blueprint QUARTERLY

IRRIGATION AND CONSERVATION NEWS FROM HUNTER
INTERNATIONAL EDITION ISSUE #25 · APRIL 2011

www.hunterindustries.com

Irrigation in the New Age of Synthetic Turf

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Irrigation in the New Age of Synthetic Turf

Synthetic Turf has undergone quite an engineering journey to get from where it was to where it is today. First generation synthetic turf was developed in the 1960s, and was essentially a grass carpet made from nylon fibers. Due to its water and maintenance saving features, it quickly began appearing in outdoor stadiums, and was used for a variety of sports. The second generation of synthetic turf was developed in the late 1970s and had longer tufts spaced more sparsely with sand spread between fibers to create a more natural look and feel.

These days synthetic turf is beyond comparison with that of the past. Third generation synthetic turf has much longer fibers, which are spaced significantly further apart. They are usually made of polyethylene, and infilled with rubber granules and sand. This makes for a softer, more skin-friendly surface, which works especially well for international football pitches due to the amount of sliding or diving involved. The environmental benefits of today's fields are also quite impressive. According to the Synthetic Turf Council, "The synthetic fields installed in North America alone conserve more than 11 billion gallons of water, and recycle over 105 million tires a year."

In the early days, irrigation didn't play much of a role in synthetic turf. Today irrigation is regularly used with virtually all third generation fields to help clean and cool surfaces to a field manager's liking. With a legacy based on innovation in virtually every corner of the irrigation industry, it should come as no surprise that Hunter Industries is fully embracing the new opportunities with synthetic turf by creating a new and expanding line of rotors and components specifically for ST applications.

The Hunter ST System features gear-driven long-range rotors based on Hunter's legendary rotor technology, a special multi-axis swing joint, low-pressure loss valves and a robust feature-packed enclosure. Hunter ST Rotors are reliable and engineered for longevity in high flow and high-pressure conditions. They are currently available in two configurations: the ST-90 and the STG-900.

The ST-90 features a smaller exposed surface area and jar-top access to the riser assembly and is ideally suited for direct burial in the natural turf that is sometimes adjacent to synthetic fields. The STG-900 features a slightly larger exposed surface area and includes through-the-top access to the riser assembly. It is ideally suited for installation within the ST Enclosure that is installed on the synthetic surface. However, it can also be installed in the natural turf that is sometimes adjacent to the synthetic field needing irrigation.

The Hunter ST Enclosure is also another major component of what sets this system apart. It's based on a complimentary blend of features including construction grade fiberglass in the body, a high impact resistant composite plastic on the exposed upper rim, and a near indestructible polymer-concrete cover set. Together they form a 9,072 kg rated enclosure that is durable yet easy to install at just 48 kg with the covers removed.

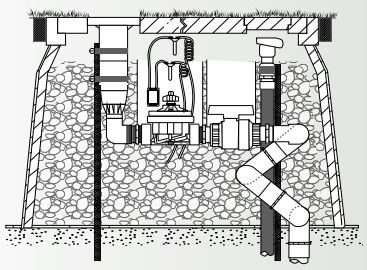
The exclusive 50 mm thick three-piece polymer-concrete cover has a perfectly located cast-in hole for the STG-900 Rotor on one side. This design allows the rotor to be held perfectly to grade within the hole while the enclosure is back-filled from the exposed opposite side. Quick couplers are a must-have around every synthetic field. The cast-in quick coupler port and cover on the opposite side eliminates the need for separate quick coupler enclosures around the playing field.

The ST Enclosure was designed to be as lightweight and easy to install as possible without sacrificing durability. From a functionality perspective, the three-piece cover, large interior space and total top access to all components make servicing easier, the system less expensive to maintain, and eliminates the possibility of disrupting or excavating the synthetic playing surface in the future.

