

Falcon® 6504 Rotors

Technical Specifications



With the Falcon 6504 rotor you can have it all—superior distribution, reliability and durability! Rain Curtain™ nozzles maximize performance and coverage. A multi-function wiper seal and tapered riser keep the stem clear of debris, providing long-term protection. Plus, heavy-duty construction makes the Falcon 6504 one of the toughest rotors in the field. Available in full- and part-circle models with optional stainless steel riser, the Falcon 6504 rotor is ideal for large turf sites such as parks, athletic fields, cemeteries, schools and commercial applications.

FEATURES:

- Stainless steel riser option helps deter vandalism on public turf areas
- Five-year trade warranty
- Easy arc adjustment (part-circle model) through top of rotor from 40° to 360°
- Water-lubricated gear drive for reliable, durable rotation
- Heavy-duty stainless steel retract spring ensures positive pop-down
- Standard black rubber cover or optional purple rubber cover for non-potable water
- Removable Seal-A-Matic™ (SAM) check device prevents puddling and erosion caused by low-head drainage
- Eight color-coded Rain Curtain nozzles offer greater design flexibility
- Rain Curtain nozzles have three ports for optimal long-range, mid-range, and close-in watering for green grass even in the heat of summer
- Nozzles are interchangeable from the front with no special tools
- Small 2" (5.1 cm) exposed diameter reduces possibility of injury in play areas
- Patented, pressure-activated wiper seal and tapered riser stem on both plastic and stainless steel models protect internals from debris to ensure positive pop-up and retraction
- 4" (10.2 cm) pop-up height to center line of nozzle clears taller turfgrass
- Stainless steel trip gears ensure long-term durability

OPERATING RANGE:

Precipitation Rate

0.37 to 1.26 in/hr (9 to 32 mm/h)

Flow Rate

2.9 to 21.7 gpm (0.66 to 4.93 m³/h;
10.8 to 82.2 l/m)

Radius

37 to 65 ft (11.3 to 19.8 m)

Pressure

30 to 90 psi (2.1 to 6.2 bar)

SPECIFICATIONS:

- 1" female NPT or BSP threaded inlet
- SAM check device holds up to 10 ft (3.1 m) of head
- Nozzle outlet trajectory is 25°

DIMENSIONS:

Exposed Surface Diameter

2" (5.1 cm)

Overall Height

8½" (21.6 cm)

Pop-up Height

4" (10.2 cm)

Note: Pop-up height is measured from cover to center of primary nozzle port.

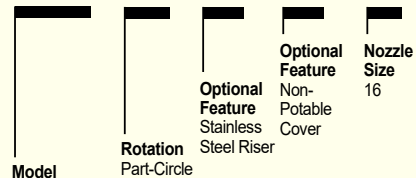
Overall body height is measured popped down.

MODELS:

- 6504-FC: Full-circle
- 6504-PC: Part-circle
- 6504-FC-NP: Full-circle, non-potable cover
- 6504-PC-NP: Part-circle,

How To Specify

6504 - PC - SS - NP - 16



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

- 6504-FC-SS: Full-circle, stainless steel
- 6504-PC-SS: Part-circle, stainless steel
- 6504-FC-SS-NP: Full-circle, stainless steel, non-potable cover
- 6504-PC-SS-NP: Part-circle, stainless steel, non-potable cover

Standard Rubber Cover with 2" Exposed Diameter

For enhanced safety on playing areas

Tapered Riser Stem (All Models)

