

**TORO**

Count on it.

# International Residential and Commercial Irrigation Products



Residential



Municipal



Sportsfields



2005-2006

# Residential/Commercial irrigation products

## i n t r o d u c t i o n

Industry-leading products are a Toro hallmark. It's portrayed in such great successes as being the first to introduce modularity; being the innovators of the X-Flow water shut-off device; and providing complete water management solutions for all types of applications.

But while product development has been a strong focus, we also know there are many other aspects to our business upon which our customers depend.

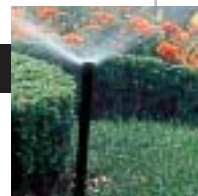
To ensure that we live up to and even exceed these expectations, we are committed to relationship building and enhancing customer care.

You'll see that we are dedicated to this business in new processes, programs, and investments in a completely renovated irrigation facility.

We are committed to you, our customers, and we are committed to excellence.

We're approaching the future with new visions for Toro. We think you're going to like what you see.





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# New and Select Products

## Full Family of Toro Variable Arc Nozzles (TVANs)

residential, commercial

Only one nozzle series needed for intricate designs.

- Available in five different radii—  
2,4, 3,0, 3,7, 4,6 and 5,2m (8', 10', 12', 15' and 17')
- For design flexibility, adjustable from 0° to 360°



## 570Z XF Sprayhead

residential, commercial

Toro's trademark 570Z spray - now available with a patented water shut-off feature if the nozzle is removed or damaged.



## MINI-8 Series Sprinklers

residential, commercial

An easy-to-use 1/2" mid-range rotor, with all arc indications and adjustments easily accessible from the top.



## TR50 and TR50XT Rotors

residential, commercial

A simple 20mm (3/4") rotor with excellent coverage and versatility.

- Features for performance include a full 5" pop-up, Smart Arc™ to protect against vandalism, nozzle tree with eight interchangeable nozzles for convenience and an over-molded wiper seal for debris resistance and below-grade installation

TR50XT offers the simplicity of the TR50 rotor with the added features of Toro's patented Trjectory™ height of spray adjustment and X-Flow® water shut-off.



## TR70XT Rotors

commercial

The large turf, 25 mm (1") version of the TR50XT, with all adjustments and features located beneath a safe, rubber cover.



# New and Select Products

## Wireless RainSensor™

residential/commercial

- A rain sensor that's wireless for the utmost installation convenience.
- Reacts to rain and freeze conditions for water conservation
  - Sensor units available for rain and freeze
  - Large digital display



## DDC™ Series Controller

residential

- An exclusive, patent-pending "virtual dial" interface guides a user through simple programming functions.
- Full of features with three independent programs, three start times, manual starts, Season Adjust and a self-diagnostic circuit breaker.



## GreenKeeper® Modular Controllers

residential/commercial

The GreenKeeper Modular Series controller is worth another look. With a new look, added features, and a powerful remote control, it has even more value. And it's still the most advanced and flexible controller in the industry for residential applications.



## P-150

commercial

A light-commercial, globe/angle valve available in 25, 40 and 50mm sizes (1", 1½" and 2").



## Pre-Assembled Flex Assemblies

commercial

Make installation easier with Toro's new flex assemblies. 13mm (½") and 20mm (¾") fittings conveniently pre-assembled onto 200mm (8") and 300mm (12") lengths of Toro Super Funny Pipe.



# Products for Residential Applications

fixed sprays, rotors, valves, controllers, landscape drip / micro-irrigation



## Rotors

Mini 8 Series  
300 Stream Rotor® Series (pictured)  
V-1550 Multi-Matrix®  
TR50/ TR50XT Series



## Valves

EZ-Flo® II Series  
EZ-Flo® Plus Series (pictured)  
254/264 Series  
250/260 Series



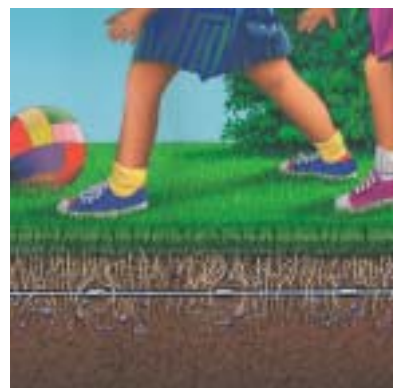
## Fixed Sprays

LPS Series  
570Z Series (pictured)  
570Z XF Series



## Controllers

DDC™ Series  
GreenKeeper® Modular Series (pictured)  
Remote™ 1000/3000 Series



## Landscape Drip / Micro-Irrigation

# Products for Commercial Applications

fixed sprays, rotors, valves, controllers, landscape drip / micro-irrigation



## Valves

250/260 Series  
252 Series  
P-150 Series  
P-220 Series  
(pictured with Remote Battery Controller)  
Brass 220 Series  
Quick Couplers



## Fixed Sprays

570Z Series  
570Z XF Series  
570Z PRX Series (pictured)



## Controllers

GreenKeeper® Modular Series  
Custom Command™ Series (pictured)  
Remote 1000/3000 Series



## Rotors

Super 700 Series  
TR50XT Series  
TR70XT Series  
2001® Series  
640 Series (pictured)



## Landscape Drip / Micro-Irrigation

# 2005/2006 Residential/Commercial irrigation products



*All specifications in this catalog are accurate at the time of printing, but are subject to change without notice.*

*Please be sure to check [www.toro.com](http://www.toro.com) for the latest performance information.*

*The performance data in this catalog show average values. This includes all sprinkler data and hydraulic valve radii, flow and check height and friction loss. All products are tested in a controlled environment; therefore uncontrolled elements, for example but not limited to wind, may affect your results.*





# Sprays and Nozzles



# Sprays and Nozzles

## Innovative and Versatile

Enhance your turf. Toro sprinklers help you meet every turf requirement with a wide range of models and nozzles, that are as attractive as they are functional. Toro. Recognized worldwide for unbeatable versatility and built-in dependability to meet your needs.

		LPS	570Z	570Z XF	570Z PRX
Conditions	Residential	X	X		
	Commercial			X	X
	Turf	X	X	X	X
	Shrubs/Ground Cover	X	X	X	X
	Slopes	X	X	X	X
	High Pressure Systems				X
	Low Pressure Systems	X	X	X	
	Roundabouts/Medians	X	X	X	
	High Traffic Areas			X	X
	High Wind Conditions				X
Features	Pop-up Height (in.) (mm)		2,3,4,6,12 50,75,100,150,300	4,6,12 100,150,300	4,6,12 100,150,300
	Side Inlet Option (in.) (mm)		6,12 150, 300	6,12 150, 300	6,12 150, 300
	Check Valve Option	X	X	X	X
	Effluent Water Option	X	X	X	X
	Shrub Model		X	X	X
	X-Flow® Water Shut-Off			X	X
	Built in pressure regulator				X



### LPS Series Sprinklers

- Radius: 0-5,8m (0' - 19')
- Flow Range: 1,9 - 17,4 LPM (0.5 - 4.6 GPM)
- Operating pressure: 1,4 - 4,8 Bar (20 - 70 PSI)



### 570Z Series Sprinklers

- Radius: 0-5,2m (0'-17')
- Flow Range: 0,2-17,3 LPM (0.05-4.58 GPM)
- Operating pressure: 1,4-5,2 Bar (20-75 PSI)



### 570Z XF Series Sprinklers

- Radius: 0-5,2m (0'-17')
- Flow Range: 0,2-17,3 LPM (0.05-4.58 GPM)
- Operating pressure: 1,4-5,2 Bar (20-75 PSI)
- X-Flow® water shut-off



### 570Z PRX Series Sprinklers

- Radius: 0-5,2m (0'-17')
- Flow Range: 0,2-17,3 LPM (0.05-4.58 GPM)
- Operating pressure: 1,4-5,2 Bar (20-75 PSI)
- X-Flow® water shut-off
- Built-in pressure regulator



# LPS Series



The LPS features a compact body with pre-installed VAN nozzles in 50mm or 100mm (2" or 4") pop-up heights. The LPS is ideal for residential applications with its small diameter cap that allows it to blend into many landscapes.

The pre-installed VAN nozzles have matched precipitation rates that provide even coverage. The spray features a sturdy, one piece molded body and a heavy duty, stainless steel retraction spring, which ensures positive pop-down.

### Toro LPS Pop-Up

2,4, 3,0, 3,7, 4,6 and 5,2m  
(8', 10', 12', 15' and 17') Radius

### Features

- Available with pre-installed, "color-coded" Variable Arc Nozzles in five radii:  
2,4, 3,0, 3,7, 4,6 and 5,2m (8', 10', 12', 15' and 17')
- Matched precipitation rate nozzles provide even coverage
- Adjustable arc patterns from 0° to 360°
- Ratcheting riser permits easy arc adjustment in the field
- Pressure-activated seal reduces flow-by during pop up and keeps debris away from stem during retraction
- Heavy-duty, stainless steel retract spring ensures positive pop down
- One-piece molded body adds durability
- Removable nozzle, screen and internal components for flushing and servicing
- Optional check valve (Model No. LPSCV)



LPS Series

Effluent water indicators available

### Specifications

- Recommended working pressure: 1,4-4,8 Bar (20-70 PSI)
- Spacing:
  - 2,4m (8') VAN: 1,9-3,1m (6'-10')
  - 3,0m (10') VAN: 2,4-3,6m (8'-12')
  - 3,7m (12') VAN: 2,7-4,6m (9'-15')
  - 4,6m (15') VAN: 3,6-5m (12'-17')
  - 5,2m (17') VAN: 4-5,8m (13'-19')
- Flow-by: 0 at 0,7 Bar (10 PSI) or greater, 1,9 l/min (.5 GPM) otherwise
- Inlet: 13mm (1/2") female NPT/BSP threads
- Exposed diameter: 32mm (1 1/4")
- Body height:
  - LPS200: 50mm (2")
  - LPS400: 100mm (4")
- Optional check valve maintains up to 2,1m (7') of elevation change to prevent low-head drainage

### Specifying Information

<input type="checkbox"/> LPS <input checked="" type="checkbox"/> X <input type="checkbox"/> XX				
Spray	Size	Nozzle		Optional
LPS - LPS	2 - 50mm (2") 4 - 100mm (4")	8 - 2,4m (8') 10 - 3,0m (10') 12 - 3,7m (12')	15 - 4,6m (15') 17 - 5,2m (17')	E - Effluent
For Example: When specifying a 50mm (2") LPS with a 3,0m (10') nozzle, you would specify: <input type="text" value="LPS -2 -10"/>				

# LPS Series



## LPS Series MPR Variable Arc Nozzles—Metric

8 Series											10 Series							
			90		180		270		360		90		180		270		360	
kPa	Bar	Kg/cm <sup>2</sup>	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
150	1.5	1.53	2.8	2.1	2.7	3.4	2.5	5.3	2.4	6.8	3.4	2.4	3.1	4.4	3.1	6.3	3.1	7.8
200	2.0	2.04	3.0	2.4	2.7	4.0	2.7	6.1	2.4	7.9	3.6	2.9	3.3	5.1	3.3	7.2	3.3	9.0
250	2.5	2.55	3.2	2.6	2.7	4.4	2.9	6.8	2.8	8.9	3.8	3.2	3.7	5.7	3.7	8.1	3.7	11.0
300	3.0	3.06	3.4	2.8	2.8	4.9	3.0	7.5	3.0	9.8	4.1	3.5	4.0	6.2	4.0	8.9	4.0	12.6
350	3.5	3.57	3.4	3.0	3.1	5.3	3.0	8.1	3.0	10.6	4.3	3.8	4.0	6.8	4.0	9.6	4.0	13.7

12 Series											15 Series							
			90		180		270		360		90		180		270		360	
kPa	Bar	Kg/cm <sup>2</sup>	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
150	1.5	1.53	3.7	3.0	3.4	5.2	3.4	7.3	3.2	8.9	4.7	3.9	4.6	6.7	4.3	9.3	4.1	10.8
200	2.0	2.04	3.9	3.5	3.6	6.1	3.6	8.5	3.6	10.4	5.1	4.5	4.8	7.8	4.5	10.7	4.5	12.5
250	2.5	2.55	4.2	3.8	3.8	6.8	3.8	9.5	3.8	11.5	5.2	5.0	5.1	8.7	4.8	11.9	4.8	13.9
300	3.0	3.06	4.4	4.2	4.1	7.5	4.0	10.4	4.0	12.7	5.3	5.5	5.2	9.5	4.9	13.1	4.9	15.2
350	3.5	3.57	4.6	4.6	4.3	8.1	4.0	11.4	4.0	13.8	5.4	5.9	5.2	10.3	4.9	14.2	4.9	16.4

17 Series										
			90		180		270		360	
kPa	Bar	Kg/cm <sup>2</sup>	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
150	1.5	1.53	4.7	4.7	4.4	7.5	4.1	9.9	4.1	11.4
200	2.0	2.04	5.1	5.6	5.1	8.9	4.8	11.5	4.8	13.4
250	2.5	2.55	5.4	6.1	5.2	9.8	5.1	12.9	5.1	14.8
300	3.0	3.06	5.6	6.7	5.3	10.6	5.2	14.2	5.1	16.2
350	3.5	3.57	5.8	7.2	5.5	11.4	5.2	15.3	5.1	17.5



## LPS Series MPR Variable Arc Nozzles—English

8 Series											10 Series							
			90		180		270		360		90		180		270		360	
PSI	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM
20	9	0.5	9	0.9	8	1.4	8	1.7	11	0.6	10	1.1	10	1.6	10	2.0		
30	10	0.6	9	1.1	9	1.7	8	2.1	12	0.8	11	1.4	11	2.0	11	2.4		
40	11	0.7	9	1.2	10	1.9	10	2.5	13	0.9	13	1.6	13	2.3	13	3.2		
50	11	0.8	10	1.4	10	2.1	10	2.8	14	1.0	13	1.8	13	2.5	13	3.6		

12 Series											15 Series							
			90		180		270		360		90		180		270		360	
PSI	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM
20	12	0.8	11	1.3	11	1.9	10	2.3	15	1.0	15	1.7	14	2.4	13	2.8		
30	13	0.9	12	1.6	12	2.3	12	2.8	17	1.2	16	2.1	15	2.9	15	3.4		
40	14	1.1	13	1.9	13	2.6	13	3.2	17	1.4	17	2.4	16	3.3	16	3.9		
50	15	1.2	14	2.1	13	3.0	13	3.6	18	1.6	17	2.7	16	3.7	16	4.3		

17 Series										
			90		180		270		360	
PSI	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM
20	15	1.2	14	1.9	13	2.5	13	2.9		
30	17	1.5	17	2.4	16	3.1	16	3.6		
40	18	1.7	17	2.7	17	3.6	17	4.1		
50	19	1.9	18	3.0	17	4.0	17	4.6		

# 570Z Series



Featuring a low-pressure seal that flushes only upon retraction, 570Z models are ideal for small garden and turf areas. Seven distinct pop-up sprinkler bodies and a host of interchangeable nozzles provide unlimited design flexibility.

## Toro 570Z Series Sprinklers

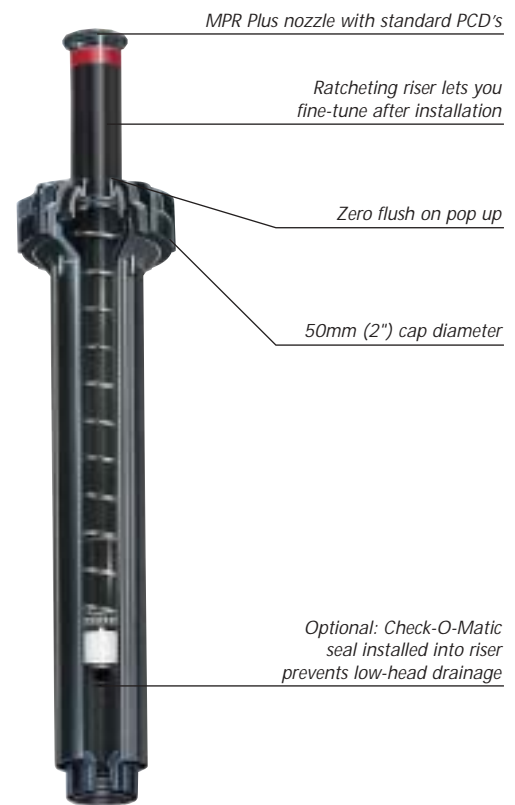
0-5,2m (0'-17") Radius

### Features

- Zero flush seal prevents flushing on pop-up, enabling more heads to be placed on same zone
- Low-pressure sealing at 1 Bar (15 PSI)
- Retraction flushing clears debris for reliable pop-down
- Small, 50mm (2") diameter black cap is less visible, reducing damage from exposure or vandals
- Accepts all Toro spray nozzles – including 570 MPR Plus fixed, Toro Variable Arc, bubbler and low angle nozzles
- Accepts Maxijet® nozzles for low-application-rate irrigation
- All bodies shipped with a flush plug in place for ease of flushing and riser pull up
- Ratcheting riser feature for easy and reliable arc adjustment
- Side-inlet models available on both 150mm (6") and 300mm (12") non-COM sprinkler bodies for sandy soils or applications prone to high pressure surges and spikes
- Check valve models with heavy-duty retraction spring prevent low-head drainage and keep laterals charged with water (optional)
- Durable engineering plastic construction
- Stainless-steel retraction spring

### Specifications

- Spacing: 0,6-5,2m (2'-17")
- Flow rate: 0,2-17 LPM (0.05-4.58 GPM)
- Recommended operating pressure: 1,4-3,5 Bar (20-50 PSI)
- Minimum operating pressure for COM models: 1,7 Bar (25 PSI)
- Maximum operating pressure: 5,2 Bar (75 PSI)
- 13mm (1/2") female-threaded inlet
- Check valve maintains up to 3m (10') in elevation change (The Check-O-Matic feature requires use of the bottom inlet.)
- Dimensions:
  - Body diameter:
    - 35mm on 50, 75, 100 and 150mm
    - (1 3/8" on 2P, 3P, 4P, 6P and 6P-SI) bodies
    - 41mm on 300mm (1 5/8" on 12P) bodies
    - 44mm on 300mm (1 3/4" on 12P-SI) bodies
  - Cap diameter: 50mm (2")
  - Side inlet: 120mm (4 3/4") from top of sprinkler to center of side inlet



570Z-6P-COM

## Specifying Information

<span style="border: 1px solid black; padding: 2px;">570Z</span> <span style="border: 1px solid black; padding: 2px;">XXP</span> <span style="border: 1px solid black; padding: 2px;">SI</span> <span style="border: 1px solid black; padding: 2px;">COM</span> <span style="border: 1px solid black; padding: 2px;">E</span>				
<i>Pop-Up Height</i>		<i>Optional</i>		<i>Optional</i>
S – Shrub	4 – 100mm (4")	SI – Side Inlet optional for 150 and 300mm (6" and 12")	COM – Check-O-Matic*	E – Effluent
2 – 50mm (2")	6 – 150mm (6")			
3 – 75mm (3")	12 – 300mm (12")			
For Example: When specifying a 570Z Series Sprinkler with a pop-up height of 150mm (6") and a check valve, you would specify: <span style="background-color: #cccccc; padding: 2px;">570Z-6P-COM</span>				

\*Not available on side inlet models.

# 570Z XF Series Sprayheads

## Toro 570Z XF Series Sprinklers

0-4,6m (0'-15') Radius

### Features

- Patented X-Flow® high-flow shut-off device built into the riser
- Restricts water loss if the nozzle is removed or damaged, eliminating potential erosion or safety issues
- Allows for nozzle and filter replacement or maintenance while the system is running
- Zero-flush seal prevents flushing on pop-up, enabling more sprinklers to be placed on the same zone
- Retraction flushing clears debris for reliable pop-down
- Low-pressure sealing at 1 Bar (15 PSI)
- Small, 50mm (2") diameter black cap is less visible, reducing damage from exposure or vandals
- Accepts all Toro spray nozzles, including 570 MPR Plus fixed, Toro Variable Arc, bubbler and low-angle nozzles
- Accepts Maxijet® nozzles for low-application rate irrigation
- All bodies shipped with a flush plug in place for ease of flushing and riser pull up
- Ratcheting riser feature for easy and reliable arc adjustment
- Non-side-inlet models available on both 150mm (6") and 300mm (12") sprinkler bodies for sandy soils or applications prone to high-pressure surges and spikes
- Check valve models with heavy-duty retraction spring prevent low-head drainage and keep laterals charged with water (optional)
- Durable engineering plastic construction
- Stainless steel retraction spring

### Specifications

- Flow rate: 0,2–17 LPM (0.05–4.58 GPM)
- Recommended operating pressure: 1,4–3,5 Bar (20–50 PSI)
- Minimum operating pressure for COM models: 1,7 Bar (25 PSI)
- Maximum operating pressure: 5,2 Bar (75 PSI)
- 13mm (1/2") female-threaded inlet
- Dimensions:
  - Body diameter:
    - 35mm (1 3/8") on 4P, 6P and 6P-SI models
    - 41mm (1 5/8") on 12P models
    - 44mm (1 3/4") on 12P-SI models
  - Cap diameter: 50mm (2")
  - Side inlet: 120mm (4 3/4") from top of sprinkler to center of side inlet
- Check valve maintains up to 3m (10') elevation change (optional on side-inlet models)



570Z XF Series



Note: You must have a nozzle screen or flush plug in place to deactivate the X-Flow® function. Without either, there will not be flow through the sprinkler.

without X-Flow® device

with X-Flow® device restricts 98% of flow when nozzle is removed or damaged

### Specifying Information

Model	Pop-Up Height	Optional	Optional	Optional
Z – Lawn Pop-up & High Pop	12P – 300mm (12")	SI – Side Inlet*	COM – Check-O-Matic**	E – Effluent Water
S – Shrub	6P – 150mm (6") 4P – 100mm (4")			

For Example:  
When specifying 570Z XF Series sprinkler with a pop-up height of 150mm (6") and check valve, you would specify:

**570Z – 6P – XF – COM**

\*Available for 150mm (6") and 300mm (12") models.  
\*\*Available with non-side inlet models.

# 570Z PRX Series



Featuring an in-riser pressure regulator and X-Flow® shut-off device, 570Z PRX models are ideal for applications with high or varying operating pressure, including long runs and slopes.

## Toro 570Z PRX Series Sprinklers

### 0-5,2m (0'-17') Radius

#### Features

- Patented in-riser pressure regulator
  - Maintains constant 2 Bar (30 PSI) outlet pressure
  - Eliminates misting and fogging caused by pressures above 2 Bar (30 PSI)
- Patented X-Flow® high-flow shut-off device built into the riser
  - Restricts water loss by 98% if the nozzle is removed or damaged, eliminating potential erosion or safety issues
  - Allows for "dry" nozzle and filter replacement or maintenance, while the system is running
- All bodies shipped with a flush plug in place for ease of flushing and riser pull up
- Zero-flush seal prevents flushing on pop-up, enabling more sprinklers to be placed on the same zone
- Retraction flushing clears debris for reliable pop-down
- Extended 5-year warranty on all PRX models

#### Models

- Shrub, 100mm (4"), 150mm (6") and 300mm (12")
- Side-inlet models available on 150mm (6") and 300mm (12") non-COM sprinkler bodies for easier installation and vandal resistance
- Check valve models with heavy-duty retraction spring prevent low-head drainage and keep laterals charged with water (optional)

#### Specifications

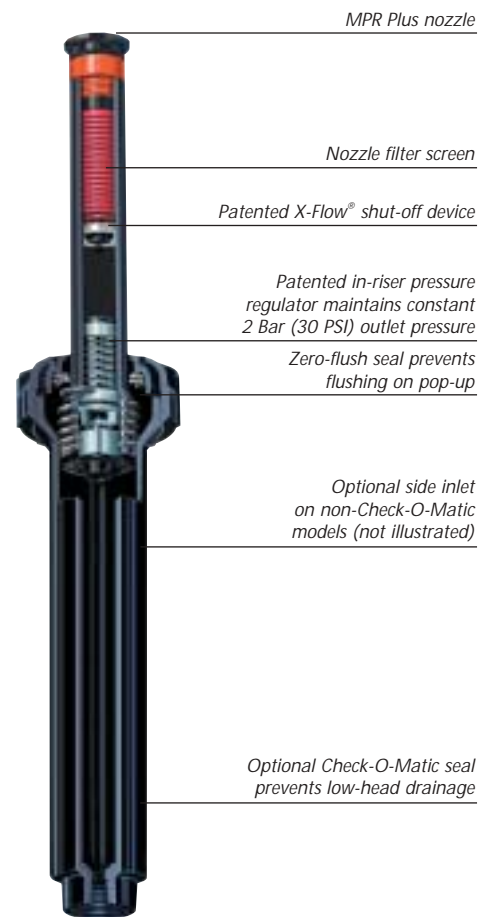
- Flow rate: 0,2–12,5 LPM (0.05–3.30 GPM)
- Recommended operating pressure: 1,4–5,2 Bar (20–75 PSI)
- Minimum operating pressure for COM models: 1,7 Bar (25 PSI)
- Maximum operating pressure: 5,2 Bar (75 PSI)
- 13mm (1/2") female threaded inlet
- Dimensions:
  - Body diameter:
    - 35mm (1 3/8") on Shrub, 4P, 6P and 6P-SI,
    - 41mm (1 5/8") on 12P
    - 44mm (1 3/4") on 12P-SI models
  - Cap diameter: 50mm (2")
  - Side inlet: 120mm (4 3/4") from the top of sprinkler to center of side inlet
- Check valve maintains up to 3m (10') in elevation change



Effluent water indicators available



Shrub 4P 6P-SI 6P 12P 12P-SI



570Z PRX Series

MPR Plus nozzle

Nozzle filter screen

Patented X-Flow® shut-off device

Patented in-riser pressure regulator maintains constant 2 Bar (30 PSI) outlet pressure

Zero-flush seal prevents flushing on pop-up

Optional side inlet on non-Check-O-Matic models (not illustrated)

Optional Check-O-Matic seal prevents low-head drainage

with X-Flow® device restricts 98% of flow when nozzle is removed or damaged

without X-Flow® device



### Specifying Information

<span style="border: 1px solid black; padding: 2px;">570X</span> <span style="border: 1px solid black; padding: 2px; margin-left: 10px;">XXP</span> <span style="border: 1px solid black; padding: 2px; margin-left: 10px;">SI</span> <span style="border: 1px solid black; padding: 2px; margin-left: 10px;">PRX</span> <span style="border: 1px solid black; padding: 2px; margin-left: 10px;">COM</span> <span style="border: 1px solid black; padding: 2px; margin-left: 10px;">E</span>				
Model	Pop-Up Height	Optional	Optional	Optional
Z-Lawn Pop-up and High Pop S-Shrub	12P- 300mm (12") 6P- 150mm (6") 4P- 100mm (4")	SI - Side Inlet	COM - Check Valve*	E - Effluent Water
For Example: When specifying 570Z PRX Series sprinkler with a pop-up height of 150mm (6") with a side inlet and non-potable water option, you would specify: <span style="border: 1px solid black; padding: 2px; display: inline-block;">570Z - 6P - SI - PRX - E</span>				

\*COM feature requires use of bottom inlet only.

# 570 MPR Series - Fixed Arc Nozzles

True matched precipitation rates and color coding by radius are just a few of the performance features of 570 MPR Plus spray nozzles. Fits any 570 pop-up body, shrub adapter, riser extender or shrub riser.

