

# Hydraulic Actuator



## KEY BENEFITS

- Compared to the old, “bias chamber” approach, the Hydraulic Actuator is very easy to install. No “wet” part of the pilot needs to be accessed and no extra mechanical frictions, O-rings, diaphragm loading, etc. are imposed on the normal operation of the pilot.
- The Hydraulic Actuator can easily be adapted to different manufacturers' pilots (versions available for Cla-Val, Bermad, Bayard, Magisco and other PRVs).
- Bias chambers that are sandwiched between the “wet” and “spring” parts of the pilot may adversely affect its operation. The Hydraulic Actuator has no such effect and therefore allows much smoother control of the PRV.

## Accurate, Reliable PRV Control

Halma Water Management's ControlMate range of PRV controllers are supplied with a Hydraulic Actuator (patent pending) - a novel device used as the interface between the electronic controller and the hydraulic PRV.

The Hydraulic Actuator is fitted in place of the adjusting screw of the standard pilot on the PRV. To adjust the PRV outlet, the ControlMate progressively extends or retracts the moving "rod" of the actuator in small steps under closed loop control. The moving rod exerts a force on the pilot's spring in a similar manner to that of the adjusting screw in a standard PRV installation.

The main PRV outlet follows its pilot valve setting, controlling the Actuator's moving rod. This leads to very accurate and repeatable control of the PRV outlet pressure.

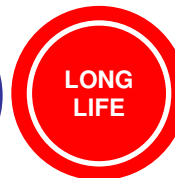
In two point pressure control applications, the two required pressure settings are mechanically set and locked on the Actuator. The outlet pressure of the main PRV cannot be outside of these values. In full modulating applications, the minimum and maximum pressures within which the controller can operate are set and locked on the Actuator.

This means that failure of electronics, incorrect operation by the user, burst or frozen pipes cannot cause closure of the main PRV.

**Dimensions** 115mm x 185mm x 85mm (standard; may differ according to PRV type)

**Weight** 1.2kg

**Construction material** Brass



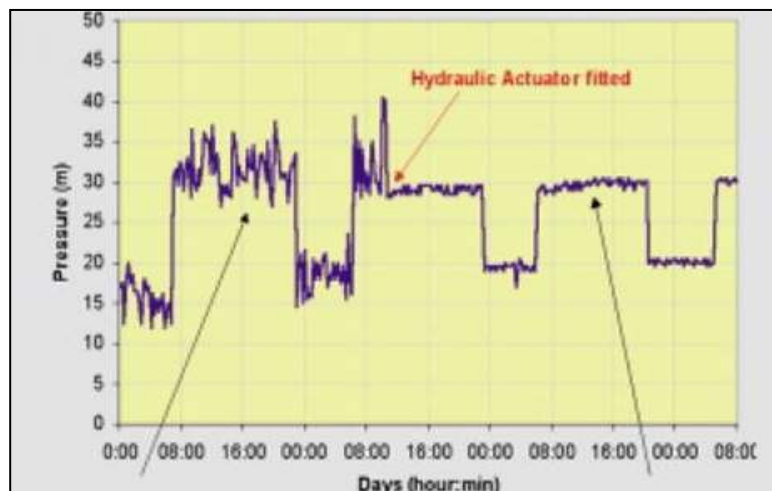
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*Accurate, Reliable PRV Control*

The availability of the Hydraulic Actuator eliminates two of the main technical weaknesses associated with the use of "bias" chambers (or dual-chamber pilots in older controllers).

Firstly, it is no longer necessary to use a so-called MRA (a small pressure regulator) to generate an intermediate pressure to carry out a 2-point control function.

Secondly, using the Hydraulic Actuator with its built-in mechanical minimum setting, there is no longer the possibility of valve closure due to electronics failure, operator error, leakage of the MRA, etc.



Pressure variations due to frictional forces on non-actuator system. Stress to pipe infrastructure leads to increased bursts.

Much smoother pressure control is achieved after installation of Hydraulic Actuator. No shocks to the pipe system.