

# **TECH SPECS**

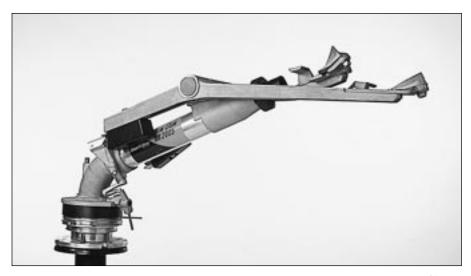
# 2000 Series Rain Guns® Three Inch, Full and Part Circle

# Longer life, improved performance and better value – guaranteed!

The new 2000 Series Rain Gun® brings Rain Bird back to the forefront of quality, performance, and reliability. This next generation model incorporates recent end user feedback and new materials to bring you the best value in today's high volume sprinkler market. To back up this claim, Rain Bird offers the best warranty in the industry. For all agricultural applications, the 2000 Series Rain Gun is backed by an unprecedented 3-year warranty. No other gun manufacturer in the industry stands behind their product for this long.

## SR2005 and F2004 Features

- 23° body trajectory
- Dual spring loaded, cast aluminum arms
- Adjustable aluminum spoon design
- Set of 6 metric taper bore nozzles included 21, 23, 26, 28, 30, 33 mm
- Ring orifice nozzles available
  .87, .99, 1.1, 1.2, 1.29, & 1.38 inches
  (22, 25, 28, 30, 33, 35 mm)
- Integral straightening vanes
- Stronger body assembly
- · Improved trip assembly
- Self-adjusting brake mechanism
- Sealed lube-for-life bearing
- · Improved trip-collar adjustments
- DN 80 (3") 4 or 6 hole flange mount standard
- NPT and BSP flange adapters
- Counterweight available for sloped conditions



SR2005

# High Standards means Longer Life

Some of the factors that lead to long life and low maintenance:

- Rain Guns are manufactured to the highest standards in a factory that is ISO9002 certified.
- Every Rain Gun is water tested before it leaves the factory.
- Trip mechanisms are reinforced with stainless steel washers and cotter pins. Straightening vanes are extruded directly into the body to reduce fluid turbulence and add strength and distance to the water stream.

# Lower Maintenance

Rain Guns are designed to keep working for years with minimal maintenance. Grease maintenance is eliminated with permanently sealed bearings. Many of our competitors pack their bearings less than 30% full. This unfilled space allows for

continued inside

## Part Numbers

# **SR2005**

Slow Reverse, Full/Part Circle Rain Gun

#### F2004

Full Circle Rain Gun

# How to Order:

<u>SR - 2005 - NPT</u>

Arc Settings
SR=Slow Reverse
F=Full Circle

(<u>optional)</u> <u>Female Flange</u> <u>Adapter</u>

**Model** 

NPT=Standard Pipe Thread BSP=British Standard Pipe



# Lower Maintenance continued

condensation and water infiltration that can lead to an eventual breakdown of the grease, corrosion, and bearing failure. This is why F2004 and SR2005 Rain Gun bearings are permanently sealed and packed 70% full with a robust, wide temperature range, water resistant silicone grease.

The braking system on these models is also maintenance free. The spring-loaded clutch self-adjusts to keep consistent rotation times through the life of the gun.

All body joints are bonded and threaded together through a chemical process that is rated for up to 7 tons of pressure. The trip collars are easily adjustable and stay in place without the use of tools or time consuming adjustments. The bearing assembly is marked every 10° to make arc adjustments easier.

# The Best Value

All accessories are included in each box including:

- Standard 2 mm (.03") neoprene gasket and bolt kit.
- Set of 6 taper bore nozzles
  21, 23, 26, 28, 30, & 33 mm sizes.
- Glycerin filled pressure gauge to ensure optimal setup.
- Aluminum body construction with stainless steel hardware to provide all the value at the lowest price possible.

# **Outstanding Performance**

Rain Bird Rain Guns are built to perform and to last. The dual arm design of our part circle guns provides better distribution and uniformity than single arm designs. The cast aluminum spoons are adjustable to provide greater control of the rotation speed. Stainless steel springs are used to absorb excess shock from the arms which allows for a much smoother arm stroke, and the removal of excess counterweights.