Ensures positive pop-up and retraction

Stainless Steel Trip Gears

For long-term strength and durability

Self-Adjusting Stator

Automatically adjusts when nozzle is changed

Nozzle Retention Screw

Allows up to 25% radius reduction without changing nozzles

Interchangeable Color-Coded Nozzles

For superior water distribution

Patented, Pressure-Activated Wiper Seal

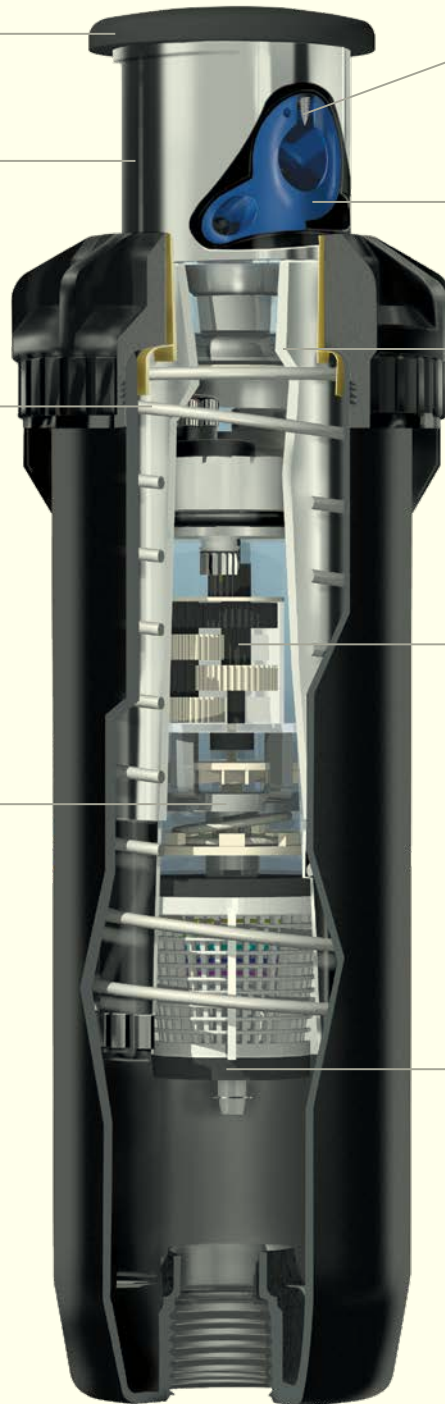
Protects the internals from debris

Water Lubricated Gear Drive

For reliable rotation

Seal-A-Matic™ (SAM) Check Device

Prevents puddling/erosion



FALCON 6504 NOZZLE PERFORMANCE

PRESSURE (PSI)	NOZZLE	RADIUS (FT)	FLOW (GPM)	■	▲
				PRECIP (IN/H)	PRECIP (IN/H)
30	● 04	39	2.9	0.37	0.42
	● 06	43	4.2	0.44	0.50
40	● 04	41	3.3	0.38	0.44
	● 06	45	4.9	0.47	0.54
	● 08	49	6.6	0.53	0.61
	● 10	51	8.1	0.60	0.69
	● 12	53	9.7	0.66	0.77
	● 14	55	11.3	0.72	0.83
	● 16	55	12.6	0.80	0.93
50	● 18	59	13.7	0.76	0.87
	● 04	41	3.7	0.42	0.49
	● 06	49	5.5	0.44	0.51
	● 08	51	7.4	0.55	0.63
	● 10	53	9.1	0.62	0.72
	● 12	55	11.0	0.70	0.81
	● 14	59	12.7	0.70	0.81
60	● 16	61	14.3	0.74	0.85
	● 18	59	15.4	0.85	0.98
	● 04	41	4.0	0.46	0.53
	● 06	47	6.0	0.52	0.60
	● 08	51	8.2	0.61	0.70
	● 10	55	10.0	0.64	0.73
	● 12	57	12.2	0.72	0.83
70	● 14	61	14.0	0.72	0.84
	● 16	63	15.7	0.76	0.88
	● 18	63	17.1	0.83	0.96
	● 04	41	4.4	0.50	0.58
	● 06	49	6.3	0.51	0.58
	● 08	51	8.9	0.66	0.76
	● 10	57	10.8	0.64	0.74
80	● 12	59	13.2	0.73	0.84
	● 14	61	15.2	0.79	0.91
	● 16	63	16.9	0.82	0.95
	● 18	65	18.3	0.83	0.96
	● 04	43	4.6	0.48	0.55
	● 06	49	6.9	0.55	0.64
	● 08	53	9.4	0.64	0.74
90	● 10	55	11.6	0.74	0.85
	● 12	61	14.0	0.72	0.84
	● 14	61	16.2	0.84	0.97
	● 16	63	18.1	0.88	1.01
	● 18	65	19.6	0.89	1.03
	● 04	43	4.6	0.48	0.55
	● 06	49	6.9	0.55	0.64
● 08	53	9.4	0.64	0.74	
