

water application solutions FOR CENTER PIVOT IRRIGATION



Nelson 3000 Series Pivot Products

- | | | | | | |
|----------|----------|----------|----------|----------|----------|
| R | S | O | D | A | T |
| R3000 | S3000 | O3000 | D3000 | A3000 | T3000 |



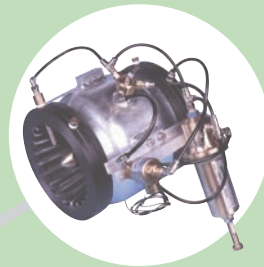
save water, save energy and do a better job of irrigating.

FROM PIVOT POINT TO END GUN

Nelson Irrigation Corporation offers a full-range of water application solutions for center pivot irrigation. From control valves, to pivot sprinklers and pressure regulators to end guns — the package is complete. Efficiency and effectiveness are at the heart of this superior center pivot irrigation package. **Save water, save energy and do a better job of irrigating with Nelson products.**

PRESSURE REGULATORS

Nelson Pressure Regulators are precision manufactured and feature a patented dampening system, improved plug resistance with a patented single strut design, and extended flow range.



CONTROL VALVES

You'll fully appreciate the extra built-in quality and reliability of a Nelson control valve when it performs under the most demanding operating conditions. Specify a Nelson 800 Series Control Valve at the Pivot Point and as part of your End Gun Control Package.

3000 SERIES PIVOT SPRINKLERS

Only Nelson offers such a complete line of advanced design pivot sprinklers. A highly-intuitive modular system of components make up Nelson's 3000 Series Pivot Products.

BIG GUN[®] SPRINKLERS

All end guns are not the same. Only the Nelson SR series Big Guns[®] have stood the test of time on center pivots — recognized the world over as the leader in quality and performance.



A WORLDWIDE REPUTATION FOR EXCELLENCE

UNIFORMITY BEGINS WITH THE ASSURANCE OF QUALITY.

Nelson Irrigation has the highest standards in engineering design, precision manufacturing, and quality assurance with state-of-the-art sprinkler package design software.

FOCUS ON SOLUTIONS.

Nelson Irrigation offers a complete line of pivot sprinklers that provide the perfect combination of features to irrigate a multitude of crops — corn, cotton, potatoes, alfalfa — to name a few.

CHOOSE HIGH PERFORMANCE.

Nelson's 3000 Series Pivot Products take into account the variety of soils and their differing content of sand, silt, and clay. Water droplet size and energy affect both wind-fighting ability and the integrity of the soil structure. Choose the product that best fits your soil type and maximizes efficiency.

INCREASE PRODUCTIVITY.

Center pivot irrigation has proven itself to be a highly effective and efficient means of irrigation. Take advantage of the benefits of improved uniformity and high application efficiency. Solve problems like runoff, while increasing yield and grade.

MAXIMIZE IRRIGATION EFFICIENCY.

The need to save water, save energy, and do a better job of irrigating is no longer an option — it's a necessity. Nelson Irrigation is focused and very dedicated to doing things that improve the state-of-the-art of agricultural irrigation by making products that maximize efficiency and uniformity at lower pressure.

IT'S SIMPLE

Choose the right sprinkler configuration for your crop type, soil type, system type, and water and energy needs.



SPECIFY NELSON ON BOARD



PRODUCTS THAT MEET YOUR NEEDS

> an irrigation SYSTEM — it's greater than the sum of its parts

S 3000 spinner

GENTLE RAIN AT LOW PRESSURE. The free-spinning action of the S3000 Spinner provides a gentle, rain-like droplet for sensitive soils and crops.

SUPERIOR UNIFORMITY AT LOW PRESSURE. A low pressure alternative to fixed sprayheads, the S3000 provides higher uniformity with better overlap and lower application rates.



R 3000 rotator[®]

GREATER THROW RADIUS. As a rotating type sprinkler the R3000 Rotator[®] produces a wider pattern resulting in a lower application rate, reduced runoff and longer soak time.

