



norweco[®]
SUBSURFACE DRIP
DISPOSAL SYSTEM

SUBSURFACE DRIP



INCREASE EFFLUENT DISPOSAL OPTIONS WITH PROVEN PERFORMANCE...

Now even properties with marginal soils can be economically developed using Norweco wastewater treatment systems and drip disposal technology. Engineered to uniformly apply treated effluent below the surface of the ground, drip distribution relies on proven techniques originally developed for agricultural irrigation. This method of pressure distribution is well suited for all types of subsurface wastewater disposal systems, as treated effluent is delivered directly to the infiltration surface. The unique features of drip disposal increase the options available for onsite treatment system design. USEPA and environmental protection agencies throughout the world have determined that subsurface drip disposal is a reliable and efficient method of effluent distribution. Even the most difficult sites can be utilized by taking advantage of gradual soil absorption, nutrient uptake by vegetation and evapotranspiration.

ONE INTEGRATED CONTROL CENTER, PRE-WIRED FOR AUTOMATIC OPERATION OF ALL SYSTEM COMPONENTS...

All system controls are integrated to combine breakers, alarms, timers, aerator circuitry, pump wiring and control switches into one lockable, weatherproof enclosure. Consolidating all electrical controls into a single UL listed enclosure eliminates the need for separate control panels and simplifies installation. Aerator and pump timers provide maximum flexibility for system operation, while audible and visual alarms clearly identify high water conditions. Operation of the pump is controlled throughout the day by an electronic timer that insures a precise amount of effluent is evenly dosed to the drip field. Timed dosing fully utilizes the hydraulic conductivity of the soil and is critical to the proper operation of a drip disposal system.

RELIABLE HB105 PUMP DESIGNED SPECIFICALLY FOR HIGH PRESSURE APPLICATIONS...

Manufactured from the finest materials and electrical components, the Norweco Model HB105 pump is designed to handle treated wastewater in high head effluent disposal applications. UL and CSA listed, this 1/2 horsepower, 3450 RPM submersible pump operates on 115 volt, single phase electrical power and is able to deliver 20 gallons per minute (GPM) at 30 pounds per square inch (psi). The stainless steel motor housing resists rust and corrosion, assuring exceptional operating life in a demanding environment. A dual action start switch provides automatic torque reversal to clear the impeller, while an electrical overload protector causes the pump to cease operation should an overload condition occur. The pump is equipped with a 10 foot long, 14-3, jacketed, type SJOW motor power cord.



FEATURES AND ADVANTAGES OF DRIP DISPOSAL

Homeowner or User

- Reliable and economical
- Installation does not harm trees or landscaping
- No unsightly mounds in yard
- Pump and alarm test switches simplify service

Engineer or Designer

- Solves limited area and soil problems
- Can be used in freezing conditions
- Reduced footprint over gravity drainfields
- Allows development of marginal lots
- Single home, community or commercial systems
- Design calculations and drawings available

Professional Contractor

- Flexible and easy to install
- Adaptable to lot shape and ground contours
- No hauling of sand or gravel
- Easily programmed for automatic operation
- Installation by trenching machine or vibratory plow

Health Officials and Community

- Works better than conventional disposal systems
- Pressure compensating emitters for uniform distribution
- Allows effluent re-use for landscape irrigation
- Optimum conditions for groundwater recharge
- Installation and service by factory-trained experts

DISPOSAL SYSTEM

Headworks Assembly



The headworks assembly includes an enclosure, lid, supply and return line connections, disc filter, three pressure monitoring valves and a flush valve. The enclosure and lid are manufactured from synthetic polymer that includes UV inhibitors to protect structural integrity. Designed for direct burial at grade, the enclosure can safely handle a 500 pound live wheel load. Schrader valves are installed upstream and downstream of the disc filter to indicate when filter service is required. A third Schrader valve is installed upstream of the flush valve to monitor operating pressure. The flush valve is installed in the return line for operational adjustments and routine service of the system.

Disc Filter



The disc filter contains 100 micron grooved rings that screen out debris and protect the drip field from any solids remaining in the effluent. Capable of handling flows up to 22 gallons per minute, the filter cartridge can be easily removed, cleaned and reinstalled when service is required.

Schrader Valves

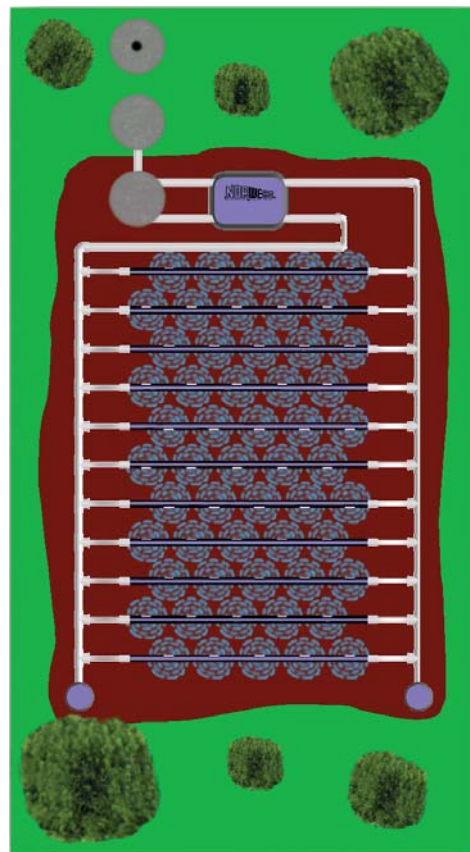


Designed to be connected to a liquid pressure gauge during system start-up and service, the Schrader valves allow system operating pressure to be accurately monitored.

