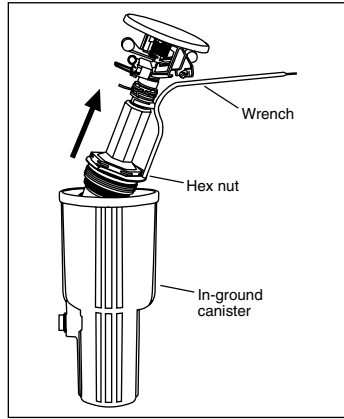


INSTALLATION OF PGP-ATR UNIT

Remove the internal assembly of the existing sprinkler:

1. Pry up the lid on the in-ground sprinkler to gain access to the internal parts.
2. Using the special internal assembly removal wrench (available from your irrigation distributor), insert the large hex end of the wrench into the canister of the head while holding the pop-up mechanism upright. The hex end of the wrench will fit onto the large hex nut at the bottom of the canister.

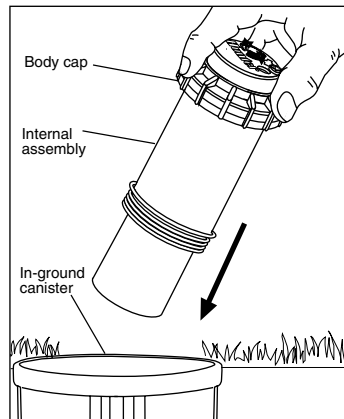


(Note: If the hex nut is not visible, there may be debris in the bottom of the canister. This debris should be removed before continuing.)

3. Turn the wrench counter-clockwise on the hex nut to remove the internal assembly of the sprinkler.

Installing the new PGP-ATR internal assembly:

1. Clean any debris in the thread area for easy assembly of the new parts. Also make sure the O-ring seal on the threaded end of the ATR assembly is in place.
2. Thread the entire ATR body/riser assembly into the existing sprinkler canister. Make sure this assembly is hand tight so that the O-ring seal seats properly in the existing canister. At this time, it is usually most convenient to align the right, fixed arc stop of the sprinkler's intended watering pattern.

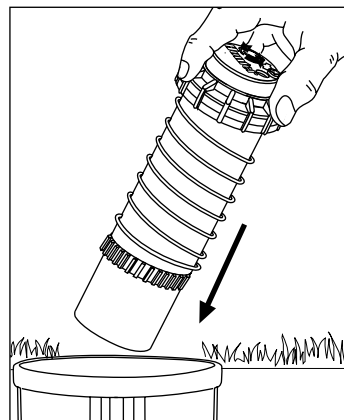


Aligning the right (fixed) side of arc:

If the right side of the arc is not properly aligned, the results may be a wet walkway or a dry turf area. The right side arc can easily be realigned.

Note: It is not necessary to dig up and remove the whole sprinkler to realign the right arc.

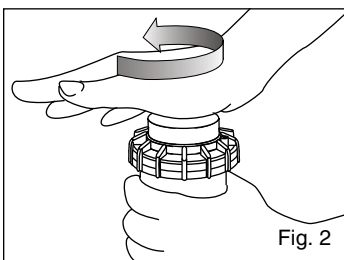
1. To align the right fixed arc stop of the sprinkler, unthread only the body cap counterclockwise and remove only the ATR. Once the internal assembly is removed, rotate the nozzle turret to the right stop. Screw the internal assembly back into the body with the nozzle aligned to the right side of the area you want irrigated. (To complete the adjustment of the watering pattern, continue with the arc adjustment steps below.)
2. Install the cap portion of the ATR to complete the assembly process.



Arc Adjustments:

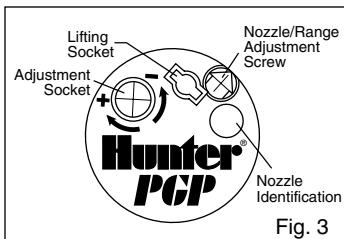
The head is preset to approximately 180°. It may be adjusted with water on or off.

