

## Butterfly Surge Valve

The studies have shown the intermittent application of water in surface irrigation changes the infiltration characteristics during advance phase. The intermittent application of water (surge flow) increases surface irrigation efficiency and its application. In this method the automation of surface irrigation which requires low pressure becomes possible.

To use water and energy most efficiently, and to save labor, it is important to use automatic devices for surge flow irrigation.

In this study, attempts have been made to design a device to achieve the above objectives. The device that is an automatic control valve has two mechanical and electronic sections and can be programmed based on time or infiltration characteristics changes along the irrigation season to produce surge for furrows. The device is wireless and can be used anywhere in the field; also, its energy is supplied by chargeable battery. The low initial cost is the other advantage of the system that makes it economical to use.



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