



Dalhamer (right) says it's vital to surround yourself with good people, including assistant superintendents Jack Holt (left) and Billy Hausch (middle).

*Continued from page 29*

born and bred, he has always enjoyed working outdoors, something he attributes to genetics.

"Many of my relatives are farmers in Ohio, where my dad was born," he says.

During high school and college, Dalhamer worked summers and winters as a greenkeeper at Poppy Hills Golf Course, a public course in Pebble Beach. That's when he got hooked on golf course maintenance. Dalhamer, also an avid golfer with a 10 handicap, graduated with a bachelor's degree in business (and a minor in plant science) from Chico State University.

After college, he participated in the Northern California Golf Association's internship program and landed at Pebble Beach, where he worked under Michaud. About 18 months into the two-year internship, Michaud named him as an assistant superintendent, a post Dalhamer held for about five years. It was a good time to work at Pebble Beach as Michaud and his crew readied

for the U.S. Amateur (1999) and the U.S. Open (2000).

"I owe a lot to Mark," Dalhamer says. "He gave me an opportunity at a young age."

Dalhamer was impressed with Michaud's work ethic and sense of urgency to get things done. "His motto was: Let's get as much done as we can get done today instead of putting it off until tomorrow," Dalhamer says. "That's a theme I've carried through."

But Dalhamer left Pebble Beach in 1999 to take the superintendent's job at nearby Carmel Valley Ranch Golf Club in Carmel, Calif.

"It was a good opportunity locally where I could grow in the profession," he says. "It was a good place for me to hone my skills."

When Troon Golf, a Phoenix-based management company, took over Carmel Valley in 2001, Dalhamer was soon promoted to senior agronomist for the West Coast. He enjoyed the position

*Continued on page 32*

IS IT SAFER  
ON TURF  
THAN OTHER  
PRODUCTS,  
EVEN IN THE  
HEAT OF  
SUMMER?

YES



The six crew members here have a combined tenure at Pebble Beach of about 150 years. They are (left to right) Mark Thomas, Rick Pieper, Jack Holt, Raul Aguilar, Clayton Hughes and Tom Marchese.

2010 U.S. OPEN PREVIEW

*Continued from page 31*

and the chance to visit golf courses throughout California.

But in 2002, Spyglass Hill Golf Course, another of the four courses at Pebble Beach Resorts, had an opening for a superintendent and came looking for Dalhamer.

“It was tough to leave Troon, but Spyglass is one of those courses that I’ve always loved,” Dalhamer says.

Three years into his job at Spyglass Hill,

Tom Huesgen left Pebble Beach Golf Links for the Cornerstone (Colo.) Golf Club, and the resort named Dalhamer to replace him.

“I have a lot of experience locally,” Dalhamer says.

Yes, he does, and he’s definitely a local boy who has done well for himself. And Dalhamer has made an impression on, not only his crew workers, but others as well.

“I thought I knew it all when I arrived here three years ago,” Hausch says. “But I’ve learned so much from Chris. I know from the time I spend here that I’ll be much better off for the rest of my career than not having this experience.”

Pat Gross, director of the Southwest region for the United States Golf Association’s Green Section who has worked with Dalhamer for the past few years to prepare the course for the U.S. Open, says Dalhamer has what it takes to be the superintendent of a high-profile course

*Continued on page 35*

PHOTO BY: LARRY AYLWARD

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**“I LOOK AT IT AS AN HONOR AND A PRIVILEGE.”**

– CHRIS DALHAMER, ON HOSTING THE U.S. OPEN

*Continued from page 32*  
like Pebble Beach.

“You think about the qualities it takes to handle that kind of job, and Chris has them,” Gross says. “He has a good work ethic, he’s easy to work with, and he’s one of the nicest guys you’ll ever meet.”

Dalhamer accepts the compliments with an unassuming nod and quick

smile. He appreciates the support, but is not one to rest on his laurels. There’s no time for that, especially at a place that bustles like Pebble Beach.

“I’m not somebody that needs the limelight,” he says.

Dalhamer will say that hosting the U.S. Open, which he calls the Super Bowl of golf, is the highlight of his career. And the great thing is he gets to do it at a spectacular place like Pebble Beach.

“I look at it as an honor and a privilege,” Dalhamer says. “Here I am at a golf course that’s one of the top in the world. And I not only get to maintain it, I get to maintain it for the U.S. Open.”

Even on a gray and rainy day, tending the turfgrass at Pebble Beach Golf Links is still a thrill. ■

Dalhamer and his staff don’t ever take the views of Pebble Beach for granted – like this view of No. 6.

PHOTO BY: © JOANN DOST

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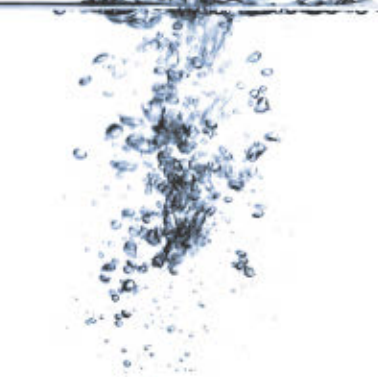
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# Training Can

Tree trimming is hazardous work, so superintendents insist on a safety-first policy

BY KEN KRIZNER,  
CONTRIBUTING WRITER



**GOLF COURSE** superintendent Scott Schraer had done his share of tree trimming during more than 20 years of working on golf courses. So when he noticed a dead limb hanging from a tree on the fifth hole at Kinsale Golf Club in Columbus, Ohio, in July 2008, there wasn't much to think about. Armed with a ladder and chain saw and accompanied by a crew member, Schraer set out to remove the limb.

