

**San Antonio
Texas**

Lawns*

	Spray Heads			Rotary Heads		
	Cool Season		Warm Season	Cool Season		Warm Season
	min.	s-t days	min. s-t days	min.	s-t days	min. s-t days
sun	12	1 4	9 1 4	28	1 4	21 1 4
shade	12	1 2	9 1 2	28	1 2	21 1 2

Flower Beds (Annuals)

	Spray Heads			min. = minutes per start time s-t = start-times per day days = watering days per week
	min.	s-t	days	
sun	10	1	4	
shade	10	1	2	

Shrubs

	Spray Heads			Rotary Heads		
	min.	s-t	days	min.	s-t	days
sun	10	1	4	22	1	4
shade	10	1	2	22	1	2

Trees

	Spray Heads			Rotary Heads		
	min.	s-t	days	min.	s-t	days
sun	10	1	4	22	1	4
shade	10	1	2	22	1	2

Natives/Drought Tolerant

	Spray Heads			Rotary Heads		
	min.	s-t	days	min.	s-t	days
sun	6	1	4	14	1	4
shade	6	1	2	14	1	2

* Lawns are divided into cool season grasses like Bluegrass or Fescue and warm season grasses like Bermudagrass or St. Augustinegrass.

Using the Charts to Determine Watering Times

- I. Locate the primary type of plant material to be watered.
- II. Decide if the area to be watered is mostly in the Sun or mostly in the Shade.
- III. Look under the appropriate column, Spray Heads or Rotary Heads for setting the number of minutes, start times and days to set in your controller.
 - a. The minutes to be set will appear under "min".
 - b. The number of times you will water a zone in a watering day appears under "s-t" (start times).
 - c. The number of days in a week to be watered appears under the "days". Space the watering days, during the week, as evenly as possible.

If the minutes for each start time from the chart on the left exceed the maximum run-time minutes for your soil type and slope from the chart below, reduce the minutes and add additional start-times. For example: Rather than watering for 16 minutes one time per day, water for 8 minutes two times per day.

Maximum Run-Time Minutes

Soil Type		Slope			
		0 - 5%	5 - 8%	8 - 12%	12% +
Maximum Run-Time Minutes					
Clay	spray	8	7	6	5
	rotor	17	15	13	11
Clay - Loam	spray	13	12	11	10
	rotor	28	26	24	22
Loam	spray	19	18	17	16
	rotor	41	39	37	35
Sandy - Loam	spray	21	20	19	18
	rotor	46	44	42	40
Sand	spray	29	28	27	26
	rotor	63	61	59	57

Maximum Run-Time Minutes above are based on data from the IA-CLIA Training Manual.