



DL2000® SERIES

Subsurface Irrigation System for Golf Course Applications

Toro's DL2000 subsurface drip irrigation system is the ideal solution for watering those tough-to-irrigate areas on any golf course. The system is available in a variety of configurations to precisely apply water to the turf root zones in bunker surrounds, tee boxes, lake perimeters and hardscape areas. Plus, when applied subsurface, irrigation does not disrupt play.

Each system is designed for easy installation and operation, and includes all necessary parts and complete instructions for installation.

Features

- Subsurface application allows water to be applied directly to turf root zone
- Water is precisely targeted to desired areas
- Minimal water loss due to evaporation, deep percolation or runoff
- Reduces bunker cave-ins and eliminates the need for hand watering
- Turf ET requirements can be met regardless of play
- Irrigation events do not interfere with play
- Three drip system configurations simplify design, specification and installation





DL2000 system comes complete with components necessary for installation.

Feature and Benefit Highlights

- US Government approved ROOTGUARD® protection uses the non-toxic TREFLAN® that creates a force-field effect, guarding against root intrusion by diverting root growth away from the emitter outlet
- DL2000 PC self-cleaning emitters provide precise, trouble-free water application
- Flexible, sturdy design to fit into unusual spaces
- Emitters are inseparably banded to the inside wall of durable polyethylene dripline tubing during manufacturing
- Withstands acids down to pH2 as well as fertilizers, chemicals and chlorine
- Approved fertilizers and chemicals can be added at a central inlet to flow directly to the root zone
- Distinctive red stripes to signify Toro dripline with ROOTGUARD
- An average bunker installation can be done in a single day



Installation is simple—just peel back the turf and install the DL2000 subsurface dripline.



Before DL2000 bunker system installation.

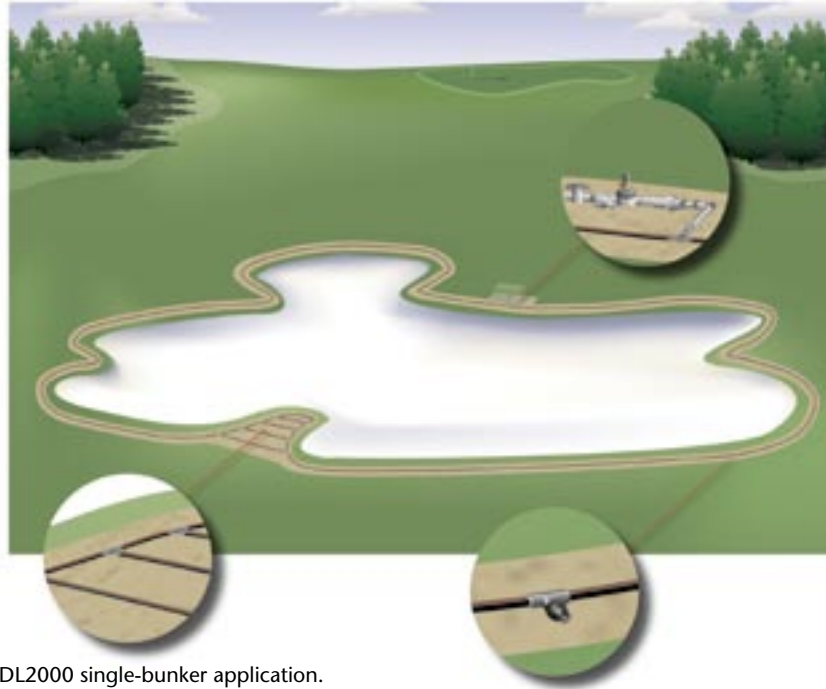


After DL2000 bunker system installation.