● 10	55	11.6	0.74	0.85	
● 12	61	14.0	0.72	0.84	
● 14	61	16.2	0.84	0.97	
● 16	63	18.1	0.88	1.01	
● 18	65	19.6	0.89	1.03	
● 04	43	4.6	0.48	0.55	
● 06	49	6.9	0.55	0.64	
● 08	53	9.4	0.64	0.74	
● 10	55	11.6	0.74	0.85	
● 12	61	14.0	0.72	0.84	
● 14	61	16.2	0.84	0.97	
● 16	63	18.1	0.88	1.01	
● 18	65	19.6	0.89	1.03	
● 04	43	4.6	0.48	0.55	
● 06	49	6.9	0.55	0.64	
● 08	53	9.4	0.64	0.74	
● 10	55	11.6	0.74	0.85	
● 12	61	14.0	0.72	0.84	
● 14	61	16.2	0.84	0.97	
● 16	63	18.1	0.88	1.01	
● 18	65	19.6	0.89	1.03	
● 04	43	4.6	0.48	0.55	
● 06	49	6.9	0.55	0.64	
● 08	53	9.4	0.64	0.74	
● 10	55	11.6	0.74	0.85	
● 12	61	14.0	0.72	0.84	
● 14	61	16.2	0.84	0.97	
● 16	63	18.1	0.88	1.01	
● 18	65	19.6	0.89	1.03	
● 04	43	4.6	0.48	0.55	
● 06	49	6.9	0.55	0.64	
● 08	53	9.4	0.64	0.74	
● 10	55	11.6	0.74	0.85	
● 12	61	14.0	0.72	0.84	
● 14	61	16.2	0.84	0.97	
● 16	63	18.1	0.88	1.01	
● 18	65	19.6	0.89	1.03	
● 04	43	4.6	0.48	0.55	
● 06	49	6.9	0.55	0.64	
● 08	53	9.4	0.64	0.74	
● 10	55	11.6	0.74	0.85	
● 12	61	14.0	0.72	0.84	
● 14	61	16.2	0.84	0.97	
● 16	63	18.1	0.88	1.01	
● 18	65	19.6	0.89	1.03	
● 04	43	4.6	0.48	0.55	
● 06	49	6.9	0.55	0.64	
● 08	53	9.4	0.64	0.74	
● 10	55	11.6	0.74	0.85	
● 12	61	14.0	0.72	0.84	
● 14	61	16.2	0.84	0.97	
● 16	63	18.1	0.88	1.01	
● 18	65	19.6	0.89	1.03	
● 04	43	4.6	0.48	0.55	
● 06	49	6.9	0.55	0.64	
● 08	53	9.4	0.64	0.74	
● 10	55	11.6	0.74	0.85	
● 12	61	14.0	0.72	0.84	
● 14	61	16.2	0.84	0.97	
● 16	63	18.1	0.88	1.01	
● 18	65	19.6	0.89	1.03	

Precipitation rates based on half-circle operation
 ■ Square spacing based on 50% diameter of throw
 ▲ Triangular spacing based on 50% diameter of throw
 Performance data collected in zero wind conditions
 Performance data derived from tests that conform with ASAE Standards; ASAE S398.1.