# Performance Data - U.S. Units

# SR2005/F2004 - GNS-2005T Taper Bore Nozzles

|                 | NOZZLE SIZE   |                      |               |               |               |                      |               |                      |               |               |               |                      |
|-----------------|---------------|----------------------|---------------|---------------|---------------|----------------------|---------------|----------------------|---------------|---------------|---------------|----------------------|
|                 | .8"           |                      | .9"           |               | 1.0"          |                      | 1.1"          |                      | 1.2"          |               | 1.3"          |                      |
| PSI @<br>Nozzle | (ft.)<br>Rad. | (gpm)<br><b>Flow</b> | (ft.)<br>Rad. | (gpm)<br>Flow | (ft.)<br>Rad. | (gpm)<br><b>Flow</b> | (ft.)<br>Rad. | (gpm)<br><b>Flow</b> | (ft.)<br>Rad. | (gpm)<br>Flow | (ft.)<br>Rad. | (gpm)<br><b>Flow</b> |
| 58              | 144           | 141                  | 148           | 170           | 153           | 220                  | 164           | 256                  | 169           | 298           | 177           | 363                  |
| 60              | 146           | 144                  | 149           | 173           | 155           | 224                  | 166           | 260                  | 171           | 303           | 179           | 369                  |
| 70              | 154           | 155                  | 157           | 186           | 165           | 242                  | 178           | 282                  | 184           | 328           | 188           | 398                  |
| 80              | 158           | 166                  | 162           | 199           | 169           | 258                  | 186           | 301                  | 195           | 350           | 193           | 426                  |
| 90              | 162           | 176                  | 166           | 212           | 171           | 274                  | 193           | 319                  | 204           | 372           | 197           | 451                  |
| 100             | 168           | 186                  | 169           | 224           | 172           | 289                  | 196           | 336                  | 212           | 392           | -             | -                    |
| 109             | 172           | 193                  | 174           | 233           | 174           | 301                  | 198           | 351                  | 210           | 409           | -             | -                    |

## SR2005/F2004 - GNS-20050 Ring Orifice Nozzles

|                 | NOZZLE SIZE   |                      |               |               |               |                      |               |               |               |                      |               |                      |
|-----------------|---------------|----------------------|---------------|---------------|---------------|----------------------|---------------|---------------|---------------|----------------------|---------------|----------------------|
|                 | .87"          |                      | .99"          |               | 1.10"         |                      | 1.20"         |               | 1.29"         |                      | 1.38"         |                      |
| PSI @<br>Nozzle | (ft.)<br>Rad. | (gpm)<br><b>Flow</b> | (ft.)<br>Rad. | (gpm)<br>Flow | (ft.)<br>Rad. | (gpm)<br><b>Flow</b> | (ft.)<br>Rad. | (gpm)<br>Flow | (ft.)<br>Rad. | (gpm)<br><b>Flow</b> | (ft.)<br>Rad. | (gpm)<br><b>Flow</b> |
| 60              | 133           | 110                  | 143           | 142           | 151           | 181                  | 160           | 224           | 167           | 274                  | 177           | 326                  |
| 70              | 138           | 120                  | 148           | 154           | 157           | 199                  | 167           | 245           | 175           | 296                  | 184           | 352                  |
| 80              | 143           | 129                  | 154           | 165           | 163           | 216                  | 174           | 262           | 183           | 318                  | 192           | 378                  |
| 90              | 148           | 136                  | 159           | 175           | 169           | 227                  | 180           | 278           | 189           | 337                  | 199           | 401                  |
| 100             | 153           | 143                  | 163           | 184           | 174           | 238                  | 186           | 293           | 196           | 356                  | 205           | 424                  |
| 110             | 157           | 150                  | 167           | 193           | 179           | 249                  | 191           | 306           | 201           | 371                  | 210           | 441                  |