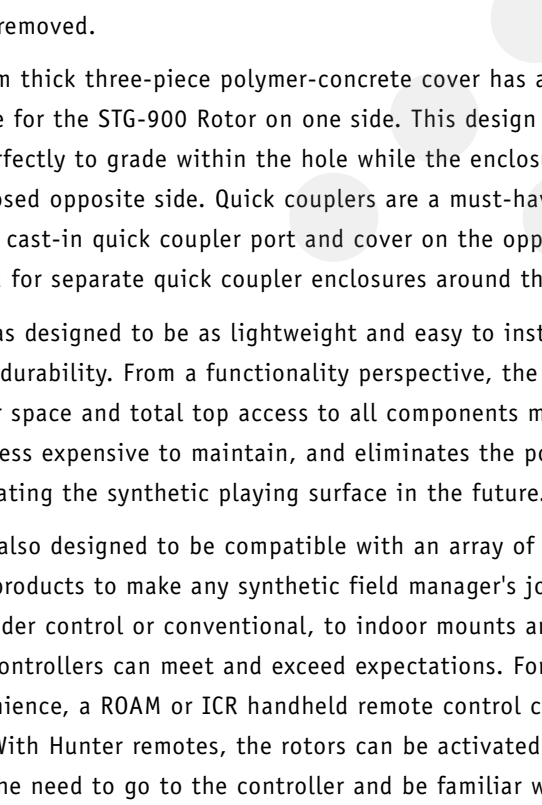
The ST System was also designed to be compatible with an array of other innovative Hunter products to make any synthetic field manager's job as easy as possible. From decoder control or conventional, to indoor mounts and outdoor pedestals, Hunter controllers can meet and exceed expectations. For the ultimate in irrigation convenience, a ROAM or ICR handheld remote control can be the perfect accessory. With Hunter remotes, the rotors can be activated from the handheld without the need to go to the controller and be familiar with its programming functions.

The goal of Hunter's System is to offer the synthetic turf industry the total irrigation solution it needs once and for all. What sets the Hunter ST System apart is that it is an integrated solution that is easy to specify and install, as well as easy and cost effective to maintain. Hunter is happy to announce that it has been well received by the synthetic turf community at large, and is currently in use in an array of synthetic fields with tremendous results. **>>**

ST System Installation Detail



ST Enclosure



ST-90 Rotor

STG-900 Rotor

Photo Contest: Inspire Hunter – Show us your landscape, win a camera

One of the greatest rewards we have at Hunter Industries is seeing our products being used at interesting sites around the world. In particular, we really like to see our products at work in creative landscape designs with an eye on conservation. It inspires us to keep working hard, and ensures that our catalog continues to offer the most innovative and water-conscious products in the world.

To show just how appreciative we are, we've created the Inspire Hunter contest, which will reward the most inspirational Hunter site studies in the world. Everyone who participates will receive a prize, and the top site, as evaluated by senior Hunter judges, will win a top prize.

Entrants must send in photos of a landscape site irrigated with Hunter Products, and a short description of the story behind the products and site. Let us know how Hunter products helped solve problems, and how conservation played into your plans. The top sites studies with photos will be placed on our website and will mention your site and your company. >>

HOW TO ENTER

1. Email your best landscape photographs and the inspiring story behind them to: InspireHunter@hunterindustires.com
2. Along with the submission, you MUST include the following information in the submission form:
   - I. Your full name and mailing address, a contact telephone number and your email address.
   - II. A brief description of the image, including where and when it was taken, any information on the details in the image, and any relevant stories.

RULES

- We can only accept digital photo submissions.
- No printed photos will be accepted.
- Photos must be submitted electronically as a high-resolution image, with a minimum resolution of 1600 pixels on the shortest edge, a minimum file size of 2MB and minimum resolution of 300 DPI. The maximum file size is 5MB.

ELIGIBILITY

Open to everyone from any country.

