



EAGLE™ Series Rotors





Breakthrough Technology That Won't Break Down

The EAGLE™ Gear-drive Rotors from Rain Bird prove that advanced technology can have practical applications. EAGLE Rotors are designed to work right out of the box and keep on working. Closed-case EAGLE Rotors have become the choice for golf course professionals who demand superior reliability, debris-resistance, labor-saving maintenance, uniform water distribution and versatility.

The complete family of EAGLE 351B, 500, 700, 900, 1100 and Wireless Series Rotors offer radius ranges from 18 to 115 feet (5,5 m to 35,1 m) and are designed with the features that allow unquestioned performance in meeting the rigorous demands of any golf course layout.

Closed-Case Provides Proven Debris-Resistance

True closed-case construction of EAGLE Rotors extends the life of the rotor by protecting the motor from debris, outside elements and environmental changes. The industry's only self-flushing mode at pop-up and pop-down adds another barrier to debris that is crucial in fine sand and silty soil types. The closed-case design also permits installation to grade.



Top-Serviceable Features Simplify Maintenance

EAGLE™ Rotors are the most durable and easy to maintain thanks to an integrated Top-Serviceable Rock Screen™ and Replaceable Valve Seat. This patented feature allows for the removal of debris and the replacement of the valve seat without flushing or digging.



By simply removing the snap-ring on the top of the rotor, you can quickly access the internal assembly and valve—with no digging. Pressure regulation and arc adjustment can be made from the top using only a screwdriver.



Top Snap-Ring



Top-Adjustable Part-Circle Arc Setting



Top-Adjustable Pressure Regulator

EAGLE™ Rotor Family Matrix

Configuration:	351B	500/550	700/750	900/950	1100/1150
Electric		X	X	X	X
SAM		X	X	X	X
Hydraulic			X	X	X
Block	X		X		
Inlet Size:					
1½ (3,8 cm)				X	X
1¼ (3,2 cm)		X	X		
1" (2,5 cm)	X		Block Only		
Inlet Threads:					
NPT	X		Block Only		
BSP	X	X	X	X	X
ACME	X	X	X	X	X
Flow Rate gpm, m³/h or l/s:	1.5-15.5 gpm (0,09-0,98 l/s)	4-13 gpm, (0,91-2,90 m³/h)	16-41 gpm, (3,57-9,38 m³/h)	20-60 gpm, (4,55-13,52 m³/h)	40.6-72.9 gpm, (9,22-16,56 m³/h)
Radius of Throw:	18-55' (5,5-16,8 m)	33-49' (10,1-14,9 m)	55-82' (16,8-25,0 m)	70-92' (21,3-28,0 m)	85-115' (25,9-35,1 m)
Warranty:	3 years or 5 years when purchased with a Rain Bird® Swing Joint.				

Product Line Adds Versatility

EAGLE Rotors offer the versatility to meet any challenge, regardless of the climate, soil type, water use and fertigation requirements. EAGLE Rotors are available in full- and part-circle versions, with a choice of electric, hydraulic, Stopmatic (SAM) and block (B) models. Should irrigation needs change, some EAGLE Series Rotors are interchangeable. Simply install the new internal assembly inside the existing case—without rewiring. The broad line of easily interchangeable color-coded nozzles allows rotors to be easily tailored to differing course applications and requirements. EAGLE Rotors also offer the additional flexibility of specialty nozzle kits, including diffuser screws for precise radius adjustment and the EAGLE's Tail™ for watering just behind a part-circle rotor—the perfect solution for stream banks. And the tall pop-up height ensures effective distribution in all turf types.

Accommodates All Thread Configurations For Added Flexibility

The entire family of EAGLE Rotors are available in British Standard Pipe Thread (BSP) or ACME. In addition, the molded-in ACME thread inlet features an o-ring seal style for positive seal without the need for sealant or risk of overtightening.

Water Lubrication Addresses Environmental Concerns

EAGLE Gear-drive Rotors were designed to work in a water environment and require no lubricant for operation. So, there is no risk of oil leaking into the ground. The unique flow-around-the-motor design reduces friction and ensures reliable performance with all types of water conditions—even reclaimed or saltwater.

Compound Cluster Gear Delivers Continuous Performance

The EAGLE Rotor Series uses a compound cluster gear concept to reduce the number of parts in the motor—and the number of problems. These larger gears are more tolerant to grit and leave more room to strengthen the casing to further protect against freezing* and high pressures associated with the heavy loads of golf course equipment.

*In areas where ground temperatures fall below 32° F or 0° C it is necessary to winterize your system.

EAGLE 750 Dual Spreader™





EAGLE™ Wireless Rotor

This revolutionary addition to the Rain Bird® EAGLE line of rotors brings innovation and flexibility to your course's irrigation system. The EAGLE Wireless Rotor operates without the use of a satellite or decoder, allowing maximum flexibility of placement. With its innovative wireless technology it requires no electrical "hookup".

The EAGLE Wireless Rotor can be added on any of the current Rain Bird Central Control Systems and incorporates the proven components of the EAGLE 700W/750W.

Unique Features of the EAGLE Wireless Rotor

- Uses wireless paging service to communicate from the Central Control System directly to the rotor.
- Operates as a standalone rotor controller when using the handheld transmitter (no paging available).
- One-time recurring irrigation events can be programmed manually.
- Internal battery and solar panel eliminate the need for external power.
- Handheld transmitter allows direct communication to the rotor and easy programming.
- Default program guarantees irrigation even if there are computer or electrical problems.

Common Features with the EAGLE 700W/750W

- The EAGLE Wireless 700W Rotor provides a radius of 55' to 80' (16,8 to 24,4 m).
- The EAGLE Wireless 750W has a radius of 55' to 83' (16,8 to 25,3 m).
- Can handle pressures from 60 to 100 psi (4,1 to 6,9 bars).
- Dual Spreader™ Nozzle design provides superior water distribution with less sensitivity to spacing difference.
- Top diameter of 7.75" (19,7 cm) reduces the risk of damage from equipment.
- The EAGLE 700W is a full-circle 360° rotor.
- The part-circle EAGLE 750W offers a 30° to 345° turning range.
- Nozzle pop-up height to mid-nozzle 2.6" (6,6 cm).
- Threads available in ACME.
- Top-Serviceable Rock Screen™ and Replaceable Valve Seat standard.

The EAGLE Wireless Rotor has a built-in controller and receives its schedule directly from the Central Control, allowing maximum flexibility of placement. With its innovative wireless technology it requires no electrical "hook-up".

The EAGLE Wireless Rotor can be added on any Rain Bird Version 5.0 Central Control Systems and incorporates the proven components of the EAGLE 700/750.



EAGLE™ 700W/750W Wireless Rotors

Model Specifications

The full- or part-circle sprinkler shall be a water-lubricated gear-drive rotor capable of covering a ____ (units) radius at a base pressure of ____ (units) and a discharge rate of ____ (units). The rotor shall be installed with a number ____ nozzle that shall be ____ in color for ease of identification. It shall operate without wire connection to any external source.

The part-circle sprinkler shall have an adjustable arc coverage of 30° to 345°. Arc adjustment can be performed with or without the rotor in operation and shall require only a flat-blade screwdriver.

The part-circle rotor shall rotate through a 180° arc in 1½ minutes or less. Rotation through 360° shall be 2½ minutes or less for the full-circle sprinkler.

The sprinkler shall be fully serviceable from the top without requiring special tools. The internal assembly shall be retained in the case by a plastic snap ring. The rotor shall have a bearing guide that allows water to flush around the riser stem as it pops up and seals against the riser when it is fully raised.

The pop-up height shall be 2.6" (6,6 cm). The retract spring shall be of stainless steel and of sufficient force for positive pop-down.

The nozzle housing cover of the rotor shall indicate the model, identify the installed nozzle and have an arrow to indicate the position of the nozzle, and shall provide a positive seal against debris when the rotor is not in operation. The housing shall be installed with one of six color-coded nozzles.

The nozzle shall be tested per ASAE S398.1 and be verified to deliver scheduling coefficient of 1.2 or less and a Christiansen coefficient of uniformity of 90% or greater at the specified spacing.

The rotor body shall be molded of engineering grade plastic and shall have a double-wall construction female (ACME) bottom inlet.

The site for the Wireless Rotor must be located in a region where paging service is available if communication with the Central Control is necessary. Otherwise, the wireless rotor shall operate as a standalone rotor controller.* (Contact your Rain Bird distributor for paging service availability.) The available handheld unit will be capable of programming and operating the wireless rotor.

The sprinkler shall be manufactured by Rain Bird Corporation, Glendora, California, U.S.A.

*A paging subscription package is required for the wireless rotor if communication with the Central Control is necessary. Otherwise, the wireless rotor shall operate as a standalone rotor controller.

Specifications

EAGLE 700W/750W Rotor:

Full-Circle:

EAGLE 700W: Wireless

Part-Circle:

EAGLE 750W: Wireless

Arc:

EAGLE 700W: Full-circle, 360°

EAGLE 750W: Adjustable, 30° to 345°

Maximum Inlet Pressure: 150 psi (10,3 bars)

Pressure Regulation Range: 60 to 100 psi (4,1 to 6,9 bars)

Factory Pressure Settings: 700W/750W available in 60, 70 and 80 psi (4,1, 4,8 and 5,5 bars)

Rotation Time:

EAGLE 700W: 360° in ≤ 180 seconds; 150 seconds nominally

EAGLE 750W: 180° in ≤ 90 seconds; 75 seconds nominally

Inlet Threads:

EAGLE 700W/750W: 1.25" (3,2 cm) (33/42) ACME

Nozzle Trajectory: 25°

Maximum Stream Height: 17' (5,2 m)

Dimensions:

Body Height: 12" (30,5 cm)

Top Diameter: 7.75" (19,7 cm)

Pop-Up Height to Mid-Nozzle: 2.6" (6,6 cm)

Top-Serviceable Rock Screen and Replaceable Valve Seat

All data is generated from tests conducted in accordance with ASAE Standard S398.1 for at least 30 minutes in zero-wind conditions.

Rain Bird recommends the use of SPACE for Windows, equivalent program or derived performance data to optimize nozzle selection.

* N.O.—Normally open

EAGLE™ 1100/1150 Rotor Series

Not only is the EAGLE 1100/1150 Rotor Series the farthest throwing gear-drive rotor on the market, it is also one of the most advanced and cost effective. The design of the EAGLE 1100 and 1150 began with a simple request—create a distance rotor with replaceable components to maximize its life. The result is a rotor that not only throws further than all other gear-drive rotors, it outperforms them with unparalleled distribution uniformity and value.

Key Features

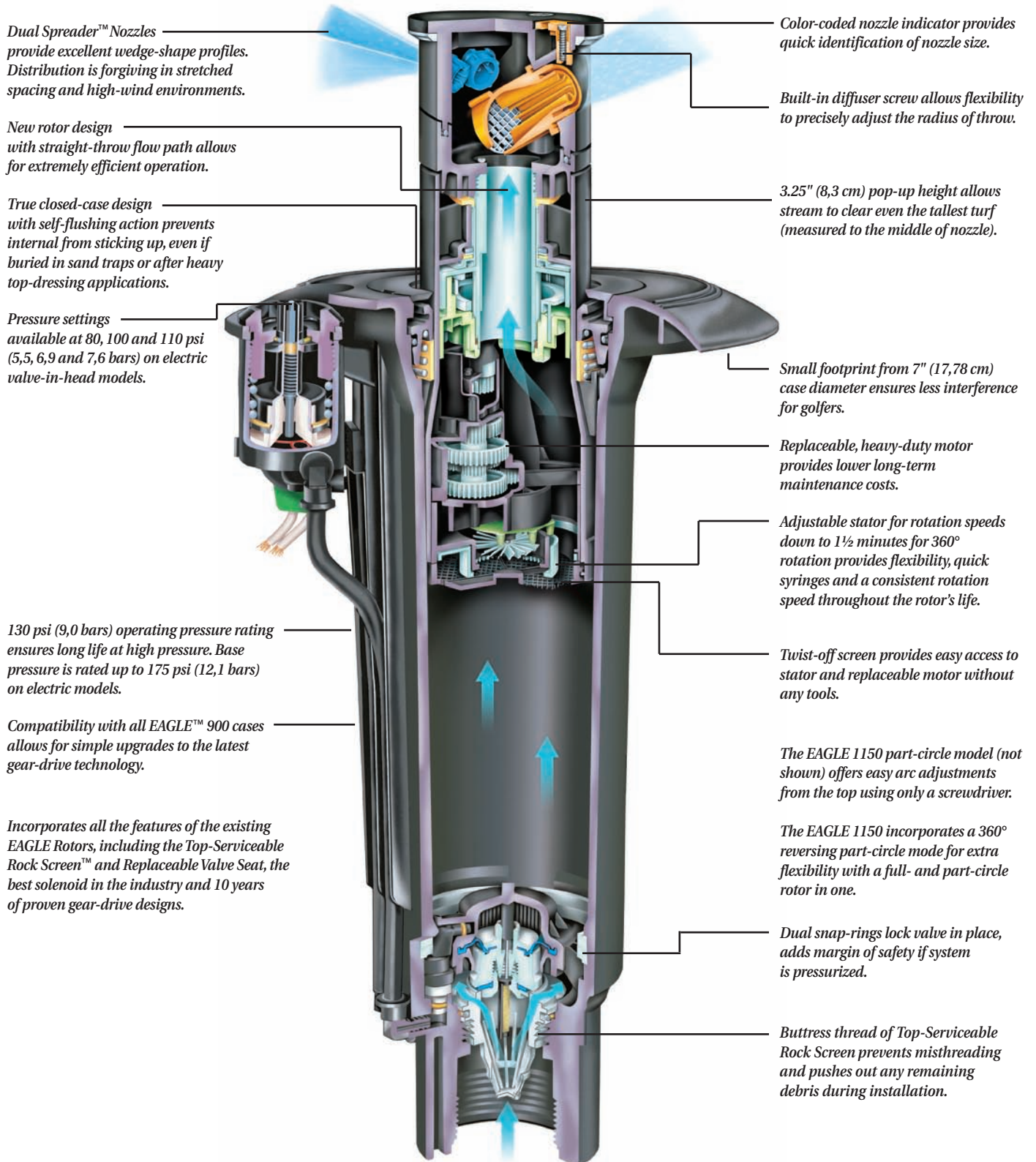
- 115' (35,1 m) throw at 110 psi (7,6 bars) regulated.
- Nozzle pop-up height to mid-nozzle 3.25" (8,3 cm).
- Adjustable rotation speed.
- Replaceable motor.
- Dual Spreader™ Nozzle technology.
- Compatible with all existing EAGLE 900 Series case assemblies.

