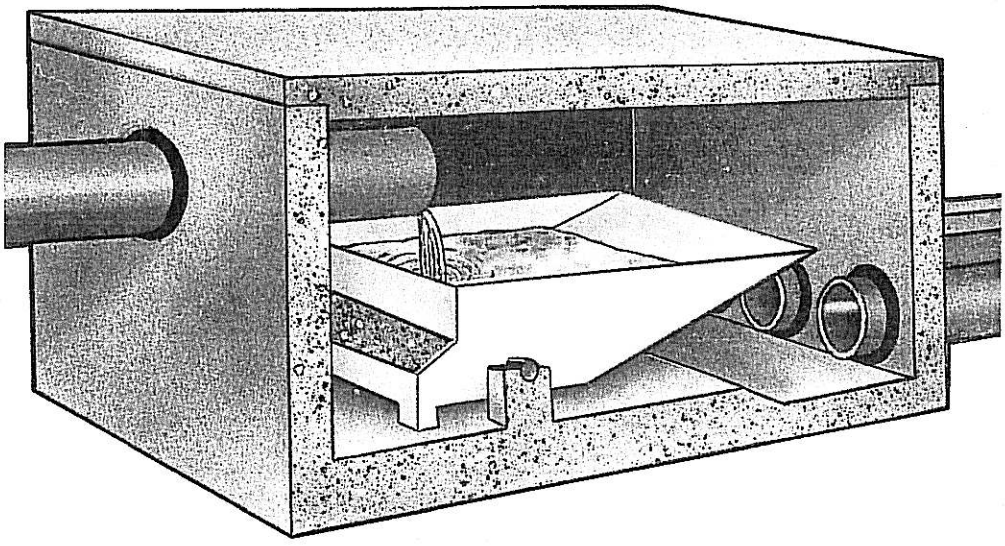
# POLYLOK'S DIPPER
## THE INNOVATIVE ANSWER TO THE TRICKLE DOWN EFFECT

## POLYLOK'S DIPPER BOX GUARANTEES UNIFORM, EQUAL DOSING FOR LEACHING SYSTEMS.

## INSURES EQUAL DISTRIBUTION

because it's designed on the basic pivot and balance principle. The system works uniformly instead of the trickle effect by providing equal flow distribution to each outlet.



## INSURES EQUAL DISTRIBUTION

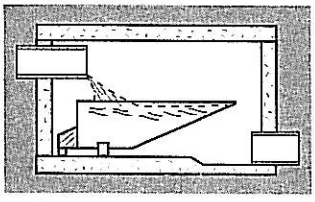
- Automatically discharges 1.5 gallons of retained effluent from the storage tray because it's designed on the basic pivot and balance principal.
- Makes system work uniformly instead of the trickle effect by providing equal flow distribution to each outlet.

## INCREASES LONGEVITY

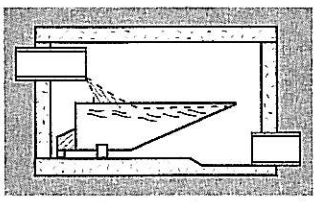
- Provides indefinite life expectancy for septic systems.
- Laboratory tested to last a minimum of 25 years without failure.
- Maintenance free.
- Minimal Added Cost.

## INSTALLATION

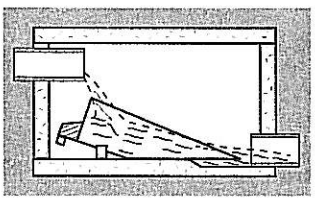
- As simple to install as any D-Box



**1.**The *Dipper* in its upright position filling up at a slow rate with effluent from the Septic Tank.



**2.** When the *Dipper* has retained 1.5 gallons of effluent it will automatically discharge and equally dose the system in 1.5 seconds.



