I-90 ADV & 36V Nozzle Installation

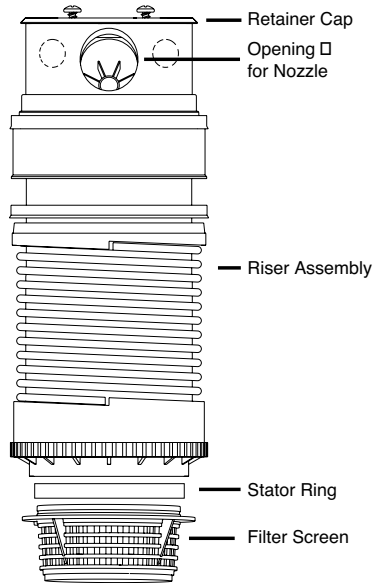
Caution! The riser assembly is under spring tension. Eye protection should be worn and proper procedures followed when servicing this product.

Tools needed: *Phillips-head screwdriver, needle-nose pliers.*

Preparation

Unscrew the body cap from the body, then withdraw the riser from the body. Compress riser spring and seal assembly by pressing downward to expose nozzles. Hold compressed assembly in this position firmly with one hand while servicing with the other hand.

I-90 Riser Assembly



Nozzle Removal and Replacement

Remove the logo cap, which is retained by a central Phillips screw. The nozzle is retained in the nozzle housing by a setscrew. To remove the nozzle, back out the setscrew using the hex key on the Hunter wrench so that the nozzle will clear. Grasp the nozzle with pliers and pull to remove.

Insert the replacement nozzle in the housing. Press firmly to fully seat the nozzle so that it will clear the retaining setscrew. Using the hex key on the Hunter wrench, turn the setscrew down to retain the nozzle.

Note: When changing from one nozzle number to another, check the stator for proper setting before returning the head to service.

Stator Ring Adjustment

Note: When installing nozzles you must also correctly set the stator to ensure proper speed of rotation. Failure to correctly set the stator may cause a non-rotation condition.

The stator is located in the base of the riser assembly. First remove the riser assembly from the body. Then remove the filter screen to access the stator.

The stator has a protruding tab that aligns with a pointer. Remove the stator by grasping this tab with pliers and pulling. Replace the stator so that its pointer is set to the number agreeing with the nozzle installed. Refer to the Nozzle / Stator Chart below for nozzle and stator settings.

Visually check for proper assembly of nozzles, setscrews and stator. Reverse the preparation procedure to reassemble the unit.

Nozzle / Stator Chart

Nozzle Number	Stator Position
25	25
33	33
38	38
43	43
48	48
53	53
63	63
73	73

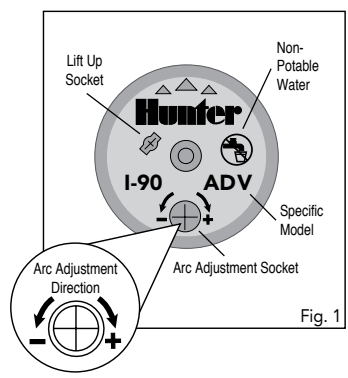
Precipitation Rate Adjustment

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.

I-90 ADV Only – Arc Adjustment

Adjustable heads are preset to approximately 180°. Sprinklers may be adjusted with water on or off. It is recommended that initial adjustment be made before installation.

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.

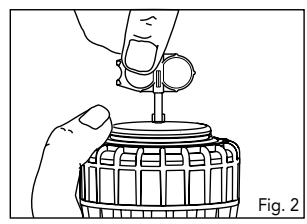


To Increase Arc:

1. Insert the plastic key end of the Hunter wrench into the adjustment socket (Fig. 1 & 2).
2. While holding the nozzle turret at the right stop, turn the wrench clockwise. Each full 360° turn of the wrench increases the arc 45°.
3. Adjust to any arc between 40° and 360°. 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 Arc:

1. Insert the key end of the Hunter wrench into the adjustment socket (Fig. 1 & 2).
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 45°.
3. Adjust to any arc between 40° and 360°. 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.

I-90 ADV Only – Aligning the Right (Fixed) Side of the Arc

If the right side of the arc is not properly aligned, the result may be a wet walkway or a dry turf area. The right side can easily be realigned. One way to realign the right stop is to unscrew the body cap counterclockwise and remove the internal assembly from the body. Once removed, rotate the nozzle turret to the right stop, insert the internal assembly back into the body with the nozzle aligned to the right side of the area you want irrigated. At this point you realigned the right arc stop, and you can adjust the left arc to an appropriate setting.

