



1000 SERIES CONTROL VALVES



ROW CROPS, TREE & VINE,
NURSERY

ZONE CONTROL FOR SPRINKLER
& DRIP IRRIGATION

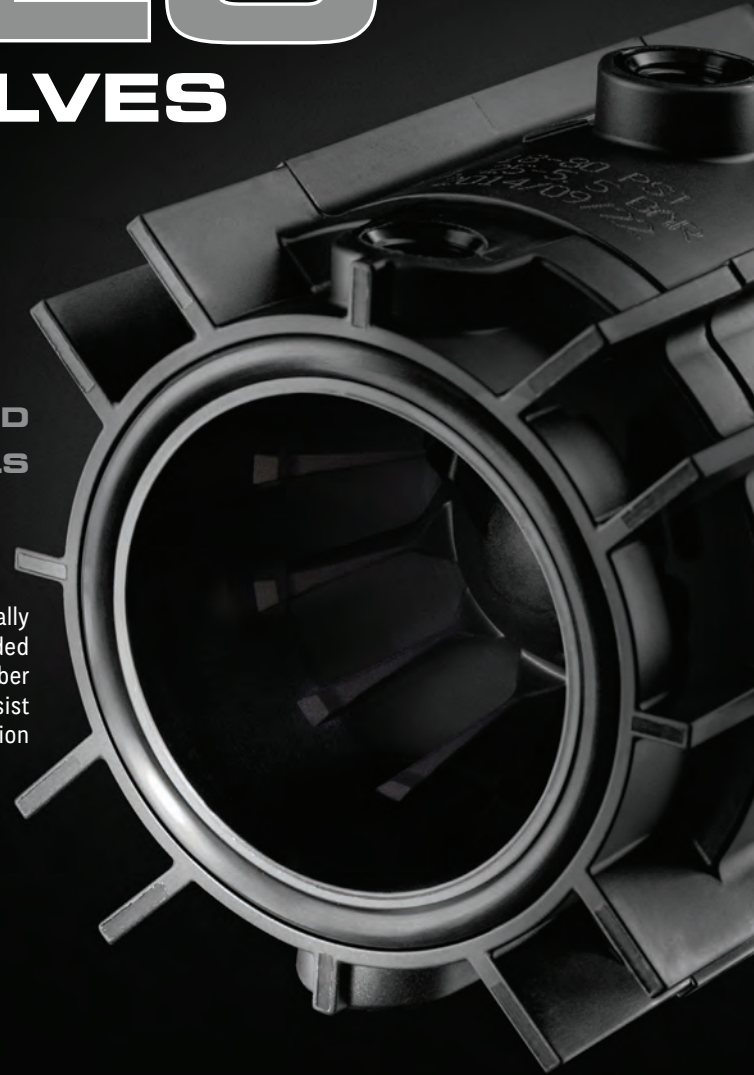
BIG GUN® VALVE CONTROL

1000 SERIES CONTROL VALVES

Nelson Irrigation Corporation has taken a great cage design to a whole new level. Flow area has been opened up by 50% by using plastic molding technology and by eliminating the upstream cage. The result is higher flow, less friction loss and more accurate pressure regulation.

