



## Application Guide

Rain Bird® XPCN Series  
Xeri Pressure Compensating Nozzle







## One Nozzle... Two Throws

With a simple turn of the nozzle to the next preset stop, the Rain Bird XPCN Nozzle adjusts from a 2.5' (0,8 m) throw to a 4' (1,2 m) throw. It's like having two nozzles in one.



## Rain Bird® XPCN Xeri Pressure Compensating Nozzle

### A Smarter Solution for Small Spaces.

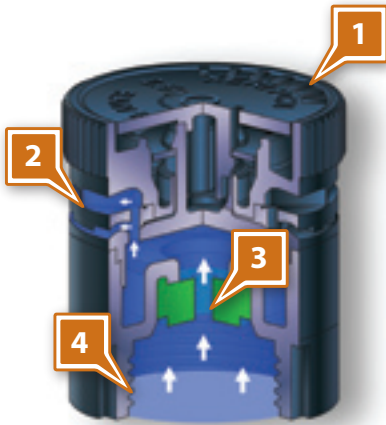
Irrigating small, intricately defined areas can be problematic. While using other micro spray alternatives can often result in overspray, overwatering, and runoff, the XPCN Nozzle is different. The XPCN is the most precise low-volume spray solution for irrigating small areas with dense plantings. What sets this nozzle apart is its pressure compensating ability and square wetting pattern – delivering superior soil moisture control and uniformity. In addition, its pressure-compensating flow washer ensures that you will have consistent flow rates regardless of pressure fluctuation or run length. For added design and installation flexibility, the nozzle easily adjusts throw distances from 2.5' to 4' (0,8 m to 1,2 m).

#### Advantages

- Offers a precise square wetting pattern – reducing overspray, overwatering and runoff
- Allows efficient control of water placement with pressure compensation – resulting in up to 65% water savings
- Compatible with all 1800® Series and UNI-SPRAY® Series spray heads, Xeri-Pop™ micro sprays, and Polyflex (using patent-pending adapter) and Schedule 80 risers
- Highest distribution uniformity\* in the industry for short radius nozzles
- Adjustable radius in one unit makes design and installation simple

*\* In head-to-head testing, the XPCN Nozzle achieved distribution uniformity measurements as high as 85% – the best competitor nozzle distribution uniformity measured 51%.*

## Smarter Design and Durable Construction



Above: Cutaway of XPCN Series Nozzle

### 1) Indicator Arrows

Indicate location of exit ports and identify model type (Q, H, F).

### 2) Exit Ports

Depending on the radius you select 2.5' or 4' (0,8 m or 1,2 m), the water is diverted to ports creating a precise square wetting pattern.

### 3) Flow Washer

As water pressure increases or decreases, the flow washer bows providing pressure compensation. From 20 to 50 psi (1,4 to 3,4 bars), the XPCN Nozzle ensures optimum coverage and is virtually mist free.

### 4) Thread

The XPCN Nozzles install on any standard 1/2" MPT connection just like regular Rain Bird MPR nozzles.

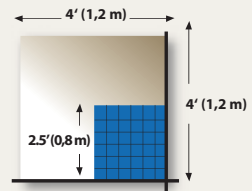
## Designed to be Flexible for Nearly any Application

The XPCN Nozzle is an ideal solution for a wide range of difficult-to-design areas, thanks to its compatibility with popular irrigation products.

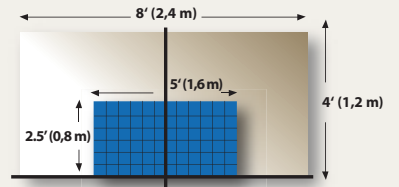


## XPCN Models

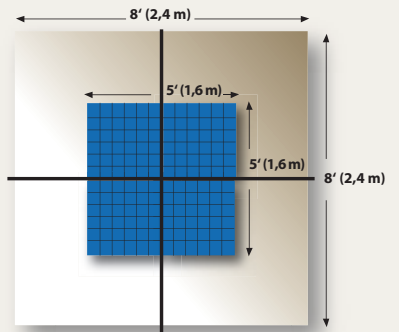
### XPCN-QTR (6 gph/25 lph, 90° sq)



