

27/37/47 Series

Impact technology with part-circle flexibility

Rain Bird's 27/37/47 Series open-case rotors are proven superior in dirty water. They offer uniform water distribution with an easy-to-service construction.

Features

- Cast-iron case on 47A for heavy-traffic areas.
- High-impact plastic case on AP and 47A-SAM models
- Heavy-duty, brass pop-up assembly.
- Proven impact drive.
- Straight-through flow for excellent performance in dirty water.
- Adjustable arc 20° to 340°.
- Precision Jet tube (PJ™) minimizes side splash.
- Inlet filter screen and flushing action protect internal assembly from debris.
- Long-wearing TNT bearing.
- Easy to rebuild and repair.
- Diffuser screw on 27AP and 37AP models allows radius reduction up to 25% without changing nozzles.
- Optional two-piece rubber cover on all models for added safety.
- Optional internal Stopamatic® valve on 47A eliminates puddling and erosion caused by low-head drainage, saving water and money.

Operating Range

- Precipitation Rate: 0.45 to 1.32 inches per hour (11 to 34 mm/h)
- Radius: 41 to 63 feet (12,5 to 19,2 m)
- Pressure: 40 to 100 psi (2,8 to 6,9 Bars)

Specifications

- 1" (26/34) female-threaded inlet
- 1" (26/34) female BSP threaded inlet (47AP, 47AP-RC, 47A-SAM, and 47A-SAM-RC models only)
- 27AP: For standard nozzle at 60 psi (4,1 Bars), the highest point of stream is 10 feet (3,1 m) above nozzle. Nozzle outlet trajectory is 25°.
- 37AP: For standard nozzle at 60 psi (4,1 Bars), the highest point of stream is 10 feet, 6 inches (3,2 m) above nozzle. Nozzle outlet trajectory is 25°.
- 47A, 47A-SAM, 47AP: For standard nozzle at 70 psi (5,0 Bars), the highest point of stream is 12 feet (3,7 m) above nozzle. Nozzle outlet trajectory is 23°.

Dimensions (with standard cover)

- 27AP/37AP/47AP overall height: 10" (25,4 cm)
 - 47A overall height: 9⁷/₁₆" (24 cm)
 - 47A-SAM overall height: 12⁷/₈" (32,7 cm)
 - 27AP/37AP/47A/47AP/47A-SAM pop-up height: 2⁵/₁₆" (5,9 cm)
 - 27AP/37AP/47A/47AP exposed surface diameter: 6" (15,2 cm)
 - 47A-SAM exposed surface diameter: 6¹/₄" (15,9 cm)
- Note: Overall body height is measured popped down.*

Dimensions (with rubber cover)

- 27AP/37AP/47AP overall height: 10¹/₂" (26,7 cm)
 - 47A overall height: 9¹¹/₁₆" (24,6 cm)
 - 47A-SAM overall height: 13³/₄" (33,7 cm)
 - 27AP/37AP/47A/47AP/47A-SAM pop-up height: 2⁵/₁₆" (5,9 cm)
 - 27AP/37AP/47A/47AP exposed surface diameter: 6¹/₂" (16,5 cm)
 - 47A-SAM exposed surface diameter: 6³/₄" (17,1 cm)
- Note: Overall body height is measured popped down.*

Models

- 47A
- 47A-RC: Rubber cover
- 27AP
- 37AP
- 47AP
- 27AP-RC: Rubber cover
- 37AP-RC: Rubber cover
- 47AP-RC: Rubber cover
- 47AP-BSP: BSP threaded
- 47AP-RC-BSP: Rubber cover, BSP threaded
- 47A-SAM
- 47A-SAM-RC: Rubber cover
- 47A-SAM-BSP: BSP threaded
- 47A-SAM-RC-BSP: Rubber cover, BSP threaded



How to Specify

47A-SAM-14

Model
47A

Nozzle Size
14

Optional Feature

SAM: Stopamatic check valve

Note: For non-U.S. applications, it is necessary to specify NPT or BSP thread type.



27AP Performance

Pressure psi	Nozzle	Radius ft.	Flow GPM	Precip In/h	Precip In/h
40	09	-	-	-	-
	10 *	41	4.4	0.50	0.58
	11	42	5.3	0.58	0.67
	12	42	6.3	0.69	0.79
50	09	41	3.9	0.45	0.52
	10 *	42	4.9	0.54	0.62
	11	43	5.9	0.61	0.71
	12	44	7.0	0.70	0.80
60	09	42	4.3	0.47	0.54
	10 *	42	5.4	0.59	0.68
	11	43	6.5	0.68	0.78
	12	45	7.7	0.73	0.85
70	09	42	4.6	0.50	0.58
	10 *	43	5.8	0.60	0.70
	11	44	7.0	0.70	0.80
	12	-	-	-	-
80	09	43	4.9	0.51	0.59
	10 *	44	6.2	0.62	0.71
	11	45	7.5	0.71	0.82
	12	-	-	-	-

