

# C O N T R O L V A L V E S



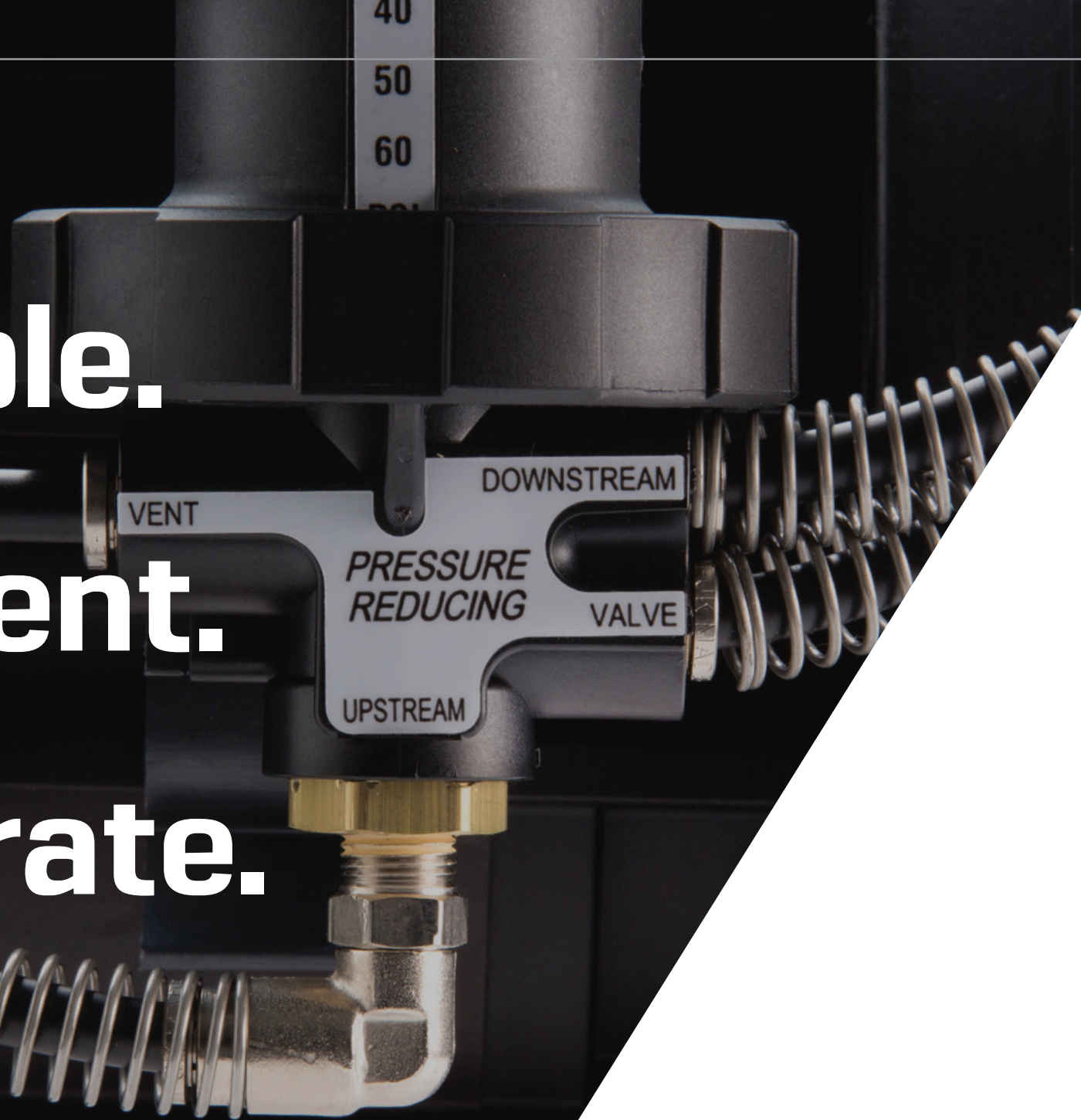
## Control Valves:

800 Series Valves

1000 Series Valves

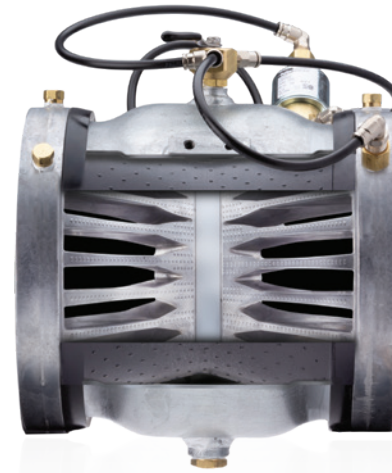
Air Control Valves

**Durable.**  
**Efficient.**  
**Accurate.**



# Premium Performance

Not all valves are created equal. As a hydraulically operated sleeve-type valve, Nelson control valves are designed for reliable and efficient operation. There simply isn't any other valve with better hydraulic performance – from the smooth open/close, to the ultra-accurate pressure control pilot and high flow capacity. Every Nelson valve is custom built and is functionally tested before it goes out the door.



# CONTROL VALVE FAMILY

## HYDRAULIC STABILITY

Nelson's complete line of control valves maintain optimum hydraulic performance in agricultural and industrial applications where reliability is key. Solutions include zone control, pressure control, flow control, and air control.



### 800 SERIES

- ✓ Up to 200 psi (13.8 bar)
- 1 2" / 3" / 4" / 6" / 8"
- Aluminum / Cast Iron



### 1000 SERIES

- ✓ Up to 150 psi (10.3 bar)
- 1 2" / 3" / 4"
- Glass-filled Nylon



### AIR CONTROL

- ✓ 5-200 psi (0.3-13.8 bar)
- 1 2"
- Continuous Air & Vacuum Relief



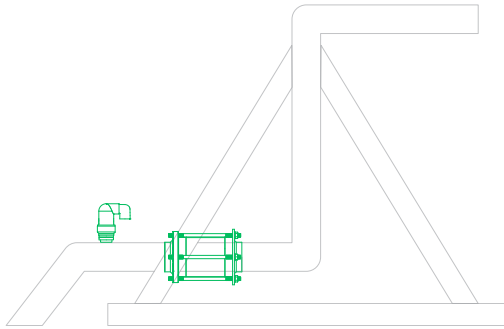
MELSON IRRIGATION - CONTROL VALVES

800 Series valves at pump station  
headworks. Washington, USA.

# Solutions

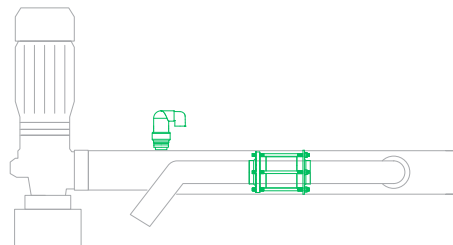
## PIVOT POINT

Automate center pivots with pressure and/or flow control valves to prevent water hammer and pressure fluctuations.



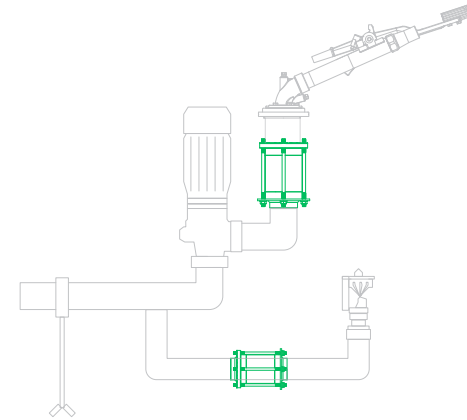
## PRESSURE RELIEF

Protect the system with a pressure sustaining/relief valve that automatically opens when a pressure spike occurs.



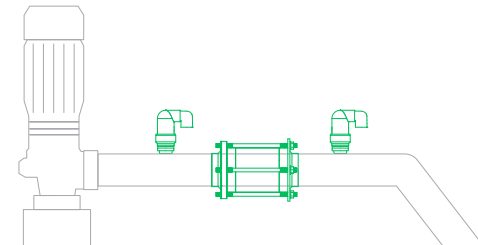
## END GUN

Reliable primary or secondary end gun control valves.



