Up Your Truck

Here are some nice innovations that can help you make your workhorse vehicle more accommodating and productive in the field.

By Greg Northcutt

18

### Product News

20

### Electronic Watchdogs

Advanced onsite systems, and even some simple ones, rely on technology to operate effectively. Here are some recent control and monitoring innovations.

By Benjamin Wideman

24

### Rules and Regs: New Mexico Toughens Onsite Regulations

By Scottie Dayton

26

### System Profile: Mighty Tight Squeeze

Peat fiber biofilters provide a treatment solution for a tiny lakeside lot in New York state where an old septic system had failed.

By Scottie Dayton

28

### Association News

29

### Industry News

## Coming Next Month: August 2009

### Large Scale and Commercial Onsite Treatment Systems

- Profile: A-Advanced Septic Services Inc., Puyallup, Wash.
- System Profile: Advanced solution for a school in Grand Bay, Ala.
- Machine Matters: Wise tips for dump truck shoppers
- Basic Training: Understanding the steps in site evaluation

# ONSITE installer

Published monthly by

  
CELEBRATING 30 YEARS OF PUBLISHING  
-1979-2009-

1720 Maple Lake Dam Rd. • PO Box 220  
Three Lakes, WI 54562

In U.S. or Canada call toll free 800-257-7222  
Elsewhere call 715-546-3346

[www.onsiteinstaller.com](http://www.onsiteinstaller.com)

E-mail: [info@onsiteinstaller.com](mailto:info@onsiteinstaller.com) • Fax: 715-546-3786

Office hours: 7:30 a.m.-5 p.m. Central Time, Mon.-Fri.

### SUBSCRIPTION INFORMATION:

A one year (12 issue) subscription to *Onsite Installer*™ in the United States or Canada is free to qualified subscribers. A qualified subscriber is any individual or company in the United States or Canada that partakes in the installation, design, maintenance, manufacture, treatment, consulting or sale of onsite wastewater treatment systems or supplies. Non-qualified subscriptions are available at a cost of \$60 per year in the United States and \$120 per year outside of the United States. To qualify visit [www.onsiteinstaller.com/qualify](http://www.onsiteinstaller.com/qualify) or call 800-257-7222.

Our subscriber list is occasionally made available to carefully selected companies whose products or services may be of interest to you. Your privacy is important to us. If you prefer not to be a part of these lists, please contact Kayla at [kaylaw@colepublishing.com](mailto:kaylaw@colepublishing.com).

### REPRINTS AND BACK ISSUES:

Visit [www.onsiteinstaller.com](http://www.onsiteinstaller.com) for options and pricing. To order reprints, call Jeff Lane at 800-257-7222 (715-546-3346) or e-mail [jeffl@colepublishing.com](mailto:jeffl@colepublishing.com). To order back issues, call Kayla at 800-257-7222 (715-546-3346) or e-mail [kaylaw@colepublishing.com](mailto:kaylaw@colepublishing.com).

### CLASSIFIED ADVERTISING:

RATE: \$1 per word, per month. Minimum of 20 words or \$20. All classified advertising must be PAID IN ADVANCE. DEADLINE: Classifieds must be received by the 17th of the month for insertion in the next month's edition. PHONE-IN ADS ARE NOT ACCEPTED. Ads may be faxed only when charging to MasterCard, VISA or Discover. Please supply all credit card information with faxed ads. Be sure to include your phone number (with area code) in your ad. Make checks payable to COLE Publishing Inc. and mail with classified ad to the address above. CLASSIFIED ADVERTISING APPEARS IN ALL CIRCULATION REGIONS AND ON THE INTERNET. Not responsible for errors beyond first insertion.

### DISPLAY ADVERTISING:

Call 800-994-7990, ask for Kim, Jim, Winnie or Phil. Publisher reserves the right to reject advertising which in its opinion is misleading, unfair or incompatible with the character of the publication.

### CIRCULATION:

Circulation averages 18,776 copies per month. This figure includes both U.S. and International distribution.

© Copyright 2009 COLE Publishing Inc.

No part may be reproduced without permission of the publisher.



# 2010

## PUMPER & CLEANER ENVIRONMENTAL EXPO INTERNATIONAL

[www.pumpershow.com](http://www.pumpershow.com)







Education Day: Feb. 24, 2010  
Exhibits Open: Feb. 25-27, 2010

Kentucky Exposition Center  
Louisville, Kentucky

# ADVERTISER **index**

July 2009

COMPANY	PAGE
Alderon Industries, Inc. ....	18
 Alita Industries, Inc. ....	17
Anchor Graphics, Inc. ....	9
Aquaworx by Infiltrator ....	23
 Bio-Microbics Inc. ....	24
Bord na Mona ....	5
BrenLin Company, Inc. ....	31
BS Design Corp. ....	31
 Eljen Corporation ....	4
Fergus Power Products ....	14
Infiltrator Systems Inc. ....	15
Jet, Inc. ....	31
Noren Products, Inc. ....	22
Orenco Systems, Inc. ....	19
 Polylok, Inc. ....	32
RotoSolutions, Inc. ....	31
Salcor, Inc. ....	10

COMPANY	PAGE
 Septic Products, Inc. ....	6
 Septic Services, Inc. ....	4
<b>Septronics</b> Septronics Inc. ....	10
Shaddix Company (The) ....	9
Simple Solutions ....	31
 SJE Rhombus Controls ....	9
SludgeHammer Group Ltd. ....	7
 T&T Tools Inc. ....	3
 Tuf-Tite, Inc. ....	11
Water Cannon, Inc. ....	31
Webtrol ....	25
 Wieser Concrete Products Inc. ....	3
Xerxes Corp. ....	29

To receive free product or service information from advertisers in *Onsite Installer*, write the Reader Reply Number **999** appearing in each advertisement on the attached postage-paid card in this issue.

**ONSITE installer** Subscriptions are **FREE** to qualified industry professionals

To subscribe, return the attached Free Subscription card in this issue, visit [onsiteinstaller.com](http://onsiteinstaller.com), or call 800-257-7222



**For the OTHER SIDE of Your Business**

Does your business include services like septic tank pumping and maintenance? If so, then consider a subscription to **Pumper**® — the publication exclusively for septic business professionals. For three decades, *Pumper* has been the definitive guide to the latest products, technologies and methods for the industry.

**SUBSCRIBE TODAY. [www.pumper.com](http://www.pumper.com) or 800-257-7222**



## T&T Tools, Inc.

### 800.521.6893



#### Hooks...

- \* Heat treated for long life
- \* Manhole Cover Hooks
- \* Septic Tank Lid Hooks
- \* Many styles available
- \* "T" handles for two hands or compact "D" handles

#### Probes...

- \* Insulated, Standard and Specialty
- \* Metal shafts: 3/8 round or hex
- \* Replaceable hardened tips
- \* Optional "slide" available to make your probe a mini-slide hammer

**Call for a FREE Catalog**

24

Email: [sales@tandttools.com](mailto:sales@tandttools.com)

Fax: 800.521.3260



**LARGE PRECAST TANKS TO 40,000 GALLONS**

- ◆ Septic, Grease Interceptors, Holding Tanks
- ◆ Available in Sizes 750 to 40,000 Gallon
- ◆ Extra Heavy Duty Tanks—HS20 Loading
- ◆ Bituminous Coating, Fast, Efficient Setting
- ◆ Vacuum Tested, Water Tight Structures
- ◆ Tanks for Bio-Microbics and Nibblers, Sand Filters
- ◆ Nationwide Delivery • Custom Sizes for Any Project



Join Us On the Web:  
[www.wieserconcrete.com](http://www.wieserconcrete.com)

42

CONCRETE PRODUCTS, INC.  
**1-800-325-8456**



## Flagg-Air Model 340

- 3450 rpm
- 1/4 hp, 115V
- Enclosed motor
- Stainless steel shaft
- High impact plastic parts
- Operates quietly
- 2-yr. warranty
- Fits in place of most original manufacturers' units
- Replacement parts available



The Flagg-Air 340 does not carry the NSF seal. Check local and state regulations for approval in your area.

## MEDO HEM LA-80 Linear Pump



with low pressure alarm & light; with on & off switch

## MEDO Piston



LA-60  
LA-80B  
LA-100  
LA-120

## SECOH Diaphragm



EL 60  
EL 80  
EL 100  
EL 120

GAST



0523  
1023

Rotary Vane Compressor

## Regenair®

R3105-12 Blower

GAST



Hydromatic, Zoeller, ABS, Liberty & Myers Pumps

## Conde SDS 6 Engine Driven



Units available 20 to 180 cfm



Moro PM80 Turbo 350 cfm

Moro Pumps: from 175 to 1642 cfm

# LIBERTY PUMPS

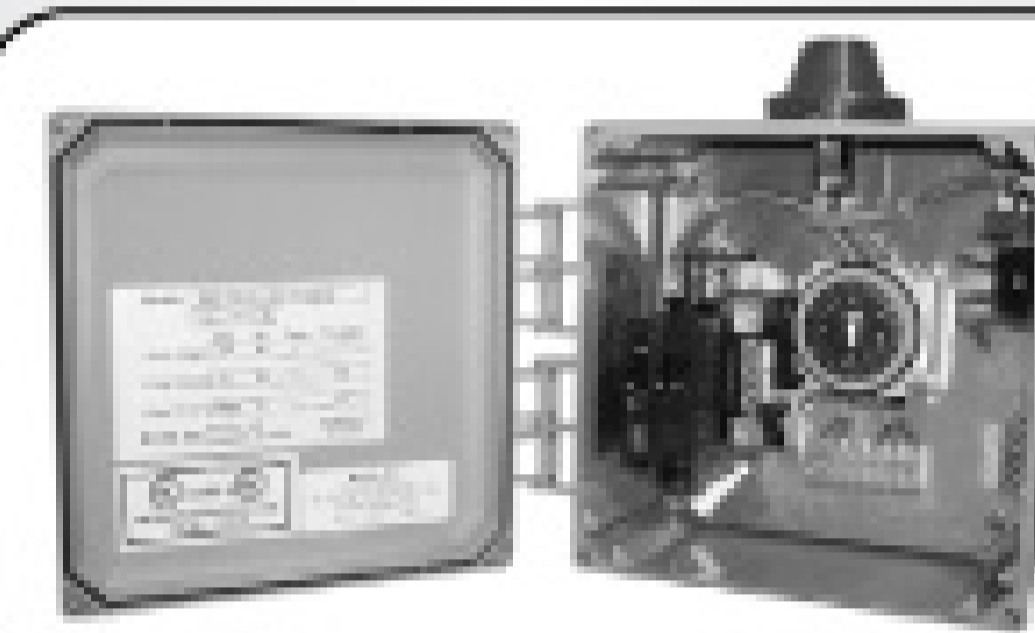
We Carry a Full Line of **LIBERTY PUMPS** and Pre-Assembled Lift Station Packages



Omnivore LSG 200 Residential Grinder



280-Series Mid-Range Effluent Pump



## BIO Control Panel

with Lift Station, Aerator, Timer & High Water Alarm

Myers High Head Filtered Effluent Pump



## Septic Services, Inc.



toll free 1.800.536.5564 • 636.583.5564 • fax 636.583.6432  
e-mail [septic@fidnet.com](mailto:septic@fidnet.com) • web [www.septicserv.com](http://www.septicserv.com)

23

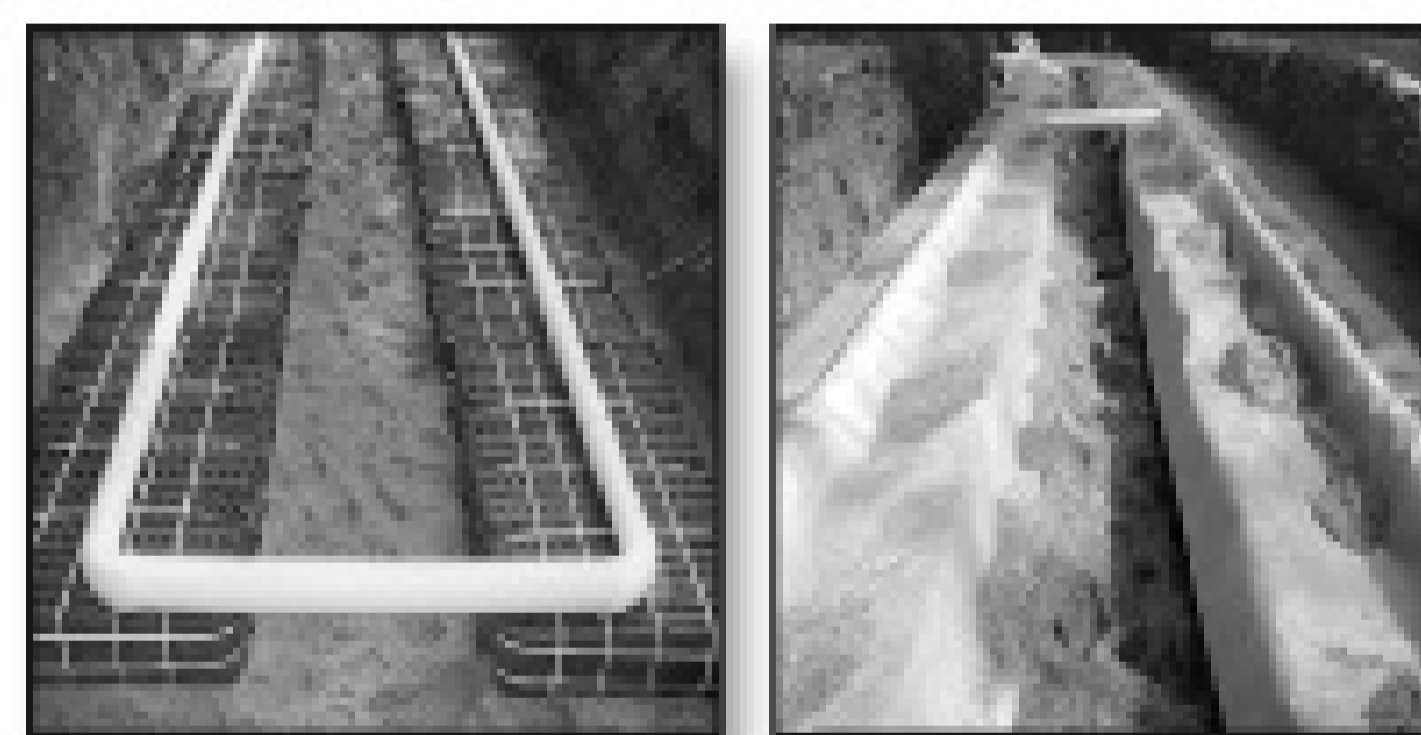
# Eljen GSF

## Geotextile Sand Filter

### Passive Advanced Treatment Technology

- Independent 3rd party testing confirms BOD and TSS <5 mg/l and Fecal Coliform reduction of 99.9%
- Much smaller installation area
- Greater long-term performance
- Good for sensitive lakeside and restricted building sites
- Lightweight recycled materials

GSF®



### FLEXIBLE SITE INSTALLATION

- Trench or Bed layouts
- Level or Sloped sites
- At Grade or Mound
- Serial & Pressure distribution
- Fast or Slow soils
- Clean & easy installation!

TIME PROVEN FOR OVER 25 YEARS

**eljen**  
CORPORATION

Innovative Products and Solutions Since 1970  
125 McKee St., E. Hartford, CT 06108  
860-610-0426 • Fax: 860-610-0427  
Email: [info@eljen.com](mailto:info@eljen.com)

**eljen.com**  
800-444-1359

33

FEBRUARY 24-27, 2010 • LOUISVILLE, KY

CELEBRATING

30 years

1981-2010



[www.pumpershow.com](http://www.pumpershow.com)

# It's Time For A New Contract With Nature



Puraflo® Peat Fiber Biofilter - The # 1 Green Solution for Wastewater Treatment!



- Superior Solution for Difficult Soils, Shallow Water Tables, and Size Restrictive Sites
- Ideal for Home, Schools, Offices, Parks, Churches, and Communities
- High quality Treatment Protects Receiving Waters
- Ideal for Repairs
- Ideal for Holiday Homes and Sites Subject to Intermittent Use

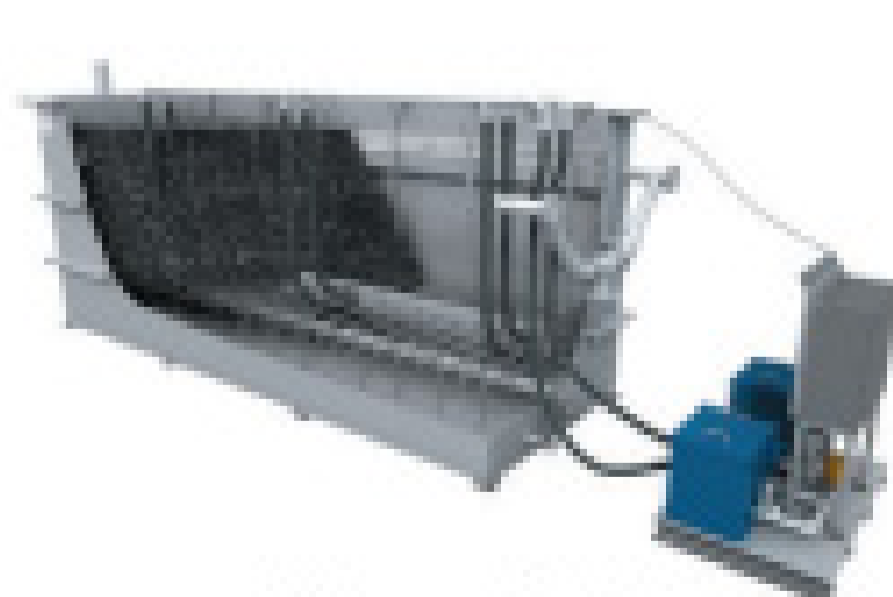
- More Than Double the Life of Other Peat Media
- Low Operating and Maintenance Costs
- Suitable for LEED and Green Build Certification
- Odor-Free Natural System
- Guaranteed, High Quality Performance Protects Health and the Environment
- Compact Wastewater Treatment System
- Pre-Assembled - Installs in Hours Not Days

Experts in Decentralized & Residential Wastewater Treatment, Water Reuse and Odor Control



PuraM

Membrane Bioreactor



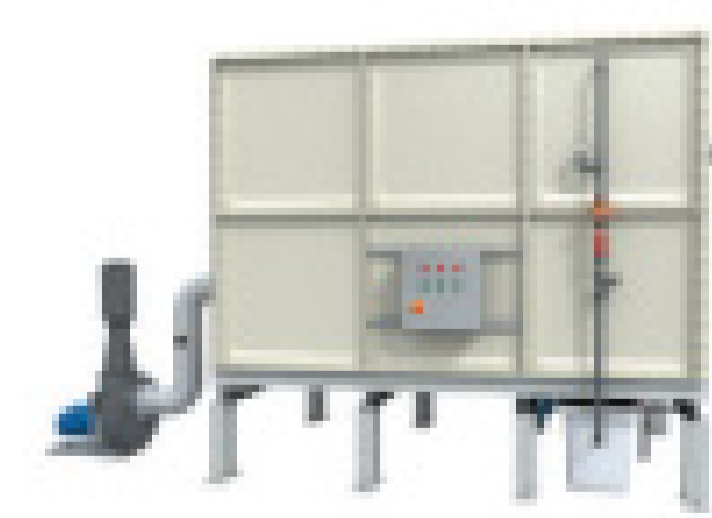
PuraSAF

Submerged Aerated Filter



PuraMax

Moving Bed Biological Reactor



MÓNASHELL

Odor and VOC Biofiltration



Rainwater Harvesting

Rainwater Reuse

**Feedback**

Onsite Installer™ welcomes your comments, ideas and suggestions on how we can serve you better. Call 800/257-7222; fax 715/546-3786; or e-mail [editor@onsiteinstaller.com](mailto:editor@onsiteinstaller.com).



## Are You Participating?

The recession affects everyone, but you don't have to be part of the doom and gloom. A positive attitude and positive action are more essential now than ever.

By Ted J. Rulseh

**A** great attitude does much more than turn on the lights in our worlds; it seems to magically connect us to all sorts of serendipitous opportunities that were somehow absent before we changed."