#### Performance Data - Metric Units

#### SR2005/F2004 - GNS-2005T Taper Bore Nozzles

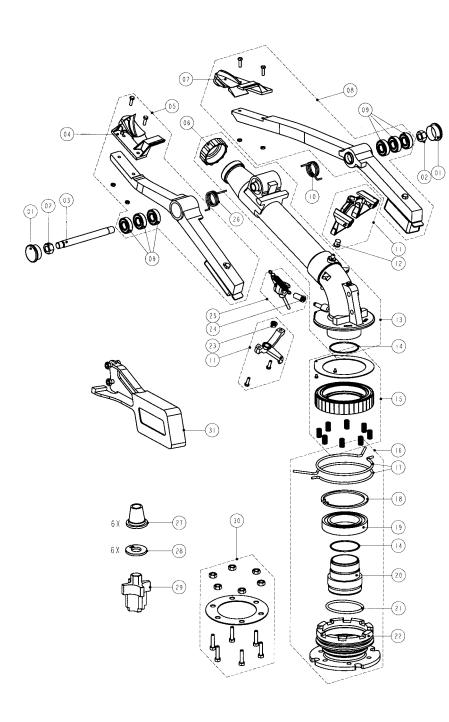
|                  |             | NOZZLE SIZE     |             |                 |             |                 |             |                 |                     |                 |             |                 |
|------------------|-------------|-----------------|-------------|-----------------|-------------|-----------------|-------------|-----------------|---------------------|-----------------|-------------|-----------------|
|                  | 21 mm       |                 | 23 mm       |                 | 26 mm       |                 | 28 mm       |                 | 30 mm               |                 | 33 mm       |                 |
| BARS @<br>Nozzle | (m)<br>Rad. | (m³/hr)<br>Flow | (m)<br>Rad. | (m³/hr)<br>Flow | (m)<br>Rad. | (m³/hr)<br>Flow | (m)<br>Rad. | (m³/hr)<br>Flow | (m)<br><b>Rad</b> . | (m³/hr)<br>Flow | (m)<br>Rad. | (m³/hr)<br>Flow |
| 4.0              | 44,0        | 32,1            | 45,0        | 38,6            | 46,5        | 50,0            | 50,0        | 58,1            | 51,5                | 67,7            | 54,0        | 82,4            |
| 4.5              | 45,8        | 34,0            | 46,8        | 40,9            | 48,8        | 53,0            | 52,5        | 61,7            | 54,3                | 71,8            | 56,0        | 87,3            |
| 5.0              | 47,5        | 35,9            | 48,5        | 43,1            | 51,0        | 56,0            | 55,0        | 65,3            | 57,0                | 75,8            | 58,0        | 92,2            |
| 5.5              | 48,3        | 37,6            | 49,5        | 45,2            | 51,5        | 58,6            | 56,8        | 68,3            | 59,3                | 79,4            | 58,8        | 96,6            |
| 6.0              | 49,0        | 39,3            | 50,5        | 47,3            | 52,0        | 61,1            | 58,5        | 71,3            | 61,5                | 83,0            | 59,5        | 100,9           |
| 6.5              | 50,3        | 40,9            | 51,0        | 49,3            | 52,3        | 63,6            | 59,3        | 74,1            | 63,3                | 86,4            | 60,5        | 104,5           |
| 7.0              | 51,5        | 42,5            | 51,5        | 51,2            | 52,5        | 66,1            | 60,0        | 76,9            | 65,0                | 89,8            | -           | -               |
| 7.5              | 52,5        | 43,9            | 53,0        | 53,0            | 53,0        | 68,4            | 60,5        | 79,8            | 64,0                | 92,8            | -           | -               |

#### SR2005/F2004 - GNS-20050 Ring Orifice Nozzles

|                  | NOZZLE SIZE         |                 |                     |                 |                     |                 |             |                 |                     |                 |                     |                 |
|------------------|---------------------|-----------------|---------------------|-----------------|---------------------|-----------------|-------------|-----------------|---------------------|-----------------|---------------------|-----------------|
|                  | 20.3                | 2 mm            | 22.86 mm            |                 | 25.4                | 25.40 mm        |             | 27.94 mm        |                     | 30.78 mm        |                     | 2 mm            |
| BARS @<br>Nozzle | (m)<br><b>Rad</b> . | (m³/hr)<br>Flow | (m)<br><b>Rad</b> . | (m³/hr)<br>Flow | (m)<br><b>Rad</b> . | (m³/hr)<br>Flow | (m)<br>Rad. | (m³/hr)<br>Flow | (m)<br><b>Rad</b> . | (m³/hr)<br>Flow | (m)<br><b>Rad</b> . | (m³/hr)<br>Flow |
| 4.0              | 43,5                | 32,5            | 46,2                | 42,4            | 49,4                | 51,8            | 51,5        | 62,2            | 53,6                | 73,5            | -                   | -               |
| 4.5              | 45,5                | 33,6            | 48,6                | 43,6            | 51,5                | 53,4            | 54,2        | 64,5            | 57,0                | 77,4            | 59,9                | 91,7            |
| 5.0              | 46,8                | 35,7            | 50,1                | 46,2            | 53,0                | 56,7            | 55,9        | 68,6            | 58,8                | 82,1            | 61,6                | 92,7            |
| 5.5              | 48,1                | 37,6            | 51,3                | 48,6            | 54,4                | 59,6            | 57,4        | 72,2            | 60,3                | 86,3            | 63,2                | 102,2           |
| 6.0              | 49,2                | 39,4            | 52,5                | 50,7            | 55,6                | 62,3            | 58,8        | 75,5            | 61,7                | 90,2            | 64,7                | 106,8           |
| 6.5              | 50,2                | 41,0            | 53,3                | 52,7            | 56,7                | 64,8            | 60,1        | 78,5            | 63,1                | 93,7            | 66,0                | 111,1           |
| 7.0              | 51,2                | 42,4            | 54,6                | 54,6            | 57,7                | 67,0            | 61,2        | 81,4            | 64,3                | 97,0            | 67,2                | 114,9           |
| 7.5              | 52,1                | 43,8            | 55,6                | 56,3            | 58,7                | 69,2            | 62,3        | 84,0            | 65,4                | 100,0           | -                   | -               |