Performance Charts

I-90-ADV Nozzle Performance Data

Nozzle	Pressure PSI	Radius ft.	Flow GPM	Precip in/hr ■	Precip in/hr ▲
25 Lt. Blue NEW	60	63	22.0	1.07	1.23
	70	64	24.9	1.17	1.35
	80	65	27.5	1.25	1.45
	90	67	28.8	1.24	1.43
	100	68	30.6	1.27	1.47
33 Gray	60	67	30.7	1.32	1.52
	70	67	33.1	1.42	1.64
	80	68	35.5	1.48	1.71
	90	69	37.7	1.52	1.76
	100	70	39.8	1.56	1.81
38 Red	60	69	34.0	1.37	1.59
	70	70	36.9	1.45	1.67
	80	72	39.8	1.48	1.71
	90	73	42.3	1.53	1.76
	100	75	44.1	1.51	1.74
43 Dk. Brown	60	70	38.7	1.52	1.76
	70	71	42.0	1.60	1.85
	80	72	44.5	1.65	1.91
	90	73	47.6	1.72	1.99
	100	73	48.3	1.74	2.01
48 Dk. Green	70	75	47.0	1.61	1.86
	80	77	50.2	1.63	1.88
	90	79	53.3	1.64	1.90
	100	81	56.0	1.64	1.90
53 Dk. Blue*	70	79	48.5	1.50	1.73
	80	81	53.4	1.57	1.81
	90	85	57.0	1.52	1.75
	100	86	59.5	1.55	1.79
63 Black	70	84	60.9	1.66	1.92
	80	86	63.8	1.66	1.92
	90	88	66.5	1.65	1.91
	100	90	69.8	1.66	1.92
73 Orange NEW	80	90	66.9	1.59	1.84
	90	92	69.7	1.59	1.83
	100	95	72.8	1.55	1.79
	110	98	76.2	1.53	1.76

I-90-36V Nozzle Performance Data

Nozzle	Pressure PSI	Radius ft.	Flow GPM	Precip in/hr ■	Precip in/hr ▲
25 Lt. Blue NEW	60	69	25.5	0.52	0.60
	70	71	27.8	0.53	0.61
	80	73	30.2	0.55	0.63
	90	75	31.7	0.54	0.63
	100	77	33.9	0.55	0.64
33 Gray	60	71	29.8	0.57	0.66
	70	74	32.2	0.57	0.65
	80	76	34.4	0.57	0.66
	90	78	36.8	0.58	0.67
	100	80	38.6	0.58	0.67
38 Red	60	74	33.3	0.59	0.68
	70	77	36.1	0.59	0.68
	80	79	38.4	0.59	0.68
	90	80	40.9	0.62	0.71
	100	82	42.8	0.61	0.71
43 Dk. Brown	60	77	38.1	0.62	0.71
	70	79	40.9	0.63	0.73
	80	82	43.9	0.63	0.73
	90	83	46.5	0.65	0.75
	100	84	48.5	0.66	0.76
48 Dk. Green	70	82	46.3	0.66	0.77
	80	86	49.6	0.65	0.75
	90	89	52.5	0.64	0.74
	100	90	54.8	0.65	0.75
53 Dk. Blue*	70	85	50.5	0.67	0.78
	80	88	53.5	0.66	0.77
	90	90	57.4	0.68	0.79
	100	92	59.5	0.68	0.78
63 Black	70	90	60.6	0.72	0.83
	80	92	63.2	0.72	0.83
	90	94	65.9	0.72	0.83
	100	96	69.4	0.72	0.84
73 Orange NEW	80	95	72.1	0.77	0.89
	90	97	75.9	0.78	0.90
	100	99	79.5	0.78	0.90
	110	101	83.0	0.78	0.90

