

A New Sprinkler for Your Bunker-Face Blues

EDITOR'S NOTE: *We can't keep wasting water to try to keep steep bunker faces as green as the rest of the golf course. Here is a new sprinkler version that can help apply water efficiently to hard-to-water areas like bunker slopes.*

By Kevin Scott

Ten years ago, pop-up spray heads around bunkers were about as common as a hole-in-one. As golf course design evolved over time to incorporate visually striking bunkers with steep, sodded faces — and as golfers expect superior turf conditions on these sloping faces — a need developed to install supplemental irrigation systems around bunkers. Hand watering, sometimes supplemented with an application of moisture-retaining pellets, wasn't proving sufficient to combat the sun-fried, wind-struck, dried-out bunker face.

Traditionally, irrigation systems equipped with spray heads at the front line were installed to cure bunker face blues. This method, however, seemed to harvest even more maintenance problems; sprays have a high application rate and emit water too quickly for soils on slopes to absorb, leaving inadequate amounts of moisture for the sod, undulating runoff, and rendering soak times ineffective. Sprays are also not ideal for micro-managing bunker faces due to their inability to maintain uniformity during arc adjustments. With spray heads installed around bunkers, water is being wasted and work crews are still employing the hose-in-hand method to water those

bunker faces that just don't seem to stay green.

A new genre of sprinkler is popping up on golf courses across the country to address the problem: Multi-stream, multi-trajectory rotating (MSMTR) sprinklers are now being installed on problem areas such as bunker faces, slopes, tee boxes and landscaped areas surrounding greens. Currently, only two companies offer MSMTR sprinklers: the Walla Walla Sprinkler Company's MP Rotator, and Rain Bird's Rotary Nozzle.

MSMTR sprinklers have only

fit in Rain Bird spray heads). These nozzles rotate while throwing several powerful streams of water, and deliver water at a one-third the rate of spray heads, allowing the soil to more-efficiently absorb the emitted water. With high uniformity and the capability for longer soak times, MSMTR sprinklers elicit virtually no runoff or standing water, effectively fight wind with stream technology, and can cover micro problem areas like bunker faces with easy arc and radius adjustments that maintain the application rate and uniformity (Rain Bird Rotary Nozzles

have variable fixed arc nozzles, while MP Rotators have a fully adjustable arc on any model).

Compared to spray heads that average 50 percent distribution uniformity (DU), rotary nozzles are between 70 to 80 percent efficient, which is commensurable to the efficiency of golf rotors.

As irrigation efficiency and water conservation migrate to the forefront of



With multi-stream, multi-trajectory rotating technology, the MP Rotator (shown here) delivers water at one third the rate of spray heads which allows the tight soil on bunker faces to efficiently absorb the water it needs--producing a healthy, green stand of turf. This technology has gradually started to infiltrate the Florida market.

recently breached the Florida market.

“Originally, our business focus has been on the west coast because of the water situation and climate,” said Chris Wright, regional sales manager for MP Rotator. “This technology has gradually started to infiltrate the Florida market due to new distribution outlets and its reputation as a water-efficient sprinkler. There is a reason why water purveyors have made this sprinkler the most rebated sprinkler in America.”

An MSMTR sprinkler is basically a small rotor that can be retrofitted to any pop-up spray head body (MP Rotators have both male and female thread models, while Rotary Nozzles

Florida superintendents' challenges due to record-breaking drought conditions, these sprinklers have been documented to save approximately 30 percent more water over conventional spray heads.

Harold Wills, irrigation superintendent at Orange Lake Resort in Orlando, oversees the irrigation at the 1,200-acre resort, which includes two 18-hole and two 9-hole golf courses. In 2006, when Orlando received only 34 inches of rainfall and entered into a drought worse than previously experienced in 1932, golf courses and commercial properties were charged to conserve water. Wills decided to work with a water auditor

and create a five-year strategic water conservation plan for the irrigation systems throughout the resort. When researching what water-efficient products to install, he discovered the MP Rotator.

"I have the MPs installed on some of my tee boxes and greens," Wills said. "Right now we have 200 installed, and are working with a water auditor to build a case for installing MPs throughout the whole resort and all necessary parts of the golf courses. The MP's scheduling coefficient is like God's rain. And God's rain is perfect."

While he currently does not have MP Rotators installed around bunkers, he is interested in pursuing the option because of the superior coverage his greens and tee boxes are currently receiving from the MPs.

"Compared to the sprinklers we used to install, the coverage is better due to the MP's ability to apply water uniformly, and adjust to corners while

maintaining a matched precipitation rate," Wills said. "Water is not being thrown everywhere and misting away into thin air. In the last year, I have only had to fix one MP. With the old sprinklers, I was out there fixing them every week."

MSMTR sprinklers, compared to sprays, can also throw further and cover more ground while irrigating at a significantly lower flow rate.

For those superintendents who already have supplemental irrigation systems around bunkers, a switch to these sprinklers is easy, but if no system is installed, the labor costs involved in installing a system can be substantial. Because of the low flow, the irrigation design can have more heads per zone, thus fewer zones are needed, saving labor and material fees for new installation.

Additionally, MSMTR sprinklers will significantly reduce many of the costs typically associated with spray heads or

hand watering. The labor will prove to pay for itself over time.

It is important to note that MP Rotators and Rotary Nozzles have similar functionality, but their specs differ. For example, the MP Rotator has an application rate of 0.45 in/hr, while the Rotary Nozzle delivers 0.75 in/hr. Check the manufacturer's specifications on each of these products before selecting which one is better-suited for your specific application.

As water purveyors mandate stern watering restrictions and strictly monitor water use on golf courses, several water-efficient technologies have been introduced, in addition to MSMTR sprinklers, being employed by superintendents to save water — and avoid being fined.

"I recently learned that three golf courses in my area were fined \$10,000 each for going over their water-usage allotment," said Wills. "We don't want to find ourselves in that situation."



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