HIGHER UNIFORMITY. The R3000 greatly improves uniformity because of the increased overlap from adjacent sprinklers.

REDUCED WIND DRIFT AND EVAPORATIVE LOSS. The R3000 more than meets the challenge of putting a rotating type sprinkler on drop tubes — down out of the wind — to minimize wind drift and evaporative loss.



> 3TN



THE 3TN NOZZLE
IS THE CENTER
OF THE 3000
SERIES PIVOT
PRODUCT LINE

A 3000 accelerator

DESIGNED FOR IN-CANOPY WATER APPLICATION. A hybrid sprinkler using both Rotator[®] and Spinner technology, the Accelerator increases rotation speed as the nozzle size increases. This maximizes throw distance and minimizes evaporative losses at low flow rates. At the end of the system it transforms into a Spinner to lower instantaneous application rates while treating the soil correctly.

MAXIMUM APPLICATION EFFICIENCY. Operating at 10 psi (0.7 BAR) the A3000 maintains the lowest possible trajectory angle without sacrificing throw distance.



O 3000 orbitor

STREAMLINED DESIGN. Featuring technology that eliminates the struts of a sprinkler body, Nelson's new Pivot Orbitor provides outstanding uniformity and optimal droplets at low pressures (10-20 psi / 0.7-1.4 bar). Expect long wear life and durability in poor water conditions, because there are no sprinkler body struts for debris to hang up on.

REDUCED WIND DRIFT AND EVAPORATIVE LOSS. Strutless sprinkler body design reduces droplet breakup, drift and drool.



D 3000 sprayhead

GERMINATE, IRRIGATE & CHEMIGATE. The flip-over dual spray cap allows easy conversion of the spray pattern. Choose from spray plate options to germinate, irrigate, and chemigate.

"LOW ENERGY DOWN IN THE CROP". The sleek, crop-guarded body design provides durability for dragging the D3000 Sprayhead down in tall growing crops like corn.

OPTIONAL LEPA ACCESSORIES. The hose drag adapter allows simple conversion of the D3000 to a hose drag system while the bubbler clip transforms the D3000 into a LEPA "bubbler" device.



T 3000 trashbuster

FLOW CONTROL NOZZLE. The 3000FC Nozzle not only eliminates the need for pressure regulators, but also passes debris more easily. It is not to be used on flexible hose drop assemblies.

BODY DESIGNED FOR WASTEWATER. The open architecture design of the body allows for debris to pass through more easily, alleviating build up of material on the plate and body.

By operating on drop tubes you can distribute effluent more days of the year, keep corrosive water off the pivot structure, eliminate excess wind/pathogen drift, and reduce odor. The T3000 Trash-buster can be configured into either a spray or rotator sprinkler.



NOZZLE

EXPANDED
NOZZLE RANGE







QUICK-CHANGE

COLOR-CODED

COMMON TO
ALL 3000 SERIES
SPRINKLERS

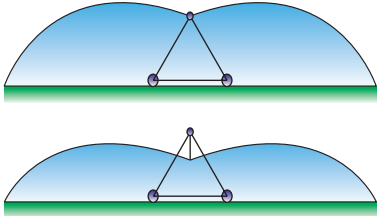
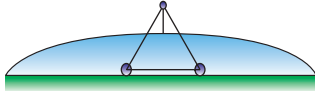
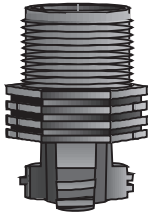
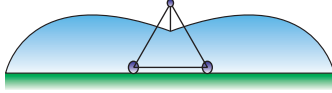
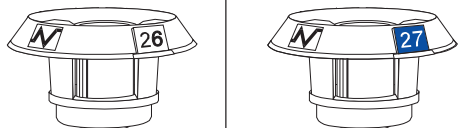
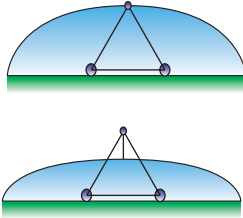

