



2022 CATALOG

1000 SERIES VALVES & TWIG[®] WIRELESS CONTROLS



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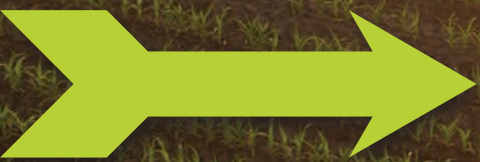
23 First Generation TWIG®

A PERFECT MATCH

Each component of an irrigation system, including how it's operated, plays a vital role in raising a healthy crop. That's why we've engineered the industry's most efficient and accurate valves, the 1000 Series, and paired them with reliable TWIG® wireless controls to bring you the most hydraulically advanced yet operationally simple irrigation system available.

TWIG®

the most **reliable**
wireless controls



1000

S E R I E S

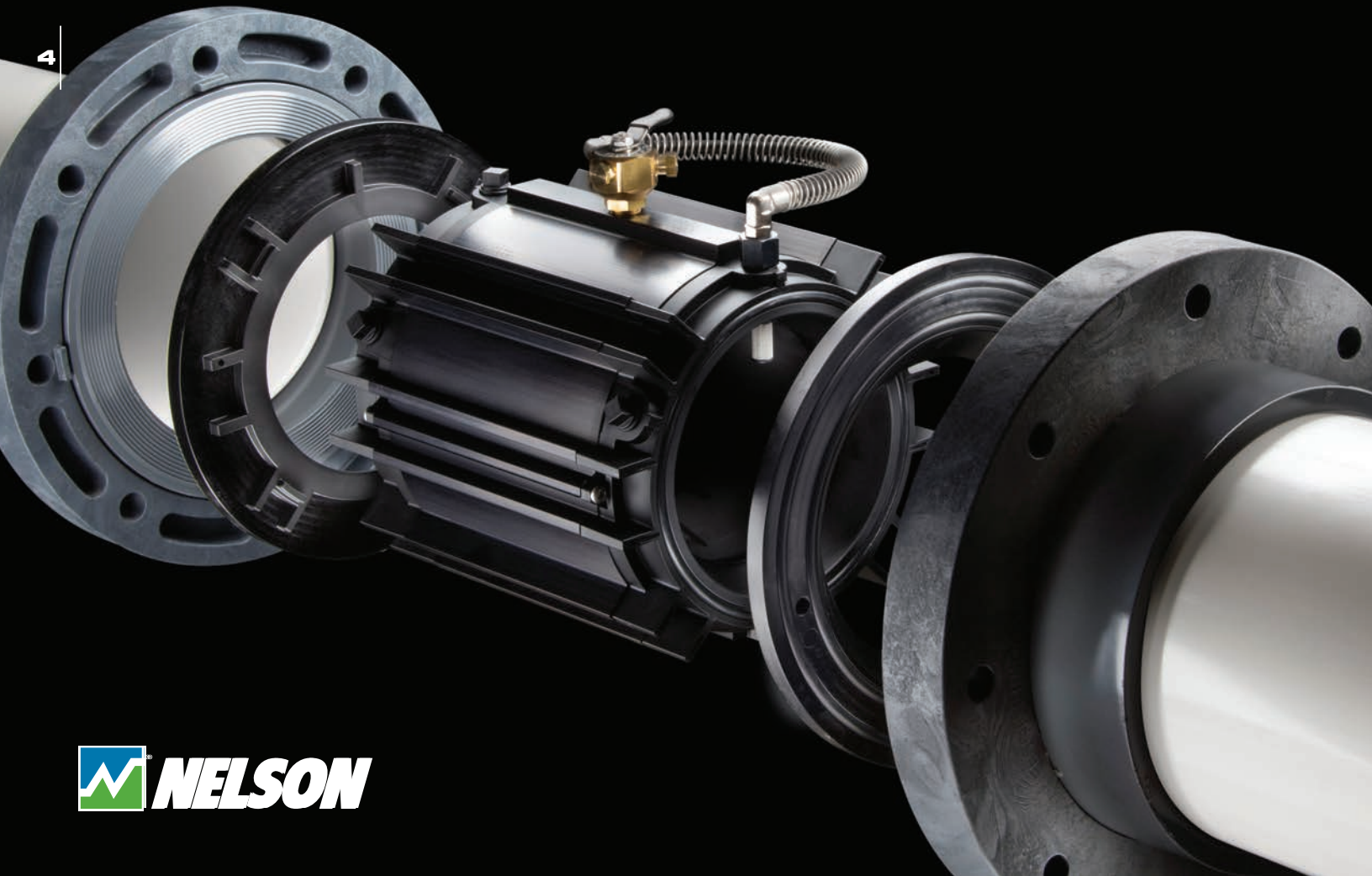
the most **efficient**
& **accurate** valves