## Toro 570 MPR Plus Spray Nozzles

### Features

- Matched precipitation rates ensure all nozzles (every radius and pattern) apply water at the same rate
- Low-flow rates allow for more sprinklers to be placed on the same zone
- Free PCDs eliminate fogging, conserve water and provide precise flow rates; available pre-installed or separate
- Color coding by radius for easy identification
- Complete selection of arcs for all radius options – full,  $\frac{3}{4}$ ,  $\frac{2}{3}$ ,  $\frac{1}{2}$ ,  $\frac{1}{3}$  and  $\frac{1}{4}$
- Uniform watering patterns eliminate over and under throw; refined design of part-circle patterns for better arc
- Precise radius/flow adjustment, will not lose adjustment
- 1,5m (5') nozzles adjust to 1m (3')
- Standard and special spray patterns
- Patterns for small areas
- Full set of arcs for 3, 2,4 and 1,5m (10', 8' and 5') radius nozzles
- 1,2 x 5,5m (4'x18') side strip ideal for parking lot medians
- 0,6 x 1,8m (2'x6') for small planter beds and other narrow areas
- 5 levels of trajectory
- Convenient nozzle packaging – nozzles and screens packed separately in attached bags



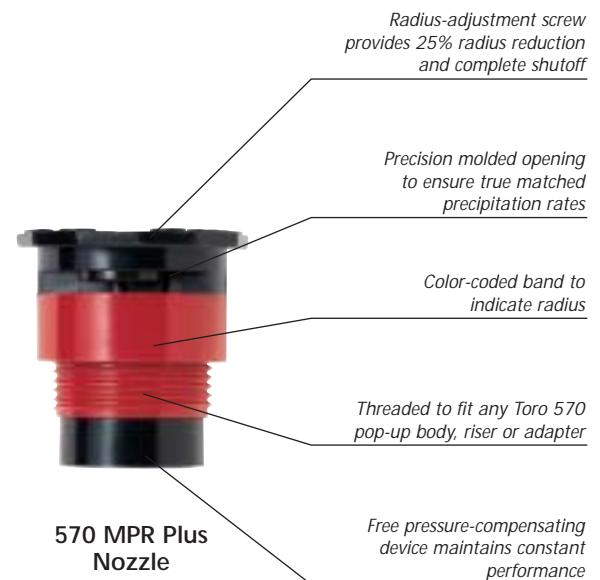
- Fine-mesh filter screens prevent clogging of lower volume nozzles
- Adjustment screw allows up to 25% reduction in radius and complete shutoff

### Specifications

- Flow rate: 0,2–17 LPM (0.05–4.58 GPM)
- Operating pressure for optimum nozzle performance: 2 Bar (30 PSI)
- Recommended operating pressure range: 1,4-3,5 Bar (20-50 PSI)
- Maximum operating pressure: 5,2 Bar (75 PSI)

Specifying Information			
Radius	Arc		Optional
5–1,5m (5') 8–2,4m (8') 10–3,0m (10') 12–3,7m (12') 15–4,6m (15')	Q—90° T—120° H—180° TT—240° TQ—270°	F—360° EST—End Strip CST—Center Strip SST—Side Strip	PC—Pressure Compensation
For Example: When specifying a 570 MPR Plus Nozzle with a spray of 3m (10'), 180° arc and pressure compensation, you would specify: <b>10-H-PC</b>			

Note: To specify a 570 MPR Plus nozzle with a 570Z sprinkler body, attach the body specification (pg. 13) before the above nozzle specification.



570 Series Nozzle Screens*		
White	Red	Red and Metal
4,6m (15') Series	2,4m (8') Series	1,5m (5') Series
3,7m (12') Series	1,2 x 9,1m (4'x30') SST	0,6 x 1,8m (2'x6') SST
3m (10') Series	1,2 x 5,5m (4'x18') SST	10' Stream Spray Series
1,2 x 9,1m (4'x30') CST Stream Bubblers		35' Stream Spray Series Flood Bubbler Series
Flat-Spray (Non-MPR)		Flat-Spray, Low Volume (Non-MPR)
1,2 x 9,1m (4'x30') EST		
2,7 x 5,5m (9'x18') SST		

\*Indicates screen provided with nozzle. Refer to current Parts Breakout Book for more information.







Nozzle Series	Apex at 2 Bar (30 PSI)				
	Maximum Height of Spray				
	27'	23'	12'	5'	0'
4,6m (15')	1,4m (4'8")				
3,7m (12')		1,1m (3'7")			
3m (10')			0,7m (2'4")		
2,4m (8')				0,66m (2'2")	
1,5m (5')					0,46m (1'6")















# 570 MPR Series - Fixed Arc Nozzles










570 MPR Series - Fixed Arc Nozzles

5 Series with 0° Trajectory - Metric					
Nozzle Radius	Bar	Pressure kPa	Kg/cm <sup>2</sup>	Flow LPM	Radius m
5-Q 	1.5	150	1.53	0.22	1.3
	2.0	200	2.04	0.33	1.5
	2.5	250	2.55	0.41	1.6
	3.0	300	3.06	0.49	1.7
3.5	350	3.57	0.58	1.8	
5-Q-PC	2.07-2.76	207-276	2.11-2.82	0.34	1.5
	2.76-5.18	276-518	2.82-5.28	0.38	1.5
5-T 	1.5	150	1.53	0.30	1.3
	2.0	200	2.04	0.44	1.5
	2.5	250	2.55	0.55	1.6
	3.0	300	3.06	0.66	1.7
3.5	350	3.57	0.77	1.8	
5-T-PC	2.07-2.76	207-276	2.11-2.82	0.45	1.5
	2.76-5.18	276-518	2.82-5.28	0.49	1.5
5-H 	1.5	150	1.53	0.44	1.3
	2.0	200	2.04	0.69	1.5
	2.5	250	2.55	0.81	1.6
	3.0	300	3.06	0.92	1.7
3.5	350	3.57	1.03	1.8	
5-H-PC	2.07-2.76	207-276	2.11-2.82	0.68	1.5
	2.76-5.18	276-518	2.82-5.28	0.76	1.5
5-TT 	1.5	150	1.53	0.63	1.3
	2.0	200	2.04	0.91	1.5
	2.5	250	2.55	1.06	1.6
	3.0	300	3.06	1.20	1.7
3.5	350	3.57	2.03	1.8	
5-TT-PC	2.07-2.76	207-276	2.11-2.82	0.87	1.5
	2.76-5.18	276-518	2.82-5.28	1.02	1.5
5-TQ 	1.5	150	1.53	0.82	1.3
	2.0	200	2.04	1.06	1.5
	2.5	250	2.55	1.22	1.6
	3.0	300	3.06	1.37	1.7
3.5	350	3.57	2.03	1.8	
5-TQ-PC	2.07-2.76	207-276	2.11-2.82	0.98	1.5
	2.76-5.18	276-518	2.82-5.28	1.10	1.5
5-F 	1.5	150	1.53	1.03	1.3
	2.0	200	2.04	1.39	1.5
	2.5	250	2.55	1.60	1.6
	3.0	300	3.06	1.81	1.7
3.5	350	3.57	2.03	1.8	
5-F-PC	2.07-2.76	207-276	2.11-2.82	1.33	1.5
	2.76-5.18	276-518	2.82-5.28	1.48	1.5

8 Series with 5° Trajectory - Metric					
Nozzle Radius	Bar	Pressure kPa	Kg/cm <sup>2</sup>	Flow LPM	Radius m
8-Q 	1.5	150	1.53	0.69	2.2
	2.0	200	2.04	0.88	2.4
	2.5	250	2.55	0.96	2.5
	3.0	300	3.06	1.02	2.6
3.5	350	3.57	1.11	2.8	
8-Q-PC	2.07-2.76	207-276	2.11-2.82	0.83	2.4
	2.76-5.18	276-518	2.82-5.28	0.95	2.4
8-T 	1.5	150	1.53	0.92	2.2
	2.0	200	2.04	1.11	2.4
	2.5	250	2.55	1.28	2.5
	3.0	300	3.06	1.42	2.6
3.5	350	3.57	1.53	2.8	
8-T-PC	2.07-2.76	207-276	2.11-2.82	1.10	2.4
	2.76-5.18	276-518	2.82-5.28	1.33	2.4
8-H 	1.5	150	1.53	1.49	2.3
	2.0	200	2.04	1.84	2.4
	2.5	250	2.55	2.08	2.5
	3.0	300	3.06	2.29	2.6
3.5	350	3.57	2.48	2.8	
8-H-PC	2.07-2.76	207-276	2.11-2.82	1.67	2.4
	2.76-5.18	276-518	2.82-5.28	1.89	2.4
8-TT 	1.5	150	1.53	2.21	2.2
	2.0	200	2.04	2.60	2.4
	2.5	250	2.55	2.89	2.5
	3.0	300	3.06	3.13	2.6
3.5	350	3.57	3.35	2.8	
8-TT-PC	2.07-2.76	207-276	2.11-2.82	2.23	2.4
	2.76-5.18	276-518	2.82-5.28	2.65	2.4
8-TQ 	1.5	150	1.53	2.47	2.2
	2.0	200	2.04	2.83	2.4
	2.5	250	2.55	3.11	2.5
	3.0	300	3.06	3.35	2.6
3.5	350	3.57	3.54	2.8	
8-TQ-PC	2.07-2.76	207-276	2.11-2.82	2.42	2.4
	2.76-5.18	276-518	2.82-5.28	2.65	2.4
8-F 	1.5	150	1.53	2.97	2.2
	2.0	200	2.04	3.69	2.4
	2.5	250	2.55	4.16	2.5
	3.0	300	3.06	4.58	2.6
3.5	350	3.57	4.96	2.8	
8-F-PC	2.07-2.76	207-276	2.11-2.82	3.22	2.4
	2.76-5.18	276-518	2.82-5.28	3.79	2.4

10 Series with 12° Trajectory - Metric					
Nozzle Radius	Bar	Pressure kPa	Kg/cm <sup>2</sup>	Flow LPM	Radius m
10-O 	1.5	150	1.53	1.20	2.8
	2.0	200	2.04	1.48	3.0
	2.5	250	2.55	1.75	3.2
	3.0	300	3.06	2.03	3.5
3.5	350	3.57	2.30	3.7	
10-O-PC	2.07-2.76	207-276	2.11-2.82	1.25	3.0
	2.76-5.18	276-518	2.82-5.28	1.40	3.0
10-T 	1.5	150	1.53	1.66	2.8
	2.0	200	2.04	1.93	3.0
	2.5	250	2.55	2.29	3.2
	3.0	300	3.06	2.59	3.5
3.5	350	3.57	2.87	3.7	
10-T-PC	2.07-2.76	207-276	2.11-2.82	1.67	3.0
	2.76-5.18	276-518	2.82-5.28	1.89	3.0
10-H 	1.5	150	1.53	2.34	2.8
	2.0	200	2.04	2.65	3.0
	2.5	250	2.55	3.02	3.2
	3.0	300	3.06	3.40	3.4
3.5	350	3.57	3.79	3.5	
10-H-PC	2.07-2.76	207-276	2.11-2.82	2.50	3.0
	2.76-5.18	276-518	2.82-5.28	2.84	3.0
10-TT 	1.5	150	1.53	2.86	2.8
	2.0	200	2.04	3.57	3.0
	2.5	250	2.55	3.98	3.1
	3.0	300	3.06	4.28	3.3
3.5	350	3.57	4.53	3.4	
10-TT-PC	2.07-2.76	207-276	2.11-2.82	3.40	3.0
	2.76-5.18	276-518	2.82-5.28	3.79	3.0
10-TQ 	1.5	150	1.53	3.25	2.8
	2.0	200	2.04	3.85	3.0
	2.5	250	2.55	4.32	3.1
	3.0	300	3.06	4.74	3.3
3.5	350	3.57	5.15	3.4	
10-TQ-PC	2.07-2.76	207-276	2.11-2.82	3.75	3.0
	2.76-5.18	276-518	2.82-5.28	4.13	3.0
10-F 	1.5	150	1.53	4.45	2.7
	2.0	200	2.04	5.50	3.0
	2.5	250	2.55	5.92	3.1
	3.0	300	3.06	6.41	3.3
3.5	350	3.57	7.07	3.4	
10-FQ-PC	2.07-2.76	207-276	2.11-2.82	5.04	3.0
	2.76-5.18	276-518	2.82-5.28	5.72	3.0

12 Series with 23° Trajectory - Metric					
Nozzle Radius	Bar	Pressure kPa	Kg/cm <sup>2</sup>	Flow LPM	Radius m
12-Q 	1.5	150	1.53	1.58	3.4
	2.0	200	2.04	1.85	3.6
	2.5	250	2.55	2.13	3.8
	3.0	300	3.06	2.31	4.0
3.5	350	3.57	2.39	4.0	
12-Q-PC	2.07-2.76	207-276	2.11-2.82	1.82	3.7
	2.76-5.18	276-518	2.82-5.28	2.01	3.7
12-T 	1.5	150	1.53	2.26	3.4
	2.0	200	2.04	2.67	3.6
	2.5	250	2.55	3.08	3.8
	3.0	300	3.06	3.43	3.9
3.5	350	3.57	3.70	4.0	
12-T-PC	2.07-2.76	207-276	2.11-2.82	2.42	3.7
	2.76-5.18	276-518	2.82-5.28	2.65	3.7
12-H 	1.5	150	1.53	3.69	3.4
	2.0	200	2.04	4.07	3.6
	2.5	250	2.55	4.62	3.8
	3.0	300	3.06	5.25	4.1
3.5	350	3.57	5.94	4.3	
12-H-PC	2.07-2.76	207-276	2.11-2.82	3.63	3.7
	2.76-5.18	276-518	2.82-5.28	4.00	3.7
12-TT 	1.5	150	1.53	4.46	3.4
	2.0	200	2.04	5.36	3.6
	2.5	250	2.55	5.91	3.8
	3.0	300	3.06	6.40	3.9
3.5	350	3.57	6.86	4.0	
12-TT-PC	2.07-2.76	207-276	2.11-2.82	4.85	3.7
	2.76-5.18	276-518	2.82-5.28	5.30	3.7
12-TQ 	1.5	150	1.53	4.31	3.3
	2.0	200	2.04	5.68	3.6
	2.5	250	2.55	6.10	3.8
	3.0	300	3.06	6.44	3.9
3.5	350	3.57	6.86	4.0	
12-TQ-PC	2.07-2.76	207-276	2.11-2.82	5.45	3.7
	2.76-5.18	276-518	2.82-5.28	6.06	3.7
12-F 	1.5	150	1.53	6.67	3.4
	2.0	200	2.04	8.09	3.6
	2.5	250	2.55	8.67	3.8
	3.0	300	3.06	9.36	3.9
3.5	350	3.57	10.32	4.0	
12-F-PC	2.07-2.76	207-276	2.11-2.82	7.27	3.7
	2.76-5.18	276-518	2.82-5.28	7.95	3.7

15 Series with 27° Trajectory - Metric					
Nozzle Radius	Bar	Pressure kPa	Kg/cm <sup>2</sup>	Flow LPM	Radius m
15-Q 	1.5	150	1.53	2.69	4.3
	2.0	200	2.04	3.15	4.5
	2.5	250	2.55	3.67	4.8
	3.0	300	3.06	4.19	4.9
3.5	350				

# 570 MPR Series



5 Series



8 Series



10 Series



12 Series



15 Series



Special Patterns

All performance specifications are based on the stated working pressure available at the base of the sprinkler head.

5 Series with 0° Trajectory – English			
Nozzle Radius	Pressure PSI	Flow GPM	Radius ft
5-Q 1/4	20	0.05	4
	30	0.09	5
	40	0.12	6
	50	0.15	6
5-Q-PC	30-40	0.09	5
	40-75	0.10	5
5-T 1/3	20	0.07	4
	30	0.12	5
	40	0.16	6
	50	0.20	6
5-T-PC	30-40	0.12	5
	40-75	0.13	5
5-H 1/2	20	0.10	4
	30	0.19	5
	40	0.23	6
	50	0.27	6
5-H-PC	30-40	0.18	5
	40-75	0.20	5
5-TT 2/3	20	0.15	4
	30	0.25	5
	40	0.30	6
	50	0.35	6
5-TT-PC	30-40	0.23	5
	40-75	0.27	5
5-TQ 3/4	20	0.20	4
	30	0.29	5
	40	0.34	6
	50	0.40	6
5-TQ-PC	30-40	0.26	5
	40-75	0.29	5
5-F	20	0.25	4
	30	0.38	5
	40	0.45	6
	50	0.53	6
5-F-PC	30-40	0.35	5
	40-75	0.39	5

8 Series with 5° Trajectory – English			
Nozzle Radius	Pressure PSI	Flow GPM	Radius ft
8-Q 1/4	20	0.17	7
	30	0.24	8
	40	0.26	9
	50	0.29	9
8-Q-PC	30-40	0.22	8
	40-75	0.25	8
8-T 1/3	20	0.23	7
	30	0.30	8
	40	0.36	9
	50	0.40	9
8-T-PC	30-40	0.29	8
	40-75	0.35	8
8-H 1/2	20	0.37	8
	30	0.50	8
	40	0.58	9
	50	0.65	9
8-H-PC	30-40	0.44	8
	40-75	0.50	8
8-TT 2/3	20	0.56	7
	30	0.70	8
	40	0.80	9
	50	0.88	9
8-TT-PC	30-40	0.59	8
	40-75	0.70	8
8-TQ 3/4	20	0.63	7
	30	0.76	8
	40	0.86	9
	50	0.93	9
8-TQ-PC	30-40	0.64	8
	40-75	0.70	8
8-F	20	0.74	7
	30	1.00	8
	40	1.16	9
	50	1.30	9
8-F-PC	30-40	0.85	8
	40-75	1.00	8

10 Series with 12° Trajectory – English			
Nozzle Radius	Pressure PSI	Flow GPM	Radius ft
10-Q 1/4	20	0.30	9
	30	0.40	10
	40	0.50	11
	50	0.60	12
10-Q-PC	30-40	0.33	10
	40-75	0.37	10
10-T 1/3	20	0.42	9
	30	0.52	10
	40	0.65	11
	50	0.75	12
10-T-PC	30-40	0.44	10
	40-75	0.50	10
10-H 1/2	20	0.60	9
	30	0.71	10
	40	0.85	11
	50	0.99	12
10-H-PC	30-40	0.66	10
	40-75	0.75	10
10-TT 2/3	20	0.71	9
	30	0.97	10
	40	1.10	11
	50	1.19	11
10-TT-PC	30-40	0.89	10
	40-75	1.00	10
10-TQ 3/4	20	0.82	9
	30	1.04	10
	40	1.20	11
	50	1.35	11
10-TQ-PC	30-40	0.99	10
	40-75	1.09	10
10-F	20	1.11	9
	30	1.49	10
	40	1.61	11
	50	1.85	11
10-F-PC	30-40	1.33	10
	40-75	1.51	10

12 Series with 23° Trajectory – English			
Nozzle Radius	Pressure PSI	Flow GPM	Radius ft
12-Q 1/4	20	0.40	11
	30	0.50	12
	40	0.60	13
	50	0.63	13
12-Q-PC	30-40	0.48	12
	40-75	0.53	12
12-T 1/3	20	0.57	11
	30	0.72	12
	40	0.87	13
	50	0.97	13
12-T-PC	30-40	0.64	12
	40-75	0.70	12
12-H 1/2	20	0.95	11
	30	1.09	12
	40	1.30	13
	50	1.55	14
12-H-PC	30-40	0.96	12
	40-75	1.05	12
12-TT 2/3	20	1.12	11
	30	1.45	12
	40	1.63	13
	50	1.80	13
12-TT-PC	30-40	1.28	12
	40-75	1.40	12
12-TQ 3/4	20	1.05	11
	30	1.55	12
	40	1.65	13
	50	1.80	13
12-TQ-PC	30-40	1.44	12
	40-75	1.60	12
12-F	20	1.67	11
	30	2.19	12
	40	2.35	13
	50	2.70	13
12-F-PC	30-40	1.92	12
	40-75	2.10	12

12 Series with 23° Trajectory – English			
Nozzle Radius	Pressure PSI	Flow GPM	Radius ft
15-Q 1/4	20	0.68	14
	30	0.85	15
	40	1.04	16
	50	1.23	16
15-Q-PC	30-40	0.75	15
	40-75	0.81	15
15-T 1/3	20	0.95	14
	30	1.10	15
	40	1.30	16
	50	1.45	16
15-T-PC	30-40	1.00	15
	40-75	1.10	15
15-H 1/2	20	1.37	13
	30	1.65	15
	40	2.02	16
	50	2.14	16
15-H-PC	30-40	1.50	15
	40-75	1.65	15
15-TT 2/3	20	1.78	14
	30	2.20	15
	40	2.66	16
	50	2.84	16
15-TT-PC	30-40	2.00	15
	40-75	2.20	15
15-TQ 3/4	20	2.10	13
	30	2.60	15
	40	3.00	16
	50	3.40	16
15-TQ-PC	30-40	2.30	15
	40-75	2.50	15
15-F	20	2.85	13
	30	3.60	15
	40	4.20	16
	50	4.58	16
15-F-PC	30-40	3.00	15
	40-75	3.30	15

Special Patterns – English			
Nozzle Radius	Pressure PSI	Flow GPM	Special Patterns Width x Length
4-EST 1/4	20	0.38	3 x 12
	30	0.45	4 x 15
	40	0.53	5 x 18
	50	0.60	6 x 20
4-EST-PC	30-40	0.43	4 x 15
	40-75	0.50	4 x 15
4-CST 1/4	20	0.75	3 x 24
	30	0.90	4 x 30
	40	1.04	4 x 30
	50	1.16	4 x 31
4-CST-PC	30-40	0.86	4 x 30
	40-75	1.00	4 x 30
9-SST 1/2	20	1.00	9 x 18
	30	1.20	9 x 18
	40	1.38	9 x 20
	50	1.55	10 x 22
9-SST-PC	30-40	1.10	9 x 18
	40-75	1.20	9 x 18
4-SST 1/4	20	0.65	4 x 24
	30	0.90	4 x 30
	40	1.04	4 x 32
	50	1.16	5 x 33
4-SST-PC	30-40	0.88	4 x 30
	40-75	1.00	4 x 30
2-SST 1/4	20	0.08	2 x 5
	30	0.09	2 x 6
	40	0.10	2 x 7
	50	0.12	3 x 7
2-SST-PC	30-40	0.09	2 x 6
	40-75	0.10	2 x 6
4S-SST 1/4	20	0.46	4 x 17
	30	0.55	4 x 18
	40	0.63	4 x 19
	50	0.71	5 x 19
4S-SST-PC	30-40	0.50	4 x 18
	40-75	0.59	4 x 18

# 570 Variable Arc Nozzles (TVANs)



Easily adjustable from 0° to 360°, the Toro Variable Arc Nozzles provide a variety of angle settings to precisely match any terrain. With the 570Z VAN, high-precision water application is easy to achieve.



570 Variable Arc Nozzles (TVANs)

## Features

- Matched precipitation rates (MPR) within families
- Fits all Toro 570Z sprinkler bodies
- Infinitely adjustable arc from 0°–360°
- Five different nozzles for various radii
  - 2,4m (8'), green
  - 3,0m (10'), blue
  - 3,7m (12'), brown
  - 4,6m (15'), black
  - 5,2m (17'), gray
- Exceptional uniform coverage
- Adjustment screw allows up to 25% radius reduction
- Flow increases or decreases proportionately with radius adjustment
- Unique grip-and-turn adjustment—wet or dry
- Fine-mesh, snap-in green filter screens prevent clogging



Convenient arc adjustment at top of nozzle. Easy to use, wet or dry.

## Specifications

- Recommended operating pressure: 1,4–3,5 Bar (20–50 PSI)
- Maximum operating pressure: 5,2 Bar (75 PSI)

## Specifying Information

TVAN		XX	
Model	Radius		
TVAN – Toro	8 – 2,4m (8')	15 – 4,6m (15')	
Variable Arc	10 – 3,0m (10')	17 – 5,2m (17')	
Nozzle	12 – 3,7m (12')		

For Example:  
When specifying a Variable Arc Nozzle with a 3,0m (10') radius, you would specify:

**TVAN-10**

8 Series – Metric				10 Series – Metric				12 Series – Metric				15 Series – Metric				17 Series – Metric			
Nozzle Pattern	Pressure Bar	Flow LPM	Radius meter	Nozzle Pattern	Pressure Bar	Flow LPM	Radius meter	Nozzle Pattern	Pressure Bar	Flow LPM	Radius meter	Nozzle Pattern	Pressure Bar	Flow LPM	Radius meter	Nozzle Pattern	Pressure Bar	Flow LPM	Radius meter
90°	1,5	2,9	2,7	90°	1,5	3,9	3,1	90°	1,5	3,5	4,1	90°	1,5	4,3	4,1	90°	1,5	6,3	4,9
	2,0	3,7	3,0		2,0	4,5	3,3		2,0	3,7	4,3		2,0	5,0	4,5		2,0	7,4	5,2
	2,5	4,3	3,1		2,5	5,0	3,4		2,5	4,1	4,3		2,5	5,4	4,6		2,5	8,0	5,4
	3,0	4,8	3,4		3,0	5,3	3,6		3,0	4,3	4,5		3,0	6,1	4,9		3,0	8,7	5,5
	3,5	4,9	3,7		3,5	5,7	4,0		3,5	4,6	4,6		3,5	6,5	4,9		3,5	9,6	5,5
180°	1,5	5,1	2,5	180°	1,5	6,2	3,1	180°	1,5	5,6	3,8	180°	1,5	7,1	4,1	180°	1,5	9,8	4,9
	2,0	5,9	2,7		2,0	7,0	3,3		2,0	6,2	4,0		2,0	8,3	4,3		2,0	11,2	5,2
	2,5	6,5	2,8		2,5	8,0	3,4		2,5	6,8	4,0		2,5	9,0	4,6		2,5	11,9	5,2
	3,0	7,1	3,0		3,0	8,6	3,7		3,0	7,3	4,0		3,0	9,8	4,6		3,0	12,9	5,2
	3,5	7,6	3,4		3,5	9,1	4,0		3,5	7,8	4,3		3,5	11,0	4,6		3,5	13,7	5,2
270°	1,5	7,1	2,4	270°	1,5	8,6	2,9	270°	1,5	7,8	3,5	270°	1,5	9,7	3,8	270°	1,5	12,1	4,9
	2,0	8,2	2,4		2,0	10,0	3,3		2,0	8,7	3,7		2,0	11,3	4,0		2,0	13,5	5,2
	2,5	9,2	2,5		2,5	11,2	3,4		2,5	9,4	4,0		2,5	12,4	4,3		2,5	15,0	5,2
	3,0	9,7	3,0		3,0	11,7	3,6		3,0	10,3	4,0		3,0	13,6	4,5		3,0	16,6	5,2
	3,5	10,7	3,0		3,5	12,6	3,7		3,5	11,1	4,3		3,5	14,8	4,6		3,5	17,9	5,0
360°	1,5	10,2	2,5	360°	1,5	12,5	3,1	360°	1,5	11,3	3,7	360°	1,5	12,3	3,8	360°	1,5	14,0	4,8
	2,0	11,9	2,7		2,0	14,5	3,3		2,0	12,1	3,7		2,0	14,2	4,0		2,0	16,0	5,1
	2,5	13,1	3,0		2,5	15,9	3,4		2,5	13,2	4,0		2,5	15,9	4,3		2,5	17,8	5,1
	3,0	14,2	3,0		3,0	17,6	3,6		3,0	14,4	4,1		3,0	17,1	4,3		3,0	19,7	5,0
	3,5	15,7	3,0		3,5	18,2	4,0		3,5	14,7	4,0		3,5	18,8	4,3		3,5	21,4	5,0

8 Series – U.S.				10 Series – U.S.				12 Series – U.S.				15 Series – U.S.				17 Series – U.S.			
Nozzle Pattern	Pressure PSI	Flow GPM	Radius feet	Nozzle Pattern	Pressure PSI	Flow GPM	Radius feet	Nozzle Pattern	Pressure PSI	Flow GPM	Radius feet	Nozzle Pattern	Pressure PSI	Flow GPM	Radius feet	Nozzle Pattern	Pressure PSI	Flow GPM	Radius feet
90°	20	0.70	9	90°	20	1.00	10	90°	20	0.90	13	90°	20	1.10	13	90°	20	1.6	16
	25	0.90	9		25	1.10	10		25	1.00	14		25	1.20	14		25	1.8	17
	30	1.00	10		30	1.20	11		30	1.00	14		30	1.30	15		30	2.0	17
	35	1.10	10		35	1.30	11		35	1.10	14		35	1.40	15		35	2.1	18
	40	1.20	11		40	1.40	11		40	1.10	14		40	1.50	16		40	2.2	18
180°	20	1.30	8	180°	20	1.60	10	180°	20	1.50	12	180°	20	1.80	13	180°	20	2.5	16
	25	1.40	9		25	1.70	10		25	1.60	13		25	2.00	14		25	2.8	17
	30	1.60	9		30	1.90	11		30	1.70	13		30	2.20	14		30	3.0	17
	35	1.70	9		35	2.10	11		35	1.80	13		35	2.30	15		35	3.1	17
	40	1.80	10		40	2.20	12		40	1.90	13		40	2.60	15		40	3.3	17
270°	20	1.80	8	270°	20	2.20	9	270°	20	2.00	11	270°	20	2.50	12	270°	20	3.2	16
	25	2.00	8		25	2.40	10		25	2.20	12		25	2.80	13		25	3.5	17
	30	2.20	8		30	2.70	11		30	2.30	12		30	3.00	13		30	3.6	17
	35	2.40	8		35	2.90	11		35	2.50	13		35	3.20	14		35	3.9	17
	40	2.50	9		40	3.10	11		40	2.60	13		40	3.50	14		40	4.2	17
360°	20	2.60	10	360°	20	3.00	12	360°	20	2.90	12	360°	20	3.10	12	360°	20	4.5	17
	25	2.90	9		25	3.50	10		25	3.10	12		25	3.50	13		25	3.9	16
	30	3.20	9		30	3.90	11		30	3.20	12		30	3.80	13		30	4.3	17
	35	3.40	10		35	4.10	11		35	3.50	13		35	4.10	14		35	4.6	17
	40	3.60	10		40	4.50	11		40	3.70	14		40	4.40	14		40	5.0	16

# Stream Sprays



570Z Stream Spray Nozzles

## Toro 570 Series Stream Spray Nozzles

Ideal for slope applications. Use 10° nozzle at the top of slopes and 35° nozzle at the bottom of slopes.

