

PGJ Rotor

*An Economical, Mid-Range
Gear-Driven Sprinkler
for Residential and Commercial Sites*

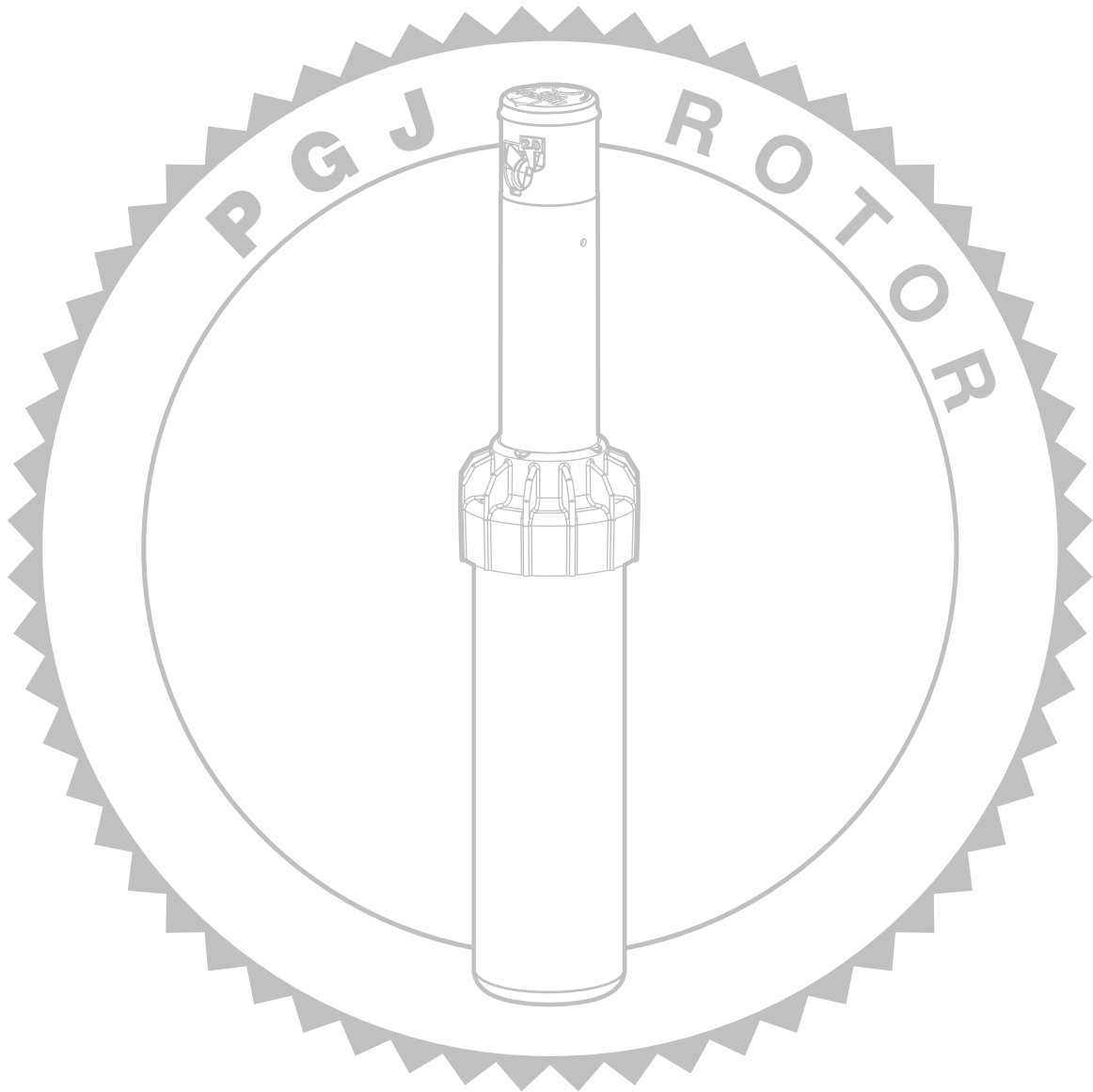


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PRODUCT OVERVIEW

PGJ...The Gear-Driven Answer for Medium-Sized Areas

The PGJ rotor has been developed to fill the void of the “mid-range” area in today’s landscapes: spacings 18' to 37' (4.6 to 9.1 m)...hard-to-fit sites that are **too large for sprays yet too small for traditional rotary sprinklers**. In essence, the PGJ has been designed as a “PGP junior,” offering all the features and benefits of our top-selling rotor, for use in small areas.

Offering greater efficiency in the application of water for slopes, medians and confined areas, PGJ eliminates wasteful runoff and puddling often associated with multiple-row spray head installations.

PGJ...The Ideal Alternative to Spray Heads

The PGJ can be zoned together with other Hunter rotors, allowing areas that would typically use spray heads to be zoned together with PGP or I-20 rotors.

