



GOLF IRRIGATION PRODUCTS



INTERNATIONAL MARKETS



**Mobile access to the information you need
and the tasks you need to perform.**

LYNX[®] APPS

Only one company is
still committed to
delivering the newest,
most advanced golf
satellite control system.

TORO[®]

**Identify potential issues before
they become irrigation problems.**

ANOTHER TORO *EXCLUSIVE*



Runtimes set in inches or seconds?
Why not both?

ANOTHER TORO *EXCLUSIVE*



TABLE OF CONTENTS

Overview		Sprinklers		Valves	
Control System Overview	3	Sprinklers and Subsurface Drip	48	Valves and Valve Boxes	145
Field Controls Overview	6	The INFINITY® & FLEX800™ Series	50	220G Brass Series Valves	146
Turf Guard®	7	INFINITY® Series Golf Rotors INF35-6/INF55-6	55	P220G and P220GS Series Valves	149
Golf Sprinklers Overview	8	INFINITY® Series Golf Rotors INF35/INF55	60	GOLF ZONE KITS	153
Irrigation Services	10	INFINITY® Series Golf Rotors INF34/INF54	65	Toro® Valve Boxes	155
		FLEX800™ Series Golf Rotors FLX35-6/FLX55-6	74	Toro® Dry Boxes	158
		FLEX800™ Series Golf Rotors FLX35/FLX55	79	470 Quick Coupler Valves	159
		FLEX800™ Series Golf Rotors FLX34/FLX54	84		
		FLEX800™ B Series Golf Rotors	89		
		Main Nozzle Adapter Performance Charts	94		
		FLEX800™ R Series Conversion Upgrades	96		
		Main Nozzle Data	99		
		TORO® Conversion Upgrade Charts	102		
		Mainless and Back Nozzle Data	103		
		T7 Series Rotors	105		
		T5 Rapidset Series Rotors	109		
		690 Series Rotors	114		
		590GF Series Rotors	117		
		Precision™ Series Spray Nozzles	119		
		Precision™ Series Rotating Nozzles	130		
		Irrigation Communication Cable	133		
		Swing Joints	142		
		Sprinkler Tools	144		

Control Systems Field Controllers

Field Controllers Comparison Chart	11
Lynx® Central Control System	12
Turf Guard® Wireless Soil Monitoring System	15
Radio Interface Unit (RUI)	18
Network Radio-Link & FIU with Radio	18
NSN® National Support Network	19
Lynx® Smart Hub	20
Lynx® Smart Module 2-wire Control Systems	23
Lynx® GAC System	26
Lynx® Smart Satellite	29
LTC® Plus to LTC® Pro	32
LTC® Pro Upgrades	33
Lynx® upgrade kits - OSMAC G3	34
Radio Interface Unit	35
Sensor Input Kits for Satellite Controllers	36
OSMAC® G3 Satellites	40
Watchdog® Weather Station	43

Resources

Technical Data	160
Wire Sizing	161
The Toro Limited Warranty	162



LYNX[®] CENTRAL CONTROL

Superior course map editing, course map creation and interaction, integration with other system components, and comprehensive reporting to increase your productivity.



Easy Set Up.

Lynx[®] gives you a fast, accurate way to setup your system to put water exactly where you want it, and then allows you to make edits as your course conditions change.



Easy to Use.

Lynx[®] has a distinct user interface that combines all essential data and intuitively presents the information you need at a glance.



Easy to Control.

With Lynx[®] you can take quick, accurate action to effectively control and manage your golf course by providing past, present and future course information from multiple sources into a single, intuitive interface



24/7 NSN[®] Support.

Toro's exclusive National Support Network provides software and network assistance from experienced service professionals. NSN Connect can be linked directly to the system.



Available Anywhere, Anytime.

Lynx[®] gives you the ability to access your irrigation controller from anywhere - simply and securely! Now also through our dedicated smart phone apps!

NEW



CONTROL SYSTEM OVERVIEW



LYNX[®] MOBILE APPS

Provides remote control anytime, anywhere.

GPS maps follow you on the course.

Select and activate sprinklers directly from the map.



Lynx Map



Lynx Handheld



Lynx Barcode



NSN[®] Connect V2



Support Available 24/7 to NSN[®] subscribers

Lynx[®] Mobile Apps Provide Remote Control

Lynx Mobile Apps—available exclusively to current NSN subscribers—enable you to control your irrigation system from your smart phone or tablet. Available for both iPhone[®] and Android[™] devices, Lynx Mobile Apps offer map and numeric based interfaces for manual irrigation, as well as an easy way to enter or edit LSM addresses.

* iPhone and the Apple logo are registered trademarks of Apple, Inc. in the U.S. and other countries.

** Android and the Android logo are trademarks or registered trademarks of Google Inc.



LYNX[®] CENTRAL CONTROL

Enables the integration of other critical systems to manage your irrigation system with un-paralleled performance, un-matched efficiency and the most comprehensive data access in the industry.



TURF GUARD[®] WIRELESS MOISTURE SENSOR

- Get current conditions and historic trends
- Understand where you are now, how you got there, and where you are going
- Make databased irrigation decisions

PUMP STATIONS

- Get current status, alarm monitoring and notification
- Maximize wire to water efficiency
- Reduce energy costs
- Works with: Flowtronex[®], Watertronics[®], Motor Controls or Grundfos[®]

WEATHER STATIONS

- Use the weather data for irrigation scheduling
- Monitor and respond to rain fall by adjusting runtimes or suspending irrigation all together
- Works with either Campbell Scientific or Spectrum Technologies

FLOW SENSORS

- Monitor flow amounts against what LYNX has scheduled to ensure pipe breaks do not go undetected
- Dial in the sprinkler performance data to manage water utilization
- Works with Toro, Bermad or Data Industrial



TORO® FIELD CONTROLS

Innovative, Flexible and Best-in-Class Field Control Options

LYNX® Smart Satellite Control

Provides distributed control and added security via intelligent field controllers with an intuitive user interface

- Station Based Flow Management helps reduce water window and optimize pump operation
- Current Sensing provides protection by monitoring each station output for proper amperage draw
- Stores and runs a fully flow-managed irrigation schedule in the event the central computer is offline
- Stand-alone capabilities enable you to conduct manual irrigation directly from the satellite faceplate
- Station runtimes are executed to the second to provide precise irrigation
- 2-way wired or wireless communication options enable flexible system design and installation

LYNX Smart Module

Provides direct control via intelligent modules installed inside or near each sprinkler

- All system components are below ground, which helps maintain course aesthetics
- Lowest cost system option due to reduced amount of wire
- Continuous 2-way communication and automated diagnostics ensure system integrity
- Best-in-class broadband lightning protection
- System can be expanded easily by adding modules to the wire path
- Lynx Smart Hub provides additional features and benefits

Custom pedestal color options help satellites blend into their natural surroundings

Toro INFINITY® and FLEX800™ Series sprinklers can be ordered with integrated LSM modules

LYNX Smart Hub

Lynx Smart Hub is a new type of field controller that adds security, programmability and sensing to the benefits and simplicity of a 2-wire system.

- Irrigation system can be segmented into manageable areas for simplified maintenance
- Provides for in-field manual operation or troubleshooting
- Stores and runs a fully flow-managed irrigation schedule in the event the central computer is offline
- Creates a convenient point of connection for soil, flow and status sensors





TURF GUARD WIRELESS SOIL MONITORING SYSTEM

Helps you improve your water efficiency, turf and soil.



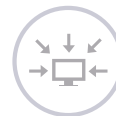
Available fully integrated into the new Toro® Lynx® control system.



Monitors soil moisture, salinity, and temperature levels.



New easy to use SiteVision™ software provides superintendents with a wealth of data about soil conditions.



The in-ground sensors are easy to install, and have long lasting (3 years) batteries that can easily be replaced on-site.



Interactive report screens make it easier to access, analyze, print and download data.



INFINITY® SERIES GOLF SPRINKLERS

Engineered for Today's Challenges. Designed for Tomorrow's Technologies. The INFINITY Series improves your course quality with less workload and most important, it keeps players playing. Calculate the money you'll save by cutting sprinkler maintenance from hours to minutes.



Smart Access® provides top accessibility to all critical components.



The Smart Access compartment offers room for a decoder module and wire splices



The protective enclosure isolates wire splices from the soil and potential shorts to ground. Provides access for system troubleshooting and repairs without digging!



The Smart Access compartment provides room to grow. Whatever the future holds, this sprinkler will be ready.



Toro FLEX800 R Series
Easily and economically upgrade
your existing Rain Bird® Eagle™ 900/1100
series sprinklers.



FLEX 800™ SERIES GOLF SPRINKLERS

Golf sprinklers with all the efficiency and proven performance features and benefits of the 800S and DT Series



LARGE NOZZLE SELECTION

From 6,0m to 30,5m (20' to 100') we've got you covered! Only Toro provides the flexibility to optimize your system for maximum uniformity.



PART AND FULL CIRCLE MODELS

Align part circle quickly and easily or adjust watering locations to suit seasonal needs.



NOZZLE BASE CLUTCHING

Simply pull up the riser and turn the nozzle base to the precise position you want to water.



TRAJECTORY ADJUSTMENT

In 24-position TruJectory™ or Dual Trajectory to help fight the wind, avoid obstacles or to reduce the radius.



Toro Technical Support

Our technical support team is highly skilled at what they do. From helping superintendents, program controllers, to troubleshooting complex system issues with consultants, the support team provides years of irrigation experience that you can count on. For technical support, please refer to the list of NSN International contact numbers on <https://www.toro.com/en/irrigation/nsn/contact-us>

Toro Controller Repair

Did you know that with the Toro Board Exchange Program you can get the replacement controller boards you need immediately? Through your distributor, Controller Repair provides controller boards ready for immediate board exchange to assure that controller downtime is minimal and your golf course and reputation stays protected. For immediate assistance call: 1-877-345-TORO. (Visit Controller Repair website at www.toro.com/controller-repair)

Toro Distributor Support

Our distributors have been our partners for an average of 40 years (10 to 88 years) and we consider them an extension of us.

Toro Field Service

With some of the most knowledgeable and helpful field service staff in the industry, and our extensive training and support programs; Toro field service personnel are always there to assist—before, during, and well after a sale.

Toro Genuine Parts

From the smallest sprinkler part to complete control systems, Toro Service Parts support can deliver most replacement parts to our distributors within hours. In fact, Toro offers its customers the highest parts order completion rate in the industry: 98%!

Toro National Support Network (NSN)

A team of support technicians dedicated to the daily operations and maintenance of computerized central control systems for customers worldwide. (see page 19 for more information)



NSN International Team: Koen, Pieter-Jan, David, Alejandro, and Kris.



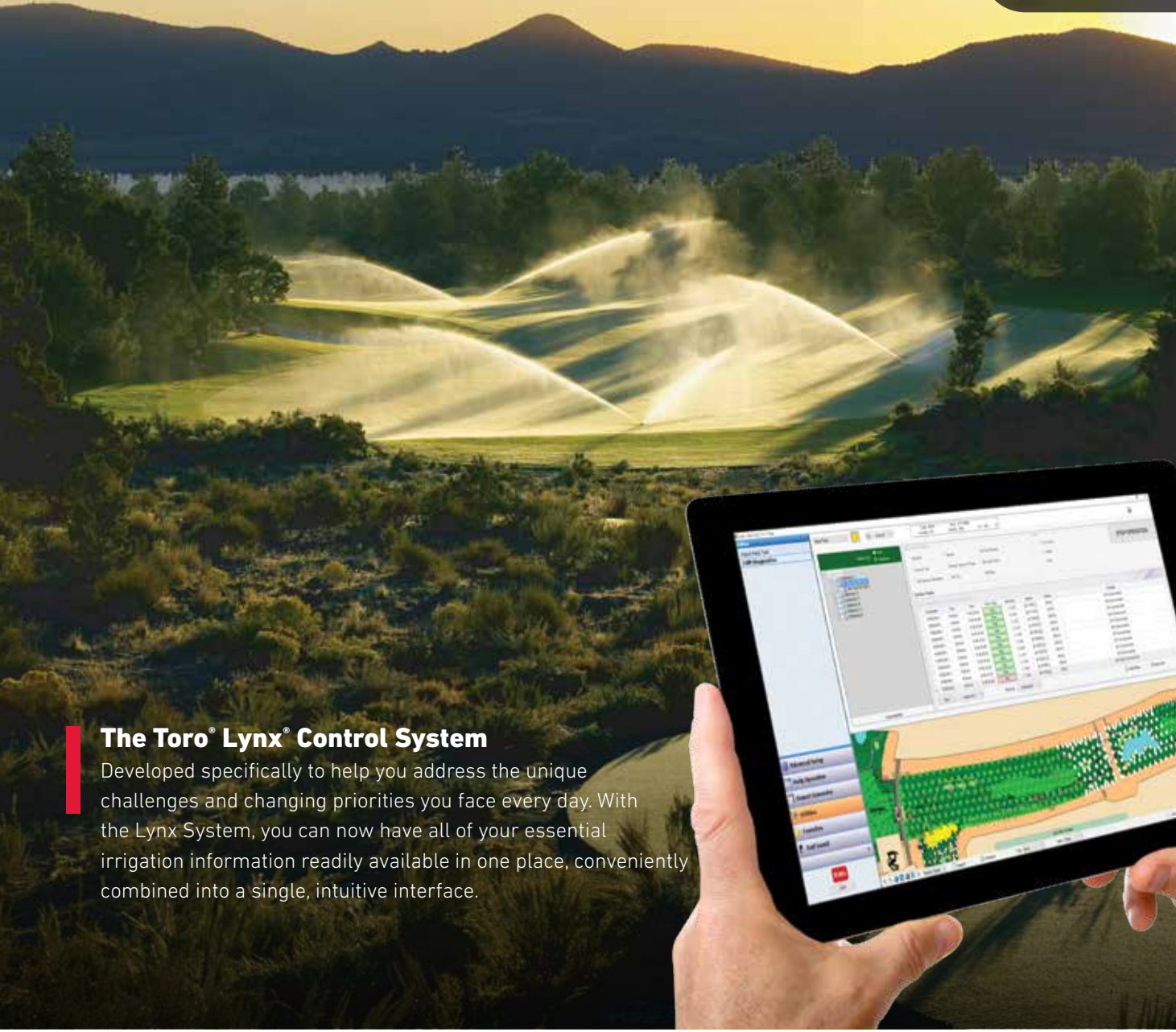
Lynx® Central Control System
Page 12



FIELD CONTROLLER COMPARISONS

Feature/Capability	Lynx® Smart Hub	Lynx® Smart Satellite	Lynx Smart Module	Lynx GAC	OSMAC® G3
Page	20	29	23	26	40
Maximum Stations Per Controller	1000	64	1000	1000	64
Maximum Simultaneously Operating Stations Per Controller	200	32	200	32**	16
Stand-alone Programs	64	64	10	N/A	24*
Wireline Field Communication	Yes	Yes	Yes	Yes	No
Wireless Field Communication	Yes	Yes	No	No	Yes
Upload Field Changes	No	Yes	No	No	No
Field Controller Alerts	Yes	Yes	No	No	No
Downloaded Programs	Yes	Yes	No	No	No
Station Based Flow Management	Yes	Yes	Yes	Yes	Yes
Station Current Sensing	No	Yes	No	Yes	No
Station Runtimes In Seconds	Yes	Yes	Yes	Yes	Yes
Language Capacity	Yes	Yes	Yes	Yes	No

* Lynx LSM 200 Stand-alone Gateway
** 16 + 16 with an expansion Gateway



The Toro® Lynx® Control System

Developed specifically to help you address the unique challenges and changing priorities you face every day. With the Lynx System, you can now have all of your essential irrigation information readily available in one place, conveniently combined into a single, intuitive interface.



Lynx Central Control Hardware Platform Added Including:

- Runtime Resolution** to the minute and second
- Standard Diagnostics** include Communication, Volts and Amps
- Map Selection** of stations for Standard Diagnostics
- Express Diagnostic** includes Communication, Amps and Volts
- Simultaneous Diagnostics** when multiple Smart vs used
- Station Mapping** in the Express method
- Synchronization** with mapping error detection and automatic remapping
- Diagnostic Results** color coded and displayed on the map with values

- Station Status Report** showing volts, amps and line balance
- LSM Firmware Update** from Lynx computer
- Lynx apps** support Lynx Smart Module platform
- Active Days** on Watering Plan includes Interval days control.
- Automatic Verification Polling** control
- Manual Verification Polling** control
- Threshold Setting** for map station labels

Watch Lynx Videos:
youtube.com/ToroCompanyEurope



Lynx Map



Lynx Handheld



Lynx Barcode



NSN® Connect V2



Features & Benefits

Lynx Adds More Flexibility And More Control

Station Percent Adjust for duration allows you to set temporary adjustments that automatically returns to normal after a set number of days. The new Sequential Instant Program allows you to pick the order stations water automatically. LSM system diagnostics can now be selected by Hole or Area to make pin pointing a problem even easier, and you can now chose to have Lynx automatically upload station changes into the Watering Plan.

Simplified Decision Making With Dynamic Drilldown

Guides you to where you need to go. Follow the water drop in the Watering Plan to find stations, holes or entire areas that are disabled, on hold or otherwise not programmed to irrigate. Quickly find any stations in Course Report that did not operate as intended.

Flexible and Editable Map

Easily add, drag, drop and assign sprinklers, satellites, sensors and switches to their exact locations. You can effortlessly make edits as your field hardware changes. Fully supports CAD-generated maps.

Power Guard Helps Prevent Wasted Energy

Integration with a Flowtronex® pump station with PACE™ enables the exclusive Lynx Power Guard feature to track and control electricity usage of the system.

Lynx Apps Provide Remote Control

Lynx Apps enable you to control your irrigation system from your smart phone or tablet. Available for both iPhone®* and Android™* devices, Lynx Apps offer map and numeric based interfaces for manual irrigation, as well as an easy way to enter or edit LSM module addresses.

Dynamic drilldown
by area, for quick overview by area and by hole

Irrigation at a glance
The colour of the water drop tells you if it's going to irrigate or not.

Simple menu
All similar functions are organized into folders

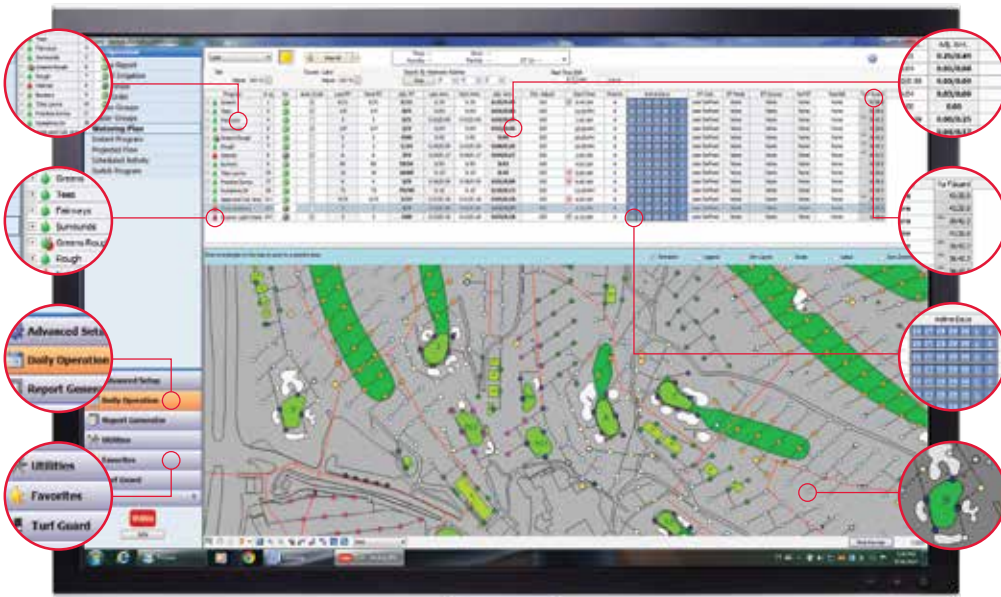
Save the most important pages
All the daily functions can be one mouse-click away

Decide how many inches/mm/minutes to water.

Intelligent irrigation with Turf Guard
Your Turf Guard sensors help you to decide when to irrigate and how much water to apply.

Decide which days of the week you are going to turn on sprinklers.

Easily edit your course map or create your own interactive map.



Lynx Map



Lynx Handheld



Lynx Barcode



NSN® Connect V2

Lynx Mobile

Enables remote access and control from any mobile device connected to the Internet. Screens are specifically designed and optimized for smaller devices.



* iPhone and the Apple logo are registered trademarks of Apple, Inc. in the U.S. and other countries.
* Android and the Android logo are trademarks or registered trademarks of Google Inc.

LYNX® CENTRAL CONTROL SYSTEM



SPECIFICATIONS – Lynx® Levels Comparison

SYSTEM CAPACITY	Lynx CE	Lynx PE	Lynx SE
Satellites	500	500	500
Satellite Stations	32,000	1344	512
LYNX® Smart Hub Stations	10,000	1000	500
Weather Stations	10	10	10
Pump Stations	10	3	2
Courses	3	2	1
Holes	48 x 2=96	48 x 3=144	48
Hydraulic Branches	1024	300	100
HARDWARE SUPPORTED			
LYNX Smart Hub	Yes	Yes	Yes
OSMAC® G3	Yes	Yes	Yes
LYNX Smart Module	Yes	Yes	Yes
LYNX GAC	Yes	Yes	Yes
LYNX Smart Satellite	Yes	Yes*	Yes*
PROGRAMMING			
Current Sensing	Yes	Yes**	Yes**
Station Adjust Upload	Yes	Yes	No
Site Code Categories	7	3	No
Precip. Mgmt. Groups (PMG)	Yes	Yes	No
Max. Stations/Hole Control	Yes	Yes	No
Instant Program Creation	Yes	Yes	Yes
Program Priority	Yes	Yes	No
Pump Profiling	Yes	Yes	No
Station Group Multi-Manual	Yes	No	No
Master Group Multi-Manual	Yes	No	No
Pump Integration	Yes	Yes	Optional
Weather Station Alarms	Yes	Yes	Optional
ET Auto Calc. RT Method	Yes	Yes	Optional

* With activation dedicated option
 ** Only with Smart Satellites



NSN® Connect
 Remote access so
 that you can control
 irrigation anytime,
 anywhere.

ADDITIONAL FEATURES

Runtimes:

- Runtimes are executed to the second rather than rounding to the whole minute, resulting in more precise irrigation and water savings (Lynx Smart Satellite, LSM, and Lynx GAC only)
- Control your irrigation by setting runtime minutes or application inches and let the system calculate the other. See exactly how much water you will apply and how long you will irrigate each area.
- Runtime synchronization with both Lynx Smart Satellite and Lynx Smart Hub prevents irrigation outages if the central goes off-line.
- Integrated runtime display shows past and planned irrigation activity so you can easily determine what action to take.

Quick Start:

- With Quick Start, you create station, hardware and area associations, and control the definition of greens, tees, fairways and sprinklers based on their locations.
- A basic hydraulic tree is auto-generated for you during Quick Start.

Views and Reports:

- Course Report provides both real time and daily summaries of both scheduled and manual watering events.
- Area and Hole orientation allows you to control your irrigation system the same way you think about the course.
- Instant Program has simple check-box selection and Dynamic Drilldown to you can instantly create and personalize new irrigation programs
- Projected Flow View shows you areas that will be watered and how much will be applied.

Communication:

- Current-sensing capabilities notify you of wire cuts and sprinklers unintentionally turned off (Lynx Smart Satellite and LSM only).
- Constant communication with both Lynx Smart Satellite and Lynx Smart Hub lets you take action if a power outage threatens irrigation.
- Toro LSM communication and solenoid diagnostics help identify shorts, low voltage and other issues.
- Weather station integration and Hand-held Remote Interface support are included as standard features

Operating System:

- Windows 10

Ease of Access with Lynx Apps:

- Lynx Map – GPS location, manual operation, favorites
- Lynx Handheld – All in one command set, command log, last dialed
- Lynx Bar Code – Add or replace, field test of new units

Warranty

- One year

Specifying Information—Lynx

LX-0X-X-X0			
Type	Computer Hardware	Service	Level
LX	0X	X	X
LX—Lynx	0—Budget Computer 1—Standard Computer 4—Premium Computer	1—1-year NSN (Standard) 2—2-year NSN 3—3-year NSN	2—SE 3—PE 4—CE

Example: When ordering a Lynx SE Central with a standard computer and one year of NSN, you would order: **LX-01-1-20**





Get the essential soil information you need, when you need it.

Stay up to date on your current soil conditions no matter where you are. Get the information you need to make important decisions in real time. Turf Guard sensors instantly track soil moisture, salinity, and temperature, saving you time. Repeaters mount easily inside all Toro Lynx® Smart Satellite, Lynx Smart Hub (LSH) Network LTC™ Plus and E-OSMAC® satellite pedestals.

Integrated Turf Guard® Soil Sensor Information helps you determine when and how much to irrigate, which helps you save water.





TURF GUARD® WIRELESS SOIL MONITORING SYSTEM

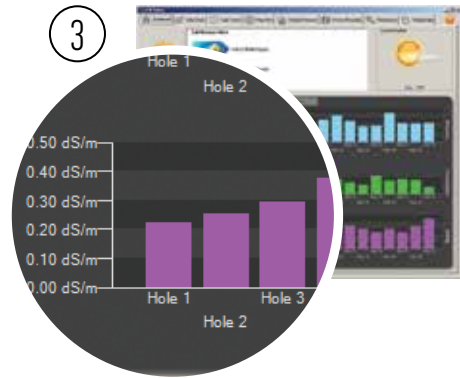
Features & Benefits

- 1 Reduce Water Usage and Improve Playability**
Monitor moisture levels and adjust irrigation without risking turf quality. Promote root growth by avoiding over watering. Detect dry areas before they impact the turf's health.
- 2 100% Wireless Network**
No wires between the repeaters and the sensors, or the sensor and the probes means that sensors can be installed anywhere on the course without disrupting play. Install sensors without having to trench or pull wires.
- 3 Take the Guesswork out of Managing Salinity**
Track salt build-up and schedule flushing as needed. Get positive confirmation that your flushing reduced soil salts. Know when and how much water to flush with.

1



3



2



Web-based or Stand-alone Interface

Graphical course overview displays sensor data at-a-glance. Plus with Toro Lynx® Control System integration you can check course moisture, salinity and temperature readings right from your irrigation control software.



TURF GUARD® WIRELESS SOIL MONITORING SYSTEM



How it works:



- One to three sensors buried in each green at critical root zone levels
- Additional sensors buried in fairways, tee boxes and planters
- Above-ground radio repeaters installed on or in existing irrigation pedestals
- Wireless MESH networking links all sensors to central control system.
- Moisture, Temperature and Salinity readings displayed in your office

SPECIFICATIONS

Operational

- Two distinct depths in the soil profile – critical root zone level and a second 127mm (5") lower. Independent measurements from each depth.
- MESH routing technology offers complete coverage even in remote canyon courses.
- Repeater mounts in most Toro irrigation satellite pedestals. An external repeater is available for other models including non-Toro pedestals.
- Supports up to 500 sensors per course
- Expected sensor battery life of 3 years, field replaceable.
- Sensor reading sent every 5 minutes.
- Automatic network configuration and failure recovery.
- Plots trends and compares historical and current readings.
- Lynx® Control System integration

Electrical

Input Power:

- Repeater: <0,02A @ 6 VAC
- Base Station: <0,1A @ 120 VAC, 50/60 Hz
- UL and CE approved

Sensor dimensions:

- Body: 5,1 cm x 9,2 cm x 15,6 cm (2" x 3.6250" x 6.1250")
- Spikes: 4,4 cm x 0,5 cm (1.7500" x 0.1969")
- Installation Hole Diameter: 10,8cm (4.25")

Sensor temperature:

- Operating: 0°C to 60°C (32°F to 140°F)
- Storage: -30°C to 82°C (-22°F to 180°F)

Sensing:

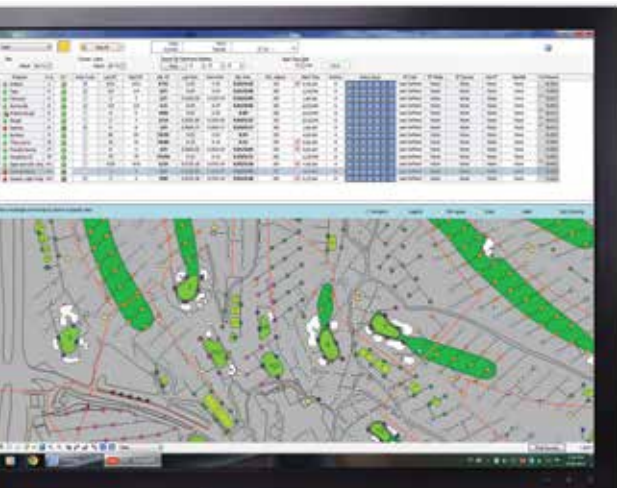
- 0,1°F Temperature resolution
- 0,1 % Volumetric soil moisture content resolution
- 0,1 dS/m Soil conductivity resolution (Salinity)

Communication:

- Repeater Range: 610m (2000') line-of-sight
- Buried Sensor Range: 152m (500') line-of-sight
- Additional licensing not required

Warranty

- Two years



Specifying Information—Turf Guard

TG-XX-XXX-XX		
Model	Description	Communication
TG	XX-XXX	XX
TG-Turf Guard	S2-R-Sensor, Replaceable Battery B-Base Station R-EXT-Repeater, External R-INT-Repeater, Internal PS-Power Supply	AU-915.5 to 927.5 MHz Band EX-900 MHz ISM Band EU-869 MHz ISM Band

Note: Not available in all locations, please check with your Toro representative for availability.

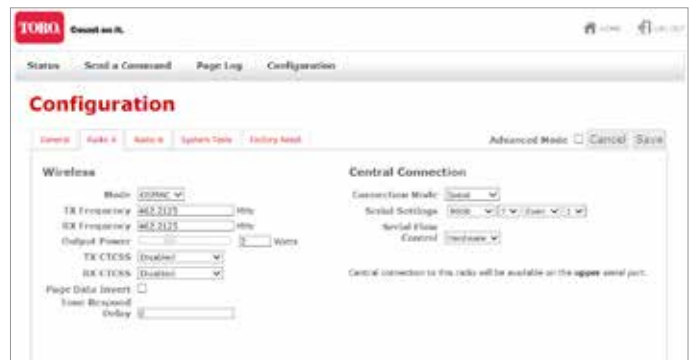


Radio Interface Unit (RIU)

The Toro® Radio Interface Unit combines the functions of the OSMAC® Base Station and Hand-held Remote Interface (HHRI) in a single unit. Available in a dual radio configuration that performs both Base Station and HHRI functions, a single radio configuration that's programmable for either function, and a radio-less configuration that's programmable for either function and utilizes a user-supplied external radio for added flexibility.

Features & Benefits

- Provides control of your system while you're on-the-go
- Provides both hand-held control and central-to-satellite communication
- Designed to operate continuously, 24/7
- Interfaces with your Lynx® or SitePro® central without the burden of recurring network costs
- Tailored to fit your application with programmable selections for: OSMAC Base Station and hand-held remote interface modes, independent transmit/receive UHF frequencies, independent transmit/receive private line settings (CTCSS) and transmit power.



Radio Interface Unit (RIU) Graphical User Interface.

Specifying Information—Radio Interface Unit (RIU)

Model	Description
RIU-00	Radio Interface Unit – External Radio

Note: FCC license required.

Network Radio-Link and FIU with Radio

Network Radio-Link offers you the flexibility to design your irrigation system unconfined by the limitations of distance or terrain. Oversized acreage and natural barriers are not a problem for Network Radio-Link. Communicating where wires can't run, it's the bridge between non-contiguous wire line systems and much more.

Features & Benefits

- Wireless communication to Network satellites
- Network Radio-Link kits for upgrades
- True 2-way communication
- Multi-port field interface allows one radio to be shared among many satellites
- Easy satellite installation
- Compatible with Network LTC™, LTC Plus, LTC Pro, Network 8000, Lynx VP®, Lynx® Smart Satellite and Lynx Smart Hub



Specifying Information—Field Interface Unit (FIU)

Model No.	Description
FIU-2010	Field Interface Unit with 1 Wire Line
FIU-2011	Field Interface Unit with 1 Wire Line and 1 Radio Line, Radio Not Included
FIU-2011R	Field Interface Unit with 1 Wire Line and 1 Radio Line, Radio Included
FIU-2011DR*	Field Interface Unit with 1 Wire Line and 1 Digital Radio, Radio Included
FIU-2020	Field Interface Unit with 2 Wire Lines
FIU-2021	Field Interface Unit with 2 Wire Lines and 1 Radio Line, Radio Not Included
FIU-2021R	Field Interface Unit with 2 Wire Lines and 1 Radio Line, Radio Included
FIU-2021DR*	Field Interface Unit with 2 Wire Lines and 1 Digital Radio, Radio Included

Note: FCC license required.
* Coming Soon



National Support Network, Toro® NSN

From small system upgrades to large-scale golf applications, our knowledgeable staff, including bilingual representatives, is available to assist you over the phone 24/7, every day of the year. NSN Connect provides remote irrigation control and easy mobile access. Anytime, anywhere. You will have the ability to access activity logs, transfer files and print documents from a remote location. NSN Connect Plus allows remote monitoring and proactive support of your system. And now available exclusively for current NSN subscribers, Lynx Apps enable you to control your irrigation system from your smart phone or tablet.

Features & Benefits

- Remote access so that you can control irrigation anytime, anywhere
- Easy access from your Apple or Windows mobile device
- Ability to easily transfer files
- Ability to print remote documents from a remote location
- Remote access activity logs and other

- **NEW: Lynx Apps enable you to control your irrigation system from your smart phone or tablet**
- Available to current NSN® subscribers – receive [support 24/7](#)



Lynx Map



Lynx Handheld



Lynx Barcode



NSN® Connect V2



Lynx® Smart Hub combines the benefits of satellites and decoders and delivers intelligent simplicity.

This new field controller adds the security, programmability and sensing capabilities of a satellite system to the benefits and simplicity of the Lynx® LSM 2-Wire Control System. Also available for Lynx GAC systems





Features & Benefits



Lynx GAC Decoder



Lynx LSM



Lynx Smart Hub In Action



Desktop Option



Remote Option



Lynx Smart Hub

Each Smart Hub can control multiple golf holes.

Operate sprinklers right from the Smart Hub pedestal, with the sprinklers in view on the course. No need to radio or return to the office.



Simplified Installation and Maintenance
Simplifies maintenance by segmenting system into manageable areas. Automated diagnostics keep you informed



Runs Automatic Programs
The Smart Hub stores and runs a fully flow-managed irrigation schedule, even if central computer is offline



Two-Way Communication
Two-way communication between the central and every sprinkler enables the addition of more SMART features. Creates a convenient connection point for soil, flow and status sensors



Provides in-field manual operation or troubleshooting
Operate sprinklers right from the Smart Hub pedestal, with the sprinklers in view on the course. No need to radio or return to the office



Best in class broadband lightning protection
Offers more efficient surge protection with all stations operating from a Smart Hub

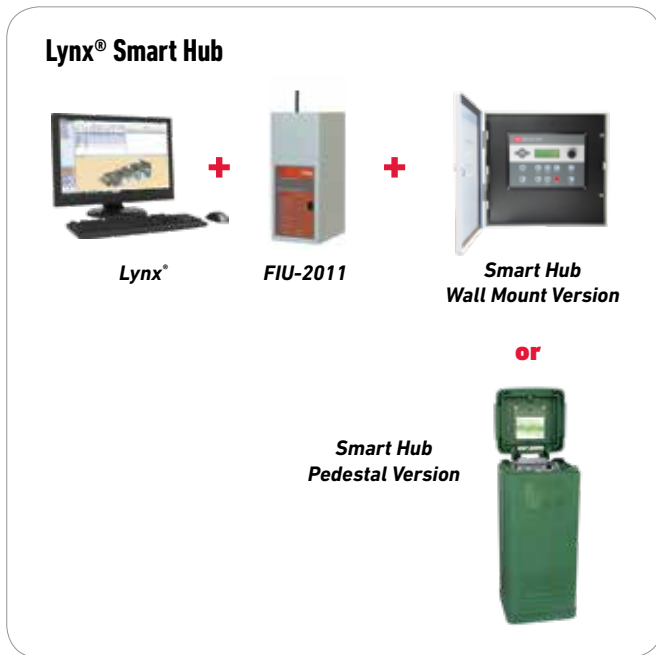


Easily Expandable
System can be expanded. Adds, moves and changes are easy – just plug and play allowing cost-effective upgrades

SYSTEM FEATURES

4 Wire Paths Per Smart Hub **250** Stations Per Wire Path **20** Smart Hubs Per System
5000 Stations Per System **50** Simultaneous Stations Per Wire Path **304 m** Distance Between Ground Points
4500 m Maximum Wire Path Length with a 2,5mm cable **20 KV** Surge Protection

LYNX® SMART HUB



SPECIFICATIONS

Installation

- Maximum number of wire paths:
 - 4 per smart hub - pedestal version
- Maximum number of decoders per wire path:
 - 250
- Maximum stations per Lynx Smart Hub:
 - 1000 for each Lynx Smart Hub
- Maximum stations per system:
 - 5000 for the entire Lynx Smart Hub system
- Simultaneous stations per output board:
 - 100
- Maximum distance from central to module
 - using 14 AWG wire: 2.6 miles
 - using 2,5 mm wire: 4,6 km
- Distance between ground points:
 - 304 m
- Solenoids per output: 2 DCLS-P
- Stations per module: 1, 2 or 4

Warranty

- Two years

SMART HUB/GATEWAY SPECIFICATIONS

Input voltage.....100-240 VAC, 50/60 Hz

Input current.....1.6A/1.0A (115/230)

Output voltage.....40VAC max

Output power.....75VA max, Class 2, SELV

Operating Temperature0° - 60°C (32° - 140°F)

Specifying Information—2-Wire Modules

LSM-1	
Type	Configuration
LSM	1
Lynx Smart Module	1—1-station

Example: A 1-station Lynx Smart Module would be specified as: **LSM-1**

**Refer to sprinkler pages for specifying information on Sprinkler 2-wire Modules*

Specifying Information—2-Wire Modules

DAC-ISP-X	
Type	Configuration
DAC-ISP	X
DAC-ISP—Module*	1—1-station 2—2-station 4—4-station

Example: A 2-station LSM Module would be specified as: **DAC-ISP-2**

**Refer to sprinkler pages for specifying information on Sprinkler 2-wire Modules*

Specifying Information—Gateway or Lynx Smart Hub

DEC-RSX-1000-XX				
Type	Configuration	Cabinet	Station Count	Communication Type
DEC	RS	X	1000	XX
DEC	RS—Lynx Smart Hub	no code—Wall mount P—Green Plastic Pedestal B—Brown Plastic Pedestal T—Tan Plastic Pedestal	1000—1000 Stations, Lynx Smart Hub*	M—Wireline DR—Radio

Example: A1000 station Lynx Smart Hub with green plastic pedestal and wireline communication would be specified as: **DEC-RSP-1000-M**

Note: A blank after RS indicates the wall mount cabinet. P, B, and T indicate green, brown, and tan plastic pedestals.

NEW



LYNX® SMART MODULE 2-WIRE CONTROL SYSTEM



toro.com



The Toro Lynx Smart Module 2-Wire Control System

Innovative technology to provide an irrigation solution that is reliable and efficient. Using a 2-wire path to communicate to buried control units, the system reduces the costs associated with traditional valve wire bundles and provides a solution that is vandal resistant, easy to install and easy to expand





Features & Benefits



Speed

Provides information faster than other two-wire brand, reducing test times from minutes to seconds and providing greater visibility into the overall health of the irrigation system.



Upgradeable

Upgrade remotely with just a click. Innovative new features and benefits are just a click away



Precision

Apply water with one-second resolution. The exact amount of water is placed exactly where it's needed.



Durable

Best in class surge protection to help weather the storm. It works with the Lynx Smart Hub, which protects the flow managed irrigation schedule, even in the event of a central failure if the central is down. Best in class broadband lightning protection.



DIAGNOSTICS
Built-in diagnostics automatically let you know if there are any problems. The wire path check quickly confirms that the whole system is operational.

INTEGRATED SPRINKLER
Toro INFINITY® and FLEX800™ Series sprinkler models have an integrated 2-wire module option.



LYNX® SMART MODULE



SPECIFICATIONS

Operational

Lynx® Central:

- Mapping capabilities
- Remote hand-held operation
- Weather station integration
- Pump station integration
- Enhanced diagnostics:
 - Communication
 - Electrical shorts/opens
 - Solenoid check
- No holding power required to operate stations
- 2-wire identification is a unique 6-character address

Installation

- Maximum number of wire paths: 4 per gateway
- Maximum number of Lynx Smart Hubs: 20 per system
- Maximum number of modules per wire path: 250
- Maximum stations per Lynx Smart Hub: 1000
- Maximum stations per system: 10,000
- Simultaneous stations per output board: 100
- Maximum distance from central to module (if using 2,5 mm wire): 5,4 km (3,4 miles)
- Maximum distance from module to sprinkler (if using 2,5 mm wire): 125 m (410 ft.)
- Solenoids per output: 2 DCLS-P
- Stations per module: 1

Electrical

- Input power: 88-264 V ac, 50/60 Hz
- Output voltage: 40 V ac max
- Output power: 75 VA max
- Class 2, SELV
- ISP 2-wire modules are rated at 20 KV surge protection
- 2-Wire modules wiring: 2,5 mm wire
- Module Protection: IP67

Warranty

- One year

Lynx Smart Hub

Lynx® + FIU-2011DR + DEC-RS-1000-M or DEC-RSP-1000-DR

Specifying Information—2-Wire Modules

LSM-1	
Type	Configuration
LSM	1
Lynx Smart Module	1—1-station

Example: A 1-station Lynx Smart Module would be specified as: **LSM-1**

**Refer to sprinkler pages for specifying information on Sprinkler 2-wire Modules*

Specifying Information—Gateway or Lynx Smart Hub

DEC-XXX-1000-XX				
Type	Configuration	Cabinet	Station Count	Communication Type
DEC	XX	X	1000	XX
DEC	RS—Lynx Smart Hub	No letter: wall mount installation P—Green Plastic Pedestal B—Brown Plastic Pedestal T—Tan Plastic Pedestal	1000—1000 Stations, Lynx Smart Hub*	M—Wireline DR—Radio

Example: A 1000 station Lynx Smart Hub with green plastic pedestal and radio communication would be specified as: **DEC-RSP-1000-DR**

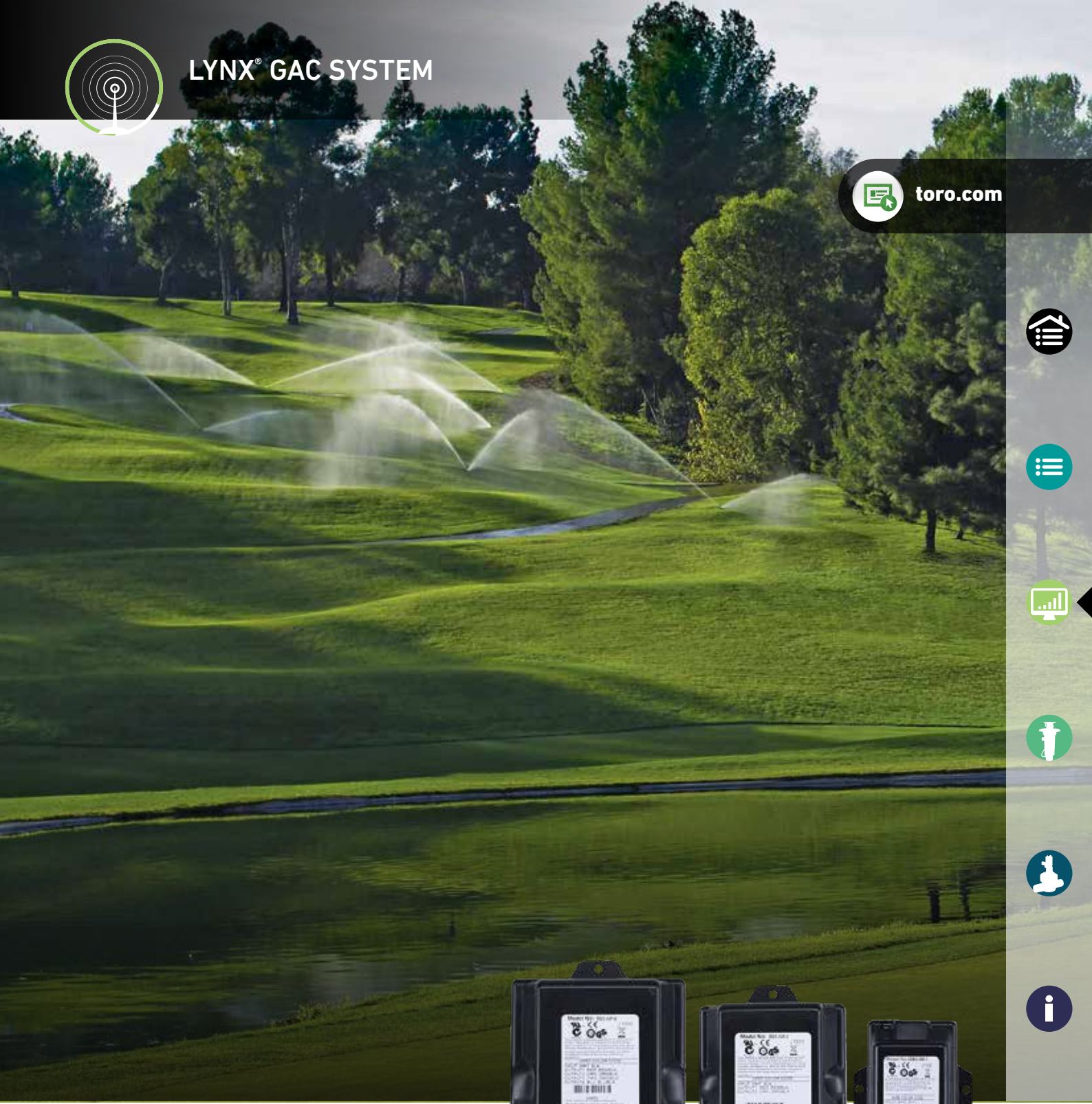
Note: A blank after RS indicates the wall mount cabinet. P, B, and T indicate green, brown, and tan plastic pedestals.

Specifying Information—INFINITY or FLEX800 Series Sprinklers

XXXXX-XXX-XX							
Type	Body inlet	Arc	Nozzle1	Nozzle 2	Pressure Regulation*	Activation Type*	Optional
XXX	X	X	X	X	X	X	6
INF	3 – 1"	4 – Full Circle	3 – 1"	0 – 7*	6 – 4,5 bar (65 psi)	6 – Lynx Smart	6 – Trujectory*
FLX	5 – 1.5"	5 – Part Circle	5 – 1.5"	1 – 9	8 – 5,5 bar (80 psi)	Module w/DCLS	
				* 0 only for INF35 or FLX35	1 – 6,9 bar (100 psi)		*Only for INF/FLX35 and 55

Example: When ordering and FLX55 Series Sprinkler, #54 nozzle, pressure regulation at 80 psi (5,5 Bar), with Lynx Smart module included and Trujectory, you would order: **FLX55-548-66**

Note: not all combinations nozzle-pressure regulations are available.



Lyn GAC Modules

The Lynx® GAC System

The Lynx upgrade system uses modern electronic technology to enable users of older decoder control systems to upgrade to a modern central with new field hardware. New features like remote control from your phone, moisture sensing and sophisticated diagnostics are now available without replacing your entire irrigation system. It offers higher surge protection, more precise run times and 2-way communication compared with older CDS, Rain Bird®* and Hunter®** Systems.

* Rain Bird is a registered trademark of the Rain Bird Corporation.
** Hunter is a registered trademark of Hunter Industries



Features & Benefits

- ① **Upgrade Your Old System**
Works with your existing sprinklers and wiring - just replace your field decoders and the central control. All the advantages of Lynx® are available to you.
- ② **Use Your Resources Efficiently**
More precise Run Time (+/- 1 second) and Enhanced Diagnostics result in water and electricity savings up to 35% of your current budget.*
- ③ **No Digging Required, Leave Them In The Ground**
With Lynx® GAC you can keep your system in the ground with no digging. You only need to change the decoder modules and the central.
- ④ **Make Your Investment Last Longer**
With Lynx® GAC your irrigation system just got a life extension. Your system will be fit for the future for a fraction of the cost of a new irrigation system.

** Results may vary depending on course conditions and system usage.*

Watch Lynx Videos at:

[youtube.com/ToroCompanyEurope](https://www.youtube.com/ToroCompanyEurope)



LYNX® GAC SYSTEM



Benefits for Users of Older CDS Systems:

- Two-way communication
- More precise run time (+/- 1 second)
- Enhanced diagnostics - rapid communication check, voltage, amperage, and cable length
- 20KV lightning protection
- Lynx Central Control (all the benefits, apps, NSN)
- 1-station fits in Toro INFINITY® Series golf sprinklers with Smart Access®

Feature	LYNX GAC	CDS	Rain Bird® FD	Hunter® Pilot
Stations Per Wire Path	500	112	250	250
Devices Per Wire Path	125	112	250	250
Outputs	1,2,4	1,2,3,4	1,2,4,6	1,2,4,6
Maximum 2.1 or 2.5mm ² AWG Wire Path Length	2100 m	1600 m	3048 m	2438 m
Simultaneous Stations with 2100 m of 2.1 or 2.5mm ² AWG Cable	16	2	20	20
Distance from Decoder Module to Solenoid	175 m 1.5mm ² cable	363 m 1.5mm ² cable	67 m	73 m
Solenoids Per Output	2	2	2	2
Surge Protection	20 KV	6-8 KV	6-8 KV	15 KV
Wire Paths Per Gateway	2	4	2	4
Solenoid Characteristics 24VAC, 60 Hz	400mA inrush 250mA holding	400mA inrush 200mA holding	400mA inrush, 250mA holding	400mA inrush, 250mA holding
Holding Current	40mA	300mA	20mA	45mA
Two-Way Feedback from Decoder Module	Volts Amps Distance	No	No	Volts Amps

SPECIFICATIONS

Operational

Enhanced diagnostics

- Communication
- Electrical shorts/opens
- Voltage
- Amperage

Module addresses are factory programmed

Low holding current

Installation

GAC gateways are available in standard and expansion configuration. Each standard gateway can connect with two 2-wire paths with maximum 125 decoders each. An expansion gateway can connect with a standard gateway and includes only daughter boards. The capacity of the expansion unit is the same as the standard gateway, but the cost is lower.

Maximum number of Gateways:

- 4 standard, 4 expansion

Maximum number of wire paths:

- 2 per gateway, 16 per system

Electrical

- Input voltage: 100-240 VAC, 50/60 Hz
- Input current: 1.6A/1.0A (115/230)
- Output voltage: 40VAC max
- Output power: 75VA max
- Class 2, SELV
- Decoders and gateways have 20KV surge protection

Temperature

- Operating temperature: 0°C to 60°C (32F to 140°F)
- Storage temperature: -30°C to 60°C (-22F to 140°F)

Warranty

- Two years



Specifying Information—GAC Module

DAC-ISP-X	
Type	Station Count
DAC-ISP	X
DAC-ISP-Module	1—1 Station, 2-2 Station, 4-4 Station

Specifying Information—Gateway

DAC-PCS-XXXX		
Type	Communication	Station Count
DAC	PCS	XXXX
DAC	PCS—Central	1000—Standard Gateway 1000-E—Expansion Gateway



*Sturdy Plastic Pedestals
Available in Sand, Tree Bark or Green.*

The all-new Lynx Smart Satellite sports a familiar look but is designed to improve performance and reliability. Picking up where the accomplished Lynx VP®/Lynx VP®e left off, the Lynx Smart Satellite adds enhanced communications with the Lynx Central Control System and integration with field sensors to further complement your decision making. Lynx Smart Satellite is also fully compatible with Lynx VP/Lynx VPE and Network 8000® systems as an addition or replacement.



Features & Benefits

Smart Design

Designed for Performance

Faster microprocessor and increased memory for high performance today and the capacity for future enhancements tomorrow.

Designed for Reliability

Fewer cables and connectors, corrosion-resistant metals, vented circuit board covers, and simplified power distribution contribute to greater reliability.



Intuitive User Interface
With backlit display for better low-light viewing. Station range entry makes establishing irrigation routines easier. DVD type controls for Start, Pause/Resume and Stop.

Lynx® Smart Satellite

Smart Features

Updated User Interface

Familiar arrow buttons and selector knob navigate the menu options in a larger backlit six-line display. Manual and diagnostic operations are easy, productive, and intuitive.

Enhanced Wireless Communications

New digital radio with an integrated modem provides improved communication signal integrity, new diagnostic information, and control options.

Optional Sensor Input Kit

Designed to integrate with the new Sensor Input Kit, allowing either local or Lynx Central response to information from anywhere on the course.

Plus all the Great Features of the Network VP

Station-Based Flow Management, current sensing and alarm response, runtimes to the second, Group Multi-Manual operation, Basic/Advanced/Grow-In programs, language support.



LYNX® SMART SATELLITES



Lynx Smart Satellite Interior View

- Clear Vented Covers on Circuit Boards: protection from pests and corrosion
- Stainless Steel and Plated Metal Parts: additional corrosion resistance
- LED Indicators: confirmation of normal function and diagnostic information to assist with troubleshooting
- Shielded Connectors: secure and reliable connections between components



SPECIFICATIONS

Operational

- Functions as a stand-alone controller or under the management of a central computer operating Lynx or SitePro Central Control System
 - Supports wireline or radio communications
 - Completely bi-directional
- Runtime to the second
- Support in 7 languages: English, Spanish, French, Italian, Chinese, Korean and Japanese
- 64 irrigation programs
- Basic, Advanced and Grow-In programs
- Station Autocycle
- Percent Adjustment from 1% to 900%
- Each output can be defined as an irrigation station or general application switch
- Nonvolatile memory retains program information and satellite settings during power-off conditions; battery backup retains the date and time
- 16-64 stations in 16 station increments; individual station control and the ability to run up to 32 stations simultaneously
- Backward compatible with SitePro/Lynx VP and SitePro/Lynx VPE satellite systems, also backward compatible with SitePro Network 8000

Optional Sensor Input Kit SMRT-SEN-BRD-KIT

- Pressure, Flow Rate, Rain, Status, and Temperature
- Includes 8 station outputs and 7 sensor inputs



Electrical

- UL and CEE Listed
- Input Power
 - 108 V ac to 132 V ac, 60 Hz
 - 0.20 amps (no load) 115 V ac
 - 1.2 amps (max. load) 115 V ac
 - 216 V ac to 264 V ac, 50 Hz
 - 0.10 amps (no load) 230 V ac
 - 0.60 amps (max. load) 230 V ac
- Output Power
 - 24 V ac: 3.0 amps (max. total load)

Dimensions

- Plastic Cabinet:
 - 43,2cm W x 101,6cm H x 40,6cm D
 - 17"W x 40"H x 16"D

Temperature/Humidity

- Operating Temperature:
 - 26°C to 60°C
 - 15°F to 140°F
- Storage Temperature:
 - 30°C to 65°C
 - 22°F to 149°F
- Humidity: 0% to 95% RH (noncondensing)

Options

- Surge Protection
- Sensor Input Kit

Warranty

- One year

Updated User Interface

- High-Contrast Backlit Display
- Intuitive Navigation
- Processor and Memory for High Performance and Future Enhancements



Choice of Three Pedestal Colors
Custom pedestal color options help satellites blend into their natural surroundings. (Green, Tree Bark, and Desert Sand)

Specifying Information— Network LTC Plus Upgrade Kit

118-0038
<i>Kit Contains</i>
Lynx VPE Faceplate, Network LTC Plus To Lynx VPE Power Distribution Board, Cable And Hardware

Specifying Information—Lynx® Smart Satellite

300-0XXY6ZSA					
Description	Configuration	Cabinet	Output	Communication	Options
300	XX	Y	6	Z	S
300—Lynx Smart Satellite	16—16 Stations 32—32 Stations 48—48 Stations 64—64 Stations	P—Plastic, Green T—Desert Sand B—Tree Bark	6—24 VAC Electric	M—2-Way Wire Modem R—Radio System	3—Large-capacity Terminal Block & Switches 4—Large-capacity Terminal Block w/Add'l Surge & Switches
Example: When ordering a 48-station, 2-way wire modem-equipped, Lynx Smart Satellite with large-capacity terminal block, additional surge and switches, specify: 300-048P6M4A					



LTC® Plus to LTC® Pro

Why LTC Pro? LTC Pro is the upgrade of LTC Plus. It has a better faceplate, fewer electrical connectors and will last longer. Once a system has been upgraded to LTC Pro completely, the firmware can be upgraded and the system can move from SitePro to Lynx.



LTC® Pro Satellite

Do you want to change and upgrade some satellites and have them ready for Lynx? Choose this package and your satellites will be future proof. Available as complete satellites or upgrade kit for existing LTC Plus satellites. Upgrade kit includes LTC Pro Faceplate, Power Distribution Board, Cable and Hardware.



Features & Benefits

- 1 **Intuitive user interface simplifies faceplate functions**
- 2 **Enhanced manual operations:**
 - Runtimes to the second
 - Stackable multi-manuals
 - Start/Pause/Stop
- 3 **Backwards compatible with SitePro®:**
It will keep working with your existing SitePro Central until you are ready to move to Lynx.
- 4 **Enhanced diagnostics**
Link monitor, System monitor, sequence station and station test.



LTC® Pro Upgrade Kit

Specifying Information—LTC Pro Satellites

LTCRXXX6XX					
Description	Configuration	Cabinet	Output	Communication	Options
LTCR	XX	X	6	X	X
LTCR - LTC Pro	16 – 16 Stations 40 – 40 Stations	P – Plastic Green	6 – 24VAC	M – Wire R – Radio	4 – Large Terminal Block, Switches, Premium Surge
Example: When specifying a 40-station, wire communication satellite, you would specify: LTCR40P6M4					

Specifying Information—LTC Pro Upgrade Kit

118-4838
Kit Contains
LTC Pro Faceplate, Power Distribution Board, Cable and Hardware



OSMAC G3 Synthesized Decoder Modules

Modules can be reprogrammed in the field – new frequency models can store up to 4 pre-programmed frequencies to transition from construction to permanent frequencies (narrowband).



Features & Benefits

- 1 Stand-alone capabilities include scheduled irrigation programs, manual program start and station multi-manual
- 2 Received Signal Strength Indication (RSSI) at the satellite faceplate aids in system installation and troubleshooting
- 3 Page Log records the last 100 commands received by each satellite, including signal strength
- 4 Improved radio performance helps overcome difficult environmental conditions
- 5 Available as complete satellites and an upgrade kit for existing E-OSMAC units

SPECIFICATIONS

Operational

OSMAC G3:

- Colored LED indicators to confirm 24-, 9-, and 5-volt power to various boards within the cabinet
- LED's for each station output
- Internal antenna allows for smaller profile cabinet
- Patented Hot Post for each eight-station module

Electrical

- Input power: 120/240 V ac, 50/60 Hz
- OSMAC G3
 - 0.20 amps, 110-120 V ac, 60 Hz (no load)
 - 0.96 amps, 110-120 V ac, 60 Hz (max load)
 - 0.10 amps, 220-240 V ac, 50/60 Hz (no load)
 - 0.47 amps, 220-240 V ac, 50/60 Hz (max load)

Dimensions

- Plastic Cabinet: 43,2cm W x 101,6cm H x 40,6cm D (17" W x 40" H x 16" D)

Options

- Surge protection

Specifying Information—OSMAC G3 Upgrade Kit

118-4839

Kit Contains

OSMAC G3 Faceplate, Interface Cable and Hardware

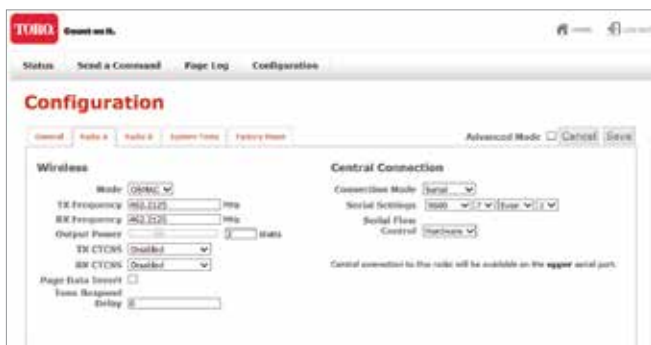


Radio Interface Unit (RIU)

The Toro® Radio Interface Unit combines the functions of the OSMAC® Base Station and Hand-held Remote Interface (HHRI) in a single unit. Available in a dual radio configuration that performs both Base Station and HHRI functions, a single radio configuration that's programmable for either function, and a radio-less configuration that's programmable for either function and utilizes a user-supplied external radio for added flexibility.