He figured, as he usually did, there would be nothing to it.

Twenty-five feet above the ground, however, something went terribly wrong. As Schraer was cutting a branch, it broke off and knocked the ladder out from underneath him. The branch, chain saw and ladder all hit Schraer as he fell to the ground.

Schraer sustained a broken rib, collapsed lung and his pelvis was fractured in eight spots. But he considers himself lucky — more so than ever after hearing of the death of Dan Gross, superintendent of Salem (Ohio) Golf Club, who was struck and killed by a falling limb while trimming a tree last December.

"It is difficult to hear about a tragic death in our industry," Schraer says. "From a personal standpoint, I realize how extremely lucky I was. It certainly could have been a lot worse."

Tree trimming can be one of the most hazardous duties that golf course grounds crews undertake.

"I would say it's one of several items we do on the course that has a very high potential of danger," says John Szklin-

# Prevent

# Tragedy

ski, superintendent of Charlotte (N.C.) Country Club.

To cut down on the potential danger, most golf clubs have a policy — either formal or informal — as to who can do the trimming and what type of trees can be trimmed. Charlotte Country Club, for example, will only trim small, ornamental trees. Szklinski brings in an outside arborist if a larger tree needs trimming.

As for the equipment, the potential danger of operating a chain saw is self-explanatory. So superintendents mandate in-house training programs, including chain saw operations safety and etiquette.

“We make sure we have knowledgeable operators anytime we need to run a chain saw,” says Jeff Corcoran, manager of golf courses and grounds for Oak Hill Country Club in Rochester, N.Y. “It’s the type of work that scares me the most when my staff is out there. There are a lot of potential accidents that can happen with a chain saw, especially with an inexperienced operator.”

**Scott Schraer (left) says nothing matters more than employee safety when it comes to tree trimming.**

On the course, employees are not allowed to operate a chain saw on their own until Corcoran reaches a level of comfort with their abilities.

“It’s a person-by-person evaluation,” he stresses. “We have staffers that I never want to see operate a chain saw.”

While using a chain saw, employees must wear protective equipment, including helmets, eye and ear protection, gloves and chaps. They must wear helmets when operating a chipper. Also, Oak Hill crew members aren’t permitted to climb trees — their trimming is done on the ground. The club employs an arborist, who works with a dedicated crew member. They are the only two employees allowed to climb trees, Corcoran says.

Charlotte Country Club and Southern Hills Country Club have similar policies.

Szklinski says the policy at Charlotte, which will host the U.S. Women’s Amateur in August, is for the first assistant to cut down a tree, while he oversees the situation. Once a tree is felled, three trained employees make the cuts and run them through a chipper. They are the only staff members involved in tree trimming.

“It limits our potential exposure to

liability and keeps a dangerous situation to a small group,” Szklinski says.

Southern Hills has its own dedicated staff of four employees to conduct tree trimming and removal, says Barry Hargrove, director of horticulture for the Tulsa, Okla., course, site of the 2001 U.S. Open and 2007 PGA Championship. They’re the only employees allowed to climb trees, and the group does the overwhelming majority of trimming on the course.

All members of the grounds crew, however, must be trained in the proper use of a chain saw and chipper in case they’re needed in an emergency.

Hargrove tries to preach a common-sense approach to the work, saying employees need to be aware of their situation at all times, whether a limb is hanging or on the ground.

“You need a plan, know where you are going to start and where your access route is if there should be a problem,” he urges. “You just can’t jump into it without thinking through the situation. Common sense can prevent accidents.”

Hargrove emphasizes to his employees that while they’re up in a tree, they should work diligently and at a steady pace.

*Continued on page 38*

## Training

*Continued from page 37*

“You don’t want to be swinging from limb to limb,” he stresses.

When working with chain saws, employees should avoid a complacent attitude.

“Everyone thinks it’s no big deal to operate a chain saw,” Hargrove says. “But when you become complacent, you slip up. The next thing you know, there is a chain-saw accident.”

Schraer, the father of two young children, has adopted a new attitude since his accident. Prior to it, he often told his employees not to undertake potentially hazardous work without supervision but admits that he didn’t always follow that advice himself.

“I’ve become more apt to examine a situation,” he says. “If I don’t feel comfortable from a safety standpoint, I won’t send out my staff.”

Sometimes, a superintendent has to call in an outside company to take care of tree trimming if the potential for danger is too great. When it comes to higher costs vs. endangering employees, the safety and well-being of employees must win out, Schraer says. Superintendents should work with their greens committee and other club officials responsible for budgetary decisions to make sure all interested parties are on the same page on this point, he says.