1. Using the palm of your hand, rotate the nozzle turret counterclockwise to the left stop to complete any interrupted rotation cycle (Fig. 2).
2. 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 arc adjustments. The right stop does not change.



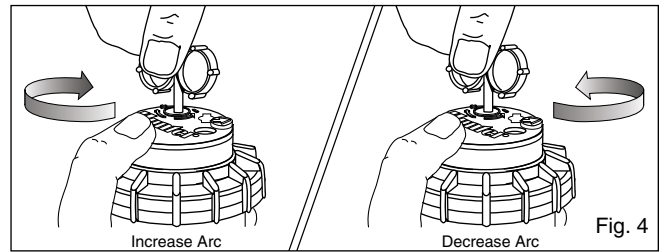
To Increase the Arc:

1. Insert the plastic key end of the Hunter wrench into the adjustment socket (Fig. 3 & 4).
2. While holding the nozzle turret at the right stop, turn the wrench clockwise. Each full 360° turn of the wrench will increase the arc 90°.
3. Adjust to any arc between 40° and 360° (Fig. 5).
4. The wrench will stop turning, or there will be a ratcheting noise, when the maximum arc of 360° (full circle) has been reached.

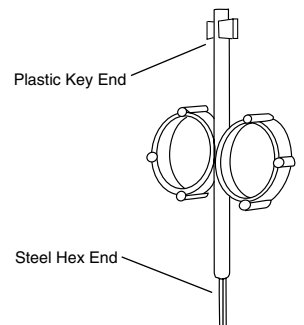
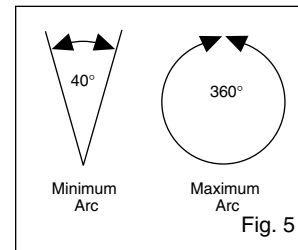


To Decrease the Arc:

1. Insert the plastic key end of the Hunter wrench into the adjustment socket (Fig. 3 & 4).
2. While holding the nozzle turret at the right stop, turn the wrench counterclockwise. Each full 360° turn of the wrench will decrease the arc 90°.
3. Adjust to any arc between 40° and 360° (Fig. 5).
4. The wrench will stop turning, or there will be a ratcheting noise, when the minimum arc of 40° has been reached.



Note: It is not necessary to disassemble the sprinkler to make adjustments.



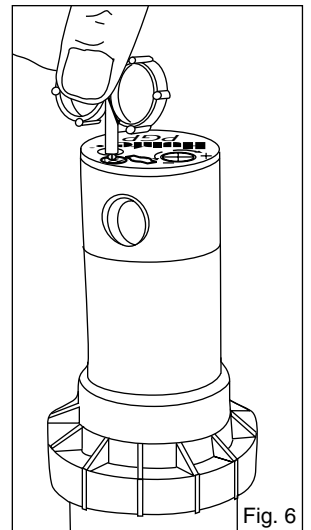
RADIUS / DISTANCE OF THROW

Insert the steel hex end of the Hunter wrench into the radius adjustment screw (Fig. 6). Turn the screw clockwise (into the stream of water) to decrease the radius, or counterclockwise to increase the radius. Radius can be reduced up to 25%.

Caution: Turning the adjustment screw clockwise more than five full turns may result in a lost radius adjustment screw.

PRECIPITATION RATE ADJUSTMENT

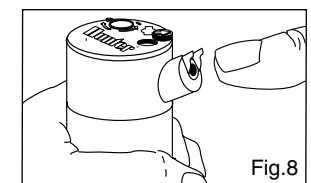
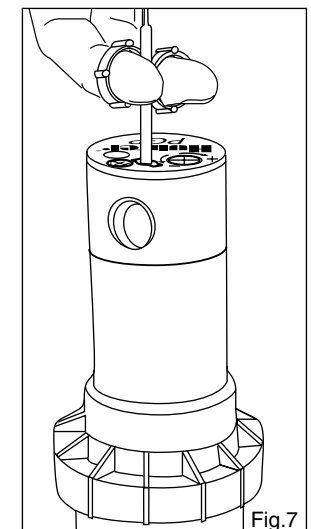
If you have excessively wet or dry areas, you can change the nozzle in the sprinkler to increase or decrease the precipitation rate. For dry areas, install a larger nozzle. For wet areas, install a smaller nozzle.