Other Features

- 130 psi (9,0 bars) operating pressure rating ensures long life at high pressure.
- The EAGLE 1150 part-circle model offers two-in-one flexibility with 360° reversing full-circle operation.
- Settable stator allows for adjustable rotation time for syringe speeds or maximum radius settings.
- Diffuser screw allows radius reduction up to 10 percent without changing nozzles.
- True closed-case design with self-flushing action prevents internal from sticking up, even if buried in sand traps or after heavy top-dressing applications.
- Color-coded nozzles and color-coded top nozzle indicator makes identification easy.
- Water-lubricated, heavy-duty and replaceable gear-drive offers reliable, durable rotation in an environmentally friendly design.
- Easy arc adjustment from the top requires no special tools for fast modifications. The arc adjust does not change over time.
- Five-year trade warranty when purchased with a Rain Bird® Swing Joint.



1100E





EAGLE™ 1100 and 1150 Rotors

Model Specifications

The full- or part-circle sprinkler shall be a water-lubricated gear-drive rotor capable of covering a ____ (units) radius at a base pressure of ____ (units) and a discharge rate of ____ (units). The rotor shall be installed with a number ____ nozzle that shall be ____ in color for ease of identification.

The part-circle sprinkler shall have adjustable arc coverage of 360°. Arc adjustment can be performed with or without the rotor in operation and shall require only a flat-blade screwdriver. The part-circle rotor shall rotate through a 180° arc in 2¼ minutes or less. Rotation through 360° shall be 4½ minutes or less for the full-circle sprinkler.

The sprinkler shall be fully serviceable from the top without requiring special tools. The internal assembly shall be retained in the case by a plastic snap-ring. The Rock Screen and Valve Seat shall be serviceable from the top. The rotor shall have a bearing guide that allows water to flush around the riser stem as it pops up and seals against the riser when it is fully raised. The pop-up height shall be 3.25". Pop-up height is measured from the flange to the middle of the nozzle. The retract spring shall be of stainless steel and of sufficient force for positive pop-down.

The nozzle housing cover of the rotor shall indicate the model, identify the installed nozzle and have an arrow to indicate the position of the nozzle and shall provide a positive seal against debris when the rotor is not in operation. The housing shall be installed with an interchangeable color-coded nozzle. The nozzle shall be tested per ASAE S398.1 and be verified to deliver scheduling coefficient of 1.3 or less and a Christiansen coefficient of uniformity of 90% or greater at the specified spacing.

The rotor body shall be molded of engineering-grade plastic and shall have a double-wall construction female (BSP or ACME) bottom inlet.

The rotor internal is compatible with all 900 Series rotor cases.

The rotor case shall have a top diameter of 7" (17,78 cm) and an overall height of 13.4" (34,0 cm). The case shall have a 1.5" (3,8 cm) BSP or ACME threaded inlet.

The sprinkler shall be manufactured by Rain Bird Corporation, Glendora, California, U.S.A.

Optional Feature—Electric Valve in Head (e.g., 1100E or 1150E). The sprinkler shall have a 24 VAC 60 cycle solenoid actuated normally closed control valve in the base of the case. The rotor shall have a pressure regulator which is adjustable from the top using a small flat-blade screwdriver. The rotor shall have a top-serviceable selector that allows the unit to be operated manually, in automatic mode or shut off entirely.

Optional Feature—Normally Open Hydraulic Valve in Head (e.g., 1100H or 1150H). The sprinkler shall have a normally open hydraulic control valve in the base of the case.

Optional Feature—Stopamatic Valve in Head (e.g., 1100S or 1150S). The sprinkler shall have a Stopamatic valve in the base of the case. The valve shall hold back at least 15' (4,6 m) of elevation.

Specifications

Models:

Full-Circle:

EAGLE 1100E: Electric
EAGLE 1100H: Hydraulic (N.O.)*
EAGLE 1100S: Stopamatic (SAM)

Part-Circle:

EAGLE 1150E: Electric
EAGLE 1150H: Hydraulic (N.O.)*
EAGLE 1150S: Stopamatic (SAM)

Arc:

EAGLE 1100: Full-circle, 360°
EAGLE 1150: Part-circle, 30° to 360° reversing full circle

Maximum Inlet Pressure:

Models 1100E: 175 psi (12,1 bars)
Models 1100S, 1100H: 130 psi (9,0 bars)

Pressure Regulation Range: 80 to 110 psi (5,5 to 7,6 bars)

Factory Pressure Settings:

1100E/1150E available in 80, 100 psi, fully open

Rotation Time:

EAGLE 1100: 360° in ≤ 220 seconds;
240 seconds nominally
EAGLE 1150: 180° in ≤ 135 seconds;
120 seconds nominally

Inlet Threads: 1.5" (3,8 cm) (15/21)
BSP or ACME female threaded

Holdback: 1100S/1150S 15' (4,6 m) elevation

Nozzle Trajectory: 25°

Maximum Stream Height: 24' (7,3 m)

Dimensions:

Body Height: 13.4" (34,0 cm)
Top Diameter: 7" (17,78 cm)
Pop-Up Height to Mid-Nozzle: 3.25" (8,3 cm)

Solenoid:

24 VAC solenoid power requirement—
0.41 amp inrush current (9.8 VA)
60 cycle—0.025 amp holding current (6.0 VA)
50 cycle—0.032 amp holding current (7.7 VA)

Top-Serviceable Rock Screen™ and Replaceable Valve Seat:

All 1100 models.

All data is generated from tests conducted in accordance with ASAE Standard S398.1 for at least 30 minutes in zero-wind conditions. Rain Bird recommends the use of SPACE for Windows, equivalent program or derived performance data to optimize nozzle selection.

* N.O.—Normally open



EAGLE™ 1100 Performance Data — U.S.

DUAL SPREADER™ NOZZLES

Base	#48 BLUE			#57 YELLOW			#63 ORANGE			#66 GREEN		
Pressure	Radius	Flow		Radius	Flow		Radius	Flow		Radius	Flow	
(psi)	(ft)	(gpm)		(ft)	(gpm)		(ft)	(gpm)		(ft)	(gpm)	
70	85	40.6		88	46.9		94	51.1		—	—	
80	89	43.7		91	50.3		99	56.3		101	59.0	
90	91	46.5		93	53.7		101	58.4		104	62.9	
100	95	48.3		94	56.9		105	62.9		109	66.4	
110	96	50.8		96	60.0		107	64.8		111	69.9	
120	97	53.1		97	62.7		109	69.3		115	72.9	

Data reflects no pressure regulation.

EAGLE™ 1150 Performance Data — U.S.

DUAL SPREADER™ NOZZLES

Base	#48 BLUE			#57 YELLOW			#63 ORANGE			#66 GREEN		
Pressure	Radius	Flow		Radius	Flow		Radius	Flow		Radius	Flow	
(psi)	(ft)	(gpm)		(ft)	(gpm)		(ft)	(gpm)		(ft)	(gpm)	
70	85	32.1		87	39.3		—	—		—	—	
80	91	35.7		93	43.0		100	48.6		97	52.5	
90	92	37.6		94	46.2		103	51.1		101	57.1	
100	96	39.3		98	48.7		107	54.5		107	59.4	
110	97	42.0		101	52.0		109	58.2		108	64.2	
120	99	43.8		105	53.6		110	61.9		114	65.3	

Data reflects no pressure regulation.

EAGLE™ 1100 Performance Data — Metric

DUAL SPREADER™ NOZZLES

Base	#48 BLUE			#57 YELLOW			#63 ORANGE			#66 GREEN		
Pressure	Radius	Flow	Flow	Radius	Flow	Flow	Radius	Flow	Flow	Radius	Flow	Flow
(bars)	(m)	(l/s)	(m³/h)	(m)	(l/s)	(m³/h)	(m)	(l/s)	(m³/h)	(m)	(l/s)	(m³/h)
4.83	25.90	2.56	9.22	26.80	2.96	10.65	28.70	3.22	11.61	—	—	—
5.0	26.20	2.61	9.40	27.10	3.01	10.85	29.00	3.31	11.90	—	—	—
5.5	27.10	2.75	9.91	27.70	3.17	11.41	30.10	3.54	12.76	30.70	3.72	13.38
6.0	27.60	2.88	10.37	28.20	3.32	11.97	30.60	3.65	13.12	31.40	3.90	14.02
6.5	28.30	2.98	10.74	28.50	3.47	12.51	31.30	3.81	13.70	32.40	4.06	14.63
7.0	29.00	3.07	11.06	28.70	3.62	13.03	32.10	3.99	14.35	33.30	4.22	15.20
7.5	29.20	3.19	11.47	29.20	3.76	13.54	32.50	4.07	14.66	33.80	4.38	15.78
8.0	29.40	3.29	11.85	29.40	3.89	14.00	33.00	4.26	15.33	34.60	4.52	16.29
8.27	29.60	3.35	12.06	29.60	3.96	14.24	33.20	4.37	15.74	35.10	4.60	16.56

Data reflects no pressure regulation.

EAGLE™ 1150 Performance Data — Metric

DUAL SPREADER™ NOZZLES

Base	#48 BLUE			#57 YELLOW			#63 ORANGE			#66 GREEN		
Pressure	Radius	Flow	Flow	Radius	Flow	Flow	Radius	Flow	Flow	Radius	Flow	Flow
(bars)	(m)	(l/s)	(m³/h)	(m)	(l/s)	(m³/h)	(m)	(l/s)	(m³/h)	(m)	(l/s)	(m³/h)
4.8	25.90	2.03	7.29	26.50	2.48	8.93	—	—	—	—	—	—
5.0	26.40	2.09	7.52	27.00	2.55	9.17	—	—	—	—	—	—
5.5	27.70	2.25	8.11	28.30	2.71	9.77	30.50	3.07	11.04	29.60	3.31	11.92
6.0	28.00	2.37	8.54	28.70	2.91	10.49	31.40	3.22	11.61	30.80	3.60	12.97
6.5	28.80	2.42	8.75	29.30	2.98	10.77	32.10	3.33	12.00	31.70	3.67	13.23
7.0	29.30	2.48	8.93	29.90	3.07	11.06	32.60	3.44	12.38	32.60	3.75	13.49
7.5	29.60	2.65	9.54	30.80	3.28	11.81	33.20	3.67	13.22	32.90	4.05	14.58
8.0	30.00	2.72	9.80	31.60	3.34	12.04	33.40	3.82	13.75	34.00	4.09	14.74
8.3	30.20	2.76	9.95	32.00	3.38	12.17	33.50	3.91	14.06	34.70	4.12	14.83

Data reflects no pressure regulation.



EAGLE™ 900/950 Rotor Series

For fairways and the rough, the EAGLE™ 900/950 Rotor Series provides superior coverage.

- The EAGLE 900 has a radius of 63' to 91' (19,2-29,6 m).
- The EAGLE 950 has a radius of 70' to 92' (21,3-28,0 m).
- Easily handles pressures from 60 to 100 psi (4,1 to 6,9 bars).
- The EAGLE 900 is a full-circle 360° rotor.
- The part-circle EAGLE 950 offers a 40° to 345° turning range.
- Both versions are available in electric, hydraulic and Stopamatic (SAM) models.
- Electric models have a heavy-duty, two-piece solenoid for easy serviceability and superior life.
- Nozzle pop-up height to mid-nozzle 2.25" (5,7 cm).
- Thread options include BSP and ACME 1.5" (3,8 cm).
- Maximum stream height 20' (6,1 m).
- Top-Serviceable Rock Screen™ and Replaceable Valve Seat standard on all EAGLE 900 models.



900E

New high-performance nozzles provide excellent uniformity, especially in larger double-row systems. Distribution is forgiving in stretched spacing and high-wind environments.

2.25" (5,7 cm) pop-up height raises stream above surrounding turf.

One-piece snap cover locks assembly firmly in place.

Top-adjustable pressure regulator offers convenient access to controls.