ADVANCED MATERIALS

Specially compounded plastic and rubber components resist corrosion



GEARED TO HANDLE TOUGH AGRICULTURAL CONDITIONS

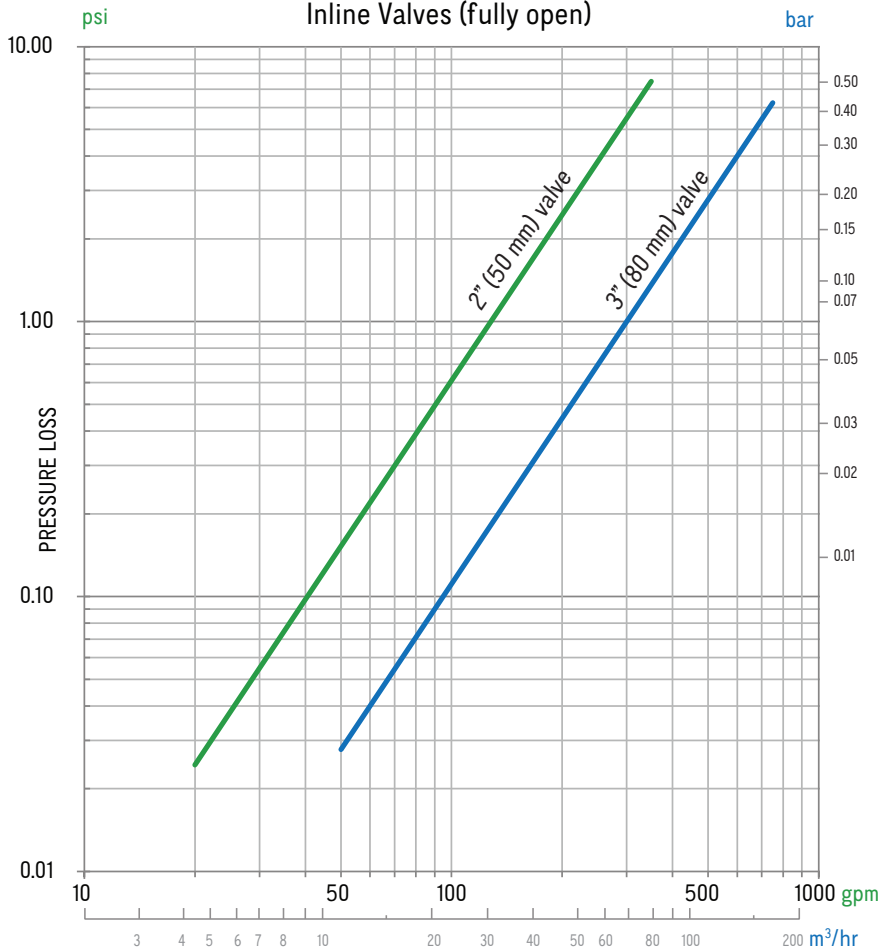
- » Vastly improved cage design to allow passage of debris.
- » 3-way control design requires minimal filtration for reliable operation, as compared to traditional 2-way valves which continuously bleed water and are susceptible to plugging.

SAVE WATER, SAVE ENERGY

- » Higher flow capacity & lower friction loss — better than any other valve on the market.
- » More precise, more stable pressure regulation over a wider range of flow.
- » Pressure regulation with minimal pressure differential required across the valve.



Pressure Loss Data
for 2" & 3" 1000 Series
Inline Valves (fully open)



	Cv (gpm @ 1 psi loss)	Kv (m ³ /hr @ 1 bar loss)
2" (50 mm)	128	113
3" (80 mm)	300	259

Pressure Loss (psi)	$= \frac{\text{Flow (gpm)}^2}{Cv^2}$
Pressure Loss (bar)	$= \frac{\text{Flow (m}^3\text{/hr)}^2}{Kv^2}$



APPLICATIONS

- » Zone control for sprinkler or drip irrigated row crops, nursery crops, orchards and vineyards.
- » Place valve under Big Gun® for solid set irrigation, end of pivot solutions and a variety of environmental controls including fire suppression, dust suppression and cooling.

