

HOW TO CALIBRATE YOUR SPRINKLER SYSTEM

Knowing the amount of water your sprinkler system applies to your lawn is an important step in using water efficiently. Most people irrigate their turf for a given number of minutes without knowing how much water they are really applying. This leads either to giving too little water or too wasted water, which runs down sidewalks and streets, or through the root zone and deep into the ground where turfgrass roots cannot reach it.

Calibrating or determining the rate of water your sprinkler system applies is an easy job. You can use the following procedure:

Step 1: Obtain several cans or straight-sided containers. Containers, which are about 6 inches in diameter, work the best.

Step 2: Place the containers in one zone at a time, scattering them where nothing will obstruct the flow from the sprinkler. Repeat this in every zone because there may be a difference in irrigation rates.

Step 3: Turn the water on for 15 minutes.

Step 4: Pass all the water collected to one can. Use a ruler to measure the depth of the water in that container.

Step 5: Find out the average depth by dividing by the number of containers, in this case, four.

Step 6: The depth measured represents the irrigation rate in inches per 15 minutes. Multiply this figure times four to obtain the irrigation rate in inches per hour.

Now that you know your sprinkler system application rate, you can more efficiently apply water to your turf.

Use the following table as a guide for sprinkler times. For example, if the sprinkler system applies water at the rate of 2 inches per hour and you wish to apply $\frac{3}{4}$ inches of water, then you would need to run your sprinklers for about 23 minutes.

To calculate the time of irrigation for rates not listed in the following table, use the following equation:

$$\begin{array}{l} \text{Minutes required} \\ \text{To run each zone} \end{array} = \frac{\text{Inches of water/hour to be applied} \times 60}{\text{Inches of water/hour delivered by system}}$$

Table 1. Time required to apply water for a given irrigation rate.

Irrigation Rate
(Amount of water per hour)

Amount of water to be applied	0.5 in.	1 in.	1.5 in.	2 in.
	Minutes to run each zone			
0.25 in.	30	15	10	8
0.50 in.	60	30	20	15
0.75 in.	90	45	30	23
1.00 in.	120	60	40	30

Calibration pointers

- Try to calibrate the sprinkler system during the same time the system is normally run, so that water pressures are similar.
- Low water pressure can significantly reduce the amount and coverage of water applied by a sprinkler system.
- Never apply more than $\frac{3}{4}$ inch of water per irrigation.
- Most time clocks can be adjusted for accurate time settings.
- Avoid mixing sprinkler head types. Mist heads apply more water than impact heads. Match sprinkler heads for uniform coverage.
- Check the sprinkler system frequently. Replace broken sprinkler heads, clear clogged nozzles and adjust the direction of spray.