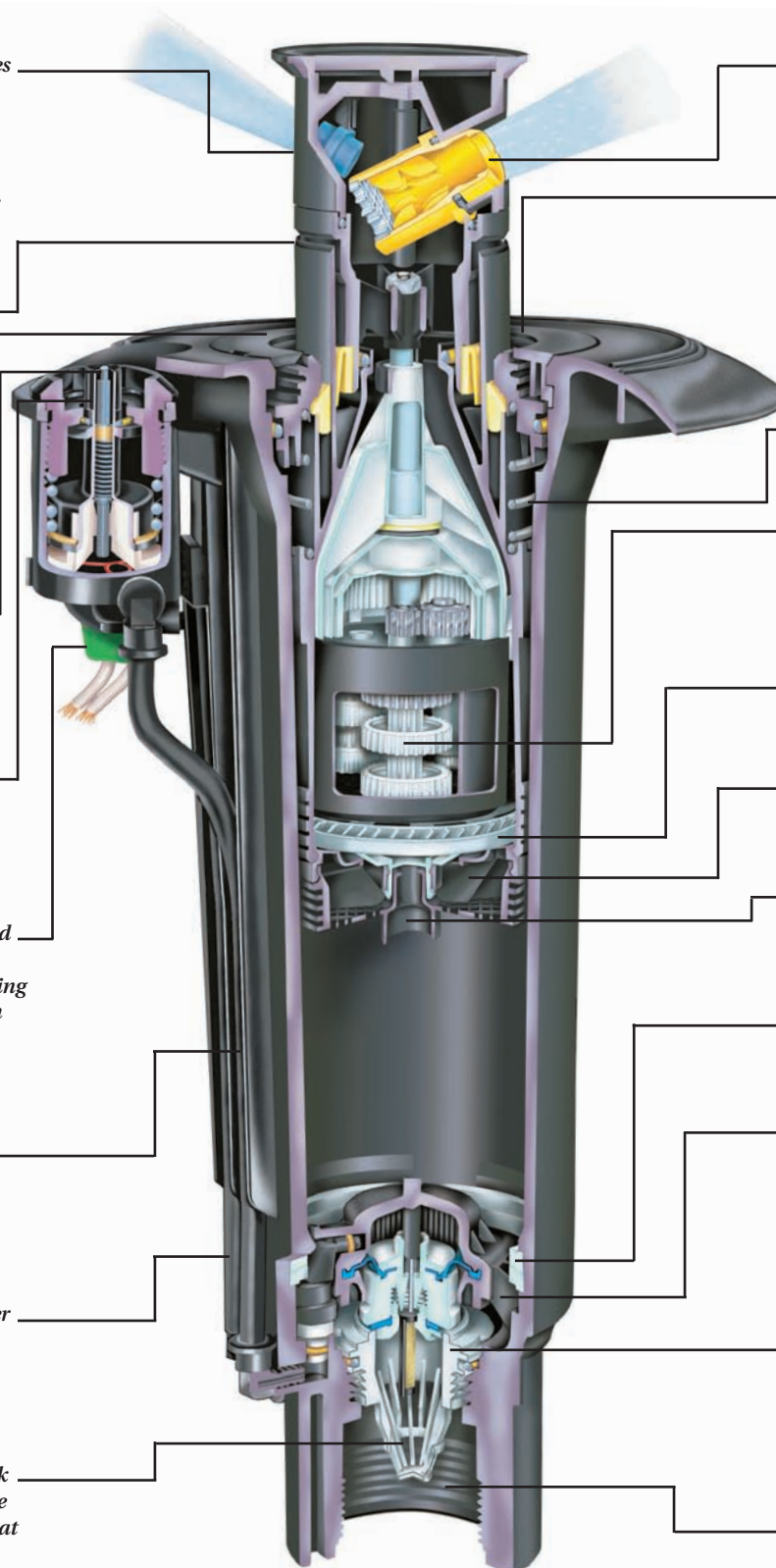
Manual operation selector provides convenient on-the-spot on and off ability.

Heavy-duty, two-piece solenoid offers superior life and can be removed without contaminating the pressure regulation system with dirt.

Reinforced polypropylene case provides protection against damage.

Internal bleed port saves water and eliminates puddling around the head.

Patented Top-Serviceable Rock Screen™ and Replaceable Valve Seat allow for debris removal at installation or due to buildup over time.



Color-coded interchangeable nozzles add convenience and flexibility.

Closed-case design with self-flushing action protects internal assembly from debris, allows rotor to be set at grade during installation and ensures performance in all soil conditions.

Heavy-duty stainless steel spring ensures positive retraction.

Water-lubricated gear-drive is environmentally friendly and offers proven, trouble-free performance.

Turbine efficiently powers gear-drive mechanism.

Stator ensures consistent rotation speed.

Fine mesh screen keeps debris from entering internal assembly.

Dual snap-rings lock valve in place, adds margin of safety if system is pressurized.

High-performance diaphragm valve offers reliable performance with little long-term wear. Rubber valve seal can be easily changed if nicked from debris.

Buttress thread of Top-Serviceable Rock Screen prevents misthreading and pushes out any remaining debris during installation.

1.5" (3,8 cm) molded-in BSP and ACME threads allow for easy installation.



EAGLE™ 900 and 950 Rotors

Model Specifications

The full- or part-circle sprinkler shall be a water-lubricated gear-drive rotor capable of covering a ____ (units) radius at a base pressure of ____ (units) and a discharge rate of ____ (units). The rotor shall be installed with a number ____ nozzle that shall be ____ in color for ease of identification.

The part-circle sprinkler shall have adjustable arc coverage of 40° to 345°. Arc adjustment can be performed with or without the rotor in operation and shall require only a flat-blade screwdriver. The part-circle rotor shall rotate through a 180° arc in 2 minutes or less. Rotation through 360° shall be 4 minutes or less for the full-circle sprinkler.

The sprinkler shall be fully serviceable from the top without requiring special tools. The internal assembly shall be retained in the case by a plastic snap ring. The Rock Screen and Valve Seat shall be serviceable from the top. The rotor shall have a bearing guide that allows water to flush around the riser stem as it pops up and seals against the riser when it is fully raised. The pop-up height shall be 2.25" (5,7 cm). Pop-up height is measured from the flange to the middle of the nozzle. The retract spring shall be of stainless steel and of sufficient force for positive pop-down.

The nozzle housing cover of the rotor shall indicate the model, identify the installed nozzle and have an arrow to indicate the position of the nozzle, and shall provide a positive seal against debris when the rotor is not in operation. The housing shall be installed with one of eight interchangeable color-coded nozzles. The nozzle shall be tested per ASAE S398.1 and be verified to deliver scheduling coefficient of 1.2 or less and a Christiansen coefficient of uniformity of 90% or greater at the specified spacing.

The rotor body shall be molded of engineering-grade plastic and shall have a double-wall construction female (BSP or ACME) bottom inlet.

The sprinkler shall be manufactured by Rain Bird Corporation., Glendora, California, U.S.A.

Optional Feature—Electric Valve in Head (e.g., 900E or 950E). The sprinkler shall have a 24 VAC 50 or 60 cycle solenoid actuated normally closed control valve in the base of the case. The rotor shall have a pressure regulator which is adjustable from the top using a small flat-blade screwdriver. The rotor shall have a top-serviceable selector that allows the unit to be operated manually, in automatic mode or shut off entirely.

The rotor case shall have a top diameter of 7" (17,8 cm) and an overall height of 13.4" (34,0 cm). The case shall have a 1.5" (3,8 cm) BSP or ACME threaded inlet.

Optional Feature—Normally Open Hydraulic Valve in Head (e.g., 900H or 950H). The sprinkler shall have a normally open hydraulic control valve in the base of the case.

The rotor case shall have a top diameter of 7" (17,8 cm) and an overall height of 13.4" (34,0 cm). The case shall have a 1.5" (3,8 cm) BSP or ACME threaded inlet.

Optional Feature—Stopmatic Valve in Head (e.g., 900S or 950S). The sprinkler shall have a Stopmatic Valve in the base of the case. The valve shall hold back at least 15' (4,6 m) of elevation.

The rotor case shall have a top diameter of 7" (17,8 cm) and an overall height of 13.4" (34,0 cm). The case shall have a 1.5" (3,8 cm) BSP or ACME threaded inlet.

Specifications

Models:

Full-Circle:

EAGLE 900E: Electric
EAGLE 900H: Hydraulic (N.O.)*
EAGLE 900S: Stopmatic (SAM)

Part-Circle:

EAGLE 950E: Electric
EAGLE 950H: Hydraulic (N.O.)*
EAGLE 950S: Stopmatic (SAM)

Arc:

EAGLE 900: Full-circle, 360°
EAGLE 950: Part-circle, 40° to 345°

Maximum Inlet Pressure:

Models 900E: 150 psi (10,3 bars)
Models 900S, 900H: 100 psi (6,9 bars)

Pressure Regulation Range: 60 to 100 psi (4,1 to 6,9 bars)

Factory Pressure Settings:

900E/950E available in 60, 70, 80 psi and wide open (4,1; 4,8; 5,5 bars and wide open)

Rotation Time:

EAGLE 900: 360° in ≤ 240 seconds; 210 seconds nominally
EAGLE 950: 180° in ≤ 120 seconds; 105 seconds nominally

Inlet Threads: 1.5" (3,8 cm) (15/21) BSP or ACME female threaded

Holdback: 900S/950S 15' (4,6 m) elevation

Nozzle Trajectory: 25°

Maximum Stream Height: 20' (6,1 m)

Dimensions:

Body Height: 13.4" (34,0 cm)
Top Diameter: 7" (17,8 cm)
Pop-Up Height to Mid-Nozzle: 2.25" (5,7 cm)

Solenoid:

24 VAC solenoid power requirement—0.41 amp inrush current (9.8 VA)
60 cycle—0.25 amp holding current (6.0 VA)
50 cycle—0.32 amp holding current (7.7 VA)

Top-Serviceable Rock Screen™ and Replaceable Valve Seat:

All 900 models.

All data is generated from tests conducted in accordance with ASAE Standard S398.1 for at least 30 minutes in zero-wind conditions.

Rain-Bird recommends the use of SPACE for Windows, equivalent program or derived performance data to optimize nozzle selection.

* N.O.—Normally open



EAGLE™ 900 Performance Data – U.S.

HIGH PERFORMANCE NOZZLES

Base Pressure (psi)	#44 BLUE		#48 YELLOW		#52 ORANGE		#56 GREEN		#60 BLACK	
	Radius (ft)	Flow (gpm)	Radius (ft)	Flow (gpm)	Radius (ft)	Flow (gpm)	Radius (ft)	Flow (gpm)	Radius (ft)	Flow (gpm)
60	63	21.4	73	28.9	75	31.9	—	—	—	—
70	67	23.5	73	31.0	79	34.6	83	40.7	87	43.2
80	71	24.7	75	34.1	81	37.1	85	43.5	91	46.4
90	71	26.5	77	35.0	81	39.5	87	46.4	91	49.5
100	73	27.9	77	36.2	83	41.8	89	49.1	91	52.2

Data reflects no pressure regulation.

EAGLE™ 900 Performance Data – Metric

HIGH PERFORMANCE NOZZLES

Base Pressure (bars)	#44 BLUE			#48 YELLOW			#52 ORANGE			#56 GREEN			#60 BLACK		
	Radius (m)	Flow (l/s)	Flow (m³/h)	Radius (m)	Flow (l/s)	Flow (m³/h)	Radius (m)	Flow (l/s)	Flow (m³/h)	Radius (m)	Flow (l/s)	Flow (m³/h)	Radius (m)	Flow (l/s)	Flow (m³/h)
4.1	19.2	1.35	4.85	22.3	1.82	6.56	22.9	2.01	7.25	—	—	—	—	—	—
4.5	19.8	1.42	5.11	22.3	1.89	6.81	23.5	2.10	7.57	25.0	2.48	8.94	26.2	2.63	9.47
5.0	20.7	1.50	5.40	22.4	2.00	7.22	24.2	2.22	8.00	25.5	2.61	9.40	26.8	2.78	10.00
5.5	21.6	1.55	5.59	22.8	2.14	7.72	24.7	2.34	8.41	25.9	2.74	9.87	27.7	2.92	10.52
6.0	21.6	1.64	5.90	23.3	2.19	7.88	24.7	2.45	8.81	26.3	2.87	10.34	27.7	3.06	11.03
6.5	21.9	1.71	6.16	23.5	2.24	8.06	24.9	2.55	9.19	26.8	3.00	10.80	27.7	3.20	11.86
6.9	22.3	1.76	6.35	23.5	2.28	8.22	25.3	2.64	9.49	27.1	3.10	11.15	27.7	3.29	11.86

Data reflects no pressure regulation.

EAGLE™ 950 Performance Data – U.S.

NOZZLES

Base Pressure (psi)	#18 WHITE-C		#20 GRAY-C		#22 BLUE-C		#24 YELLOW-C		#26 ORANGE		#28 GREEN		#30 BLACK		#32 BROWN	
	Radius (ft)	Flow (gpm)	Radius (ft)	Flow (gpm)	Radius (ft)	Flow (gpm)	Radius (ft)	Flow (gpm)	Radius (ft)	Flow (gpm)	Radius (ft)	Flow (gpm)	Radius (ft)	Flow (gpm)	Radius (ft)	Flow (gpm)
60	70	19.5	72	23.0	74	26.5	76	30.8	78	36	—	—	—	—	—	—
70	72	21.3	74	25.1	76	28.8	80	33.5	82	38.7	84	42.9	84	47.3	84	50.4
80	74	22.9	76	27.0	80	30.9	84	36.0	84	41.5	86	47.3	86	50.4	85	53.1
90	75	24.4	78	28.7	82	32.9	88	38.4	86	43.4	89	48.5	90	52.9	88	55.6
100	76	25.8	80	30.5	84	34.6	90	40.5	88	46.7	91	52.2	92	55.8	92	59.4

Data reflects no pressure regulation.

EAGLE™ 950 Performance Data – Metric

NOZZLES

Base Pressure (bars)	#18 WHITE-C			#20 GRAY-C			#22 BLUE-C			#24 YELLOW-C			#26 ORANGE			#28 GREEN			#30 BLACK			#32 BROWN		
	Radius (m)	Flow (l/s)	Flow (m³/h)	Radius (m)	Flow (l/s)	Flow (m³/h)	Radius (m)	Flow (l/s)	Flow (m³/h)	Radius (m)	Flow (l/s)	Flow (m³/h)	Radius (m)	Flow (l/s)	Flow (m³/h)	Radius (m)	Flow (l/s)	Flow (m³/h)	Radius (m)	Flow (l/s)	Flow (m³/h)	Radius (m)	Flow (l/s)	Flow (m³/h)
4.1	21.3	1.23	4.43	21.9	1.45	5.22	22.6	1.67	6.02	23.2	1.94	7.00	23.8	2.27	8.18	—	—	—	—	—	—	—	—	—
4.5	21.7	1.29	4.64	22.3	1.52	5.48	22.9	1.75	6.29	23.8	2.03	7.32	24.4	2.36	8.50	25.2	2.62	9.44	25.2	2.90	10.44	25.3	3.10	11.17
5.0	22.1	1.37	4.93	22.7	1.61	5.81	23.5	1.85	6.66	24.7	2.15	7.75	25.1	2.49	8.95	25.8	2.78	10.00	25.8	3.03	10.92	25.7	3.22	11.60
5.5	22.5	1.44	5.19	23.2	1.70	6.12	24.4	1.95	7.01	25.6	2.27	8.16	25.6	2.61	9.41	26.2	2.98	10.72	26.2	3.18	11.43	25.9	3.35	12.05
6.0	22.8	1.51	5.44	23.6	1.78	6.40	24.8	2.04	7.34	26.5	2.38	8.56	26.0	2.70	9.73	26.9	3.04	10.93	27.1	3.29	11.85	26.6	3.46	12.46
6.5	23.0	1.58	5.68	24.0	1.86	6.69	25.3	2.12	7.64	27.1	2.48	8.93	26.5	2.83	10.18	27.4	3.16	11.37	27.7	3.42	12.30	27.3	3.61	13.00
6.9	23.2	1.63	5.86	24.4	1.92	6.93	25.6	2.18	7.86	27.4	2.56	9.20	26.8	2.95	10.61	27.7	3.29	11.86	28.0	3.52	12.67	28.0	3.75	13.49

Data reflects no pressure regulation.

