Technology in Irrigation *Change Is Happening!*

BY **MATTHEW MIKUCKI**

THE ARRAY OF CHOICES REQUIRED AS PART OF THE DECISION MAKING PROCESS WHEN PURCHASING A NEW GOLF COURSE IRRIGATION SYSTEM CAN BE MIND-BOGGLING.

One of the major opportunities during the decision making process that can affect both the aesthetics of the golf course and the total cost of the system is the choice between an above ground irrigation control system and a below ground system.

Typically, the areas most often discussed during the purchase of an irrigation system are the selection of the computer control system and the actual sprinklers themselves. The comparison of an above ground and below ground irrigation control system is often overlooked.

Most modern irrigation systems utilize a computer to manage the operation of the sprinklers and valves on the golf course. The computer, in combination with specialized software, manages the operation of the sprinklers and valves to ensure that they do not exceed the capacity of the pumping station and the water delivery pipes in the ground.

Given the significant differences in the capabilities of the software available from the major irrigation manufacturers, the features, benefits, and ease of use of the irrigation control software should be considered during the decision making process.

On the output side, where the water meets the grass, the actual sprinklers, called rotors in the industry, are the delivery system for applying the water to the turf. There are several factors that influence the performance of the rotors.

While each manufacturer offers rotors that spray water on the turf, there are differences in the ability of the rotor to spray that water evenly and effectively. In addition to the actual performance of the rotor, the physical placement of the rotors on the golf course by the irrigation consultant can also have an impact on the performance of the system. If the rotors are not properly placed or the incorrect nozzle is used, the performance of the rotors can suffer.

And as previously mentioned, the one area that is often omitted from the process is the decision of an above ground or a below ground control system.

The traditional control system for golf course irrigation control has been a satellite controller system, which is an above ground system. This system consists of individual controllers that operate anywhere between eight and 72 individual sprinklers or valves. Sometimes, sprinklers and valves are grouped together to save money during the system installation resulting in less control.

Each of these controllers is connected to the central control computer through a wire path in the ground. A typical 18-hole irrigation system can utilize more than one million feet of copper wire to connect the central control computer to each satellite controller, to power each satellite controller, and to connect to each sprinkler and valve on the golf course.

The satellite controller has been the traditional system for multiple reasons. First, they were widely adopted as systems transitioned from controller only, or stand-alone systems to controllers operated by a central control computer and software.

Second, until recently, the below ground control products were not capable of managing larger irrigation systems. And finally, since a below ground control system must have a computer to operate, end users were more reluctant to rely on a computer to fully manage the irrigation system.

All of that is changing. Below ground irrigation control systems have become mainstream systems. There are many benefits to below ground control. For example, Rain Bird Corporation has just released a new below ground control system that communicates directly from the central control to sprinklers and valves on the golf course.

This new system, called the Rain Bird® Integrated Control(IC) System™, offers precise irrigation control, which can lead to a more playable golf course, typically at a lower cost than a traditional satellite controller system.

When compared to a traditional above ground control system, the below ground systems and specifically the IC System, offer many significant benefits. First, everything is below ground and out of sight. No plastic satellite controller pedestals to hide or repair, if vandalized. In addition, since

the IC system is a completely sealed system, there is little concern from insects or other wildlife that like to take up residence in satellite controllers.

One of the biggest reasons to consider a below ground controller system is cost. Because below ground systems utilize less wire than a traditional satellite controller system, they typically cost less than a traditional satellite controller system. For example, depending on the plan, the Rain Bird IC System can require up to 90 percent less wire than a traditional satellite controller system. Because of the reduction in wire required, the total irrigation system cost can be reduced by up to 25 percent depending on the plans.

Lower cost from less wire, vandal and insect resistance, greater control and beautiful golf courses are the reasons that golf courses around the world are giving below ground control systems a second look. The benefits are too good to pass up. **BR**

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