The PGJ saves installation time and material costs in narrow areas typically reserved for sprays. Less trenching, fewer piping connections, less lawn disruption are all important labor saving benefits. With the PGJ, more sprinklers can be connected to the same zone, reducing the number of valves and controller stations.

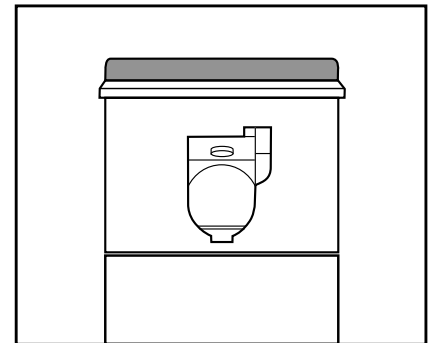
PGJ...The Special Features Customers Require

With a wide range of pop-up heights, the PGJ can meet all your needs. The 4" (10 cm) is for normal grass heights, the 6" (15 cm) is ideal for areas with taller grasses or where mowing is infrequent, and the 12" (30 cm) is ideal for all higher plant material. There is also a shrub model that is ideally suited for use on a riser.



Hunter has always made it a point to listen to the comments of those in the field when developing new products or enhancing existing ones. In response to that input, a key feature of the PGJ is exactly what so many have been asking for—a protective rubber cover that combines strength (to protect the inner workings of the head) with safety.

One of the hottest PGJ features is a **radius adjustment screw** with a hex socket and straight slot that allows for quick and precise fine tuning of the spray, keeping water away from surrounding buildings, walkways and hardscapes.



The PGJ has the proven reliability of its “big brother” along with the easy to adjust arc, ranging from 40° to 360°, wet or dry, popped up or down!

PGJ...The answer to your needs for a small economical rotor for your residential and commercial landscape and turf applications.

PRODUCT FEATURES AND BENEFITS



Nozzles Fashioned After Those of PGP *Same great features, but crafted for smaller coverage*

The full range of PGJ nozzles come on a convenient rack just like the ones for PGP. They also feature the same basic design, making them easy to install and remove. And they're also large, making it easy to determine the flow rate. But, make no mistake, PGJ nozzles have been specifically created to handle the particular needs of the smaller areas for which PGP was made.

Radius Adjustment

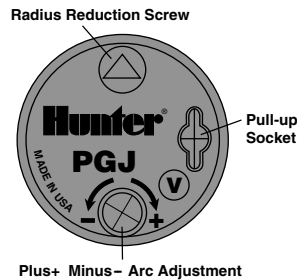
Adjust the radius and fine tune the stream of water with a quick and easy radius adjustment screw

Using the convenient Hunter wrench or either a hex or straight slot screwdriver, nozzle radius can be reduced up to 25%. The radius adjustment screw doubles as a positive means of retaining the sprinkler nozzle, making nozzle installation fool-proof.

Pull-up Socket

Simplifies nozzle installation and removal

The PGJ is the only mid-range rotor that has a pull-up socket, making it easy to access the nozzle.



Protective Rubber Cover

Keeps debris out and keep play areas safe

Just like the PGP, the PGJ rotor includes an integral rubber cover that won't come off. The cover serves a dual purpose, being solid enough to protect the internal adjustment mechanism and forgiving enough to provide safety to those may come in contact with it on the field of play.

Compact Body and Small Exposed Surface Area

1 1/4" (3 cm)—out of sight, out of mind!

The PGJ's small exposed diameter hides from small children and vandals. It won't detract from the beauty of the landscape.

40°-360° Adjustable Arc

Easily adjusts from the top of the sprinkler—up or down, wet or dry

For fast and efficient arc adjustments, the PGJ's versatility allows you to put the water where you want it, without getting areas wet that should stay dry. Easily fine-tune the precise

setting you need with the same 4:1 ratio as the PGP.

Plus (+) and Minus (-) Symbols

Show the way for quick arc adjustment

The plus and minus symbols, on top of the sprinkler, make arc adjustments easy to understand.

Proven Reversing Mechanism

The industry's best for reliable directional change

The three spring reversing mechanism has given us the consistent directional change that reliable operation requires!

Single Thread Body Cap

Extra strong, yet easy to service when necessary

The single thread body cap and body top

PGJ Rotors

withstand burst pressures in excess of 200 PSI (13.8 bars; 1379 kPa). It also allows for fast and easy servicing, if necessary, of the super large filter screen.

Proven Gear Drive

Matches the superior reliability of time-tested PGP drives

The PGJ is in essence a two-thirds scale version of our proven PGP rotor. It uses the same continuously improved gear drive design first introduced over ten years ago, ensuring reliable operation.

Super Strong Retraction Spring

Provides positive retraction every time!

The PGJ's spring is stronger than any of our competitors'.

