

"PERC-RITE®"

Onsite Wastewater Drip Dispersal Solutions

INNOVATIVE TECHNOLOGY FOR THE ENVIRONMENTAL AGE

~ Buy American ~



"Perc-Rite®" Drip Systems Protecting the Future of America



1-800-345-3132

American Manufacturing Company, Inc.
P.O. Box 97
Elkwood, VA 22718

MwM
Mountain Wastewater Management
A division of Soil Services Company, Inc.

Northcentral Pennsylvania Dealer
(570) 924-4696
www.mountainwastewater.com

"Perc-Rite®" ~ Setting the Industry Standard!

Why Drip Dispersal?

Drip Dispersal is a land application system for dispersal of wastewater effluent in decentralized environments. Drip utilizes time dosed, low volume, equally distributed doses over an entire absorption area while at the same time providing final treatment and recycle back into the environment. Drip provides optimum conditions for groundwater recharge to the receiving environment. It is ideal for any size system: single family homes, schools, churches, state parks, communities, commercial sites, etc. Drip systems are aesthetically pleasing and are installed subsurface utilizing the "out-of-site, out-of-mind" theory. Drip fields lend themselves to passive recreation with year round natural irrigation.

"Time dosed" systems provide for managing rest times between doses, peak flow notification, excess flow alarms and helps prevent soil saturation by maintaining an aerobic environment at the tubing interface. Drip is ideal for shallow installations, which maximizes the standoff to any site restrictions (i.e. rock, seasonal water table, etc.). Sloping sites and/or wooded sites are not a problem. Drip Dispersal is utilized in both warm and cold climates 365 days per year! Drip can reduce storage requirements and may offer a reduced area footprint compared to conventional systems. Drip is a reliable, proven *and* permanent option for *your* wastewater dispersal needs.

Why "Perc-Rite®" Drip?

The original drip technology! The world-renowned "Perc-Rite™" technology was the first drip dispersal system developed for use in wastewater applications. The "Perc-Rite™" Drip System is a complete wastewater dispersal system utilizing pressure compensating drip tubing, automatic disc filtration, automatic periodic forward field flushing and efficient effluent pumps with totalizing flow meter and state-of-the-art controls plus design standards for long term sustainable onsite wastewater installations.

The pressure compensating drip tubing allows for complete equal distribution of the effluent. Disc filtration provides the necessary protection for the drip emitters prior to the drip field. The disc filters automatically backwash at preset intervals.

The "Perc-Rite™" Drip System also automatically forward flushes the drip tubing on a periodic basis at the generally accepted engineering standard for minimum scouring velocity of 2.0 ft/sec. The "Perc-Rite™" System sets the standard for excellence in drip technology!

How much "Pretreatment" is required?

Primary settling is all that is required for the "Perc-Rite™" Drip technology. Drip dispersal is dependent on the soils and receiving environment, so specific site restrictions may dictate the quality and extent of any additional pretreatment that is required.

Why American Manufacturing?

With over 1 billion emitters installed in subsurface wastewater applications, "Perc-Rite™" is the largest *Drip System* name in North America. With American's in-house control panel fabrication we offer a single source complete "Perc-Rite™" Drip Dispersal System. We have over 100 years combined experience in the wastewater industry. Our technical support is first class and is unmatched. American continues to offer ongoing technical service even after the sale.



COMMUNITY SYSTEMS
The bigger the better!
The more cost effective!

All wastewater systems require long-term operation and maintenance, so American Manufacturing provides complete O & M manuals for both owners and installers. All of our drips system models are available with Remote Operation and Monitoring capabilities and long-term call in tech support. We are an engineering-driven company staffed with Professional Engineers, Soil Scientists and designers to keep us a leader on the cutting edge of technology. We strive to provide our customers with proven, durable, and dependable *complete* systems to satisfy even the toughest onsite needs. American "Perc-Rite™" truly is the finest Drip Dispersal System available.

