

NEW SPRINKLER OPTIONS (NELSON)

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INTRODUCTION

Recognized as a world leader in quality and innovation, Nelson Irrigation Corporation focuses on providing exceptional products for agricultural and industrial applications including Rotator® sprinklers, control valves, pressure regulators, and Big Gun® sprinklers. This includes a full-range of water application solutions for center pivot irrigation.

The Nelson name has been tied to manufacturing and irrigation for over 100 years and remains unrelenting in its mission to improve the state-of-the-art of water application. There is a great challenge to satisfy an increasing demand for food and fiber while simultaneously protecting the world's natural resources. Innovative products and solutions from Nelson Irrigation Corporation are helping to meet this demand.

3NV NOZZLE & THE 3030 SERIES PIVOT SPRINKLER

Built with precision accuracy, this innovative dial-nozzle is an industry first that combines multiple functions. The 3NV nozzle is installed from the side making installation and re-nozzling quick and easy. The first turn of the nozzle to the "off" position will stop the flow of water and provides a convenient inspection port to view the nozzle condition. This built-in ball valve can be used to allow soil to dry out around the pivot point or wheel tracks to conserve water and can make pivot maintenance easier and safer. The third position provides a nozzle flush mode. Inverting the nozzle allows debris trapped in the nozzle to be efficiently washed away. This process is easy, requires no tools, and prevents damage to the nozzle. The fourth, and final position provides for a line flush. This allows for a high velocity flush of the drop tube and pressure regulator when needed due to water quality.

The 3030 series uses all existing Nelson square thread fittings and cap/plate assemblies. The 3NV nozzle has the same nozzle range, flowrates, and color codes as the preexisting Nelson 3000 series 3TN nozzle.



10 PSI ROTATOR® TECHNOLOGY

For over 25 years, Nelson has developed sprinklers using proven Rotator® technology. The center pivot Rotator® features the widest throw distance available on drop tubes and the highest uniformity. It operates on a proven, patented drive principle with an economic design that features only one moving part. Users can expect the highest levels of reliability and wear life, even under tough field and water conditions. The Rotator® offers several plate options specifically engineered for optimum performance for varying crops, soils, mounting heights, and uniformity expectations.

Nelson recently introduced a new “low pressure” olive plate. This plate is specifically designed to provide gentler droplets to the soil along with high uniformity at pressures as low as 10 PSI while maintaining large wetted diameters and low precipitation rates.

LOW PRESSURE, FINE DROPLET ORBITOR

The Orbitor features new technology that eliminates the struts of a sprinkler body to provide outstanding uniformity and optimal droplets at low operating pressures. Designed with an innovative, bracketless assembly, debris hang up and water pattern misting common to conventional sprinklers are mitigated.

Recent improvements to the product include a “fine droplet” purple plate and an expanded pressure range. The new purple plate delivers a consistently smaller droplet that is ideal for germination of crops and soils requiring a gentler application. Recent field testing has proven that the Orbitor can be reliably operated down to as low as 6 PSI resulting in a new operating pressure range of 6 – 20 PSI for the product.



UP-TOP LIME SPINNER PLATE

Nelson’s Spinner is a low-pressure alternative developed as a variation of the original Nelson Rotator®. It has proven to be a popular choice for use on sensitive crops and soils that do well under a more gentle application of water. The Spinner product can be matched with a selection of plates and nozzle pressures to provide the desired droplet size and uniformity.

Nelson has added a new plate to the Spinner product offering that gives irrigators another up-top option for center pivot irrigation. Up-top usage gives the Spinner increased throw and maximizes

uniformity by eliminating crop interference. The lime plate is approved for ultra-low pressures ranging from 6 – 15 PSI.

END OF SYSTEM SPRINKLERS USING ROTATOR® TECHNOLOGY

Irrigating valuable land in the corners of pivots provides quick pay-back under the right conditions. New end of pivot sprinkler options from Nelson are changing the way farmers irrigate with center pivots. Two new sprinklers have been developed using proven Rotator® technology. Benefits include increased reliability and wear life, and lower operating pressure compared to conventional impact style sprinklers. These sprinklers can be used by themselves or in conjunction with a higher volume Big Gun® sprinkler if additional water is needed or if the field shape benefits from a shorter radius sprinkler used along the edges.