### Features

- Multiple stream pattern selections
- Radius adjusts up to 50%
- Pressure-compensating spray nozzles available to maintain constant 2 Bar (30 PSI) performance at pressures exceeding 2 Bar (30 PSI)
- Low-angle for better wind resistance
- Low-application rate for slopes and tight soils
- Use on shrub adapter, 570Z Series fixed sprays, 570 risers, and riser extenders

### Specifications

- Flow rate: 2,7–10,2 LPM (0.60–2.7 GPM)
- Recommended operating pressure range: 0,7–2,8 Bar (10–40 PSI)
- Maximum operating pressure: 5,2 Bar (75 PSI)

## Specifying Information

XX SSX PC

Angle	Arc	Optional
10—10° 35—35° F—360°	Q—90° H—180°	PC—Pressure Compensation

For Example:  
When specifying a 570 Series Stream Spray Nozzle with a 10° angle, 180° arc and pressure compensation, you would specify:

10-SSH-PC



Pattern	Description	Bar	Pressure kPa	Kg/cm <sup>2</sup>	Flow LPM	Radius meters
90°	10-SSQ	1,5	150	1,53	2,40	4,4
		2,0	200	2,04	2,95	4,8
		2,5	250	2,55	3,31	5,1
		3,0	300	3,06	3,63	5,3
		3,5	350	3,57	3,93	5,5
	10-SSQ-PC	2,8-3,5 4,1-4,8	280-350 410-480	2,86-3,57 4,18-4,90	2,65	4,0 4,6
180°	10-SSH	1,5	150	1,53	3,92	4,4
		2,0	200	2,04	4,47	4,8
		2,5	250	2,55	4,97	5,1
		3,0	300	3,06	5,45	5,3
		3,5	350	3,57	5,92	5,5
	10-SSH-PC	2,8-3,5 4,1-4,8	280-350 410-480	2,86-3,57 4,18-4,90	5,30	4,0 4,6
360°	10-SSF	1,5	150	1,53	7,01	4,4
		2,0	200	2,04	7,84	4,8
		2,5	250	2,55	8,71	5,1
		3,0	300	3,06	9,53	5,3
		3,5	350	3,57	10,30	5,5
	10-SSF-PC	2,8-3,5 4,1-4,8	280-350 410-480	2,86-3,57 4,18-4,90	6,81	4,0 4,6

Pattern	Description	Pressure PSI	Flow GPM	Radius feet
90°	10-SSQ	20	.60	14'
		30	.80	16'
		40	.92	17'
		50	1.03	18'
		10-SSQ-PC	40-50 60-70	.70 .70
	180°	10-SSH	20	1.00
30			1.20	16'
40			1.38	17'
50			1.55	18'
10-SSH-PC			40-50 60-70	1.40 1.40
360°		10-SSF	20	1.80
	30		2.10	16'
	40		2.42	17'
	50		2.70	18'
	10-SSF-PC		40-50 60-70	1.80 2.00

Pattern	Description	Bar	Pressure kPa	Kg/cm <sup>2</sup>	Flow LPM	Radius meters
90°	35-SSQ	1,5	150	1,53	2,40	5,6
		2,0	200	2,04	2,95	6,0
		2,5	250	2,55	3,31	6,3
		3,0	300	3,06	3,63	6,5
		3,5	350	3,57	3,93	6,7
	35-SSQ-PC	2,8-3,5 4,1-4,8	280-350 410-480	2,86-3,57 4,18-4,90	2,65	5,2 5,5
180°	35-SSH	1,5	150	1,53	3,92	5,6
		2,0	200	2,04	4,47	6,0
		2,5	250	2,55	4,97	6,3
		3,0	300	3,06	5,45	6,5
		3,5	350	3,57	5,92	6,7
	35-SSH-PC	2,8-3,5 4,1-4,8	280-350 410-480	2,86-3,57 4,18-4,90	5,30	5,2 5,5
360°	35-SSF	1,5	150	1,53	7,01	5,6
		2,0	200	2,04	7,84	6,0
		2,5	250	2,55	8,71	6,3
		3,0	300	3,06	9,53	6,5
		3,5	350	3,57	10,30	6,7
	35-SSF-PC	2,8-3,5 4,1-4,8	280-350 410-480	2,86-3,57 4,18-4,90	6,81	5,2 5,5

Note: Stream sprays not recommended for turf applications.

Pattern	Description	Pressure PSI	Flow GPM	Radius feet
90°	35-SSQ	20	.60	18'
		30	.80	20'
		40	.92	21'
		50	1.03	22'
		35-SSQ-PC	40-50 60-70	.70 .70
	180°	35-SSH	20	1.00
30			1.20	20'
40			1.38	21'
50			1.55	22'
35-SSH-PC			40-50 60-70	1.40 1.40
360°		35-SSF	20	1.80
	30		2.10	20'
	40		2.42	21'
	50		2.70	22'
	35-SSF-PC		40-50 60-70	1.80 2.00

Note: Stream sprays not recommended for turf applications. See page 99 for precipitation rate calculations.

# Bubbler Nozzles



## Toro 570 Series Pressure – Compensating Flood Bubbler Nozzles



570 Series Flood Bubbler

### Features

- Built-in pressure regulation
- 8 LPM (2 GPM) adjustable flow
- 1, 2 and 4 LPM (0.25, 0.50 and 1.0 GPM) fixed flow
- Ideal for trees and large shrubs
- Retracts into high-pop for greater vandal resistance
- All pressure compensating, maintaining constant 2 Bar (30 PSI) performance at pressures exceeding 2 Bar (30 PSI)
- Use on shrub adapter, 570Z Series, 570 risers and riser extenders

### Specifications

- Flow rate: 1,1–9,0 LPM (0.25–2.0 GPM)
- Recommended operating range: 1,4-3,5 Bar (20-50 PSI)
- Maximum operating pressure: 5,2 Bar (75 PSI)



570 Series Nozzles — Flood Bubblers

Description	2,5 Bar	3 Bar	3,5 Bar	4 Bar
	250 kPa 2,55 Kg/cm <sup>2</sup>	300 kPa 3,06 Kg/cm <sup>2</sup>	350 kPa 3,57 Kg/cm <sup>2</sup>	400 kPa 4,08 Kg/cm <sup>2</sup>
FB-25-PC	0,95	0,95	0,95	0,95
FB-50-PC	1,63	1,77	1,89	1,89
FB-100-PC	3,53	3,66	3,79	3,79
FB-200-ADJ-PC7,05		7,32	7,57	7,57

Description	40 PSI	50 PSI	60 PSI
	GPM	GPM	GPM
FB-25-PC	.25	.25	.25
FB-50-PC	.45	.50	.50
FB-100-PC	.95	1.00	1.00
FB-200-ADJ-PC	1.90	2.00	2.00

Note: For each 570 Series nozzle selection, the performance of the pressure compensation option is shown in shaded area.



570 Series Nozzles — Stream Bubblers

Description	Stream Patterns	Performance Data															
		1 Bar		1,5 Bar		2 Bar		2,5 Bar		3 Bar		3,5 Bar		4 Bar			
		Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM		
SB-90	2/60°	2,7	2,21	3,5	2,76	3,9	3,19	4,3	3,59	4,7	3,94	4,9	4,27	5,4	4,57		
SB-90-PC2	2/60°							0,5	0,82	0,5	0,85	0,5	0,87	0,5	0,90		
SB-180	4/60°	2,1	3,76	2,9	4,63	3,6	5,32	4,0	5,96	4,5	6,55	4,9	7,09	5,1	7,53		
SB-180-PC2	4/60°							0,8	1,81	0,8	1,87	0,8	1,90	0,8	1,92		
SB-360	6/60°	1,3	5,23	1,9	6,42	2,4	7,43	2,6	8,26	2,8	9,01	3,1	9,73	3,7	11,77		
SB-360-PC2	6/60°							0,5	2,82	0,5	2,85	0,5	2,88	0,5	2,91		
SB-2-180	2/180°	2,7	2,21	3,5	2,76	3,9	3,19	4,3	3,59	4,7	3,94	4,9	4,27	5,4	4,57		
SB-2-180-PC2	2/180°							0,5	0,82	0,5	0,85	0,5	0,87	0,5	0,90		
SB-4-180	2/60°x2/60°	2,1	3,76	2,9	4,63	3,6	5,32	4,0	5,96	4,5	6,55	4,9	7,09	5,1	7,53		
SB-4-180-PC2	2/60°x2/60°							0,8	1,81	0,8	1,87	0,8	1,90	0,8	1,92		

Description	Stream Patterns	Performance Data											
		10 PSI		20 PSI		30 PSI		40 PSI		50 PSI		60 PSI	
		Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM
SB-90	2/60°	7'	0.49	11'	0.70	13'	0.86	15'	1.00	16'	1.12	18'	1.23
SB-90-PC2	2/60°					1.5'	0.21	1.5'	0.22	1.5'	0.23	1.5'	0.24
SB-180	4/60°	5'	0.84	9'	1.18	12'	1.43	14'	1.66	16'	1.86	17'	2.02
SB-180-PC2	4/60°					2.5'	0.46	2.5'	0.49	2.5'	0.50	2.5'	0.51
SB-360	6/60°	3'	1.18	6'	1.63	8'	2.00	9'	2.29	10'	2.55	11'	2.82
SB-360-PC2	6/60°					1.5'	0.74	1.5'	0.75	1.5'	0.76	1.5'	0.77
SB-2-180	2/180°	7'	0.49	11'	0.70	13'	0.86	15'	1.00	16'	1.12	18'	1.23
SB-2-180-PC2	2/180°					1.5'	0.21	1.5'	0.22	1.5'	0.23	1.5'	0.24
SB-4-180	2/60°x2/60°	5'	0.84	9'	1.18	12'	1.43	14'	1.66	16'	1.86	17'	2.02
SB-4-180-PC2	2/60°x2/60°					2.5'	0.46	2.5'	0.49	2.5'	0.50	2.5'	0.51

Note: For each 570 Series nozzle selection, the performance of the pressure compensation option is shown in shaded area.

# 500 Series

## Toro 500 Series Flood Bubblers

### Features

- For use with fixed risers
- Adjustable flow (flood bubbler models)
- Serviceable filter screen
- Durable engineering plastic and stainless-steel construction



Flood Bubblers

### Specifications

- Flow rate: 4,9–16,8 LPM (1.08–3.70 GPM)
- Recommended operating pressure: 1,4–3,5 Bar (20–50 PSI)
- Maximum pressure: 5,2 Bar (75 PSI)
- 13mm (1/2") female-threaded inlet



500 Series Flood Bubbler



500 Series Stream Bubbler

## Toro 500 Series Stream Bubblers

### Features

- Multiple stream pattern selection
- Radius adjusts up to 50%
- Pressure-compensating spray nozzles available, maintaining constant 2 Bar (30 PSI) performance at pressures exceeding 2 Bar (30 PSI)
- Use on shrub adapter and pop-up sprinklers, risers and riser extenders

### Specifications

- Flow rate: 2,2–9,1 LPM (0.49–2.02 GPM)
- Recommended operating pressure range: 0,7–2,8 Bar (10–40 PSI)
- Maximum operating pressure: 5,2 Bar (75 PSI)

500 Series Adjustable Stream Bubbler Performance Chart – Metric

Model Number	Stream Patterns	1 Bar		1,5 Bar		2 Bar		2,5 Bar		3 Bar	
		Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
511-30	2/60°	3,6	4,84	4,4	5,99	4,8	6,95	5,1	7,62	5,3	8,25
512-30	4/60°	2,5	6,72	3,1	8,30	3,3	9,59	3,7	10,71	4,2	11,81
514-30	6/60°	2,1	8,38	2,5	10,27	3,0	11,89	3,2	13,30	3,5	14,67
516-30	2/180°	3,6	4,84	4,4	5,99	4,8	6,95	5,1	7,62	5,3	8,25

500 Series Adjustable Stream Bubbler Performance Chart – English

Model Number	Stream Patterns	10 PSI		20 PSI		30 PSI		40 PSI	
		Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM
511-30	2/60°	10'	1.08	14'	1.52	16'	1.87	17'	2.10
512-30	4/60°	7'	1.50	10'	2.11	11'	2.58	13'	2.98
514-30	6/60°	6'	1.89	8'	2.61	10'	3.20	11'	3.70
516-30	2/180°	10'	1.08	14'	1.52	16'	1.87	17'	2.10

500 Series Adjustable Flood Bubbler – Metric

Model Number	Pattern	Bar	kPa	Kg/cm <sup>2</sup>	LPM
514-20	(360°) Flood	1,0	100	1,02	6,32
		1,25	125	1,28	7,14
		1,5	150	1,53	7,84
		1,75	175	1,79	8,38
		2,0	200	2,04	8,93
		2,25	225	2,30	9,28
		2,5	250	3,55	9,65
		2,75	275	3,81	10,20

500 Series Adjustable Flood Bubbler – English

Model Number	Pattern	PSI	GPM
514-20	(360°) Flood	15	1.70
		20	2.00
		25	2.20
		30	2.40
		35	2.50
		40	2.70



# 570 Series "PCDs"



## Toro 570 Series Pressure-Compensating Devices (PCDs)

Using different PCDs, radius and flow can be controlled for optimum design flexibility. These PCDs ensure consistent, efficient performance without water waste in systems subject to varying pressures.

## Features

- Provides true matched precipitation rates with all 570 MPR Plus nozzles
- Eliminates nozzle fogging
- Compensates for pressure variations within a system
- Retrofits any Toro nozzle to pressure-compensating feature
- Maintains constant 2 Bar (30 PSI) performance at pressures exceeding 2-3,8 Bar (30-55 PSI)



Model	Performance shown at 5 Bar (500 kPa/5,1 Kg/cm <sup>2</sup> ) – Metric															
	0,1		0,25		0,5		0,7		1		1,4		2		3	
Nozzle	Rad	LPM	Rad	LPM	Rad	LPM	Rad	LPM	Rad	LPM	Rad	LPM	Rad	LPM	Rad	LPM
5Q	1,5	0,42	1,5	0,72	1,5	0,72	1,5	0,72	1,5	0,72	1,5	0,72	1,5	0,72	1,8	0,72
5T	1,5	0,45	1,5	0,76	1,5	0,79	1,5	0,83	1,5	0,83	1,5	0,83	1,5	0,83	1,5	0,83
5H	0,6	0,42	1,5	0,76	1,5	1,14	1,5	1,17	1,5	1,21	1,5	1,25	1,5	1,25	1,5	1,25
5TT			1,5	1,02	1,5	1,67	1,5	1,78	1,5	1,82	1,5	1,82	1,5	1,82	1,5	1,82
5TQ			1,5	1,10	1,5	1,89	1,5	2,01	1,5	2,16	1,5	2,16	1,5	2,16	1,5	2,16
5F			1,5	0,95	1,5	1,48	1,5	2,35	1,5	2,54	1,5	2,57	1,5	2,57	1,5	2,50
8Q			2,4	0,95	2,4	1,59	2,4	1,59	2,7	1,63	2,7	1,63	2,7	1,63	2,4	1,63
8T			1,8	1,10	2,4	1,32	2,4	1,55	2,4	1,63	2,4	1,74	2,4	1,74	2,4	1,74
8H			1,2	1,06	2,4	1,89	2,7	2,46	2,7	3,22	2,7	3,29	2,7	3,33	2,7	3,29
8TT			0,6	1,06	2,1	1,89	2,4	2,65	2,7	4,24	3,0	4,43	3,0	4,50	3,0	4,54
8TQ			0,3	0,98	1,8	1,89	2,4	2,65	3,0	4,58	3,4	5,34	3,4	5,45	3,4	5,53
8F			0,3	0,95	1,8	1,89	1,8	2,20	2,7	3,79	3,0	5,38	3,0	5,53	3,0	5,53
10Q			2,1	1,17	3,0	1,40	3,4	2,27	3,7	2,38	3,4	2,42	3,4	2,42	3,4	2,42
10T			1,2	0,91	3,0	1,89	3,4	2,50	3,4	3,33	3,4	3,41	3,4	3,44	3,4	3,41
10H			1,2	1,14	2,4	2,16	3,0	2,84	3,0	4,39	3,0	4,54	3,4	4,58	3,4	4,58
10TT			0,6	0,98	1,8	1,78	2,1	2,16	3,0	3,79	3,4	5,87	3,4	6,21	3,4	6,17
10TQ					1,8	2,01	2,1	2,31	3,0	4,13	3,0	6,09	3,0	6,40	3,4	6,47
10F							0,3	2,08	1,8	4,50	3,0	5,72	3,4	7,80	3,0	8,37
12Q			1,5	1,14	3,7	2,01	3,7	2,69	4,0	2,95	3,7	2,91	4,0	2,95	4,0	2,99
12T			0,9	1,02	2,7	1,89	3,4	2,65	3,7	3,79	3,7	3,82	3,7	3,94	3,7	3,94
12H			0,3	1,10	1,8	2,04	2,1	2,38	3,7	3,97	4,0	6,40	4,3	6,78	4,3	6,81
12TT					1,2	1,74	1,5	2,31	3,0	4,88	3,7	5,30	3,7	8,90	3,7	9,12
12TQ					1,5	1,85	1,8	2,16	3,4	4,77	3,7	6,06	4,3	8,33	4,0	8,67
12F							1,2	2,16	2,1	4,43	3,0	6,89	3,4	7,95	3,4	12,19
15Q			0,9	1,06	3,0	1,97	4,3	3,07	4,6	4,92	4,9	5,53	4,9	5,64	4,9	5,72
15T					2,1	1,89	2,4	2,27	4,3	4,16	4,6	6,78	4,6	7,34	4,6	7,53
15H					0,9	2,01	1,5	2,35	3,4	4,73	4,6	6,25	5,2	9,80	5,2	10,26
15TT					0,6	2,04	0,9	2,35	2,7	4,58	4,0	6,78	4,9	8,33	5,5	10,41
15TQ									1,8	4,47	3,0	6,70	4,6	9,46	4,9	10,64
15F									0,9	4,39	2,4	6,59	2,7	9,27	4,0	12,49
9-SST			1,5x0,6	1,10	2,1x3,0	1,78	2,1x3,7	2,12	2,7x5,5	4,54	3,4x6,7	6,66	3,4x6,7	7,42	3,4x6,7	7,53
4-SST			0,3x1,8	0,98	0,6x6,1	1,78	0,9x7,3	2,16	1,2x9,1	3,79	1,2x10,4	5,68	1,2x10,4	5,83	1,2x10,4	5,94
4-CST			0,3x1,8	0,98	0,6x6,1	1,78	0,9x7,3	2,16	1,2x9,1	3,79	1,2x10,4	5,68	1,2x10,4	5,83	1,2x10,4	5,94
4-EST			0,3x2,4	1,10	1,2x4,6	1,89	1,2x5,5	2,50	1,2x5,5	2,95	1,2x5,5	2,84	1,2x5,5	2,80	1,2x5,5	2,88
4S-SST			0,6x1,8	0,95	1,2x5,5	2,23	1,2x5,5	2,50	1,2x5,5	3,18	1,2x6,1	3,18	1,2x6,1	3,18	1,2x6,1	3,29
2-SST	0,6x1,8	0,45	0,6x1,8	0,61	0,6x1,8	0,72	0,6x1,8	0,64	0,9x1,8	0,64	0,9x1,8	0,64	0,9x1,8	0,64	0,9x1,8	0,64
SB-90			0,6	0,95	2,1	1,78	2,7	2,12	5,2	4,62	5,5	5,34	5,5	5,49	5,8	5,53
SB-180			0,3	0,95	0,6	1,89	0,9	2,31	2,7	4,62	4,6	7,08	4,3	8,71	4,6	9,20
SB-360			0,3	0,87	0,3	1,70	0,6	2,04	1,2	4,24	2,7	6,78	3,4	9,46	4,3	13,59
SB-2-180			0,6	0,95	2,4	1,78	2,7	2,12	4,9	4,35	5,2	5,11	5,5	5,22	6,1	5,30
SB-4-180			0,3	0,91	0,6	1,89	0,9	2,31	3,0	4,58	4,3	6,93	5,2	8,59	5,2	9,12
35-SSQ			1,5	0,95	4,0	1,82	5,5	2,65	5,5	4,24	5,5	4,66	5,5	4,81	5,5	4,81
35-SSH			0,3	0,87	2,1	1,70	2,4	2,12	5,5	4,39	5,5	5,30	4,3	7,61	4,3	8,29
35-SSF					0,9	1,74	0,9	2,01	2,7	4,35	4,6	6,81	5,5	7,57	5,5	12,64
10-SSQ			1,5	0,91	4,6	1,78	4,6	2,65	5,2	4,28	5,2	4,50	5,2	4,54	5,2	4,58
10-SSH			0,3	0,87	1,2	1,70	1,2	2,04	4,0	4,32	4,6	5,30	5,5	9,24	4,9	10,94
10-SSF					0,6	1,78	0,6	2,12	2,7	4,47	4,3	6,66	4,6	7,57	4,3	13,36
FB-2				0,95		1,89		2,65		3,79		5,30		7,57		11,36
FB-50				0,95		1,89		2,65		3,79		5,30		7,57		11,36
FB-100				0,95		1,89		2,65		3,79		5,30		7,57		11,36
FB-200-ADJ				0,95		1,89		2,65		3,79		5,30		7,57		11,36

Radius shown in meters.   = Standard PCD. Using PCDs below this range may produce undesirable nozzle performance.   = PCD benefits (decreased fogging and pressure reduction) may not be realized when using PCDs above this range.

# 570 Series "PCDs"

## Specifications

- Recommended operating pressure:  
2-3,8 Bar (30-55 PSI)
- Maximum operating pressure:  
5,2 Bar (75 PSI)



Model	Performance shown at 75 PSI – English															
	0.1		0.25		0.5		0.7		1		1.4		2		3	
Nozzle	Rad	GPM	Rad	GPM	Rad	GPM	Rad	GPM	Rad	GPM	Rad	GPM	Rad	GPM	Rad	GPM
5Q	5	0.11	5	0.19	5	0.19	5	0.19	5	0.19	5	0.19	5	0.19	6	0.19
5T	5	0.12	5	0.20	5	0.21	5	0.22	5	0.22	5	0.22	5	0.22	5	0.22
5H	2	0.11	5	0.20	5	0.30	5	0.31	5	0.32	5	0.33	5	0.33	5	0.33
5TT			5	0.27	5	0.44	5	0.47	5	0.48	5	0.48	5	0.48	5	0.48
5TQ			5	0.29	5	0.50	5	0.53	5	0.57	5	0.57	5	0.57	5	0.57
5F			5	0.25	5	0.39	5	0.62	5	0.67	5	0.68	5	0.68	5	0.66
8Q			8	0.25	8	0.42	8	0.42	9	0.43	9	0.43	9	0.43	8	0.43
8T			6	0.29	8	0.35	8	0.41	8	0.43	8	0.46	8	0.46	8	0.46
8H			4	0.28	8	0.50	9	0.65	9	0.85	9	0.87	9	0.88	9	0.87
8TT			2	0.28	7	0.50	8	0.70	9	1.12	10	1.17	10	1.19	10	1.20
8TQ			1	0.26	6	0.50	8	0.70	10	1.21	11	1.41	11	1.44	11	1.46
8F			1	0.25	6	0.50	6	0.58	9	1.00	10	1.42	10	1.46	10	1.46
10Q			7	0.31	10	0.37	11	0.60	12	0.63	11	0.64	11	0.64	11	0.64
10T			4	0.24	10	0.50	11	0.66	11	0.88	11	0.90	11	0.91	11	0.90
10H			4	0.30	8	0.57	10	0.75	10	1.16	10	1.20	11	1.21	11	1.21
10TT			2	0.26	6	0.47	7	0.57	10	1.00	11	1.55	11	1.64	11	1.63
10TQ					6	0.53	7	0.61	10	1.09	10	1.61	10	1.69	11	1.71
10F							1	0.55	6	1.19	10	1.51	11	2.06	10	2.21
12Q			5	0.30	12	0.53	12	0.71	13	0.78	12	0.77	13	0.78	13	0.79
12T			3	0.27	9	0.50	11	0.70	12	1.00	12	1.01	12	1.04	12	1.04
12H			1	0.29	6	0.54	7	0.63	12	1.05	13	1.69	14	1.79	14	1.80
12TT					4	0.46	5	0.61	10	1.29	12	1.40	12	2.35	12	2.41
12TQ					5	0.49	6	0.57	11	1.26	12	1.60	14	2.20	13	2.29
12F							4	0.57	7	1.17	10	1.82	11	2.10	11	3.22
15Q			3	0.28	10	0.52	14	0.81	15	1.30	16	1.46	16	1.49	16	1.51
15T					7	0.50	8	0.60	14	1.10	15	1.79	15	1.94	15	1.99
15H					3	0.53	5	0.62	11	1.25	15	1.65	17	2.59	17	2.71
15TT					2	0.54	3	0.62	9	1.21	13	1.79	16	2.20	18	2.75
15TQ									6	1.18	10	1.77	15	2.50	16	2.81
15F									3	1.16	8	1.74	9	2.45	13	3.30
9-SST			5x2	0.29	7x10	0.47	7x12	0.56	9x18	1.20	11x22	1.76	11x22	1.76	11x22	1.99
4-SST			1x6	0.26	2x20	0.47	3x24	0.57	4x30	1.00	4x34	1.50	4x34	1.54	4x34	1.57
4-CST			1x6	0.26	2x20	0.47	3x24	0.57	4x30	1.00	4x34	1.50	4x34	1.54	4x34	1.57
4-EST			1x8	0.29	4x15	0.50	4x18	0.66	4x18	0.78	4x18	0.75	4x18	0.74	4x18	0.76
4S-SST			2x6	0.25	4x18	0.59	4x18	0.66	4x18	0.84	4x20	0.84	4x20	0.84	4x20	0.87
2-SST	2x6	0.12	2x6	0.16	2x6	0.19	2x6	0.17	3x6	0.17	3x6	0.17	3x6	0.17	3x6	0.17
SB-90			2	0.25	7	0.47	9	0.56	17	1.22	18	1.41	18	1.45	19	1.46
SB-180			1	0.25	2	0.50	3	0.61	9	1.22	15	1.87	14	2.30	15	2.43
SB-360			1	0.23	1	0.45	2	0.54	4	1.12	9	1.79	11	2.50	14	3.59
SB-2-180			2	0.25	8	0.47	9	0.56	16	1.15	17	1.35	18	1.38	20	1.40
SB-4-180			1	0.24	2	0.50	3	0.61	10	1.21	14	1.83	17	2.27	17	2.41
35-SSQ			5	0.25	13	0.48	18	0.70	18	1.12	18	1.23	18	1.27	18	1.27
35-SSH			1	0.23	7	0.45	8	0.56	18	1.16	18	1.40	14	2.01	14	2.19
35-SSF					3	0.46	3	0.53	9	1.15	15	1.80	18	2.00	18	3.34
10-SSQ			5	0.24	15	0.47	15	0.70	17	1.13	17	1.19	17	1.20	17	1.21
10-SSH			1	0.23	4	0.45	4	0.54	13	1.14	15	1.40	18	2.44	16	2.89
10-SSF					2	0.47	2	0.56	9	1.18	14	1.76	15	2.00	14	3.53
FB-25				0.25		0.50		0.70		1.00		1.40		2.00		3.00
FB-50				0.25		0.50		0.70		1.00		1.40		2.00		3.00
FB-100				0.25		0.50		0.70		1.00		1.40		2.00		3.00
FB-200-ADJ				0.25		0.50		0.70		1.00		1.40		2.00		3.00

Radius shown in feet.      = Standard PCD. Using PCDs below this range may produce undesirable nozzle performance.  
     = PCD benefits (decreased fogging and pressure reduction) may not be realized when using PCDs above this range.