Earl Nightingale

So, there's a recession on. Are you participating? Did you even know participation was voluntary?

No one is naive enough to think the economy isn't hurting. In many quarters, the installation business is hurting severely, dependent as it is on the housing market. Your business might be suffering, too, in very real terms, and maybe to some degree that's unavoidable.

But there's one thing you can avoid, and that's the doom and gloom. At least that's the message I got at the Pumper & Cleaner Expo in February when I spoke to James Taylor, a sales and service manager with Footage Tools of Toronto, Ontario. He said his company is "not participating."

### Productive energy

Perhaps that's an attitude worth trying on. Things may be tough now, but business has always run in cycles. This downward trend may

be longer and steeper than others we've been through, but it will turn around — it always has. And the right attitude can help you be ready when it does.

Fine, some may say. But business is slow. Attitude won't wake up dormant customers. No amount of salesmanship can make people build houses. All right then. Maybe now is the time to go to work on improving your business from the inside.

---

**Things may be tough now, but business has always run in cycles. This downward trend may be longer and steeper than others we've been through, but it will turn around — it always has. And the right attitude can help you be ready when it does.**

---

Are there best practices that you could learn by attending training? Are there new treatment technologies or drainfield designs you might be using but haven't yet tried? Could those innovations help you down the road — or open opportunities even now? Could they put you in position to lead in your market when things do turn back upward?

What about your employees? Quite possibly you haven't been able to keep them all on. But what of those you still have? The current conditions may drag their moods down, but might also give them a greater

sense of urgency. Tap into their energy. You may find they can contribute ideas that help propel your business ahead.

Beyond that, if your customers are hesitant, reach out to them in new ways. If you're not servicing and maintaining the systems you install, maybe it's time to start. If there are builders or developers you haven't approached in the recent past, knock on their doors. You might find opportunities that seemed out of reach or unappealing before but now deserve a closer look.

### Let it show

Finally, now is the time to direct positive energy outward. Answer the phone with enthusiasm. Greet people you see in a business setting (or in any setting for that matter) with a firm handshake, a look in the eye, and a smile. A recession doesn't change the fact that customers like doing business with people who are upbeat.

Anyone who makes contact with a representative of your company, in the field or on a visit to your office, should feel good energy. A positive attitude is infectious. If you carry it with you, good things can happen.

So, what's your choice? How about deciding now not to be part of the gloom? Suppose you were to make yourself a sign that says: "Not Participating." Hang it up someplace where you'll see it every day. Then behave as if you meant it.

After all, as motivational expert Zig Ziglar once said, "Positive thinking won't let you do anything, but it will let you do everything better than negative thinking will."

There may be reasons for pessimism, but there's nothing to gain from wearing that on your sleeve. Things will turn around. It may not be obvious how soon, but they will. With the right outlook, you can start your own turnaround today. ■

The most complete line of ...  
**SPI**  
 Septic Products Inc.

- System Alarms
- Float Switches
- On-Site Accessories
- Control Panels

**Call Today**  
**419-282-5933**  
[www.septicproducts.com](http://www.septicproducts.com)  
[sales@septicproducts.com](mailto:sales@septicproducts.com)

38

# Digests solid waste... and has the credentials to prove it!

Meeting industry standards  
worldwide:



NSF-40 - Class I  
New Installations



IMO - MARPOL - MEPC-159 (55)  
Meets and Exceeds  
Global Maritime Standards



IAPMO IGC-180-2003  
Remediation Certification



# SludgeHammer®

nature called. we answered.

1.800.426.3349 or  
SludgeHammer.net

Jim Anderson and David Gustafson are connected with the University of Minnesota onsite wastewater treatment education program. Dave is extension onsite sewage treatment educator. Jim is former director of the university's Water Resources Center and is now an emeritus professor, as well as education program coordinator for the National Association of Wastewater Transporters. Readers are welcome to submit questions or article suggestions to Jim and David. Write to [ander045@umn.edu](mailto:ander045@umn.edu).

# Draining It Right

Effective media filter performance depends on taking great care when designing and installing a watertight underdrain system

By Jim Anderson, Ph.D., and David Gustafson, PE.

**M**edia filter drainage systems or underdrains are an important part of filter design and operation. If they are not installed properly, the filter will not meet the expected treatment level.

Filter systems collect and clean effluent and deliver it to the next part of the treatment system. Drainage systems are sometimes made by the manufacturer as a part of the product. Other times, the installer constructs the system. In either case, the drainage system must be watertight so that the effluent leaves the filter and flows onward without leaking into the soil, and so that the filter does not collect additional water.

## Handling the piping

With manufactured drainage systems, installers only need to make the proper watertight connections. This means using the proper PVC pipe primer and glue to make solvent welds that will withstand the pressures and stresses placed on the pipe.

When constructing a drainage system for a filter you are building, it is important to check the plans, specifications and state and local requirements first. Typically, a 4-inch Schedule 40 pipe is used. The pipe has 1/4-inch slots spaced about 4 inches apart and oriented at the 12 o'clock position.

Sometimes regular 4-inch sewer pipe is used with the 1/2-inch holes

at 4 and 8 o'clock. At times, 3-inch pipe is used. If slots or holes are larger than 1/4-inch, you must use stone larger than pea rock to prevent the rock from entering the pipe.

It is recommended to avoid using a filter fabric around the drainage pipe. This is to prevent the pipe from being clogged with sand fines, bacterial growth, or both. If that happens, it limits drainage from the filter. That in turn causes water to back up into the filter, creating anaerobic conditions and leading to hydraulic failure.

The end of the pipe opposite the outlet should be capped. To prevent fines from entering the bottom drainage system on sand filters, 6 inches of washed stone should be placed around the pipe. Over this area, place 2 to 3 inches of washed pea rock. This pea rock also should be placed over the entire remaining area of the sand filter base. Avoid using sharp stones, since they could puncture the liner membrane.

## Dealing with pumps

Depending on the technology, a basin may be contained within the media filter to house a pump and float controls. The pump delivers the effluent back to a recirculation tank or to the final soil treatment area.

Pumps may be positioned at the very bottom, raised above the base, or placed in the mid-zone of the filter. It is important to know

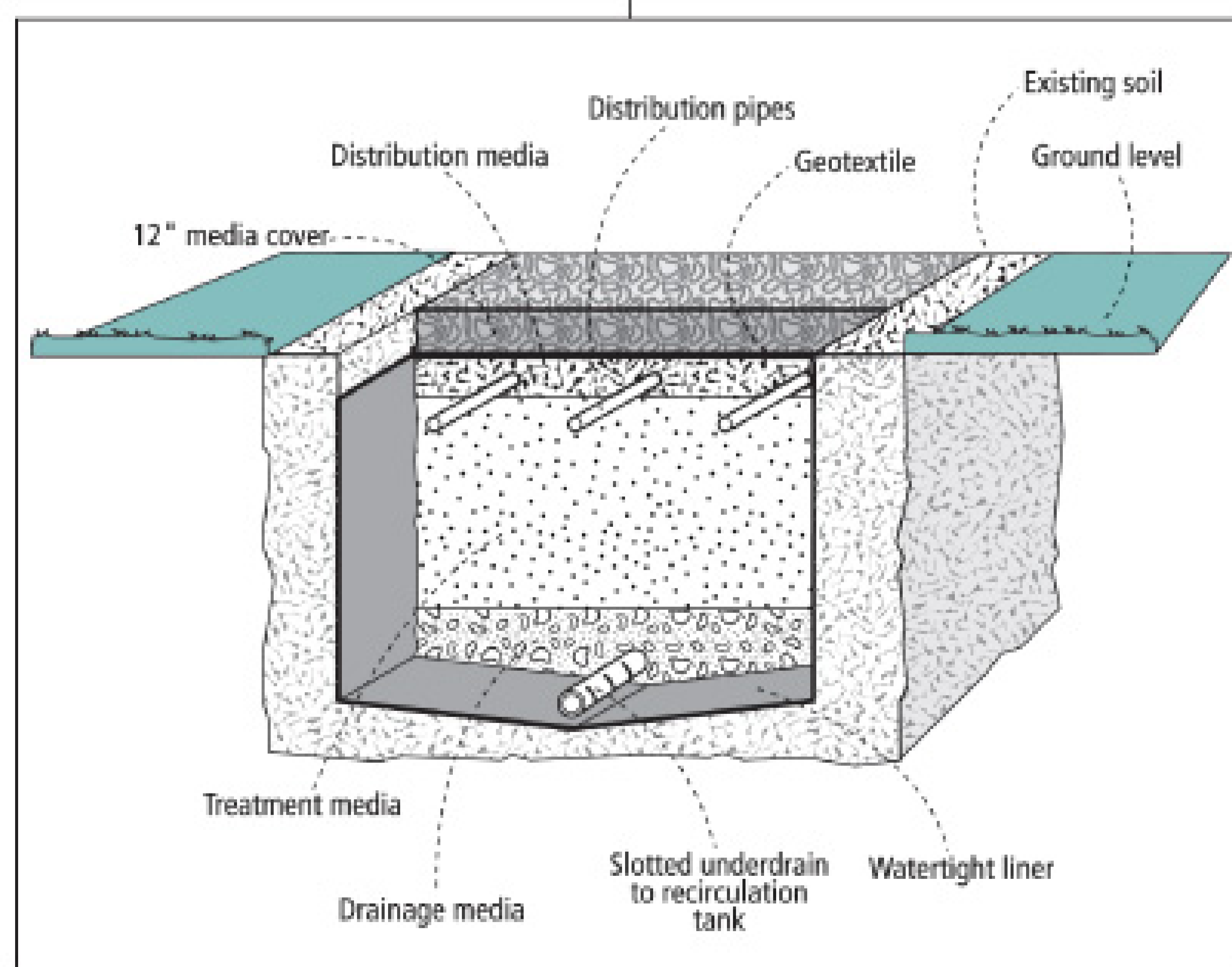
the purpose of the pump and what the pump requirements are for that particular use.

Single-pass filters often use an internal pump basin that is formed as a part of the excavation and flexible liner installation. The pump basin bottom has to be at the correct elevation, level and plumb. It is important not to push the underdrain piping too far into the pump basin, as it could then interfere with pump float operation.

The pump on float elevation

must be set below the top of the underdrain pipe. This ensures that the liquid level inside the filter does not come in contact with the sand media. If it does, it will interfere with oxygen exchange in the media. That in turn will result in reduced treatment and possibly growth of a biofilm in the anaerobic conditions created at the bottom of the filter. The ultimate result will be hydraulic failure.

One way to keep track of where the components should be placed



A cross section of a typical media filter. The media discussed in the article is in the drainage media area at the bottom of the filter. This is where the effluent is drained or pumped from the filter, either back to the septic tank to recirculate, or to the final soil treatment area.



is to keep track of the elevations required inside the pump basin. You can then use these markings in the future when you perform maintenance or troubleshooting.

### Underdrain piping

The underdrain pipe has to be watertight where it leaves the box. If the container has rigid walls, a proper watertight glued or threaded PVC fitting is best.

As we discussed in our previous article on installing liners, flexible boots are used. The most complicated of these boots to install is on recirculating filters. Good installation requires that you determine the proper invert elevation. The liner is then cut and glue applied to both the liner and the boot.

Preparation and the gluing are much like the procedure used in repairing an inner tube. A putty seal and stainless steel band clamp is applied on the exterior of the outlet pipe, and as it is tightened, the putty material makes contact with the interior surface of the boot.

When done correctly, this provides a mechanical watertight seal.

Where sub-aeration piping is included in the design, it is usually installed at the interface of the pea rock and the stone. The purpose of this pipe is to enable introduction of air into the system to break down any biomat and to help the filter recover.

The pipe will be small in diameter and may be either PVC pipe or perforated polyethylene tubing. A vertical PVC or poly standpipe connects to the sub-aeration system and ends at grade, where it is capped. It is placed within a lawn irrigation-type valve box for access and is finished with the cover flush to grade. It is important, as always, to follow the specifications for pipe size, orifice size and orifice spacing. Following these procedures will ensure that the underdrain system will function the way it was designed to give the customer long-term performance with only routine maintenance. ■

## Decals • Signs • Labels & More!

We Specialize in Waste Management Labeling Solutions

- Service Records
- Logo Signs
- Lock Out Tags
- Gender Signs
- NCR Records
- Service Call Forms
- Warning Decals
- Service Tags

All Printing & Signs Can be Customized at No Additional Charge

Anchor Graphics  
Labels & More


6770 C.R. 4064  
Kemp, TX 75143  
P: 903-603-2200

YOUR SYSTEM HAS BEEN CHECKED COMPLETELY

1-800-875-7859 www.AnchorGraphics.com  
Fax: 972-422-4311 Info@anchorgraphics.com

244

## The Shaddix Company



**TRUCK FOR SALE:**  
2001 FL70 Freightliner,  
low miles, AB, AC, drivers air  
ride seat, NEW 16' set bed.  
**Great Unit!!**

**\$38,500**

Financing Available

**CALL TOMMY AT 256-338-4987**

160

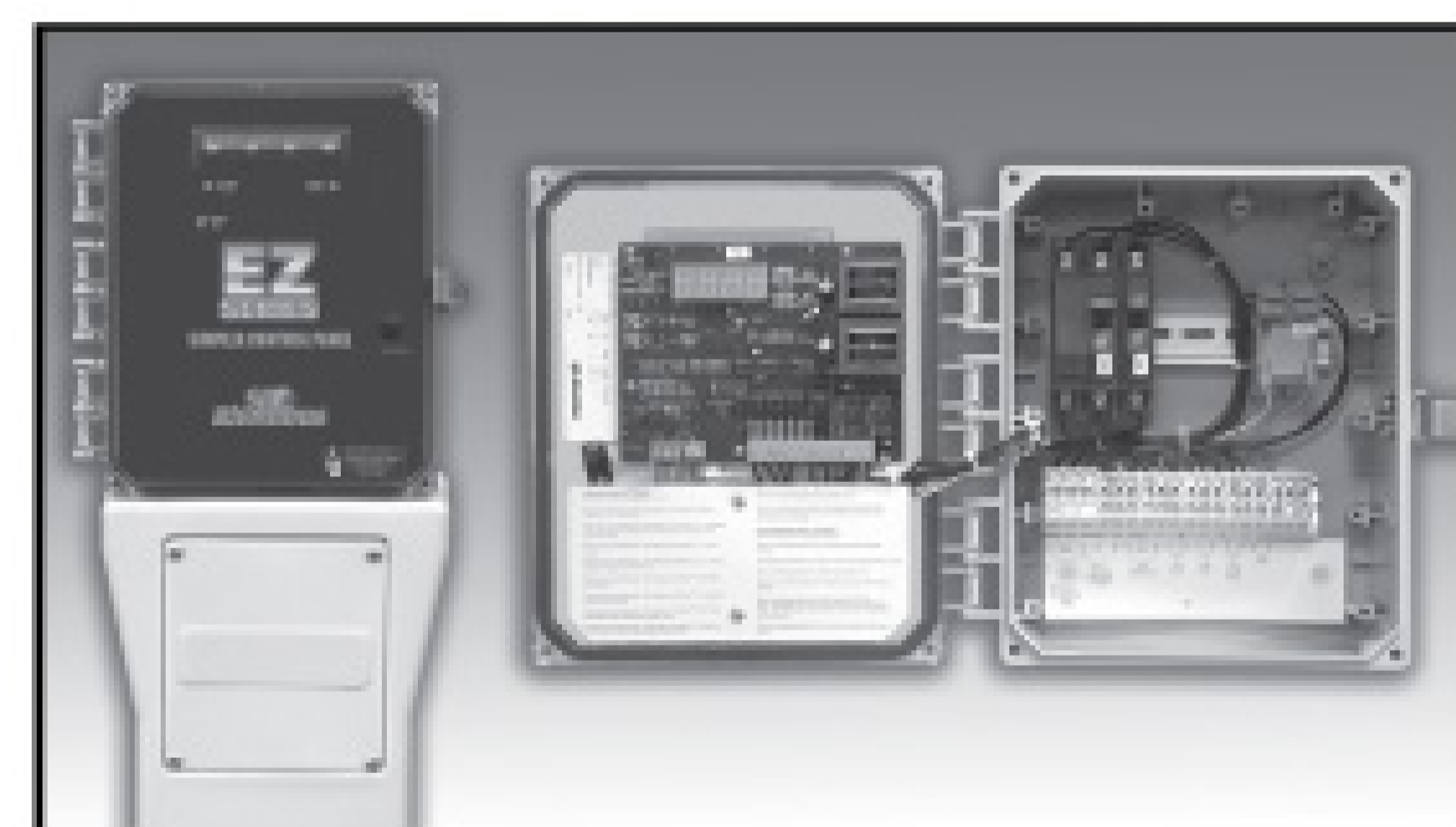
## Get In-Site to On-Site with New Panels from SJE-Rhombus



**IFS In-Site Event Monitoring Control Panel**

The **IFS In-Site** panel monitors and logs system events via a flash drive, including pump run times, pump cycles, alarm conditions, power outages, service calls and more! Just plug the flash drive into the panel to download system events. The pre-loaded software on the flash drive formulates **quick, convenient reports**, which makes diagnosing system conditions easy. Visit [www.sjrhombus.com](http://www.sjrhombus.com) for a free demo of IFS In-Site software!

View Our Product Training Videos at [www.sjrhombus.com](http://www.sjrhombus.com)  
Or Call 1-888-342-5753 for your FREE CD-ROM copies!



**EZ Series™ Simplex Control Panel**

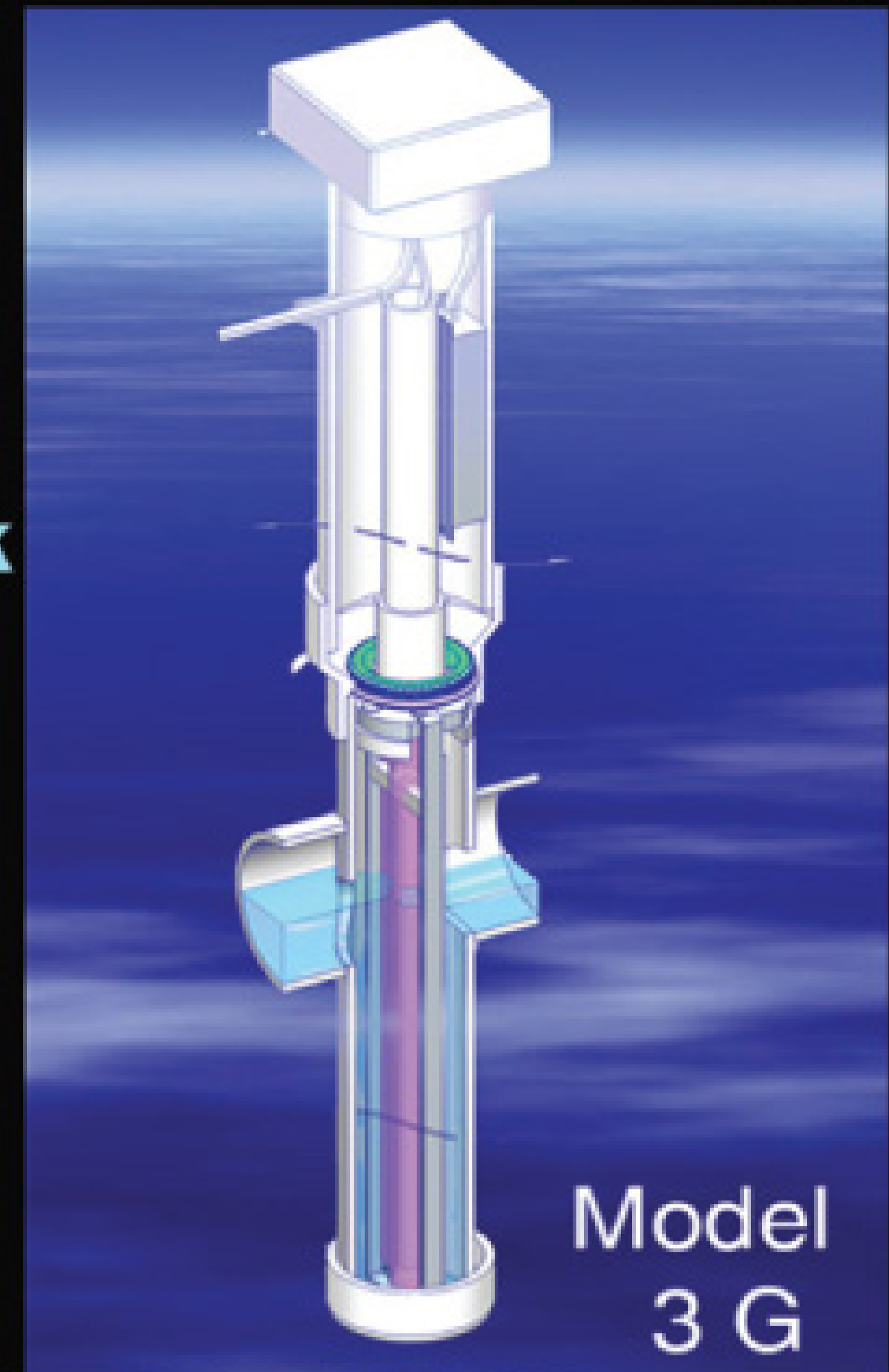
The **EZ Series™ Simplex Demand/TD** control panel is designed to control one single phase pump in on-site installations. It features a **digital display** for programming and monitoring system functions. **EZ Series™ Simplex** can be **easily converted** to demand or timed dose application in the field. A **mounting post** (optional) features a **removable access cover** for easy installation and wiring. **EZ Series™ Duplex and Plugger** models available!

