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# Backflow Irrigation Control Station
# Watts Regulator BIC-1000

The BIC Station is a pre-engineered irrigation control valve station that incorporates a master valve, regulator valve, backflow preventer, preload valve and high pressure lock out switch in one “off the shelf” package. Installation is quick and simple, just drop-bolt-and go, since the whole station is above ground, no costly ground work is required.

One of the most important features of the BIC Station is the line break detection and prevention capabilities. When connected to a suitable master controller the station can detect a down stream line break and the master valve will shut down the system until the fault is corrected.

**BIC-1000**
**Station Description**

The Watts Backflow Irrigation Control Station (BIC Station) is a pre-designed and assembled valve station intended to control and protect irrigation systems and water supply lines.

**The BIC Station consists of the following components:**

**Flow Sensor** – generates a frequency which is proportional to the flow rate in the pipe, allowing irrigation controller to detect excessive water flow.

**Automatic Control Valve / Master Valve** – creates head-loss, maintains a preset outlet pressure under varying inlet pressures and flow demands. Also stops water flow when signaled by controller.

**Backflow Prevention Assembly** – prevents contamination of supply water by stopping reverse flow of irrigation water.

**Pressure Switch** – signals controller when preset line pressures are exceeded.

**Relief Valve** – relieves over pressure conditions due to “pressure creep” and spikes from rapid valve closure.

**Butterfly Valves** – shut off water lines for service or repair of control station.

**General Operation**

Under normal operation, water at line pressure flows through the inlet butterfly valve and past the flow meter where it generates an output frequency. Once past the flow meter it enters the ACV where its pressure is reduced to a preset “irrigation line” pressure. Flow leaving the ACV enters the backflow valve and passes through two independent disk type check valves. The flow then passes the relief valve and pressure switch before leaving the station through the discharge butterfly valve.

With the station in standby or “idle” condition, the ACV is closed and only a small bypass or “pilot” flow is possible. The bypass circuit is used to maintain a low “pilot pressure” on downstream distribution lines to reduce hammering on startup. In the event of a line break, the flow meter will read an increase in line flow and the master controller can then signal the ACV to shut down and stop flow.

**Call Bernie Clarke @ (661) 294-0901 For More Information**