



SPRINKLER

Catalogue

ABSTRACT

This study examines the design, efficiency, and implementation of sprinkler systems in agricultural and urban settings. Sprinkler irrigation has emerged as a pivotal technique in enhancing crop yield and conserving water resources amidst increasing climate variability and population growth. Through an analysis of various sprinkler technologies, including fixed, portable, and automated systems, this research highlights their operational principles, advantages, and limitations. We conducted field experiments to evaluate the uniformity of water distribution, soil moisture retention, and the impact on crop health. Results indicate that modern automated sprinkler systems significantly improve water efficiency and reduce labour costs, promoting sustainable practices in irrigation management. Furthermore, the study discusses advancements in smart irrigation technology, where sensor-based systems optimize water application based on real-time environmental data. The implications of this research underscore the importance of integrating innovative irrigation practices to address global challenges in food production and water scarcity.

**REDSHIFT ENVIRONMENTAL SYSTEMS INDIA
PVT.LTD**

Sprinkler Performance Chart

RS/SPB/05

Sprinkler



Features

- 3/4" BSP/NPT male threaded.
- Durable Bronze body and arm with zinc coated.
- Heavy duty Brass Nut & Tube.
- Stainless Steel Pivot Pin, Springs.
- Bearing & Sealing washers are made of material for extending life.
- Recommended Pressure 2.0 - 4.0 kg/cm* or 30 – 57 Psi.
- Recommended spacing up to 10m for higher distribution uniformity.
- Trajectory Angle: 27°
- Rotation Angle 360 deg

Application

- All crops irrigation compatible by overhead irrigation on Solid set, permanent set, hard lines, portable lines, wheel lines & mechanically moved system such as centre pivot.
- Area where strong wind is prevalent,
Nozzles with stream straitening vane.

Performance Table

Sl No	Sample No	Water Flow Rate (LPM)	Water Pressure(Kg/cm2)	Cover Length (R) (m)	Cover Area(m)
01	RSTS/01	14.2	2	10.0	62.8
02	RSTS/02	14.6	2	9.5	59.7
03	RSTS/03	14.6	2	10.0	62.8
04	RSTS/04	14.4	2	10.5	65.94
05	RSTS/05	14.1	2	11.0	69.1

Best efficiency Point: - 15 LPM Flow at 3 BAR Pressure

RS/SPB/02

Sprinkler



Features

- ½" BSP/NPT male threaded.
- Durable Brass body and arm.
- Heavy duty Brass Nut & Tube.
- Stainless Steel Pivot Pin, Springs.
- Bearing & Sealing washers are made of material for extending life.
- Recommended Pressure 2.0 - 4.0 kg/cm* or 30 – 57 Psi.
- Recommended spacing up to 9 m for higher distribution uniformity.
- Trajectory Angle: 27°
- Rotation Angle 180 deg

Application

- All crops irrigation compatible by overhead irrigation on Solid set, permanent set, hard lines, portable lines, wheel lines & mechanically moved system such as centre pivot.
- Area where strong wind is prevalent,
Nozzles with stream straitening vane.

Performance Table

SI No	Sample No	Water Flow Rate (LPM)	Water Pressure(Kg/cm2)	Cover Length (R) (m)	Cover Area(m)
01	RSTS/01	10.4	2.8	9.5	59.66
02	RSTS/02	10.8	2.8	9.5	59.66
03	RSTS/03	10.6	2.8	11	37.68
04	RSTS/04	10.5	2.8	9.5	59.66
05	RSTS/05	10.3	2.8	9.5	59.66

Best efficiency Point: - 12 LPM Flow at 3 BAR Pressure

RS/SPB/04

Sprinkler



Features

- 3/4" BSP/NPT male threaded.
- Durable Bronze body and arm with zinc coted.
- Heavy duty Brass Nut & Tube.
- Stainless Steel Pivot Pin, Springs.
- Bearing & Sealing washers are made of material for extending life.
- Recommended Pressure 2.0 - 4.0 kg/cm* or 30 – 57 Psi.
- Recommended spacing up to 8 m for higher distribution uniformity.
- Trajectory Angle: 27°
- Rotation Angle 180 deg

Application

- All crops irrigation compatible by overhead irrigation on Solid set, permanent set, hard lines, portable lines, wheel lines & mechanically moved system such as centre pivot.
- Area where strong wind is prevalent,
Nozzles with stream straitening vane.