**SJE-Rhombus**

# SALCOR UV DISINFECTION

## *The Finishing Touch*

- Designed for Onsite Systems
- Gravity Flow to 6 GPM
- Installed in Ground or Pump Tank
- Minimum (Annual) Maintenance
- Two Year UV Lamp Life
- NSF and Other Third Party Tests Confirm Superior Bacteria and Virus Kill.



Model  
3 G

**Salcor Inc. P. O. Box 1090 Fallbrook, CA 92088**  
**(760) 731-0745 Fax: (760) 731-2405**

126

## **Septronics® Inc.**

*Junction Boxes, Alarms, Pedestals, & Pump Controls*

**ORDER ANYTIME — ONLINE**

**[www.septronicsinc.com](http://www.septronicsinc.com)**

Dual Alarms  
Event Counters  
Manual, Off, Automatic Pump Controls  
Receptacle-Based Pump/Alarm Controls  
Hardwire Pump/Alarm Controls

Need to Monitor a Unit?  
Need a Custom Built Item?

**[www.septronicsinc.com](http://www.septronicsinc.com)**



Lo Profile Pump Controls  
with Interior Alarms



Pedestal Pump Controls  
with Interior or Exterior Alarms

40

Web: [www.septronicsinc.com](http://www.septronicsinc.com) • Ph: 262.567.9030 • Toll Free: 888.565.8908

## **One Complete Package**

[promonthly.com](http://promonthly.com)

[cleaner.com](http://cleaner.com)

[pumper.com](http://pumper.com)

[mswmag.com](http://mswmag.com)

[onsiteinstaller.com](http://onsiteinstaller.com)

[pumpershow.com](http://pumpershow.com)

[pumpertrader.com](http://pumpertrader.com)

[eq-mag.com](http://eq-mag.com)

[tpomag.com](http://tpomag.com)

[septicyellowpages.com](http://septicyellowpages.com)

[sewerpages.com](http://sewerpages.com)

**COLE Publishing**

**1.800.257.7222 | 715.546.3346**

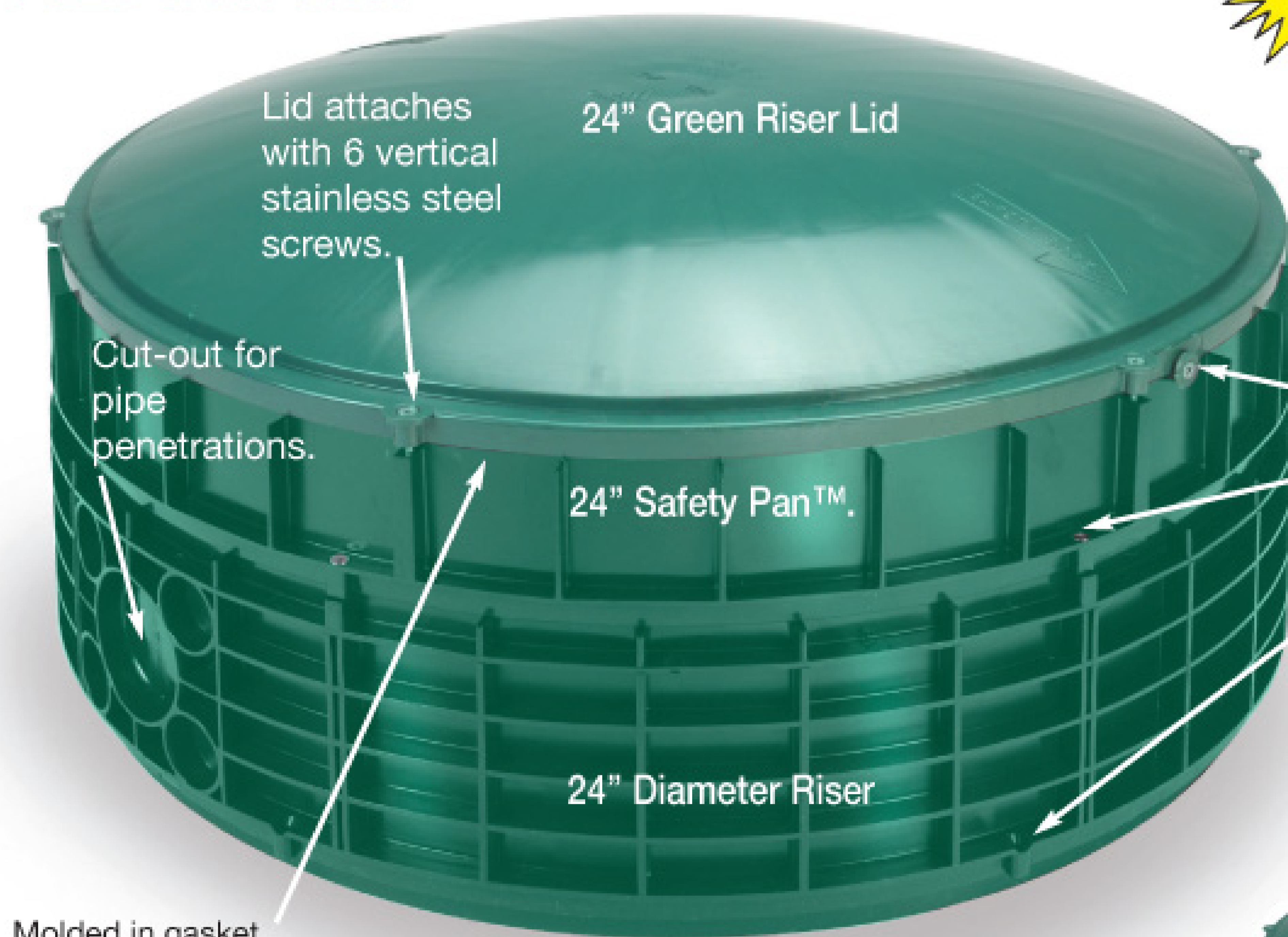


# TUF-TITE®

For Samples & Pricing  
Call: 800-382-7009

## Septic Tank Riser, Lid & Safety Pan™

**FREE FREIGHT ON FULL CARTONS!**



Lid attaches with 6 vertical stainless steel screws.

24" Green Riser Lid

Cut-out for pipe penetrations.

24" Safety Pan™

24" Diameter Riser

Molded in gasket.

Available in 12", 16", 20" and 24" diameters.



### Tank Adapter Ring

New - Horizontal Safety Screw.

Safety Pan™ to Riser attachment with 6 vertical stainless steel screws.

Riser to Riser attachment with 6 vertical stainless steel screws.

Patent Numbers  
5,617,679 &  
5,852,901; other  
pats. pending.

### Riser Lid

with Molded-in gasket.  
Available in 12", 16", 20" and 24" diameters.

Concrete Lid w/handle

### Safety Pan™

Safety Pan™ available in 16", 20" and 24" diameters.

### Riser

For septic tanks. Stackable in 6" increments. Available in 12", 16", 20" and 24" diameters.

### Tank Adapter Ring

For mounting riser flush to top of tank when casting-in is not an option.

### Effluent Filters

Patent Numbers  
6,319,403; D 431,629; other  
pats. pending.

800 GPD  
ANSI/NSF  
Standard 46



4" Sch. 40 &  
SDR-35

**EF-4**  
4" Filter



1500 GPD  
ANSI/NSF  
Standard 46



4" Sch. 40 &  
SDR-35

244 ft. of  
1/16" filtration  
area.

**EF-6**  
6" Filter

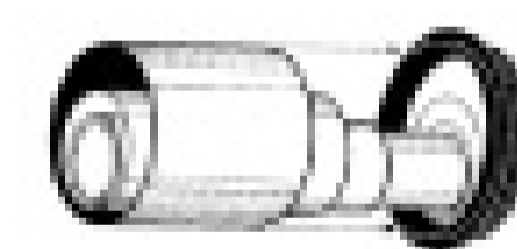
Gas/Solids  
Deflector

### One-Piece Tank Seal

For concrete Septic tanks and D-boxes.  
Accepts pipes from 1-1/2" to 4".  
Mounts with or without concrete flash.

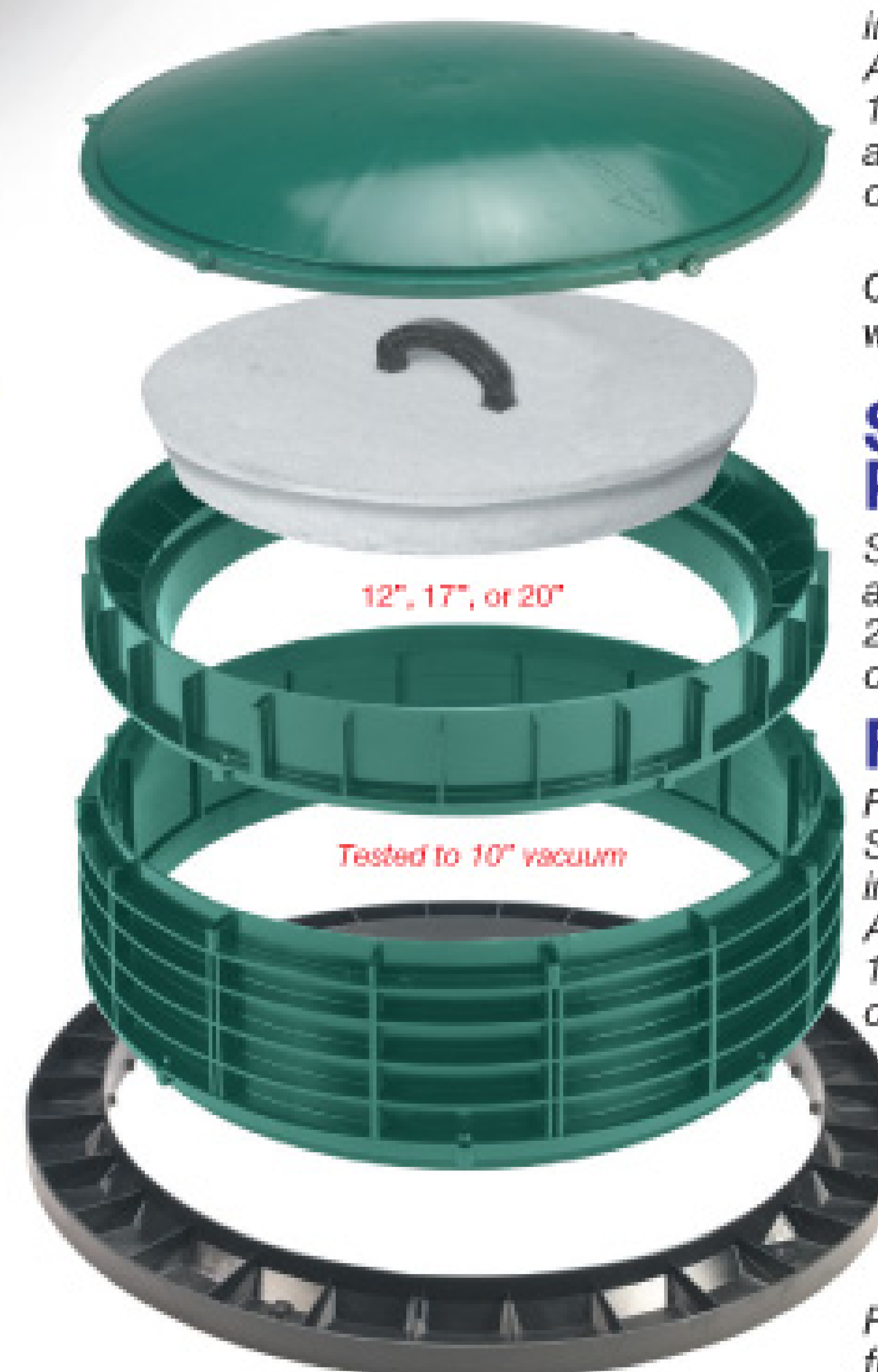


**TS-4-RUBBER TANK SEAL**  
(will hold 10psi)  
**TS-4PRO TANK SEAL**  
(will hold 5" vacuum)



Free Freight: 32c

Patent No's  
4,951,914,  
5,624,123  
& 5,711,536;



12", 17", or 20"

Tested to 10" vacuum



The Roggenkamp crew prepares the bed for a mound system.  
(Photography by Dee Goerge)



# Soils and Savvy

For business success, installer Al Roggenkamp relies on knowledge of site conditions and effective communication with customers

By Dee Goerge

**Al Roggenkamp & Sons Excavating & Trenching, Wadena, Minn.**

**FOUNDED:** 1972

**OWNERS:** Al and Jeanne Roggenkamp

**EMPLOYEES:** 3 (plus up to 5 part time as needed)

**MARKET AREA:** 19 counties in central and northern Minnesota



Septic system installers know how to move dirt and lay pipe. Al Roggenkamp believes two other skills are a must for running a successful business — good public relations skills and an understanding of soil science.

Roggenkamp, owner of Al Roggenkamp & Sons Excavating & Trenching near Wadena, Minn., recalls installing his first septic system, a concrete block seepage pit with curved, open-joint blocks made by a local silo company, for a widow who added onto her home to have indoor plumbing more than 35 years ago. There have been scores of regulations in the industry since.

“The biggest change is the separation from the water table and protection for the water table,” Roggenkamp says. “It’s one of the best things Minnesota has done for the environment.” That’s important, he says, and to install systems

correctly requires paying attention to what soil borings and perc tests indicate.

His farming background and excavating experience in 19 central and northern Minnesota counties have helped teach him about a variety of soils and the types of systems that will work in each. Installation of residential septic systems makes up about 50 to 60 percent of the company’s work.

#### Installer, designer, inspector

“I believe we are a frontrunner in the field because we have all the licensing,” says Roggenkamp, who advocates continuing education for himself and his crew. He is a soil and site evaluator and is a licensed designer, installer and state inspector.

Contractors appreciate having an installer who can also design the system. And, he notes, inspecting other contractors’ installations is a

“When I got tossed into this in the late 1970s, we weren’t soil scientists. We aren’t now either, but we’re a lot closer. We need to pay attention to the soils more than ever. Soil boring is the most important tool, and the second is the perc test.”

Al Roggenkamp

good sideline business. “It’s also a fast track of education,” Roggenkamp says. “If you’re inspecting other people’s work, you see what they are doing wrong and right.”

A common problem he sees is installers trying to take shortcuts that don’t meet guidelines on separation from the water table. Some installers ignore mottled soil that

indicates the historic high-water mark in their bore samples. As a result, they install the incorrect system and fail inspection.

At the same time, Roggenkamp finds his installation experience benefits him when he is inspected. He even admits he enjoys friendly arguments with inspectors when they question methods he uses.

### Amateur soil scientist

"The most important thing I've learned about is the soils," Roggenkamp says. He attends individual septic treatment systems workshops offered through the University of Minnesota at locations throughout the state.

"When I got tossed into this in the late 1970s, we weren't soil scientists," he says. "We aren't now either, but we're a lot closer. We need to pay attention to the soils more than ever. Soil boring is the most important tool, and the second is the perc test. I always have an initial assumption of what type system it will be when I go to a site, but it's the biggest mistake you can make to act solely on an assumption."

With everything from sand to loam to clay in his region, he has designed systems for many conditions. None have been exactly alike because there are variables: the

**The septic tank is buried and the homeowners broadcast seed on a fall day in Minnesota. The goal is to establish ground cover immediately to provide frost protection for this mound system.**



**Above:** The Roggenkamp crew includes, from left, (back row) Louis Roggenkamp and Luke Roggenkamp; and (front row) Nathan Riedel, Al Roggenkamp and Erv Salo. **Right,** Nathan Riedel scoops out earth to finish the hole for a septic tank.

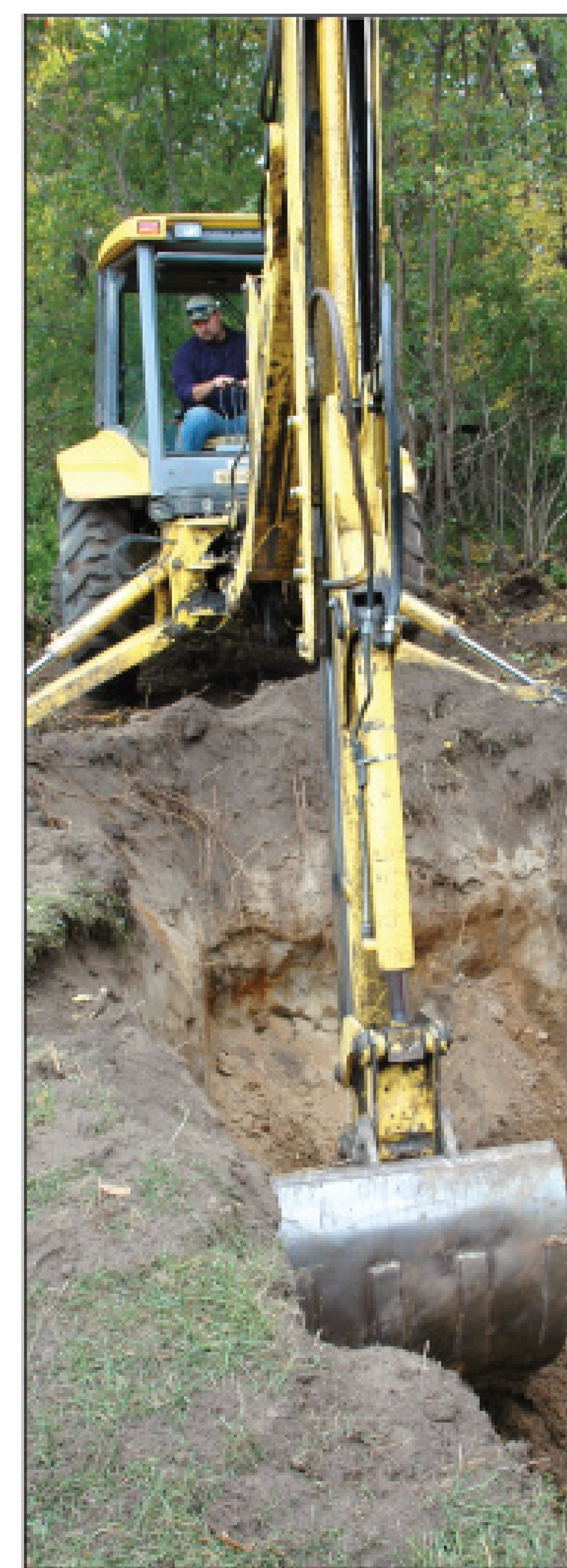
water table, runoff, soil texture, soil permeability, and percolation, along with the lifestyle needs of individual households.

In difficult areas, Roggenkamp takes as many as 15 bore samples to help plan the best design. For example, on lakeshore properties, the most obvious place may not be the best place if it has less than a 3-foot separation and requires a more expensive mound. "Everybody thinks a mound system is a big Band-Aid for everything," he says. "But it doesn't always fit, and other ways can save money. Sometimes it just takes more pipe to get to a site farther away."