FALCON 6504 NOZZLE PERFORMANCE METRIC

PRESSURE (BAR)	NOZZLE	RADIUS (M)	FLOW (M ³ /H)	FLOW (L/M)	■	▲
					PRECIP (MM/H)	PRECIP (MM/H)
2.1	● 04	11.9	0.66	10.98	9	11
	● 06	13.1	0.95	15.90	11	13
2.5	● 04	12.3	0.72	11.92	10	11
	● 06	13.5	1.05	17.56	12	13
	● 08	14.9	1.50	25.20	13	16
	● 10	15.5	1.84	30.60	15	18
	● 12	16.2	2.20	36.60	17	19
	● 14	16.8	2.57	42.60	18	21
	● 16	16.8	2.86	47.40	20	24
3.0	● 18	18.0	3.11	51.60	19	22
	● 04	12.5	0.78	13.02	10	12
	● 06	14.1	1.16	19.34	12	13
	● 08	15.1	1.56	26.04	14	16
	● 10	15.8	1.92	31.99	15	18
	● 12	16.4	2.31	38.44	17	20
	● 14	17.2	2.68	44.63	18	21
3.5	● 16	17.4	3.00	49.95	20	23
	● 18	18.0	3.25	54.11	20	23
	● 04	12.5	0.85	14.09	11	13
	● 06	14.9	1.26	20.96	11	13
	● 08	15.5	1.69	28.24	14	16
	● 10	16.2	2.08	34.70	16	18
	● 12	16.8	2.52	41.98	18	21
4.0	● 14	18.0	2.91	48.45	18	21
	● 16	18.6	3.27	54.53	19	22
	● 18	18.1	3.53	58.78	22	25
	● 04	12.5	0.89	14.91	11	13
	● 06	14.4	1.34	22.33	13	15
	● 08	15.5	1.83	30.44	15	17
	● 10	16.6	2.23	37.17	16	19
4.5	● 12	17.3	2.72	45.28	18	21
	● 14	18.5	3.12	52.01	18	21
	● 16	19.1	3.50	58.37	19	22
	● 18	19.0	3.81	63.45	21	24
	● 04	12.5	0.96	15.94	12	14
	● 06	14.6	1.40	22.33	13	15
	● 08	15.5	1.95	32.43	16	19
5.0	● 10	17.1	2.37	39.44	16	19
	● 12	17.7	2.89	48.17	18	21
	● 14	18.6	3.32	55.38	19	22
	● 16	19.2	3.71	61.82	20	23
	● 18	19.5	4.03	67.12	21	24
	● 04	12.7	1.01	16.84	13	15
	● 06	14.9	1.47	22.33	13	15
5.5	● 08	15.7	2.05	34.16	17	19
	● 10	17.2	2.50	41.64	17	19
	● 12	18.1	3.04	50.72	19	21
	● 14	18.6	3.51	58.49	20	23
	● 16	19.2	3.91	65.11	21	24
	● 18	19.8	4.23	70.51	22	25
	● 04	13.1	1.04	17.39	12	14
6.0	● 06	14.9	1.56	25.79	14	16
	● 08	16.1	2.13	35.54	16	19
	● 10	16.8	2.63	43.84	19	22
	● 12	18.6	3.18	52.92	18	21
	● 14	18.6	3.67	61.23	21	25
	● 16	19.2	4.10	68.40	22	26
	● 18	19.8	4.44	74.07	23	26
● 04	13.1	1.04	17.39	12	14	
6.2	● 18	19.8	4.79	79.77	24	28
	● 18	19.8	4.93	82.13	25	29

HIGH-SPEED FALCON 6504 NOZZLE PERFORMANCE

PRESSURE (PSI)	NOZZLE	RADIUS (FT)	FLOW (GPM)	■	▲
				PRECIP (IN/H)	PRECIP (IN/H)
30	● 04	37	3.0	0.42	0.49
	● 06	39	4.3	0.54	0.63
40	● 04	41	3.5	0.40	0.46
	● 06	43	6.0	0.62	0.72
	● 08	47	6.6	0.58	0.66
	● 10	47	8.1	0.71	0.82
	● 12	49	9.9	0.79	0.92
	● 14	53	11.4	0.78	0.90
	● 16	51	12.6	0.93	1.08
50	● 18	53	13.9	0.95	1.10
	● 04	41	3.7	0.42	0.49
	● 06	45	5.6	0.53	0.62
	● 08	49	7.5	0.60	0.69
	● 10	49	9.2	0.74	0.85
	● 12	53	11.2	0.77	0.89
60	● 14	53	12.9	0.88	1.02
	● 16	53	14.3	0.98	1.13
	● 18	55	15.6	0.99	1.15
	● 04	41	4.2	0.48	0.56
	● 06	45	6.2	0.59	0.68
	● 08	47	8.3	0.72	0.84
	● 10	49	10.2	0.82	0.94
70	● 12	53	12.4	0.85	0.98
	● 14	53	14.2	0.97	1.12
	● 16	55	15.7	1.00	1.15
	● 18	59	17.2	0.95	1.10
	● 04	41	4.6	0.53	0.61
	● 06	43	6.7	0.70	0.81
	● 08	49	9.0	0.72	0.83
80	● 10	51	11.1	0.82	0.95
	● 12	55	13.5	0.86	0.99
	● 14	53	15.3	1.05	1.21
	● 16	57	17.1	1.01	1.17
	● 18	59	18.6	1.03	1.19
	● 04	39	4.9	0.62	0.72
	● 06	43	7.1	0.74	0.85
90	● 08	51	9.7	0.72	0.83
	● 10	49	11.9	0.95	1.10
	● 12	55	14.4	0.92	1.06
	● 14	53	16.5	1.13	1.31
	● 16	59	18.4	1.02	1.18
	● 18	59	20.0	1.11	1.28
	● 18	61	21.3	1.10	1.27