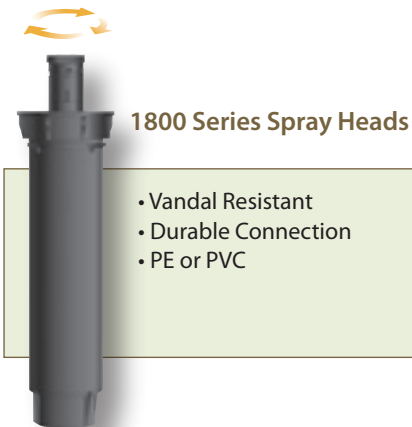
### XPCN-HLF (12 gph/50 lph, 180° sq)



### XPCN-FUL (24 gph/100 lph, 360° sq)

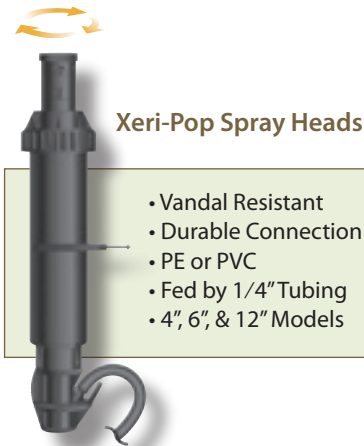


Throw distances based on 6" (0,15 m) height above grade



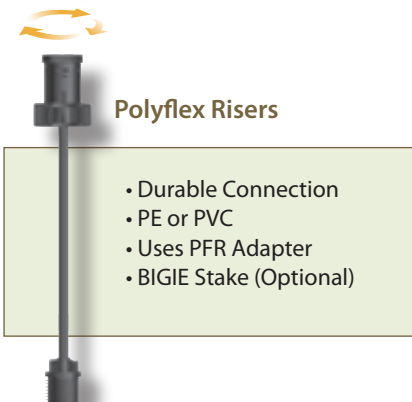
### 1800 Series Spray Heads

- Vandal Resistant
- Durable Connection
- PE or PVC



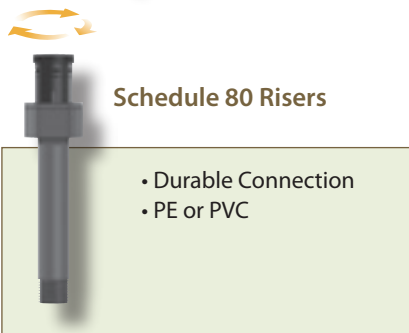
### Xeri-Pop Spray Heads

- Vandal Resistant
- Durable Connection
- PE or PVC
- Fed by 1/4" Tubing
- 4", 6", & 12" Models



### Polyflex Risers

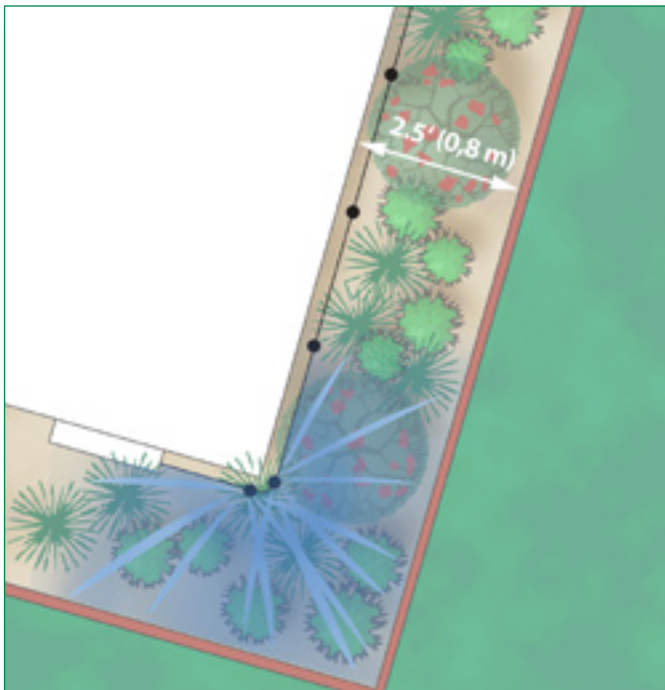
- Durable Connection
- PE or PVC
- Uses PFR Adapter
- BIGIE Stake (Optional)