“We’re all here trying to do the best for our clubs to give them as much as we can within our budgets,” Schraer says. “At the same time, we have to draw a line if something is outside the scope of our abilities.” ■

---

*Krizner is a freelance writer from Willowick, Ohio.*



## If You Must Do It Yourself ...

**Y**ou’re making your way around the golf course and notice that some trees need to be trimmed. What’s your first move?

According to R.J. Laverne, a board-certified master arborist and manager of education and training for Kent, Ohio-based Davey Tree Expert Co., your first move should be to hire a trained arborist to do the job.

“It’s dangerous to remove large pieces of suspended wood,” he says. “As we have seen over and over again, lives can be lost or serious injury can be suffered when you try to lower a heavy piece of wood to the ground in a controlled manner.”

But Laverne acknowledges that some superintendents don’t have the budgetary funds to hire an outside arborist, meaning they will assign the trimming to their crews. For those superintendents, Laverne offers some tips to safely trim trees:

- ▶ Careful pruning using proper reduction cuts of weakened branches can be beneficial by reducing the weight on the limb without removing the entire limb, which may be too heavy to safely remove without advanced rigging.
- ▶ An employee shouldn’t use a chain saw while standing on a ladder or use a chain saw when its bar is above the shoulder.
- ▶ Employees should always wear suitable protective equipment when cutting wood, including hard hat, eye and ear protection, and ballistic chaps that cover the legs.
- ▶ Don’t stand more than 6 feet off the ground on an extension ladder. Davey Tree’s internal policy dictates that if its workers are more than 6 feet up on a ladder, they must be tied into the tree using an approved climbing saddle.
- ▶ Only a trained arborist should use a chain saw when working on a ladder. An employee who is not a trained arborist should only use hand tools (pruner, hand saw) when working off the ground.
- ▶ If you use an extension ladder, it should be placed firmly against the tree – not the limb – and a co-worker should be at its base holding it in place.
- ▶ Don’t trim at the end of the day. You shouldn’t start a dangerous task if you’re tired or fatigued.

Laverne emphasizes the potential for injury is greater when an employee is trimming a tree compared with allowing the limb to fall on its own. The odds are in your favor that no one will be underneath if the limb falls, he says.

“The level of risk jumps substantially – exponentially – as soon as a person starts working on a tree because there is a target,” he stresses. – Ken Krizner





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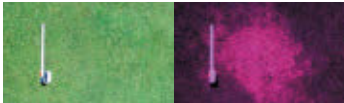
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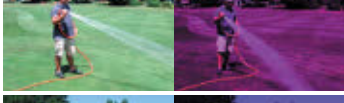
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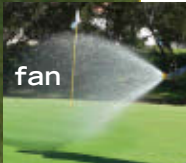


Magnum™ nozzle pictured with 1" brass adapter (sold separately on Page 7)



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fan



jet



soak

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- 3/4" inlet (1" brass adapter available, see Page 7)
- Ergonomic handle/valve provides easy grip and variable on/off control.
- Durable solid metal design: zinc, aircraft aluminum and stainless steel.
- Patented Precision™ nozzle fogs at 70 psi to deliver a 25 ft. pattern with only 4-6 GPM

Perfect for tournament play, CoolPro™ puts down only enough water to cool the turf canopy. It prevents wilting while maintaining good ball speed. CoolPro is a great tool for protecting grass on hot days without damaging roots.

### ordering

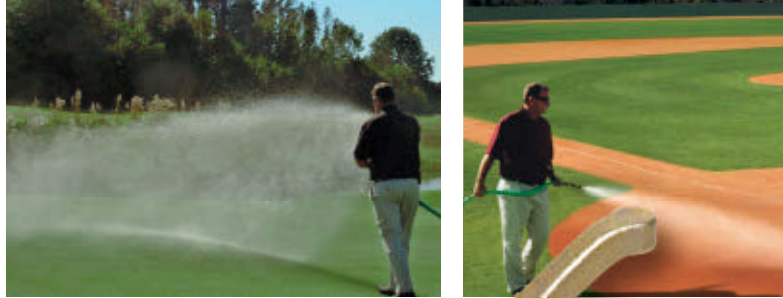
- |               |                           |
|---------------|---------------------------|
| Part # NG450  | MAGNUM™ Hose Nozzle       |
| Part # HNC075 | CoolPro™ Valve and Nozzle |
| Part # CV075L | CoolPro™ Valve only       |



# Precision™

## SOLID METAL, SPECIFIC TASK HOSE NOZZLES

Underhill Precision™ nozzles deliver millions of soft, uniform droplets to provide rapid yet surprisingly gentle water application over a huge range of flow rates. From soft watering to powerful drenching, patented Precision nozzles are designed with ideal flow rates and droplet sizes to fully irrigate without disturbing turf, dirt, seeds, etc., providing a precise solution for every hand watering application.



**NEW!**

### NozzlePro KIT

MAGNUM, CoolPro, the entire Precision nozzle series and a high-flow brass valve - kept safe and secure in an unbreakable, lockable, corrosion-proof case.



