



# Enhanced valve control on water treatment network

*Photographs show the SIPOS 5 actuator electronic control head and separately mounted motor gear unit (inset). These have been installed as part of the Lower Molonglo waste water treatment network near Canberra, Eastern Australia.*



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## Application

### Lower Molonglo waste water treatment plant

The Lower Molonglo treatment plant is situated close to Canberra in Eastern Australia and treats water from a wide catchment area. An actuator on one of the remote network supply lines, located a 20 minute drive south of the treatment works, required replacing with a more sophisticated valve control.

## Design Challenge

### Greater valve control

The key challenge was to replace the existing actuator to provide additional control steps to meet / exceed the immediate requirements to future proof the solution. In addition to valve operating times set for 0% - 10% and 10% - 100%, the client wanted to set a specific operating time for 10% - 40% of 147 seconds. To simplify set up, open percentages and times needed to be inputted directly without having the complexity of calculating on / off times.

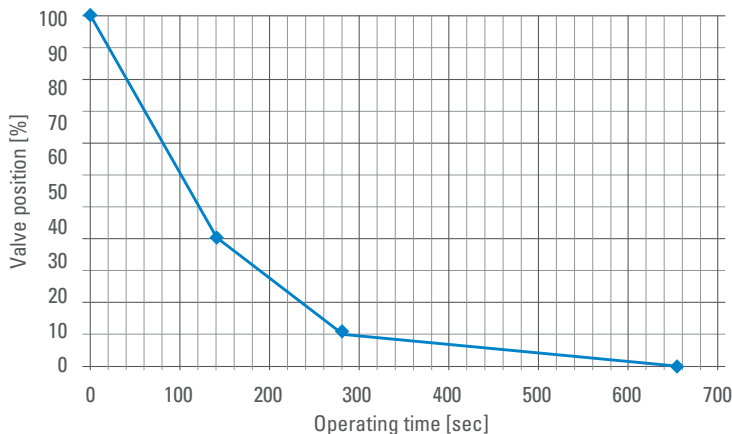
## Solution

### Remotely mounted SIPOS 5 actuator

By using a split mounted SIPOS 5 actuator with up to ten set points greater control flexibility was provided. The actual control points are shown on the graph below - additional points can be added, as required. Setting and operation of the actuator was made easier by mounting the electronic control unit above ground with the motor gear unit located in an underground pit with the valve and pipework.

## Technical Data

### Stroke / time curve



Location: Canberra, New South Wales, Australia



## Function Profile

The SIPOS 5 actuator has the unique capability to control valve position based on preset time intervals. Up to ten time set points, with corresponding valve positions, can be programmed. The speed of valve opening or closing is then controlled ensuring that the desired set position is achieved at the correct time.

This advanced flexibility can produce linearization of valve characteristics, allowing full port valve selection and / or significantly reduced water hammer when closing valves. In addition the ability to mount the electronic control head separately from the motor gear unit means the actuator can be set / controlled from a convenient and safe location.

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