

RECLAIMED

WATER Applications

the original
BIG GUN®
SPRINKLER

Why choose a Nelson Big Gun®

- The **Nelson name** is synonymous with the best quality available.
- **Heavy-duty construction** ensures long wear life & reliability.
- **Greatest range of options.** Full & part-circle sprinklers available in a variety of trajectory, nozzle & coating options.
- **Valve combinations available** for maximum system efficiency.
- **Easy to operate, maintain and repair** with readily available parts and documentation.

Advantages for Reclaimed Water Applications

- High volume in short time
- Rugged durability in dirty & corrosive conditions
- Large nozzles less likely to plug, filtration requirements minimal
- All ball bearings are sealed

 **NELSON**
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IT'S THE ONE FOR THE JOB



Formerly described as “waste water” — growers, agriculture, industry and municipalities now recognize the value of “reclaimed water”. The Nelson Big Gun provides a tremendous opportunity to solve a number of problems that can occur with this type of application.

There are a variety of methods for applying reclaimed water. Among them are center pivot systems, travelers and solid set. For gun type irrigation the Nelson Big

Gun is the sprinkler of choice. (Please refer to the *Traveler* and *Solid Set* application sheets for more information). With a full range of models available (see *The Original Big Gun®* brochure), flow rates of 30-1200 GPM (6.8-275 m³/hr) can be achieved with maximum uniformity to match a variety of needs.

The relatively large nozzle sizes can reduce the level of waste treatment or filtration required. The large throw diameters of the guns reduce the application rate under the system. Pressure of at least 50 psi (3.5 bar) at the end of the system provides optimum gun performance and the option to use the lowest trajectory model can reduce susceptibility to drift and evaporation.

Around the world, design parameters and regulations vary and they need to be applied to the design and operation. Canada and the United States have specific federal, state, provincial and local environmental requirements that need to be addressed. In most cases, these regulations will determine the general design parameters of the system such as potential crops, allowable flow, operating times, and other factors. Your local Nelson Irrigation Dealer is an excellent source of information and assistance in sprinkler selection.



BIG GUN® SPRINKLERS *for Wastewater Applications*

Nelson Big Guns are engineered and precision manufactured for heavy-duty reliability and long wear life. A variety of trajectory, nozzle and coating options are available for specification in a number of demanding applications. No one wants to work on a “waste water” system with subpar equipment!

The **SR200 MANURE/LARGE NOZZLE KIT** was specifically designed to help with slow rotation speeds when the gun is used with 1.75” diameter and larger nozzles. This kit is particularly useful when pumping manure and other slurries with densities different than water. When the kit is properly installed and adjusted, the rotation speed should be faster, the Drive Arm action stronger, and there should be less “hair-pinning” of debris on the Drive Vane. Please contact factory for more information on this special option.

CORROSIVE WATER CONSIDERATIONS

If corrosive water is to be pumped through the Nelson Big Guns, consideration needs to be given to the potential reactions between the corrosive water and the materials used to construct the Big Guns.

BIG GUN OPTIONS	WHERE TO USE	PH RANGE	WATCH OUT FOR	COMMENTS
STANDARD Big Gun is made from aluminum, yellow and red brass, 18-8 stainless steel, and engineering grade plastics. Seals and o-rings are buna-nitrite rubber.	Works well for most agricultural and dust suppression applications. History with pumping manure and similar slurries has been generally acceptable. Wear life is shorter than with clean water. In most cases it is more economical than special coatings and stainless steel Big Guns.	4.5-8.5	<ul style="list-style-type: none"> High concentrations of suspended solids (sand, etc.). Galvanic corrosion can be a problem when pumping manure slurries and food processing waste. Hydrogen sulfide at levels detectable by odor (smells like rotten eggs). 	In most applications if the water can successfully grow a crop and concentrated chemicals and fertilizers are not pumped through the system, the standard Big Gun will work acceptably. Life can be improved by flushing and draining when not operating.
ANODIZED Same construction as above. All aluminum components have been class 1 brass color anodized. Anodizing adds a thicker aluminum oxide layer than occurs naturally.	Designed for industrial dust suppression applications where mildly corrosive water remain infrequently stagnant in the Big Gun during shutdown.	4.5-8.5	<ul style="list-style-type: none"> Chlorides >700 ppm High concentrations of suspended solids. Galvanic corrosion with electrolytic fluids. Hydrogen sulfide at levels detectable by odor (smells like rotten eggs). 	Life can be improved by draining sprinkler and flushing it out when not operating.
POWDER COATED Same construction as anodized Big Gun. A polyester powder coating is then applied inside and out to improve corrosion resistance.	Designed for industrial dust suppression. Dust mixes with water and forms a caustic paste on exterior of sprinkler. Polyester powder coating increases life of sprinkler and minimizes pitting corrosion. Coating is in the flow path as well as on all exterior surfaces.	4.5-8.5	<ul style="list-style-type: none"> Chlorides >700 ppm High concentrations of suspended solids. Galvanic corrosion with electrolytic fluids. Hydrogen sulfide at levels detectable by odor (smells like rotten eggs). 	Life can be improved by draining sprinkler and flushing it out when not operating.
STAINLESS STEEL Big Gun is made from 316 series stainless steel. All plastics, o-rings, and seal materials have been chosen to be compatible with mining and industrial process fluids.	Designed for use with sodium hydroxide, sulfuric acid and sodium cyanide solutions used in mining heap leach and process waters.	0-14	<ul style="list-style-type: none"> Chlorides >100 ppm in stagnant or depositing conditions Hydrogen sulfide at levels detectable by odor (smells like rotten eggs). De-aerated conditions. Sulfuric acid conc. >10%. Anhydrous ammonia (attacks fluorocarbon elastomer seals). 	Life can be improved by draining sprinkler and flushing it out when not operating. Avoid partially full stagnant storage, de-aeration, sedimentation in the presence of chlorides and biological deposits.

WARRANTY AND DISCLAIMER: Nelson Big Gun® Sprinklers are warranted for one year from date of original sale to be free of defective materials and workmanship when used within the working specifications for which the products were designed and under normal use and service. The manufacturer assumes no responsibility for installation, removal or unauthorized repair of defective parts. The manufacturer's liability under this warranty is limited solely to replacement or repair of defective parts and the manufacturer will not be liable for any crop or other consequential damages resulting from defects or breach of warranty. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSES AND OF ALL OTHER OBLIGATIONS OR LIABILITIES OF MANUFACTURER. No agent, employee or representative of the manufacturer has authority to waive, alter or add to the provisions of this warranty, nor to make any representations or warranty not contained herein.

This product may be covered by one or more of the following U.S. Patent Nos. 3,744,720, 3,559,887 and other U.S. Patents pending or corresponding issued or pending foreign patents.



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