AMERICAN



DRIP DISPERSAL SYSTEMS

RESIDENTIAL PERC-RITE®

PATENT NO. 5,200,065

PATENT NO. 5,984,574

PATENT NO. 6,261,452B1



Disperse Economically, Effectively, Permanently

**Innovative Technology
for the Environmental Age**

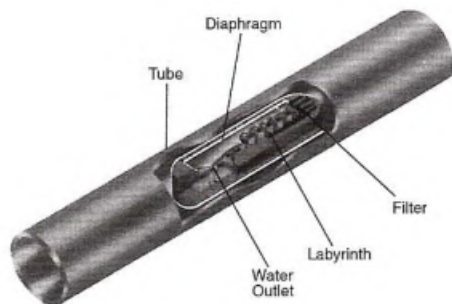
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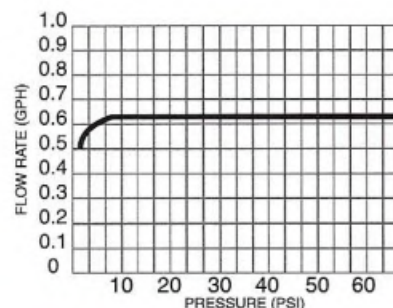
PERC-RITE® DRIP SYSTEM

The system control panel is equipped with four float switches and controls the timed doses to be discharged. The water level must be high enough to overcome the "Redundant Off" (Bottom) float in order for the pump to run. When the water level rises enough to overcome the "Dose Enable" (second) float and the timer is in a dose enable mode the cycle will initiate. The pump will activate and automatically backflush the disc filters then dose the lead zone. The pump will continue to run for the length of time as set on the pump run timer to provide a complete dose. The system will remain off until the preprogrammed time enters a new cycle enable mode, at which time the control will activate another cycle and dose the new lead zone (as long as the "Dose Enable" float is still up). This process will continue until the water level drops below the "Dose Enable" float and the pump run timer has timed out. Each zone will automatically receive a field flush each 25 cycles to clean the drip tubing.

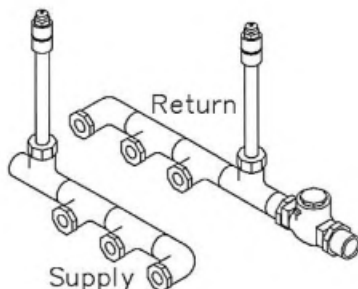
The control system is equipped with a peak enable circuit to manage peak flows and excess water use event. If the water level rises enough to overcome the "peak enable" (third) float and the peak enable selector switch is on, the system will be cycled at the peak (design) rate. The system will continue to cycle at an increased rate until the peak enable float is deactivated at which time the system will resume the normal dosing cycle. In the event the water level continues to rise enough to overcome the "High Level" (fourth) float, the audio/visual alarm will be activated. This condition alerts excess water use in addition to possible mechanical failures.



The construction of the "bioline" drip tubing is unique in that the internal diaphragm and labyrinth provided for an exact amount of effluent to be discharged from each of its emitters which are normally spaced at two foot intervals along the entire length. Each emitter maintains a constant flow over pressure ranges of 7 to 70 psi. Because the effluent is distributed at an ultra low rate, large quantities of effluent may be economically distributed over large areas during controlled periods of time without saturating the surrounding soil.



For slopes over 10%, systems must be designed with top feed manifolds to control draindown after the pump shuts off.



