

800 SERIES VALVE SPECIFICATION

1. GENERAL:

The 800 Series Nelson valve is capable of operating in a pressure range from 10 PSI through 200 PSI depending upon the selected internal rubber sleeve diaphragm. See the latest valve configuration table on the following page. The valve shall have optional accessories which may include devices that will:

- a) open by electric solenoid,
- b) control the downstream pressure (pressure reducing control),
- c) control the upstream pressure (pressure sustaining control),
- d) pressure relief (pressure sustaining control),
- e) control rate of flow,
- f) check flow
- g) selected combination of the above.

2. DESIGN

1. The valve body is of the wafer style which will fit between two standard flanges. Threaded and Victaulic connections also available for 2" and 3" size valves. Materials shall be as shown on the 800 Series materials guide (page 3).
2. If equipped with a pressure control, the pressure regulator shall be 3-way pilot operation. The adjustment bolt shall have a label attached to assist the user in selecting the correct pressure.
3. The internal rubber sleeve diaphragm shall be molded in the normally closed position. The valve will require operating pressure in order to open the valve but no pressure will be required to close the valve.
4. Special controls and operational options can be ordered by designating the 'S##' number at the end of the valve code. These codes are listed in the table found in Section 16 of the 800 Series Valve Resource Manual.

MATERIALS GUIDE

ITEMS	2 INCH VALVE	3 INCH VALVE	4 INCH VALVE	NEW STYLE 4 INCH VALVE	6 INCH VALVE	8 INCH VALVE
JACKET	ANODIZED ALUMINUM	ANODIZED ALUMINUM	ANODIZED ALUMINUM	ANODIZED ALUMINUM	GALVANIZED STEEL	GALVANIZED STEEL
CAGE	ALUMINUM OR EPOXY COATED CAST IRON	ALUMINUM OR EPOXY COATED CAST IRON	ALUMINUM OR EPOXY COATED CAST IRON	ALUMINUM OR EPOXY COATED CAST IRON	EPOXY COATED CAST IRON	EPOXY COATED CAST IRON
SLEEVE DIAPHRAGM	POLYISOPRENE RUBBER	POLYISOPRENE RUBBER	POLYISOPRENE RUBBER	POLYISOPRENE RUBBER	POLYISOPRENE RUBBER	POLYISOPRENE RUBBER
CENTER BOLT	STAINLESS STEEL	STAINLESS STEEL	STAINLESS STEEL	STAINLESS STEEL	STAINLESS STEEL	STAINLESS STEEL
CENTER BARRIER	UHMW (PLASTIC)	UHMW (PLASTIC)	UHMW (PLASTIC)	UHMW (PLASTIC)	UHMW (PLASTIC)	UHMW (PLASTIC)

PRESSURE CONTROL MATERIALS:

BRASS, STAINLESS STEEL, TEFLON, AND NITRILE RUBBER

PLASTIC TUBING:

NYLON

TUBE FITTINGS:

NICKEL PLATED BRASS BODIES AND COLLETS

ELECTRIC SOLENOIDS:

BRASS, STAINLESS STEEL, NITRILE RUBBER, PLASTIC, AND EPDM SEALS

STUD KITS:


CARBON STEEL W/ ZINC-NICKLE COATING

2" & 3" Valves

To Order: Specify 800 Series Control Valve and Select From Each Letter Option. Any item in section D, E & H can be ordered separately as a Kit. Specify the option letter and number (example "E23" for a 9/12V, 3/64" Solenoid Kit).