# Parts Diagram and Description



|    | Part Description                          | Part Numbers      |  |  |  |  |  |  |  |  |
|----|---|-------------------|--|--|--|--|--|--|--|--|
| 1  | Arm Cap (2)                               | Included in Kit B |  |  |  |  |  |  |  |  |
| 2  | Arm Nut (2)                               | Included in Kit B |  |  |  |  |  |  |  |  |
| 3  | Arm Shaft                                 | Included in Kit B |  |  |  |  |  |  |  |  |
| 4  | Reverse Spoon Bracket Assembly            | 71-P00382         |  |  |  |  |  |  |  |  |
| 5  | Reverse Arm Assembly                      | 71-P50809         |  |  |  |  |  |  |  |  |
| 6  | Nozzle Retainer                           | 71-P50302         |  |  |  |  |  |  |  |  |
| 7  | Forward Spoon Bracket Assembly            | 71-P00364         |  |  |  |  |  |  |  |  |
| 8  | Forward Arm Assembly                      | 71-P50807         |  |  |  |  |  |  |  |  |
| 9  | Arm Ball Bearing                          | 71-P00324         |  |  |  |  |  |  |  |  |
| 10 | Forward Arm Spring                        | 71-P50295         |  |  |  |  |  |  |  |  |
| 11 | Trip Yoke Assembly                        | 71-P50215         |  |  |  |  |  |  |  |  |
| 12 | Upper Yoke Bushing                        | Included in Kit A |  |  |  |  |  |  |  |  |
| 13 | Elbow/Range Tube Assembly                 | 71-P50803         |  |  |  |  |  |  |  |  |
| 14 | O-Ring (2)                                | Included in Kit A |  |  |  |  |  |  |  |  |
| 15 | Brake Assembly                            | 71-P50814         |  |  |  |  |  |  |  |  |
| 16 | Bearing Assembly                          | 71-P50975         |  |  |  |  |  |  |  |  |
| 17 | Friction Collar (2 Required)              | 71-P50116         |  |  |  |  |  |  |  |  |
| 18 | Snap Ring                                 | 71-P50344         |  |  |  |  |  |  |  |  |
| 19 | Ball Bearing                              | 71-P50549         |  |  |  |  |  |  |  |  |
| 20 | Lock Nut                                  | 71-P50796         |  |  |  |  |  |  |  |  |
| 21 | O-Ring                                    | 71-102155         |  |  |  |  |  |  |  |  |
| 22 | Bearing Sleeve                            | 71-P50795         |  |  |  |  |  |  |  |  |
| 23 | Lower Yoke Bushing                        | Included in Kit A |  |  |  |  |  |  |  |  |
| 24 | Trip Lever Bushing                        | Included in Kit A |  |  |  |  |  |  |  |  |
| 25 | Trip Lever Assembly                       | 71-P50331         |  |  |  |  |  |  |  |  |
| 26 | Reverse Arm Spring                        | 71-P50296         |  |  |  |  |  |  |  |  |
| 27 | GNS-2005T Taper Nozzle (6) Set            | L00250            |  |  |  |  |  |  |  |  |
| 28 | GNS-20050 Ring Nozzle (6) Set             | L00255            |  |  |  |  |  |  |  |  |
|    | Accessories                               |                   |  |  |  |  |  |  |  |  |
| 29 | Bearing Wrench                            | 71-P50697         |  |  |  |  |  |  |  |  |
| 30 | Riser Installation Kit                    | 71-P00368         |  |  |  |  |  |  |  |  |
| 31 | Rear Counterweight                        | L00260            |  |  |  |  |  |  |  |  |
| 32 | Glycerin Filled Pressure Gauge (not shown | n) 71-P00080      |  |  |  |  |  |  |  |  |
|    | Spare Parts Kit                           |                   |  |  |  |  |  |  |  |  |
| Α  | Maintenance Kit                           | 71-P50364         |  |  |  |  |  |  |  |  |
| В  | Arm Shaft Kit                             | 71-P50365         |  |  |  |  |  |  |  |  |
|    |   |                   |  |  |  |  |  |  |  |  |