# 570 Adapters / Accessories



## Toro 570 Shrub Adapters

For use with any 570 MPR Plus spray, stream bubbler or Maxijet® nozzle to effectively irrigate small shrubs and planters in non-traffic areas. Accepts all Toro nozzles and filter screens, and installs onto a 13mm (1/2") NPT riser.



570Z PRX Shrub Adapter

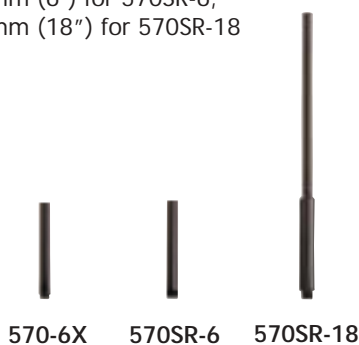
570 Shrub Adapter

## Toro Risers and Extenders

Modify existing systems to irrigate small shrubs and planters in non-traffic areas. For use with any 570 MPR Plus spray, stream bubbler or Maxijet® nozzle.

### Features

- Male-inlet threads install onto any 570Z pop-up spray sprinkler or 570 shrub adapter to provide a 150mm (6") extension (570-6X)
- Accepts all Toro nozzles and filter screens
- Durable engineering plastic construction
- Stabilizer available for 2P, 3P, 4P, and 6P models
- 570 female-outlet threads accept all Toro nozzles
- Maximum pressure: 5,2 Bar (75 PSI)
- Height: 150mm (6") for 570SR-6, 460mm (18") for 570SR-18



570-6X

570SR-6

570SR-18

## 850-67 Stabilizer

- Fits all 570Z 2P, 3P, 4P and 6P bodies

## Effluent Water Indicators

Use with any 570Z Series sprinkler or 570 shrub adapter to identify the effluent water system.

### 89-5818

- Lavender snap-on cover for use on 570S Series shrub adapters



89-5818

### 102-0563

- Lavender molded cover for use on 570Z Series pop-up models



102-0563

### 570S-E

- Lavender molded 570Z Series shrub adapter for effluent applications
- Installs onto a 13mm (1/2") NPT riser



570S-E

## Installation/Adjustment Tools

### 89-6395

- Riser pull-up tool for 570Z Series models



89-6395

### 102-1777

- X-tool for 570Z XF and PRX Series models (redirects spray of water until X-Flow® device is activated.)



102-1777

### 89-7350

- Adjustment tool for 570Z Series models



89-7350

# Super Funny Pipe

This unique piping acts like an extension cord, allowing you to put sprinklers exactly where you want them. Even deep-seated high-pops are easy to install in difficult, hard-to-trench locations.

## Toro Super Funny Pipe and Fittings

### Features

- Provides easy installation for problem areas
- Cushions sprinklers from external impact
- Connects to sprinklers and Toro fittings
- Flexible, thick-walled polyethylene pipe
- 30,5m (100') coils available in stretch wrap

### Specifications

- Wall thickness: 2,5mm (.10") ± .01
- Inside diameter: 12,4mm (.49") ± .01
- Outside diameter: approximately 18mm (.70")

### Super Funny Pipe

- 850-23 6m (20') length working pressure: 8,2 Bar (120 PSI)
- 850-24 15,2m (50') coil working pressure: 8,2 Bar (120 PSI) (36Kg)
- 850-25 30,5m (100') coil working pressure: 8,2 Bar (120 PSI) (68Kg) (more flexible)

### Fittings

To be used only with Toro Super Funny Pipe

- 850-20 Coupling
- 850-31 13mm (1/2") Male Elbow
- 850-32 20mm (3/4") Male Elbow
- 850-33 20-13mm (3/4"-1/2") Female Adapter
- 850-34 13mm (1/2") Female Elbow
- 850-35 13mm (1/2") Male Adapter
- 850-36 20mm (3/4") Male Insert 3/4" x 3/8"
- 850-37 Tee Barbed inserts require no clamps.



Super Funny Pipe Fittings

See page 44 for more details on the preassembled flex assemblies.



Super Funny Pipe

Super Funny Pipe Friction Loss – Metric				
LPM Flow				
5	10	15	20	25
0,30	1,02	2,00	3,77	5,58

Note: This chart indicates the amount of pressure loss (in kPa) per meter of Super Funny Pipe installed at stated flow rates (LPM).

Super Funny Pipe Friction Loss – English						
GPM Flow						
1	2	3	4	5	6	7
0.01	0.02	0.06	0.09	0.15	0.21	0.27

Note: This chart indicates the amount of pressure loss (PSI) per foot of Super Funny Pipe installed at stated flow rates (GPM).

Super Funny Pipe Fittings Friction Loss Chart – Metric						
LPM Flow						
Model No.	Description	5	10	15	20	25
850-31	13mm Male Elbow	1,87	6,43	13,8	28,7	46,9
850-32	20mm Male Elbow	2,23	7,42	17,8	37,1	61,4
850-34	13mm Female Elbow	1,87	6,43	13,8	28,7	46,9
850-35	13mm Male Adapter	0,89	3,08	6,89	16,1	28,2
850-36	20mm Male Adapter	1,35	4,13	9,55	21,8	37,7

Note: This chart indicates the amount of pressure loss (in kPa) per meter of Super Funny Pipe at stated flow rates (LPM).

Super Funny Pipe Fittings Friction Loss Chart – English								
GPM Flow								
Model No.	Description	1	2	3	4	5	6	7
850-31	1/2" Male Elbow	0.05	0.15	0.36	0.62	1.13	1.62	2.37
850-32	3/4" Male Elbow	0.06	0.18	0.41	0.80	1.42	2.20	3.05
850-34	1/2" Female Elbow	0.05	0.15	0.36	0.62	1.13	1.62	2.37
850-35	1/2" Male Adapter	0.03	0.06	0.18	0.31	0.60	1.00	1.41
850-36	3/4" Male Adapter	0.04	0.10	0.23	0.43	0.80	1.37	1.86

Note: This chart indicates the amount of pressure loss (PSI) per foot of Super Funny Pipe at stated flow rates (GPM).



One of the most useful and time-saving sprinkler installation aids is Toro Super Funny Pipe. Whether you are installing a new system or replacing an old sprinkler, Super Funny Pipe can make your job faster and easier.



Super Funny Pipe is a high-strength poly tubing that solves tough sprinkler installation and replacement problems. Simply put, it acts as a flexible extension cord between the water line and the sprinkler, allowing you to position sprinklers easily where you need them—even in hard-to-reach areas.



# Small Turf Sprinklers



# Small Turf Sprinklers

## Technology Applied for Dependable Performance

Toro gear-driven rotors have set numerous industry standards, and are installed on premium turf properties across the world.

Whether you require a short-range “mini” rotor, Toro’s patented multi-stream rotor, or a medium-range sprinkler with anti-vandalism or adjustable height of spray options, Toro has you covered.



Super Funny Pipe Flex Assemblies  
20 and 30cm (8" and 12")



### Mini 8 Series Sprinklers

- Radius: 4,6-9,2m (15'-30')
- Flow Range: 3-11,3 LPM (.8-3.0 GPM)
- Operating pressure: 2,0- 4,1 Bar (30-60 PSI)



### 300 Series Multi-stream Sprinklers

- Radius: 4,6-9,2m (15'-30')
- Flow Range: 2-28 LPM (.57-7.51 GPM)
- Operating pressure: 2,4-3,5 Bar (35-50 PSI)



### Super 700 Series Sprinklers

- Radius: 6-16m (20'-52')
- Flow Range: 4,2-37 LPM (1.11-9.75 GPM)
- Operating pressure: 1,7-5,2 Bar (25-75 PSI)



## Residential

# Small Turf Sprinklers



## Small Turf Sprinklers

		Mini 8	300	S700	V-1550	TR50	TR50XT	
Ideal Application	Turf	X	X	X	X	X	X	
	Shrubs/Ground Cover		X	X		X	X	
	Slopes		X	X	X		X	
	Low Pressure	X		X	X	X		
	Rubber Cover for Commercial Fields			X	X	X	X	
	High Wind			X	X		X	
	Features	Full Circle	X	X	X	X	X	X
Part Circle-Adjustable		X		X	X	X	X	
Part Circle-Fixed			X					
Radius		(m) (ft)	4,6-9,2 15-30	4,6-9,2 15-30	6-16 20-52	5,8-16,8 19-55	6,5-15,9 21-52	6,5-15,9 21-52
Inlet Size		(mm) (in)	13 ½	20 ¾	20 ¾	20 ¾	20 ¾	20 ¾
Pressure Rating		(bar) (psi)	2,0-4,1 30-60	2,4-3,5 35-50	1,7-5,2 25-75	1,7-5,2 25-75	1,7-4,8 25-70	1,7-7,0 25-100
Stainless Steel Riser					X			
Check Valve				X*	X	X	X	X
Effluent Water Option				X	X	X	X	X
Shrub - 13-20mm (½-¾ inlet)				X	X	X	X	X
High-pop				X	X	X	X	X

\* Shrub models only.



**V-1550 Series Sprinklers**

- Radius: 5,8-16,8m (19'-55')
- Flow Range: 4-35 LPM(1.0-9.0 GPM)
- Operating pressure: 1,7-5,2 Bar (25-75 PSI)



**TR50 Series Sprinklers**

- Radius: 6,5-15,9m (21'-52')
- Flow Range: 3,1-47,5 LPM (0.8-12.5 GPM)
- Operating pressure: 1,7- 4,8 Bar (25-70 PSI)



**TR50XT Series Sprinklers**

- Radius: 6,5-15,9m (21'-52')
- Flow Range: 3,1-47,5 LPM (0.8-12.5 GPM)
- Operating pressure: 1,7- 7,0 Bar (25-100 PSI)



**Commercial**

# Mini 8 Series

The Mini 8, a 13mm (1/2") gear-drive rotor, serves as the perfect in-between fit for your applications where the landscape is too big for sprays, but too small for a full-size rotor. When using a 13mm (1/2") rotor, you can water efficiently, thereby saving money (and water). The cost to irrigate is less and compared to fixed-sprays, it requires fewer stations to cover an area.

Add Mini 8 to your fixed spray and rotor offering and have all the tools you need to irrigate residential and commercial landscapes most efficiently and effectively.



Nozzle Tree



Mini 8 Series Rotor

## Mini 8 Series Rotor

### Features

- Visible arc indication from the top of sprinkler, for infinite adjustments from 45° to 360°
- Five interchangeable nozzles – (comes pre-installed with a 1.5 nozzle)
- Part- and full-circle arcs in one sprinkler
- Stainless steel radius adjustment screw allows up to 25% reduction
- Pressure activated seal and robust trip mechanism for enhanced reliability
- Ratcheting riser for easy arc adjustment

### Specifications

#### Nozzle Performance

- Flow rate: 3–11,3 LPM (0.8–3.0 GPM)
- Trajectory: 25°

#### Lawn Pop-up

- Flow rate: 3–11,3 LPM (0.8–3.0 GPM)
- Recommended operating pressure range: 2,4–3,5 Bar (30–50 PSI)
- Maximum operating pressure: 4,1 Bar (60 PSI)
- 13mm (1/2") threaded NPT/BSP inlet
- Pop-up to nozzle: 95mm (3 3/4")
- Dimensions:
  - Body diameter: 44mm (1 3/4")
  - Cap diameter: 57mm (2 1/4")
  - Height: 150mm (6")

Visible arc indication from the top of sprinkler



Dry pull-up slot

Radius adjustment screw

Infinite arc adjustment from 45° to 360°

Lawn Pop-up Apex @ 2,8 Bar (40 PSI)

Nozzle	Maximum Height of Spray	
0.75	0,95m	(3' 11")
1.0	1,55m	(5' 1")
1.5	2,04m	(6' 7")
2.0	2,32m	(7' 6")
3.0	2,32m	(7' 6")



## Specifying Information

MINI8 4P XX

Description	Body	Nozzle
MINI8 - Mini 8 Rotor	4P - Lawn Pop-up	75 - .75 20 - 2.0 10 - 1.0 30 - 3.0 15 - 1.5

For Example:  
When specifying a Mini 8 Series sprinkler with a 3.0 nozzle, you would specify:

MINI8-4P-30

## Mini 8 Series



Mini 8 Performance Data—Metric			
Nozzle	Bar	LPM	Radius
.75	2,0	3,0	6,1
	2,5	3,3	6,3
	3,0	3,8	6,5
	3,5	4,6	6,7
1.0	2,0	4,2	7,9
	2,5	4,6	8,1
	3,0	5,2	8,3
	3,5	5,7	8,6
1.5*	2,0	4,5	8,8
	2,5	5,0	9,0
	3,0	5,6	9,3
	3,5	6,1	9,5
2.0	2,0	5,3	9,1
	2,5	6,0	9,3
	3,0	6,8	9,4
	3,5	7,7	9,4
3.0	2,0	8,7	10,3
	2,5	9,4	10,6
	3,0	10,4	10,7
	3,5	11,5	10,7

\*Pre-installed nozzle. Radius shown in meters.

Mini 8 Performance Data—U.S.			
Nozzle	psi	GPM	Radius
.75	30	0.8	20
	40	0.9	21
	50	1.2	22
	30	1.1	26
1.0	40	1.3	27
	50	1.5	28
	30	1.2	29
1.5*	40	1.4	30
	50	1.6	31
	30	1.4	30
2.0	40	1.7	31
	50	2.0	31
	30	2.3	34
3.0	40	2.6	35
	50	3.0	35

\*Pre-installed nozzle. Radius shown in feet.

## 300 Series Multi-Stream

The 300 Series is well known for its visually appealing, multi-stream distribution of water. Ideal for medium-to-large lawn and shrub areas.

### Toro 300 Series Stream Rotor® Sprinklers

4,6–9,2m (15'–30') Radius

#### Features

- Multiple rotating stream pattern allows water to soak into tight soils and slopes without runoff
- Matched precipitation rate nozzles and arc discs
- Choice of six nozzles and nine interchangeable arc discs
- Planetary, water-lubricated, gear-drive design for longer life
- Large basket filter screen
- Durable engineering plastic and stainless-steel construction
- Check valve prevents low-head drainage and keeps laterals charged with water (optional on shrub model only)

#### Lawn and 300mm (12") Pop-up

- Pop-up design
- Stainless-steel retraction spring
- Wiper seal
- Small surface diameter
- At-grade installation
- 300mm (12") body has side inlet

Effluent water indicators available



Shrub



Lawn Pop-up



High-pop



Matched precipitation rate refers to uniform delivery of water across each square foot of an irrigated area. The result is high-precision application, and consistently green, healthy landscape.

# 300 Series Multi-Stream

## Specifications

### Nozzle Performance

- Flow rate: 2–28,5 LPM (0.57–7.51 GPM)
- Fixed-radius models: 5–9,2m (16'–30')
- Omni adjustable-radius models: 4,6–9,2m (15'–30')
- Trajectory: 27°

### Lawn Pop-up

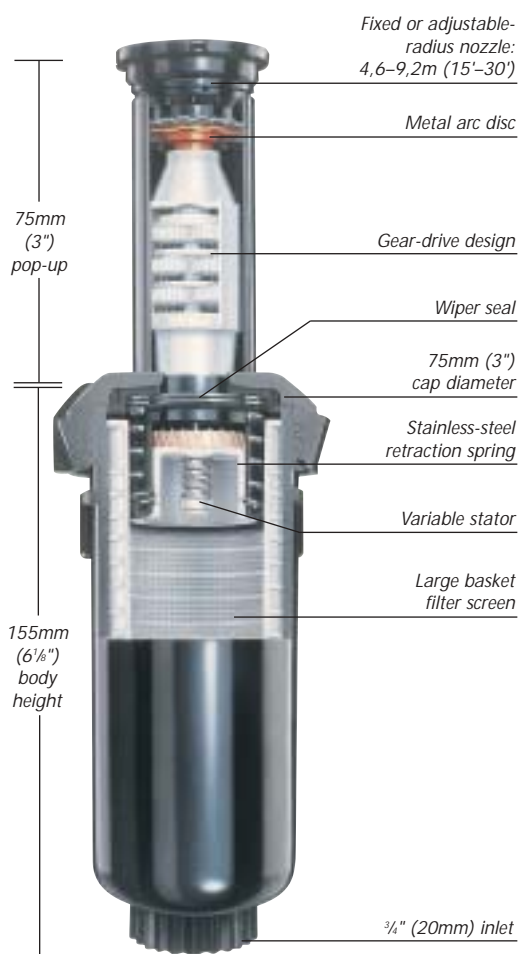
- Flow rate: 2,5–28 LPM (0.57–7.51 GPM)
- Recommended operating pressure: 2,4–3,5 Bar (35–50 PSI)
- Maximum operating pressure: 5,2 Bar (75 PSI)
- Pop-up to nozzle: 70mm (2¾")
- 20mm (¾") female-threaded inlet
- Dimensions:
  - Body diameter: 59mm (2⅜")
  - Cap diameter: 75mm (3")
  - Height: 157mm (6⅛")
- Locking cap available (Part No. 35-1344)

### Shrub

- Flow rate: 2,1–28,9 LPM (0.57–6.36 GPM)
- Recommended operating pressure: 2,4–3,5 Bar (35–50 PSI)
- Maximum operating pressure: 5,2 Bar (75 PSI)
- 13mm (½") and 20mm (¾") female-threaded inlets
- Dimensions:
  - Base diameter: 50mm (2")
  - Height: 150mm (6")
- Check valve maintains up to 2,4m (8') elevation change

### High-pop

- Flow rate: 2,5–28 LPM (0.57–7.51 GPM)
- Recommended operating pressure: 2,4–3,5 Bar (35–50 PSI)
- Maximum operating pressure: 5,2 Bar (75 PSI)
- Pop-up to nozzle: 290mm (11¾")
- 20mm (¾") female-threaded bottom and side inlets
- Side inlet: 180mm (7") from top of sprinkler to center of side inlet
- Dimensions:
  - Body diameter: 59mm (2⅜")
  - Cap diameter: 75mm (3")
  - Height: 405mm (16")
- Standard locking cap



## Specifying Information

<span style="border: 1px solid black; padding: 2px;">3XX</span> <span style="border: 1px solid black; padding: 2px;">XX</span> <span style="border: 1px solid black; padding: 2px;">XX</span> <span style="border: 1px solid black; padding: 2px;">COM</span>			
Arc	Body	Nozzle	Optional
00—without Arc Disc 04—90° 05—112° 06—135° 07—157.5° 08—180° 09—202.5° 10—225° 12—270° 16—360°	00—Lawn Pop-up 10—Shrub 12—High-pop	01—Small Radius, 12 Ports 02—Medium Radius, 12 Ports 03—Large Radius, 12 Ports 15—Adjustable Shrub and Lawn Pop-up 21—Small Radius, 12 Ports, High-pop 22—Medium Radius, 12 Ports, High-pop 23—Large Radius, 12 Ports, High-pop 25—Adjustable High-pop 63—Large Radius, 6 Ports, Low Flow 93—Large Radius, 9 Ports, Low Flow	COM—Check-O-Matic*  E—Effluent
For Example: When specifying a 300 Series Shrub Sprinkler with a 90° arc and an adjustable nozzle, you would specify: <span style="background-color: #cccccc; padding: 2px 10px;">304-10-15</span>			

\*Available with shrub models only.



# 300 Series Multi-Stream



**300 Series Multi-Stream**

300 Fixed-Radius Nozzle Performance Chart – Metric													
Nozzle	Bar	Pressure kPa	Radius meters	Flow (at Designated Arcs) Liters Per Minute									
01	2,5	250	2,55	4,9	8,82	6,61	5,51	4,96	4,41	3,86	3,31	2,76	2,20
	3,5	350	3,57	5,5	11,0	8,26	6,88	6,20	5,51	4,82	4,13	3,44	2,75
02	2,5	250	2,55	6,5	11,1	8,30	6,92	6,23	5,53	4,84	4,15	3,46	2,77
	3,5	350	3,57	7,4	13,0	9,76	8,13	7,32	6,50	5,69	4,88	4,07	3,25
03	2,5	250	2,55	8,6	20,9	15,7	13,1	11,7	10,4	9,13	7,83	6,52	5,22
	3,5	350	3,57	9,2	24,6	18,5	15,4	13,8	12,3	10,8	9,23	7,69	6,15
63§	2,5	250	2,55	8,6	10,5	7,84	6,54	5,88	5,23	4,58	3,92	3,27	2,61
	3,5	350	3,57	9,2	12,3	9,24	7,70	6,93	6,16	5,39	4,62	3,85	3,08
93§	2,5	250	2,55	8,6	15,7	11,7	9,78	8,80	7,82	6,85	5,67	4,89	3,91
	3,5	350	3,57	9,2	18,5	13,9	11,5	10,4	9,23	8,08	6,93	5,77	4,62

300 Fixed-Radius Nozzle Performance Chart – English													
Nozzle	PSI	Pressure PSI	Radius feet	Flow (at Designated Arcs) Gallons Per Minute									
01	35	50	16'	2.28	1.71	1.43	1.28	1.14	1.00	0.86	0.71	0.57	
			18'	2.88	2.16	1.80	1.62	1.44	1.26	1.08	0.90	0.72	
02	35	50	21'	2.88	2.16	1.80	1.62	1.44	1.26	1.08	0.90	0.72	
			24'	3.41	2.56	2.13	1.92	1.71	1.49	1.28	1.06	0.85	
03	35	50	28'	5.43	4.07	3.39	3.05	2.72	2.38	2.04	1.69	1.36	
			30'	6.45	4.84	4.03	3.63	3.23	2.82	2.42	2.01	1.61	
63§	35	50	28'	2.72	2.04	1.70	1.53	1.36	1.19	1.02	0.85	0.68	
			30'	3.23	2.42	2.02	1.82	1.62	1.41	1.21	1.00	0.81	
93§	35	50	28'	4.07	3.05	2.54	2.29	2.04	1.78	1.53	1.27	1.02	
			30'	4.84	3.63	3.03	2.72	2.42	2.12	1.82	1.51	1.21	

All performance specifications are based on the stated working pressure available at the base of the sprinkler head. §Low Flow.

Omni™ Adjustable Radius Nozzle Performance Chart Standard – Metric													
Bar	Pressure kPa	Radius meters	Flow (at Designated Arcs) Liters Per Minute										
2,5	250	2,55	4,5	12,9	9,7	8,1	7,3	6,5	5,7	4,9	4,0	3,2	
			5	14,1	10,6	8,8	8,0	7,1	6,2	5,3	4,4	3,5	
			6	16,6	12,5	10,4	9,3	8,3	7,3	6,2	5,2	4,2	
			7	19,1	14,3	11,9	10,7	9,6	8,4	7,2	5,9	4,8	
			8	22,2	16,7	13,9	12,5	11,1	9,7	8,3	6,9	5,6	
3,5	350	3,57	6	19,2	14,4	12,0	10,8	9,6	8,4	7,2	6,0	4,8	
			7	22,2	16,7	13,9	12,5	11,1	9,7	8,3	6,9	5,6	
			8	25,2	18,9	15,7	14,2	12,6	11,0	9,4	7,8	6,3	
			9	28,2	21,1	17,6	15,8	14,1	12,3	10,6	8,8	7,0	
			10	31,2	23,4	19,5	17,5	15,6	13,6	11,7	9,7	7,8	

Omni™ Adjustable Radius Nozzle Performance Chart Standard – English													
PSI	Pressure PSI	Radius feet	Flow (at Designated Arcs) Gallons Per Minute										
35	50	15'	3.41	2.55	2.13	1.91	1.70	1.49	1.28	1.06	0.85		
35	50	18'	4.00	3.00	2.50	2.25	2.00	1.75	1.50	1.24	1.00		
35	50	21'	4.58	3.44	2.86	2.58	2.29	2.01	1.72	1.42	1.15		
35	50	24'	5.17	3.88	3.23	2.91	2.58	2.26	1.94	1.60	1.29		
35	50	26'	5.76	4.32	3.60	3.24	2.88	2.52	2.16	1.79	1.44		
50	75	18'	4.65	3.49	2.91	2.62	2.33	2.04	1.74	1.44	1.16		
50	75	21'	5.36	4.02	3.35	3.02	2.68	2.35	2.01	1.66	1.34		
50	75	24'	6.08	4.56	3.80	3.42	3.04	2.66	2.28	1.88	1.52		
50	75	27'	6.79	5.09	4.24	3.82	3.40	2.97	2.55	2.10	1.70		
50	75	30'	7.51	5.63	4.69	4.23	3.75	3.29	2.82	2.33	1.88		

All performance specifications are based on the stated working pressure available at the base of the sprinkler head.