### Schedule 80 Risers

- Durable Connection
- PE or PVC





## Narrow Planting Bed Next to Structure

### Dense Applications

Small spaces require careful irrigation control to prevent property damage. Generally, the best way to protect a structure (whether glass, stucco or wood) is to design heads to spray away from the structure. However, if bed width exceeds 30 inches, the XPCN Nozzle will allow you to locate heads spraying back toward the structure. Where high traffic and vandalism are not issues, XPCN Nozzles can be placed on fixed Schedule 80 risers or Polyflex riser assemblies high enough to clear plant material. Conversely, in vandal-prone areas retractable pop-ups can be used. Using XPCN Nozzles in narrow planting beds next to structures to carefully control water placement helps prevent overspray, run-off, and potentially costly property damage and liability claims.

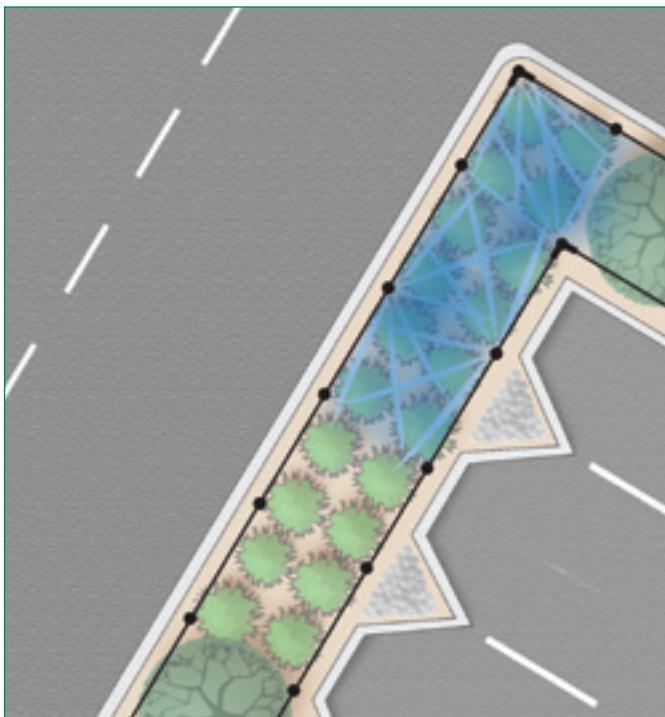
#### Installation Material List

##### Option A

- PE Tubing
- BIGIE Stake w/Polyflex Riser
- XPCN Adapter
- XPCN Nozzles

##### Option B

- PVC Lateral/Fittings
- Schedule 80 Risers
- XPCN Nozzles



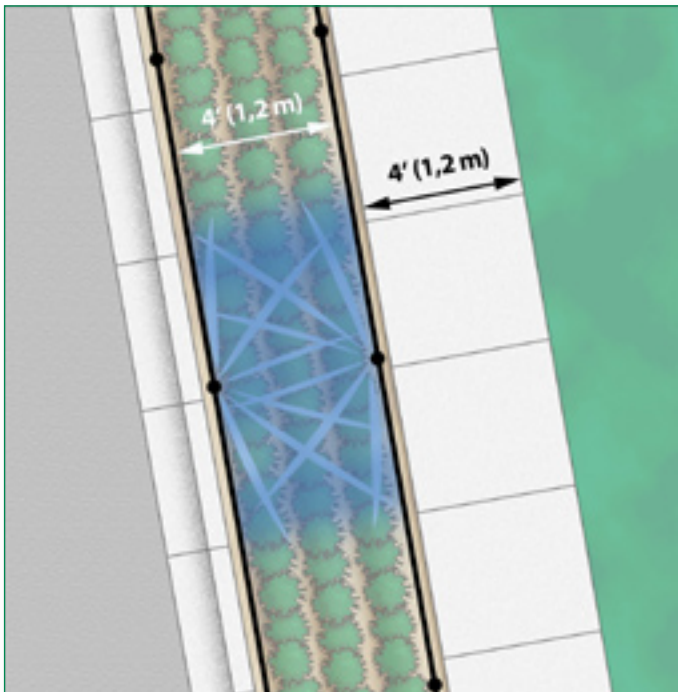
## Parking Lot Islands

### Combination Applications

Using XPCN Nozzles in parking lot islands to carefully control water helps prevent overspray, run-off, and potential vehicle damage liability. Spray heads in parking lot islands may also be damaged by overhanging vehicle bumpers, wheels riding over curbs, and vandalism. Using pop-ups on a flexible swing joint or flexible swing assembly can be a good method to increase the durability of such a system.