**3.** Dipper ready to start the next cycle.

***Polylok's Dipper is easily installed in any septic system. Whether existing, new, failed, reclining or flat - the action of the Dipper allows the entire system to work uniformly - replacing the trickle effect, which forces the entire septic system to fail. For a small increase why put your customer in jeopardy. Insist on the DIPPER.***

For more information, call: **1-877-765-9565**

**FOR ADDITIONAL INFORMATION ON ANY PRODUCT, OR PRINTED MATERIAL CALL OUR TOLL FREE NUMBER LISTED BELOW.**

**° EQUALIZERS ° BAFFLE READY PIPE SEALS ° EFFLUENT FILTERS ° BAFFLES ° GAS DEFECTORS ° STAINLESS STEEL SCREW NAILS ° DIPPER SETS ° ADAPTER PLUGS ° RAIN DRAIN GRATES ° LIFT HOLE PLUGS ° STEEL MOLD'S FOR: THE DIPPER BOX, D-BOX /RAIN DRAIN CUSTOM D-BOXES ° STEEL CLAMPS, LARGE & SMALL ° CUSTOM ENGRAVED SIGNS ° HANDLES: RECESSED HINGED OR STATIONARY ° WARNING SIGNS ° CUSTOM SIGNS ° SAFETY CAPS FOR REBAR ° PL-122 EFFLUENT FILTER SYSTEM**

CERTIFIED PLANT

A Precaster Working For Precasters.

POLYLOK™ Inc.

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Web site: **www.polylok.com**

U.S. Patent # 4,838,731
Other Patents Pending

UNITED CONCRETE PRODUCTS

POLYLOK™ Inc.