Features & Benefits

- ① Provides control of your system while you're on-the-go
- ② Provides both hand-held control and central-to-satellite communication
- ③ Designed to operate continuously, 24/7
- ④ Interfaces with your Lynx® or SitePro® central without the burden of recurring network costs
- ⑤ Tailored to fit your application with programmable selections for: OSMAC Base
- ⑥ Station and hand-held remote interface modes, independent transmit/receive UHF frequencies, independent transmit/receive private line settings (CTCSS) and transmit power



Radio Interface Unit (RIU) Graphical User Interface.

Specifying Information—Radio Interface Unit (RIU)

Model	Description
RIU-00	Radio Interface Unit – External Radio
RIU-01	Radio Interface Unit – Single Radio
RIU-02	Radio Interface Unit – Dual Radio

Note: FCC license required.



Sensor Input Kits for Satellite Controllers

The Sensor Input Kits for Lynx Smart Satellite and Network VP deliver important field data to the superintendent's office. Relevant data is the foundation of informed decision making, whether the decision is made by a human or a computer. A satellite controller equipped with either of the two Sensor Input Kits can receive data from up to seven sensors. The satellite collects, stores, and delivers the data to Lynx, where it can be accessed by the superintendent on the Sensor Dashboard. Lynx also can respond automatically to changes to the irrigation system and changes in weather conditions. A Sensor Input Kit can help save the valuable resources of time and water, and help keep course conditions at their best.



SENSOR INPUT KIT FOR NETWORK VP*



VP-SEN-BUNDLE

118-5487SK

VP Timing Module – Sensor Compatible

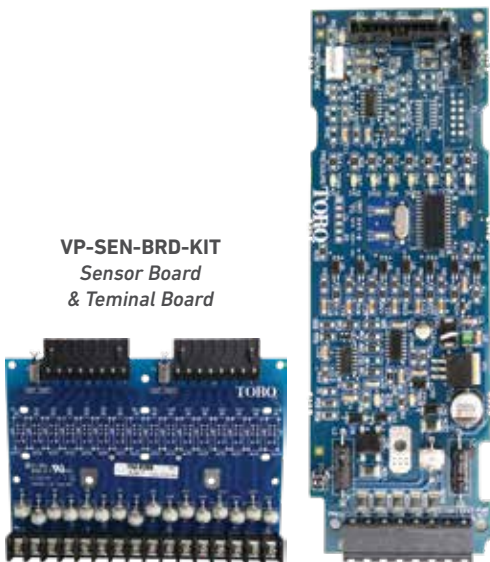
SENSOR INPUT KIT FOR LYNX® SMART SATELLITE



SMRT-SEN-BRD-KIT

VP-SEN-BRD-KIT

*Sensor Board
& Terminal Board*





Features & Benefits

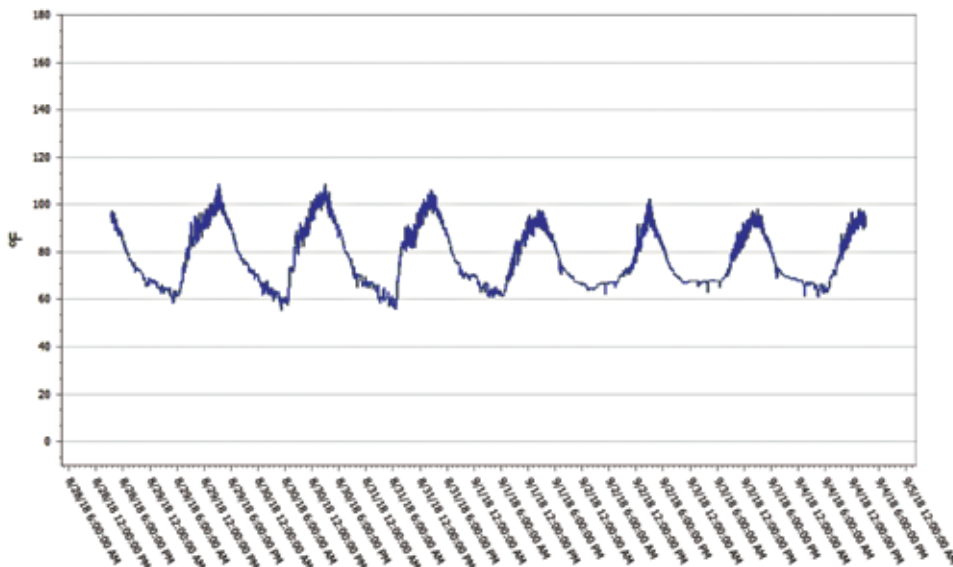
- 1 Lynx Sensor Dashboard Presents the Real-time Status of Sensors on the Course**
At-a-glance understanding of the condition of the course irrigation system and weather inputs enhance decision-making.



- 2 Lynx Report Generator Presents Logged Sensor Data in Tabular or Graphical Format**
Display trends over time for a complete understanding of the weather and irrigation system.

Temperature : Section C - 1-3-Temperature

Generated At: 9/4/2018 3:33 PM
Start Date: 8/28/2018 3:33 PM
Span: 7 Day(s) 0 Hour(s) 0 Minute(s)





3

Sensor alarms and responses can be easily configured in Lynx with numerous options for responses to alarm conditions.

Automatically Safeguard Your Course, Eliminate Water Waste, and Ensure Efficient Irrigation

Alarm & Response Examples:

Pressure Sensor: Set alarm conditions and appropriate responses for high and/or low pressure values

- ✓ A text notification or email can be sent if measured pressure falls below a specified value.

Rain Gauge: Prevent, suspend or adjust irrigation in the event of a measurable rain event

- ✓ Lynx will account for measured rain on an hourly or daily basis and automatically apply a Rain Hold or adjust scheduled activity to account for the rain fall received.

Temperature Gauge: Set alarm conditions and appropriate responses for high and/or low air temperature

- ✓ Activate greens fans through a satellite switch output when air temperature exceeds the alarm value for a set duration
- ✓ Suspend irrigation when air temperature is near freezing.

Switch Status: Set alarm conditions and appropriate responses for changes in switch state

- ✓ Control pond or tank water level using level switches to trigger a pump or valve to transfer water, maintaining water level within a set range.

Flow Meter: Set alarm conditions and appropriate responses for high and/or low flow rate values

- ✓ A satellite switch can be closed if a flow out of tolerance is observed, signaling the pump station to shut down.



Photo credit: Jeremy Klotz

A flow out-of-tolerance condition, manageable with a sensor input kit, flow meter, an automatic alarm response in Lynx®.

CONTROL SYSTEM UPGRADES

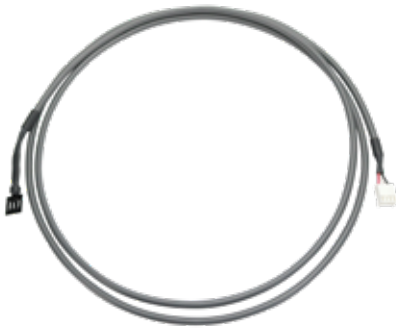


Toro Sensors



Pressure Sensor

Approved Model: **PRESS200-SEN-KIT**
Toro Pressure Sensor Kit: 0 – 200 PSI



Temperature Sensor

Approved Model: **TEMP-SEN-KIT**
Toro Temperature Sensor Kit

SPECIFICATIONS

Sensors

The Sensor Input Kits can accept up to seven sensors; they are compatible with the following sensors:

- (1) Pressure sensor
- (1) Temperature sensor

Satellites equipped with Sensor Input Kits can accommodate up to 56 station outputs:

- The Sensor Input Kit for Network VP includes a sensor input board that takes the place of an eight station output board
- The Sensor Input Kit for Lynx Smart Satellite is a module that contains eight station outputs and seven sensor inputs. It takes the place of a sixteen station output board.
- Lynx version 5.0 or later is required for interaction with the Sensor Input Kits
- The Sensor Input Kit for Network VP includes a new Timing Module with faster processor, larger display, and expanded memory

Sensor Input Kit for Network VP

Model: VP-SEN-BUNDLE

- 118-5487SK: VP Timing Module, Sensor compatible
- VP-SEN-BRD-KIT: Sensor Board and Level 4 Terminal Board

Sensor Input Kit for Lynx Smart Satellite

Model: SMRT-SEN-BRD-KIT

Toro Pressure Sensor Kit

Model: PRESS200-SEN-KIT

- 0 – 200 PSI

1/4" – 18 NPT male thread

Toro Temperature Sensor Kit

Model: TEMP-SEN-KIT

Recommended accessory: Radiation Shield Davis #7714

Rain Gauge

Recommended Model: Texas Electronics TR525I

Flow Meter

Recommended Models: Data Industrial 200 Series or Bermad 900M Series, reed switch signal

Recommended Sensors



Radiation Shield for Temperature Sensor
Recommended Model:
Davis® #7714



Rain Gauge – Tipping Bucket
Recommended Model:
Texas Electronics TR 525I



Flow Meter
Recommended Models:
Data Industrial® Series 200
or **Bermad® 900 M Series**



The OSMAC® G3 Satellite

The OSMAC® G3 satellite is easy to install, troubleshoot and maintain. Economical because you buy only what you need and can expand as your site conditions change. They utilize paging technology to create one of the most convenient, dependable, and flexible satellites on the market. Employing wireless communication, these satellites are great for retrofit projects. Available as complete satellites or upgrade kit for existing OSMAC® G3 satellites. Upgrade kit includes OSMAC G3 faceplate, interface cable and hardware **Available only in selected territories.**



Features & Benefits

- ① **Low Cost Wireless Communication**
Ideal choice for upgrading existing systems. No communication wires are needed. Mounts to many existing pedestal bolt patterns.
- ② **Easily Expandable**
OSMAC G3 offers up to 64 stations in eight-station increments.
- ③ **Lower Operating Costs**
The enhanced surge protection on OSMAC G3 provides lower operating costs. Ideal for high lightning areas.
- ④ **Flexible Station Outputs**
Combine satellites with different output types for added system flexibility.



OSMAC® G3 SATELLITES



OSMAC® G3 Synthesized Decoder Modules
 Modules can be reprogrammed in the field – new frequency models can store up to 4 pre-programmed frequencies to transition from construction to permanent frequencies (narrow-band).



Specifying Information—OSMAC G3 Upgrade Kit

118-2987
<i>Kit Contains</i>
OSMAC G3 Faceplate, Interface Cable and Hardware

Specifying Information—OSMAC G3 Satellites

G3-XXX6RX					
Description	Configuration	Cabinet	Output	Communication	Options
G3	XX	X	6	R	X
G3—OSMAC G3	16—16 Stations 24—24 Stations 32—32 Stations 40—40 Stations 48—48 Stations 56—56 Stations 64—64 Stations	P—Plastic Green B—Plastic Tree Bark T—Plastic Desert Sand	6A—24VAC	R—Narrowband Radio	3—Large Terminal Block & Switches 4—Large Terminal Block & Switches, Premium Surge
Example: When specifying a 40-station, satellite in a green plastic cabinet with large terminal block, switches and premium surge you would specify: G3-40P6R4					

SPECIFICATIONS

Operational

OSMAC G3:

- Colored LED indicators to confirm 24-, 9-, and 5-volt power to various boards within the cabinet
- LED's for each station output
- Internal antenna allows for smaller profile cabinet
- Patented Hot Post for each eight-station module

Electrical

- Input power: 120/240 V ac, 50/60 Hz
- OSMAC G3
 - 0.20 amps, 110-120 V ac, 60 Hz (no load)
 - 0.96 amps, 110-120 V ac, 60 Hz (max load)
 - 0.10 amps, 220-240 V ac, 50/60 Hz (no load)
 - 0.47 amps, 220-240 V ac, 50/60 Hz (max load)

Dimensions

- Plastic Cabinet: 43,2cm W x 101,6cm H x 40,6cm D
 (17" W x 40" H x 16" D)

Options

- Surge protection

Additional features

- Stand-alone capabilities include scheduled irrigation programs, manual program start and station multi-manual
- Received Signal Strength Indication (RSSI) at the satellite faceplate aids in system installation and troubleshooting
- Page Log records the last 100 commands received by each satellite
- Improved radio performance helps overcome difficult environmental conditions
- Available as complete satellites and an upgrade kit for existing OSMAC units

Warranty

- Two years



Note: FCC license required. Frequency modules do not need to be ordered separately. Product shipped with four pre-programmed synthesized frequency modules (462.2125, 462.4375, 467.2125 and 467.4375).

NEW



WATCHDOG® WEATHER STATION



toro.com

WatchDog® Retriever & Pups for Toro® Lynx®

Spectrum Technologies, Inc. has created a specialty line of WatchDog Weather Stations and Retriever & Pups Stations designed specifically for easy integration with Toro Lynx Central Control System.

WatchDog Pups are wireless sensor nodes that come in three models – Sensor Pups, Station Pups and Repeater Pups. A deployment of multiple Pups can create a network of customized sensor measurement options for optimal turf growth conditions. The WatchDog Retriever works with the Pups to manage the network. A single Retriever can compile and record all sensor data collected by up to 10 remotely located Pups.

Single or Multi-Station Wireless Mesh Network

- Mesh network technology means that every Pup also acts as a signal receptor
- Increase range and placement options with the dedicated Repeater Pup
- Easily add measurement locations to the network to capture site specific data where you need it most



Features & Benefits

1 Fully Integrates with Toro® Lynx® Central Control
Choose between WatchDog-3910 ET Pup Station or WatchDog-2910 Full Weather Station, or combine both in the same network.

A Direct connection to Lynx CPU with WatchDog-2910 Full Weather Station.

B Direct cable connection to Lynx CPU with WatchDog-3912T Retriever that provides rainfall and ET measurements from its wireless network of solar powered WatchDog-3910 ET Pup Stations.

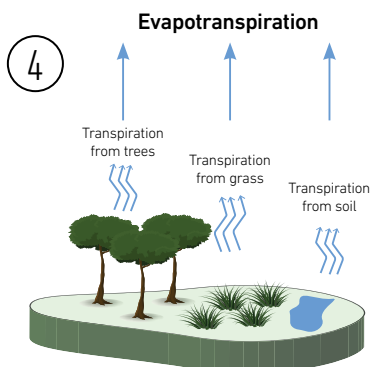
2 ET Pup Station Network
Connect up-to 10 WatchDog-3910 ET Pup Stations per network. Independent Data Logging. Collect site-specific data with one system. Transmit data in rolling/complex topography.

3 Wireless Capability (mesh)
Wireless sensor nodes that can be used as single or multi-station mesh network. Accurate, real-time data throughout your course.

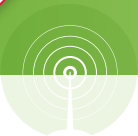
4 Evapotranspiration (ET) Calculation
Ability to calculate evapotranspiration (ET) values to support the course manager's irrigation schedules. By basing irrigation decisions on real-time ET data, you are able to deliver water more efficiently with less waste.

5 Daily Archive
The weather station display on archive that allows you to look at historical data for that location without downloading the data. The archive is regularly updated whenever the data logger is actively collecting data. The daily archive retains the last 30 days of data.

6 External Ports To Include Additional Sensors
5 additional ports to customize your station with plug-in sensors to meet your needs. WatchDog-2910 Full Weather Station only.
* 5 additional ports viewed on SpecConnect only.



*2910 Full WatchDog Weather Station requires Station Pup 3931 to operate wirelessly 868MHz



SETUP 1 - Cable



WatchDog - 2910W (23M)
WatchDog-2910M (1.2Km)

**WatchDog-2910,
Direct Cable Connection**

Full-featured weather station measures, calculates and logs Rainfall, ET, Wind Speed/ Direction, Temperature, RH and Solar Radiation. Five extra sensor ports. Requires WatchDog 3931 Station Pup to communicate with the Retriever network. Includes mounting bracket.

* solar panel sold separately

2910W and 2910M Weather Station
WatchDog-2910W (23M)
WatchDog-2910M (1.2Km)

SETUP 2 - Radio

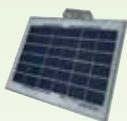


868 MHz



WatchDog- 2910

WatchDog - 3931 (Station Pup)



WatchDog - SP3999

**Station Pup (868 MHz)
WatchDog-3931**

Required for each full weather station to communicate with the Retriever network. The Station Pup has a built-in radio, and is wired directly to a full weather station to communicate its data. Requires WatchDog SP 3999 Solar Power Package. Includes mounting bracket and communication cable.
* solar panel and 2910 sold separately

SETUP 3 - Radio Multi-station



868 MHz



WatchDog- 3930ET



WatchDog - SP3999

WatchDog - SP3999
Solar panel for auxiliary power for:
WatchDog- 3930ET (Pup Station)
WatchDog - 3931 (Station Pup)

WATCHDOG® RETREIVER & PUPS FOR TORO® LYNX®



NEW

Sensor	Measurement	Accuracy
Wind Speed	0.3-241 km/h (0.2-150 mph)	±3 km/h (±2 mph), ±5%
Wind Direction	1° increments	±3°
Air Temperature	-40° to 125°C	±0.3°C
Relative Humidity	0% to 100%	±2% at 25°C
Rainfall	0.25mm resolution	±2% at < 5 cm/hr
Solar Radiation	1-1500 W/m ²	±5%

SPECIFICATIONS

Additional features

- Accurate, real-time weather information directly from your golf course
- Monitor, record and analyze several growing conditions including Temperature, Humidity, Wind Speed and Direction, Solar Radiation and Rain Fall
- Choose measurement intervals from 1 to 60 minutes (holds 183 days of data with a 30 minute interval) 2900only
- Use the LCD Display to check current and daily high/low readings without a PC-2910 only

Operational

- Communication
 - Direct:
 - PC Interface Cable
 - 23 meter 6v Power Direct Connect Cable
 - Short-Range Modem Pair-can be wired up to 1.2 km (for 2910 only)
 - Wireless: Retriever & Pups
- Sensors:
 - Wind Speed
 - Wind Direction
 - Air Temperature
 - Relative Humidity
 - Rainfall
 - Solar Radiation

Installation

- Retriever features a weatherproof case and 23m cable (terminating in a 9-pin serial connection) to allow high mounting for the greatest range. Includes 12V AC adapter for power.

Electrical

- Power source:
 - Solar Panel
 - 5w Solar Panel with 6V rechargeable battery
 - Alternative power with AC/DC power adapter for direct connect option1
- Available External Sensor Ports: 2910 only
- Dimensions: (weather station)
 - 30cm x 21.5cm x 30cm (12" x 8.5" x 12")
- Weight:
 - 2.9kg (6.4lbs)
- Dimensions (Pup):
 - 57 CM x 46 cm x 28 cm
- Weight (Pup):
 - 2.6kg

Temperature

- Operating temperature: -30° to 55°C (-22° to 130°F)

Warranty

- One year

Specifying Information—WatchDog® Weather Station (For wired short or long range communication)

WATCHDOG-XXXX X	
Description	Communication
WATCHDOG-XXXX	X
2910 – Spectrum WatchDog 2910	W – Wired, 23m cable included, ready for installation M – Modem, for long-range (1200m) wired installation*

*Cable not included

Specifying Information—WatchDog® Weather Station (For radio application using ET Pup stations)

Code	Description
WATCHDOG-3912T	Spectrum WatchDog 3912T, Retriever for Lynx, radio. Includes 23m cable kit, usb to pin serial adapter
WATCHDOG-3930ET	Spectrum ET Pup Station, 4 sensors input**
WATCHDOG-SP3999	Solar Power Pack (recommended)***

**Max 10 units

*** Number of solar packs depends on the number of weather stations

Specifying Information—WatchDog® Weather Station (For radio application using full weather stations)

Code	Description
WATCHDOG-3912T	Spectrum WatchDog 3912T, Retriever for Lynx, radio. Includes 23m cable kit, usb to pin serial adapter
WATCHDOG-2910	Spectrum WatchDog 2910
WATCHDOG-3931	Station Pup updating WatchDog 2910
WATCHDOG-SP3999	Solar Power Pack (recommended)***

***Number of solar pack depends on the number of weather stations





WatchDog® Cable Connections

WatchDog - 2910W or 2910M

Direct cable connections to Lynx®.



WatchDog-2910W
Full Weather Station.



WatchDog-3660DP
23 meter powered
direct connect cable.

OR



WatchDog-2910M
Full Weather Station.



WatchDog-3665WM
Short-Range Modem
1.2Km.

New Wireless (Mesh) Components

WatchDog - 3931 (Station Pup)

Connects directly to the Retriever and transmits data to Toro Lynx software.



WatchDog-3931 (Station Pup)
Full Weather Station.



WatchDog-3912T (Station Pup)
Retriever for Toro Lynx
868 MHz.

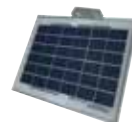


WatchDog #3927C75
Power direct connect
Retriever Extension
Cable Kit (12V).

Additional Accessories

WatchDog - SP3999

5W Solar Panel Package with 6V rechargeable battery.



WatchDog-SP3999
Necessary for each Pup deployed in a Lynx integrated network. The 5W solar panel and 6V rechargeable battery pack provide power for Pups. Includes mounting bracket and wiring components.



WatchDog #3661U
USB-to-3.5mm-Stereo-Plug Adapter
Connect WatchDog devices directly to your computer USB Port.



SPRINKLERS AND SUBSURFACE DRIP



SPRINKLER COMPARISONS

Model	INF35-6/ INF55-6	INF35/ INF55	INF34/ INF54	FLX35-6/ FLX55-6	FLX35/ FLX55	FLX34/ FLX54
Page	55	60	65	74	79	84
Radius	13-30m (42'-100')	13-28m (43'-92')	16-30m (52'-99')	13-30m (42'-100')	13-28m (43'-92')	16-30m (52'-99')
Short Radius (mainless)	10,5-16m (46'-51')	10,4-15m (34'-50')		10,5-16m (46'-51')	10,4-15m (34'-50')	
Radius Reduction Screw		X	X		Optional	Optional
Back nozzle Capable	X	X	X	X	X	X
Inlet size	1" and 1.5", ACME	1" and 1.5", ACME	1" and 1.5", ACME	1" and 1.5", ACME	1" and 1.5", ACME	1" and 1.5", ACME
Below Grade Capable	Stealth-T	Stealth-D	Stealth-D			
Flow Range	27-231 LPM (7.1-61.1 GPM)	31-232 LPM (8.2-61.3 GPM)	49-234 LPM (13.0-61.8 GPM)	27-231 LPM (7.1-61.1 GPM)	31-232 LPM (8.2-61.3 GPM)	49-234 LPM (13.0-61.8 GPM)
Recommended Operating Pressure	4,5-5,5 Bar (65-80 PSI)	4,5-5,5 Bar (65-80 PSI)	4,5-5,5 Bar (65-80 PSI)	4,5-5,5 Bar (65-80 PSI)	4,5-5,5 Bar (65-80 PSI)	4,5-5,5 Bar (65-80 PSI)
High Wind	X	X	X	X	X	X
LSM 2-wire Systems	X	X	X	X	X	X
Normally Open Hydraulic System				X	X	X
Spike Guard™ Solenoid	X	X	X	X	X	X
Full Circle	X	X	X	X	X	X
Part-circle Adjustable	X	X		X	X	
Part/Full Circle In One	40°-330° and 360°	40°-330° and 360°		40°-330° and 360°	40°-330° and 360°	
Ratcheting Riser	X	X		X	X	
Check Valve				X	X	X
Trajectory Adjustment	7°-30°	25° & 15°	25° & 15°	7°-30°	25° & 15°	25° & 15°
Nozzle Base Clutching	X	X		X	X	
SMART ACCESS Compartment	X	X	X			
SMART ACCESS Cover	X	X	X			
Removable Marker	X	X	X			
Pilot Valve Serviceable Under Pressure	X	X	X			
Warranty	2 Years/ 5 Years*	2 Years/ 5 Years*	2 Years/ 5 Years*	2 Years/ 5 Years*	2 Years/ 5 Years*	2 Years/ 5 Years*

*When purchased and installed with Toro Swing Joints.



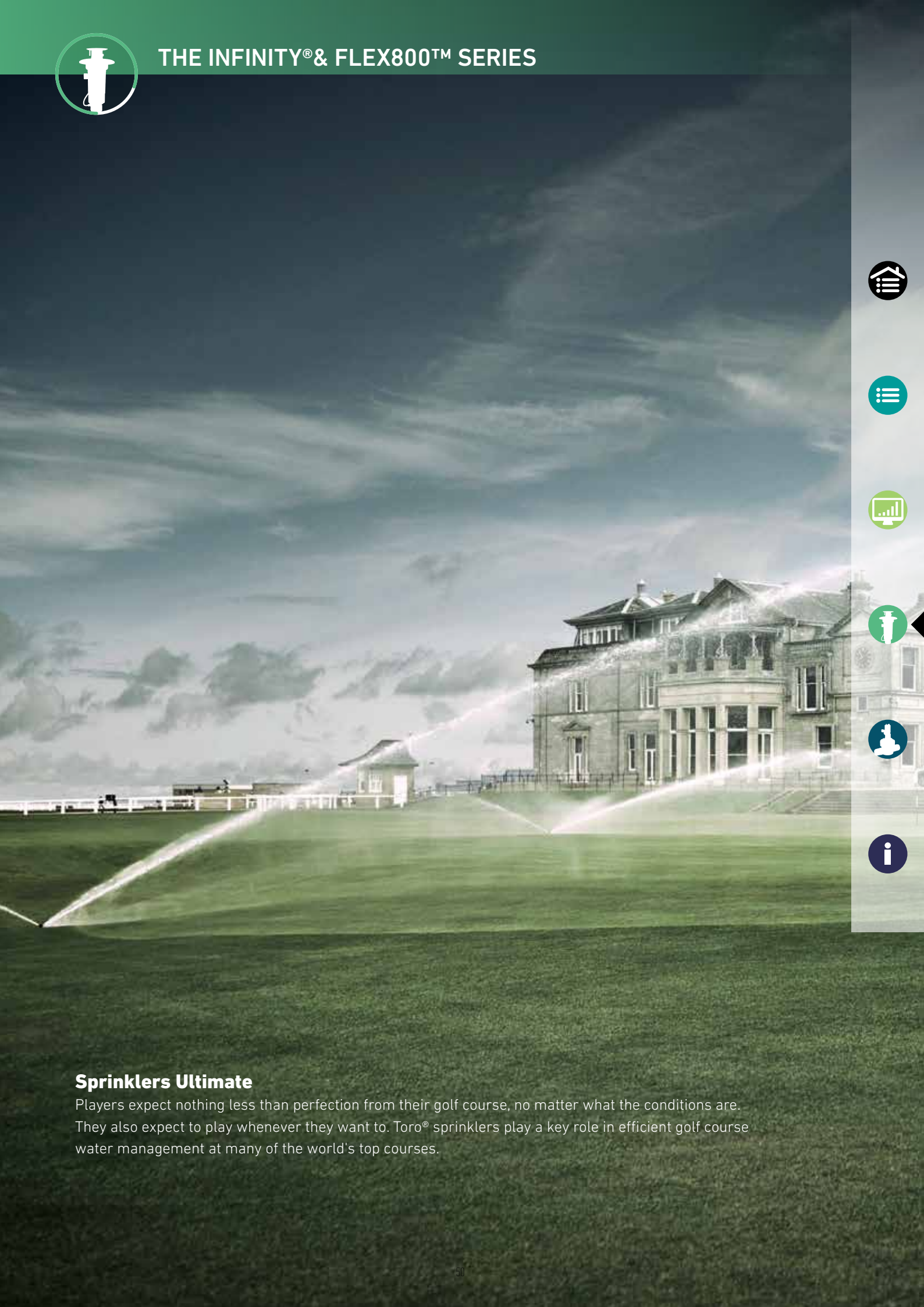
SPRINKLERS AND SUBSURFACE DRIP



Sprinkler Comparison

Model	FLEX800 B Series	T7 Rotor	T5 Rotor	690	590GF
Page	89	105	109	114	117
Radius	13-29m (42'-95')	Low-flow: 11,6-16,2m (38'-53') High-flow: 14,0-25,3m (46'-83')	Low Angle 7,6-11m (25'-36') Std Angle 10-15,2m (33'-50')	27-33m (87'-108')	0,6-79m (2'-26')
Short Radius	X	X	X		X
Radius Reduction Screw	Optional	X	X		X
Back nozzle Capable	X				
Inlet size	1" NPT, BSP, ACME	1" ACME	.75" NPT	1.5" NPT	0.5" NPT
Flow Range	27-213 LPM (7.1-56.3 GPM)	Low-flow: 6,4-48,1 LPM (1.7-12.7 GPM) High-flow: 25,8-115,5 LPM (6.8-30.5 GPM)	Low Angle: 2,8-14 LPM (.74-3.7 gpm) Std Angle: 4,4-36,7 LPM (1.15-9.7 gpm)	193-311 LPM (51.0-82.2 GPM)	0,19-17,0 LPM (.05-4.5 GPM)
Recommended Operating Pressure	3,5-6,9 Bar (50-100 PSI)	2,8-6,9 Bar (40-100 psi)	1,7-4,5 Bar (25-65 psi)	5,5-6,9 Bar (80-100 PSI)	1,4-3,4 Bar (20-50 PSI)
High Wind	X			X	
Decoder (block systems only)	X	X	X		
Low Pressure		X	X		X
Normally Open Hydraulic System				X	
Full Circle	X	X	X	1 and 2 Speed	X
Part-circle Adjustable	X	X	X		X
Part-circle Fixed				90° and 180°	X
Part/Full Circle In One	40°-330° and 360°	45°-360°	40°-360°		
Ratcheting Riser	FLX35-6B/FLX35B				X
Check Valve	X	X	Optional Model	Optional Model	Optional Model
Smart-Arc Memory		X			
Below Grade	X				
Trajectory Adjustment	7°-30°/25° & 15°		Std tree - 25° Low angle tree - 10°		
Warranty	2 Years/ 5 Years*	2 Years/ 5 Years*	2 Years/ 5 Years*	2 Years/ 5 Years*	2 Years/ 5 Years*

*When purchased and installed with Toro Swing Joints.



Sprinklers Ultimate

Players expect nothing less than perfection from their golf course, no matter what the conditions are. They also expect to play whenever they want to. Toro® sprinklers play a key role in efficient golf course water management at many of the world's top courses.



THE INFINITY® & FLEX800™ SERIES

The Unique Features of Toro®

One of our greatest areas of expertise is golf course irrigation. A Toro® sprinkler is always packed with ideas. Make your work count over and over with the sensational INFINITY® sprinkler family with Smart Access®.



Wide Nozzle Selection
Benefit from infinite flexibility on both front and back nozzles.

Pilot Valve Selector
Simply turn the sprinkler on and off at the top.



LSM 2-Wire Module
Never worry about finding the decoder. And always be sure it's well protected.



INFINITY® Stealth™ Kit Models
Eliminate sprinkler interference, enhance course appearance.

Versatile Trajectory Adjustment
Perfectly adapt the sprinkler to any terrain and wind conditions.

Nozzle Base Clutching
Turn, hold and shoot to put down as much water as needed on a hot spot.

Arc Adjustment
Define the arc of the sprinkler with a simple hand gesture.

Ratcheting Riser
Move the arc back and forth without changing it

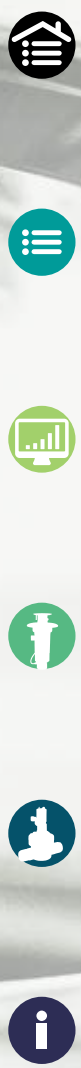
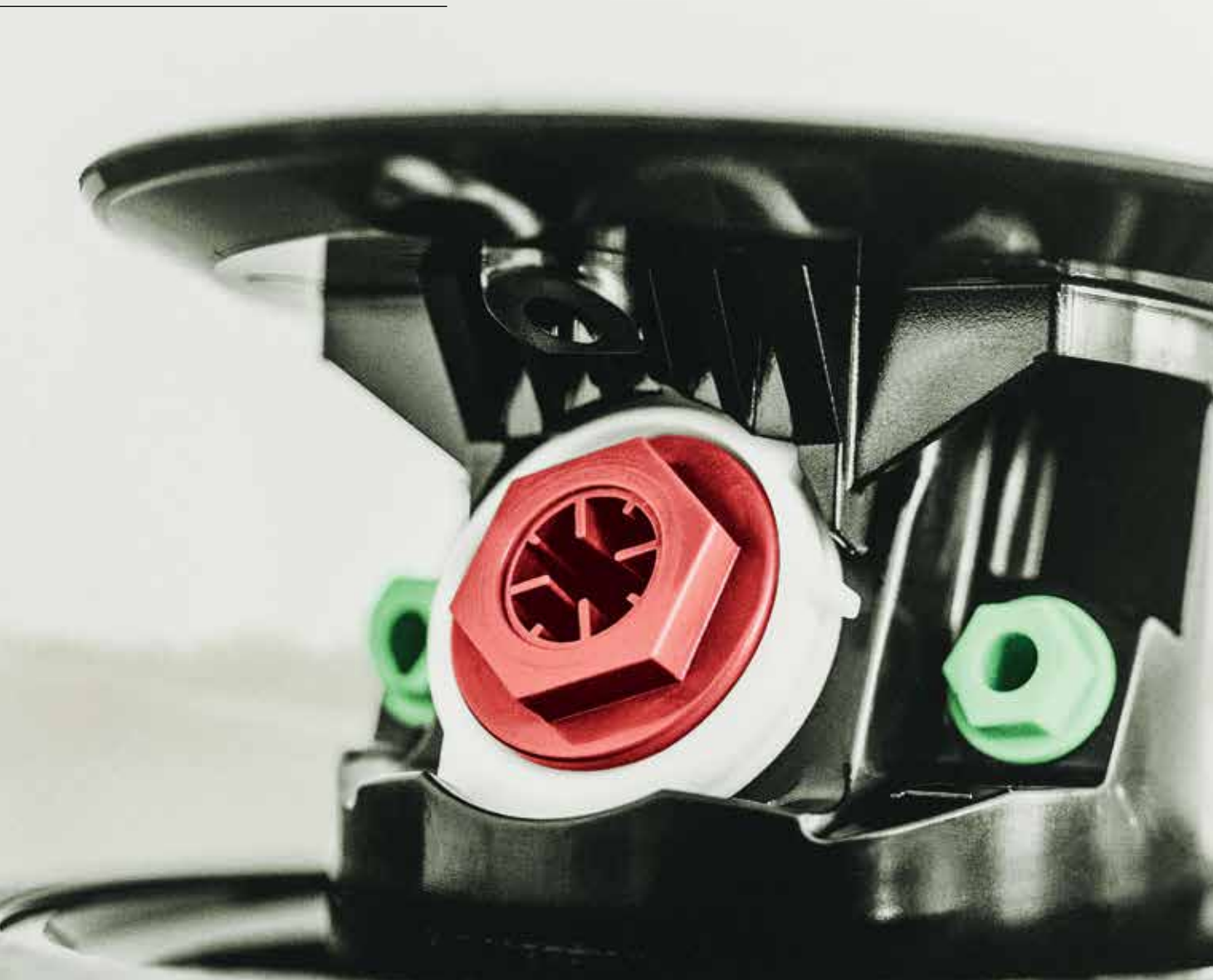
Smart Access®
Solenoid, pilot valve and decoder all within hand's reach, no digging required.

Protective Enclosure
All parts and wire connections are safe from the elements.



THE INFINITY® & FLEX800™ SERIES

The Unique Features of Toro®



THE DIFFERENCE BETWEEN GOOD AND REVOLUTIONARY.

	INFINITY® 35-6/55-6 35/55	INFINITY® 34/54	FLEX800™ 35-6/55-6 35/55	FLEX800™ 34/54	B-Series 35-6/55-6 35/55	B-Series 34/54
#01 Smart Access®	✓	✓	○	○	○	○
#02 Trajectory Adjustment	✓	✓	✓	✓	✓	✓
#03 Easy Arc Adjustment	✓	○	✓	○	✓	○
#04 Ratcheting Riser	✓	○	✓	○	✓	○
#05 Largest Nozzle Selection	✓	✓	✓	✓	✓	✓
#06 Sturdy Construction	✓	✓	✓	✓	✓	✓
#07 Nozzle Base Clutching	✓	○	✓	○	✓	○



The Perfect Toro® for All Areas

THE WHERE DEFINES THE WHICH.



FOR DEMANDING AREAS

Tackle every obstacle on the golf course – wind, trees, bunkers, mounds, etc.



FOR MODERATE AREAS

Apply water to exactly the right spot at exactly the right angle; don't be limited by slopes or branches.

INF35-6

Smart Access®

INF55-6

Smart Access®



INF35

Smart Access®

INF55

Smart Access®



FLX35-6

FLX55-6

FLX35

FLX55





The Perfect Toro® for All Areas

THE WHERE DEFINES THE WHICH.



FOR PLAIN AREAS

Where a consistent and reliable full-circle water supply is needed, these sprinklers do an outstanding job.



FOR TEES AND THEIR SURROUNDINGS

There are areas on a course that are best supplied by block systems. Get the best from Toro® for this task.

INF34

Smart Access®



INF54

Smart Access®



FLX35-6B



FLX 35B



FLX34



FLX54



FLX34B





INFINITY® SERIES GOLF ROTORS INF35-6/INF55-6



toro.com



INFINITY 35-6/55-6 Series: Part/Full Circle with Smart Access® and TruJectory™

With the industry's largest selection of high performance nozzles and TruJectory adjustment, the INFINITY 35-6/55-6 Series with Smart Access allows you to put water precisely where you want it for maximum distribution uniformity. And the part/full circle drive allows you to simply and economically adjust the area of coverage to match your seasonal watering needs or meet water rationing mandates in seconds with no disassembly or additional parts required.

Watch INFINITY Videos:

youtube.com/ToroCompanyEurope



SMART ACCESS provides top accessibility to all critical components and room to grow for whatever the future holds.





Features & Benefits

- ① **TruJectory® – 24 Positions**
From 7° - 30° in 1° increments put water where you want it. Adjust from the top of the sprinkler in seconds, wet or dry. This flexibility lets you tackle every obstacle on the course; wind, trees, bunkers, mounds and more.
- ② **Industry's Largest Nozzle Selection**
Nozzles from 12,8m - 30,5m (42' to 100') radius plus a wide assortment of back nozzles lets you put the precise amount of water exactly where you need it. All nozzles threaded in from the front.

- ③ **Hot Spot Watering**
Nozzle base can be turned in either direction and held to put down as much water as needed, precisely where you want it. Standard on all Toro Part circle Golf rotors!
- ④ **Adjustment With No Disassembly**
Toro exclusive, simply pull up the riser and turn the nozzle base to the precise position you want to water.
- ⑤ **True Part and Full-Circle in One – 40° - 330° Part Circle and 360° Full Circle**
These sprinklers can be 360° full circle today and part circle tomorrow allowing you to simply and economically adjust the area of coverage to match your seasonal needs or meet water rationing mandates.



INFINITY® SERIES GOLF ROTORS INF35-6/INF55-6



INF35-6 Conversion Upgrades

Models	Description
INF35-6-3134	INF35-6 w/31-34 Nozzles (33 Nozzle Installed)
INF35-6-3537	INF35-6 w/35-37 Nozzles (35 Nozzle Installed)



INF55-6 Conversion Upgrades

Models	Description
INF55-6-5154	INF55-6 w/51-54 Nozzles (53 Nozzle Installed)
INF55-6-5558	INF55-6 w/55-58 Nozzles (55 Nozzle Installed)
INF55-6-59	INF55-6 w/59 Nozzle installed



STEALTH™ Kits

Eliminates sprinkler interference and enhances course appearance.



STEALTH™ Kit Models

STEALTH-T – Kit attaches to INFINITY Series sprinklers with TruJectory™ style, 24-position main nozzle adjustment capability

STEALTH-D – Kit attaches to INFINITY Series sprinklers with dual trajectory main nozzle adjustment capability

Operating Specifications

Inlet:

- **INF35-6:** 25mm (1") ACME
- **INF55-6:** 40mm (1.5") ACME

Radius:

- **INF35-6:** 12,8 – 28,0m (42' – 92')
- **INF55-6:** 15,9 – 30,5m (52' – 100')

Flow Rate:

- **INF35-6:** 26,9-171,5 LPM (7.1 – 45.3 GPM)
- **INF55-6:** 52,6-231,3 LPM (13.9 – 61.1 GPM)

Precipitation Rates:

- **INF35-6:**
Minimum: 9,8mm/hr (0.39"/hr);
Maximum: 16,3mm/hr (0.64"/hr)
- **INF55-6:**
Minimum: 11,1mm/hr (0.44"/hr);
Maximum: 17,5mm/hr (0.69"/hr)

Pilot Valve: Selectable at 3,4; 4,5; 5,5; and 6,9 Bar (50, 65, 80 and 100 psi)

Recommended Operating Pressure Range:

- 4,5-6,9 Bar (65-100 psi)
- Maximum: 10,3 Bar (150 psi)
- Minimum: 2,8 Bar (40 psi)

Activation Type

- Standard Solenoid
- Spike Guard Solenoid
- Nickel-plated Spike Guard Solenoid
- DC Latching Solenoid (DCLS)
 - Momentary low voltage pulse
- Lynx Smart Module with DCLS
 - Momentary low voltage pulse
- Trajectory: 24 positions from 7° - 30° in 1° increments

Nozzle Selection

- **INF35-6** has eight nozzle variations (30, 31, 32, 33, 34, 35, 36 and 37)
- **INF55-6** has nine nozzle variations (51, 52, 53, 54, 55, 56, 57, 58 and 59)
- Four in-line nozzles, rotating stream pattern
- One back nozzle position
- Stator variations: INF35-6 – 3 and NF55-6 – 3

Dimensions

SMART ACCESS™ Cover and Compartment Diameter:

- **INF35-6:** 19cm (7.5")
- **INF55-6:** 19cm (7.5")

Body height:

- **INF35-6:** 25cm (10")
- **INF55-6:** 29cm (11.38")

Weight:

- **INF35-6:** 1,95kg (4.31 lbs.)
- **INF55-6:** 2,33kg (5.13 lbs.)

Weight integrated with Lynx Smart Module:

- **INF35-6:** 2,27kg (5.00 lbs.)
- **INF55-6:** 2,63kg (5.82 lbs.)

Pop-up height to nozzle: 8,25cm (3.25")

Warranty

Two years; Five years when installed with Toro Swing Joints

Specifying Information—INF35-6 & INF55-6

INFX5-XXX-X6					
Body Inlet	Arc	Nozzle	Pressure Regulation*	Activation Type	Trajectory
INFX	5	XX	X	X	6
3—1" 5—1 1/2"	5—Part-circle and Full-circle in One	INF35—30, 31, 32, 33, 34, 35, 36, 37 INF55—51, 52, 53, 54, 55, 56, 57, 58, 59	6— 4,5 bar (65 psi) 8— 5,5 Bar (80 psi) 1— 6,9 Bar (100 psi)	1—Standard Solenoid 2—Spike Guard™ Solenoid 3—Nickel-plated Spike Guard Solenoid 4—DC Latching Solenoid (DCLS) 5—Integrated GDC Module w/DCLS 6—Integrated LYNX Smart Module w/DCLS	6—24-position TruJectory
Example: When specifying an INF35-6 Series Sprinkler with #34 nozzle, pressure regulation at 4,5 bar (65 psi) and Spike Guard you would specify: INF35-346-26					

* All sprinklers are equipped with the selectable pilot valve that allows settings at 3,4; 4,5; 5,5; and 6,9 Bar (50, 65, 80 and 100 psi).

Note: Not all models available.



INFINITY® SERIES GOLF ROTORS INF35-6/INF55-6

INF35-6/INF55-6 Trajectory Performance—(Metric)

Nozzle/Bar/LPM	#31/51 Nozzle @ 4,5 Bar							#32/52 Nozzle @ 4,5 Bar															
	7°	10°	15°	20°	25°	30°	7°	10°	15°	20°	25°	30°											
Trajectory																							
"A" Radius	14,0	14,0	15,2	15,5	16,2	16,5	15,2	14,0	14,9	14,9	15,2	15,5	16,8	19,2	19,5	16,5	19,8						
"B" Spray Height	1,2	1,2	1,5	1,8	2,4	3,0	3,4	4,0	4,0	4,6	0,9	1,2	1,2	1,8	2,7	3,7	3,4	4,6	4,0				
"C" Distance from Head	7,6	7,9	7,6	8,2	7,9	9,8	10,1	11,6	10,1	12,2	10,1	12,4	6,1	6,7	7,3	7,9	8,5	9,4	10,4	10,7	10,4	10,4	9,1

Nozzle/Bar/LPM	#33/53 Nozzle @ 4,5 Bar							#34/54 Nozzle @ 4,5 Bar														
	7°	10°	15°	20°	25°	30°	7°	10°	15°	20°	25°	30°										
Trajectory																						
"A" Radius	16,5	17,1	18,0	18,9	20,1	20,7	18,6	17,7	18,3	19,2	20,4	22,6	22,6	21,3								
"B" Spray Height	1,2	1,5	1,5	1,8	2,1	2,7	4,0	4,6	1,2	1,5	1,2	1,8	1,8	2,4	3,4	3,0	4,3	5,2				
"C" Distance from Head	7,0	9,1	8,5	10,1	9,8	10,4	10,7	10,7	11,3	10,7	11,3	7,3	9,4	7,9	10,4	10,7	12,2	11,9	12,5	11,9	11,9	12,8

Nozzle/Bar/LPM	#35/55 Nozzle @ 4,5 Bar							#36/56 Nozzle @ 5,5 Bar												
	7°	10°	15°	20°	25°	30°	7°	10°	15°	20°	25°	30°								
Trajectory																				
"A" Radius	18,0	18,6	18,9	19,5	20,1	21,3	23,2	22,6	23,5	19,5	21,9	20,7	22,2	23,2	22,9	24,4	25,0	25,6	25,9	25,0
"B" Spray Height	1,2	1,8	1,5	1,8	2,1	2,7	3,4	4,6	5,2	1,5	2,1	2,7	4,3	5,2	6,7					
"C" Distance from Head	9,1	10,4	9,8	11,0	11,0	13,1	13,1	13,7	13,1	13,7	13,1	13,7	7,6	11,6	12,2	13,7	14,9	13,7		

Nozzle/Bar/LPM	#37/57 Nozzle @ 5,5 Bar							#58 Nozzle @ 5,5 Bar										
	7°	10°	15°	20°	25°	30°	7°	10°	15°	20°	25°	30°						
Trajectory																		
"A" Radius	19,8	21,9	21,0	22,6	23,8	23,5	25,0	25,3	26,2	27,1	25,6	25,9	22,9	23,5	25,3	26,5	28,0	26,8
"B" Spray Height	1,5	2,1	2,7	4,3	5,5	6,7												
"C" Distance from Head	9,1	11,9	12,5	14,0	15,2	14,0	11,6	12,2	13,1	14,3	15,8	14,6						

Nozzle/Bar/LPM	#59 Nozzle @ 5,5 Bar					
	7°	10°	15°	20°	25°	30°
Trajectory						
"A" Radius	23,5	23,8	25,6	27,1	29,3	28,0
"B" Spray Height	2,1	2,4	3,4	4,9	6,4	7,6
"C" Distance from Head	12,8	13,4	13,7	14,3	16,2	14,9

Information is for reference only. Actual results may vary.

INF35-6/INF55-6 Trajectory Performance—(U.S.)

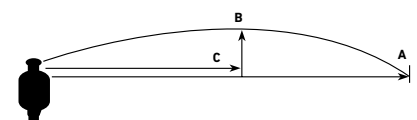
Nozzle/PSI/GPM	#31/51 Nozzle @ 65 psi						#32/52 Nozzle @ 65 psi					
	7°	10°	15°	20°	25°	30°	7°	10°	15°	20°	25°	30°
Trajectory												
"A" Radius	46'	46'	50'/51'	53'	54'	50'	46'/49'	49'/50'	51'	55'	63'/64'	54'/65'
"B" Spray Height	4'	4'	5'/6'	8'/10'	11'/13'	13'/15'	3'/4'	4'	6'	9'	12'/11'	15'/13'
"C" Distance from Head	25'/26'	25'/27'	26'/32'	33'/38'	33'/40'	33'/41'	20'/22'	24'/26'	28'/31'	34'/35'	34'	34'/30'

Nozzle/PSI/GPM	#33/53 Nozzle @ 65 psi						#34/54 Nozzle @ 65 psi					
	7°	10°	15°	20°	25°	30°	7°	10°	15°	20°	25°	30°
Trajectory												
"A" Radius	54'	56'	59'	62'	66'/68'	61'	58'	60'	63'	67'	74'	70'
"B" Spray Height	4'/5'	5'/6'	7'	9'	13'	15'	4'/5'	4'/6'	6'/8'	11'/10'	14'	17'
"C" Distance from Head	23'/30'	28'/33'	32'	34'/35'	35'/37'	35'/37'	24'/31'	26'/34'	35'/40'	39'/41'	39'	39'/42'

Nozzle/PSI/GPM	#35/55 Nozzle @ 65 psi						#36/56 Nozzle @ 80 psi					
	7°	10°	15°	20°	25°	30°	7°	10°	15°	20°	25°	30°
Trajectory												
"A" Radius	59'	61'/62'	64'/66'	70'	76'	74'/77'	64'/72'	68'/73'	76'/75'	80'/82'	84'/85'	82'
"B" Spray Height	4'/6'	5'/6'	7'/9'	11'	15'	17'	5'	7'	9'	14'	17'	22'
"C" Distance from Head	30'/34'	32'/36'	36'/43'	43'/45'	43'/45'	43'/45'	25'	38'	40'	45'	49'	45'

Nozzle/PSI/GPM	#37/57 Nozzle @ 80 psi						#58 Nozzle @ 80 psi					
	7°	10°	15°	20°	25°	30°	7°	10°	15°	20°	25°	30°
Trajectory												
"A" Radius	65'/72'	69'/74'	78'/77'	82'/83'	86'/89'	84'/85'	75'	77'	83'	87'	92'	88'
"B" Spray Height	5'	7'	9'	14'	18'	22'	6'	7'	10'	15'	18'	22'
"C" Distance from Head	30'	39'	41'	46'	50'	46'	38'	40'	43'	47'	52'	48'

Nozzle/PSI/GPM	#59 Nozzle @ 80 psi					
	7°	10°	15°	20°	25°	30°
Trajectory						
"A" Radius	77'	78'	84'	89'	96'	92'
"B" Spray Height	7'	8'	11'	16'	21'	25'
"C" Distance from Head	42'	44'	45'	47'	53'	49'



Information is for reference only. Actual results may vary.



INFINITY® SERIES GOLF ROTORS INF35-6/INF55-6

INF35-6 Series Performance Chart—(Metric)

Base Pressure			Nozzle Set 30		Nozzle Set 31		Nozzle Set 32		Nozzle Set 33		Nozzle Set 34		Nozzle Set 35		Nozzle Set 36		Nozzle Set 37	
			102-2208		102-4587		102-4588		102-4589		102-0728		102-0729		102-0730		102-4261	
			Blue	Gray	Blue	Gray	Red	Gray	Orange	Gray	Orange	Gray	Blue	Gray	Blue	Gray	Orange	Gray
Bar	kPa	kg/cm ²	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
3.4	340	3.47	12.8	26.9	15.9	51.9	18.6	64.7	19.5	76.5	21.0	103.7	—	—	—	—	—	—
4.5	450	4.59	13.7	32.9	16.5	58.7	19.2	77.6	20.1	86.7	22.6	113.6	23.2	122.6	24.4	128.7	—	—
5.5	550	5.61	14.0	36.3	17.4	64.3	20.4	85.5	21.4	95.8	23.5	125.7	24.1	135.5	25.6	141.9	26.2	154.4
6.9	690	7.04	14.6	42.4	18.0	71.5	22.0	95.4	22.6	106.7	24.4	140.0	25.6	151.0	26.8	160.9	28.1	171.5
Stator			102-6929 Blue				102-1939 Yellow						102-1940 White					
Conversions			INF35-6-3134												INF35-6-3537			

Not recommended at these pressures. Radius shown in meters. Toro recommends the use of a 1 1/4" (30mm) swing joint at flows over 25-GPM (95-LPM).
Sprinkler radius of throw per ASAE standard S398.1.

INF35-6 Series Performance Chart—(U.S.)

Base Pressure			Nozzle Set 30		Nozzle Set 31		Nozzle Set 32		Nozzle Set 33		Nozzle Set 34		Nozzle Set 35		Nozzle Set 36		Nozzle Set 37	
			102-2208		102-4587		102-4588		102-4589		102-0728		102-0729		102-0730		102-4261	
			Blue	Gray	Blue	Gray	Red	Gray	Orange	Gray	Orange	Gray	Blue	Gray	Blue	Gray	Orange	Gray
psi	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM		
50	42	7.1	52	13.7	61	17.1	64	20.2	69	27.4	—	—	—	—	—	—		
65	45	8.7	54	15.5	63	20.5	66	22.9	74	30.0	76	32.4	80	34.0	—	—		
80	46	9.6	57	17.0	67	22.6	70	25.3	77	33.2	79	35.8	84	37.5	86	40.8		
100	48	11.2	59	18.9	72	25.2	74	28.2	80	37.0	84	39.9	88	42.5	92	45.3		
Stator			102-6929 Blue				102-1939 Yellow						102-1940 White					
Conversions			INF35-6-3134												INF35-6-3537			

INF55-6 Series Performance Chart—(Metric)

Base Pressure			Nozzle Set 51		Nozzle Set 52		Nozzle Set 53		Nozzle Set 54		Nozzle Set 55		Nozzle Set 56		Nozzle Set 57		Nozzle Set 58		Nozzle Set 59	
			102-4587		102-4588		102-4589		102-0728		102-0729		102-0730		102-4261		102-4260		102-4259	
			Blue	Gray	Red	Gray	Orange	Gray	Orange	Gray	Blue	Gray	Blue	Gray	Orange	Gray	Blue	Gray	Blue	Gray
Bar	kPa	kg/cm ²	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM		
3.4	340	3.47	15.9	52.6	18.9	65.9	20.1	78.3	21.0	108.3	—	—	—	—	—	—	—	—		
4.5	450	4.59	16.5	59.4	19.5	78.3	20.7	88.6	22.6	113.1	23.2	127.9	24.7	135.1	—	—	—	—		
5.5	550	5.61	17.4	65.1	20.7	86.7	22.0	97.7	23.5	130.2	24.1	140.8	25.9	149.1	27.1	165.0	28.1	179.8		
6.9	690	7.04	18.0	72.3	22.3	96.5	23.2	108.6	24.4	144.6	25.6	156.3	27.1	165.4	28.7	183.6	29.0	194.9		
Stator			102-1939 Yellow						102-1940 White						102-1941					
Conversions			INF55-6-5154						INF55-6-5558						INF55-6-59					

Not recommended at these pressures. Radius shown in meters. Toro recommends the use of a 1 1/4" (30mm) swing joint at flows over 25-GPM (95-LPM).
Sprinkler radius of throw per ASAE standard S398.1.

INF55-6 Series Performance Chart—(U.S.)

Base Pressure			Nozzle Set 51		Nozzle Set 52		Nozzle Set 53		Nozzle Set 54		Nozzle Set 55		Nozzle Set 56		Nozzle Set 57		Nozzle Set 58		Nozzle Set 59	
			102-4587		102-4588		102-4589		102-0728		102-0729		102-0730		102-4261		102-4260		102-4259	
			Blue	Gray	Red	Gray	Orange	Gray	Orange	Gray	Blue	Gray	Blue	Gray	Orange	Gray	Blue	Gray	Blue	Gray
psi	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM		
50	52	13.9	62	17.4	66	20.7	69	28.6	—	—	—	—	—	—	—	—	—	—		
65	54	15.7	64	20.8	68	23.4	74	31.2	76	33.8	81	35.7	—	—	—	—	—	—		
80	57	17.2	68	22.9	72	25.8	77	34.4	79	37.2	85	39.4	89	43.6	92	47.5	96	57.0		
100	59	19.1	73	25.5	76	28.7	80	38.2	84	41.3	89	43.7	94	48.5	95	51.1	100	61.1		
Stator			102-1939 Yellow						102-1940 White						102-1941					
Conversions			INF55-6-5154						INF55-6-5558						INF55-6-59					

Not recommended at these pressures. Radius shown in feet.
Toro recommends the use of a 1 1/4" swing joint at flows over 25-GPM (95-LPM). Sprinkler radius data collected in Toro's zero wind test facility per ASAE standard S398.1.
Actual site conditions must be considered when selecting the appropriate nozzle.
All sprinklers are equipped with the selectable pilot valve that allows settings at 3.4, 4.5, 5.5, and 6.9 Bar (50, 65, 80 and 100 psi).



The INFINITY 35/55 Series: Part/Full Circle with Smart Access® and Dual Trajectory

The INFINITY 35/55 Series features a dual trajectory main nozzle that provides exceptional nozzle performance at the 25° standard angle position and great performance in windy applications at the 15° low angle position. And the part/full circle drive allows you to adjust the area of coverage to match your seasonal watering needs or meet water rationing mandates in seconds with no additional parts required.

Dual Trajectory

The 25° setting provides maximum distance of throw and the 15° setting provides improved wind performance, radius reduction and obstacle avoidance.



Watch INFINITY Videos:

youtube.com/ToroCompanyEurope





Features & Benefits - Dual Trajectory Part Circle

- ① **Industry's Largest Nozzle Selection**
Nozzles from 12,8m - 30,5m (42' to 100') radius plus a wide assortment of back nozzles lets you put the precise amount of water exactly where you need it. All nozzles threaded in from the front.
- ② **Stainless Steel Valve Seat**
Eliminates body damage from rocks and debris. This in-destructible stainless steel seat is molded to the body and virtually eliminates body replacements due to seat damage. Standard on all Toro Golf rotors!
- ③ **Ratcheting Riser**
Align part circle quickly and easily or adjust watering locations to suit seasonal needs.
- ④ **True Part and Full-Circle in One – 40° - 330° part circle**
These sprinklers can be full circle today and part circle tomorrow allowing you to simply and economically adjust the area of coverage to match your seasonal needs or meet water rationing mandates.



SMART ACCESS provides top accessibility to all critical components and room to grow for whatever the future holds.

INFINITY® SERIES GOLF ROTORS INF35/INF55



INF35 Conversion Upgrades

Models	Description
• INF35-3134	INF35 w/31–34 Nozzles (#33 Nozzle Installed)
• INF35-3537	INF35 w/35–37 Nozzles (#35 Nozzle Installed)



INF55 Conversion Upgrades

Models	Description
• INF55-5154	INF55 w/51–54 Nozzles (#53 Nozzle Installed)
• INF55-5558	INF55 w/55–58 Nozzles (#55 Nozzle Installed)
• INF55-59	INF55 w/59 Nozzle



STEALTH™ Kits

Eliminates sprinkler interference and enhances course appearance.