If he can install a pressurized rock bed system with a lift station pump instead, he can save clients \$1,000 to \$1,500. Pressurized rock bed systems are common in his area, and so are at-grade and mound systems. Because of sandy soils, gravity-fed systems seldom meet Minnesota's new requirements.

"Another thing we do is test sand in local gravel pits in the area," Roggenkamp says. "If it's suitable sand that's locally avail-

able, we can save customers money by not having to buy washed aggregate for mounds."



## Thou Shalt Not ...

Even if a septic system is installed properly, it can fail within a year if owners mistreat it. A new Minnesota law may offer installers some protection from having to warranty repairs that aren't their fault. By 2011, customers will be required to sign a homeowners' maintenance agreement that they are responsible for properly using and maintaining their septic system.

Al Roggenkamp isn't waiting for the law. He's always been proactive in educating homeowners about proper maintenance. For example, if the system is installed in late summer or early fall without enough time to grow protective sod, he stresses the importance of covering the tank with mulch to protect it from freezing.

For general maintenance, he gives his customers the *Septic System Owners Guide*, available through the State of Minnesota. He also gives them the "The Septic Tank Eleven Commandments," adapted from the book, *Onsite Wastewater Treatment Systems*, by Bennette Burks and Dr. Mary Margaret Minnis.

The commandments forbid actions such as pouring grease, chemicals or automotive fluids down the drain, attaching a garbage disposal to the sink, flushing cigarette butts or disposable diapers, and attaching clear-water sources such as footing drains or sump pumps to the septic system.

The Eleventh Commandment is Roggenkamp's own: "Thou shalt pump thy septic tank at least once every two years."

## PR and education

Still, there is more to installing than soils and science. "You've got to be personable in this business," Roggenkamp says. "It's just good business to make sure you have a long discussion with the homeowner. If you can't talk to a person at length, you can't glean the information you need to get the right system."

As a designer, he spends an hour to an hour and a half with clients and has them go through an extensive questionnaire, whether or not the county he's working in requires it. As a designer (and an installer who wants to please his customers), he needs to know as many details as possible: What plumbing is on the second floor? Is there a grinder pump in the basement? A high-capacity washer? A hot tub? How many people live in the home? How many showers do they take?

"People who tend to overuse water need to keep in mind that the average daily usage per household is written into the design," he says. "Minnesota standards specify 150 gallons of wastewater per day, per bedroom in the home. If that is exceeded, heavy usage will cause drainfield saturation and eventual failure."

With the detailed information, he can better design the system, increasing tank size, using a two-compartment tank, or enlarging the drainfield. Since he often designs and installs, he has more control to put in the right system for the customer.

## Loyalty and family

Another component of Roggenkamp's business is finding high-quality local goods and services. Being loyal to local businesses is important to him as a community-minded resident and as a businessman.

For example, while inspecting another installer's work, Roggenkamp liked the quality of the tank, made by Wippler Precast out of Pine River, Minn. He tried one of the company's tanks and has continued exclusively with them because "the tanks are user-friendly, and the drivers are always on time, and they never get lost."

He also buys equipment from one dealership, buys sand from the pits he has inspected, and works



Louis Roggenkamp is one of several family members who work for the business.

with the same electricians and septic tank pumper. "When you shop around for subcontractors, you never get the service that you do when you exclusively use certain subcontractors," he explains.

Roggenkamp's biggest loyalty is to his family. "I can't say enough

## Diversified operation

With his diversified excavating operation, Roggenkamp has equipment for all aspects of septic system installation. He buys backhoes and skid-steers from a New Holland dealer and custom orders four-lever controls instead of joysticks.

**"I can't say enough about my help. I've been fortunate to have my children working for me."**

**Al Roggenkamp**

about my help," he says. "I've been fortunate to have my children working for me." Sons Louis and Luke, and son-in-law Nathan Riedel work full time. Jeanne, his wife of nearly 38 years, takes care of the bookwork. Through the years, all six of the couple's children have worked for the business. Erv Salo (not a family member) works full time in summer and part time in winter.

"We farmed too, and I think farm kids have an edge because they learn to build, weld and fix things," Roggenkamp says. He tries to keep on top of all new licensing requirements. Two employees are a step away from being licensed to design systems. Roggenkamp and two crew members are also master plumbers, with restricted licenses to work in cities with a population under 5,000.

Roggenkamp & Sons owns two skid-steer loaders and two four-wheel-drive, 110-hp backhoe loaders. The fleet includes four tandem-axle gravel trucks — three Fords and a GMC — all purchased used. "We can haul our own aggregate



Louis Roggenkamp takes final measurements and makes a level check to ensure that a septic tank will be placed correctly.

from local pits and save ourselves and our clients a few bucks," Roggenkamp says.

As a business owner, Roggenkamp thinks it's important to keep costs down for everyone, while still meeting regulations to protect the groundwater. And when systems fail — a pump dies or a pipe settles — the company fixes it: "It's important to stand behind your work. There's not an installer who can say they never made a mistake." ■



# "Duel Power Lid"

Plugs, Lids & Adaptor Rings

Sizes Available: **18", 24", 30" & 36"**



**Fergus Power Products**  
Providing "Environmental Products" 190

*The Company who maintains a pulse on the environment!*

Toll Free **1-800-243-7584**  
E-mail [fpproducts@prtcl.com](mailto:fpproducts@prtcl.com)  
[www.FergusPowerProducts.com](http://www.FergusPowerProducts.com)



**INFILTRATOR®**  
systems inc.

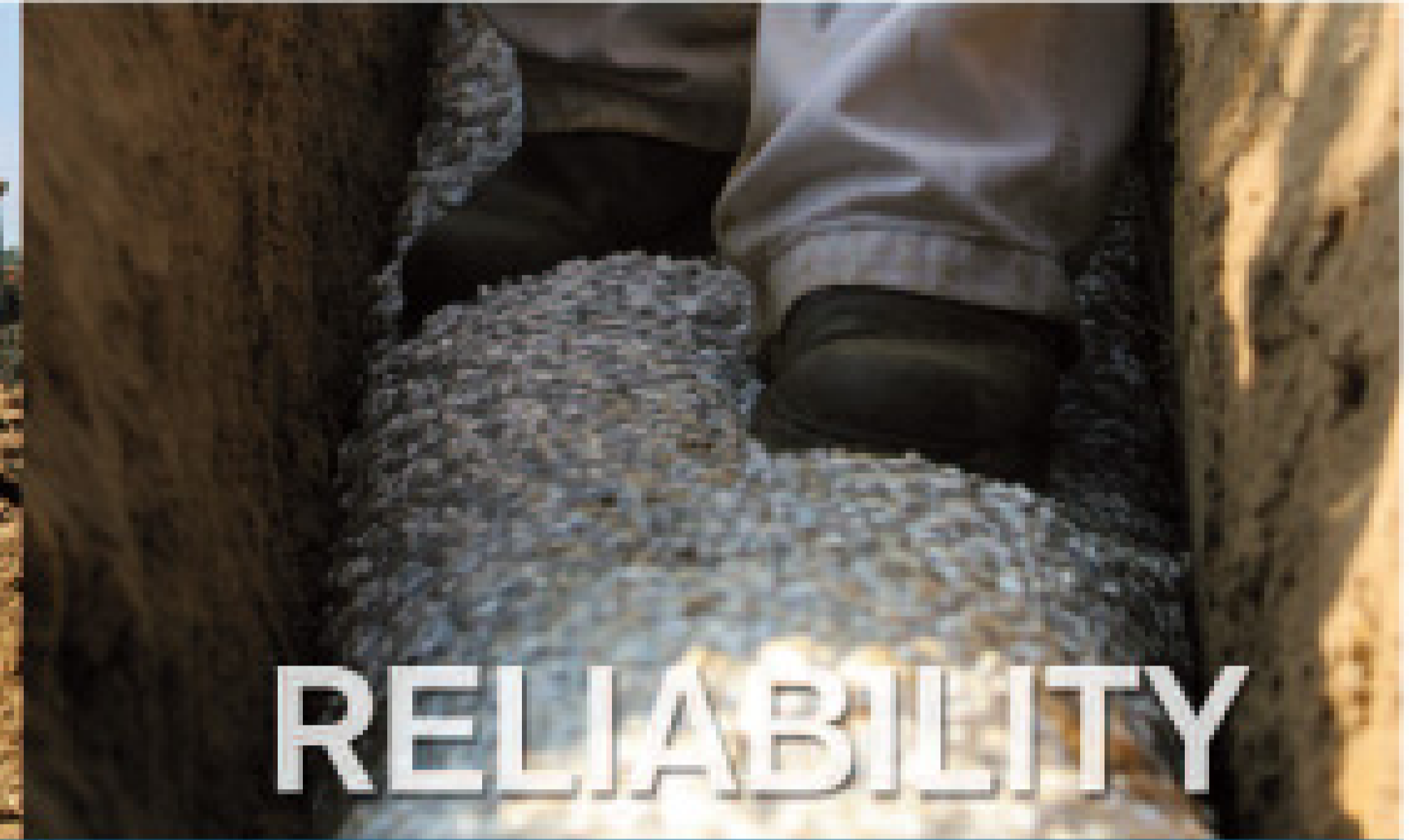
# Infiltrator welcomes *EZflow* to our family!



**SIMPLICITY**



**PERFORMANCE**



**RELIABILITY**

*EZflow* offers these great benefits:

- Modular bundles come in easy to contour 10' lengths and a variety of diameters
- Manufactured from recycled materials instead of energy-intensive resources
- Flexibility makes it an ideal solution for sloped sites and around trees
- Lightweight and quick to install, saving time and money
- Always clean and free of fines

**Quick4**



**INFILTRATOR®**  
septic tanks



**AQUAWORX™**  
by INFILTRATOR



**EZflow™**  
by INFILTRATOR

800.649.0253 • [www.ezflowlp.com](http://www.ezflowlp.com)

*Machine Matters is designed to help readers get the most from excavators, backhoes, skid-steers and other mechanical equipment through proper maintenance, operation and financial practices. Readers are welcome to submit ideas for this column and can send them to Ted J. Rulseh, editor, by calling 800/257-7222 or e-mailing editor@onsiteinstaller.com.*

# Pick Up Your Truck

Here are some nice innovations that can help you make your workhorse vehicle more accommodating and productive in the field

By Greg Northcutt

**A**s useful as your pickup truck is, chances are you can make it even more valuable by cleaning up clutter and using the space inside the cab and the bed more efficiently. Here are some ideas on how to get organized for the road.

## Extended Cab

The **Truck Office**, made by **MobileDUZ LLP**, transforms the rear of the extended cab of a full-size pickup truck into a system of secure drawers and storage compartments for organizing paperwork, files, technical data and supplies, storing a laptop computer, and operating a printer-copier-scanner.

"It was designed by an excavating contractor and is made of high-strength, low-linear-density polyethylene, which resists impacts and

punctures," says Debi Manning, a partner in the company. "This material performs well in scorching heat or subzero temperatures."

The system has a custom-fitted base that attaches to the cab floor using the same points and hardware as the rear seat, which it replaces. The base includes a lockable Long Drawer, measuring 12 inches by 4 1/4 inches by 49 inches, for holding items like site plans and levels. It pulls out 37 inches in most full-size pickups.

The Universal Chest, which attaches to the base, provides three compartments for storing ring binders, files, manuals and the like, plus lockable laptop storage and two drawers for office supplies. There's even a place to store the truck jack. Options include an electric package to power printers and other devices; a printer-copier-scanner on an electric lift; and a soft-sided cooler that fits in a compartment. Visit [www.mobileduz.com](http://www.mobileduz.com).

## Sturdy Bed Cover

The **DiamondBack truck cover** doubles as a secure protection for tools, supplies and other materials in the bed of your pickup and as a strong, rugged, load-bearing flat bed for hauling lumber, equipment and other cargo.

"The front and back panels of the three-piece cover fold up to give you full access to cargo in the front or back of the box," says Ethan Wendle, president of **DiamondBack**

DiamondBack truck cover from DiamondBack Automotive Accessories



**Automotive Accessories.** The panels, made of aluminum tread plate, weigh 25 to 35 pounds and can be easily removed as needed.

The SE model, made of 0.08-inch thick tread plate, can haul up to 400 pounds of cargo, while the 0.1-inch thick tread plate of the heavy-duty HD model can support up to 1,600 pounds of distributed load. Two keyed locks provide security for the bed.

"You can install the cover in about 15 minutes using a 9/16-inch socket wrench," Wendle says. "Clamps secure the center panel to the bed rails, and steel 3/8-inch rods lock into the side rails to secure the front and rear panels. One person can remove the cover in about 10 minutes." Visit [www.diamondbackfleet.com](http://www.diamondbackfleet.com).

## In-cab Mounting

**RAM Mounting Systems** are made of marine-grade aluminum

with a powder-coat finish and stainless hardware. The RAM family of more than 1,500 interchangeable mounting accessories lets you mount your laptop and other devices in your pickup truck (as well as on an ATV, boat, motorcycle, snowmobile or other vehicles).

The Ram Mount for laptop computers includes a telescoping mounting pole that rotates 360 degrees, providing optimal viewing angles. The Tough-Tray computer platform uses a ball-and-socket design to tilt, turn and twist to fit your preferences. This technology includes a nitrile rubber ball that reduces road shocks and vibrations. The base attaches to the front bench or passenger side seat rail using existing hardware.

"Our system will hold any laptop with a screen width of 10.5 to 17.8 inches," says Erik Seymour, sales representative for **National Products Inc.**, the manufacturer.



Truck Office from MobileDUZ LLP





RAM Mounting Systems from National Products Inc.

Other vibration-damping mounting systems include custom and universal cradles for tablet PCs, GPS units, cell phones and cameras that attach to dashboards and other flat surfaces. Visit [www.ram-mount.com](http://www.ram-mount.com).

### Roll-out Bed Deck

The **BedSlide roll-out cargo deck** for pickup trucks, cargo vans and utility bodies eliminates crawling or reaching into the bed to get at tools and materials. "It's the easy, safe and convenient way to organize and retrieve cargo," says David McInturf, vice president of the manufacturer, **IFW Bedslide**.

The weight capacities of the five models range from 1,000 pounds for the light-duty unit to 1,800 pounds for the top-of-the-line Contractor Grade model. Squeeze

and pull the handle of the CG and the deck, with its powder-coated, reinforced steel framework and eight sealed steel roller bearings, rolls out to about 80 percent of its length, or about 6 feet for an 8-foot bed.

Made with 3/4-inch marine-grade plywood, 4-inch-high aluminum side rails and a 1/4-inch-thick rubber mat, the CG deck locks in the closed, mid- or fully-opened positions. It comes fully assembled and can be installed with a three-point mounting system in about 30 minutes. Bolt-in installation takes a little longer. Once installed, it can be removed in less than a minute, if not bolted in place. Visit [www.bedslide.com](http://www.bedslide.com).

### Swing-out Toolbox

The **Swing Case toolbox** makes it easier to reach tools and supplies in the truck bed. The unit fits out of the way against the inside wall of the bed between the tailgate and rear wheel well and can be used under any tonneau cover, says David Wells, president of **E.D. Industries Inc.**, which also makes Undercover tonneau covers.

A quick-release latch allows the case to swing out nearly 180 degrees for easy access, and it swings back to lock in place. To remove it, swing the case out and lift it off the hinge. Made of ABS plastic, the weather-proof product holds up to 50 pounds of tools or cargo and includes a sliding tool tray and lockable lid. It provides a 3-inch clearance above the truck bed for storing lumber and other materials.

The case installs in about five



Swing Case toolbox from E.D. Industries Inc.

minutes using six self-tapping screws. It is available in both right- and left-side mounted versions. Visit [www.undercoverinfo.com](http://www.undercoverinfo.com).

### Vinyl Water Bag

Fill the vinyl **ShurTrax** unit with 3 inches of water from a garden hose and you add up to 400 pounds of traction weight over the rear axle of your pickup truck.

"It provides a safe, secure weight that improves vehicle balance, handling, cornering and traction on wet, slippery roads," says Jim Brooks, vice president of **Owens Classic International**, the manufacturer. "It is safer than other types of ballast weight, like sandbags, concrete blocks, cord wood and other potential projectiles, and it's more economical than some commercial weight alternatives."

The dual-chamber unit consists of a 25-mil vinyl water bladder and a durable outer protective chamber made of 25-mil UV-resistant vinyl reinforced with woven nylon mesh. The inner bladder is divided into four chambers to prevent water from sloshing around

when turning corners.

The product is designed to freeze. "It expands and contracts during normal freezing and thawing and is rated to withstand outside temperatures as low as minus 40 degrees," Brooks says. "It lies flat and can support up to 500 pounds of flat-lying cargo." Four brass grommets provide tie-down points. Visit [www.shurtrax.com](http://www.shurtrax.com).


Greg Northcutt is a freelance writer based in Port Orchard, Wash. He can be reached by e-mailing this publication at [editor@onsiteinstaller.com](mailto:editor@onsiteinstaller.com). ■

### ShurTrax from Owens Classic International



BedSlide roll-out cargo deck from IFW Bedslide

**NEW & Improved** **ALITA® LINEAR AIR PUMP**




- ☑ Full range of efficient and reliable aeration pumps for Aerobic Treatment Unit
- ☑ Low energy cost and quiet operation
- ☑ 3 Years Manufacturer Limited Warranty
- ☑ Parts and repair available for variety of brands of linear air pumps

☎ Call 626-962-2116 for more information



UL certified in compliance to USA and Canada safety standards for outdoor air compressors



**ALITA INDUSTRIES, INC.**  
P.O. Box 660923, Arcadia, CA 91066-0923, USA  
phone: (826) 962-2116 fax: (826) 962-2177  
on-line: [www.alita.com](http://www.alita.com) e-mail: [sales@alita.com](mailto:sales@alita.com)

July 2009

## Griffin Offers 243 Stainless Steel Submersible

Electric submersible pumps from Griffin Pump and Equipment Inc. are made of stainless steel to withstand corrosive environments. The fully self-priming pumps are available from 120-volt single phase to 460-volt three-phase and are designed for flows of a few gallons per minute to several hundred gpm as well as heads to several hundred feet. **866/770-8100; www.griffinpump.com.**



and a capacity of nearly 10 ounces per foot. Made of polycarbonate, the sampler has no valves, stoppers or flaps to restrict fluid. **888/999-3290; www.simtechfilter.com.**