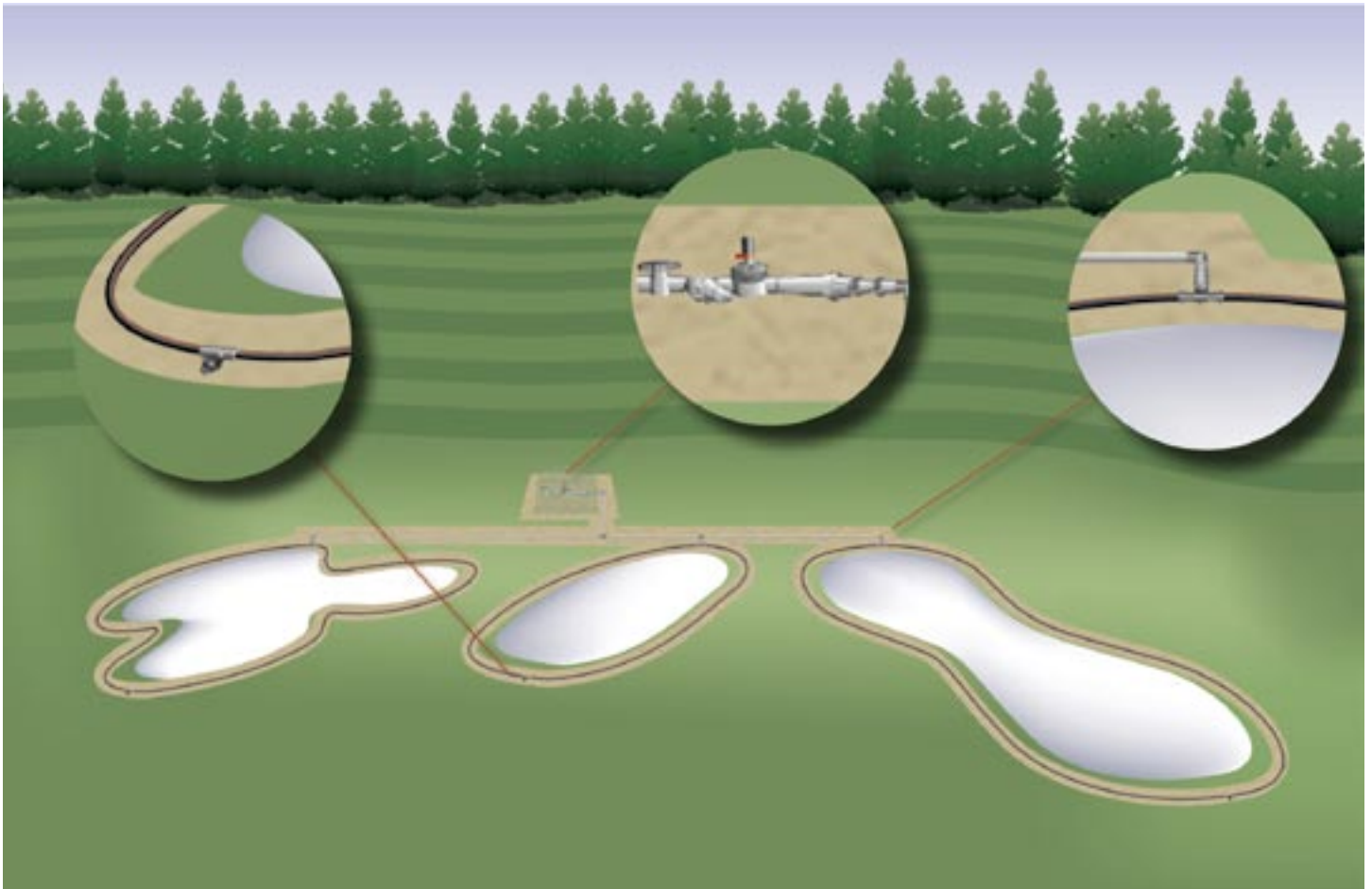
Bunker Drip Systems

Drip System for Bunker Application—low and high flow:

- Minimizes runoff
- Eliminates overspray into bunker
- Uniformly applies water to irregularly shaped areas such as fingers
- Cycle/soak allows for application on steep slopes
- Reduces bunker cave-ins
- Saves time, labor and money by eliminating the need for hand-watering

