

GOLFDOM concludes its rundown on the most frequently asked questions about automatic irrigation

Automatic Irrigation: Ask the Experts

By the EDITORS and FRED V. GRAU

Again, some questions have been carried over from the March issue. These questions have been answered by different manufacturers. Other questions are new. The responses are solely the opinions of the individual manufacturers.

Question: Are present mains usually adequate or must all new lines be installed?

Answer: In some cases a portion of the existing mains can be used; more often they cannot because of location, size or the condition of the piping.

The scaled drawing of the course and site information developed by the designer should indicate the location, size and type of material of the existing piping. Professional design of an irrigation system requires fluency in planning the configuration of piping. There are many alternative routings of pipe

for each course, which will bring water to each sprinkler head in the proper quantity at the correct pressure. A professional turf irrigation engineer or golf course architect who designs such systems can best determine the advisability of a layout encompassing some of the existing piping.

Often pipe installed for one system is found to be the wrong size for the new system. Pipe, for example, installed for a manual fairway system is often too large for the new automatic system. Because of the ability to control heads on several different fairways at one time in an automatic system, fewer heads per fairway are run. Therefore, smaller quantities of water are delivered to a given fairway at one time, through smaller lines.

Before using existing pipe, however, if the pipe is one that is subject to corrosion or tuberculation,

its condition and flow capacity must be determined at the site. The anticipated service life and flow characteristics of existing pipe are important considerations in deciding whether or not it is wise to install all new lines.

(Ethyl Corp.)

Question: To what extent is lightning a hazard in an electrical system?

Answer: As hazards go, lightning outranks toe-stubbing. Chances are, improperly grounded automatic control equipment will go along fine for years. But when that first bolt strikes, watch out! The 150,000 volts or so, of a close hit, may destroy one or more of the controllers even though they are scattered all over a golf course. It may pick on the pump house control equipment or blow out the solenoids on the valves and burn or weaken wire insulation. Or all of these things can happen. But they probably won't. Even so, since the cost is so low, grounding all automatic controllers is worthwhile. Simply attached the ground wire to both controller chassis and to the index timing unit—connect the other end to a buried, four-foot piece of metal pipe (preferably where the ground will be wet from sprinkling).

(Skinner Irrigation Company)

Question: What is the big compelling reason for an automatic system over a manual system?

Answer: Labor saving has to be the most important reason or the

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ASK THE EXPERTS

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lack of competent labor available to the superintendent. In this day and age of rapidly rising labor costs, improved management techniques must be introduced to control these ever rising costs. Surveys show that the cost of golf course maintenance is increasing at the rate of about 5 per cent a year. A 10 year outlook indicates that this trend will continue because superintendents are being asked and expected to provide better playing conditions. Salaries and labor costs are expected to continue to go up and may very well constitute the major part of the 5 per cent annual cost increase. Golf course superintendents are insisting that modernization programs be taken into account if requests to the clubs for a quality course are to be met. An automatic irrigation system will be a major factor in controlling

labor costs and improving the quality of the course.

There are other reasons for going automatic. An automatic irrigation system will optimize turf growth and conserve water. An automatic system will never over-water when properly programmed and reduces or completely eliminates run-off. It provides precise control of moisture by the superintendent to assure ultimate turf quality.

(Toro Mfg. Corp.)

Answer: A comparison of the relative initial costs of a manual versus an automatic irrigation system should be accompanied by a study of continuing operating costs. The higher initial cost of an automatic system is frequently justified by savings in labor and other operating expenses.

The final amortized cost of the system, however, is only part of the explanation of the trend toward automatic golf course irrigation systems. Availability of com-

petent and dependable employees is a common concern of superintendents. Where night or seasonal employment is required, as is often the case in the operation of a manual irrigation system, the problem is particularly acute. Through a properly designed automatic irrigation system, the superintendent has direct control over the amount of water to be applied to areas relative to their respective water requirements.

It should also be considered that well-irrigated courses can generate additional revenues because they will command stronger membership and higher dues.

(Ethyl Corp.)

Question: What type sprinklers work best with an automatic system—pendulum? Others?

Answer: The impact type sprinkler has proven to be the most dependable, trouble free and least expensive to maintain than either

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ASK THE EXPERTS

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the cam driven or gear driven sprinkler.

(Rain Bird Sprinkler Mfg. Corp.)

Question: Should control panels be located in the superintendent's office, in the field or both?

Answer: Control panels should be located in the field so that all areas being controlled by the controller, or controllers, can be seen from this location.

(Rain Bird Sprinkler Mfg. Corp.)

Question: Will the system eliminate hose?

Answer: A well-engineered automatic irrigation system on a golf course can eliminate all hose watering, in our opinion.

(L.R. Nelson Mfg. Company, Inc.)

Question: Which is better—double row or single row outlets?

Answer: Whether a single row, double row or full coverage system is desired depends upon geographical location and condition of the specific course.

Single row irrigation is the most economical configuration where width of mowed fairways and wind conditions permit adequate coverage. Sprinklers are spaced at 50 percent of diameter of throw, which typically is 90 feet.

On double or multiple row systems, triangular spacing is generally used. The triangular spacing method offers more uniform distribution of water and is particularly desirable in windy areas or where dictated by the width of mowed fairways.

(Ethyl Corp.)

Question: Will the automatic system help in solving the undependable labor problems?

Answer: An automatic sprinkling system solves the night watering man problem. More important, it provides versatility one cannot get from a manual system. For exam-

ple, if the golf course is on heavy soil, an automatic system can be set to operate sprinklers for five minutes, once an hour, six times in one night. The same half hour as with the manual system, but what a difference! The water sticks where it lands so the turf grows uniformly, without soft, low spots.

An automatic system is more expensive to buy and to maintain because it is more complex. It takes longer to install and to shake

down. Unless a professional designs and installs it, it can be one big headache. The payoff, though, from the right system is beautiful: a key personnel problem is solved and the salary expense cut; much less water is pumped because the system is far more efficient; the course looks and plays better; and, on a new layout, the germination rate improvement saves money and may let the club open for play a season ahead of schedule.

(Skinner Irrigation Company)

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