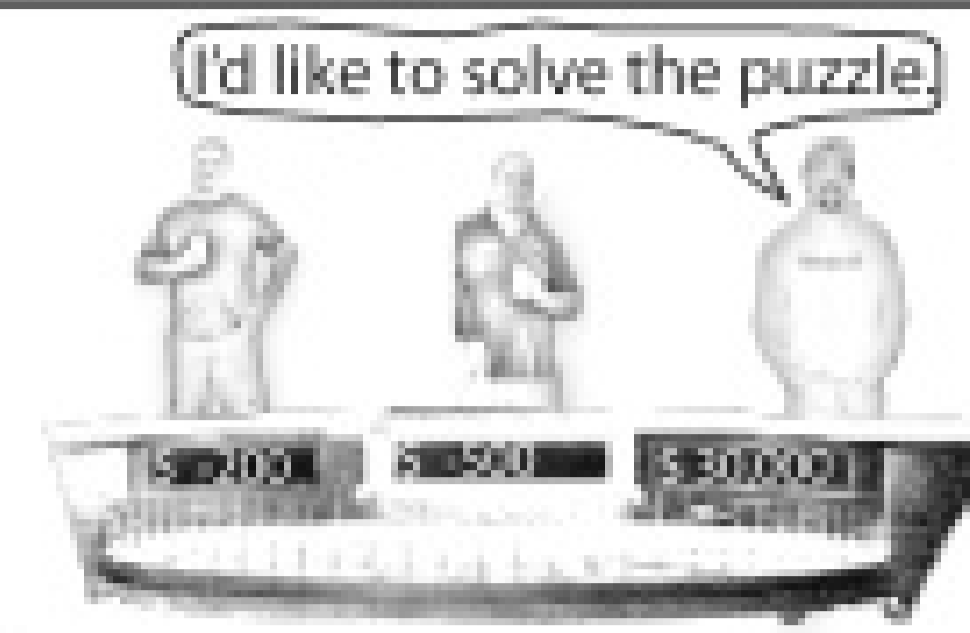
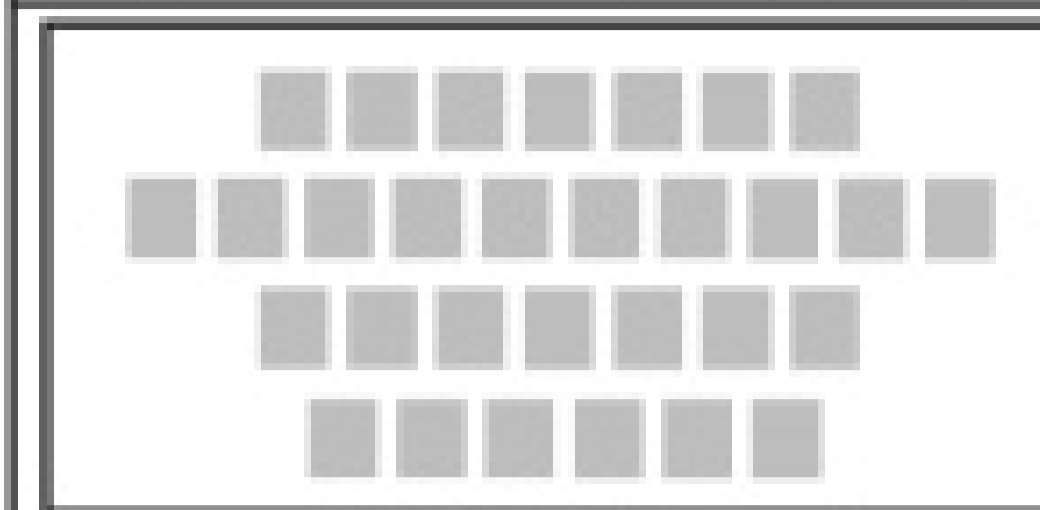
## Zoeller Offers 25 Turbine Filtered STEP Systems

Effluent turbine filtered STEP systems from Zoeller Pump Co. are designed for simplex or duplex applications in a single polyethylene pump vault. Available in a flat-bottom design for free-standing applications or pipe supports for suspended installation, the inlet is either predrilled or blank for field customization. **800/928-7867; www.zoeller.com. ■**



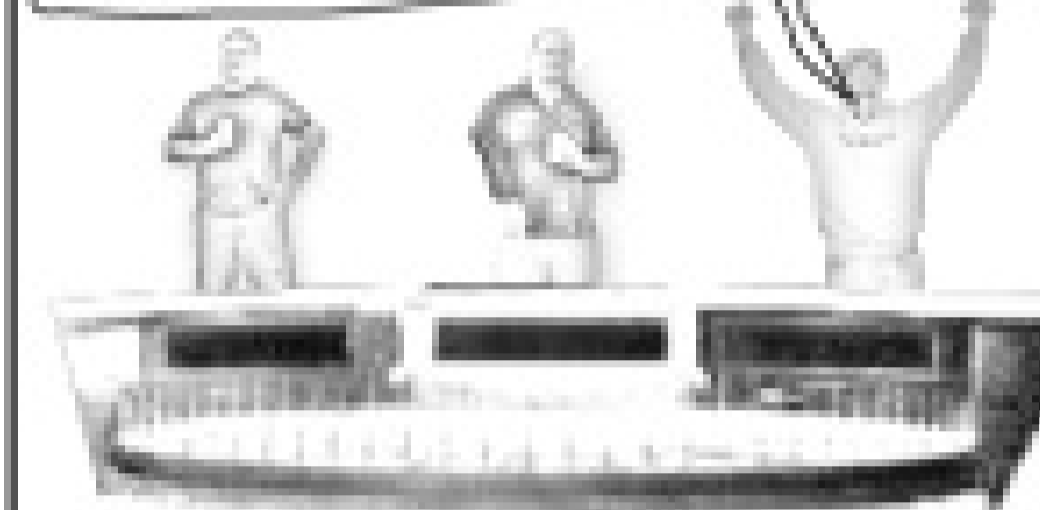
## Sim/Tech Offers 16 Two-Piece Sludge Sampler

The two-piece TruCore sludge sampler from Sim/Tech Filter has an inside diameter of 1 3/8 inches



**Category:** A control panel that is self diagnosing, easy to install, and won the control panel beauty pageant.

I don't want to take the risk of going bankrupt because I landed on brand x. The answer is ALDERON INDUSTRIES CHECK IT PANELS!

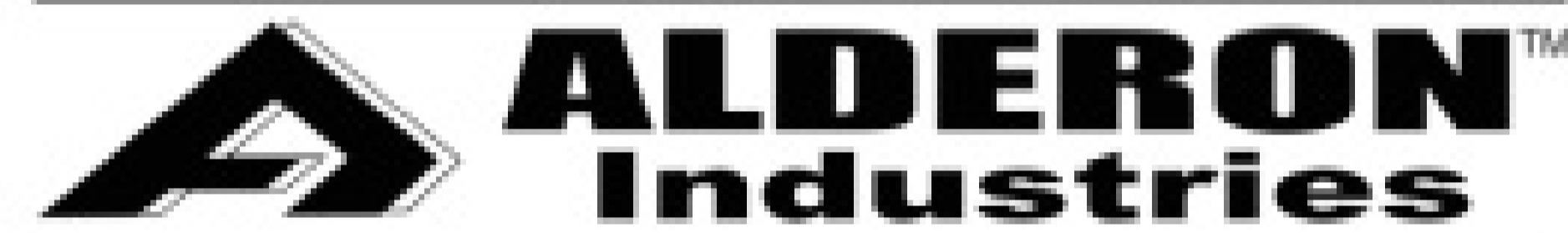


Correct! You rule! Since you are the first person to ever solve the puzzle without spinning the wheel you can pick your prize!

I'll take a lifetime supply of Alderon Check It panels & I'd like to marry Vanna White!

Men who use Check It panels are hot!

**WARNING:** It's unlikely that Vanna White will marry you because you buy Check It panels. If she does marry you, please call us because that would be awesome! If you want more info about simplex or duplex Check It panels visit [www.alderonind.com](http://www.alderonind.com)



Leading Edge Control Products

222

Alderon Industries - PO Box 827 Hawley MN 56549 - 218-483-3034 - [www.alderonind.com](http://www.alderonind.com)

# Pumper.

— 1979-2009 —

## 30 Years

OF DEDICATED SERVICE TO THE LIQUID WASTE INDUSTRY

[www.pumper.com](http://www.pumper.com) or 800-257-7222

# It's A Bag Full



[onsiteinstaller.com](http://onsiteinstaller.com)

- > Classifieds
- > Used Equipment
- > E-zines
- > Product Categories



When you receive *Onsite Installer* each month there is no need to bluff.

Join 25,000 of your industry peers each month who welcome *Onsite Installer*, for the unlimited value it brings them. Each issue will show you new tools, tips to save on expenses, money-saving deals and much more.

Contact

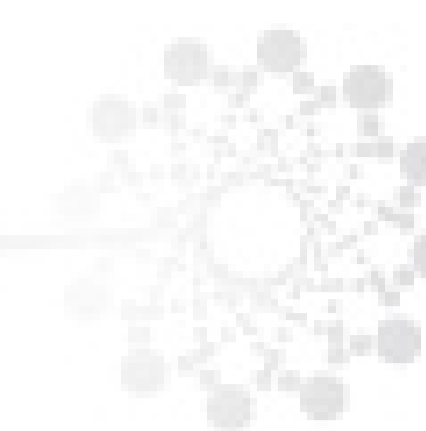
us

at

**800.257.7222**

or

[www.onsiteinstaller.com](http://www.onsiteinstaller.com)



## *Open Letter to the Onsite Industry*

Surfacing waste. Malfunctioning equipment. Failing systems. Smelly sites.

All of us who have spent our careers in the onsite industry know that decentralized wastewater systems are scattered all over, made in countless ways, sold by countless companies, and serviced — if at all — by countless individuals using their own individual paper forms. For regulators, managing inventories and tracking system performance have been all but impossible. We all know the solution, but we haven't had the tools to make it work.

### **Until now.**

The Internet has become the world's most powerful tool for bringing people and information together. For the past 10 years, the Internet — and its potential for improving the onsite industry — has driven Orenco Systems®, Inc. in Oregon and eOnsite, LLC in Washington to develop online management tools for the onsite industry.

Working separately but sharing the same vision, we have been developing similar management tools to serve ALL sectors of the industry: regulators, service providers, pumpers, manufacturers, property owners. Tools that allow paperless tracking of systems and their performance. Tools that make it possible for regulatory oversight that is self-funded, at negligible cost.

To consolidate our efforts and quickly bring an affordable onsite management tool to our industry, Orenco Systems and eOnsite are proud to announce that we have joined forces to create a brand new company: OnlineRME, LLC. Our online management tool — OnlineRME™ — is now managing more than 250,000 properties. And when deficiencies are reported, failures decline. We know it works.

For more information about our company, our product, our self-funding model, and our clients, please visit us at [www.onlineRME.com](http://www.onlineRME.com).

**Harold Ball**  
*President, CEO*  
*Orenco Systems®, Inc.*

**Eric Evans, RS**  
*President*  
*eOnsite, LLC*

**Dennis Hurowitz**  
*General Manager*  
*OnlineRME, LLC*

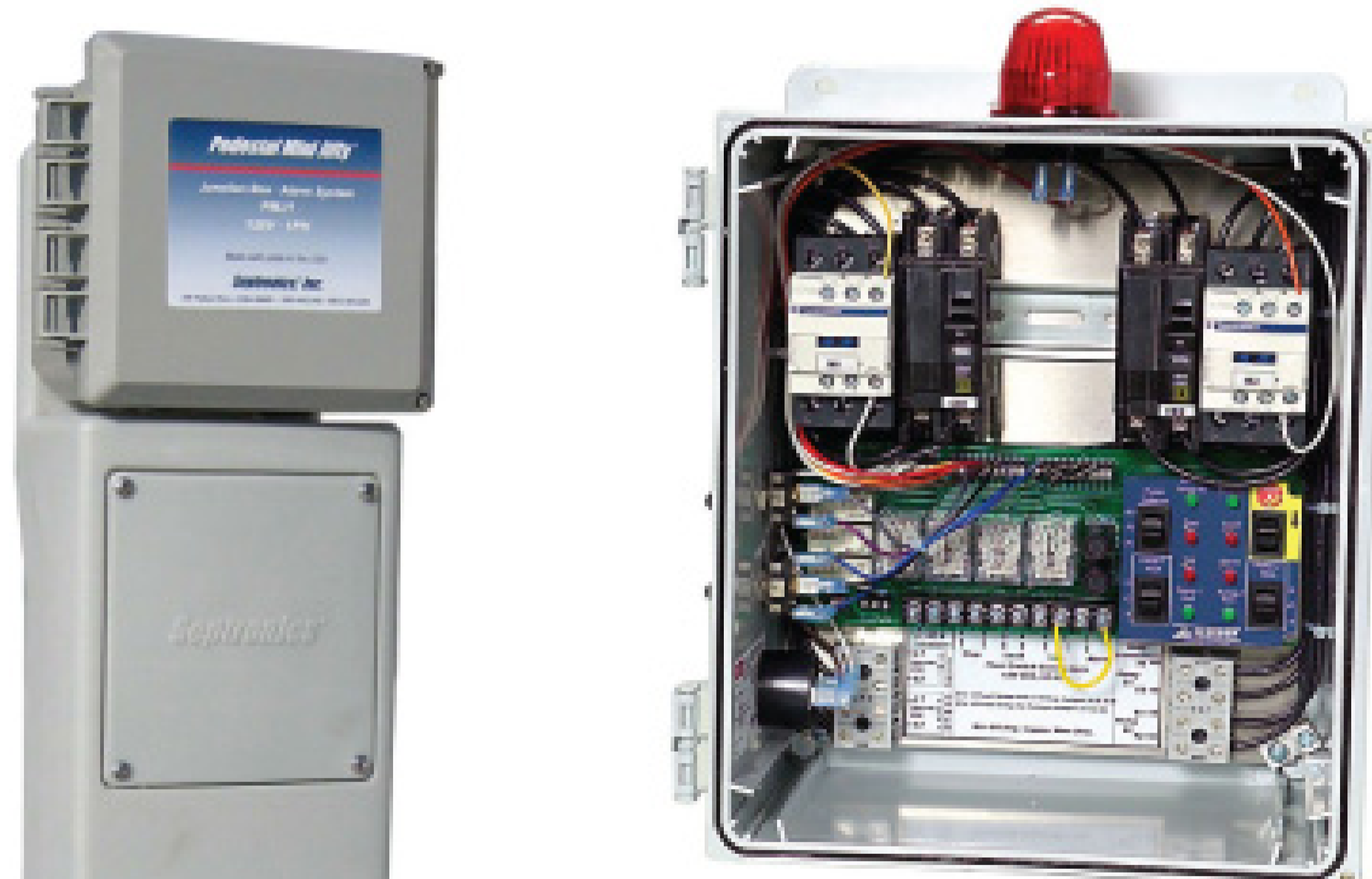
*Your Eye on Onsite*

# Electronic Watchdogs

Advanced onsite systems, and even some simple ones, rely on technology to operate effectively. Here are some recent control and monitoring innovations.

By Benjamin Wideman

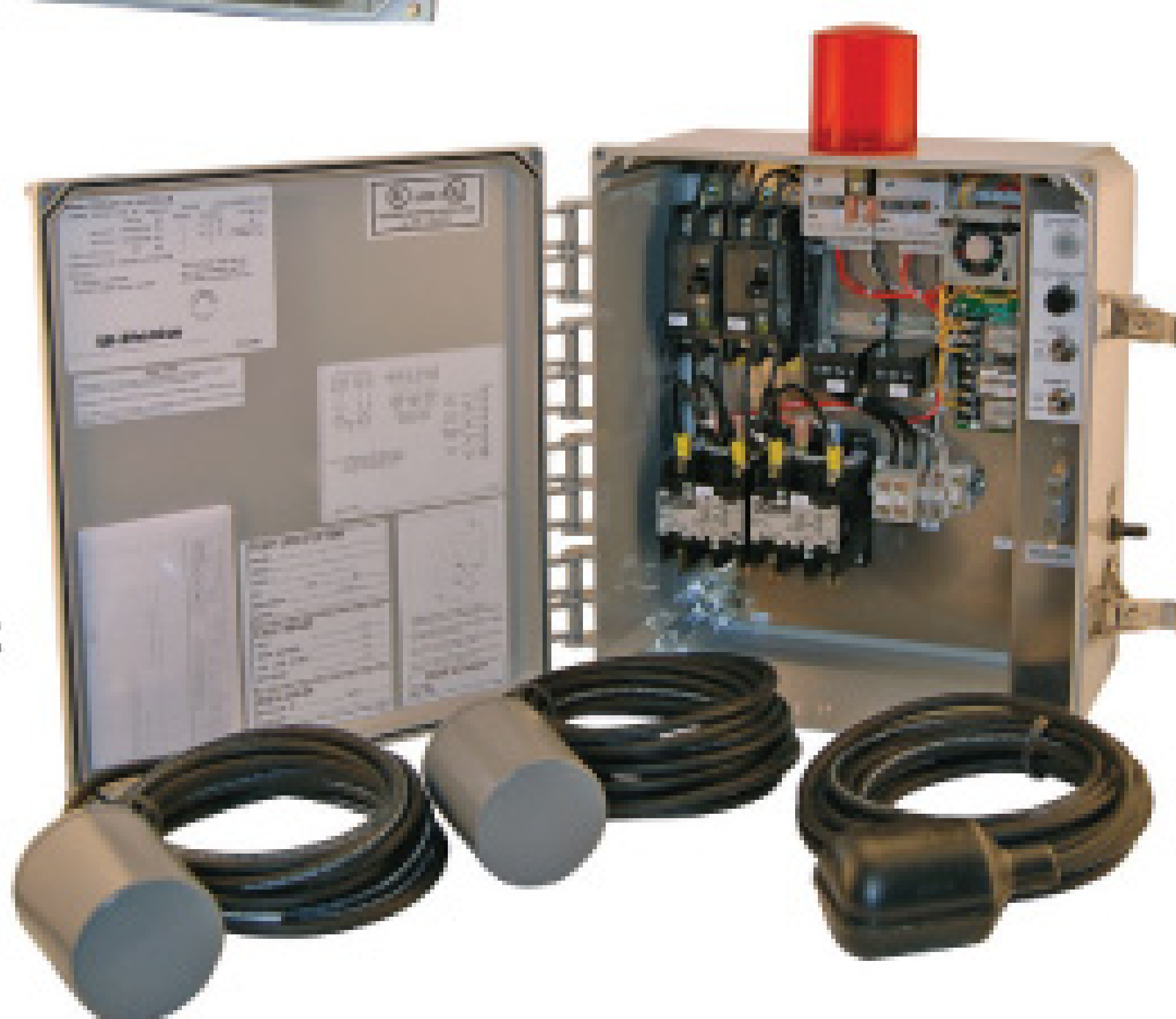
Check It panels from Alderon Industries



PMJ1DB (#2108) pedestal unit from Septronics Inc.



Model 10-143 time-dosing duplex control panel from Zoeller Co.



LB50 alarm from Septic Services Inc.



## Self-diagnostic System

**Check It panels** from **Alderon Industries** provide push-button troubleshooting and the ability to control, monitor and self-diagnose septic systems. The user presses the Check It switch to diagnose floats or problems with pressure switches, incoming power or pump alternation.

A pump selector switch is used to simplex the system automatically. Every Check It panel comes with float switches that are labeled for easy installation. The panels use IEC contactors, which have 20 times more life cycles than definite-purpose controls. The panels can be expanded in the field to make changes after installation and can be used for multiple applications. 218/483-3034; [www.alderonind.com](http://www.alderonind.com).

## Pedestal Unit

The **PMJ1DB (#2108) pedestal unit** by **Septronics Inc.** lets users easily monitor pump cycles while spending less time in the field on maintenance calls. This exterior pedestal-mounted junction box with event counter and interior dual alarm comes assembled with one alarm switch, dual alarm, auto reset, horn silence, upper and lower cord seals, and a pipe nipple with three locknuts to connect to the riser.

The event counter, pump receptacle and color-coded terminal strip are located on a slide-out aluminum terminal board for easy hookup. The unit is available for 120-volt or 240-volt systems, and with single-alarm and event counter combinations. An extra cord can be slipped into the pedestal for safekeeping away from the elements. 888/565-8908; [www.septronicsinc.com](http://www.septronicsinc.com).

## Timed Dosing

The **Model 10-143 time-dosing duplex control panel** from **Zoeller Co.** is designed for single-phase pumps. When enabled by a float, the programmable timer activates twin motor contractors that power the pumps on alternating cycles. On and off times are set accurately and easily with the timer's range selectors and color-coded dials.

A high-water condition prompts an audio/visual alarm and overrides the timer until the water recedes to normal operating levels. In low-water conditions, a redundant off circuit protects the pumps. The panel's UL-listed NEMA 4X enclosure has lockable latches for tamper resistance and safety.

Alternating duplex systems spread the wear evenly between two pumps in time-dosing applications such as recirculating media filters, pressure distribution, and mounds. An event counter, elapsed-time meter, and three mechanically activated, variable-level float switches are included. 800/928-7867; [www.zoeller.com](http://www.zoeller.com).

### High-water Alarm

Septic Services Inc.'s economical indoor or outdoor **LB50 alarm** with level control includes a warning light, audible alarm, remote alarm for commercial systems, and three-position toggle switch for operate, silence, and test. To install, technicians connect the level control switch to the terminal blocks, then plug the unit into a 115-volt outlet. The unit is fused for circuit protection and has a remote alarm for switches that close on signal (0.4 amps at 115 volts AC). **800/536-5564; www.septicserv.com.**

### Dosing for Aerobic Systems

The **Model 202 aerobic system control panel** from **Ecological Tanks Inc.** is designed for systems requiring demand dosing of effluent. It includes a power circuit for the compressor and audible and visual high-water and low-air-pressure alarms. The pump on-off is controlled by the water level at the pump float. The unit includes a pump test switch to verify effluent pump operation.

