

Simplex Timer (Model TD Control Panel)

Manufacturer: SJE Rhombus

Model:

- TD1W914X (115 V);
- TD1W114X (115/208/230 V)

Phase: Single

Number of Pumps: 1

Float Tree(s) Required: One 2-Float Tree Timer

Electrical Schematic Available at:
www.waterloo-biofilter.com → Products
→ Control Panels → Simplex Timer

Dosing Type: Timer

Applications:

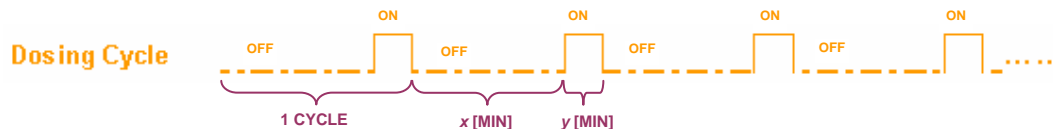
1. Dosing One-Pump Biofilter Configurations (> 3000 L/d)
2. Dosing Small Beds

Operational Description

A simplex timer dosing incorporates an OMRON timer to operate a single pump on a timed cycle. In this operation, the pump repeats a timed off-on cycle.

Each cycle consists of:

- x minutes of pump off time followed by
- y minutes of pump on time



Timed Off-On Dosing Cycle Schematic

The purpose of the timer is to balance flow evenly to the Biofilter[®] for better treatment; thus, the goal is to dose consistently over the entire day. To achieve this goal, it is crucial to set the cycle timer properly.

Typically, a TD1 panel requires 2 float switches (2-float tree Timer) for operation. They include:

1. *Timer Enable* (Turns pump on/off)
2. *High Water Alarm float* (Activates audible and visual alarms)

The *Timer Enable float* starts/stops the cycle timer. When this switch rises, the cycle timer starts. The pump turns on and repeats timed cycles until the *Timer Enable float*

drops, upon which the cycle timer stops. Please note that the timer always starts with the off portion of the cycle. The *Timer Enable/Low Level Cutout float* should be clamped to 16" from the bottom of the pump chamber.

The *High Water Alarm float* notifies the operator of a high water level in the tank. When this switch rises for more than 2 seconds, it activates the audible and visual alarms. A high water level may result from a surge of influent. The *High Water Alarm float* should be clamped to $\frac{3}{4}$ the height of the pump chamber from the bottom of the chamber. This is a safety factor to provide time for the operator to investigate and react to the problem before outbreaks occur.

Timer Override OPTIONAL

High Position
Turns ON both pumps

Low Position
Turns OFF Timer Override

2. High Water Alarm

High Position (>2 seconds)
Turns ON audible and visual alarm

Low Position
Turns OFF audible and visual alarm

1. Timer Enable

(Low Level Cutout)

High Position
Turns ON cycle timer

Low Position
Turns OFF cycle timer

Redundant Off OPTIONAL

High Position
Nothing happens

Low Position
Turns OFF power to the panel

40"

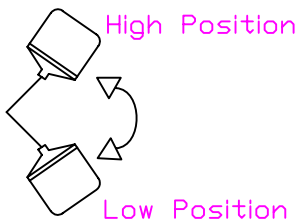
16"

14"

36"

57"

Legend



Simplex Timer
Float Tree