TOP FEED MANIFOLD

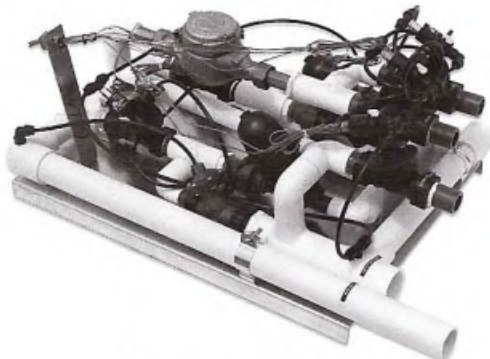


DRIP TUBING

for WASTEWATER DISPERSAL

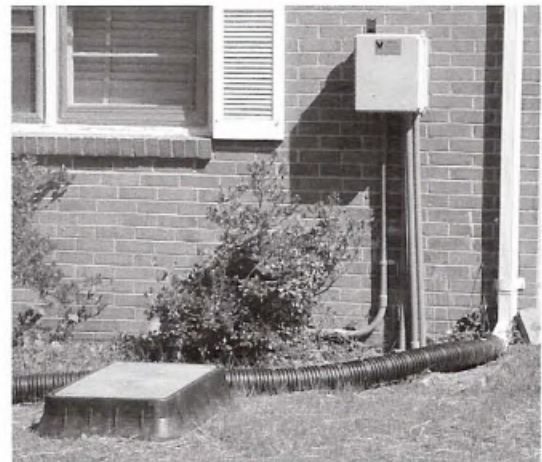
AIR & VACUUM RELEASE

The dual action air release valve vents air out of the piping network during filling and as important, allows air out of the system after the pump shuts off. Air release valves are provided with the zone return kit for each zone.



HYDRAULIC UNIT

Disc Filtration - The submersible pump delivers unfiltered effluent to the unit. The filter backflushing schedule is triggered at the beginning of each dose cycle. One filter valve closes, thus blocking the flow of unfiltered effluent to that filter thereby backflushing the unused filter. The accumulated impurities discharge back into the pretreatment unit. The closing and opening procedure of the filter and back flush valves causes a change of flow within the unit to provide filtered water from one filter to backflush the other.

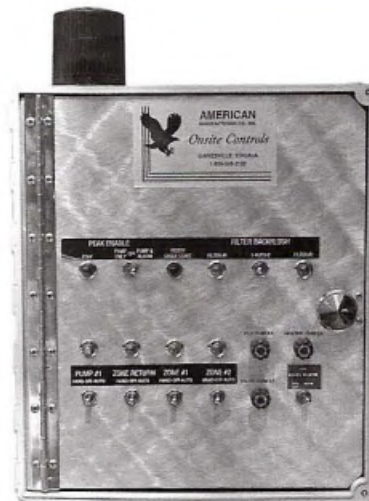


**HYDRAULIC UNIT
AND
CONTROL INSTALLATION**

OPERATION AND MAINTENANCE

The **Perc - Rite®** drip dispersal system provides a user friendly operator interface with no programming skill necessary to operate system. The only thing that varies is the run time. Each mechanical component has a H-O-A switch (Hand-Off-Auto) which can be used to check component operation.

Dialers and remote monitoring are available at additional cost. Data acquisition through a hand held computer device can collect substantial operational data. Please check our web site for more details.



SIMPLEX CONTROLS

Three or four float simplex or duplex controls provide duty rated contactors and efficient operator interface.

American Manufacturing Company, Inc. manufactures many specialty Onsite

Wastewater Products including the **Bull Run™ Valve, Dial-A-Flow™, Distribution Boxes, Accessories and Controls.**

American also supplies as an Original Equipment Manufacturer (OEM) many other products unique to the Onsite industry.



**AMERICAN
MANUFACTURING
Company, Inc.**

www.americanonsite.com

featuring... **Bull Run Valve™
Dial-A-Flow™
Perc-Rite® drip equip.
Timer Controls**