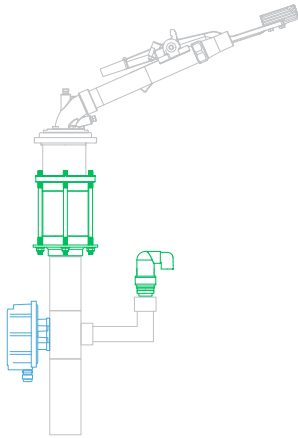
## PUMP

Maintain hydraulic stability with continuous acting air vents and a pressure sustaining and/or reducing valve.



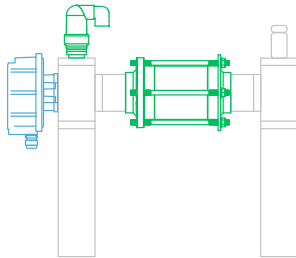
## **BIG GUN®**

Control valves and TWIG® Wireless Controls make an automated solid set Big Gun® sprinkler system possible.



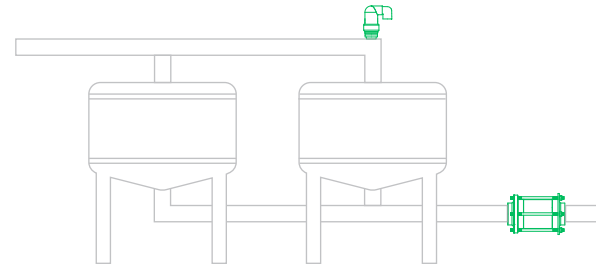
## **ZONE CONTROL**

Precision irrigation requires continuous acting air vents and TWIG® wireless automated hydraulic valves.



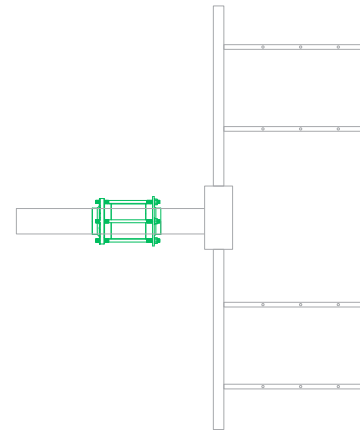
## **FILTER STATION**

Get the air out with the ACV200, and use a pressure sustaining-normally open (PSNO) valve to provide optimum backflush pressure.



## **DRIP / LAYFLAT**




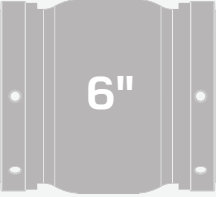
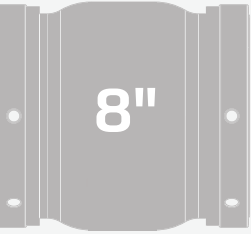
Accurate and stable pressure reducing valves maintain a truly constant pressure at each block for total farm uniformity.