EAGLE™ 700/750 Rotor Series

Designed for precise control and high uniformity, the EAGLE 700/750 Rotor Series is suitable for use in single rows for narrow fairways and roughs, or double/triple row systems.

- The EAGLE 700 Rotor provides a radius of 55' to 80' (16,8-24,4 m).
- The EAGLE 750 has a radius of 55' to 83' (16,8-25,3 m).
- Can handle pressures from 60 to 100 psi (4,1 to 6,9 bars).
- Dual Spreader™ Nozzle design provides superior water distribution with less sensitivity to spacing difference.
- Top diameter of 6.25" (15,9 cm) reduces the risk of damage from equipment.
- The EAGLE 700 is a full-circle 360° rotor.
- The part-circle EAGLE 750 offers a 30° to 345° turning range.
- Both versions are available in electric, hydraulic, Stopmatic (SAM), block (with SEAL-A-MATIC™ device) and block with rubber cover top (with SEAL-A-MATIC device) models.
- Electric models have a heavy-duty, two-piece solenoid for easy serviceability and superior life.
- Nozzle pop-up height to mid-nozzle 2.6" (6,6 cm).
- Threads available in BSP or ACME.
- Top-Serviceable Rock Screen™ and Replaceable Valve Seat standard on all valve-in-head models.



EAGLE™ 700 Performance Data – U.S.

DUAL SPREADER™ NOZZLES

Base Pressure (psi)	#28 WHITE		#32 BLUE		#36 YELLOW		#40 ORANGE		#44 GREEN		#48 BLACK	
	Radius (ft)	Flow (gpm)	Radius (ft)	Flow (gpm)	Radius (ft)	Flow (gpm)	Radius (ft)	Flow (gpm)	Radius (ft)	Flow (gpm)	Radius (ft)	Flow (gpm)
50	55	16.8	58	19.6	60	22.7	64	25.1	—	—	—	—
60	56	18.7	62	21.9	62	24.9	66	27.3	68	29.6	—	—
70	56	19.5	63	22.6	64	26.4	66	28.6	68	31.6	70	36.0
80	59	20.9	64	24.9	66	28.3	68	30.8	68	33.9	72	38.7
90	60	23.2	64	27.2	66	31.0	68	33.9	74	36.8	78	41.6
100	60	24.5	66	28.5	68	32.7	70	35.8	76	38.8	80	44.1

Data reflects no pressure regulation.

EAGLE™ 700 Performance Data – Metric

DUAL SPREADER™ NOZZLES

Base Pressure (bars)	#28 WHITE			#32 BLUE			#36 YELLOW			#40 ORANGE			#44 GREEN			#48 BLACK		
	Radius (m)	Flow (l/s)	Flow (m³/h)	Radius (m)	Flow (l/s)	Flow (m³/h)	Radius (m)	Flow (l/s)	Flow (m³/h)	Radius (m)	Flow (l/s)	Flow (m³/h)	Radius (m)	Flow (l/s)	Flow (m³/h)	Radius (m)	Flow (l/s)	Flow (m³/h)
3,5	16,8	1,06	3,82	17,7	1,24	4,45	18,3	1,43	5,16	19,5	1,58	5,70	—	—	—	—	—	—
4,0	17,0	1,16	4,16	18,7	1,35	4,87	18,8	1,54	5,56	20,0	1,69	6,10	20,5	1,84	6,61	—	—	—
4,5	17,1	1,21	4,34	19,1	1,40	5,06	19,2	1,62	5,83	20,1	1,77	6,36	20,7	1,93	6,96	20,8	2,20	7,91
5,0	17,3	1,25	4,51	19,3	1,46	5,26	19,7	1,70	6,10	20,3	1,84	6,62	20,7	2,03	7,31	21,5	2,31	8,33
5,5	18,0	1,32	4,74	19,5	1,57	5,64	20,1	1,78	6,42	20,7	1,94	6,98	20,7	2,14	7,69	21,9	2,44	8,78
6,0	18,2	1,42	5,11	19,5	1,67	6,02	20,1	1,91	6,86	20,7	2,08	7,49	22,0	2,27	8,16	23,2	2,57	9,25
6,5	18,3	1,50	5,40	19,8	1,75	6,30	20,4	2,00	7,21	21,0	2,19	7,88	22,8	2,38	8,55	24,0	2,69	9,69
6,9	18,3	1,55	5,56	20,1	1,80	6,47	20,7	2,06	7,43	21,3	2,26	8,13	23,2	2,45	8,81	24,4	2,78	10,02

Data reflects no pressure regulation.

Specifications

Models:

Full-Circle:

EAGLE 700E: Electric
EAGLE 700H: Hydraulic (N.O.)*
EAGLE 700S: Stopmatic (SAM)
EAGLE 700B: SEAL-A-MATIC™ device
EAGLE 700BRC: SEAL-A-MATIC device, rubber cover

Part-Circle:

EAGLE 750E: Electric
EAGLE 750H: Hydraulic (N.O.)*
EAGLE 750S: Stopmatic (SAM)
EAGLE 750B: SEAL-A-MATIC device
EAGLE 750BRC: SEAL-A-MATIC device, rubber cover

Arc:

EAGLE 700: Full-circle, 360°
EAGLE 750: Adjustable, 30° to 345°

Maximum Inlet Pressure:

Models 700E: 150 psi (10,3 bars)
Models 700S, 700H, 700B: 100 psi (6,9 bars)

Pressure Regulation Range:

60 to 100 psi (4,1 to 6,9 bars)
Factory Pressure Settings: 700E/750E available in 60, 70 and 80 psi (4,1; 4,8 and 5,5 bars)

Rotation Time:

EAGLE 700: 360° in ≤ 180 seconds; 150 seconds nominally
EAGLE 750: 180° in ≤ 90 seconds; 75 seconds nominally

Inlet Threads:

Models 700E/750E, 700H/750H, 700S/750S: 1.25" (3,2 cm) (33/42) BSP or ACME

Models 700B/750B, 700BRC/750BRC: 1" (2,5 cm) (26/34) BSP or ACME

Holdback:

700B/750B: 10' (3,1 m) of elevation
700S/750S: 15' (4,6 m) of elevation

Nozzle Trajectory:

25°

Maximum Stream Height:

17' (5,2 m)
Dimensions:
Body Height:
Models 700E/750E, 700H/750H, 700S/750S: 12.0" (30,5 cm)
Models 700B/750B: 9.6" (24,5 cm)
Models 700BRC/750BRC: 10" (25,4 cm)

Top Diameter:

Models 700E/750E, 700H/750H, 700S/750S: 6.25" (15,9 cm)
Models 700B/750B: 4.25" (10,8 cm)
Models 700BRC/750BRC: 4.75" (12,1 cm)

Pop-Up Height to Mid-Nozzle:

Models 700E/750E, 700S/750S, 700H/750H, 700B/750B: 2.6" (6,6 cm)
Models 700BRC/750BRC: 2.25" (5,7 cm)

Solenoid:

24 VAC solenoid power requirement—
0.41 amp inrush current (9.8 VA)
60 cycle—0.25 amp holding current (6.0 VA)
50 cycle—0.32 amp holding current (7.7 VA)

Top-Serviceable Rock Screen™

and Replaceable Valve Seat:

Models 700/750 E, H and S.

All data is generated from tests conducted in accordance with ASAE Standard S398.1 for at least 30 minutes in zero-wind conditions.

Rain Bird recommends the use of SPACE for Windows, equivalent program or derived performance data to optimize nozzle selection.

* N.O.—Normally open

EAGLE™ 700 Low-Angle Performance Data — U.S.†

LOW-ANGLE, DUAL SPREADER™ NOZZLES

Base Pressure (psi)	#32LA GRAY		#36LA RED		#44LA BROWN	
	Radius (ft)	Flow (gpm)	Radius (ft)	Flow (gpm)	Radius (ft)	Flow (gpm)
50	57	19.5	—	—	—	—
60	59	21.6	61	24.2	—	—
70	61	23.5	63	26.3	67	34.5
80	63	25.5	65	28.4	69	36.4
90	65	27.4	67	30.9	71	38.9
100	67	29.1	67	33.1	71	41.7

Data reflects no pressure regulation.

†EAGLE™ 700 Low-Angle available only as retro-fit nozzle kits.

EAGLE™ 700 Low-Angle Performance Data — Metric†

LOW-ANGLE, DUAL SPREADER™ NOZZLES

Base Pressure (bars)	#32LA GRAY			#36LA RED			#44LA BROWN		
	Radius (m)	Flow (lps)	Flow (m³/h)	Radius (m)	Flow (lps)	Flow (m³/h)	Radius (m)	Flow (lps)	Flow (m³/h)
3,5	17,4	1,23	4,43	—	—	—	—	—	—
4	17,9	1,34	4,81	18,4	1,49	5,38	—	—	—
4,5	18,3	1,43	5,13	18,9	1,60	5,75	19,8	2,09	7,53
5	18,7	1,51	5,45	19,4	1,69	6,09	20,6	2,21	7,94
5,5	19,2	1,61	5,78	19,8	1,79	6,44	21,0	2,29	8,26
6	19,6	1,69	6,09	20,2	1,90	6,85	21,5	2,41	8,67
6,5	20,1	1,77	6,39	20,4	2,01	7,23	21,6	2,53	9,11
6,9	20,4	1,84	6,61	20,4	2,09	7,52	21,6	2,63	9,47

Data reflects no pressure regulation.

†EAGLE™ 700 Low-Angle available only as retro-fit nozzle kits.

EAGLE™ 750 Performance Data – U.S.

DUAL SPREADER™ NOZZLES

Base Pressure (psi)	#28 WHITE		#32 BLUE		#36 YELLOW		#40 ORANGE		#44 GREEN		#48 BLACK	
	Radius (ft)	Flow (gpm)	Radius (ft)	Flow (gpm)	Radius (ft)	Flow (gpm)	Radius (ft)	Flow (gpm)	Radius (ft)	Flow (gpm)	Radius (ft)	Flow (gpm)
50	55	13.4	57	15.0	61	16.9	63	19.7	-	-	-	-
60	57	15.0	59	16.9	63	18.8	67	21.8	69	24.0	-	-
70	59	16.7	61	18.3	65	20.4	69	23.7	73	27.9	77	31.2
80	61	17.8	63	20.0	67	21.8	71	26.5	75	30.1	79	33.6
90	61	19.3	65	21.1	67	23.5	73	28.4	77	32.2	81	35.9
100	61	20.2	65	22.5	67	24.9	75	30.1	77	34.0	83	38.1

Data reflects no pressure regulation.

EAGLE™ 750 Performance Data – Metric

DUAL SPREADER™ NOZZLES

Base Pressure (bars)	#28 WHITE			#32 BLUE			#36 YELLOW			#40 ORANGE			#44 GREEN			#48 BLACK		
	Radius (m)	Flow (l/s)	Flow (m³/h)	Radius (m)	Flow (l/s)	Flow (m³/h)	Radius (m)	Flow (l/s)	Flow (m³/h)	Radius (m)	Flow (l/s)	Flow (m³/h)	Radius (m)	Flow (l/s)	Flow (m³/h)	Radius (m)	Flow (l/s)	Flow (m³/h)
3,5	16,8	0,85	3,04	17,4	0,95	3,41	18,6	1,07	3,84	19,2	1,24	4,47	-	-	-	-	-	-
4,0	17,3	0,93	3,33	17,9	1,04	3,75	19,1	1,16	4,18	20,2	1,35	4,86	20,8	1,48	5,33	-	-	-
4,5	17,7	1,00	3,61	18,3	1,11	4,01	19,5	1,24	4,46	20,7	1,44	5,18	21,7	1,64	5,92	22,6	1,89	6,82
5,0	18,1	1,07	3,86	18,7	1,18	4,25	20,0	1,31	4,71	21,2	1,54	5,54	22,4	1,80	6,46	23,6	2,01	7,23
5,5	18,6	1,12	4,05	19,2	1,26	4,53	20,4	1,37	4,94	21,6	1,67	6,00	22,8	1,90	6,82	24,1	2,12	7,61
6,0	18,6	1,19	4,28	19,6	1,31	4,72	20,4	1,45	5,22	22,1	1,76	6,32	23,3	1,99	7,17	24,5	2,22	8,00
6,5	18,6	1,24	4,46	19,8	1,37	4,93	20,4	1,52	5,47	22,5	1,84	6,62	23,5	2,08	7,49	24,9	2,32	8,37
6,9	18,6	1,27	4,59	19,8	1,42	5,11	20,4	1,57	5,66	22,9	1,90	6,84	23,5	2,15	7,72	25,3	2,40	8,64

Data reflects no pressure regulation.

700E

Dual Spreader™ Nozzles provide excellent wedge-shape profiles. Distribution is forgiving in stretched spacing and high wind environments.

2.6" (6,6 cm) pop-up height to mid-nozzle raises stream above surrounding turf.

One-piece snap cover locks assembly firmly in place.

Top-adjustable pressure regulator offers convenient access to controls.

Manual operation selector provides convenient on-the-spot on and off ability.

Heavy-duty, two-piece solenoid offers superior life and can be removed without contaminating the pressure regulation system with dirt.

Reinforced polypropylene case provides protection against damage.

Internal bleed port saves water and eliminates puddling around the head.

Patented Top-Serviceable Rock Screen™ and Replaceable Valve Seat allow for debris removal at installation or due to buildup over time.

Diffuser screw kit allows flexibility to reduce radius of throw in difficult watering applications.

