



# Precision™ Series Spray Nozzle

## Sprays

**Male- or Female-threaded Nozzles Fit Toro®, Irritrol®, Rain Bird® and Hunter® Spray Bodies**



**The Patented H<sub>2</sub>O Chip**  
No Moving or Sonic Welded Parts



Assures no variation at the end of the water arc for better edge definition and consistent, reliable performance.

### PSN with PCD Performs Under Pressure!

Competitor's High Flow Nozzle:  
12H Nozzle at 50 PSI = 1.83GPM  
or 2.45"/hr.\*

PSN with PCD Nozzle:  
12H Nozzle at 50 PSI = 0.74 GPM  
or 1"/hr.\*

Up To  
60% Less  
Water!

*Toro's Precision™ Series Spray Nozzles are the most complete and efficient spray nozzle line available to help irrigation professionals manage water use, eliminate runoff and reduce customer water bills.* The Precision™ Spray nozzles 1"/hr. precipitation rate ensures that water is applied more slowly and evenly without sacrificing landscape health. These nozzles are available in a wide selection of arcs and radii, as well as male and female threads, making them ideal for large scale installations and retrofits. The Precision™ Series Spray Nozzles are now also available in pressure-compensating versions, further enhancing the best-in-class spray nozzle in the industry.

## Features & Benefits

### Patented H<sub>2</sub>O Chip Technology

Using patented H<sub>2</sub>O chip technology – and no moving parts – each Precision Series Spray nozzles creates one or more high frequency oscillating streams to achieve the desired arc and radius with 1/3 less water usage.

### Maximize Irrigation Efficiency

Precision Spray nozzles deliver an industry first 1"/hr (25mm/hr) precipitation rate, which better matches soil infiltration rate. This lower precipitation rate, along with high distribution uniformity make this nozzles family the most efficient nozzle from 5'-15' (1,5-4,6m).

### Pressure-Compensating Versions Available

Pressure-Compensating Precision™ Series Spray Nozzles maintain 1"/hr (25mm/hr.) precipitation rate and minimizes misting up to inlet pressures to more than 40 PSI, minimizing the need for a regulating head, at fraction of the cost.

### Design and Retrofit Effectiveness

The lower flow rate of Precision Series spray nozzles maximizes design efficiency and saves on overall material costs by using fewer valves and less controller stations. In addition, existing systems with low pressure can be fixed with a simple retrofit of the existing high-flow nozzle.

### Third-Party Performance Validation

Precision™ Series Spray nozzles (non-Pressure-Compensating versions only) have been tested and validated in the field and at the Center for Irrigation Technology (CIT).

### Pressure Compensation Device

The elastomeric PCD disk opens and closes in response to changes in inlet pressure to maintain optimal performance, even when the pressure rises higher than 40 psi. The Pressure-Compensating versions are indicated by the red stamped Toro logo, while the non-Pressure-Compensated versions are indicated by the white stamped Toro logo.

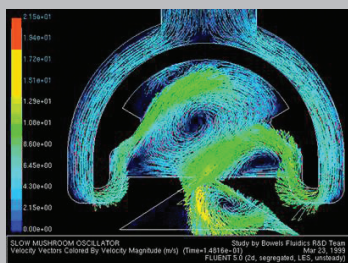


\*Based on internal flow rate test data in Riverside, CA.

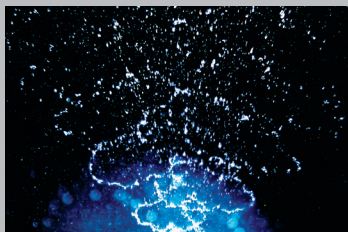
**TORO®****VISIBLY DIFFERENT.**

## Toro® Precision™ Series Spray Nozzles

The Toro Precision Series Spray Nozzles with patented H<sup>2</sup>O Chip technology offers performance characteristics that are visibly different than conventional spray nozzles. The secret lies within the chamber of the H<sup>2</sup>O Chip. Invisible to the naked eye, and only seen with strobe light illumination, water oscillates at over 200 cycles per second. This creates a spray pattern that offers better coverage, defined edges, reduced run-off, and lower flow - ultimately resulting in less water use.



Water enters a specially designed chamber to create high-frequency oscillations.



Water droplets of consistent size and velocity exit the nozzle as high-frequency oscillating streams detectable only with strobe light illumination.