### choose your nozzle by flow rate or specific task

NOZZLE NAME (color)	GPM	VALVE	TASKS
Rainbow™ (yellow)	15	CoolPro	Greens, tees, sensitive landscaping, transplants, seed beds
Rainmaker™ (green)	23	High-Flow	Syringe and spot watering turf and hardy landscaping
Cloudburst™ (blue)	48	High-Flow	Dry spots, high volume drenching and application of wetting agent
Cyclone™ (red)	50+	High-Flow	Pre-game skins watering, heavy watering of large areas

Note: GPM will vary with pressure at nozzle.

### high-flow valves



#### SOLID BRASS

- 3/4" hose thread inlet/outlet
- up to 50 GPM

#### COMPOSITE / STAINLESS STEEL

- 3/4" hose thread inlet/outlet
- oversized handle
- up to 55 GPM

### hose adapters / quick-connectors



### ordering

Part # HP-K1	NozzlePro Kit
Part # HN1500	Precision™ Rainbow™ Hose Nozzle
Part # HN2300	Precision™ Rainmaker™ Hose Nozzle
Part # HN4800	Precision™ Cloudburst™ Hose Nozzle
Part # HN5000	Precision™ Cyclone™ Hose Nozzle
Add "-CV" to part numbers to include brass high-flow valve and 1" adapter (as pictured above).	
Part # CV075H	High-Flow 3/4" Valve - Brass
Part # A-BV77FM	High-Flow 3/4" Valve - Composite/Steel
Part # A-BA107FM	1" FHT x 3/4" MHT Brass Hose Adapter
Part # A-BA107MF	1" MHT x 3/4" FHT Brass Hose Adapter
Part # A-BQ7M	3/4" Quick-Connect, male end
Part # A-BQ7F	3/4" Quick-Connect, female end
Part # HN075W	replacement washer, 3/4" hose

## PelletPro™

### APPLICATOR GUN FOR SOLID WETTING AGENT TABLETS

We outfitted our heavy-duty surfactant applicator with a high-flow composite/stainless steel valve and a Precision™ Cloudburst™ nozzle to produce the finest wetting agent gun available. The PelletPro™ accepts all wetting agent tablets and is designed to provide powerful, yet ultra-soft spray when watering or applying surfactants to tight, hydrophobic soils.

### features

- 48 GPM capability gets the job done faster!
- Ultra Heavy-Duty - brass fittings, aircraft aluminum, stainless steel, and precision engineered glass-filled materials
- Patented Precision™ Cloudburst™ nozzle delivers large droplets in an outstanding fan pattern
- Pellet rotation (1 RPS) evenly dissolves/applies tablets



With the included 1" FHT x 3/4" MHT brass adapter, PelletPro™ works with both 3/4" and 1" hoses.

PelletPro™ rotates pellets at 1 revolution per second (RPS) to evenly dissolve/apply wetting agent

### 2 products in 1!

Remove the PelletPro™ bowl and you have a superb syringe nozzle combo: the patented, 48 GPM Precision™ Cloudburst™ with our high-flow, oversized handle valve.



PelletPro's bowl, also sold individually, works perfectly as a replacement in-line filter bowl for most spray rigs. Heavy-duty, transparent plastic shows fluids. (No more cracked bowls during winter storage!)

### ordering

Part # A-PPWA50K	PelletPro™ Applicator Gun
Part # A-PPB	In-line Filter Bowl
Part # A-PPBG	Gasket

# LiquidPro™

## APPLICATOR GUN FOR LIQUID WETTING AGENT

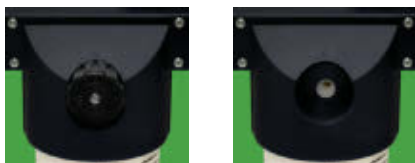
This popular “liquid” version of the PelletPro™ features the proven combination of our Precision™ Cloudburst™ nozzle and the high-flow composite/stainless steel valve. Adding a chemical-resistant, UV-protected, lightweight siphon/mixing system produces an applicator gun which can cover 1000 square feet in less than a minute. Now, with unmatched speed and uniformity, you can virtually “paint” your turf with liquid wetting agent, fertilizers, and micronutrients. And like the PelletPro, LiquidPro disassembles easily to create the Cloudburst™ High-Flow Valve syringe nozzle.



With the included 1" FHT x 3/4" MHT brass adapter, LiquidPro™ works with both 3/4" and 1" hoses.

### features

- Patented Precision™ Cloudburst™ nozzle evenly distributes wetting agent ensuring uniform coverage. Made of aircraft aluminum and stainless steel.
- Lightweight, durable nylon construction weighs only 3 lbs., UV-protected and chemical resistant.
- High-density polybottle has full quart capacity with easy-to-read measurements in fluid ounces and milliliters.
- Needle Valve Metering Chamber: Engineered venturi siphon mixes proper amount of wetting agent into the water flow.
- Pistol grip design with textured handle provides sure grip surface and reduces operator fatigue.
- Adjustable metering dial offers 10 additive settings including “Water Only.”
- Metering dial can be removed to prevent tampering with a predetermined setting.



### 2 products in 1!

The Precision™ Cloudburst™ nozzle and high-flow valve can be quickly assembled to create a powerful, 48 GPM syringe nozzle.