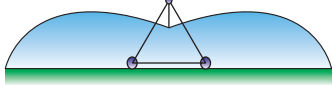

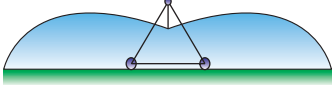
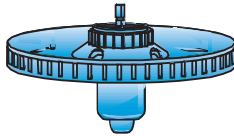
HIGH WEAR-
RESISTANCE

PRECISION
ACCURACY

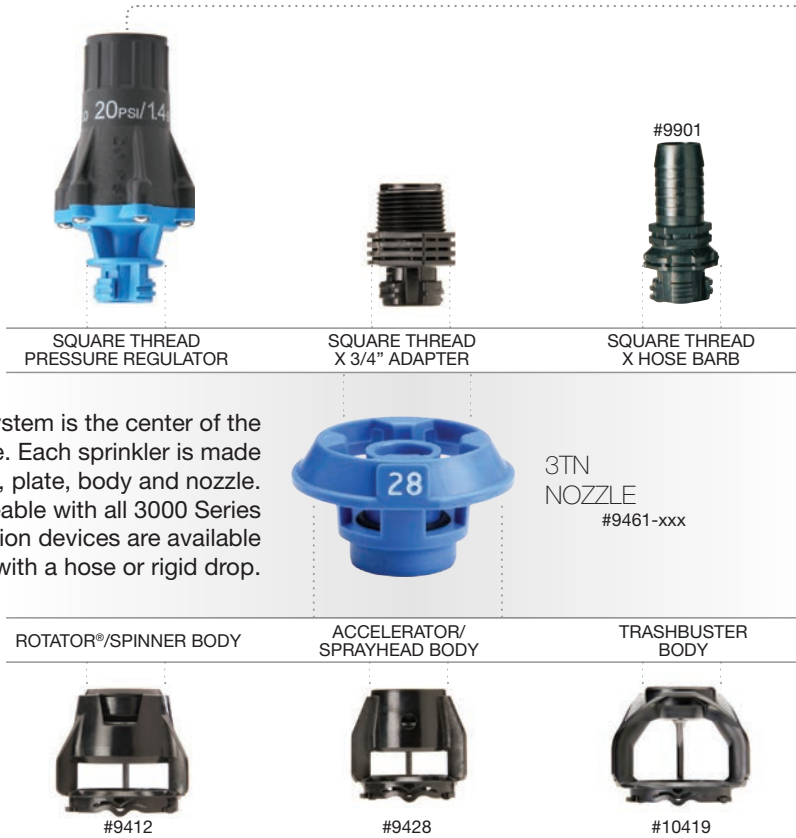
> 3000 series		DESCRIPTION	NOZZLE TYPE	OPERATING* RANGE	APPLICATION RATE
R	 rotator®	The <i>R3000 Rotator</i> ® features the greatest throw distance available on drop tubes. The wide water pattern from rotating streams equates to lower average application rates, longer soak time and reduced runoff. More overlap from adjacent sprinklers improves uniformity.	3TN	15-50 PSI (1-3.4 BAR)	LOW
S	 spinner	The <i>S3000 Spinner</i> utilizes a free-spinning action to produce a gentle, rain-like water pattern. Designed for more sensitive crops and soils, low instantaneous application rates and reduced droplet kinetic energy help maintain proper soil structure.	3TN	10-20 PSI (0.7-1.4 BAR)	LOW - MEDIUM
O	 orbitor	The <i>O3000 Orbitor</i> is designed with an innovative bracketless assembly. Debris hang-up and water-pattern misting common to conventional sprinklers are eliminated.	3TN	10-20 PSI (0.7-1.4 BAR)	LOW - MEDIUM
D	 sprayhead	The <i>D3000 Sprayhead</i> is a fixed spray designed with future needs in mind. As irrigation requirements change throughout the season, the D3000 features a flip-over cap to change spray patterns. The D3000 is easily convertible to LEPA or other 3000 Series sprinklers.	3TN	6-40 PSI (.41-2.8 BAR)	HIGH
A	 accelerator	The <i>A3000 Accelerator</i> maximizes performance of in-canopy water application. Designed as a hybrid of Rotator and Spinner technology, the Accelerator increases rotation speed through the nozzle range.	3TN	10-15 PSI (0.7-1 BAR)	MEDIUM
T	 trashbuster	Developed for the land application of wastewater, the <i>T3000 Trashbuster</i> features an open-architecture body design to pass debris more easily. Available with the 3000 FC, a plug-resistant, flow compensating sprinkler package can simplify maintenance.	3TN or 3000 FC	Depends on sprinkler selection	LOW - HIGH