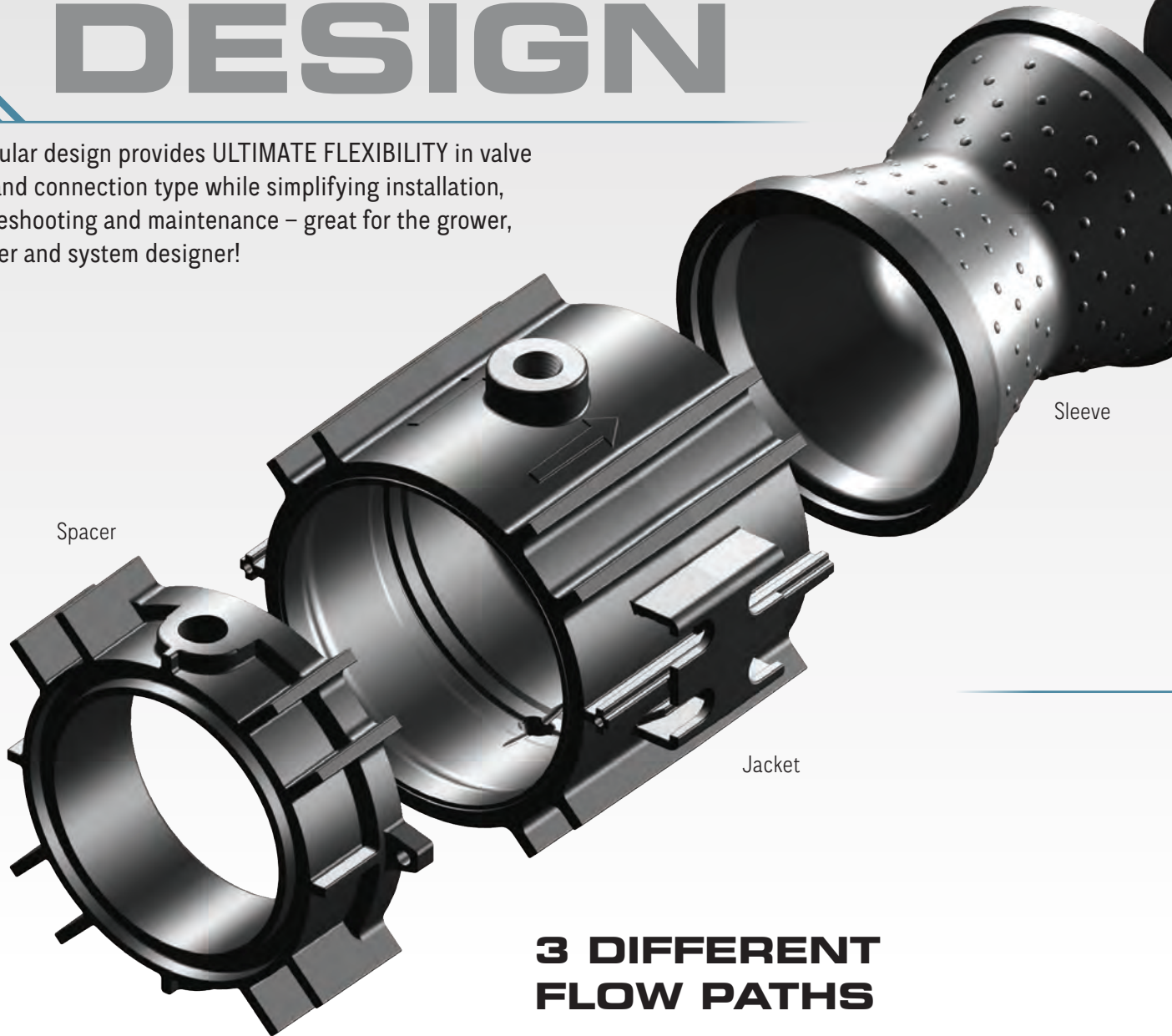


Tel: +1 509.525.7660 / Fax: +1 509.525.7907 /
nelsonirrigation.com / info@nelsonirrigation.com