ENTRY FEE

Free

ENTRY DEADLINE

30 June 2011

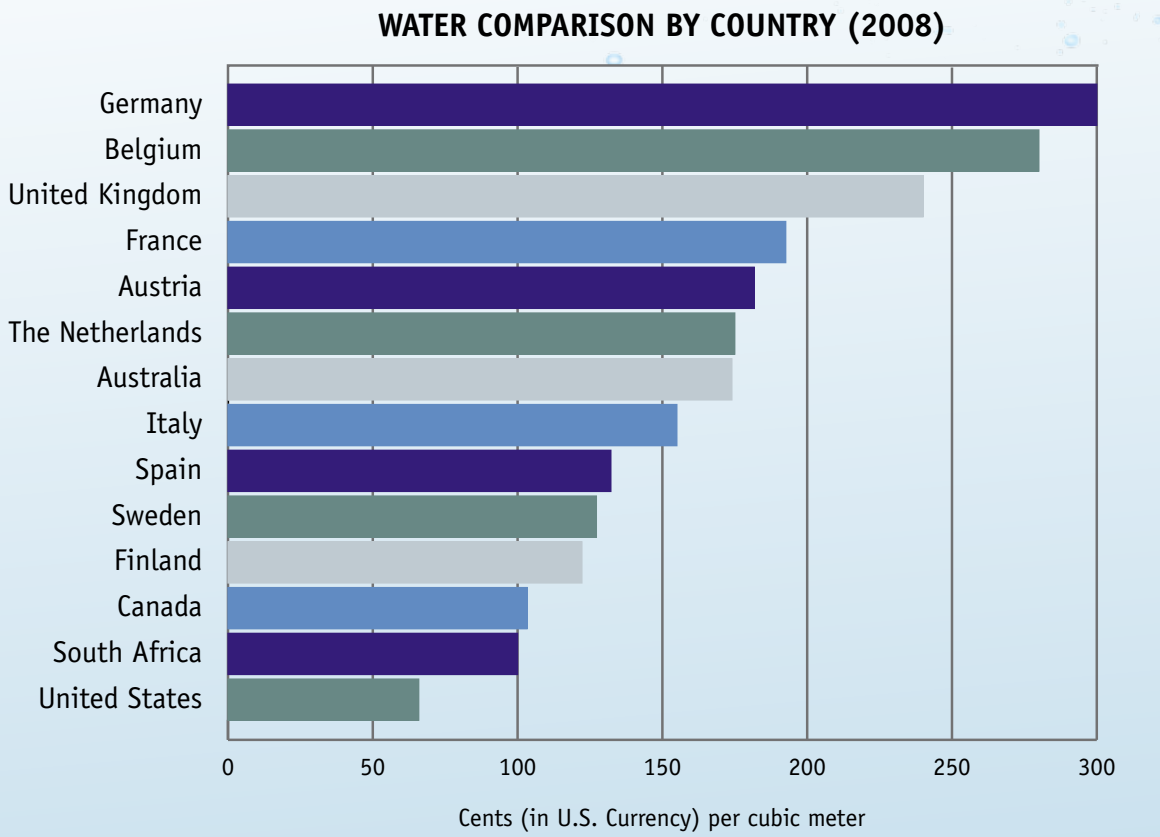
PRIZE INFORMATION

- Grand Prize Winner – Digital SLR Camera
- Runner up – iTouch
- All Participants who enter both a site study and a photo – Hunter Flash memory

Water Cost Comparison

As this comparison chart illustrates, the cost of water varies greatly around the world. Most countries of Western Europe experience double, if not triple, that of their North American counterparts.

Finding practical, cost-cutting ways to bring conservation to the forefront of every irrigation project has always been Hunter Industries' mission. With products such as the MP Rotator, Solar Sync weather sensor, pressure regulation nozzles and many more, they're proud to announce to the world that there is now a way to make any small equipment investment go a long way for reducing overall water costs. >>



Source: NUS Consulting Group

Hunter Training Update: More Websites Than Ever

At Hunter Industries, we're known for taking two things in particular very seriously: product innovation and dedication to conservation. However, something else we also take quite seriously is ensuring that our customers have complete access to the training tools they need to succeed with our great products.