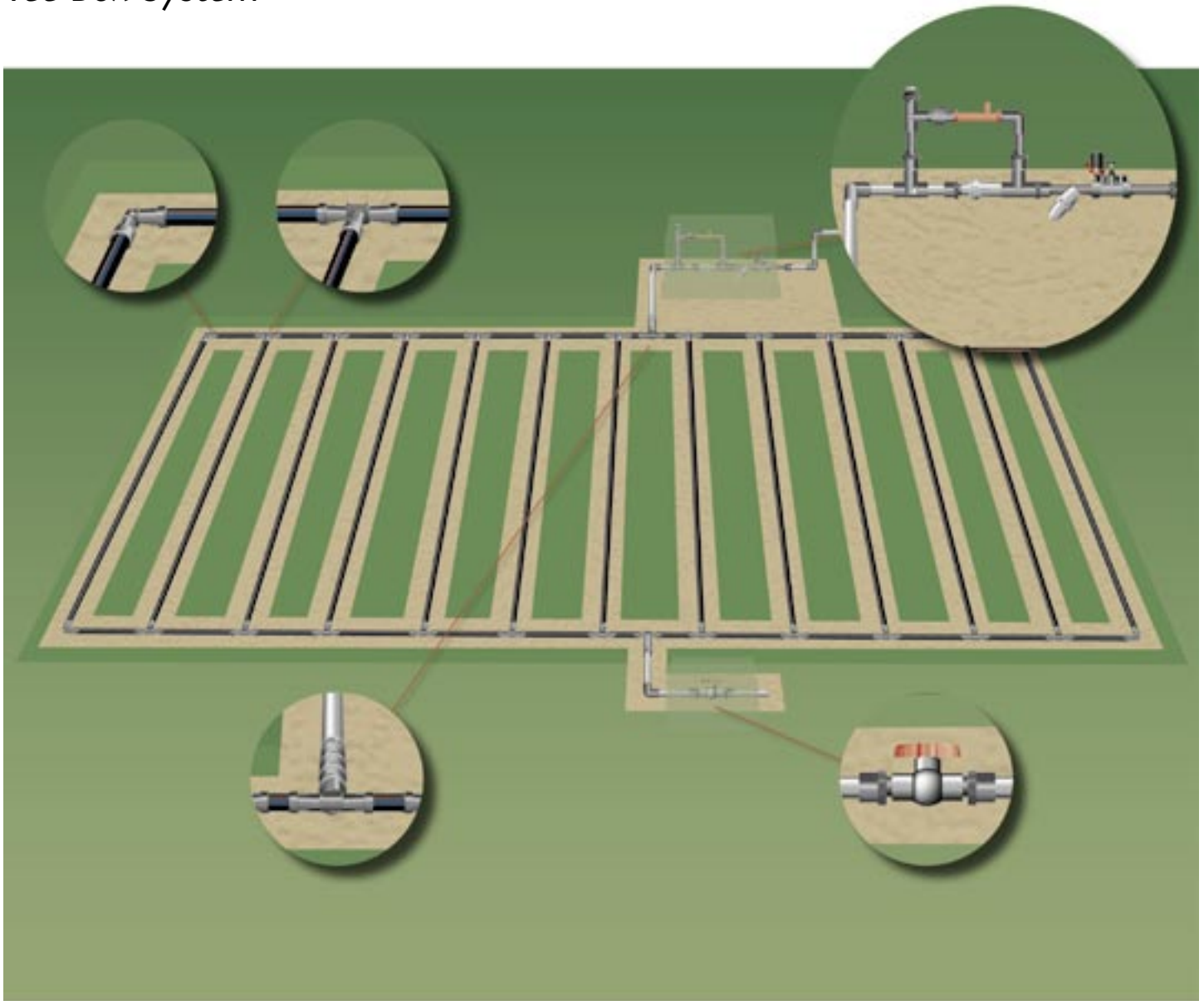


DL2000 single-bunker application.



DL2000 multi-bunker application.

Tee Box System



Drip System for Tee Box Application:

- Applies water directly to the root zone allowing turf to stay dry
- Airjection® system provides aeration during irrigation to reduce soil compaction and promote healthier turf
- Irrigation events do not interfere with concentrated traffic on the tee box
- Water is applied precisely to the tee box without watering the surrounding area

About Toro Airjection®

Airjection is Toro's proven method of injecting micro-bubbles directly into the irrigation water. With Airjection, water, air and nutrients are simultaneously available for plant use, creating a healthier, more vigorous turf. The Airjection unit is calibrated to deliver the proper air/water ratio and comes preassembled and ready to install.

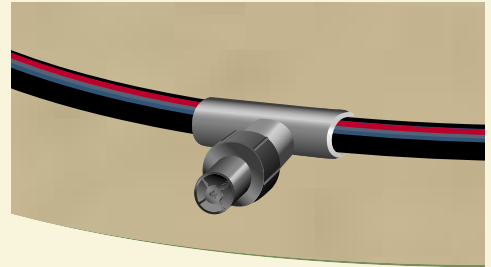
DL2000 ROOTGUARD® Technology

The safest subsurface system in the industry, Toro's DL2000 dripline features the patented, non-toxic ROOTGUARD technology, which prevents roots from clogging irrigation emitters.