1000

S E R I E S

EFFICIENT - ACCURATE - RELIABLE

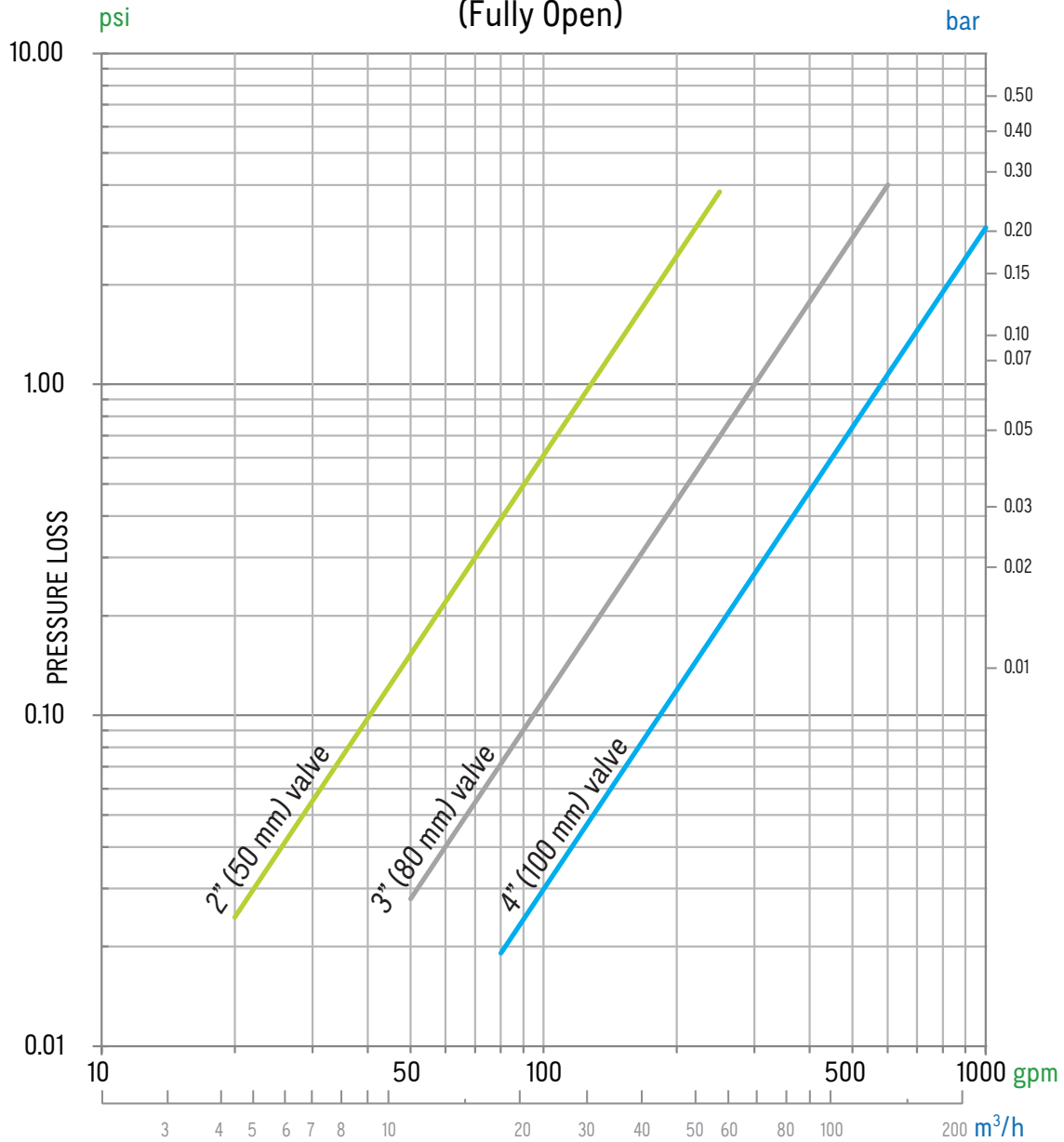
The 1000 Series is geared to handle tough agricultural environments. High flow capacity and a modular design provide ultimate flexibility in valve style and connection type while simplifying installation, troubleshooting and maintenance —great for the grower, installer and system designer!



Pressure Loss Data

1000 Series Inline Valves

(Fully Open)



	Cv (gpm @ 1 psi loss)	Kv (m³/hr @ 1 bar loss)
2" (50 mm)	130	112
3" (80 mm)	300	259
4" (100 mm)	580	501

$$\text{Pressure Loss (psi)} = \frac{\text{Flow (gpm)}^2}{Cv^2}$$

$$\text{Pressure Loss (bar)} = \frac{\text{Flow (m}^3/\text{h)}^2}{Kv^2}$$

1000 SERIES

TO ORDER: Select one option from each of the seven sections to build the valve description code.

SECTION	1. SIZE	2. STYLE	3. PRESSURE	4. CONNECTIONS	5. ON/OFF CONTROL	6. PRESSURE CONTROL	7. FILTER
CODE	1000V2	INL	MED	B03	E01	R60	H3
DESCRIPTION	1000 Series 2" Valve	Inline	Medium (18-80 psi)	2" PVC Socket	Manual Selector Only	Pressure Reducing 5-60 psi	Internal Filter

1. SIZE	
CODE	SIZE
1000V2	2"
1000V3	3"
1000V4	4"

2. STYLE	
CODE	STYLE
INL	Inline
BGV	Big Gun® Valve
TEE*	Tee
ELB*	Elbow

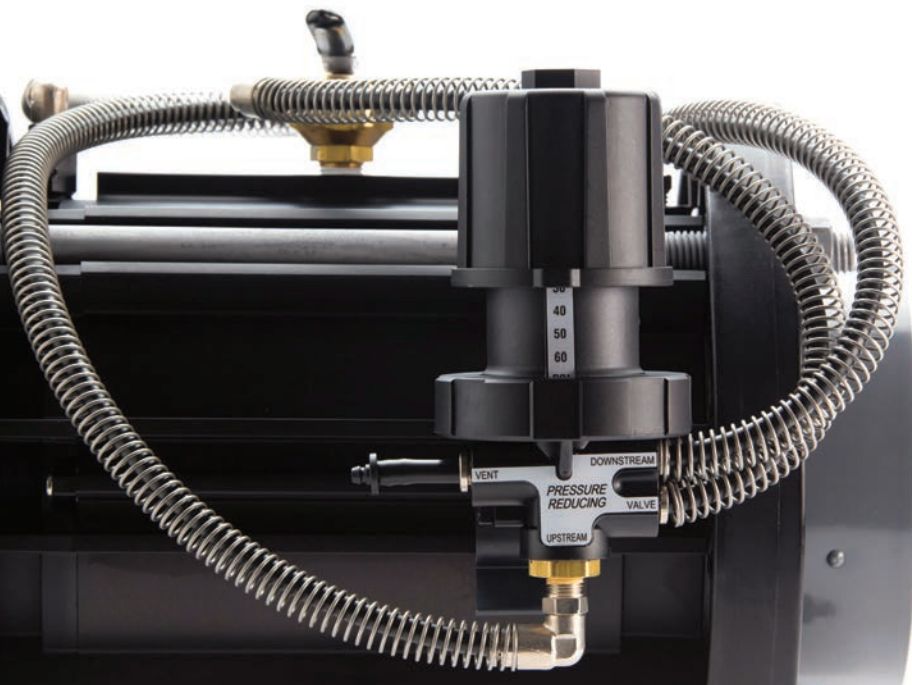
*Tee and Elbow in 2" only

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

4. CONNECTIONS	
CODE	CONNECTIONS
CONNECTIONS FOR 2" VALVES	
B01	None (wafer only, no stud kit)
B02	2" FNPT (metal)
B03	2" PVC Socket
B04	Wafer 3x2x3 (no stud kit)
B05	2" Victaulic
B06	3" Victaulic (3x2x3)
B08	2" FNPT (plastic)
B09	3" OD Spline (Certa-Set)
B11	1.5" FNPT
B14	2" FBSP (Plastic)
B16	3" PVC Socket (3x2x3)
B17	Wafer w/stud kit for 2" flanges
B19	Wafer w/stud kit for 75/100 Big Gun®
B21	Wafer 3x2x3 w/stud kit
CONNECTIONS FOR 3" VALVES	
B01	None (wafer only, no stud kit)
B15	3" PVC Socket
B18	Wafer w/stud kit for 3" flanges
B20	Wafer w/stud kit for 150 Big Gun®
B22	Wafer 4x3x4 w/stud kit
B23	Wafer 4x3x4 (no stud kit)
B24	3" Victaulic
B25	4" PVC Socket (4x3x4)
B33	4" Victaulic (4x3x4)
B36	3" FNPT (metal)
B37	3" FBSP (metal)
CONNECTIONS FOR 4" VALVES	
B01	None (wafer only, no stud kit)
B26	4" PVC Socket
B27	Wafer w/stud kit for 4" flanges
B29	Wafer 6x4x6 w/stud kit
B30	Wafer 6x4x6 (no stud kit)
B31	6" PVC Socket (6x4x6)
B32	4" Victaulic

PROTECT CONTROL TUBING FROM DAMAGE CAUSED BY COYOTES AND OTHER ANIMALS.