*Careful selection of pressure and sprinkler configuration must be taken into account to optimize droplet size.

**Throw Distance Varies with Pressure, Nozzle Size, Mounting Height and Hydraulic Conditions.

MOUNTING	RELATIVE THROW DIAMETER**	FEATURES & BENEFITS
<p>Up Top or On Drops</p>	<p>50-74' (15.2-22.6 m)</p> 	<p>MODULARITY = ECONOMY & EFFICIENCY</p> <p>Nelson 3000 Series Pivot Products are easy to change/inter-change to give you the best configuration for your ever-changing conditions.</p>
<p>On Drops</p>	<p>42-54' (12.8-16.5 m)</p> 	 <p>A square thread fitting or a square thread Universal Regulator are a great way to connect sprinkler & hose</p>
<p>On Drops (flex hose)</p> <p><small>IMPORTANT! The Orbitor requires a minimum of 2' (0.6 m) of reinforced flexible hose in the mounting assembly. It also requires the 0.85lb. integral weight in all installations. Do not use any other conventional weight styles instead of, or in addition to, the Orbitor weight.</small></p>	<p>47-58' (14.3-17.7 m)</p> 	<p>3TN NOZZLES</p> <ul style="list-style-type: none"> ▪ Quick-Change ▪ Color-Coded ▪ Easily Identifiable  <p>(Odd-numbered nozzles have a color marking the color of the next size nozzle.)</p>
<p>Up Top or On Drops</p>	<p>16-40' (4.9-12.2 m)</p> 	 <p>All 3000 Series Pivot Products Bodies have a "CROP-GUARDED" design to prevent hang-ups when the sprinkler is down in the crop.</p>
<p>On Drops</p>	<p>30-46' (9.1-14.0 m)</p> 	 <p>The 3000 Series high-performance plates are engineered to provide the optimal droplet size for various conditions.</p>
<p>Up Top or On Drops</p> <p><small>IMPORTANT! Do not use 3000FC with hose drops.</small></p>	<p>Depends on Sprinkler Selection</p> 	

3000 Series Pivot Products



3/4" FNPT x Square Thread		
	Uni-Flo	Hi-Flo
6 PSI	9572-001	9611-001
10 PSI	9572-002	9611-002
15 PSI	9572-003	9611-003
20 PSI	9572-004	9611-005
25 PSI	9572-005	9611-006
30 PSI	9572-006	9611-007
40 PSI	9572-007	9611-008
50 PSI	9572-008	9611-009

3/4" FNPT x 3/4" FNPT		
	Uni-Flo	Hi-Flo
6 PSI	9491-001	9071-001
10 PSI	9491-002	9071-002
15 PSI	9491-003	9071-003
20 PSI	9491-004	9071-005
25 PSI	9491-005	9071-006
30 PSI	9491-006	9071-007
40 PSI	9491-007	9071-008
50 PSI	9491-008	9071-009

The 3TN "One" Nozzle system is the center of the 3000 Series Pivot Product line. Each sprinkler is made up of an assembly of a cap, plate, body and nozzle. The 3TN Nozzle is interchangeable with all 3000 Series sprinklers. A variety of connection devices are available to link the sprinkler with a hose or rigid drop.