*Innovations in Precast, Drainage & Wastewater Products*

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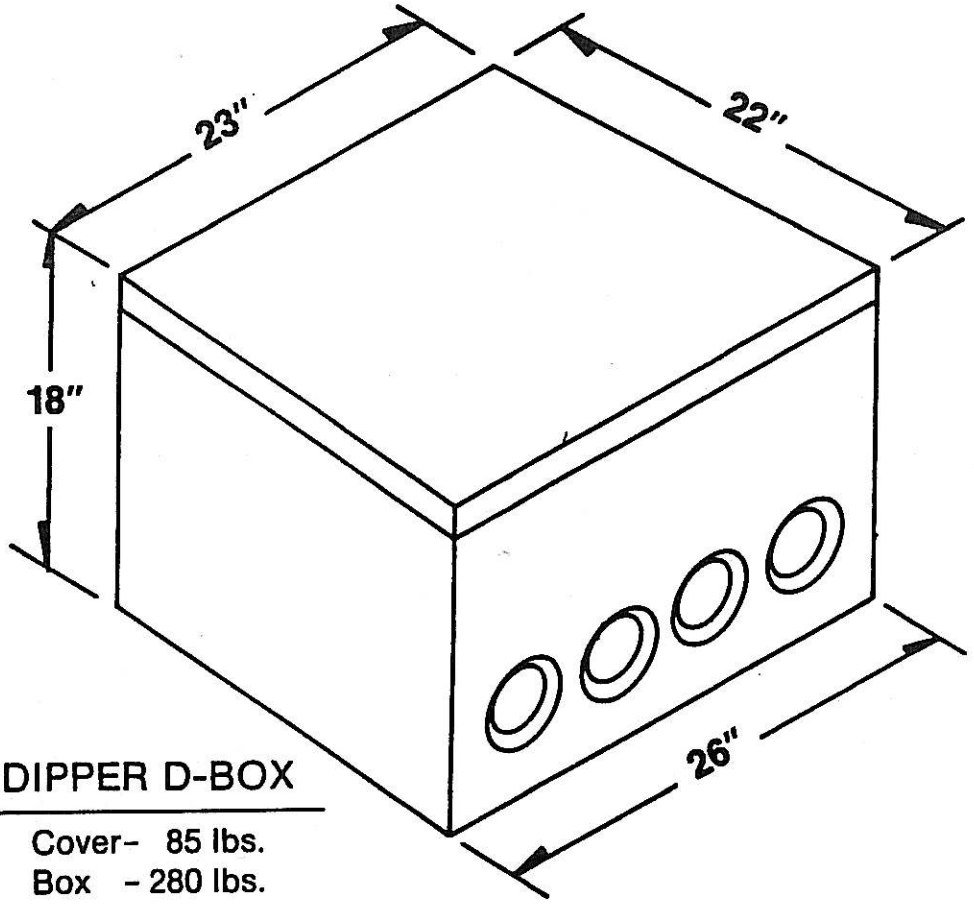
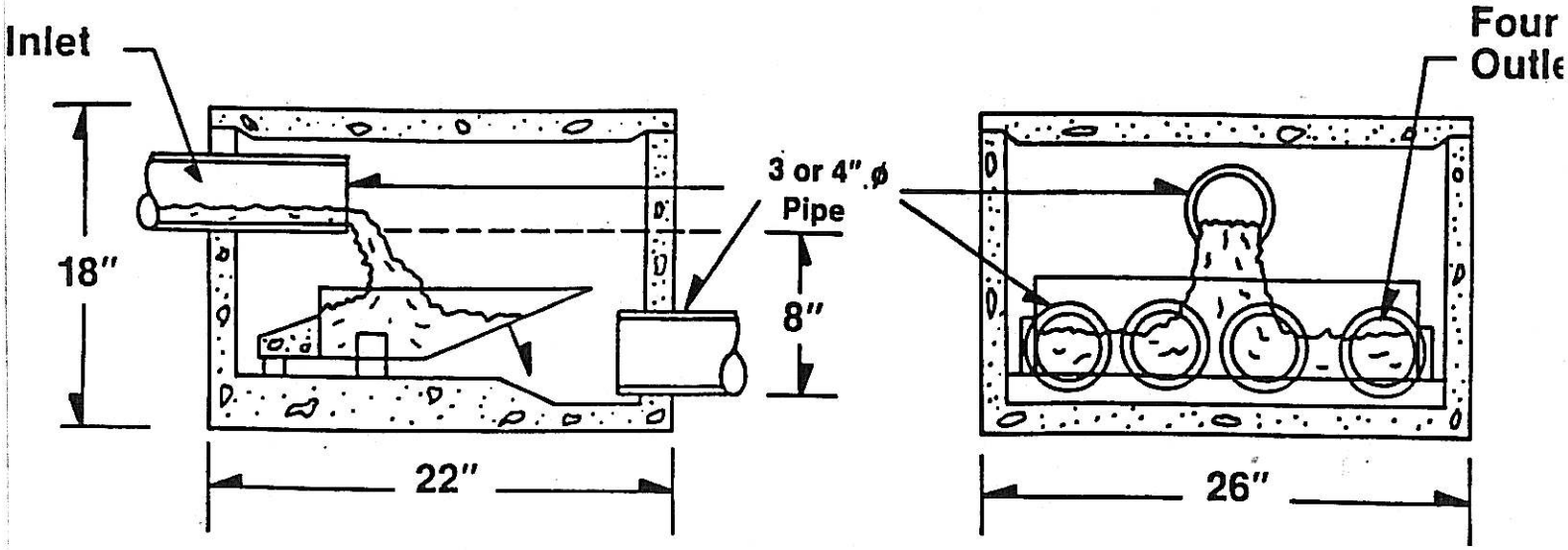
# Polylok Dipper Mold Information




**DIPPER D-BOX**

Cover- 85 lbs.
Box - 280 lbs.