Male-Threaded



H<sup>2</sup>O Chip



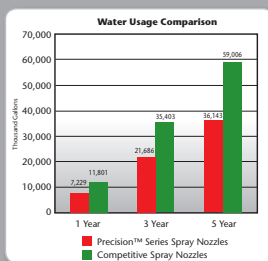
Pre-attached Filter For Rapid Installation

Female-Threaded

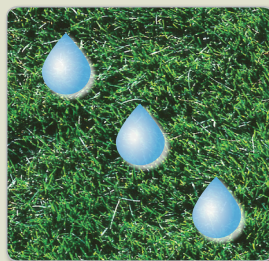
### A Spray Nozzle Line That Delivers:



1"/hr. Matched Precipitation And One-For-One Retrofits



Higher Overall Irrigation Efficiency From 4-15 ft.



Water Use Reduction While Minimizing Run-off and Water Waste



Fit Toro, RainBird®, Hunter® and Irritrol® Fixed Sprays





**TORO®**

# Here's What Our Customers Are Saying About Precision™ Series Spray Nozzles!



## 1" Per Hour Matched Precipitation And One-For-One Retrofit

Perfect when upgrading conventional, higher flow spray nozzles...Look for the "O" stamped on top of the nozzle.

"I was skeptical that putting 30% less water down would keep the turf in good condition. If I reduced my time by 30% with the old nozzles, I'd be growing straw. All I can say just by my observation is that it works. So far it looks great."

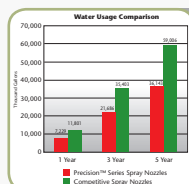
**Bill Bobbit**  
Landscape Manager  
La Quinta, CA

"We are finding that with the new water windows, if you have the old-style nozzles or high-efficiency competitive nozzles, you cannot complete your water cycle to meet a water district's water window."

**Eric Anderson**  
President, Valley Soil  
Temecula, CA

"For us, usually it's not about pressure, it's about the volume of water available. There was one job where I was going to install four valves, 2 in front and 2 in back, with these nozzles, I was able to use just two valves, 1 in front and 1 in back, and cut my cost in pipe and valves in half."

**David Rudgers**  
Owner,  
Rudgers Landscape Construction  
Pomay, CA



## Higher Overall Irrigation Efficiency From 4-15 Feet

Precision Series Spray nozzles perform more like a small rotor. The H<sub>2</sub>O Chip enables the nozzles to achieve distances of throw equivalent to those of conventional spray nozzles – but with one-third less flow and higher overall irrigation efficiency.

We ensure that our research is unbiased when we make tests. We have seen a uniformity coefficient greater than 80% on the Precision Spray Nozzles, which we've never had on square spacing."

**Bernd Lainauer**  
Professor and Turf Grass  
Extension Specialist,  
New Mexico State University  
Las Cruces, NM

"I am absolutely thrilled by the installation of the Precision Spray Nozzles. I am getting water where the gardener said I never would. I asked him to completely do my back yard with these nozzles. I live in an area that we can only water three days a week. But every inch of my backyard now gets watered. And even though it's been hotter than blue blazes, my lawn is greening up."

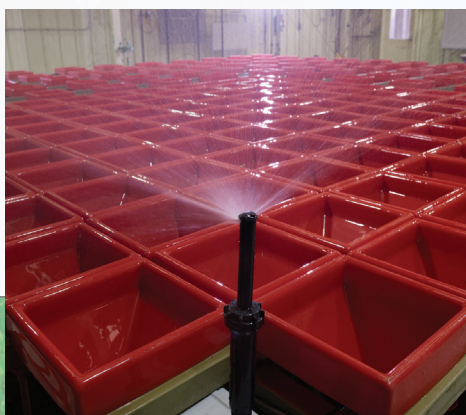
**Barbara Brown**  
Homeowner  
San Diego, CA

"What I found in general was they had a much higher uniformity than regular spray nozzles. They were also consistently at about a 25% less application rate overall, compared to regular spray heads. Running these nozzles side by side with regular nozzles they keep the lawns green in the same number of minutes with these using less water. Because these nozzles are proving to have a better uniformity rate, you can cut down the amount of time and still have the same results."

**Laurence Budd**  
Urban Water Conservation  
EPA WaterSense Partner,  
CLLA auditor

"DU before the swap was 44%. After changing to Precision Spray Nozzles (No other changes or adjustments were made), DU went up to 73%. An increase of 29%! Using the 2009 YTD ET/Rainfall data, this could represent a savings of almost 11,000 gallons for this single zone!"

**Dan Muelrath**  
Water Conservation  
Program Coordinator,  
City of Santa Rosa, California



Laboratory and third party independent field testing show efficiency to be 15-20% higher than competitive nozzles at 15 feet or less.



## Water Use Reduction While Minimizing Run-Off And Water Waste

Precision Series Spray Nozzles have proven to save water in the field while reducing unnecessary overspray, wasteful run-off and evaporation.

"One of our guiding principles is to be good stewards of the environment, even in a water rich state such as Michigan. The installation site selected is one of the toughest on the property...an annual display bed fully exposed on a windy hill top. Even in these conditions a 20% water reduction was achieved. That's a significant savings and that's just one station!"