To help ensure this access, we're constantly updating and perfecting our online education resource center: training.hunterindustries.com. At this site, you'll find courses, tutorials, and other educational resources that let you and/or your employees work and learn at your own pace. It even features discussion forums and support features to ensure you're getting the most out of your courses.

The best part about it? It's free for any and all who want to take advantage of this amazing resource. Plus, since its online, you and your employees can use it anytime, and anywhere you have an internet connection and a browser. It helps better businesses, careers, and all the projects that push both forward.

Some of our most recent additions to the site include:

- Ultra Rotors
- MP Rotator
- ICD-HP Wireless Decoder Programmer
- Solar-Sync
- IMMS Graphics Creation Overview
- DUAL Decoder Installation
- I-Core Fundamentals

To get started on the courses that work best for your business, log on to www.training.hunterindustries.com and fill out the simple registration form. If at any time throughout your training should you encounter any problems, feel free to contact Hunter Training Support by emailing training@hunterindustries.com. **>>**

Follow Us On...

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Looking for the best way to stay connected to everything that's happening in and around Hunter Industries? Find us today on Facebook at facebook.com/hunterindustries.

Our Facebook page is filled with all the latest updates and company info you need to know as an irrigation professional. It's also the fastest way to stay informed on all the product information and updates that can help your business immediately improve.

Since virtually everyone who follows us is a member of the global irrigation community, it's a great way to connect with your peers around the world, and start a conversation or two about our great profession.

For the best industry insights, and immediate updates no matter where you are in the world, get online and connect with Hunter on Facebook today! **>>**

ICD-HP: Complete Control
Now Compatible with DUAL

The ICD-HP Handheld Programmer is the indispensable field tool for the decoder professional. It saves installation and diagnostic time, and helps you get even more out of your Hunter decoder systems.

Using innovative wireless induction, the ICD-HP permits a full range of programming, diagnostic and operational features, without removal of waterproof connectors. The programmer's induction probe communicates with Hunter decoders through the decoder case—wirelessly.

Now, the ICD-HP is an even more valuable tool in the irrigation professional's arsenal, because it is compatible with Dual.

The Dual system is an affordable two-wire decoder output option for the popular I-Core controller. Dual includes programmable 1 and 2 station decoders. These decoders are fully compatible with the wireless ICD-HP.

So, with ICD-HP and Dual capabilities, you can assign station numbers in any order, turn stations on/off at the valve box, have an easy to use sensor tester, and get multi-meter functions, all without removing a single waterproof connector. It's total two-wire control in the palm of your hand, operable anywhere on your site. **>>**

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New Catalogs Available

As the innovation leaders of the irrigation industry, we at Hunter Industries take tremendous pride in our catalog of products. It's both an internal and external reminder of how we've gone from a one-product manufacturing start-up in 1981 to a global irrigation leader with a fully expanded portfolio to meet any challenge. We're happy to report that our 2011 catalog is our most comprehensive ever. Not only is it packed full of our most diverse and technologically advanced line of products ever, it's also our most complete. It's also designed to make the information and products you are looking for easily accessible and readable.

If you don't yet have your copy, find it online at hunterindustries.com. It can be downloaded as a PDF, or mailed to you in its print form if you fill out a catalog request form. >>

The 2011 Hunter catalog is currently available in the following languages:

US Domestic English
English Metric
Spanish
French
Deutsche
Italian
Portuguese

It will be available shortly in the following languages:

Greek
Russian
Arabic
Turkish
Polish

ACC vs DUAL: Similar Technology, Different Applications

Hunter Industries is fully dedicated to providing customers with every tool they need no matter what kind of job they're undertaking. Having multiple two-wire solutions available in the catalog—the ACC Decoder Controller, and the Dual for I-Core—is just another example of that in action.

Two-wire "decoder" control technology is the fastest growing trend in irrigation control. The two-wire approach saves wire, simplifies installation and field troubleshooting, offers incredible flexibility after the initial installation, and reduces exposure to lightning surge damage. While both ACC and I-Core/Dual offer these real-world benefits, they do it in different ways, and on different levels.