Variable Stator

Keeps rotation speed consistent regardless of nozzle size or pressure

With the variable stator design there is no need to adjust or change the stator "bypass setting" on the PGJ. Now even better than ever, the variable stator is more dirt tolerant, providing years of reliability. No matter what nozzle or variable pressure you may have, there will always be a constant rotation speed of the sprinkler across a wide range of pressures.

Heavy Duty Riser Seal

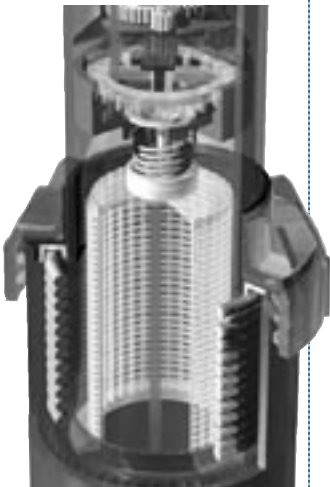
Stops wasteful excess "flow-by"

Hunter has taken the time-proven design of the PGP riser seal and used that as the inspiration to craft one specifically for the PGJ. As the sprinkler pops up, the PGJ's large sealing surface prevents wasteful flow-by. And, when it's retracted, it keeps debris from entering the seal.

Extra Large Screen

3 times the size of our leading competitor's

The huge screen with 30 mesh size can catch a large amount of debris, maintaining sprinkler operation and preventing nozzle clogging.



Drain Check Valve

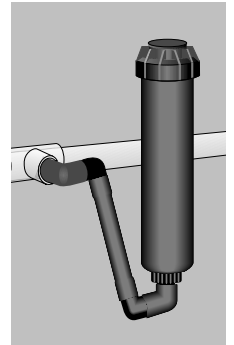
Saves water, reduces liability

The drain check valve feature is optional in all pop-up models. The check valve will hold back water pressure from up to 7' (2.1 m) of elevation change. A "V" on the rubber cover indicates that a drain check valve has been factory installed.

Swing Joint*

For easy installations and retrofits

A timesaving, versatile, heavy-duty swing joint to get the sprinkler height and position just right in mere seconds. It allows for use of a check valve on 6" (15 cm) and 12" (30 cm) models (a side inlet access won't allow a check valve to work, but a bottom inlet access, with the addition of a swing joint, allows the check valve to function and give the user "side-inlet" versatility). The swing joint has swivel ell's on both ends for added versatility. Install the swing joint vertically or horizontally with a twist of the wrist. The swing joint also protects lateral piping from downward forces exerted on the sprinkler by heavy equipment, providing a reliable, flexible connection.



Reclaimed Water Versions

Easy identification when using reclaimed water for irrigation

Purple is the recognized color for irrigation components using reclaimed water. The PGJ can be ordered with a purple rubber cover permanently attached so it will meet the needs of identification standards. The drain check valve is standard on all reclaimed water versions.

**Purchased separately*

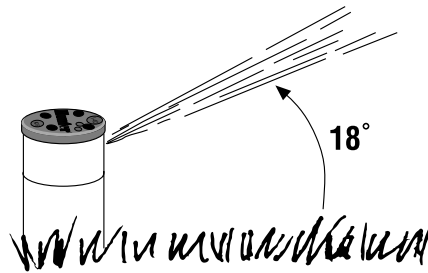
PRODUCT PERFORMANCE

The PGJ's interchangeable nozzles provide a wide and versatile range from the optimum performance is based upon 40 PSI (2.8 bars; 275 kPa), dynamic operating pressure.

The average precipitation rate is approximately .60" per hour (15 mm/hr) for a 180° arc sprinkler. The actual precipitation rate may vary, and should be calculated.

Trajectories

The nozzle trajectory is approximately 18 degrees. This is high enough to reach the proper radius without being so high that it is affected in windy conditions.



PGJ Nozzle Performance Data					
Nozzle	Pressure PSI	Radius ft.	Flow GPM	Precip in/hr ■ ▲	
.75	30	15'	0.64	0.55	0.63
	40	16'	0.75	0.56	0.65
	50	17'	0.85	0.57	0.65
1.0	30	18'	0.85	0.51	0.58
	40	19'	1.0	0.53	0.62
	50	19'	1.1	0.59	0.68
1.5	30	21'	1.3	0.57	0.66
	40	22'	1.5	0.60	0.69
	50	22'	1.7	0.68	0.78
2.0	30	24'	1.7	0.57	0.66
	40	25'	2.0	0.62	0.71
	50	25'	2.3	0.71	0.82
2.5	30	27'	2.2	0.58	0.67
	40	28'	2.5	0.61	0.71
	50	28'	2.8	0.69	0.79
3.0	30	30'	2.5	0.53	0.62
	40	31'	3.0	0.60	0.69
	50	31'	3.4	0.68	0.79
4.0	30	33'	3.7	0.65	0.76
	40	34'	4.0	0.67	0.77
	50	34'	4.3	0.72	0.83
5.0	30	36'	4.7	0.70	0.81
	40	37'	5.0	0.70	0.81
	50	37'	5.3	0.75	0.86

Note: All precipitation rates calculated for 180 degree operation.
For the precipitation rate for a 360 degree sprinkler, divide by 2.