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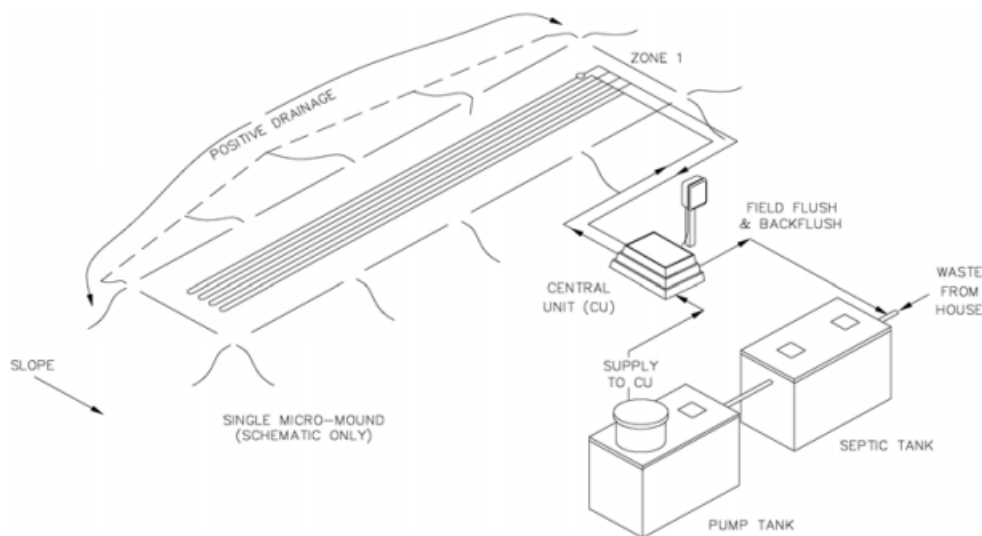


AMERICAN PERC-RITE®



NEW! RESIDENTIAL DRIP MICRO-MOUND APPROVAL:

The Perc-Rite® system features competitive DISC filtration, automatic zone dosing, automatic field flushing and flow measurement for long term serviceability.



NEW!

**Septic Tank Effluent
Allowed
Low Profile Install**

MWM

Mountain Wastewater Management
A DIVISION OF SOIL SERVICES COMPANY, INC.

324 HILL ROAD
FORKSVILLE PA 18616
P 570-924-4696
F 570-924-3407
WWW.MOUNTAINWASTEWATER.COM

PERC-RITE® DRIP SYSTEM PRIMARY (SEPTIC) EFFLUENT APPROVAL

The **Perc-Rite® Drip System** is a unique fluid handling system for dispersal of effluent wastewater in soil systems. The system incorporates filtration, time and level controlled application and ultra low rate drip distribution. In conditions where aerobic dispersal to drip could not be used in Pennsylvania, this system offers a unique method for subsurface distribution of the waste water effluent.

The Pennsylvania **Micro-Mound™ approval** used with the **Perc-Rite® Drip System** will accommodate shallow soil installations with a low profile mound for a more aesthetic installation. Local soil and site conditions may require additional treatment for excessive organics, oil and grease or other contaminants.

Google Search: American Onsite Designer's Guide CalcTools
Select: PA MICROMOUND

APPROVAL FEATURES:

- SEPTIC EFFLUENT OR SECONDARY
- LOW PROFILE MOUND
- 10" VERTICAL SEPARATION TO WATER TABLE
- 16" VERTICAL SEPARATION TO ROCK
- UP TO 15% SLOPE
- CALC TOOL DESIGN ASSISTANCE

To Order Call: (800) 345-3132

www.americanonsite.com

American Manufacturing will design and build most any onsite wastewater or water system controller that is typically used today. American Manufacturing becomes involved with the entire operation of the system whether potable water, process water, or wastewater. American has on-staff Professional Engineers, designers, soils scientists, and trained sales personnel with state-of-the-art experience in control systems. We provide complete design support for most any Drip Dispersal Application

Our objective is to provide the most practical, economical, and efficient system control devices for fluid handling. We inventory many standard application controls and are able to manufacture special application panels in a very timely manner due to our modular design.

AMERICAN MANUFACTURING COMPANY, INC.