### a real time saver!

Bring plenty of wetting agent, fertilizers, and micronutrients to the field all at once with our 6-pack of polybottles.



### ordering

- Part # A-LPWA50K - LiquidPro™ Applicator Gun
- Part # A-LPWAB-6 - 6-Pack of 32 oz. Polybottles and Carrier

## RollerPro™

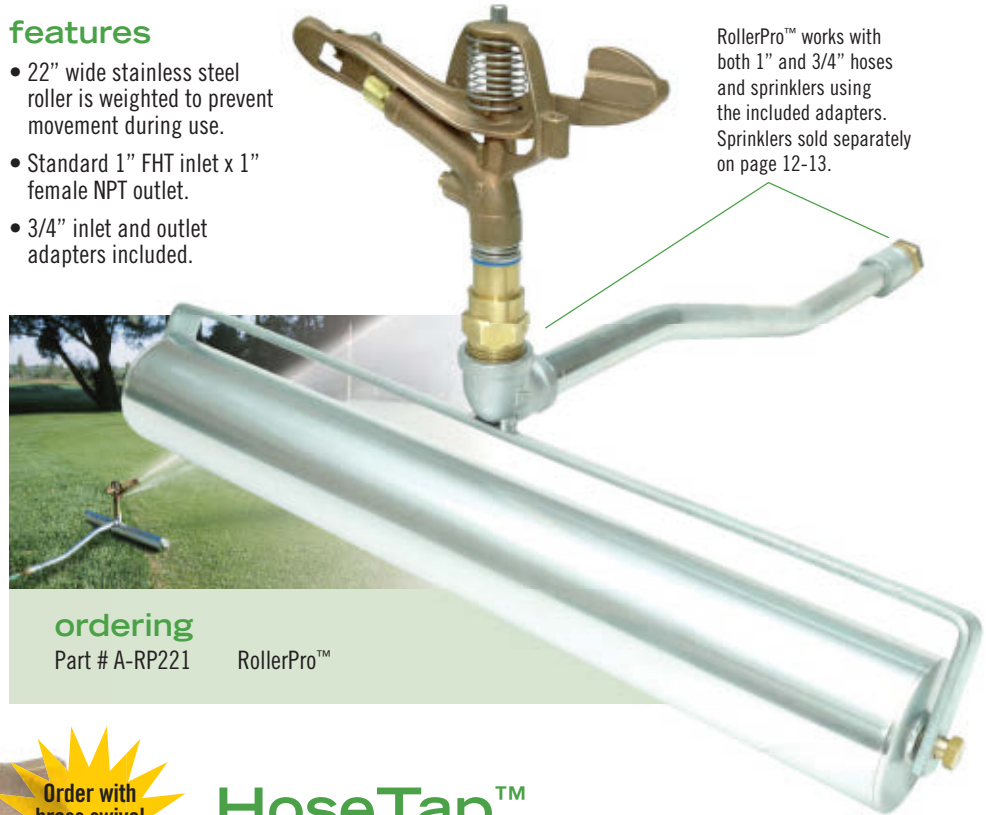
### PORTABLE SPRINKLER BASE

The 22" wide stainless steel roller of RollerPro™ provides a stable field position for supplemental watering. Designed for years of hard use, it is ideal for watering dry spots and newly seeded areas.

### features

- 22" wide stainless steel roller is weighted to prevent movement during use.
- Standard 1" FHT inlet x 1" female NPT outlet.
- 3/4" inlet and outlet adapters included.

RollerPro™ works with both 1" and 3/4" hoses and sprinklers using the included adapters. Sprinklers sold separately on page 12-13.



### ordering

Part # A-RP221 RollerPro™

Order with  
brass swivel  
for extra  
savings!

## HoseTap™

### SOLID METAL HOSE ADAPTER

HoseTap™ gives you a hose connection anywhere you have a Toro® or Rain Bird® electric, valve-in-head sprinkler...ideal for fast connections when quick-couplers or hose bibs are not available. Aircraft aluminum body won't break or wear out like plastic, and is anodized with color for easy sprinkler manufacturer identification. Each HoseTap™ includes the precision metal disc, o-ring, and riser. Brass swivels sold separately (see Page 12).

### ordering

Part # HN-T100 - HoseTap™ for Toro® 1" inlet golf sprinklers  
 Part # HN-T150 - HoseTap™ for Toro® 1-1/2" inlet golf sprinklers  
 Part # HN-R125 - HoseTap™ for Rain Bird® Eagle 700 Series golf sprinklers  
 Add "B" to part numbers to specify BSP thread  
 Add "S" to part numbers to include 1" brass swivel  
 Add "S75" to part numbers to include 3/4" brass swivel

### REPLACEMENT O-RINGS

Part # OR-100 Fits Toro® 1" inlet and Rain Bird® Eagle 700 Series golf sprinklers / HoseTap  
 Part # OR-150 Fits Toro® 1-1/2" inlet golf sprinklers / HoseTap

