We look at soil & water quality from a different perspective.

Yours.



Your course is like no other – especially when it comes to soil and water quality issues.

That's why we've designed a comprehensive line of products to help you manage your unique soil-and water-related challenges. From salt stress to carbonate buildup, we'll help you evaluate your turf's needs and build a program that is both effective and affordable.

Contact your Aquatrols distributor for more information.

A golf course is no different than any other workplace. Workers must abide by safety procedures, and a safe environment must be provided for golfers.

by Bruce R. Williams, CGCS

afety at the golf course is often overlooked until accidents or problems arise. Golf course maintenance is a business and safety should be a part of every business. Every golf course budget should have a line item for safety equipment, upgrades to facilities, adherence to laws and regulations and training for staff regarding the need for a safe workplace as well as providing a safe place for golfers to enjoy their recreation.

All too often safety becomes a priority after an accident has happened. At that point it may be a little late to be compliant - sort of like closing the barn door after the horse is gone. It also becomes a priority when inspectors arrive at your door to follow up on a call from a disgruntled employee.

Every golf course needs written sections on safety in the various documents that guide its operation. This includes standard operating procedures, long-range planning, your orientation and training manual and as a budgetary item.

So, you don't have a safety program? Or, the existing one is weak at best. Where do you start? Either conduct an internal audit of your safety program or hire an outside consultant to do it for you. I have contracted people from insurance companies, consultants who may



For fire ant colonies, it's a perfect storm.

Only one solution has the benefits of both baits and contact insecticides. DuPont[®] Advion[®] fire ant bait is one of the fastest, most effective fire ant control bait products available today—eliminating the entire colony in just 24 to 72 hours. Advion[®] provides outstanding year-round protection in just one or two applications. And it does it all while also having a favorable environmental and toxicological profile. Advion[®] fire ant bait is registered as reduced-risk for use on fire ants by the U.S. EPA under its Reduced-Risk Program. Experience all-in-one fire ant control today. Please visit us at proproducts.dupont.com/fireantbait. Advion.[®] Unbeatable results.

DuPont Professional Products



"Every golf course needs written sections on safety in the various documents that guide its operation. This includes standard operating procedures, long-range planning, your orientation and training manual and as a budgetary item."

have been former inspectors and also consultants who have these skills as well as are knowledgeable of the laws and have spent quality time on golf courses.

POINTING OUT THE OBVIOUS. It is pretty easy to do a walkthrough at a turf-care center and find the obvious potential violations. Here are some common examples:

- Acetylene tanks are not secured to a non-movable object, such as a wall
- Improper spacing for guards on a bench grinder or mower grinders
- Improper ventilation
- Overloaded electrical wall outlets
- Floors littered with clutter
- Incorrect or unmarked walkways
- Inaccurate and out-of-date records, including OSHA
- Poor staff safety-training, including topics, signatures and training methods
- Incomplete first-aid kits
- Inaccessible MSDS sheet
- Poorly labeled emergency gasoline shutoff
- Improper pesticide storage that fails to meet state laws
- Disorganized copies of licenses for qualified applicators
- Poorly written safety plan that follows OSHA guidelines
- Lack of or poorly written emergency-response plan
- Lack of safety training for equipment operators
- Non-compliant fuel-can storage
- Rinsate recovery that does not meet state laws
- Emergency exits with improper signage
- No wash-water eye stations and/or showers
- Improper storage of motor oil and lubricants
- Compressed air lines that lack proper shutoffs and connections

While these topics are more concentrated inside the shop there are also a variety of them that have an impact on outside operations as well.

- · Chainsaw safety
- First aid
- Defibrillator training
- Emergency evacuation plan
- Safety equipment training

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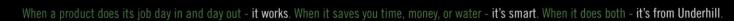
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NEW!

Magnum[™] UltraMAX

PREMIUM HOSE-END NOZZLES & ACCESSORIES

Step up to the most professional nozzle you can buy - MAGNUMTM UltraMax. Firefighter quality for professionals in any field, these variable flow, multi-function nozzles are virtually indestructible and leak proof. The innovative TURBO SHIFT feature, available on both high-flow and low-flow models, provides two distinct GPM ranges for added versatility. And the outstanding distribution patterns of all MAGNUM UltraMAX nozzles make them excel in high demand areas like greens/tees, infield conditioning and equipment and stadium washdowns.

features / specifications

- Multi-Pattern Spray: Fog, Jet Stream, Fan
- Built for 1" and ¾" Hose Flow Rates (range: 7-43 GPM)
- Materials: Aircraft Aluminum, Stainless Steel, TPR Rubber



FULL THROTTLE

Single Variable Flow: Delivers steady, maximum volume fog, jet stream and fan patterns.