#### Installation Material List

- |   |  |
|---|--|
| <input type="checkbox"/> PVC Lateral/Fittings | <input type="checkbox"/> XPCN Nozzles                          |
| <input type="checkbox"/> 1800 Spray Heads     | <input type="checkbox"/> SA Series Swing Assemblies (Optional) |



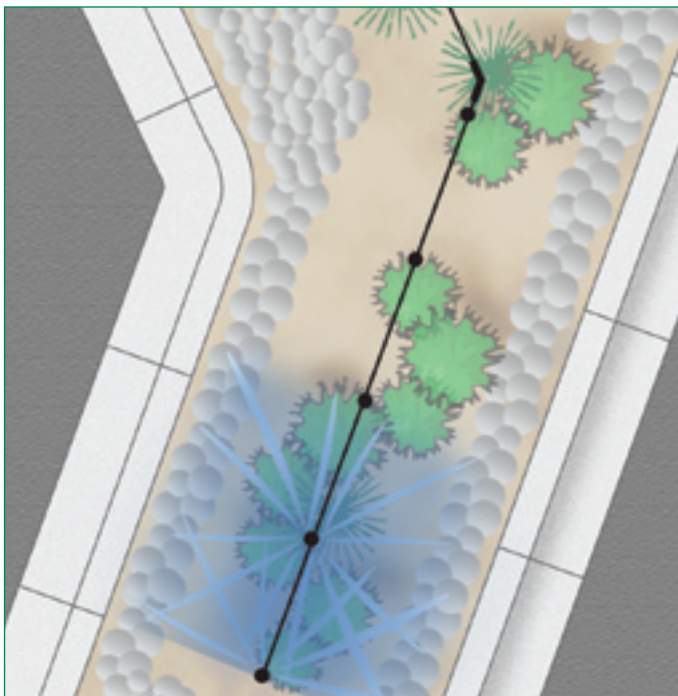
## Parkways and Walkways

### Dense Applications

The XPCN Nozzle's precise square-shaped spray patterns are useful in significantly reducing overspray in narrow planting beds between paved areas such as streets and sidewalks. Overspray in these situations is a potential safety hazard and liability concern. Additionally, to reduce the risk of vandalism and physical damage in these high-traffic spaces consider installing XPCN Nozzles on retractable Rain Bird® 1800® Series or Xeri-Pop™ micro spray heads.

#### Installation Material List

- PE Tubing
- XPCN Nozzles
- Xeri-Pop Spray Heads



## Street Medians

### Dense Applications

Because street medians are generally narrow, overspray and run-off in roadways are a common occurrence – and can often cause problems ranging from a minor annoyance to a considerable hazard for drivers. The XPCN Nozzle – designed specifically for short-throw areas to deliver low water volume in a precise pattern – addresses these issues. The nozzle requires no special screen to obtain proper flow. Furthermore, it requires no radius reduction screw adjustment to achieve a shorter radius or pattern. Using the XPCN Nozzle provides added confidence that the project will be installed properly while minimizing exposure to liability.

#### Installation Material List

- PVC Lateral / Fittings
- XPCN Nozzles
- 1800 Spray Heads

## What Our Customers Have to Say

Seeing is believing! Let's take a look at the many ways you can use the XPCN Nozzle and listen to some of our customers and their product solutions.



**Carol Brinkman**  
*Grounds Supervisor*  
*San Antonio Community Hospital*

"Overspray was a big problem for us. We had sidewalks and buildings that got soaked every time the system came on.

Our solution was to change to Rain Bird's XPCN Nozzles. They were super easy to work with and we didn't have to dig up or move anything. We just swapped out the nozzles.

We were really impressed with the square pattern and the pressure compensation. These new nozzles totally eliminated our overspray problems. Wet sidewalks and walls are a thing of the past at the hospital. Best of all, every one of my nozzles performs exactly the same, from the beginning to the end of the run.

