

## TightWatt2 Technical Data Sheet

Part # TW2-PFC

### Overview

The TightWatt2 is an intelligent, year-round pool controller. The patent-pending year-round schedule allows significant efficiency gains especially when combined with a 2-speed pump motor. The TightWatt2 is capable of controlling: primary pump: either single- or two-speed auxiliary pump: either a booster pump or pump for in-floor cleaning systems.

### Low Consumer Cost

In most cases, TightWatt2 can install in the customer's existing enclosure. This reduces labor cost and also saves the cost of buying a new enclosure. The TightWatt2 is cost-competitive with other controls on the market, even though it has considerably greater efficiency.

### Upward Migration

Many consumers (especially in California) will be making the transition to two-speed pumps, but replacement of the pump and controller at the same time is quite a bit of expense. The TightWatt2 allows replacement of their controller and they have the option to upgrade their single-speed motor to a two-speed motor at a later date.

### Installation

The TightWatt2 has been designed to snap into existing Intermatic\* enclosures (the most common enclosure on the market), dramatically reducing installation time. Installation of the controller itself takes just a couple minutes.

### Automatic Cycle Operation

The TightWatt2 is an intelligent year-round control for a pool system, and is designed to take advantage of the seasonal temperature variation which allows a pool filter to run less during colder months and still maintain water quality. The user sets 4 time durations: summer high, summer low, winter high, winter low. The TightWatt2 then uses these values to compute a year-round run schedule (see graph). Some pool professionals adjust the pump run-time twice a year (once in spring, once in fall). Relieving the consumer / pool maintenance person of the task of manually adjusting a 24-hour timer (if it is adjusted at all) produces significant electrical savings over the course of a year.

### Manual cycle operation

The user has the option to run a manual cycle and select the duration for high speed, low speed, etc. The manual cycle will only run once. Following the manual cycle, the controller will revert to automatic cycles each day.

### Time of Use

The TightWatt2 allows up to 2 start times per day, and start times are set by the user. This flexibility allows it to work well with most time-of-use plans. Default settings of the controller cause the pool equipment to run at night in an effort to shift the load from daytime hours

### Supported Accessories

- X-10 interface (for remote control & home automation interfacing)
- Freeze sensor (turns on pump during cold temperatures to prevent plumbing damage)

### Electrical Ratings

The current design has been designed with the following electrical goals:

Primary pump high-speed winding: 120/240V, 30A, 3HP

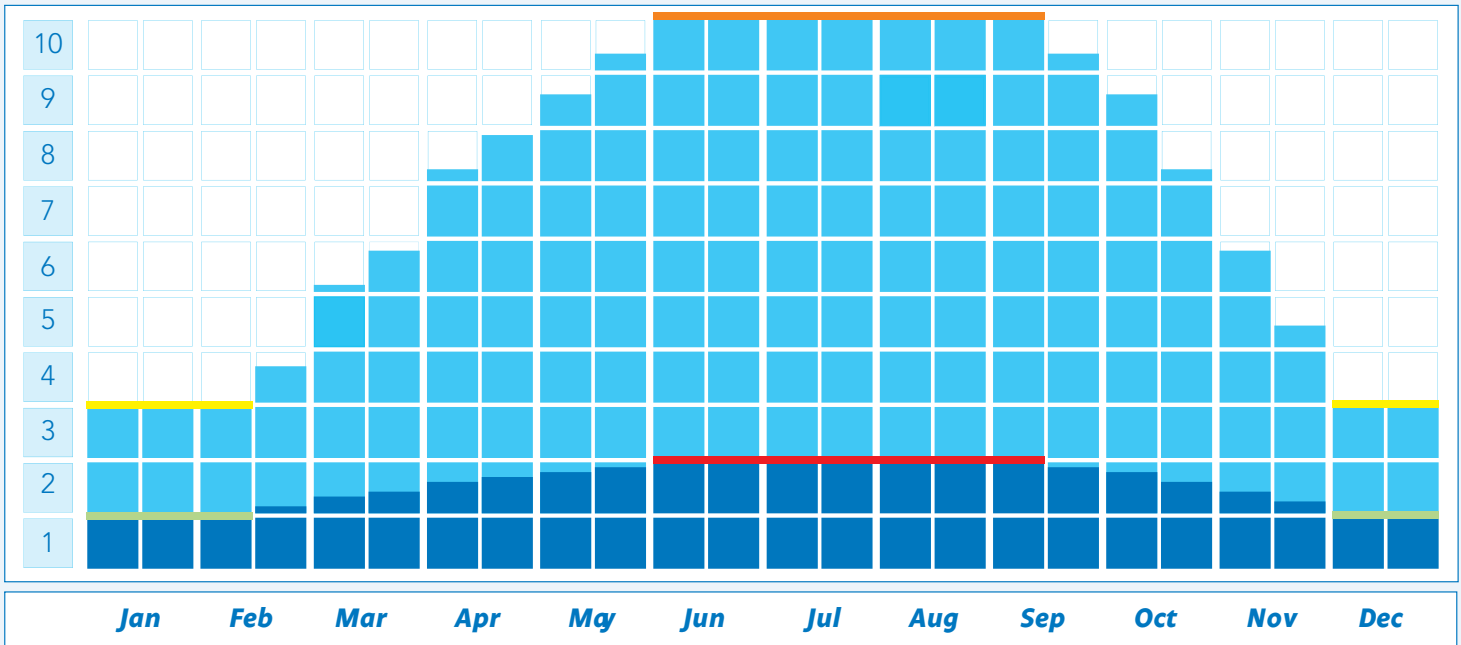
Primary pump low-speed winding: 120/240V, 10A, 1HP

Auxiliary pump winding: 120/240V, 30A, 3HP

Surge protection: 1kV surge protection

Switching: double-pole switches offer increased safety

## TightWatt2 Self-Adjusting Run Schedule for 2-Speed Pumps



### Graph Key

- = Total Daily Run-Time in Hours (Low + High Speed)
- = TightWatt2 Self-Adjusts Run-Time To Turn Pump Off
- = TightWatt2 Running Pump on Low - Cost of \$2.07
- = TightWatt2 Running Pump on High - Cost of \$7.94

### TightWatt User Settings

- = High Speed Winter Run Time
- = Low Speed Winter Run Time
- = High Speed Summer Run Time
- = Low Speed Summer Run Time

Annual Energy Cost\*: 1-Speed Pump w/ 24hr Timer = \$1,524.48 | 2-Speed Pump w/ TightWatt2 = \$568.86 | **Savings = \$955.62**

\*Costs based on PG&E Rate of \$.23 / kWh | 1-Speed Pump w/ 24 Hour Timer Running 2.3kW pump 8 hrs year-round VS a 2-Speed Pump w/ TightWatt2 set for a Summer Run-Time of 2hr High (2.3kW) & 8 hr Low (.6kW) | Winter Run-Time of 1 hr High (2.3kW) & 2hr Low (.6kW) | Your results may vary.

For more information or technical questions, please contact Stephen Allen - [sallen@tightwatt.com](mailto:sallen@tightwatt.com)

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