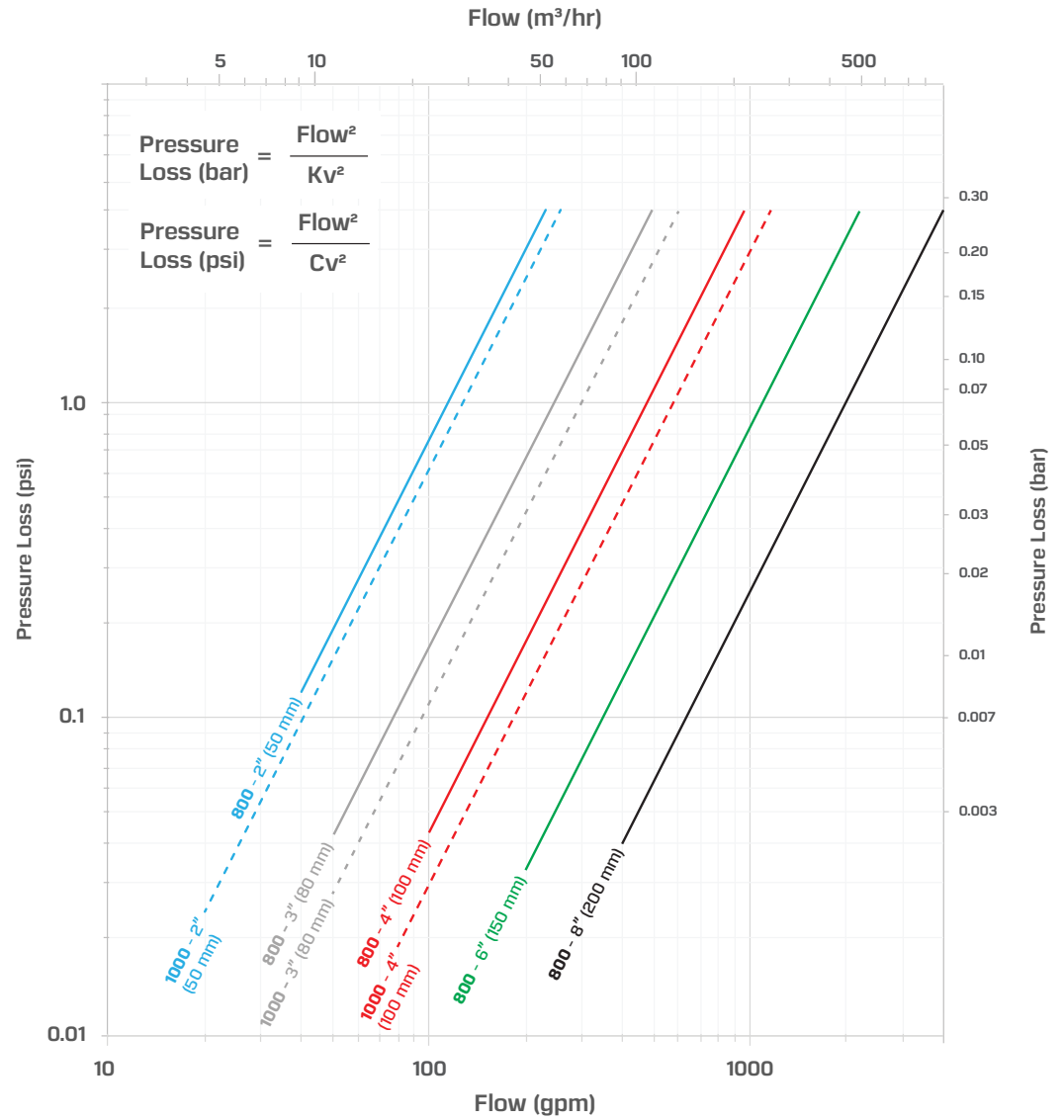


# Efficient

HIGHEST FLOW CAPACITY AND LOWEST FRICTION LOSS

NELSON IRRIGATION - CONTROL VALVES

 2" 800 / 1000 Series	40-200 gpm 9-45 m <sup>3</sup> /hr Cv: 115 / 130 gpm
 3" 800 / 1000 Series	50-500 gpm 11-113 m <sup>3</sup> /hr Cv: 240 / 300 gpm
 4" 800 / 1000 Series	80-900 gpm 18-204 m <sup>3</sup> /hr Cv: 480 / 580 gpm
 6" 800 Series	200-1900 gpm 45-431 m <sup>3</sup> /hr Cv: 1100 gpm
 8" 800 Series	400-3500 gpm 90-795 m <sup>3</sup> /hr Cv: 2000 gpm





# Accurate

STABLE, ACCURATE PRESSURE REGULATION OVER A WIDER FLOW RANGE

## PILOT

The most accurate and responsive pressure control in the industry - trusted by irrigators, proven by science.