300 Series Shrub – Metric (360° Arc Disc) (Model No. 300-10-15COM)			
Nozzle	Bar	LPM	Radius
01	3,5	7,9	4,3
01	5,0	10,8	4,8
02	3,5	9,5	7,0
02	5,0	13,5	7,6
03	3,5	17,4	8,2
03	5,0	23,0	8,8
63	3,5	10,2	8,6
63	5,0	14,0	9,1
93	3,5	14,0	8,9
93	5,0	19,4	9,4
Omni (Min)	3,5	10,2	4,9
Omni (Min)	5,0	14,5	5,4
Omni (Max)	3,5	21,1	9,2
Omni (Max)	5,0	23,8	10

300 Series Shrub – English (360° Arc Disc) (Model No. 300-10-15COM)			
Nozzle	PSI	GPM	Radius
01	50	2.07	14
01	75	2.95	16
02	50	2.48	23
02	75	3.69	25
03	50	4.55	27
03	75	6.24	29
63	50	2.66	28
63	75	3.82	30
93	50	3.64	29
93	75	5.29	31
Omni (Min)	50	2.67	16
Omni (Min)	75	3.95	18
Omni (Max)	50	5.55	30
Omni (Max)	75	6.36	33



Omni Nozzle – Adjusts from 4,6 to 9m

Apex at 3,5 Bar – Metric	
Nozzle	Maximum Ht. of Spray
01	1,47m
02	1,55m
03	1,8m
63	2,1m
93	1,9m

Apex at 50 PSI – English	
Nozzle	Maximum Ht. of Spray
01	4'10"
02	5'1"
03	5'11"
63	7'
93	6'3"

# Super 700 Series

The Super 700 is a robust sprinkler ideal for high traffic areas. Options include 21 nozzle choices and stainless-steel risers.

## Toro Super 700 Series Sprinklers

6,4-16m (21'-52") Radius

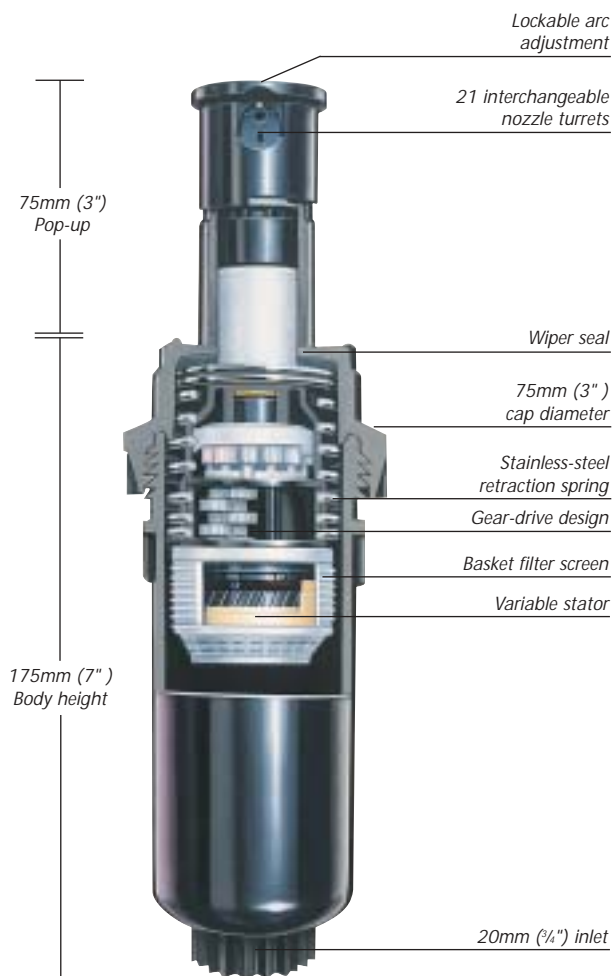
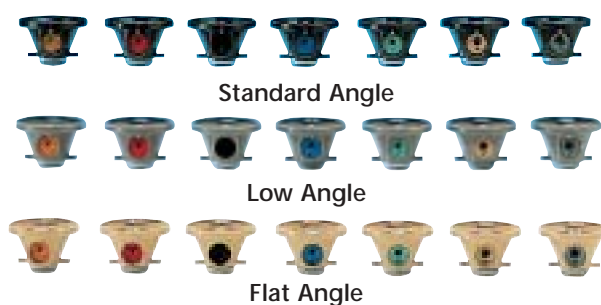
### Features

- Full-circle and adjustable part-circle (40°-330°) models
- 21 interchangeable nozzle turrets (standard, low, or flat angle)
- Adjustment screw allows up to 25% radius reduction
- Balanced precipitation rate nozzles
- Lockable arc adjustment (vandal-resistant)
- Check valve available to prevent low-head drainage, keeping laterals charged with water (check valve standard on commercial and high-pop models)
- Stainless-steel riser sleeve (S700C)
- Locking cap (S700C, high-pop)
- Gear-drive design for longer life
- Basket filter screen to prevent clogging
- Stainless-steel retraction spring
- Wiper seal
- Durable engineering plastic and stainless-steel construction
- Small surface diameter
- At-grade installation
- Optional Rubber Cover Kit (Model 700-10)

### Specifications

#### Nozzle Performance

- Flow rate: 5,0-44,3 LPM (0.11-9.75 GPM)
- Optimum nozzle performance range: 1,7-3,5 Bar (25-50 PSI)
- Operating pressure range: 1,7-5,2 Bar (25-75 PSI)
- Maximum operating pressure: 5,2 Bar (75 PSI)
- Trajectory:
  - Standard angle: 25°
  - Low angle: 15°
  - Flat angle: 7°



Super 700 Lawn Pop-Up



# Super 700 Series



Nozzle Series	Maximum Height of Spray (m)		
	25°	15°	7°
1.5	2,3m	1,5m	0,8m
2.0	2,4m	1,6m	0,6m
3.0	2,6m	1,6m	0,6m
4.5	2,7m	1,7m	0,8m
6.0	3,0m	1,7m	0,7m
7.5	3,2m	1,7m	0,8m
9.0	3,4m	1,7m	0,7m

Nozzle Series	Maximum Height of Spray (ft)		
	25°	15°	7°
1.5	7'6"	4'10"	2'6"
2.0	8'0"	5'4"	2'1"
3.0	8'6"	5'2"	2'
4.5	9'0"	5'7"	2'1"
6.0	10'0"	5'5"	2,1'
7.5	10'6"	5'6"	2'7"
9.0	11'0"	5'5"	2'3"

Nozzle	BAR	LPM	25° Radius	15° Radius	7° Radius
1.5	3,0	4,9	10,9	9,4	6,8
2.0	3,0	7,2	11,2	10,0	7,1
3.0	3,5	10,6	12,1	10,8	7,7
4.5	3,5	14,8	13,0	11,8	8,3
6.0	4,0	20,8	14,1	12,2	9,5
6.0	5,0	22,7	14,6	12,5	9,7
7.5	4,0	26,5	14,4	12,5	9,8
7.5	5,0	28,0	14,9	12,8	10,0
9.0	4,0	28,8	14,4	12,7	10,0
9.0	5,0	33,7	14,9	13,4	10,6

\*Radius in meters

Nozzle	PSI	GPM	25° Radius	15° Radius	7° Radius
1.5	45	1.36	37	32	23
2.0	45	1.92	38	34	24
3.0	50	2.76	39	35	25
4.5	50	3.84	42	38	27
6.0	55	5.33	46	40	31
6.0	75	6.14	48	41	32
7.5	55	6.86	47	41	32
7.5	75	7.50	49	42	33
9.0	60	7.83	49	43	34
9.0	75	9.10	48	44	35

\*Radius in feet

## Lawn Pop-Up and Commercial

- Flow rate: 4,2-37 LPM (1.11-9.75 GPM)
- 20mm (¾") NPT female-threaded inlet
- Dimensions:
  - Body diameter: 60mm (2⅜")
  - Cap diameter: 75mm (3")
  - Height: 178mm (7")
- Check-O-Matic maintains up to 3m (10') elevation change (S700C)
- Stainless steel riser and locking cap standard (S700C)
- Pop-up to nozzle: 75mm (3")

## Shrub

- Flow rate: 4,2-37 LPM (1.11-9.75 GPM)
- 13mm (½") and 20mm (¾") female-threaded inlets
- Dimensions:
  - Body diameter: 45mm (1¾")
  - Cap diameter: 75mm (3")
  - Height: 130mm (5⅛")
- Check valve maintains up to 2,4m (8') elevation change

## Hi-Pop

- Flow rate: 4,2-37 LPM (1.11-9.75 GPM)
- 20mm (¾") female-threaded bottom and side inlets
- Side inlet: 178mm (7") from top of cap to center of side inlet
- Check-O-Matic maintains 3m (10') elevation change
- Dimensions:
  - Body diameter: 60mm (2⅜")
  - Cap diameter: 75mm (3")
  - Height: 419mm (16½")
- Pop-up to nozzle: 270mm (10½")
- Check valve maintains up to 3m (10') elevation change

(Continued on next page)

Specifying Information				
Body	Arc	Nozzle	Angle	Optional
P—Lawn C—Commercial HP—Hi-Pop S— Shrub Body	P—Part-Circle F—Full-Circle	15—1.5 20—2.0 30—3.0 45—4.5 60—6.0 75—7.5 90—9.0	SA - Standard Angle 25° LA - Low Angle 15° FA - Flat Angle 7°	COM—Check-O-Matic*  E—Effluent
<b>Optional Models Available</b>				
S700-FC-CKVL—Full-Circle Less Nozzle, with Check Valve S700-PC-CKVL—Part-Circle Less Nozzle, with Check Valve				
For Example: When specifying a Super 700 Series Hi-Pop Sprinkler with a 360° arc and #3.0 flat-angle nozzle, you would specify: <b>S700HP-FC-30-FA</b>				

\*Available with shrub models only.

# Super 700 Series

Super 700 Series Nozzle Performance Chart – Metric									
Nozzle Size (Color)	Pressure			25° Standard Angle		15° Low Angle		7° Flat Angle	
	Bar	kPa	Kg/cm <sup>2</sup>	Rad (meters)	Flow LPM	Rad (meters)	Flow LPM	Rad (meters)	Flow LPM
1.5 Orange	1,5	150	1,53	10,5	3,9	8,9	3,9	6,2	3,9
	2,0	200	2,04	10,9	4,6	9,4	4,6	6,6	4,6
	2,5	250	2,55	11,4	5,2	9,8	5,2	7,1	5,2
	3,0	300	3,06	11,8	5,8	10,3	5,8	7,5	5,8
	3,5	350	3,57	12,2	6,3	10,7	6,3	8,0	6,3
	4,0	400	4,08	12,4	6,7	11,2	6,7	8,4	6,7
2.0 Red	1,5	150	1,53	10,6	5,2	9,4	5,2	6,3	5,2
	2,0	200	2,04	11,0	6,0	9,8	6,0	6,7	6,0
	2,5	250	2,55	11,4	6,7	10,2	6,7	7,4	6,7
	3,0	300	3,06	12,1	7,4	10,9	7,4	7,8	7,4
	3,5	350	3,57	12,5	8,0	11,3	8,0	8,3	8,0
	4,0	400	4,08	13,0	8,6	11,8	8,6	8,7	8,6
3.0 Black	1,5	150	1,53	11,4	8,4	9,9	8,4	6,5	8,4
	2,0	200	2,04	11,8	9,9	10,3	9,9	6,9	9,9
	2,5	250	2,55	12,3	11,2	10,8	11,2	7,7	11,2
	3,0	300	3,06	12,7	12,3	11,5	12,3	8,1	12,3
	3,5	350	3,57	13,2	13,4	11,9	13,4	8,6	13,4
	4,0	400	4,08	13,6	14,4	12,4	14,4	9,0	14,4
4.5 Blue	1,5	150	1,53	11,7	9,8	10,0	9,8	6,1	9,8
	2,0	200	2,04	12,1	11,6	10,9	11,6	7,4	11,6
	2,5	250	2,55	12,6	13,2	11,4	13,2	8,4	13,2
	3,0	300	3,06	13,5	14,8	12,3	14,8	9,1	14,8
	3,5	350	3,57	14,0	16,1	12,8	16,1	9,5	16,1
	4,0	400	4,08	14,2	17,3	13,0	17,3	10,2	17,3
6.0 Green	1,5	150	1,53	11,3	14,4	10,5	14,4	6,1	14,4
	2,0	200	2,04	12,6	17,1	10,9	17,1	7,4	17,1
	2,5	250	2,55	13,6	19,6	11,7	19,6	8,5	19,6
	3,0	300	3,06	14,2	21,9	12,3	21,9	9,6	21,9
	3,5	350	3,57	15,0	23,9	13,2	23,9	10,1	23,9
	4,0	400	4,08	15,4	25,6	14,1	25,6	10,5	25,6
7.5 Light Gray	1,5	150	1,53	12,3	18,8	10,3	18,8	5,7	18,8
	2,0	200	2,04	12,7	22,0	11,2	22,0	6,6	22,0
	2,5	250	2,55	13,6	24,9	12,1	24,9	7,8	24,9
	3,0	300	3,06	14,4	27,5	13,0	27,5	8,7	27,5
	3,5	350	3,57	15,2	29,9	13,8	29,9	9,6	29,9
	4,0	400	4,08	15,4	32,0	14,2	32,0	11,1	32,0
9.0 Dark Gray	1,5	150	1,53	12,2	26,0	10,0	26,0	6,0	26,0
	2,0	200	2,04	13,5	24,0	10,9	24,0	6,9	24,0
	2,5	250	2,55	14,4	26,5	11,8	26,5	7,8	26,5
	3,0	300	3,06	15,1	29,4	12,7	29,4	8,9	29,4
	3,5	350	3,57	15,5	33,9	13,5	33,9	9,9	33,9
	4,0	400	4,08	15,7	36,3	14,4	36,3	11,0	36,3

Super 700 Series Nozzle Performance Chart – English									
Nozzle Size (Color)	Pressure PSI	25° Standard Angle		15° Low Angle		7° Flat Angle			
		Rad (feet)	Flow GPM	Rad (feet)	Flow GPM	Rad (feet)	Flow GPM		
1.5 Orange	25	35	1.11	30	1.11	21	1.11		
	30	36	1.23	31	1.23	22	1.23		
	35	37	1.34	32	1.34	23	1.34		
	40	38	1.45	33	1.45	24	1.45		
	45	39	1.55	34	1.55	25	1.55		
	50	40	1.64	35	1.64	26	1.64		
2.0 Red	55	40	1.72	36	1.72	27	1.72		
	60	41	1.80	37	1.80	28	1.80		
	25	35	1.42	31	1.42	21	1.42		
	30	36	1.58	32	1.58	22	1.58		
	35	37	1.73	33	1.73	24	1.73		
	40	39	1.86	35	1.86	25	1.86		
3.0 Black	45	40	1.99	36	1.99	26	1.99		
	50	41	2.11	37	2.11	27	2.11		
	55	42	2.21	38	2.21	28	2.21		
	60	43	2.31	39	2.31	29	2.31		
	25	38	2.40	33	2.40	22	2.40		
	30	39	2.66	34	2.66	23	2.66		
4.5 Blue	35	40	2.89	35	2.89	25	2.89		
	40	41	3.12	37	3.12	26	3.12		
	45	42	3.32	38	3.32	27	3.32		
	50	43	3.52	39	3.52	28	3.52		
	55	44	3.69	40	3.69	29	3.69		
	60	45	3.86	41	3.86	30	3.86		
6.0 Green	25	39	2.80	34	2.80	22	2.80		
	30	40	3.13	36	3.13	25	3.13		
	35	41	3.43	37	3.43	27	3.43		
	40	43	3.71	39	3.71	29	3.71		
	45	45	3.98	41	3.98	30	3.98		
	50	46	4.23	42	4.23	31	4.23		
7.5 Light Gray	55	46	4.44	42	4.44	33	4.44		
	60	47	4.64	43	4.64	34	4.64		
	25	39	4.13	35	4.13	22	4.13		
	30	42	4.63	36	4.63	25	4.63		
	35	44	5.08	38	5.08	27	5.08		
	40	46	5.50	39	5.50	30	5.50		
9.0 Dark Gray	45	47	5.90	41	5.90	32	5.90		
	50	49	6.28	43	6.28	33	6.28		
	55	50	6.58	45	6.58	34	6.58		
	60	51	6.88	47	6.88	35	6.88		
	25	41	5.35	35	5.35	20	5.35		
	30	42	5.92	37	5.92	22	5.92		
9.0 Dark Gray	35	44	6.45	39	6.45	25	6.45		
	40	46	6.94	42	6.94	27	6.94		
	45	48	7.41	43	7.41	29	7.41		
	50	50	7.84	45	7.84	31	7.84		
	55	50	8.22	46	8.22	34	8.22		
	60	51	8.59	47	8.59	38	8.59		
9.0 Dark Gray	25	42	5.64	34	5.64	21	5.64		
	30	45	6.28	36	6.28	23	6.28		
	35	47	6.87	38	6.87	25	6.87		
	40	48	7.42	41	7.42	27	7.42		
	45	50	7.93	42	7.93	30	7.93		
	50	51	8.90	44	8.90	32	8.90		
Dark Gray	55	51	9.33	46	9.33	35	9.33		
	60	52	9.75	48	9.75	37	9.75		

All performance specifications are based on the stated working pressure available at the base of the sprinkler head.



# V-1550 Multi-Matrix® Series



## Toro V-1550 Series Sprinklers

5,8-16,8m (19'-55') Radius

### Features

- Adjustable-flow nozzle, 3,2-44 LPM (0.85-11.62 GPM)
- Full-circle and adjustable part-circle (40°-360°) models available
- All adjustments made from the top – wet or dry
- Truejectory™ adjustment from 7° to 25° for fine-tuning nozzle spray trajectory
- Smart Arc™ memory maintains previously set arc and minimizes vandalism
- Balanced precipitation rates
- Standard rubber cover (except shrub models)
- Servi-Snap™ snap-ring design for easy servicing
- Proven planetary water lubricated gear-drive design
- Standard model has over molded wiper seal for greater debris resistance
- Low-pressure, low flow models available for enhanced low-pressure nozzle and operating performance
- Check valve prevents low-head drainage and keeps laterals charged with water (standard on lawn pop-up models and optional on shrub models)

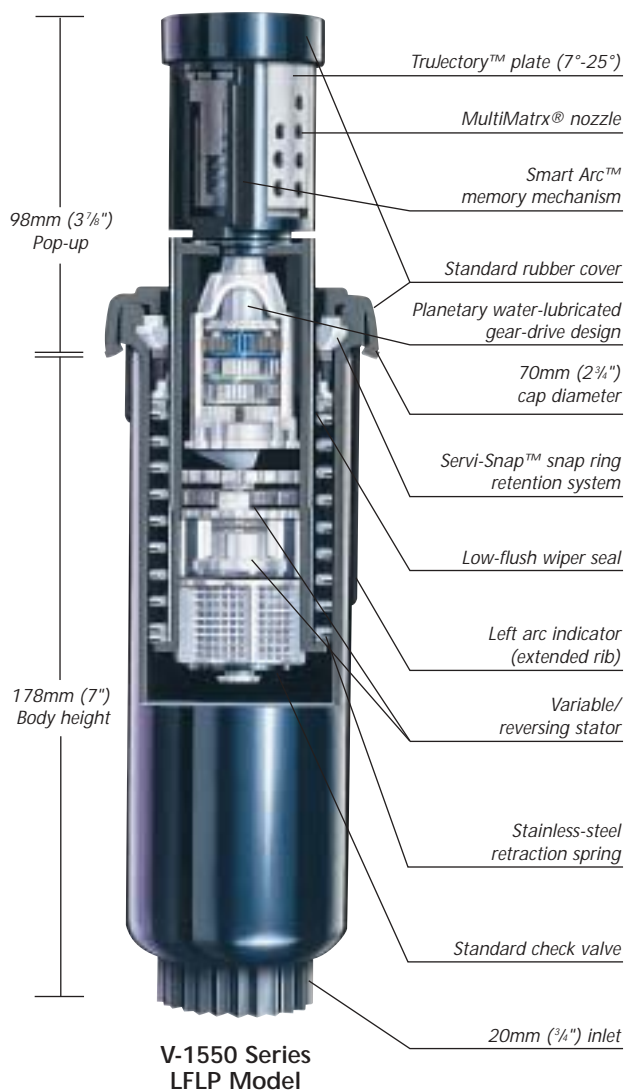
### Specifications

- Radius: 5,8-16,8m (19'-55')
- Flow rate: 3,2-44 LPM (0.85-11.62 GPM)
- Trajectory: 7°-25°
- Operating pressure range: 1,7-5,2 Bar (25-75 PSI)
- Optimum nozzle performance: 3,5 Bar (50 PSI)
- 20mm (¾") female-threaded inlet (pop-up models)
- 20mm (¾") and 13mm (½") female-threaded inlet (shrub models)
- Check-O-Matic maintains up to 3m (10') elevation change and 2,4m (8') on shrub models
- Dimensions:
  - Pop-up to center of nozzle plate:
    - Lawn-Pop=67mm (2⅝")
    - High-Pop=260mm (10¼")
  - Height:
    - Shrub Model=200mm (7⅞")
    - Lawn-Pop=178mm (7")
    - High-Pop=432mm (17")
- Body diameter: 63,5mm (2½")
- Exposed diameter: 69,8mm (2¾")

(Continued on next page)



300mm (12") High Pop      100mm (4") Pop-Up      Shrub



V-1550 Multi-Matrix® Series

# V-1550 Multi-Matrix® Series

V-1550 MultiMatrix MPR Combinations  
The following sets of nozzles may be used in combination to deliver a balanced precipitation rate.



9 Nozzles in One

#1	#2	#3	#4
#1.5	#3	#4.5	#6
#2	#4	#6	#8
#3	#6	#9	
#4	#8	#4	#8
#4.5	#9	#4.5	#9

Note: Combinations assume that all nozzles are operating at the same pressure. In addition, sprinklers can run off the same line if adequate flow exists.

Nozzle	BAR	LPM	7° Radius	25° Radius
1.0	2,75	3,9	4,9	8,8
1.5	3,5	5,5	4,9	9,3
2.0	3,5	8,3	5,3	9,6
3.0	3,5	9,7	5,5	9,8
3.0	4,0	11,4	5,7	10,2
4.0	3,5	13,3	5,5	10,1
4.0	4,0	15,1	5,7	10,5
4.5	3,5	15,5	5,5	10,7
4.5	4,0	16,9	5,7	11,2
6.0	4,0	21,3	5,9	11,8
6.0	4,5	23,3	6,1	12,2
8.0	4,0	26,6	6,0	12,5
8.0	4,8	30,7	6,4	13,1
9.0	4,0	29,3	6,0	12,5
9.0	4,8	36,6	6,4	13,7

\*Shown in meters.

Nozzle	PSI	GPM	7° Radius	25° Radius
1.0	40	1.02	16	29
1.5	50	1.44	16	30
2.0	50	2.15	17	31
3.0	50	2.52	18	32
3.0	60	3.13	19	34
4.0	50	3.47	18	33
4.0	60	4.13	19	35
4.5	50	4.05	18	35
4.5	60	4.56	19	37
6.0	55	5.41	19	38
6.0	65	6.13	20	40
8.0	60	7.18	20	42
8.0	70	8.16	21	38
9.0	60	7.90	20	42
9.0	70	9.76	21	45

\*Shown in feet.

Nozzle Sets	25°		7°	
	Maximum Height of Spray*	Distance from Head*	Maximum Height of Spray*	Distance from Head*
1.0	2,3	4,6	0,4	2,7
1.5	2,3	3,6	0,4	2,7
2.0	2,5	5,8	0,4	3,0
3.0	2,8	6,7	0,4	3,0
4.0	2,9	6,7	0,5	3,7
4.5	3,2	8,2	0,5	4,0
6.0	3,4	8,5	0,6	4,3
8.0	3,5	9,1	0,6	4,6
9.0	3,7	9,4	0,6	4,6

\*Shown in meters.

Nozzle Sets	25°		7°	
	Maximum Height of Spray*	Distance from Head*	Maximum Height of Spray*	Distance from Head*
1.0	7'8"	15'	1'5"	9'
1.5	7'8"	15'	1'5"	9'
2.0	8'4"	19'	1'5"	10'
3.0	9'4"	22'	1'5"	10'
4.0	9'6"	22'	1'7"	12'
4.5	10'6"	27'	1'8"	13'
6.0	11'	28'	1'10"	14'
8.0	11'6"	30'	2'	15'
9.0	12'	31'	2'	15'

\*Shown in feet.



## Specifying Information

V-1550

Body	Optional	Optional
S-Shrub 4–100mm (4") Pop-Up 12–300mm (12") High Pop	F—Full-Circle	E—Effluent LFLP—Low Flow Low Pressure

For Example:  
When specifying a full-circle V-1550 Series sprinkler with a 100mm (4") pop-up height and a low-pressure nozzle, you would specify:

V-1550-4LFLP

# V-1550 Multi-Matrix® Series



V-1550 Multi-Matrix® Series

V-1550 MultiMatrix Low Pressure Nozzle Performance Data @ 25° Trajectory – Metric  $\triangleleft 25^\circ$

Base Pressure		Nozzle Sets																											
		Recommended For Most Applications																											
		4			6			8			11			15			17			23			30			34			
Bar	kPa	Kg/cm <sup>2</sup>	Rad	LPM	m <sup>3</sup> /hr	Rad	LPM	m <sup>3</sup> /hr	Rad	LPM	m <sup>3</sup> /hr	Rad	LPM	m <sup>3</sup> /hr	Rad	LPM	m <sup>3</sup> /hr	Rad	LPM	m <sup>3</sup> /hr	Rad	LPM	m <sup>3</sup> /hr	Rad	LPM	m <sup>3</sup> /hr	Rad	LPM	m <sup>3</sup> /hr
2.0	200	2.04	9,1	4,0	0,24	9,4	4,8	0,29	9,8	7,7	0,46	10,0	9,5	0,57	10,0	12,4	0,74	10,0	13,7	0,82	10,3	19,1	1,15	10,3	21,8	1,31	10,4	24,7	1,48
2.5	250	2.55	9,2	4,4	0,26	9,8	5,3	0,32	10,7	8,5	0,51	11,0	10,8	0,65	11,0	14,3	0,86	11,4	15,7	0,94	12,3	21,9	1,31	12,3	26,9	1,61	12,3	28,6	1,72
3.0	300	3.06	9,5	4,8	0,29	10,1	5,8	0,35	11,1	9,3	0,56	11,4	11,9	0,72	11,9	15,9	0,95	12,2	17,8	1,07	13,4	24,7	1,48	13,6	29,1	1,75	13,6	32,4	1,95
3.5	350	3.57	9,5	5,1	0,30	10,1	6,3	0,38	11,3	10,0	0,60	11,6	13,0	0,78	12,5	17,2	1,03	12,8	19,4	1,16	14,3	26,1	1,56	14,6	31,8	1,91	14,6	35,5	2,13
4.0	400	4.08	9,3	5,3	0,3	10,1	6,8	0,4	11,6	10,5	0,63	11,9	13,9	0,83	12,6	18,4	1,11	13,2	20,8	1,25	15,1	27,7	1,66	15,4	34,2	2,05	15,5	38,1	2,29
4.5	450	4.59	9,2	5,5	0,3	10,1	7,2	0,4	11,6	10,7	0,64	11,9	14,6	0,87	12,8	19,5	1,17	13,7	21,9	1,32	15,5	29,3	1,76	15,8	36,3	2,18	16,1	40,7	2,44
5.0	500	5.10	9,2	5,7	0,3	9,8	7,5	0,4	11,5	11,0	0,7	11,8	15,3	0,9	12,8	20,2	1,2	14,0	23,0	1,4	15,9	30,6	1,84	16,5	38,2	2,29	16,5	42,7	2,56

☐ = Nozzles not recommended at this pressure  
 ■ = Optimum nozzle performance.

All performance specifications are based on the stated working pressure available at the base of the sprinkler head.  
 Radius shown in meters.