PGJ Nozzle Performance Data – Metric						
Nozzle	Pressure Bars	Pressure kPa	Radius m	Flow m³/hr	Flow l/min	Precip mm/hr ■ ▲
.75	2.1	206	4.6	0.15	2.4	14 16
	2.8	275	4.9	0.17	2.8	14 17
	3.4	344	5.2	0.19	3.2	14 17
1.0	2.1	206	5.5	0.19	3.2	13 15
	2.8	275	5.8	0.23	3.8	14 16
	3.4	344	5.8	0.25	4.2	15 17
1.5	2.1	206	6.4	0.30	4.9	14 17
	2.8	275	6.7	0.34	5.7	15 18
	3.4	344	6.7	0.39	6.4	17 20
2.0	2.1	206	7.3	0.39	6.4	14 17
	2.8	275	7.6	0.45	7.6	16 18
	3.4	344	7.6	0.52	8.7	18 21
2.5	2.1	206	8.2	0.50	8.3	15 17
	2.8	275	8.5	0.57	9.5	16 18
	3.4	344	8.5	0.64	10.6	18 20
3.0	2.1	206	9.1	0.57	9.5	14 16
	2.8	275	9.4	0.68	11.4	15 18
	3.4	344	9.4	0.77	12.9	17 20
4.0	2.1	206	10.1	0.84	14.0	17 19
	2.8	275	10.4	0.91	15.1	17 20
	3.4	344	10.4	0.98	16.3	18 21
5.0	2.1	206	11.0	1.07	17.8	18 21
	2.8	275	11.3	1.14	18.9	18 21
	3.4	344	11.3	1.20	20.1	19 22

Note: All precipitation rates calculated for 180 degree operation.
For the precipitation rate of a 360 degree sprinkler, divide by 2.

Data represent test results in zero wind. Adjust for local conditions. Radius may be reduced up to 25% with adjustment screw (this may alter the uniformity of the spray pattern). Optimum performance is at 40 PSI (2.8 bars/275 kPa). For information on testing standards and precipitation rate calculations, see Hunter Irrigation Products catalog.

PRODUCT COMPARISONS

FEATURES	Hunter® PGJ Rotor	Rainbird® 3500	Toro® 300 Rotor	Nelson® 5500 Rotor
Pull-up Socket	✓	✓		
Full & Part Circle in 1 Unit	✓	✓		
Adjustable Arc... Wet or Dry, Up or Down	40°-360°	40°-360°	Discs	40°-360°
+ and - Symbols for Easier Arc Adjustment	✓	✓		
Fast, Easy Interchangeable Nozzles	✓	✓		✓
Nozzles Packed in Box	✓	✓		
Rubber Cover	✓			
Reliable 3-Spring Reverser Mechanism	✓			
Available in Shrub, 4", 6", 12" Pop-up	✓			
Exposed Diameter	1 1/4" (3 cm)	1 1/4" (3 cm)	3" (8 cm)	1 7/8" (5 cm)
Easy Servicing Body Cap	✓	✓		
Radius Adjustment	✓	✓	Optional	✓
Extra Large Filter Screen	✓		✓	
Optional Drain Check Valve	✓	✓		✓
Optional Reclaimed Water Versions	✓	✓	✓	✓
WARRANTY	Hassle-free, 2-year, non-prorated	3-year conditional	2- year conditional	5-year conditional

Nozzle Replacement Guide

To Replace: Rainbird® 3500	Use PGJ Nozzle	To Replace: Toro® 300 Series	Use PGJ Nozzle
.75	→ .75	304-XX-01	→ .75
1	→ 1.0	308-XX-01	→ 1.5
1.5	→ 1.5	316-XX-01	→ 2.5
2	→ 2.0	304-XX-02	→ .75
3	→ 3.0	308-XX-02	→ 2.0
4	→ 4.0	316-XX-02	→ 3.0
To Replace: Nelson® Pro 5500	Use PGJ Nozzle	304-XX-03	→ 1.5
#51	→ .75	308-XX-03	→ 3.0
#52	→ 1.5	To Replace: Toro® XP300 Series	Use PGJ Nozzle
#53	→ 2.0	XP300-XX-Q-05	→ 1.0
#54	→ 3.0	XP300-XX-H-05	→ 2.0

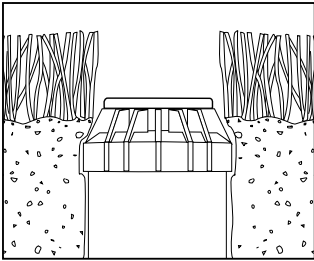
SPECIFICATION GUIDE

EXAMPLE: **PGJ - 06 - V**

MODEL	POP-UP HEIGHT	OPTIONS
PGJ	00 = Shrub 04 = 4" Pop-up 06 = 6" Pop-up 12 = 12" Pop-up	R = Reclaimed Water Identifier V = Factory-Installed Drain Check Valve (Pop-up Models Only)