High Volume Model:

15-40 GPM (57-151 L/min) Low Volume Model:

12-19 GPM (45-72 L/min)



TURBO SHIFT

Dual Variable Flow: Delivers light fog and low volume jet stream patterns before shifting to high volume jet stream and fan patterns.

Made in USA

High Volume Model:

Opens with 12-17 GPM (45-64 L/min)
Turbo Shifts to 20-43 GPM (76-163 L/min)

Low Volume Model:

Opens with 7-12 GPM (27-45 L/min)
Turbo Shifts to 14-17 GPM (53-64 L/min)



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NEW!

UltraMAX Valves

Heavy duty ball valve, push-pull on/off control handle and exceptional build quality for long life under demanding use. Available in Firefighter Grip for two-handed operation or ergonomic Pistol Grip for comfortable, extended use. **Nozzles sold separately.**

ordering

Part # NG550-DFH-75
Part # NG550-DFH-10
Part # NG550-DFL-75
Part # NG550-DFL-10
Part # NG500-SFH-75
Part # NG500-SFH-10
Part # NG500-SFL-75
Part # NG500-SFL-10
Part # SVPG-75
Part # SVPG-10
Part # SV-75
Part # SV-75
Part # SV-10

All flow rates based on 80 psi (5.5 bar)

Turbo Shift 12-43 GPM (45-163 L/min) - ¾" FHT inlet Turbo Shift 12-43 GPM (45-163 L/min) - 1" FHT inlet Turbo Shift 7-17 GPM (27-64 L/min) - ¾" FHT inlet Turbo Shift 7-17 GPM (27-64 L/min) - 1" FHT inlet Full Throttle 15-40 GPM (57-151 L/min) - ¾" FHT inlet Full Throttle 15-40 GPM (57-151 L/min) - 1" FHT inlet Full Throttle 12-19 GPM (45-72 L/min) - ¾" FHT inlet Full Throttle 12-19 GPM (45-72 L/min) - 1" FHT inlet Full Throttle 12-19 GPM (45-72 L/min) - 1" FHT inlet Fistol Grip Valve - ¾" FHT inlet Pistol Grip Valve - ¾" FHT inlet Firefighter Grip Valve - ¾" FHT inlet Firefighter Grip Valve - 1" FHT inlet

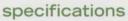
Magnum™

SOLID METAL HOSE NOZZLE

Underhill™ Magnum™ contains no plastic internal parts to break, stick or wear out. Our unique ratchet mechanism easily adjusts from gentle fan to powerful jet stream and prevents over-tightening damage. Precision-machined, incredibly smooth operation and outstanding distribution patterns make it ideal for high-demand areas like greens and tees. Magnum™ is also an excellent equipment wash-down nozzle.

features

- Multi-pattern sprays effortless control with hydraulic assist on/off
- Solid metal internal no plastic parts to break or wear out
- Ratchet mechanism prevents over-tightening damage
- · Ultra-durable construction withstands any abuse
- · Fire hose quality nozzle feels great in your hands
- · Beautiful, consistent spray patterns for life
- . Built for 1" and 34" flow rates



Materials: stainless steel, aluminum, TPR rubber

Flow: 37 GPM at 80 psi

Inlet: 34" hose thread (1" brass adapter available, see Page 4)











Won't stick...won't break

solid metal internal body

Magnum™ nozzle pictured

with 1" brass adapter (sold separately on Page 4)





CoolPro™

COOL WITHOUT OVER WATERING - NO ROOT DAMAGE

A hot summer day can be murder on your greens. Use too much water and you risk damage to the roots. CoolPro™ is the first nozzle specifically designed for the single purpose of lightly misting the turf canopy to cool without over watering. And its 25 foot fogging pattern gets the job done quickly.

features

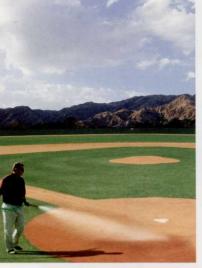
- Precision[™] nozzle fogs at 70 psi to deliver a 25 ft. pattern with only 4-6 GPM
- 34" inlet (1" brass adapter available, see Page 4)
- Ergonomic handle/valve provides easy grip and variable on/off control.
- Durable solid metal design: zinc, aircraft aluminum and stainless steel.

ordering

Part # NG450 Part # HNC075 Part # HN0600

Part # CV075L

MAGNUM™ Hose Nozzle CoolPro™ Valve and Nozzle CoolPro™ Nozzle only 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.