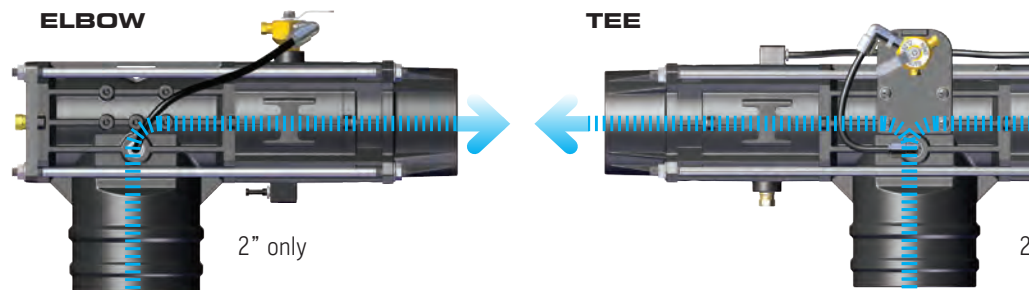
REDEFINE DESIGN

A modular design provides ULTIMATE FLEXIBILITY in valve style and connection type while simplifying installation, troubleshooting and maintenance – great for the grower, installer and system designer!

4



3 DIFFERENT FLOW PATHS



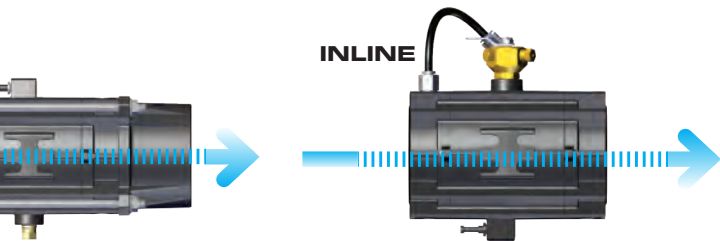


Cage/Barrier
Assembly

1000 SERIES CONTROL VALVES

WAYS TO CONFIGURE

» Nelson valve sizes should be selected based on flow needs as opposed to pipe sizes. Because of the high level efficiency, it is common to select the valve one size smaller than the pipe.



" only

2" & 3"

2" VALVE FLEX CONNECTIONS

THREADED
1.25", 1.5",
2" FNPT, &
1.5", 2" FBSP



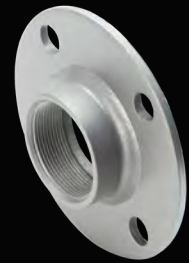
3" OD SPLINE
(CERTA-SET)



2" & 3"
VICTAULIC



2" METAL
ANSI FLANGE
(FNPT)

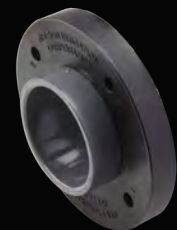


2" VALVE X 3"
FLANGE ADAPTER
& 3" VALVE X 4"
FLANGE ADAPTER



FLANGED CONNECTIONS

2", 3" & 4"
NELSON FLANGE
PVC SOCKET HUB



3" VALVE

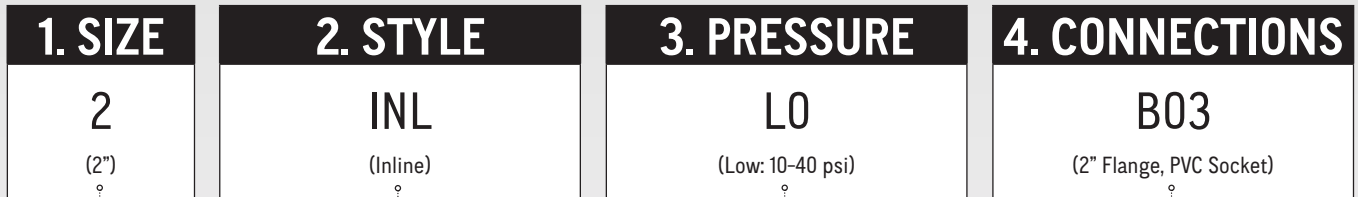
3" VICTAULIC



1000 SERIES

CONTROL VALVE DESCRIPTION CODES

1000V



SIZE	
CODE	SIZE
2	2"
3	3"