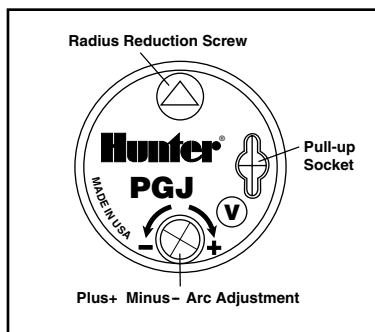
INSTALLATION & MAINTENANCE

Installation Height



The PGJ pop-up sprinkler should be installed at finish grade as shown in the illustration.

Arc Adjustment



1. Rotate the nozzle turret counterclockwise to the left stop.
2. Now, rotate the nozzle turret clockwise to the right stop. This is the fixed side of the arc. The nozzle turret must be held in this position for all arc adjustments.

To increase arc:

1. Insert the key end of the Hunter wrench into the adjustment socket on top of the sprinkler.
2. While holding the nozzle turret at the right stop, turn the wrench clockwise.

3. The wrench will stop turning when adjusted to the maximum arc (360°).
Do not go past this stop.

4. Adjust to any arc between 40°-360°.

To decrease arc:

1. Insert the key end of the Hunter wrench into the adjustment socket.
2. While holding the nozzle turret at the right stop, turn the wrench counterclockwise.
3. The wrench will stop turning when adjusted to the minimum arc (40°).
Do not go past this stop.
4. Adjust to any arc between 40°-360°.

Radius Adjustment

To decrease radius:

1. Turn nozzle-retainer/radius-adjustment screw clockwise.
2. If smaller radius is desired install smaller nozzle. This will affect precipitation rate.

To increase radius:

1. Turn nozzle-retainer/radius-adjustment screw counterclockwise.
2. If larger radius is desired, install larger nozzle. This will affect precipitation rate.

Precipitation Rate Adjustment

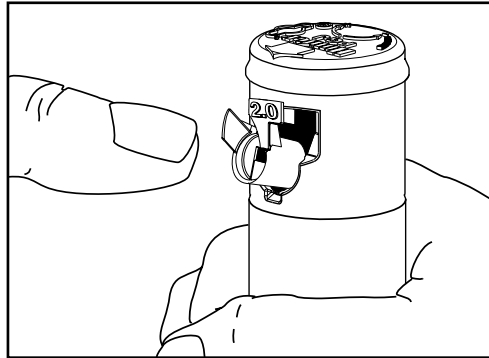
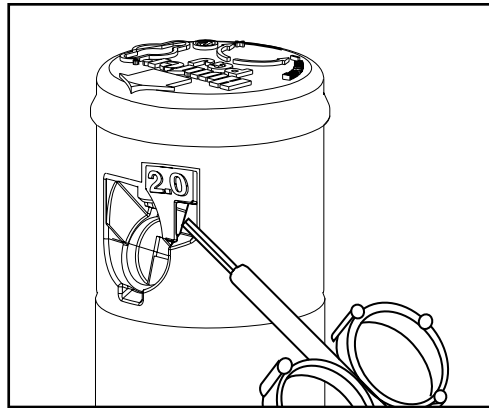
To increase precipitation:

1. Remove existing nozzle.
2. Replace with larger size.
3. Adjust radius.

To decrease precipitation:

1. Remove existing nozzle.
2. Replace with smaller size.
3. Adjust radius.

Nozzle Removal & Insertion

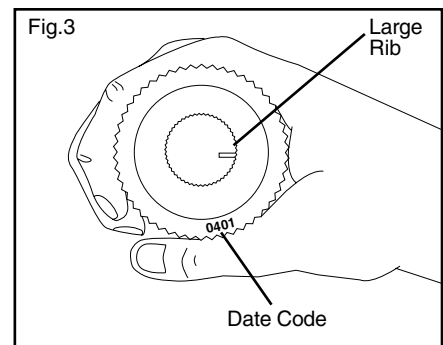
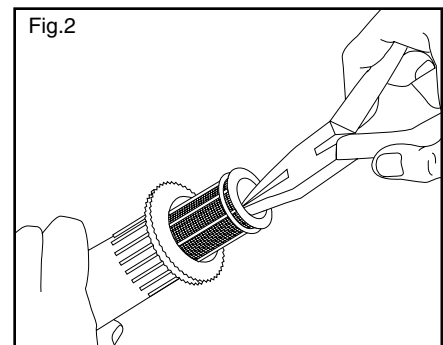
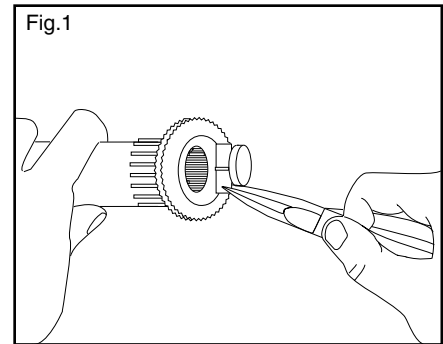