TREFLAN, a pre-emergent herbicide, is infused into the emitter during the molding process, resulting in a virtually maintenance-free dripline requiring no filters to change and no chemically treated disks to handle. This process results in each DL2000 emitter being protected from root intrusion.

Operating & Maintenance Tips

- The interval between irrigations depends on the average soil type. Light (sandy) soil should be watered frequently with short irrigation durations. Heavy (clay) soils can be watered less frequently with longer irrigation durations.
 - Irrigation time should not exceed the soil's infiltration rate.
 - Flushing keeps the DL2000 dripline clean. Any particles that accumulate at the end of the submains and driplines will be expelled from the system.
 - Problem detection is not complicated. Leaks can be found easily by walking the system and looking for excessively wet areas.
- Clean the filter as often as necessary. In new installations, the filter should be checked frequently. Frequency depends on water quality.



DL2000 with flush valve installed.



DL2000 with ROOTGUARD protection inhibits root intrusion directly at the emitter opening.

Specifying information

Bunker System Components (Low Flow and High Flow)

- DL2000® Subsurface Dripline
 - Low Flow System – 500'
 - High Flow System – 1000'
- Drip Zone Valve Kit—includes control valve, pressure regulator, Y-filter and manual ball valve
- Air Vent Assembly—pre-assembled and ready to install for labor savings
- Required Inlet/Outlet Fittings
- Flush Assembly Fittings (8 gpm, 2 psi sealing flush valve)
- Installation Fittings
 - Includes Toro exclusive Loc-Eze® tees, couplings, elbows and end clamps for a secure connection
 - 10' of Blue Stripe polyethylene tubing
 - Soil staples for secure tubing placement during installation
- Teflon Tape
- Installation Instructions

Additional 500' rolls of DL2000 can be ordered using part number RGP-212-05. See Bunker System chart.

Tee Box System Components

- DL2000® Subsurface Dripline
- Toro Control Valve
- Y-Filter—1" small body screen filter, 150 mesh
- Manual Ball Valve—1" PVC
- Airjection® Assembly—pre-assembled and pre-calibrated, ready for installation
- Riser Fittings—PVC to DL2000 connection
- Inlet/Outlet Fittings
- Installation Fittings
 - Includes Toro exclusive Loc-Eze® tees, couplings, elbows and end clamps for a secure connection
 - 10' of Blue Stripe polyethylene tubing
 - Soil Staples for secure tubing placement during installation
- Teflon Tape
- Installation Instructions

For Tee Box installations requiring additional DL2000 area coverage, order an expansion kit. See Tee Box System chart above to make determination. Expansion kit includes:
DL2000 Dripline—500', riser fittings, Loc-Eze installation fittings and additional air vents.

Bunker System

	Low Flow	High Flow
Flow Range	.25 to 8 gpm	2 to 20 gpm
DL2000 Range*	30' to 1000'	250' to 2500'
Max DL2000 Run Length	250'	250'
Application Rate (12" x 12" emitter spacing)	.85" per hour	.85" per hour
Pressure Compensating Emitter	0.5 GPH	0.5 GPH
Emitter Spacing	12"	12"

*The DL2000 Range expresses the maximum amount of DL2000 dripline the system has been designed for.

Tee Box System with Airjection

Flow Range	2 to 20 gpm
DL2000 Range*	250' to 2500'
Max DL2000 Run Length	250'
Application Rate (12" x 12" emitter spacing)	.85" per hour
Pressure Compensating Emitter	0.5 GPH
Emitter Spacing	12"

*The DL2000 Range expresses the maximum amount of DL2000 dripline the system has been designed for.

Specifying Information

Model Number	Description
SSDS-LF-500	DL2000 500' Subsurface Drip System—Low Flow
SSDS-HF-1000	DL2000 1000' Subsurface Drip System—High Flow
SSDS-A-500	DL2000 500' Subsurface Drip System with Airjection
SSDS-AZ-500	DL2000 500' Subsurface Drip System—Additional Area
RGP-212-05	DL2000 500' roll, 0.5 GPH, 12" spacing

Example: A 500' DL2000 Drip System with Airjection, would be specified as: **SSDS-A-500**