STYLE	
CODE	STYLE
INL	Inline
BGV	Big Gun Valve
TEE	Tee
ELB	Elbow

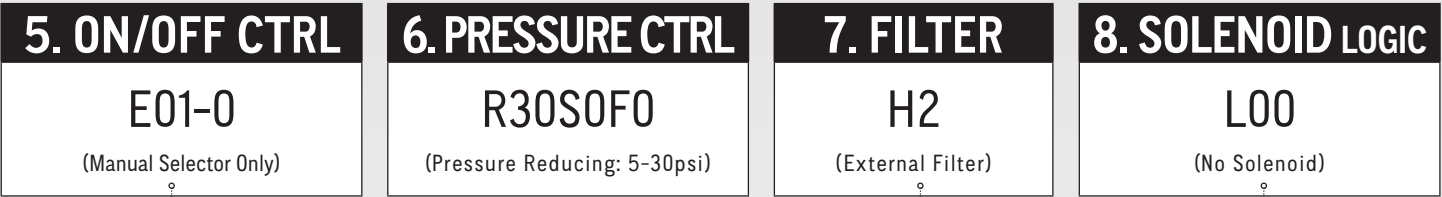
PRESSURE	
CODE	OPERATING PRESSURE
LO	Low (10-40 psi)
MED	Medium (18-80 psi)
HI	High (30-150 psi)

CONNECTIONS	
CODE	CONNECTIONS
CONNECTIONS FOR 2" VALVES	
B01	None (wafer only, no stud kit)
B02	2" Metal Flanges, FNPT
B03	2" Flange, PVC Socket
B04	Wafer w/2x3" adapters for 3" flanges (no stud kit)
B05	2" Victaulic
B06	3" Victaulic
B07	1.25" FNPT
B08	2" FNPT
B09	3" OD Spline (Certa-Set)
B11	1.5" FNPT
B13	1.5" FBSP
B14	2" FBSP
B16	3" Flange, PVC Socket (w/2x3" adapters)
B17	Wafer w/stud kit for 2" flanges
B19	Wafer w/stud kit for 75/100 Big Gun
B21	Wafer w/stud kit and 2x3" adapters for 3" flanges
CONNECTIONS FOR 3" VALVES	
B01	None (wafer only, no stud kit)
B15	3" Flange, PVC Socket
B18	Wafer w/stud kit for 3" flanges
B20	Wafer w/stud kit for 150 Big Gun
B22	Wafer w/stud kit and 3x4" adapters for 4" flanges
B23	Wafer w/3x4" adapters for 4" flanges (no stud kit)
B24	3" Victaulic
B25	4" Flange, PVC Socket (w/3x4" adapters)

Example:

1000V2 INL LO B03 E01-0 R30S0F0 H2 L00

1000 Series 2" Valve, Inline, Low pressure (10-40psi), 2" PVC flanges, Manual Selector Only, Pressure Reducing (5-30psi), External Filter.



ON/OFF CONTROLS			
CODE	ON/OFF CONTROL	CODE	SINGLE/DUAL CONTROL
E00	None	-0	NA
E01	Manual Selector Only	Tee Valves Only:	
E23	Manual Selector w/E23 Solenoid - DC latching	-1	Single Control
E29	Manual Selector w/E29 Solenoid - DC latching	-2	Dual Control
E31	Manual Selector w/E31 Window+ Controller		
E34	Manual Selector w/E34 Solenoid - 24VDC		
E40	Manual Selector w/E40 Solenoid - 24VAC		
E43	Manual Selector w/E43 Solenoid - 24VAC		
E46	Manual Selector w/E46 Solenoid - 24VAC		
E50	Manual Selector w/E50 Solenoid - 120VAC		
E53	Manual Selector w/E53 Solenoid - 110VAC		