**Side View** **End View**

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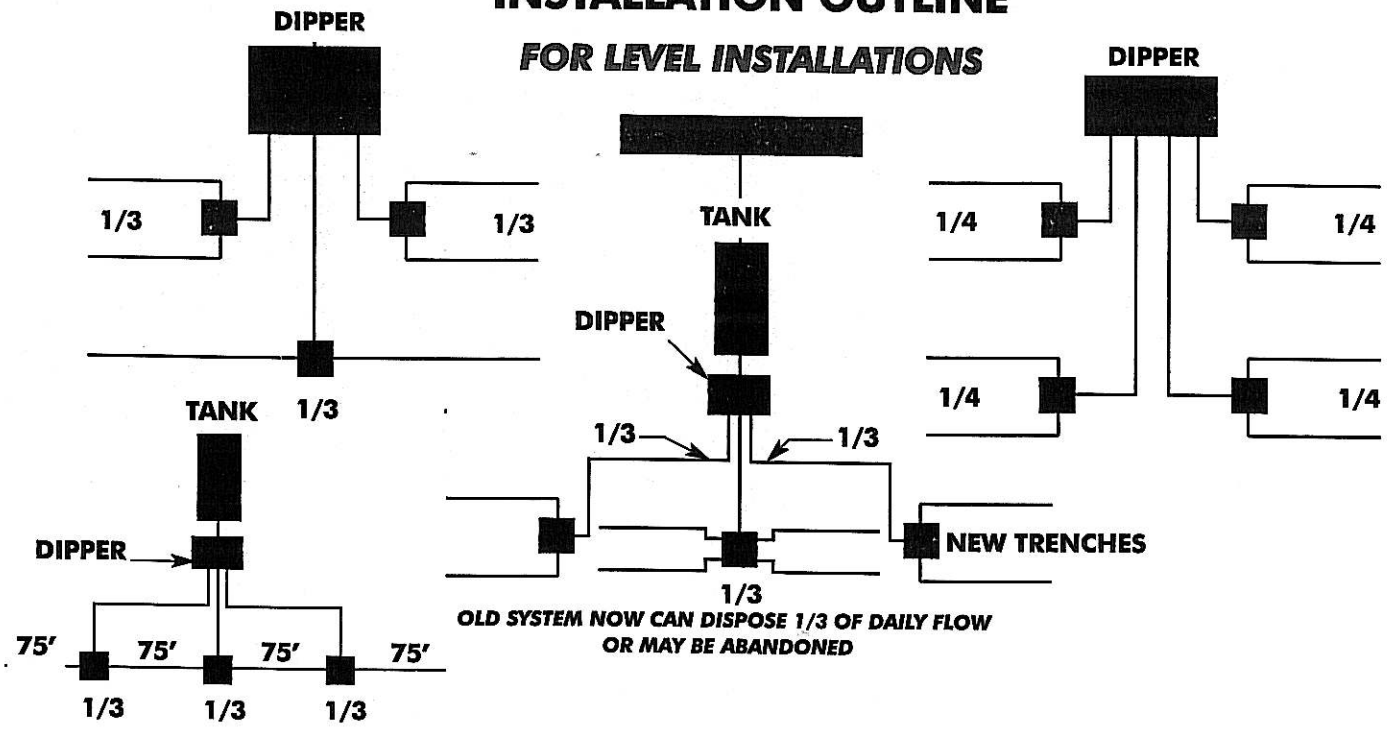
# POLYLOK'S DIPPER