STEALTH™ Kit Models

STEALTH-T – Kit attaches to INFINITY Series sprinklers with Trujectory™ style, 24-position main nozzle adjustment capability

STEALTH-D – Kit attaches to INFINITY Series sprinklers with dual trajectory main nozzle adjustment capability

Operating Specifications

Inlet:

- **INF35:** 25mm (1") ACME
- **INF55:** 40mm (1.5") ACME

Radius:

- **INF35:** 12,8 – 25,3m (43' – 83')
- **INF55:** 16,7 – 28,0m (55' – 92')

Flow Rate:

- **INF35:** 31,0 – 179,0 LPM (8.2 – 47.8 GPM)
- **INF55:** 53,0 – 232,0 LPM (14.1 – 61.3 GPM)

Precipitation Rates:

- **INF35:** Minimum: 10,8 mm/hr (0.43"/hr); Maximum: 19,4 mm/hr (0.76"/hr)
- **INF55:** Minimum: 11,4 mm/hr (0.45"/hr); Maximum: 20,5 mm/hr (0.81"/hr)

Pilot Valve: Selectable at 3,4; 4,5; 5,5; and 6,9 Bar (50, 65, 80 and 100 psi)

Recommended Operating Pressure Range:

- 4,5-6,9 Bar (65-100 psi)
- Maximum: 10,3 Bar (150 psi)
- Minimum: 2,8 Bar (40 psi)

Activation Type

- Standard Solenoid
- Spike Guard Solenoid
- Nickel-plated Spike Guard Solenoid
- DC Latching Solenoid (DCLS)
 - Momentary low voltage pulse
- Lynx Smart Module with DCLS
 - Momentary low voltage pulse

Nozzle Selection

- **INF35** has eight nozzle variations (30, 31, 32, 33, 34, 35, 36 & 37)
- **INF55** has nine nozzle variations (51, 52, 53, 54, 55, 56, 57, 58 & 59)
- Three in-line nozzles, rotating stream pattern
- Two back nozzle positions
- Stator variations: 3
- Radius reduction screw 363-4839 for fine tuning

Dimensions:

SMART ACCESS® Cover And Compartment Diameter:

- **INF35:** 19cm (7.5")
- **INF55:** 19cm (7.5")

Body height:

- **INF35:** 25cm (10")
- **INF55:** 29cm (11.38")

Weight:

- **INF35:** 1,93kg (4.26 lbs.)
- **INF55:** 2,30kg (5.08 lbs.)

Weight – Intergrated with Lynx Smart Module:

- **INF35:** 2,24kg (4.95 lbs.)
- **INF55:** 2,59kg (5.71 lbs.) Pop-up height to nozzle: 8,25cm (3.25")

Warranty

Two years; Five years when installed with Toro Swing Joints

Specifying Information—INF35 & INF55

INF55-XXX-X				
Body Inlet	Arc	Nozzle	Pressure Regulation*	Activation Type
INF35	5	XX	X	X
3—1" 5—1½"	5—Part-circle and Full-circle In One	INF35—30, 31, 32, 33, 34, 35, 36, 37 INF55—51, 52, 53, 54, 55, 56, 57, 58, 59	6— 4,5 bar (65 psi) 8— 5,5 bar (80 psi) 1— 6,9 bar (100 psi)	1—Standard Solenoid 2—Spike Guard™ Solenoid 3—Nickel-plated Spike Guard Solenoid 4—DC Latching Solenoid (DCLS) 5—Integrated GDC Module w/DCLS 6—Integrated LYNX Smart Module w/DCLS









Example: When specifying an INF35 Series Sprinkler with #34 nozzle, pressure regulation at 4,5 bar (65 psi) and Spike Guard you would specify: **INF35-346-2**

* All sprinklers are equipped with the selectable pilot valve that allows settings at 3,4; 4,5; 5,5; and 6,9 Bar (50, 65, 80 and 100 psi).
Note: Not all models available.



INFINITY® SERIES GOLF ROTORS INF35/INF55









INF35 Performance Data—25° – (Metric)

Front Nozzle Positions			Nozzle Set 30		Nozzle Set 31		Nozzle Set 32		Nozzle Set 33		Nozzle Set 34		Nozzle Set 35		Nozzle Set 36		Nozzle Set 37	
																		
			102-2208		102-6906		102-0726		102-6907		102-0728		102-6955		102-6935		102-6936	
			Yellow	Beige	Yellow	Brown	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Green	Green	Green	Green	Green
Back Nozzle Positions			Red Plug		Red Plug		Red Plug		Red Plug		Red Plug		Red Plug		Red Plug			
Bar	kPa	kg/cm2	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
3.4	340	3.47	13.1	31.0	16.2	52.2	17.1	69.3	18.6	82.1	—	—	—	—	—	—	—	—
4.5	450	4.59	13.7	37.9	16.2	58.7	18.0	77.6	19.5	92.4	20.7	106.7	22.0	129.1	—	—	—	—
5.5	550	5.61	14.0	43.5	17.4	65.5	18.9	85.9	20.4	102.6	21.7	117.7	22.9	143.1	23.8	152.5	24.4	166.5
6.9	690	7.04	14.3	50.7	18.0	72.3	19.8	94.2	21.4	112.8	22.6	129.1	24.1	154.8	24.7	165.8	25.3	179.0

INF35 Series Performance Chart—15°

Bar	kPa	kg/cm2	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
3.4	340	3.47	13.1	31.0	15.9	51.5	17.7	68.5	18.6	81.4	—	—	—	—	—	—	—	—
4.5	450	4.59	13.7	37.9	16.5	57.9	18.3	76.8	19.5	91.6	19.8	103.3	21.0	125.3	—	—	—	—
5.5	550	5.61	14.0	43.5	17.7	65.1	19.5	85.5	21.0	101.4	21.0	114.3	22.9	139.3	23.2	150.3	23.2	162.4
6.9	690	7.04	14.3	50.7	18.3	71.9	20.1	93.5	21.7	111.7	22.0	124.5	23.8	149.5	25.0	161.2	25.0	174.5
Stator			102-6929 Blue				102-1939 Yellow						102-1940 White					
Conversions			INF35-3134									INF35-3537						

INF35 Performance Data—25° – (U.S.)

Front Nozzle Positions			Nozzle Set 30		Nozzle Set 31		Nozzle Set 32		Nozzle Set 33		Nozzle Set 34		Nozzle Set 35		Nozzle Set 36		Nozzle Set 37	
																		
			102-2208		102-6906		102-0726		102-6907		102-0728		102-6955		102-6935		102-6936	
			Yellow	Beige	Yellow	Brown	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Green	Green	Green	Green	Green
Back Nozzle Positions			Red Plug		Red Plug		Red Plug		Red Plug		Red Plug		Red Plug		Red Plug			
PSI	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM		
50	43	8.2	53	13.8	56	18.3	61	21.7	65	25.3	—	—	—	—	—	—		
65	45	10.0	53	15.5	59	20.5	64	24.4	68	28.2	72	34.1	—	—	—	—		
80	46	11.5	57	17.3	62	22.7	67	27.1	71	31.1	75	37.8	78	40.3	80	44.0		
100	47	13.4	59	19.1	65	24.9	70	29.8	74	34.1	79	40.9	81	43.8	83	47.3		

INF35 Series Performance Chart—15°

PSI	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM		
50	43	8.2	52	13.6	58	18.1	61	21.5	62	25.6	—	—	—	—	—	—		
65	45	10.0	54	15.3	60	20.3	64	24.2	65	27.3	69	33.1	—	—	—	—		
80	46	11.5	58	17.2	64	22.6	69	26.8	69	30.2	75	36.8	76	39.7	76	42.9		
100	47	13.4	60	19.0	66	24.7	71	29.5	72	32.9	78	39.5	82	42.6	82	46.1		
Stator			102-6929 Blue				102-1939 Yellow						102-1940 White					
Conversions			INF35-3134									INF35-3537						

■ Not recommended at these pressures.

Toro recommends the use of a 1 1/4" swing joint at flows over 25-GPM (95-LPM). Sprinkler radius of throw per ASAE standard S398.1. All sprinklers are equipped with the selectable pilot valve that allows settings at 3.4, 4.5, 5.5, and 6.9 Bar (50, 65, 80 and 100 psi).

INF35 Nozzle Apex—(Metric)

Pressure	Nozzle	Apex at 15°	Apex at 25°
4.5 bar	31	1.8m @ 15.5m	4m @ 16.4m
	32	1.8m @ 15.5m	3.4m @ 19.5m
	33	2.1m @ 18m	4m @ 20.7m
	34	2.4m @ 19m	4.6m @ 22.6m
	35	2.7m @ 20m	4.6m @ 23m
5.5 bar	36	2.4m @ 22.9m	5.5m @ 25.3m
	37	2.7m @ 22.5m	5.8m @ 25m

INF35 Nozzle Apex—(U.S.)

Pressure	Nozzle	Apex at 15°	Apex at 25°
65 PSI	31	6' @ 51'	13' @ 54'
	32	6' @ 51'	11' @ 64'
	33	7' @ 59'	13' @ 68'
	34	8' @ 63'	15' @ 74'
	35	9' @ 66'	15' @ 76'
80 PSI	36	8' @ 75'	18' @ 83'
	37	9' @ 74'	19' @ 82'



INFINITY® SERIES GOLF ROTORS INF35/INF55

INF55 Performance Data—25° – (Metric)

			Nozzle Set 51		Nozzle Set 52		Nozzle Set 53		Nozzle Set 54		Nozzle Set 55		Nozzle Set 56		Nozzle Set 57		Nozzle Set 58		Nozzle Set 59	
			 (Yellow)		 (Blue)		 (Brown)		 (Orange)		 (Green)		 (Gray)		 (Black)		 (Red)		 (Beige)	
Front Nozzle Positions			102-6906		102-0726		102-6907		102-0728		102-6955		102-6935		102-6936		102-6909		102-4259	
			Yellow	Brown	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Green	Green	Green	Green	Green	Green	Green	Green	Green
			102-5670	102-5671	102-5670	102-6884	102-5670	102-6884	102-5670	102-6884	102-5670	102-6885	102-6531	102-6885	102-6531	102-6885	102-6531	102-6885	102-6531	102-6885
Back Nozzle Positions																				
			Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug
			102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335
Bar	kPa	kg/cm ²	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
3,4	340	3,47	16,7	53,4	17,3	70,0	18,9	84,4	20,1	97,6	—	—	—	—	—	—	—	—	—	—
4,5	450	4,59	17,4	59,8	18,2	79,1	19,8	95,0	21,0	108,6	22,3	135,8	—	—	—	—	—	—	—	—
5,5	550	5,61	18,0	66,2	18,5	87,4	20,7	105,2	21,9	119,9	23,1	150,3	24,4	163,2	25,2	182,5	25,9	189,3	27,1	217,6
6,9	690	7,04	18,6	73	19,2	95,7	21,7	114,7	22,8	130,6	24,4	164,6	25,2	185,5	26,8	194,9	27,4	204,0	28,0	232,0

INF55 Series Performance Chart—15°

Bar	kPa	kg/cm ²	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
3,4	340	3,47	16,7	53,0	17,9	62,5	18,9	84,0	19,2	96,9	—	—	—	—	—	—	—	—	—	—
4,5	450	4,59	17,1	59,0	18,8	78,3	19,8	94,6	20,1	107,9	22,8	133,6	—	—	—	—	—	—	—	—
5,5	550	5,61	18,0	65,9	20,1	87,1	21,0	104,8	21,4	119,2	23,1	147,6	23,7	160,5	24,0	177,5	24,0	187,4	25,0	216,5
6,9	690	7,04	18,2	72,7	20,7	95,0	21,7	114,3	22,0	129,8	24,4	158,6	24,6	184,3	25,3	192,2	25,3	202,1	25,9	230,1
Stator			102-1939 Yellow									102-1940 White						102-1941 White		
Conversions			INF55-5154									INF55-5558						INF55-59		

INF55 Performance Data—25° – (U.S.)

			Nozzle Set 51		Nozzle Set 52		Nozzle Set 53		Nozzle Set 54		Nozzle Set 55		Nozzle Set 56		Nozzle Set 57		Nozzle Set 58		Nozzle Set 59	
			 (Yellow)		 (Blue)		 (Brown)		 (Orange)		 (Green)		 (Gray)		 (Black)		 (Red)		 (Beige)	
Front Nozzle Positions			102-6906		102-0726		102-6907		102-0728		102-6955		102-6935		102-6936		102-6909		102-4259	
			Yellow	Brown	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Green	Green	Green	Green	Green	Green	Green	Green	Green
			102-5670	102-5671	102-5670	102-6884	102-5670	102-6884	102-5670	102-6884	102-5670	102-6885	102-6531	102-6885	102-6531	102-6885	102-6531	102-6885	102-6531	102-6885
Back Nozzle Positions																				
			Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug
			102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335
PSI	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM
50	55	14.1	57	18.5	62	22.3	66	25.8	—	—	—	—	—	—	—	—	—	—	—	—
65	57	15.8	60	20.9	65	25.1	69	28.7	73	35.9	—	—	—	—	—	—	—	—	—	—
80	59	17.5	61	23.1	68	27.8	72	31.7	76	39.7	80	43.1	83	48.2	85	50.0	89	57.5	—	—
100	61	19.3	63	25.3	71	30.3	75	34.5	80	43.5	83	49.0	88	51.5	90	53.9	92	61.3	—	—

INF55 Series Performance Chart—15°

PSI	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM
50	55	14.0	59	16.5	62	22.2	63	25.6	—	—	—	—	—	—	—	—	—	—	—	—
65	56	15.6	62	20.7	65	25.0	66	28.5	75	35.3	—	—	—	—	—	—	—	—	—	—
80	59	17.4	66	23.0	69	27.7	70	31.5	78	39.0	78	42.4	79	46.9	79	49.5	82	57.2	—	—
100	60	19.2	68	25.1	71	30.2	72	34.3	80	41.9	81	47.2	83	52.1	83	53.4	85	60.8	—	—
Stator			102-1939 Yellow									102-1940 White						102-1941 White		
Conversions			INF55-5154									INF55-5558						INF55-59		

■ Not recommended at these pressures.

Toro recommends the use of a 1 1/4" swing joint at flows over 25-GPM (95-LPM). Sprinkler radius of throw per ASAE standard S398.1. All sprinklers are equipped with the selectable pilot valve that allows settings at 3,4; 4,5; 5,5; and 6,9 Bar (50, 65, 80 and 100 psi).

INF55 Nozzle Apex—(Metric)

Pressure	Nozzle	Apex at 15°	Apex at 25°
4,5 bar	51	1,8m @ 15,5m	4m @ 16,4m
	52	1,8m @ 15,5m	3,4m @ 19,5m
	53	2,1m @ 18m	4m @ 20,7m
	54	2,4m @ 19m	4,6m @ 22,6m
	55	2,7m @ 20m	4,6m @ 23m
5,5 bar	56	2,4m @ 22,9m	5,5m @ 25,3m
	57	2,7m @ 22,5m	5,8m @ 25m
	58	3m @ 25m	5,5m @ 26,5m
	59	3,4m @ 24,6m	6,4m @ 27,7m

INF55 Nozzle Apex—(U.S.)

Pressure	Nozzle	Apex at 15°	Apex at 25°
65 PSI	51	6' @ 51'	13' @ 54'
	52	6' @ 51'	11' @ 64'
	53	7' @ 59'	13' @ 68'
	54	8' @ 63'	15' @ 74'
	55	9' @ 66'	15' @ 76'
80 PSI	56	8' @ 75'	18' @ 83'
	57	9' @ 74'	19' @ 82'
	58	10' @ 82'	18' @ 87'
	59	11' @ 81'	21' @ 91'



INFINITY® SERIES GOLF ROTORS INF34/INF54



toro.com



The INFINITY 34/54: Full-circle with Smart Access® and Dual Trajectory.

The INFINITY 34/54 is the Toro Premium full-circle golf sprinkler. The dual trajectory main nozzle provides exceptional nozzle performance at the 25° standard angle position and great performance in windy applications at the 15° low angle position. And the consistency of the constant velocity full circle drive ensures even water application across the coverage area every time you water.

Watch INFINITY Videos:

youtube.com/ToroCompanyEurope



SMART ACCESS provides top accessibility to all critical components and room to grow for whatever the future holds.



25°

15°

Dual Trajectory - 25° or 15°
Provides two selections for the main nozzle trajectory; the 25 degree setting provides maximum distance of throw and the 15 degree setting provides improved wind performance, radius reduction and obstacle avoidance.





Features & Benefits - Dual Trajectory Full Circle

- ① **Industry's Largest Nozzle Selection**
Nozzles from 15,9m - 30,2m (52' to 99'). Color coded for easy flow and radius identification and threaded from the front to simplify servicing.
- ② **Five Activation types**
 - Standard solenoid
 - Spike Guard™ solenoid
 - Nickel plated Spike Guard solenoid
 - DC Latching solenoid (DCLS)
 - Integrated LSM module w/ DCLS available on all INFINITY models!

- ③ **Constant Velocity Full Circle Drive**
Ensures consistent rotation speeds when matched with station run times for even water application across the coverage area every time you water.
- ④ **Stainless Steel Valve Seat**
Eliminates body damage from rocks and debris. This in-destructible stainless steel seat is molded to the body and virtually eliminates body replacements due to seat damage. Standard on all Toro Golf rotors!



INFINITY® SERIES GOLF ROTORS INF34/INF54



INF34 Conversion Upgrades

Models	Description
INF34-3134	INF34 w/31-34 Nozzles (#33 Nozzle Installed)
INF34-3537	INF34 w/35-37 Nozzles (#35 Nozzle Installed)



INF54 Conversion Upgrades

Models	Description
INF54-5154	INF54 w/51-54 Nozzles (#53 Nozzle Installed)
INF54-5558	INF54 w/55-58 Nozzles (#55 Nozzle Installed)
INF54-59	INF54 w/ 59 Nozzle installed



STEALTH™ Kits

Eliminates sprinkler interference and enhances course appearance.



STEALTH™ Kit Models

STEALTH-T – Kit attaches to INFINITY Series sprinklers with TruJectory™ style, 24-position main nozzle adjustment capability

STEALTH-D – Kit attaches to INFINITY Series sprinklers with dual trajectory main nozzle adjustment capability

Features

Dual Trajectory adjustment on main nozzle - 25° or 15°
Constant velocity full circle drive
Radius reduction screw can effectively reduce the sprinkler throw down to 30'

Operating Specifications

Inlet:

- **INF34:** 25mm (1") ACME
- **INF54:** 40mm (1.5") ACME

Radius:

- **INF34:** 15,9 – 27,8m (52' – 91')
- **INF54:** 15,9 – 30,2m (52' – 99')

Flow Rate:

- **INF34:** 49,2-177,5 LPM (13.0 – 46.9 GPM)
- **INF54:** 50,0-233,9 LPM (13.2 – 61.8 GPM)

Precipitation Rates:

- **INF34:**
 - Minimum: 9,8 mm/hr (0.39"/hr)
 - Maximum: 16,2 mm/hr (0.60"/hr)
- **INF54:**
 - Minimum: 9,6 mm/hr (0.38"/hr)
 - Maximum: 17,8 mm/hr (0.70"/hr)

Pilot Valve: Selectable at 3,5; 4,5; 5,5; and 6,9 Bar (50, 65, 80 and 100 psi)

Recommended Operating Pressure Range:

- 4,5-6,9 Bar (65-100 psi)
- Maximum: 10,3 Bar (150 psi)
- Minimum: 2,8 Bar (40 psi)

Activation Type

- Standard Solenoid
- Spike Guard Solenoid
- Nickel-plated Spike Guard Solenoid
- DC Latching Solenoid (DCLS)
 - Momentary low voltage pulse
- Lynx Smart Module with DCLS
 - Momentary low voltage pulse

Trajectory: 25° or 15°

Dimensions

SMART ACCESS® Cover And Compartment Diameter:

- **INF34:** 19cm (7.5")
- **INF54:** 19cm (7.5")

Body height:

- **INF34:** 25cm (10")
- **INF54:** 29cm (11.38")

Weight:

- **INF34:** 1,91kg (4.22 lbs.)
- **INF54:** 2,28kg (5.04 lbs.)

Weight integrated with Lynx Smart Module:

- **INF34:** 2,24kg (4.95 lbs.)
- **INF54:** 2,59kg (5.71 lbs.)

Pop-up height to nozzle: 8,25cm (3.25")

Warranty

Two years; Five years when installed with Toro Swing Joints

Specifying Information—INF34 & INF54

INF34-XXX-XX				
Body Inlet	Arc	Nozzle	Pressure Regulation*	Activation Type
INF34	4	XX	X	X
3—1" 5—1½"	4—Full Circle	INF34—31, 32, 33, 34, 35, 36, 37 INF54—51, 52, 53, 54, 55, 56, 57, 58, 59	6— 4,5 bar (65 psi) 8— 5,5 bar (80 psi) 1— 6,9 bar (100 psi)	1—Standard Solenoid 2—Spike Guard™ Solenoid 3—Nickel-plated Spike Guard Solenoid 4—DC Latching Solenoid (DCLS) 5—Integrated GDC Module w/DCLS 6—Integrated LYNX Smart Module w/DCLS

Example: When specifying an INF34 Series Sprinkler with #34 nozzle, pressure regulation at 4,5 bar (65 psi) and Spike Guard you would specify: **INF34-346-2**

* All sprinklers are equipped with the selectable pilot valve that allows settings at 3,4; 4,5; 5,5; and 6,9 Bar (50, 65, 80 and 100 psi).

Note: Not all models available.



INFINITY® SERIES GOLF ROTORS INF34/INF54

INF34 Series Performance Chart—25° (Metric)

Front Nozzle Positions			Nozzle Set 31 (Yellow)		Nozzle Set 32 (Blue)		Nozzle Set 33 (Brown)		Nozzle Set 34 (Orange)		Nozzle Set 35 (Green)		Nozzle Set 36 (Gray)		Nozzle Set 37 (Black)			
			102-0725		102-7001		102-0727		102-7002		102-6908		102-0730		102-4261			
			102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-6883
Back Nozzle Positions																		
			Yellow	Blue	Yellow	Orange	Yellow	Red	Yellow	Beige	Yellow	Beige	Yellow	Red	Yellow	Gray		
			102-6937	102-2925	102-6937	102-2926	102-6937	102-2928	102-6937	102-2929	102-6937	102-2929	102-6937	102-6944	102-6937	102-6945		
Bar	kPa	kg/cm ²	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM		
3,4	340	3,47	17,4	49,2	17,7	58,7	19,5	82,9	20,7	92,4	—	—	—	—	—	—		
4,5	450	4,59	17,7	55,3	18,3	68,1	20,7	92,4	22,0	106,4	23,2	121,9	—	—	—	—		
5,5	550	5,61	18,3	61,3	19,2	77,6	22,0	101,8	23,2	117,7	24,4	134,7	25,3	144,6	25,9	157,1		
6,9	690	7,04	18,9	67,8	20,1	88,6	22,9	112,8	24,1	132,1	25,6	148,8	26,8	164,3	27,8	177,5		

INF34 Series Performance Chart—15°

Bar	kPa	kg/cm ²	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
3,4	340	3,47	15,9	48,8	16,2	59,0	18,3	82,1	18,9	96,5	—	—	—	—	—	—
4,5	450	4,59	16,2	54,5	16,5	64,7	18,6	91,6	19,5	106,0	20,4	121,5	—	—	—	—
5,5	550	5,61	17,1	60,6	17,4	71,9	19,8	100,7	21,0	117,3	22,3	134,4	23,2	143,8	23,5	156,3
6,9	690	7,04	17,4	66,2	18,0	77,6	20,4	111,7	21,7	128,3	22,9	145,3	24,4	163,1	24,7	177,1
Stator			102-6929 Blue						102-1940 White							
Conversions			INF34-3134						INF34-3537							

INF34 Series Performance Chart—25° (U.S.)

Front Nozzle Positions			Nozzle Set 31 (Yellow)		Nozzle Set 32 (Blue)		Nozzle Set 33 (Brown)		Nozzle Set 34 (Orange)		Nozzle Set 35 (Green)		Nozzle Set 36 (Gray)		Nozzle Set 37 (Black)			
			102-0725		102-7001		102-0727		102-7002		102-6908		102-0730		102-4261			
			102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-6883
Back Nozzle Positions																		
			Yellow	Blue	Yellow	Orange	Yellow	Red	Yellow	Beige	Yellow	Beige	Yellow	Red	Yellow	Gray		
			102-6937	102-2925	102-6937	102-2926	102-6937	102-2928	102-6937	102-2929	102-6937	102-2929	102-6937	102-6944	102-6937	102-6945		
PSI	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM		
50	57	13,0	58	15,5	64	21,9	68	24,4	—	—	—	—	—	—	—	—		
65	58	14,6	60	18,0	68	24,4	72	28,1	76	32,2	—	—	—	—	—	—		
80	60	16,2	63	20,5	72	26,9	76	31,1	80	35,6	83	38,2	85	41,5	41,5	41,5		
100	62	17,9	66	23,4	75	29,8	79	34,9	84	39,3	88	43,4	91	46,9	46,9	46,9		

INF34 Series Performance Chart—15°

psi	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM
50	52	12,9	53	15,6	60	21,7	62	25,5	—	—	—	—	—	—
65	53	14,4	54	17,1	61	24,2	64	28,0	67	32,1	—	—	—	—
80	56	16,0	57	19,0	65	26,6	69	31,0	73	35,5	76	38,0	77	41,3
100	57	17,5	59	20,5	67	29,5	71	33,9	75	38,4	80	43,1	81	46,8
Stator			102-6929 Blue						102-1940 White					
Conversions			INF34-3134						INF34-3537					

■ Not recommended at these pressures. Radius shown in feet.
Toro recommends the use of a 1/4" swing joint at flows over 25-GPM (95-LPM). Sprinkler radius of throw per ASAE standard S398.1.
All sprinklers are equipped with the selectable pilot valve that allows settings at 3,4; 4,5; 5,5; and 6,9 Bar (50, 65, 80 and 100 psi).

INF34 Nozzle Apex—(Metric)

Pressure	Nozzle	Apex at 15°	Apex at 25°
4,5 bar	31	1,8 @ 15,6	4,0 @ 16,5
	32	1,8 @ 15,6	3,4 @ 19,5
	33	2,1 @ 18,0	4,0 @ 20,7
	34	2,4 @ 19,2	4,6 @ 22,6
	35	2,7 @ 20,1	4,6 @ 23,2
5,5 bar	36	2,4 @ 22,9	5,5 @ 25,3
	37	2,7 @ 22,6	5,8 @ 25,0

INF34 Nozzle Apex—(U.S.)

Pressure	Nozzle	Apex at 15°	Apex at 25°
65 PSI	31	6' @ 51'	13' @ 54'
	32	6' @ 51'	11' @ 64'
	33	7' @ 59'	13' @ 68'
	34	8' @ 63'	15' @ 74'
	35	9' @ 66'	15' @ 76'
80 PSI	36	8' @ 75'	18' @ 83'
	37	9' @ 74'	19' @ 82'



INFINITY® SERIES GOLF ROTORS INF34/INF54

INF54 Series Performance Chart—25° (Metric)

Front Nozzle Positions	Nozzle Set 51		Nozzle Set 52		Nozzle Set 53		Nozzle Set 54		Nozzle Set 55		Nozzle Set 56		Nozzle Set 57		Nozzle Set 58		Nozzle Set 59			
	(Yellow)		(Blue)		(Brown)		(Orange)		(Green)		(Gray)		(Black)		(Red)		(Beige)			
	102-0725		102-7001		102-0727		102-7002		102-6908		102-0730		102-4261		102-4260		102-4259			
Red Plug		Red Plug		Red Plug		Red Plug		Red Plug		Red Plug		Red Plug		Brown		Red Plug		Brown		
102-4335		102-4335		102-4335		102-4335		102-4335		102-4335		102-4335		102-4335		102-6883		102-4335		
Back Nozzle Positions																				
Yellow		Blue		Yellow		Orange		Yellow		Beige		Yellow		Gray		Yellow		Gray		
102-6937		102-2925		102-6937		102-2926		102-6937		102-2928		102-6937		102-2929		102-6937		102-2929		
Bar	kPa	kg/cm ²	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
3,4	340	3,47	17,7	50,0	18,0	59,4	19,5	83,3	21,4	99,2	-	-	-	-	-	-	-	-	-	-
4,5	450	4,59	18,3	56,0	18,6	66,2	20,7	93,9	22,6	110,9	24,1	129,4	-	-	-	-	-	-	-	-
5,5	550	5,61	18,6	62,1	19,5	75,7	22,0	104,5	23,8	123,4	25,3	143,8	25,9	154,0	26,5	169,9	27,8	190,0	29,3	210,4
6,9	690	7,04	19,2	68,5	20,4	89,3	22,9	115,1	24,7	138,9	26,5	160,9	27,5	173,4	28,4	190,0	29,0	209,7	30,2	233,9

INF54 Series Performance Chart—15°

Bar	kPa	kg/cm ²	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	
3,4	340	3,47	15,9	50,0	16,2	59,8	18,6	83,3	19,8	98,4	-	-	-	-	-	-	-	-	-	-	
4,5	450	4,59	16,2	56,0	16,5	65,9	19,2	93,9	20,4	110,5	21,0	129,1	-	-	-	-	-	-	-	-	
5,5	550	5,61	17,1	62,1	17,7	73,4	20,7	104,5	22,0	123,0	22,9	143,1	24,1	152,9	24,7	168,8	25,9	188,9	26,5	209,3	
6,9	690	7,04	17,7	68,5	18,3	79,9	21,7	115,1	22,9	137,8	24,1	160,1	25,6	172,2	26,5	188,9	27,1	208,6	28,7	232,8	
Stator			102-6929 Blue									102-1940 White									
Conversions			INF54-5154									INF54-5558									102-1941 White

INF54 Series Performance Chart—25° (U.S.)

Front Nozzle Positions	Nozzle Set 51		Nozzle Set 52		Nozzle Set 53		Nozzle Set 54		Nozzle Set 55		Nozzle Set 56		Nozzle Set 57		Nozzle Set 58		Nozzle Set 59			
	(Yellow)		(Blue)		(Brown)		(Orange)		(Green)		(Gray)		(Black)		(Red)		(Beige)			
	102-0725		102-7001		102-0727		102-7002		102-6908		102-0730		102-4261		102-4260		102-4259			
Red Plug		Red Plug		Red Plug		Red Plug		Red Plug		Red Plug		Red Plug		Brown		Red Plug		Brown		
102-4335		102-4335		102-4335		102-4335		102-4335		102-4335		102-4335		102-4335		102-6883		102-4335		
Back Nozzle Positions																				
Yellow		Blue		Yellow		Orange		Yellow		Beige		Yellow		Gray		Yellow		Gray		
102-6937		102-2925		102-6937		102-2926		102-6937		102-2928		102-6937		102-2929		102-6937		102-2929		
PSI	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM
50	58	13,2	59	15,7	64	22,0	70	26,2	—	—	—	—	—	—	—	—	—	—	—	—
65	60	14,8	61	17,5	68	24,8	74	29,3	79	34,2	—	—	—	—	—	—	—	—	—	—
80	61	16,4	64	20,0	72	27,6	78	32,6	83	38,0	85	40,7	87	44,9	91	50,2	96	55,6	—	—
100	63	18,1	67	23,6	75	30,4	81	36,7	87	42,5	90	45,8	93	50,2	95	55,4	99	61,8	—	—

INF54 Series Performance Chart—15°

psi	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	
50	52	13,2	53	15,8	61	22,0	65	26,0	—	—	—	—	—	—	—	—	—	—	—	—	
65	53	14,8	54	17,4	63	24,8	67	29,2	69	34,1	—	—	—	—	—	—	—	—	—	—	
80	56	16,4	58	19,4	68	27,6	72	32,5	75	37,8	79	40,4	81	44,6	85	49,9	87	55,3	—	—	
100	58	18,1	60	21,1	71	30,4	75	36,4	79	42,3	84	45,5	87	49,9	89	55,1	94	61,5	—	—	
Stator			102-6929 Blue									102-1940 White									102-1941 White
Conversions			INF54-5154									INF54-5558									INF54-59

■ Not recommended at these pressures. Radius shown in feet.

Toro recommends the use of a 1 1/4" swing joint at flows over 25-GPM (95-LPM). Sprinkler radius of throw per ASAE standard S398.1. All sprinklers are equipped with the selectable pilot valve that allows settings at 3,4; 4,5; 5,5; and 6,9 Bar (50, 65, 80 and 100 psi).

INF54 Nozzle Apex—(Metric)

Pressure	Nozzle	Apex at 15°	Apex at 25°
4,5 Bar	51	1,8 @ 15,6	4,0 @ 16,5
	52	1,8 @ 15,6	3,4 @ 19,5
	53	2,1 @ 18,0	4,0 @ 20,7
	54	2,4 @ 19,2	4,6 @ 22,6
	55	2,7 @ 20,1	4,6 @ 23,2
5,5 Bar	56	2,4 @ 22,9	5,5 @ 25,3
	57	2,7 @ 22,6	5,8 @ 25,0
	58	3,0 @ 25,0	5,5 @ 26,5
	59	3,4 @ 24,7	6,4 @ 27,1

INF54 Nozzle Apex—(U.S.)

Pressure	Nozzle	Apex at 15°	Apex at 25°
65 PSI	51	6' @ 51'	13' @ 54'
	52	6' @ 51'	11' @ 64'
	53	7' @ 59'	13' @ 68'
	54	8' @ 63'	15' @ 74'
	55	9' @ 66'	15' @ 76'
80 PSI	56	8' @ 75'	18' @ 83'
	57	9' @ 74'	19' @ 82'
	58	10' @ 82'	18' @ 87'
	59	11' @ 81'	21' @ 91'



Toro® INFINITY Razor kits.

Extend the frequency of digging up and leveling sprinklers with the Toro® INFINITY Razor kits. Over time the application of topdressing and settling can result in the sprinkler being in a depression below grade level. This can interfere in the natural roll of the ball, create trip hazards and take away from the natural beauty of the course. The Razor kits are designed to raise the top of the sprinkler in 1/2" increments up to 1 1/2" (3 stages) without digging!!



Pilot Valve stacker retention feature

Screw retention features (3 places)



NEW



INFINITY® RAZOR™ KITS

Features & Benefits

- ✓ Eliminates Sprinkler Interference
- ✓ Eliminates Trip Hazards
- ✓ Enhances Course Appearance
- ✓ Huge Labor Savings – No Digging Required!
- ✓ Retention Features – Hardware Never Gets Lost
- ✓ **Smart Access® Compartment**
Enables access to pilot valve, Lynx® Smart Module, wire splices and more



For more details see installation instructions 373-1015

1" Models



1.5" Models



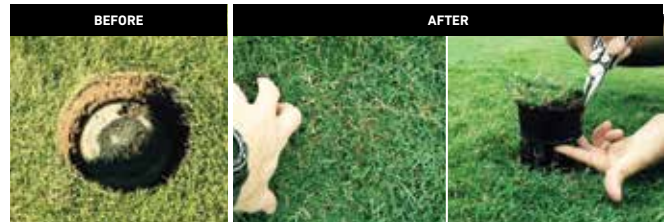
INFINITY Razor Kits

Model	Description
RAZOR-10-1	Razor Kit, 1" INFINITY, Stage 1 with 1.5" screws and pilot valve stacker
RAZOR-10-2	Razor Kit, 1" INFINITY, Stage 2 with 2" screws and pilot valve stacker
RAZOR-10-3	Razor Kit, 1" INFINITY, Stage 3 with 2.5" screws and pilot valve stacker
RAZOR-15-1	Razor Kit, 1.5" INFINITY, Stage 1 with 1.5" screws and pilot valve stacker
RAZOR-15-2	Razor Kit, 1.5" INFINITY, Stage 2 with 2" screws and pilot valve stacker
RAZOR-15-3	Razor Kit, 1.5" INFINITY, Stage 3 with 2.5" screws and pilot valve stacker



Toro® INFINITY Stealth kits.

Eliminate sprinkler interference with the outcome of the game forever! Toro's INFINITY Stealth Kits can be installed onto any INFINITY sprinkler allowing turf growth directly atop the sprinkler to eliminate the hard surface bounce should a golf ball hit it. The seamless turf appearance adds to the beauty of the course and improves labor efficiency by minimizing trimming efforts around the sprinklers.



STEALTH™ KIT MODELS

STEALTH-T – Kit attaches to INFINITY Series sprinklers with TruJectory™ style, 24-position main nozzle adjustment capability

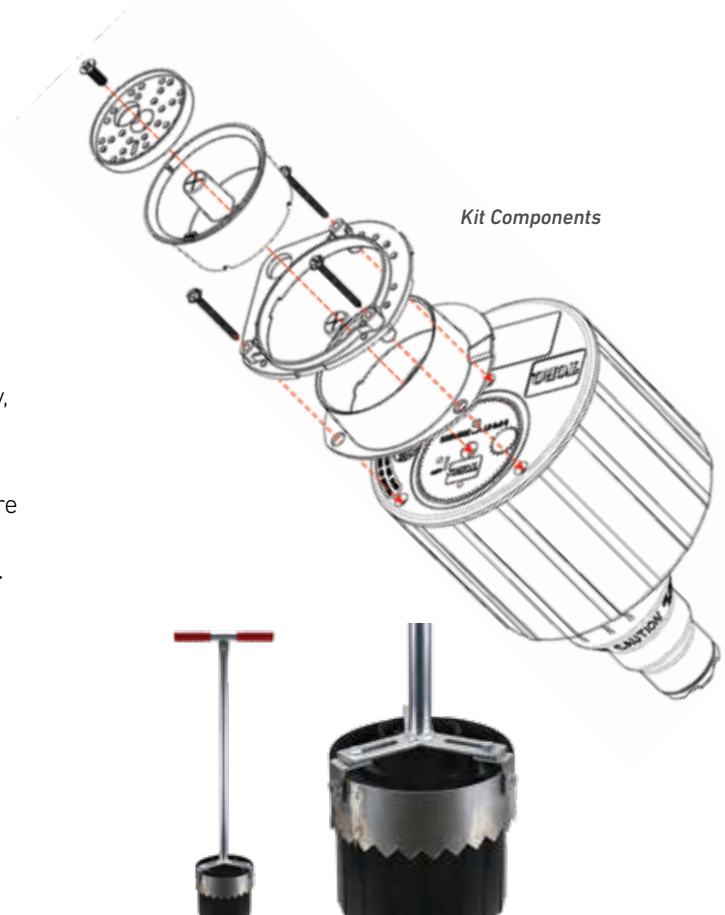
STEALTH-D – Kit attaches to INFINITY Series sprinklers with dual trajectory main nozzle adjustment capability

Enhanced appearance and increased efficiency



Features & Benefits

- ✓ **Eliminates Sprinkler Interference**
- ✓ **Enhances Course Appearance**
- ✓ **Natural Turf Atop Sprinkler**
- ✓ **Kit Fits Existing Infinity Sprinklers**
- ✓ **Easy Access**
To arc adjustment, snap rings, riser removal assembly, valve and rock screen
- ✓ **Smart Access® Compartment**
Enables access to pilot valve, Lynx® Smart Module, wire splices and more
- ✓ **Access to Manual Selector and TruJectory™ Adjuster**
With minimal turf/soil displacement
- ✓ **Turf Cup Grass Can Be Grown in a Nursery**
Prior to being installed onto the sprinkler



Kit Components

Turf Removal for Compartment Access 8" Cutter





FLEX800™ 35-6/55-6 Series: Part/Full Circle with TruJectory™

With the industry's largest selection of high performance nozzles and TruJectory™ adjustment the FLEX800™ 35-6/55-6 Series allows you to put water precisely where you want it for maximum distribution uniformity. The part/full circle drive allows you to simply and economically adjust the area of coverage to match your seasonal watering needs or meet water rationing mandates in seconds with no disassembly or additional parts required. Finally, with TruJectory™ you have 24 positions from 7 to 30° in 1° increments to put water where you want it.

30°

7°



*FLEX800™ 35-6/55-6 Series
Part/Full Circle with TruJectory*



FLEX800™ SERIES GOLF ROTORS FLX35-6/FLX55-6

Features & Benefits - TruJectory™ Part Circle

- ① **TruJectory**
Put water precisely where you want it for maximum distribution uniformity.
- ② **20,000 Volt Lightning Rating**
Spike Guard™ solenoid virtually eliminates the need for replacements in high lightning areas. Draws half the amperage of traditional solenoids so you can run twice as many sprinklers simultaneously, reduce the cost of wire during initial installation or increase the distance from controller to sprinkler.



- ③ **Adjustment With No Disassembly**
Toro exclusive, simply pull up the riser and turn the nozzle base to the precise position you want to water.
- ④ **True Part and Full-Circle in One – 40° - 330° Part Circle and 360° Full Circle**
These sprinklers can be full circle today and part circle tomorrow allowing you to simply and economically adjust the area of coverage to match your seasonal needs or meet water rationing mandates.



TruJectory™

①

Spike Guard™ Solenoid

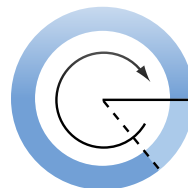
②

Ratcheting Riser

③

True Part and Full-Circle in One

④



FLEX800™ SERIES GOLF ROTORS FLX35-6/FLX55-6



Conversion Upgrades

FLX35-6 Conversion Upgrades

Models	Description
• FLX35-6-3134	FLX35-6 w/31–34 Nozzles (#33 Nozzle Installed)
• FLX35-6-3537	FLX35-6 w/35–37 Nozzles (#35 Nozzle Installed)



FLX55-6 Conversion Upgrades—(Ribbed Body)

Models	Description
• FLX55-6-5154	FLX55-6 w/51–54 Nozzles (#53 Nozzle Installed)
• FLX55-6-5558	FLX55-6 w/55–58 Nozzles (#55 Nozzle Installed)
• FLX55-6-59	FLX55-6 w/59 Nozzle



FLX55-6 Conversion Upgrades—(Ribless Body)

Models	Description
• FLX55-6-5154R	FLX55-6 w/51–54 Nozzles (#53 Nozzle Installed)
• FLX55-6-5558R	FLX55-6 w/55–58 Nozzles (#55 Nozzle Installed)
• FLX55-6-59R	FLX55-6 w/59 Nozzle



Dimensions

Body diameter:

- **FLX35-6:** 16,5cm (6.5")
- **FLX55-6:** 19cm (7.5")

Body height:

- **FLX35-6:** 25cm (10")
- **FLX55-6:** 29cm (11.38")

Weight:

- **FLX35-6:** 1,35kg (2.98 lbs.)
- **FLX55-6:** 1,68kg (3.70 lbs.)

Weight – Intergrated with

Lynx Smart Module:

- **FLX35-6:** 1,64kg (3.63 lbs.)
- **FLX55-6:** 1,95kg (4.30 lbs.)

Features

- Trajectory: 24 positions from 7° – 30° in 1° increments
- Part/Full circle sprinklers
- Pop-up height to nozzle: 8,3cm (3.25")

Operating Specifications

Inlet:

- **FLX35-6:** 25mm (1") ACME
- **FLX55-6:** 40mm (1.5") ACME

Radius:

- **FLX35-6:** 12,8 – 28,0m (42' – 92')
- **FLX55-6:** 15,9 – 30,5m (52' – 100')

Flow Rate:

- **FLX35-6:** 26,9–171,5 LPM (7.1 – 45.3 GPM)
- **FLX55-6:** 52,6–231,3 LPM (13.9 – 61.1 GPM)

Precipitation Rates:

- **FLX35-6:** Minimum: 9,8mm/hr (0.39"/hr);
Maximum: 16,3mm/hr (0.64"/hr)
- **FLX55-6:** Minimum: 11,1mm/hr (0.44"/hr);
Maximum: 17,5mm/hr (0.69"/hr)

Pilot Valve: Selectable at 3,4; 4,5; 5,5; and 6,9 Bar (50, 65, 80 and 100 psi)

Recommended Operating Pressure Range:

- 4,5–6,9 Bar (65–100 psi)
- Maximum: 10,3 Bar (150 psi)
- Minimum: 2,8 Bar (40 psi)

Activation types – Electric Valve-in-Head:

- Standard Solenoid:
 - 24 VAC, 50/60 Hz
 - Inrush: 0.30 A
 - Holding 0.20 A
- Spike Guard Solenoid:
 - 24 VAC, 50/60 Hz
 - Inrush: 0.12 A
 - Holding 0.10 A
- Nickel-Plated Spike Guard Solenoid:
 - 24 VAC, 50/60 Hz
 - Inrush: 0.12 A
 - Holding 0.10 A
- DC Latching Solenoid (DCLS)
 - Momentary low voltage pulse
- Lynx Smart Module with DCLS
 - Momentary low voltage pulse

Nozzle Selection

- **FLX35-6** has eight nozzle variation (30, 31, 32, 33, 34, 35, 36 & 37)
- **FLX55-6** has nine nozzle variations (51, 52, 53, 54, 55, 56, 57, 58 & 59)
- Four in-line nozzles, rotating stream pattern
- One back nozzle position
- Stator variations: **FLX35-6 – 3** and **FLX55-6 – 3**
 - Ratcheting riser
 - Nozzle base clutching

Warranty

- Two years; Five years when installed with Toro Swing Joints

Specifying Information—FLX35-6 & FLX55-6

FLXX5-XXX-X6					
Body Inlet	Arc	Nozzle	Pressure Regulation*	Activation Type	Trajectory
FLXX	X	XX	X	X	6
3— 25mm (1") 5— 40mm (1.5")	5—Part-circle and Full-circle In One	<u>FLX35</u> - 30, 31, 32, 33, 34, 35, 36, 37 <u>FLX55</u> - 51, 52, 53, 54, 55, 56, 57, 58, 59	6— 4,5 bar (65 psi) 8— 5,5 bar (80 psi) 1— 6,9 bar (100 psi)	1—Standard Solenoid 2—Spike Guard™ Solenoid 3—Nickel-plated Spike Guard Solenoid 4—DC Latching Solenoid (DCLS) 5—Integrated GDC Module w/DCLS 6—Integrated LLYNX Smart Module w/DCLS	6—24-position Trajectory
Example: When specifying an FLX35-6 Series Sprinkler with Spike Guard™ Solenoid, #34 nozzle, an electric valve and pressure regulation at 4,5 bar (65 psi) you would specify: FLX35-346-26					

* Electric models only. All sprinklers are equipped with the selectable pilot valve that allows settings at 3,4; 4,5; 5,5; and 6,9 Bar (50, 65, 80 and 100 psi).

Note: Not all models available. Nickel-plated, corrosion-resistant models are available upon request.



FLEX800™ SERIES GOLF ROTORS FLX35-6/FLX55-6

FLX35-6/FLX55-6 Trajectory Performance—(Metric)

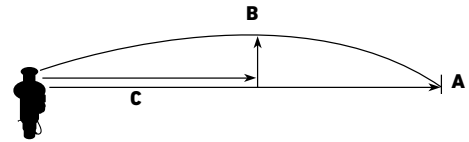
Nozzle/Bar/LPM	#31/51 Nozzle @ 4,5 Bar							#32/52 Nozzle @ 4,5 Bar															
	7°	10°	15°	20°	25°	30°	7°	10°	15°	20°	25°	30°											
Trajectory	7°	10°	15°	20°	25°	30°	7°	10°	15°	20°	25°	30°											
"A" Radius	14,0	14,0	15,2	15,5	16,2	16,5	15,2	14,0	14,9	14,9	15,2	15,5	16,8	19,2	19,5	16,5	19,8						
"B" Spray Height	1,2	1,2	1,5	1,8	2,4	3,0	3,4	4,0	4,0	4,6	0,9	1,2	1,2	1,8	2,7	3,7	3,4	4,6	4,0				
"C" Distance from Head	7,6	7,9	7,6	8,2	7,9	9,8	10,1	11,6	10,1	12,2	10,1	12,4	6,1	6,7	7,3	7,9	8,5	9,4	10,4	10,7	10,4	10,4	9,1

Nozzle/Bar/LPM	#33/53 Nozzle @ 4,5 Bar						#34/54 Nozzle @ 4,5 Bar															
	7°	10°	15°	20°	25°	30°	7°	10°	15°	20°	25°	30°										
Trajectory	7°	10°	15°	20°	25°	30°	7°	10°	15°	20°	25°	30°										
"A" Radius	16,5	17,1	18,0	18,9	20,1	20,7	18,6	17,7	18,3	19,2	20,4	22,6	21,3									
"B" Spray Height	1,2	1,5	1,5	1,8	2,1	2,7	4,0	4,6	1,2	1,5	1,8	1,8	2,4	3,4	3,0	4,3	5,2					
"C" Distance from Head	7,0	9,1	8,5	10,1	9,8	10,4	10,7	10,7	11,3	10,7	11,3	7,3	9,4	7,9	10,4	10,7	12,2	11,9	12,5	11,9	11,9	12,8

Nozzle/Bar/LPM	#35/55 Nozzle @ 4,5 Bar						#36/56 Nozzle @ 5,5 Bar													
	7°	10°	15°	20°	25°	30°	7°	10°	15°	20°	25°	30°								
Trajectory	7°	10°	15°	20°	25°	30°	7°	10°	15°	20°	25°	30°								
"A" Radius	18,0	18,6	18,9	19,5	20,1	21,3	23,2	22,6	23,5	19,5	21,9	20,7	22,2	23,2	22,9	24,4	25,0	25,6	25,9	25,0
"B" Spray Height	1,2	1,8	1,5	1,8	2,1	2,7	3,4	4,6	5,2	1,5	2,1	2,7	4,3	5,2	6,7					
"C" Distance from Head	9,1	10,4	9,8	11,0	11,0	13,1	13,1	13,7	13,1	13,7	13,1	13,7	7,6	11,6	12,2	13,7	14,9	13,7		

Nozzle/Bar/LPM	#37/57 Nozzle @ 5,5 Bar						#58 Nozzle @ 5,5 Bar											
	7°	10°	15°	20°	25°	30°	7°	10°	15°	20°	25°	30°						
Trajectory	7°	10°	15°	20°	25°	30°	7°	10°	15°	20°	25°	30°						
"A" Radius	19,8	21,9	21,0	22,6	23,8	23,5	25,0	25,3	26,2	27,1	25,6	25,9	22,9	23,5	25,3	26,5	28,0	26,8
"B" Spray Height	1,5	2,1	2,7	4,3	5,5	6,7	1,8	2,1	3,0	4,6	5,5	6,7						
"C" Distance from Head	9,1	11,9	12,5	14,0	15,2	14,0	11,6	12,2	13,1	14,3	15,8	14,6						

Nozzle/Bar/LPM	#59 Nozzle @ 5,5 Bar					
	7°	10°	15°	20°	25°	30°
Trajectory	7°	10°	15°	20°	25°	30°
"A" Radius	23,5	23,8	25,6	27,1	29,3	28,0
"B" Spray Height	2,1	2,4	3,4	4,9	6,4	7,6
"C" Distance from Head	12,8	13,4	13,7	14,3	16,2	14,9



Information is for reference only. Actual results may vary.

FLX35-6 Series Performance Chart—(Metric)

Base Pressure	Nozzle Set 30		Nozzle Set 31		Nozzle Set 32		Nozzle Set 33		Nozzle Set 34		Nozzle Set 35		Nozzle Set 36		Nozzle Set 37			
	(White) 102-2208		(Yellow) 102-4587		(Blue) 102-4588		(Brown) 102-4589		(Orange) 102-0728		(Green) 102-0729		(Gray) 102-0730		(Black) 102-4261			
	Blue	Gray	Blue	Gray	Red	Gray	Orange	Gray	Orange	Gray	Blue	Gray	Blue	Gray	Orange	Gray		
Bar	kPa	kg/cm ²	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
3,4	340	3,47	12,8	26,9	15,9	51,9	18,6	64,7	19,5	76,5	21,0	103,7	—	—	—	—	—	
4,5	450	4,59	13,7	32,9	16,5	58,7	19,2	77,6	20,1	86,7	22,6	113,6	23,2	122,6	—	—	—	
5,5	550	5,61	14,0	36,3	17,4	64,3	20,4	85,5	21,4	95,8	23,5	125,7	24,1	135,5	25,6	141,9	26,2	154,4
6,9	690	7,04	14,6	42,4	18,0	71,5	22,0	95,4	22,6	106,7	24,4	140,0	25,6	151,0	26,8	160,9	28,1	171,5
Stator			102-1939 Yellow						102-1940 White									
Conversions			FLX35-6-3134						FLX35-6-3537									

FLX55-6 Series Performance Chart—(Metric)

Base Pressure	Nozzle Set 51		Nozzle Set 52		Nozzle Set 53		Nozzle Set 54		Nozzle Set 55		Nozzle Set 56		Nozzle Set 57		Nozzle Set 58		Nozzle Set 59			
	(Yellow) 102-4587		(Blue) 102-4588		(Brown) 102-4589		(Orange) 102-0728		(Green) 102-0729		(Gray) 102-0730		(Black) 102-4261		(Red) 102-4260		(Beige) 102-4259			
	Blue	Gray	Red	Gray	Orange	Gray	Orange	Gray	Blue	Gray	Blue	Gray	Orange	Gray	Blue	Gray	Blue	Gray		
Bar	kPa	kg/cm ²	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
3,4	340	3,47	15,9	52,6	18,9	65,9	20,1	78,3	—	—	—	—	—	—	—	—	—	—		
4,5	450	4,59	16,5	59,4	19,5	78,3	20,7	88,6	22,6	113,1	23,2	127,9	—	—	—	—	—	—		
5,5	550	5,61	17,4	65,1	20,7	86,7	22,0	97,7	23,5	130,2	24,1	140,8	25,9	149,1	27,1	165,0	28,1	179,8	29,3	215,7
6,9	690	7,04	18,0	72,3	22,3	96,5	23,2	108,6	24,4	144,6	25,6	156,3	27,1	165,4	28,7	183,6	29,0	194,9	30,5	231,3
Stator			102-1939 Yellow						102-1940 White											
Conversions			FLX55-6-5154						FLX55-6-5558						102-1941					
															FLX55-6-59					

■ Not recommended at these pressures. Radius shown in meters.
 Toro recommends the use of a 30mm swing joint at flows over 95-LPM. Sprinkler radius of throw per ASAE standard S398.1.
 Actual site conditions must be considered when selecting the appropriate nozzle.
 All sprinklers are equipped with the selectable pilot valve that allows settings at 3,4; 4,5; 5,5; and 6,9 Bar.



FLEX800™ SERIES GOLF ROTORS FLX35-6/FLX55-6

FLX35-6/FLX55-6 Trajectory Performance—(U.S.)

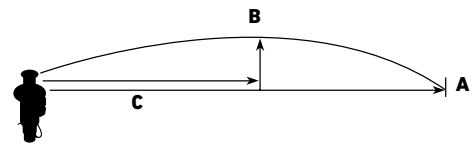
Nozzle/PSI/GPM	#31/51 Nozzle @ 65 psi						#32/52 Nozzle @ 65 psi					
	7°	10°	15°	20°	25°	30°	7°	10°	15°	20°	25°	30°
Trajectory	7°	10°	15°	20°	25°	30°	7°	10°	15°	20°	25°	30°
"A" Radius	46'	46'	50'/51'	53'	54'	50'	46'/49'	49'/50'	51'	55'	63'/64'	54'/65'
"B" Spray Height	4'	4'	5'/6'	8'/10'	11'/13'	13'/15'	3'/4'	4'	6'	9'	12'/11'	15'/13'
"C" Distance from Head	25'/26'	25'/27'	26'/32'	33'/38'	33'/40'	33'/41'	20'/22'	24'/26'	28'/31'	34'/35'	34'	34'/30'

Nozzle/PSI/GPM	#33/53 Nozzle @ 65 psi						#34/54 Nozzle @ 65 psi					
	7°	10°	15°	20°	25°	30°	7°	10°	15°	20°	25°	30°
Trajectory	7°	10°	15°	20°	25°	30°	7°	10°	15°	20°	25°	30°
"A" Radius	54'	56'	59'	62'	66'/68'	61'	58'	60'	63'	67'	74'	70'
"B" Spray Height	4'/5'	5'/6'	7'	9'	13'	15'	4'/5'	4'/6'	6'/8'	11'/10'	14'	17'
"C" Distance from Head	23'/30'	28'/33'	32'	34'/35'	35'/37'	35'/37'	24'/31'	26'/34'	35'/40'	39'/41'	39'	39'/42'

Nozzle/PSI/GPM	#35/55 Nozzle @ 65 psi						#36/56 Nozzle @ 80 psi					
	7°	10°	15°	20°	25°	30°	7°	10°	15°	20°	25°	30°
Trajectory	7°	10°	15°	20°	25°	30°	7°	10°	15°	20°	25°	30°
"A" Radius	59'	61'/62'	64'/66'	70'	76'	74'/77'	64'/72'	68'/73'	76'/75'	80'/82'	84'/85'	82'
"B" Spray Height	4'/6'	5'/6'	7'/9'	11'	15'	17'	5'	7'	9'	14'	17'	22'
"C" Distance from Head	30'/34'	32'/36'	36'/43'	43'/45'	43'/45'	43'/45'	25'	38'	40'	45'	49'	45'

Nozzle/PSI/GPM	#37/57 Nozzle @ 80 psi						#58 Nozzle @ 80 psi					
	7°	10°	15°	20°	25°	30°	7°	10°	15°	20°	25°	30°
Trajectory	7°	10°	15°	20°	25°	30°	7°	10°	15°	20°	25°	30°
"A" Radius	65'/72'	69'/74'	78'/77'	82'/83'	86'/89'	84'/85'	75'	77'	83'	87'	92'	88'
"B" Spray Height	5'	7'	9'	14'	18'	22'	6'	7'	10'	15'	18'	22'
"C" Distance from Head	30'	39'	41'	46'	50'	46'	38'	40'	43'	47'	52'	48'

Nozzle/PSI/GPM	#59 Nozzle @ 80 psi					
	7°	10°	15°	20°	25°	30°
Trajectory	7°	10°	15°	20°	25°	30°
"A" Radius	77'	78'	84'	89'	96'	92'
"B" Spray Height	7'	8'	11'	16'	21'	25'
"C" Distance from Head	42'	44'	45'	47'	53'	49'



Information is for reference only. Actual results may vary.

FLX35-6 Series Performance Chart—(U.S.)

Base Pressure	Nozzle Set 30 (White)		Nozzle Set 31 (Yellow)		Nozzle Set 32 (Blue)		Nozzle Set 33 (Brown)		Nozzle Set 34 (Orange)		Nozzle Set 35 (Green)		Nozzle Set 36 (Gray)		Nozzle Set 37 (Black)	
	102-2208		102-4587		102-4588		102-4589		102-0728		102-0729		102-0730		102-4261	
	Blue	Gray	Blue	Gray	Red	Gray	Orange	Gray	Orange	Gray	Blue	Gray	Blue	Gray	Orange	Gray
psi	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM
50	42	7.1	52	13.7	61	17.1	64	20.2	69	27.4	—	—	—	—	—	—
65	45	8.7	54	15.5	63	20.5	66	22.9	74	30.0	76	32.4	—	—	—	—
80	46	9.6	57	17.0	67	22.6	70	25.3	77	33.2	79	35.8	84	37.5	86	40.8
100	48	11.2	59	18.9	72	25.2	74	28.2	80	37.0	84	39.9	88	42.5	92	45.3
Stator	102-6929 Blue				102-1939 Yellow				102-1940 White							
Conversions					FLX35-6-3134								FLX35-6-3537			

FLX55-6 Series Performance Chart—(U.S.)