Available on any valve configuration by selecting option H4 (external filter with tubing protection) or H5 (internal filter with tubing protection)



5. ON/OFF CONTROLS*

CODE	ON/OFF CONTROL	CODE	SINGLE/DUAL CTRL.
E00	None	Tee Valves Only:	
E01	Manual Selector Only	-1	Single Control
E02	Manual Sel. w/E02 Solenoid - 12VDC Lat.	-2	Dual Control
E11*	Manual Sel. w/E11 Solenoid - 12VDC, NC		
E21	Manual Sel. w/E21 Sol. - 12VDC, 1.6 mm		
E23	Manual Sel. w/E23 Solenoid - DC Lat.		
E29	Manual Sel. w/E29 Solenoid - DC Lat.		
E31	Manual Sel. w/E31 Window+ Controller		
E34	Manual Sel. w/E34 Solenoid - 24VDC		
E40	Manual Sel. w/E40 Solenoid - 24VAC		
E43	Manual Sel. w/E43 Solenoid - 24VAC		
E46	Manual Sel. w/E46 Solenoid - 24VAC		
E50	Manual Sel. w/E50 Solenoid - 120VAC		
E53	Manual Sel. w/E53 Solenoid - 110VAC		

*Contact factory for full solenoid specifications.

*Normally closed solenoid for pressure sustaining,
normally open valve ("PSNO") applications at filter stations

6. PRESSURE CONTROL

CODE	ADJ. RANGE
PRESSURE REDUCING	
R0	None
R30	5-30 psi
R60	5-60 psi
R120	10-120 psi
PRESSURE SUSTAINING	
S0	None
S60	5-60 psi
S120	10-120 psi

7. FILTER

CODE	FILTER
H0	None
H2	External Filter
H3	Internal Filter
FILTER W/ TUBING PROTECTION	
H4	External Filter
H5	Internal Filter

Nelson Control Valves come standard normally closed. Use the following codes to specify special solenoid plumbing logic.

OPTIONAL SOLENOID LOGIC

SOLENOID ONLY			SUSTAINING W/ SOLENOID			REDUCING W/ SOLENOID			SUSTAINING/REDUCING W/ SOLENOID		
CODE	SOLENOID STATUS	VALVE STATUS	CODE	SOLENOID STATUS	VALVE STATUS	CODE	SOLENOID STATUS	VALVE STATUS	CODE	SOLENOID STATUS	VALVE STATUS
L01*	Energized	Open	L03	Energized	Sustaining	L07*	Energized	Reducing	L09	Energized	Sustaining-Reducing
	De-energized	Closed		De-energized	Closed		De-energized	Closed		De-energized	Closed
L02	Energized	Closed	L04*	Energized	Sustaining	L08	Energized	Closed	L10	Energized	Sustaining
	De-energized	Open		De-energized	Open		De-energized	Reducing		De-energized	Reducing
			L05	Energized	Closed	L13	Energized	Reducing	L11	Energized	Reducing
				De-energized	Sustaining		De-energized	Open		De-energized	Sustaining
			L06	Energized	Open	L14	Energized	Open	L12	Energized	Open
				De-energized	Sustaining		De-energized	Reducing		De-energized	Sustaining-Reducing

*Standard

*Pressure Sustaining normally-open valve ("PSNO") for applications at filter stations. *Standard

► SOLID SET BIG GUN® VALVES

See page 12 for End Gun Valves.

2" (50 mm) & 3" (80 mm) Big Gun® Valves

TWIG®-READY 1000 SERIES BIG GUN® VALVE
with 12VDC latching solenoid (E02), high pressure
(30-150 psi) sleeve, internal filter w/tubing protection
(H5), and stud kit for ANSI Big Gun®

ANSI Big Gun®	Valve Size	Valve Part Number
75 or 100 Series	2"	12255-0901
150 Series	3"	12239-0914

See pages 6-7 to configure other options.
See pages 18-23 for TWIG® pricing.

THREADED FLANGE:
2" FNPT - 10356PV
2" FBSP - 12940
3" FNPT - 13233-001
3" FBSP - 13233-002

SOLID SET BIG GUN® IRRIGATION REINVENTED

Easier and more efficient than ever before by combining TWIG® automation
with 1000 Series Control Valves directly under an ANSI Big Gun®.



► TEE & ELBOW VALVES

2" (50 mm) Tee and Elbow Valves

3" Certa-Lok Inlet x 3" Certa-Set Outlet(s) - Includes Splines

(See pages 6-7 to configure other options.)

TWIG®-READY TEE & ELBOW VALVES

Electric on/off with manual selector(s) and solenoid(s) as indicated below. 30-150 psi (2.1-10.3 bar), w/ 3" OD spline (Certa-Set) outlet(s) and internal filter with tubing protection (H5).

VALVE WITH SOLENOID	Part Number
Elbow Valve	
E02 Solenoid (12 VDC latch)	12217-0055
Single Control Tee Valve	
E02 Solenoid (12 VDC latch)	11614-0085
Dual Control Tee Valve	
E02 Solenoids (12 VDC latch)	11614-0090

MANUAL ON/OFF TEE & ELBOW VALVES

30-150 psi (2.1-10.3 bar), w/ 3" OD Spline (Certa-Set) Outlet, Manual Selector(s) & Internal Filter

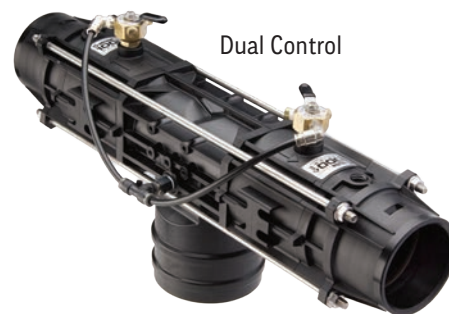
VALVE	Part Number
Elbow Valve	12217-0001
Single Control Tee Valve	11614-0001
Dual Control Tee Valve	11614-0004



Elbow



Single Control



Dual Control

► MANUAL & TWIG® READY INLINE VALVES

ELECTRIC ON/OFF VALVES are used to open or close a valve electrically. They are commonly used to automate zone control. Common configurations are shown below. Other options available. (See pages 6-7.)

