Application Data

Influent Flow Control Valves

Red Valve Company, Inc.

The 36" Series 5400E Control Pinch Valve is becoming quite popular as an influent flow control valve, replacing the traditional butterfly or gate valves that suffer clogging and reliability problems.

These Type A Pinch Valves are installed on a central column where influent is distributed to different settling and aeration tanks for treatment. The valves must contend with abrasive grit and raw sewage to provide accurate metering of the influent.

One of the most difficult applications in the wastewater treatment process is influent flow control. After collection and transportation through a city's sewer system, there must come a point where a valve controls the amount of influent that enters the plant.

In many systems, this valve is of a very large diameter and is used to divert the entire flow away from the plant in the event of heavy rains or snowmelt. These valves must be able to handle anything that can work its way into the sewer lines, including tree branches, plastic bags and bottles, sand and grit, chemical spills, raw sewage, aluminum cans and just about anything else that will fit down a sewer pipe.

Red Valve's large-diameter pinch valves have a full-port opening that offers no obstructions and no change in the direction of flow. There are no crevices or dead spots where debris can collect, and the soft walls of the elastomer sleeve not only prevent buildup, they can actually seal around entrapped solids for a drop-tight shutoff.

Even if the influent flow control valve is installed after initial screening, it must still deal with concentrated sewage and abrasive grit, which often moves at a considerable velocity as it enters the treatment process. The Type A Pinch Valve is commonly used in this application when only rough throttling of the influent is required. Equipped with a booster relay, the Type A is the most simple and cost effective flow control valve available for sewage. The body of the valve functions as a built-in actuator, eliminating the need for costly and heavy external actuators. The pinching action of the valve maintains a smooth, laminar flow when throttled, perfect for thick material such as sewage.