NOZZLE INSTALLATION

Note: Nozzle #7 is factory-installed in the sprinkler. This information is needed only if you wish to change the nozzle.

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 (Fig. 7).
2. Using the hex key of the Hunter wrench, turn the radius adjustment screw (Fig. 6) 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 pulling outward on the nozzle "ears" with a pair of needle-nosed pliers.
3. Slip the desired nozzle into the nozzle socket (Fig. 8). Note that the socket is angled up 25°. The "ears" should be adjusted so that the nozzle range screw threads directly down between them. Then tighten the nozzle range screw. The raised bump with an arrow on the rubber cover will always indicate the location of the nozzle and direction of water flow when the sprinkler is retracted.



PGP Red Standard Nozzle Performance Data

Nozzle	Pressure PSI	Radius ft.	Flow GPM	Precip in/hr	
				■	▲
1	30	28'	0.5	0.12	0.14
	40	29'	0.6	0.14	0.16
	50	29'	0.7	0.16	0.19
	60	30'	0.8	0.17	0.20
2	30	29'	0.7	0.16	0.19
	40	30'	0.8	0.17	0.20
	50	30'	0.9	0.19	0.22
	60	31'	1.0	0.20	0.23
3	30	30'	0.9	0.19	0.22
	40	31'	1.0	0.20	0.23
	50	31'	1.2	0.24	0.28
	60	32'	1.3	0.24	0.28
4	30	32'	1.2	0.23	0.26
	40	33'	1.4	0.25	0.29
	50	34'	1.6	0.27	0.31
	60	34'	1.8	0.30	0.35
5	30	34'	1.6	0.27	0.31
	40	36'	1.8	0.27	0.31
	50	38'	2.0	0.27	0.31
	60	38'	2.2	0.29	0.34
6	30	34'	2.0	0.33	0.38
	40	36'	2.4	0.36	0.41
	50	38'	2.7	0.36	0.42
	60	38'	2.9	0.39	0.45
7	30	34'	2.6	0.43	0.50
	40	38'	3.0	0.40	0.46
	50	40'	3.4	0.41	0.47
	60	40'	3.7	0.45	0.51
8	30	37'	3.2	0.45	0.52
	40	39'	3.7	0.47	0.54
	50	41'	3.9	0.45	0.52
	60	42'	4.6	0.50	0.58
9	30	38'	3.6	0.48	0.55
	40	41'	4.3	0.49	0.57
	50	44'	5.2	0.52	0.60
	60	45'	5.5	0.52	0.60
10	40	44'	6.0	0.60	0.69
	50	46'	6.8	0.62	0.71
	60	47'	7.6	0.66	0.76
	70	49'	8.2	0.66	0.76
11	40	46'	8.0	0.73	0.84
	50	48'	8.9	0.74	0.86
	60	50'	9.8	0.75	0.87
	70	51'	10.5	0.78	0.90
12	40	46'	10.5	0.96	1.10
	50	48'	11.9	0.99	1.15
	60	50'	12.7	0.98	1.13
	70	52'	14.1	1.00	1.16