## THE INNOVATIVE ANSWER TO THE TRICKLE DOWN EFFECT

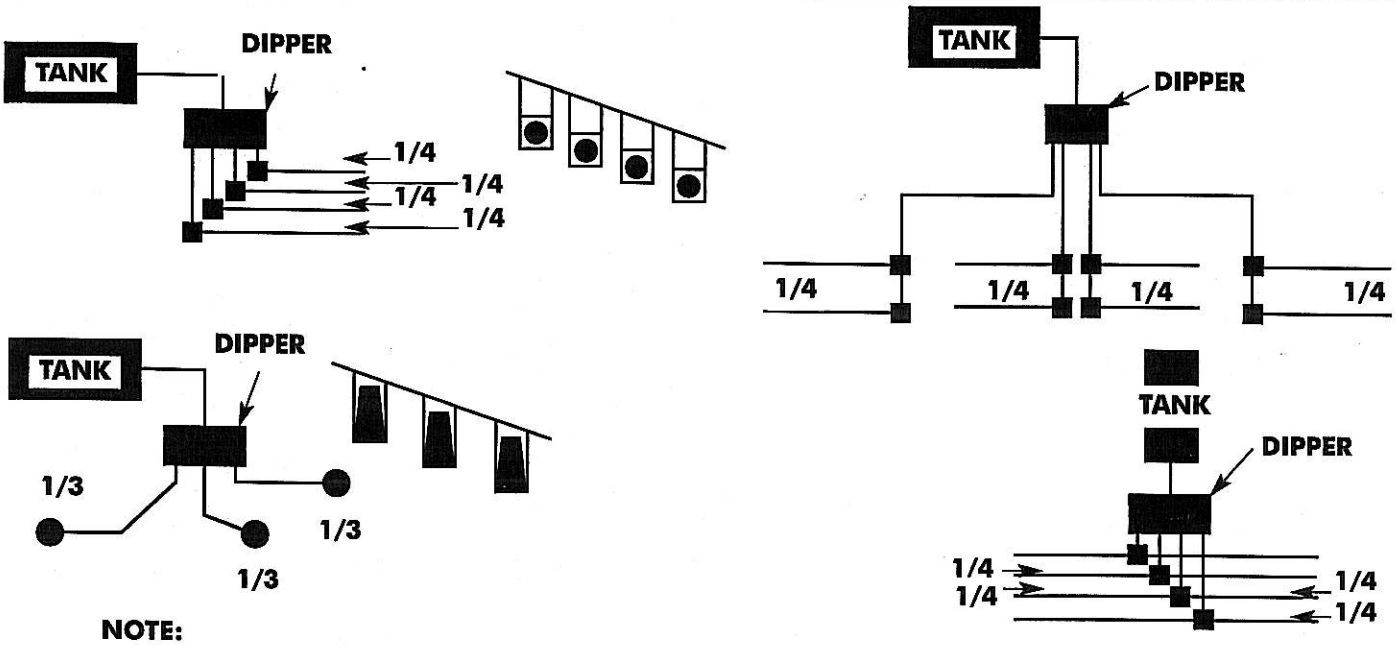
## INSTALLATION OUTLINE

### *FOR LEVEL INSTALLATIONS*



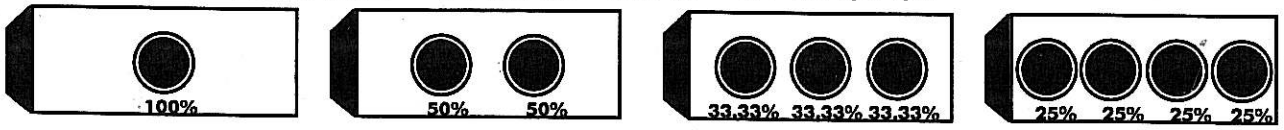

*OLD SYSTEM NOW CAN DISPOSE 1/3 OF DAILY FLOW OR MAY BE ABANDONED*

## *INSTALLATIONS ON SLOPES*




**NOTE:**

***2 PIPES*** = 50/50 ***3 PIPES*** = 1/3 1/3 1/3 ***4 PIPES*** = 1/4 1/4 1/4 1/4




1. MAKE SURE YOU HAVE 8" MINIMUM PITCH BETWEEN TANK OUTLET AND DIPPER OUTLET.
2. DURING INSTALLATION IT IS NECESSARY TO MAINTAIN EQUAL LEACHING AREA PER OUTLET PIPE, WHETHER IT BE 2, 3, OR 4 PIPES
3. AFTER INSTALLATION MAKE SURE INLET PIPE DOES NOT INTERFERE WITH DIPPER ACTION

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# Polylok Dipper Mold Information

At the present time, effluent discharged from septic tanks is commonly applied to leaching systems utilizing gravity flow. This effluent is generally directed through standard distribution boxes and applied to leaching systems in one of several manners. The leaching systems are laid out so that the liquid is applied to the soil some distance from the tank for dispersal by trenches, beds, pits, galleries or other land application methods. Normal flows through septic tanks typically cause liquid to discharge at a very slow rate of flow sometimes refered to as "trickle" flow. This is due to the quelling effect of the large liquid filled septic tank which is barely impacted by frequent applications of small discharges generated by residential and commercial water use fixtures.