V-1550 MultiMatrix Low Pressure Nozzle Performance Data @ 25° Trajectory – English  $\triangleleft 25^\circ$

Base Pressure		Nozzle Sets																	
		Recommended For Most Applications																	
		1		1.5		2		3		4		4.5		6		8		9	
PSI		Rad	GPM	Rad	GPM	Rad	GPM	Rad	GPM	Rad	GPM	Rad	GPM	Rad	GPM	Rad	GPM	Rad	GPM
25		29	85	25	1.05	27	1.44	26	1.85	26	2.73	27	3.23	28	4.00	28	5.02	29	5.57
30		30	94	27	1.15	29	1.65	28	2.09	30	3.09	30	3.68	31	4.56	31	5.63	33	6.25
35		31	1.02	29	1.25	32	1.82	32	2.34	33	3.47	34	4.09	35	5.05	35	6.28	37	6.96
40		31	1.08	30	1.33	33	1.96	33	2.54	34	3.72	36	4.42	37	5.51	38	6.84	39	7.58
45		31	1.12	31	1.42	34	2.08	34	2.73	35	4.06	39	4.71	39	5.90	42	7.36	42	8.16
50		31	1.17	31	1.49	34	2.15	34	2.89	36	4.31	39	4.98	41	6.27	43	7.85	44	8.75
55		31	1.21	31	1.55	35	2.29	35	3.04	38	4.52	40	5.23	42	6.61	45	8.26	46	9.23
60		32	1.24	30	1.60	35	2.39	35	3.15	38	4.69	40	5.41	43	6.87	45	8.61	47	9.67
65		32	1.28	30	1.66	36	2.48	36	3.30	39	4.88	41	5.62	44	7.14	45	8.99	49	10.09
70		31	1.31	30	1.70	36	2.57	36	3.42	39	5.05	41	5.84	44	7.43	46	9.29	49	10.42
75		30	1.34	30	1.75	37	2.64	37	3.55	39	5.21	42	6.00	44	7.68	47	9.61	50	10.89

☐ = Nozzles not recommended at this pressure  
 ■ = Optimum nozzle performance.

All performance specifications are based on the stated working pressure available at the base of the sprinkler head.  
 Radius shown in feet.

V-1550 MultiMatrix Standard Nozzle Performance Data @ 25° Trajectory – Metric  $\triangleleft 25^\circ$

Base Pressure		Nozzle Sets																											
		Recommended For Most Applications																											
		4			6			8			11			15			17			23			30			34			
Bar	kPa	Kg/cm <sup>2</sup>	Rad	LPM	m <sup>3</sup> /hr	Rad	LPM	m <sup>3</sup> /hr	Rad	LPM	m <sup>3</sup> /hr	Rad	LPM	m <sup>3</sup> /hr	Rad	LPM	m <sup>3</sup> /hr	Rad	LPM	m <sup>3</sup> /hr	Rad	LPM	m <sup>3</sup> /hr	Rad	LPM	m <sup>3</sup> /hr	Rad	LPM	m <sup>3</sup> /hr
2.0	200	2.04	9,1	3,5	0,21	8,0	4,2	0,25	8,7	6,0	0,36	8,3	7,6	0,46	8,8	11,3	0,68	8,9	13,4	0,80	9,2	16,6	1,00	9,2	20,6	1,24	9,7	22,9	1,37
2.5	250	2.55	9,5	3,9	0,23	8,9	4,8	0,29	9,8	6,9	0,42	9,8	8,9	0,54	10,1	13,2	0,79	10,4	15,6	0,94	10,7	19,3	1,16	10,8	24,0	1,44	11,4	26,6	1,60
3.0	300	3.06	9,5	4,2	0,25	9,3	5,2	0,31	10,2	7,7	0,46	10,2	10,0	0,60	10,5	14,8	0,89	11,5	17,3	1,04	11,6	21,6	1,30	12,2	26,9	1,62	12,4	29,9	1,79
3.5	350	3.57	9,5	4,4	0,27	9,5	5,6	0,34	10,4	8,1	0,49	10,4	10,9	0,65	11,0	16,3	0,98	11,9	18,8	1,13	12,5	23,7	1,42	13,1	29,6	1,78	13,4	33,0	1,98
4.0	400	4.08	9,6	4,6	0,28	9,3	5,9	0,36	10,7	8,8	0,53	10,7	11,7	0,70	11,6	17,4	1,04	12,2	20,1	1,20	12,9	25,4	1,52	13,7	31,8	1,91	14,1	35,6	2,13
4.5	450	4.59	9,8	4,8	0,29	9,2	6,2	0,37	10,9	9,3	0,56	10,9	12,4	0,74	11,8	18,3	1,10	12,4	21,1	1,27	13,4	26,8	1,61	13,7	33,7	2,02	14,8	37,9	2,27
5.0	500	5.10	9,4	5,0	0,30	9,2	6,5	0,39	11,0	9,8	0,59	11,0	13,1	0,78	11,9	19,2	1,16	12,6	22,2	1,33	13,4	28,3	1,70	14,1	35,4	2,13	15,0	39,8	2,39

☐ = Nozzles not recommended at this pressure  
 ■ = Optimum nozzle performance.

All performance specifications are based on the stated working pressure available at the base of the sprinkler head.  
 Radius shown in meters.

V-1550 MultiMatrix Standard Nozzle Performance Data @ 25° Trajectory – English  $\triangleleft 25^\circ$

Base Pressure		Nozzle Sets																	
		Recommended For Most Applications																	
		1		1.5		2		3		4		4.5		6		8		9	
PSI		Rad	GPM	Rad	GPM	Rad	GPM	Rad	GPM	Rad	GPM	Rad	GPM	Rad	GPM	Rad	GPM	Rad	GPM
25		29	98	30	1.19	30	1.97	30	2.33	30	3.02	30	3.28	31	4.50	31	5.28	30	5.94
30		30	1.09	31	1.29	33	2.08	34	2.60	34	3.38	34	3.77	35	5.29	35	5.99	36	6.80
35		30	1.16	32	1.40	35	2.23	36	2.82	36	3.74	37	4.11	40	5.70	40	7.07	40	7.49
40		31	1.22	33	1.49	36	2.37	37	3.06	38	4.05	39	4.54	43	6.44	43	7.40	43	8.13
45		31	1.29	33	1.58	37	2.51	38	3.24	40	4.31	41	4.85	45	6.61	46	7.96	46	8.95
50		31	1.34	33	1.67	37	2.65	38	3.44	41	4.56	42	5.14	47	6.90	48	8.41	48	9.40
55		31	1.38	33	1.76	38	2.76	39	3.64	41	4.80	43	5.41	49	7.21	50	8.90	50	9.89
60		30	1.40	33	1.85	38	2.80	39	3.72	42	4.99	44	5.63	50	7.48	51	9.28	52	10.34
65		30	1.46	33	1.91	38	2.83	39	3.88	42	5.18	45	5.84	51	7.80	52	9.67	53	10.86
70		30	1.49	32	1.97	38	2.89	39	4.02	42	5.31	46	6.04	52	8.04	54	10.00	54	11.17
75		30	1.52	32	2.02	37	2.95	37	4.07	42	5.47	46	6.18	53	8.24	55	10.36	55	11.62

☐ = Nozzles not recommended at this pressure  
 ■ = Optimum nozzle performance.

All performance specifications are based on the stated working pressure available at the base of the sprinkler head.  
 Radius shown in feet.

# TR50 and TR50XT Rotor Series

## Toro TR50 and TR50XT Rotor

### 6,5–15,9m (21'–52') Radius

#### Shared Features of the TR50 and TR50XT

- Simple to set watering pattern with ratcheting arc adjustment
- 127mm (5") pop-up to clear tall turf
- Cluster, water-lubricated, gear-drive design
- Dry mode pull-up slot
- Arc adjustment from 30° to 360°
- Continuous, unidirectional rotation provides uniform water coverage when set at 360°
- Smart Arc™ memory returns sprinkler to previously set arc if vandalized
- Slip clutch assures no damage to gears if vandalized
- Laser-etched indications on cap
- Unique, over-molded wiper seal for greater debris resistance and below-grade installation
- Factory-installed with a #3.0 nozzle
- Left arc indicator on cap (arrow), body (hash mark) and riser (arc band)
- Stainless-steel radius adjustment screw allows up to 25% radius reduction
- Large filter screen to prevent clogging
- 3-year warranty

#### Specifications

- Radius: 6,5m–15,9m (21'–52')
- Flow rate: 3,1–47,5 LPM (0.8–12.5 GPM)
- Trajectory: 5° to 25° (TR50XT only)
- Recommended operating pressure range: 1,7– 4,8 Bar (25–70 PSI)
- Optimum operating pressure: 3,6 Bar (55 PSI)
- 20mm (¾") female-threaded inlet
- 20mm (¾") and 13mm (½") female-threaded inlet (shrub models)
- Check valve maintains up to 3,0m (10') elevation change on all models (optional for TR50, standard for TR50XT Series)
- 13mm (½") below-grade installation
- Dimensions for lawn pop-up:
  - Pop-up to center of nozzle: 120mm (4¾")
  - Base diameter: 60mm (2⅜")
  - Height: 200mm (8")
- Models:
  - Lawn-pop — 127mm (5")
  - Shrub
  - High-pop — 305mm (12")

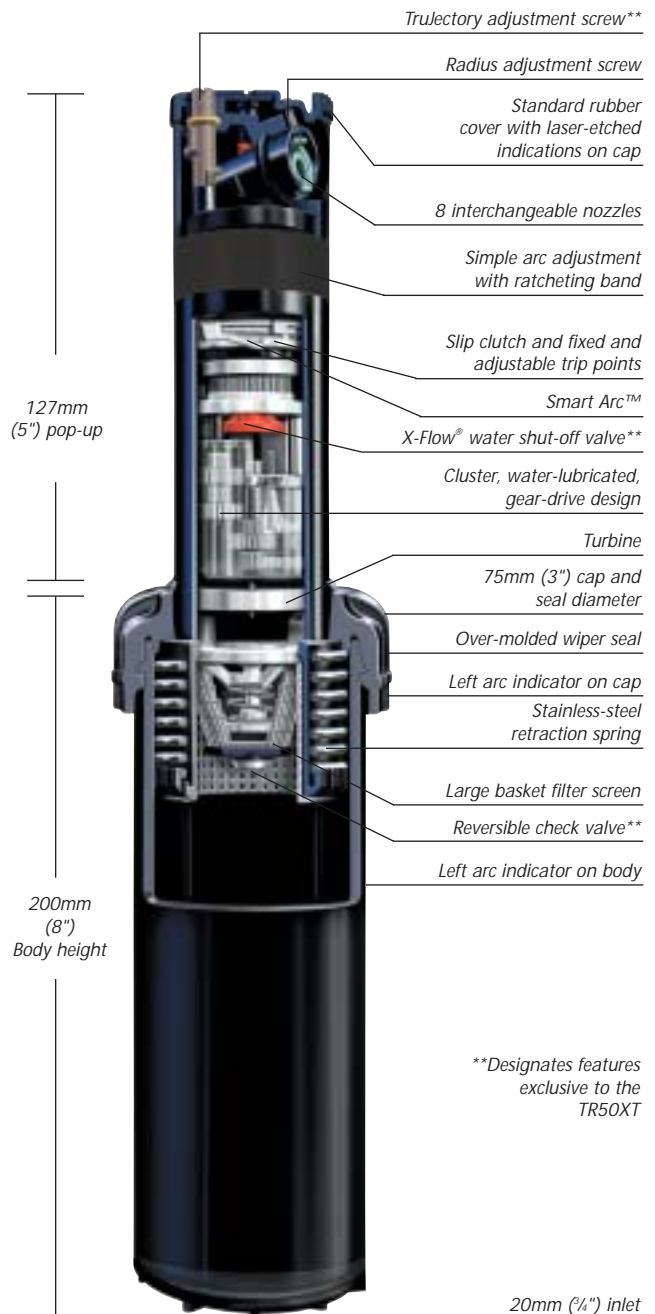


TR50

TR50XT

#### Features EXCLUSIVE to the TR50XT

- Truejectory™ adjustment from 5° to 25° for fine-tuning radius and nozzle spray trajectory
- X-Flow® water shut-off for dry nozzle and arc changes
- Color-coded nozzle tree for quick and easy identification and installation
- Standard reversible check valve prevents low-head drainage, keeping laterals charged with water
- Extended 5-year warranty



TR50 and TR50XT Series



# TR50 and TR50XT Rotor Series



**TR50 and TR50XT Rotor Series**



Trjectory™ (Radius and height of spray adjustment)



X-Flow™ (water shut off valve)

## Specifying Information

TR50XX  XX  XX  X

Description	Body	Nozzle		Optional
TR50 — TR50	P—127mm (5") Lawn Pop-Up S—Shrub	10–1.0	45–4.5	E—Effluent LFLP*—
TR50XT — TR50XT	HP—305mm (12") High Pop-Up	20–2.0 30–3.0	75–7.5 90–9.0	Low Flow Low Pressure

For Example:  
When specifying a 127mm (5") lawn pop-up TR50XT Series Sprinkler  
with a #3.0 nozzle, you would specify:

**TR50XT-P-30**

\*Available soon for TR50 Lawn and High-Pop models.

(Continued on next page)

# TR50 and TR50XT Rotor Series

TR50 and TR50XT Nozzle Performance Data @ 25° Trajectory – Metric $\triangle 25^\circ$																		
Base Pressure			Nozzle Sets															
			1		1.5		2		3		4.5		6		7.5		9	
Bar	kPa	Kg/cm <sup>2</sup>	Rad	LPM	Rad	LPM	Rad	LPM	Rad	LPM	Rad	LPM	Rad	LPM	Rad	LPM	Rad	LPM
1,5	150	1,53	9,3	3,1	10,0	4,2	10,0	5,2	10,4	6,4	9,8	10,0	9,9	12,8	10,2	16,0	10,2	19,2
2,0	200	2,04	10,0	3,6	10,8	4,5	10,8	6,1	11,7	7,8	11,4	12,2	11,6	15,7	11,9	19,2	11,9	23,2
2,5	250	2,55	10,6	3,7	11,4	5,3	11,5	7,0	12,3	8,9	12,0	14,2	12,5	17,9	13,0	22,0	13,1	26,7
3,0	300	3,06	11,1	4,0	11,8	5,8	12,0	7,6	12,6	9,9	12,5	15,9	13,2	19,8	13,7	24,7	14,0	29,8
3,5	350	3,57	11,3	4,6	12,2	6,1	12,2	8,0	12,8	10,7	13,1	17,4	14,1	21,6	14,4	27,1	14,7	32,8
4,0	400	4,08	11,5	4,8	12,4	6,7	12,7	8,6	13,0	11,8	13,1	18,9	14,5	23,3	14,8	29,3	14,9	35,6
4,5	450	4,59	11,6	5,3	12,5	7,2	12,8	9,5	13,1	12,5	13,3	20,3	14,6	24,8	14,9	31,1	15,1	37,5
5,0	500	5,10	11,7	5,8	12,5	7,7	12,8	10,4	13,1	13,2	13,5	21,6	14,6	26,3	14,9	32,8	15,2	39,5
5,5	550	5,61	11,9	6,3	12,5	7,9	12,8	11,0	13,1	14,0	13,7	22,7	14,6	27,9	14,9	34,7	15,2	41,9
6,0	600	6,12	12,1	6,9	12,5	8,7	12,8	11,5	13,3	14,8	13,7	23,8	14,8	29,3	15,1	36,4	15,5	43,9
6,5	650	6,63	12,2	7,5	12,6	9,9	12,9	12,2	13,4	15,5	13,7	24,9	15,2	30,5	15,5	38,1	15,7	45,8
7,0	700	7,14	12,2	8,0	12,8	11,1	13,1	13,0	13,4	16,0	13,7	25,9	15,6	31,6	15,9	39,6	15,9	47,5

All performance specifications are based on the stated working pressure available at the base of the sprinkler head. Radius shown in meters.

Recommended pressures for TR50XT rotor only.

TR50 and TR50XT Nozzle Performance Data @ 25° Trajectory – English $\triangle 25^\circ$																		
Base Pressure		Nozzle Sets																
		1		1.5		2		3		4.5		6		7.5		9		
PSI	Rad	GPM	Rad	GPM	Rad	GPM	Rad	GPM	Rad	GPM	Rad	GPM	Rad	GPM	Rad	GPM	Rad	GPM
20	30	0.8	32	1.1	32	1.3	33	1.6	31	2.5	31	3.2	32	4.0	32	4.8	32	4.8
30	33	0.9	36	1.2	36	1.6	39	2.1	38	3.3	39	4.2	40	5.2	40	6.3	40	6.3
40	36	1.0	38	1.5	39	1.9	41	2.5	40	4.0	42	5.0	44	6.2	45	7.5	45	7.5
50	37	1.2	40	1.6	40	2.1	42	2.8	43	4.6	46	5.7	47	7.1	48	8.6	48	8.6
60	38	1.3	41	1.8	42	2.3	43	3.2	43	5.1	48	6.3	49	7.9	49	9.6	49	9.6
70	38	1.5	41	2.0	42	2.7	43	3.4	44	5.6	48	6.8	49	8.5	50	10.2	50	10.2
80	39	1.7	41	2.1	42	2.9	43	3.7	45	6.0	48	7.4	49	9.2	50	11.1	50	11.1
90	40	1.9	41	2.4	42	3.1	44	4.0	45	6.4	49	7.9	50	9.8	51	11.8	51	11.8
100	40	2.1	42	2.9	43	3.4	44	4.2	45	6.8	41	8.3	52	10.4	52	12.5	52	12.5

All performance specifications are based on the stated working pressure available at the base of the sprinkler head. Radius shown in feet.

Recommended pressures for TR50XT rotor only.

TR50XT Nozzle Performance Data @ 5° Trajectory – Metric $\triangle 5^\circ$																		
Base Pressure			Nozzle Sets															
			1		1.5		2		3		4.5		6		7.5		9	
Bar	kPa	Kg/cm <sup>2</sup>	Rad	LPM	Rad	LPM	Rad	LPM	Rad	LPM	Rad	LPM	Rad	LPM	Rad	LPM	Rad	LPM
1,5	150	1,53	6,5	3,1	6,8	4,2	7,2	5,2	7,6	6,4	7,6	10,0	7,7	12,8	8,2	16,0	8,7	19,2
2,0	200	2,04	6,7	3,6	7,3	4,5	7,8	6,1	9,0	7,8	9,0	12,2	9,2	15,7	9,3	19,2	9,4	23,2
2,5	250	2,55	7,1	3,7	7,9	5,3	8,7	7,0	9,9	8,9	9,9	14,2	10,0	17,9	10,2	22,0	10,4	26,7
3,0	300	3,06	7,4	4,0	8,5	5,8	9,5	7,6	10,7	9,9	10,7	15,9	10,8	19,8	11,1	24,7	11,3	29,8
3,5	350	3,57	7,7	4,6	9,2	6,1	10,1	8,0	11,3	10,7	11,3	17,4	11,6	21,6	11,9	27,1	12,0	32,8
4,0	400	4,08	8,1	4,8	9,4	6,7	10,3	8,6	11,3	11,8	11,8	18,9	11,8	23,3	12,4	29,3	12,6	35,6
4,5	450	4,59	8,5	5,3	9,6	7,2	10,4	9,5	11,4	12,5	11,9	20,3	12,0	24,8	12,7	31,1	13,0	37,5
5,0	500	5,10	9,0	5,8	9,9	7,7	10,4	10,4	11,7	13,2	11,9	21,6	12,3	26,3	12,9	32,8	13,2	39,5
5,5	550	5,61	9,4	6,3	10,3	7,9	10,7	11,0	11,9	14,0	11,9	22,7	12,5	27,9	13,1	34,7	13,4	41,9
6,0	600	6,12	10,1	6,9	10,6	8,7	10,9	11,5	11,9	14,8	11,9	23,8	12,7	29,3	13,3	36,4	13,8	43,9
6,5	650	6,63	10,6	7,5	10,9	9,9	11,2	12,2	12,0	15,5	12,0	24,9	12,8	30,5	13,5	38,1	14,1	45,8
7,0	700	7,14	11,0	8,0	11,3	11,1	11,6	13,0	12,2	16,0	12,2	25,9	12,8	31,6	13,7	39,6	14,4	47,5

All performance specifications are based on the stated working pressure available at the base of the sprinkler head. Radius shown in meters.

TR50XT Nozzle Performance Data @ 5° Trajectory – English $\triangle 5^\circ$																		
Base Pressure		Nozzle Sets																
		1		1.5		2		3		4.5		6		7.5		9		
PSI	Rad	GPM	Rad	GPM	Rad	GPM	Rad	GPM	Rad	GPM	Rad	GPM	Rad	GPM	Rad	GPM	Rad	GPM
20	21	0.8	22	1.1	23	1.3	24	1.6	24	2.5	24	3.2	26	4.0	28	4.8	28	4.8
30	22	0.9	24	1.2	26	1.6	30	2.1	30	3.3	31	4.2	31	5.2	31	6.3	31	6.3
40	24	1.0	27	1.5	30	1.9	34	2.5	34	4.0	34	5.0	35	6.2	36	7.5	36	7.5
50	25	1.2	30	1.6	33	2.1	37	2.8	37	4.6	38	5.7	39	7.1	39	8.6	39	8.6
60	27	1.3	31	1.8	34	2.3	37	3.2	39	5.1	39	6.3	41	7.9	42	9.6	42	9.6
70	29	1.5	32	2.0	34	2.7	38	3.4	39	5.6	40	6.8	42	8.5	43	10.2	43	10.2
80	31	1.7	34	2.1	35	2.9	39	3.7	39	6.0	41	7.4	43	9.2	44	11.1	44	11.1
90	34	1.9	35	2.4	36	3.1	39	4.0	39	6.4	42	7.9	44	9.8	46	11.8	46	11.8
100	36	2.1	37	2.9	38	3.4	40	4.2	40	6.8	42	8.3	45	10.4	47	12.5	47	12.5

All performance specifications are based on the stated working pressure available at the base of the sprinkler head. Radius shown in feet.



# Super Funny Pipe



This unique piping acts like an extension cord, allowing you to put sprinklers exactly where you want them. Even deep-seated high-pops are easy to install in difficult, hard-to-trench locations.



Super Funny Pipe

## Toro Super Funny Pipe and Fittings

### Features

- Provides easy installation for problem areas
- Cushions sprinklers from external impact
- Connects to sprinklers and Toro fittings
- Flexible, thick-walled polyethylene pipe
- 30,5m (100') coils available in stretch wrap

### Specifications

- Wall thickness: 2,5mm (.10") ± .01
- Inside diameter: 12,4mm (.49") ± .01
- Outside diameter: approximately 18mm (.70")

### Super Funny Pipe

- 850-23 6m (20') length working pressure: 8,2 Bar (120 PSI)
- 850-24 15,2m (50') coil working pressure: 8,2 Bar (120 PSI) (36Kg)
- 850-25 30,5m (100') coil working pressure: 8,2 Bar (120 PSI) (68Kg) (more flexible)

### Fittings

To be used only with Toro Super Funny Pipe

- 850-20 Coupling
- 850-31 13mm (1/2") Male Elbow
- 850-32 20mm (3/4") Male Elbow
- 850-33 20-13mm (3/4"-1/2") Female Adapter
- 850-34 13mm (1/2") Female Elbow
- 850-35 13mm (1/2") Male Adapter
- 850-36 20mm (3/4") Male Insert 3/4" x 3/8"
- 850-37 Tee Barbed inserts require no clamps.



Super Funny Pipe Fittings

See page 44 for more details on the preassembled flex assemblies.

Super Funny Pipe Friction Loss – Metric				
LPM Flow				
5	10	15	20	25
0,30	1,02	2,00	3,77	5,58

Note: This chart indicates the amount of pressure loss (in kPa) per meter of Super Funny Pipe installed at stated flow rates (LPM).

Super Funny Pipe Friction Loss – English						
GPM Flow						
1	2	3	4	5	6	7
0.01	0.02	0.06	0.09	0.15	0.21	0.27

Note: This chart indicates the amount of pressure loss (PSI) per foot of Super Funny Pipe installed at stated flow rates (GPM).

Super Funny Pipe Fittings Friction Loss Chart – Metric						
LPM Flow						
Model No.	Description	5	10	15	20	25
850-31	13mm Male Elbow	1,87	6,43	13,8	28,7	46,9
850-32	20mm Male Elbow	2,23	7,42	17,8	37,1	61,4
850-34	13mm Female Elbow	1,87	6,43	13,8	28,7	46,9
850-35	13mm Male Adapter	0,89	3,08	6,89	16,1	28,2
850-36	20mm Male Adapter	1,35	4,13	9,55	21,8	37,7

Note: This chart indicates the amount of pressure loss (in kPa) per meter of Super Funny Pipe at stated flow rates (LPM).

Super Funny Pipe Fittings Friction Loss Chart – English								
GPM Flow								
Model No.	Description	1	2	3	4	5	6	7
850-31	1/2" Male Elbow	0.05	0.15	0.36	0.62	1.13	1.62	2.37
850-32	3/4" Male Elbow	0.06	0.18	0.41	0.80	1.42	2.20	3.05
850-34	1/2" Female Elbow	0.05	0.15	0.36	0.62	1.13	1.62	2.37
850-35	1/2" Male Adapter	0.03	0.06	0.18	0.31	0.60	1.00	1.41
850-36	3/4" Male Adapter	0.04	0.10	0.23	0.43	0.80	1.37	1.86

Note: This chart indicates the amount of pressure loss (PSI) per foot of Super Funny Pipe at stated flow rates (GPM).



One of the most useful and time-saving sprinkler installation aids is Toro Super Funny Pipe. Whether you are installing a new system or replacing an old sprinkler, Super Funny Pipe can make your job faster and easier.



Super Funny Pipe is a high-strength poly tubing that solves tough sprinkler installation and replacement problems. Simply put, it acts as a flexible extension cord between the water line and the sprinkler, allowing you to position sprinklers easily where you need them—even in hard-to-reach areas.

# Super Funny Pipe Flex Assemblies

Make installation easier with Toro's new flex assemblies. 13mm (1/2") and 20mm (3/4") fittings conveniently pre-assembled onto 200mm (8") and 300mm (12") lengths of Toro Super Funny Pipe.

## Toro Super Funny Pipe Flex Assemblies

### Features

- Flexible yet durable segments of Toro Super Funny Pipe with factory pre-installed fittings
- Allows sprinkler heads to be moved or adjusted to grade easily
- Perfect for hard to trench areas
- Prevents damage to sprays, rotors or pipes, especially when run over by vehicles or equipment
- Available in 20 cm or 30 cm (8" or 12") lengths with 13mm or 20mm (1/2" or 3/4") fittings
- Packaged in a re-sealable bag for convenience on the job site

### Specifications

- Wall thickness: 2,5mm (.10") ± .01
- Inside diameter: 12,4mm (.49") ± .01
- Outside diameter: approximately 18mm (.70")
- Recommended operating pressure: 1,7 – 5,2 Bar (25 – 75 PSI)
- Maximum operating pressure: 5,9 Bar (85 PSI)
- Models:
  - SPFA-585: 20 cm (8") length with 13mm x 13mm (1/2" x 1/2") fittings
  - SPFA-5875: 20 cm (8") length with 13mm x 20mm (1/2" x 3/4") fittings
  - SPFA-5125: 30 cm (12") length with 13mm x 13mm (1/2" x 1/2") fittings
  - SPFA-51275: 30 cm (12") length with 13mm x 20mm (1/2" x 3/4") fittings

NEW



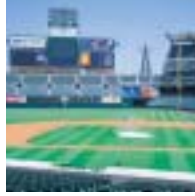
Flex Assemblies

### Specifying Information

<input type="checkbox"/> SPFA <input type="checkbox"/> 5X <input checked="" type="checkbox"/> X <input checked="" type="checkbox"/> X <input checked="" type="checkbox"/> X			
Description	Inlet Fitting	Length	Outlet Fitting
SPFA— Super Funny Pipe Flex Assembly	5— 13mm (1/2")	8— 20cm (8") 12— 30cm (12")	5— 13mm (1/2") fitting 75— 20mm (3/4") fitting
For Example: When specifying a Super Funny Pipe Flex Assembly that is 30 cm (12") in length and has a 13mm (1/2") inlet fitting and a 20 mm (3/4") outlet fitting, you would specify: <span style="background-color: #cccccc; padding: 2px 10px;">SPFA-51275</span>			



# Large Turf Sprinklers



# Large Turf Sprinklers

## Cover New Ground

Toro products are used on the world's most prestigious athletic fields. They help beautify landscapes for municipalities and local councils.