TWIG®-READY ELECTRIC ON/OFF INLINE VALVES

12VDC latching solenoid (E02), medium sleeve (18-80 psi), and internal filter.

Size	Connections	Part Number
2"	(B03) 2" PVC Socket	12255-0814
	(B16) 3" PVC Socket	12255-1299
3"	(B15) 3" PVC Socket	12239-0610
	(B25) 4" PVC Socket	12239-1051
4"	(B26) 4" PVC Socket	12531-0752
	(B27) Wafer w/stud kit	12531-0753
	(B31) 6" PVC Socket	12531-0513



PRESSURE REDUCING VALVES accurately maintain a constant downstream pressure regardless of changing flow rate or pressure. Nelson pressure reducing valves are the most accurate in the industry and regulate across a wide flow range. Common configurations are shown below. Other options available. (See pages 6-7.)

TWIG®-READY ELECTRIC ON/OFF, PRESSURE REDUCING (5-60 PSI) INLINE VALVES

12VDC latching solenoid (E02), medium sleeve (18-80 psi), and internal filter.

Size	Connections	Part Number
2"	(B03) 2" PVC Socket	12255-1308
	(B16) 3" PVC Socket	12255-1087
3"	(B15) 3" PVC Socket	12239-1057
	(B25) 4" PVC Socket	12239-1052
4"	(B26) 4" PVC Socket	12531-0754
	(B27) Wafer w/stud kit	12531-0755
	(B31) 6" PVC Socket	12531-0756



MANUAL ON/OFF, PRESSURE REDUCING (5-60 PSI) INLINE VALVES

Manual selector, medium sleeve (18-80 psi), and internal filter.

Size	Connections	Part Number
2"	(B03) 2" PVC Socket	12255-0361
	(B16) 3" PVC Socket	12255-0326
3"	(B15) 3" PVC Socket	12239-0095
	(B25) 4" PVC Socket	12239-0200
4"	(B26) 4" PVC Socket	12531-0004
	(B27) Wafer w/stud kit	12531-0061
	(B31) 6" PVC Socket	12531-0194



► PRESSURE SUSTAINING & COMBO VALVES

PRESSURE SUSTAINING VALVES are closed until the upstream pressure exceeds the set point on the control pilot, then open to relieve pressure as required. They are often used as relief valves to prevent damage to system components, or downstream of filter stations to provide adequate backflush pressure. Common configurations are shown below. Other options available. (See pages 6-7.)

PRESSURE SUSTAINING (5-60 PSI) INLINE VALVES

Manual selector, medium sleeve (18-80 psi), and internal filter.

Size	Connections	Part Number
2"	(B03) 2" PVC Socket	12255-0364
	(B16) 3" PVC Socket	12255-0329
3"	(B15) 3" PVC Socket	12239-0140
	(B25) 4" PVC Socket	12239-0238
4"	(B26) 4" PVC Socket	12531-0047
	(B27) Wafer w/stud kit	12531-0175
	(B31) 6" PVC Socket	12531-0369



COMBINATION PRESSURE SUSTAINING/REDUCING VALVES combine the functions of the pressure sustaining and pressure reducing in one valve. They are often used to prevent system drain-down in undulating terrain, or downstream of filter stations to automatically transition between supplying adequate backflush pressure and regulating downstream pressure. Common configurations are shown below. Other options available. (See pages 6-7.)

PRESSURE SUSTAINING (5-60 PSI) & PRESSURE REDUCING (5-60 PSI) INLINE VALVES

Manual selector, medium sleeve (18-80 psi), and internal filter.

Size	Connections	Part Number
2"	(B03) 2" PVC Socket	12255-0365
	(B16) 3" PVC Socket	12255-0330
3"	(B15) 3" PVC Socket	12239-0141
	(B25) 4" PVC Socket	12239-0277
4"	(B26) 4" PVC Socket	12531-0036
	(B27) Wafer w/stud kit	12531-0026
	(B31) 6" PVC Socket	12531-0370



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► PIVOT POINT CONTROL VALVES

PIVOT POINT CONTROL VALVES open and close at the command of the pivot point, making pivot automation possible by eliminating trips to the pivot point to start and stop the pivot. The high flow capacity of the 4" valve together with the 6x4x6 flange adapter kit saves money by allowing the use of a smaller valve that fits easily within 6" flanges. Common configurations are shown below. Other options available. (See pages 6-7.)

Manual selector with E50 solenoid (120 VAC, 1.6mm), high sleeve (30-150 psi), and H5 internal filter with tubing protection.

Size	Connections	Reducing	Part Number
4"	(B27) Wafer w/stud kit	No	12531-0382
	(B29) Wafer 6x4x6 w/stud kit	No	12531-0251
4"	(B27) Wafer w/stud kit	10-120 psi	12531-0383
	(B29) Wafer 6x4x6 w/stud kit	10-120 psi	12531-0384



► END OF PIVOT VALVES FOR SR75 & SR100

1000P – 2” (50 mm) Pivot End Gun Valve (Booster Pump Controlled – no solenoid required)

Model	Description	PN (18-80 psi)
STANDARD — FOR ALL PIVOT BRANDS EXCEPT VALLEY (includes ball drain/vent, 2 rubber drains (#9800 and #9800-100PV), and 1/4" tube fitting)		
1000P	Valve	12254-0007
	Valve with Stud Kit	12254-0001
FOR VALLEY PIVOTS (includes ball drain/vent, 1 rubber drain (#9800), and two 1/4" tube fittings)		
1000P-V	Valve with Stud Kit and 2" FNPT Metal Flanges	12254-0013



1000P

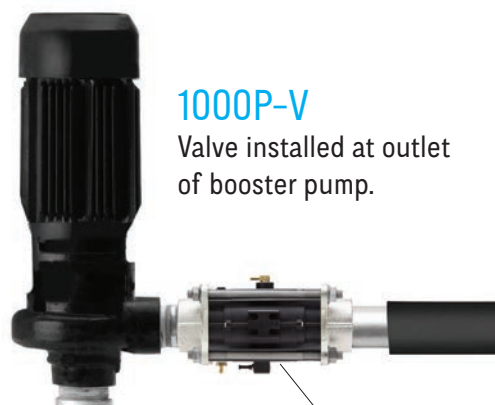
Valve installed directly below ANSI-flanged Big Gun®. Order lower 2" metal flange (#10356PV) separately.