**Scott Davidson**  
Plant Record & Irrigation Specialist  
Frederik Meijer Gardens & Sculpture Park  
Grand Rapids, Michigan

"The line of demarcation is pretty straight and there's not any overspray, and they stay in adjustment. The coverage has been exceptional. We have left the same setting on the timer as was set for the higher-gallage head. We haven't seen a decline in the turf even though we've had some pretty hot weather recently."

**Patrick Reynolds**  
Parks Manager,  
City of Culver City, CA

"I've been doing this 27 years and I can tell there is a savings of at least 20-25% of water. The droplets are good, I'm real impressed, so impressed, we want to retrofit other heads with all Toro Precision Spray Nozzles. We're always looking for anything that saves water. I'm sold on these."

**Louie Raygoza**  
Sr. Crew Leader/Maintenance  
Specialist (Irrigation),  
City of Santa Maria



## Fit Toro, RainBird®, Hunter® and Irritrol® Fixed Sprays

Available in male and female threaded models with a radius between 5' and 15' and the nozzle tops are color-coded to indicate the specific radius. Available in models with 9 different arcs between 60° and 360°, and specialty arcs such as right and left corners and center strips. All Precision nozzles can be used with operating pressures of between 20 and 50 psi.

"The Precision Series Spray Nozzle is sort of like the Compact Fluorescent Light (CFL) bulb of water savings. You just remove the old style nozzle, screw on a Precision Spray Nozzle, and save 25-30% more water instantly."

**Bryan McDonald**  
Vice-President,  
Whitmore Landscape Management  
Plano, TX

The installation process was no different than any typical nozzle installation for heads we have been using forever. They were a good fit. On two residential jobs we had absolutely no die-back, no brown spots. The lawns were perfect and its been about 100 degrees here the last two weeks."

**Kevin Dettner**  
Landscape Construction Manager,  
Zuke's Landscape, Inc.  
Rancho Cordova, CA

To me, I've seen a lot of products come through and once in a while one comes along that really grabs you, and this one fits that category. There've been some jobs where people wanted to save water and get better distribution, but the area was too small for rotating nozzles. Now I'll use these [Precision] spray nozzles. I think it's going to become very, very popular."

**Agustin Gomez**  
Owner, Agustin's Irrigation Service  
San Diego, CA

### ENERGY SAVINGS:



### WATER SAVINGS\*:



\*Projections of savings are based on Precision™ Series Spray Nozzles and conventional spray nozzles using the same watering schedule. Actual savings from installing Precision Series Spray nozzles may vary based on site conditions, head spacing and other factors not under Toro's control.





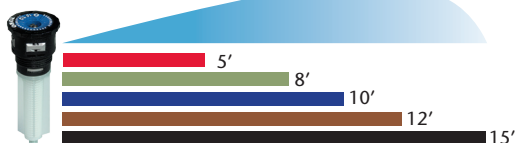
**TORO®**

# MAXIMIZE EFFICIENCY.

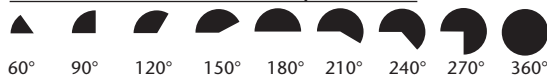
Color-coded Male And Female Threaded Nozzles  
To Fit **ALL SPRAYHEADS**

*5 Radii Available In  
Male & Female Threads*

*1"/hr. MPR Even After  
Radius Reduction*



*9 Arcs Plus Side and Corner Strips Available*



4' X 15'  
4' X 9'

**LCS**  
(Left Corner Strip)

4' X 30'  
4' X 18'

**SST**  
(Side Strip)

4' X 15'  
4' X 9'

**RCS**  
(Right Corner Strip)

**Fit Toro®, RainBird®,  
Hunter® and Irritrol®  
Fixed Sprays**



\* Includes: Rain Bird®, Hunter®,  
WeatherMatic®, Hit®, Orbit® and Irritrol®

## **Toro® 570Z PRX Spray Head** **X-Flow® Valve-In-Stem**

Built right into the riser it couldn't be simpler. As long as the basket screen is in place, it pushes down on the valve, allowing water to flow around the valve and to the nozzle. If the nozzle and screen are missing or removed, the XF valve seats, sealing off water flow. No more geysers! Another industry first!

### **Patented In-Stem Pressure Regulation**

Maximizes spray head efficiency at 30 psi.



Without Valve-In-Stem



With Valve-In-Stem



### **Pressure-Compensating Versions Available**

Pressure-Compensating Precision™ Series Spray Nozzles maintain 1"/hr (25mm/hr.) precipitation rate and minimizes misting up to inlet pressures to more than 40 PSI, minimizing the need for a regulating head, at fraction of the cost.