3TN NOZZLE #9461-xxx

R3000

Body #9412



R3000 Cap #9539

Blue Up-Top U4-8°	White Up-Top	Green D4-8°	Red D6-12°	Orange Multi-Trajectory	Brown Multi-Trajectory
Plate #8817 Cap/Plate Assy* #11969-001	Plate #10749 Cap/Plate Assy* #11969-002	Plate #8844 Cap/Plate Assy* #11969-003	Plate #8839 Cap/Plate Assy* #11969-004	Plate #10598 Cap/Plate Assy* #11969-005	Plate #10681 Cap/Plate Assy* #11969-006
Cap/Plate Body Assy* #11970-001	Cap/Plate Body Assy* #11970-002	Cap/Plate Body Assy* #11970-003	Cap/Plate Body Assy* #11970-004	Cap/Plate Body Assy* #11970-005	Cap/Plate Body Assy* #11970-006
20-50 PSI (1.4-3.4 bar)	15-30 PSI (1.0-2.0 bar)	20-50 PSI (1.4-3.4 bar)	15-30 PSI (1.0-2.0 bar)	15-30 PSI (1.0-2.0 bar)	15-30 PSI (1.0-2.0 bar)

S3000

Body #9412



S3000 Cap #9540

Red D6-12°	Purple D6-20°	Yellow D8-21°	Beige Small Nozzle	Part Circle Spinner
Plate #8839 Cap/Plate Assy* #11971-001	Plate #9583 Cap/Plate Assy* #11971-002	Plate #10361 Cap/Plate Assy* #11971-003	Plate #11013	Part Circle Spinner #9926-001
Cap/Plate Body Assy* #11972-001	Cap/Plate Body Assy* #11972-002	Cap/Plate Body Assy* #11972-003		
10-20 PSI (0.7-1.4 bar)	10-20 PSI (0.7-1.4 bar)	10-20 PSI (.7-1.4 bar)	10-15 PSI (0.7-1.0 bar) Operates with a #10-15 nozzle. Ultra-low flow.	

*Part numbers do not include the 3/4" Adapter & 3TN Nozzle that are required for a complete Assembly.

O3000



<p>Black Standard Angle</p>  <p>Assy w/ Weight #11488-101</p> <p>10-20 PSI (0.7-1.4 bar)</p>	<p>Blue Low Angle</p>  <p>Assy w/ Weight #11488-102</p> <p>10-20 PSI (0.7-1.4 bar)</p>	<p>Purple Small Droplet</p>  <p>Assy w/ Weight #11488-103</p> <p>10-20 PSI (0.7-1.4 bar)</p>
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A3000

Body #9428



A3000 Cap #10402

<p>Maroon</p>  <p>Plate #9906 Cap/Plate Assy* #11498-001 Cap/Plate Body Assy* #11973-001</p> <p>6-15 PSI (0.4-1.0 bar)</p>	<p>Gold</p>  <p>Cap/Plate Assy* #11498-002 Cap/Plate Body Assy* #11973-002</p> <p>6-15 PSI (0.4-1.0 bar)</p>	<p>Navy Up-Top</p>  <p>Cap/Plate Assy* #11498-003 Cap/Plate Body Assy* #11973-003</p> <p>6-15 PSI (0.4-1.0 bar)</p>
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D3000

Body #9428



Flip-over D3000
Cap #9429
Spray Plate with
Cap Assy
#10041-xxxx

Green #9543	Yellow #9631	Purple #9550	Blue #9493
Black #9541	Gray #9542	Orange #10683	Brown #10721
Turquoise #9591	Red #9437	White #10971	

Accessories



T3000

Body #10419



R3000 Cap #9539

Rotator® Configuration

Blue #8817
Green #8844

See page 7 for
Cap/Plate Assy #

T3000

Body #10419



T3000 Cap &
Spray Plate
#10324-xxx

Sprayhead Configuration

Green #9543 -001	Yellow #9631 -002	Black #9541 -003
Blue #9493 -004	Purple #9550 -005	Orange #10683 -006



> UNIVERSAL FLO 3000 series PRESSURE REGULATORS

The function of a pressure regulator in center pivot sprinkler design is to fix a varying inlet pressure to a set outlet pressure, regardless of changes in the system pressure due to hydraulic conditions, elevation changes, pumping scenarios, etc. The benefits include a uniform depth of water application, controlled sprinkler performance (droplet size and throw distance), and flexibility in system operation. Specify Nelson's Universal Flo 3000 Series Regulator in your sprinkler package.