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

PGP Blue Standard Nozzle Performance Data

Nozzle	Pressure PSI	Radius ft.	Flow GPM	Precip in/hr	
				■	▲
1.5	25	29'	1.2	0.27	0.32
	35	31'	1.4	0.28	0.32
	45	31'	1.5	0.30	0.35
	55	32'	1.8	0.34	0.39
	65	32'	1.9	0.36	0.41
2.0	25	33'	1.4	0.25	0.29
	35	33'	1.7	0.30	0.35
	45	34'	2.0	0.33	0.38
	55	34'	2.1	0.35	0.40
	65	32'	2.3	0.43	0.50
2.5	25	33'	1.7	0.30	0.35
	35	35'	2.1	0.33	0.38
	45	35'	2.5	0.39	0.45
	55	35'	2.6	0.41	0.47
	65	35'	2.9	0.46	0.53
3.0	25	35'	2.2	0.35	0.40
	35	36'	2.7	0.40	0.46
	45	38'	3.0	0.40	0.46
	55	39'	3.4	0.43	0.50
	65	39'	3.7	0.47	0.54
4.0	25	37'	3.0	0.42	0.49
	35	39'	3.5	0.44	0.51
	45	40'	4.0	0.48	0.56
	55	41'	4.5	0.52	0.60
	65	41'	4.8	0.55	0.63
5.0	25	37'	3.7	0.52	0.60
	35	39'	4.5	0.57	0.66
	45	42'	5.0	0.55	0.63
	55	42'	5.7	0.62	0.72
	65	42'	6.2	0.68	0.78
6.0	25	38'	4.3	0.57	0.66
	35	40'	5.6	0.67	0.78
	45	43'	6.0	0.62	0.72
	55	44'	6.7	0.67	0.77
	65	44'	7.3	0.73	0.84
8.0	25	37'	6.0	0.84	0.97
	35	41'	7.0	0.80	0.93
	45	44'	8.0	0.80	0.92
	55	46'	9.0	0.82	0.95
	65	46'	9.8	0.89	1.03

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

Replacement Guide PGP Gear Driven Rotary Sprinkler

To Replace	Use Hunter Nozzle
Mini-Paw 15103	07 (Black) 6
	09 (Green) 7
Maxi-Paw 2045	06 (Red) 5
	07 (Black) 6
	08 (Blue) 8
	10 (Yellow) 9
	12 (Beige) 10

PGP Gray Low Angle Nozzle Performance Data

Nozzle	Pressure PSI	Radius ft.	Flow GPM	Precip in/hr	
				■	▲
4	30	22'	1.4	0.56	0.64
	40	24'	1.7	0.57	0.66
	50	26'	1.8	0.51	0.59
	60	28'	2.0	0.49	0.57
5	30	25'	1.6	0.49	0.57
	40	27'	1.9	0.50	0.58
	50	28'	2.1	0.52	0.60
	60	30'	2.3	0.49	0.57
6	30	27'	2.1	0.55	0.64
	40	30'	2.5	0.53	0.62
	50	33'	2.8	0.49	0.57
	60	35'	3.0	0.47	0.54
7	30	29'	2.8	0.64	0.74
	40	32'	3.1	0.58	0.67
	50	35'	3.5	0.55	0.64
	60	37'	3.8	0.53	0.62
8	30	31'	3.4	0.68	0.79
	40	34'	3.9	0.65	0.75
	50	37'	4.4	0.62	0.71
	60	38'	4.7	0.63	0.72
9	30	33'	4.3	0.76	0.88
	40	37'	5.0	0.70	0.81
	50	40'	5.6	0.67	0.78
	60	42'	6.1	0.67	0.77
10	40	38'	6.5	0.87	1.00
	50	40'	7.3	0.88	1.01
	60	42'	8.0	0.87	1.01
	70	44'	8.6	0.86	0.99

P Blank nozzle plug for turning off selected sprinklers during repairs, maintenance, etc.