1000 Series Pilot

### EASY ADJUSTMENT

Fine-tune the pressure by hand; no tools required

### ADJUSTMENT LABEL

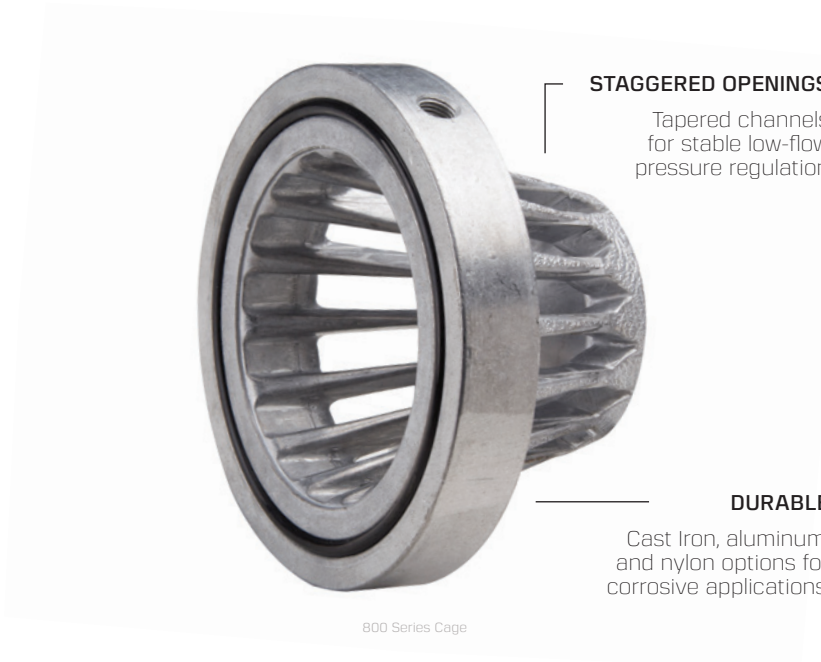
Simplifies setting the regulated pressure before installation

### ACCURATE AND RESPONSIVE

Precision sensitivity bushing is engineered to valve size, and easily replaceable to customize performance for unique hydraulic conditions

## PROPORTIONAL THROTTLING

Smooth open/close and stable pressure regulation across a wide range of flows.



### STAGGERED OPENINGS

Tapered channels for stable low-flow pressure regulation

### DURABLE

Cast Iron, aluminum, and nylon options for corrosive applications.

800 Series Cage

# 800 SERIES

## INDUSTRIAL STRENGTH

The 800 Series Valve has set the standard in durability and efficiency since 1991. Used in industrial and agricultural applications alike, it is engineered for smooth open/close and stable pressure regulation.