Base Pressure	Nozzle Set 51 (Yellow)		Nozzle Set 52 (Blue)		Nozzle Set 53 (Brown)		Nozzle Set 54 (Orange)		Nozzle Set 55 (Green)		Nozzle Set 56 (Gray)		Nozzle Set 57 (Black)		Nozzle Set 58 (Red)		Nozzle Set 59 (Beige)			
	102-4587		102-4588		102-4589		102-0728		102-0729		102-0730		102-4261		102-4260		102-4259			
	Blue	Gray	Red	Gray	Orange	Gray	Orange	Gray	Blue	Gray	Blue	Gray	Orange	Gray	Blue	Gray	Blue	Gray		
psi	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM		
50	52	13.9	62	17.4	66	20.7	69	28.6	—	—	—	—	—	—	—	—	—	—		
65	54	15.7	64	20.8	68	23.4	74	31.2	76	33.8	—	—	—	—	—	—	—	—		
80	57	17.2	68	22.9	72	25.8	77	34.4	79	37.2	85	39.4	89	43.6	92	47.5	96	57.0		
100	59	19.1	73	25.5	76	28.7	80	38.2	84	41.3	89	43.7	94	48.5	95	51.1	100	61.1		
Stator					102-1939 Yellow								102-1940 White				102-1941			
Conversions					FLX55-6-5154								FLX55-6-5558				FLX55-6-59			

■ Not recommended at these pressures. Radius shown in feet.

Toro recommends the use of a 1.25" swing joint at flows over 25-GPM (95-LPM). Sprinkler radius data collected in Toro's zero wind test facility per ASAE standard S398.1.

Actual site conditions must be considered when selecting the appropriate nozzle.

All sprinklers are equipped with the selectable pilot valve that allows settings at 50, 65, 80 and 100 psi.



FLEX800™ SERIES GOLF ROTORS FLX35/FLX55



toro.com

The FLEX800 35/55 Series: Part/Full Circle with Dual Trajectory

The FLEX800 35/55 Series features a dual trajectory main nozzle that provides exceptional nozzle performance at the 25° standard angle position and great performance in windy applications at the 15° low angle position. And the part/full circle drive allows you to adjust the area of coverage to match your seasonal watering needs or meet water rationing mandates in seconds with no additional parts required.



Part/Full Circle Drive





FLEX800™ SERIES GOLF ROTORS FLX35/FLX55

Features & Benefits - Dual Trajectory Part Circle

- ① **Stainless Steel Valve Seat**
Eliminates body damage from rocks and debris. This in-destructible stainless steel seat is molded to the body and virtually eliminates body replacements due to seat damage.
- ② **Ratcheting riser**
Align part circle quickly and easily or adjust watering locations to suit seasonal needs.

- ③ **Industry's Largest Nozzle Selection**
Nozzles from 13,1m - 28,0m (43' to 92') radius plus a wide assortment of back nozzles lets you put the precise amount of water exactly where you need it. All nozzles threaded in from front.
- ④ **True Part and Full-Circle in One – 40° - 330° Part Circle and 360° Full Circle**
These sprinklers can be full circle today and part circle tomorrow allowing you to adjust the area of coverage to match your seasonal needs or meet water rationing mandates.



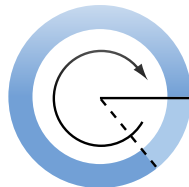
Stainless Steel Valve Seat

① **Ratcheting Riser**

② **Industry's Largest Nozzle Selection**

③ **True Part and Full-Circle in One**

④



FLEX800™ SERIES GOLF ROTORS FLX35/FLX55



FLX35 Conversion Upgrades

Models	Description
• FLX35-3134	FLX35 w/31–34 Nozzles (#33 Nozzle)
• FLX35-3537	FLX35 w/35–37 Nozzles (#35 Nozzle)



FLX55 Conversion Upgrades (Ribbed Body)

Models	Description
• FLX55-5154	FLX55 w/51–54 Nozzles (#53 Nozzle)
• FLX55-5558	FLX55 w/55–58 Nozzles (#55 Nozzle)
• FLX55-59	FLX55 w/59 Nozzle



FLX55 Conversion Upgrades (Ribless Body)

Models	Description
• FLX55-5154R	FLX55 w/51–54 Nozzles (#53 Nozzle)
• FLX55-5558R	FLX55 w/55–58 Nozzles (#55 Nozzle)
• FLX55-59R	FLX55 w/59 Nozzle



Dimensions

- Body diameter:
- **FLX35:** 16,5cm (6.5")
 - **FLX55:** 19cm (7.5")
- Body height:
- **FLX35:** 25cm (10")
 - **FLX55:** 29cm (11.38")

- Weight:
- **FLX35:** 1,31kg (2.89 lbs.)
 - **FLX55:** 1,62kg (3.57 lbs.)
- Weight – Integrated with Lynx Smart Module:
- **FLX35:** 1,62kg (3.58 lbs.)
 - **FLX55:** 1,93kg (4.26 lbs.)

Features

- Dual Trajectory adjustment on main nozzle - 25° or 15°
- Part/Full circle sprinklers
- Radius reduction screw 363-4839 for fine tuning
- Ratcheting riser
- Nozzle base clutching
- Pop-up height to nozzle: 8,3cm (3.25")

Operating Specifications

Inlet:

- **FLX35:** 25mm (1") ACME
- **FLX55:** 40mm (1.5") ACME

Radius:

- **FLX35:** 13,1 – 25,3m (43' – 83')
- **FLX55:** 16,7 – 28,0m (55' – 92')

Flow Rate:

- **FLX35:** 31,0 – 179,0 LPM (8.2 – 47.8 GPM)
- **FLX55:** 53,0 – 232,0 LPM (14.1 – 61.3 GPM)

Precipitation Rates:

- **FLX35:** Minimum: 10,8 mm/hr (0.43"/hr); Maximum: 19,4 mm/hr (0.76"/hr)
- **FLX55:** Minimum: 11,4 mm/hr (0.45"/hr); Maximum: 20,5 mm/hr (0.81"/hr)

Pilot Valve:

- Selectable at 3,4; 4,5; 5,5; and 6,9 Bar (50, 65, 80, 100 psi)

Recommended Operating Pressure Range:

- 4,5-6,9 Bar (65-100 psi)
- Maximum: 10,3 Bar (150 psi)
- Minimum: 2,8 Bar (40 psi)

Activation types – Electric Valve-in-Head:

- Standard Solenoid:
 - 24 VAC, 50/60 Hz
 - Inrush: 0.30 A
 - Holding 0.20 A
- Spike Guard Solenoid:
 - 24 VAC, 50/60 Hz
 - Inrush: 0.12 A
 - Holding 0.10 A
- Nickel-Plated Spike Guard Solenoid:
 - 24 VAC, 50/60 Hz
 - Inrush: 0.12 A
 - Holding 0.10 A
- DC Latching Solenoid (DCLS)
 - Momentary low voltage pulse
- Lynx Smart Module with DCLS
 - Momentary low voltage pulse

Nozzle Selection

- **FLX35** has eight nozzle variations (30, 31, 32, 33, 34, 35, 36 & 37)
- **FLX55** has nine nozzle variations (51, 52, 53, 54, 55, 56, 57, 58 & 59)
- Three in-line nozzles
- Rotating stream pattern
- Two back nozzle positions

Warranty

- Two years; Five years when installed with Toro Swing Joints

Specifying Information—FLX35 & FLX55

FLXX5-XXX-X				
Body Inlet	Arc	Nozzle	Pressure Regulation*	Activation Type
FLXX	5	XX	X	X
3—25mm (1") 5—40mm (1½")	5—Part-circle and Full-circle In One	FLX35—30, 31, 32, 33, 34, 35, 36, 37 FLX55—51, 52, 53, 54, 55, 56, 57, 58, 59	6— 4,5 bar (65 psi) 8— 5,5 bar (80 psi) 1— 6,9 bar (100 psi)	1—Standard Solenoid 2—Spike Guard™ Solenoid 3—Nickel-plated Spike Guard Solenoid 4—DC Latching Solenoid (DCLS) 5—Integrated GDC Module w/DCLS 6—Integrated LYNX Smart Module w/DCLS

Example: When specifying an FLX35 Series Sprinkler with #34 nozzle, pressure regulation at 4,5 bar (65 psi) and Spike Guard you would specify: **FLX35-346-2**

* All sprinklers are equipped with the selectable pilot valve that allows settings at 3,4; 4,5; 5,5; and 6,9 Bar (50, 65, 80 and 100 psi).
 Note: Not all models available. Nickel-plated, corrosion-resistant models are available upon request.



FLEX800™ SERIES GOLF ROTORS FLX35/FLX55

FLX35 Performance Data—25° – (Metric)

Front Nozzle Positions	Nozzle Set 30		Nozzle Set 31		Nozzle Set 32		Nozzle Set 33		Nozzle Set 34		Nozzle Set 35		Nozzle Set 36		Nozzle Set 37				
	(White Plug)		(Yellow)		(Blue)		(Brown)		(Orange)		(Green)		(Gray)		(Black)				
	102-2208		102-6906		102-0726		102-6907		102-0728		102-6955		102-6935		102-6936				
Back Nozzle Positions																			
	Red Plug 102-4335																		
	Bar	kPa	kg/cm2	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
	3,4	340	3,47	13,1	31,0	16,2	52,2	17,1	69,3	18,6	82,1	—	—	—	—	—	—	—	—
4,5	450	4,59	13,7	37,9	16,2	58,7	18,0	77,6	19,5	92,4	20,7	106,7	22,0	129,1	—	—	—	—	
5,5	550	5,61	14,0	43,5	17,4	65,5	18,9	85,9	20,4	102,6	21,7	117,7	22,9	143,1	23,8	152,5	24,4	166,5	
6,9	690	7,04	14,3	50,7	18,0	72,3	19,8	94,2	21,4	112,8	22,6	129,1	24,1	154,8	24,7	165,8	25,3	179,0	

FLX35 Series Performance Chart—15°

Bar	kPa	kg/cm2	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM		
3,4	340	3,47	13,1	31,0	15,9	51,5	17,7	68,5	18,6	81,4	—	—	—	—	—	—	—	—		
4,5	450	4,59	13,7	37,9	16,5	57,9	18,3	76,8	19,5	91,6	19,8	103,3	21,0	125,3	—	—	—	—		
5,5	550	5,61	14,0	43,5	17,7	65,1	19,5	85,5	21,0	101,4	21,0	114,3	22,9	139,3	23,2	150,3	23,2	162,4		
6,9	690	7,04	14,3	50,7	18,3	71,9	20,1	93,5	21,7	111,7	22,0	124,5	23,8	149,5	25,0	161,2	25,0	174,5		
Stator			102-6929 Blue						102-1939 Yellow						102-1940 White					
Conversions			FLX35-3134						FLX35-3134						FLX35-3537					

FLX55 Performance Data—25° – (Metric)

Front Nozzle Positions	Nozzle Set 51		Nozzle Set 52		Nozzle Set 53		Nozzle Set 54		Nozzle Set 55		Nozzle Set 56		Nozzle Set 57		Nozzle Set 58		Nozzle Set 59		
	(Yellow)		(Blue)		(Brown)		(Orange)		(Green)		(Gray)		(Black)		(Red)		(Beige)		
	102-6906		102-0726		102-6907		102-0728		102-6955		102-6935		102-6936		102-6909		102-4259		
Back Nozzle Positions																			
	Red Plug 102-4335																		
	Bar	kPa	kg/cm2	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
	3,4	340	3,47	16,7	53,4	17,3	70,0	18,9	84,4	20,1	97,6	—	—	—	—	—	—	—	—
4,5	450	4,59	17,4	59,8	18,2	79,1	19,8	95,0	21,0	108,6	22,3	135,8	—	—	—	—	—	—	
5,5	550	5,61	18,0	66,2	18,5	87,4	20,7	105,2	21,9	119,9	23,1	150,3	24,4	163,2	25,2	182,5	25,9	189,3	
6,9	690	7,04	18,6	73	19,2	95,7	21,7	114,7	22,8	130,6	24,4	164,6	25,2	185,5	26,8	194,9	27,4	204,0	

FLX55 Series Performance Chart—15°

Bar	kPa	kg/cm2	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM		
3,4	340	3,47	16,7	53,0	17,9	62,5	18,9	84,0	19,2	96,9	—	—	—	—	—	—	—	—		
4,5	450	4,59	17,1	59,0	18,8	78,3	19,8	94,6	20,1	107,9	22,8	133,6	—	—	—	—	—	—		
5,5	550	5,61	18,0	65,9	20,1	87,1	21,0	104,8	21,4	119,2	23,1	147,6	23,7	160,5	24,0	177,5	24,0	187,4		
6,9	690	7,04	18,2	72,7	20,7	95,0	21,7	114,3	22,0	129,8	24,4	158,6	24,6	184,3	25,3	192,2	25,3	202,1		
Stator			102-1939 Yellow						102-1940 White						102-1941 White					
Conversions			FLX55-5154						FLX55-5558						FLX55-59					

■ Not recommended at these pressures. Radius shown in meters.
Toro recommends the use of a 30mm swing joint at flows over 95-LPM. Sprinkler radius of throw per ASAE standard S398.1.
All sprinklers are equipped with the selectable pilot valve that allows settings at 3,4; 4,5; 5,5; and 6,9 Bar.

FLX35 Nozzle Apex—(Metric)

Pressure	Nozzle	Apex at 15°	Apex at 25°
4,5 bar	31	1,8m @ 15,5m	4m @ 16,4m
	32	1,8m @ 15,5m	3,4m @ 19,5m
	33	2,1m @ 18m	4m @ 20,7m
	34	2,4m @ 19m	4,6m @ 22,6m
	35	2,7m @ 20m	4,6m @ 23m
5,5 bar	36	2,4m @ 22,9m	5,5m @ 25,3m
	37	2,7m @ 22,5m	5,8m @ 25m


























FLX55 Nozzle Apex—(Metric)

Pressure	Nozzle	Apex at 15°	Apex at 25°
4,5 bar	51	1,8m @ 15,5m	4m @ 16,4m
	52	1,8m @ 15,5m	3,4m @ 19,5m
	53	2,1m @ 18m	4m @ 20,7m
	54	2,4m @ 19m	4,6m @ 22,6m
	55	2,7m @ 20m	4,6m @ 23m
	5,5 bar	56	2,4m @ 22,9m
57		2,7m @ 22,5m	5,8m @ 25m
58		3m @ 25m	5,5m @ 26,5m
59		3,4m @ 24,6m	6,4m @ 27,7m





























FLEX800™ SERIES GOLF ROTORS FLX35/FLX55

FLX35 Performance Data—25° – (U.S.)

Front Nozzle Positions	Nozzle Set 30		Nozzle Set 31		Nozzle Set 32		Nozzle Set 33		Nozzle Set 34		Nozzle Set 35		Nozzle Set 36		Nozzle Set 37			
																		
	(White Plug)		(Yellow)		(Blue)		(Brown)		(Orange)		(Green)		(Gray)		(Black)			
	102-2208		102-6906		102-0726		102-6907		102-0728		102-6955		102-6935		102-6936			
																		
	102-5670	102-6942	102-5670	102-5671	102-5670	102-6884	102-5670	102-6884	102-5670	102-6884	102-5670	102-6885	102-6531	102-6885	102-6531	102-6885		
Back Nozzle Positions	 Red Plug 102-4335																	
PSI	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM		
50	43	8.2	53	13.8	56	18.3	61	21.7	65	25.3	—	—	—	—	—	—		
65	45	10.0	53	15.5	59	20.5	64	24.4	68	28.2	72	34.1	—	—	—	—		
80	46	11.5	57	17.3	62	22.7	67	27.1	71	31.1	75	37.8	78	40.3	80	44.0		
100	47	13.4	59	19.1	65	24.9	70	29.8	74	34.1	79	40.9	81	43.8	83	47.3		
FLX35 Series Performance Chart—15°																		
PSI	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM		
50	43	8.2	52	13.6	58	18.1	61	21.5	62	25.6	—	—	—	—	—	—		
65	45	10.0	54	15.3	60	20.3	64	24.2	65	27.3	69	33.1	—	—	—	—		
80	46	11.5	58	17.2	64	22.6	69	26.8	69	30.2	75	36.8	76	39.7	76	42.9		
100	47	13.4	60	19.0	66	24.7	71	29.5	72	32.9	78	39.5	82	42.6	82	46.1		
Stator	102-6929 Blue						102-1939 Yellow						102-1940 White					
Conversions	FLX35-3134						FLX35-3134						FLX35-3537					

FLX55 Performance Data—25° – (U.S.)

Front Nozzle Positions	Nozzle Set 51		Nozzle Set 52		Nozzle Set 53		Nozzle Set 54		Nozzle Set 55		Nozzle Set 56		Nozzle Set 57		Nozzle Set 58		Nozzle Set 59	
																		
	(Yellow)		(Blue)		(Brown)		(Orange)		(Green)		(Gray)		(Black)		(Red)		(Beige)	
	102-6906		102-0726		102-6907		102-0728		102-6955		102-6935		102-6936		102-6909		102-4259	
																		
	102-5670	102-5671	102-5670	102-6884	102-5670	102-6884	102-5670	102-6884	102-5670	102-6885	102-6531	102-6885	102-6531	102-6885	102-6531	102-6885		
Back Nozzle Positions	 Red Plug 102-4335																	
PSI	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM		
50	55	14.1	57	18.5	62	22.3	66	25.8	—	—	—	—	—	—	—	—		
65	57	15.8	60	20.9	65	25.1	69	28.7	73	35.9	—	—	—	—	—	—		
80	59	17.5	61	23.1	68	27.8	72	31.7	76	39.7	80	43.1	83	48.2	85	50.0		
100	61	19.3	63	25.3	71	30.3	75	34.5	80	43.5	83	49.0	88	51.5	90	53.9		
FLX55 Series Performance Chart—15°																		
PSI	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM		
50	55	14.0	59	16.5	62	22.2	63	25.6	—	—	—	—	—	—	—	—		
65	56	15.6	62	20.7	65	25.0	66	28.5	75	35.3	—	—	—	—	—	—		
80	59	17.4	66	23.0	69	27.7	70	31.5	78	39.0	78	42.4	79	46.9	79	49.5		
100	60	19.2	68	25.1	71	30.2	72	34.3	80	41.9	81	47.2	83	52.1	83	53.4		
Stator	102-1939 Yellow						102-1940 White						102-1941 White					
Conversions	FLX55-5154						FLX55-5558						FLX55-59					

■ Not recommended at these pressures.
Toro recommends the use of a 1 1/4" swing joint at flows over 25-GPM. Sprinkler radius of throw per ASAE standard S398.1.
All sprinklers are equipped with the selectable pilot valve that allows settings at 50, 65, 80 and 100 psi.

FLX35 Nozzle Apex—(U.S.)

Pressure	Nozzle	Apex at 15°	Apex at 25°
65 PSI	31	6' @ 51'	13' @ 54'
	32	6' @ 51'	11' @ 64'
	33	7' @ 59'	13' @ 68'
	34	8' @ 63'	15' @ 74'
	35	9' @ 66'	15' @ 76'
80 PSI	36	8' @ 75'	18' @ 83'
	37	9' @ 74'	19' @ 82'

FLX55 Nozzle Apex—(U.S.)

Pressure	Nozzle	Apex at 15°	Apex at 25°
65 PSI	51	6' @ 51'	13' @ 54'
	52	6' @ 51'	11' @ 64'
	53	7' @ 59'	13' @ 68'
	54	8' @ 63'	15' @ 74'
	55	9' @ 66'	15' @ 76'
	56	8' @ 75'	18' @ 83'
80 PSI	57	9' @ 74'	19' @ 82'
	58	10' @ 82'	18' @ 87'
	59	11' @ 81'	21' @ 91'



The FLEX34/54: Full Circle with Dual Trajectory

The FLEX34/54 are the full circle irrigation sprinklers in the FLEX800™ Series. They come with dual trajectory main nozzle that provides exceptional nozzle performance at the 25° standard angle position and great performance in windy applications at the 15° low angle position. And the consistency of the constant velocity full circle drive ensures even water application across the coverage area every time you water.



Dual Trajectory





Features & Benefits - Dual Trajectory Full Circle

- ① **Industry's Largest Nozzle Selection**
Nozzles from 15,8 – 30,5m (52' to 100') plus a wide assortment of back nozzles lets you put the precise amount of water exactly where you need it. All nozzles threaded in from front.
- ② **Stainless Steel Valve Seat**
Eliminates body damage from rocks and debris. This in-destructible stainless steel seat is molded to the body and virtually eliminates body replacements due to seat damage.

- ③ **Five Activation Types**
 - Standard solenoid
 - Spike Guard™ solenoid
 - Nickel plated Spike Guard solenoid
 - DC Latching solenoid (DCLS)
 - Integrated LSM module w/ DCLS available on all FLEX models!
- ④ **Constant Velocity Full Circle Drive**
Ensures consistent rotation speeds when matched with station run times for even water application across the coverage area every time you water.



Industry's Largest Nozzle Selection



Stainless Steel Valve Seat



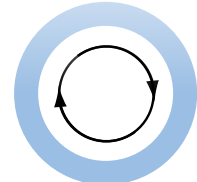
Five Activation Types



Constant Velocity Full-Circle Drive



5



FLEX800™ SERIES GOLF ROTORS FLX34/FLX54



FLX34 Conversion Upgrades

Models	Description
• FLX34-3134	FLX34 w/31–34 Nozzles (#33 Nozzle)
• FLX34-3537	FLX34 w/35–37 Nozzles (#35 Nozzle)



FLX54 Conversion Upgrades

Models	Description
• FLX54-5154	FLX54 w/51–54 Nozzles (#53 Nozzle Installed)
• FLX54-5558	FLX54 w/55–58 Nozzles (#55 Nozzle)
• FLX54-59	FLX54 w/59 Nozzle



Dimensions

Body diameter:

- **FLX34:** 16,5cm (6.5")
- **FLX54:** 19,1cm (7.5")

Body height:

- **FLX34:** 25,4cm (10")
- **FLX54:** 28,9cm (11.375")

Weight:

- **FLX34:** 1,35kg (2.98 lbs.)
- **FLX54:** 1,68kg (3.70 lbs.)

Weight – Integrated with Lynx Smart Module:

- **FLX34:** 1,61kg (3.65 lbs.)
- **FLX54:** 1,92kg (4.24 lbs.)

Features

- Dual Trajectory adjustment on main nozzle - 25° or 15°
- Full circle sprinklers
- Pop-up height to nozzle: 8,3cm (3.25")

Operating Specifications

Inlet

- **FLX34:** 25mm (1") ACME
- **FLX54:** 40mm (1.5") ACME

Radius

- **FLX34:** 15,8 – 27,7m (52' – 91')
- **FLX54:** 15,8 – 30,2m (52' – 99')

Flow Rate:

- **FLX34:** 48,8 – 177,5 LPM (13.0 – 46.9 GPM)
- **FLX54:** 50 – 233,9 LPM (13.2 – 61.8 GPM)

Precipitation Rates:

- **FLX34:** Minimum - 9,8mm/hr (.39"/hr); Maximum - 16,2mm/hr (.64"/hr)
- **FLX54:** Minimum - 9,6mm/hr (.38"/hr); Maximum - 17,3mm/hr (.70"/hr)

Pilot Valve:

- Selectable at 3,4; 4,5; 5,5; and 6,9 Bar (50, 65, 80, 100 psi)

Recommended Operating Pressure Range:

- 4,5-6,9 Bar (65-100 psi)
- Maximum: 10,3 Bar (150 psi)
- Minimum: 2,8 Bar (40 psi)

Activation types – Electric Valve-in-Head:

- Standard Solenoid:
 - 24 VAC, 50/60 Hz
 - Inrush: 0.30 A
 - Holding 0.20 A
- Spike Guard Solenoid:
 - 24 VAC, 50/60 Hz
 - Inrush: 0.12 A
 - Holding 0.10 A
- Nickel-Plated Spike Guard Solenoid:
 - 24 VAC, 50/60 Hz
 - Inrush: 0.12 A
 - Holding 0.10 A
- DC Latching Solenoid (DCLS)
 - Momentary low voltage pulse
- Lynx Smart Module with DCLS
 - Momentary low voltage pulse

Nozzle Selection

- **FLX34** has seven nozzle variation (31, 32, 33, 34, 35, 36 and 37)
- **FLX54** has nine nozzle variations (51, 52, 53, 54, 55, 56, 57, 58 and 59)
- Three opposing nozzles, rotating stream pattern
- Two additional front nozzle positions

Warranty

- Two years; Five years when installed with Toro Swing Joints

Specifying Information—FLX34 & FLX54

FLXX4-XXX-X				
Body Inlet	Arc	Nozzle	Pressure Regulation*	Activation Type
FLXX	4	XX	X	X
3— 25mm (1") 5— 40mm (1.5")	4—Full Circle	FLX34—31, 32, 33, 34, 35, 36, 37 FLX54—51, 52, 53, 54, 55, 56, 57, 58, 59	6— 4,5 bar (65 psi) 8— 5,5 bar (80 psi) 1— 6,9 bar (100 psi)	1—Standard Solenoid 2—Spike Guard™ Solenoid 3—Nickel-plated Spike Guard Solenoid 4—DC Latching Solenoid (DCLS) 5—Integrated GDC Module w/DCLS 6—Integrated LYNX Smart Module w/DCLS
Example: When specifying a FLX34 Series Sprinkler with #34 nozzle, pressure regulation at 4,5 bar (65 psi), and Spike Guard™ Solenoid you would specify: FLX34-346-2				

* Electric models only. All sprinklers are equipped with the selectable pilot valve that allows settings at 3,4; 4,5; 5,5; and 6,9 Bar (50, 65, 80 and 100 psi).



FLEX800™ SERIES GOLF ROTORS FLX34/FLX54

FLX34 Series Performance Chart—25° (Metric)

Front Nozzle Positions			 (Yellow) 102-0725		 (Blue) 102-7001		 (Brown) 102-0727		 (Orange) 102-7002		 (Green) 102-6908		 (Gray) 102-0730		 (Black) 102-4261	
Back Nozzle Positions																
			Yellow 102-6937	Blue 102-2925	Yellow 102-6937	Orange 102-2926	Yellow 102-6937	Red 102-2928	Yellow 102-6937	Beige 102-2929	Yellow 102-6937	Beige 102-2929	Yellow 102-6937	Red 102-2928	Yellow 102-6937	Gray 102-6945
Bar	kPa	kg/cm ²	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
3,4	340	3,47	17,4	49,2	17,7	58,7	19,5	82,9	20,7	92,4	—	—	—	—	—	—
4,5	450	4,59	17,7	55,3	18,3	68,1	20,7	92,4	22,0	106,4	23,2	121,9	—	—	—	—
5,5	550	5,61	18,3	61,3	19,2	77,6	22,0	101,8	23,2	117,7	24,4	134,7	25,3	144,6	25,9	157,1
6,9	690	7,04	18,9	67,8	20,1	88,6	22,9	112,8	24,1	132,1	25,6	148,8	26,8	164,3	27,8	177,5

FLX34 Series Performance Chart—15°

Bar	kPa	kg/cm ²	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
3,4	340	3,47	15,9	48,8	16,2	59,0	18,3	82,1	18,9	96,5	—	—	—	—	—	—
4,5	450	4,59	16,2	54,5	16,5	64,7	18,6	91,6	19,5	106,0	20,4	121,5	—	—	—	—
5,5	550	5,61	17,1	60,6	17,4	71,9	19,8	100,7	21,0	117,3	22,3	134,4	23,2	143,8	23,5	156,3
6,9	690	7,04	17,4	66,2	18,0	77,6	20,4	111,7	21,7	128,3	22,9	145,3	24,4	163,1	24,7	177,1
Stator							102-6929 Blue					102-1940 White				
Conversions							FLX34-3134					FLX34-3537				

FLX54 Series Performance Chart—25° (Metric)

Front Nozzle Positions			 (Yellow) 102-0725		 (Blue) 102-7001		 (Brown) 102-0727		 (Orange) 102-7002		 (Green) 102-6908		 (Gray) 102-0730		 (Black) 102-4261		 (Red) 102-4260		 (Beige) 102-4259	
Back Nozzle Positions																				
			Yellow 102-6937	Blue 102-2925	Yellow 102-6937	Orange 102-2926	Yellow 102-6937	Red 102-2928	Yellow 102-6937	Beige 102-2929	Yellow 102-6937	Beige 102-2929	Yellow 102-6937	Red 102-6944	Yellow 102-6937	Gray 102-6945	Yellow 102-6937	Gray 102-6945	Yellow 102-6937	Gray 102-6945
Bar	kPa	kg/cm ²	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
3,4	340	3,47	17,7	50,0	18,0	59,4	19,5	83,3	21,4	99,2	—	—	—	—	—	—	—	—	—	—
4,5	450	4,59	18,3	56,0	18,6	66,2	20,7	93,9	22,6	110,9	24,1	129,4	—	—	—	—	—	—	—	—
5,5	550	5,61	18,6	62,1	19,5	75,7	22,0	104,5	23,8	123,4	25,3	143,8	25,9	154,0	26,5	169,9	27,8	190,0	29,3	210,4
6,9	690	7,04	19,2	68,5	20,4	89,3	22,9	115,1	24,7	138,9	26,5	160,9	27,5	173,4	28,4	190,0	29,0	209,7	30,2	233,9

FLX54 Series Performance Chart—15°

Bar	kPa	kg/cm ²	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
3,4	340	3,47	15,9	50,0	16,2	59,8	18,6	83,3	19,8	98,4	—	—	—	—	—	—	—	—	—	—
4,5	450	4,59	16,2	56,0	16,5	65,9	19,2	93,9	20,4	110,5	21,0	129,1	—	—	—	—	—	—	—	—
5,5	550	5,61	17,1	62,1	17,7	73,4	20,7	104,5	22,0	123,0	22,9	143,1	24,1	152,9	24,7	168,8	25,9	188,9	26,5	209,3
6,9	690	7,04	17,7	68,5	18,3	79,9	21,7	115,1	22,9	137,8	24,1	160,1	25,6	172,2	26,5	188,9	27,1	208,6	28,7	232,8
Stator							102-6929 Blue					102-1940 White					102-1941 White			
Conversions							FLX54-5154					FLX54-5558					FLX54-59			

Not recommended at these pressures. Radius shown in meter.
 Toro recommends the use of a 30mm swing joint at flows over 95-LPM. Sprinkler radius of throw per ASAE standard S398.1.
 Actual site conditions must be considered when selecting the appropriate nozzle.
 All sprinklers are equipped with the selectable pilot valve that allows settings at 3,4; 4,5; 5,5 and 6,9 Bar.

FLX34 Nozzle Apex—(Metric)

Pressure	Nozzle	Apex at 15°	Apex at 25°
4,5 bar	31	1,8 @ 15,6	4,0 @ 16,5
	32	1,8 @ 15,6	3,4 @ 19,5
	33	2,1 @ 18,0	4,0 @ 20,7
	34	2,4 @ 19,2	4,6 @ 22,6
	35	2,7 @ 20,1	4,6 @ 23,2
5,5 bar	36	2,4 @ 22,9	5,5 @ 25,3
	37	2,7 @ 22,6	5,8 @ 25,0

FLX54 Nozzle Apex—(Metric)

Pressure	Nozzle	Apex at 15°	Apex at 25°
4,5 Bar	51	1,8 @ 15,6	4,0 @ 16,5
	52	1,8 @ 15,6	3,4 @ 19,5
	53	2,1 @ 18,0	4,0 @ 20,7
	54	2,4 @ 19,2	4,6 @ 22,6
	55	2,7 @ 20,1	4,6 @ 23,2
5,5 Bar	56	2,4 @ 22,9	5,5 @ 25,3
	57	2,7 @ 22,6	5,8 @ 25,0
	58	3,0 @ 25,0	5,5 @ 26,5
	59	3,4 @ 24,7	6,4 @ 27,1



FLEX800™ SERIES GOLF ROTORS FLX34/FLX54

FLX34 Series Performance Chart—25° (U.S.)

Front Nozzle Positions	Nozzle Set 31 (Yellow) 102-0725		Nozzle Set 32 (Blue) 102-7001		Nozzle Set 33 (Brown) 102-0727		Nozzle Set 34 (Orange) 102-7002		Nozzle Set 35 (Green) 102-6908		Nozzle Set 36 (Gray) 102-0730		Nozzle Set 37 (Black) 102-4261	
	 Red Plug 102-4335													
Back Nozzle Positions	 Yellow 102-6937	 Blue 102-2925	 Yellow 102-6937	 Orange 102-2926	 Yellow 102-6937	 Red 102-2928	 Yellow 102-6937	 Beige 102-2929	 Yellow 102-6937	 Beige 102-2929	 Yellow 102-6937	 Red 102-2928	 Yellow 102-6937	 Gray 102-6945
PSI	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM
50	57	13.0	58	15.5	64	21.9	68	24.4	—	—	—	—	—	—
65	58	14.6	60	18.0	68	24.4	72	28.1	76	32.2	—	—	—	—
80	60	16.2	63	20.5	72	26.9	76	31.1	80	35.6	83	38.2	85	41.5
100	62	17.9	66	23.4	75	29.8	79	34.9	84	39.3	88	43.4	91	46.9

FLX34 Series Performance Chart—15°

psi	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	
50	52	12.9	53	15.6	60	21.7	62	25.5	—	—	—	—	—	—	
65	53	14.4	54	17.1	61	24.2	64	28.0	67	32.1	—	—	—	—	
80	56	16.0	57	19.0	65	26.6	69	31.0	73	35.5	76	38.0	77	41.3	
100	57	17.5	59	20.5	67	29.5	71	33.9	75	38.4	80	43.1	81	46.8	
Stator	102-6929 Blue								102-1940 White						
Conversions	FLX34-3134								FLX34-3537						

FLX54 Series Performance Chart—25° (U.S.)

Front Nozzle Positions	Nozzle Set 51 (Yellow) 102-0725		Nozzle Set 52 (Blue) 102-7001		Nozzle Set 53 (Brown) 102-0727		Nozzle Set 54 (Orange) 102-7002		Nozzle Set 55 (Green) 102-6908		Nozzle Set 56 (Gray) 102-0730		Nozzle Set 57 (Black) 102-4261		Nozzle Set 58 (Red) 102-4260		Nozzle Set 59 (Beige) 102-4259	
	 Red Plug 102-4335																	
Back Nozzle Positions	 Yellow 102-6937	 Blue 102-2925	 Yellow 102-6937	 Orange 102-2926	 Yellow 102-6937	 Red 102-2928	 Yellow 102-6937	 Beige 102-2929	 Yellow 102-6937	 Beige 102-2929	 Yellow 102-6937	 Red 102-6944	 Yellow 102-6937	 Gray 102-6945	 Yellow 102-6937	 Gray 102-6945	 Yellow 102-6937	 Gray 102-6945
PSI	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM
50	58	13.2	59	15.7	64	22.0	70	26.2	—	—	—	—	—	—	—	—	—	—
65	60	14.8	61	17.5	68	24.8	74	29.3	79	34.2	—	—	—	—	—	—	—	—
80	61	16.4	64	20.0	72	27.6	78	32.6	83	38.0	85	40.7	87	44.9	91	50.2	96	55.6
100	63	18.1	67	23.6	75	30.4	81	36.7	87	42.5	90	45.8	93	50.2	95	55.4	99	61.8

FLX54 Series Performance Chart—15°

psi	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	
50	52	13.2	53	15.8	61	22.0	65	26.0	—	—	—	—	—	—	—	—	—	—	
65	53	14.8	54	17.4	63	24.8	67	29.2	69	34.1	—	—	—	—	—	—	—	—	
80	56	16.4	58	19.4	68	27.6	72	32.5	75	37.8	79	40.4	81	44.6	85	49.9	87	55.3	
100	58	18.1	60	21.1	71	30.4	75	36.4	79	42.3	84	45.5	87	49.9	89	55.1	94	61.5	
Stator	102-6929 Blue								102-1940 White							102-1941 White			
Conversions	FLX54-5154								FLX54-5558							FLX54-59			

■ Not recommended at these pressures. Radius shown in feet.
Toro recommends the use of a 1 1/4" swing joint at flows over 25-GPM. Sprinkler radius of throw per ASAE standard S398.1.
Actual site conditions must be considered when selecting the appropriate nozzle.
All sprinklers are equipped with the selectable pilot valve that allows settings at 50, 65, 80 and 100 psi.

FLX34 Nozzle Apex—(U.S.)

Pressure	Nozzle	Apex at 15°	Apex at 25°
65 PSI	31	6' @ 51'	13' @ 54'
	32	6' @ 51'	11' @ 64'
	33	7' @ 59'	13' @ 68'
	34	8' @ 63'	15' @ 74'
	35	9' @ 66'	15' @ 76'
80 PSI	36	8' @ 75'	18' @ 83'
	37	9' @ 74'	19' @ 82'

FLX54 Nozzle Apex—(U.S.)

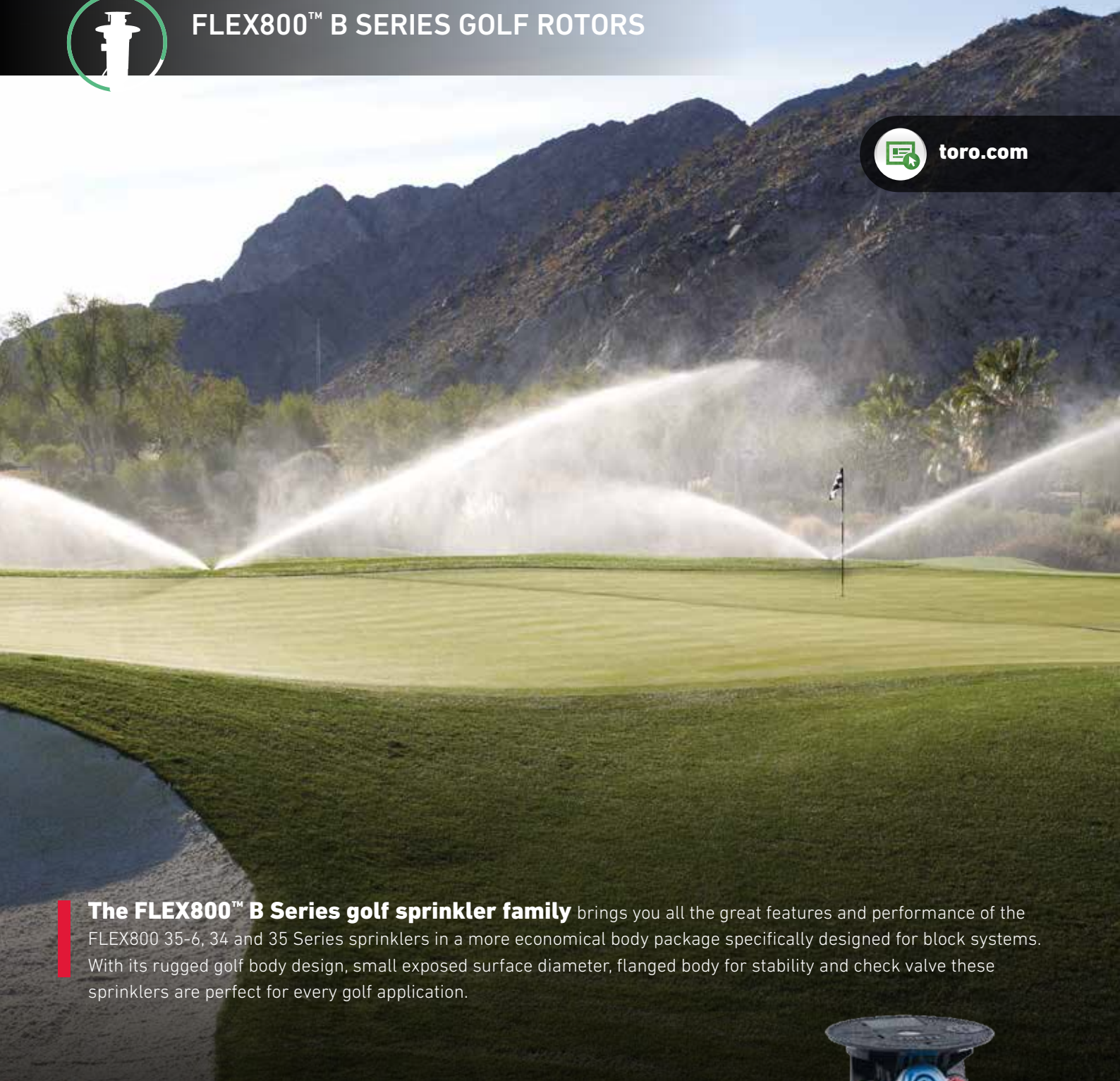
Pressure	Nozzle	Apex at 15°	Apex at 25°
65 PSI	51	6' @ 51'	13' @ 54'
	52	6' @ 51'	11' @ 64'
	53	7' @ 59'	13' @ 68'
	54	8' @ 63'	15' @ 74'
	55	9' @ 66'	15' @ 76'
	56	8' @ 75'	18' @ 83'
80 PSI	57	9' @ 74'	19' @ 82'
	58	10' @ 82'	18' @ 87'
	59	11' @ 81'	21' @ 91'



FLEX800™ B SERIES GOLF ROTORS



toro.com



The FLEX800™ B Series golf sprinkler family brings you all the great features and performance of the FLEX800 35-6, 34 and 35 Series sprinklers in a more economical body package specifically designed for block systems. With its rugged golf body design, small exposed surface diameter, flanged body for stability and check valve these sprinklers are perfect for every golf application.

*Main Nozzle Adapter
A wide assortment of intermediate
and inner nozzles for use in the main
nozzle adapter and back nozzle
position provide unmatched nozzle
flexibility.*





FLEX800™ B SERIES GOLF ROTORS

Features & Benefits

- 1 Industry's Largest Nozzle Selection**
Nozzles from 7,6 – 29,0m (25' to 95') radius, plus a wide assortment of intermediate and inner nozzles, provide unmatched flexibility allowing you to put the precise amount of water exactly where you need it. All nozzles threaded in from front.
- 2 True Part and Full-Circle in One – 40° - 330° Part Circle and 360° Full Circle**
These sprinklers can be 360° full circle or part circle allowing you to adjust the area of coverage to match your seasonal needs or meet water rationing mandates.

- 3 Flanged Cap Installs Below Grade**
Stabilizes the body position and maintains optimum nozzle performance.
- 4 Small Exposed Diameter**
Minimizes the appearance of the sprinkler to maximize the beauty of the course. Perfect for high traffic areas like tees, greens and surrounds.



Industry's Largest Nozzle Selection



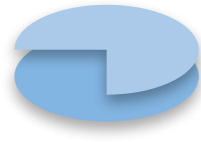
True Part and Full-Circle in One



Below Grade-Installed Flanged Cap



Small Exposed Diameter



FLEX800™ B SERIES GOLF ROTORS



Nozzle Trajectory Provides Unmatched Performance
FLX35-6B with TruJectory™ adjustment from 7°-30° in 1° increments and FLX35/FLX34 models with dual trajectory settings of 25° or 15° provide improved wind performance, obstacle avoidance and radius adjustment.



Features

- Ratcheting riser
- Nozzle base clutching – Part circle models

Operating Specifications

- Inlet:
 - 25mm (1") NPT, BSP or ACME
- Radius:
 - FLX35-6B: 9m – 29m (29' – 95')
 - FLX35B: 9m – 27m (29' – 90')
 - FLX34B: 17m – 29m (57' – 95')
- Flow Rate:
 - FLX35-6B: 26,8 – 198,7 LPM (7.1 – 52.5 gpm)
 - FLX35B: 31,0 – 213,1 LPM (8.2 – 56.3 gpm)
 - FLX34B: 49,2 – 209,7 LPM (13.0 – 55.4 gpm)
- Precipitation Rates:
 - FLX35-6B: 9,8 – 16,3mm/hr (.39 – .64"/hr)
 - FLX35B: 10,8 – 19,4mm/hr (.43 – .76"/hr)
 - FLX34B: 9,8 – 16,2mm/hr (.39 – .64"/hr)
- Recommended Operating Pressure
 - 4,4 – 6,9 Bar (65-100 psi)
- Trajectory:
 - FLX35-6B – 7°-30° in 1° increments; 24 positions
 - FLX35B – 15° or 25° – 2 positions
 - FLX34B – 15° or 25° – 2 positions
- Check-O-Matic feature prevents low head drainage up to 10' of elevation change

Nozzle Selection

- Nozzle variations
 - FLX35-6B – Nine variations (30, 31, 32, 33, 34, 35, 36, 37 & 38)
 - FLX35B – Nine variations (30, 31, 32, 33, 34, 35, 36, 37 & 38)
 - FLX34B – Eight variations (31, 32, 33, 34, 35, 36, 37 & 38)
- Back nozzle capability on part circle models standard
 - FLX35-6B – one position available
 - FLX35B – two positions available
- FLX34B – two additional front nozzle positions
- Main-less capability for short radius applications
- Stator variations:
 - FLX35-6B, FLX35: 3
 - FLX34: 2
- Radius reduction screw for fine tuning the radius (363-4839). Standard on FLX35B; optional on FLX34B and not available on FLX35-6B models

Dimensions

- Body diameter: 15,2cm (6")
- Body height: 21,6cm (8.5")
- Weight:
 - FLX35-6B: 0,9kg (1.99 lbs)
 - FLX35B: 0,9kg (2 lbs)
 - FLX34B: 0,89kg (1.97 lbs)
- Pop-up height to nozzle: 8,25cm (3.25")

Warranty

- Two years; Five years when installed with Toro Swing Joints

Specifying Information – B Series

FLX3XB-X2-XXXX					
Series	Arc	System	Thread Type	Valve Type	Nozzle
FLX3	X	B	X	2	XXXX
FLX3—FLEX800 B Series	4—Full-Circle (DT only) 5—Part-/Full-Circle 5-6--Part-/Full-Circle with TruJectory	B—Block	0—NPT 4—ACME 5—BSP	Check-O-Matic	3134— Includes nozzles #31, 32, 33 & 34 3538— Includes nozzles #35, 36, 37 & 38

Example: When specifying a FLEX800 B Series Sprinkler with full circle - NPT threads, #34 nozzle, you would specify: **FLX34B-02-3134**



FLEX800™ B SERIES GOLF ROTORS

FLX35-6B Series Performance Chart—25° (Metric)

Base Pressure			Nozzle Set 30 (White) 102-2208		Nozzle Set 31 (Yellow) 102-4587		Nozzle Set 32 (Blue) 102-4588		Nozzle Set 33 (Brown) 102-4589		Nozzle Set 34 (Orange) 102-0728		Nozzle Set 35 (Green) 102-0729		Nozzle Set 36 (Gray) 102-0730		Nozzle Set 37 (Black) 102-4261		Nozzle Set 38 (Red) 102-6909	
			Blue 102-2925	Gray 102-2910	Blue 102-2925	Gray 102-2910	Red 102-2928	Gray 102-2910	Orange 102-2926	Gray 102-2910	Orange 102-2926	Gray 102-2910	Blue 102-2925	Gray 102-2910	Blue 102-2925	Gray 102-2910	Orange 102-2926	Gray 102-2910	Blue 102-2925	Gray 102-2910
			Back Nozzle 102-4335 Red Plug																	
Bar	kPa	kg/cm ²	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
3.5	345	3.52	13	26,9	16	53,0	18	68,1	—	—	—	—	—	—	—	—	—	—	—	—
4,1	414	4,22	13	30,0	16	57,5	18	73,9	20	82,9	—	—	—	—	—	—	—	—	—	—
4,8	483	4,92	14	33,1	17	62,1	19	79,6	21	89,3	23	123,8	23	133,2	—	—	—	—	—	—
5,5	552	5,63	14	36,3	17	65,9	20	85,5	21	95,8	23	132,9	24	142,7	26	149,9	26	164,3	27	179,8
6,2	621	6,33	14	39,4	18	70,0	21	90,5	22	101,2	24	140,0	25	151,0	26	158,6	27	173,7	28	189,3
6,9	689	7,03	15	42,4	18	73,4	21	95,4	23	106,7	24	147,2	26	158,2	27	166,9	27	183,2	29	198,7
Stator			102-6929 Blue						102-1939 Yellow						102-1940 White					
Conversions			INF35-6-3134 (Requires screen replacement)												INF35-6-3537 (Requires screen replacement)					

FLX35B Series Performance Chart—25° (Metric)

Front Nozzle Positions			Nozzle Set 30 (White Plug) 102-2208		Nozzle Set 31 (Yellow) 102-6906		Nozzle Set 32 (Blue) 102-0726		Nozzle Set 33 (Brown) 102-6907		Nozzle Set 34 (Orange) 102-0728		Nozzle Set 35 (Green) 102-6955		Nozzle Set 36 (Gray) 102-6935		Nozzle Set 37 (Black) 102-6936		Nozzle Set 38 (Red) 102-6909	
			Yellow 102-5670	Beige 102-6942	Yellow 102-5670	Brown 102-5671	Yellow 102-5670	Yellow 102-6884	Yellow 102-5670	Yellow 102-6884	Yellow 102-5670	Yellow 102-6884	Yellow 102-5670	Yellow 102-6884	Green 102-6885	Green 102-6531	Green 102-6885	Green 102-6531	Green 102-6885	Green 102-6531
			Back Nozzles 102-4335 Red Plug																	
Bar	kPa	kg/cm ²	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm
3.5	345	3.52	13	31,0	17	51,5	17	69,3	—	—	—	—	—	—	—	—	—	—	—	—
4,1	414	4,22	13	35,2	17	56,8	18	76,1	19	91,6	—	—	—	—	—	—	—	—	—	—
4,8	483	4,92	14	39,3	18	61,3	18	82,5	20	99,5	21	113,6	22	140,0	—	—	—	—	—	—
5,5	552	5,63	14	43,5	18	65,5	19	88,2	20	106,0	22	121,5	23	149,9	24	162,4	24	184,0	26	191,5
6,2	621	6,33	14	47,1	18	69,6	19	93,5	21	112,8	22	129,4	23	159,0	24	171,8	25	194,9	27	202,9
6,9	689	7,03	14	50,7	19	73,1	20	98,4	21	118,8	23	135,9	24	167,3	25	184,7	25	205,1	27	213,1
Stator			102-6929 Blue						102-1939 Yellow						102-1940 White					
Conversions			FLX35-3134 (Requires screen replacement)												FLX35-3537 (Requires screen replacement)					

FLX34B Series Performance Chart—25° (Metric)

Front Nozzle Positions			Nozzle Set 31 (Yellow) 102-0725		Nozzle Set 32 (Blue) 102-7001		Nozzle Set 33 (Brown) 102-0727		Nozzle Set 34 (Orange) 102-7002		Nozzle Set 35 (Green) 102-6908		Nozzle Set 36 (Gray) 102-0730		Nozzle Set 37 (Black) 102-4261		Nozzle Set 38 (Red) 102-4260			
			Yellow 102-6937	Blue 102-2925	Yellow 102-6937	Orange 102-2926	Yellow 102-6937	Red 102-2928	Yellow 102-6937	Beige 102-2929	Yellow 102-6937	Beige 102-2929	Yellow 102-6937	Red 102-6944	Yellow 102-6937	Gray 102-6945	Yellow 102-6937	Gray 102-6945		
			Front Nozzles 102-4335 Red Plug																	
Bar	kPa	kg/cm ²	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm
3,5	345	3,52	17	49,2	18	58,7	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4,1	414	4,22	18	53,2	18	64,9	20	89,3	—	—	—	—	—	—	—	—	—	—	—	—
4,8	483	4,92	18	58,7	19	68,9	21	99,2	22	113,6	24	135,1	—	—	—	—	—	—	—	—
5,5	552	5,63	18	61,3	19	77,6	22	105,6	23	121,5	24	144,6	25	154,8	26	159,3	28	190,0	—	—
6,2	621	6,33	19	66,2	20	83,1	22	112,2	24	128,9	25	153,1	26	164,1	27	168,4	28	199,8	—	—
6,9	689	7,03	19	71,2	20	88,6	23	118,8	24	136,3	26	161,6	27	173,4	28	177,5	29	209,7	—	—
Stator			102-6929 Blue									102-1940 White								
Conversions			FLX34-3134 (Requires screen replacement)									FLX34-3537 (Requires screen replacement)								

■ Not recommended at these pressures. Radius shown in meter.
 Toro recommends the use of a 30mm swing joint at flows over 95-LPM. Sprinkler radius data collected in Toro's zero wind test facility per ASAE standard S398.1.
 Actual site conditions must be considered when selecting the appropriate nozzle.
 All sprinklers are equipped with the selectable pilot valve that allows settings at 3,4; 4,5; 5,5; and 6,9 Bar.



FLEX800™ B SERIES GOLF ROTORS

FLX35-6B Series Performance Chart—25° (U.S.)

Base Pressure	Nozzle Set 30 (White) 102-2208		Nozzle Set 31 (Yellow) 102-4587		Nozzle Set 32 (Blue) 102-4588		Nozzle Set 33 (Brown) 102-4589		Nozzle Set 34 (Orange) 102-0728		Nozzle Set 35 (Green) 102-0729		Nozzle Set 36 (Gray) 102-0730		Nozzle Set 37 (Black) 102-4261		Nozzle Set 38 (Red) 102-6909									
	Blue	Gray	Blue	Gray	Red	Gray	Orange	Gray	Orange	Gray	Blue	Gray	Blue	Gray	Orange	Gray	Blue	Gray								
	102-2925	102-2910	102-2925	102-2910	102-2928	102-2910	102-2926	102-2910	102-2926	102-2910	102-2925	102-2910	102-2925	102-2910	102-2926	102-2910	102-2925	102-2910								
Back Nozzle 102-4335 Red Plug																										
PSI	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM								
50	42	7.1	52	14.0	58	18.0	—	—	—	—	—	—	—	—	—	—	—	—								
60	43	7.9	54	15.2	60	19.5	66	21.9	—	—	—	—	—	—	—	—	—	—								
70	45	8.8	55	16.4	63	21.0	68	23.6	74	32.7	77	35.2	—	—	—	—	—	—								
80	46	9.6	57	17.4	65	22.6	70	25.3	77	35.1	79	37.7	84	39.6	86	43.4	90	47.5								
90	47	10.4	58	18.5	68	23.9	72	26.8	79	37.0	82	39.9	86	41.9	88	45.9	93	50.0								
100	48	11.2	59	19.4	70	25.2	74	28.2	80	38.9	84	41.8	88	44.1	90	48.4	95	52.5								
Stator	102-6929 Blue										102-1939 Yellow								102-1940 White							
Conversions											INF35-6-3134 (Requires screen replacement)								INF35-6-3537 (Requires screen replacement)							

FLX35B Series Performance Chart—25° (U.S.)

Front Nozzle Positions	Nozzle Set 30 (White Plug) 102-2208		Nozzle Set 31 (Yellow) 102-6906		Nozzle Set 32 (Blue) 102-0726		Nozzle Set 33 (Brown) 102-6907		Nozzle Set 34 (Orange) 102-0728		Nozzle Set 35 (Green) 102-6955		Nozzle Set 36 (Gray) 102-6935		Nozzle Set 37 (Black) 102-6936		Nozzle Set 38 (Red) 102-6909									
	Yellow	Beige	Yellow	Brown	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Green	Green	Green	Green	Green	Green	Green								
	102-5670	102-6942	102-5670	102-5671	102-5670	102-6884	102-5670	102-6884	102-5670	102-6884	102-5670	102-6885	102-6531	102-6885	102-6531	102-6885	102-6531	102-6885								
Back Nozzles 102-4335 Red Plug																										
PSI	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM								
50	43	8.2	55	13.6	56	18.3	—	—	—	—	—	—	—	—	—	—	—	—								
60	44	9.3	56	15.0	58	20.1	63	24.2	—	—	—	—	—	—	—	—	—	—								
70	45	10.4	58	16.2	60	21.8	65	26.3	69	30.0	73	37.0	—	—	—	—	—	—								
80	46	11.5	59	17.3	62	23.3	67	28.0	71	32.1	75	39.6	78	42.9	80	48.6	85	50.6								
90	47	12.5	60	18.4	64	24.7	69	29.8	73	34.2	77	42.0	80	45.4	82	51.5	88	53.6								
100	47	13.4	61	19.3	65	26.0	70	31.4	74	35.9	79	44.2	81	48.8	83	54.2	90	56.3								
Stator	102-6929 Blue										102-1939 Yellow								102-1940 White							
Conversions											FLX35-3134 (Requires screen replacement)								FLX35-3537 (Requires screen replacement)							

FLX34B Series Performance Chart—25° (U.S.)

Front Nozzle Positions	Nozzle Set 31 (Yellow) 102-0725		Nozzle Set 32 (Blue) 102-7001		Nozzle Set 33 (Brown) 102-0727		Nozzle Set 34 (Orange) 102-7002		Nozzle Set 35 (Green) 102-6908		Nozzle Set 36 (Gray) 102-0730		Nozzle Set 37 (Black) 102-4261		Nozzle Set 38 (Red) 102-4260		
	Yellow	Blue	Yellow	Orange	Yellow	Red	Yellow	Beige	Yellow	Beige	Yellow	Red	Yellow	Gray	Yellow	Gray	
	102-6937	102-2925	102-6937	102-2926	102-6937	102-2928	102-6937	102-2929	102-6937	102-2929	102-6937	102-6944	102-6937	102-6945	102-6937	102-6945	
Front Nozzles 102-4335 Red Plug																	
PSI	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	
50	57	13.0	58	15.5	—	—	—	—	—	—	—	—	—	—	—	—	
60	58	14.1	60	17.2	67	23.6	—	—	—	—	—	—	—	—	—	—	
70	59	15.5	61	18.2	69	26.2	73	30.0	78	35.7	—	—	—	—	—	—	
80	60	16.2	63	20.5	72	27.9	76	32.1	80	38.2	83	40.9	85	42.1	91	50.2	
90	61	17.5	65	22.0	74	29.7	78	34.1	82	40.5	86	43.4	88	44.5	93	52.8	
100	62	18.8	66	23.4	75	31.4	79	36.0	84	42.7	88	45.8	91	46.9	95	55.4	
Stator	102-6929 Blue										102-1940 White						
Conversions	FLX34-3134 (Requires screen replacement)										FLX34-3537 (Requires screen replacement)						

■ Not recommended at these pressures. Radius shown in feet.

Toro recommends the use of a 1.25" swing joint at flows over 25-GPM. Sprinkler radius data collected in Toro's zero wind test facility per ASAE standard S398.1. Actual site conditions must be considered when selecting the appropriate nozzle.

All sprinklers are equipped with the selectable pilot valve that allows settings at 50, 65, 80 and 100 psi.