It's nice to know that we're saving water, and I can always count on Rain Bird for a quality solution for our tough irrigation challenges."



**Phil Liso**  
*Landscape Inspector*  
*Public Works Department*

"Over the years, several corners in the city of Lake Forest were redesigned to incorporate HOA monuments. They do a great job aesthetically, but created a nightmare for us in terms of irrigation! We were unable to add dedicated control zones to the design because of the location of these new decorative areas. To compound the problem, the rotors we were using were shredding the plant materials and would eventually destroy the signs altogether.

Rain Bird had a great solution for us – the XPCN Nozzle. These nozzles are a perfect fit for the size and shape of the new planting areas. And thanks to the nozzle's pressure compensating feature, we were able to put them on the existing line, have low pressure watering for the delicate plants, and not affect the rotors' performance in the slightest.

It's comforting to know that the XPCN Nozzles aren't tearing up my plant materials, detracting from my rotors' performance, or causing problems with other plant material in the zone. These new nozzles are the perfect solution for me."

## XPCN Nozzle Performance Charts

XPCN Nozzle Performance				
<i>2.5-foot throw @ 6" height above grade</i>				
Nozzle	Pressure psi	Throw Radius ft.	Flow GPH	Precip. Rate w/no overlap in/h
<b>Q</b>	20	2.5	6.4	1.64
	30	2.5	7.4	1.90
	40	3.0	7.4	1.32
	50	3.0	7.4	1.32
<b>H</b>	20	2.5	10.2	1.31
	30	2.5	12.2	1.57
	40	3.0	13.7	1.22
	50	3.0	13.7	1.22
<b>F</b>	20	2.5	20.0	1.28
	30	2.5	24.2	1.55
	40	3.0	27.3	1.22
	50	3.0	27.3	1.22

XPCN Nozzle Performance (METRIC)				
<i>0,8 m throw @ 0,15 m height above grade</i>				
Nozzle	Pressure bars	Throw Radius m,	Flow LPH	Precip. Rate w/no overlap mm/h
<b>Q</b>	1,4	0,8	24	42
	2,1	0,8	28	48
	2,8	0,9	28	34
	3,4	0,9	28	34
<b>H</b>	1,4	0,8	39	33
	2,1	0,8	46	40
	2,8	0,9	52	31
	3,4	0,9	52	31
<b>F</b>	1,4	0,8	76	33
	2,1	0,8	92	39
	2,8	0,9	103	31
	3,4	0,9	103	31

XPCN Nozzle Performance				
<i>4-foot throw @ 6" height above grade</i>				
Nozzle	Pressure psi	Throw Radius ft.	Flow GPH	Precip. Rate w/no overlap in/h
<b>Q</b>	20	4.0	6.4	0.64
	30	4.0	7.4	0.74
	40	4.5	7.4	0.59
	50	4.5	7.4	0.59
<b>H</b>	20	4.0	10.2	0.51
	30	4.0	12.2	0.61
	40	4.5	13.7	0.54
	50	4.5	13.7	0.54
<b>F</b>	20	4.0	20.0	0.50
	30	4.0	24.2	0.61
	40	4.5	27.3	0.54
	50	4.5	27.3	0.54

XPCN Nozzle Performance (METRIC)				
<i>1,2 m throw @ 0,15 m height above grade</i>				
Nozzle	Pressure bars	Throw Radius m.	Flow LPH	Precip. Rate w/no overlap mm/h
<b>Q</b>	1,4	1,2	24	16
	2,1	1,2	28	19
	2,8	1,4	28	15
	3,4	1,4	28	15
<b>H</b>	1,4	1,2	39	13
	2,1	1,2	46	16
	2,8	1,4	52	14
	3,4	1,4	52	14
<b>F</b>	1,4	1,2	76	13
	2,1	1,2	92	15
	2,8	1,4	103	14
	3,4	1,4	103	14

Performance data taken in zero wind conditions.

## The Intelligent Use of Water™

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At Rain Bird, we believe it is our responsibility to develop products and technologies that use water efficiently. Our commitment also extends to education, training and services for our industry and our communities.

The need to conserve water has never been more greater. We want to do even more, and with your help, we can. Visit [www.rainbird.com](http://www.rainbird.com) for more information about The Intelligent Use of Water.™



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