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

PGP Red Standard Nozzle Performance Data – Metric

Nozzle	Pressure Bars	Pressure kPa	Radius m	Flow m³/hr	Flow l/min	Precip mm/hr	
						■	▲
1	1.7	172	8.2	0.10	1.7	3	3
	2.0	200	8.5	0.11	1.8	3	3
	2.5	248	8.5	0.13	2.1	4	4
	3.0	303	8.8	0.15	2.4	4	4
	3.5	352	8.8	0.16	2.7	4	5
	4.0	400	9.1	0.18	2.9	4	5
4.5	448	9.1	0.19	3.2	5	5	
2	1.7	172	8.5	0.14	2.4	4	5
	2.0	200	8.8	0.16	2.6	4	5
	2.5	248	8.8	0.17	2.9	4	5
	3.0	303	9.1	0.19	3.2	5	5
	3.5	352	9.1	0.21	3.5	5	6
	4.0	400	9.4	0.22	3.7	5	6
4.5	448	9.4	0.23	3.9	5	6	
3	1.7	172	8.8	0.18	3.0	5	5
	2.0	200	9.1	0.20	3.3	5	5
	2.5	248	9.1	0.22	3.7	5	6
	3.0	303	9.4	0.25	4.1	6	6
	3.5	352	9.4	0.27	4.5	6	7
	4.0	400	9.8	0.29	4.8	6	7
4.5	448	9.8	0.31	5.1	6	7	
4	1.7	172	9.4	0.24	4.1	5	6
	2.0	200	9.8	0.27	4.4	6	6
	2.5	248	9.8	0.30	5.0	6	7
	3.0	303	10.1	0.34	5.6	7	8
	3.5	352	10.1	0.37	6.2	7	8
	4.0	400	10.4	0.40	6.6	7	9
4.5	448	10.4	0.43	7.1	8	9	
5	1.7	172	10.1	0.33	5.5	7	8
	2.0	200	10.4	0.36	5.9	7	8
	2.5	248	10.4	0.39	6.5	7	8
	3.0	303	11.0	0.43	7.2	7	8
	3.5	352	11.6	0.46	7.7	7	8
	4.0	400	11.6	0.49	8.1	7	8
4.5	448	11.6	0.51	8.6	8	9	
6	1.7	172	10.1	0.42	6.9	8	10
	2.0	200	10.4	0.45	7.5	8	10
	2.5	248	10.7	0.51	8.5	9	10
	3.0	303	11.0	0.57	9.4	9	11
	3.5	352	11.6	0.61	10.2	9	11
	4.0	400	11.6	0.66	10.9	10	11
4.5	448	11.9	0.70	11.6	10	11	
7	1.7	172	10.1	0.54	9.0	11	12
	2.0	200	10.4	0.58	9.7	11	12
	2.5	248	11.0	0.65	10.8	11	12
	3.0	303	11.6	0.72	12.0	11	12
	3.5	352	12.2	0.78	12.9	10	12
	4.0	400	12.2	0.83	13.8	11	13
4.5	448	12.2	0.88	14.6	12	14	
8	1.7	172	11.0	0.66	11.0	11	13
	2.0	200	11.3	0.71	11.8	11	13
	2.5	248	11.6	0.79	13.2	12	14
	3.0	303	11.9	0.87	14.5	12	14
	3.5	352	12.5	0.94	15.6	12	14
	4.0	400	12.5	1.00	16.6	13	15
4.5	448	12.8	1.05	17.6	13	15	
9	1.7	172	11.3	0.73	12.2	11	13
	2.0	200	11.6	0.80	13.4	12	14
	2.5	248	11.6	0.92	15.4	14	16
	3.0	303	12.5	1.05	17.5	13	16
	3.5	352	13.4	1.15	19.2	13	15
	4.0	400	13.4	1.25	20.9	14	16
4.5	448	13.7	1.35	22.4	14	17	
10	2.0	200	12.2	1.14	19.0	15	18
	2.5	248	12.8	1.29	21.4	16	18
	3.0	303	13.4	1.44	24.0	16	18
	3.5	352	14.0	1.56	26.1	16	18
	4.0	400	14.3	1.68	28.0	16	19
	4.5	448	14.3	1.79	29.9	17	20
5.0	496	14.6	1.90	31.7	18	21	
11	2.0	200	12.8	1.55	25.9		