#10753PV – Ball Vent
Kit for 1000P
(included)



Rubber Drain
(included)



1000P-V

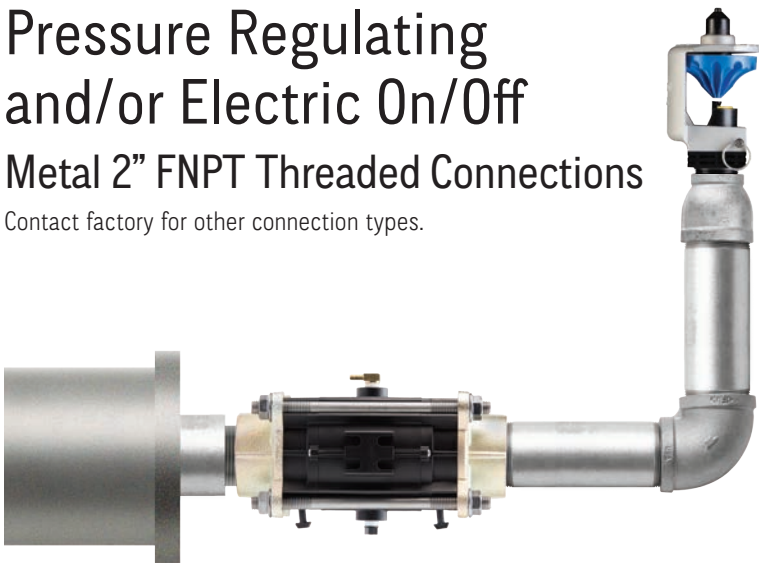
Valve installed at outlet of booster pump.



► END OF PIVOT VALVES FOR R55 & R75

1000P – 2” (50 mm) End of Pivot
Pressure Regulating
and/or Electric On/Off
Metal 2” FNPT Threaded Connections

Contact factory for other connection types.



Model	Valve Function	Internal Filter	Rubber Drains QTY 2	On/off	Press. Reg. Adjust. Range (psi)	Part Number
1000P-R	Pressure regulating only. No on/off control.	✓	✓	-	5-60	12254-0036
1000P-X*	Electric on/off by solenoid located at pivot tower box*.	-	✓	solenoid at tower*	-	12254-0037
1000P-RX*	Pressure regulating with electric on/off by solenoid located at pivot tower box*.	✓	✓	solenoid at tower*	5-60	12254-0038

*1000P-X and 1000P-RX models have electric on/off capability, but do not include a solenoid. The solenoid is provided by others and typically is located at the last tower on the pivot.



1000P-R



1000P-X



1000P-RX

► BASE VALVE PARTS

Description	2" Valve	3" Valve	4" Valve
	Part Number	Part Number	Part Number
Base Valve, 10-40 psi	12255-0001	12239-0090	12531-0001
Base Valve, 18-80 psi	12255-0002	12239-0001	12531-0002
Base Valve, 30-150 psi	12255-0003	12239-0091	12531-0003
Sleeve, 10-40 psi	11624-002	11909-002	12516-002
Sleeve, 18-80 psi	11624-003	11909-003	12516-003
Sleeve, 30-150 psi	11624-001	11909-001	12516-001
Spacer Assy.	12236	12349	12528
Cage/Barrier Assy.	11630	12348	12529
O-Ring	12352	9484PV	11416PV
Jacket	12767	12766	13109



► SOLENOIDS

3-Way Solenoid Specifications

(For Electric On/Off choose from DC, DC Latching or AC Solenoids.)

Model #	Manufacturer	Voltage ¹	Inrush Amps	Hold-ing Amps	Resis-tance (ohm)	Watts	Inlet Orifice	Electrical Connection	Solenoid Only Part Number	Kit Part Number*
E02	NELSON	12 VDC Lat	-	-		-	2 mm (adapt-able to 4 mm)	1/2" MNPT w/Leads	12845	12575-002
E11	GEM-SOL	12 VDC, normally closed**	-	0.83	14.3	10	1/16" (1.6 mm)	1/2" FNPT w/Leads	7510-011	12575-011
E21	PARKER	12 VDC	-	0.6	20	8	1/16" (1.6 mm)	1/2" FNPT w/Leads	7510-001	12575-021
E23	BACCARA	9/12 VDC Lat	-	-	4.2	3	3/64" (1.2 mm)	>12" Leads	7510-052	12575-023
E29	—	12-40 VDC Lat	-	-	-	-	5/64" (2.0 mm)	47" Leads	7510-029	12575-029
E31	BACCARA	18-21 VDC Lat	-	-	23	3	3/64" (1.2 mm)	Window+ Controller	7510-053	11253-003
E34	BACCARA	24 VDC	0.125	0.125	119	3	3/64" (1.2 mm)	>12" Leads	7510-054	12575-034
E40	GEM-SOL	24 VAC	0.15	0.15	-	2.5	1/16" (1.6 mm)	1/2" FNPT w/Leads	7510-015	12575-040
E43	BACCARA	24 VAC	0.125	0.125	-	3	3/64" (1.2 mm)	>12" Leads	7510-050	12575-043
E46	GEM-SOL	24 VAC	0.8	0.43	9	5.5	1/16" (1.6 mm)	1/2" FNPT w/Leads	7510-016	12575-046
E50	PARKER	120 VAC	0.2	0.1	184	8	1/16" (1.6 mm)	1/2" FNPT w/Leads	7510-004	12575-050
E53	GEM-SOL	110 VAC	0.15	0.11	230	5.5	1/16" (1.6 mm)	1/2" FNPT Plug-In	7510-051	12575-053

*Solenoid kits include mounting clip and all necessary fittings/parts for retrofitting an existing 1000 Series valve.

**E11 solenoid is normally closed, used for logic L02, L04, L05, and L08.



► PRESSURE CONTROL

Accurate and Easy

Nelson Irrigation's pressure control pilot is engineered and tuned to the unique geometry of the 1000 Series valve, resulting in the most accurate pressure control valves in the industry. The convenient labels make setting the pressure and connecting the tubes easy for just about anyone.