Drip Emitter Tubing



At the heart of the drip disposal system, this linear low density polyethylene tubing delivers treated effluent to the disposal area. Turbulent flow emitters, bonded to the inside wall, are spaced 24 inches apart for consistent effluent dosing to the disposal field. The interior of the tubing is coated with an antimicrobial agent that inhibits biological growth and extends system life.



Drip Field Valve Enclosure

The drip field valve enclosure is used in each supply line and return line to provide a secure housing for the air/vacuum relief valves. The enclosure can also be used to house an optional zone indexing valve. Suitable for burial at grade, the drip field valve enclosure and lid are manufactured from low density polymer resin that includes UV inhibitors to protect structural integrity. This open-bottom enclosure and matching lid are available in six inch and ten inch diameter, and are colored purple if required, designating a source of non-potable water. When extreme cold weather conditions are anticipated, the drip field valve enclosure can be insulated to protect the air/vacuum relief valve or zone indexing valve from freezing.



Effluent Emitter

Turbulent flow path emitters assure uniform distribution by delivering 1.0 gallons per hour per emitter to the soil. The pressure compensating design equalizes flow even on sloped or rolling terrain.

Drip Disposal Fittings

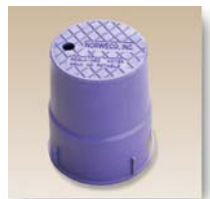


All fittings and connectors are specifically designed for use with drip emitter tubing and are molded from high strength polymer resin. The flexible connectors simplify tubing connections and drip field assembly.

Air/Vacuum Relief Valves



One relief valve is installed in the drip field at the highest point in the supply line and one relief valve is installed at the highest point in the return line. The valves provide temporary air relief during field pressurization and continuous vacuum relief during field evacuation.



OTHER EQUIPMENT FROM NORWECO



SINGULAIR® HOME TREATMENT PLANTS

Individual home wastewater treatment systems for use in non-sewered suburban and rural areas. Norweco SINGULAIR plants automatically reduce all household wastewater to a clear, odorless effluent in just 24 hours. Treatment capacities up to 1,500 GPD.

MODULAIR® WASTEWATER TREATMENT PLANTS

For semi-commercial applications - 1,500 to 100,000 GPD. Tanks are precast concrete covered with galvanized metal grating. MODULAIR equipment is factory assembled and tested. Ideal for small subdivisions, factories, schools, shopping centers, etc.

TRAVALAIR® WASTEWATER TREATMENT PLANTS

Featuring Norweco's exclusive TRAVALAIR sludge return and surface skimming system. Flexible in design - capable of serving communities of 10,000 people. Automatic sludge collection and return completely eliminate hopper scraping.

BIO-KINETIC® WASTEWATER MANAGEMENT SYSTEMS

The solution to managing onsite treatment system performance that makes any septic system, tile field or filter bed work better and last longer. Protects sand filters, mounds, irrigation systems, constructed wetlands or any effluent disposal device. Treatment capacities up to 2,000 GPD.

EASY TO DESIGN, INSTALL AND MAINTAIN FOR RELIABLE OPERATION...

Subsurface drip disposal systems are specifically engineered for each site by a design professional and are constructed in compliance with local rules and regulations. Drip emitter tubing is installed in shallow, narrow excavations using a trenching machine or vibratory plow so that existing trees and vegetation are not disturbed.

Drip disposal fields are adaptable to irregularly shaped lots or difficult site constraints. The shallow depth at which the drip emitter tubing is installed allows more of the soil to be used for treatment. The controlled manner in which effluent is distributed allows the use of marginal soils and land that would not be suitable for development using conventional wastewater disposal methods.

Drip distribution systems should be maintained by a trained service technician. Performing routine service insures that all components operate at peak efficiency. When properly maintained, Norweco subsurface drip disposal systems will provide effective and reliable service for the operational life of approved secondary treatment systems.

EQUIPMENT PACKAGE AND COMPONENTS BACKED BY A COMPREHENSIVE LIMITED WARRANTY...

Norweco drip disposal equipment is designed, manufactured and tested to provide the most effective performance for domestic wastewater applications. System owners, installing contractors and service providers can be assured that all components are constructed to maximize the operational life of each system and provide years of trouble-free service.

Drip disposal system equipment is warranted against defects in material and workmanship under normal use and service for a period of two years from the date of purchase. The Norweco limited warranty provides secure, single-source protection and covers all components of the subsurface drip disposal system, including headworks assembly, disc filter, valves, pump, integrated system controls, drip tubing, fittings and enclosures.

Detailed warranty and service information are available from your licensed, factory-trained Norweco distributor, authorized dealer or service provider.

norweco®

*Engineering the future of water
and wastewater treatment*

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