The Value of a Full and Part-Circle Rotor in One

BY **LLOYD VON SCHELIHA**

THE TECHNOLOGY BEHIND IRRIGATION HAS STEADILY DEVELOPED OVER MANY YEARS. REGULATORY REQUIREMENTS, WATER SCARCITY AND TIGHTER BUDGETS HAVE DRIVEN THE IRRIGATION INDUSTRY TO PROVIDE NEW AND INNOVATIVE SOLUTIONS TO TODAY'S ISSUE, ALWAYS KEEPING AN EYE ON THE FUTURE OF IRRIGATION.

In the golf industry, the changes are often only visible to the end customer in the form of better playing conditions. In recent years, irrigation equipment manufacturers have developed rotors that operate as full- or part- circle rotors in a single head. This technology was first introduced in the commercial markets like municipal parks, large developments and business parks, but has recently become more important in the golf industry, but for different reasons.

Appreciating the value of a full- and part- circle rotor may not be particularly interesting. However, understanding the applications helps to illuminate the benefit to the course in the form of water management, controlling operational costs and maintaining exceptional playing conditions.

A single rotor that can operate in both full circle and part circle modes is ideal for many reasons. The versatility of a full- and part-circle rotor allows water to be managed more efficiently. Here are just a few examples:

• ***Over-seeding fairways*** – The rotor can be set to water just fairways in the winter and let the roughs go dormant. When spring comes, the rotor can be switched back to full circle. This means water is not wasted in the winter months.

• ***Managing to water restrictions*** – When Mother Nature decides to limit the amount of natural precipitation, municipalities begin to impose water restrictions. This was especially true in the southeastern United States a couple summers ago. A rotor that gives the course flexibility to water just the areas it can, means it will survive better during times of water restriction.

• ***Quotas for effluent water*** – More and more courses are irrigating with effluent water. However, this often comes with a requirement to use a specified amount every week, even if there has been sufficient natural precipitation. The flexibility to turn the rotors toward roughs or non-play areas

A rotor with full and part-circle versatility will ultimately reduce operational costs. This is because a system can be designed with fewer rotors, and a single replacement can be stocked in the maintenance facility. This reduces the amount of irrigation equipment inventory required to maintain the course. If the course has a rotor that allows for optimal versatility, it can improve course conditions while reducing costs.

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next step was to check underneath the greens' mix, in other words the gravel and drain tiles.

I've learned over the years that if the problem is not coming from up above and it's not disease or insects than it must be coming from down below. On-site testing of the gravel layer and drains showed that the gravel surrounding the tiles had solidified and had turned to a concrete-like material, not allowing water to enter the drain tiles.

The decision was made to take everything out including the drain tiles and completely rebuild all of the greens.

By implementing solutions ***based on science*** and the ***best technology available***, both courses were able to move forward in an intelligent and appropriate manner.

Different courses…different solutions to achieve superior playing conditions **BR**

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allows those courses to use the required amount of water, while maintain good playing conditions.

• ***Establishing native areas*** – During the construction process the course may want to establish native areas around the course, but does not want to irrigate these areas on a regular basis. A rotor with the ability to water the native areas when needed means the irrigation system design can be streamlined to reduce the cost of installation.

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Easy adjustment allows maintenance personnel to put water only where necessary, which reduces the amount the course spends on water. Lower water consumption also means reduced electricity expenses.

It is not unusual for courses to have a set of full-circle rotor internals and a set of part-circle rotor internals. When the season changes, course personnel will go out and switch out internals across the course because of overseeding or water restrictions. This can be a significant labor and inventory cost. A rotor that can be manipulated easily while in the ground will have a major impact on the budget.

The ultimate goal is to have a course that provides optimal playing conditions. Firm, fast fairways make golfers happy. If the course has a rotor that allows for optimal versatility, it can improve course conditions while reducing costs.

Irrigation equipment manufactures have full- and part-circle rotors, but not all rotors are the same. It is important to understand the differences between the various products on the market. The way a rotor operates can make a real difference to the application of the product in the real world.

There are some things to consider when evaluating rotor technology.

• How efficient are the rotors at applying water? This is one of the most important questions you can consider because it has a long-term impact on the budget and playability of the course. A rotor that applies water efficiently will reduce water consumption and electrical costs for many years, while keeping the course firm and fast. *(See Boardroom March/April 2008 – Green Committee – "The True Cost Requires Many Considerations")*

• If the course invests in the latest technology today, will it be easy to upgrade in the future? It is hard to move forward if you're looking backward, but seeing into the future is problematic. To answer this question you will need to consider the track record of the various manufacturers. Have the manufacturers made it easy to take advantage of the latest technology without having to make major investments in retrofit kits and upgrades.

• Is the product easy to use? With today's shrinking budgets, maintenance staffs are being pushed to the limit. The products need to be easy to use, as well as quick to adjust. This will ensure personnel are maximizing their time to maintain other parts of the property, not wasting time on their hands and knees fiddling with a sprinkler.

Even as belts are tightened and water use becomes more controlled, the end customer, the golfer, still want a fast, firm course to play. The right rotor technology will help a course improve water management, control operational cost and optimize playing conditions for the long-term. **BR**

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