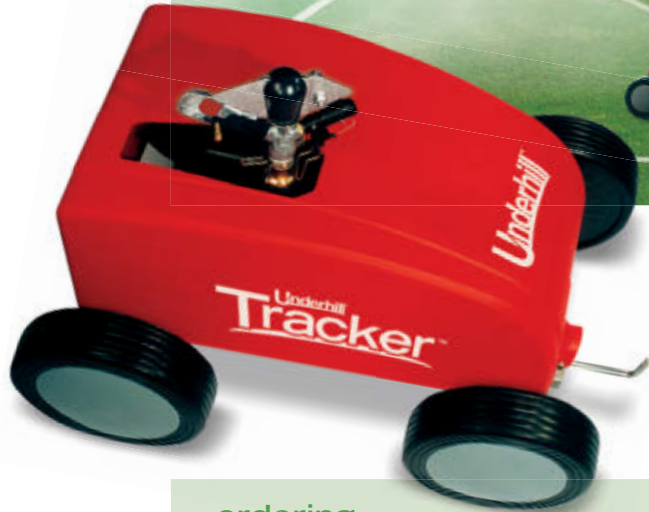
# Tracker™

## PORTABLE IRRIGATION MACHINE

The Tracker™ offers a very economical solution for supplementing seasonal watering needs of 1/4 acre to 2 acre areas. It is also ideal for irrigating athletic fields, cemeteries, golf course roughs, or other large areas where an underground system is impractical. Built to last with precision German engineering and high quality materials, this portable powerhouse can irrigate an entire football field in just two passes.

## specifications

- Weight: 58 lbs.
- Size: Length 33", Width 22", Height 22"
- Materials: Aluminum, Brass, ABS
- Minimum Water Pressure: 50 psi
- Hose Required: 1"
- Includes 1" brass quick-connect adapter



## ordering

Part # T-400 Tracker™ Portable Irrigation Machine

# Mirage™

## HUGE THROW, HIGH-PERFORMANCE LARGE TURF SPRINKLERS

Underhill Mirage pop-up turf sprinklers, featuring precision German engineering and huge throws, can be installed completely outside the playing area of sports fields.

**M-160:** With its powerful **174 ft. throw radius**, the Mirage™ M-160 is a worldwide favorite for sports fields, golf driving ranges and other large area turf or dust control applications.

**M-125:** A very impressive long-throw sprinkler in its own right with a **125 ft. radius**, the M-125 is perfect for installation in the out-of-play areas of large turf fields.

**M-115:** For areas where irrigation must be installed within the playing area, the M-115's deep sod cup cover holds a 9" (220 mm) diameter section of natural grass to "disappear" when not in use, staying out of the way of athletes and mowers.



**CALL FOR DETAILS!**

# 2WIRE

## YOU PICK THE CONTROLLER...WE CAN MAKE IT 2WIRE!

Underhill™ decoder modules can convert controllers to 2-wire operation - with no field grounding and no special wire - so you can use your favorite clock to lower the cost and simplify the installation of your next irrigation project. Control up to 48 stations with a single module. More affordable than what you are using now (save a ton on wiring costs alone!), easier to use, and ultra-reliable (15 years and 150,000+ field successes).



## Quick Coupler Valves & Keys

### SOLID BRASS, SINGLE SLOT/LUG ESSENTIALS

Built to last, Underhill valves and keys are constructed of solid red brass and stainless steel. Valves incorporate rugged one-piece design.



Valve: Part # QV-075R  
(3/4" FPT inlet)

Key: Part # QK-075  
(3/4" MPT x 1/2" FPT outlet)

Valve: Part # QV-100R  
(1" FPT inlet)

Key: Part # QK-100  
(1" MPT x 3/4" FPT outlet)

Valve: Part # QV-150R  
(1-1/2" FPT inlet)

Key: Part # QK-150  
(1-1/2" MPT x 1-1/4" FPT outlet)



### hose swivels

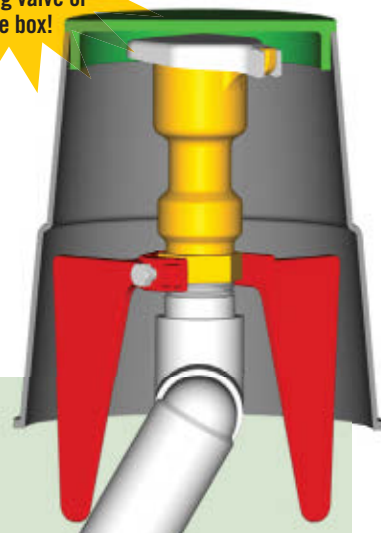
Part # HS-075 3/4" FPT x 3/4" MHT outlet  
Part # HS-100 1" FPT x 3/4" MHT outlet  
Part # HS-101 1" FPT x 1" MHT outlet  
Part # HS-151 1-1/2" FPT x 1" MHT outlet

## The Claw™

### QUICK COUPLER MOTION RESTRAINT

When quick coupler valves become unscrewed from swing joints, it's more than just a hassle - it can be dangerous. The Claw™, new from Underhill, offers a simple solution. Embedded in the soil below the quick coupler, and then securely attached to its base, The Claw provides significant resistance to rotational, vertical and horizontal motion, preventing the valve from moving. Made from high strength ductile iron, this compact anchor attaches easily with a single steel bolt.