Individual circuit breakers provide short-circuit protection and disconnect for the compressor, pump and alarm circuits. The alarms include a mute/test switch to verify operation of the alarm circuits and to silence the alarm until the fault is cleared. The 8- by 8- by 4-inch enclosure is rated NEMA 4X (waterproof). **800/277-8179; www.etiaquasafe.com.**

### Event Monitoring

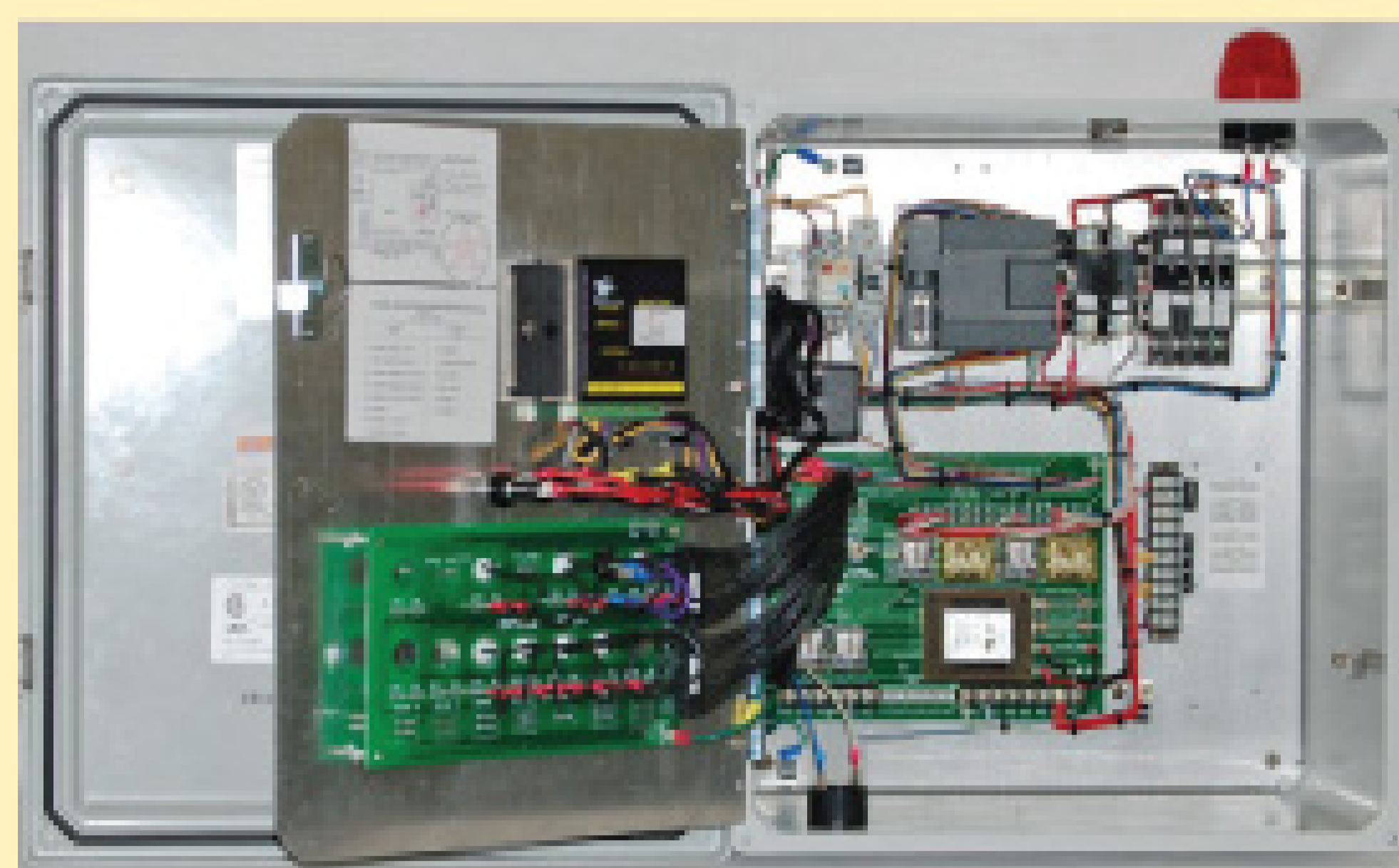
The **Installer Friendly Series In-Site simplex control panel** from **SJE-Rhombus** is designed to control one 120, 208 or 240 VAC single-phase pump. The panel has an easy-to-use touch pad with display on the inner door for programming and system monitoring. The panel configuration can be easily converted in the field to a timed-dose or demand-dose system.

All system events including pump run times, pump cycles, alarm conditions, power outages and service calls can be retrieved easily by downloading panel information onto a USB flash drive included with each panel. Data reports make diagnosing system conditions easy. The user plugs the flash drive into the USB port on the inner door of the panel to download events. The preloaded software on the flash drive formulates system data, creating reports quickly in an easy-to-read format. **888/342-5753; www.sjrhombus.com.**

### Accurate Dosing

The **50A802 Model simplex time dosing panel** from **Septic Products Inc.** enables accurate dosing of soil absorption systems. The unit includes circuit breakers for the pump circuit, a definite-purpose motor contactor, easy-to-access terminal block, and alarm silence and on-off test switches.

Other features include an externally mounted audible alarm, large exter-



American Onsite telemetry reporting service by American Manufacturing Co.



MVP control panels from Orenco Systems Inc.

nal alarm light, pump running light, repeat cycle timer, color-coded internal wiring, a weather-resistant, hinged poly enclosure, wiring schematic, and mounting feet for the enclosure. **419/282-5933; www.septicproducts.com.**

### Telemetry Reporting

The **American Onsite telemetry reporting service** by **American Manufacturing Co.** is a means of receiving and responding to alarm conditions remotely through a Web-based delivery system. The TRS option can be used with any control panel and can be customized to suit any site requiring up to eight independent alarm conditions, such as pump fail, low-water alarm or high-level alarm.

The auto-dialer connects to a standard phone line. When an "alarm" condition or an "all clear" signal is received, the unit contacts the American Manufacturing Tracking server on a toll-free exchange and transmits the specified data. Each site has its own ID and can be programmed with various alarm conditions that will be transmitted to the end user via e-mail and/or text messages.

Users can log in to the TRS system via the Internet through any Web browser with a secure username and password. Users can view present and past alarm data and establish trends. **800/345-3132; www.americanonsite.com.**

### Programmable Panels

**MVP control panels from Orenco Systems Inc.,** the onsite industry's first programmable logic controller, have been upgraded to include more information screens. The Siemens LOGO! digital programmable logic module, with an LCD display and programming keys, enables service providers to adjust timer settings in the field quickly and accurately.

Visual float position indicators, an elapsed time meter, and counters for alarms and power faults make O&M and troubleshooting easier. Panels differentiate high- and low-level alarms and reactivate silenced alarms after 12 hours. **800/348-9843; www.orencocontrols.com. ■**

Everyone talks about creating  
a greener environment.

You actually *do it*.

Find the tools you need to keep your communities green at

[www.colepublishing.com](http://www.colepublishing.com). Publishing environmental trade magazines since 1979.

# EFFICIENT COOLING

## for sealed electrical panels

remove waste heat while  
keeping contaminants out

energy efficient  
easy installation  
replaces air conditioning  
replaces compressed air  
NEMA 12, 4, 4X, Stainless Steel



650.322.9500  
NORENPRODUCTS.COM



270



**Featured in  
an article?**

**Make the  
most of it!**

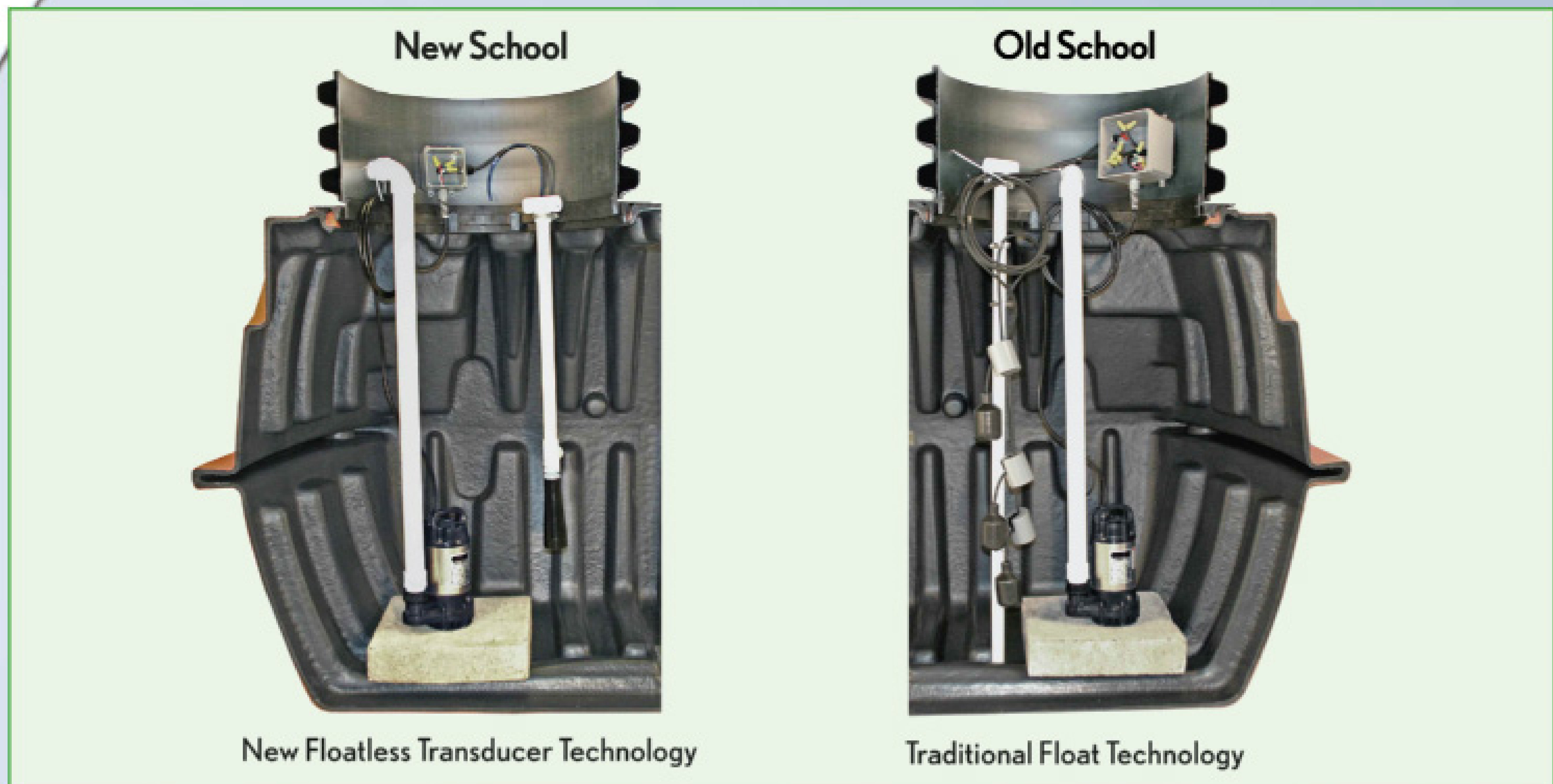
**REPRINTS AVAILABLE**

We offer: Full copies of the original magazine  
Hard copy color reprints  
Electronic reprints

Visit [onsiteinstaller.com/editorial](http://onsiteinstaller.com/editorial) for articles and pricing  
E-mail [jeffl@colepublishing.com](mailto:jeffl@colepublishing.com) or call 800-257-7222

# AQUAWORX IPC™ PANELS OFFER FLOATLESS TECHNOLOGY

When you install an Aquaworx IPC Panel with Floatless Technology, you will never want to go back to floats. The pressure transducer replaces troubles associated with a float system. With a transducer there are no float cords to become entangled, interrupting operation. The pressure transducer has a single wire which reduces installation time and eliminates the need for a junction box.



## **Benefits:**

- Save Time - Simple wiring and set-up reduces installation time by 2-3 hours
- Save Money - Reduced installation time saves on the electricians bill
- C.Y.A. - Data logging provides easy access to historical data
- Accuracy - Accurate to 0.1 of an inch

 **AQUAWORX™**  
**CONTROL PANELS**  
by INFILTRATOR  
[www.aquaworx.com](http://www.aquaworx.com)

*"Rules and Regs" is a monthly feature in Onsite Installer™. We welcome information about state or local regulations of potential broad interest to onsite contractors. Send ideas to editor@onsiteinstaller.com.*

# New Mexico Toughens Onsite Regulations

By **Scottie Dayton**

**B**eginning July 1, all concrete septic tanks installed in New Mexico are required to have a cast-in resilient connector certified to meet or exceed ASTM Standard C923 on the outlet connection.

Only licensed installers or qualified homeowners may install or modify onsite systems. Qualified homeowners, however, may install only conventional systems, and only at their primary residence. Installers are designated Specialist 1 for graywater and conventional onsite systems, and Specialist 2 for all types of onsite systems.

Only installers, site evaluators/system designers, or professional engineers with a specialty subdiscipline of onsite wastewater engineering may inspect onsite systems for property transactions. Manufacturers of advanced treatment systems must provide training and certification for maintenance service providers on a yearly basis.

## Michigan

A proposed state Senate bill would require homeowners to hire only licensed inspectors to inspect conventional or alternative treatment systems, and to have their systems inspected every 10 years. If passed, these rules would activate on Jan. 1, 2010.

Beginning July 1, 2010, the Department of Health would have to approve all alternative systems, and installers would need a groundwater discharge permit. The bill also would create an Onsite Wastewater Treatment System Advisory Council.

Licensed septage haulers in Michigan may be entitled to reimbursement of conference registra-

tion fees and continuing education courses under an existing state law. More than \$73,000 still exists in a contingency account set up for that purpose. One hauler per company may apply. Information is at [www.michigan.gov/deqseptage](http://www.michigan.gov/deqseptage).

## Kansas

Officials in Topeka want urban households with onsite systems to switch to the municipal sewer system. To locate septic tanks, Topeka's GIS staff crafted a map with layers showing houses near sewer mains that receive water service but no sewer service. Tap-in fees cost citizens more than \$1,000.

## Idaho

The state Senate voted to overturn rules issued by the Department of Environmental Quality to increase the drainfield capacity of onsite systems, thereby bringing the state's septic code more in line with the rest of the nation. The state House of Representatives is expected to follow suit.

Idaho's standards, among the least stringent in the nation, are about half what the U.S. EPA expects. DEQ officials and representatives of Idaho's regional health districts may resort to gathering more data on system failures and requiring property owners to pump their septic tanks periodically.

## Pennsylvania

A state Senate bill to amend the Regulatory Review Act would require agencies submitting proposed regulations to present detailed explanations of how data in the regulation was obtained and why it is acceptable. The Indepen-

dent Regulatory Review Commission would then have to determine whether agencies have the statutory authority to promulgate the regulations and whether the regulations conform to the intention of the General Assembly.

If the regulations are consistent, the commission would have to consider whether they are in the public interest based on economic or fiscal factors, the protection of public health, the possible conflict with or

duplication of existing regulations, and the substantial nature of the policy. Every step would have to be supported by acceptable data. ■

Smart  
**Solutions**  
**Pumper.**

THE LIQUID WASTE INDUSTRY'S  
MUST-READ PUBLICATION SINCE 1979

Subscribe now at [pumper.com](http://pumper.com)  
or 800-257-7222

## Economical and Ecological Wastewater and Stormwater Treatment Products

With a worldwide emphasis on improving water quality, Bio-Microbics manufactures proven wastewater and stormwater treatment systems for single-family homes, clustered subdivisions, commercial applications, or the renovation of a failed septic system.

Easy to install and operate in new or pre-existing tanks, products include: MicroFAST®, HighStrengthFAST®, RetroFAST®, BioBarrier® Membrane BioReactor, and BioSTORM®.

The simple, pre-engineered design of our wastewater and stormwater treatment systems deliver consistent high performance to help make better water...for a better world.



Visit us at [www.biomicrobics.com](http://www.biomicrobics.com)

or call for more info

1-800-753-FAST(3278)

**BIO-MICROBICS**  
INCORPORATED  
Better Water. Better World.™

© 2008 Bio-Microbics, Inc. 8450 Cole Pkwy, Shawnee, KS 66227 • Phone: 913-422-0707 • Fax: 913-422-0808  
FAST, MicroFAST, HighStrengthFAST, and RetroFAST are registered trademarks of Smith & Loveless Inc. and used under license.



### INTRODUCING OUR NEW WASTEWATER PUMPS

**2 Year  
Warranty**



### Effluent Pumps

Part No.	HP	Volts	Net Price
W031E	0.33	115	<b>\$119.82</b>
Flows to 30 GPM, Heads to 30 feet.			
W041E	0.4	115	<b>\$170.54</b>
Flows to 35 GPM, Heads to 40 feet.			
W051E	0.5	115	<b>\$255.66</b>
W052E	0.5	230	<b>\$283.33</b>
Flows to 50 GPM, Heads to 56 feet.			
W152E	1.5	230	<b>\$698.58</b>
Flows to 70 GPM, Heads to 131 feet.			

- Recessed impeller design reduces bearing load and prevents clogging.
- Carbon/ceramic mechanical seal with secondary lip seal to prevent leakage.
- Oil filled motor dissipates heat build up.
- Ball bearings reduce radial and thrust loads providing longer motor life.
- 2 Year warranty.

### Sewage Pumps

Part No.	HP	Volts	Net Price
W051S	0.5	115	<b>\$252.45</b>
W052S	0.5	230	<b>\$296.77</b>
Flows to 100 GPM, Heads to 18.5 feet.			
*W102S	1	230	<b>\$625.93</b>
Flows to 160 GPM, Heads to 65 feet.			

- Recessed impeller design reduces bearing load and prevents clogging.
- Silicon carbide mechanical seal with secondary lip seal to prevent leaking.\*
- Oil filled motor dissipates heat build up.
- Ball bearings reduce radial and thrust loads providing longer motor life.
- 2 Year warranty.

### Grinder Pumps

Part No.	HP	Volts	Net Price
W101G	1	115	<b>\$920.00</b>
W102G	1	230	<b>\$920.00</b>
Flows to 25 GPM, Heads to 90 feet.			
W202GDS	2	230	<b>\$1,115.00</b>
Flows to 40 GPM, Heads to 103 feet.			
W202GHH	2	230	<b>\$1,150.00</b>
Flows to 25 GPM, Heads to 200 feet.			

- Hardened Stainless Steel shredding ring and grinding cutter.
- Recessed (vortex) impeller design reduces bearing load and prevents clogging.
- Internal capacitors eliminating the use of external controls.
- Silicon carbide mechanical seal with secondary lip seal to prevent leakage.
- Oil filled motor dissipates heat build up.
- 2 Year warranty.

Contact Us At: **1-800-769-7867**

136

\* Shipping within the continental U.S., to business addresses, via UPS ground. Minimum \$50.00 order. See catalog for complete shipping policy.

Visit [www.Webtrol.com](http://www.Webtrol.com) to see our complete line of onsite products.

# Mighty Tight Squeeze

Peat fiber biofilters provide a treatment solution for a tiny lakeside lot in New York state where an old septic system had failed

By **Scottie Dayton**

**S**ewage backing up in a three-bedroom home on Lake Carmel in Carmel, N.Y., had created a hazardous mold condition under a bathroom floor.

The homeowners summoned Pat Tyndall of Tyndall Septic Systems Inc. in Brewster, N.Y. He pumped the concrete block septic tank and put the people in touch with Chris Dellaripa, project coordinator for the Putnam County Septic Repair Program.

Dellaripa immediately stopped the homeowners from using the bathrooms. Because the home was within a 500-foot radius of Lake Carmel's high-water mark, the onsite system qualified for free replacement under the county program.

"This was one of the most challenging jobs I've done in awhile,"

says John Kalin, P.E., of Design Concepts Engineering in Pawling, N.Y. "The only place for the secondary treatment system was a 9- by 24-foot area at the back of the house. It was like working in a planter box."