Color-coded interchangeable nozzles add convenience and flexibility.

Closed-case design with self-flushing action protects internal assembly from debris, allows rotor to be set at grade during installation and ensures performance in all soil conditions.

Heavy-duty stainless steel spring ensures positive retraction.

Water-lubricated gear-drive is environmentally friendly and offers proven, trouble-free performance.

Turbine efficiently powers gear-drive mechanism.

Stator ensures consistent rotation speed.

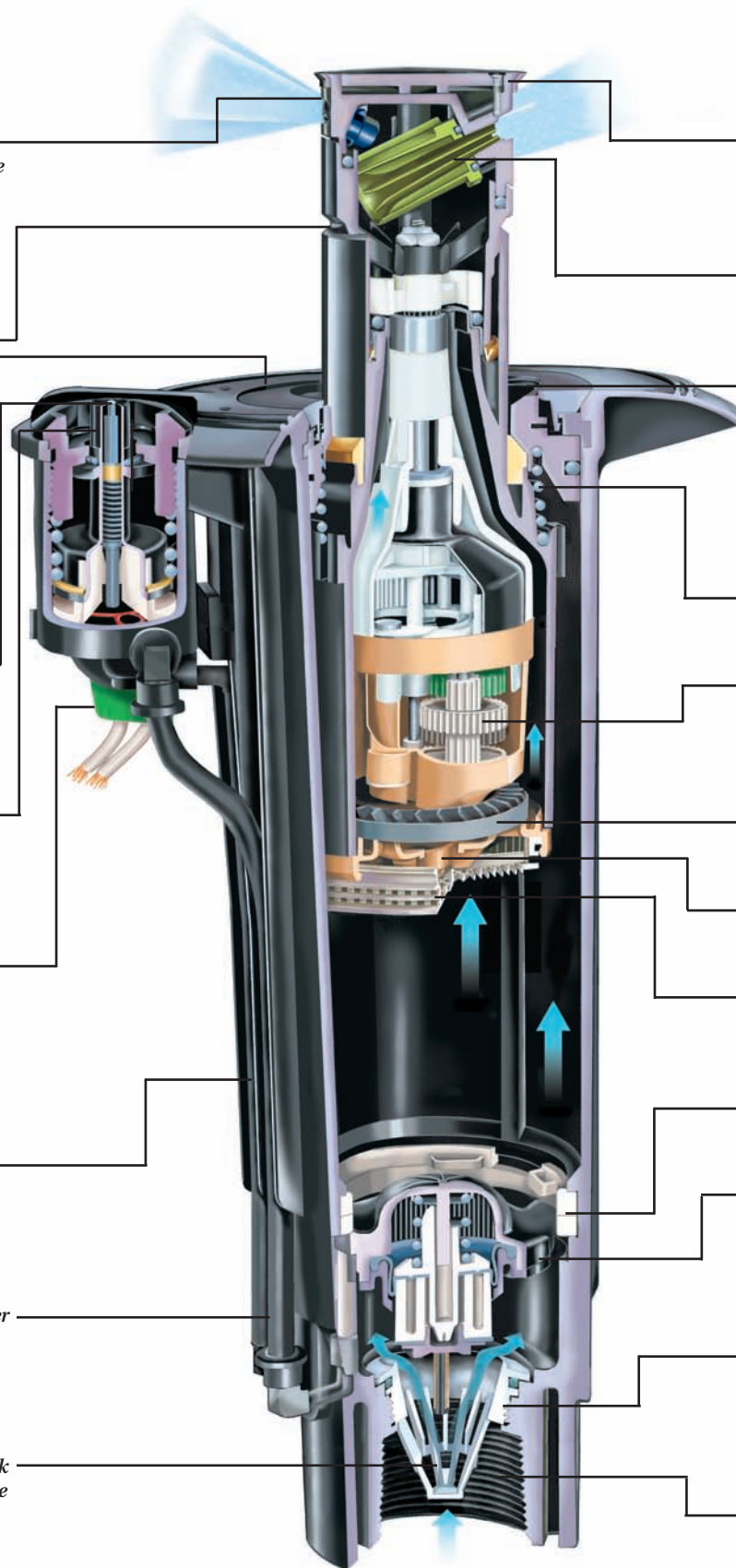
Fine mesh screen keeps debris from entering internal assembly.

Lower dual snap-rings lock valve firmly in place.

Diaphragm valve offers reliable performance with little long-term wear. Rubber valve seal can be easily changed if nicked from debris.

Buttress thread of Top-Serviceable Rock Screen prevents misthreading and pushes out any remaining debris during installation.

1.25" (3,2 cm) molded-in BSP and ACME threads allow for easy installation.



EAGLE™ 700 and 750 Rotors

Model Specifications

The full- or part-circle sprinkler shall be a water-lubricated gear-drive rotor capable of covering a ____ (units) radius at a base pressure of ____ (units) and a discharge rate of ____ (units). The rotor shall be installed with a number ____ nozzle that shall be ____ in color for ease of identification.

The part-circle sprinkler shall have adjustable arc coverage of 30° to 345°. Arc adjustment can be performed with or without the rotor in operation and shall require only a flat-blade screwdriver. The part-circle rotor shall rotate through a 180° arc in 1½ minutes or less. Rotation through 360° shall be 2½ minutes or less for the full-circle sprinkler.

The sprinkler shall be fully serviceable from the top without requiring special tools. The internal assembly shall be retained in the case by a plastic snap-ring. The rotor shall have a bearing guide that allows water to flush around the riser stem as it pops up and seals against the riser when it is fully raised. The pop-up height shall be 3.25" (8,3 cm). The retract spring shall be of stainless steel and of sufficient force for positive pop-down.

The nozzle housing cover of the rotor shall indicate the model, identify the installed nozzle and have an arrow to indicate the position of the nozzle, and shall provide a positive seal against debris when the rotor is not in operation. The housing shall be installed with one of six color-coded nozzles. The nozzle shall be tested per ASAE S398.1 and be verified to deliver scheduling coefficient of 1.2 or less and a Christiansen coefficient of uniformity of 90% or greater at the specified spacing.

The rotor body shall be molded of engineering-grade plastic and shall have a double-wall construction female (BSP or ACME) bottom inlet.

The sprinkler shall be manufactured by Rain Bird Corporation, Glendora, California, U.S.A.

Optional Feature—Electric Valve in Head (e.g., 700E or 750E). The sprinkler shall have a 24 VAC 50 or 60 cycle solenoid actuated normally closed control valve in the base of the case. The rotor shall have a pressure

regulator which is adjustable from the top using a small flat-blade screwdriver. The rotor shall have a top-serviceable selector that allows the unit to be operated manually, in automatic mode or shut-off entirely. The Rock Screen and Valve Seat shall be serviceable from the top.

The rotor case shall have a top diameter of 6.25" (15,9 cm) and an overall height of 12.0" (30,5 cm). The case shall have a 1.25" (3,2 cm) BSP or ACME threaded inlet.

Optional Feature—Normally Open Hydraulic Valve in Head (e.g., 700H or 750H). The sprinkler shall have a normally open hydraulic control valve in the base of the case. The Rock Screen and Valve Seat shall be serviceable from the top.

The rotor case shall have a top diameter of 6.25" (15,9 cm) and an overall height of 12.0" (30,5 cm). The case shall have a 1.25" (3,2 cm) BSP or ACME threaded inlet.

Optional Feature—Stopmatic Valve in Head (e.g., 700S or 750S). The sprinkler shall have a Stopmatic valve in the base of the case. The valve shall hold back at least 15' (4,6 m) of elevation. The Rock Screen and Valve Seat shall be serviceable from the top.

The rotor case shall have a top diameter of 6.25" (15,9 cm) and an overall height of 12.0" (30,5 cm). The case shall have a 1.25" (3,2 cm) BSP or ACME threaded inlet.

Optional Feature—Block Configuration (e.g., 700B or 750B). The sprinkler shall have a spring-loaded SEAL-A-MATIC™ holdback device in the base of the case and shall be used with a pressure-regulating in-line electrically actuated valve. The device shall hold back at least 10' (3,1 m) of elevation.

The rotor case shall have a top diameter of 4.25" (10,8 cm) and an overall height of 9.6" (24,5 cm). The case shall have a 1" (2,5 cm) NPT, BSP or ACME threaded inlet.

Optional Feature—Block Rubber Cover Configuration (e.g., 700BRC or 750BRC). The sprinkler shall have a spring-loaded SEAL-A-MATIC holdback device in the base of the case and shall be used with a pressure-regulating in-line electrically actuated valve. The device shall hold back at least 10' (3,1 m) of elevation.

The sprinkler shall have a three-part rubber cover. The rubber nozzle housing cover shall indicate the model, identify the installed nozzle and have an arrow to indicate the position of the nozzle, and shall provide a positive seal against debris when the rotor is not in operation. The rubber cover shall include a rubber snap-ring cover and a rubber outer ring.

The rotor case shall have a top diameter of 4.75" (12,1 cm) and an overall height of 10.0" (25,4 cm). The case shall have a 1" (2,5 cm) NPT, BSP or ACME threaded inlet.



EAGLE™ 705/755 Rotor Series



Making a rotor wind tolerant is more than simply lowering the trajectory of the spray. The design of EAGLE 705/755 Wind Tolerant Rotors began with a simple request, to create an effective wind tolerant rotor for the EAGLE 700 Series. The result is a rotor that not only has a lower trajectory but also integrates innovative design features that include a larger water droplet size and inverse wedge shaped spray pattern that make the rotor truly wind tolerant. Powered by the proven water lubricated rugged gear-drive assembly from the EAGLE Series of rotors, the EAGLE 705/755 Wind Tolerant Rotors use an advanced nozzle design to provide true wind tolerance. Search no further if you are facing persistent, unrelenting wind. Install EAGLE 705/755 Wind Tolerant Rotors.

Unique Features and Benefits of the EAGLE Wind Tolerant Rotor

- Unique flow channel design (patent pending) — reduces frictional loss to maintain standard range of throw, even with the lower trajectory.
- Larger droplet size — minimizes wind blown water loss.
- Low trajectory — reduces loss of range in windy conditions.
- Inverse wedge shaped spray pattern — helps the spray power through the wind.

Common Features with the EAGLE 700/750

- Similar zero-wind radius of throw as the EAGLE 700/750 makes it easy for an existing user to switch to wind tolerant rotors.
- Operating pressure from 60 to 100 psi (4,1 to 6,9 bars).
- Accommodates inlet pressure up to 150 psi (10,3 bars).
- Top-Serviceable Rock Screen™ and Replaceable Valve Seat.
- Inlet threads available in ACME and BSP.
- Water-lubricated, heavy-duty gear-drive offers reliable operation.
- True closed-case design with self-flushing action prevents internals from sticking up, even if buried in sand traps.
- High pop-up height clears tall grass.
- Color-coded nozzles make identification easy.
- Solenoid can be removed, even if the water line remains pressurized.



Model Specifications

The full- or part-circle sprinkler shall be a water-lubricated gear-driven rotor, capable of covering a ____ (units) radius at a base pressure of ____ (units) and a discharge rate of ____ (units). The rotor shall be installed with a number ____ nozzle that shall be ____ in color for ease of identification.

The part-circle sprinkler shall have adjustable arc coverage of 30° to 345°. Arc adjustment can be performed with or without the rotor in operation and shall require only a flat-blade screwdriver. The part-circle rotor shall rotate through 180° in 1½ minutes or less. Rotation through 360° shall be 3 minutes or less for the full-circle sprinkler.

The sprinkler shall be fully serviceable from the top without requiring special tools. The internal assembly shall be retained in the case by a plastic snap-ring. The rotor shall have a bearing guide that allows water to flush around the riser stem as it pops up and seals against the riser when it is fully raised. The pop-up height shall be 2.62" (6,7 cm) from the top of the flange to the center of the nozzle. The retract spring shall be of stainless steel and of sufficient force for positive pop-down.

The nozzle housing cover of the rotor shall identify the installed nozzle size and have an arrow to indicate the position of the nozzle and shall provide a positive seal against debris when the rotor is not in operation. The housing shall be installed with one of

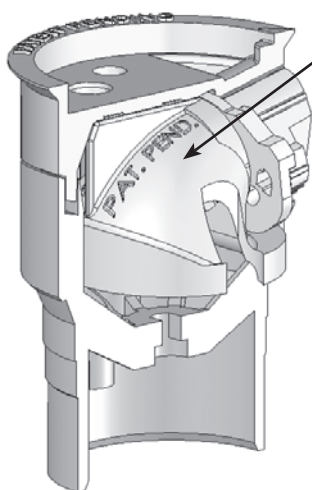
the three color-coded nozzles. The nozzles shall be tested as per ASAE S398.1.

The rotor shall be molded of engineering plastic and shall have a double wall construction with female (BSP or ACME) bottom inlet thread.

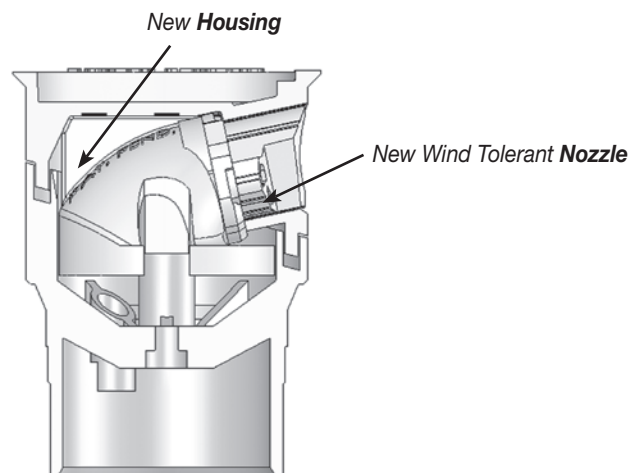
The sprinkler shall be manufactured by Rain Bird Corporation, Glendora, California, U.S.A.

Optional Feature – Non-potable Plastic Nozzle Housing. The rotor shall have a purple plastic nozzle housing to indicate to the user that non-potable water is being used. There shall be no difference between the black and the purple nozzle housing except the color.