**EASY RETROFIT**  
Installs without  
removing valve or  
valve box!



The Claw™ pictured  
with 1" quick coupler,  
key and hose swivel.

### ordering

Part # QCA-075100 The Claw™ for 3/4" and 1" valves  
Part # QCA-150 The Claw™ for 1-1/2" valves

# Impact Sprinklers

## SOLID BRASS, ULTRA-RELIABLE WORKHORSES

For reliable, trouble-free, high-performance year after year, you just can't beat our brass impact sprinklers. Available in full circle and full/part circle, in inlet sizes of 3/4", 1" and 1-1/4".

### features

- Solid brass construction
- Stainless steel drive spring
- Bearing assembly hood for longer wear life
- Chemical resistant bearing seals
- Solid brass nozzle



Underhill's SI100F 1" inlet brass impact atop the portable base RollerPro™ (see page 10) puts a powerful sprinkler anywhere you can run a hose.



**3/4"**  
Flow: 5-15 GPM  
Spacing: 40-60 ft.



**1"**  
Flow: 15-45 GPM  
Spacing: 50-80 ft.



**1-1/4"**  
Flow: 25-120 GPM  
Spacing: 75-110 ft.

### ordering

		GPM	Radius (ft.)
Part # SI075F	3/4" MPT Full Circle Sprinkler	13	57
Part # SI075P	3/4" MPT Part/Full Circle Sprinkler	11	48
Part # SI100F	1" MPT Full Circle Sprinkler	23	71
Part # SI100P	1" MPT Part/Full Circle Sprinkler	23	71
Part # SI125F	1-1/4" MPT Full Circle Sprinkler	51	96
Part # SI125P	1-1/4" MPT Part/Full Circle Sprinkler	54	78

Performance data shown at 80 psi. GPM and radius will vary with pressure at sprinkler



**NEW!**

## Splice Kit

### DIRECT BURY SPLICE KIT

Developed by 3M Company, each kit includes a single wire connector which can accommodate wire sizes from 18-10 gauge, and a waterproof gel case. Excellent for golf, commercial and residential applications.



### ordering

Part # DBRY-4	Direct Bury Splice Kit - 4 Pack
Part # VL-6	VersaLid™ 6"-7" valve box lid

## VersaLid™

### VALVE BOX UNIVERSAL REPLACEMENT LID

VersaLid™ is the easy solution for broken or missing valve box lids. No need to guess what brand a buried box is or even worse - dig it up to find out - VersaLid's locking system fits all 6"-7" round valve boxes.

### features

- Stepped locking system
- Fits all 6"-7" round boxes
- Interchangeable, easy to install
- Greater top-load strength and more UV-resistant than structural foam lids

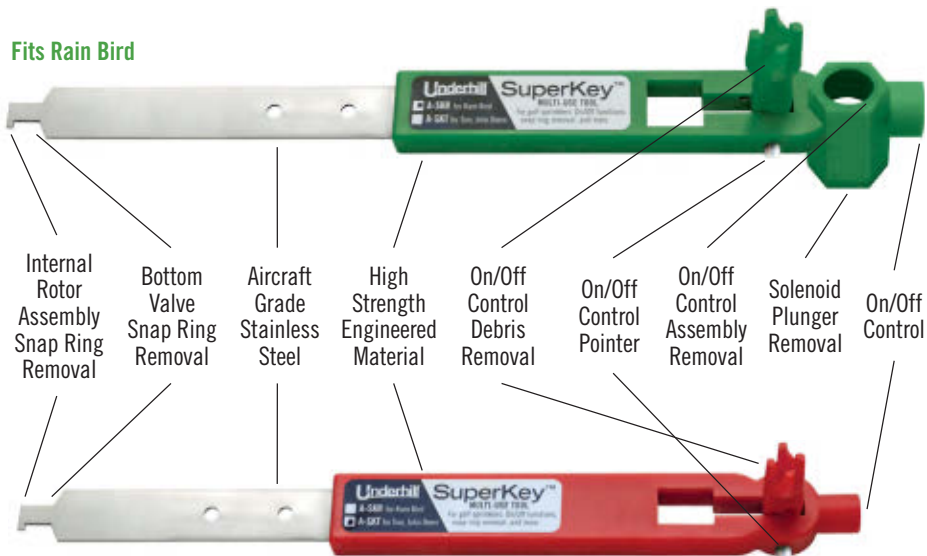


## NEW! SuperKey™

### MULTI-PURPOSE GOLF SPRINKLER TOOL

This ultimate multi-purpose tool designed for Rain Bird®, Toro® and John Deere® golf sprinklers is a must have. Made of stainless steel and composite material, it effortlessly turns Electric-Valve-In-Heads on and off, removes internal assembly snap rings and performs many other sprinkler maintenance chores.