MAIN NOZZLE ADAPTER PERFORMANCE CHARTS

Intermediate Nozzle Performance Charts

102-2929 Beige		Trajectory		30°		25°		20°		15°		10°		7°	
Pressure		Flow		Radius		Radius		Radius		Radius		Radius		Radius	
PSI	BAR	LPM	GPM	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet
50	3,4	30,7	8.1	17.4	53	17.1	52	16.4	50	15.7	48	14.8	45	13.8	42
60	4,1	33,7	8.9	18.7	57	18.4	56	17.4	53	16.7	51	15.4	47	14.8	45
65	4,5	35,2	9.3	19.0	58	18.4	56	17.7	54	16.7	51	16.1	49	15.1	46
70	4,8	36,3	9.6	19.4	59	18.7	57	18.4	56	17.4	53	16.4	50	15.7	48
80	5,5	39,0	10.3	20.0	61	19.7	60	19.0	58	18.4	56	17.4	53	16.4	50
90	6,2	41,3	10.9	20.7	63	20.0	61	19.4	59	18.7	57	17.7	54	16.7	51
100	6,9	43,5	11.5	21.3	65	20.7	63	19.7	60	19.0	58	18.0	55	16.7	51



102-2928 Red		Trajectory		30°		25°		20°		15°		10°		7°	
Pressure		Flow		Radius		Radius		Radius		Radius		Radius		Radius	
PSI	BAR	LPM	GPM	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet
50	3,4	23,8	6.3	17.4	53	16.7	51	15.7	48	15.1	46	14.1	43	13.1	40
60	4,1	26,5	7.0	18.0	55	17.4	53	16.4	50	15.7	48	14.8	45	13.8	42
65	4,5	27,3	7.2	18.4	56	17.7	54	17.1	52	16.1	49	15.4	47	14.4	44
70	4,8	28,4	7.5	18.7	57	18.0	55	17.4	53	16.7	51	16.1	49	15.1	46
80	5,5	30,3	8.0	19.4	59	19.0	58	18.4	56	17.7	54	17.1	52	16.1	49
90	6,2	32,2	8.5	19.7	60	19.0	58	18.7	57	18.0	55	17.4	53	16.4	50
100	6,9	34,1	9.0	20.0	61	19.4	59	18.7	57	18.0	55	17.4	53	16.4	50



102-2927 Gray		Trajectory		30°		25°		20°		15°		10°		7°	
Pressure		Flow		Radius		Radius		Radius		Radius		Radius		Radius	
PSI	BAR	LPM	GPM	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet
50	3,4	18,9	5.0	16.4	50	15.7	48	15.1	46	14.4	44	13.5	41	12.5	38
60	4,1	20,8	5.5	17.1	52	16.4	50	15.7	48	15.1	46	14.1	43	13.1	40
65	4,5	21,6	5.7	17.4	53	16.7	51	16.1	49	15.1	46	14.4	44	13.5	41
70	4,8	22,3	5.9	17.4	53	16.7	51	16.1	49	15.4	47	14.8	45	13.8	42
80	5,5	23,8	6.3	17.7	54	17.1	52	16.4	50	15.7	48	15.1	46	14.1	43
90	6,2	25,4	6.7	18.0	55	17.4	53	17.1	52	16.4	50	15.7	48	14.8	45
100	6,9	26,9	7.1	18.0	55	17.7	54	17.4	53	17.1	52	16.4	50	15.1	46



102-2926 Orange		Trajectory		30°		25°		20°		15°		10°		7°	
Pressure		Flow		Radius		Radius		Radius		Radius		Radius		Radius	
PSI	BAR	LPM	GPM	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet
50	3,4	16,3	4.3	15.7	48	15.1	46	14.4	44	13.8	42	12.8	39	11.5	35
60	4,1	17,8	4.7	16.4	50	15.7	48	15.1	46	14.4	44	13.5	41	12.5	38
65	4,5	18,5	4.9	16.7	51	16.1	49	15.4	47	14.8	45	13.8	42	12.8	39
70	4,8	19,3	5.1	16.7	51	16.4	50	15.7	48	15.1	46	14.1	43	13.1	40
80	5,5	20,4	5.4	17.1	52	16.7	51	16.4	50	15.7	48	14.8	45	13.8	42
90	6,2	22,0	5.8	17.4	53	17.1	52	16.7	51	16.1	49	15.4	47	14.4	44
100	6,9	23,1	6.1	17.7	54	17.4	53	17.1	52	16.4	50	15.7	48	14.8	45



102-2925 Blue		Trajectory		30°		25°		20°		15°		10°		7°	
Pressure		Flow		Radius		Radius		Radius		Radius		Radius		Radius	
PSI	BAR	LPM	GPM	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet
50	3,4	10,2	2.7	13.8	42	13.5	41	12.8	39	12.5	38	11.8	36	11.2	34
60	4,1	11,4	3.0	14.1	43	13.8	42	13.1	40	12.8	39	12.1	37	11.5	35
65	4,5	12,1	3.2	14.1	43	13.8	42	13.1	40	12.8	39	12.1	37	11.5	35
70	4,8	12,5	3.3	14.4	44	13.8	42	13.5	41	12.8	39	12.5	38	11.8	36
80	5,5	13,2	3.5	14.4	44	14.1	43	13.5	41	13.1	40	12.5	38	11.8	36
90	6,2	14,0	3.7	14.8	45	14.4	44	13.8	42	13.5	41	12.8	39	12.1	37
100	6,9	14,8	3.9	14.8	45	14.4	44	14.1	43	13.8	42	13.1	40	12.5	38



MAIN NOZZLE ADAPTER PERFORMANCE CHARTS

102-6885 Green		Trajectory		30°		25°		20°		15°		10°		7°	
Pressure		Flow		Radius		Radius		Radius		Radius		Radius		Radius	
PSI	BAR	LPM	GPM	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet
50	3,4	20,4	5,4	16,7	51	16,4	50	15,7	48	14,8	45	13,8	42	12,8	39
60	4,1	22,3	5,9	17,1	52	16,7	51	16,1	49	15,1	46	14,1	43	13,5	41
65	4,5	23,1	6,1	17,1	52	16,7	51	16,4	50	15,4	47	14,4	44	13,8	42
70	4,8	23,8	6,3	17,4	53	17,1	52	16,4	50	15,4	47	14,4	44	13,8	42
80	5,5	25,4	6,7	17,4	53	17,1	52	16,7	51	15,7	48	14,8	45	14,1	43
90	6,2	26,9	7,1	17,7	54	17,4	53	17,1	52	16,4	50	15,4	47	14,8	45
100	6,9	28,0	7,4	18,0	55	18,0	55	17,7	54	17,1	52	16,1	49	15,4	47

102-6884 Yellow		Trajectory		30°		25°		20°		15°		10°		7°	
Pressure		Flow		Radius		Radius		Radius		Radius		Radius		Radius	
PSI	BAR	LPM	GPM	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet
50	3,4	15,5	4,1	15,7	48	15,4	47	14,8	45	13,5	41	12,5	38	11,5	35
60	4,1	17,0	4,5	16,1	49	15,7	48	15,4	47	14,4	44	13,5	41	12,5	38
65	4,5	17,8	4,7	16,4	50	16,1	49	15,7	48	14,8	45	13,8	42	12,8	39
70	4,8	18,2	4,8	16,4	50	16,1	49	15,7	48	14,8	45	14,1	43	13,1	40
80	5,5	19,3	5,1	16,7	51	16,4	50	16,1	49	15,4	47	14,4	44	13,5	41
90	6,2	20,4	5,4	17,4	53	17,1	52	16,4	50	15,7	48	14,8	45	13,8	42
100	6,9	22,0	5,8	17,7	54	17,4	53	16,7	51	16,1	49	15,1	46	14,1	43

102-6883 Brown		Trajectory		30°		25°		20°		15°		10°		7°	
Pressure		Flow		Radius		Radius		Radius		Radius		Radius		Radius	
PSI	BAR	LPM	GPM	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet
50	3,4	9,1	2,4	13,5	41	13,1	40	12,5	38	11,8	36	10,8	33	9,8	30
60	4,1	9,8	2,6	14,1	43	13,8	42	13,1	40	12,5	38	11,8	36	10,8	33
65	4,5	10,2	2,7	14,4	44	13,8	42	13,5	41	12,8	39	12,1	37	11,2	34
70	4,8	10,6	2,8	14,8	45	14,1	43	13,8	42	13,1	40	12,5	38	11,5	35
80	5,5	11,4	3,0	15,1	46	14,8	45	14,1	43	13,5	41	13,1	40	11,8	36
90	6,2	12,1	3,2	15,1	46	14,8	45	14,4	44	13,8	42	13,5	41	12,1	37
100	6,9	12,9	3,4	15,1	46	14,8	45	14,4	44	14,1	43	13,5	41	12,5	38

Inner Nozzle Performance Charts*

102-6937 Yellow		Trajectory		30°		25°		20°	
Pressure		Flow		Radius		Radius		Radius	
PSI	BAR	LPM	GPM	Meters	Feet	Meters	Feet	Meters	Feet
50	3,4	14,0	3,7	8,5	26	7,9	24	6,6	20
60	4,1	15,1	4,0	9,2	28	8,2	25	7,2	22
65	4,5	15,9	4,2	9,2	28	8,2	25	7,2	22
70	4,8	16,7	4,4	9,2	28	8,5	26	7,5	23
80	5,5	17,8	4,7	9,2	28	8,5	26	7,9	24
90	6,2	18,9	5,0	9,5	29	8,9	27	8,2	25
100	6,9	19,7	5,2	9,8	30	9,5	29	8,9	27

102-6531 Green		Trajectory		30°		25°		20°	
Pressure		Flow		Radius		Radius		Radius	
PSI	BAR	LPM	GPM	Meters	Feet	Meters	Feet	Meters	Feet
50	3,4	15,1	4,0	10,5	32	9,8	30	8,5	26
60	4,1	16,3	4,3	11,2	34	10,2	31	8,9	27
65	4,5	17,0	4,5	11,2	34	10,2	31	8,9	27
70	4,8	17,8	4,7	11,2	34	10,2	31	9,2	28
80	5,5	18,9	5,0	11,2	34	10,5	32	9,5	29
90	6,2	20,1	5,3	11,2	34	10,5	32	9,5	29
100	6,9	21,2	5,6	11,5	35	10,8	33	9,8	30



* Not recommended below 20°



FLEX800™ R SERIES CONVERSION UPGRADES

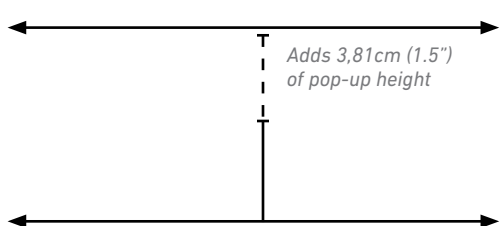


toro.com



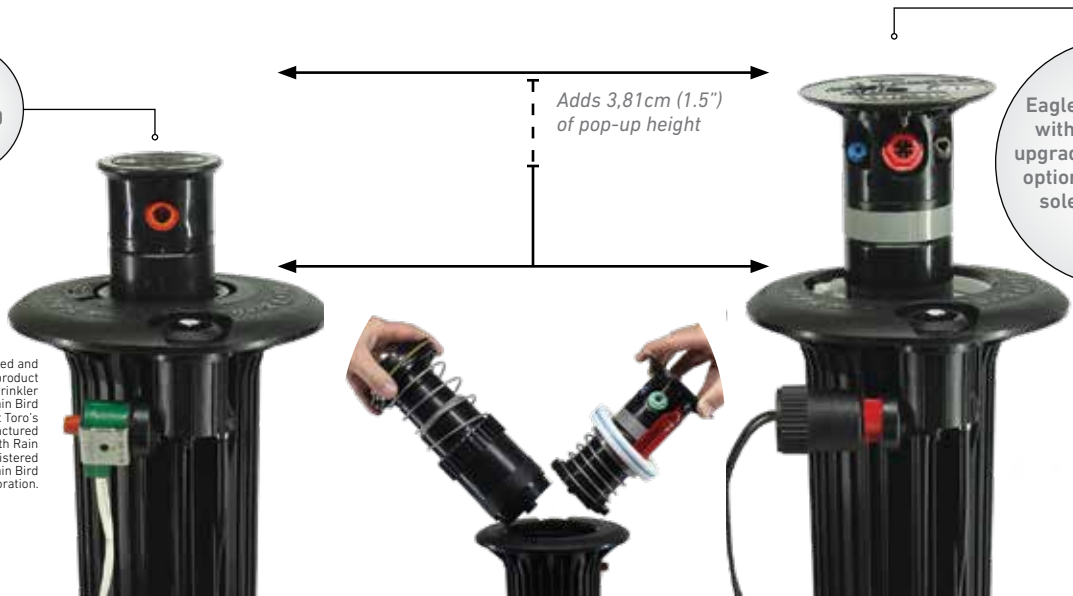
The Toro FLEX800™ R Series Conversion Upgrades enable customers with existing Rain Bird® Eagle™ 900 and 1100 Series sprinklers to upgrade to Toro's industry leading sprinkler technology. The benefits of upgrading include the patented TruJectory™ adjustment, full and part circle in the same sprinkler, the ability to ratchet the riser and clutch the nozzle base, and an extra 3,81cm (1.5") pop-up height.

Rain Bird Eagle 900



Rain Bird Eagle 900 upgraded with Toro R Series upgrade assembly and optional Spike Guard solenoid/adaptor

Toro has designed and manufactured this product to fit within a sprinkler housing made by Rain Bird Corporation, but Toro's product is not manufactured by or affiliated with Rain Bird. Rain Bird is a registered trademark of Rain Bird Corporation.





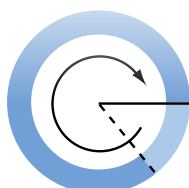
FLEX800™ R SERIES CONVERSION UPGRADES

Features & Benefits

- ① **Industry's Largest Nozzle Selection**
Nozzles from 12,8 – 30,5m (42' to 100') radius plus a wide assortment of back nozzles lets you put the precise amount of water exactly where you need it.
- ② **Ratcheting riser**
Align part circle quickly and easily or adjust watering locations to suit seasonal needs. (only FLX55-6RB and FLX55RB).
- ③ **Dual Trajectory**
The 25° setting provides maximum distance of throw and the 15° setting provides improved wind performance, radius reduction and obstacle avoidance (FLX54RB & FLX55RB).
- ④ **True Part and Full-Circle in One – 40° - 330° Part Circle and 360° Full Circle**
These sprinklers can be 360° full circle today and part circle tomorrow allowing you to simply and economically adjust the area of coverage to match your seasonal needs or meet water rationing mandates (FLX55-6RB & FLX55RB).
- ⑤ **20,000 Volt Lightning Rating**
Spike Guard™ solenoid virtually eliminates the need for replacements in high lightning areas. Draws half the amperage of traditional solenoids so you can run twice as many sprinklers simultaneously, reduce the cost of wire during installation or increase the distance from controller to sprinkler.



Industry's Largest **1** Nozzle Selection Ratcheting **2** Riser Dual **3** Trajectory True Part and **Full-Circle in One**



Toro has designed and manufactured this product to fit within a sprinkler housing made by Rain Bird Corporation, but Toro's product is not manufactured by or affiliated with Rain Bird. Rain Bird is a registered trademark of Rain Bird Corporation.

FLEX800™ R SERIES CONVERSION UPGRADES



SPECIFICATIONS

Operational

- Ratcheting riser allows riser positioning without riser removal.
- Recommended Operating Pressure Range: 4,1 6,9 Bar (60-100 psi) (maximum – 10,3 Bar (150 psi) and minimum – 2,7 Bar (40 psi)
- Radius reduction screw for radius refinement
- Riser pull-up feature simplifies servicing
- Yardage marker capable
- 8,26cm (3.25") pop-up clears tall grasses

Nozzles

- 4 main nozzle combinations included provides a wide range of radius and flow capabilities.
- Back nozzle capable (FLX55-6RB & FLX55RB)
- Two additional front nozzle positions (FLX54RB only)
- Nozzle base clutching (FLX55-6RB & FLX55RB) allows nozzle base movement by hand
- All nozzles threaded from the front with no disassembly required.



Specifying Information—R Series Conversion Assemblies

Model Number	Description
FLX55-6RB-5154	R Series Conversion with FLX55-6 riser assembly and low flow nozzle set #51 - #54
FLX55-6RB-5558	R Series Conversion with FLX55-6 riser assembly and high flow nozzle set #55 - #58
FLX55RB-5154	R Series Conversion with FLX55 riser assembly and low flow nozzle set #51 - #54
FLX55RB-5558	R Series Conversion with FLX55 riser assembly and high flow nozzle set #55 - #58
FLX54RB-5154	R Series Conversion with FLX54 riser assembly and low flow nozzle set #51 - #54
FLX54RB-5558	R Series Conversion with FLX54 riser assembly and high flow nozzle set #55 - #58

Specifying Information—R Series Solenoid Adapters

Model Number	Description
SPIKEGUARD-RB	Toro solenoid adapter with Spike Guard™ solenoid for Rain Bird Eagle 700, 900 or 1100 Series sprinklers

Toro® has designed and manufactured this product to fit within a sprinkler housing made by Rain Bird® Corporation, but Toro's product is not manufactured by or affiliated with Rain Bird. Rain Bird is a registered trademark of Rain Bird Corporation.



MAIN NOZZLE DATA

FLX55-6RB-5154 Performance Chart—(Metric)										FLX55-6RB-5558 Performance Chart—(Metric)									
Front Nozzle Positions	Nozzle Set 51 (Yellow) 102-4587		Nozzle Set 52 (Blue) 102-4588		Nozzle Set 53 (Brown) 102-4589		Nozzle Set 54 (Orange) 102-0728		Nozzle Set 55 (Green) 102-0729		Nozzle Set 56 (Gray) 102-0730		Nozzle Set 57 (Black) 102-4261		Nozzle Set 58 (Red) 102-4260				
	 Blue 102-2925	 Gray 102-2910	 Red 102-2928	 Gray 102-2910	 Orange 102-2926	 Gray 102-2910	 Orange 102-2926	 Gray 102-2910	 Blue 102-2925	 Gray 102-2910	 Blue 102-2925	 Gray 102-2910	 Orange 102-2926	 Gray 102-2910	 Blue 102-2925	 Gray 102-2910			
Back Nozzle Positions	 Red Plug 102-4335																		
Bar	kPa	kg/cm ²	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	
4,1	414	4,22	16,8	60,9	19,2	76,8	21,0	88,6	22,9	118,5	—	—	—	—	—	—	—	—	
4,8	483	4,92	17,1	65,9	20,1	82,5	21,3	95,8	23,2	127,9	—	—	—	—	—	—	—	—	
5,5	552	5,63	17,4	70,0	20,7	88,2	21,9	102,2	23,5	136,3	24,4	148,0	25,9	155,2	26,8	171,9	28,0	188,1	
6,2	621	6,33	17,7	73,4	21,3	92,7	22,9	107,9	24,1	144,2	25,3	157,1	26,5	164,7	27,7	182,5	28,6	199,9	
6,9	689	7,03	18,0	77,6	21,9	98,0	23,2	113,6	24,4	152,2	26,2	165,4	27,4	173,0	28,6	191,5	29,3	209,3	
Stator		102-1939 Yellow									102-1940 White								
Conversion		FLX55-6RB-5154									FLX55-6RB-5558								

FLX55-6RB-5154 Performance Chart—(U.S.)										FLX55-6RB-5558 Performance Chart—(U.S.)									
Front Nozzle Positions	Nozzle Set 51 (Yellow) 102-4587		Nozzle Set 52 (Blue) 102-4588		Nozzle Set 53 (Brown) 102-4589		Nozzle Set 54 (Orange) 102-0728		Nozzle Set 55 (Green) 102-0729		Nozzle Set 56 (Gray) 102-0730		Nozzle Set 57 (Black) 102-4261		Nozzle Set 58 (Red) 102-4260				
	 Blue 102-2925	 Gray 102-2910	 Red 102-2928	 Gray 102-2910	 Orange 102-2926	 Gray 102-2910	 Orange 102-2926	 Gray 102-2910	 Blue 102-2925	 Gray 102-2910	 Blue 102-2925	 Gray 102-2910	 Orange 102-2926	 Gray 102-2910	 Blue 102-2925	 Gray 102-2910			
Back Nozzle Positions	 Red Plug 102-4335																		
PSI	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm	
60	55	16.1	63	20.3	69	23.4	75	31.3	—	—	—	—	—	—	—	—	—	—	
70	56	17.4	66	21.8	70	25.3	76	33.8	—	—	—	—	—	—	—	—	—	—	
80	57	18.5	68	23.3	72	27.0	77	36.0	80	39.1	85	41.0	88	45.4	92	49.7	96	53.3	
90	58	19.4	70	24.5	75	28.5	79	38.1	83	41.5	87	43.5	91	48.2	94	52.8	98	56.3	
100	59	20.5	72	25.9	76	30.0	80	40.2	86	43.7	90	45.7	94	50.6	96	55.3	100	60.3	
Stator		102-1939 Yellow									102-1940 White								
Conversion		FLX55-6RB-5154									FLX55-6RB-5558								



MAIN NOZZLE DATA

FLX55RB-5154 Performance Chart—(Metric)											FLX55RB-5558 Performance Chart—(Metric)									
Front Nozzle Positions	Nozzle Set 51 (Yellow) 102-6906		Nozzle Set 52 (Blue) 102-0726		Nozzle Set 53 (Brown) 102-6907		Nozzle Set 54 (Orange) 102-0728		Nozzle Set 55 (Green) 102-6955		Nozzle Set 56 (Gray) 102-6935		5Nozzle Set 57 (Black) 102-6936		Nozzle Set 58 (Red) 102-6909					
	Yellow 102-5670	Brown 102-5671	Yellow 102-5670	Yellow 102-6884	Yellow 102-5670	Yellow 102-6884	Yellow 102-5670	Yellow 102-6884	Yellow 102-5670	Green 102-6885	Green 102-6531	Green 102-6885	Green 102-6531	Green 102-6885	Green 102-6531	Green 102-6885				
	Back Nozzle Positions																			 Red Plug 102-4335
Bar	kPa	kg/cm ²	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm		
4,1	414	4,22	17,1	57,5	17,4	76,1	20,1	92,0	20,7	106,0	—	—	—	—	—	—	—	—		
4,8	483	4,92	17,7	62,5	18,3	82,1	20,4	99,2	21,6	115,1	—	—	—	—	—	—	—	—		
5,5	552	5,63	18,0	66,2	18,9	87,4	20,7	105,2	21,9	120,0	23,2	150,3	24,4	163,2	25,3	182,5	25,9	200,6		
6,2	621	6,33	18,3	69,7	19,5	92,7	21,6	109,0	22,6	130,6	23,8	163,2	24,7	170,7	26,2	193,8	26,5	212,0		
6,9	689	7,03	18,6	73,1	20,1	95,8	21,9	114,7	22,9	138,2	24,4	172,2	25,0	185,5	27,4	206,3	27,1	223,3		
Stator			102-1939 Yellow								102-1940 White									
Conversion			FLX55RB-5154								FLX55RB-5558									

FLX55RB-5154 Performance Chart—(U.S.)											FLX55RB-5558 Performance Chart—(U.S.)									
Front Nozzle Positions	Nozzle Set 51 (Yellow) 102-6906		Nozzle Set 52 (Blue) 102-0726		Nozzle Set 53 (Brown) 102-6907		Nozzle Set 54 (Orange) 102-0728		Nozzle Set 55 (Green) 102-6955		Nozzle Set 56 (Gray) 102-6935		5Nozzle Set 57 (Black) 102-6936		Nozzle Set 58 (Red) 102-6909					
	Yellow 102-5670	Brown 102-5671	Yellow 102-5670	Yellow 102-6884	Yellow 102-5670	Yellow 102-6884	Yellow 102-5670	Yellow 102-6884	Yellow 102-5670	Green 102-6885	Green 102-6531	Green 102-6885	Green 102-6531	Green 102-6885	Green 102-6531	Green 102-6885				
	Back Nozzle Positions																			 Red Plug 102-4335
PSI	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm		
60	56	15.2	57	20.1	66	24.3	68	28.0	—	—	—	—	—	—	—	—	—	—		
70	58	16.5	60	21.7	67	26.2	71	30.4	—	—	—	—	—	—	—	—	—	—		
80	59	17.5	62	23.1	68	27.8	72	31.7	76	39.7	80	43.1	83	48.2	85	53.0	—	—		
90	60	18.4	64	24.5	71	28.8	74	34.5	78	43.1	81	45.1	86	51.2	87	56.0	—	—		
100	61	19.3	66	25.3	72	30.3	75	36.5	80	45.5	82	49.0	90	54.5	89	59.0	—	—		
Stator			102-1939 Yellow								102-1940 White									
Conversion			FLX55RB-5154								FLX55RB-5558									



MAIN NOZZLE DATA

FLX54RB-5154 Performance Chart—(Metric)											FLX54RB-5558 Performance Chart—(Metric)							
Front Nozzle Positions			Nozzle Set 51 (Yellow) 102-0725		Nozzle Set 52 (Blue) 102-7001		Nozzle Set 53 (Brown) 102-0727		Nozzle Set 54 (Orange) 102-7002		Nozzle Set 55 (Green) 102-6908		Nozzle Set 56 (Gray) 102-0730		Nozzle Set 57 (Black) 102-4261		Nozzle Set 58 (Red) 102-4260	
			Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Brown 102-6883	Red Plug 102-4335
Back Nozzle Positions			Yellow 102-6937	Blue 102-2925	Yellow 102-6937	Orange 102-2926	Yellow 102-6937	Red 102-2928	Yellow 102-6937	Beige 102-2929	Yellow 102-6937	Beige 102-2929	Yellow 102-6937	Red 102-2928	Yellow 102-6937	Gray 102-4965	Yellow 102-6937	Gray 102-4965
Bar	kPa	kg/cm ²	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm
4.1	414	4.22	18.0	55.3	18.9	65.9	20.7	92.0	21.6	106.7	—	—	—	—	—	—	—	—
4.8	483	4.92	18.3	59.4	19.2	71.2	21.3	99.6	22.9	115.8	—	—	—	—	—	—	—	—
5.5	552	5.63	18.6	62.1	19.5	75.7	21.9	104.5	23.8	123.4	25.3	149.5	25.9	161.6	26.5	173.8	27.7	190.0
6.2	621	6.33	18.9	67.4	20.1	80.6	22.6	113.2	24.4	131.4	25.9	157.5	26.8	170.0	27.4	183.6	28.3	199.9
6.9	689	7.03	19.2	68.5	20.4	89.3	22.9	115.1	24.7	138.9	26.5	165.4	27.4	177.2	28.3	193.8	29.0	209.7
Stator			102-6929 Blue								102-1940 White							
Conversion			FLX54RB-5154								FLX54RB-5558							

■ Not recommended at these pressures. Radius shown in metres.
 Toro recommends the use of a 3,18cm (1.25") swing joint at flows over 95-LPM (25-GPM). Sprinkler radius data collected in Toro's zero wind test facility per ASAE standard S398.1.
 Actual site conditions must be considered when selecting the appropriate nozzle.

FLX54RB-5154 Performance Chart—(U.S.)											FLX54RB-5558 Performance Chart—(U.S.)							
Front Nozzle Positions			Nozzle Set 51 (Yellow) 102-0725		Nozzle Set 52 (Blue) 102-7001		Nozzle Set 53 (Brown) 102-0727		Nozzle Set 54 (Orange) 102-7002		Nozzle Set 55 (Green) 102-6908		Nozzle Set 56 (Gray) 102-0730		Nozzle Set 57 (Black) 102-4261		Nozzle Set 58 (Red) 102-4260	
			Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Brown 102-6883	Red Plug 102-4335
Back Nozzle Positions			Yellow 102-6937	Blue 102-2925	Yellow 102-6937	Orange 102-2926	Yellow 102-6937	Red 102-2928	Yellow 102-6937	Beige 102-2929	Yellow 102-6937	Beige 102-2929	Yellow 102-6937	Red 102-2928	Yellow 102-6937	Gray 102-4965	Yellow 102-6937	Gray 102-4965
PSI	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm
60	59	14.6	62	17.4	68	24.3	71	28.2	—	—	—	—	—	—	—	—	—	—
70	60	15.7	63	18.8	70	26.3	75	30.6	—	—	—	—	—	—	—	—	—	—
80	61	16.4	64	20.0	72	27.6	78	32.6	83	39.5	85	42.7	87	45.9	91	50.2	91	50.2
90	62	17.8	66	21.3	74	29.9	80	34.7	85	41.6	88	44.9	90	48.5	93	52.8	93	52.8
100	63	18.1	67	23.6	75	30.4	81	36.7	87	43.7	90	46.8	93	51.2	95	55.4	95	55.4
Stator			102-6929 Blue								102-1940 White							
Conversion			FLX54RB-5154								FLX54RB-5558							

■ Not recommended at these pressures. Radius shown in feet.
 Toro recommends the use of a 3,18cm (1.25") swing joint at flows over 25-GPM (95-LPM). Sprinkler radius data collected in Toro's zero wind test facility per ASAE standard S398.1.
 Actual site conditions must be considered when selecting the appropriate nozzle.



TORO® CONVERSION UPGRADE CHARTS

CROSS REFERENCE GUIDE—(METRIC)					MODELS BEING REPLACED										
New Model	Arc	Trajectory	Radius - m	Flow - lpm	634	664	734	764	765	864S	865S	834S	835S	DT34	DT35
FLX34-3134	Full Circle	25° or 15°	15,9 - 24,1	48,8 - 132,1	X	X	X	X	X	X	X	X	X	X	X
FLX34-3537	Full Circle	25° or 15°	20,4 - 27,8	121,5 - 177,5	X	X	X	X	X	X	X	X	X	X	X
FLX35-3134	Part/Full Circle	25° or 15°	15,9 - 22,6	51,5 - 129,1			1	X	X	X	X	X	X	X	X
FLX35-3537	Part/Full Circle	25° or 15°	21,0 - 25,3	125,3 - 179,0			1	X	X	X	X	X	X	X	X
FLX35-6-3134	Part/Full Circle	30° - 7°	14,0 - 24,4	58,7 - 140,0			1	X	X	X	X	X	X	X	X
FLX35-6-3537	Part/Full Circle	30° - 7°	18,0 - 28,1	71,5 - 171,5			1	X	X	X	X	X	X	X	X

1 - Must have ribbed bodies manufactured after 1992 to use Part/Full circles.



CROSS REFERENCE GUIDE—(METRIC)					MODELS BEING REPLACED													
New Model	Arc	Trajectory	Radius - m	Flow - lpm	654	655	670	684	690	754	784	785	884S	885S	854S	855S	DT54	DT55
FLX54-5154	Full Circle	25° or 15°	17,7 - 24,7	50,0 - 138,9	2	2	2	2	4	2	2	2	X	X	X	X	X	X
FLX54-5558	Full Circle	25° or 15°	24,1 - 29,0	129,4 - 209,7	2	2	2	2	4	2	2	2	X	X	X	X	X	X
FLX54-59	Full Circle	25° or 15°	29,3 - 30,2	210,4 - 233,9	2	2	2	2	4	2	2	2	X	X	X	X	X	X
FLX55-5154	Part/Full Circle	25° or 15°	16,7 - 22,8	53,4 - 130,6					4	2	2	2	X	X	X	X	X	X
FLX55-5558	Part/Full Circle	25° or 15°	22,3 - 27,4	135,8 - 204,0					4	2	2	2	X	X	X	X	X	X
FLX55-59	Part/Full Circle	25° or 15°	27,1 - 28,0	217,6 - 232,0					4	2	2	2	X	X	X	X	X	X
FLX55-6-5154	Part/Full Circle	30° - 7°	14,0 - 24,4	36,3 - 144,6					4	2	2	2	X	X	X	X	X	X
FLX55-6-5558	Part/Full Circle	30° - 7°	18,0 - 29,0	72,3 - 194,9					4	2	2	2	X	X	X	X	X	X
FLX55-6-59	Part/Full Circle	30° - 7°	23,5 - 30,5	130,2 - 231,3					4	2	2	2	X	X	X	X	X	X
FLX55-5154R	Part/Full Circle	25° or 15°	16,7 - 22,8	53,4 - 130,6	3	3	3	3		3								
FLX55-5558R	Part/Full Circle	25° or 15°	22,3 - 27,4	135,8 - 204,0	3	3	3	3		3								
FLX55-59R	Part/Full Circle	25° or 15°	27,1 - 28,0	217,6 - 232,0	3	3	3	3		3								
FLX55-6-5154R	Part/Full Circle	30° - 7°	14,0 - 24,4	36,3 - 144,6	3	3	3	3		3								
FLX55-6-5558R	Part/Full Circle	30° - 7°	18,0 - 29,0	72,3 - 194,9	3	3	3	3		3								
FLX55-6-59R	Part/Full Circle	30° - 7°	23,5 - 30,5	130,2 - 231,3	3	3	3	3		3								

2 - Requires the separate purchase and use of 102-0950 conversion adapter

3 - Use the "R" Series (Ribless body) conversion for bodies dated prior to 1992.

4 - Requires the separate purchase and use of 102-5011 690 conversion adapter



CROSS REFERENCE GUIDE —(U.S.)					MODELS BEING REPLACED										
New Model	Arc	Trajectory	Radius - Ft	Flow - gpm	634	664	734	764	765	864S	865S	834S	835S	DT34	DT35
FLX34-3134	Full Circle	25° or 15°	52' - 79'	12,9 - 34,9	X	X	X	X	X	X	X	X	X	X	X
FLX34-3537	Full Circle	25° or 15°	67' - 91'	32,1 - 46,9	X	X	X	X	X	X	X	X	X	X	X
FLX35-3134	Part/Full Circle	25° or 15°	52' - 74'	13,6 - 34,1			1	X	X	X	X	X	X	X	X
FLX35-3537	Part/Full Circle	25° or 15°	69' - 83'	33,1 - 47,3			1	X	X	X	X	X	X	X	X
FLX35-6-3134	Part/Full Circle	30° - 7°	46' - 80'	15,5 - 37,0			1	X	X	X	X	X	X	X	X
FLX35-6-3537	Part/Full Circle	30° - 7°	59' - 92'	32,4 - 45,3			1	X	X	X	X	X	X	X	X

1 - Must have ribbed bodies manufactured after 1992 to use Part/Full circles.



CROSS REFERENCE GUIDE—(U.S.)					MODELS BEING REPLACED													
New Model	Arc	Trajectory	Radius - Ft	Flow - gpm	654	655	670	684	690	754	784	785	884S	885S	854S	855S	DT54	DT55
FLX54-5154	Full Circle	25° or 15°	58' - 81'	13,2 - 36,7	2	2	2	2	4	2	2	2	X	X	X	X	X	X
FLX54-5558	Full Circle	25° or 15°	79' - 95'	34,2 - 55,4	2	2	2	2	4	2	2	2	X	X	X	X	X	X
FLX54-59	Full Circle	25° or 15°	96' - 99'	55,6 - 61,8	2	2	2	2	4	2	2	2	X	X	X	X	X	X
FLX55-5154	Part/Full Circle	25° or 15°	55' - 75'	14,0 - 34,5					4	2	2	2	X	X	X	X	X	X
FLX55-5558	Part/Full Circle	25° or 15°	73' - 90'	35,3 - 53,9					4	2	2	2	X	X	X	X	X	X
FLX55-59	Part/Full Circle	25° or 15°	82' - 92'	57,2 - 61,3					4	2	2	2	X	X	X	X	X	X
FLX55-6-5154	Part/Full Circle	30° - 7°	46' - 80'	13,9 - 38,2					4	2	2	2	X	X	X	X	X	X
FLX55-6-5558	Part/Full Circle	30° - 7°	59' - 95'	33,8 - 51,1					4	2	2	2	X	X	X	X	X	X
FLX55-6-59	Part/Full Circle	30° - 7°	77' - 100'	57,0 - 61,1					4	2	2	2	X	X	X	X	X	X
FLX55-5154R	Part/Full Circle	25° or 15°	55' - 75'	14,0 - 34,5	3	3	3	3		3								
FLX55-5558R	Part/Full Circle	25° or 15°	73' - 90'	35,3 - 53,9	3	3	3	3		3								
FLX55-59R	Part/Full Circle	25° or 15°	82' - 92'	57,2 - 61,3	3	3	3	3		3								
FLX55-6-5154R	Part/Full Circle	30° - 7°	46' - 80'	13,9 - 38,2	3	3	3	3		3								
FLX55-6-5558R	Part/Full Circle	30° - 7°	59' - 95'	33,8 - 51,1	3	3	3	3		3								
FLX55-6-59R	Part/Full Circle	30° - 7°	77' - 100'	57,0 - 61,1	3	3	3	3		3								

2 - Requires the separate purchase and use of 102-0950 conversion adapter

3 - Use the "R" Series (Ribless body) conversion for bodies dated prior to 1992.






4 - Requires the separate purchase and use of 102-5011 690 conversion adapter





MAINLESS AND BACK NOZZLE DATA





FLX55-6RB Series Mainless Nozzle Performance Data—(Metric)

			 Blue - Plug - Gray 102-2925 102-2208 102-2910		 Orange - Plug - Gray 102-2926 - 102-2208 - 102-2910		 Red - Plug - Gray 102-2928 - 102-2208 - 102-2910		 Gray - Plug - Gray 102-2910 - 102-2208 - 102-2910		 Gray - Plug - Gray 102-2930 - 102-2208 - 102-2910	
Bar	kPa	kg/cm ²	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
4,5	448	4,6	14,0	32,9	14,0	39,4	15,2	46,9	12,8	38,6	14,3	52,6
SOR			5:02		4:16		3:36		4:19		4:06	
5,5	552	5,6	14,0	36,3	14,3	43,5	16,2	51,9	13,4	42,4	15,5	57,9
SOR			4:22		3:40		3:03		3:53		3:40	

FLX55-6RB Series Mainless Nozzle Performance Data—(U.S.)

			Blue - Plug - Gray 102-2925 102-2208 102-2910		Orange - Plug - Gray 102-2926 - 102-2208 - 102-2910		Red - Plug - Gray 102-2928 - 102-2208 - 102-2910		Gray - Plug - Gray 102-2910 - 102-2208 - 102-2910		Gray - Plug - Gray 102-2930 - 102-2208 - 102-2910	
PSI	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM
65	46	8.7	46	10.4	50	12.4	42	10.2	47	13.9		
SOR			5:02		4:16		3:36		4:19		4:06	
80	46	9.6	47	11.5	53	13.7	44	11.2	51	15.3		
SOR			4:22		3:40		3:03		3:53		3:40	

FLX55RB Mainless Nozzle Performance Data—(Metric)

			 Green Plug Grey 102-6531 102-2208 102-2910		 Green Plug Green 102-6531 102-2208 102-6885		 Green Plug Red 102-6531 102-2208 102-2928		 Green Plug Beige 102-6531 102-2208 102-2929	
Bar	kPa	kg/cm ²	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
4,5	448	4,6	10,4	39,4	13,4	38,6	14,6	43,5	15,2	51,1
SOR			3:40		3:50		3:25		2:40	
5,5	552	5,6	11,3	43,9	13,4	43,2	14,6	48,8	15,2	56,8
SOR			3:15		3:25		3:00		2:30	

FLX55RB Mainless Nozzle Performance Data—(U.S.)

PSI	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM		
65	34	10.4	44	10.2	48	11.5	50	13.5		
SOR			3:40		3:50		3:25		2:40	
80	37	11.6	44	11.4	48	12.9	50	15.0		
SOR			3:15		3:25		3:00		2:30	

Requires the low-flow stator 102-6929 for indicated rotation speeds.
 SOR: Speed of rotation



MAINLESS AND BACK NOZZLE DATA

Back Nozzle Performance Data—(Metric)

Nozzles			4,5 Bar 448 kPa 4,6 kg/cm2		5,5 Bar 552 kPa 5,6 kg/cm2		
Part #	Description	Color	Radius - m	LPM	Radius - m	LPM	Profile
102-6937	Inner Nozzle with Yellow Restrictor	Yellow/Yellow	8,8	14,0	9,2	15,5	
102-6531	Inner Nozzle with White Restrictor	Green/White	9,5	16,3	10,1	17,4	
102-2135	Inner Nozzle with White Restrictor	White/White	7,6	15,5	7,9	17,0	
102-2136	7/16" Hex Inner Nozzle Assy w/ Yellow Restrictor	Yellow/Yellow	7,3	14,4	7,6	15,5	
102-6883	Intermediate Nozzle	Brown	11,6	10,6	11,6	10,6	
102-6884	Intermediate Nozzle	Yellow	12,5	15,5	13,1	17,0	
102-6885	Intermediate Nozzle	Green	12,8	20,4	13,7	22,7	
102-2925	Intermediate Nozzle	Blue	12,2	10,6	12,8	12,1	
102-2926	Intermediate Nozzle	Orange	13,4	16,3	13,7	18,2	
102-2927	Intermediate Nozzle	Gray	14,0	19,3	14,3	20,4	
102-2928	Intermediate Nozzle	Red	14,6	24,6	15,3	26,5	
102-2929	Intermediate Nozzle	Beige	15,6	30,7	16,2	34,4	

Back Nozzle Performance Data—(U.S.)

Nozzles			65 PSI		80 PSI		
Part #	Description	Color	Radius	GPM	Radius	GPM	Profile
102-6937	Inner Nozzle w/ Yellow Restrictor	Yellow/Yellow	29	3.7	30	4.1	
102-6531	Inner Nozzle w/ White Restrictor	Green/White	31	4.3	33	4.6	
102-6883	Intermediate Nozzle	Brown	38	2.8	38	2.8	
102-6884	Intermediate Nozzle	Yellow	41	4.1	43	4.5	
102-6885	Intermediate Nozzle	Green	42	5.4	45	6.0	
102-2925	Intermediate Nozzle	Blue	40	2.8	42	3.2	
102-2926	Intermediate Nozzle	Orange	44	4.3	45	4.8	
102-2927	Intermediate Nozzle	Gray	46	5.1	47	5.4	
102-2928	Intermediate Nozzle	Red	48	6.5	50	7.0	
102-2929	Intermediate Nozzle	Beige	51	8.1	53	9.1	



T7 SERIES ROTORS



toro.com



The T7 Series sprinkler is built rugged to withstand the harsh golf course conditions. The low-flow version is perfect for shorter-radius golf course applications like tee tops, surrounds and perimeters. The T7 has been designed and tested to ensure the high reliability demanded by the market.

There are several model choices available for the T7 Series sprinklers:



Plastic or stainless steel models



Low-Flow or High-Flow models



Effluent water indicator models



T7 SERIES ROTORS



Features & Benefits

- 1 **Water is Evenly Distributed**
High efficiency nozzles with single port design ensure water is evenly distributed across the pattern.
- 2 **Versatility**
Available in standard and low-flow models to meet your application needs.
- 3 **Vandal and Abuse Resistant**
The Smart Arc memory safely returns the sprinkler to previously set arc even when turned beyond arc borders.
- 4 **Clears Tall Grasses**
The 14,61cm (5.75") pop-up ensures proper spray pattern and nozzle distribution uniformity even in taller grasses.
- 5 **Additional Features**
 - Standard check valve
 - Radius reduction screw – up to 25%
 - Threaded cap-retained riser assembly
 - Variable reversing stator
 - Slip clutch
 - Riser pull-up feature – adjustment/pull-up tool supplied
 - Locking cap screw
- 6 **Model Choices**
 - Plastic or stainless steel models
 - Low-Flow or High-Flow models
 - Effluent water indicator models



Top Arc Indication
Arc setting indicator on top of the rotor allows for easy wet or dry adjustments. Part or full-circle from 45° to 360°.

Operating Specifications

- Precipitation rate: 5,6-36,1mm (.22-1.42") per hour
- Radius: Low-flow models: 11,9-17,1m (39'-56")
High-flow models: 14,0-22,9m (46'-75");
- Flow rate: Low-flow models: 6,4-48,5 LPM (1.7-12.8 GPM)
High-flow models: 25-115,8 LPM (6.6-30.6 GPM)
- Operating pressure range: 2,8-7,0 Bar (40-100 psi)
- Inlet size: 25mm (1") threaded NPT or 25mm (1") BSP
- Nozzle trajectory: 25°
- Arc adjustment: 45°-335° and 360° (unidirectional at 360°)

Additional Features

- Two nozzle trees:
- Low flow: 6 nozzles (2, 3, 4.5, 6, 7.5 and 9)
- High flow: 7 nozzles (7, 9, 12, 16, 20, 24 and 27)
- Nozzle support/breakup screw

Options Available

- Stainless steel riser

Dimensions

- Pop-up height to nozzle: 127mm (5")
- Body height: 222mm (8.75")
- Rubber cover diameter: 57mm (2.25")
- Body diameter: 70mm (2.75")

Warranty

- Two years; Five years when installed with Toro Swing Joints

Specifying Information—T7 Sprinkler

T7PXX-XXXX			
Description	Optional	Thread	Optional
T7P	XX	XX	L
T7P—Sports Rotor	SS—Stainless Steel Riser OO—Plastic Riser (ResCom)	02—NPT Thread 42—ACME 52—BSP	L—Low Flow

Example: A low flow T7P sprinkler with a stainless steel riser and ACME threads would be specified as **T7PSS-42L**



T7 SERIES ROTORS

T7 Sports Rotor Nozzle Performance Data - Low Flow—Metric

Nozzle	Pressure (Bar)	Radius (m)	Flow (LPM)	Precip mm/hr ■	Precip mm/hr ▲
2.0	2,8	11,9	6,4	6,4	5,6
	3,4	11,9	7,6	7,4	6,4
	4,1	12,2	8,3	7,6	6,6
	4,8	12,2	9,1	8,4	7,1
	5,5	12,2	9,8	8,9	7,9
	6,2	12,5	10,2	9,1	7,9
	6,9	12,5	11,0	9,7	8,4
3.0*	2,8	11,9	9,1	9,1	7,9
	3,4	12,2	10,6	9,9	8,4
	4,1	12,5	11,7	10,4	9,1
	4,8	12,5	12,9	11,4	9,9
	5,5	12,8	13,6	11,7	10,2
	6,2	12,8	14,8	11,9	10,4
	6,9	13,1	15,5	12,4	10,7
4.5	2,8	11,6	15,5	16,0	13,7
	3,4	12,5	17,8	15,7	13,5
	4,1	12,5	19,7	17,3	15,0
	4,8	12,8	21,6	18,0	15,7
	5,5	12,8	23,1	19,6	16,8
	6,2	13,1	24,6	19,8	17,3
	6,9	13,1	26,1	21,1	18,3
6.0	2,8	13,1	18,9	15,0	13,0
	3,4	14,0	21,6	15,0	13,0
	4,1	14,6	23,8	15,5	13,2
	4,8	14,9	26,5	16,5	14,5
	5,5	14,9	28,0	17,3	15,0
	6,2	15,2	29,9	17,8	15,5
	6,9	15,2	31,8	18,8	16,3
7.5	2,8	13,4	22,0	16,8	14,7
	3,4	14,0	25,4	17,8	15,2
	4,1	14,6	28,0	18,0	15,7
	4,8	14,9	30,3	19,1	16,5
	5,5	15,2	33,3	19,8	17,0
	6,2	15,2	36,0	21,3	18,5
	6,9	15,8	37,9	20,6	17,8
9.0	2,8	13,7	28,0	20,6	17,8
	3,4	14,9	32,2	19,8	17,3
	4,1	15,5	35,6	20,3	17,8
	4,8	16,2	39,4	21,1	18,3
	5,5	16,8	42,8	21,1	18,3
	6,2	16,8	45,4	22,6	19,6
	6,9	17,1	48,5	22,9	19,8

* Pre-installed nozzle
Radius shown in meters, Data based on 180°.

T7 Sports Rotor Nozzle Performance Data - Low Flow—U.S.

Nozzle	Pressure (PSI)	Radius (ft)	GPM	Precip (in/hr) ▲	Precip (in/hr) ■
2.0	40	39	1.7	0.25	0.22
	50	39	2.0	0.29	0.25
	60	40	2.2	0.3	0.26
	70	40	2.4	0.33	0.28
	80	40	2.6	0.35	0.31
	90	41	2.7	0.36	0.31
	100	41	2.9	0.38	0.33
3.0*	40	39	2.4	0.36	0.31
	50	40	2.8	0.39	0.33
	60	41	3.1	0.41	0.36
	70	41	3.4	0.45	0.39
	80	42	3.6	0.46	0.4
	90	42	3.9	0.47	0.41
	100	43	4.1	0.49	0.42
4.5	40	38	4.1	0.63	0.54
	50	41	4.7	0.62	0.53
	60	41	5.2	0.68	0.59
	70	42	5.7	0.71	0.62
	80	42	6.1	0.77	0.66
	90	43	6.5	0.78	0.68
	100	43	6.9	0.83	0.72
6.0	40	43	5	0.59	0.51
	50	46	5.7	0.59	0.51
	60	48	6.3	0.61	0.52
	70	49	7	0.65	0.57
	80	49	7.4	0.68	0.59
	90	50	7.9	0.7	0.61
	100	50	8.4	0.74	0.64
7.5	40	44	5.8	0.66	0.58
	50	46	6.7	0.7	0.6
	60	48	7.4	0.71	0.62
	70	49	8	0.75	0.65
	80	50	8.8	0.78	0.67
	90	50	9.5	0.84	0.73
	100	52	10	0.81	0.7
9.0	40	45	7.4	0.81	0.7
	50	49	8.5	0.78	0.68
	60	51	9.4	0.8	0.7
	70	53	10.4	0.83	0.72
	80	55	11.3	0.83	0.72
	90	55	12	0.89	0.77
	100	56	12.8	0.9	0.78

* Pre-installed nozzle
Radius shown in feet, Data based on 180°



T7 SERIES ROTORS

T7 Sports Rotor Nozzle Performance Data - High Flow—Metric

Nozzle	Pressure (Bar)	Radius (m)	Flow (LPM)	Precip mm/hr ■	Precip mm/hr ▲
7.0	2,8	14,0	25,0	18,3	15,7
	3,4	14,3	28,0	19,1	16,5
	4,1	14,6	30,7	19,8	17,3
	4,8	14,9	33,3	20,8	18,0
	5,5	15,5	35,6	21,1	18,3
	6,2	15,8	39,0	21,6	18,5
	6,9	16,5	40,5	21,1	18,3
9.0	2,8	14,3	28,0	19,3	16,8
	3,4	15,2	31,4	18,5	16,3
	4,1	15,5	32,9	19,3	16,8
	4,8	15,8	35,6	20,6	17,8
	5,5	16,5	37,5	20,3	17,5
	6,2	16,8	41,3	20,8	18,0
	6,9	17,1	43,5	21,3	18,5
12.0*	2,8	15,2	36,0	22,6	19,6
	3,4	15,5	43,9	22,9	19,8
	4,1	16,2	48,1	23,1	20,1
	4,8	16,5	52,2	24,4	21,1
	5,5	16,8	55,6	25,1	21,8
	6,2	17,1	59,1	25,9	22,4
	6,9	17,4	62,5	26,4	22,9
16.0	2,8	16,2	49,2	26,9	23,4
	3,4	17,1	57,2	26,9	23,4
	4,1	17,7	61,3	26,4	22,9
	4,8	18,0	66,2	27,7	24,1
	5,5	18,6	71,2	27,9	24,1
	6,2	18,9	75,7	29,0	24,9
	6,9	19,2	79,9	29,7	25,7
20.0	2,8	16,2	60,6	32,5	27,9
	3,4	17,7	66,2	31,0	26,7
	4,1	18,3	73,8	30,7	26,7
	4,8	18,6	78,0	32,0	27,7
	5,5	19,8	84,0	30,2	26,2
	6,2	20,1	89,3	31,2	26,9
	6,9	20,4	93,9	31,8	27,7
24.0	2,8	15,8	59,8	32,3	27,9
	3,4	18,3	66,2	27,7	24,1
	4,1	19,2	73,1	28,2	24,4
	4,8	19,8	78,4	29,0	25,1
	5,5	20,4	84,4	29,2	25,4
	6,2	20,7	90,1	30,5	26,4
	6,9	21,6	95,8	29,5	25,7
27.0	2,8	16,8	70,8	36,1	31,2
	3,4	19,8	88,6	29,5	25,4
	4,1	21,6	89,3	26,7	23,1
	4,8	21,9	97,7	27,9	24,1
	5,5	22,3	103,7	29,0	25,1
	6,2	22,6	110,2	30,0	25,9
	6,9	22,9	115,8	30,7	26,7

* Pre-installed nozzle
Radius shown in meters, Data based on 180°.

T7 Sports Rotor Nozzle Performance Data - High Flow—U.S.

Nozzle	Pressure (PSI)	Radius (FT)	Flow (GPM)	Precip (in/hr) ▲	Precip (in/hr) ■
7.0	40	46	6.6	0.72	0.62
	50	47	7.4	0.75	0.65
	60	48	8.1	0.78	0.68
	70	49	8.8	0.82	0.71
	80	51	9.4	0.83	0.72
	90	52	10.3	0.85	0.73
	100	54	10.7	0.83	0.72
9.0	40	47	7.4	0.76	0.66
	50	50	8.3	0.73	0.64
	60	51	8.7	0.76	0.66
	70	52	9.4	0.81	0.7
	80	54	9.9	0.8	0.69
	90	55	10.9	0.82	0.71
	100	56	11.5	0.84	0.73
12.0*	40	50	9.5	0.89	0.77
	50	51	11.6	0.9	0.78
	60	53	12.7	0.91	0.79
	70	54	13.8	0.96	0.83
	80	55	14.7	0.99	0.86
	90	56	15.6	1.02	0.88
	100	57	16.5	1.04	0.9
16.0	40	53	13	1.06	0.92
	50	56	15.1	1.06	0.92
	60	58	16.2	1.04	0.9
	70	59	17.5	1.09	0.95
	80	61	18.8	1.1	0.95
	90	62	20	1.14	0.98
	100	63	21.1	1.17	1.01
20.0	40	53	16	1.28	1.1
	50	58	17.5	1.22	1.05
	60	60	19.5	1.21	1.05
	70	61	20.6	1.26	1.09
	80	65	22.2	1.19	1.03
	90	66	23.6	1.23	1.06
	100	67	24.8	1.25	1.09
24.0	40	52	15.8	1.27	1.1
	50	60	17.5	1.09	0.95
	60	63	19.3	1.11	0.96
	70	65	20.7	1.14	0.99
	80	67	22.3	1.15	1
	90	68	23.8	1.2	1.04
	100	71	25.3	1.16	1.01
27.0	40	55	18.7	1.42	1.23
	50	65	23.4	1.16	1
	60	71	23.6	1.05	0.91
	70	72	25.8	1.1	0.95
	80	73	27.4	1.14	0.99
	90	74	29.1	1.18	1.02
	100	75	30.6	1.21	1.05

* Pre-installed nozzle
Radius shown in feet, Data based on 180°.





T5 RAPIDSET SERIES ROTORS



toro.com

The Toro® T5 RapidSet® Series Rotor

With all the features to satisfy all your basic irrigation needs while surprising you with a few extras, the T5 offers an extra inch of pop-up height compared to most competitive units. All lawn models are now available with the optional RapidSet® feature, a quick and easy way to make arc adjustments—with NO TOOLS. The stainless steel riser and nozzle base of the T5 RapidSet® Stainless Steel rotor not only add strength, but help protect the rotor from damage and excessive wear due to vandalism or abrasive sandy soils which can cause scoring of a plastic riser. Over time, this can lead to leaks at the wiper seal or an inability for the riser to fully retract.



*RapidSet® arc adjustment
requires NO TOOLS!*



T5 RAPIDSET SERIES ROTORS

Watch video to learn more
[Toro.com](https://www.toro.com)

Features & Benefits

- ① **127mm (5") Pop-Up**
Easily replaces many competitive 100mm (4') units in the same footprint but delivers an extra inch of pop-up.
- ② **Standard Rubber Cover**
The top of the sprinkler is covered with a heavy duty rubber cover to minimize impact injuries and reduce liability.
- ③ **Airfoil™ Technology Nozzles**
The T5 RapidSet rotor comes with a full set of 8 standard nozzles (25° trajectory) and 4 low angle (10° trajectory) nozzles that utilize patentpending Airfoil technology, which creates a zone of low pressure just below the main stream to gently guide water downward for unmatched uniformity without forcefully washing out newly-laid seeds.

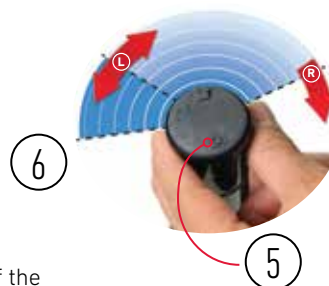
- ④ **Optional Check Valve**
Available with a hold back strength of 2,1m (7') of elevation change.
- ⑤ **Top Adjust Arc Set**
The T5 can be set between a minimum arc set of 40° and a full circle set of 360°. Arc changes are made from the top of the sprinkler while popped up or down by using a small slotted screwdriver.
- ⑥ **RapidSet® Arc Adjustment**
Easy tool-free arc adjustment, without any risk to overtorque and damage the interior of the rotor.



Nozzles
Geometry on the face of the nozzle creates breakup.



Stream straighteners align the water flow behind the nozzle.



T5 Series Model List	
Model	Description
T5P-RS	127mm (5") Lawn Pop-up w/o check valve
T5PCK-RS	127mm (5") Lawn Pop-up w/ check valve
T5PE-RS	127mm (5") Lawn Pop-up w/o checkvalve, Effluent
T5S-RS	Shrub
T5SE-RS	Shrub, Effluent
T5HP-RS	305mm (12") High Pop-up
T5HPE-RS	305mm (12") High Pop-up, Effluent

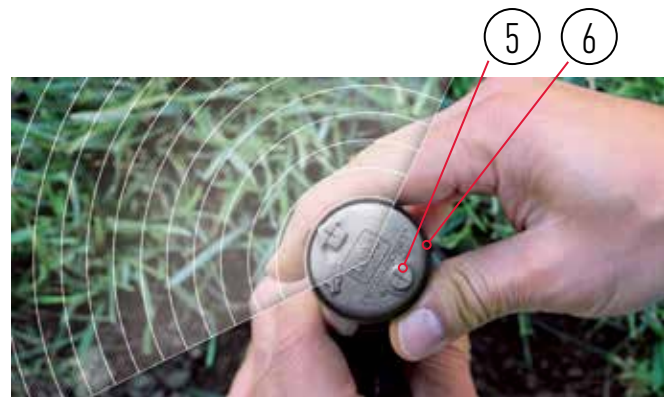




T5 RAPIDSET® STAINLESS STEEL SERIES

Features & Benefits

- ① **127mm (5") Pop-Up**
Easily replaces many competitive 100mm (4") units in the same footprint but delivers an extra inch of pop-up.
- ② **Standard Rubber Cover**
The top of the sprinkler is covered with a heavy duty rubber cover to minimize impact injuries and reduce liability.
- ③ **Airfoil™ Technology Nozzles**
The T5 RapidSet rotor comes with a full set of 8 standard nozzles (25° trajectory) and 4 low angle (10° trajectory) nozzles that utilize patentpending Airfoil technology, which creates a zone of low pressure just below the main stream to gently guide water downward for unmatched uniformity without forcefully washing out newly-laid seeds.
- ④ **Optional Check Valve**
Available with a hold back strength of 2.1m (7') of elevation change.
- ⑤ **Top Adjust Arc Set**
The T5 can be set between a minimum arc set of 40° and a full circle set of 360°. Arc changes are made from the top of the sprinkler while popped up or down by using a small slotted screwdriver.
- ⑥ **RapidSet® Arc Adjustment**
Easy tool-free arc adjustment, without any risk to overtorque and damage the interior of the rotor.
- ⑦ **Commercial-grade 304 Stainless Steel Riser and Nozzle Base Sleeves**
Helps prevent 'stick ups' and eliminates scoring of riser caused by coarse and sandy soils.
- ⑧ **Heavy-duty Construction**
Protects riser and nozzle base from damage caused by vandalism.