P.O. BOX 97 Elkwood, Va. 22718

1-800-345-3132

Questions or comments: Email us at american@americanonsite.com or call (800) 345-3132

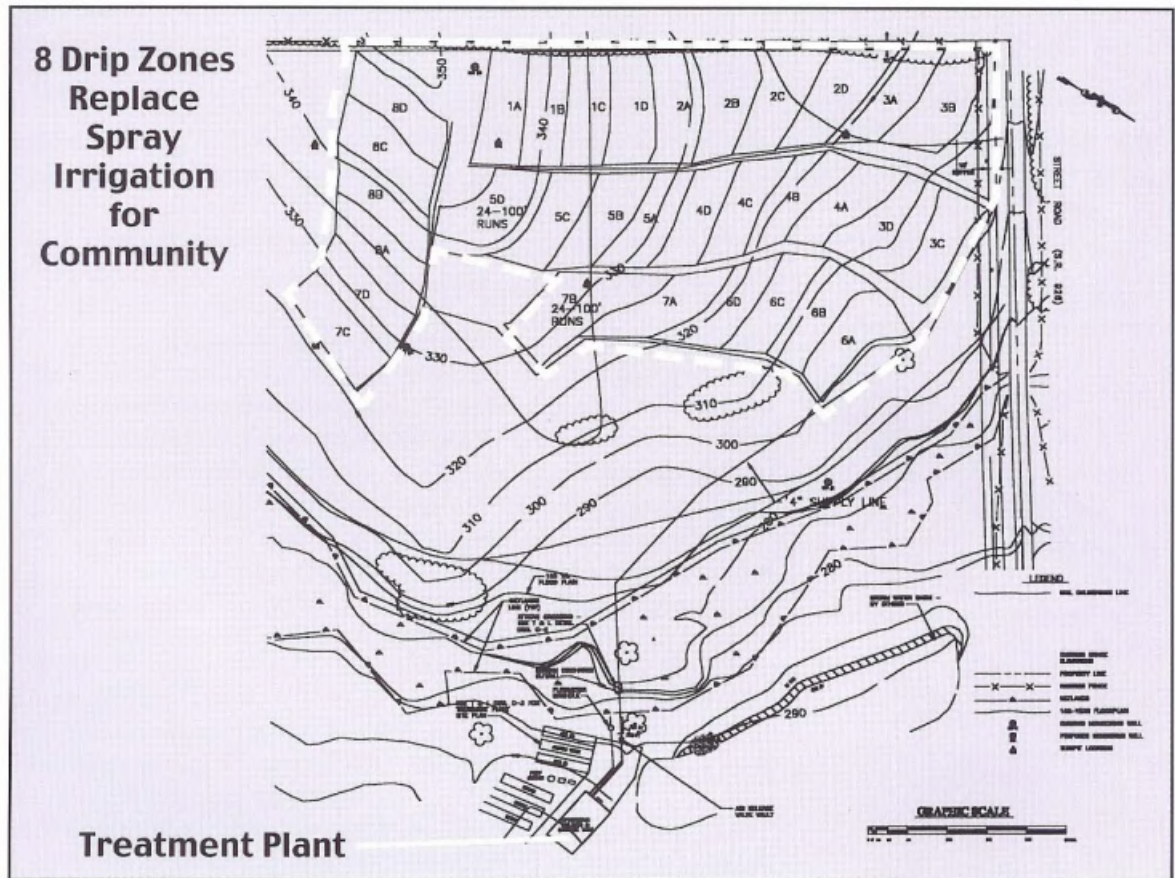
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PERC-RITE® DRIP DISPERSAL SYSTEMS

LAND APPLICATION for ONSITE WASTEWATER

Disperse Economically, Effectively, Permanently



ELIMINATE SPRAY ♦ REDUCE STORAGE ♦ REDUCE BUFFERS

**Innovative Technology
for the Environmental Age**

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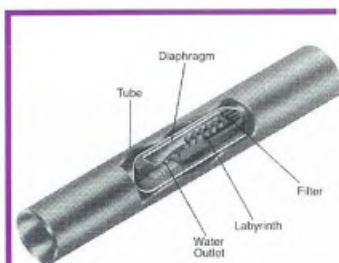
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PERC-RITE® DRIP SYSTEM OPERATION