Function	Adjustment Range	For 2" Valves ¹		For 3" and 4" Valves ²	
		Pilot Part #	Kit* Part #	Pilot Part #	Kit* Part #
Reducing	5-30 psi	12342-009	12262-006	12342-003	12262-003
Reducing	5-60 psi	12342-007	12262-004	12342-001	12262-001
Reducing	10-120 psi	12342-008	12262-005	12342-002	12262-002
Sustaining	5-60 psi	12342-010	12262-010	12342-004	12262-007
Sustaining	10-120 psi	12342-011	12262-011	12342-005	12262-008

1. Pressure control pilot for 2" valves contains a bushing with 1 hole (hex retainer painted gray).

2. Pressure control pilot for 3" and 4" valves contains a bushing with 4 holes (hex retainer is brass, unpainted).

*Kit includes mounting clip and all necessary fittings/parts for retrofitting an existing Nelson 1000 Series Valve.



PRESSURE CONTROL KIT
(See table for part number.)

ADJUSTMENT CAP
Fine-tune the pressure by hand; no tools required.

ADJUSTMENT LABEL
Simplifies setting the regulated pressure before installation.

FUNCTION LABEL
Clearly marked ports make plumbing easy.



PRESSURE CONTROL PILOT
(See table for part number.)

SENSITIVITY BUSHING
Engineered to valve size, and easily replaceable to customize performance for unique hydraulic conditions.

► CONNECTIONS & STUD KITS

Code	Connection Type	Connection Part Number	Stud Dia.	Stud Length	Nuts (Qty)	Stud Kit Part Number
CONNECTIONS FOR 2" VALVES			STUD KITS FOR 2" INLINE VALVES			
B02	2" FNPT (metal)	10356PV	1/2" (12 mm)	8.25" (210 mm)	8	10142-101
B03	2" PVC Socket	12334	1/2" (12 mm)	9.75" (248 mm)	8	10142-102
B04	Wafer 3x2x3 (no stud kit)	12167	-	-	-	-
B05	2" Victaulic	12165	5/16" (8 mm)	7.5" (190 mm)	8	12264-002
B06	3" Victaulic (3x2x3)	12163	5/16" (8 mm)	7.5" (190 mm)	8	12264-002
B08	2" FNPT (plastic)	12156	5/16" (8 mm)	7.5" (190 mm)	8	12264-002
B09	3" OD Spline (Certa-Set)	11635	5/16" (8 mm)	7.5" (190 mm)	8	12264-002
B14	2" FBSP (plastic)	12475	5/16" (8 mm)	7.5" (190 mm)	8	12264-002
B16	3" PVC Socket (3x2x3 adapter)	12489 12167	1/2" (12 mm)	10.75" (273 mm)	8	10142-103
B17	Wafer w/stud kit for 2" flanges	-	1/2" (12 mm)	9.75" (248 mm)	8	10142-102
B19	Wafer w/stud kit for 75/100 Big Gun®	-	1/2" (12 mm)	8.25" (210 mm)	4	10142-001PV
B21	Wafer 3x2x3 w/stud kit	12167	1/2" (12 mm)	11.5" (292 mm)	8	10142-104
CONNECTIONS FOR 3" VALVES			STUD KITS FOR 3" INLINE VALVES			
B15	3" PVC Socket	12489	1/2" (12 mm)	10.75" (273 mm)	8	10142-103
B18	Wafer w/stud kit for 3" flanges	-	1/2" (12 mm)	11.5" (292 mm)	8	10142-104
B20	Wafer w/stud kit for 150 Big Gun®	-	1/2" (12 mm)	9.75" (248 mm)	4	10142-002PV
B22	Wafer 4x3x4 w/stud kit	12518	1/2" (12 mm)	12" (305 mm)	8	10142-105
B23	Wafer 4x3x4 (no stud kit)	12518	-	-	-	-
B24	3" Victaulic	12785	1/2" (12 mm)	10.75" (273 mm)	8	10142-103
B25	4" PVC Socket (4x3x4 adapter)	12515 12518	1/2" (12 mm)	11.5" (292 mm)	8	10142-104
B33	4" PVC Victaulic (4x3x4 adapter)	12824 12518	1/2" (12 mm)	11.5" (292 mm)	8	10142-104
B36	3" FNPT (metal)	13233-001	1/2" (12 mm)	9.75" (248 mm)	8	10142-102
B37	3" FBSP (metal)	13233-002	1/2" (12 mm)	9.75" (248 mm)	8	10142-102
CONNECTIONS FOR 4" VALVES			STUD KITS FOR 4" INLINE VALVES			
B26	4" PVC Socket	12515	1/2" (12 mm)	11.5" (292 mm)	8	10142-104
B27	Wafer w/stud kit for 4" flanges	-	1/2" (12 mm)	12" (305 mm)	16	10142-205
B29	Wafer 6x4x6 w/stud kit	13217	3/4" (19 mm)	13.5" (343 mm)	16	8976PV
B30	Wafer 6x4x6 (no stud kit)	13217	-	-	-	-
B31	6" PVC Socket (6x4x6 adapter, plastic)	13039 12991*	1/2" (12 mm)	13.5" (343 mm)	16	10142-206
B32	4" Victaulic	12824	1/2" (12 mm)	11.5" (292 mm)	8	10142-104

*Only for use with PVC flanges; for metal flanges, use #13217 instead.

Flange Adapter Kits

Cost-effective way of installing a Nelson 1000 Series valve in the next larger pipe size. (Includes stud kit and two flange adapters. The 6x4x6 kit also includes hardware to extend the manual selector above the studs.)



Description	Stud Dia.	Stud Length	Nuts (QTY)	Part Number
Stud Kit with 3x2x3 flange adapters	1/2" (12 mm)	11.5" (292 mm)	8	12323
Stud Kit with 6x4x6 alum. flange adapters	3/4" (19 mm)	13.5" (343 mm)	16	13065

► ACCESSORIES

Fittings, Filters, Clips & Kits

Part Description	Part Number
Mounting Clips	
Solenoid to 2" & 3" valves	12637
Solenoid to 4" Valve	12637-001
Press. Control Pilot or External Filter to 2" & 3"	12443
Press. Control Pilot or External Filter to 4" valve	12498
Filters	
Internal Filter, 1/4" MNPT x 1/8" FNPT	11632
External Filter Kit (2" & 3")	12454
External Filter Kit (4")	12454-002
1/4" Plastic Tube Fittings	
1/4" Threaded Plug	12964
Vent Restrictor, 1/4" barb	12818
Pressure Gauge	
Gauge (specify range: 0-30psi = -001; 0-60 psi = -002; 0-100 psi = -003)	8968-XXX
Schrader Valve Chuck	10103
Spline Fittings	
3" OD (Certa-Set) Spline x 3" Hose Barb	12359
Spline	12347
Tubing Protection	
Tubing Protection Kit	13038



12637 (to 2" and 3" valves)
12637-001 (to 4" valves)
Mounting Clip Assy
for Solenoid