WIDE FLOW RANGE

The Nelson Universal Pressure Regulator has a flow up to 12 GPM (2.7 M³/H) at 15 PSI (1.0 BAR) and above.

PATENTED DAMPENING SYSTEM

A patented o-ring dampening system handles severe pressure surges to withstand water hammer.



PATENTED PLUG RESISTANT DESIGN

Improved plug-resistance with a new single-strut seat design in both the Hi-Flo and Universal Flo models.

EXTENDED PERFORMANCE & PRECISION ACCURACY

Precision components coupled with an internally lubricated o-ring minimize frictional drag and hysteresis.

CHEMICALLY RESISTANT MATERIALS

UNIVERSAL 3000 SERIES CONNECTION

Integral adapter connects directly into all Nelson 3000 Series Sprinklers.



1 LB. WEIGHT FOR FLEXIBLE HOSE DROPS

The modular weight fits onto all Nelson Pressure Regulators. When pressure regulators are not used, the weight fits securely on the body of 3000 Series sprinklers (not to be fitted directly on the N3000 Nutator). The 1 lb. Modular Pivot Weight is designed for Nelson 3000 Series products operating at 20 PSI (1.4 BAR) and below.

TECHNICAL TIPS FOR REGULATING SYSTEMS

IMPORTANT: Allow approximately 5 PSI (.35 BAR) extra pressure in order for the regulator to function properly. For example, the minimum design pressure for a 20 PSI (1.4 BAR) pressure regulator is 25 PSI (1.7 BAR).

IMPORTANT: If your system is designed with Nelson sprinklers, use Nelson Pressure Regulators. Individual manufacturers' pressure regulator performance varies. Interchanging could result in inaccurate nozzle selection.

> 3000 series PIVOT ACCESSORIES

3TN DUAL & TRIPLE NOZZLE CLIPS

SAVE WATER WITH SMART TOOLS.

Nelson 3000 Series sprinklers can be equipped with two or three nozzles using the 3TN Dual Nozzle Clip or 3TN Triple Nozzle Clip. These allow you to precisely match crop water requirements through the season. During germination, lower system flow rates lessen the intensity of water droplets to maintain proper soil structure and reduce runoff. Adjust the system flow as crop water requirements change.



- Change system flow quickly and accurately.
- No more fumbling with or dropping nozzles.
- Meet differing in-season demands:
 - Germinate at LO, Irrigate at HI
 - Irrigate at HI, Chemigate at LO

NOTE: Do not operate in down-in-the-crop applications, or with the D3000 Chemigation Plate.

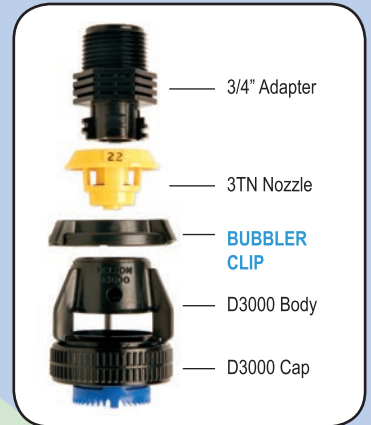
NEW! 3TN TRIPLE NOZZLE CLIP



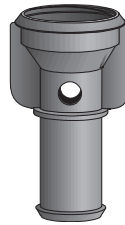
LEPA APPLICATIONS

D3000 SPRAYHEAD WITH BUBBLER CLIP

Transform the D3000 Sprayhead into a LEPA Bubbler by inverting the D3000 Cap and attaching a bubbler clip to the D3000 Body. (Not to be used with second spray plate.)



