

SPORTS FIELD

Applications

the original
BIG GUN®
SPRINKLER



Why choose a Nelson Big Gun®

- The **Big Gun®** 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 Sports Field Applications

- High degree of portability/flexibility
- Sprinklers on the perimeter create less obstacles on the field
- Optional Quick-Coupling Valve provides:
 - extremely low friction loss
 - super smooth opening & closing
 - ability to easily remove sprinkler after irrigation and cover valve box

IT'S THE ONE FOR THE JOB



Nelson Big Gun® sprinklers are ideal for a wide range of applications including sports field irrigation and sports turf cooling. 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.

There are several ways to install Big Gun sprinklers in sports field applications. The Big Guns can be mounted on risers away from the field and people (see hockey field picture above); inside large boxes with hydraulic covers away from the field; or by utilizing the Quick Coupling Valve system so that the gun can be easily removed and the valve box covered when not in use (see inset picture above).

The Quick Coupling Big Gun System is beneficial because it keeps sprinklers off the field where they may cause injuries. A quick twist is all it takes to attach a Big Gun and key to a valve. Connecting the hydraulic assist smoothly opens the valve and starts the flow of water. Disconnection and moving the gun to the next valve location is just as quick and easy.

The system can also be equipped for automated or semi-automated operation to reduce time and labor. Wireless, battery operated controls can be configured on the Big Gun Quick Coupling arrangement to automate watering times or remotely actuate individual sprinklers. Ideal applications include hard-to-reach areas such as parks, cemeteries, athletic fields and other spots where it is not practical or economical to install a hard-wired controller. Hard wiring with a standard irrigation controller is an option when there are fewer system constraints.



BIG GUN® SPRINKLERS for Sports Field Applications

HOW THE NELSON QUICK COUPLER WORKS

The QC Valve is subjected to system water pressure at all times. After the key is connected to the valve and the hydraulic assist is connected, water enters the key and hydraulically powers the valve open.

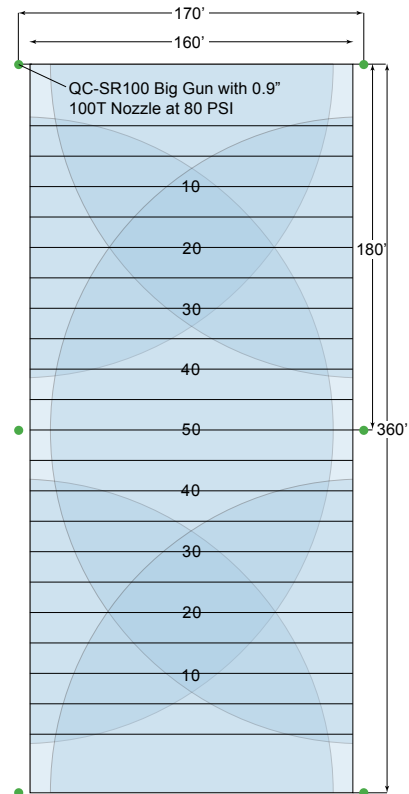
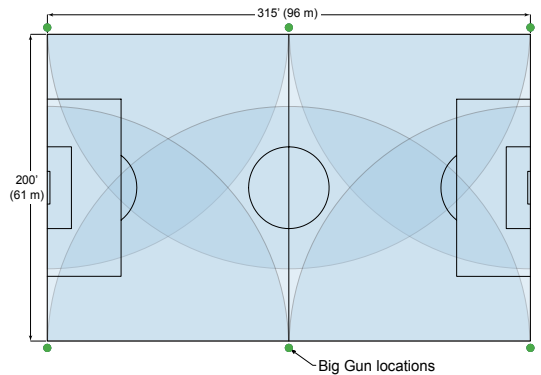
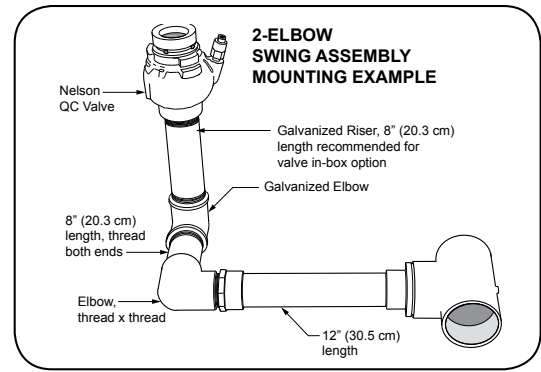
Successful operation of the Quick Coupler systems depends upon good installation. The valve must be adequately supported to counteract the thrust of the gun and must be mounted in a vertical position. A swing joint riser is recommended. Detailed design information is available through Nelson Irrigation. In brief, the basic design considerations include the following:

Sprinkler Spacings. For best coverage spacing should be from 50% to 60% of the sprinkler diameter. With the 100 Series Big Gun spacings from 160-180' (49-55 m) are ideal. Please note that the radius is reduced by 1-2% when installed at ground level on a QC Valve in a valve box as compared to a riser height of 3' (.91 m).

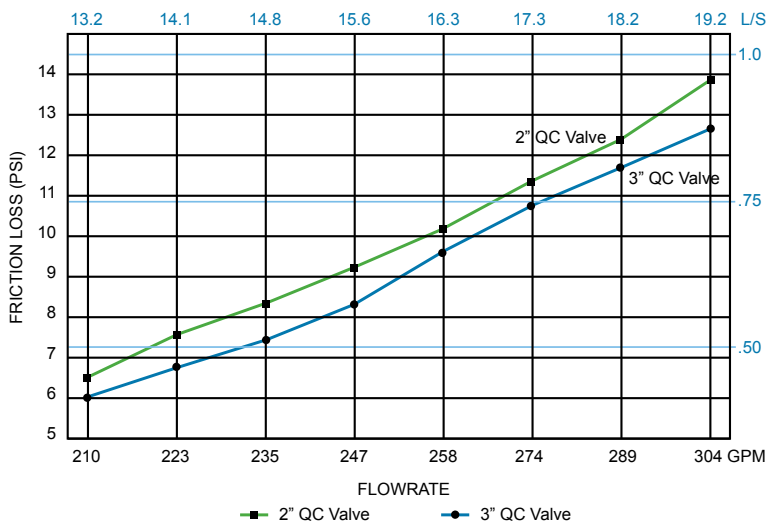
Wind. In high wind areas, use closer spacings and stagger the sprinklers (triangular spacings) for best results.

Pressure. Successful use of gun type systems depends upon adequate pressure at the gun nozzle. Minimum nozzle pressures are 70 psi (5 bar) for the 100 series Big Guns. Be sure to check to make sure the radius is sufficient for the spacing required.

Application Rates. Be sure your soil will accept the application rate of the gun. The application rate of one 100 series gun running by itself without overlap of adjacent guns is approximately .25"/hr (6 mm/hr). Considering the overlap of adjacent guns, the total amount applied will be approximately .4"/hr. to .5"/hr effectively (10 to 12 mm/hr).



Nelson 2" and 3" QC Valves
Friction Loss Chart



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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