# Specifications (For Specifiers)

The full circle or part circle impulse drive sprinkler shall be a single nozzle type, capable of covering

\_\_\_\_\_\_(feet/meters) radius, at \_\_\_\_\_ (PSI/bars) with a discharge rate of \_\_\_\_\_ (GPM/M³H). The sprinkler body and bearing sleeve shall be of heat treated, cast aluminum. Straightening vanes shall be integral to the body. The sprinkler arm, springs, fulcrum shafts, and trip mechanisms shall be stainless steel. The drive nozzle trajectory shall be 23 degrees from horizontal.

The rotation of the sprinkler shall be accomplished by a spring loaded, vertical oscillating arms, actuated by the outlet water stream. The part circle models shall have a slow-reverse feature for reduced vibration and greater safety.

The nozzle shall be of durable, chemically resistant plastic and shall be easily replaceable. A set of six taper bore nozzles shall be included with the gun - 21, 23, 26, 28, 30, 33 mm. The nozzle size shall be molded into the plastic for easy identification.

The bearing assembly shall be permanently sealed and packed 70% with a wide temperature range, water resistant silicone grease. The brake mechanism will be spring loaded and self-adjusting.

On part circle models, adjustable friction collars will be supplied to set arc adjustments without the use of tools, and the bearing assembly will be

marked in ten degree increments to facilitate adjustments.

The F2004 shall be for full circle operation only. The SR2005 shall have adjustable part circle or full circle operation.

The sprinkler shall have a DN 80 4 or 6 hole patterns with a 2 mm (.08") neoprene gasket and bolt kit shall be supplied with the gun.

An optional (NPT/BSP) flange adapter will be supplied to adapt the flange inlet to a (3"/76 mm) female inlet

The sprinkler shall carry a three year warranty against original defects in material or workmanship in agricultural applications. The sprinkler shall be supplied by Rain Bird Corporation, Glendora, California.

# Rain Gun Safety

Operating Rain Guns remotely under circumstances where the operator cannot see the gun being activated can be dangerous if persons or animals are close to the device. When activated these guns can come on with significant force. Operators should also be aware of trip hazard, over-head obstruction, thrust, etc. for their applications, to prevent any bodily harm. If an operator has any question pertaining to Rain Gun Safety please contact your local dealer or Rain Bird representative.

# Rain Gun Warranty

**Agricultural Applications** 

• Our latest generation of Rain Guns is built on a legacy of knowledge, trust, and feedback from end users like you. Our warranty is simple and in line with Rain Bird's reputation as the most reliable agricultural sprinkler in the world. To back up our claim, we offer the best warranty in the agriculture industry. For all agricultural applications, we offer a three-year; no questions asked warranty including free service or parts replacement. Product replacement, full credit, or return in lieu of spare parts or service is at Rain Bird's discretion upon approval. Approval may include product testing.

**Non-agricultural Applications** 

- We understand that Rain Guns are often utilized in applications that may be more demanding than general agricultural applications. In these circumstances, Rain Bird offers an eighteen month warranty including free service or parts replacement, but excludes coverage in the following general applications or environments:
- Electrolytic conditions, such as high salt environments or salt water spray applications
- Applications where environmental conditions are not compatible with the materials used in Rain Guns
- Caustic or corrosive chemical conditions or spray applications
- Abrasive fluid spray applications

Rain Bird Corporation Agri-Products Division

633 W. Foothill Blvd. Glendora, CA 91741-2469 Phone: (800) 435-5624 Fax: (626) 852-7310

Rain Bird International, Inc.

145 N. Grand Ave. Glendora, CA 91741-2469 Phone: (626) 963-9311 Fax: (626) 963-4287 1-800-HELLO-AG 6am-6pm MST M-F

www.rainbird.com Rain Bird. The Intelligent Use of Water.™