Performance Table

SI No	Sample No	Water Flow Rate (LPM)	Water Pressure(Kg/cm2)	Cover Length (R) (m)	Cover Area(m)
01	RSTS/01	14.6	2	10.0	62.8
02	RSTS/02	14.6	2	8.5	53.38
03	RSTS/03	14.6	2	8.5	53.8
04	RSTS/04	14.3	2	10.0	62.8
05	RSTS/05	14.6	2	8.5	53.4

Best efficiency Point: - 15 LPM Flow at 3 BAR Pressure

RS/SPB/06

Sprinkler



Features

- 3/4" BSP/NPT male threaded.
- Durable Aluminium body and arm with Brass coted.
- Heavy duty Brass Nut & Tube.
- Stainless Steel Pivot Pin, Springs.
- Bearing & Sealing washers are made of material for extending life.
- Recommended Pressure 2.0 - 4.0 kg/cm* or 30 - 57 Psi.
- Recommended spacing up to 9 m for higher distribution uniformity.
- Trajectory Angle: 27°
- Rotation Angle 360 deg

Application

- All crops irrigation compatible by overhead irrigation on Solid set, permanent set, hard lines, portable lines, wheel lines & mechanically moved system such as centre pivot.
- Area where strong wind is prevalent,
Nozzles with stream straitening vane.

Performance Table

SI No	Sample No	Water Flow Rate (LPM)	Water Pressure(Kg/cm2)	Cover Length(R) (m)	Cover Area(m)
01	RSTS/01	14.6	2	9.5	59.6
02	RSTS/02	14.6	2	9.5	59.6
03	RSTS/03	14.6	2	9.5	59.6
04	RSTS/04	13.7	2	11	69.08
05	RSTS/05	14.6	2	10	62.8

Best efficiency Point: - 15 LPM Flow at 3 BAR Pressure

RS/SPB/03

Sprinkler



Features

- 3/4" BSP/NPT male threaded.
- Durable Bronze body and arm .
- Heavy duty Brass Nut & Tube.
- Stainless Steel Pivot Pin, Springs.
- Bearing & Sealing washers are made of material for extending life.
- Recommended Pressure 2.0 - 4.0 kg/cm* or 30 – 57 Psi.
- Recommended spacing up to 8 m for higher distribution uniformity.
- Trajectory Angle: 27°
- Rotation Angle 360 deg

Application

- All crops irrigation compatible by overhead irrigation on Solid set, permanent set, hard lines, portable lines, wheel lines & mechanically moved system such as centre pivot.
- Area where strong wind is prevalent,
Nozzles with stream straitening vane.

Performance Table

SI No	Sample No	Water Flow Rate (LPM)	Water Pressure(Kg/cm2)	Cover Length(R) (m)	Cover Area(m)
01	RSTS/01	14.8	2	10	62.8
02	RSTS/02	14.8	2	9.5	59.6
03	RSTS/03	15.5	2	9	56.52
04	RSTS/04	15.7	2	8.5	53.8
05	RSTS/05	15.6	2	9.5	59.7

Best efficiency Point: - 15 LPM Flow at 3 BAR Pressure

RS/SPP/03 Sprinkler



Features

- 3/4" BSP/NPT male threaded.
- Durable PVC body and arm .
- Heavy duty Brass Nut & Tube.
- Stainless Steel Pivot Pin, Springs.
- Bearing & Sealing washers are made of material for extending life.
- Recommended Pressure 2.0 - 4.0 kg/cm* or 30 – 57 Psi.
- Recommended spacing up to 9 m for higher distribution uniformity.
- Trajectory Angle: 27°
- Rotation Angle 360 deg

Application

- All crops irrigation compatible by overhead irrigation on Solid set, permanent set, hard lines, portable lines, wheel lines & mechanically moved system such as centre pivot.
- Area where strong wind is prevalent,
Nozzles with stream straitening vane.

Performance Table

SI No	Sample No	Water Flow Rate (LPM)	Water Pressure(Kg/cm2)	Cover Length(R) (m)	Cover Area(m)
01	RSTS/01	13.4	2.2	10	62.8
02	RSTS/02	14	3	10.5	65.94
03	RSTS/03	14.2	3.5	11	69.08
04	RSTS/04	14.5	4	11.5	72.22
05	RSTS/05	15	4.2	12	75.36

Best efficiency Point: - 15 LPM Flow at 3 BAR Pressure

RS/SPP/04 Sprinkler



Features

- 3/4" BSP/NPT male threaded.
- Durable PVC body and arm .
- Heavy duty Brass Nut & Tube.
- Stainless Steel Pivot Pin, Springs.
- Bearing & Sealing washers are made of material for extending life.
- Recommended Pressure 2.0 - 4.0 kg/cm* or 30 – 57 Psi.
- Recommended spacing up to 9 m for higher distribution uniformity.
- Trajectory Angle: 27°
- Rotation Angle 180 deg

Application

- All crops irrigation compatible by overhead irrigation on Solid set, permanent set, hard lines, portable lines, wheel lines & mechanically moved system such as centre pivot.
- Area where strong wind is prevalent,
Nozzles with stream straitening vane.