#### Fits Rain Bird



#### Fits Toro, John Deere

#### ordering

- Part # A-SKR SuperKey™ for Rain Bird® golf sprinklers
- Part # A-SKT SuperKey™ for Toro® and John Deere® golf sprinklers

## DeepDrip™

### TREE WATERING STAKES

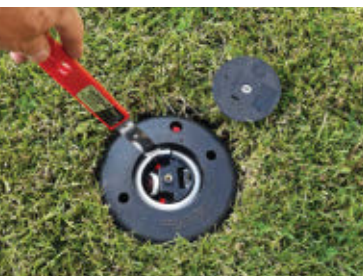
DeepDrip™ stakes allow you to water and fertilize your trees at the roots, encouraging deeper roots and healthier trees. Water gets underground fast, so you can water for shorter periods and enjoy considerable water conservation. They also help to aerate the soil with oxygen, and you can add fertilizer into the shaft to direct nutrients to the root zone.



DeepDrip comes in three sizes, each designed for use with automatic landscape drip systems or a hose. The 14.5" unit is ideal for small trees and shrubs with shallow roots, like rose bushes and ornamental trees (or in commercial use for boxed trees). The 24.5" stake is best for most tree varieties except for palms and other deeper rooted trees, which will benefit from the longer 36" stakes.

#### ordering

- Part # A-DD14 DeepDrip™ 14.5" watering stake
- Part # A-DD24 DeepDrip™ 24.5" watering stake
- Part # A-DD36 DeepDrip™ 36" watering stake





# NEW! Gulp™ Ultra Pumps

## HIGH-CAPACITY WATER REMOVAL SUCTION PUMPS

Whether you need to remove water from sprinklers and valve boxes or displace gallons of standing water in the field, the Underhill Gulp™ Ultra series of water removal hand pumps has the right tool for the job. Constructed from heavy-duty, corrosion-proof materials, these pumps are self-priming and easy to clean. The Gulp Syringe™ Ultra and Gulp™ Ultra are ideal for carrying on maintenance carts for small, routine needs. For larger water removal jobs, BigGulp™ Ultra can pump well over a gallon of water in only three strokes!

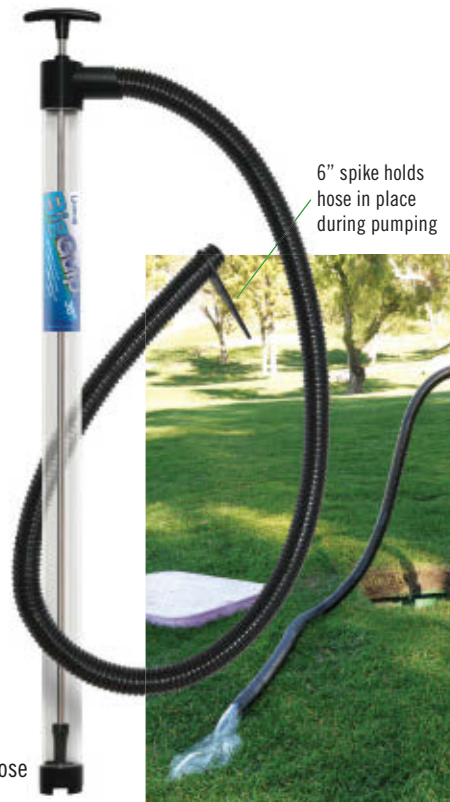
### special features

- Extra Volume Pump Capacity
- Easy cleaning twist-off inlet and exit caps
- Replacement Wiper Seal and Bottom Check Valve (Big Gulp/Gulp)
- Dual Wiper Seal (Replaceable)
- Extra Strength Pump Tube Material
- Stainless Steel Pump Shaft
- Self Priming



### BIG GULP ULTRA

- 47 oz./stroke
- 36" clear pump chamber
- 72" or 36" x 1-1/2" outlet hose



6" spike holds hose in place during pumping

### GULP ULTRA

- 12 oz./stroke
- 12" clear pump chamber
- 24" outlet hose



### GULP SYRINGE ULTRA

- 12 oz./stroke
- 12" clear pump chamber



## Gulp™ Classic

### GULP

- 8 oz./stroke
- 12" pump chamber
- 10" outlet pipe



### GULP SYRINGE

- 8 oz./stroke
- 12" pump chamber



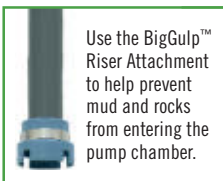
### SUPER GULP

- 16 GPM pumping capability
- 4" dia. x 2 ft. pump chamber
- 3" dia. x 3 ft. outlet hose
- 3" dia. x 7 ft. inlet hose



### BIG GULP

- 35 oz./stroke
- 36" chamber
- 72" or 36" outlet hose



Use the BigGulp™ Riser Attachment to help prevent mud and rocks from entering the pump chamber.

## ordering

### GULP ULTRA SERIES

- Part # A-G12-C Gulp™ Ultra
- Part # A-G12S-CK Gulp™ Syringe Ultra
- Part # A-G3636CK BigGulp™ Ultra with 36" outlet hose
- Part # A-G3672CK BigGulp™ Ultra with 72" outlet hose

### GULP CLASSIC SERIES

- Part # A-G12 Gulp™
- Part # A-G12S Gulp™ Syringe
- Part # A-G3636K BigGulp™ with 36" outlet hose
- Part # A-G3672K BigGulp™ with 72" outlet hose
- Part # A-G2484 SuperGulp™ with 84" outlet hose
- Part # A-G01 BigGulp™ Riser Attachment



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