12443 (to 2" and 3" valves)
12498 (to 4" valves)
Mounting Clip for
Pilot or External Filter



8968-XXX Pressure Gauge
10103 Schrader Valve Chuck



12818
Vent restrictor, 1/4" barb



12964
1/4" threaded plug



11632
Internal Filter



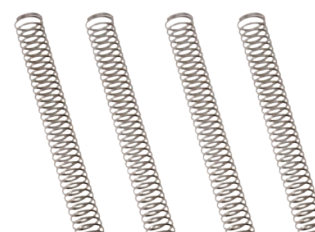
12454 External Filter Kit (2" & 3")
12454-002 External Filter Kit (4")



12359
3" OD
(Certa-Set) Spline
x 3" Hose Barb



12347
Spline



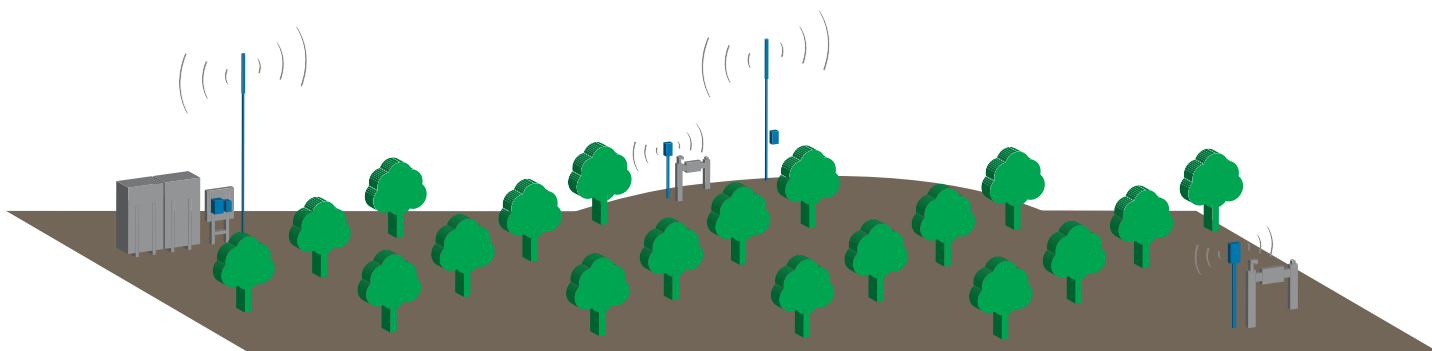
13038
Tubing Protection Kit

► WIRELESS AUTOMATION

TWIG®

WIRELESS VALVE CONTROL YOU CAN TRUST.

Since 2014 Nelson Irrigation has offered TWIG® Wireless Controls for system automation. The purpose of the TWIG® system is simple – turn valves on and off in the most reliable way possible. It eliminates unnecessary features and troublesome wires that cause other systems to be quickly abandoned. The new TWIG-MC master controller brings remote, mobile control to both TWIG-V or first generation TWIG® devices.



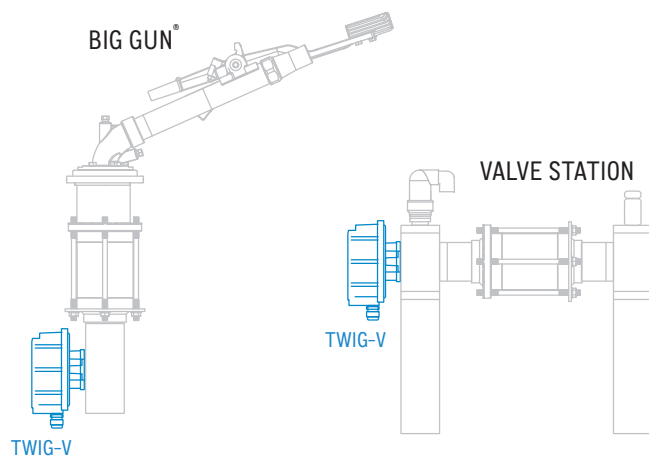
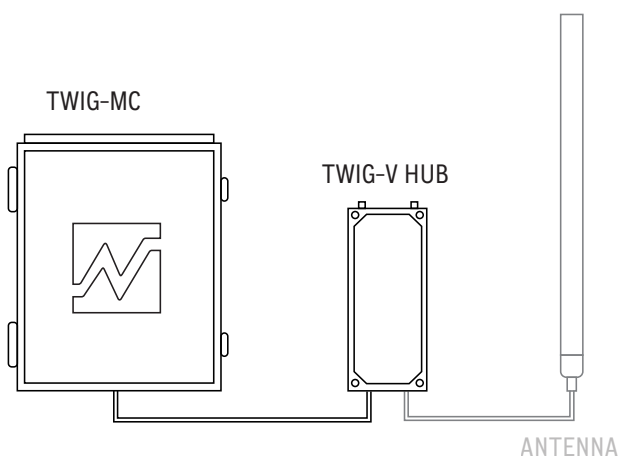
18 | TWIG-V Network Components

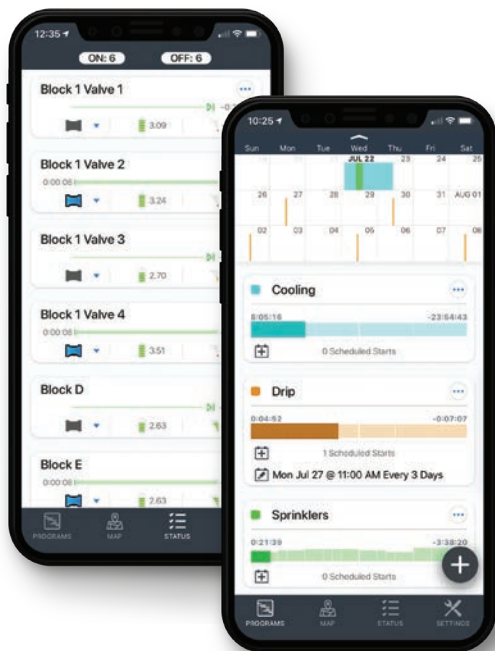
MASTER CONTROLLER

Connect to the TWIG-MC master controller via Bluetooth® or over the internet to operate your irrigation system with your iOS or Android enabled tablet or phone. The TWIG-V Hub communicates via line-of-sight 900 MHz radio signal with the TWIG-V radios in the field.

AUTOMATED IRRIGATION

The TWIG-V radios are connected to DC latching solenoid-operated valves and communicate with the TWIG-V Hub to turn valves on/off at the command of the TWIG-MC. Even portable systems can be automated thanks to the low-power design of the TWIG-V.