Other Features – The rotor case shall have a top diameter of 7.75" (19,7 cm) and an overall height of 12" (30,5 cm). The case shall have a 1.25" (3,2 cm) BSP or ACME threaded inlet.



New Patent Pending Component:
Flow Channel that enhances range of main nozzle.





EAGLE™ 705E Zero-Wind Performance Data – U.S.

WIND TOLERANT NOZZLES

Base Pressure (psi)	#16 GRAY		#18 RED		#22 BLACK	
	Range	Flow	Range	Flow	Range	Flow
	(ft)	(gpm)	(ft)	(gpm)	(ft)	(gpm)
60	56	16.3	58	19.0	—	—
70	56	17.5	61	20.9	—	—
80	60	18.5	65	22.3	65	34.8
90	62	20.2	65	23.2	67	38.8
100	63	21.1	65	24.2	71	40.5

Data reflects no pressure regulation.

EAGLE™ 705E Zero-Wind Performance Data – Metric

WIND TOLERANT NOZZLES

Base Pressure (bars)	#16 GRAY		#18 RED		#22 BLACK	
	Range	Flow	Range	Flow	Range	Flow
	(m)	(lps)	(m)	(lps)	(m)	(lps)
4,1	17,1	1,03	17,7	1,20	—	—
4,8	17,1	1,10	18,6	1,32	—	—
5,5	18,3	1,16	19,8	1,41	19,8	2,20
6,2	18,9	1,27	19,8	1,46	20,4	2,45
6,9	19,2	1,33	19,8	1,52	21,6	2,56

Data reflects no pressure regulation.

EAGLE™ 755E Zero-Wind Performance Data – U.S.

WIND TOLERANT NOZZLES

Base Pressure (psi)	#16 GRAY		#18 RED		#22 BLACK	
	Range	Flow	Range	Flow	Range	Flow
	(ft)	(gpm)	(ft)	(gpm)	(ft)	(gpm)
60	60	15.7	63	18.8	—	—
70	62	16.7	63	20.0	—	—
80	62	17.8	65	21.4	65	35.8
90	64	18.8	67	22.7	67	37.6
100	66	20.4	67	24.0	71	41.1

Data reflects no pressure regulation.

EAGLE™ 755E Zero-Wind Performance Data – Metric

WIND TOLERANT NOZZLES

Base Pressure (bars)	#16 GRAY		#18 RED		#22 BLACK	
	Range	Flow	Range	Flow	Range	Flow
	(m)	(lps)	(m)	(lps)	(m)	(lps)
4,1	18,3	0,99	19,2	1,19	—	—
4,8	18,9	1,05	19,2	1,26	—	—
5,5	18,9	1,12	19,8	1,35	19,8	2,26
6,2	19,5	1,19	20,4	1,43	20,4	2,37
6,9	20,1	1,29	20,4	1,51	21,6	2,59

Data reflects no pressure regulation.

Notes:

- 1) Recommended for use on sites experiencing continuous high wind conditions of 4 mph (6,5 kmph) or more.
- 2) For best results, it is recommended to use rotors in triangular spacing.
- 3) The range and flow data is for zero-wind condition only. Users should apply their experience and judgment to reduce the range of throw and space the rotors suitably according to the local wind conditions.

Specifications

Models:

Full-Circle:

EAGLE 705E: Electric

Part-Circle:

EAGLE 755E: Electric

Arc:

EAGLE 705E: Full-circle, 360°

EAGLE 755E: Adjustable, 30° to 345°

Maximum Inlet Pressure:

150 psi (10,3 bars)

Pressure Regulation Range:

60 to 100 psi (4,1 to 6,9 bars)

Factory Pressure Settings:

705E/755E available in 60, 70 and 80 psi (4,1, 4,8 and 5,5 bars)

Rotation Time:

EAGLE 705E:

360° in ≤ 180 seconds; 150 seconds nominally

EAGLE 755E:

180° in ≤ 90 seconds;

75 seconds nominally

Inlet Threads:

1.25" (3,2 cm) (33/42) BSP or ACME

Nozzle Trajectory: 12°

Maximum Stream Height: 10' (3,1 m)

Dimensions:

Body Height: 12" (30,5 cm)

Top Diameter: 7.75" (19,7 cm)

Pop-Up Height to Mid-Nozzle: 2.62" (6,7 cm)

Solenoid:

24 VAC solenoid power requirement —

0.41 amp inrush current (9.8 VA)

60 cycle — 0.25 amp holding current (6.0 VA)

50 cycle — 0.32 amp holding current (7.7 VA)

Top-Serviceable Rock Screen™ and Replaceable Valve Seat

All data is generated from tests conducted in accordance with ASAE Standard S398.1 for at least 30 minutes in zero-wind conditions.

The EAGLE 705/755 rotors perform better in windy conditions and are recommended for sites experiencing continuous high wind speed only.

EAGLE™ 500/550 Rotor Series

EAGLE 500/550 Rotors have just the right power and coverage for tee boxes and other small areas throughout the course.

- The EAGLE 500/550 has a radius of 33' to 49' (10,1-14,9 m).
- Operates at pressures from 40 to 100 psi (2,8 to 6,9 bars).
- Quick rotation, less than 2 minutes full-circle, waters key areas in less time.
- Nozzle design provides superior water distribution with less sensitivity to spacing difference.
- Solid design and construction provide a higher degree of reliability, grit resistance and significantly longer life than commercial-grade products.
- The EAGLE 500 is a full-circle 360° rotor.
- The part-circle EAGLE 550 offers a 30° to 345° turning range.
- Both versions are available in electric and hydraulic models.
- Electric models have a heavy-duty, two-piece solenoid for easy serviceability and superior life.
- Threads available in BSP or ACME.
- Top-Serviceable Rock Screen™ and Replaceable Valve Seat standard on all valve-in-head models.
- Nozzle pop-up height to mid-nozzle 2.6" (6,6 cm).





EAGLE™ 500 and 550 Rotors

Model Specifications

The full- or part-circle sprinkler shall be a water-lubricated gear-drive rotor capable of covering a ____ (units) radius at a base pressure of ____ (units) and a discharge rate of ____ (units). The rotor shall be installed with a number ____ nozzle that shall be ____ in color for ease of identification.

The part-circle sprinkler shall have adjustable arc coverage of 30° to 345°. Arc adjustment can be performed with or without the rotor in operation and shall require only a flat-blade screwdriver. The part-circle rotor shall rotate through a 180° arc in 1 minute or less. Rotation through 360° shall be 2 minutes or less for the full-circle sprinkler.

The sprinkler shall be fully serviceable from the top without requiring special tools. The internal assembly shall be retained in the case by a plastic snap-ring. The rotor shall have a bearing guide that allows water to flush around the riser stem as it pops up and seals against the riser when it is fully raised. The retract spring shall be of stainless steel and of sufficient force for positive pop-down.

The nozzle housing cover of the rotor shall indicate the model, identify the installed nozzle and have an arrow to indicate the position of the nozzle, and shall provide a

positive seal against debris when the rotor is not in operation. The housing shall be installed with one of three color-coded nozzles. The nozzle shall be tested per ASAE S398.1 and be verified to deliver scheduling coefficient of 1.2 or less and a Christiansen coefficient of uniformity of 90% or greater at the specified spacing.

The rotor body shall be molded of engineering-grade plastic and shall have a double-wall construction female (BSP or ACME) bottom inlet.

The sprinkler shall be manufactured by Rain Bird Corporation, Glendora, California, U.S.A.

Optional Feature—Electric Valve in Head (e.g., 500E or 550E). The sprinkler shall have a 24 VAC 50 or 60 cycle solenoid actuated normally closed control valve in the base of the case. The rotor shall have a pressure regulator which is adjustable from the top using a small flat-blade screwdriver. The rotor shall have a top-serviceable selector that allows the unit to be operated manually, in automatic mode or shut-off entirely. The Rock Screen and Valve Seat shall be serviceable from the top.

The rotor case shall have a top diameter of 6.25" (15,9 cm) and an overall height of 12" (30,5 cm). The case shall have a 1.25" (3,2 cm) BSP or ACME threaded inlet.

Optional Feature—Normally Open Hydraulic Valve in Head (e.g., 500H or 550H). The sprinkler shall have a normally open hydraulic control valve in the base of the case. The Rock Screen and Valve Seat shall be serviceable from the top.

The rotor case shall have a top diameter of 6.25" (15,9 cm) and an overall height of 12" (30,5 cm). The case shall have a 1.25" (3,2 cm) BSP or ACME threaded inlet.



Specifications

Models:

Full-Circle:

EAGLE 500E: Fast rotation, electric

EAGLE 500H: Fast rotation, hydraulic (N.O.)*

Part-Circle:

EAGLE 550E: Fast rotation, electric

EAGLE 550H: Fast rotation, hydraulic (N.O.)*

Arc:

EAGLE 500: Full-circle, 360°

EAGLE 550: Adjustable, 30° to 345°

Maximum Inlet Pressure:

Models 500E: 150 psi (10,3 bars)

Models 500H: 100 psi (6,9 bars)

Pressure Regulation Range:

60 to 100 psi (4,1 to 6,9 bars)

Factory Pressure Settings:

500E/550E available in 60, 70 and 80 psi (4,1; 4,8 and 5,5 bars)

Rotation Time:

EAGLE 500: 360° in ≤120 seconds; 90 seconds nominally

EAGLE 550: 180° in ≤ 60 seconds; 45 seconds nominally

Inlet Threads:

1.25" (3,2 cm) (33/42) BSP or ACME

Nozzle Trajectory:

25°

Maximum Stream Height:

13' (4,0 m)

Dimensions:

Body Height:

12" (30,5 cm)

Top Diameter:

6.25" (15,9 cm)

Pop-Up Heights to Mid-Nozzle:

2.6" (6,6 cm)

Solenoid:

24 VAC solenoid power requirement—0.41 amp inrush current (9.8 VA)

60 cycle—0.25 amp holding current (6.0 VA)

50 cycle—0.32 amp holding current (7.7 VA)

Top-Serviceable Rock Screen™ and Replaceable Valve Seat:

Rain Bird recommends the use of SPACE for Windows, equivalent program or derived performance data to optimize nozzle selection.

* N.O.—Normally open

EAGLE™ 500 Performance Data – U.S.

NOZZLES

Base	#52 BEIGE			#53 GRAY		#54 RED	
Pressure	Radius	Flow		Radius	Flow	Radius	Flow
(psi)	(ft)	(gpm)		(ft)	(gpm)	(ft)	(gpm)
40	33	6.0		41	7.7	45	9.3
50	35	6.6		43	8.6	47	10.3
60	35	7.2		43	9.4	47	11.2
70	35	7.7		45	10.1	47	12.0
80	35	8.3		45	10.8	47	12.8
90	37	8.7		43	10.9	47	12.8
100	35	9.1		43	11.2	47	13.2

Data reflects no pressure regulation.

EAGLE™ 500 Performance Data – Metric

NOZZLES

Base	#52 BEIGE				#53 GRAY			#54 RED		
Pressure	Radius	Flow	Flow		Radius	Flow	Flow	Radius	Flow	Flow
(bars)	(m)	(l/s)	(m³/h)		(m)	(l/s)	(m³/h)	(m)	(l/s)	(m³/h)
2,8	10,1	0,38	1,36		12,5	0,49	1,75	13,7	0,59	2,11
3,0	10,3	0,39	1,41		12,7	0,51	1,82	13,9	0,61	2,19
3,5	10,7	0,42	1,51		13,1	0,55	1,97	14,3	0,65	2,36
4,0	10,7	0,45	1,61		13,1	0,58	2,10	14,3	0,70	2,50
4,5	10,7	0,47	1,70		13,4	0,62	2,22	14,3	0,73	2,64
5,0	10,7	0,50	1,78		13,7	0,65	2,33	14,3	0,77	2,77
5,5	10,7	0,52	1,88		13,7	0,68	2,45	14,3	0,81	2,90
6,0	11,1	0,54	1,95		13,3	0,69	2,47	14,3	0,81	2,91
6,5	11,0	0,56	2,01		13,1	0,70	2,50	14,3	0,82	2,95
6,9	10,7	0,57	2,07		13,3	0,71	2,54	14,3	0,83	3,00

Data reflects no pressure regulation.

EAGLE™ 550 Performance Data – U.S.

NOZZLES

Base	#52 BEIGE			#53 GRAY		#54 RED	
Pressure	Radius	Flow		Radius	Flow	Radius	Flow
(psi)	(ft)	(gpm)		(ft)	(gpm)	(ft)	(gpm)
40	33	6.0		41	7.7	45	9.3
50	35	6.6		41	8.6	47	10.3
60	35	7.2		43	9.4	49	11.2
70	35	7.7		43	10.1	49	12.0
80	37	8.3		43	10.8	49	12.8
90	39	8.8		43	11.5	49	12.9
100	39	9.1		45	12.0	49	13.6

Data reflects no pressure regulation.

EAGLE™ 550 Performance Data – Metric

NOZZLES

Base	#52 BEIGE				#53 GRAY			#54 RED		
Pressure	Radius	Flow	Flow		Radius	Flow	Flow	Radius	Flow	Flow
(bars)	(m)	(l/s)	(m³/h)		(m)	(l/s)	(m³/h)	(m)	(l/s)	(m³/h)
2,8	10,1	0,38	1,36		12,5	0,49	1,75	13,7	0,59	2,11
3,0	10,3	0,39	1,41		12,5	0,51	1,82	13,9	0,61	2,19
3,5	10,7	0,42	1,51		12,5	0,55	1,97	14,4	0,65	2,36
4,0	10,7	0,45	1,61		12,9	0,58	2,10	14,8	0,70	2,50
4,5	10,7	0,47	1,70		13,1	0,62	2,22	14,9	0,73	2,64
5,0	10,8	0,50	1,78		13,1	0,65	2,33	14,9	0,77	2,77
5,5	11,3	0,52	1,88		13,1	0,68	2,45	14,9	0,81	2,91
6,0	11,7	0,55	1,96		13,1	0,71	2,56	14,9	0,81	2,92
6,5	11,9	0,56	2,03		13,4	0,74	2,66	14,9	0,83	3,00
6,9	11,9	0,57	2,07		13,7	0,76	2,73	14,9	0,86	3,09

Data reflects no pressure regulation.