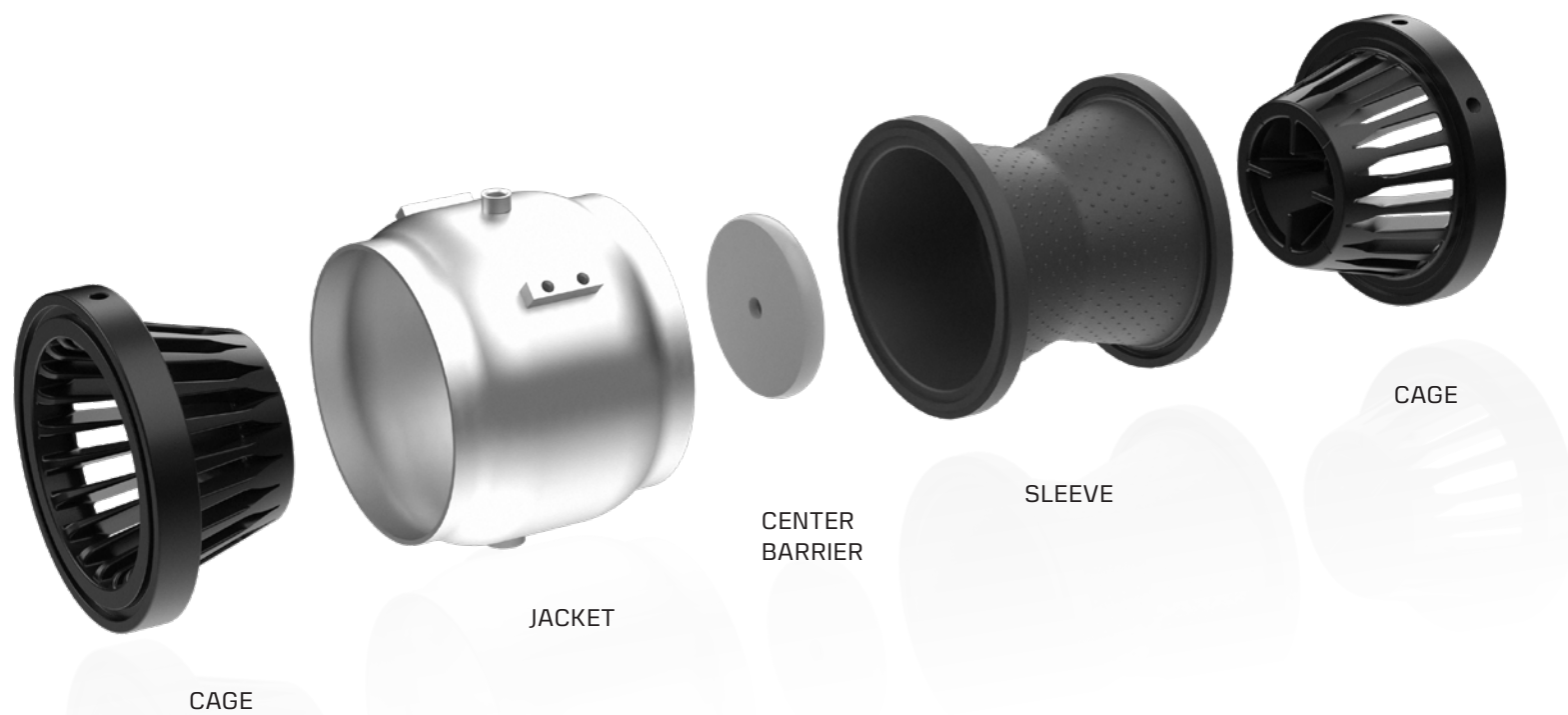
### SPECIFICATIONS

- ✔ 10-50 psi (0.7-3.4 bar) / 18-80 psi (1.2-5.5 bar) / 30-200 psi (2.1-13.8 bar)
- Wafer, Threaded (2"/3"), Victaulic (2"/3")
- ⊞ Aluminum / Cast Iron

⏴ 2" / 3" / 4" / 6" / 8"

- ⊕ On / Off: Manual / Electric Solenoid
- ⊕ Pressure Control: Reducing / Sustaining / Combo
- ⊕ Flow Control: Rate of Flow / Check
- ⊕ Primary Applications: Center pivot point and end gun, pump stations, filter stations

	2"	3"	4"	6"	8"
Cv (gpm)	115	240	480	1100	2000
Kv (m <sup>3</sup> /hr)	99	209	415	951	1729



FEATURES

**PRESSURE CONTROL**  
Accurate 3-Way Pilot



**FLOW CONTROL**  
Slow-fill pipelines with Rate of Flow control



**TUBING PROTECTION**  
Protect against rodents and coyotes.



# 1000 SERIES

ENGINEERED ACCURACY

The 1000 Series excels in zone control where precision regulation and energy efficiency are critical. The single-cage design is resistant to plugging and is easy to clean.



## SPECIFICATIONS

- ✔ 10-40 psi (0.7-2.8 bar) / 18-80 psi (1.2-5.5 bar) / 30-150 psi (2.1-10.3 bar)
- ⊖ Wafer, Threaded, Victaulic, PVC Socket
- ⊙ Glass-filled Nylon

📏 2" / 3" / 4"

- + On / Off: Manual / Electric Solenoid
- + Pressure Control: Reducing / Sustaining / Combo
- + Primary Applications: Zone control, filter stations, pivot point, end gun

	2"	3"	4"
Cv (gpm)	130	300	580
Kv (m <sup>3</sup> /hr)	112	259	501



**FEATURES**

**PRESSURE CONTROL**

Accurate 3-way plastic pilot



**TEE / ELBOW**

For Certa-Set® systems



**TWIG® WIRELESS**

Simple and reliable automation.



# ACV200

PROTECT YOUR INVESTMENT

Entrapped air wreaks havoc on irrigation systems by causing water hammer and pressure fluctuations. Rely on the ACV200 for continuous air relief under pressure when standard air vents slam closed.