Remotely control and monitor your irrigation system from anywhere with our new TWIG Controller and mobile app.

Easily create watering schedules; edit by drag and drop; start, stop or pause a schedule; map irrigation blocks to verify field operation; and monitor pressure and flow.

► WIRELESS AUTOMATION

TWIG

HOW TO ORDER*:

STEP 1 — CONTROLLER + HUB

- Select power option. (Order solar power kit if necessary.)
- Order antenna kit.

STEP 2 — TWIG® RADIO MODULES

- Specify internal or external antennas.
- Specify how many valves each TWIG® will control (1 or 2).

STEP 3 — REPEATER

If necessary to extend the range of the radio network.

- Select power option. (Order solar power kit if necessary.)
- Order antenna kit.

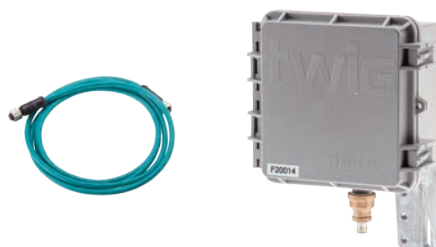


TWIG® Wireless Control products available in select countries. Go to TWIG FAQ at nelsonirrigation.com. Available to select dealers. Contact the factory for purchasing terms and conditions.

► TWIG® CONTROLLER

Model	PartNumber	Description
TWIG-MC, 110VAC	12957-001	Master Controller - 110VAC.
TWIG-MC, 12VDC	12957-003	Master Controller - 12VDC. Order solar kit separately. See page 22.
TWIG-V HUB	13206	Manages TWIG-V network, connects to TWIG-MC using included cable.*
TWIG HUB	13207	Manages legacy TWIG network, connects to TWIG-MC using included cable.*

*Order Antenna Kit separately.



TWIG Hub



TWIG-V Hub

TWIG-MC

- » Full mobile control using iOS or Android App over Bluetooth
- » No subscriptions
- » Internet ready (user provided connection or cell modem)
- » 2 pressure sensor inputs
- » Flow meter input
- » 2 pump start contacts
- » Backwards compatible with legacy TWIGs using the TWIG Hub.

Hub

- » Manages the radio network; use TWIG-V Hub for TWIG-V devices, and/or TWIG Hub for first generation devices.
- » Connects to MC controller using included cable.
- » Order antenna kit separately.

► TWIG® RADIO MODULE

Model	PartNumber	Description
TWIG-V 1i	13457-001	Internal Antenna, w/bracket. Operates one valve
TWIG-V 2i	13457-002	Internal Antenna, w/bracket. Operates up to two valves, independently
TWIG-V 1e	13457-011	External Antenna,* w/bracket. Operates one valve
TWIG-V 2e	13457-012	External Antenna,* w/bracket. Operates up to two valves, independently

*Order Antenna Kit separately.



TWIG-V

- » Sealed enclosure
- » Bluetooth setup using the TWIG-V app
- » Fast-response radio network communicates within 3 seconds
- » Low-power design uses off-the shelf D-cell batteries
- » Includes mounting bracket

► TWIG® REPEATER

Model	PartNumber	Description
TWIG-V Repeater, AC	12966-001	TWIG-V Repeater - 110VAC power. Order antenna kit separately.
TWIG-V Repeater, DC	12966-002	TWIG-V Repeater - 12VDC power. Order antenna and solar kits separately.



TWIG-V Repeater

- » Extends the radio network by creating "sub-networks" that tie back to the Hub.
- » Facilitates radio communication directly between the Hub and the TWIG-V; cannot communicate to other repeaters.
- » Up to 8 repeaters in a network.

► ANTENNAS, SOLAR KITS, RELAYS, PARTS

Antenna Kits For Hubs, Repeaters, External Antenna TWIG® devices

Model	Part Number	Description
Omni w/ 10' of cable	12000-010	Multi-directional Omni antenna (6 dBi) with cable assembly, mounting hardware, lightning arrestor*, and coax tape, for connecting antenna to HUB, external antenna TWIG-V, or TWIG-V Repeater.
Omni w/ 20' of cable	12000-020	
Omni w/ 30' of cable	12000-030	
Omni w/ 40' of cable	12000-040	
Omni w/ 50' of cable	12000-050	

Note: A grounding rod (supplied by others) must be used in conjunction with the lightning arrestor.



Solar Power Kits for TWIG-MC or TWIG-V Repeater



Model	Part Number	Description
Solar Kit for TWIG-MC, with Battery	13438	90 Watt, 12VDC solar kit with mounting hardware for solar panel, battery and charge controller in weather resistant enclosure. For TWIG-MC.
Solar Kit for TWIG® or TWIG-V Repeater, with Battery	12075-002	10 Watt, 12VDC solar kit with mounting hardware for solar panel, battery and charge controller in weather resistant enclosure. For TWIG® or TWIG-V Repeater.

Relay

22

Connect a standard TWIG® or TWIG-V to this relay assembly to start a remote pump or other device by closing a contact at the command of the TWIG-MC.

Model	Part Number	Description
Single Relay	13108-001	One latching relay in a weather resistant enclosure
Dual Relay	13108-002	Two latching relays in a weather resistant enclosure



Replacement Parts

Model	Part Number	Description
RP-SMA to N, 10' cable	11865-010	10' cable connects TD200/TWIG-e/TWIG Repeater to lightning arrestor
RP-SMA to N, 20' cable	11865-020	20' cable connects TD200/TWIG-e/TWIG Repeater to lightning arrestor
N to N, 20' cable	11996-020	20' cable connects antenna to lightning arrestor
N to N, 30' cable	11996-030	30' cable connects antenna to lightning arrestor
Lightning Arrestor	11997	Replacement lightning arrestor used in the antenna kits
Solar Charge Controller	12330	Replacement 12VDC charge controller for TD200 and Repeaters only
MC to Hub Cord Set	13264	8 Pole Ethernet Cord Set (from MC Controller to Hub)
Wire Connector	10145	Compression connector for stranded wire. Gel filled.

BETTER TOGETHER



Nelson Irrigation makes a full range of products for agricultural and industrial irrigation. All development and testing is performed with the big picture in mind. No product operates independently. Our sprinklers, regulators, valves and controllers are developed together and made to deliver water as efficiently and effectively as possible. Whether you're irrigating strawberries or cooling cattle, think of not only us but our products as a team.

SAVE WATER, SAVE ENERGY, SAVE LABOR AND DO A BETTER JOB OF IRRIGATING WITH NELSON PRODUCTS.



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