The "DIPPER" is significantly different from present methods of effluent application because it provides a cost effective means for applying effluent to several separate leaching areas or systems by dosing 1.5 gallons of liquid in a distribution box with multiple outlets. This is far superior to standard gravity flow for leaching systems constructed on both level areas and on slopes. Gravity flow to leaching systems in level areas is normally achieved through a distribution box with all pipes set at the same elevation. Liquid entering the box has a tendency to flow out the lowest pipe even if the difference in elevation is minimal, as little as 1/16 of an inch. The result is disproportionate effluent loading which may saturate the soil in one small portion of the system area. After total saturation, liquid may back up into the distribution box and be redirected to the next lowest pipe in the box but continue to overload that lowest receiving leaching system. The "DIPPER" eliminates this unequal loading situation by collecting small batches of liquid which are then automatically dumped within the distribution box in such a manner

# Polylok Dipper Mold Information

to equally distribute effluent to selected leaching components. Slight differences in pipe elevations, possible settling of the distribution box, actions of the frost/thaw cycle or different angles of piping entering the box are compensated for each time the "DIPPER" forcefully dumps the collected liquid within the sump area of the box.

The beneficial applications for use of the "DIPPER" are even greater when used for leaching systems installed at different elevations. It has long been recognized that serial application of effluent to leaching systems was preferable to central distribution box division not because systems worked better under flooded conditions, but because health officials, engineers and installers were aware of the many problems involved with trying to install and maintain equal flow division in a standard distribution box. One method to avoid that problem was to apply effluent in such a manner so as to flood the upper leaching area until effluent backed up to the overflow elevation. This disproportionate effluent distribution system did not promote uniform use of leaching areas but did assure complete use of the system through a series of overflows. Use of the "DIPPER" instead of serial application will allow 100% utilization of leaching systems not located in the same area or at the same elevation. Uniform application of effluent over a larger area is preferable to over saturation of leaching systems. It is therefore an object of the present invention to provide an improved method of distributing the effluent. A further object of the invention is to provide a system wherein the cost is materially below that of competing systems. The cost reduction is realized through use of the "DIPPER" distribution box to replace the first distribution box typically used for both level and sloped leaching system installations. The dosing effect achieved through use of the "DIPPER" is normally provided by either using mechanical pump lift stations which are expensive to both operate and install or

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installation of a dosing siphon chamber which is also much more expensive than the "DIPPER" and normally requires an 18 to 24 inch head loss to operate. The "DIPPER" effectively provides small batch dosing within the distribution box with only an 8 inch difference between the inlet and outlet.

The "DIPPER" distribution box consists of a precast concrete distribution box specifically designed to house the dipper tray and insure equal division of effluent to the four "POLYLOK" pipe seals (pat. pending) integrally cast into the end walls of the concrete box. Use of this pipe seal provides easy access for multiple pipe connection with a water tight seal for both 3 and 4 inch diameter piping used for septic system construction. The dipper is a one piece PVC tray which pivots within the box to achieve the desired dosing effect each time the tray is loaded with the 1.5 gallons of effluent required to activate the dump. The dipper tray rotates back and forth on durable PVC rocker hinges which are an integral part of the tray and set on PVC sockets that are cast into the concreate box floor. A small quantity of concrete is cast to the underside of the "DIPPER" tray to act as a counter balance, returning the tray to the receiving position immediately after the dump occurs. The polyethylene material used to construct the tray has been specifically designed and tested to withstand the various chemicals and compounds typically discharged into septic systems.