RapidSet® arc adjustment requires **NO TOOLS!**

T5 RapidSet® Stainless Steel Series Model List

Model	Description
T5PSS-RS	T5 RapidSet Stainless Steel Rotor
T5PSSE-RS	T5 RapidSet Stainless Steel Rotor with Effluent cover
T5PCKSS-RS	T5 RapidSet Stainless Steel Rotor with pre-installed COM*
TP5CKSS-E-RS	T5 RapidSet Stainless Steel Rotor with pre-installed COM* and Effluent cover
T5PCKSS1.5-RS	T5 RapidSet Stainless Steel Rotor with pre-installed COM* and #1.5 nozzle
T5PCKSS2.0-RS	T5 RapidSet Stainless Steel Rotor with pre-installed COM* and #2.0 nozzle
T5PCKSS2.5-RS	T5 RapidSet Stainless Steel Rotor with pre-installed COM* and #2.5 nozzle

*COM: Check-O-Matic Check Valve



T5 RAPIDSET SERIES ROTORS

T5 Nozzle Performance Data—Metric

Nozzle	Pressure Bar	Radius m.	Flow m ³ /hr	Flow l/m	Precipitation Rate (mm/hr)	
					■	▲
1.5	1,7	10,06	0,26	4,4	5,16	5,96
	2,0	10,18	0,28	4,7	5,44	6,29
	2,5	10,40	0,32	5,3	5,90	6,82
	3,0	10,62	0,35	5,9	6,27	7,25
	3,5	10,67	0,38	6,3	6,69	7,73
	4,0	10,76	0,40	6,7	6,99	8,07
2.0	4,5	10,97	0,43	7,1	7,09	8,19
	1,7	10,67	0,33	5,5	5,79	6,68
	2,0	10,79	0,36	6,0	6,20	7,16
	2,5	11,01	0,42	7,0	6,89	7,96
	3,0	11,23	0,47	7,8	7,46	8,62
	3,5	11,28	0,51	8,4	7,94	9,17
2.5	4,0	11,28	0,54	9,0	8,52	9,83
	4,5	11,28	0,59	9,8	9,21	10,64
	1,7	10,67	0,40	6,6	6,98	8,07
	2,0	10,79	0,44	7,3	7,53	8,70
	2,5	11,01	0,51	8,5	8,41	9,71
	3,0	11,23	0,57	9,5	8,99	10,39
3.0	3,5	11,28	0,61	10,2	9,62	11,11
	4,0	11,28	0,65	10,9	10,27	11,86
	4,5	11,28	0,69	11,5	10,89	12,58
	1,7	10,97	0,50	8,3	8,30	9,58
	2,0	11,22	0,54	8,9	8,52	9,84
	2,5	11,66	0,60	10,1	8,88	10,25
4.0	3,0	12,10	0,68	11,3	9,25	10,68
	3,5	12,19	0,75	12,6	10,15	11,72
	4,0	12,19	0,82	13,6	11,01	12,72
	4,5	12,19	0,86	14,4	11,61	13,41
	1,7	11,28	0,67	11,2	10,54	12,17
	2,0	11,64	0,72	12,1	10,69	12,34
5.0	2,5	12,27	0,82	13,7	10,92	12,61
	3,0	12,71	0,91	15,2	11,30	13,04
	3,5	12,80	0,98	16,3	11,92	13,77
	4,0	12,89	1,04	17,3	12,49	14,42
	4,5	13,11	1,10	18,4	12,83	14,81
	1,7	11,89	0,85	14,2	12,05	13,92
6.0	2,0	12,13	0,92	15,3	12,50	14,44
	2,5	12,57	1,04	17,3	13,15	15,18
	3,0	13,02	1,14	19,0	13,44	15,51
	3,5	13,46	1,24	20,7	13,73	15,86
	4,0	13,72	1,33	22,2	14,14	16,33
	4,5	13,72	1,39	23,1	14,73	17,01
8.0	1,7	11,89	0,95	15,9	13,50	15,59
	2,0	12,38	1,04	17,4	13,65	15,76
	2,5	13,22	1,21	20,1	13,79	15,92
	3,0	13,88	1,35	22,4	13,96	16,12
	3,5	14,20	1,45	24,2	14,42	16,65
	4,0	14,42	1,55	25,9	14,93	17,24
1.5	4,5	14,63	1,65	27,4	15,39	17,77
	1,7	10,97	1,31	21,8	21,69	25,05
	2,0	11,83	1,43	23,8	20,43	23,59
	2,5	13,26	1,64	27,3	18,65	21,54
	3,0	14,14	1,80	29,9	17,96	20,74
	3,5	14,50	1,95	32,4	18,51	21,37
2.0	4,0	14,81	2,08	34,7	18,99	21,93
	4,5	15,24	2,20	36,7	18,97	21,91

1. Precipitation rates based on half-circle operation
2. ■ square spacing based on 50% diameter of throw
3. ▲ triangular spacing based on 50% diameter of throw

T5 Nozzle Performance Data—US

Nozzle	PSI	Radius	GPM	Precipitation Rate (in/hr)■ (in/hr)▲	
				1.5	25
35	34	1.38	0.27		0.23
45	35	1.59	0.29		0.25
55	35	1.74	0.32		0.27
65	36	1.88	0.32		0.28
2.0	25	35	1.45	0.26	0.23
	35	36	1.80	0.31	0.27
	45	37	2.12	0.34	0.30
	55	37	2.30	0.37	0.32
2.5	65	37	2.58	0.42	0.36
	25	35	1.75	0.32	0.28
	35	36	2.20	0.38	0.33
	45	37	2.55	0.41	0.36
	55	37	2.80	0.45	0.39
3.0*	65	37	3.05	0.50	0.43
	25	36	2.20	0.38	0.33
	35	38	2.60	0.40	0.35
	45	40	3.05	0.42	0.37
	55	40	3.52	0.49	0.42
4.0	65	40	3.80	0.53	0.46
	25	37	2.95	0.48	0.41
	35	40	3.55	0.49	0.43
	45	42	4.10	0.52	0.45
	55	42	4.45	0.56	0.49
5.0	65	43	4.85	0.58	0.50
	25	39	3.75	0.55	0.47
	35	41	4.50	0.60	0.52
	45	43	5.10	0.61	0.53
	55	45	5.75	0.63	0.55
6.0	65	45	6.10	0.67	0.58
	25	39	4.20	0.61	0.53
	35	43	5.20	0.63	0.54
	45	46	6.05	0.64	0.55
	55	47	6.65	0.67	0.58
8.0	65	48	7.25	0.70	0.61
	25	36	5.75	0.99	0.85
	35	43	7.10	0.85	0.74
	45	47	8.05	0.81	0.70
	55	48	8.95	0.86	0.75
1.5	65	50	9.70	0.86	0.75

1. Precipitation rates based on half-circle operation
2. ■ square spacing based on 50% diameter of throw
3. ▲ triangular spacing based on 50% diameter of throw



T5 RAPIDSET SERIES ROTORS



T5 Low Angle Nozzle Performance Data—Metric

Nozzle	Pressure Bar	Radius m.	Flow m ³ /hr	Flow l/m	Precipitation Rate (mm/hr)	
					■	▲
1.0 LA	1,7	7,62	0,17	2,8	5,79	6,68
	2,0	7,99	0,19	3,1	5,84	6,74
	2,5	8,53	0,22	3,6	5,93	6,84
	3,0	8,53	0,23	3,8	6,29	7,26
	3,5	8,71	0,25	4,1	6,52	7,53
	4,0	8,84	0,27	4,4	6,82	7,88
1.5 LA	1,7	8,23	0,25	4,2	7,38	8,52
	2,0	8,60	0,27	4,5	7,38	8,52
	2,5	9,18	0,31	5,2	7,39	8,53
	3,0	9,40	0,34	5,7	7,68	8,87
	3,5	9,45	0,38	6,3	8,41	9,71
	4,0	9,45	0,41	6,8	9,13	10,55
2.0 LA	1,7	8,84	0,32	5,3	8,14	9,40
	2,0	9,08	0,35	5,8	8,41	9,72
	2,5	9,49	0,40	6,7	8,89	10,27
	3,0	9,71	0,45	7,6	9,64	11,14
	3,5	9,93	0,49	8,2	9,98	11,52
	4,0	10,06	0,52	8,7	10,37	11,98
3.0 LA	1,7	8,84	0,50	8,3	12,79	14,77
	2,0	9,33	0,54	8,9	12,32	14,23
	2,5	10,10	0,60	10,1	11,84	13,67
	3,0	10,32	0,68	11,3	12,73	14,70
	3,5	10,71	0,74	12,3	12,87	14,86
	4,0	10,97	0,79	13,2	13,17	15,21
	4,5	10,97	0,84	14,0	13,96	16,12

Specifications

Dimensions

	Lawn Pop	Shrub	HP	Stainless Steel
Body Diameter:	57mm (2¼")	57mm (2¼")	57mm (2¼")	57mm (2¼")
Cap Diameter:	67mm (2⅝")	N/A	67mm (2⅝")	67mm (2⅝")
Height:	190mm (7½")	196mm (7¾")	429mm (16⅞")	190mm (7½")

Operating Specifications

Radius: 7,6–15,2m (25'–50')
 Arc Set: 40–360°
 Flow Rate: 2,8–36,5 LPM (0.76 – 9.63 GPM)
 Operating Pressure Range: 1,7–4,8 Bar (25–70 psi)
 Trajectory: 25° standard, 10° low angle
 Pop-up to nozzle: 127mm (5")
 Inlet: ¾"
 Factory installed with a #3.0 nozzle

Options Available

Check valve
 RapidSet® Arc Adjustment

Warranty

Five years

T5 Low Angle Nozzle Performance Data—US

Nozzle	PSI	Radius	GPM	Precipitation Rate (in/hr)	
				■	▲
1.0LA	25	25	0.74	0.26	0.23
	35	28	0.94	0.27	0.23
	45	28	1.02	0.29	0.25
	55	29	1.14	0.30	0.26
	65	29	1.25	0.33	0.29
1.5LA	25	27	1.10	0.34	0.29
	35	30	1.35	0.33	0.29
	45	31	1.52	0.35	0.30
	55	31	1.75	0.40	0.35
	65	31	1.90	0.44	0.38
2.0LA	25	29	1.40	0.37	0.32
	35	31	1.72	0.40	0.34
	45	32	2.05	0.45	0.39
	55	33	2.25	0.46	0.40
	65	33	2.45	0.50	0.43
3.0LA	25	29	2.20	0.58	0.50
	35	33	2.60	0.53	0.46
	45	34	3.05	0.59	0.51
	55	36	3.40	0.58	0.51
	65	36	3.70	0.63	0.55

1. Precipitation rates based on half-circle operation
2. ■ square spacing based on 50% diameter of throw
3. ▲ triangular spacing based on 50% diameter of throw

Specifying Information—T5 RapidSet Sprinkler

T5PXX SS X.XX-RS					
Description	Optional	Stainless Steel Riser	Custom Nozzles	Optional	
T5	XX	SS	X.X	E	-RS
T5P— T5 RapidSet Series Rotor	CK— Check-O-Matic*	Stainless Steel	15—5,9 LPM (1.5 GPM) 20—7,8 LPM (2.0 GPM) 25—9,5 LPM (2.5 GPM)	E—Effluent	RapidSet

Example: A T5 RapidSet Stainless Steel Rotor with a 2.5 nozzle and COM, would be specified as: **T5P2.5-RS**

Specifying Information—T5 Sprinkler

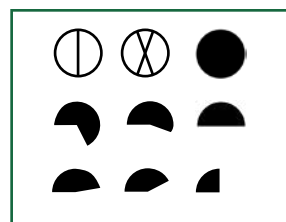
T5X-XXXX-XX-X					
Description	Body	Nozzle		Optional	Optional
T5	P	XXXX		XX	E
T5— T5	P—Lawn Pop-up S—Shrub HP—High Pop	15—5,9 LPM (1.5 GPM) 20—7,8 LPM (2.0 GPM) 25—9,5 LPM (2.5 GPM) 30—11,3 LPM (3.0 GPM)	40—15,2 LPM (4.0 GPM) 50—19,0 LPM (5.0 GPM) 60—22,4 LPM (6.0 GPM) 80—29,9 LPM (8.0 GPM)	Low Angle Nozzle 10LA—3,8 LPM (1.0 GPM) 15LA—5,7 LPM (1.5 GPM) 20LA—7,6 LPM (2.0 GPM) 30LA—11,3 LPM (3.0 GPM)	CK— Check-O-Matic* RS— RapidSet (w/Lawn Pop-up only) E—Effluent

Example: A T5 Lawn Pop-up sprinkler with a 2.5 nozzle, would be specified as: **T5P-25**



For nearly 50 years the 690 Series has set the standard for durability and reliability in golf applications.

Two 2-speed models provide a slower speed in the non-overlap areas and a faster speed in the overlap areas to provide a more balanced precipitation rate than traditional full circle sprinklers in these application which lowers system costs.



*Fixed Arc Drives
Nine fixed arc drive assemblies ensure positive retention of the coverage area with no arc drift.*



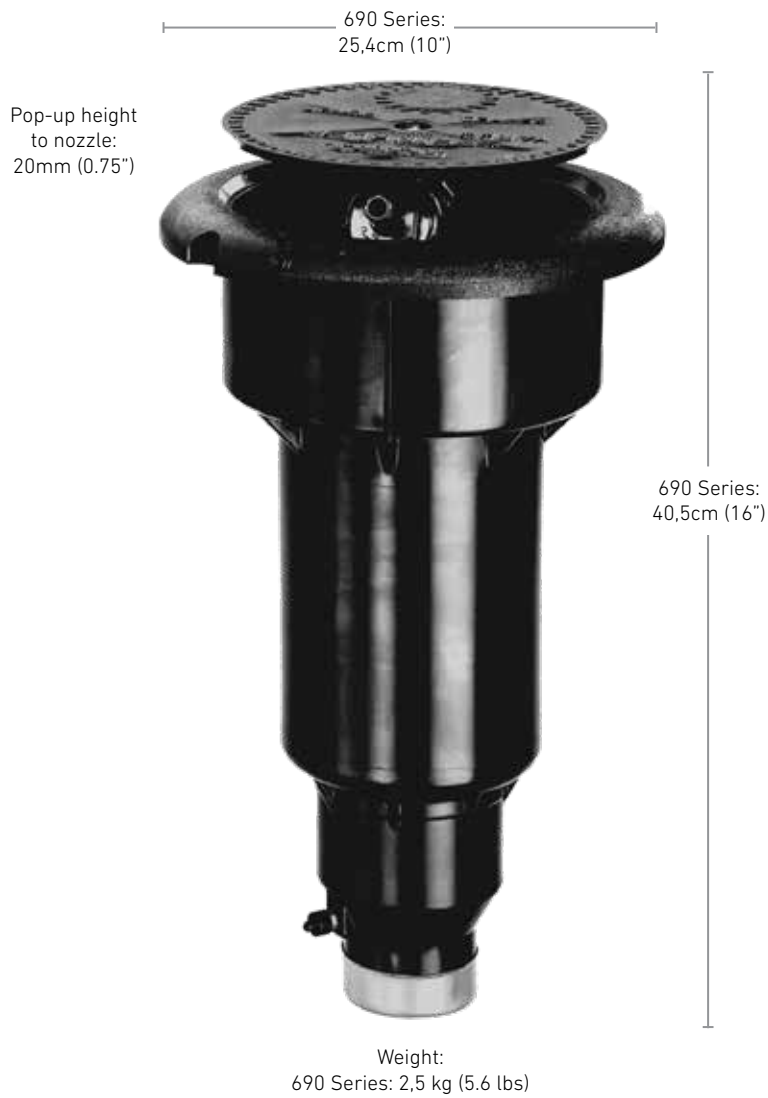


690 SERIES ROTORS

Features & Benefits

- 1 **696 2-Speed Models**
Used in single row applications these sprinklers operate at a slower speed over the 60 degree non-overlap area and a faster speed over the 120 degree overlapped areas to provide a balanced application rate.
- 2 **698 2-Speed Models**
Used in double row applications these sprinklers operate at a slower speed over the 180 degree non-overlap area and a faster speed over the 180 degree overlapped areas to provide a a balanced application rate.

- 3 **Artificial Playing Surfaces**
Radius and flow capabilities are perfect for cooling and rinsing artificial playing surfaces.
- 4 **Electric Valve In Head Models**
Electric valve in head models provide individual head control that ensures run times can match differing soil, turf and terrain watering requirements, pressure regulation to ensure all nozzles perform at the same pressure and manual ON-OFF-Auto control at the head.



2-Speed Models
696



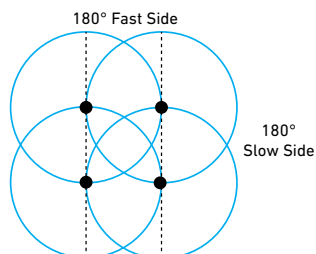
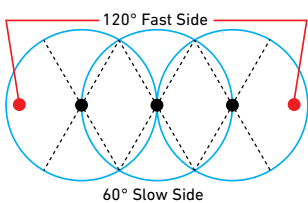
2-Speed Models
698



Artificial
Surfaces



Electric
Valve In Head



690 SERIES ROTORS



Operating Specifications

- Inlet: 3,8cm (1.5") NPT
- Radius: 26,5 – 32,9m (87' – 108')
- Flow Rate: 193,0 – 311,2 LPM (51,0 – 82,2 GPM)
- Recommended Operating Pressure Range:
 - 5,5 – 7,0 Bar (80 – 100 psi)
 - Maximum pressure: 10,3 Bar psi (150 psi)
 - Minimum pressure: 2,8 Bar (40 psi)
- Electric Valve-In-Head Solenoid: 24V ac, 50/60 Hz
 - Inrush: 60 Hz; 0,30 Amps
 - Holding: 60 Hz; 0,20 Amps
- Check-O-Matic: Maintains 11,2m (37') of elevation

Additional Features

- Manual control at the sprinkler, On-Off-Auto (electric)
- Time-proven, gear-drive design
- All internal components serviceable from the top of the sprinkler
- Durable engineering plastic and stainless steel construction
- Nine arc selections

Dimensions

- Body diameter: 25,4cm (10")
- Body height: 40,5cm (16")
- Weight: 2,5 kg (5.6 lbs)
- Pop-up height to nozzle: 20mm (0.75")

Warranty

- Two years; Five years when installed with Toro Swing Joints

690 Series Performance Chart—(Metric)

Base Pressure			Nozzle Set 90		Nozzle Set 91		Nozzle Set 92	
Bar	kPa	Kg/cm ²	Radius	LPM	Radius	LPM	Radius	LPM
5,5	550	5,61	26,5	193,0	29,3	231,3	30,5	280,1
6,9	690	7,04	27,4	216,1	30,5	278,2	32,9	311,2

Radius shown in meters.
Sprinkler radius of throw per ASAE standard S398.1.

690 Series Performance Chart—(U.S.)

Base Pressure		Nozzle Set 90		Nozzle Set 91		Nozzle Set 92	
psi	Radius	GPM	Radius	GPM	Radius	GPM	GPM
80	87	51.0	96	61.2	100	74.0	
100	90	57.1	100	73.5	108	82.2	

Radius shown in feet.
Sprinkler radius of throw per ASAE standard S398.1.

Specifying Information—690

69X-0X-XXX			
Arc	Valve-In-Head Type	Nozzle	Pressure Regulation*
69X	0X	XX	X
1—90° 2—180° 4—Full-circle 6—Full-circle, 2-speed (60°–120°) 8—Full-circle, 2-speed (180°–180°)	A—150° B—165° C—195° D—210°	1—Normally Open Hydraulic 2—Check-O-Matic 6—Electric	8—5,5 bar (80 psi) 1—6,9 bar (100 psi)
Example: When specifying a 690 Series Sprinkler with a 180° arc, electric valve-in-head, #91 nozzle, and pressure regulation at 5,5 bar (80 psi), you would specify: 692-06-918			

*Electric models only.



590GF SERIES SPRAYS



toro.com



Flanged Cap

Flanged cap installs below grade to stabilize the body position and maintain optimum nozzle performance.

The Toro 590GF Series is the first spray head designed specifically for golf course irrigation with enhanced water management capabilities.

The 590GF is built for the tough golf course environment, including harsh debris situations like top-dressing and sand, high water pressures, and daily mower and foot traffic. The 590GF is perfect around bunkers, on small tee boxes, and around the clubhouse. And with its patented X-Flow technology, the 590GF has a built-in shutoff device should a nozzle be damaged or removed and its standard check valve feature minimizes low head drainage.



590GF-4

590GF-6

590GF-12

590GF SERIES SPRAYS



Features & Benefits

- 1 Nozzle Options**
 In addition to the full line of Toro MPR, T-VAN and specialty nozzles the 590GF accepts the revolutionary Precision™ Spray and Precision™ Rotating Series nozzles with optimized distribution uniformity that provides exceptional turf conditions with minimal water usage.
- 2 Designed Flush Rate**
 Sprinkler flushes during pop-up and retraction clearing debris from around the riser to eliminate stick-ups and ensure positive sealing and retraction.
- 3 X-Flow® Shut Off Device**
 The X-Flow shut off feature stops the flow of water if the nozzle is damaged or removed to eliminate flooding, water waste and soil erosion.
- 4 Prevent Low Head Drainage**
 The standard check valve prevents low head drainage with up to 3 meters (10') of elevation change minimizing soil erosion and water waste.

With X-Flow
 Eliminates water waste, soil erosion and flooding



Without X-Flow
 Water waste, soil erosion and flooding occur

Operating Specifications

- Radius: 0,6 – 7,9m (2' – 26')
- Recommended pressure range: 1,7 – 3,4 Bar (25-50 psi) maximum – 5,2 Bar (75 psi)
- Flow rate: 0,15 – 17,8LPM (0.04 – 4.71 GPM)
- 2 GPM flush rate

Additional Features

- Stainless steel retraction spring
- All bodies shipped with flush plug in place
- Ratcheting riser feature for arc adjustment

Dimensions

- Body diameter:
 - 34,9mm (1.375") on 4P and 6P
 - 41,275mm (1.625") on 12P
- Cap diameter: 50,8mm (2")
- Inlet: 12,7mm (0.5") female-threaded

Warranty

- Two years; Five years when installed with Toro Swing Joints

Risers and Extenders



570-6X

- Male-inlet threads install onto any 590GF sprinkler or to provide a 15,2cm (6") extension
- Maximum pressure: 5,2 Bar (75 psi)

570SR-6 and 570SR-18 Risers

- 12,7mm (0.5") male-threaded inlet for installation on pipe fittings
- Maximum pressure: 5,2 Bar (75 psi)
- Height: 15,2cm and 45,7 (6" and 18")

Specifying Information—590GF Series Sprays

590GF-XX	
Model Number	Description
590GF-4	10,2cm (4") Pop-Up
590GF-6	15,2cm (6") Pop-Up
590GF-12	30,5cm (12") Pop-Up



PRECISION™ SERIES SPRAY NOZZLES



toro.com

The Toro Precision™ Series Spray Nozzles are the most complete and efficient spray nozzle line available

to help irrigation professionals manage water use. The Precision™ Series Spray Nozzles' 25mm/hr. (1"/hr.) precipitation rate ensures that water is applied more slowly and evenly. Now also available in pressure-compensating versions, further enhancing the best-in-class spray nozzle in the industry.

*PSN with PCD
Performs
Under Pressure!*

UP TO
33%
WATER
SAVINGS

Pressure Compensation Device

The elastomeric PCD disk opens and closes in response to changes in inlet pressure to maintain optimal nozzle performance. Recommended for use on systems operating above 2,8 Bar (40 psi), PCD models can easily be identified by the red Toro lettering across the top of the nozzle.





PRECISION™ SERIES SPRAY NOZZLES

Features & Benefits

- ① **Patented H²O Chip Technology**
Using patented H²O chip technology – and no moving parts – each Precision™ Series Spray Nozzle creates one or more high frequency oscillating streams to achieve the desired arc and radius with one-third less water usage.
- ② **Maximize Irrigation Efficiency**
Precision™ Series Spray Nozzles deliver an industry first 25mm/hr (1"/hr) precipitation rate, which better matches soil infiltration rate. This lower precipitation rate, along with high distribution uniformity make this the most efficient nozzle family from 1,5-4,6m (5'-15').
- ③ **Third-Party Performance Validation**
Precision™ Series Spray Nozzles have been tested and validated in the field and at the Center for Irrigation Technology (CIT).

- ④ **Pressure-Compensating**
Pressure-Compensating Precision™ Series Spray Nozzles maintain 25mm/hr. (1"/hr) precipitation rate and minimize misting for inlet pressures of more than 2,8 Bar (40 PSI), minimizing the need for a regulating head, at a fraction of the cost.
- ⑤ **Design and Retrofit Effectiveness**
The lower flow rate of Precision™ Series Spray Nozzles maximizes design efficiency and saves on overall material costs by using fewer valves and less controller stations. In addition, existing systems with low pressure can be fixed with a simple retrofit of the existing high-flow nozzle.



- ① 
- ② 

- ④ 
PSN with PCD Nozzle
- ⑤ 
Competitor's High Flow Nozzle

③





**Based on internal flow rate test data in Riverside, CA.*



PRECISION™ SERIES SPRAY NOZZLES



Performance Data Pressure Compensating – Precision™ Series Spray Nozzles (Metric)

Arc	Model # (O-XX-XX)	Bar	LPM	Radius	Precipitation Rate		Model # (O-XX-XX)	Bar	LPM	Radius	Precipitation Rate		Model # (O-XX-XX)	Bar	LPM	Radius	Precipitation Rate	
					■ (mm/hr)	▲ (mm/hr)					■ (mm/hr)	▲ (mm/hr)					■ (mm/hr)	▲ (mm/hr)
60°	5-60	1,4	0,2	1,4	25,4	30,5	8-60	1,4	0,4	2,3	25,4	30,5	10-60	1,4	0,6	2,9	25,4	30,5
		2,1	0,2	1,5	25,4	30,5		2,1	0,4	2,4	25,4	27,9		2,1	0,6	3,0	25,4	27,9
		2,8	0,2	1,5	25,4	30,5		2,8	0,5	2,5	27,9	30,5		2,8	0,7	3,0	25,4	30,5
		3,4	0,2	1,6	25,4	27,9		3,4	0,5	2,5	27,9	33,0		3,4	0,7	3,0	27,9	33,0
90°	5-Q	1,4	0,2	1,4	25,4	30,5	8-Q	1,4	0,5	2,1	27,9	33,0	10-Q	1,4	1,0	2,9	25,4	27,9
		2,1	0,2	1,5	25,4	27,9		2,1	0,6	2,4	25,4	27,9		2,1	0,9	3,0	25,4	30,5
		2,8	0,3	1,5	25,4	30,5		2,8	0,7	2,5	25,4	30,5		2,8	1,1	0,4	25,4	30,5
		3,4	0,3	1,5	25,4	30,5		3,4	0,7	2,6	25,4	27,9		3,4	1,1	0,4	25,4	30,5
120°	5-T	1,4	0,3	1,3	25,4	30,5	8-T	1,4	0,8	2,3	25,4	30,5	10-T	1,4	1,2	2,9	25,4	27,9
		2,1	0,3	1,5	25,4	30,5		2,1	0,8	2,4	25,4	27,9		2,1	1,3	3,0	25,4	27,9
		2,8	0,3	1,6	25,4	30,5		2,8	0,9	2,5	25,4	27,9		2,8	1,4	3,0	25,4	30,5
		3,4	0,4	1,6	25,4	27,9		3,4	0,9	2,5	25,4	27,9		3,4	1,4	3,0	27,9	30,5
150°	5-150	1,4	0,3	1,2	25,4	30,5	8-150	1,4	0,9	2,3	25,4	30,5	10-150	1,4	1,6	3,0	25,4	27,9
		2,1	0,4	1,5	25,4	30,5		2,1	1,0	2,4	25,4	27,9		2,1	1,6	3,0	25,4	27,9
		2,8	0,5	1,6	25,4	30,5		2,8	1,1	2,5	25,4	27,9		2,8	1,7	3,1	25,4	27,9
		3,4	0,5	1,6	25,4	30,5		3,4	1,1	2,5	25,4	30,5		3,4	1,7	3,2	25,4	27,9
180°	5-H	1,4	0,4	1,3	25,4	30,5	8-H	1,4	1,0	2,1	25,4	30,5	10-H	1,4	1,8	3,0	25,4	27,9
		2,1	0,5	1,5	25,4	30,5		2,1	1,2	2,4	25,4	27,9		2,1	1,9	3,0	25,4	27,9
		2,8	0,5	1,6	25,4	30,5		2,8	1,3	2,4	25,4	30,5		2,8	2,1	3,1	25,4	30,5
		3,4	0,5	1,6	25,4	27,9		3,4	1,3	2,4	25,4	30,5		3,4	2,1	3,2	25,4	30,5
210°	5-210	1,4	0,4	1,3	25,4	30,5	8-210	1,4	1,2	2,3	27,9	33,0	10-210	1,4	2,1	3,0	27,9	33,0
		2,1	0,6	1,6	27,9	30,5		2,1	1,4	2,4	27,9	33,0		2,1	2,2	3,0	27,9	33,0
		2,8	0,6	1,6	27,9	33,0		2,8	1,4	2,5	27,9	33,0		2,8	2,3	3,2	27,9	30,5
		3,4	0,6	1,7	27,9	33,0		3,4	1,4	2,5	27,9	33,0		3,4	2,3	3,2	27,9	33,0
240°	5-TT	1,4	0,5	1,3	27,9	33,0	8-TT	1,4	1,3	2,1	25,4	30,5	10-TT	1,4	2,4	2,9	25,4	27,9
		2,1	0,6	1,5	25,4	27,9		2,1	1,7	2,4	25,4	27,9		2,1	2,6	3,0	25,4	30,5
		2,8	0,7	1,5	27,9	30,5		2,8	1,7	2,4	25,4	30,5		2,8	2,8	3,1	25,4	27,9
		3,4	0,7	1,5	27,9	33,0		3,4	1,7	2,4	25,4	30,5		3,4	2,8	3,2	25,4	27,9
270°	5-TQ	1,4	0,6	1,3	25,4	30,5	8-TQ	1,4	1,6	2,2	25,4	27,9	10-TQ	1,4	2,7	2,9	25,4	27,9
		2,1	0,8	1,5	25,4	30,5		2,1	1,9	2,4	27,9	27,9		2,1	3,0	3,0	25,4	27,9
		2,8	0,8	1,5	27,9	30,5		2,8	2,0	2,4	27,9	30,5		2,8	3,2	3,1	25,4	27,9
		3,4	0,8	1,5	27,9	33,0		3,4	2,1	2,4	27,9	30,5		3,4	3,3	3,2	25,4	27,9
360°	5-F	1,4	0,6	1,2	25,4	30,5	8-F	1,4	2,1	2,1	27,9	30,5	10-F	1,4	3,6	2,9	25,4	27,9
		2,1	1,0	1,5	25,4	30,5		2,1	2,5	2,4	25,4	27,9		2,1	3,9	3,0	25,4	27,9
		2,8	1,0	1,5	25,4	30,5		2,8	2,6	2,4	25,4	30,5		2,8	4,1	3,1	25,4	27,9
		3,4	1,0	1,5	25,4	30,5		3,4	2,7	2,4	27,9	30,5		3,4	4,2	3,2	25,4	30,5

Precipitation rate (50% square spacing): 25mm per hour even after radius reduction of 20%.



PRECISION™ SERIES SPRAY NOZZLES



Performance Data Pressure Compensating – Precision™ Series Spray Nozzles (U.S.)

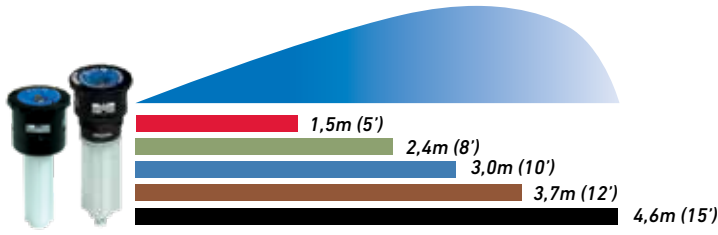
Arc	Model # (O-XX-XX)	psi	gpm	Radius	Precip. Rate ■ (in./hr.)	Precip. Rate ▲ (in./hr.)	Model # (O-XX-XX)	psi	gpm	Radius	Precip. Rate ■ (in./hr.)	Precip. Rate ▲ (in./hr.)	Model # (O-XX-XX)	psi	gpm	Radius	Precip. Rate ■ (in./hr.)	Precip. Rate ▲ (in./hr.)
60°	5-60	20	0.04	4.7	1.0	1.2	8-60	20	0.10	7.6	1.0	1.2	10-60	20	0.16	9.5	1.0	1.2
		30	0.04	5.0	1.0	1.2		30	0.11	8.0	1.0	1.1		30	0.17	10.0	1.0	1.1
		40	0.04	5.0	1.0	1.2		40	0.12	8.1	1.1	1.2		40	0.18	10.0	1.0	1.2
		50	0.05	5.3	1.0	1.1		50	0.13	8.3	1.1	1.3		50	0.19	10.0	1.1	1.3
90°	5-Q	20	0.06	4.6	1.0	1.2	8-Q	20	0.14	7.0	1.1	1.3	10-Q	20	0.26	9.5	1.0	1.1
		30	0.06	5.0	1.0	1.1		30	0.17	8.0	1.0	1.1		30	0.23	10.0	1.0	1.2
		40	0.07	5.0	1.0	1.2		40	0.18	8.2	1.0	1.2		40	0.28	1.2	1.0	1.2
		50	0.07	5.0	1.0	1.2		50	0.18	8.4	1.0	1.1		50	0.28	1.3	1.0	1.2
120°	5-T	20	0.07	4.4	1.0	1.2	8-T	20	0.20	7.6	1.0	1.2	10-T	20	0.31	9.5	1.0	1.1
		30	0.09	5.0	1.0	1.2		30	0.22	8.0	1.0	1.1		30	0.34	10.0	1.0	1.1
		40	0.09	5.2	1.0	1.2		40	0.23	8.2	1.0	1.1		40	0.36	10.0	1.0	1.2
		50	0.10	5.4	1.0	1.1		50	0.24	8.3	1.0	1.1		50	0.37	10.0	1.1	1.2
150°	5-150	20	0.07	4.0	1.0	1.2	8-150	20	0.25	7.5	1.0	1.2	10-150	20	0.41	9.8	1.0	1.1
		30	0.11	5.0	1.0	1.2		30	0.27	8.0	1.0	1.1		30	0.43	10.0	1.0	1.1
		40	0.12	5.2	1.0	1.2		40	0.28	8.1	1.0	1.1		40	0.44	10.2	1.0	1.1
		50	0.13	5.4	1.0	1.2		50	0.29	8.2	1.0	1.2		50	0.46	10.4	1.0	1.1
180°	5-H	20	0.10	4.4	1.0	1.2	8-H	20	0.26	7.0	1.0	1.2	10-H	20	0.48	9.7	1.0	1.1
		30	0.13	5.0	1.0	1.2		30	0.33	8.0	1.0	1.1		30	0.51	10.0	1.0	1.1
		40	0.14	5.1	1.0	1.2		40	0.34	8.0	1.0	1.2		40	0.55	10.3	1.0	1.2
		50	0.14	5.2	1.0	1.1		50	0.34	8.0	1.0	1.2		50	0.56	10.4	1.0	1.2
210°	5-210	20	0.10	4.4	1.0	1.2	8-210	20	0.33	7.6	1.1	1.3	10-210	20	0.56	9.8	1.1	1.3
		30	0.15	5.2	1.1	1.2		30	0.36	8.0	1.1	1.3		30	0.58	10.0	1.1	1.3
		40	0.16	5.3	1.1	1.3		40	0.37	8.1	1.1	1.3		40	0.60	10.4	1.1	1.2
		50	0.17	5.5	1.1	1.3		50	0.38	8.2	1.1	1.3		50	0.62	10.5	1.1	1.3
240°	5-TT	20	0.14	4.3	1.1	1.3	8-TT	20	0.34	7.0	1.0	1.2	10-TT	20	0.63	9.6	1.0	1.1
		30	0.17	5.0	1.0	1.1		30	0.44	8.0	1.0	1.1		30	0.69	10.0	1.0	1.2
		40	0.19	5.0	1.1	1.2		40	0.46	8.0	1.0	1.2		40	0.73	10.3	1.0	1.1
		50	0.19	5.0	1.1	1.3		50	0.46	8.0	1.0	1.2		50	0.74	10.4	1.0	1.1
270°	5-TQ	20	0.15	4.3	1.0	1.2	8-TQ	20	0.41	7.2	1.0	1.1	10-TQ	20	0.71	9.5	1.0	1.1
		30	0.20	5.0	1.0	1.2		30	0.49	8.0	1.1	1.1		30	0.79	10.0	1.0	1.1
		40	0.21	5.0	1.1	1.2		40	0.54	8.0	1.1	1.2		40	0.84	10.3	1.0	1.1
		50	0.22	5.0	1.1	1.3		50	0.55	8.0	1.1	1.2		50	0.86	10.4	1.0	1.1
360°	5-F	20	0.17	4.0	1.0	1.2	8-F	20	0.55	7.0	1.1	1.2	10-F	20	0.95	9.6	1.0	1.1
		30	0.26	5.0	1.0	1.2		30	0.66	8.0	1.0	1.1		30	1.03	10.0	1.0	1.1
		40	0.26	5.0	1.0	1.2		40	0.68	8.0	1.0	1.2		40	1.08	10.3	1.0	1.1
		50	0.26	5.0	1.0	1.2		50	0.71	8.0	1.1	1.2		50	1.12	10.4	1.0	1.2





PRECISION™ SERIES SPRAY NOZZLES

Five Radii Available in Toro (Male) & Female Threads



Nine Arcs, Plus Side and Center Strips Available



*Not available with Pressure-Compensating

1,2m X 4,6m (4' X 15')	1,2m X 9,1m (4' X 30')	1,2m X 4,6m (4' X 15')
1,2m X 2,7m (4' X 9')	1,2m X 5,5m (4' X 18')	1,2m X 2,7m (4' X 9')

LCS (Left Corner Strip) **SST** (Side Strip) **RCS** (Right Corner Strip)

Performance Data Pressure Compensating – Precision™ Series Spray Nozzles (Metric)

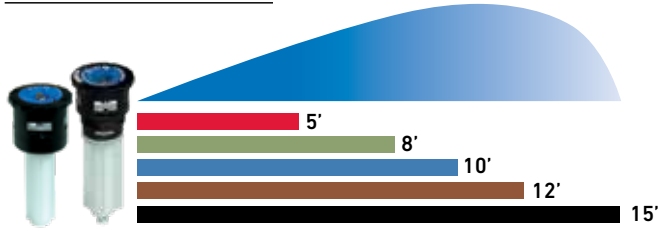
Arc	Model # (O-XX-XX)	Bar	LPM	Radius	Precipitation Rate		Model # (O-XX-XX)	Bar	LPM	Radius	Precipitation Rate		Arc	Bar	LPM	Radius	Precipitation Rate	
					■ (mm/hr)	▲ (mm/hr)					■ (mm/hr)	▲ (mm/hr)					■ (mm/hr)	▲ (mm/hr)
60°	12-60P	2,8	1,1	4,0	25,4	30,5	15-60P	2,8	1,4	4,3	27,9	30,5	4X30 SSTP	2,8	2,3	1,2 x 9,1	25,4	27,9
		3,4	1,1	4,0	25,4	30,5		3,4	1,6	4,6	25,4	30,5		3,4	2,5	1,2 x 9,1	25,4	30,5
		4,1	1,1	4,0	25,4	30,5		4,1	1,7	4,6	27,9	33,0		4,1	2,5	1,2 x 9,1	27,9	33,0
		4,8	1,1	4,0	25,4	30,5		4,8	1,8	4,6	30,5	35,6		4,8	2,6	1,2 x 9,1	27,9	33,0
90°	12-QP	2,8	1,3	3,7	25,4	30,5	15-QP	2,8	2,0	4,3	25,4	30,5	4X15 LCSP	2,8	1,2	1,2 x 4,6	25,4	30,5
		3,4	1,5	3,7	27,9	33,0		3,4	2,2	4,4	27,9	30,5		3,4	1,2	1,2 x 4,6	27,9	30,5
		4,1	1,6	3,8	30,5	33,0		4,1	2,4	4,5	27,9	33,0		4,1	1,3	1,2 x 4,6	27,9	33,0
		4,8	1,8	3,9	30,5	35,6		4,8	2,6	4,6	30,5	33,0		4,8	1,3	1,2 x 4,6	30,5	33,0
120°	12-TP	2,8	1,7	3,5	25,4	30,5	15-TP	2,8	2,7	4,4	25,4	30,5	4X15 RCSP	2,8	1,2	1,2 x 4,6	25,4	30,5
		3,4	1,9	3,6	25,4	30,5		3,4	2,9	4,5	25,4	30,5		3,4	1,2	1,2 x 4,6	27,9	30,5
		4,1	2,0	3,7	27,9	33,0		4,1	3,1	4,6	27,9	30,5		4,1	1,3	1,2 x 4,6	27,9	33,0
		4,8	2,2	3,7	27,9	33,0		4,8	3,3	4,8	27,9	30,5		4,8	1,3	1,2 x 4,6	30,5	33,0
150°	12-150P	2,8	2,2	3,7	25,4	27,9	15-150P	2,8	3,5	4,3	27,9	33,0	4X18 SSTP	2,8	1,4	1,2 x 5,5	25,4	27,9
		3,4	2,5	3,5	30,5	33,0		3,4	3,9	4,4	30,5	33,0		3,4	1,4	1,2 x 5,5	25,4	30,5
		4,1	2,7	3,7	30,5	33,0		4,1	4,3	4,4	33,0	38,1		4,1	1,4	1,2 x 5,5	25,4	30,5
		4,8	3,0	3,7	33,0	38,1		4,8	4,7	4,4	35,6	40,6		4,8	1,5	1,2 x 5,5	25,4	30,5
180°	12-HP	2,8	2,6	3,5	25,4	30,5	15-HP	2,8	4,2	4,4	25,4	30,5	4X9 LCSP	2,8	0,7	1,2 x 2,7	25,4	27,9
		3,4	2,8	3,6	25,4	30,5		3,4	4,5	4,4	27,9	30,5		3,4	0,7	1,2 x 2,7	27,9	30,5
		4,1	3,0	3,7	27,9	30,5		4,1	4,9	4,3	27,9	33,0		4,1	0,8	1,2 x 2,7	27,9	30,5
		4,8	3,2	3,8	27,9	30,5		4,8	5,3	4,2	30,5	33,0		4,8	0,8	1,2 x 2,7	30,5	33,0
210°	12-210P	2,8	3,3	3,4	30,5	35,6	15-210P	2,8	4,7	4,3	25,4	30,5	4X9 RCSP	2,8	0,7	1,2 x 2,7	25,4	30,5
		3,4	3,6	3,5	30,5	35,6		3,4	5,5	4,3	30,5	35,6		3,4	0,7	1,2 x 2,7	27,9	30,5
		4,1	4,0	3,7	30,5	35,6		4,1	5,9	4,3	33,0	38,1		4,1	0,8	1,2 x 2,7	27,9	30,5
		4,8	4,3	3,7	33,0	25,4		4,8	6,4	4,6	30,5	35,6		4,8	0,8	1,2 x 2,7	30,5	33,0
240°	12-TTP	2,8	3,4	3,5	25,4	30,5	15-TTP	2,8	5,5	4,4	25,4	30,5	4X9 RCSP	2,8	0,7	1,2 x 2,7	25,4	30,5
		3,4	3,9	3,5	27,9	33,0		3,4	5,9	4,5	25,4	30,5		3,4	0,7	1,2 x 2,7	27,9	30,5
		4,1	4,4	3,5	30,5	33,0		4,1	6,4	4,6	27,9	30,5		4,1	0,8	1,2 x 2,7	27,9	30,5
		4,8	4,9	3,5	30,5	35,6		4,8	6,8	4,7	27,9	33,0		4,8	0,8	1,2 x 2,7	30,5	33,0
270°	12-TQP	2,8	4,0	3,5	25,4	30,5	15-TQP	2,8	6,1	4,3	22,9	25,4	4X9 RCSP	2,8	0,7	1,2 x 2,7	25,4	30,5
		3,4	4,3	3,6	25,4	30,5		3,4	6,4	4,4	25,4	27,9		3,4	0,7	1,2 x 2,7	27,9	30,5
		4,1	4,7	3,7	27,9	33,0		4,1	6,8	4,5	25,4	30,5		4,1	0,8	1,2 x 2,7	27,9	30,5
		4,8	5,0	3,7	27,9	33,0		4,8	7,2	4,6	27,9	30,5		4,8	0,8	1,2 x 2,7	30,5	33,0
360°	12-FP	2,8	5,1	3,5	25,4	27,9	15-FP	2,8	8,3	4,4	25,4	30,5	4X9 RCSP	2,8	0,7	1,2 x 2,7	25,4	30,5
		3,4	5,6	3,6	25,4	30,5		3,4	8,9	4,5	25,4	30,5		3,4	0,7	1,2 x 2,7	27,9	30,5
		4,1	6,2	3,7	27,9	33,0		4,1	9,5	4,6	27,9	30,5		4,1	0,8	1,2 x 2,7	27,9	30,5
		4,8	6,7	3,8	27,9	33,0		4,8	10,1	4,7	27,9	33,0		4,8	0,8	1,2 x 2,7	30,5	33,0

Precipitation rate (50% square spacing): 25mm per hour even after radius reduction of 20%.

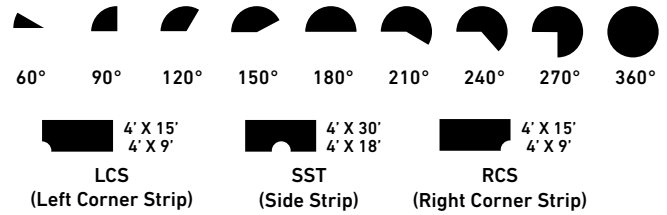


PRECISION™ SERIES SPRAY NOZZLES

Five Radii Available in Toro (Male) & Female Threads



Nine Arcs, Plus Side and Center Strips Available



Performance Data Pressure Compensating – Precision™ Series Spray Nozzles (U.S.)

Arc	Model # (O-XX-XX)	psi	gpm	Radius	Precip. Rate (in./hr.)	Precip. Rate (in./hr.)	Model # (O-XX-XX)	psi	gpm	Radius	Precip. Rate (in./hr.)	Precip. Rate (in./hr.)	Arc	psi	gpm	Radius	Precip. Rate (in./hr.)	Precip. Rate (in./hr.)
60°	12-60P	40	0.30	13.0	1.0	1.2	15-60P	40	0.36	14.0	1.1	1.2	4X30 SSTP	40	0.62	4x30	1.0	1.1
		50	0.30	13.0	1.0	1.2		50	0.41	15.0	1.0	1.2		50	0.65	4x30	1.0	1.2
		60	0.30	13.0	1.0	1.2		60	0.45	15.0	1.1	1.3		60	0.67	4x30	1.1	1.3
		70	0.30	13.0	1.0	1.2		70	0.48	15.0	1.2	1.4		70	0.70	4x30	1.1	1.3
90°	12-QP	40	0.34	12.0	1.0	1.2	15-QP	40	0.53	14.2	1.0	1.2	4X15 LCSP	40	0.32	4x15	1.0	1.2
		50	0.39	12.2	1.1	1.3		50	0.59	14.5	1.1	1.2		50	0.33	4x15	1.1	1.2
		60	0.43	12.5	1.2	1.3		60	0.64	14.8	1.1	1.3		60	0.34	4x15	1.1	1.3
		70	0.48	12.7	1.2	1.4		70	0.70	15.1	1.2	1.3		70	0.35	4x15	1.2	1.3
120°	12-TP	40	0.46	11.5	1.0	1.2	15-TP	40	0.72	14.3	1.0	1.2	4X15 RCSP	40	0.32	4x15	1.0	1.2
		50	0.50	11.8	1.0	1.2		50	0.77	14.8	1.0	1.2		50	0.33	4x15	1.1	1.2
		60	0.54	12.0	1.1	1.3		60	0.82	15.2	1.1	1.2		60	0.34	4x15	1.1	1.3
		70	0.58	12.3	1.1	1.3		70	0.87	15.7	1.1	1.2		70	0.35	4x15	1.2	1.3
150°	12-150P	40	0.59	12.0	1.0	1.1	15-150P	40	0.93	14.0	1.1	1.3	4X18 SSTP	40	0.36	4x18	1.0	1.1
		50	0.66	11.5	1.2	1.3		50	1.04	14.5	1.2	1.3		50	0.37	4x18	1.0	1.2
		60	0.72	12.0	1.2	1.3		60	1.14	14.5	1.3	1.5		60	0.38	4x18	1.0	1.2
		70	0.78	12.0	1.3	1.5		70	1.23	14.5	1.4	1.6		70	0.39	4x18	1.0	1.2
180°	12-HP	40	0.70	11.5	1.0	1.2	15-HP	40	1.10	14.5	1.0	1.2	4X9 LCSP	40	0.18	4x9	1.0	1.1
		50	0.75	11.8	1.0	1.2		50	1.20	14.3	1.1	1.2		50	0.19	4x9	1.1	1.2
		60	0.80	12.2	1.1	1.2		60	1.29	14.0	1.1	1.3		60	0.20	4x9	1.1	1.2
		70	0.85	12.5	1.1	1.2		70	1.39	13.8	1.2	1.3		70	0.21	4x9	1.2	1.3
210°	12-210P	40	0.86	11.0	1.2	1.4	15-210P	40	1.23	14.0	1.0	1.2	4X9 RCSP	40	0.18	4x9	1.0	1.2
		50	0.96	11.5	1.2	1.4		50	1.44	14.0	1.2	1.4		50	0.19	4x9	1.1	1.2
		60	1.05	12.0	1.2	1.4		60	1.56	14.0	1.3	1.5		60	0.20	4x9	1.1	1.2
		70	1.13	12.0	1.3	1.5		70	1.70	15.0	1.2	1.4		70	0.21	4x9	1.2	1.3
240°	12-TTP	40	0.90	11.4	1.0	1.2	15-TTP	40	1.45	14.5	1.0	1.2	4X9 RCSP	40	0.18	4x9	1.0	1.2
		50	1.03	11.5	1.1	1.3		50	1.57	14.8	1.0	1.2		50	0.19	4x9	1.1	1.2
		60	1.16	11.5	1.2	1.3		60	1.68	15.0	1.1	1.2		60	0.20	4x9	1.1	1.2
		70	1.29	11.6	1.2	1.4		70	1.80	15.3	1.1	1.3		70	0.21	4x9	1.2	1.3
270°	12-TQP	40	1.05	11.4	1.0	1.2	15-TQP	40	1.60	14.0	0.9	1.0	4X9 RCSP	40	0.18	4x9	1.0	1.2
		50	1.14	11.7	1.0	1.2		50	1.70	14.4	1.0	1.1		50	0.19	4x9	1.1	1.2
		60	1.23	12.0	1.1	1.3		60	1.80	14.8	1.0	1.2		60	0.20	4x9	1.1	1.2
		70	1.32	12.3	1.1	1.3		70	1.90	15.1	1.1	1.2		70	0.21	4x9	1.2	1.3
360°	12-FP	40	1.35	11.5	1.0	1.1	15-FP	40	2.20	14.5	1.0	1.2	4X9 RCSP	40	0.18	4x9	1.0	1.2
		50	1.49	11.8	1.0	1.2		50	2.36	14.8	1.0	1.2		50	0.19	4x9	1.1	1.2
		60	1.63	12.2	1.1	1.3		60	2.52	15.1	1.1	1.2		60	0.20	4x9	1.1	1.2
		70	1.77	12.5	1.1	1.3		70	2.68	15.4	1.1	1.3		70	0.21	4x9	1.2	1.3



PRECISION™ SERIES SPRAY NOZZLES



Performance Data – Precision™ Series Spray Nozzles (Metric)

Arc	Model # (O-XX-XX)	Bar	LPM	Radius	Precipitation Rate		Model # (O-XX-XX)	Bar	LPM	Radius	Precipitation Rate		Model # (O-XX-XX)	Bar	LPM	Radius	Precipitation Rate	
					■ (mm/hr)	▲ (mm/hr)					■ (mm/hr)	▲ (mm/hr)					■ (mm/hr)	▲ (mm/hr)
60°	5-60	1,4	0,2	1,4	25,4	30,5	8-60	1,4	0,4	2,3	25,4	30,5	10-60	1,4	0,6	2,9	25,4	30,5
		2,1	0,2	1,5	25,4	30,5		2,1	0,4	2,4	25,4	27,9		2,1	0,6	3,0	25,4	27,9
		2,8	0,2	1,5	25,4	30,5		2,8	0,5	2,5	27,9	30,5		2,8	0,7	3,0	25,4	30,5
		3,4	0,2	1,6	25,4	27,9		3,4	0,5	2,5	27,9	33,0		3,4	0,7	3,0	27,9	33,0
90°	5-Q	1,4	0,2	1,4	25,4	30,5	8-Q	1,4	0,5	2,1	27,9	33,0	10-Q	1,4	1,0	2,9	25,4	27,9
		2,1	0,2	1,5	25,4	27,9		2,1	0,6	2,4	25,4	27,9		2,1	0,9	3,0	25,4	30,5
		2,8	0,3	1,5	25,4	30,5		2,8	0,7	2,5	25,4	30,5		2,8	1,1	0,4	25,4	30,5
		3,4	0,3	1,5	25,4	30,5		3,4	0,7	2,6	25,4	27,9		3,4	1,1	0,4	25,4	30,5
120°	5-T	1,4	0,3	1,3	25,4	30,5	8-T	1,4	0,8	2,3	25,4	30,5	10-T	1,4	1,2	2,9	25,4	27,9
		2,1	0,3	1,5	25,4	30,5		2,1	0,8	2,4	25,4	27,9		2,1	1,3	3,0	25,4	27,9
		2,8	0,3	1,6	25,4	30,5		2,8	0,9	2,5	25,4	27,9		2,8	1,4	3,0	25,4	30,5
		3,4	0,4	1,6	25,4	27,9		3,4	0,9	2,5	25,4	27,9		3,4	1,4	3,0	27,9	30,5
150°	5-150	1,4	0,3	1,2	25,4	30,5	8-150	1,4	0,9	2,3	25,4	30,5	10-150	1,4	1,6	3,0	25,4	27,9
		2,1	0,4	1,5	25,4	30,5		2,1	1,0	2,4	25,4	27,9		2,1	1,6	3,0	25,4	27,9
		2,8	0,5	1,6	25,4	30,5		2,8	1,1	2,5	25,4	27,9		2,8	1,7	3,1	25,4	27,9
		3,4	0,5	1,6	25,4	30,5		3,4	1,1	2,5	25,4	30,5		3,4	1,7	3,2	25,4	27,9
180°	5-H	1,4	0,4	1,3	25,4	30,5	8-H	1,4	1,0	2,1	25,4	30,5	10-H	1,4	1,8	3,0	25,4	27,9
		2,1	0,5	1,5	25,4	30,5		2,1	1,2	2,4	25,4	27,9		2,1	1,9	3,0	25,4	27,9
		2,8	0,5	1,6	25,4	30,5		2,8	1,3	2,4	25,4	30,5		2,8	2,1	3,1	25,4	30,5
		3,4	0,5	1,6	25,4	27,9		3,4	1,3	2,4	25,4	30,5		3,4	2,1	3,2	25,4	30,5
210°	5-210	1,4	0,4	1,3	25,4	30,5	8-210	1,4	1,2	2,3	27,9	33,0	10-210	1,4	2,1	3,0	27,9	33,0
		2,1	0,6	1,6	27,9	30,5		2,1	1,4	2,4	27,9	33,0		2,1	2,2	3,0	27,9	33,0
		2,8	0,6	1,6	27,9	33,0		2,8	1,4	2,5	27,9	33,0		2,8	2,3	3,2	27,9	30,5
		3,4	0,6	1,7	27,9	33,0		3,4	1,4	2,5	27,9	33,0		3,4	2,3	3,2	27,9	33,0
240°	5-TT	1,4	0,5	1,3	27,9	33,0	8-TT	1,4	1,3	2,1	25,4	30,5	10-TT	1,4	2,4	2,9	25,4	27,9
		2,1	0,6	1,5	25,4	27,9		2,1	1,7	2,4	25,4	27,9		2,1	2,6	3,0	25,4	30,5
		2,8	0,7	1,5	27,9	30,5		2,8	1,7	2,4	25,4	30,5		2,8	2,8	3,1	25,4	27,9
		3,4	0,7	1,5	27,9	33,0		3,4	1,7	2,4	25,4	30,5		3,4	2,8	3,2	25,4	27,9
270°	5-TQ	1,4	0,6	1,3	25,4	30,5	8-TQ	1,4	1,6	2,2	25,4	27,9	10-TQ	1,4	2,7	2,9	25,4	27,9
		2,1	0,8	1,5	25,4	30,5		2,1	1,9	2,4	27,9	27,9		2,1	3,0	3,0	25,4	27,9
		2,8	0,8	1,5	27,9	30,5		2,8	2,0	2,4	27,9	30,5		2,8	3,2	3,1	25,4	27,9
		3,4	0,8	1,5	27,9	33,0		3,4	2,1	2,4	27,9	30,5		3,4	3,3	3,2	25,4	27,9
360°	5-F	1,4	0,6	1,2	25,4	30,5	8-F	1,4	2,1	2,1	27,9	30,5	10-F	1,4	3,6	2,9	25,4	27,9
		2,1	1,0	1,5	25,4	30,5		2,1	2,5	2,4	25,4	27,9		2,1	3,9	3,0	25,4	27,9
		2,8	1,0	1,5	25,4	30,5		2,8	2,6	2,4	25,4	30,5		2,8	4,1	3,1	25,4	27,9
		3,4	1,0	1,5	25,4	30,5		3,4	2,7	2,4	27,9	30,5		3,4	4,2	3,2	25,4	30,5

Precipitation rate (50% square spacing): 25mm per hour even after radius reduction of 20%.



PRECISION™ SERIES SPRAY NOZZLES



Performance Data – Precision™ Series Spray Nozzles (U.S.)