BASE VALVE			ACCESSORIES		
A	B	C	D	E	H
VALVE MATERIAL/SIZE	CONNECTION STYLE & HARDWARE	OPERATING PRESSURE	PRESSURE/ FLOW CONTROL	ON/OFF MODE	FILTER
ALUMINUM A2" A3"	WAFER STYLE B9 (No studs) Includes Manual Selector & Mounting Bracket Kits B10 (4 studs, 8 nuts) Includes Manual Selector & Mounting Bracket Kits	C1 10-50 PSI	NONE D01	MANUAL E01 (No Solenoid) ELECTRIC SOLENOID DC (voltage, orifice diameter) E21 (12V, 1/16") E34 (24V, 3/64") DC Latching E23 (9/12V, 3/64") E28 (12-50V, 11/128") AC (voltage, orifice diameter) E43 (24V, 3/64") E46 (24V, 1/16") E53 (110V, 1/16")	H2 External H3* Internal for 2" & 3"
		C2 30-200 PSI	REDUCING (small body pilot) D11 (3-25 PSI) D12 (5-50 PSI) D13 (10-120 PSI)		
CAST IRON A2" A3"	THREADED B3 (Specify NPT or BSP) Includes Manual Selector & Mounting Bracket Kits VICTAULIC B6 Includes Manual Selector & Mounting Bracket Kits	C3 18-80 PSI	SUSTAINING (small body pilot) D15 (5-50 PSI) D16 (10-120 PSI)		
			RATE-OF-FLOW D18 Specify flow rate & pipe size SLEEVE EXHAUST D06 SHUTTLE CHECK D07 (Must also order solenoid or pressure control)		

SAMPLE ORDER (see opposite page): A6" B5 C2 D03 E40 H3. This configuration represents a 6" valve with wafer style connection (studs & nuts included), 30 to 200 PSI pressure rating, pressure reducing (10 - 120 PSI) control package with a 24VAC 1/16" solenoid, and an internal filter.

RATE-OF-FLOW CONFIGURATION	PRESSURE CONTROL PILOT	PRESSURE CTRL. UPGRADE KITS	SLEEVE EXHAUST D06	SHUTTLE CHECK D07	INTERNAL & EXTERNAL FILTERS
 <p>3" Pipe, 120-400 gpm (#9778-005) 4" Pipe, 200-540 gpm (#9778-006) 6" Pipe, 330-1010 gpm (#9778-007); 500-2000 gpm (#9778-003) 8" Pipe, 490-1530 gpm (#9778-008); 900-3800 gpm (#9778-001)</p>	 <p>Adjustable Pressure-Reducing or Pressure-Sustaining Pilots (small body for 2" & 3" valves, large body for 4, 6, & 8" valves)</p>	 <p>For pilots manufactured prior to 1/1/2014. Updates performance with a new spool/diaphragm assembly. Small Body Upgrade Kit #12229-001 Large Body Upgrade Kit #12230-001</p>	 <p>By adding a D06, the main valve can snap open when water arrives. The valve will then stay open until upstream pressure reaches 30 PSI. Above 30 PSI the valve will respond to normal solenoid or pressure control.</p>	 <p>If outlet pressure exceeds inlet pressure the valve will close.</p>	 <p>Protect the solenoid or pressure controls from clogging. Self-cleaning internal filter is standard. External filter for greater filtration. Use both for the most demanding conditions.</p>

4, 6 & 8" Valves

BASE VALVE			ACCESSORIES		
A	B	C	D	E	H
VALVE MATERIAL/SIZE	CONNECTION STYLE & HARDWARE	OPERATING PRESSURE	PRESSURE/ FLOW CONTROL	ON/OFF MODE	FILTER
ALUMINUM A4"	WAFER STYLE B9 (No studs) Includes Manual Selector & Mounting Bracket Kits B10 (8 studs, 16 nuts) Includes Manual Selector & Mounting Bracket Kits	C1 10-50 PSI C2 30-200 PSI C3 18-80 PSI	NONE D01	MANUAL E01 (No Solenoid)	H2 External H3 Internal for 4", 6" & 8"
			REDUCING (large body pilot) D02 (5-50 PSI) D03 (10-120 PSI) D04 (25-200 PSI)	ELECTRIC SOLENOID DC (voltage, orifice diameter) E21 (12V, 1/16") E30 (24V, 1/16")	
CAST IRON A4" A6" A8"	WAFER STYLE B4 (No studs) Includes Manual Selector & Mounting Bracket Kits B5 (8 studs, 16 nuts) 4" Valve 6" Valve 8" Valve Includes Manual Selector & Mounting Bracket Kits		SUSTAINING (large body pilot) D05 (25-200 PSI) D08 (10-120 PSI) D09 (5-50 PSI)	DC Latching E28 (12-50V, 11/128")	
			RATE-OF-FLOW D18 Specify flow rate & pipe size	AC (voltage, orifice diameter, inrush amps) E40 (24V, 1/16", 0.15A)	
			SLEEVE EXHAUST D06	E41 (24V, 1/16", 1.1A)	
			SHUTTLE CHECK D07 (Must also order solenoid or sustaining control)	E46 (24V, 1/16", 0.8A)	
				E50 (120V, 1/16")	
				E52 (6 & 8" only) (120V, 1/8")	

NEW! PIPE ADAPTER KITS


Order #11433 to fit 4" valve in 6" pipe. Includes hardware to extend accessories above the studs.
 Order #12225 to fit 6" valve in 8" pipe. Includes hardware to extend accessories above the studs.