Precipitation rates based on half-circle operation
 ■ Square spacing based on 50% diameter of throw
 ▲ Triangular spacing based on 50% diameter of throw
 Performance data collected in zero wind conditions
 Performance data derived from tests that conform with ASAE Standards; ASAE S398.1.

HIGH-SPEED FALCON 6504 NOZZLE PERFORMANCE METRIC

PRESSURE (BAR)	NOZZLE	RADIUS (M)	FLOW (M ³ /H)	FLOW (L/M)	■	▲
					PRECIP (MM/H)	PRECIP (MM/H)
2.1	● 04	11.3	0.68	11.35	11	12
	● 06	11.9	0.98	15.90	14	16
2.5	● 04	12.0	0.75	12.54	10	12
	● 06	12.7	1.22	20.16	15	18
	● 08	14.2	1.49	25.20	15	17
	● 10	14.2	1.83	30.60	18	21
	● 12	14.8	2.24	37.20	20	24
	● 14	16.0	2.58	43.20	20	23
	● 16	15.4	2.85	47.40	24	28
3.0	● 18	16.0	3.15	52.80	24	28
	● 04	12.5	0.81	13.51	10	12
	● 06	13.3	1.33	22.18	15	17
	● 08	14.5	1.57	26.18	15	17
	● 10	14.5	1.93	32.12	18	21
	● 12	15.4	2.35	39.20	20	23
3.5	● 14	16.2	2.71	48.09	21	24
	● 16	15.8	3.00	49.95	24	28
	● 18	16.4	3.29	54.87	25	28
	● 04	12.5	0.85	14.15	11	13
	● 06	13.7	1.28	21.37	14	16
	● 08	14.9	1.72	28.62	16	18
	● 10	14.9	2.11	35.11	19	22
4.0	● 12	16.2	2.56	42.74	20	23
	● 14	16.2	2.95	49.20	23	26
	● 16	16.2	3.27	54.53	25	29
	● 18	16.9	3.57	59.51	25	29
	● 04	12.5	0.93	15.52	12	14
	● 06	13.7	1.38	23.02	15	17
	● 08	14.4	1.85	30.81	18	21
4.5	● 10	14.9	2.27	37.86	20	24
	● 12	16.2	2.76	46.03	21	24
	● 14	16.2	3.17	52.77	24	28
	● 16	16.6	3.50	58.37	25	29
	● 18	17.7	3.83	63.90	24	28
	● 04	12.5	1.00	16.69	13	15
	● 06	13.4	1.48	24.46	16	19
5.0	● 08	14.6	1.97	32.81	18	21
	● 10	15.3	2.42	40.40	21	24
	● 12	16.5	2.95	49.13	22	25
	● 14	16.2	3.36	55.94	26	30
	● 16	17.1	3.73	62.22	26	30
	● 18	18.0	4.07	67.89	25	29
	● 04	12.3	1.06	17.70	14	16
5.5	● 06	13.1	1.56	25.74	18	21
	● 08	15.1	2.08	34.73	18	21
	● 10	15.4	2.57	42.78	22	25
	● 12	16.8	3.12	51.96	22	26
	● 14	16.2	3.54	59.06	27	31
	● 16	17.5	3.96	65.96	26	30
	● 18	18.0	4.30	71.74	27	31
6.0	● 04	11.9	1.11	18.52	16	18
	● 06	13.1	1.61	26.84	19	22
	● 08	15.5	2.20	36.65	18	21
	● 10	14.9	2.70	44.97	24	28
	● 12	16.8	3.27	54.43	23	27
	● 14	16.2	3.74	62.35	29	33
	● 16	18.0	4.17	69.53	26	30
6.2	● 18	18.0	4.53	75.58	28	32
	● 18	18.4	4.75	79.16	28	32
● 18	18.6	4.84	80.62	28	32	