Nozzle Installation

1. Insert the plastic key end of the Hunter wrench into the lifting socket of the sprinkler and turn 90°. Pull the riser up to gain access to the nozzle socket.
2. Using the hex key of the Hunter wrench, turn the radius adjustment screw counterclockwise to be sure it is not blocking the nozzle socket opening. If a nozzle is already installed, it can be removed by backing out the adjustment screw and turning on the water, or by prying outward under the nozzle.
3. Slip the desired nozzle into the nozzle socket. Note that the socket is angled up 25° so that the nozzle range screw threads directly down. Then tighten the nozzle range screw. The arrow on the rubber cover will always indicate the location of the nozzle and direction of the water flow when the sprinkler is retracted.

Note: Undamaged nozzles are reusable. Nozzle sets are also recyclable.

Cleaning the Filter Screen

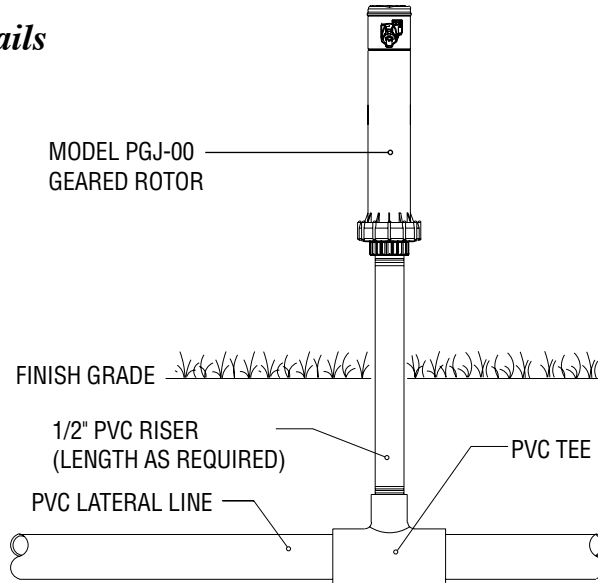


Unscrew body cap and remove internal riser.

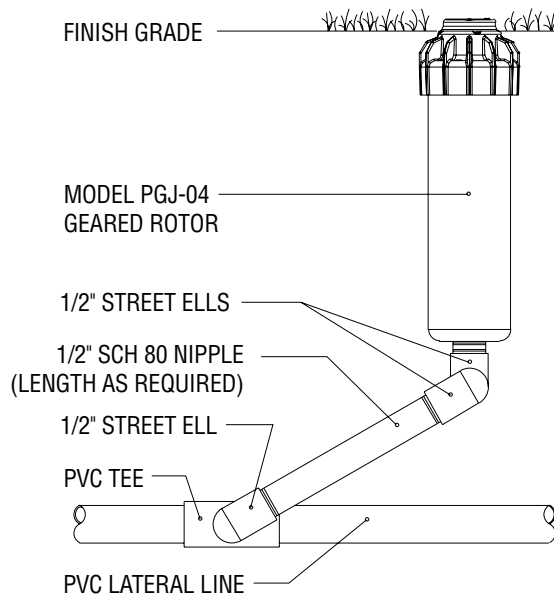
1. If sprinkler has drain check valve, remove with needle nose pliers.
2. With needle nose pliers, grasp large rib (Fig. 3) on the inside of the screen and pull firmly to remove screen.
3. Note the position of the large rib in comparison to the date code, which is located on the bottom of the riser.