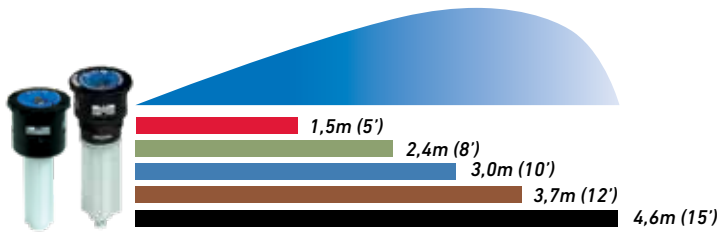
Arc	Model # (O-XX-XX)	psi	gpm	Radius	Precip. Rate (in./hr.)	Precip. Rate (in./hr.)	Model # (O-XX-XX)	psi	gpm	Radius	Precip. Rate (in./hr.)	Precip. Rate (in./hr.)	Model # (O-XX-XX)	psi	gpm	Radius	Precip. Rate (in./hr.)	Precip. Rate (in./hr.)
					■ (in./hr.)	▲ (in./hr.)					■ (in./hr.)	▲ (in./hr.)					■ (in./hr.)	▲ (in./hr.)
60°	5-60	20	0.04	4.7	1.0	1.2	8-60	20	0.10	7.6	1.0	1.2	10-60	20	0.16	9.5	1.0	1.2
		30	0.04	5.0	1.0	1.2		30	0.11	8.0	1.0	1.1		30	0.17	10.0	1.0	1.1
		40	0.04	5.0	1.0	1.2		40	0.12	8.1	1.1	1.2		40	0.18	10.0	1.0	1.2
		50	0.05	5.3	1.0	1.1		50	0.13	8.3	1.1	1.3		50	0.19	10.0	1.1	1.3
90°	5-Q	20	0.06	4.6	1.0	1.2	8-Q	20	0.14	7.0	1.1	1.3	10-Q	20	0.26	9.5	1.0	1.1
		30	0.06	5.0	1.0	1.1		30	0.17	8.0	1.0	1.1		30	0.23	10.0	1.0	1.2
		40	0.07	5.0	1.0	1.2		40	0.18	8.2	1.0	1.2		40	0.28	1.2	1.0	1.2
		50	0.07	5.0	1.0	1.2		50	0.18	8.4	1.0	1.1		50	0.28	1.3	1.0	1.2
120°	5-T	20	0.07	4.4	1.0	1.2	8-T	20	0.20	7.6	1.0	1.2	10-T	20	0.31	9.5	1.0	1.1
		30	0.09	5.0	1.0	1.2		30	0.22	8.0	1.0	1.1		30	0.34	10.0	1.0	1.1
		40	0.09	5.2	1.0	1.2		40	0.23	8.2	1.0	1.1		40	0.36	10.0	1.0	1.2
		50	0.10	5.4	1.0	1.1		50	0.24	8.3	1.0	1.1		50	0.37	10.0	1.1	1.2
150°	5-150	20	0.07	4.0	1.0	1.2	8-150	20	0.25	7.5	1.0	1.2	10-150	20	0.41	9.8	1.0	1.1
		30	0.11	5.0	1.0	1.2		30	0.27	8.0	1.0	1.1		30	0.43	10.0	1.0	1.1
		40	0.12	5.2	1.0	1.2		40	0.28	8.1	1.0	1.1		40	0.44	10.2	1.0	1.1
		50	0.13	5.4	1.0	1.2		50	0.29	8.2	1.0	1.2		50	0.46	10.4	1.0	1.1
180°	5-H	20	0.10	4.4	1.0	1.2	8-H	20	0.26	7.0	1.0	1.2	10-H	20	0.48	9.7	1.0	1.1
		30	0.13	5.0	1.0	1.2		30	0.33	8.0	1.0	1.1		30	0.51	10.0	1.0	1.1
		40	0.14	5.1	1.0	1.2		40	0.34	8.0	1.0	1.2		40	0.55	10.3	1.0	1.2
		50	0.14	5.2	1.0	1.1		50	0.34	8.0	1.0	1.2		50	0.56	10.4	1.0	1.2
210°	5-210	20	0.10	4.4	1.0	1.2	8-210	20	0.33	7.6	1.1	1.3	10-210	20	0.56	9.8	1.1	1.3
		30	0.15	5.2	1.1	1.2		30	0.36	8.0	1.1	1.3		30	0.58	10.0	1.1	1.3
		40	0.16	5.3	1.1	1.3		40	0.37	8.1	1.1	1.3		40	0.60	10.4	1.1	1.2
		50	0.17	5.5	1.1	1.3		50	0.38	8.2	1.1	1.3		50	0.62	10.5	1.1	1.3
240°	5-TT	20	0.14	4.3	1.1	1.3	8-TT	20	0.34	7.0	1.0	1.2	10-TT	20	0.63	9.6	1.0	1.1
		30	0.17	5.0	1.0	1.1		30	0.44	8.0	1.0	1.1		30	0.69	10.0	1.0	1.2
		40	0.19	5.0	1.1	1.2		40	0.46	8.0	1.0	1.2		40	0.73	10.3	1.0	1.1
		50	0.19	5.0	1.1	1.3		50	0.46	8.0	1.0	1.2		50	0.74	10.4	1.0	1.1
270°	5-TQ	20	0.15	4.3	1.0	1.2	8-TQ	20	0.41	7.2	1.0	1.1	10-TQ	20	0.71	9.5	1.0	1.1
		30	0.20	5.0	1.0	1.2		30	0.49	8.0	1.1	1.1		30	0.79	10.0	1.0	1.1
		40	0.21	5.0	1.1	1.2		40	0.54	8.0	1.1	1.2		40	0.84	10.3	1.0	1.1
		50	0.22	5.0	1.1	1.3		50	0.55	8.0	1.1	1.2		50	0.86	10.4	1.0	1.1
360°	5-F	20	0.17	4.0	1.0	1.2	8-F	20	0.55	7.0	1.1	1.2	10-F	20	0.95	9.6	1.0	1.1
		30	0.26	5.0	1.0	1.2		30	0.66	8.0	1.0	1.1		30	1.03	10.0	1.0	1.1
		40	0.26	5.0	1.0	1.2		40	0.68	8.0	1.0	1.2		40	1.08	10.3	1.0	1.1
		50	0.26	5.0	1.0	1.2		50	0.71	8.0	1.1	1.2		50	1.12	10.4	1.0	1.2





PRECISION™ SERIES SPRAY NOZZLES

Five Radii Available in Toro (Male) & Female Threads



Nine Arcs, Plus Side and Center Strips Available

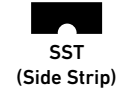


*Not available with Pressure-Compensating

1,2m X 4,6m (4' X 15')
1,2m X 2,7m (4' X 9')

1,2m X 9,1m (4' X 30')
1,2m X 5,5m (4' X 18')

1,2m X 4,6m (4' X 15')
1,2m X 2,7m (4' X 9')



Performance Data – Precision™ Series Spray Nozzles (Metric)

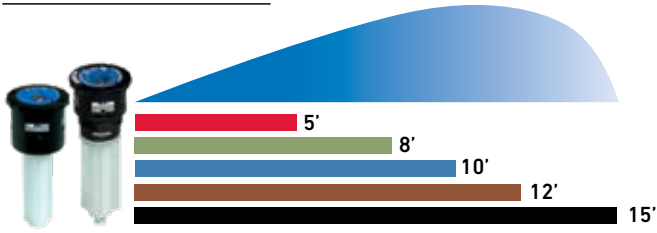
Arc	Model # (O-XX-XX)	Bar	LPM	Radius	Precipitation Rate		Model # (O-XX-XX)	Bar	LPM	Radius	Precipitation Rate		Arc	Bar	LPM	Radius	Precipitation Rate	
					■ (mm/hr)	▲ (mm/hr)					■ (mm/hr)	▲ (mm/hr)					■ (mm/hr)	▲ (mm/hr)
60°	12-60P	1,4	0,9	3,5	25,4	30,5	15-60P	1,4	1,3	4,3	25,4	30,5	4X30 SSTP	1,4	2,3	1,2 x 9,1	25,4	27,9
		2,1	0,9	3,7	25,4	30,5		2,1	1,5	4,6	25,4	30,5		2,1	2,5	1,2 x 9,1	27,9	30,5
		2,8	1,0	3,7	25,4	30,5		2,8	1,5	4,6	25,4	30,5		2,8	2,5	1,2 x 9,1	27,9	30,5
		3,4	1,1	3,7	27,9	33,0		3,4	1,6	4,7	25,4	30,5		3,4	2,6	1,2 x 9,1	27,9	33,0
90°	12-QP	1,4	1,3	3,7	25,4	30,5	15-QP	1,4	2,0	4,3	25,4	30,5	4X15 LCSP	1,4	1,2	1,2 x 4,6	25,4	30,5
		2,1	1,4	3,7	25,4	27,9		2,1	2,2	4,6	25,4	27,9		2,1	1,2	1,2 x 4,6	27,9	30,5
		2,8	1,5	3,5	25,4	30,5		2,8	2,3	4,6	25,4	30,5		2,8	1,3	1,2 x 4,6	27,9	30,5
		3,4	1,5	3,7	25,4	27,9		3,4	2,3	4,7	25,4	30,5		3,4	1,3	1,2 x 4,6	27,9	33,0
120°	12-TP	1,4	1,7	3,5	25,4	30,5	15-TP	1,4	2,7	4,4	25,4	30,5	4X15 RCSP	1,4	1,2	1,2 x 4,6	25,4	30,5
		2,1	1,9	3,7	25,4	27,9		2,1	2,9	4,6	25,4	27,9		2,1	1,2	1,2 x 4,6	27,9	30,5
		2,8	1,9	3,7	25,4	27,9		2,8	3,1	4,7	25,4	30,5		2,8	1,3	1,2 x 4,6	27,9	33,0
		3,4	2,0	3,7	25,4	27,9		3,4	3,1	4,7	25,4	30,5		3,4	1,3	1,2 x 4,6	27,9	33,0
150°	12-150P	1,4	2,3	3,5	25,4	30,5	15-150P	1,4	3,5	4,5	25,4	30,5	4X18 SSTP	1,4	1,4	1,2 x 5,5	25,4	27,9
		2,1	2,3	3,7	25,4	27,9		2,1	3,6	4,6	25,4	30,5		2,1	1,4	1,2 x 5,5	25,4	27,9
		2,8	2,4	3,7	25,4	27,9		2,8	3,8	4,6	25,4	30,5		2,8	1,4	1,2 x 5,5	25,4	30,5
		3,4	2,4	3,7	25,4	27,9		3,4	4,2	4,7	27,9	33,0		3,4	1,4	1,2 x 5,5	25,4	30,5
180°	12-HP	1,4	2,6	3,5	25,4	30,5	15-HP	1,4	4,2	4,4	25,4	30,5	4X9 LCSP	1,4	0,7	1,2 x 2,7	25,4	30,5
		2,1	2,8	3,7	25,4	27,9		2,1	4,4	4,6	25,4	27,9		2,1	0,7	1,2 x 2,7	25,4	30,5
		2,8	3,0	3,7	25,4	30,5		2,8	4,7	4,7	25,4	30,5		2,8	0,8	1,2 x 2,7	27,9	30,5
		3,4	3,0	3,8	25,4	30,5		3,4	4,8	4,7	25,4	30,5		3,4	0,8	1,2 x 2,7	27,9	27,9
210°	12-210P	1,4	2,9	3,5	27,9	33,0	15-210P	1,4	4,4	4,4	27,9	30,5	4X9 RCSP	1,4	0,7	1,2 x 2,7	25,4	30,5
		2,1	3,1	3,7	27,9	33,0		2,1	4,5	4,6	25,4	30,5		2,1	0,7	1,2 x 2,7	25,4	30,5
		2,8	3,2	3,7	27,9	30,5		2,8	4,9	4,7	25,4	30,5		2,8	0,8	1,2 x 2,7	27,9	30,5
		3,4	3,2	3,8	27,9	30,5		3,4	5,3	4,8	27,9	33,0		3,4	0,8	1,2 x 2,7	27,9	30,5
240°	12-TTP	1,4	3,4	3,5	25,4	30,5	15-TTP	1,4	5,5	4,4	25,4	30,5	4X9 RCSP	1,4	0,7	1,2 x 2,7	25,4	30,5
		2,1	3,7	3,7	25,4	27,9		2,1	5,8	4,6	25,4	27,9		2,1	0,7	1,2 x 2,7	25,4	30,5
		2,8	3,9	3,7	25,4	27,9		2,8	6,0	4,6	25,4	27,9		2,8	0,8	1,2 x 2,7	27,9	30,5
		3,4	4,0	3,8	25,4	27,9		3,4	6,1	4,7	25,4	27,9		3,4	0,8	1,2 x 2,7	27,9	30,5
270°	12-TQP	1,4	4,0	3,5	25,4	30,5	15-TQP	1,4	6,5	4,4	25,4	30,5	4X9 RCSP	1,4	0,7	1,2 x 2,7	25,4	30,5
		2,1	4,4	3,7	25,4	30,5		2,1	6,7	4,6	25,4	27,9		2,1	0,7	1,2 x 2,7	25,4	30,5
		2,8	4,5	3,7	25,4	30,5		2,8	6,9	4,6	25,4	30,5		2,8	0,8	1,2 x 2,7	27,9	30,5
		3,4	4,6	3,7	25,4	30,5		3,4	7,2	4,7	25,4	30,5		3,4	0,8	1,2 x 2,7	27,9	30,5
360°	12-FP	1,4	5,1	3,5	25,4	27,9	15-FP	1,4	8,3	4,4	25,4	30,5	4X9 RCSP	1,4	0,7	1,2 x 2,7	25,4	30,5
		2,1	5,6	3,7	25,4	27,9		2,1	8,7	4,6	25,4	27,9		2,1	0,7	1,2 x 2,7	25,4	30,5
		2,8	6,0	3,8	25,4	27,9		2,8	8,9	4,6	25,4	27,9		2,8	0,8	1,2 x 2,7	27,9	30,5
		3,4	6,1	3,8	25,4	27,9		3,4	9,1	4,7	25,4	27,9		3,4	0,8	1,2 x 2,7	27,9	30,5

Precipitation rate (50% square spacing): 25mm per hour even after radius reduction of 20%.

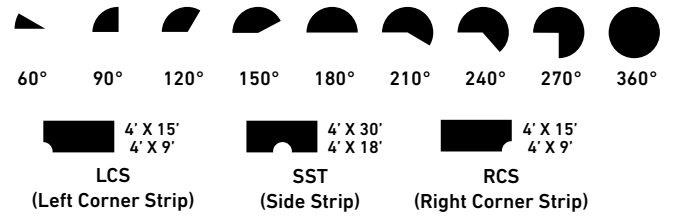


PRECISION™ SERIES SPRAY NOZZLES

Five Radii Available in Toro (Male) & Female Threads



Nine Arcs, Plus Side and Center Strips Available



Performance Data – Precision™ Series Spray Nozzles (U.S.)

Arc	Model # (O-XX-XX)	psi	gpm	Radius	Precip. Rate (in./hr.)	Precip. Rate (in./hr.)	Model # (O-XX-XX)	psi	gpm	Radius	Precip. Rate (in./hr.)	Precip. Rate (in./hr.)	Arc	psi	gpm	Radius	Precip. Rate (in./hr.)	Precip. Rate (in./hr.)
					■	▲					■	▲					■	▲
60°	12-60	20	0.24	11.5	1.0	1.2	15-60	20	0.35	14.0	1.0	1.2	4X30 SST	20	0.62	4x28	1.0	1.1
		30	0.25	12.0	1.0	1.2		30	0.39	15.0	1.0	1.2		30	0.66	4x30	1.1	1.2
		40	0.26	12.1	1.0	1.2		40	0.40	15.1	1.0	1.2		40	0.67	4x30	1.1	1.2
		50	0.28	12.2	1.1	1.3		50	0.42	15.3	1.0	1.2		50	0.68	4x30	1.1	1.3
90°	12-Q	20	0.34	12.0	1.0	1.2	15-Q	20	0.53	14.2	1.0	1.2	4X15 LCS	20	0.32	4x15	1.0	1.2
		30	0.37	12.1	1.0	1.1		30	0.58	15.0	1.0	1.1		30	0.33	4x15	1.1	1.2
		40	0.39	11.4	1.0	1.2		40	0.60	15.1	1.0	1.2		40	0.34	4x15	1.1	1.2
		50	0.39	12.0	1.0	1.1		50	0.61	15.3	1.0	1.2		50	0.34	4x15	1.1	1.3
120°	12-T	20	0.46	11.5	1.0	1.2	15-T	20	0.72	14.3	1.0	1.2	4X15 RCS	20	0.32	4x15	1.0	1.2
		30	0.49	12.0	1.0	1.1		30	0.77	15.0	1.0	1.1		30	0.33	4x15	1.1	1.2
		40	0.51	12.2	1.0	1.1		40	0.81	15.3	1.0	1.2		40	0.34	4x15	1.1	1.3
		50	0.52	12.3	1.0	1.1		50	0.82	15.4	1.0	1.2		50	0.34	4x15	1.1	1.3
150°	12-150	20	0.60	11.6	1.0	1.2	15-150	20	0.92	14.7	1.0	1.2	4X18 SST	20	0.36	4x18	1.0	1.1
		30	0.62	12.0	1.0	1.1		30	0.96	15.0	1.0	1.2		30	0.37	4x18	1.0	1.1
		40	0.63	12.2	1.0	1.1		40	1.00	15.2	1.0	1.2		40	0.38	4x18	1.0	1.2
		50	0.64	12.3	1.0	1.1		50	1.10	15.3	1.1	1.3		50	0.38	4x18	1.0	1.2
180°	12-H	20	0.70	11.5	1.0	1.2	15-H	20	1.10	14.5	1.0	1.2	4X9 LCS	20	0.18	4x9	1.0	1.2
		30	0.74	12.0	1.0	1.1		30	1.16	15.0	1.0	1.1		30	0.19	4x9	1.0	1.2
		40	0.79	12.3	1.0	1.2		40	1.25	15.4	1.0	1.2		40	0.2	4x9	1.1	1.2
		50	0.80	12.4	1.0	1.2		50	1.28	15.5	1.0	1.2		50	0.2	4x9	1.1	1.1
210°	12-210	20	0.76	11.6	1.1	1.3	15-210	20	1.15	14.5	1.1	1.2	4X9 RCS	20	0.18	4x9	1.0	1.2
		30	0.82	12.0	1.1	1.3		30	1.20	15.0	1.0	1.2		30	0.19	4x9	1.0	1.2
		40	0.84	12.3	1.1	1.2		40	1.30	15.5	1.0	1.2		40	0.2	4x9	1.1	1.2
		50	0.85	12.4	1.1	1.2		50	1.40	15.6	1.1	1.3		50	0.2	4x9	1.1	1.1
240°	12-TT	20	0.90	11.4	1.0	1.2	15-TT	20	1.45	14.5	1.0	1.2		20	0.2	4x9	1.1	1.2
		30	0.99	12.0	1.0	1.1		30	1.54	15.0	1.0	1.1		30	0.2	4x9	1.1	1.2
		40	1.04	12.3	1.0	1.1		40	1.58	15.2	1.0	1.1		40	0.2	4x9	1.1	1.2
		50	1.05	12.4	1.0	1.1		50	1.61	15.3	1.0	1.1		50	0.2	4x9	1.1	1.2
270°	12-TQ	20	1.05	11.4	1.0	1.2	15-TQ	20	1.72	14.5	1.0	1.2		20	0.2	4x9	1.1	1.2
		30	1.15	12.0	1.0	1.2		30	1.78	15.0	1.0	1.1		30	0.2	4x9	1.1	1.2
		40	1.19	12.2	1.0	1.2		40	1.82	15.0	1.0	1.2		40	0.2	4x9	1.1	1.2
		50	1.22	12.3	1.0	1.2		50	1.90	15.3	1.0	1.2		50	0.2	4x9	1.1	1.2
360°	12-F	20	1.35	11.5	1.0	1.1	15-F	20	2.20	14.5	1.0	1.2		20	0.2	4x9	1.1	1.2
		30	1.48	12.0	1.0	1.1		30	2.31	15.0	1.0	1.1		30	0.2	4x9	1.1	1.2
		40	1.59	12.4	1.0	1.1		40	2.35	15.2	1.0	1.1		40	0.2	4x9	1.1	1.2
		50	1.60	12.5	1.0	1.1		50	2.40	15.3	1.0	1.1		50	0.2	4x9	1.1	1.2

PRECISION™ SERIES SPRAY NOZZLES



Operating Specifications

- Radius: 1,5-4,6m (5'-15')
- Operating Pressure Range: 1,4-5,2 Bar (20-75 psi)
- Arc Options: 60°, 90°, 120°, 150°, 180°, 210°, 240°, 270°, 360°
- Side & Corner Specialty Patterns
- Fit Toro® or Irritrol®, Rain Bird® and Hunter® Spray Bodies



Specifications

Operating Specifications (with PCD)

- Radius: 1,5-4,6m (5'-15')
- Operating pressure range: 2,8-5,2 Bar (40-75 psi)
- Recommended Pressure: 3,5 Bar (50 psi)
- Flow Rate: 0,15-10,1 LPM (0.04-2.68 GPM)
- Nozzle trajectory:
 - 1,5m (5'): 5°
 - 2,4m (8'): 10°
 - 3,0m (10'): 15°
 - 3,7m (12'): 20°
 - 4,6m (15'): 27°
- Corner and Side Strips: 20°

Additional Features

- Radius reduction 25% maximum
- Color coded for radius on top of the nozzle
- Precipitation rate ≤ 25mm/hour (≤ 1"/hour)
- Maintains precipitation rate as radius is reduced up to max of 25%
- Matched precipitation rate within radius families
- Matched precipitation rates between radius families
- Screen attached to nozzle for easy insertion into the spray body
- Works on all spray bodies

Warranty

- Two years

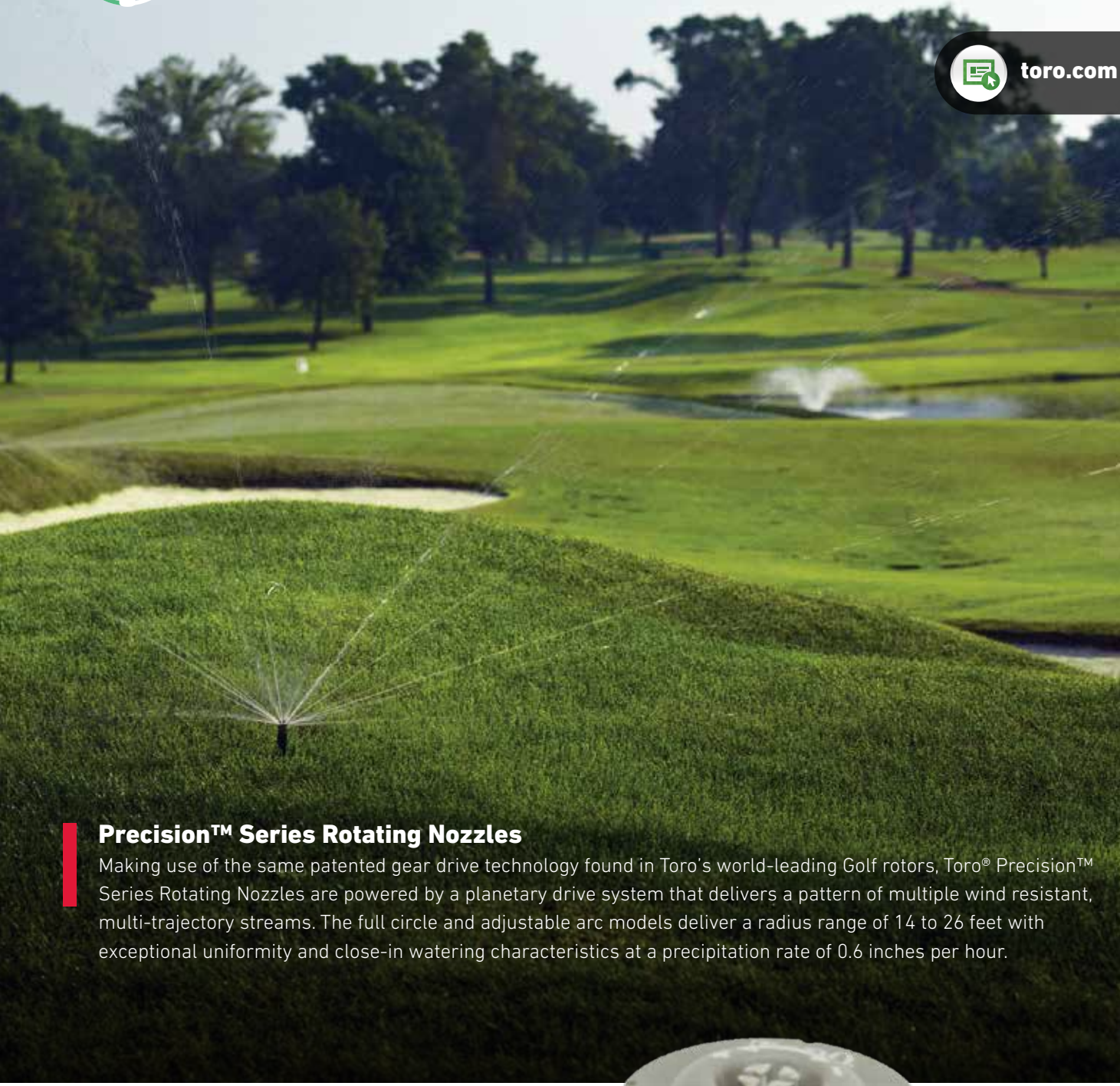
Note: Pressure-Compensating Precision Spray Nozzles have a factory-installed, pressure-compensating disc (indicated by letter P at end of model number) to regulate the flow and maintain steady water pressure.

Precision™ Series Nozzle Model List

Description	1,5m (5') "O" Nozzle (Red)		2,4m (8') "O" Nozzle (Green)		3,0m (10') "O" Nozzle (Blue)		3,7m (12') "O" Nozzle (Brown)		4,6m (15') "O" Nozzle (Black)		Special Patterns (Grey)	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
60°	O-T-5-60	O-5-60	O-T-8-60	O-8-60	O-T-10-60	O-10-60	O-T-12-60	O-12-60	O-T-15-60	O-15-60	O-T-4X9-RCS	O-4X9-RCS
90°	O-T-5-Q	O-5-Q	O-T-8-Q	O-8-Q	O-T-10-Q	O-10-Q	O-T-12-Q	O-12-Q	O-T-15-Q	O-15-Q	O-T-4X9-LCS	O-4X9-LCS
120°	O-T-5-T	O-5-T	O-T-8-T	O-8-T	O-T-10-T	O-10-T	O-T-12-T	O-12-T	O-T-15-T	O-15-T	O-T-4X18-SST	O-4X18-SST
150°	O-T-5-150	O-5-150	O-T-8-150	O-8-150	O-T-10-150	O-10-150	O-T-12-150	O-12-150	O-T-15-150	O-15-150	O-T-4X15-RCS	O-4X15-RCS
180°	O-T-5-H	O-5-H	O-T-8-H	O-8-H	O-T-10-H	O-10-H	O-T-12-TQ	O-12-H	O-T-15-H	O-15-H	O-T-4X15-LCS	O-4X15-LCS
210°	O-T-5-210	O-5-210	O-T-8-210	O-8-210	O-T-10-210	O-10-210	O-T-12-210	O-12-210	O-T-15-210	O-15-210	O-T-4X30-SST	O-4X30-SST
240°	O-T-5-TT	O-5-TT	O-T-8-TT	O-8-TT	O-T-10-TT	O-10-TT	O-T-12-TT	O-12-TT	O-T-15-TT	O-15-TT		
270°	O-T-5-TQ	O-5-TQ	O-T-8-TQ	O-8-TQ	O-T-10-TQ	O-10-TQ	O-T-12-TQ	O-12-TQ	O-T-15-TQ	O-15-TQ		
360°	O-T-5-F	O-5-F	O-T-8-F	O-8-F	O-T-10-F	O-10-F	O-T-12-F	O-12-F	O-T-15-F	O-15-F		

Specifying Information—Precision™ Series Spray Nozzles

O-X-XXXX-XXX-P					
Nozzle	Thread	Radius		Arc	PCD
O	z	XXXX		XXX	P
0—1" Per Hour	T—Toro Male Threaded Nozzle Blank—Female Threaded Nozzle	5— 1,5m (5') 8— 2,4m (8') 10— 3,0m (10') 12— 3,7m (12') 15— 4,6m (15')	4X15— 1,2mX4,6m* (4'X15') 4X30— 1,2mX9,1m* (4'X30') 4X9— 1,2mX2,7m (4'X9') 4X18— 1,2mX5,5m (4'X18')	60 — 60°* TT — 240° Q — 90° TQ — 270° T — 120° F — 360° -Full Circle 150 — 150°* LCS — Left Corner H — 180° RCS — Right Corner 210 — 210°* SST — Side Strip*	P—Pressure Compensating
Example 1: A female threaded Precision Series Spray with a spray radius of 3,7m (12') and a 90° arc would be specified as: O-12-QP Example 2: A male threaded Precision Series Spray with a spray radius of 3,0m (10') and a 180° arc would be specified as: O-T-10-HP					



Precision™ Series Rotating Nozzles

Making use of the same patented gear drive technology found in Toro's world-leading Golf rotors, Toro® Precision™ Series Rotating Nozzles are powered by a planetary drive system that delivers a pattern of multiple wind resistant, multi-trajectory streams. The full circle and adjustable arc models deliver a radius range of 14 to 26 feet with exceptional uniformity and close-in watering characteristics at a precipitation rate of 0.6 inches per hour.

Step-Up™ Technology

Step-Up™ Technology is designed to deliver high uniformity with matched precipitation for in-close watering all the way out to the furthest radius point. The unique "steps" create 15 streams, each designed to cover an area of the pattern.



Steps

Precision Series Rotating Nozzles supply matched precipitation with any arc and any radius from 4.3m-7.9m (14 to 26'). Water is applied slowly and evenly to reduce runoff and wasted water.



PRECISION™ SERIES ROTATING NOZZLES

Features & Benefits

- ① **Consistent, Gear-Driven Performance**
Precision™ Series Rotating Nozzles are uniquely powered by a patented planetary gear drive, variable stator and turbine. Unlike competing rotating nozzles, the Precision™ Series Rotating Nozzle's gear drive is not system pressure dependent and delivers consistent rotation speed and performance across a wide range of operating pressures. The entire drive system is protected by the factory-installed fine mesh filter screen.
- ② **Fewer Models**
Two Toro-threaded models and two female-threaded models are all that are required to cover radius requirements of 14 to 26 feet and infinitely adjustable arcs between 45° and 270° or 360°. Fewer models allow for less inventory and more flexibility.

- ③ **Matched Precipitation Rate**
These nozzles deliver water more slowly and evenly than standard spray nozzles, which helps prevent runoff and water waste. Moreover, the 0.6" per hour precipitation rate better positions users to meet watering window requirements than competing rotating nozzles.
- ④ **EZ ARC™ Visual Arc Indicators**
Toro Precision™ Series Rotating Nozzles are the only rotating nozzles available that allow the user to dial in the nozzle's arc setting before installation. Further, the nozzle features a right edge call-out on adjustable models that assists in quick and effective installations.



Female-threaded
PRN-A



Male-threaded
PRN-TA



Female-threaded
PRN-F



Male-threaded
PRN-TF



Consistent, Gear-Driven
Performance



The Precision™ Series Rotating Nozzle's gear drive delivers consistent rotation speed and performance across a wide range of operating pressures.



WATER MANAGEMENT HIGHLIGHT



Precision™ Series Rotating Nozzle Shrub & Slope Kit
Fully-assembled kit includes Precision™ Rotating Nozzle, 570S Shrub riser with patented X-Flow® Technology, and Precision™ Check Valve. This water-saving combination is ideally suited for stationary above-ground applications, such as slopes, shrub irrigation, and nursery settings.
(PRNA-S-PCV, PRNF-S-PCV)

PRECISION™ SERIES ROTATING NOZZLES



PRN Visual Arc Adjustment



The unique adjustment method allows for presetting of arc by hand or tool before the nozzle is installed. Visual indicators allow the user to quickly adjust the arc pattern to the desired arc from 45°-270°. The adjustment band can be adjusted by hand or with the included tool. The tool can be ordered separately as: PRNTOOL

Performance Data Precision™ Series Rotating Nozzles—Metric

Arc	Bar	LPM	Radi- us	Precip Rate (mm/hr)		Rotation
				■	▲	
45°	1,7	0,64	4,3	17,0	19,59	19,0
	2,1	0,87	4,6	20,0	23,09	17,0
	2,4	0,79	4,9	16,0	18,53	16,0
	3,1	1,06	5,5	16,9	19,52	15,0
	3,8	1,25	5,8	17,9	20,65	14,0
	4,5	1,48	6,7	15,8	18,20	14,0
90°	5,2	1,63	6,7	17,4	20,07	13,0
	1,7	1,63	4,9	16,4	18,97	14,0
	2,1	1,70	5,2	15,2	17,58	13,0
	2,4	2,04	5,8	14,6	16,89	13,0
	3,1	2,65	6,7	14,1	16,33	13,0
	3,8	2,99	7,0	14,6	16,87	13,0
120°	4,5	3,22	7,6	13,3	15,36	12,0
	5,2	3,48	7,6	14,4	16,62	12,0
	1,7	1,82	5,0	13,1	15,12	14,0
	2,1	2,23	5,2	15,0	17,29	12,0
	2,4	2,38	5,6	13,5	15,59	12,0
	3,1	3,48	6,7	13,9	16,10	12,0
180°	3,8	3,86	7,0	14,1	16,33	11,0
	4,5	4,20	7,3	14,1	16,32	11,0
	5,2	4,47	7,6	13,8	15,99	11,0
	1,7	3,14	4,6	18,0	20,83	12,0
	2,1	3,44	5,2	15,4	17,78	12,0
	2,4	4,01	5,8	14,4	16,58	12,0
240°	3,1	5,22	6,7	13,9	16,10	12,0
	3,8	5,83	7,0	14,2	16,44	11,0
	4,5	6,36	7,6	13,1	15,18	11,0
	5,2	6,85	7,9	13,1	15,12	10,0
	1,7	4,24	4,6	18,3	21,08	12,0
	2,1	4,58	4,9	17,3	20,02	12,0
270°	2,4	5,38	5,8	14,4	16,66	12,0
	3,1	6,47	6,4	14,2	16,42	12,0
	3,8	7,15	6,7	14,3	16,54	12,0
	4,5	7,61	7,0	13,9	16,09	11,0
	5,2	8,33	7,3	14,0	16,18	10,0
	1,7	4,09	4,3	17,9	20,69	11,0
360°	2,1	4,88	4,6	18,6	21,53	11,0
	2,4	5,19	5,5	13,7	15,88	11,0
	3,1	7,08	6,4	13,8	15,92	10,0
	3,8	8,06	6,7	14,3	16,52	10,0
	4,5	8,90	7,3	13,3	15,32	10,0
	5,2	9,84	7,6	13,5	15,62	10,0

Specifications

Operating Specifications

- Radius: 4,3-7,9m (14'-26')
- Operating pressure range: 1,4-5,2 Bar (20-75 psi)
- Recommended Pressure: 2,8-3,5 Bar (40-50 psi)
- Flow Rate: 1,4-14 LPM (0.17-3.68 GPM)

Additional Features

- 15 unique streams with different trajectories
- Maximum height of 20° trajectory to fight through wind
- Threads onto nearly all sprayheads and shrub adapters (male or female)
- Pre-attached screen for easy installation
- Radius reduction up to 25% by turning set screw 90°
- Color coded to identify adjustable or full circle
- Precipitation rate = 14 mm/hr. (0.55"/hr.) on square spacing plans
- Maintains precipitation rate as radius is reduced
- Matched precipitation from 4,3-7,9m (14-26')
- Matched precipitation from 1,4-5,2 Bar (20-75 psi)
- Adjustable by hand or with included tool
- Consistent speed of rotation not affected by pressure

Warranty

- Five years

Precision Series Rotating Nozzle Model List

Male Threaded	Description
PRN-TA	Toro Threaded, 4,3-7,9m (14-26'), Adjustable from 45°-270°
PRN-TF	Toro Threaded, 4,3-7,9m (14-26'), Full-Circle
Female Threaded	Description
PRN-A	Female Threaded, 4,3-7,9m (14-26'), Adjustable from 45°-270°
PRN-F	Female Threaded, 4,3-7,9m (14-26'), Full-Circle

Specification Note:

Proper system flush prior to installation and primary filtration of 100 mesh is necessary to ensure reliable operation of this product.

Specifying Information—Precision Series Rotating Nozzle

PRN-XX		
Model	Thread	Model
PRN	X	X
PRN—Precision Rotating Nozzle	T—Male Thread Blank—Female Thread	A—Adjustable arc F—Full-circle
Example: A male threaded Precision Series Rotating nozzle with a 7,3m (24') radius and a 180° arc would be specified as: PRN-TA A female threaded Precision Series Rotating nozzle with a 6,1m (20') radius and 360° arc would be specified as: PRN-F		



IRRIGATION COMMUNICATION CABLE



[toro.com](https://www.toro.com)

Paige® Electric manufactures and supplies irrigation communication cable for Toro Lynx GDC, Lynx Satellites and Lynx Smart Hub systems. Irrigation communication cable is designed to transmit and receive signals between irrigation satellites, central computers, weather stations and sensors while minimizing electrical, magnetic and radio frequency interferences.





IRRIGATION COMMUNICATION CABLE

TSW16AWG Toro® Irrigation Communication Cable

TSW16AWG is irrigation communication cable for Toro Lynx Satellites and Lynx Smart Hub systems. It is designed to transmit and receive signals between irrigation satellites, central computers, weather stations and sensors while minimizing electrical, magnetic and radio frequency interferences.



TSW16AWG cable is offered in two spool sizes: 500m or 1000m.

Specifications

Description:

- Irrigation communication cable
- Direct burial
- Two conductor, 16 AWG, stranded copper,
- Shielded with an aluminum shield and drain wire

Construction:

- Conductor
 - Stranded (7 strands) 16 AWG soft annealed tin coated copper conforming to ASTM-B-3 and B-8.
- Insulation
 - PVC; yellow and gray; 0,406 mm (0.016") thick.
- Shield
 - 2 mil aluminum backed polyester shielding with a 16 AWG solid tinned copper drain wire in contact with the aluminum side with a 25% minimum overlap.
- Jacket
 - Black Polyethylene; 1,143 mm (0.045") thick, sunlight and moisture resistant; 7.62 mm (0.300") O.D.
- Cable assembly
 - Insulated conductors and drain wire are twisted together with a 7.62 cm (3") maximum lay.
 - Nonhydropscopic fillers inserted in the valleys to insure roundness.
- Print legend
 - "PAIGE ELECTRIC P7162D listing agency and number 16 AWG 1PR SHIELDED 30V SPRINKLER SYSTEMS WIRE AND/OR UNDERGROUND LOW ENERGY CIRCUIT CABLE RoHS country of origin" printed every 2 feet.

Agency listing

- Listed by UL, ETL or CSA to UL Standard 1493

TSW16AWG – Part Numbers

Part No	Description	Jacket Color	Spool size (meters)
TSW16AWG-500	1 Pair Satellite and Smart Hub Communication Cable, Shielded DB, w/ Drain Wire	Black	500
TSW16AWG-1000	1 Pair Satellite and Smart Hub Communication Cable, Shielded DB, w/ Drain Wire	Black	1000

TSW16AWG – Packaging

Spool size	Spool Dimensions (mm)				Weights (Kg)		
	Flange Diameter	Height	Core Diameter	Arbor Hole	Spool	Cable Only	Total Shipping
500m	520	230	200	68	4.55	18.45	23
1000m	550	300	200	68	6	36.9	45

Specifying Information—TSW16AWG

TSW16AWG-XXXX	
Cable	Spool Size
TSW16AWG	XXXX
TSW16AWG— 1 Pair Satellite and Smart Hub Communication Cable, Shielded DB, w/ Drain Wire	500—500 meters 1000—1000 meters

Example: 1 Pair Satellite and Smart Hub Communication Cable, Shielded DB, w/ Drain Wire would be specified as: **TSW16AWG-1000**



IRRIGATION COMMUNICATION CABLE

Irrigation Control Cables - 1.5 & 2.5mm², 2 CORE

These cables were designed, are manufactured and tested based upon specifications provided by TORO (Form No.: LUK200-AACA ©2005.)

Construction

Conductor

- Single core, round, solid bare copper, and soft annealed for maximum flexibility. Nominal diameters: 1.36mm for 1.5mm² and 1.76 for 2.5mm².

2.5 mm cable

- Available in 4 colours for easy installment and troubleshooting:
 - red
 - black
 - green
 - white

Insulation

- 0.7mm wall thickness, polyethylene for high cut-through resistance and tensile strength. Colors: Black & White. Nominal conductor diameters: 2.80mm for 1.5mm² and 3.16mm for 2.5mm².

Inner Filler Core

- Extruded non-hydroscopic polyvinylchloride, white. Minimum inner cover thickness of 0.5mm. Diameter: 6.52mm for 1.5mm² and 7.50mm for 2.5mm².

Outer Sheath

- Red High Density Polyethylene for high abrasion resistance, cut-through resistance and tensile strength. Nominal wall thickness of 1.8mm. Nominal overall cable diameters: 10.2mm for 1.5mm² and 11.1mm for 2.5mm²

Print Legend

- TORO 2 CORE CABLE 2*_MM²***METER, where __ is 1.5 or 2.5 and *** is sequential random meters. Printed every meter.



Electrical & Mechanical Design Details

	1.5mm ²	2.5mm ²
Maximum current, buried* (Amperes)	42	48
Maximum current, open air* (Amperes)	32	36
Maximum DC current at 20°C (Ohms/km)	12	7.21
Maximum conductor temperature	90°C	
Maximum short circuit conductor temperature	250°C	

*Based on ambient temperature of 30°C for cable in the open air, and based on 15°C (British standard ground temperature at 0.5meters) for buried cable.

Packaging Details

Put-Up		Cable Size (mm ²)	Spool Dimensions mm (inches)				Weights Kg (lbs)		
m	ft		Flange Diameter	Height	Core	Arbor Hole	Cable Only	Spool Only	Total
500	1640	1,5	500 (19,7)	400 (15,7)	160 (6,3)	42 (1,7)	59 (23,2)	6 (2,4)	65 (25,6)
1000	3280		600 (23,6)	500 (19,7)		42 (1,7)	118 (46,4)		124 (48,8)
500	1640	2,5	500 (19,7)	400 (15,7)		42 (1,7)	76 (29,9)		82 (32,3)
1000	3280		600 (23,6)	500 (19,7)		42 (1,7)	152 (59,8)		158 (62,2)

Specifying Information—TDW25M

TDWXXM-XXXX			
Cable	Cable Size	Spool Size	Colour
TDW	XXM	XXXX	X
TDW—Toro Wire Decoder	15—1,5 mm ² 25—2,5 mm ²	500—500 meters 1000—1000 meters	empty—coat red B—coat black G—coat green W—coat white
Example: When specifying a red coated 2,5 mm ² Toro Wire Decoder of 1000 meters, you would order: TDW25M-1000			



IRRIGATION COMMUNICATION CABLE

TDW0221T-1000 Toro® Jacketed Decoder Wire

DIRECT BURIAL. SIZES: 14 or 2,1 mm, SOLID COPPER, 2-CONDUCTOR, P7350D 1.0 SCOPE

This specification covers jacketed cables containing two listed Golf Course Sprinkler wires, single conductor, suitable for direct burial, for operation up to 600 volts, and temperatures up to 60°C.



Construction

- Inner Conductors
 - Soft drawn bare copper meeting the requirements of ASTM specification B-3 or B-8. Insulation shall be low density high molecular weight polyethylene and a thickness of 0.045", per Paige Electric specification P7079D. The two conductors (black and white) shall be twisted with a minimum lay of 4".
- An optional Mylar tape may be used over the conductors.
- A rip cord shall be placed directly below the outer jacket.
- Overall jacket
 - Red, high density polyethylene with a thickness of 0.035". Available with optional identification stripe colors as listed in the table below. Stripe to be integrally extruded into and through the complete wall of the jacket with an approximate width of 1/8". The jacket shall be sufficiently round, and loose, to facilitate its removal when being stripped. Minimum inner diameters of the outer jacket

Construction	Inches	mm
14 AWG/2c - 2,1 mm	0.358	9.1

A "T" drill bit, whose diameter is 0.358", shall be used to measure the minimum inner diameter of 14 AWG/2c cables.

A "W" drill bit, whose diameter is 0.386", shall be used to measure the minimum inner diameter of 12 AWG/2c cables.

Surface Print:

- Inner Conductors
 - "Paige Electric P7079D 14 or 12 AWG or 2,1 mm PE Listing file Number 600V Sprinkler System Wire Direct Burial"
- Outer Jacket
 - "Paige Electric, P7350D, 14 or 12 AWG or 2,1 mm PE 600V Sprinkler System Wire Direct Burial Only for Toro Decoder Systems RoHS"
- TEMPERATURE RATING
 - -55°C to +60°C
- PUT-UPS
 - 1800m and some odd lengths.
- SPLICING RECOMMENDATIONS
 - Wire splices are the weak link of any electrical circuit. It is especially important to make proper joints in irrigation systems because the joints are exposed to wet and damp environments that can cause corrosion of the copper conductor, and premature failure. Paige Electric recommends the strict use of Model DBR/Y-6, as manufactured by the 3M Company (Paige specification P7364D) for 14 AWG 2 or 3 conductors. For 12 AWG and splices of 4 to 6 conductors, Paige Electric recommends its Re-enterable connectors (Paige Specification P7408D).

Toro Part No.	Size	Jacket Color	Shipping Weight
			kg/ 1000 m
TDW0221T-1000	14 AWG 2 Cond.	Red	96,72



IRRIGATION COMMUNICATION CABLE



Product Dimensions:

Model	Diameter	Height
270DCFD	2-3/16"	3-1/16"
270DCFD3	2-3/8"	3-1/4"

Packaging:

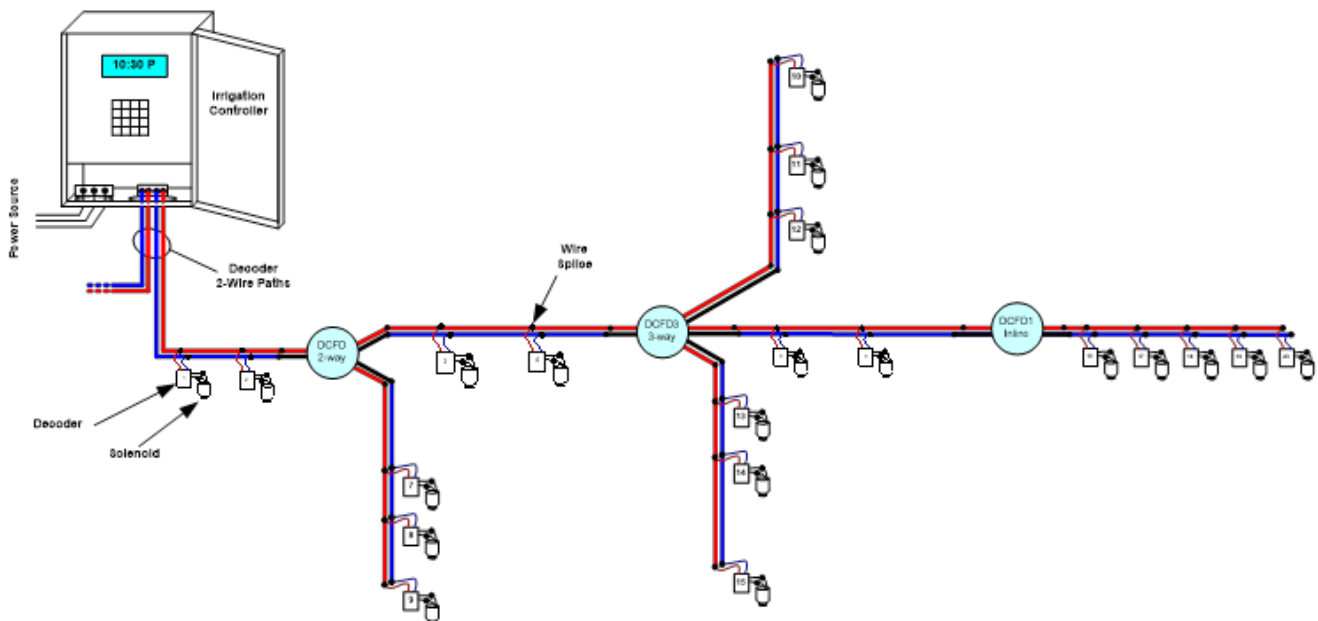
Part Number	Quantity Per Case	Weight Per Box	Dimensions
270DCFD	5	1.00 lb	9" x 12" x 5"
270DCFD3	5	1.25 lb	9" x 12" x 5"

Typical Specifications:

The Paige Electric Decoder Cable Fuse Devices shall be installed at strategic locations of a Decoder/2-Wire/2-Core system such that it can isolate certain sections of cables for purposes of troubleshooting. The DCFD shall be installed inside an accessible irrigation valve box. Each location shall be clearly shown on the as built drawings. The splices for all connections shall be made using 3M model DBR/Y-6 (Paige Electric 270672) waterproof connectors.



Typical Installation:



Note that the Decoder Cable Fuse Devices have been strategically installed at the points where cables split in different direction. Or it can be installed in long straight wire sections to isolate it in half. These are the obvious location where one would undo the splices when troubleshooting and trying to isolate the section of the system that is causing the fault.



IRRIGATION COMMUNICATION CABLE

Bare Copper Wire (refer to Grounding Guidelines for installation)

Bare Copper Wire

- Soft-Annealed, uncoated copper, 18AWG - 1/0AWG.
- 250, 500, and 1,000 foot spools. Custom lengths possible.
- Solid or stranded.

Note: Paige part numbers



	Wire Size (AWG)									
	18	16	14	12	10	8	6	4	2	1/0
Solid	160120	160137	160248	160364	160465	160629	160635	160678	160738	-
Stranded	-	-	-	160365	160466	160630	160636	160679	160739	160074

Grounding, Bonding And Shielding Products Copper Ground Plates

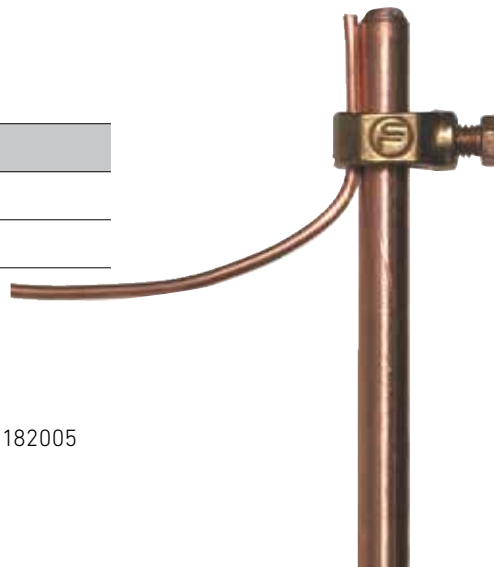
Paige® Part #	Toro® Part #	Ground Plate	Thickness	Wire AWG	Wire Feet
182199IC		4" x 96"	0.060" Minimum	6	25
182201IC	182201PW	4" x 36"	0.060" Minimum	10	10



Toro Part No.:
182201PW same as
Paige Part No.:
182201IC

Copper-Clad Ground Rods

Part #	Description
182000	5/8" x 8'
182007	5/8" x 10'



Ground Rod Clamps, Cast Bronze

For 5/8" Diameter ground rods. Paige part number 182005

Copper-Clad Ground Rods With Welded Insulated Conductor

Part #	Ground Rod	Wire AWG	Wire Feet
182000IC10	5/8" x 8'	10	15
182000IC6	5/8" x 8'	6	15
182007IC6	5/8" x 10'	6	25





IRRIGATION COMMUNICATION CABLE

Cadweld Plus "One-Shot"

- Permanently welds multiple bare copper wires together or bare copper wire to 5/8" diameter ground rods, so the connection doesn't loosen or corrode
- UL® listed. Exothermic reaction welding process meets National Electrical Code® requirements



PLUSCU



PG11L



GT



NT



GR



NX

CADWELD CONNECTIONS

Wire Sizes (AWG)	No. of Connections	Cadweld Part No.	Paige Part No.
6 & 8	1	GR1161GPLUS	1820037P
6 & 8	2	GT1161GPLUS	1820039P
6 & 8	3	NT1161GPLUS	1820038P
6 & 8	4	NX1161GPLUS	1820060P
4	1	GR1161LPLUS	1820043P
4	2	GT1161LPLUS	1820053P
4	3	NT1161LPLUS	1820054P
4	4	NX1161LPLUS	1820061P
6 & 8	4	PG11LPLUS	1820074P
PLUSCU Battery Control Unit			1820040CU

18200059 - Ground Enhancement Materials/Earth Contact Backfills

- Superior conductive material that improves the effectiveness of ground rods/plates.
- It permanently reduces resistance-to-ground, regardless of soil conditions.
- Ideal for use in dry conditions, rocky ground and sandy soils.
- 50 pound bags
- PowerSet™ hardens when wetted and can be used in any application. Paige part number 1820058.
- PowerFill™ is non-hardening and must be used in non-porous soils. Paige part number 1820059.
- Non-flammable. Safe to use while igniting CADWELDs and in storage



Toro Part No.:
18200059



IRRIGATION COMMUNICATION CABLE

Toro® DBRY-100 - 3M™ Direct Bury Splice Kit - DBO/B-6 and DBR/Y-6

The 3M™ Direct Bury Splice Kits are used to electrically connect two or more pre-stripped copper wires and moisture seal the connection for direct burial. It includes the 3M "Performance Plus" Electrical Spring Connector and a high impact, UV-resistant polypropylene tube prefilled with moisture-resistant gel. They are ideal for splicing wires and cables in irrigation and Low Voltage Lighting systems. For residential, commercial, golf, and other green industry applications.

Features

Reduces inventory and SKUs:

- Replaces the following 3M connectors: DBY, DBR, DBY-6, DBR-6, DBR/Y, DBY-Kit, DBRKit, DBY-6-Kit, DBR-6-Kit, DBR/Y-Kit.

Rated for 600 volts:

- Two connectors for most connections required in irrigation (conventional and decoder types) and landscape lighting systems. Listed under UL486D for USA and Canada, File E102356. Meets Directive 2006/95/EC and IEC standards EN61984:2009, EN60998-1:2004, and EN60998-2-4:2005.

Bulk or Kits-of-two connectors:

- Each waterproof connector includes the "Performance Plus" twist-on connector (wire nut*), and a gel-filled tube

Water Proof and Sunlight Resistant:

- The DBRY-100 may be installed above or below ground, inside a "valve box" or buried next to a valve-in-head sprinkler or light fixture, or submerged in water

Strain relief:

- The gel-filled tube includes a lid that compresses the wire insulation when closed. This applies a pressure, known as "strain relief" that keeps the connection inside the tube when the wires are pulled-upon. The connector tube includes channels for three sets of wires.

Operating temperature:

- -40°F to 221°F (-40°C to 105°C)

Made in the USA by the 3M Company:

- Unquestioned quality by a name you can trust



Paige Part Number		270672
3M Part Number		DBR/Y-6 Bulk
Toro Part Number		DBRY-100
Description		Bulk pack of 100 each gel-filled tubes and twiston connectors.
Case Data	Weight lb (Kg)	5.1 (2,3)
	Dimensions inch (cm)	14.25 x 7.625 x 7.5 (36 x 19 x 19)
Pallet Data	Quantities	75 cases 7,500 tubes
	Weights lb (Kg)	402 (183)
	Dimensions inch (cm)	48 x 42 x 43 (122 x 107 x 109)
	Volume, ft3 (m3)	50.2 (1,42)



SWING JOINTS



toro.com



Toro offers a full line of swing joints.

Toro swing joints cover all golf sprinkler thread types. Swing joints provide the flexibility to align the sprinkler to proper grade and level positioning to ensure optimum water use through maximum nozzle distribution uniformity.

Features & Benefits

- 1 Minimize Friction Loss**
2,54 3,18 and 3,81cm (1", 1.25" and 1.5") models are available to cover flows exceeding 80 gpm, and minimize friction loss to ensure optimum pressure is available at each sprinkler.
- 2 Saddle And Glue Tee Models**
Two swing joint types are available with 2" service tees included; glue tees for PVC piping applications and saddle tees for HDPE piping applications. Both tee styles are available with 2,54 3,18 and 3,81cm (1", 1.25" and 1.5") double o-ring sealing outlets.
- 3 Standard 2X90 And Ultra 4X90 Outlet Configurations**
The standard 2x90 models provide two 90's at the outlet for alignment in two directions and the Ultra 4x90 models provide four 90's at the outlet for maximum alignment flexibility in four directions.
- 4 Quick Coupler Models**
All swing joint styles are available with a quick coupler outlet that includes both an anti-rotation and position stabilizing feature to ensure the quick coupling valve stays secure during key installation and removal.

SWING JOINTS



1 1/4" Female ACME x 1" Male ACME Adapter
Allows you to upgrade existing Rain Bird® Eagle™ 700 1 1/4" sprinklers to any Toro 800S or DT Series Sprinkler. P/N TA36-132

Durability And Reliability
Constructed from schedule 80 PVC for durability and provides double o-ring seals on all swing fittings to ensure a lifetime of reliability and leak free performance.



Additional Features

- Schedule 80 PVC construction
- Double o-ring swivel joints
- Low friction loss characteristics
- 315 psi pressure rating
- 800 psi burst pressure safety rating
- Standard models with 2x90 outlet configuration
- Ultra models with 4x90 outlet for maximum alignment flexibility
- 3 inlet fittings styles: ACME, male thread and 4" spigot
- 2 outlet fitting styles: ACME and male thread
- 8", 12" and 18" lay lengths
- Saddle Tee models: 2" and 63mm tees with 1", 1 1/4" or 1 1/2" outlet
- Glue Tee models: 2" tee with 1", 1 1/4" or 1 1/2" outlet
- Glue 90° models: 2" 90° with 1", 1 1/4" or 1 1/2" outlet
- Quick coupler models with Dura-lock anti-rotation feature
- Compatible with all brands of service and saddle tees

Warranty

- Five years
- Toro Golf sprinkler warranty extended to 5 years when purchased and installed with a Toro Swing Joint.



1", 1 1/4" and 1 1/2"



Standard 2x90 and Ultra 4x90



DIN Saddle
Standard 63 mm Saddle



Quick Coupler



Glue tees, Saddle tees



Toro Tool Tip:

Use a 1 1/4" hole saw for the 1" Saddle Tee.

Use a 1 1/2" hole saw for the 1 1/4" and 1 1/2" Saddles.

Specifying Information—Toro Swing Joint

TSJ-ABCDEFGHIJ-KLMN							
Description	Inlet Size	Inlet Type	Size	Lay Length	Number of Elbows	Outlet Size	Outlet Type
TSJ	AB	CDE	FG	HI	J	KL	MN
TSJ—Toro Swing Joint	10—1" (2,54cm) 12—1.25" (3,18cm) 15—1.5" (3,8cm) 50—0.5" (1,25cm) 75—0.75" (1,9cm)	A—ACME thread ST—Saddle Tee B—BSP DST—DIN Saddle	Blank—same as inlet size 10—1" (2,54cm) 12—1.25" (3,18cm) 15—1.5" (3,8cm)	8—8" (20,32cm) 12—12" (30,48cm) 16—16" (40,64cm) 18—18" (45,72cm)	3—Standard Unibody 4—Standard Unibody for Saddle Tees 5—Ultra Unibody 6—Ultra Unibody for Saddle Tees	10—1" (2,54cm) 15—1.5" (3,8cm)	M—MIPT (Male pipe thread) A—ACME thread Q—Quick Coupler, inlet size and size are different QC—Quick Coupler inlet size and size are the same B—BSP
Example: A Toro 1.25" (3,18cm) Swing Joint with an 1.25" (3,18cm) ACME inlet, 12" (30,48cm) lay length, 3 elbows (standard unibody) and 1" (2,54cm) ACME outlet fitting would be specified as: TSJ-12A-12-3-10A							

*Rain Bird is a registered trademark of Rain Bird Corporation. Eagle is a trademark of Rain Bird Corporation.



SPRINKLER TOOLS

995-15 Selector Tool

- All electric golf sprinklers
- Allows user to manually turn the sprinkler "ON", turn or leave it "OFF" or place it into the "AUTO" position awaiting a command from the controller



995-83 Multi Purpose Tool

- All Golf sprinklers
- Riser pull up for INFINITY®, FLEX800, DT and 800S Series
- Riser screen removal on all models
- Upper snap ring remover on all models



995-82 Arc Adjustment Tool, 3/32" Allen Wrench

- 765,785,865S,885S Arc adjustment of the part circle drives
- INFINITY®, FLEX800, DT and 800S Series. Adjustment of the radius reduction screw



Riser Removal Tools

- 995-85 drive assembly extraction tool 730, 760, 780, 860S,880S
- Threads onto the drive output shaft and allows removal of the drive from the body



Valve Removal Tools

- 995-08 All 1" golf models and 640
- 995-09 All 1.5" models and 690



Nut Drivers

- 995-105 5/16" INFINITY®, FLEX800, DT and 800S Series TruJectory adjustment on INF5-6/ FLX5-6 models
- Inner, intermediate and back nozzle removal on all DT and 800S models
- 995-99 5/8"
- Dual trajectory selection
- Main nozzle removal on all models
- 995-79 7/16" 834S/854S pre August 2007
- Inner, intermediate and back nozzle removal
- 650/760/780/860S/880S Inner, intermediate and back nozzle removal
- 995-81 9/16" 760/780 Series Main nozzle removal
- 995-80 1/2" 760/780/860S/880S Nozzle base jam nut removal
- 995-53 3/8" 660/680 Cap nut removal



Valve Insertion Tools

- Aligns and Installs Valve into the Body**
- 995-35 640 VIH body
- 995-76 All 1" golf models (Except INFINITY®)
- 995-101 All 1.5" golf models (Except INFINITY®)
- 995-12 690 body
- 118-1843 INFINITY® 1.5" models
- 118-1844 INFINITY® 1" models



995-100 Valve Snap Ring Pliers with Screen Remover

- All Golf sprinklers lower snap ring removal on all models
- Rock screen removal on all INFINITY®, FLEX800, DT and 800S Series
- Valve removal on all models



Riser Hold Up Tools Allow for Nozzle Servicing

- 118-0954 Riser hold up tool, red
- 995-55 All 700 models
- 995-102 Universal hold up tool, all 700, 800S, DT, INFINITY® and FLEX800 models



PRNTOOL

- Adjustment tool for Precision™ Series Rotating Nozzles
- Adjusts arc and radius



PNOZZTOOL Riser Pull Up Tool

- Used on 590GF sprays



102-6527

- T7 Rotor adjustment tool



118-0954

- Riser hold up tool





VALVES AND VALVE BOXES



VALVE COMPARISONS

Model		220G Series	P220G Series	P220G Scrubber Series
Page		146	149	149
Flow Range		19-644 LPM (5.0-170 GPM)	19-681 LPM (5.0-180 GPM)	19-568 LPM (5.0-150 GPM)
Operating Pressure		0,7-15,2 Bar (10-220 PSI Max)	0,7-15,2 Bar (10-220 PSI Max)	0,7-15,2 Bar (10-220 PSI Max)
Conditions	Electrically Activated Systems	X	X	X
	Pressure Regulated Systems	X	X	X
Sizes	25 mm (1")	X	X	X
	40 mm (1.5")	X	X	X
	50 mm (2")	X	X	X
Configurations	Angle		X	X
	Inline/Globe	X	X	X
Inlet/Outlet	Threaded (Female)	X	X	X
Features	Manual Flow Control	X	X	X
	Pressure Regulation	X	X	X
	Internal Manual Bleed	X	X	X
	External Manual Bleed (Flush)	X	X	X
Body Construction	Glass-filled Nylon		X	X
	Brass	X		
Warranty		2 Years	2 Years	2 Years



220G BRASS SERIES VALVES



toro.com



The 220G Brass Series

Valves that provide extra durability in the most challenging environments on the course. With precise pressure regulation the optimum operating pressure and exact flow requirements are delivered to every sprinkler ensuring maximum efficiency and uniformity.