METRIC

Pressure Bars	Nozzle	Radius m	Flow m ³ /h	Flow l/s	Precip mm/h	Precip mm/h
2,8	09	-	-	-	-	-
	10 *	12,5	1,00	0,28	13	15
	11	12,8	1,20	0,33	15	17
	12	12,8	1,43	0,40	17	20
3,0	09	-	-	-	-	-
	10 *	12,6	1,04	0,29	13	15
	11	12,9	1,26	0,35	15	17
	12	13,0	1,49	0,41	18	20
3,5	09	12,5	0,89	0,25	11	13
	10 *	12,7	1,12	0,31	14	16
	11	13,0	1,35	0,37	16	18
	12	13,4	1,60	0,44	18	21
4,0	09	12,7	0,95	0,26	12	14
	10 *	12,9	1,19	0,33	14	17
	11	13,2	1,44	0,40	17	19
	12	13,7	1,72	0,48	18	21
4,5	09	12,8	1,01	0,28	12	14
	10 *	13,0	1,27	0,35	15	17
	11	13,3	1,53	0,42	17	20
	12	-	-	-	-	-
5,0	09	12,9	1,06	0,29	13	15
	10 *	13,2	1,34	0,37	15	18
	11	13,5	1,62	0,45	18	20
	12	-	-	-	-	-
5,5	09	13,1	1,11	0,31	13	15
	10 *	13,4	1,41	0,39	16	18
	11	13,7	1,70	0,47	18	21
	12	-	-	-	-	-

37AP Performance

Pressure psi	Nozzle	Radius ft.	Flow GPM	Precip In/h	Precip In/h
40	12	-	-	-	-
	13	43	7.3	0.76	0.88
	14*	43	8.4	0.87	1.01
	15	44	9.6	0.96	1.10
50	12	44	7.0	0.70	0.80
	13	44	8.2	0.82	0.94
	14*	45	9.4	0.89	1.03
	15	45	10.8	1.03	1.19
60	12	45	7.7	0.73	0.85
	13	45	9.0	0.86	0.99
	14*	46	10.4	0.95	1.09
	15	46	11.8	1.07	1.24
70	12	46	8.3	0.76	0.87
	13	46	9.8	0.89	1.03
	14*	47	11.3	0.99	1.14
	15	47	12.8	1.12	1.29
80	12	47	8.9	0.78	0.90
	13	47	10.5	0.92	1.06
	14*	48	12.1	1.01	1.17
	15	48	13.7	1.15	1.32

METRIC

Pressure Bars	Nozzle	Radius m	Flow m ³ /h	Flow l/s	Precip mm/h	Precip mm/h
2,8	12	-	-	-	-	-
	13	13,1	1,66	0,46	19	22
	14*	13,1	1,91	0,53	22	26
	15	13,4	2,18	0,61	24	28
3,0	12	-	-	-	-	-
	13	13,2	1,73	0,48	20	23
	14*	13,4	1,99	0,55	22	26
	15	13,5	2,28	0,63	25	29
3,5	12	13,4	1,59	0,44	18	20
	13	13,4	1,87	0,52	21	24
	14*	13,6	2,15	0,60	23	27
	15	13,7	2,45	0,68	26	30
4,0	12	13,7	1,71	0,47	18	21
	13	13,7	2,00	0,55	21	25
	14*	13,9	2,30	0,64	24	28
	15	14,0	2,62	0,73	27	31
4,5	12	13,9	1,82	0,50	19	22
	13	13,9	2,13	0,59	22	26
	14*	14,2	2,45	0,68	24	28
	15	14,2	2,79	0,77	28	32
5,0	12	14,1	1,92	0,53	19	22
	13	14,1	2,26	0,63	23	26
	14*	14,4	2,61	0,72	25	29
	15	14,4	2,95	0,82	28	33
5,5	12	14,3	2,02	0,56	20	23
	13	14,3	2,38	0,66	23	27
	14*	14,6	2,75	0,76	26	30
	15	14,6	3,11	0,86	29	34

27/37/47 Series



47AP/47A/47A-SAM Performance

Pressure psi	Nozzle	■ ▲			
		Radius ft.	Flow GPM	Precip In/h	Precip In/h
60	14	54	10.8	0.71	0.82
	15	55	12.7	0.81	0.93
	16 *	56	14.0	0.86	0.99
	17	57	15.5	0.92	1.06
	18	57	17.6	1.04	1.20
70	14	56	11.7	0.72	0.83
	15	57	13.9	0.82	0.95
	16 *	58	15.2	0.87	1.00
	17	59	17.1	0.95	1.09
	18	59	19.1	1.06	1.22
80	14	57	12.6	0.75	0.86
	15	58	14.9	0.85	0.99
	16 *	59	16.4	0.91	1.05
	17	60	18.6	1.00	1.15
	18	61	20.5	1.06	1.23
90	14	59	13.4	0.74	0.86
	15	60	15.9	0.85	0.98
	16 *	61	17.3	0.90	1.03
	17	62	20.0	1.00	1.16
	18	63	21.8	1.06	1.22
100	14	60	14.2	0.76	0.88
	15	61	16.9	0.87	1.01
	16 *	62	18.3	0.92	1.06
	17	-	-	-	-
	18	-	-	-	-