2" FNPT X ANSI FLANGE


#10356 Lower Flange for Valve/Gun Combo. See page 46.

WINDOW+ CONTROLLER


E33-1 Window+ Controller with 12/24 VDC Latching Solenoid (1.2 mm orifice for 2", 3" & 4" Valves)
E20-1 Window+ Controller with 12/24 VDC Latching Solenoid (1.6 mm orifice for 4", 6" & 8" Valves)

PRESSURE GAUGE OPTIONS


#10104 1/4" Valve Stem; #10103 Lock on Gauge Chuck for the 1/4" Valve Stem; #10105-xxx Gauge & Fittings Kit (Specify Pressure Gauge + 1 Lock on Gauge Chuck, 2 Valve Stems)

QUICK CONNECT GAUGE OPTIONS


Two male quick connect fittings are recommended with reducing or sustaining functions.

#9498 Male QC Fitting; #9438-002 Female QC Fitting (shown); Specify Gauge; #8968-002, 0-60 PSI; #8968-004, 0-160 PSI; #8968-005, 0-200 PSI

Big Gun® / Valve Combos

Mount an 800 Series Control Valve directly to a Big Gun Sprinkler with an ANSI base. For control of a pivot end gun with booster pump, use the 2" 800P Valve (D, E, H accessories not needed). For solid set applications, add a filter, solenoid and/or pressure control to your valve.







800P - 2" PIVOT END GUN CONTROL VALVE
 Example: A2B11C3

Specify ANSI Flange Connection on SR75 or SR100 Big Gun (SR100 shown. Order Big Gun separately. Lower flange not included.)



SOLID SET BIG GUN® VALVE
 Example: A4B18C2D01E01H3

Specify ANSI Flange Connection on Big Gun (SR200 w/ wedge kit shown. Order Big Gun separately. Lower flange not included.)

Hardware w/ Base Valve Order	B11/B12 2" PIVOT END GUN CONTROL VALVE	B17/B18 SOLID SET BIG GUN VALVE
3-way manual on/off selector kit (#8980) 	-	✓
Mounting bracket kit (2" - #9189) (+3" - #8924) 	-	✓
Rubber drain/plug 	2 EACH #9800	1 EACH #9800-100
Ball drain/vent (#10753) 	✓	-

BASE VALVE			ACCESSORIES		
A	B	C	D	E	H
VALVE MATERIAL/SIZE	CONNECTION STYLE & HARDWARE (SEE TOP RIGHT)	OPERATING PRESSURE	PRESSURE/FLOW CONTROL	ON/OFF MODE	FILTER
ALUMINUM A2"	800P - 2" Pivot End Gun Valve B12 (No studs) B11 (4 studs, 4 nuts) (See chart in upper right for hardware included)	C2 30-200 PSI	-	-	-
		C3 18-80 PSI			
ALUMINUM A2" A3" A4"	Solid Set Big Gun Valve B17 2" & 3" Valve (4 studs & 4 nuts) 4" Valve (8 studs & 8 nuts) (See chart in upper right for hardware included)	C2 30-200 PSI	NONE D01 REDUCING D13 (10-120 PSI) (small body pilot for 2", 3" valves) D03 (10-120 PSI) (large body pilot for 4" valve)	MANUAL E01 (No Solenoid) ELECTRIC SOLENOID (voltage, orifice diameter) DC Latching E28 (12-50V, 11/128") AC E46 (24V, 1/16") (Other solenoids available upon request.)	H2 External H3* Internal for 2" & 3" H3 Internal for 4"
		C3 18-80 PSI			
	CAST IRON A4"	Solid Set Big Gun Valve B18 (8 studs & 8 nuts) (See chart in upper right for hardware included)			