HD3000



HD3000 HOSE DRAG ADAPTER

For (LEPA) low energy precision application, utilize the 3/4" hose drag adapter on the 3000 Series to apply a hose drag or a drag sock. With LEPA, the plant canopy remains dry and water is applied directly to the furrow — typically every other furrow. Pressure regulators are generally a necessity for good LEPA uniformity of nozzle discharge.

Solve Wheel Track Problems with Part-Circle Sprinklers

PROBLEM:

Excessive water in the wheel tracks can cause slippage of the tires, causing the system to slow down in wet areas and steep slopes — increasing the application depth in relation to other parts of the fields. Deep wheel track ruts are also detrimental to the equipment and harvesting efficiency.

SOLUTION:

Nelson part circle sprinklers direct the water off of the pivot structure at the towers and away from the wheel track to prevent deep wheel track ruts. Overall field uniformity can be maintained by preventing excessive slippage of the tires, and maintaining a uniform speed of travel.

PC-R3000



PC-S3000



PC-D3000



HOSE BARB FITTINGS

USER-FRIENDLY. Easy installation of hose barb into 3/4" flexible hose.

EASY THREAD INSTALLATION. The convenience of the 15/16" Hex Adapter is unique to Nelson fittings. Secure fittings using 15/16" deep well socket or open end wrench.

ELIMINATE ADDITIONAL FITTINGS.



3/4" FNPT



3/4" MNPT



3000 ST
(#9901 — square thread for 3000 Series)

SAVE WATER, SAVE ENERGY
AND DO A BETTER JOB OF IRRIGATING WITH NELSON 3000 SERIES PIVOT PRODUCTS.



> IMPACT and BIG GUN SPRINKLERS

P85AS
20 GPM-125 GPM
(4.5 M³/H-28.4 M³/H)



SR75
30 GPM-160 GPM
(6.8 M³/H-36.3 M³/H)



SRN100
50 GPM-300 GPM
(11.4 M³/H-68.2 M³/H)



SR100
50 GPM-300 GPM
(11.4 M³/H-68.2 M³/H)

BIG GUN SPRINKLERS. In the field of large-volume sprinklers, Nelson Big Guns® are recognized the world over as the leader in quality and performance. They are engineered and precision manufactured for heavy-duty reliability and long wear life with minimum maintenance required. Every Nelson Big Gun® is subjected to the toughest inspection testing and quality control standards in the industry. The SR (Slow Reverse) series of Big Guns® is far and away the number one choice for center pivot end gun use around the world.

With its proven dual arm drive and patented dual drive spoon, the SR gun reverses at the same slow, steady speed as it drives forward. This greatly reduces the vibration and whipping action of the old fast reverse system, which puts excessive stress and strain on the carrying device.

PLASTIC IMPACT SPRINKLER PACKAGES

F44AAB



8° Low Angle

Save Inventory & Cost – The F44AAB requires only one model of sprinkler to cover from pivot point to end gun.

Save Water & Energy – The 8° low angle body minimizes wind exposure and operates at low pressure for optimum efficiency.

Heavy Duty – Featuring a Seal-Lock™ Bearing design, wear life is extended in tough field conditions. Engineering grade plastic provides durability. *Select standard or Nelson FCN® flow control nozzles.*

BRASS IMPACT SPRINKLER PACKAGES

F33AA



15° Low Angle

Wide Coverage & Overlap - 15° trajectory maximizes throw distance, while keeping the water pattern down out of the wind.

Extended Wear Life – Precision manufactured from the highest quality materials available. Features the Seal-Lock™ Bearing design for extended wear life in tough field conditions.

Select standard or Nelson FCN® flow control nozzles.



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These products may be covered by one or more of the following U.S. Patent Nos. 3744720, 3559887, 4796811, 4809910, RE33823, DES312865, 5415348, 5409168, 5439174, 5588595, 5671774, 6688539, 7025287, 7140595 and other U.S. Patents pending or corresponding issued or pending foreign patents.



Nelson Irrigation Corporation's worldwide network of professional dealers provides customized water application solutions.