220G BRASS SERIES VALVES

Features & Benefits

- 1 EZReg® Pressure Regulating System**
Can be adjusted from 0,3-6,9 Bar (5-100 PSI) to provide the optimum operating pressure for every zone.
- 2 Spike Guard™ Solenoid**
With 20,000 volt lightning rating, it virtually eliminates the need for solenoid replacements. And with half the amperage draw of traditional solenoids you can run twice as many valves simultaneously, reduce the cost of wire during installation or increase the distance from controller to valve.
- 3 Internal Manual Bleed**
Ensures the optimum pressure of the system even when being operated manually.
- 4 Self Flushing And Serviceable Filter**
A 120 mesh stainless steel screen in the flow of water is continually being cleaned any time the valve is in operation. Serviceable from the side of the valve the filter can be removed without disassembly.



220G-27-06



220G-27-04



1



2



3



4

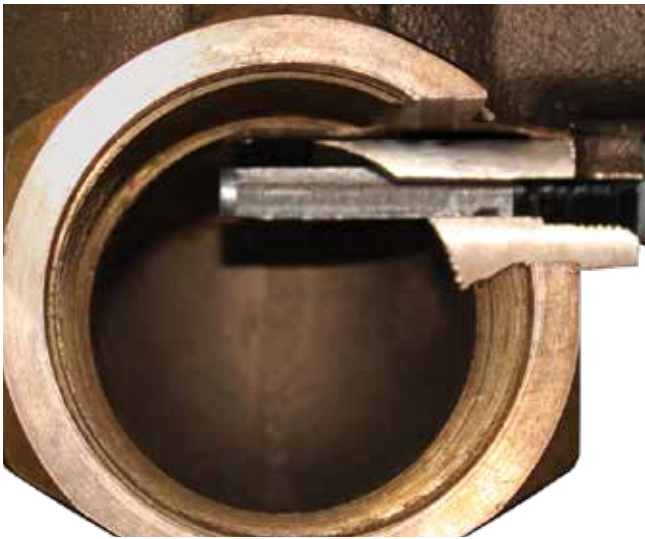
220G BRASS SERIES VALVES

Valve Wire Sizing Chart

Maximum One-way Distance (in meters) Between Controller and Valve Using Spike-Guard™ Solenoid*

Ground Wire	Control Wire						
	18	16	14	12	10	8	6
18	622	768	896	1000	1079	1134	1177
16	768	993	1219	1420	1591	1713	1804
14	896	1219	1579	1939	2262	2530	2731
12	1000	1420	1939	2512	3078	3597	4017
10	1079	1591	2262	3078	4017	4895	5721
8	1134	1603	2530	3597	4895	6340	7785
6	1122	1817	2731	4017	5700	7785	10083

* Solenoid Model: 24 V ac
 Pressure: 10,3 Bar (150 psi)
 Voltage Drop: 4 V
 Minimum Operating Voltage: 20 V
 Amperage (peak) 0.12 A



Dirty Water Resistance

The 120 mesh stainless steel filter screen is positioned on the supply side of the water stream. It is constantly flushed by the flow, enabling the use of very dirty water without clogging. Stainless steel construction of both the filter screen and the valve solenoid seat ensures long component life in all types of water and pressures.

220G Brass Series Friction Loss Data (Metric—LPM)

Model	Type	Liters Per Minute																			
		19	38	57	76	114	151	189	227	265	303	378	454	568	644	681	757	946	1136	1325	
25mm (1")	Electric	0,12	0,14	0,15	0,21	0,35	0,54														
40mm (1.5")	Electric				0,15	0,17	0,19	0,21	0,26	0,34	0,46										
50mm (2")	Electric					0,21	0,22	0,20	0,21	0,23	0,23	0,31	0,46	0,70	0,93	1,03					

Notes: For optimal performance when designing a system, it is recommended that total Pressure Loss be calculated to ensure sufficient downstream pressure. For optimum pressure regulation performance, size regulating valves towards the higher flow ranges. Flow rates are recommended not to exceed 5 psi loss.

220G Brass Series Friction Loss Data (English—GPM)

Model	Type	Gallons Per Minute																			
		5	10	15	20	30	40	50	60	70	80	100	120	150	170	180	200	250	300	350	
25mm (1")	Electric	1.8	2.0	2.2	3.1	5.1	7.8														
40mm (1.5")	Electric				2.2	2.5	2.8	3.1	3.8	5.0	6.6										
50mm (2")	Electric					3.1	3.2	2.9	3.0	3.3	3.4	4.5	6.6	10.1	13.5	14.9					

Notes: For optimal performance when designing a system, it is recommended that total Pressure Loss be calculated to ensure sufficient downstream pressure. For optimum pressure regulation performance, size regulating valves towards the higher flow ranges. Flow rates are recommended not to exceed 5 psi loss.

Specifying Information—220G Series

220G-2X-0X-XXX			
Model	Activation Type	Size	Latching Solenoid
220G	2X	0X	XXX
220G— 220G Series Brass Valve	7—NPT, Electric, Pressure Regulated 4—BSP	4—1" Brass, Pressure Regulated w Spike Guard™ 6—1½" Brass, Pressure Regulated w Spike Guard™ 8—2" Brass, Pressure Regulated w Spike Guard™	DL—DC Latching Solenoid for GAC System

Example: When ordering a 1", 220G Series brass, BSP thread, pressure regulating valve and Spike Guard solenoid, you would order: 220G-24-04

Operating Specifications

- Flow Range:
 - 25mm (1"): 19-151 lpm (5-40 gpm)
 - 40mm (1.5"): 76-454 lpm (20-120 gpm)
 - 50mm (2"): 114-644 lpm (30-170 gpm)
- Operating Pressure (15,2 bar (220 psi) maximum pressure rating):
 - Electric — 0,7–15 Bar (10–220 psi)
- Pressure regulating:
 - Outlet: 0,3 – 6,9 bar (5 – 100 psi ± 3 psi)
 - Inlet: 0,7 – 15,2 bar (10 – 220 psi)
- Minimum pressure differential (between inlet and outlet) for pressure regulation:
 - 25mm and 40mm models: 0,7 bar (10 psi)
 - 50mm models: 1,4 bar (20 psi)
- Burst pressure safety rating: 52 Bar (750 psi)
- Body style:
 - Globe valve – 25mm, 40mm, and 50mm (1", 1.5", 2") female threads
- Spike Guard™ DC Latching Solenoid: 24 VAC (50/60 Hz) Standard
 - Inrush: 60 Hz; 0,12 amps
 - Holding: 60 Hz; 0,10 amps

Additional features

- Diaphragm stem guide
- Ingot brass and stainless steel construction
- Pressure regulates in electric and manual modes, serviceable under pressure
- Forward-flow design for more precise regulation
- Standard, built-in Schrader-type valve for downstream pressure verification
- Anti-vandal dust cap on pressure-regulating models
- No external tubing
- External manual bleed for system flushing
- Manual flow control: adjustable to zero flow
- Stainless steel diaphragm support ring for minimum wear
- Stainless steel solenoid seat for longer life and positive shutoff
- Low-power requirement for longer wire runs

Dimensions

- 25mm (1"): 146 x 127mm (5.75" H x 5" W)
- 40mm (1.5"): 165 x 152mm (6.5" H x 6" W)
- 50mm (2"): 191 x 178mm (7.5" H x 7" W)

Warranty

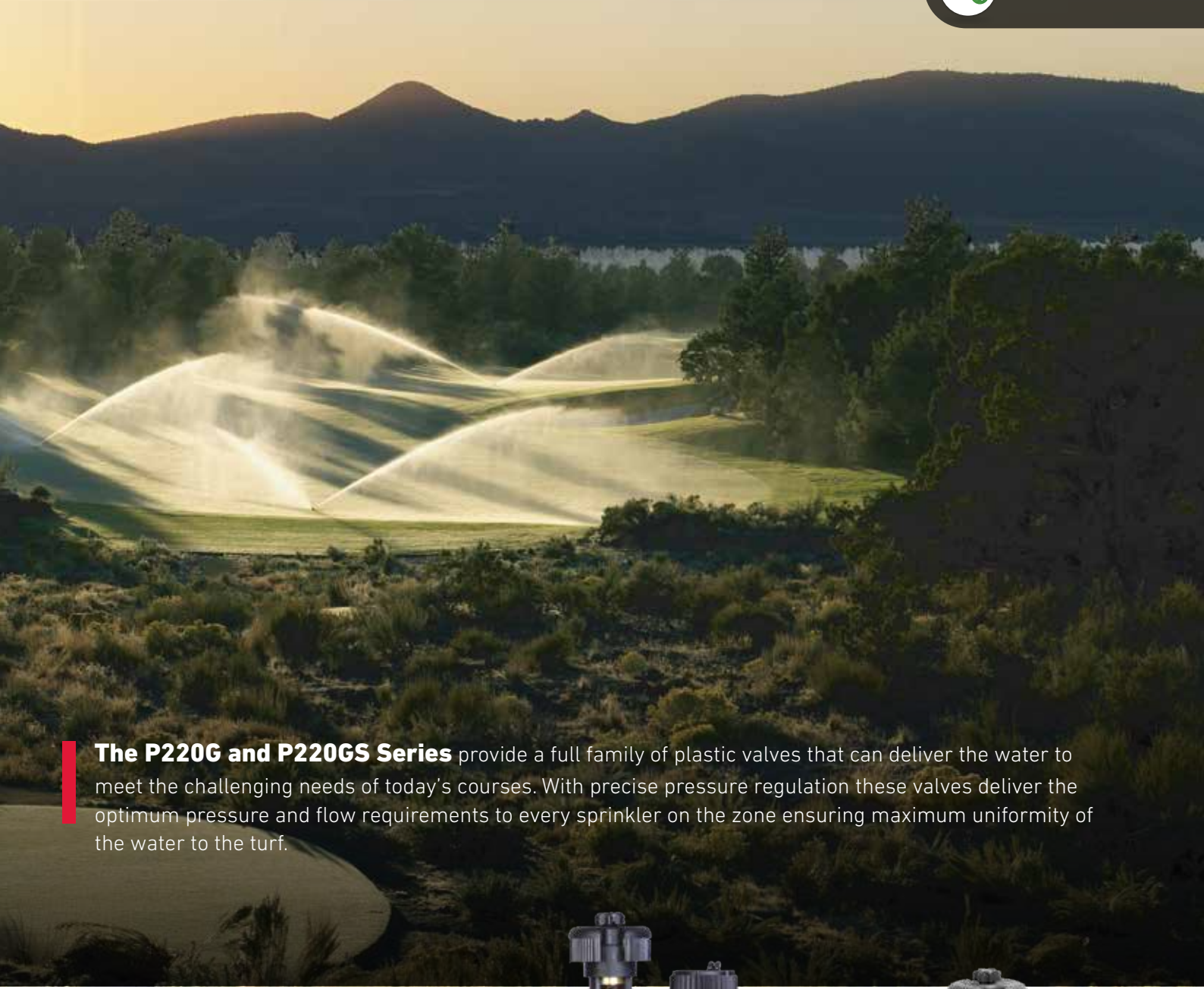
- Five years



P220G AND P220GS SERIES VALVES



toro.com



The P220G and P220GS Series provide a full family of plastic valves that can deliver the water to meet the challenging needs of today's courses. With precise pressure regulation these valves deliver the optimum pressure and flow requirements to every sprinkler on the zone ensuring maximum uniformity of the water to the turf.



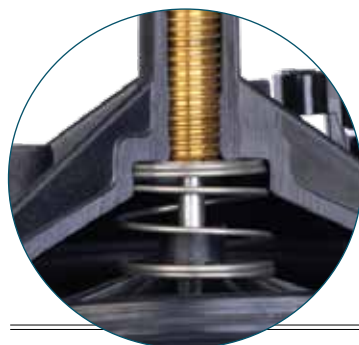


P220G AND P220GS SERIES VALVES

Features & Benefits

- ① **EZReg® Pressure Regulating System**
Can be adjusted from 0,3-6,9 Bar (5-100 PSI) to deliver the optimum pressure for every need.
- ② **Spike Guard™ Solenoid**
With its 20,000 volt lightning rating, it virtually eliminates the need for solenoid replacements in high lightning environments.

- ③ **Internal Manual Bleed**
Ensures the optimum pressure of the system even when being operated manually.
- ④ **Double-beaded Fabric Reinforced Diaphragm**
Provides superior performance and extended life without tearing in high-pressure golf applications.



Self Cleaning Metering Pin
A self-cleaning feature that operates two times during every valve cycle ensuring smooth positive opening and closing.



P220G AND P220GS SERIES VALVES



Valve Wire Sizing Chart

Maximum One-way Distance (in meters) Between Controller and Valve Using Spike-Guard™ Solenoid*

Ground Wire	Control Wire						
	18	16	14	12	10	8	6
18	622	768	896	1000	1079	1134	1177
16	768	993	1219	1420	1591	1713	1804
14	896	1219	1579	1939	2262	2530	2731
12	1000	1420	1939	2512	3078	3597	4017
10	1079	1591	2262	3078	4017	4895	5721
8	1134	1603	2530	3597	4895	6340	7785
6	1122	1817	2731	4017	5700	7785	10083

* Solenoid Model: 24 V ac
 Pressure: 10,3 Bar (150 psi)
 Voltage Drop: 4 V
 Minimum Operating Voltage: 20 V
 Amperage (peak) 0.12 A



Operating Specifications

- Flow Range:
 - 25mm (1"): 18,9-189,3 LPM (5-50 GPM)
 - 40mm (1.5"): 113,6 - 416,4 LPM (30 - 110 GPM)
 - 50mm (2"): 302,8 - 681,4 LPM (80 - 180 GPM)
- Operating Pressure: 15,2 bar (220 psi) maximum pressure rating
 - Electric: 0,7 - 15,2 bar (10 - 220 psi)
- Pressure regulating:
 - Outlet: 0,3 - 6,9 bar (5 - 100 psi ± 3 psi)
 - Inlet: 0,7 - 15,2 bar (10 - 220 psi)
- Minimum pressure differential (between inlet and outlet) for pressure regulation: 0,7 bar (10 psi)
- Burst pressure safety rating: 51,7 bar (750 psi)
- Body styles:
 - Globe/Angle: 25mm, 40mm, and 50mm (1", 1.5", 2") female threads
- Spike Guard™ Solenoid: 24 VAC (50/60 Hz) Standard
 - Inrush: 60 Hz; 0,12 amps
 - Holding: 60 Hz; 0,1 amps

Additional features

- Glass-filled nylon and stainless steel construction
- Internal and External bleed
- No external tubing
- Standard, built-in Schrader-type valve for downstream pressure verification
- Flow control independent of solenoid
- Self-aligning bonnet to ensure correct installation
- Self-cleaning, stainless steel metering rod
- Low-flow capability down to 5 GPM
- Low-power requirement for longer wire runs

Dimensions

- 25mm (1"): 146 x 127mm (5.75" H x 5" W)
- 40mm (1.5"): 165 x 152mm (6.5" H x 6" W)
- 50mm (2"): 191 x 178mm (7.25" H x 7" W)

Warranty

- Two years

P220G Series Friction Loss Data—(Metric)

Size	Configuration	LPM Flow																
		25	50	75	100	125	150	200	250	300	350	400	450	500	600	700	800	900
25mm (1")	Globe	0,28	0,29	0,22	0,28	0,50												
	Angle	0,28	0,29	0,21	0,19	0,33												
40mm (1.5")	Globe				0,11	0,16	0,25	0,36	0,48	0,63	0,77	0,94	1,13					
	Angle				0,09	0,11	0,19	0,28	0,36	0,49	0,61	0,75	0,93					
50mm (2")	Globe									0,14	0,19	0,23	0,28	0,33	0,39	0,45	0,52	0,60
	Angle									0,08	0,11	0,14	0,17	0,19	0,23	0,27	0,30	0,36

Notes: For optimum performance when designing a system, calculate total friction loss to ensure sufficient downstream pressure.
 For optimum regulation performance, size regulating valves toward the higher flow ranges.
 Flow rates are recommended not to exceed 0,3 bar loss. Values shown in bar.

P220G Series Friction Loss Data*—(U.S.)

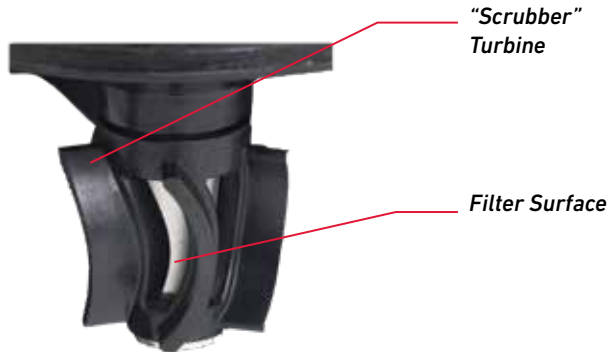
Size	Configuration	GPM Flow																
		5	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	180
25mm (1")	Globe	4,00	4,20	3,20	4,10	7,20												
	Angle	4,00	4,20	3,10	2,70	4,80												
40mm (1.5")	Globe				1,60	2,30	3,60	5,20	7,00	9,20	11,20	13,60	16,40					
	Angle				1,30	1,60	2,80	4,00	5,50	7,10	8,90	10,90	13,50					
50mm (2")	Globe									2,10	2,70	3,30	4,00	4,80	5,60	6,50	7,50	8,70
	Angle									1,20	1,60	2,00	2,40	2,80	3,30	3,90	4,40	5,20

Notes: For optimum performance when designing a system, be sure to calculate total friction loss to ensure sufficient downstream pressure.
 For optimum regulation performance, size regulating valves toward the higher flow ranges.
 Flow rates are recommended not to exceed 5 psi loss. Values shown in psi.

P220G AND P220GS SERIES VALVES

ACT™ System

Patent-pending Active Cleansing Technology – in which the turbine is constantly rotating to clean the metering/filtration area. This ensures that dirt, algae, chlorines, chloramines and water treated with ozone will not impede valve performance (P220GS only).



P220GS Scrubber Valve Series Friction Loss Data*—(Metric)

Size	Configuration	GPM Flow															
		5	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150
1"	Globe	0,32	0,33	0,21	0,42	0,74											
	Angle	0,29	0,32	0,18	0,38	0,65											
1½"	Globe			0,08	0,11	0,20	0,30	0,43	0,59	0,77	0,97	1,19	1,41				
	Angle			0,07	0,10	0,16	0,25	0,36	0,48	0,64	0,81	1,01	1,20				
2"	Globe									0,25	0,32	0,37	0,47	0,57	0,62	0,72	0,80
	Angle									0,19	0,24	0,30	0,39	0,44	0,51	0,61	0,65

Note: For optimum performance when designing a system, be sure to calculate total friction loss to ensure sufficient downstream pressure. For optimum regulation performance, size regulating valves toward the higher flow ranges. Flow rates are recommended not to exceed 0,3 bar loss. Values shown in bar.

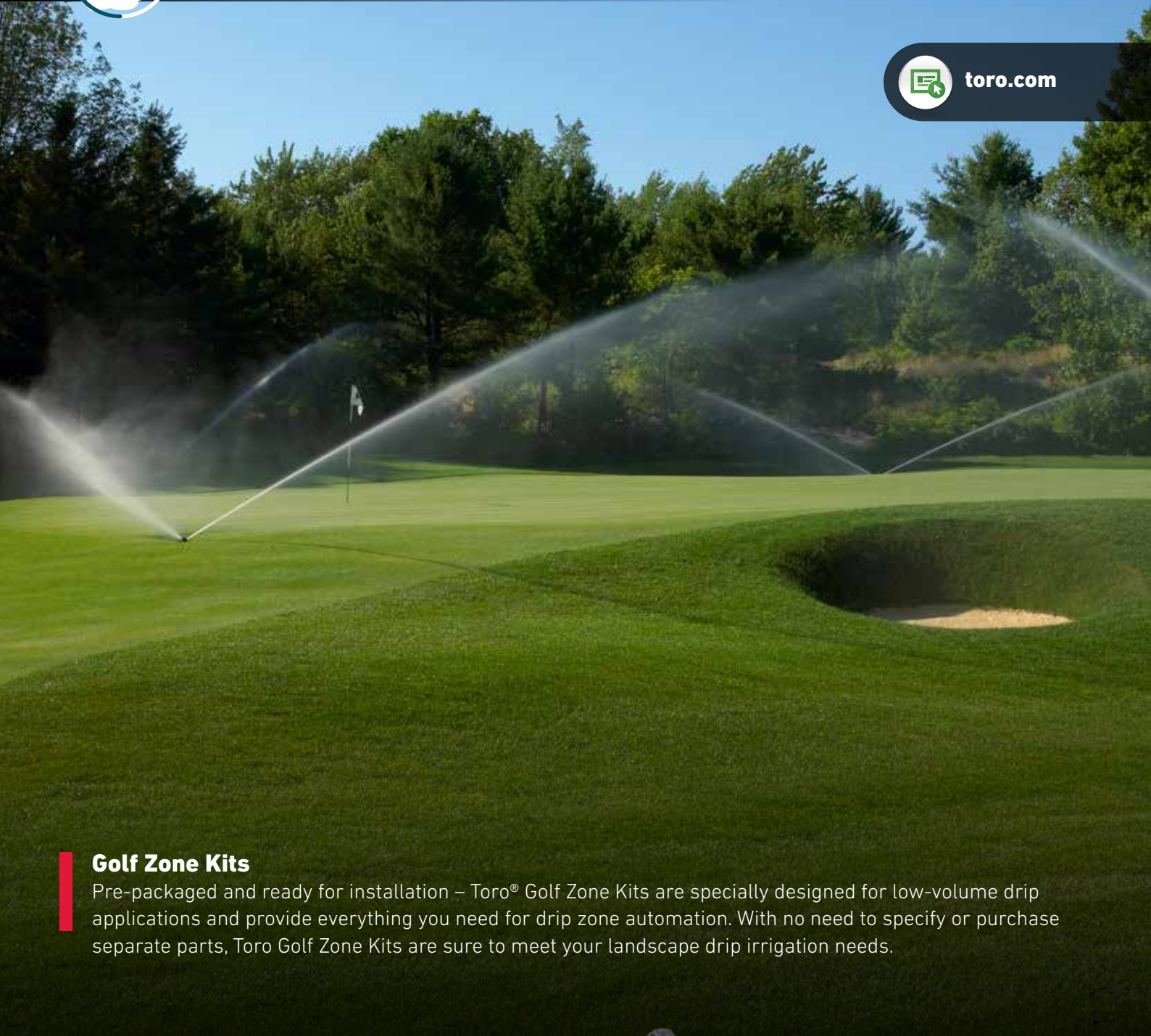
P220GS Scrubber Valve Series Friction Loss Data*—(U.S.)

Size	Configuration	GPM Flow															
		5	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150
1"	Globe	4.63	4.74	3.10	6.05	10.75											
	Angle	4.14	4.64	2.54	5.53	9.46											
1½"	Globe			1.14	1.56	2.85	4.36	6.28	8.57	11.20	14.03	17.20	20.46				
	Angle			0.95	1.51	2.28	3.69	5.29	6.97	9.26	11.80	14.60	17.40				
2"	Globe									3.57	4.62	5.33	6.80	8.20	9.02	10.46	11.61
	Angle									2.79	3.50	4.41	5.62	6.39	7.35	8.81	9.37

Note: For optimum performance when designing a system, be sure to calculate total friction loss to ensure sufficient downstream pressure. For optimum regulation performance, size regulating valves toward the higher flow ranges. Flow rates are recommended not to exceed 5 psi loss. Values shown in psi.

Specifying Information—P220G and P220GS Series

P220GX-XX-0XYY			
Type	Body Style	Size	Optional
P220GX	XX	X	YY
P220G—P220G Series Plastic Valve P220GS—P220GS Plastic Scrubber Valve	27—NPT, Pressure-regulated 0,3-6,9 bar (5-100 PSI) 24—BSP, Pressure Regulated 0,3-6,9 bar (5-100 PSI)	4—25mm (1") 6—40mm (1.5") 8—50mm (2")	DL—DC Latching Solenoid
Example: A 25mm (1") P220G Series plastic electric, pressure-regulating valve with a 60 Hz solenoid, would be specified as: P220G-27-04			



Golf Zone Kits

Pre-packaged and ready for installation – Toro® Golf Zone Kits are specially designed for low-volume drip applications and provide everything you need for drip zone automation. With no need to specify or purchase separate parts, Toro Golf Zone Kits are sure to meet your landscape drip irrigation needs.

Kits with the popular P220G Series Valves provide the rugged durability required for larger golf course applications, while kits with the P220GS Scrubber Series Valves ensure that dirt, algae, chlorines, chloramines and water treated with ozone will not impede valve performance.



Toro's Y-Filter offers superior performance with a 150 mesh stainless steel screen filter to assure clog-free operation.



GOLF ZONE KITS

Features & Benefits

- ① **Filtration and Pressure Regulation Provided**
Each kit includes a Y filter with 150 mesh/100 micron stainless steel screen filter to prevent debris contamination and a 25 psi fixed regulator to eliminate damage from high pressure spikes.
- ② **Flush Valve**
Provides a momentary high velocity in the tubing to move debris out of the piping system to eliminate emitter clogging every time the zone is activated.

- ③ **Pressure Regulator**
Prevents emitter blow-outs.
- ④ **Constructed Of Highest Quality Plastics**
For durability and corrosion resistance.



Specifying Information—Golf Zone Kits

Model	Description
GZK-25-LF-DCL	P220G valve with DC latching solenoid, 25 psi reg, low flow .1-8 gpm, 150 mesh SS filter
GZK-25-LF-SG	P220G valve with SPIKE GUARD™ solenoid, 25 psi reg, low flow .1-8 gpm, 150 mesh SS filter
GZK-25-MF-DCL	P220G valve with DC latching solenoid, 25 psi reg, medium flow 2-20 gpm, 150 mesh SS filter
GZK-25-MF-SG	P220G valve with SPIKE GUARD solenoid, 25 psi reg, medium flow 2-20 gpm, 150 mesh SS filter
GZK-40-MF-DCL	P220G valve with DC latching solenoid, 40 psi reg, medium flow 2-20 gpm, 150 mesh SS filter
GZK-40-MF-SG	P220G valve with SPIKE GUARD solenoid, 40 psi reg, medium flow 2-20 gpm, 150 mesh SS filter



Valve Boxes are used for practical, aesthetic and security reasons wherever valves or off-fairway Lynx® GAC modules need to be installed below grade but remain accessible for monitoring or service. Toro offers a full line of round and rectangular valve boxes that will fit valves up to 10,2cm (4") and 1-, 2- and 4- station Lynx GAC modules.



Features & Benefits

- ① **T-lip Lid Design**
The T-lip lid design keeps dirt out to prevent jamming and provides improved grip for lid removal and easy access to the equipment inside. The secure snap fit and bolt retention ensure that only authorized personnel will have access.
- ② **Wide Range Of Sizes**
Toro offers a wide range of round and rectangular boxes to meet every need. We offer round boxes in 6", 7" and 10" and rectangular boxes in 12" x 17" and 15" x 21" sizes. Rectangular boxes are available with 12" standard and 6" shallow depth. With the reverse stack capability and rectangular 6" extensions tackling deeper installations can be easily accomplished.

- ③ **Variety of Colors**
Toro valve boxes and covers come in a wide variety of colors to blend into the surrounding environment or to identify specific applications. Green for grass, tan for sand and purple for non-potable water applications. Black and brown to blend in with a variety of soils and mulches and gray for electrical applications.
- ④ **Durable Construction**
Valve boxes are constructed of H.D.P.E. (High-Density Polyethylene) with heavy-duty wall sections designed to provide a secure enclosure to protect your equipment investment.

Rectangular Extension Boxes
Rectangular extensions allow for deeper installation in 15,2cm (6") increments



Reverse Stack
Allows for deeper installations in an initial 30,5cm (12") then 70cm (24") increments.



T-Lip Lid Design



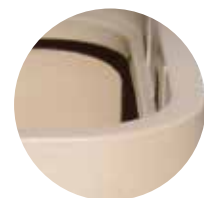
Wide Range of Sizes



Variety of Colors



Durable Construction





TORO® VALVE BOXES

Ordering Information—Round Valve Boxes

TVB-XXRND-XX		
Type	Size	Color Description
TVB	XXRND	XX
TVB—Toro Valve Box	6—15,2cm (6") Round 7—17,8cm (7") Round 10—25,4cm (10") Round	Blank— Green lid and black box G—Green lid and box GY—Gray lid and box (electrical) T—Tan lid and box E—Purple lid and box (effluent) BK—Black lid and box BR—Brown lid w/black box
Example - A Toro 17,8cm (7") round valve box for effluent water applications would be specified as: TVB-7RND-E		

Description	A Length	B Width	C Height	Weight (lbs)
15,2cm (6")	16,0cm (6.3")	20,6cm (8.1")	22,9cm (9.0")	0,52 kg (1.15 lbs)
17,8cm (7")	17,3cm (6.8")	23,6cm (9.3")	22,9cm (9.0")	0,82 kg (1.80 lbs)
25,4cm (10")	25,1cm (9.9")	33,0cm (13.0")	26,2cm (10.3")	1,54 kg (3.39 lbs)



Ordering Information—Rectangular Valve Boxes

TVB-XXXX-XX-XX			
Type	Size	Height	Color Description
TVB	XXXX	XX	XX
TVB—Toro Valve Box	1217—30,5x43,2cm (12"x17") 1521—38,1x53,3cm (15"x21")	6—15,2cm (6") High 12—30,5cm (12") High	Blank— Green lid and black box G—Green lid and box GY—Gray lid and box (elect.) T—Tan lid and box E—Purple lid and box (effluent) BK—Black lid and box BR—Brown lid w/black box
Example - A Toro 30,5x43,2x15,2(12x17x6) rectangular valve box for effluent water applications would be specified as: TVB-1217-6-E			

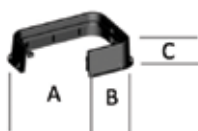
Description	A Length	B Width	C Height	Weight (lbs)
30,5x43,2x15,2 (12x17x6)	47,8cm (18.8")	35,0cm (13.8")	17,3cm (6.8")	2,98 kg (6.56 lbs)
30,5x43,2x30,5 (12x17x12)	53,3cm (21.0")	40,6cm (16.0")	31,2cm (12.3")	4,11 kg (9.05 lbs)
38,1x53,3x15,2 (15x21x6)	61,7cm (24.3")	47,8cm (18.8")	18,3cm (7.2")	3,97 kg (8.75 lbs)
38,1x53,3x30,5 (15x21x12)	65,3cm (25.7")	48,5cm (19.1")	31,2cm (12.3")	5,49 kg (12.11 lbs)



Ordering Information—Rectangular Extensions

TVB-XXXX-EXT6BOX-XX			
Type	Size	Height	Color Description
TVB	XXXX	EXT6BOX	XX
TVB—Toro Valve Box	1217—30,5x43,2cm (12"x17") 1521—38,1x53,3cm (15"x21")	EXT6BOX— 15,2cm (6") High	Blank— Black box G—Green box GY—Gray box (elect.) T—Tan box E—Purple box (effluent)
Example - A Toro 15,2cm (6") extension for a 30,5x43,2cm (12"x17") tan valve box would be specified as: TVB-1217-EXT6BOX-T			

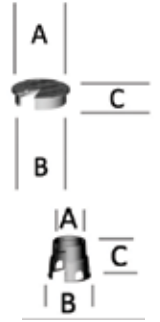
Description	A Length	B Width	C Height	Weight (lbs)
30,5x43,2x15,2 (12x17x6)	47,8cm (18.8")	35,0cm (13.8")	17,3cm (6.8")	3,04 kg (6.71 lbs)
38,1x53,3x15,2 (15x21x6)	61,7cm (24.3")	45,2cm (17.8")	17,5cm (6.9")	4,03 kg (8.89 lbs)



Ordering Information—Round Valve Box Separates

TVB-XXXXX-XX		
Type	Size Box or Lid	Color Description
TVB	XXXXX	XX
TVB—Toro Valve Box	6LID—15,2cm (6") Round lid 7LID—17,8cm (7") Round lid 10LID—25,4cm (10") Round lid BOX6—15,2cm (6") Box (black only) BOX7—17,8cm (7") Box (black only) BOX10—25,4cm (10") Box (black only)	G—Green lid GY—Gray lid (electrical) T—Tan lid E—Purple lid (effluent) BK—Black lid BR—Brown lid
Example - A Toro 17,8cm (7") round valve box lid for effluent water applications would be specified as: TVB-7LID-E		

Description	A Length	B Width	C Height	Weight (lbs)
15,2cm (6") lid	16,0cm (6.3")	20,6cm (8.1")	3,0cm (1.2")	0,14 kg (.31 lbs)
17,8cm (7") lid	17,3cm (6.8")	23,6cm (9.3")	4,3cm (1.7")	0,24 kg (.52 lbs)
25,4cm (10") lid	25,1cm (9.9")	33,0cm (13.0")	5,3cm (2.1")	0,51 (1.13 lbs)



Description	A Length	B Width	C Height	Weight (lbs)
15,2cm (6") box	16,0cm (6.3")	20,6cm (8.1")	22,9cm (9.0")	0,35 kg (.77 lbs)
17,8cm (7") box	17,3cm (6.8")	23,6cm (9.3")	22,9cm (9.0")	0,24 kg (.52 lbs)
25,4cm (10") box	25,1cm (9.9")	33,0cm (13.0")	26,2cm (10.3")	1,02 kg (2.26 lbs)

Ordering Information—Rectangular Valve Box Separates

TVB-XXXX-LID-XX			
Type	Size	Height	Color Description
TVB	XXXX	LID—Lid	XX
TVB—Toro Valve Box	1217—30,5x43,2cm (12"x17") 1521—38,1x53,3cm (15"x21")	LID—Lid	Blank— Green lid G—Green lid GY—Gray lid (elect.) T—Tan lid E—Purple lid (effluent) BK—Black lid BR—Brown lid
Example - A Toro 30,5x43,2cm (12x17) rectangular valve box lid for effluent water applications would be specified as: TVB-1217-LID-E			

TVB-XXXX-XXXXXX		
Type	Size	Height
TVB	XXXX	XX
TVB—Toro Valve Box	1217—30,5x43,2cm (12"x17") 1521—38,1x53,3cm (15"x21")	6BOX—15,2cm (6") High valve box 12BOX—30,5cm (12") High valve box
Example - A Toro 30,5x43,2x15,2(12x17x6) rectangular valve box would be specified as: TVB-1217-6BOX-BK		

Description	A Length	B Width	C Height	Weight (lbs)
30,5x43,2cm (12"x17") lid	42,9cm (16.9")	30,0cm (11.8")	5,1cm (2.0")	1,24 kg (2.73 lbs)
38,1x53,3cm (15"x21") lid	54,1cm (21.3")	37,8cm (14.9")	4,8cm (1.9")	1,47 kg (3.23 lbs)
30,5x43,2x15,2cm (12"x17"x6") box	47,8cm (18.8")	35,1cm (13.8")	17,3cm (6.8")	1,74 kg (3.83 lbs)
30,5x43,2x30,5cm (12"x17"x12") box	53,3cm (21")	40,6cm (16")	31,2cm (12.3")	2,87 kg (6.32 lbs)
38,1x53,3x15,2cm (15"x21"x6") box	61,7cm (24.3")	45,2cm (17.8")	17,5cm (6.9")	2,57 kg (5.66 lbs)
38,1x53,3x30,5cm (15"x21"x12") box	65,3cm (25.7")	48,5cm (19.1")	31,2cm (12.3")	4,02 kg (8.88 lbs)





TORO® DRY BOXES

- A Dual Bolt Retention covers**
Ensures proper sealing and vandal resistance.
- B Heavy Duty Lid**
Construction molded from High Density Polyethylene (H.D.P.E), available in Green, Tan, Purple, Black, Gray and Brown.
- C Accessory Plate (optional)**
Attaches directly to the lid and allows attachments of various components like GAC modules, elec/hyd converters, battery operated controllers and more.
- D Dual Seal Lid**
Keeps water and critters from creeping in from the top.
- E Heavy Duty Box**
Construction molded from High Density Polyethylene (H.D.P.E), available in Green, Tan, Purple, Black, Gray and Brown.
- F Dirt Skirt (optional)**
Attaches directly to the bottom of the valve box and provides an outer seal to prevent intrusion from burrowing rodents, water and critters.

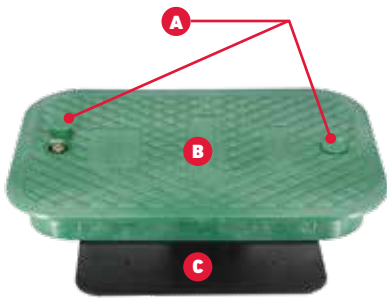
Specifications

Static Vertical Load Rating:

SCTE - Light Duty, Pedestrian

Properties of Base Material	ASTM Test Method	HDPE
Tensile Strength	D-638	186,16 - 303,37 bar (2700-4,400 PSI) (Typical Range)
Flexural Modulus	D-790	Minimum 14,000 not to exceed 24,000 PSI
Notched Izod Impact Strength	D-256	0.5 - 3.0 (Typical Range)
Deflection Temperature @ 66PSI	D-648	65,56 - 93,33 C (150-200 F) (Typical Range)
Density	D-792	Minimum 0.95- not to exceed 0.965
Electrical Dielectric Strength	D-149	400-600 V/mil (Typical Range)
Chemical Resistance	D-543	Very Resistant
Water Absorption	D-570	Less than 1% weight change

Warranty
• One year



TVB-1217-DBAP
(Accessory plate)



TVB-1217-DB (Dry Box)



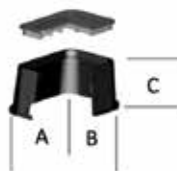
TVB-12RND-DB (Round Dry Box)

Ordering Information—Dry Box Valve Boxes

TVB-1217-12DB-XX			
Type	Size	Height	Color Description
TVB	1217	12DB	XX
TVB—Toro Valve Box	1217—30,5X43,2 12"X17"	12DB—30,5 (12") High Dry Box	Blank— Green lid and black box G—Green lid and box GY—Gray lid and box (elect.) T—Tan lid and box E—Purple lid and box (effluent) BK—Black lid and box BR—Brown lid w/black box
Example - A Toro 30,5x43,2x30,5cm (12"x17"x12") valve box for electrical applications would be specified as: TVB-1217-12DB-GY			

Description	A Length	B Width	C Height	Weight (lbs)
12DB	53,3cm (21.0")	40,6cm (16.0")	31,2cm (12.3")	4,45 kg (9.8 lbs)

Description	A Length	B Width	C Height	Weight (lbs)
DBAP	29,2cm (11.5")	21,6cm (8.5")	0,5cm (.2")	0,45 kg (0.99 lbs)
DBDS	50,3cm (19.8")	36,8cm (14.5")	3,3cm (1.3")	1,27 kg (2.8 lbs)



Specifying Information—Dry Box Valve Boxes

TVB-12RND-DB-XX			
Type	Size	Height	Color Description
TVB	12RND	DB	XX
TVB—Toro Valve Box	30 cm (12") Round	Dry Box	G—Green GY—Gray (electrical) T—Tan E—Purple (effluent) BK—Black BR—Brown
Example: A Toro 12" round Dry Box for effluent water applications would be specified as: TVB-12RND-DB-E			

Description	A Length	B Width	C Height	Weight (lbs)
DB	29cm (11.5")	36,8cm (14.5")	32,38cm (12.75")	3,23 kg (7.12 lbs)

Accessories	
TVB-1217-DBAP	DRY BOX Accessory Plate
TVB-1217-DBDS	DRY BOX Dirt Skirt





470 QUICK COUPLER VALVES



Features

- Full range of flows from 0 to 100 gallons per minute
- 1,9, 2,5 and 3,8cm (0.75", 1" and 1.5") one- and two-piece single-lug models including ACME thread key connections to meet a variety of installation requirements
- Hose swivel provides 360° movement without hose tangling for ease of use
- A variety of sizes meet various applications
- Metal and vinyl locking and non-locking covers
- Effluent (lavender-colored) locking cover

Warranty

- Two years

Ordering Information—Quick Coupler Valve Accessories

Order Number	Description
463-01	12,7mm(0.5") Female, 19,1mm(0.75") Male, Single-lug Coupler Key
464-01	19,1mm(0.75") Female, 25,4mm(1") Male, Single-lug Coupler Key
464-02	25,4mm(1") Female, Single-lug Coupler Key
464-03	25,4mm(1") ACME Thread Coupler Key
465-01	31,8mm(1.25") Inlet, 19,1mm(0.75") Female, 25,4mm(1") Male, Single-lug Coupler Key
466-01	31,8mm(1.25") Female, 38,1mm(1.5") Male, Single-lug Coupler Key
477-00	19,1mm(0.75") NPT x 19,1mm(0.75") MHT Hose Swivel
477-01	25,4mm(1") NPT x 19,1mm(0.75") MHT Hose Swivel
477-02	25,4mm(1") NPT x 25,4mm(1") MHT Hose Swivel
LK	Key for Locking Cover

470 Quick Coupler Valves

Whether it's for hand watering the hot spots, fertilizer wash in, washing down equipment or filling the sprayer and lakes the 400 Series provides a full family of quick coupling valves and accessories that connect you directly to the main water source to fill all your hand watering needs.

470 Series Friction Loss Data—(Metric)

	LPM Flow										
	35	50	75	100	125	150	175	225	275	325	375
Model 473	1,0	0,2	0,4	0,6							
Model 474			0,1	0,2	0,3	0,5					
Model 475				0,1	0,2	0,2	0,4	0,6			
Model 476						0,1	0,1	0,2	0,3	0,4	0,6

Note: For optimum sprinkler performance when designing a system, be sure to calculate total friction loss to ensure sufficient downstream pressure.

Flow rates are recommended not to exceed 0,3 bar loss. Values listed in bar.

For kPa values, multiply tabular values by 100. For Kg/cm² values, multiply tabular values by 1,02.

470 Series Friction Loss Data—(U.S.)

	GPM Flow											
	10	15	20	25	30	35	40	50	60	70	85	100
Model 473	1.5	3.1	5.3	8.5								
Model 474			1.1	2.2	3.6	5.7	8.0					
Model 475				1.0	1.8	2.7	3.6	6.4	9.8			
Model 476							1.0	1.7	2.6	3.6	5.6	8.8

Note: For optimum sprinkler performance when designing a system, be sure to calculate total friction loss to ensure sufficient downstream pressure.

Flow rates are recommended not to exceed 5 psi loss. Values listed in psi.

Specifying Information—Quick Couplers

Toro Model Number	Description	Inlet Size NPT Threads	Body Type	Outlet Key Size	Corresponding Key(s)	Valve Cover Type	Corresponding Swivel(s)*		
							477-00	477-01	477-02
473-00	QCV 19,1(0.75), SS CVR	19,1mm(.75")	1 Piece	19,1mm(.75")	463-01	Stainless Steel	A	B	B
474-00	QCV 25,4(1), SS CVR	25,4mm(1")	1 Piece	25,4mm(1")	464-01/464-02	Stainless Steel	B	B	A
474-01	QCV 25,4(1), VYL CVR	25,4mm(1")	1 Piece	25,4mm(1")	464-01/464-02	Yellow Vinyl, Spring Loaded	B	B	A
474-03	QCV 25,4(1), VYL CVR, W/LK	25,4mm(1")	1 Piece	25,4mm(1")	464-01/464-02	Yellow Vinyl, Locking, Spring Loaded	B	B	A
474-04	QCV 25,4(1), LAV VYL CVR	25,4mm(1")	1 Piece	25,4mm(1")	464-01/464-02	Lavender Vinyl, Locking, Spring Loaded	B	B	A
474-21	QCV 25,4(1), VYL CVR, 2PC	25,4mm(1")	2 Piece	25,4mm(1")	464-01/464-02	Yellow Vinyl, Spring Loaded	B	B	A
474-24	QCV 25,4(1), LAV VYL CVR, 2PC	25,4mm(1")	2 Piece	25,4mm(1")	464-01/464-02	Lavender Vinyl, Locking, Spring Loaded	B	B	A
474-40	QCV 25,4(1), SS CVR, ACME	25,4mm(1")	1 Piece	25,4mm(1")	464-03	Stainless Steel	B	A	A
474-41	QCV 25,4(1), VYL CVR, ACME	25,4mm(1")	1 Piece	25,4mm(1")	464-03	Yellow Vinyl, Spring Loaded	B	A	A
474-44	QCV25,4(1), LAVVYL CVR, W/LK, ACME	25,4mm(1")	1 Piece	25,4mm(1")	464-03	Lavender Vinyl, Locking, Spring Loaded	B	A	A
475-00	QCV 31,8(1.25), SS CVR	25,4mm(1")	1 Piece	31,8mm(1.25")	465-01	Stainless Steel	B	B	B
475-01	QCV 31,8(1.25), VYL CVR	25,4mm(1")	1 Piece	31,8mm(1.25")	465-01	Yellow Vinyl	B	B	B
476-00	QCV 38,1(1.5), SS CVR	38,1mm(1.5")	1 Piece	38,1mm(1.5")	466-01	Stainless Steel	B	B	B
476-01	QCV 38,1(1.5), VYL CVR	38,1mm(1.5")	1 Piece	38,1mm(1.5")	466-01	Yellow Vinyl, Spring Loaded	B	B	B
476-04	QCV 38,1(1.5), LAV VYL CVR	38,1mm(1.5")	1 Piece	38,1mm(1.5")	466-01	Lavender Vinyl, Locking, Spring Loaded	B	B	B

* A – Attaches directly to the quick coupler key. B – Requires additional fittings to be used with the quick coupler key.



VALVE SPECIFICATIONS

CONTROL SYSTEMS

Type of System	Maximum Distance From Controller to Valve	Elevation Restrictions
Pin Type ^E (00) Hydraulic* with 4,8mm (0.19") Control Tubing	30,5m (100')	
Pin Type ^E (00) Hydraulic* with 6,4mm(0.25") Control Tubing	61,0m (200')	
Normally Open (01) with 4,8mm(0.19") Control Tubing	152,4m (500')	Valve elevation should not exceed 7.6m (25') ABOVE or 21.3 (70') BELOW controller elevation.
Normally Closed (08) Hydraulic with 4,8mm(0.19") Control Tubing	152,4m (500')	Valve elevation should not exceed 0m (0') ABOVE or 21.3 (70') BELOW controller elevation.
Normally Open (01) with 6,4mm(0.25") Control Tubing	304,8m (1000')	Valve elevation should not exceed 7.6m (25') ABOVE or 21.3 (70') BELOW controller elevation.
Normally Closed (08) Hydraulic with 6,4mm(0.25") Control Tubing	304,8m (1000')	Valve elevation should not exceed 7.6m (25') ABOVE or 21.3 (70') BELOW controller elevation.
Electric (06)	Depends on variables <ul style="list-style-type: none"> • Voltage available • Wire size 	NONE

* - All hydraulic connections on Toro valves are 1/4" insert type.
- Control line pressure must be equal to or greater than mainline pressure.
- Control line pressure range is 40 to 150 psi.
** Minimum solenoid voltage required for reliable electric VIH operation is 19.5 V AC
E - Maximum of one (1) valve per station on pin type systems.

CONVERSION INFORMATION

- All gallons per minute are shown in U.S.
- To convert to imperial gallons per minute, multiply by 0.833
- To convert to liters per minute, multiply by 3.78
- To convert pounds per square inch (psi) to atmospheres, divide by 14.7
- To convert pounds per square inch (psi) to kilograms per square centimeter (kg/cm²), divide by 14.22
- To convert feet to meters, divide by 3.28

WINTERIZING SPECIFICATIONS

In freezing climates, valves should be properly winterized to prevent freeze-related damage.

SPRINKLER SPACING

The Toro Company does not recommend designing for zero (0) mph wind conditions.

■ Square Spacing

- No wind - 55% of diameter
- 4 mph wind - 50% of diameter
- 6,4 kph wind - 50% of diameter
- 8 mph wind - 45% of diameter
- 12,8 kph - 45% of diameter

■ Triangular Spacing

- No wind - 60% of diameter
- 4 mph wind - 55% of diameter
- 6,4 kph wind - 55% of diameter
- 8 mph wind - 50% of diameter
- 12,8 kph - 50% of diameter

■ Single Row Spacing

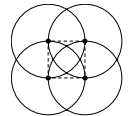
- No wind - 50% of diameter
- 4 mph wind - 50% of diameter
- 6,4 kph wind - 50% of diameter
- 8 mph wind - 45% of diameter
- 12,8 kph - 45% of diameter

Design in consideration of the worst wind conditions.

PRECIPITATION RATE FORMULAS

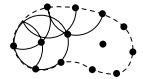
■ Square-spaced sprinklers in pattern:

$$\frac{\text{GPM of full-circle} \times 96.3}{(\text{Spacing})^2}$$



■ Triangular-spaced sprinklers in pattern:

$$\frac{\text{GPM of full-circle} \times 96.3}{(\text{Spacing})^2 (0.866)}$$

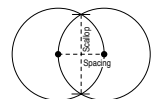


■ Area and flow:

$$\frac{\text{Total GPM of zone} \times 96.3}{\text{Total irrigated square feet of zone}}$$

■ Single row:

$$\frac{\text{GPM of full-circle} \times 96.3}{(\text{Spacing}) (\text{Scallop})}$$



Valve-In-Head Activation Types

Electric

- Pressure regulation feature at the same pressure—regardless of elevation changes
- Manual On-Off-Auto control at the sprinkler
- Individual sprinkler control for more precise watering

Normally Open

- Individual sprinkler control for more precise watering
- Hydraulic control capability with sophisticated electronic/electric control systems
- Ideal for all dirty water applications—irrigation water is not used for control
- Lightning resistant

Check-O-Matic

- Maintains 11,3m(37') elevation change
- Eliminates low-head drainage
- Requires separate remote control valve



WIRE SIZING

Current Draw (Amperage)

Standard Wattage Solenoid

Product	Solenoids	Assumes 24 VAC, 50/60 Hz Output			
		120 VAC, 60 Hz		240 VAC, 50 Hz	
		Inrush	Holding	Inrush	Holding
Lynx® Smart Satellite and Lynx VPE	0	–	0.20	–	0.19
	1	0.26	0.25	0.30	0.22
	2	0.35	0.30	0.34	0.25
	3	0.40	0.34	0.36	0.28
	4	0.46	0.39	0.39	0.30
	5	0.50	0.43	0.42	0.33
	6	0.64	0.48	0.44	0.36
	7	0.70	0.52	0.46	0.38
	8	0.73	0.56	0.50	0.41
	9	0.77	0.61	0.53	0.43
	10	0.80	0.65	0.57	0.46
	11	0.85	0.69	0.57	0.48
	12	0.91	0.73	0.57	0.51
	13	1.00	0.77	0.61	0.53
	14	1.03	0.81	0.62	0.55
	15	1.05	0.85	0.63	0.58
	Network LTC Satellite	0	0.15	0.15	0.14
1		0.23	0.21	0.18	0.17
2		0.31	0.27	0.21	0.20
3		0.39	0.33	0.24	0.23
4		0.47	0.39	0.26	0.25
5		0.55	0.45	0.29	0.28
6		0.63	0.51	0.32	0.30
7		0.71	0.57	0.34	0.33
8		0.79	0.63	0.37	0.35
9		0.87	0.69	0.40	0.38
10		0.95	0.75	0.42	0.40
11		1.03	0.81	0.45	0.43
12		1.11	0.87	0.48	0.46
E-Series OSMAC Satellite	0	0.05	0.05	0.03	0.03
	1	0.13	0.11	0.07	0.06
	2	0.21	0.17	0.12	0.09
	3	0.29	0.23	0.17	0.12
	4	0.37	0.29	0.21	0.15
	5	0.45	0.35	0.26	0.19
	6	0.53	0.41	0.31	0.22
	7	0.61	0.47	0.35	0.25
	8	0.69	0.53	0.40	0.28
	9	0.77	0.59	0.45	0.31
	10	0.85	0.65	0.50	0.35
	11	0.93	0.71	0.54	0.38
	12	1.01	0.77	0.59	0.41
	13	1.09	0.83	0.64	0.44
	14	1.17	0.89	0.68	0.47
	15	1.25	0.95	0.73	0.51
	16	1.33	1.01	0.81	0.54

Spike Guard™ Low Wattage Solenoid

Product	Solenoids	Assumes 24 VAC, 50/60 Hz Output			
		120 VAC, 60 Hz		240 VAC, 50 Hz	
		Inrush	Holding	Inrush	Holding
Lynx® Smart Satellite and Lynx VPE	0	–	0.20	0.21	0.20
	1	0.24	0.22	0.22	0.21
	2	0.26	0.24	0.23	0.22
	3	0.29	0.27	0.24	0.23
	4	0.31	0.29	0.25	0.24
	5	0.33	0.31	0.26	0.26
	6	0.35	0.33	0.28	0.27
	7	0.39	0.37	0.29	0.28
	8	0.41	0.39	0.30	0.30
	9	0.43	0.41	0.32	0.31
	10	0.46	0.44	0.34	0.33
	11	0.47	0.46	0.35	0.35
	12	0.49	0.48	0.36	0.36
	13	0.52	0.50	0.37	0.38
	14	0.54	0.52	0.38	0.39
	15	0.56	0.54	0.40	0.40
	16	0.58	0.56	0.43	0.42
	17	0.60	0.58	0.44	0.43
	18	0.61	0.60	0.46	0.45
	19	0.63	0.62	0.47	0.46
	20	0.66	0.64	0.49	0.48
	21	0.68	0.66	0.50	0.49
	22	0.70	0.68	0.51	0.50
	23	0.74	0.70	0.53	0.52
	24	0.76	0.72	0.54	0.53
	25	0.79	0.74	0.55	0.54
	26	0.80	0.75	0.57	0.56
	27	0.85	0.77	0.58	0.57
	28	0.90	0.79	0.59	0.58
	29	0.93	0.81	0.60	0.59
	30	0.96	0.82	0.61	0.60
	31	1.01	0.84	0.62	0.61
32	1.04	0.86	0.64	0.62	
Network LTC Satellite and Network LTC Plus Satellite	0	0.15	0.15	0.14	0.14
	1	0.17	0.17	0.16	0.15
	2	0.20	0.19	0.18	0.17
	3	0.22	0.21	0.20	0.19
	4	0.25	0.23	0.21	0.20
	5	0.27	0.25	0.23	0.22
	6	0.29	0.27	0.25	0.24
	7	0.32	0.29	0.27	0.25
	8	0.34	0.31	0.28	0.27
	9	0.37	0.33	0.30	0.29
	10	0.39	0.35	0.32	0.30
	11	0.41	0.37	0.33	0.31
	12	0.44	0.39	0.34	0.33
E-OSMAC Satellite	0	0.05	0.05	0.03	0.03
	1	0.07	0.07	0.05	0.05
	2	0.10	0.09	0.06	0.06
	3	0.12	0.11	0.08	0.08
	4	0.15	0.13	0.10	0.09
	5	0.17	0.15	0.12	0.11
	6	0.19	0.17	0.13	0.12
	7	0.22	0.19	0.15	0.14
	8	0.24	0.21	0.17	0.15
	9	0.27	0.23	0.18	0.17
	10	0.29	0.25	0.20	0.18
	11	0.31	0.27	0.22	0.20
	12	0.34	0.29	0.23	0.21
	13	0.36	0.31	0.25	0.23
	14	0.39	0.33	0.27	0.24
	15	0.41	0.35	0.29	0.26
	16	0.44	0.37	0.30	0.27



THE TORO LIMITED WARRANTY for Golf Irrigation Equipment

The Toro Company and its affiliate, Toro Warranty Company, pursuant to an agreement between them, jointly warrants to the owner, each new piece of irrigation equipment (featured in the current catalog at date of installation) against defects in material and workmanship for a period described below, provided they are used for irrigation purposes under manufacturer's recommended specifications and instructions.

During the warranty period, we will repair or replace, at our option, any part found to be defective. Your remedy is limited solely to the replacement or repair of defective parts.

This warranty does not apply (i) to Acts of God (e.g., lightning, flooding, etc.); or (ii) to products not manufactured by Toro when used in conjunction with Toro products; or (iii) where equipment is used, or installation is performed in any manner contrary to Toro's specifications and instructions, nor where equipment is altered or modified.

Return the defective part to your irrigation contractor or installer, or your local Golf Irrigation Distributor, or contact The Toro Warranty Company, P.O. Box 489, Riverside, California 92502, (800) 664-4740 for the location of your nearest Toro distributor or outside the U.S., call +1 (951) 688-9221.

Neither Toro nor Toro Warranty Company is liable for indirect, incidental or consequential damages in connection with the use of equipment, including but not limited to: vegetation loss, the cost of substitute equipment or services required during periods of malfunction or resulting non-use, property damage or personal injury resulting from installer's actions, whether negligent or otherwise.

Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply to you.

All implied warranties, including those of merchantability and fitness for use, are limited to the duration of this express warranty.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

This warranty gives you specific legal rights and you may have other rights which vary from state to state. Proof of installation date required for any warranty claim and for any product covered by this warranty.

Lynx® Smart Satellite

Lynx Smart Satellite is covered by this warranty for 2 years from the date of installation.

Golf Sprinklers

All Toro golf sprinklers are covered by this warranty for two (2) years from date the date of installation. Proof of installation date required for any warranty claim. If the Golf Sprinklers are installed with Toro Swing Joints, the warranty is extended to 5 years. Proof of simultaneous installation required for any warranty claim.

Swing Joints

Toro swing joints are covered by this warranty for 5 years from the date of installation. Warranty covers defects in manufacturing and excludes damage resulting from natural phenomenas such as frost heave.

Valves

220G Series valves are covered by this warranty for 5 years from date of installation. P-220G Series, P-220GS Series and 470 series quick coupler valves are covered by this warranty for 2 years from date of installation.

Control Systems and Turf Guard®

All Toro golf control systems (central controls, field satellite controllers, GDC and Turf Guard), unless covered by a Toro NSN Support Plan, are covered by this warranty for one (1) year from date of installation.



We reserve the right to improve our products and make changes in the specifications and designs without notice and without incurring obligation. Products depicted in this brochure are for demonstration purposes only. Actual products offered for sale may vary in design and features.

Toro is always there to help you care for your landscapes the way you want,
when you want, better than anyone else.

toro.com

Worldwide Headquarters
The Toro Company
8111 Lyndale Ave. So.
Bloomington, MN 55420 U.S.A.
Phone: (1) 952 888 8801

Printed in Belgium
©2019 The Toro Company.
All Rights Reserved.

19-300-GB-UK

TORO

Count on it.



facebook.com/torocompany
twitter.com/TheToroCompany
youtube.com/ToroCompanyEurope

Join the conversation
@ToroGolf

Products depicted in this literature are for demonstration purposes only. Actual products offered for sale may vary in use, design, required attachments and safety features. We reserve the right to improve our products and make changes in specifications, design and standard equipment without notice and without incurring obligation. See your dealer for details on all our warranties.