RainbowTM TASKS: Greens, tees, seed beds, transplants, delicate landscaping (15 GPM)

Rainmaker™ TASKS: Syringe and spot watering turf and hardy landscaping (23 GPM)

Cloudburst™ TASKS: Dry spots, drenching, and wetting agent application (35+ GPM)

Cyclone™ Pre-game skins watering, heavy watering of large areas (50+ GPM) Note: GPM will vary with pressure at nozzle.

high-flow valves



COMPOSITE / STAINLESS STEEL:

34" hose thread inlet/outlet, oversized handle, up to 55 GPM

SOLID BRASS: 34" hose thread inlet/outlet, up to 50 GPM



hose adapters / quick-connectors









ordering

NEW! **Bumper Design**

Part # HN1500CV Precision™ Rainbow™ Nozzle Kit Part # HN2300CV Precision™ Rainmaker™ Nozzle Kit Precision™ Cloudburst™ Nozzle Kit Part # HN4800CV Part # HN5000CV Precision™ Cyclone™ Nozzle Kit

Nozzle Kits include brass High Flow Control Valve and 34"MHT x 1"FHT Adapter. To order nozzle only: remove "CV" from part number.



Part # CV075H Part # A-BV77FM Part # A-BQ7M Part # A-BQ7F Part # HN075W

High-Flow 34" Valve - Brass High-Flow 34" Valve - Composite/Steel Part # A-BA107FM 1" FHT x 3/4" MHT Brass Hose Adapter Part # A-BA107MF 1" MHT x 34" FHT Brass Hose Adapter 34" Quick-Connect, male end 34" Quick-Connect, female end replacement washer, 34" hose

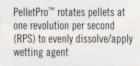
PelletPro™

APPLICATOR GUN FOR SOLID WETTING AGENT TABLETS

Our heavy-duty surfactant applicator, high-flow valve and Precision™ Cloudburst™ nozzle combo comprises the finest wetting agent gun available. PelletPro™ accepts all wetting agent tablets and provides a high volume, yet soft spray for watering or applying surfactants to tight, hydrophobic soils.

features

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





PelletPro's bowl works great as a replacement in-line filter for most spray rigs. Heavy-duty, transparent bowl shows fluid levels, and won't crack during winter storage.



IN-LINE APPLICATOR OPTION

Connect directly to a water source (quick coupler, HoseTap, etc.) to get the benefits of PelletPro with less handheld weight.



LiquidPro™

APPLICATOR GUN FOR LIQUID WETTING AGENT

LiquidPro's chemical-resistant, UV-protected, lightweight siphon/mixing system can cover 1000 square feet in less than a minute! With unmatched speed and uniformity, you can virtually "paint" your turf with liquid wetting agent, fertilizers, and micronutrients. Adjustable metering dial offers 10 additive settings including "Water Only."

ordering

Part # A-PPWA50K PelletPro™ Applicator Gun

Part # A PPQ-075 PelletPro™ In-line Applicator: ¾" FHT inlet, ¾" MHT outlet

Part # A-PPQ-100 PelletPro™ In-line Applicator: 1" FHT inlet, 1" MHT outlet

Part # A-PPB In-line Filter Bowl

Part # A-PPBG Gasket

Part # A-LPWA50K LiquidPro™ Applicator Gun

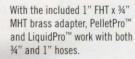
Part # A-LPWAB-6 6-Pack of 32 oz. Polybottles and Carrier



PLICATION GU

DERHIII. US

PelletPro and LiquidPro's Precision™ Cloudburst™ nozzle and high-flow valve quickly assemble to create a powerful, 35+ GPM syringe nozzle.





Cost

Profile™

SOLID METAL GOLF SPRINKLER NOZZLES

Upgrade your Toro® or Rain Bird® sprinklers with our perfect-fit Profile™ nozzles and you will see improved results immediately. And with ultra-uniform water distribution, you can cut back watering times to **save millions** of gallons of water **every year**. Over time, since Profile solid metal nozzles resist wear and clogging, you'll enjoy these superior results for the life of your sprinkler...never needing to change out nozzles again. Nozzles so consistent, patterns so uniform... it's like rain on demand.™

▼ ROI

Use less water, energy and manpower and get better course playability.

"Profile nozzles lived up to our expectations and eliminated patchy dry spots and donuts. We retrofitted all our fairways and now run a more efficient irrigation program."

Logan Spurlock

Superintendent, Sherwood Country Club

"It was like putting in a new irrigation system. I became a believer overnight."

Mike Huck

Irrigation & Turfgrass Services

Former USGA Staff Agronomist and Superintendent, Murrieta Hot Springs Resort

"The Profile retrofit program has also extended the life of our Toro system while improving course appearance and playability."

Dennis Eichner

Assistant Superintendent, Silverado Resort - Napa, California

"The real power is knowing that retrofitting sprinklers with Profile nozzles can be phased in to work within a course's operating budget."

Kurt Thompson

K. Thompson and Associates, Irrigation Consultant and Trainer Huntersville, North Carolina and Pace, Florida

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