I-90-ADV Nozzle Performance Data – Metric

Nozzle	Pressure Bar	Pressure kPa	Radius m	Flow m^3/hr	Flow l/min	Precip mm/hr ■	Precip mm/hr ▲
25 Lt. Blue NEW	4.0	400	18.9	4.97	82.8	28	32
	4.5	450	19.2	5.34	89.0	29	33
	5.0	500	19.5	5.70	95.0	30	35
	5.5	550	19.8	6.10	101.6	31	36
	6.0	600	20.1	6.43	107.2	32	37
	6.5	650	20.4	6.76	112.7	32	37
	7.0	700	20.7	7.08	117.9	33	38
33 Gray	4.0	400	20.1	6.84	114.1	34	39
	4.5	450	20.4	7.25	120.9	35	40
	5.0	500	20.4	7.64	127.4	37	42
	5.5	550	20.7	8.06	134.4	38	43
	6.0	600	20.7	8.42	140.3	39	45
	6.5	650	21.0	8.75	145.9	40	46
	7.0	700	21.3	9.08	151.3	40	46
38 Red	4.0	400	20.7	7.61	126.8	35	41
	4.5	450	21.0	8.07	134.5	37	42
	5.0	500	21.3	8.51	141.9	37	43
	5.5	550	21.9	8.99	149.8	37	43
	6.0	600	22.3	9.39	156.5	38	44
	6.5	650	22.6	9.77	162.9	38	44
	7.0	700	22.9	10.14	169.0	39	45
43 Dk. Brown	4.0	400	21.0	8.72	145.4	39	46
	4.5	450	21.3	9.18	153.0	40	47
	5.0	500	21.6	9.62	160.2	41	47
	5.5	550	21.9	10.08	168.0	42	48
	6.0	600	21.9	10.47	174.5	43	50
	6.5	650	22.3	10.84	180.7	44	51
	7.0	700	22.3	11.20	186.6	45	52
48 Dk. Green	5.0	500	22.9	10.83	180.4	41	48
	5.5	550	23.5	11.41	190.1	41	48
	6.0	600	23.8	11.89	198.1	42	49
	6.5	650	24.1	12.35	205.8	43	49
	7.0	700	24.7	12.79	213.2	42	48
53 Dk. Blue*	5.0	500	24.1	11.29	188.2	39	45
	5.5	550	24.7	12.00	200.0	39	45
	6.0	600	25.6	12.59	209.9	38	44
	6.5	650	26.2	13.17	219.4	38	44
	7.0	700	26.2	13.72	228.7	40	46
63 Black	5.0	500	25.6	13.95	232.5	43	49
	5.5	550	26.2	14.52	241.9	42	49
	6.0	600	26.5	14.98	249.7	43	49
	6.5	650	26.8	15.43	257.1	43	50
	7.0	700	27.4	15.85	264.2	42	49
73 Orange NEW	5.5	550	27.4	15.22	253.7	40	47
	6.0	600	27.7	15.69	261.4	41	47
	6.5	650	28.3	16.13	268.8	40	46
	7.0	700	29.0	16.55	275.8	39	46
	7.5	750	29.9	17.01	283.5	38	44

I-90-36V Nozzle Performance Data – Metric

Nozzle	Pressure Bar	Pressure kPa	Radius m	Flow m^3/hr	Flow l/min	Precip mm/hr ■	Precip mm/hr ▲
25 Lt. Blue NEW	4.0	400	20.7	5.70	94.9	13	15
	4.5	450	21.0	6.06	101.1	14	16
	5.0	500	21.6	6.42	106.9	14	16
	5.5	550	22.3	6.80	113.3	14	16
	6.0	600	22.6	7.12	118.7	14	16
	6.5	650	22.9	7.43	123.9	14	16
	7.0	700	23.5	7.73	128.9	14	16
33 Gray	4.0	400	21.3	6.65	110.8	15	17
	4.5	450	21.9	7.05	117.4	15	17
	5.0	500	22.6	7.43	123.7	15	17
	5.5	550	23.2	7.84	130.6	15	17
	6.0	600	23.5	8.18	136.3	15	17
	6.5	650	23.8	8.51	141.8	15	17
	7.0	700	24.4	8.83	147.1	15	17
38 Red	4.0	400	22.3	7.45	124.2	15	17
	4.5	450	22.9	7.89	131.4	15	17
	5.0	500	23.8	8.29	138.2	15	17
	5.5	550	24.1	8.74	145.6	15	17
	6.0	600	24.1	9.10	151.7	16	18
	6.5	650	24.4	9.46	157.6	16	18
	7.0	700	25.0	9.80	163.3	16	18
43 Dk. Brown	4.0	400	23.2	8.51	141.9	16	18
	4.5	450	23.8	8.99	149.9	16	18
	5.0	500	24.1	9.45	157.4	16	19
	5.5	550	25.0	9.94	165.6	16	18
	6.0	600	25.0	10.35	172.4	17	19
	6.5	650	25.3	10.74	178.9	17	19
	7.0	700	25.6	11.11	185.2	17	20
48 Dk. Green	5.0	500	25.0	10.69	178.1	17	20
	5.5	550	26.2	11.24	187.2	16	19
	6.0	600	26.8	11.69	194.9	16	19
	6.5	650	27.1	12.13	202.1	16	19
	7.0	700	27.4	12.55	209.2	17	19
53 Dk. Blue*	5.0	500	25.9	11.62	193.6	17	20
	5.5	550	26.8	12.21	203.6	17	20
	6.0	600	27.1	12.71	211.8	17	20
	6.5	650	27.7	13.19	219.7	17	20
	7.0	700	28.0	13.64	227.4	17	20
63 Black	5.0	500	27.4	13.85	230.8	18	21
	5.5	550	28.0	14.41	240.2	18	21
	6.0	600	28.3	14.87	247.9	19	21
	6.5	650	28.7	15.31	255.2	19	22
	7.0	700	29.3	15.73	262.2	18	21
73 Orange NEW	5.5	550	29.0	16.51	275.2	20	23
	6.0	600	29.3	17.05	284.1	20	23
	6.5	650	29.6	17.56	292.6	20	23
	7.0	700	30.2	18.05	300.7	20	23
	7.5	750	30.8	18.58	309.6	20	23

* Factory-installed nozzle

Note: All ADV precipitation rates are calculated for 180-degree operation. For the precipitation rate for a 360-degree sprinkler, divide by 2. Precipitation rates for the 36V model are calculated at 360 degrees.

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