SPECIFICATIONS:

The full- or part-circle sprinkler shall be a single stream, water lubricated, gear drive type capable of covering a _____ foot (meter) radius at a base pressure of _____ pounds per square inch (Bars) with a discharge rate of _____ gallons per minute (l/s, m³/h). The part-circle sprinkler shall have adjustable arc coverage of 40° to 360°. Arc adjustment can be performed with or without the rotor in operation and shall require only a flat blade screwdriver. The sprinkler shall be capable of full-circle (360°) operation in either the single direction mode (FC) or the bi-directional mode (PC). The sprinkler shall have a rotating nozzle turret independent of the riser stem. The portion of the riser stem that is in contact with the wiper seal shall be non-rotating.

The sprinkler shall have a pressure activated, multi-function, soft elastomeric wiper seal that will clean debris from the pop-up stem as it retracts. This wiper seal shall prevent the sprinkler from sticking in the up position, and be capable of sealing the sprinkler riser stem to the sprinkler cap under normal operating pressures. The sprinkler shall have a tapered riser stem that will assist in the flushing mode of the sprinkler as it pops-up, as well as when it pops-down. The tapered stem shall seal positively against the multi-function wiper seal to assure no flow-by when fully activated.

The sprinkler shall have a screen attached to the drive housing to filter inlet water, protect the drive from clogging, and simplify its removal for cleaning and flushing of the system. The sprinkler body shall have a double-wall construction 1" female (NPT or BSP) bottom inlet. The sprinkler shall have a standard rubber cover which designates the full-circle sprinkler from the top, as well

as designates each adjustment opening from the top. The sprinkler shall have a front-load nozzle assembly which will allow the nozzle to be installed without a stator bushing change. The sprinkler shall have eight color-coded nozzles. All but the #4 and #6 nozzle shall have three ports for optimal close-in, mid-range, and long-range water distribution. The sprinkler shall have a stainless steel adjusting screw capable of reducing the radius up to 25%. The angle of trajectory shall be 25° from horizontal.

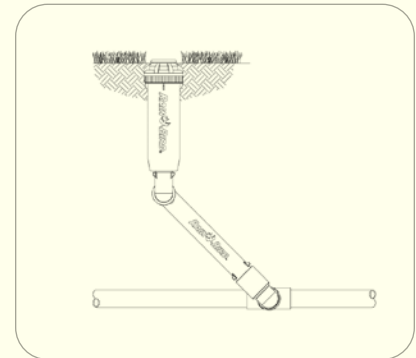
The sprinkler shall have a strong stainless steel retract spring for positive pop-down. The sprinkler shall have a standard Seal-A-Matic (SAM) device capable of holding up to 10 ft (3.1 m) of head. Pop-up height as measured from the top of the cover to the centerline of the nozzle orifice shall be 4 in (10.2 cm). The sprinkler's overall height shall be 8½ in (21.6 cm) and the diameter shall be 2 in (5.1 cm).

Optional Feature Specifications**Non-Potable Rubber Cover: 6504-FC-NP, 6504-PC-NP**

When so indicated on the design, the rotor shall have a purple rubber cover to indicate to the user that non-potable water is being used. There shall be no difference between the black and purple covers except for the color.

Stainless Steel Riser Stem: 6504-FC-SS, 6504-PC-SS

When so indicated on the design, the rotor shall have a stainless steel covered nozzle turret and riser stem. The riser stem shall be tapered and conform to the standard plastic riser stem in all other ways.

**Rain Bird Corporation**

6991 E. Southpoint Road
Tucson, AZ 85756
Phone: (520) 741-6100
Fax: (520) 741-6522

Rain Bird Corporation

970 West Sierra Madre Avenue
Azusa, CA 91702
Phone: (626) 812-3400
Fax: (626) 812-3411