

innovation in irrigation™

NELSON

PART CIRCLE PIVOT SPRINKLERS

PC-S3000 — PART CIRCLE SPINNER

The Part Circle Spinner distributes water to one side in an approximate semicircle. It can be used to minimize application on pivot towers or other structures. The Part Circle Spinner utilizes the 3TN nozzle of the conventional S3000 spinner. The directional control is provided by a 'stream deflector' which is inserted between the nozzle and the spinner body.

OPERATING SPECS:

- 10-20 PSI (.7-.14 BAR),
- #14-#40 3TN Nozzle,
- Mount on a rigid drop assembly

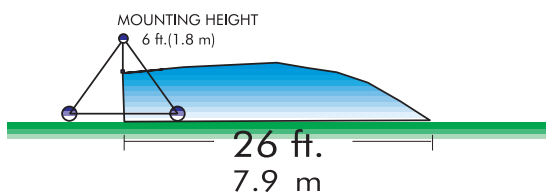
PERFORMANCE:

- 190° Arc (varies slightly with flowrate)
- Gentle, Rainlike Droplets
- High Uniformity
- Low Instantaneous Rates

THROW RADII:

(At midpoint of arc, throw to the sides may be less.)

- 15 PSI (1.0 BAR)
- #36 3TN Nozzle
- Stream Height = 13 in. (330 mm)



PC-D3000 — PART CIRCLE SPRAYHEAD

The Part Circle Sprayhead has a 170° arc setting to provide part-circle operation for applications at the span towers or offset drops or boombacs. The PC-D3000 spray plate provides stream definition similar to the spray plate geometry of the #9493 Blue spray plate. The medium grooves and concave trajectory provide wind-penetration and wide throw distance.

OPERATING SPECS:

- 10-20 PSI (.7-.14 BAR),
- #9-#50 3TN Nozzle,
- Mount on a rigid drop assembly

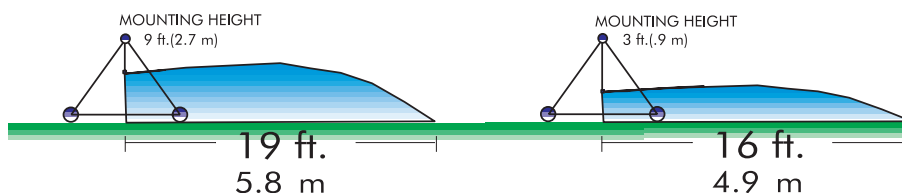
PERFORMANCE:

- 170° Arc (varies slightly with flowrate)
- Low Trajectory
- Concave Medium Groove
Blue Spray Plate

THROW RADII:

(At midpoint of arc, throw to the sides may be less.)

- 10 PSI (.7 BAR)
- #36 3TN Nozzle
- Stream Height = 5 in. (127 mm)



DESIGNING WITH PART CIRCLE SPRINKLERS

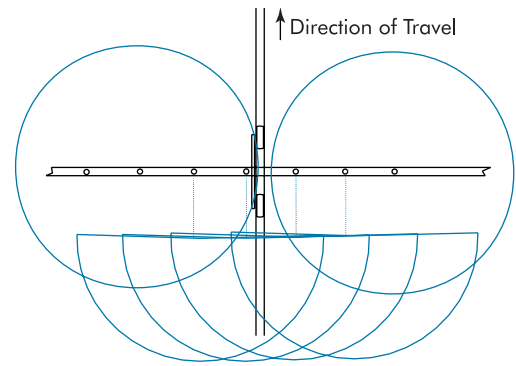
STEP 1: Plan the system with conventional full circle sprinklers. For Linears/Laterals select sprinkler spacing and determine the nozzle size to deliver your desired application rate. For pivot systems, planning should include a *Sprinkler Package Chart*. The Part Circle Spinner will fit best in packages with sprinkler spacing of 15 feet (4.5m) or less. The Part Circle Spray should be in sprinkler packages with spacings of 11 feet (3.3m) or less. If the part circle devices are to be mounted on boombacks, maintain uniform spacing between all sprinklers. If the devices will be mounted on conventional drops, a distance of 1 to 3 feet (.3 to 1m) between the wheel and the closest sprinkler on each side is optimal.

STEP 2: Determine which outlets need modified sprinklers. Use the preliminary design to compare the distance to the tower with the radius for each sprinkler. If you are working from a *Sprinkler Package Chart*, adjust the listed Tower location for the wheel offset. An offset of 2 feet (.6m) is common. Coverage diameter information on other 3000 Series Sprinklers is available in the SELECTOR software program or by contacting Nelson Irrigation.

STEP 3: Plan the orientation angles for the Part Circle Sprinklers. The semicircular pattern of the Part Circle Sprinklers adjacent to the towers should be oriented as close to perpendicular to the main pipe as possible. On boombacks, they should face directly away from the main pipe as shown in the diagram. On straight drops, they should be adjusted so the edge of the semicircle falls immediately behind the rear tower wheel. If possible, orient adjacent part circles at opposite directions from the pipe. This reduces the application rate.

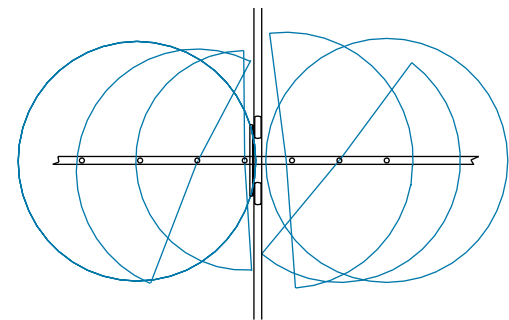
Part-Circle Sprinklers can be installed in a variety of configurations

BOOMBACKS



Installations on boombacks minimize the compromise in uniformity that occurs when part-circle devices are utilized.

STRAIGHT DROPS



Installations on straight drops require careful adjustment of the orientation.

ADDITIONAL CAUTIONS

It is important to mount Part Circle Sprinklers on rigid drops. Side thrust will cause extreme movement of flexible drops. Part Circle Sprinklers cannot provide the whole solution to traction, rutting, or runoff problems. If you are trying to utilize mechanized irrigation systems on steep slopes or heavy soils you should carefully consider all aspects of system design and management that can contribute to reduced soil loading and application rate minimization. The distribution profile of the Part Circle Sprinklers provides good overlaps with conventional sprinklers in most configurations. However, it is likely that a system intended to minimize application at the tower will not achieve the high uniformity possible with a well designed conventional system. For best results keep the spacing within the limits described above. Part Circle Sprinklers can be used to minimize, but they will not totally eliminate, application on the towers or wheel tracks.

WARRANTY AND DISCLAIMER

Nelson Part Circle Spinners & Sprays 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.