Whatever the application, you can count on Toro sprinklers to save you time, water and money.

		TR70XT	2001	640
Ideal Applications	3,0 – 4,5 Bar (40–65 PSI) Systems	X	X	X
	4,5 – 7,0 Bar (65–100 PSI) Systems	X		X
	High Traffic, Vandal Prone Areas			X
	Rubber Cover for Commercial Fields	X	X	X
	High Wind	X	X	X
	Normally Open, VIH Hydraulic System			X
Features	Full Circle	X	X	X
	Part Circle-Adjustable	X	X	
	Part Circle-Fixed			X
	Inlet Size (mm)	25	25	25
	(in)	1	1	1
	Stainless Steel Riser		X	X
	Check Valve	X	X	X
	Effluent Water Option	X	X	X
	Smart Arc™ Memory	X	X	
	Adjustable Rotation Speed			X
	Small Exposed Surface Diameter			X
	X-Flow® Water Shutoff	X		
	Trjectory™ Height of Spray Adjustment	X		



**Toro TR70XT Series Sprinklers**

- Radius: 12,5-21m (41'-69')
- 19,3-101 LPM (5.1-26.6 GPM)



**Toro 2001 Series Sprinklers**

- Radius: 15-21,7m (48'-71')
- 21-118 LPM (5.6-31.3 GPM)



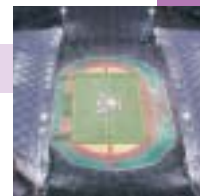
**Toro 640 Series Sprinklers**

- Radius: 14-20m (47'-67')
- 23-95 LPM (6.0-25.0 GPM)



**Sport / Commercial**

# TR70XT Series Sprinklers



With the use of the simple adjustment band technology of the TR50XT, the TR70XT is just as convenient but made to withstand the pressure of commercial applications, such as sport fields. All features, including the exclusive, patented X-Flow<sup>®</sup> water shut-off and trajectory adjustment, are located beneath a safe, rubber cover.

## Toro TR70XT Rotor

12,5 – 21m (41'–69') Radius

### Features

- Adjusting band for visual verification of arc setting
- All adjustments located beneath rubber cover
- Patented X-Flow shut-off device built into the riser
  - Restricts water loss if the nozzle is removed or damaged
  - Allows for dry nozzle replacement or maintenance while the system is running
- Color-coded nozzle tree for quick and easy identification and installation
- Seven interchangeable nozzles
- Factory-installed with a #12 nozzle
- 127mm (5") pop-up to clear tall turf
- Truejectory™ adjustment from 5° to 25° for fine-tuning nozzle spray trajectory (positioned below rotor cover)
- Left arc indicator on cap (arrow) and body (hash mark)
- Right stop indicator (white arrow on black band)
- Cluster, water-lubricated, gear-drive design
- Dry mode pull-up slot
- Arc adjustment from 30° to 360°
- Continuous unidirectional rotation provides uniform water coverage when set at 360°
- Smart Arc™ memory returns sprinkler to previously set arc if vandalized
- Slip clutch assures no damage to gears if vandalized
- Standard, reversible check valve prevents low-head drainage, keeping laterals charged with water
- Laser-etched indications on rubber cover
- Unique, over-molded wiper seal for greater debris resistance and 1/2" below-grade installation
- Standard rubber cover
- Stainless-steel radius adjustment screw allows up to 25% radius reduction
- Large filter screen to prevent clogging
- Extended five-year warranty



### Specifications

- Radius: 12,5m–21m (41'– 69')
- Flow rate:  
19,3–101 LPM (5.1–26.6 GPM)
- Trajectory: 5° to 25°
- Recommended operating pressure range:  
1,7–7 Bar (25–100 PSI)
- Optimum operating pressure:  
4,5 Bar (65 PSI)
- 25mm (1") female-threaded inlet
- Check valve maintains up to 3m (10') elevation change on all models
- 13mm (1/2") below-grade installation
- Dimensions:
  - Pop-up to center of nozzle (lawn pop-up): 120mm (4 3/4")
  - Base diameter: 60mm (2 3/8")
  - Height: 200mm (8")

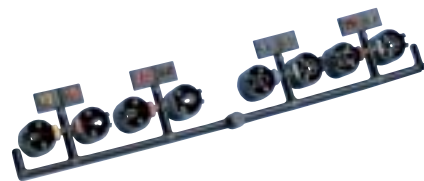
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# TR70XT Series Sprinklers

Nozzle	Bar	kPa	Kg/cm <sup>2</sup>	LPM	Rad. (m)
7.0	3,0	300	3,06	20,2	13,0
	3,5	350	3,57	22,1	13,4
	4,0	400	4,08	24,0	13,4
	4,5	450	4,59	25,6	13,4
	5,0	500	5,10	27,1	13,4
	5,5	550	5,61	28,6	13,4
	6,0	600	6,12	29,9	13,4
	6,5	650	6,63	31,2	13,4
7,0	700	7,14	32,4	13,5	
9.0	3,0	300	3,06	24,5	13,9
	3,5	350	3,57	26,7	14,4
	4,0	400	4,08	28,9	15,1
	4,5	450	4,59	30,7	15,4
	5,0	500	5,10	32,5	15,6
	5,5	550	5,61	34,4	15,8
	6,0	600	6,12	36,1	15,8
	6,5	650	6,63	37,9	16,0
7,0	700	7,14	39,9	16,2	
12.0*	3,0	300	3,06	41,6	13,2
	3,5	350	3,57	44,6	14,6
	4,0	400	4,08	47,6	14,7
	4,5	450	4,59	50,8	14,8
	5,0	500	5,10	54,0	15,1
	5,5	550	5,61	57,7	15,5
	6,0	600	6,12	59,5	15,5
	6,5	650	6,63	62,0	15,7
7,0	700	7,14	64,4	15,9	
16.0	3,0	300	3,06	48,8	13,2
	3,5	350	3,57	52,6	14,1
	4,0	400	4,08	56,2	14,7
	4,5	450	4,59	59,5	14,9
	5,0	500	5,10	62,8	15,0
	5,5	550	5,61	66,1	15,2
	6,0	600	6,12	69,1	15,9
	6,5	650	6,63	72,0	16,4
7,0	700	7,14	74,7	16,8	
20.0	3,0	300	3,06	53,9	13,6
	3,5	350	3,57	58,7	14,7
	4,0	400	4,08	62,5	15,6
	4,5	450	4,59	66,0	16,2
	5,0	500	5,10	69,4	16,7
	5,5	550	5,61	73,3	17,3
	6,0	600	6,12	76,3	17,2
	6,5	650	6,63	79,4	17,3
7,0	700	7,14	82,4	17,7	
24.0	3,0	300	3,06	60,5	14,7
	3,5	350	3,57	64,3	15,9
	4,0	400	4,08	67,6	16,8
	4,5	450	4,59	71,3	17,7
	5,0	500	5,10	75,2	18,5
	5,5	550	5,61	79,3	19,2
	6,0	600	6,12	82,9	19,6
	6,5	650	6,63	86,5	20,1
7,0	700	7,14	89,9	20,6	
27.0	3,0	300	3,06	67,0	14,5
	3,5	350	3,57	73,2	15,9
	4,0	400	4,08	78,7	16,8
	4,5	450	4,59	83,0	17,9
	5,0	500	5,10	86,8	18,9
	5,5	550	5,61	90,3	19,8
	6,0	600	6,12	94,2	19,8
	6,5	650	6,63	97,8	20,3
7,0	700	7,14	101,4	21,2	

Nozzle	psi	GPM	Rad. (ft)
7.0	40	5.1	42
	50	5.8	44
	60	6.5	44
	70	7.0	44
	80	7.6	44
	90	8.1	44
	100	8.5	44
	9.0	40	6.2
50		7.0	47
60		7.8	50
70		8.4	51
80		9.1	52
90		9.7	52
12.0*	100	10.4	53
	40	10.6	41
	50	11.7	48
	60	12.8	48
	70	14.0	49
	80	15.1	51
16.0	90	16.0	51
	100	16.9	52
	40	12.4	42
	50	13.8	46
	60	15.1	49
	70	16.3	49
20.0	80	17.5	50
	90	18.6	53
	100	19.6	55
	40	13.6	43
	50	15.4	48
	60	16.8	52
24.0	70	18.0	54
	80	19.4	57
	90	20.5	56
	100	21.6	58
	40	15.5	46
	50	16.9	52
27.0	60	18.1	56
	70	19.5	60
	80	21.0	63
	90	22.3	65
	100	23.6	67
	40	16.9	45
50	19.2	52	
60	21.2	56	
70	22.6	61	
80	23.9	65	
90	25.3	65	
100	26.6	69	



Optional Adjustment Tool 102-1303

All performance specifications are based on the stated working pressure available at the base of the sprinkler head.  
\*Indicates pre-installed nozzle.



## Specifying Information

TR70XT X XX X

Description	Body	Thread	Nozzle	Optional
TR70XT - TR70XT Series Rotor	P - 127mm (5") Pop-Up	02 - NPT 52 - BSP	7-7.0 12-12.0 9-9.0 16-16.0 20-20.0 24-24.0 27-27.0	E - Effluent

For Example:  
When specifying a 127mm (5") lawn pop-up TR70XT Series Sprinkler with BSP threads and a #12.0 nozzle, you would specify:

TR70XT-P-52-12



# 2001® Series Sprinklers



With an adjustable arc and complete selection of color-coded nozzles, the 2001 Series sprinkler takes you to a new level of convenience in design, installation and maintenance.

## Toro 2001 Series Sprinklers

15-21,7m (48'-71') Radius

### Features

- Arc adjustable from the top (30°-360°)
- 6 main nozzles and 2 inner nozzles provided with each sprinkler
- Screw-in nozzles — no adjustment screw required for retention
- Color-coded nozzle tree, supplied with each sprinkler provides easy identification and installation
- Full 100mm (4") pop-up
- Smart Arc™ memory feature returns arc to previous setting (even if nozzle is turned beyond setting)
- Rubber cover minimizes impact damage
- Standard Check-O-Matic eliminates low-head drainage, keeping laterals charged with water
- Bi-directional planetary water-lubricated gear drive provides extended life
- Snap ring designed for ease of maintenance
- Unique, over-molded wiper seal for greater debris resistance
- Stainless-steel riser available, ideal for sandy applications

### Specifications

- Radius: 15-21,7m (48'-71')
- Flow rate: 21-118 LPM (5.6-31.3 GPM)
- Operating pressure range: 2,8-5,5 Bar (40-80 PSI)
- Recommended operating pressure: 4 Bar (60 PSI)
- 25mm (1") female-threaded inlet (NPT or BSP)
- Nozzle trajectory: 25°
- Pop-up to main nozzle: 95mm (3¾")
- Precipitation rate: 5-16mm/hr (0.20-0.63 in/hr)
- Check-O-Matic maintains 3m (10') elevation change
- Dimensions:
  - Height: 215mm (8½")
  - Exposed surface: 85mm (3⅜")
  - Body diameter: 63,5mm (2½")



(Continued on next page)

# 2001® Series Sprinklers

## Specifying Information

2001

Optional	Arc	Body Thread	Nozzle		Optional
S–Stainless steel	Blank–Adjustable Arc, 30°–360° F–Full-Circle, 360°	Blank–NPT BSP–BSP	6 9 12	15 18 24	E–Effluent Indicator Cap

For Example:  
When specifying a stainless-steel 2001 Series Sprinkler with an adjustable arc, an effluent indicator cap and BSP threads, you would specify:

**S-2001-BSP-E**

### Apex at 4,1 Bar (60 PSI)

Nozzle	25° Maximum Ht. of Spray
6	3,5m (11'6")
9	4,2m (13'10")
12	4,1m (13'5")
15	4,3m (14'0")
18	4,3m (14'2")
24	4,6m (15')

- Gray spreader nozzles used with the 6 and 9 GPM main nozzle.
- Red spreader nozzles used with all other main nozzles.

### 2001 Series Performance Chart — Metric

Bar	kPa	Kg/cm <sup>2</sup>	Nozzle Set 6 ●		Nozzle Set 9 ●		Nozzle Set 12 ●		Nozzle Set 15 ●		Nozzle Set 18 ●		Nozzle Set 24 ●	
			Radius (m)	Flow LPM	Radius (m)	Flow LPM	Radius (m)	Flow LPM	Radius (m)	Flow LPM	Radius (m)	Flow LPM	Radius (m)	Flow LPM
2,75	275	2,80	14,6	21,2	14,9	30,7	15,2	38,6	15,8	47,7	16,5	55,6	17,4	69,3
3,0	300	3,06	14,8	22,4	15,1	32,1	15,2	40,6	16,2	50,2	16,9	58,4	17,6	73,0
3,5	350	3,57	15,3	24,8	15,6	35,1	15,9	44,6	16,8	55,3	17,7	64,2	18,0	80,5
4,0	400	4,08	15,5	26,4	15,8	37,8	16,1	48,2	17,2	59,7	17,9	69,9	18,2	86,5
4,5	450	4,59	15,7	28,1	16,0	40,4	16,3	51,6	17,9	63,9	18,3	74,9	19,1	92,3
5,0	500	5,10	16,0	29,7	16,3	42,9	16,8	54,7	18,4	68,0	18,9	79,7	20,0	98,3
5,5	550	5,61	16,4	31,4	16,7	45,3	17,6	57,4	18,9	72,1	19,8	84,6	20,7	105
6,0	600	6,12	16,7	33,0	17,4	47,3	17,9	60,4	19,1	75,5	20,2	88,7	21,2	109

All performance specifications are based on stated working pressure available at the base of the sprinkler head.

### 2001 Series Performance Chart — English

PSI	Nozzle Set 6 ●		Nozzle Set 9 ●		Nozzle Set 12 ●		Nozzle Set 15 ●		Nozzle Set 18 ●		Nozzle Set 24 ●	
	Feet	GPM	Feet	GPM	Feet	GPM	Feet	GPM	Feet	GPM	Feet	GPM
40	48	5.6	49	8.1	50	10.2	52	12.6	54	14.7	57	18.3
50	50	6.5	51	9.2	52	11.7	55	14.5	58	16.8	59	21.1
60	51	7.1	52	10.2	53	13.0	57	16.1	59	18.9	60	23.3
70	52	7.7	53	11.1	54	14.2	60	17.6	61	20.6	65	25.4
80	54	8.3	55	12.0	58	15.2	62	19.1	65	22.4	68	27.7

All performance specifications are based on stated working pressure available at the base of the sprinkler head.

### 2001 Adjustment Tool



89-4717



# 640 Series Sprinklers



Considered the most durable, heavy-duty commercial sprinkler available, the 640 Series is the traditional, proven veteran for athletic fields and other large commercial applications. It is equipped with a standard rubber cover, five nozzles, 12 arcs and a check valve. A variety of models are available including Valve-In-Head and effluent.

## Toro 640 Series Sprinklers

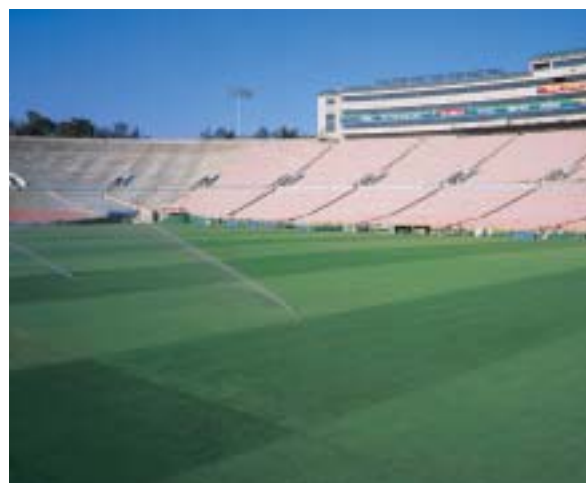
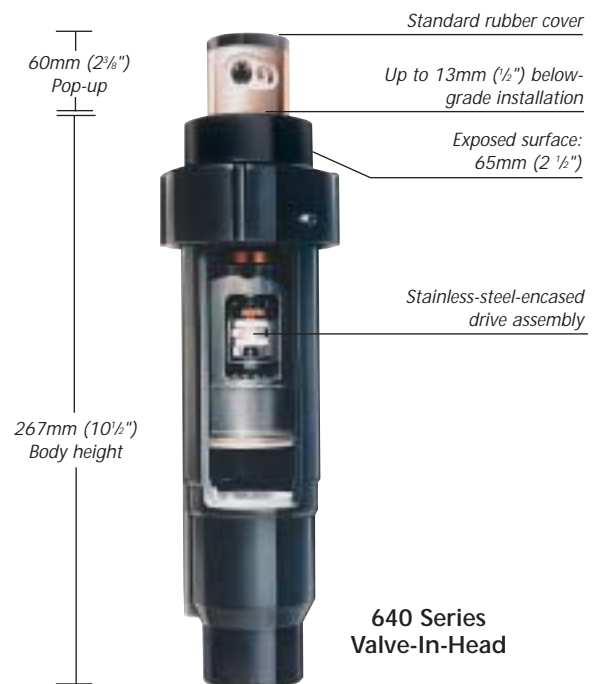
14-20m (47'-67') Radius

### Features

- Selection of 5 nozzles and 12 arcs
- Valve-in-head (normally open hydraulic models)
- Standard rubber cover minimizes impact damage
- Adjustment screw allows up to 25% radius reduction
- Standard check valve prevents low-head drainage, keeping laterals charged with water
- Up to 13mm (1/2") below-grade installation
- Vandal-resistant cap with locking set screw
- Small exposed surface diameter
- Stainless-steel-encased nozzle and drive assembly
- Stainless-steel retraction spring
- Durable engineering plastic, brass and stainless-steel construction
- Gear-drive design for longer life
- Basket filter screen to prevent clogging
- Capable of faster rotation – fast speed performance data available
- 5 year warranty

### Specifications

- Radius: 14-20m (47'-67')
- Flow rate: 23-95 LPM (6.0-25.0 GPM)
- Recommended operating pressure: 2,8-6,2 Bar (40-90 PSI)
- Maximum operating pressure: 7 Bar (100 PSI)
- Pop-up to nozzle: 60mm (2 3/8")
- 25mm (1") female-threaded inlet, NPT or BSP
- Trajectory: 27°
- Dimensions:
  - Exposed surface diameter when buried 13mm (1/2") below grade: 65mm (2 1/2")
  - Body diameter: 65mm (2 1/2")
  - Cap diameter: 83mm (3 1/4")
  - Body height: Check-O-Matic: 230mm (9")  
Valve-in-head: 267mm (10 1/2")
- Check-O-Matic maintains 4,6m (15') elevation change



(Continued on next page)

# 640 Series Sprinklers

## Specifying Information

64X XX XX XXX

Arc	Body Thread	Valve Type	Nozzle	Special Arc	Optional
0-Special Arc	0-NPT	1-NO Valve-	40	045° 148°	E-Effluent Model
1-90°	5-BSP	In-Head	41	060° 173°	
2-180°		2-Check-O-	42	108° 192°	
3-270°		Matic	43	127° 238°	
4-360°			44		

For Example:  
When specifying a 640 Series with a 180° arc, a #42 nozzle, BSP, and a check valve, you would specify:  
**642-52-42**

Apex at 3,5 Bar	
27°	
Nozzle	Maximum Height of Spray
40	3,5m (11'6" @ 50 PSI)
41	4,2m (13'10" @ 50 PSI)
42	4,1m (13'5" @ 50 PSI)
43	5,7m @ 4 Bar (18'8" @ 60 PSI)
44	6,0m @ 5 Bar (19'6" @ 75 PSI)

### 640 Series Performance Chart — Metric

Nozzle	Bar	kPa	Kg/cm <sup>2</sup>	Meters	LPM
40	3,0	300	3,06	14,6	23,6
	3,5	350	3,57	15,3	25,5
	4,0	400	4,08	15,7	27,2
	4,5	450	4,59	16,0	29,0
	5,0	500	5,10	16,2	30,9
	5,5	550	5,61	16,5	32,5
6,0	600	6,12	16,7	34,1	
41	3,0	300	3,06	15,2	36,9
	3,5	350	3,57	16,2	38,8
	4,0	400	4,08	16,4	41,0
	4,5	450	4,59	16,6	43,4
	5,0	500	5,10	16,8	45,8
	5,5	550	5,61	17,1	48,0
6,0	600	6,12	17,3	49,9	
42	3,0	300	3,06	16,2	46,6
	3,5	350	3,57	16,8	49,1
	4,0	400	4,08	17,0	52,2
	4,5	450	4,59	17,2	54,4
	5,0	500	5,10	17,5	56,7
	5,5	550	5,61	17,7	59,7
6,0	600	6,12	17,7	62,5	
43	3,0	300	3,06	17,4	51,7
	3,5	350	3,57	18,0	55,2
	4,0	400	4,08	18,0	58,5
	4,5	450	4,59	18,3	62,0
	5,0	500	5,10	18,7	65,6
	5,5	550	5,61	19,2	69,1
6,0	600	6,12	19,4	72,2	
44	3,0	300	3,06	17,3	65,7
	3,5	350	3,57	18,3	70,8
	4,0	400	4,08	18,5	74,3
	4,5	450	4,59	18,9	79,3
	5,0	500	5,10	19,4	84,3
	5,5	550	5,61	19,8	88,4
6,0	600	6,12	20,2	92,8	

All performance specifications are based on the stated working pressure available at the base of the sprinkler head.

### 640 Series Performance Chart — English

Nozzle	PSI	Feet	GPM
40	40	47	6.0
	50	50	6.7
	60	52	7.3
	70	53	8.0
	80	54	8.6
	90	55	9.2
41	40	48	9.5
	50	53	10.2
	60	54	11.0
	70	55	11.9
	80	56	12.7
	90	57	13.4
42	40	52	12.0
	50	55	12.9
	60	56	14.0
	70	57	14.7
	80	58	15.8
	90	58	16.8
43	40	56	13.2
	50	59	14.5
	60	59	15.7
	70	61	17.0
	80	63	18.3
	90	64	19.4
44	40	55	16.7
	50	60	18.6
	60	61	19.9
	70	63	21.9
	80	65	23.4
	90	67	25.0

All performance specifications are based on the stated working pressure available at the base of the sprinkler head.



# 780 Series



## Toro 780 Series Sprinklers

17–26,5m (55'–87') Radius

### Features

- Adjustable part-circle (30°–330°) and full-circle models available
- Arc adjustment from top of sprinkler
- Full 75mm (3") pop-up clears tall grasses
- Standard stainless steel riser resists scoring from embedded debris
- Nozzles color-coded by radius and flow
- Caps serve as yardage markers or effluent water indicators
- Four standard pressure-regulation settings available to ensure consistently accurate nozzle performance:
  - 3,5, 4,5, 5,5 and 6,9 Bar (50, 65, 80 and 100 psi) (electric)
- Three body styles/activation types available to fit every application:
  - Electric Valve-In-Head
  - Normally Open Hydraulic
  - Valve-In-Head
  - Check-O-Matic
- Manual control at the sprinkler, On-Off-Auto (electric)
- All internal components serviceable from the top of the sprinkler
- Large selection of color-coded nozzles available
- Effluent indicators available. Cap (Part No. 89-8288)



### Specifications

- Radius: 17–26,5m (55'–87')
- Flow rate: 46,5–190 LPM (12.3–50.1 GPM)
- 40mm (1½") NPT female-threaded inlet, BSP and ACME threads available
- Adjustable part-circle (30°–330°) and full-circle models
- Dimensions:
  - Height: 280mm (11")



Model 784



Model 785

### Specifying Information

78 X X X XX X

Arc	Body Threads	Valve Type	Nozzle	Pressure Regulation*
4—Full-circle	0—NPT	1—Normally Open Hydraulic	82 86	5—3,5 Bar (50 psi)
5—Adjustable Part-circle	4—ACME 5—BSP	2—Check-O-Matic 6—Electric	83 87 84 88 85 89	6—4,5 Bar (65 psi) 8—5,5 Bar (80 psi) 1—6,9 Bar (100 psi)

For Example:

When specifying a 780 Series Sprinkler with a 360° arc, NPT threads, #82 nozzle, an electric valve and pressure regulation at 4,5 Bar (65 psi), you would order:

784-06-826

\*Electric models only.

# 780 Series / 880S Series

## 780 Series Performance Chart—Metric

Pressure	Nozzle Set 82 ● (Yellow)		Nozzle Set 83 ● (Blue)		Nozzle Set 84 ● (Brown)		Nozzle Set 85 ● (Orange)		Nozzle Set 86 ● (Green)		Nozzle Set 87 ● (Gray)		Nozzle Set 88 ● (Black)		Nozzle Set 89 ● (Red)	
	● YELLOW	■ YELLOW	● BLUE	■ BLUE	● BROWN	■ BROWN	● ORNG	■ ORNG	● GREEN	■ GREEN	● GRAY	■ GRAY	● BLACK	■ BLACK	● RED	■ RED
Bar kPa kg/cm <sup>2</sup>	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
3,4 340 3,47	16,8	47	17,7	50	18,6	65	19,2	79	19,8	92	21,0	109	22,0	122	22,6	135
4,5 450 4,59	18,3	51	19,5	57	20,4	75	20,7	89	21,7	106	22,3	125	22,9	139	23,5	154
5,5 550 5,61	19,5	56	20,7	62	21,7	84	22,6	98	23,8	117	24,4	140	24,7	157	25,0	171
6,9 690 7,04	20,4	62	21,0	70	22,0	93	23,2	111	24,4	131	25,6	155	26,2	172	26,5	190

Beige Stator

■ Not recommended at this pressure. ● = Main Nozzle ● = Intermediate Nozzle ■ = Inner Nozzle. Radius shown in meters. Sprinkler radius of throw per ASAE standard S398.1.

## 780 Series Performance Chart—U.S.

Pressure	Nozzle Set 82 ● (Yellow)		Nozzle Set 83 ● (Blue)		Nozzle Set 84 ● (Brown)		Nozzle Set 85 ● (Orange)		Nozzle Set 86 ● (Green)		Nozzle Set 87 ● (Gray)		Nozzle Set 88 ● (Black)		Nozzle Set 89 ● (Red)	
	● YELLOW	■ YELLOW	● BLUE	■ BLUE	● BROWN	■ BROWN	● ORNG	■ ORNG	● GREEN	■ GREEN	● GRAY	■ GRAY	● BLACK	■ BLACK	● RED	■ RED
psi	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM
50	55	12.3	58	13.2	61	17.2	63	20.8	65	24.4	69	28.8	72	32.2	74	35.7
65	60	13.4	64	15.0	67	19.8	68	23.6	71	28.1	73	32.9	75	36.8	77	40.6
80	64	14.9	68	16.4	71	22.1	74	25.9	78	30.9	80	36.9	81	41.4	82	45.2
100	67	16.3	69	18.6	72	24.5	76	29.4	80	34.5	84	40.9	86	45.4	87	50.1

Beige Stator

■ Not recommended at this pressure. ● = Main Nozzle ● = Intermediate Nozzle ■ = Inner Nozzle. Radius shown in feet. Sprinkler radius of throw per ASAE standard S398.1.

