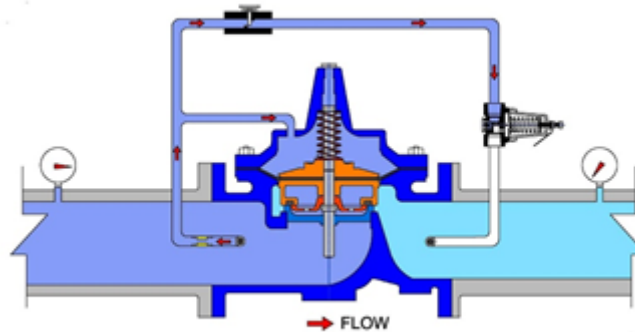


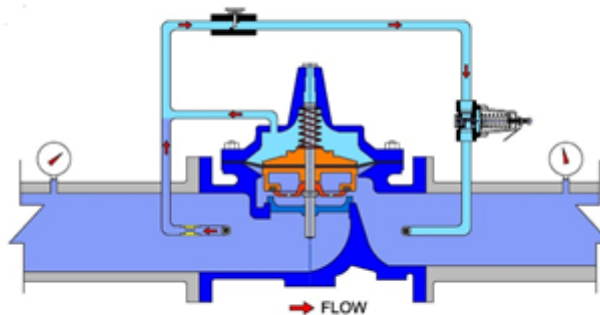
# WATTS PRV

## 1. Closed Valve



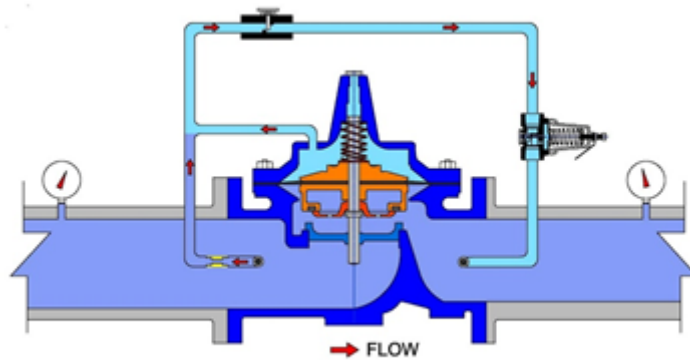
This is when the main valve is fully closed. The nut of the pilot is fully loosened so the pilot would be in a closed state, allowing no flow through it. This causes max flow into the cover of the main valve. The pressure of the top part of the diaphragm is higher than that of the bottom part causing the main valve to fully close.

## 2. Low Flow Demand (Night)



At night, less people are using water, thus demand for the flow is low. This causes a pressure build-up at the downstream which will then be detected by the pilot, causing it to move towards its closed position allowing less flow through it. Which in turn will cause more flow into the cover of the main valve, making it move towards its closed position as well. Thus, this will enable the outlet flow of the main valve to decrease while still maintaining the set pressure.

### 3. High Flow Demand (Day)



During the day, there will be a high demand for water. This causes a pressure drop at the downstream which will then be sensed by the pilot causing its spring to compress, making it open more allowing more flow through it. Which in turn results in less fluid in the cover of the main valve making it open more as well. Thus, this increases the outlet flow while still maintaining the set pressure.