TECHNICAL INFORMATION

Installation Details

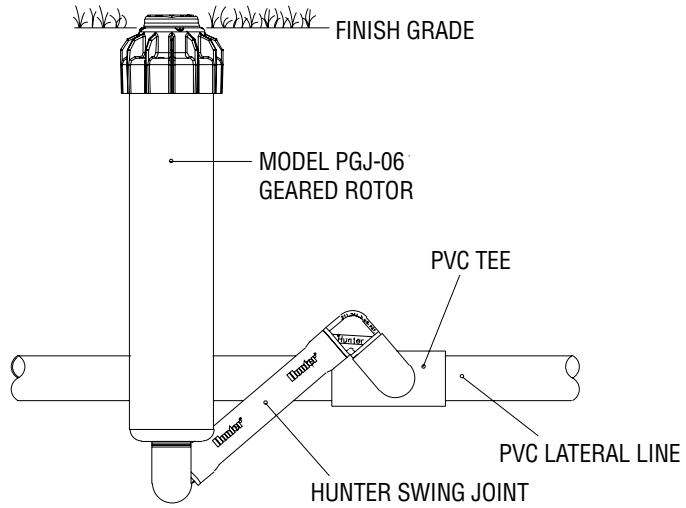


Hunter® PGJ-SHRUB

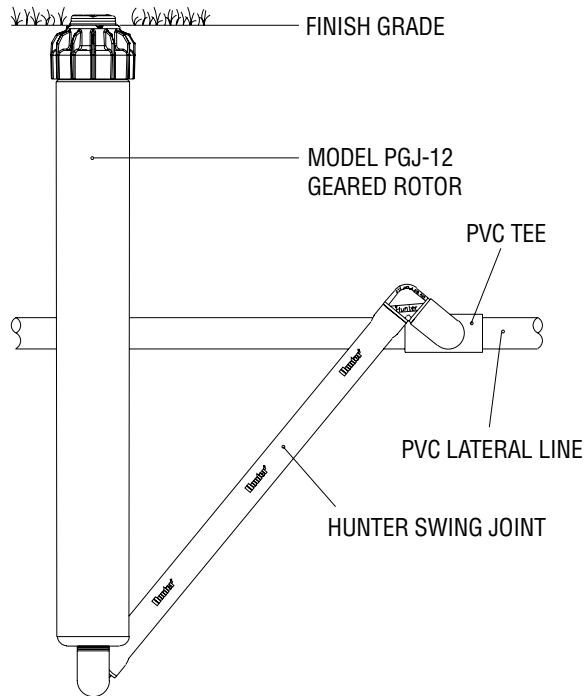


Hunter® PGJ-04

PGJ Rotors



Hunter® PGJ-06



Hunter® PGJ-12

SAMPLE LAYOUTS

3-Row Spray Head System versus PGJ Rotor 2-Row System

Typically, in long and narrow landscapes, three rows of spray heads have been installed to irrigate the areas. Now, with the PGJ, two rows can irrigate the same area, more efficiently, while saving dollars on piping, valves, stations on the controller, trenching, labor and most importantly, water use!

PS 3-Row Spray System

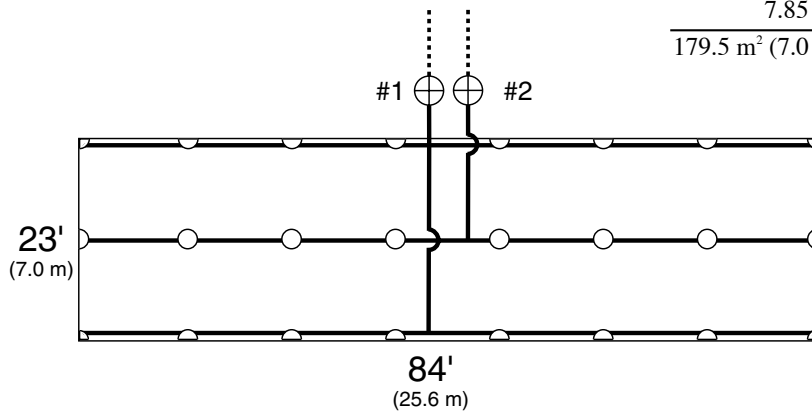
Zone #1=18.8 GPM (4.27 m³/hr; 71.17 l/min)

Zone #2=15.8 GPM (3.59 m³/hr; 59.81 l/min)

△ ... PS 04 12A 90° .8 GPM (0.18 m³/hr; 3.0 l/min)

◐ .. PS 04 12A 180° 1.3 GPM (0.30 m³/hr; 4.9 l/min)

○ .. PS 04 12A 360° 2.2 GPM (0.50 m³/hr; 8.3 l/min)



PS Spray 3-Row System Precipitation Rate:

$$\frac{96.25 \times 34.6 \text{ gpm (total gpm for area)}}{1932 \text{ sq. ft. (23' x 84' = total area)}} = 1.72''/\text{hr}$$

$$\frac{130.9 \text{ l/min} \times 60}{179.5 \text{ m}^2 \text{ (7.0 m x 25.6 m = total area)}} = 44 \text{ mm/hr}$$

$$\frac{7.85 \text{ m}^3/\text{hr} \times 1000}{179.5 \text{ m}^2 \text{ (7.0 m x 25.6 m = total area)}} = 44 \text{ mm/hr}$$

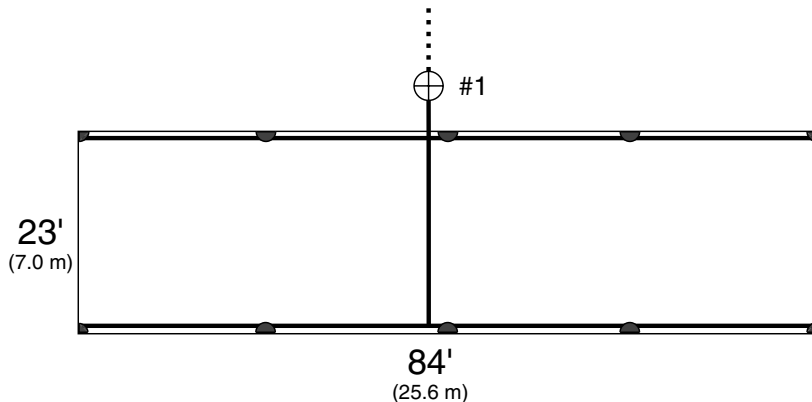
PGJ 2-Row Rotor System

Saves installation time and labor,
and reduces material costs.