Tyndall won the bid. He faced a 2:1 grade change from the road to the bottom of the 60- by 90-foot lot, and had no clear access. At the heart of the system are three peat fiber biofilter systems.

## Site conditions

Soils are well-drained brown sandy loam with no groundwater, mottling or rocks. A failing dry well next to the house was within 25 feet of the lot's potable well, and within 65 feet of potable wells to the east and west. Half the septic tank extended into the neighbor's



An excavator operator places a 1,000-gallon dual-compartment Fralo Plastech septic tank from Roth Global Plastics within the 500-foot distance from the high-water mark of Lake Carmel. (Photo courtesy of Pat Tyndall)

backyard, where the system's clay tile drainfield was ponding.

## System components

Kalin designed the system to handle 450 gpd. Its major components are:

- 1,000-gallon Fralo Plastech dual-compartment septic tank from Roth Global Plastics.
- A300 effluent filter, Zabel Environmental, a division of Polylok
- 1,000-gallon single-compartment pump tank
- 1/3-hp low-head PE31M Hydromatic pump
- Three 150-gallon pre-engineered Puraflo peat fiber biofilters, Bord na Mona Corp.
- Installer Friendly Series single-phase timed dose/alarm panel, SJE-Rhombus.

## System operation

Wastewater gravity flows through a 4-inch PVC Schedule SDR-35 lateral to the septic tank, then into the pump tank. The pump runs 75 seconds every two hours, sending 30 gallons of effluent through a 2-inch PVC line tied to the biofilters.

A spray manifold in each module evenly doses the peat. Purification occurs as the liquid percolates through the media over 36 to 48 hours. The peat also suppresses odors.

Weep holes topped with clean stone on either side of the modules disperse effluent to the ground through 7- by 24-foot by 6-inch deep beds of washed gravel.

The units produce effluent averaging less than 10 mg/l TSS and BOD, and a 99 percent reduction in fecal coliforms with no pathogens.

## System Profile

<b>Location:</b>	Carmel, N.Y.
<b>Facility served:</b>	Three-bedroom home
<b>Designer:</b>	John Kalin, P.E., Design Concepts Engineering, Pawling, N.Y.
<b>Installer:</b>	Pat Tyndall, Tyndall Septic Systems Inc., Brewster, N.Y.
<b>Site conditions:</b>	Brown sandy loam with no groundwater, mottling or rocks
<b>Type of system:</b>	Puraflo peat fiber biofilters, Bord na Mona Corp.
<b>Hydraulic capacity:</b>	450 gpd



The septic tank is ready to install at the lakeside lot to serve a three-bedroom home in Carmel, N.Y. (Photo courtesy of John Kalin)

### Installation

The front of the house faces a road. A flight of 20 steps leads down to a patio, from which an identical stairway goes to the backyard. To get the Komatsu PC35 zero-tail-swing compact excavator to the foot of the property, Tyndall and his two men cut a road. They used the smaller machine to build a platform halfway down the hill, then parked the bigger Volvo EC55B Pro compact excavator on the platform.

The crew first abandoned the 20-foot-deep hand-dug well and original septic tank. "I ordered 8 cubic yards of concrete, and when the mixer arrived, the driver dumped it into the excavator bucket a load at a time," says Tyndall.

The Volvo excavator transferred the concrete to the Komatsu waiting below. Then that operator took it down the hill to the well. Most materials were handled this way. The men removed a chain-link fence along the east property line, then filled the septic tank with concrete.

A foundation drain pipe protruded from the walk-out basement, and 3 feet of soil was pushed against the wall. The crew removed the pipe and soil, using the latter to backfill the well and septic tank.

It took two days to excavate the three 24- by 7- by 4-foot-deep holes for the biofilters, which fit next to the basement and paralleled the east property line. "We'd extract and move a bucket of soil to a position the Volvo could reach," says Tyndall. "That driver piled it on the

road. When the hole was dug, the Komatsu went up the hill to load the soil into our dump container."

Workers shoveled gravel into

wheelbarrows from a pile midway down the hill, then transported it to the holes. Moving and setting the 1,800-pound biofilters taxed the smaller excavator to its limit. After installing and plumbing a module, the men erected a 4-foot-high retention wall along the property line behind it.

"We couldn't set all three biofilters at once because we had an area only 2 feet wide in which to install the 2-inch inflow and outflow pipes," says Tyndall. The Volvo lowered five pallets of Unilock blocks, and the men carried each 50-pound block down the stairs or moved them in wheelbarrows.

After covering the basement wall and retention wall behind the first biofilter with rubber membrane, they repeated the process for the second and third modules. The liner prevents water from leaching

horizontally.

"We laid plywood sheets on top of the biofilters, then ran over them with the wheelbarrows and dumped gravel into the holes," says Tyndall. "We also used the wheelbarrows to backfill with spoil."

Excavating the two 9- by 5- by 4-foot-deep holes for the fiberglass tanks along the side of the house was easier, as there was more room for the machine to maneuver. The pump tank sat 15 feet from the first biofilter. The tanks, installed one at a time and side-by-side on a 6-inch-deep gravel bed, were backfilled with more spoil, only this time using the Komatsu excavator.

Because the biofilters were so close together, the pump could dose them in 40 seconds, but the manufacturer recommends running it for at least a minute. Tyndall installed a valve and throttled back the pump to 75 seconds. A weep hole drains effluent into the pump tank, preventing the liquid from freezing in the line. "A normal installation of these components takes three days," says Tyndall. "This one took two weeks."

**"The only place for the secondary treatment system was a 9- by 24-foot area at the back of the house. It was like working in a planter box."**

John Kalin, PE.



Workers backfill around the Puraflo peat biofilter system from Bord na Mona. (Photo courtesy of Pat Tyndall)

### Maintenance

Under the Septic Repair Program, the system's installer is responsible for maintaining it for the first two years. Twice per year, Tyndall observes the float, pump and lids. He checks the sludge level in the septic tank and cleans the effluent filter. At the end of two years, he draws an effluent sample and sends it to a lab for analysis. The system is operating as designed. ■

#### MORE INFO:

- 64** **Bord na Mona**  
336/547-9338  
www.BNM-US.com
- 189** **Hydromatic**  
419/289-3042  
www.hydromatic.com
- 1** **Roth Global Plastics Inc.**  
866/943-7256  
www.roth-global.net
- 41** **SJE-Rhombus**  
218/847-1317  
www.sjerrhombus.com
- 6** **Zabel Environmental,**  
**a division of Polylok**  
800/701-3946  
www.polylok.com

## Alberta Action Plans

The Alberta Onsite Wastewater Management Association adopted a priority action plan that includes discouraging homeowners from designing or installing onsite systems themselves, encouraging only certified professionals to install systems, improving inspection processes, increasing stakeholder accountability, and investigating certification levels and training programs.

The association is launching a pilot project to help municipalities put the Model Process Reference Document, a guide for developing subdivisions with private onsite systems, into practical use.

With the province banning land application of septage by 2010, and with many receiving facilities already at capacity or banning haulers, the association developed a hauler training and certification program to increase municipalities' confidence that haulers are handling septage responsibly. The National Association of Wastewater Transporters will administer the program if Alberta Environment provides funding.

## CALENDAR OF EVENTS

### July 10-11

Wisconsin Precast Concrete Association Summer Convention, Chula Vista Resort, Wisconsin Dells. Call 608/256-7701.

### Aug. 6-8

Florida Onsite Wastewater Association Conference, Ocean Center, Daytona Beach. Call 407/937-2228 or visit [www.fowaonsite.com](http://www.fowaonsite.com).

### Aug. 7-8

Wisconsin Liquid Waste Carriers Association Summer Convention, Potawatomi Northern Lights Casino and Hotel, Wabeno. Call 608/255-2770.

### Aug. 12-14

North Carolina Septic Tank Association Outreach Symposium, Greenville Convention Center,

Greenville. Call Monica Rhea at 704/739-5849 or visit [www.ncsta.net](http://www.ncsta.net).

### Aug. 28-29

Georgia Onsite Wastewater Association Conference, Marietta Conference Center, Marietta. Call 678/646-0379 or visit [www.onsitewastewater.org](http://www.onsitewastewater.org).

## TRAINING & EDUCATION

### DVD Educates Homeowners

A DVD from the Montana State University Extension, *Taking Care of Our Ground Water: A homeowner's guide to well and septic systems*, explains how onsite wastewater and potable well water are part of the same water cycle. Besides interviews with homeowners and professionals, the video uses 3-D graphic animations. It has sections on water system considerations for buying or building a new home, protecting the wellhead, onsite systems, sampling for well water quality, interpreting water quality results, chlorinating a well and water system, water treatment options, and bloopers. To order the \$4 DVD or view the lower quality Web version, go to <http://extn.msu.montana.edu/publications.asp>.

### NAWT

The National Association of Wastewater Transporters has these sessions:

- Aug. 25-26 – Inspector Training, Flagstaff, Ariz.
- Oct. 9-10 – Waste Treatment Symposium, Orlando, Fla.

Call NAWT at 800/236-6298 or visit [www.nawt.org](http://www.nawt.org). For Arizona classes, contact Kitt Farrell-Poe at 928/782-3836 or e-mail [kittfp@ag.arizona.edu](mailto:kittfp@ag.arizona.edu).

### Alabama

The following licensing class is the joint effort of the Alabama Onsite Wastewater Association (AOWA) and University of West Alabama (UWA):

- Aug. 12-13 – Continuing Education, Gadsden.

Call 334/396-3434 or visit [www.aowa.org](http://www.aowa.org).

### Florida

Courses are at the Florida Onsite Wastewater Association Training Center in Polk City:

- Aug. 17-18 – Maintenance Training for Onsite Installers
- Aug. 20-21 – Maintenance Training for Onsite Installers
- Aug. 25-27 – Onsite Technologies from A-Z
- Aug. 28 – What's New at the Training Center?

Contact FOWA at 407/937-2228 or [www.fowaonsite.com](http://www.fowaonsite.com).

### Michigan

The Michigan Onsite Wastewater Training and Education Center at MSU Tollgate Center in Novi is offering these courses:

- Aug. 12-13 – Existing Systems Evaluator Training
- Aug. 20 – Pumped Systems Evaluator Training.

Call Barb DeLong at 517/355-4720 or visit [www.egr.msu.edu/age/outreach.html](http://www.egr.msu.edu/age/outreach.html).

### Minnesota

The University of Minnesota Extension has these classes:

- Aug. 11 – Sampling Onsite Systems, Waterville
- Aug. 18-21 – Service Provider, Mankato.

Call Nick Haig at 800/322-8642 (612/625-9797) or visit <http://septic.umn.edu>.

### New England

The New England Onsite Wastewater Training Program at the University of Rhode Island in Kingston has this workshop:

- Aug. 6 – Surveying Basics for Onsite Wastewater Contractors.

Visit [www.uri.edu/ce/wq](http://www.uri.edu/ce/wq) or contact David Kalen at 401/874-5950 or [davidkalen@mail.uri.edu](mailto:davidkalen@mail.uri.edu).

### North Carolina

North Carolina Soils and On-Site Wastewater Training Academy has this course:

- Aug. 19 – Subsurface Wastewater System Operator Training, Plymouth.

Call Joni Tanner at 919/513-1678 or visit [www.soil.ncsu.edu/training](http://www.soil.ncsu.edu/training).

### North Carolina

The North Carolina Septic Tank Association has these courses:

- Aug. 12-13 – Installer/Inspector, Greenville
- Aug. 14 – Pumper, Greenville.

Call Connie Stephens at 336/416-6394 or visit [www.ncsta.net](http://www.ncsta.net).

### Pennsylvania

The Pennsylvania Septage Management Association is offering this course:

- Aug. 19-20 – Confined Space, West Chester.

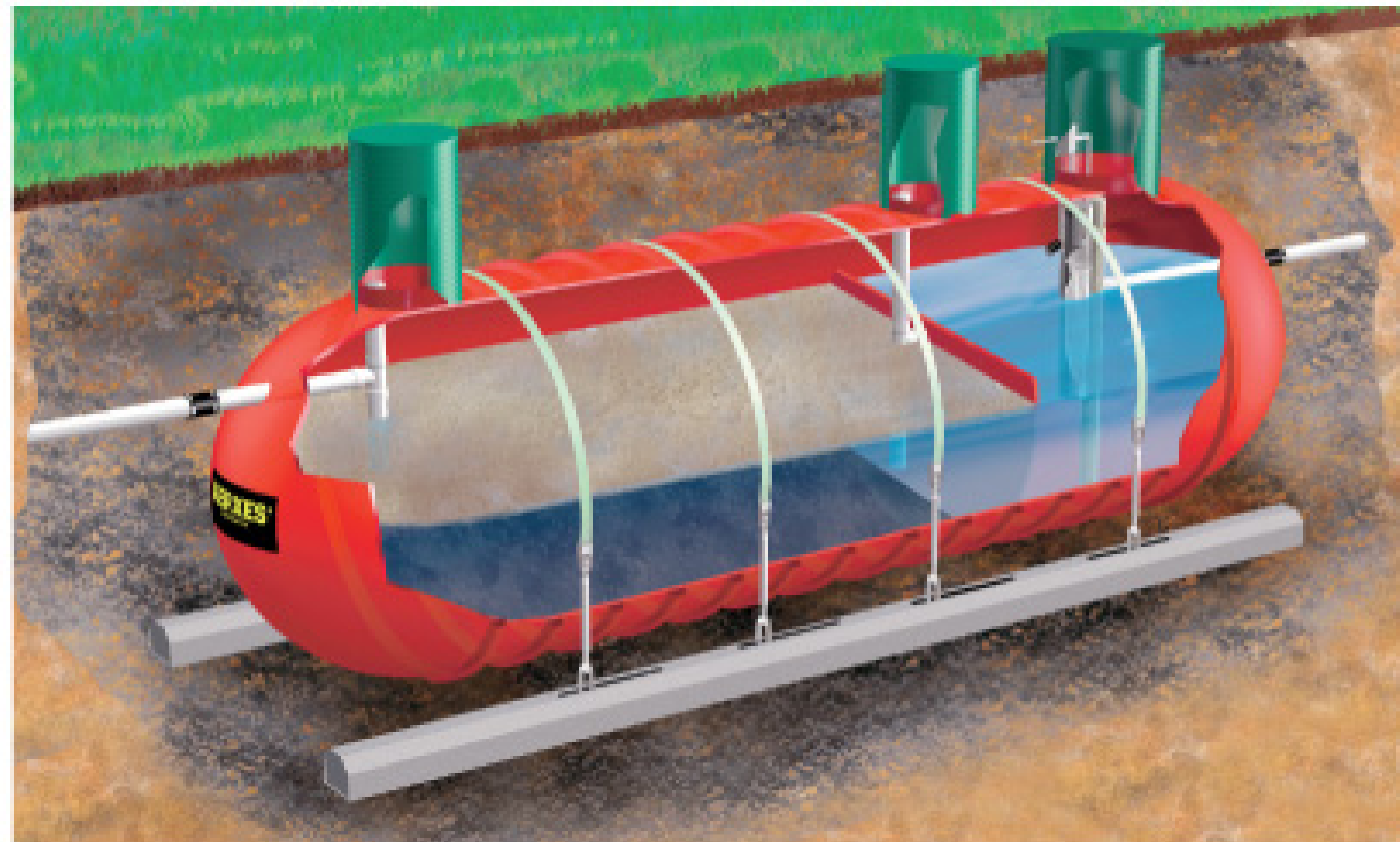
Call 717/763-7762 or visit [www.pasma.net](http://www.pasma.net). ■

**Come In We're OPEN**  
[www.onsiteinstaller.com](http://www.onsiteinstaller.com)

# Serious about Watertight Tanks?

**XERXES**<sup>®</sup>  
CORPORATION  
a subsidiary of ZCL Composites Inc.

When it comes to wastewater tanks, watertight design is gaining a lot of attention. The benefits of installing a watertight tank are numerous, and, with changing regulations; it's often mandatory. So, if you're serious about watertight tanks and ease of installation is important, consider Xerxes fiberglass tanks for your next project.



## Benefits of Watertight Tanks include:

- **One-piece construction** - no field installation of components requiring seams/seals to complete the tank.
- **Factory manufactured** - no need to form and fabricate a tank in place with unpredictable weather conditions, field crews and completion dates.
- **Proven track record** - Xerxes tanks have been used for nearly three decades for storage of petroleum products where watertight is the only design standard that is acceptable.
- **Strong design** - standard tanks are designed for burial depth to 7 feet, water table to grade **AND** an H-20 load rating.

101

www.xerxes.com • (952) 887-1890 phone • (952) 887-1882 fax

## INDUSTRY NEWS

July 2009

### Infiltrator Acquires Ring Industrial Group

Infiltrator Systems Inc. has acquired Ring Industrial Group LP of Oakland, Tenn., manufacturer of the EZflow brand of expanded polystyrene drainfield systems. Ring's six manufacturing plants will be operated as EZflow LP, wholly owned by Infiltrator Systems Inc., as the company looks to expand the EZflow product line. Key members of the Ring Industrial Group, including its engineering staff, have been retained. The customer service and accounting departments have been integrated into the Infiltrator organization. With the addition of EZflow, Infiltrator, based in Old Saybrook, Conn., has products in 2.5 million onsite systems across North America.

### Bord na Mona, American Join Forces

Bord na Mona Environmental Products U.S. Inc. has formed a strategic alliance with American Manufacturing Co. Inc. to package American's Perc-Rite drip systems with its own Puraflo peat fiber biofilter onsite wastewater treatment systems in difficult soil condition environments.

The first such combination system under the partnership has been installed at a residence in Charleston, S.C. "Our partnership with American Manufacturing promises to bring a new level of onsite treatment quality and flexibility to areas known for having difficult soil conditions, such as shallow bedrock, clay, and high water tables," says Bord na Mona executive vice president John Payne. "These combination systems will feature a single control panel that significantly simplifies long-term operation and maintenance."

The Perc-Rite system is a single- or multi-zoned fluid handling system for drip dispersal using disc filtration followed by low-volume timed dosing. The system delivers treated wastewater equally to a dispersal area, providing unsaturated flow for an aerobic soil environment.

The Puraflo system, certified by NSF to NSF/ANSI Standard 40, is a low-energy, natural solution for onsite treatment requirements that uses natural biofibrous peat filter media. Delivered in pre-assembled modular units that save installation time and costs, the system is compatible with drip dispersal, making it well-suited to difficult soils and restrictive lot sizes.

According to Payne, Bord na Mona's partnership with American is open-ended and will include future collaboration on other treatment and reuse solutions for the residential and commercial markets. American will include a selection of its products at the Bord na Mona Innovation Center in Greensboro, N.C.

### Crest Precast Launches New Web Site

Crest Precast has launched a new Web site, [www.crestprecastconcrete.com](http://www.crestprecastconcrete.com). The site features complete product drawings for septic tanks and grease interceptors.