The ACC Decoder Controller is Hunter's most powerful controller for command of large and sophisticated sites. It uses the standard ACC controller as the interface, and allows contractors to install large-scale decoder systems without having to learn an entirely new operating system. Hunter's ACC Decoder Controller also includes two-way decoder line communication, which provides the ability for the controller to confirm that the decoder has been activated. It has a 99-station capacity and includes one, two, four, and six station decoders in compact, waterproof enclosures with color-coded wiring connections and integrated earth ground wire.

ACC Decoder controllers support special features, such as the ability to assign the two programmable pump/master valve outputs to decoders, and the ability to monitor sensors (including flow) via the two-wire path by adding ICD-SEN sensor decoders. The ACC controller may operate up to 6 programs simultaneously.

In contrast to the ACC, the I-Core is designed for smaller commercial and even large estate projects. It's easy to use, easy to install, and easy to program. While created for smaller sites than the ACC, it still includes many large-scale features like seasonal adjustment by program, solar sync compatibility, flow meter and monitoring capability, four fully independent programs, and 6 language options. Dual is the 2 wire system designed for the I-Core controller, so installers can now utilyze the burgeoning technology on sites where they previously could not. The Dual system uses an optional module that plugs into the I-Core, which then supports up to 3 two-wire paths to the decoders. DUAL allows the I-Core to handle a maximum of 48 stations. The DUAL module can be combined with I-Core's 6 station output modules to create a hybrid system with conventional and two-wire station control. Dual decoders come in one and two station versions, and are aptly named Dual-1 and Dual-2.

DÜAL

Dual decoders are very competitively priced, and do not include integrated surge protection. Instead, they are protected by Dual-S surge suppression modules, which are installed in the two-wire paths and grounded as needed (minimum, after every 12th decoder or 1000 ft/300 m).

The I-Core Dual controllers may operate any two programs simultaneously.

When choosing a decoder controller for a large project that demands premium features, excellent on-board diagnostics, large numbers of simultaneously operating stations, and very long wire runs, the ACC controller is unbeatable.

The I-Core Dual offers a two-wire alternative for smaller projects with all the benefits of two-wire technology at a very competitive price point. >>

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news@hunterindustries.com

PGP Ultra: Still the Ultimate Rotor

The original PGP Rotor from Hunter Industries is still talked about as one of the greatest innovations to ever hit the irrigation industry. Its gear-driven engineering concept was a new level of quality, precision, and conservation no one saw coming except for Ed Hunter himself. The PGP's original design and impressive performance along with continuous improvements and enhancements have meant decades of unmatched durability, versatility, and value. This has allowed the PGP to maintain its status as the best selling rotor in the world since 1981.

Now, with the PGP Ultra, it takes all the conveniences and reliability of the original PGP and raises it another notch. It was a long and tumultuous process to try and change something that has been heralded as perhaps the biggest thing that's ever happened to modern irrigation. However, with better materials and technology, and most of all, with customer insights in their arsenal of tools, Hunter engineers set to work and created something truly marvelous.

The PGP Ultra is sturdier, more precise, and more conservation-focused than its predecessor. Many of the changes created in this gear-driven rotor were not internally generated, but rather generated through feedback from our customers.

Big changes include:

- Automatic arc return, which returns the nozzle turret to original arc pattern, regardless where it is turned outside of the desired arc pattern
- A non-strippable, vandal-proof drive mechanism to allow the user to turn the nozzle turret against the direction of drive without damage
- A non-reversing turret, which allows continuous counter-clockwise rotation when the arc is adjusted to a full 360 degrees
- Comes standard with a nozzle retainer/radius adjustment screw that can be turned with either the standard Hunter wrench or slotted screwdriver

Each PGP Ultra also comes with an easy-to-install, square top rack of 8 standard nozzles and 4 low angle nozzles. Optional racks of short-range nozzles, for the smallest of areas, are available, too. The PGP Ultra also boasts a 3-year warranty, and is designed to function flawlessly on all kinds of landscapes anywhere in the world. >>

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