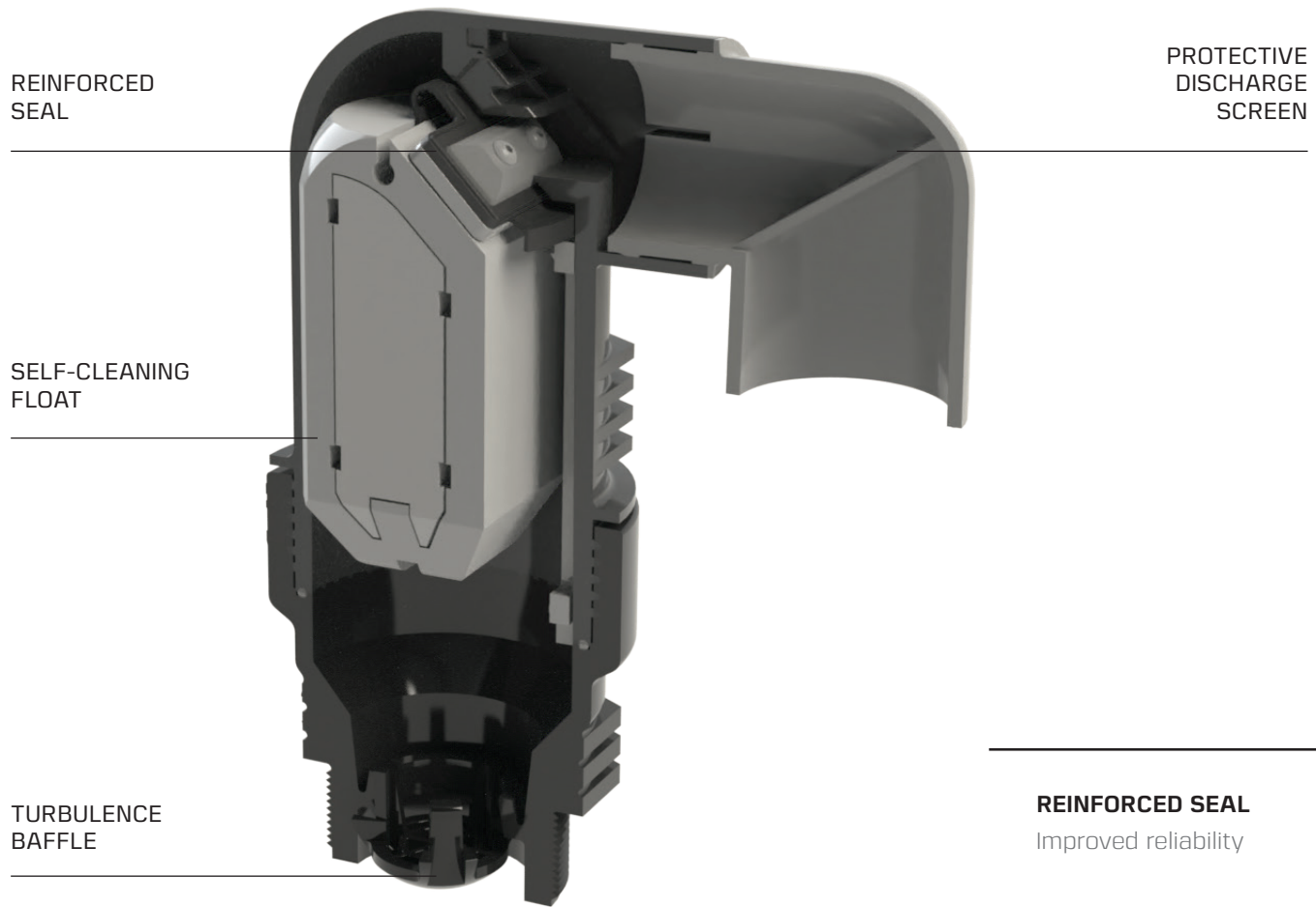


## SPECIFICATIONS

- ✓ 5-200 psi (0.3-13.8 bar)
- ⊕ 2" MNPT or 2" MBSP Inlet
- ⊕ 1 1/2" Socket Outlet
- ⊕ Glass-filled Nylon & Polypropylene
- ⊕ Air Relief
- ⊕ Vacuum Relief
- ⊕ Air Release Under Pressure

## APPLICATIONS

- ⊕ Pump start up / shut down
- ⊕ Filter stations
- ⊕ Vent at high points
- ⊕ Before and after control valves
- ⊕ Big Gun® sprinkler risers.



FEATURES

**REINFORCED SEAL**  
Improved reliability



**SMALL PORT**  
Improved air separation



# CONTROL VALVES



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