HP-500 SURGE MASTER VALVE AND LVC-6
"SIMPLE SURGE" CONTROLLER

- Superior Design
- Superior Field Adaptability
- Superior Performance with optional "Automation Plus" and remote, automatic pump start and stop.
- The Easiest to Operate Controller
- The Only Controller that Provides the Full Benefits of Surge Irrigation

THE RUGGED WATERMAN SURGE VALVE
WITH SELF-CONTAINED, REMOVABLE CONTROLLER

EXCELLENCE IN FURROW IRRIGATION WITH THE WATERMAN SURGE SYSTEM

SOLAR PANEL RAISED: CONTROLLER IS EASILY ACCESSED AND OPERATED
WHAT IS SURGE IRRIGATION?
Surge irrigation is the application of water in a series of surges or advances down the furrow rather than a continuous stream.
Between surges (advances) of the water, time is created for the water to recede and infiltrate the soil and provide a smooth, sealed surface for the next surge of water to pass over, increasing its rate of advance down the furrow with each successive surge.

WHAT ARE THE ADVANTAGES OF SURGE IRRIGATION?
1. Less water used or more acres irrigated with the same amount of water.
2. Greater opportunity for increased yields.
3. Ability to apply a smaller depth of water more uniformly.
4. Allows user to apply small supplemental irrigations with a high degree of accuracy.
5. Less water lost to deep percolation, and less opportunity for leaching nutrients, chemicals and minerals into the groundwater.
6. Less runoff at end of field, most noticeably with soils having lower intake rates.
7. Increased distribution uniformity. Upper and lower ends receive essentially the same amounts of water.
8. Allows user to adjust water infiltration times to enhance efficiencies and uniformities.

WHY DOES THE WATERMAN LVC-6 CONTROLLER OUTPERFORM ANY OTHER SURGE CONTROLLER?
1. It is simple and easy to operate, and allows quick adaptation to any field condition.
2. It allows the user a selection of modes, from simple pre-set procedures to measured advance method programming that responds automatically to furrow flow rate, soil moisture content, furrow slope, infiltration rate, furrow condition and soil type.
3. It provides for automatic “finishing surges,” to ease the water to the end of the furrow. The durations may be adjusted up or down.
4. Integral solar panel assures continuing power to run the programs and operate the surge valve.
5. LCD Display continuously monitors and shows:
   • Program level
   • ½ cycle time remaining (countdown) left and right
   • Total out time
   • Disk position - left or right

WHAT HAPPENS TO THE CONTROLLER PROGRAM IF I LOSE POWER TO MY PUMP?
With the optional “power interrupt” feature installed, the Waterman LVC-6 controller “senses” the loss of flow through use of a pressure differential switch. The LVC-6 simply goes into “pause” mode until it senses a restoration of flow in the pipe. No reprogramming is necessary.

CAN THE PUMP BE PROGRAMMED FOR REMOTE, AUTOMATIC START AND STOP THROUGH THE WATERMAN CONTROLLER TO COINCIDE WITH IRRIGATION DEMANDS?
Yes, if this option is installed, the Surge Master provides a remote signal to activate the pump in conjunction with a surge program.

WHY ARE THE WATERMAN HP-200 AND HP-500 SURGE VALVES SO SUPERIOR?
1. They are ruggedly constructed.
2. The valves are available in 6", 8", 10" and 12" sizes.
3. The dimensions provide for full flow.
4. No external pinch points.
5. The valve disk(s) and drive unit are slow moving to prevent water hammer (8 seconds to seating). High torque mechanism.
6. Flange adaptors available to match user pipe sizes; step up or down.
7. Internal pipe stops.

SURGE IRRIGATION—Uniform water application; Uniform crops; Higher yields; More efficient water use.

CONVENTIONAL CONTINUOUS FLOW IRRIGATION—Excess water use; Loss to deep percolation and tail water; Poor distribution uniformity; Non-uniform yield.
FEATIRES OF THE LVC-6 "SIMPLE SURGE"
- All of the features you love on our LVC-5, made ultra simple to operate.
- As few as two buttons to push for fully automatic surge irrigation.
- Furrow length programs give added flexibility and ease.
- Use the easy four step measured advance method program for maximizing the benefits of surge irrigation.
- Optional power interruption capability automatically pauses the program for loss of pump power. It simply picks up where it left off when the pump starts again.
- English or Spanish language readout selection.
- Start watering on the left or right, it’s your choice!
- Repeat a program with the push of just one button!

THE FAMOUS WATERMAN "MEASURED ADVANCE METHOD, UTILIZES THE FIRST WATER ADVANCE TIME (ACTUAL OR ESTIMATED) TO AUTOMATICALLY CALCULATE AND EXECUTE THE IRRIGATION PROGRAM.

BECAUSE OF THE MEASURED FIRST ADVANCE DISTANCE AND THE WATER ADVANCE TIME TO THAT POINT, THE RESULTING CALCULATED TIMES RESPOND TO FURROW FLOW RATE, SOIL MOISTURE CONTENT, FURROW SLOPE, INFILTRATION RATE, FURROW CONDITION AND SOIL TYPE OF THAT PARTICULAR FIELD.
THE WATERMAN MODEL HP-500
SURGE VALVE SPECIFICATIONS SIZES 6", 8", 10"

Valve Body
Cast Aluminum

Valve Disc
Cast Aluminum, internal butterfly type. Single disc, vulcanized rubber seat.

LVC-6 Controller *
Solid state; impact and weather resistant glass-filled nylon housing; removable for use on other surge valves or for safekeeping.
Program selections:
Pre-set, field length, measured advance.
User options to override and vary programs. Cutback and finishing surges. LCD display.

Power Source
12-volt rechargeable battery. Solar panel.

Universal Adaptor Flanges (for couplers)
Bolt-on; "O" ring seal; internal pipe stops.
6" 6", 7", or 8" adaptor flanges.
8" 8" or 10" adaptor flanges.
10" 10" or 12" adaptor flanges.

Operating Mechanism
High torque gearmotor.

Recommended Maximum Flow Rates
6" Model 625 G.P.M.
8" Model 1100 G.P.M.
10" Model 1700 G.P.M.

Weights
6" 37# (Valve 20#, Controller 17#)
8" 46# (Valve 29#, Controller 17#)

* LVC-5 controller also available
**Valve Body**
Cast Aluminum; Welded Construction

**Valve Disc (2)**
Cast Aluminum, internal butterfly type. Dual disc, vulcanized rubber seat.

**LVC-6 Controller** *
Solid state; impact and weather resistant glass-filled nylon housing; removable for use on other surge valves or for safekeeping. Program selections:
- Pre-set, field length, measured advance.
- User options to override and vary programs. Cutback and finishing surges. LCD display.

**Power Source**
12-volt rechargeable battery. Solar panel.

**Universal Adaptor Flanges** (for couplers)
12" Welded construction. Internal pipe stops.
12" x 12" x 12"; 10" adaptors available.

**Operating Mechanism**
High torque gearmotor.

**Recommended Maximum Flow Rates**
12" Model 2500 G.P.M.

**Weight**
90# (Valve 76#, Controller 14#)

* LVC-5 controller also available