Performance Table

Sl No	Sample No	Water Flow Rate (LPM)	Water Pressure(Kg/cm2)	Cover Length (R) (m)	Cover Area(m)
01	RSTS/01	15.3	2	9.5	59.7
02	RSTS/02	15.4	2	9.5	59.7
03	RSTS/03	15.3	2	9.5	59.7
04	RSTS/04	15.3	2	9.5	59.7
05	RSTS/05	15.4	2	9.0	56.52

Best efficiency Point: - 15 LPM Flow at 3 BAR Pressure

RS/SPB/01 Sprinkler



Features

- 1/2" BSP/NPT male threaded.
- Durable Bronze body and arm.
- Heavy duty Brass Nut & Tube.
- Stainless Steel Pivot Pin, Springs.
- Bearing & Sealing washers are made of material for extending life.
- Recommended Pressure 2.0 - 4.0 kg/cm* or 30 – 57 Psi.
- Recommended spacing up to 10 m for higher distribution uniformity.
- Trajectory Angle: 27°
- Rotation Angle 360 deg

Application

- All crops irrigation compatible by overhead irrigation on Solid set, permanent set, hard lines, portable lines, wheel lines & mechanically moved system such as centre pivot.
- Area where strong wind is prevalent,
Nozzles with stream straitening vane.

Performance Table

Sl No	Sample No	Water Flow Rate (LPM)	Water Pressure(Kg/cm2)	Cover Length(m)	Cover Area(m)
01	RSTS/01	12.0	2.4	10.0	62.8
02	RSTS/02	12.1	2.4	11.5	72.22
03	RSTS/03	12.1	2.4	11.5	72.22
04	RSTS/04	11.8	2.4	10.0	62.8
05	RSTS/05	11.9	2.4	11.5	72.22

Best efficiency Point: - 12 LPM Flow at 3 BAR Pressure

RS/SPP/01 Sprinkler



Features

- 1/2" BSP/NPT male threaded.
- Durable P.V.C body and arm .
- Heavy duty Brass Nut & Tube.
- Stainless Steel Pivot Pin, Springs.
- Bearing & Sealing washers are made of material for extending life.
- Recommended Pressure 2.0 - 4.0 kg/cm* or 30 – 57 Psi.
- Recommended spacing up to 9 m for higher distribution uniformity.
- Trajectory Angle: 27°
- Rotation Angle 360 deg

Application

- All crops irrigation compatible by overhead irrigation on Solid set, permanent set, hard lines, portable lines, wheel lines & mechanically moved system such as centre pivot.
- Area where strong wind is prevalent,
Nozzles with stream straitening vane.

Performance Table

SI No	Sample No	Water Flow Rate (LPM)	Water Pressure(Kg/cm2)	Cover Length(m)	Cover Area(m)
01	RSTS/01	8.6	3.2	9.5	59.66
02	RSTS/02	8.7	3.2	10	62.8
03	RSTS/03	9.4	3	10	62.8
04	RSTS/04	8.7	3	10	62.8
05	RSTS/05	8.7	3.2	10	62.8

Best efficiency Point: - 8 LPM Flow at 3 BAR Pressure

RS/SPP/02 Sprinkler



Features

- 1/2" BSP/NPT male threaded.
- Durable P.V.C body and arm .
- Heavy duty Brass Nut & Tube.
- Stainless Steel Pivot Pin, Springs.
- Bearing & Sealing washers are made of material for extending life.
- Recommended Pressure 2.0 - 4.0 kg/cm* or 30 – 57 Psi.
- Recommended spacing up to 5 m for higher distribution uniformity.
- Trajectory Angle: 27°
- Rotation Angle 180 deg

Application

- All crops irrigation compatible by overhead irrigation on Solid set, permanent set, hard lines, portable lines, wheel lines & mechanically moved system such as centre pivot.
- Area where strong wind is prevalent,
Nozzles with stream straitening vane.

Performance Table

SI No	Sample No	Water Flow Rate (LPM)	Water Pressure(Kg/cm2)	Cover Length(m)	Cover Area(m)
01	RSTS/01	7.2	3.2	7	43.96
02	RSTS/02	7.3	3.2	7.5	47.1
03	RSTS/03	7.2	3.2	7.5	47.1
04	RSTS/04	7.3	3.2	4	25.12
05	RSTS/05	7.2	3.2	4	25.12

Best efficiency Point: - 7 LPM Flow at 3 BAR Pressure