The R55 is a multi-stream sprinkler that can be mounted in an upright or inverted position at the end of the pivot. It has the lowest operating pressure of any end of pivot sprinkler while providing good wind-fighting characteristics and uniformity. The R55 can be operated from 15 to 40 PSI. Five different nozzle options provide flowrates from 18 to 84 GPM with wetted radius ranging from 39 to 55 feet.



The R75 is a versatile, high-uniformity sprinkler. It features an easy to access nozzle, dual barrel spray plate for distance and uniformity, and adjustable stops to achieve the best arc of coverage. Its operating range is 25 to 60 PSI and can achieve a wetted radius of 70 feet. Six different nozzles will vary the flow from 24 to 69 GPM.



DELTA P FOR PIVOT END GUN VALVE CONTROL

The SRNV100 is an end gun and control valve in one. The nozzle valve improves end gun performance and efficiency by eliminating pressure loss, turbulence, and debris hang-up typical of other end gun control valves. The Delta P can be paired with the SRNV100 to further improve reliability by eliminating the need for an electric solenoid. The Delta P is a pressure differential switch that automatically opens and closes the nozzle valve by sensing pressure upstream and downstream of the booster pump.



PURGE VALVE

When traditional end guns aren't an option, specify the Nelson Purge Valve to intermittently flush the end of the pivot to prevent solids from collecting. Features include reliability, self-cleaning, obstruction free flow, and corrosion-free parts. Basic operation will provide automatic flushing at start-up and shut-down or an electric solenoid can be interfaced with the center pivot to provide flushing while the machine is operating.



1000 SERIES CONTROL VALVE

For over 25 years, Nelson has perfected the sleeve-style valve with the 800 series product line. Known worldwide for their hydraulic efficiency and high performance, Nelson valves are used in a variety of applications under demanding conditions in agricultural and environment control systems.

Recent improvements have resulted in the new lower cost 1000 series plastic control valve. The 1000 series saves energy with higher flow capacity and lower friction loss than any other valve on the market. It is geared to handle tough agricultural environments with an improved cage design to more effectively pass debris. A modular design provides ultimate flexibility in valve style and connection type while simplifying installation, trouble-shooting and maintenance.

Choose from 3 different flow path options: inline, tee, and elbow. Nelson's proprietary "Flex-Connect" ends are interchangeable and allow for "mixing and matching" ends. Options include NPT, spline, Victaulic, and wafer.



1000 series valve applications include zone control for sprinkler or drip irrigated row crops, nursery crops, orchards and vineyards. The valve fits perfectly under a Big Gun® for solid set irrigation, end of pivot solutions and a variety of environmental controls including fire suppression, dust suppression and cooling.

TWIG WIRELESS CONTROL SYSTEM

The purpose of the Nelson Wireless Control System is to provide a method of automatically cycling through a series of irrigation control valves in a programmed sequence. The TWIG system is sophisticated, yet engineered for simplicity. The TWIG System consists of a TD200 Controller capable of controlling up to 100 TWIGs and 200 valves. The TWIGs are located in the field on solenoid-operated valves. The system operates like a conventional hard-wired automated irrigation system except the underground wires have been eliminated and replaced by two-way wireless radio signals between the TD200 and the TWIGs. The TWIG system operates in the 900 MHz range and does not require a license.

Irrigation automation results in savings of labor, energy, and water, as well as production of higher yield and grade crops. Additional TWIG wireless control benefits include:

- Reduced initial cost compared to the high cost of hard wired systems.
- Eliminates in-ground wire splices which are a chronic source of problems.
- Reduced lightning damage associated with hard wired systems, except for direct strikes.
- Eliminates rodent damage associated with buried wires.
- Easily expandable to accommodate future system growth by simply adding TWIGs to the network.
- Solar power option brings automation to remote areas where no power source is available.
- Makes automation of portable systems possible.
- There is no limit to the number of TWIGs that can be turned on at any one given time.

SUMMARY

The vast differences in crops, soils, farming practices, and climatic conditions worldwide, coupled with regional differences in the availability of water and energy resources requires a diverse array of irrigation products. Additional information is available at www.NelsonIrrigation.com.