Zone #1=16 GPM

▲ ... PGJ 04 90° #1.0 1.0 GPM (0.23 m³/hr; 3.8 l/min)

◐ .. PGJ 04 180° #2.0 2.0 GPM (0.45 m³/hr; 7.6 l/min)



PGJ 2-Row Rotor System Precipitation Rate:

$$\frac{96.25 \times 16 \text{ gpm (total gpm for area)}}{1932 \text{ sq. ft. (23' x 84' = total area)}} = .80''/\text{hr}$$

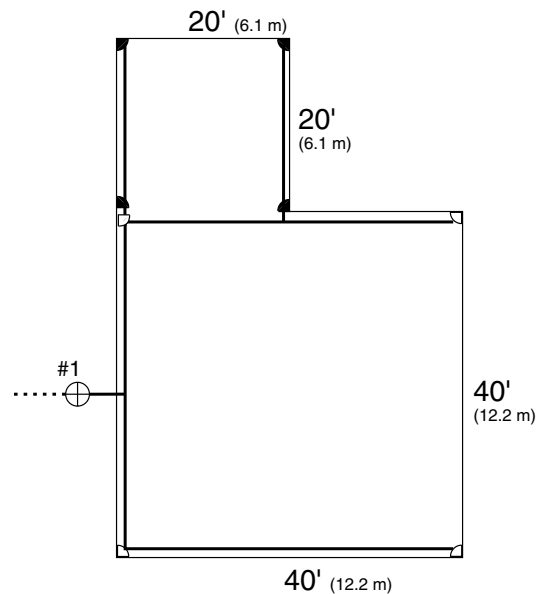
$$\frac{60.6 \text{ l/min} \times 60}{179.5 \text{ m}^2 \text{ (7.0 m x 25.6 m = total area)}} = 20 \text{ mm/hr}$$

$$\frac{3.63 \text{ m}^3/\text{hr} \times 1000}{179.5 \text{ m}^2 \text{ (7.0 m x 25.6 m = total area)}} = 20 \text{ mm/hr}$$

PGJ Rotors

Use PGJ on the Same Zone with Other Rotors

Now, when landscapes require smaller areas to be irrigated together with larger areas, the PGJ and PGP rotors can be combined on one zone! As shown in this design, one valve can control both the smaller area and the larger area and provide a uniform precipitation rate over the entire landscape. Normally, two valves would have to be installed: one for a spray zone and one for a rotor zone. So, less valves, piping, wire, and stations on the controller are required!



PGJ Precipitation Rate: (Sprinkler Spacing Method)

$$\frac{34560 \times 1.0 \text{ gpm}}{90^\circ \times 20' \times 20'} = .98''/\text{hr with PGJ set at } 90^\circ \text{ arc}$$

$$\frac{3.8 \text{ l/min} \times 21600}{90^\circ \times 6.1\text{m} \times 6.1\text{m}} = 24 \text{ mm/hr with PGJ set at } 90^\circ \text{ arc}$$

$$\frac{0.23 \text{ m}^3/\text{hr} \times 360000}{90^\circ \times 6.1\text{m} \times 6.1\text{m}} = 24 \text{ mm/hr with PGJ set at } 90^\circ \text{ arc}$$

PGP Precipitation Rate: (Sprinkler Spacing Method)

$$\frac{34560 \times 4.23 \text{ gpm}}{90^\circ \times 40' \times 40'} = .99''/\text{hr with PGP set at } 90^\circ \text{ arc}$$

$$\frac{16.0 \text{ l/min} \times 21600}{90^\circ \times 12.2\text{m} \times 12.2\text{m}} = 26 \text{ mm/hr with PGP set at } 90^\circ \text{ arc}$$

$$\frac{0.96 \text{ m}^3/\text{hr} \times 360000}{90^\circ \times 12.2\text{m} \times 12.2\text{m}} = 26 \text{ mm/hr with PGP set at } 90^\circ \text{ arc}$$

Zone #1=20.8 GPM

-PGJ-04 #1.0 nozzle 1.0 GPM (0.23 m³/hr; 3.8 l/min)
-PGP-ADJ #8 nozzle 4.23 GPM (0.96 m³/hr; 16.0 l/min)

NOTES



Hunter®

Hunter Industries Incorporated • The Irrigation Innovators
1940 Diamond Street • San Marcos, California 92069 • TEL: (1) 760-744-5240 • FAX: (1) 760-744-7461
www.HunterIndustries.com

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P/N 700424 LIT-210 1/04