



# 800 Series Control Valves

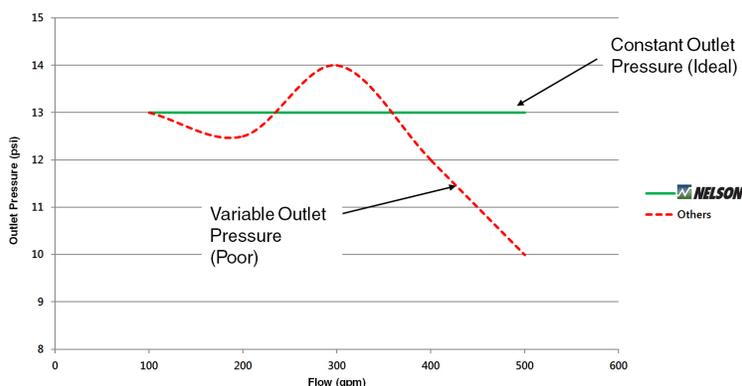
## Performance Evaluation

A 2013 study by the Irrigation Training and Research Center (ITRC) at Cal Poly University in San Luis Obispo, CA evaluated the performance of 22 pressure regulating control valves for use in low-pressure systems.<sup>1</sup> The Nelson 4" 800 Series Pressure Reducing Valve was tested against competitive 3" and 4" valves.

### The Ideal Pressure Control Valve

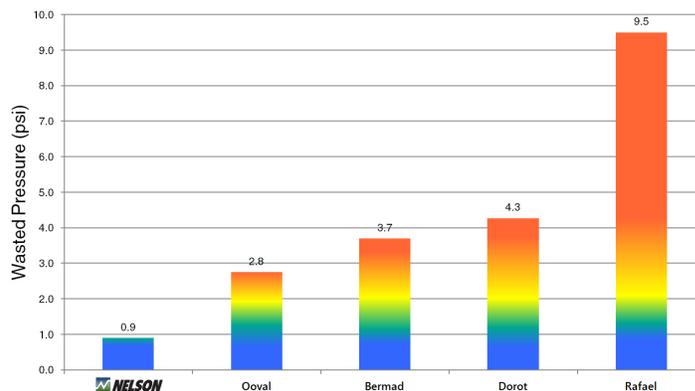
- ✓ **CONSTANT OUTLET PRESSURE**  
The ideal valve must respond quickly and accurately to maintain a constant outlet pressure as system changes such as irrigation blocks turning on/off cause the flow rate and inlet pressure to vary.

Outlet Pressure (psi) with Changing Flow Rate  
(inlet pressure held constant at 20 psi)



- ✓ **MINIMAL PRESSURE LOSS**  
Pressure loss = energy loss = money loss. An efficient valve is the key to a low-pressure, energy saving valve. The ideal valve requires minimal inlet pressure to maintain a constant outlet pressure.

Average Pressure Loss (psi) in 4" Valves at 400 gpm



### Choose Performance

- **MOST ACCURATE**  
The Nelson 800 Series Valve was the only valve "able to maintain an outlet pressure within +/- 0.5 psi."
- **MOST EFFICIENT**  
The Nelson 800 Series Valve has 1/2 to 1/10 the pressure loss of other valves.
- **BEST FOR LOW-PRESSURE REGULATION**  
The Nelson 800 Series Valve uses the MOST ADVANCED 3-WAY PILOT in the industry, which requires the lowest pressure differential to maintain a constant outlet pressure. Other valves that use two-way pilots can require a pressure differential of 20-30 psi.

1. Burt, C.M. and K. Feist 2013. Low-Pressure Testing: Pressure Regulating Valves. Irrigation Training & Research Center, California Polytechnic State University, San Luis Obispo, California, USA. Report R13-003. See also 2013 Proceedings of the Irrigation Association Show, Austin, TX.