EAGLE™ 351B Rotors



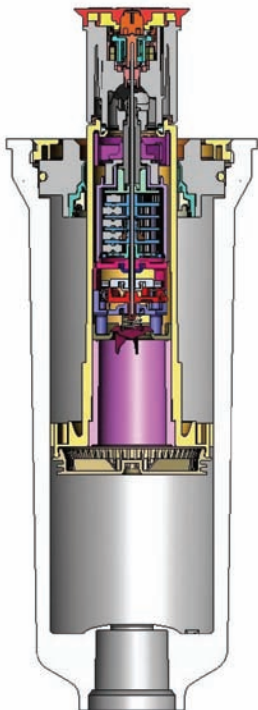
Residential-grade landscaping rotors eventually crack under the pressure of golf course irrigation systems, but the EAGLE 351B is more durable than any other short-throw rotor, and it has a five-year warranty (when installed with a Rain Bird® swing joint) to back up that performance pledge. With an ideal adjustable range for tee boxes, small greens, and other limited irrigation areas, the EAGLE 351B uses a nozzle technology that exceeds all other brands, specifically designed for efficient water distribution. Control the arc with a flathead screwdriver, without turning the case, for precision coverage in tiny spaces. Sturdy, accurate, made just for golf course irrigation systems — the EAGLE 351B is the short solution to a long-time need, guaranteed.

- Solid design and construction guarantee (with a five-year warranty when installed in conjunction with a Rain Bird swing joint), for a significantly longer life span than commercial-grade products.
- Available in block (with SEAL-A-MATIC™ device) models.
- Inlet threads available in 1" BSP and ACME.
- Water-lubricated gear drive eliminates loss of lubrication and water contamination due to leakage.
- Self-adjusting turbine stator allows for nozzle replacement without other adjustment requirements.

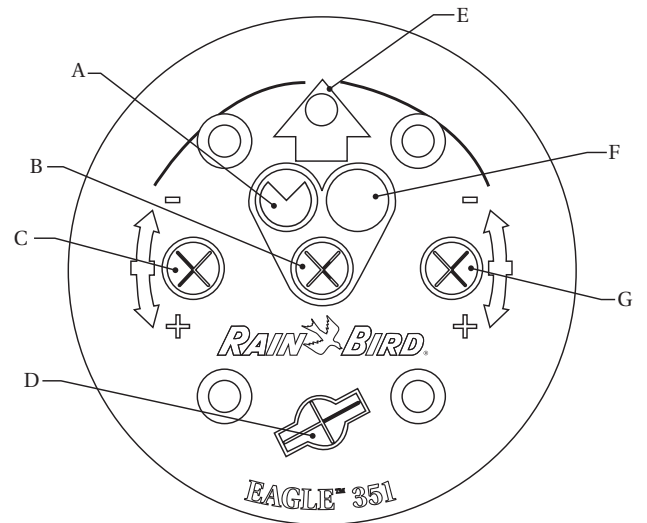
Features and Benefits

- As requested by superintendents, the radius of throw is a versatile 18' to 55' (5,5 m to 16,8 m), for irrigating tight areas.
- Built to withstand golf course irrigation system water pressure; operates at pressure from 60 to 90 psi (4,1-6,2 bars), and can sustain up to 100 psi (6,9 bars).
- Both full- and part-circle operation are incorporated into each unit, requiring only one head for all irrigation needs.
- Adjustable left and right side trips allow for easy installation, without turning the case.
- The Rain Bird Memory Arc® feature returns the rotor to its original arc setting when it has been forcibly turned beyond the trip points of the set arc.
- Nozzle pop-up height of 3.25" (8,3 cm) from top of the case to the center of the nozzle clears the taller grasses.
- Unique nozzle design, interchangeable without special tools, distributes water evenly, with less sensitivity to water pressure.
- Fully top serviceable, eliminating the need to dig in order to perform maintenance.





- A= Part-Circle Icon*
- B= Full/Part-Circle Adjustment Slot*
- C=Left Edge Arc Adjustment Slot*
- D=Pull-up Tool Slot*
- E= Nozzle Retainer Screw*
- F= Full-Circle Icon*
- G= Right Edge Arc Adjustment Slot*





EAGLE™ 351B Performance Data – U.S.

BASE PRESSURE

NOZZLE	60 psi		70 psi		80 psi		90 psi	
	Radius (ft)	Flow (gpm)	Radius (ft)	Flow (gpm)	Radius (ft)	Flow (gpm)	Radius (ft)	Flow (gpm)
18S White	18	1.8	20	1.9	20	2.0	22	2.2
22S Dark Gray	22	2.2	22	2.4	24	2.5	26	2.7
26S Dark Orange	24	2.6	24	2.8	26	3.1	26	3.2
30S Light Green	30	3.0	30	3.1	32	3.2	32	3.4
36S Brown	34	3.6	34	3.8	34	4.2	36	4.4
40 Orange	40	2.1	40	2.3	42	2.4	42	2.5
44 Red	44	3.5	46	3.6	46	4.1	46	4.3
48 Blue	48	5.8	48	6.4	48	6.8	48	7.0
54 Beige	50*	12.4*	54*	13.5*	56*	14.6*	56*	15.5*

EAGLE™ 351B Performance Data – Metric

BASE PRESSURE

NOZZLE	4,1 bar		4,8 bar		5,5 bar		6,2 bar	
	Radius (m)	Flow (l/s)	Radius (m)	Flow (l/s)	Radius (m)	Flow (l/s)	Radius (m)	Flow (l/s)
18S White	5,5	0,11	6,1	0,12	6,1	0,13	6,7	0,14
22S Dark Gray	6,7	0,14	6,7	0,15	7,3	0,16	7,9	0,17
26S Dark Orange	7,3	0,16	7,3	0,18	7,9	0,20	7,9	0,20
30S Light Green	9,1	0,19	9,1	0,20	9,8	0,20	9,8	0,21
36S Brown	10,4	0,23	10,4	0,24	10,4	0,26	11,0	0,28
40 Orange	12,2	0,13	12,2	0,15	12,8	0,15	12,8	0,16
44 Red	13,4	0,22	14,0	0,23	14,0	0,26	14,0	0,27
48 Blue	14,6	0,37	14,6	0,40	14,6	0,43	14,6	0,44
54 Beige	15,2*	0,78*	16,5*	0,85*	17,1*	0,92*	17,1*	0,98*

*For best results, recommended for use in triangular spacing only.

Data reflects no pressure regulation. For a block rotor, it is the pressure at the inlet to the rotor casing after the pressure has been regulated through a valve. All data is generated from tests conducted in accordance with ASAE Standard S398.1 for at least 30 minutes, in zero-wind conditions. Rain Bird recommends the use of SPACE for Windows,* equivalent programming or derived performance data to optimize nozzle selection.

EAGLE™ 351B Rotors Model Specifications

The full- or part-circle sprinkler shall be a water-lubricated gear-driven rotor, capable of covering a _____ (units) radius at a base pressure of _____ (units) and a discharge rate of _____ (units). The rotor shall be installed with a number _____ nozzle that shall be _____ in color for ease of identification.

The sprinkler shall be capable of both full-circle and part-circle rotation in the same unit. The mode of operation shall be selected by inserting a flat-blade screwdriver in the top of the rubber cap and by turning a selector approximately 45°. The sprinkler shall not reverse direction during continuous operation in full-circle mode. The sprinkler shall have adjustable arc coverage of 50° to 330° in part-circle mode. Arc adjustment can be performed with or without the rotor in operation and shall require only a flat-blade screwdriver. In part-circle mode, the rotor shall rotate 180° in 1½ minutes or less. Rotation through 360° shall be 3 minutes or less in full-circle sprinkler mode. The arc adjustment can be performed both in the right and the left trip location of the sprinkler.

The sprinkler shall be fully serviceable from the top without requiring special tools. The internal assembly shall be retained in the case by a plastic snap ring. The rotor shall have a bearing guide that allows water to flush around the riser stem as it pops up and seals

against the riser when it is fully raised. The portion of the riser stem that is in contact with the wiper seal shall be non-rotating. The pop-up height shall be 3.25" (8,3 cm) to the center of the nozzle. The retracting spring shall be of stainless steel and of sufficient force for positive pop-down.

The nozzle housing cover of the rotor shall indicate the model and have an arrow to indicate the position of the nozzle and shall provide a positive seal against debris when the rotor is not in operation. The housing shall be installed with one of the 9 color-coded nozzles. The nozzles shall be tested as per ASAE S398.1.

The rotor shall be manufactured by Rain Bird Corporation, Glendora, California, U.S.A.

Operational Feature

Block configuration (e.g., 351B). The sprinkler shall have a spring-loaded SEAL-A-MATIC™ holdback device in the base of the case and shall be used with a pressure regulating in-line electrically actuated valve. The device shall hold back at least 10' (3,1m) of elevation.

The rotor case shall have a top diameter of 4.25" (10,8 cm) and an overall height of 9.6" (24,5 cm). The case shall have a 1" (2,5 cm) NPT, BSP or ACME threaded inlet.

Specifications

Models:

EAGLE 351B: SEAL-A-MATIC™ device

Arc:

EAGLE 351B: 360° in full-circle mode, adjustable from 50° to 330° in part-circle mode

Maximum Inlet Pressure:

Model 351B: 100 psi (6,9 bar)

Recommended Operating Pressure:

60 psi (4,1 bar), 70 psi (4,8 bar), 80 psi (5,5 bar)

Radius:

18 to 55 feet (5,5 to 16,8 m)

Flow:

Full-Circle Mode: 360° ≤ 180 seconds; 120 seconds nominally

Part-Circle Mode: 180° ≤ 90 seconds; 60 seconds nominally

Inlet Threads: 1" (2,5 cm) (26/36) NPT, BSP or ACME

Holdback: 10' (3,1 m) of elevation

Nozzle Trajectory: 17° and 25°

Maximum Stream Height: 13' (4,0 m)

Dimensions:

Body Height: 9.6" (24,5 cm)

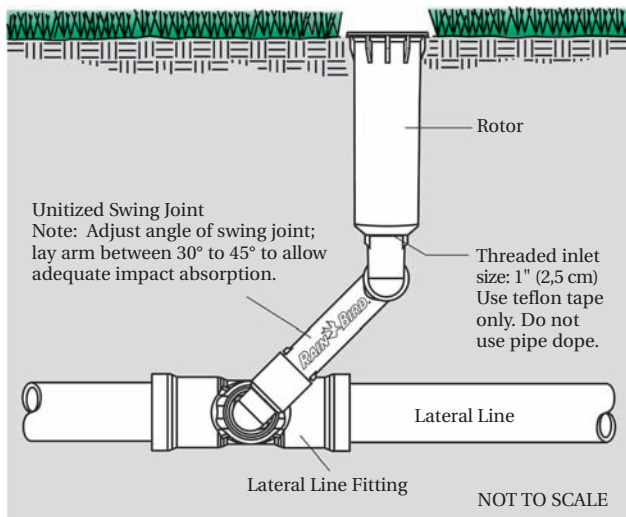
Top Diameter: 4.25" (10,8 cm)