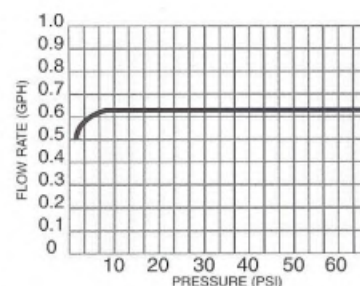
The system control panel is equipped with three float switches and controls the timed doses to be discharged. The water level must be high enough to overcome the "Redundant Off" (Bottom) float in order for the pump to run. When the water level rises high enough to overcome the "Dose Enable" (second) float and the timer is in a dose enable mode the cycle will initiate. The pump will activate and automatically backflush the disk filters, then dose the lead zone. The pump will continue to run for the length of time as set on the pump run timer to provide a complete dose. The system will remain off until the preprogrammed off timer enters a new cycle enable mode, at which time the control will activate another cycle and dose the new lead zone (as long as the "Dose Enable" float is still up). This process will continue until the water level drops below the "Dose Enable" float and the pump run timer has timed out. Each zone will automatically receive a field flush each 50 cycles to clean the drip tubing.

If the water level rises enough to overcome the "High Level" (third) float, the audio/visual alarm will be activated until silenced by pressing the Test-Normal-Silence switch to the silence position. The alarm circuit must be manually reset when the "High Level" float returns to its normal position.

PRESSURE COMPENSATING DRIPPERLINE FOR WASTEWATER



The dripperline for wastewater is used for both surface and subsurface effluent disposal and recharge. American uses the perfect hydraulic delivery system, considered to be the world's most accurate pressure compensating dripperline. The patented self-flushing, free-floating diaphragm cleans itself during operation. The drippers are located every two feet in the 1000 foot rolls and provide 0.61 gallons per hour per emitter. In most applications the tubing is placed two feet on center providing one emitter for every four square feet of total area.

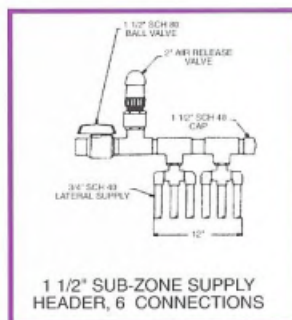


ZONE CONTROL VALVE

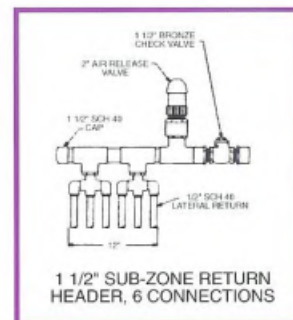
This solenoid activated diaphragm valve is engineered to perform reliably under the most challenging conditions. All valves use direct sealing diaphragms and are constructed with minimal parts - no stem, seals, or bearings. The unique structure of these valves allows a straight flow pattern with very low friction loss.

SUPPLY MANIFOLD, RETURN MANIFOLD

For slopes greater than 10%, systems must be designed with top feed supply and return manifolds. These manifolds control "draindown", the event that occurs which overloads the lower laterals in a zone after the pump shuts off. The manifolds control the amount of water that can drain into each individual lateral.



SUPPLY MANIFOLD



RETURN MANIFOLD

Patent No. 5,984,574

AIR RELEASE & VACUUM VALVE

The new dual function "Guardian" is corrosion resistant made of fiberglass reinforced U.V. protected nylon. Maximum working pressure 150 psi. Drip tight sealing at low pressures.