FILTER	
CODE	FILTER
H0	None
H1	Int./Ext. Filter
H2	External Filter
H3	Internal Filter

SOLENOID LOGIC	
CODE	VALVE STATUS: SOLENOID ENERGIZED/DE-ENERGIZED
L00	NA
SOLENOID ONLY	
L01	Open/Closed (Standard)
L02	Closed/Open (Reverse Logic)
SUSTAINING W/ SOLENOID	
L03	Sustaining/Closed
L04	Sustaining/Open
L05	Closed/Sustaining
L06	Open/Sustaining
REDUCING W/ SOLENOID	
L07	Reducing/Closed (Standard)
L08	Closed/Reducing (Reverse Logic)
SUSTAINING/REDUCING W/ SOLENOID	
L09	Sust.-Red./Closed (Standard)

PRESSURE CONTROL					
PRESSURE REDUCING		PRESSURE SUSTAINING		RATE-OF-FLOW	
CODE	ADJ. RANGE	CODE	ADJ. RANGE	CODE	ADJ. RANGE
R0	None	S0	None	F0	None
R30	5-30 psi	S30	5-30 psi	F3	3", 120-400 gpm
R60	5-60 psi	S60	5-60 psi	F4	4", 200-540 gpm
R120	10-120 psi	S120	10-120 psi		

1000 SERIES

CONTROL OPTIONS

» ELECTRIC ON-OFF



Add a solenoid for electric on-off capability. The 3-way electric solenoid must be energized to open the valve and de-energized to close the valve.

» PRESSURE CONTROL



REDUCING OR SUSTAINING/RELIEF
Add a pressure control pilot to maintain a set upstream and/or downstream pressure.

Nelson's new plastic pressure control pilot provides SIMPLE, ACCURATE & STABLE pressure controls plus:

- » Lightweight
- » Lower cost
- » Easy to adjust without tools
- » Corrosion resistant

CENTER PIVOT & SOLID SET

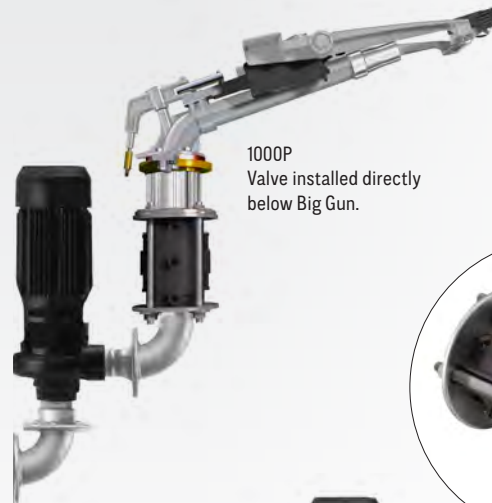


BIG GUN VALVE (BGV) FOR SOLID SET APPLICATIONS
Mount directly below an ANSI Big Gun: 2" for 75 or 100 Series Big Gun; 3" for 150 Series Big Gun

1000P - PRESSURE REGULATING AND/OR ELECTRIC ON/OFF CONTROL VALVE FOR R55 OR R75 END SPRINKLERS. Choose from threaded 2" or 1.25" FNPT inlet/outlet.



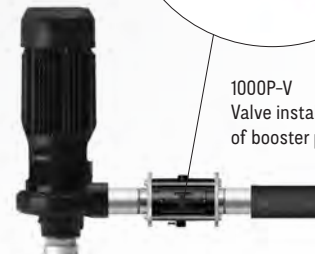
CENTER PIVOT END GUN VALVE CONTROL*



1000P
Valve installed directly below Big Gun.



1000P-V
Valve installed at outlet of booster pump.



*Booster pump controlled — does not require a solenoid.



848 Airport Road, Walla Walla, Washington 99362 U.S.A.
Tel: +1 509.525.7660 / Fax: +1 509.525.7907
info@nelsonirrigation.com / nelsonirrigation.com

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