Pressure Bars	Nozzle	METRIC				
		Radius m	Flow m ³ /h	Flow l/s	Precip mm/h	Precip mm/h
4,1	14	16,5	2,45	0,68	18	21
	15	16,8	2,88	0,80	20	24
	16 *	17,1	3,18	0,88	22	25
	17	17,4	3,52	0,98	23	27
	18	17,4	4,00	1,11	26	31
4,5	14	16,8	2,56	0,71	18	21
	15	17,1	3,02	0,84	21	24
	16 *	17,4	3,33	0,92	22	25
	17	17,7	3,71	1,03	24	27
	18	17,7	4,17	1,16	27	31
5,0	14	17,1	2,70	0,75	18	21
	15	17,4	3,20	0,89	21	24
	16 *	17,7	3,50	0,97	22	26
	17	18,0	3,95	1,10	24	28
	18	18,1	4,40	1,22	27	31
5,5	14	17,4	2,84	0,79	19	22
	15	17,7	3,37	0,93	21	25
	16 *	18,0	3,68	1,02	23	26
	17	18,4	4,20	1,17	25	29
	18	18,6	4,63	1,29	27	31
6,0	14	17,8	2,98	0,83	19	22
	15	18,1	3,54	0,98	22	25
	16 *	18,4	3,86	1,07	23	26
	17	18,7	4,45	1,23	25	29
	18	19,0	4,86	1,35	27	31
6,5	14	18,1	3,12	0,87	19	22
	15	18,4	3,71	1,03	22	25
	16 *	18,7	4,03	1,12	23	27
	17	-	-	-	-	-
	18	-	-	-	-	-
6,9	14	18,3	3,22	0,89	19	22
	15	18,6	3,84	1,07	22	26
	16 *	18,9	4,15	1,15	23	27
	17	-	-	-	-	-
	18	-	-	-	-	-

Precipitation Rates based on half-circle operation.

■ Square spacing based on 50% diameter of throw.

▲ Triangular spacing based on 50% diameter of throw.

* Standard Nozzle Size

Performance data collected in zero wind conditions.

Performance data derived from tests that conform with ASAE Standards; ASAE S398.1.



Specifications

The part-circle pop-up rotor sprinkler shall be a single-nozzle impact drive type, capable of covering a ____ (units) radius at a base pressure of ____ (units) with a discharge rate of ____ (units) and shall have an infinitely adjustable arc of coverage from 20 degrees to 340 degrees.

The sprinkler case shall be constructed of ABS plastic for AP and A-SAM Models and cast iron for A Models. The internal assembly shall be of all brass construction except for the arm spring, bearing spring, bearing washers, bearing guide, outer trip and wiper seal. The rotation of the sprinkler shall be accomplished by a horizontal oscillating Precision Jet (PJ™) arm, actuated by the outlet water stream.

The sprinkler nozzle for models 27 and 37 shall have an adjustable diffuser pin for distance and distribution control. The nozzle shall have an outlet trajectory of 25 degrees from the horizontal for models 27 and 37, and 23 degrees from the horizontal for model 47A, AP and A-SAM sprinklers.

Pop-up height shall be 2⁵/₁₆" (5,9 cm). The sprinkler shall have a 1" (26/34) FPT or BSP threaded inlet.

The sprinkler shall be so constructed that all internal parts, including inlet screen, are accessible through the top of the sprinkler case without disturbing the soil around the case. The three internal assemblies of all models available shall be interchangeable in the same case.

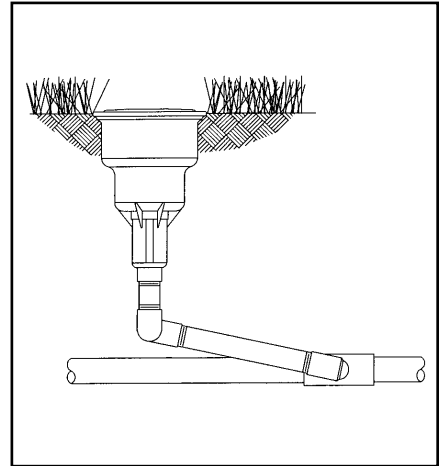
The sprinkler shall have a rubber cover (RC), vandal-resistant cover screws (VRCS), and locking friction collars (LFC) where specified.

47A-SAM Part-Circle Stopamatic® Pop-up Rotor Sprinkler

The sprinkler case shall be constructed of heavy-duty plastic.

The sprinkler shall be equipped with an internal Stopamatic valve assembly in the lower portion of the case. This valve shall be spring-loaded with a stainless steel spring and shall automatically close completely when the pressure drops to 15 feet (4,5 m) of head (approximately 6.5 psi or 0,4 Bars) to prevent drainage of the water in the piping when the system is not in operation.

The sprinkler shall be as manufactured by Rain Bird Sprinkler Mfg. Corp., Glendora, California.



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