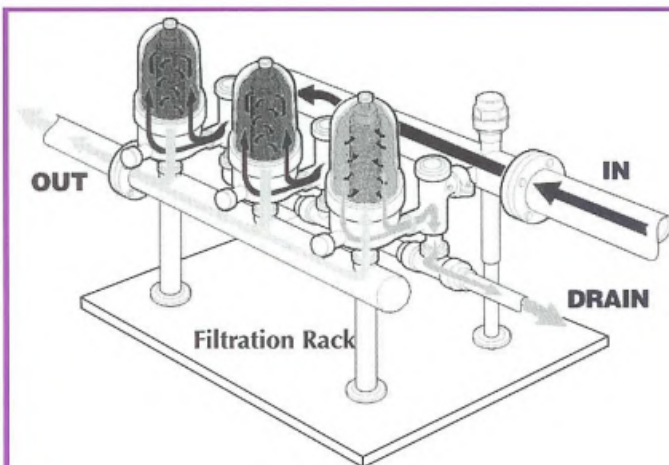


DISC FILTRATION

Disc Filtration is an innovative approach to solids removal from liquids. The unique structure allows for high efficiency filtration, low backwash volume, and reusable elements. The discs are flat, grooved plastic rings with a hole in the center. Rings are stacked together to form a cylindrical filter element. As effluent is pressurized into the filter, it compresses the rings tightly together. The grooves in the rings criss-cross, forming a network that traps the solid particles which are larger than the grooves. Filtered liquid exits from the inside of the cylinder providing reliable operation. Disc filters come in a full range of sizes and capacities for the various size systems.

Wastewater for Drip Dispersal is filtered with a mesh size of 140. This provides a 115 micron maximum size particle in the filtrate. When used with the Pressure Compensating emitter, the filtration ration is 6:1. This ratio amounts to placing a baseball through a basketball hoop. The emitters will not plug from particles coming through the filter system.

Backflushing of the filters is performed automatically on a time cycle basis or on larger systems with pressure drop. The filtration system is designed to take filtered effluent from one or more filters and use it for backflushing the other. Filtration systems used in commercial applications employ "spin-clean" filters which automatically separate the discs during backflush to allow them to spin to more efficiently and remove retained solids particles for the discs.



DRIP DISPERSAL CONTROL SYSTEM

American Manufacturing becomes involved with the entire operation of the system whether RESIDENTIAL, COMMERCIAL, or COMMUNITY wastewater system. American has staff professional engineers, designers, soils scientists, and trained sales people with State-of-the-art experience in drip system control.

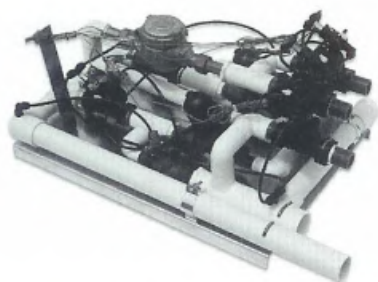
Our objective is to provide the most practical, economical, and efficient operating system for fluid handling. We inventory many standard application controls and are able to manufacture special application panels in a very timely manner due to our modular design and manufacturing methods.

Remote Operation & Monitoring with graphics interfaces are available and required on large systems. American's Engineering Catalog, Service Guide, Internet access Model Number builder and more are available to the designer/specifier.

Community Filtration & Control System



PERC-RITE® RESIDENTIAL DRIP DISPERSAL



RESIDENTIAL FILTRATION UNITS are available in two, three, and four zone and 15 gallons per minute capacity. Total daily flows to 2500 gallons per day.



RESIDENTIAL CONTROLS provide user friendly operator interface with no programming skill requirements.



TUBING — Pressure compensating drip tubing 0.6 gph, the perfect distribution system

American Manufacturing Company, Inc. manufactures many specialty Onsite Wastewater system packages including **Recirculating Sand Filter Treatment** components, **Pump Station Equipment**, and state-of-the-art **Drip Disposal Systems**. **Remote Operation and Monitoring Systems** for conventional large system drainfields and **High Strength Waste Management**.

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