Pop-Up Height: 3.25" (8,3 cm) from top of the case to the center of the nozzle

Rain Bird® EAGLE™ Series Rotors Construction Detail Drawings

351B

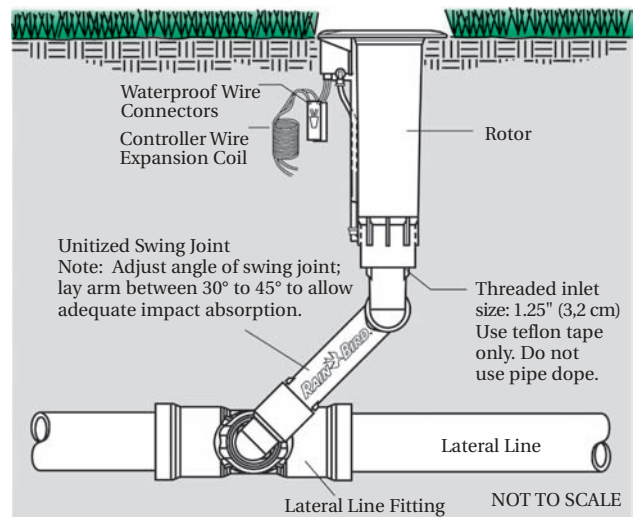
700B/750B



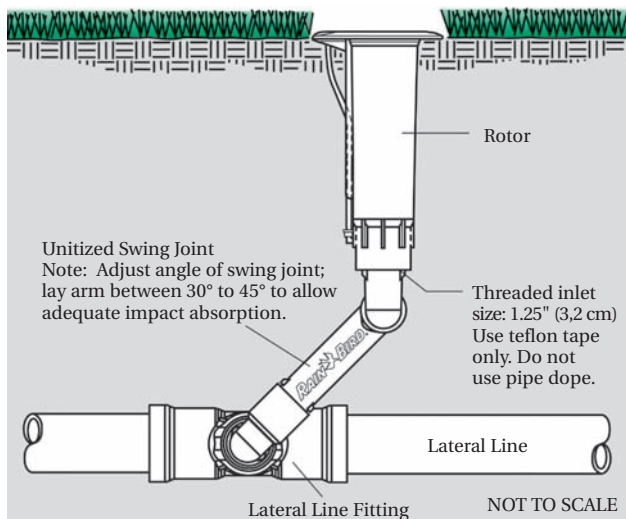
500E/550E

700E/750E

705E/755E

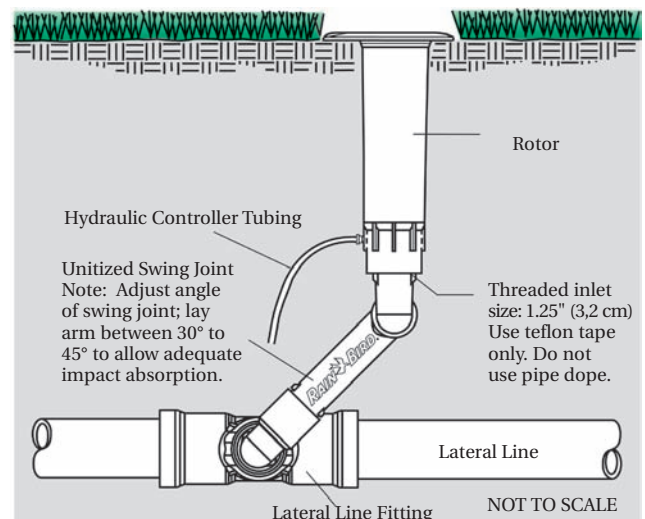


700S/750S



500H/550H

700H/750H

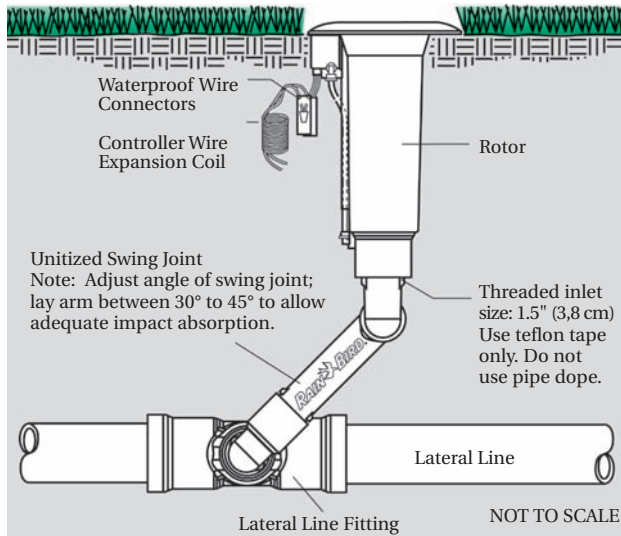


Rain Bird® EAGLE™ Series Rotors

Construction Detail Drawings

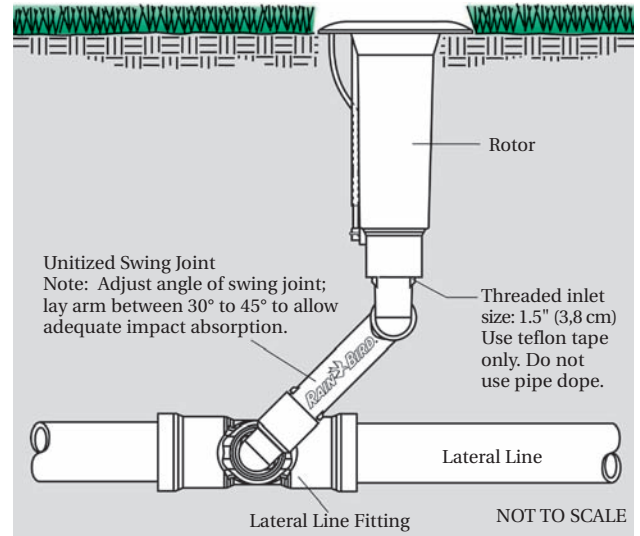
900E/950E

1100E/1150E



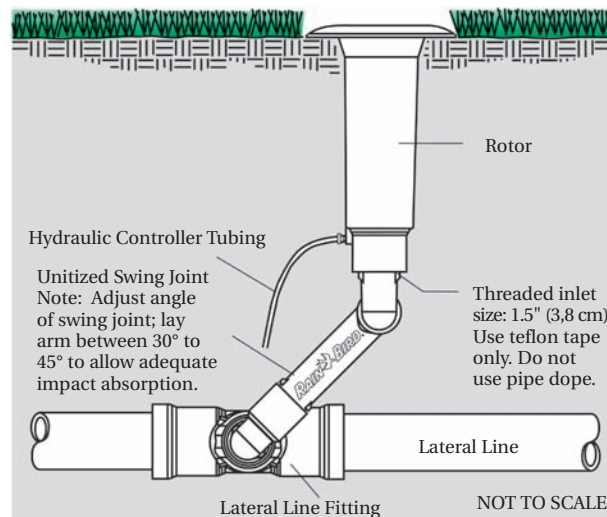
900S/950S

1100S/1150S



900H/950H

1100H/1150H



Conversion Factors, Equivalents and Formulas

AREAS

6,452 Sq. Centimeters	1 Sq. Inch
144 Sq. Inches	1 Sq. Foot
9 Sq. Feet	1 Sq. Yard
43,560 Sq. Feet	1 Acre
1 Acre	43,560 Sq. Feet
1 Acre	4,840 Sq. Yards
1 Acre	160 Sq. Rods
1 Sq. Rod	272.25 Sq. Feet
1 Sq. Rod	30.25 Sq. Yards
640 Acres	1 Sq. Mile
640 Acres	1 Section
Area of a Circle	Radius Squared x 3.1416
Area of a Square	One Side Squared
Area of a Triangle	$\frac{1}{2}$ Base x Altitude
Area of a Rectangle	Length x Width
Area of a Parallelogram	Base x Altitude

LINEAL MEASUREMENTS

1 Centimeter	0.3937 Inches
1 Cubit	18 Inches
1 Meter	39.37 Inches
1 Rod	16.5 Feet
1 Rod	5.5 Yards
1 Chain	4 Rods
1 Chain	66 Feet
320 Rods	1 Mile
5280 Feet	1 Mile
Circumference of Circle	Diam. x 3.1416

VOLUME

1728 Cubic Inches	1 Cubic Foot
231 Cubic Inches	1 Gallon
27 Cubic Feet	1 Cubic Yard
1 Cubic Foot	7.48052 Gallons (U.S.)
1 Cubic Yard	202 Gallons (U.S.)
16 Drams	1 Ounce
32 Ounces	1 Quart
4 Quarts	1 Gallon
1 Gallon	3.785 Liters
1 Gallon	0.00379 Cu. Meters
1 Gallon	0.833 Imperial Gal.
27,154 Gallons	1 Acre Inch
325,851 Gallons	1 Acre Foot
1,000,000 Gallons	3.0689 Acre Feet
1 Acre Foot	43,560 Cubic Feet
Volume of a Cube	Area of Base x Height
Volume of a Pyramid	$\frac{1}{3}$ Area of Base x Height
Volume of a Sphere	Diam. Cubed x 0.5236

WEIGHTS

1 U.S. Gallon (Water)	8.3357 lbs.
1 Cu. Foot (Water)	62.3554 lbs.
1 Imperial Gallon	10.0 lbs.
1 Liter	2.2 lbs.
Earth, in Place Undisturbed	100 lbs./cu.ft.
Earth, Dry and Loose	82 – 90 lbs./cu.ft.
Earth, Moist	75 – 100 lbs./cu.ft.
Sand, Dry	90 – 106 lbs./cu.ft.
Shale or Red Rock	162 lbs./cu.ft.
Limestone	160 – 163 lbs./cu.ft.
Base Gravel	12.0 lbs./sq. ft./inch Thick in Place
Asphalt	12.5 lbs./sq. ft./inch Thick in Place
Sack Cement	94 lbs.
Concrete (Plain)	140 lbs./cu.ft.
Concrete (Reinforced)	150 lbs./cu.ft.

PRESSURES

1 Atmosphere	29.921 Inches of Hg @ 32° F
1 Atmosphere	33.94 Ft. of Water @ 62° F
1 Atmosphere	14.6963 lbs./sq. Inch
1 Pound per Square Inch	2.31 Feet of Head
1 Foot of Water	0.433 lbs./sq. Inch
1 Kilogram/sq. Centimeter	14.22 lbs./sq. Inch
1 Foot of Water	62.3554 lbs./sq. Foot
1 Bar	14.5 lbs./sq. Inch

FLOWS

1 Gallon/Minute (U.S.)	0.002228 cu. ft./Second
1 Gallon/Minute (U.S.)	0.13368 cu. ft./Minute
1 Gallon/Minute (U.S.)	8.0208 cu. ft./Hour
1 Gallon/Minute (U.S.)	0.06309 Liters/Second
1 Gallon/Minute (U.S.)	3.78533 Liters/Minute
1 Gallon/Minute (U.S.)	0.0044192 Acre Ft./24 Hrs.
1 Gallon/Minute (U.S.)	0.22712 cu. Meters/Hr.
1 Cubic Ft. per Second	448.83 gpm
1 Liter per Second	15.85 gpm
1 Cubic Meter per Minute	264 gpm
1 Acre Inch per Hour	452.57 gpm
1 Acre Foot per Day	226.3 gpm
1,000,000 Gallons per Day	694.4 gpm
1 Cubic Ft. per Second	0.992 Acre Inches/Hr.

POWER

Horsepower	$\frac{\text{gpm} \times \text{Total Head (Ft)}}{3960 \times \text{Pump Efficiency}}$
Pump Efficiency	$\frac{\text{gpm} \times \text{Total Head (Ft)}}{3960 \times \text{BHP to Pump}}$
1 Horsepower	33,000 Ft. lbs./Minute
1 Horsepower	746 Watts
1 Horsepower	0.746 Kilowatts

Hydraulic Formulas for Sprinklers

DISCHARGE FROM NOZZLES

U.S. (gpm)	METRIC (m ³ /h)	METRIC (lps)
$gpm = \sqrt{P} \times D^2 \times 29.82 \times C$	$m^3/hr = \sqrt{P} \times D^2 \times 259,8 \times C$	$lps = \sqrt{P} \times D^2 \times 935,3 \times C$
$D = \frac{\sqrt{\frac{gpm}{C \times \sqrt{P} \times 29.82}}}{\sqrt{C \times \sqrt{P} \times 29.82}}$	$D = \frac{\sqrt{\frac{m^3/h}{C \times \sqrt{P} \times 259,8}}}{\sqrt{C \times \sqrt{P} \times 259,8}}$	$D = \frac{\sqrt{\frac{lps}{C \times \sqrt{P} \times 935,3}}}{\sqrt{C \times \sqrt{P} \times 935,3}}$
$P = \left[\frac{gpm}{C \times D^2 \times 29.82} \right]^2$	$P = \left[\frac{m^3/h}{C \times D^2 \times 259,8} \right]^2$	$P = \left[\frac{lps}{C \times D^2 \times 935,3} \right]^2$
gpm = Gallons per minute D = Diameter of nozzle in inches P = Pressure in pounds per square inch C = Coefficient of discharge	m ³ /h = Cubic meters per hour D = Diameter of nozzle in millimeters P = Pressure in bars C = Coefficient of discharge	lps = Liters per second D = Diameter of nozzle in millimeters P = Pressure in bars C = Coefficient of discharge

PRECIPITATION (Rectangular Spacing)

U.S. (gpm)	METRIC (m ³ /h)	METRIC (lps)
$Pr. = \frac{gpm \times 96.3}{A}$	$Pr. = \frac{m^3/hr \times 1000}{A}$	$Pr. = \frac{lps \times 3600}{A}$
$gpm = \frac{Pr. \times A}{96.3}$	$m^3/h = \frac{Pr. \times A}{1000}$	$lps = \frac{Pr. \times A}{3600}$
Pr. = Precipitation in inches per hour A = Area (Distance between sprinklers on line x distance between lines) gpm = Gallons per minute per sprinkler	Pr. = Precipitation in millimeters per hour A = Area (Distance between sprinklers on line x distance between lines) m ³ /h = Cubic meters per hour per sprinkler	Pr. = Precipitation in millimeters per hour A = Area (Distance between sprinklers on line x distance between lines) lps = Liters per second per sprinkler

VELOCITY

U.S.	METRIC
$V = \sqrt{\frac{P}{0.00674}} \quad P = 0.00674 \times V^2 \quad V = \frac{gpm}{2.45 \times D^2}$	$V = \sqrt{\frac{P}{0.01419}} \quad P = \frac{9547 \times lps}{D^2} \quad V = \frac{2652 \times m^3/h}{D^2}$
V = Velocity in feet per second P = Pressure in lbs. per square inch D = Diam. of pipe or nozzle in inches	P = 0.01419 x V ² V = Velocity in meters per second P = Pressure in bars D = Diam. of pipe or nozzle in millimeters

NOTES

A column of water 1 foot high equals 0.4331 pounds pressure
(A column of water 1 meter high equals 0,098 bars.)
1 pound pressure equals a column of water 2.309 feet high
(1 bar pressure equals a column of water 10,20 meters high.)
1 acre equals 43,560 square feet.
1 acre inch equals 27,154 gallons.
1 cubic foot equals 7.48 gallons.
1 liter per second equals 15.85 gallons per minute.
1 m³/h equals 4.403 gallons per minute.
1 bar equals 14.50 psi (approximately 100 kPa).
1 millimeter equals 0.394 inches.
The height of an equilateral triangle is 0.866 times its base.
The discharge of a nozzle is in proportion to the square of its diameter and the square root of the pressure.

POWER FORMULA

1 hp = 550 foot pounds per second
= 746 watts or 0.746 kW
= 1 second foot of water falling 8.8'
Water H.P. = $\frac{\text{Second foot of water} \times \text{head in feet}}{8.8}$

= $\frac{\text{Gal. per min. of water} \times \text{head in feet}}{3960}$
Brake hp = $\frac{\text{Water hp}}{\text{Eff. of pump}}$
1 kilowatt (kW) = 1000 watts
= 1,341 hp
= 737.5 foot pounds per second



Notes

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Notes

[illegible]



Notes

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Notes

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Service Tools

Rain Bird offers a full line of quality tools for the service and maintenance of EAGLE™ Series Rotors. Constructed of heavy-duty metal alloys and durable plastic, these tools are lightweight and easy to use.

SRP

Snap-Ring Pliers 900/950/1100/1150

SR-700

Snap-Ring Pliers 700/750/500/550

VT-DR

Valve Insertion Tool 900/950/1100/1150

VT-700

Valve Insertion Tool 700/750/500/550

EGL-SVK

EAGLE Selector Service Tool/Key

DR-SVK-7

7" (17,8 cm) Selector Valve Key

DR-SVK-18

18" (45,7 cm) Selector Valve Key

IS-TSR

Installation Socket for
Top-Serviceable Rock Screen™

UHA

Universal Hose Adapter
(not shown)



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