### Nova Scotia Approves Quick4 Chambers

Nova Scotia Environment has approved the use of Quick4 chambers from Infiltrator Systems Inc. as a substitute for rock and pipe in onsite septic systems. Both the Quick4 Standard and Quick4 Equalizer 36 chambers can be installed in any of the allowed system types as specified in the Technical Guidelines, including contour trenches, mounds, area beds, multiple trenches and sloping sand filters. ■

### AERATORS

We sell Flagg-Air 340, Secoh, Gast and Medo Linear, FPZ and Gast Regenerative, Thomas and Gast Rotary Vane aerators, rebuild kits and alarms at wholesale prices. Septic Services, Inc. www.septic-serv.com. 1-800-536-5564. (IM)

### BLOWERS

**VFC200P-5T, FUJI** Pumps, Regenerative Blowers, Ring Compressors. All models, accessories. Authorized distributor. Authorized parts and repair center. Call 888-227-9822. www.carymfg.com (IBM)

### BUSINESSES

Montana based ready mix concrete company for sale includes all equipment, real estate, inventory. Owner will stay and help with transition or work for new owner. Call Tom Emerling at Yellowstone Business Acquisitions, 406-655-4241. (I7)

### BUSINESSES

(2) Septic tank delivery trucks; 1-ready mix truck; 7-Celico septic tank forms (1000-1500 gallon); misc. drop box, riser forms, lift tank forms. Trucks and loaders in good condition. (In service in 2007) All forms in good or better condition. (Used in 2007) Package price \$70,000. 218-829-9678 or 800-829-5755. (IBM)

Well established cesspool, line cleaning and installation company located in Suffolk County, NY. All equipment in excellent condition. Flatbed backhoe trailer, dump truck, 2 pump trucks, van with compressor. Many extras. Call for more info. 631-874-5488. (P8)

Central Wisconsin septic pumping, installation and repair. Tri-axle dump, excavator, posi track pickup, 2 trailers and phone number. Home, shop, and acreage available. \$350,000 high profits in slow times. septicbiz4sale@yahoo.com. (P8)

### BUSINESSES

Have License Will Sponsor State of Florida. Operate your own business. Pumpouts, repairs, new installations. etc. Joe Malone 321-784-1614. (P7)

If you are in need of a REGISTERED SEPTIC TANK CONTRACTOR to qualify your Florida-based septic company, send me an email @ BLRSepticService@aol.com or call 561-723-5001. (P7C8)

### DREDGES

Seepex sludge & polymer mixing & pumping unit. 5 years old. Excellent condition. Asking \$20,000 OBO. Call 1-506-672-2100. (PBM)

### HAND TOOLS

**Crust Busters** - Portable, lightweight machine guaranteed to mix up septic tanks and grease traps! Save time and money! **www.crustbusters.com**, 1-888-878-2296. (IM)

### LEASE/FINANCING

**North Star Commercial Credit:** Commercial Loans for Trucks or Equipment. Flexible purchase programs to fit your budget. 21 yrs. in the industry. Contact **Tom Myers - 877-804-2274**. (CPBM)

### PIPELINE REHABILITATION

Max Liner lining equipment, ready to work. Max Cutter 10-12 Mini complete set also available, two 95-gal. over-pack drums, an air operated open drum mixer, one 18" width x 24' length gravity conveyor and a pull behind Ingersoll Rand 175 diesel air compressor. Will sell together or separately. Call Harry 843-556-4320. (I8)

Mini tap cutter for sale, unused, German-made, pneumatic-powered, for use in 4"-6" lined pipe, with articulating arm, and complete with pneumatic hose accessories. Sell for \$12,500 OBO. Call 985-386-3006 for more information. (P7)

### PORTABLE RESTROOM TRAILERS

NEW RESTROOM TRAILERS. All sizes from single station to 12 stations. New trailer over stock on single station shower unit. Was \$9800. Now only \$7900. Call Rich Restroom Mfg. 260-593-2279. (I7)

### PUMPS

Hydromatic, Zoeller, Liberty, ABS, Myers, Grinder and Effluent pumps. Lift station packages and high water alarms are also available. Septic Services, Inc. www.septic-serv.com. 1-800-536-5564. (IM)

New **Masport** and **Jurop** vacuum pumps. Compare our price before you buy. W-K Machine & Supply Co. Call 1-800-633-8947. Distributor. (PBM)

It's **EASY** to submit your classified **ONLINE!**

Just go to:

[www.onsiteinstaller.com](http://www.onsiteinstaller.com)

Place a Classified Ad;

Fill in the Online Form!

Only \$1.00 per word!

## Cleaner | Pumper | CLASSIFIED AD FORM | PRO | installer

### CHOOSE THE CATEGORY:

- |  |   |
|--|---|
| <input type="checkbox"/> Aerators                    | <input type="checkbox"/> Positions Available      |
| <input type="checkbox"/> Blowers                     | <input type="checkbox"/> Positions Wanted         |
| <input type="checkbox"/> Bucket Machines             | <input type="checkbox"/> Pressure Washers         |
| <input type="checkbox"/> Businesses for Sale         | <input type="checkbox"/> Pumps-Dredge             |
| <input type="checkbox"/> Business Opportunities      | <input type="checkbox"/> Pumps-High Pressure      |
| <input type="checkbox"/> Cable Machines              | <input type="checkbox"/> Pumps-Submersible        |
| <input type="checkbox"/> Computer Software           | <input type="checkbox"/> Pumps-Vacuum             |
| <input type="checkbox"/> Dewatering                  | <input type="checkbox"/> Pumps - Washdown         |
| <input type="checkbox"/> Drainfield Restoration      | <input type="checkbox"/> Pumps-Water              |
| <input type="checkbox"/> Drain/Sewer Cleaning Equip. | <input type="checkbox"/> Rodding Machines         |
| <input type="checkbox"/> Dredges                     | <input type="checkbox"/> Roll-Off Containers      |
| <input type="checkbox"/> Excavating Attachments      | <input type="checkbox"/> Root Control             |
| <input type="checkbox"/> Excavating Equipment        | <input type="checkbox"/> Safety Equipment         |
| <input type="checkbox"/> Hand Tools                  | <input type="checkbox"/> Septic System Components |
| <input type="checkbox"/> Hazardous Waste Units       | <input type="checkbox"/> Septic Tanks             |
| <input type="checkbox"/> Hydroexcavation             | <input type="checkbox"/> Septic Trucks            |
| <input type="checkbox"/> Jetters-Trailer             | <input type="checkbox"/> Service/Repair           |
| <input type="checkbox"/> Jetters-Truck               | <input type="checkbox"/> Slide-In Units           |
| <input type="checkbox"/> Jet Vacs                    | <input type="checkbox"/> Sludge Applicators       |
| <input type="checkbox"/> Lease Financing             | <input type="checkbox"/> Tanks                    |
| <input type="checkbox"/> Levels & Transits           | <input type="checkbox"/> Tools                    |
| <input type="checkbox"/> Locators                    | <input type="checkbox"/> Trailers-Vacuum/Tanker   |
| <input type="checkbox"/> Miscellaneous               | <input type="checkbox"/> Trucks (dump/misc.)      |
| <input type="checkbox"/> Parts & Components          | <input type="checkbox"/> TV Inspection            |
| <input type="checkbox"/> Pipeline Rehabilitation     | <input type="checkbox"/> Vacuum Loaders           |
| <input type="checkbox"/> Portable Toilets            | <input type="checkbox"/> Vases                    |
| <input type="checkbox"/> Portable Toilet Tanks       | <input type="checkbox"/> Vehicle Tracking         |
| <input type="checkbox"/> Portable Toilet Trailers    | <input type="checkbox"/> Wanted                   |
| <input type="checkbox"/> Portable Toilet Trucks      | <input type="checkbox"/> Wastewater Transfer      |
|  | <input type="checkbox"/> Waterblasting            |

Please print ad legibly below with correct punctuation and phone number. Circle each word to be bolded, if any. (\$1.00 extra per word)

### CHOOSE THE PUBLICATION(S):

- |   |   |   |
|---|---|---|
| <input type="checkbox"/> <b>CLEANER</b><br>Deadline: 1st of the Month | <input type="checkbox"/> <b>MSW</b><br>Deadline: 1st of the Month               | <input type="checkbox"/> <b>PUMPER</b><br>Deadline: 10th of the Month |
| <input type="checkbox"/> <b>PRO</b><br>Deadline: 17th of the Month    | <input type="checkbox"/> <b>ONSITE INSTALLER</b><br>Deadline: 17th of the Month |   |

### CLASSIFIED AD RATE:

\$1.00 per word, per month with a 20-word minimum or \$20.00. \$1.00 extra per bold word (key words only).

### ADVANCE PAYMENT REQUIRED:

No billing for classified ads. Payment must be received in advance before publishing.

### CALCULATE THE AMOUNT DUE:

\_\_\_\_\_ words X \$1.00 = \_\_\_\_\_ X \_\_\_\_\_ Months X \_\_\_\_\_ Publications = \$ \_\_\_\_\_  
(\$20 minimum) # of months to run the ad # of publications checked above **Total Amount Due**

(Example: 25-wd. ad X \$1.00 per word = \$25.00;  
x 2 months to run the ad = \$50.00;  
x 2 publications (Pumper & Pro) = \$100.00 Total)

### FILL IN COMPANY AND PAYMENT INFO:

COMPANY NAME: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_ PHONE: \_\_\_\_\_  
CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_

**MAIL** this completed form with payment to:  
COLE Publishing Inc., PO Box 220, Three Lakes, WI 54562

**FAX** this completed form to: **715-546-3786**

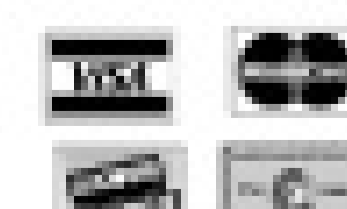
**ONLINE** forms at:  
[www.cleaneec.com](http://www.cleaneec.com) \* [www.mswmag.com](http://www.mswmag.com)  
[www.pumpec.com](http://www.pumpec.com) \* [www.promonthly.com](http://www.promonthly.com)  
\* [www.onsiteinstaller.com](http://www.onsiteinstaller.com)

**QUESTIONS: CALL 1-800-257-7222**

PLEASE FILL OUT CREDIT CARD INFORMATION COMPLETELY INCLUDING V-CODE (3-DIGIT NUMBER FOUND BY YOUR SIGNATURE)

CREDIT CARD NO.: \_\_\_\_\_ V-CODE: \_\_\_\_\_ EXP. DATE: \_\_\_\_\_  
CARDHOLDER NAME: \_\_\_\_\_ PHONE: \_\_\_\_\_

**WE ACCEPT:**



**Seal it Tight!  
Seal it Easy!  
Seal it Fast!**



- Easy 10 minute installation!
- Secure fit for all systems!
- Made & sold by septic installers!
- Prevent ground water infiltration and save money at the same time!

Are you tired of using risers that are too tall or too short for the job you are completing? Plastic riser pipe will give an exact height each time. Try our system and you will never have to carry concrete pipe and lids again. Save time by not having to assemble multiple sections.

Seal-R™ Lids can be personalized. Seal-R™ Lids are manufactured with UV additive to resist degradation from exposure to sunlight.



**BrenLin Company, Inc.**

Herman, MN

**888-606-1998**

Fax: 320-677-3001

E-mail: brenlin@frontiernet.net

Web Site: seal-r.com

54

**JET INC. SIMPLY Better™**  
Pioneers in Advanced Wastewater Treatment since 1955™  
**Better For Precasting  
Better For Installation  
Better For Service**  
1.800.321.6960 • www.jetincorp.com  
email@jetincorp.com **109**



**Hot Water Portable \$1,899**

- >Up to 4000psi - 4.2gpm
- >Reliable Beckett burner
- >9 gallon diesel tank
- >Roll cage protected
- >4000 psi systems from \$799
- >Electric, diesel and gas units available
- >Call for free full line color catalog
- >Free lifetime tech support

Since 1981

**www.watercannon.com**

**1-800-454-9274**



26

Simple Solutions  
DISTRIBUTING LLC  
MAKERS OF  
**Wolverine Brand™**  
ODOR CONTROL PRODUCTS  
**\$40 ea**  
Case Qty 6  
**Free Shipping**  
lower 48



**Wolverine Brand Vent Filters  
Stop The Stink-GUARANTEED!**

In New Jersey  
**973-846-7817**  
Outside New Jersey  
**866-667-8465**

**www.IndustrialOdorControl.com**  
**www.StopSepticOdor.com**

**PayPal**    **180**

**MARKETPLACE  
advertising**

**THE DIRTY BIRD™** **45**  
Septic Vent Concealer  
Converts your ugly septic vent into an attractive bird bath and controls odor too!  
866.968.9668 781.793.9334  
**www.thedirtybird.com**

**The Most Durable & Economical  
Septic Lid** **132**  
Durable & Lightweight Polymer  
WILL NOT Crack Like Concrete!  
Easier to Handle & Transport  
18" & 24" Available  
Easy Installation  
Optional Sand Filled

**800.868.0973**

**ONSITE installer**  
**MARKETPLACE advertising**

Onsite Installer Marketplace gives you nationwide exposure to thousands of industry professionals.

Layout and design is included **FREE**, and we can fax or e-mail you a proof for final approval!

**Now Available In 4-Color Or Spot Colors**

*Choose a size that works best for you!*

**Call 1.800.994.7990**

**Size A: \$309<sup>00\*</sup>**

**1.875" W x 4.875" H**  
This size is great for two photos!

**Size B: \$209<sup>00\*</sup>**

**1.875" W x 3.2" H**  
Perfect size for one photo!

**Size C: \$109<sup>00\*</sup>**

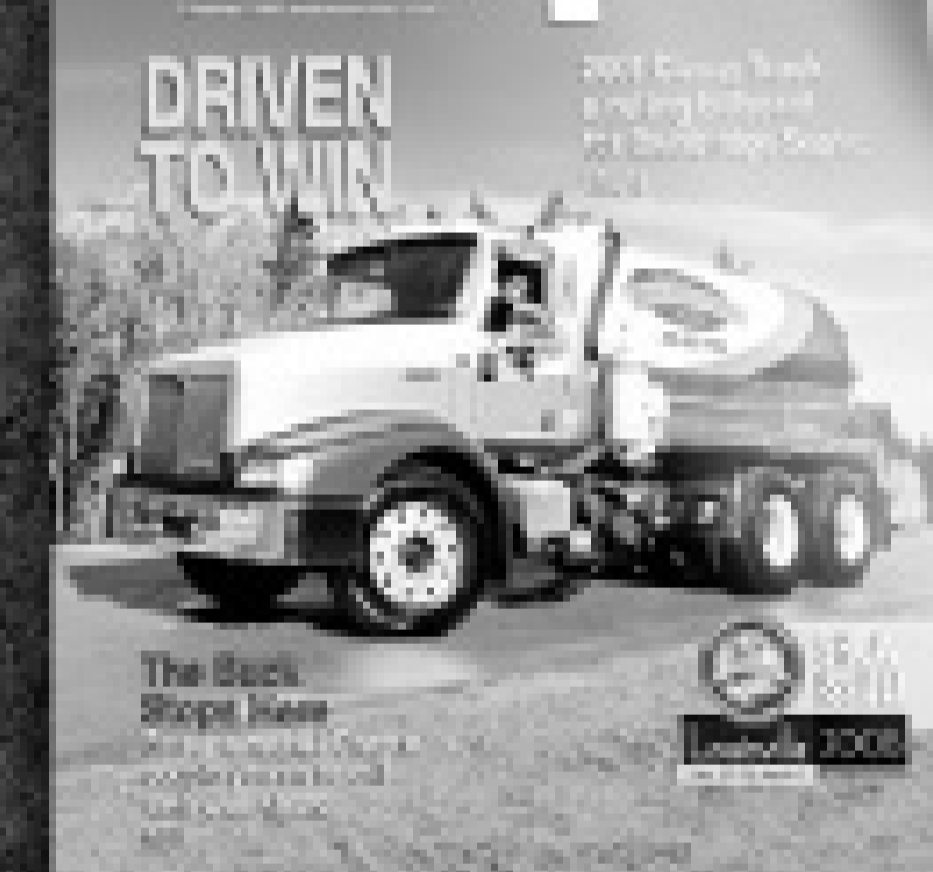
**1.875" W x 1.5" H**  
A great value!

\*Black and white prices, call for 4-color pricing.

Send ad materials and payment to:

**COLE PUBLISHING INC. • P.O. Box 220 • THREE LAKES, WI 54562**

**Pumper**



**Great Tips. Great Deals.  
Great Magazine.**

Turn the page and stay up-to-date on the latest products, equipment and information for your industry. Over 25,000 of your peers read Pumper each month for the unlimited knowledge it gives them. Each issue shows you new tools, tips to save on expenses, money-saving deals and much more.

Don't miss an issue - Subscribe today!  
Call 1.800.257.7222  
or go to **www.pumper.com**

30th Annual **February**

**24-27,**



**'10**

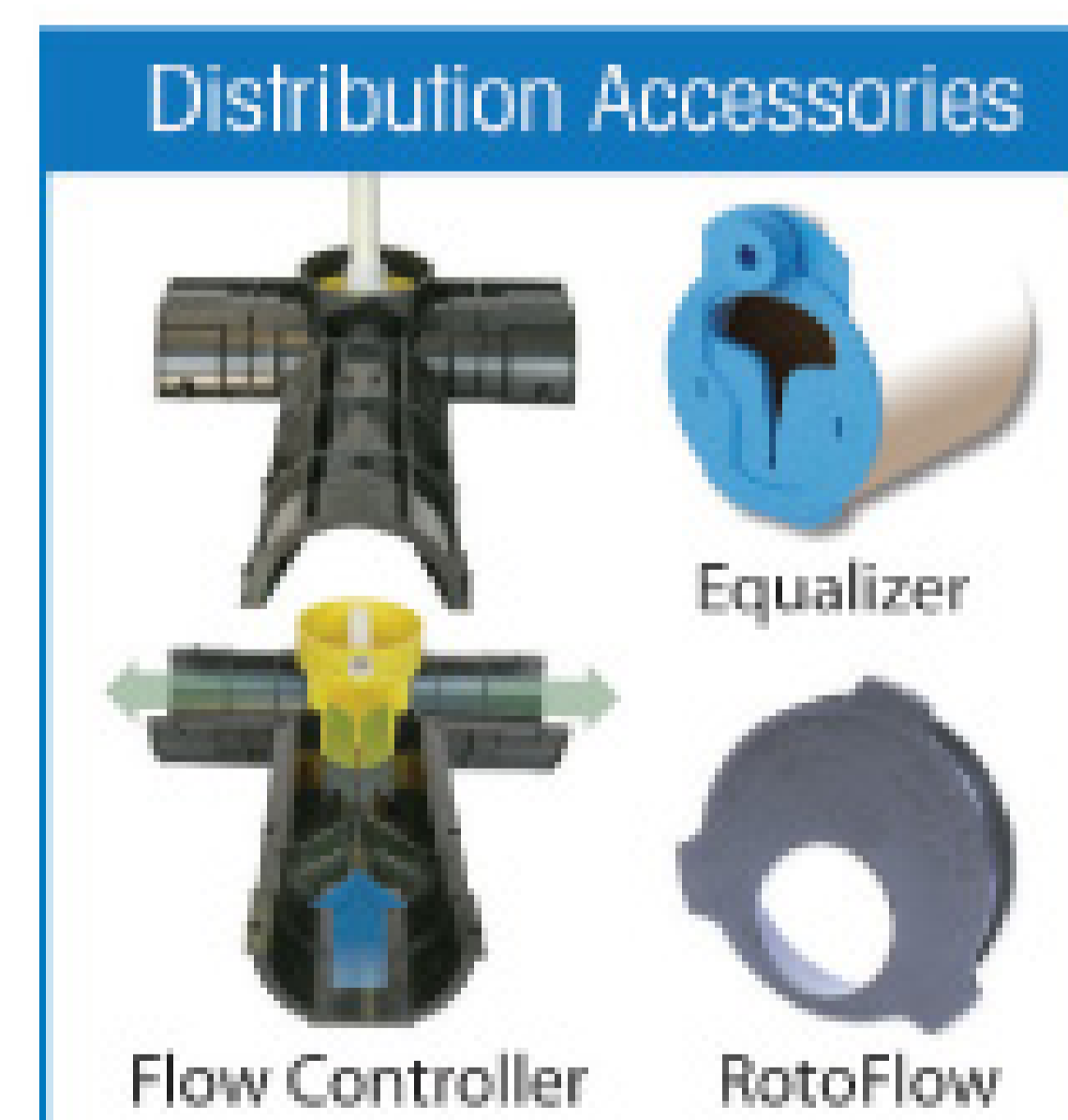
Kentucky  
Exposition  
Center

**www.PumperShow.com**

# The Clear Choice!



Engineers throughout the country are specifying the PL-525 for commercial and residential applications. The PL-525 extends the time between servicing with its patented shut-off ball and ability to accept a Smart Filter® Alarm. Our vast selection of accessories will help you in any application you come across. You will have piece of mind when you design or install a system with one of our filters inside. See for yourself why Polylok and Zabel are The Clear Choice!



See our complete line of Effluent Filters at [www.polylok.com](http://www.polylok.com)



3 Fairfield Blvd,  
Wallingford, Connecticut 06492  
1-800-701-3946 Fax: 203-284-8514  
email: [sales@polylok.com](mailto:sales@polylok.com)  
Web site: [www.polylok.com](http://www.polylok.com)