## 880S Series Performance Chart—Metric

Pressure	Nozzle Set 81 ● (Yellow)		Nozzle Set 82 ● (Blue)		Nozzle Set 83 ● (Brown)		Nozzle Set 84 ● (Orange)		Nozzle Set 85 ● (Green)		Nozzle Set 86 ● (Gray)		Nozzle Set 87 ● (Black)		Nozzle Set 88 ● (Red)	
	● ORANGE	■ RED	● GRAY	■ RED	● RED	■ RED	● RED	■ RED	● BEIGE	■ RED	● BEIGE	■ RED	▲ RED	■ RED	▲ RED	■ RED
Bar kPa kg/cm <sup>2</sup>	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
3,4 340 3,47	16,8	54	18,3	71	18,6	79	19,8	95	19,8	114	20,1	118	20,1	118	20,1	130
4,5 450 4,59	17,4	62	19,2	81	20,4	90	21,0	109	22,3	132	22,3	137	22,3	137	22,3	150
5,5 550 5,61	18,0	70	20,1	91	21,0	101	22,3	122	23,5	147	23,5	153	23,5	155	23,5	169
6,9 690 7,04	18,3	78	21,0	102	21,7	113	23,5	137	25,3	165	25,3	172	25,3	174	25,6	190

Beige Stator

■ Not available in electric models. Radius shown in meters. Toro recommends the use of a 30mm (1 1/4") swing joint at flows over 95 LPM (25 GPM). Sprinkler radius of throw per ASAE standard S398.1. ● = Main Nozzle ● = Intermediate Nozzle ■ = Inner Nozzle ▲ = Inner Nozzle w/o Restrictor

## 880S Series Performance Chart—U.S.

Pressure	Nozzle Set 81 ● (Yellow)		Nozzle Set 82 ● (Blue)		Nozzle Set 83 ● (Brown)		Nozzle Set 84 ● (Orange)		Nozzle Set 85 ● (Green)		Nozzle Set 86 ● (Gray)		Nozzle Set 87 ● (Black)		Nozzle Set 88 ● (Red)	
	● ORANGE	■ RED	● GRAY	■ RED	● RED	■ RED	● RED	■ RED	● BEIGE	■ RED	● BEIGE	■ RED	▲ RED	■ RED	▲ RED	■ RED
psi	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM
50	55	14.3	60	18.7	61	20.8	65	25.1	65	30.2	66	31.3	66	31.3	66	34.4
65	57	16.5	63	21.4	67	23.9	69	28.9	73	34.8	73	36.1	73	36.3	73	39.7
80	59	18.4	66	24.1	69	26.7	73	32.3	77	38.9	77	40.4	77	40.9	77	44.7
100	60	20.6	69	27.0	71	29.9	77	36.3	83	43.7	83	45.4	83	46.1	84	50.2

Beige Stator

■ Not available in electric models. Radius shown in feet. Toro recommends the use of a 30mm (1 1/4") swing joint at flows over 95 LPM (25 GPM). Sprinkler radius of throw per ASAE standard S398.1. ● = Main Nozzle ● = Intermediate Nozzle ■ = Inner Nozzle ▲ = Inner Nozzle w/o Restrictor

**Specifying Information**

8XXS
X
X
XX
X
X

Body Inlet	Arc	Body Threads	Valve Type	Nozzle	Pressure Regulation*	Optional
8— 40mm (1 1/2")	4—Full-circle 5—Adjustable Part-circle	0—NPT 4—ACME 5—BSP	1—Normally Open Hydraulic 2—Check-O-Matic 6—Electric	<b>880S</b> 81 82 83 84 85 86 87 88	6—4,5 Bar (65 psi) 8—5,5 Bar (80 psi) 1—6,9 Bar (100 psi)	E—Effluent Model D—Decoder

For Example:  
When specifying a full-circle 880S Series Sprinkler with NPT threads, #82 nozzle, an electric valve and pressure regulation at 4,5 Bar (65 psi), you would order:

884S-06-826

\* Electric only.





## Toro 880S Series Sprinklers

17–29,6m (55'–97') Radius

### Features

- Three-nozzle configuration provides better distribution uniformity, nozzle flexibility and system efficiency
- Constant-velocity drive provides reliable rotation speed from sprinkler to sprinkler
- Less than half the amperage - run more sprinklers simultaneously or reduce wiring costs
- With nearly three times the surge protection, the Spike-Guard™ solenoid keeps the system running
- Closed-case design uniquely defends against impact and keeps internal parts free from debris contamination
- Steady piston valve opening and closing reduces pressure shock to the sprinkler's hydraulic system
- Fewer parts save time and money
- Removable rock screen - easy to service while it stops debris damage from occurring
- Indestructible stainless steel valve seat and communication tube never need replacing
- Debris-resistant nozzles eliminate clogging with a built-in stream straightener and inner/intermediate nozzles
- Over-molded DuraSeal™ riser has the right amount of flush on pop-up and pop-down to avoid permanent damage from debris
- DebrisBuster™ traps sediment before damage to the valve or seat occurs

### Specifications

- Radius: 16,7–25,6m (55'–84')
- Flow rate: 54,1–190 LPM (14.3–50.2 GPM)
- Arc: full-circle (360°) and adjustable part-circle (30°–330°)
- Recommended operating pressure range: 4,5–7 Bar (65–100 psi)
- Maximum pressure: 10,3 Bar (150 psi)
- Minimum pressure: 2,8 Bar (40 psi)
- Activation options:
  - Electric Valve-In-Head
  - Normally Open Valve-In-Head
  - Check-O-Matic (maintains 11,2 m [37'] of elevation change)
- Spike-Guard™ Electric Valve-In-Head solenoid: 24 V ac, 50/60 Hz
  - Inrush:
    - 50 Hz: 0.17 Amps
    - 60 Hz: 0.12 Amps
  - Holding:
    - 50 Hz: 0.15 Amps
    - 60 Hz: 0.10 Amps
- Decoder EVIH solenoid:
  - 24 V ac, 50/60 Hz
  - Inrush:
    - 50 Hz: 0.47 Amps
    - 60 Hz: 0.40 Amps
  - Holding:
    - 50 Hz: 0.32 Amps
    - 60 Hz: 0.24 Amps
- Nozzle variations: eight (81, 82, 83, 84, 85, 86, 87 and 88)
- Three in-line nozzles, rotating stream pattern
- Back nozzle capable
- Precipitation rates:
  - Minimum: 10mm/hr (.39"/hr)
  - Maximum: 19mm/hr (.74"/hr)
- Stator variations: 1
- Inlet size: 40mm (1½") NPT, BSP or ACME
- Trajectory: 25°



- Apex at 5,5 Bar (80 psi):
  - 81 nozzle: 4,7m @ 13,1m (15' 4" @ 43')
  - 82 nozzle: 5,2m @ 13,7m (17' 0" @ 45')
  - 83 nozzle: 5,2m @ 14m (17' 1" @ 46')
  - 84 nozzle: 5,4m @ 15,2m (17' 6" @ 50')
  - 85 nozzle: 5,7m @ 15,5m (18' 6" @ 51')
  - 86 nozzle: 6,2m @ 16,2m (20' 4" @ 53')
  - 87 nozzle: 6,3m @ 16,8m (20' 8" @ 55')
  - 88 nozzle: 6,4m @ 17,4m (20' 11" @ 57')
- Body height: 290mm (11½")
- Body diameter: 190mm (7½")
- Pop-up to nozzle: 80mm (3¼")
- Weight: 1,73 Kg (3.81 lbs.)



# 690 Series

## Toro 690 Series Sprinklers 26,5–33m (87'–108') Radius

### Features

- Two standard pressure-regulation settings available to ensure consistently accurate nozzle performance, regardless of elevation:
  - 5,5 Bar and 6,9 Bar (80 psi and 100 psi) (electric)
- Three body styles/activation types available to fit every application:
  - Electric Valve-In-Head
  - Normally Open Hydraulic
  - Valve-In-Head
  - Check-O-Matic
- Manual control at the sprinkler, On-Off-Auto (electric)
- Bowl-vented discharge (atmospheric) minimizes the differential pressure required for regulation and ensures positive valve closure (electric)
- Time-proven, gear-drive design
- All internal components serviceable from the top of the sprinkler
- Large selection of nozzles available
- Durable engineering plastic and stainless steel construction



### Specifications

- Radius: 26,5–33,0m (87'–108')
- Flow rate: 193–311 LPM (51.0–82.2 GPM)
- 40mm (1½") NPT female-threaded inlet
- 9 arc selections:
  - 90°, 150°, 165°, 180°, 195°, 210°, 360° fixed arcs
  - 60°/120° full-circle, two-speed
  - 180°/180° full-circle, two-speed
 (Two speed models run half speed in non-overlap areas to provide balanced water application)
- Rubber cover kit option: Part No. 690-01
- Dimensions:
  - Height: 405mm (16")

### 690 Series Performance Chart—Metric

Base Pressure			Nozzle Set 90		Nozzle Set 91		Nozzle Set 92	
Bar	kPa	Kg/cm <sup>2</sup>	Rad.	LPM	Rad.	LPM	Rad.	LPM
5,5	550	5,61	26,5	193	29,3	232	30,5	280
6,9	690	7,04	27,4	216	30,5	278	32,9	311

*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	Rad.	GPM	Rad.	GPM	Rad.	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

69 X 0 X X X X

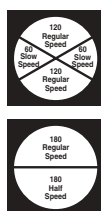
Arc	Valve Type	Nozzle	Pressure Regulation*
1—90°	A—150°	90	8—5,5 Bar (80 psi)
2—180°	B—165°	91	
4—Full-Circle	C—195°	92	1—6,9 Bar (100 psi)
6—Full-Circle, 2-speed (60°-120°)	D—210°	6—Electric	
8—Full-Circle, 2-speed (180°-180°)			

For Example:

When specifying a 690 Series Sprinkler with a 180° arc, an electric valve-in-head, #91 nozzle and pressure regulation at 5,5 Bar (80 psi), you would order:

**692-06-918**

*\*Electric models only.*



*Two-speed designs offer an economical alternative in non-over-lapping areas while providing balanced water application.*





# Valves



# Valves

## Designed and Built to Perform

Your sprinkler system is only as good as its valves. That's why Toro valves are designed for rugged reliability, even under demanding dirty water conditions.

Toro makes the right valve for every application. From light residential use to heavy-duty industrial needs, we've got you covered.



- Toro EZ-Flo® II Valves**
- Flow range: 1-114 LPM (0.25-30 GPM)
  - Operating pressure: 0,7-6,9 Bar (10-100 PSI maximum)
  - Size: 20 and 25mm (¾" and 1")



- Toro EZ-Flo® Plus Valves**
- Flow range: 1-114 LPM (0.25-30 GPM)
  - Operating pressure: 0,7-10 Bar (10-150 PSI maximum)
  - Size: 25mm (1")

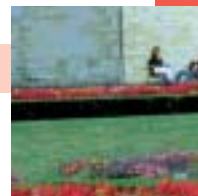


- Toro 254/264 Series Valves**
- Flow range: 19-170 LPM (5-45 GPM)
  - Operating pressure: 1,4-10 Bar (20-150 PSI maximum)
  - Size: 20 and 25mm (¾" and 1")



- Toro 250/260 Series Valves**
- Flow range: 19-151 LPM (5-40 GPM)
  - Operating pressure: 1,4-10 Bar (20-150 PSI maximum)
  - Size: 25mm (1")

## Residential



		EZ-Flo® II	EZ-Flo® Plus	254/264	250/260	P-150	P-220	252	Brass 220
Conditions	Electrically Activated Systems	X	X	X	X	X	X	X	X
	Hydraulically Activated Systems				X			X	X
	Effluent Water		X	X	X	X	X	X	X
Sizes	¾" (20mm)	X		X					
	1" (25mm)	X	X	X	X	X	X	X	X
	1¼" (32mm)								X
	1½" (40mm)					X	X	X	X
	2" (50mm)					X	X	X	X
	2½" (65mm)								X
	3" (75mm)						X		X
	Configuration	Angle					X	X	X
Globe		X	X	X	X	X	X	X	X
Inlet/Outlet	Threaded (Female)	X	X	X	X	X	X	X	X
	Slip		X						
	Male x Male	X	X	X					
	Male x Barb		X	X					
Features	Manual Flow Control	X	X	X	X	X	X	X	X
	Pressure Regulation					X	X		X
	Internal Bleed	X	X			X	X		X
	External Bleed (Flush)		X	X	X	X	X	X	X
Body Construction	ABS				X			X	
	PVC		X						
	Glass-filled Nylon	X		X		X	X		
	Glass-filled Polypropylene		X						
	Brass								X

\*2½" and 3" only.

NEW



- Toro P-150 Series Valves**
- Flow range: 19-568 LPM (5-150 GPM)
  - Operating pressure: 1,4-10 Bar (20-150 PSI maximum)
  - Size: 25, 40 and 50mm (1", 1½" and 2")



- Toro P-220 Series Plastic Valves**
- Flow range: 19-852 LPM (5-225 GPM)
  - Operating pressure: 0,7-15 Bar (10-220 PSI maximum)
  - Size: 25, 40, 50 and 75mm (1", 1½", 2" and 3")



- Toro 252 Series Valves**
- Flow range: 19-568 LPM (5-150 GPM)
  - Operating pressure: 1,4-10 Bar (20-150 PSI maximum)
  - Size: 25, 40 and 50mm (1", 1½" and 2")



- Toro 220 Series Brass Valves**
- Flow range: 19-681 LPM (5-180 GPM)
  - Operating pressure: 1,4-15 Bar (20-220 PSI maximum)
  - Size: 25 to 75mm (1" to 3")

# EZ-Flo® II Series “Jar-Top” Residential Valves

## EZ-Flo® II Series Plastic Valves\*

### 20 and 25mm (¾" and 1") Electric Models

#### Features

- Threaded jar-top bonnet system with heavy-duty cap ring (no screws) for fast and easy servicing
- Globe configuration
- Male/Female thread BSP: ¾" and 1"
- Optional flow control (FC)
- Internal manual bleed
- Body and bonnet is Nylon reinforced with fiberglass (30%)
- Captive solenoid (the plunger is retained in the solenoid)
- Slow, anti-water hammer closing
- Double-beaded diaphragm in thermoplastic rubber
- Working pressure: 0,7 to 6,9 bars (10-100 PSI)
- Solenoid: 24 V/50 Hz
  - Inrush current: 0,34 Amp.
  - Holding current: 0,20 Amp.
- Floating bleed tube allows thermal expansion without affecting performance
- Easily serviced without removal from the system

#### Specifications

- Flow range:
  - 1- 114 LPM (0.25-30.0 GPM)
- Operating pressure: 0,7-6,9 Bar (10-100 PSI)
- Body styles (Globe valve):
  - 20mm (¾") male/female NPT/BSP
  - 25mm (1") male/female BSP
- Solenoid: 24 V a.c.
  - Inrush: 0,4 Amps, 11,50 VA
  - Holding: 0,2 Amps, 5,75 VA

#### Dimensions:

- Female globe: 130 x 75 x 101mm  
(5 1/8" x 3" x 4") (H x W x L)
- Male globe: 130 x 75 x 127mm  
(5 1/8" x 3" x 5") (H x W x L)



EZ-Flo® II Series Valves



Effluent water solenoid assembly and tag (RW60-Kit) available.



DC latching solenoid assembly

#### Options Available

- Reclaimed water purple solenoid assembly and tag (RW60-Kit)
- DC latching solenoid assembly

EZ-Flo II Friction Loss Data - Metric (Bar)						
LPM Flow						
Size	20	40	60	80	100	120
20mm	0,44	0,39	0,25	0,35	0,57	0,87
25mm	0,37	0,43	0,34	0,30	0,40	0,54

Note: For optimum sprinkler performance when designing a system, calculate total friction loss to ensure sufficient downstream pressure.

### Specifying Information

<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 2px 5px;">EV</div> <div style="border: 1px solid black; padding: 2px 5px;">XX</div> <div style="border: 1px solid black; padding: 2px 5px;">XX</div> </div>			
Model	Flow Control	Body Threads	Size
EV - EZ Flo II valve	0 - without Flow Control 2 - with Flow Control	2 - Male x Male, BSP 3 - Female, BSP	3 - 20mm (¾") 4 - 25mm (1")

For Example:  
When ordering a male x male, 25mm (1") EZ Flo II Series valve with BSP threads, flow control and a 50 Hz solenoid, you would specify:

**EV-22-54**

\*Available in select markets only



# EZ-Flo® Plus Series “Jar-Top” Plastic Valves



EZ-Flo® II / EZ-Flo® Plus Series “Jar-Top” Plastic Valves

## Toro EZ-Flo® Plus Series Plastic Valves

### 25mm (1") Electric Model

#### Features

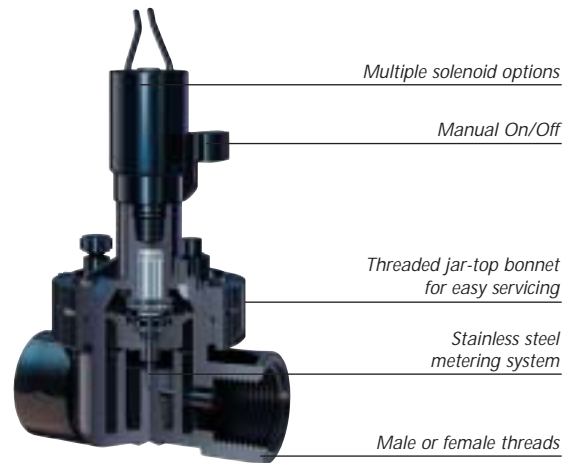
- Threaded jar-top bonnet system with heavy-duty cap ring (no screws) for fast and easy servicing
- Tough, double-beaded Santoprene® diaphragm for a longer life and to prevent leaking
- Resilient Buna-N diaphragm seat seal
- Manual internal bleed
- Manual external bleed (flush mode)
- Full stainless-steel metering system
- Floating bleed tube allows thermal expansion without affecting performance
- Heavy-duty PVC, glass-filled polypropylene and stainless-steel construction (corrosion and UV-resistant)
- Encapsulated solenoid with captured hex plunger and spring
- Easily serviced without removal from the system
- Less solenoid models available
- Extended 3 year warranty

#### Specifications

- Flow range:
  - 25mm (1"): 1-114 LPM (0.25-30.0 GPM)
- Operating pressure: 0,7-10 Bar (10-150 PSI)
- Body styles: (Globe valve):
  - Male and female models available
  - 25mm (1")
  - NPT/BSP
  - Less solenoid models available
- Solenoid: 60 Hz (24 V.a.c.)
  - Inrush: 0.4 Amps, 11,50 VA
  - Holding: 0.2 Amps, 5,75 VA
- Solenoid: 50 Hz (24 V.a.c.)
  - Inrush: 0.34 Amps, 11,50 VA
  - Holding: 0.2 Amps, 5,75 VA
- Dimensions:
  - Female globe: 130 x 75 x 101mm (H x W x L)  
(5 1/8" x 3" x 4") (H x W x L)
  - Male globe: 130 x 75 x 140mm (H x W x L)  
(5 1/8" x 3" x 5 1/2") (H x W x L)



EZ-Flo® Plus Series Valve



Size	Type	LPM Flow					
		1	19	38	57	76	114
25mm (1")	Inline	0,14	0,24	0,28	0,21	0,23	0,43

Flow rates are recommended not to exceed 0,35 Bar loss. Values are listed in Bar.

Size	Type	GPM Flow					
		.25	5	10	15	20	30
1" (25mm)	Inline	2.0	3.5	4.0	3.0	3.3	6.2

Note: For optimum sprinkler performance when designing a system, calculate total friction loss to ensure sufficient downstream pressure. Flow rates are recommended not to exceed 5 PSI loss. Values are listed in PSI.

#### Options Available

- Reclaimed water purple solenoid assembly and tag
- DC latching solenoid\* assembly

\*The maximum pressure for a valve that utilizes a DC latching solenoid is 8 bar (120 PSI).



Effluent water solenoid assembly and tag (RW60-Kit) available.



DC latching solenoid assembly

#### Specifying Information – EZ-Flo Plus Valves

EZ X XX X4				
Threads	Flow Control	Body Threads	Solenoid	Size
F-NPT P-BSP	0-w/o F.C. 2-with F.C.	0-Slip 1-M x M, NPT 2-M x M, BSP 3-Female, BSP 5-Male x Barb 6-Female, NPT	0-60Hz 5-50Hz 6-None (BSP only)	4-25mm (1")

For Example:  
When ordering a Male x Male, BSP thread, 25mm (1") EZ-Flo Plus Valve with flow control and a 50Hz solenoid, you would order:

**EZP-22-54**

Note: Some model combinations are not available. Consult your local Toro distributor for availability in select markets.

# 254/264 Series

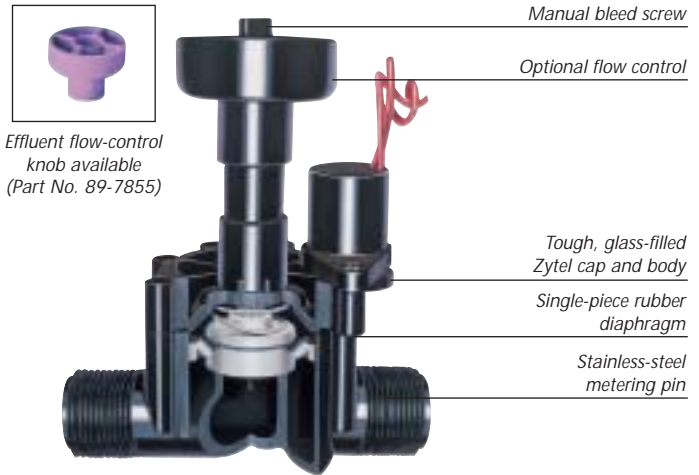
Extremely rugged residential/commercial valves designed for reliable performance.

## Toro 254/264 Series Plastic Valves

### 20 and 25mm (3/4" and 1") Electric Models

#### Features

- Male-threaded inlet and male-threaded or barbed outlet available
- Barbed insert models for use with poly pipe
- Manual flow control: adjustable to zero flow (254 Series)
- Manual bleed screw
- Energy-efficient solenoid
- 45cm (18") lead wires for easy-access installation
- Self-cleaning, stainless-steel metering pin (electric models)
- Stainless-steel diaphragm differential spring for smooth, positive closing
- Single-piece rubber diaphragm for reliable, leak-free valve closing
- Tough, glass-filled Zytel® cap and body provides stability under pressure
- Zytel Super Tough and stainless-steel construction for exceptional durability
- Available with or without flow control



254 Male x Male Valve

#### Specifications

##### 25mm (1") Models

- Recommended flow range: 19-170 LPM (5-45 GPM)
- Operating pressure: 1.4-10 Bar (20-150 PSI)
- Burst pressure safety rating: 52 Bar (750 PSI)
- Body styles: Globe valve
  - 2X4-06: 25mm (1") male-threaded inlet and outlet
  - 2X4-16: 25mm (1") male-threaded inlet, 25mm (1") insert (barbed) outlet
- Solenoid: 50/60 Hz (24 V.a.c.)
  - Inrush: 0.30 Amps, 7.20 VA
  - Holding: 0.20 Amps, 4.80 VA
- Dimensions:
  - 254 Series (with flow control): 152 x 115mm (H x W) (6" x 4 1/2") (H x W)
  - 264 Series (without flow control): 115 x 115mm (H x W) (4 1/2" x 4 1/2") (H x W)

##### 20mm (3/4") Models

- Recommended flow range: 2-57 LPM (0.5-15.0 GPM)
- Operating pressure: 1-10 Bar (15-150 PSI)
- Burst pressure safety rating: 52 Bar (750 PSI)
- Body style: Globe valve
  - 20mm (3/4") male-threaded inlet and outlet
- Solenoid: 50/60 Hz (24 V.a.c.)
  - Inrush: 0.25 Amps, 6.00 VA
  - Holding: 0.19 Amps, 4.50 VA
- Dimensions: 76 x 102mm (H x W) (3" x 4" H x W)

Flow (LPM)	2	25	50	75	100	125
20mm (3/4") Electric	<0,1	0,1	0,4	0,7		
25mm (1") Electric		0,1	0,2	0,2	0,3	0,4

\*Values are listed in Bar. For kPa values, multiply tabular values by 100. For Kg/cm<sup>2</sup> values, multiply tabular values by 1,02. Flow rates are recommended not to exceed 0,35 Bar loss

Flow (GPM)	0.5	1	3	5	10	15	20	25	30
3/4" Electric	<1.0	<1.0	<1.0	1.5	3.0	6.5			
1" Electric				2.0	2.0	2.3	3.1	4.0	5.4

Note: For optimum sprinkler performance when designing a system, calculate total friction loss to ensure sufficient downstream pressure. Flow rates are recommended not to exceed 5 PSI loss.

#### Specifying Information – 254/264 Series Plastic Valves

<span style="border: 1px solid black; padding: 2px;">2X4</span> <span style="border: 1px solid black; padding: 2px; margin-left: 10px;">X6</span> <span style="border: 1px solid black; padding: 2px; margin-left: 10px;">OX</span>		
Flow Control	Body Threads	Size
5-w/ F.C. 6-w/o F.C.	0-Male Thread x Male Thread-NPT 1-Male Thread x Barb-NPT	3-20mm (3/4") 4-25mm (1")
For Example: When specifying a 25mm (1") electric 264 Series Valve without flow control and with a male thread x 25mm (1") insert, you would specify: <span style="background-color: #cccccc; padding: 2px 10px;">264-16-04</span>		

20mm (3/4") available with male x male thread without flow control only.

# 250/260 Series



Highly versatile residential/commercial valves for use in light-to-moderate debris water. Three activation types for easy design, installation and maintenance.

## Toro 250/260 Series Plastic Valves

### 25mm (1") Electric, Normally Open Hydraulic and Pin-Type Hydraulic Models

#### Features

- Manual flow control: adjustable to zero flow (250 Series)
- Manual bleed screw
- Energy-efficient solenoid
- 45cm (18") lead wires (electric models) for easy-access installation
- Self-cleaning, stainless-steel metering pin (electric models)
- Stainless-steel diaphragm differential spring for smooth, positive closing
- Single-piece rubber diaphragm for reliable, leak-free valve closing
- Durable engineering plastic and stainless-steel construction for exceptional durability
- Tough, glass-filled Zytel® cap provides stability under pressure
- Available with or without flow control

#### Specifications

- Recommended flow range: 19-151 LPM (5-40 GPM)
- Operating pressure: 1,4-10 Bar (20-150 PSI)
- Burst pressure safety rating: 52 Bar (750 PSI)
- Body style:
  - 25mm (1") female-threaded inlet and outlet
- Solenoid: 50/60 Hz (24 V.a.c.)
  - Inrush: 0.30 Amps, 7.20 VA
  - Holding: 0.20 Amps, 4.80 VA
- Dimensions:
  - 250 Series (with flow control): 152 x 114mm (H x W) (6" x 4½") (H x W)
  - 260 Series (without flow control): 114 x 114mm (H x W) (4½" x 4½") (H x W)

Effluent flow-control knob available (Part No. 89-7855)



260-06-04



250-01-04



250-06-04

250/260 Series Friction Loss Chart – Metric Data (Bar)					
Flow (LPM)	20	40	60	80	100
25mm Hydraulic	<0,1	0,1	0,1	0,2	0,3
25mm Electric		0,3	0,3	0,3	0,4

\*Values are listed in Bar. For kPa values, multiply tabular values by 100. For Kg/cm<sup>2</sup> values, multiply tabular values by 1,02. Flow rates are recommended not to exceed 0,35 Bar loss.

250/260 Series Friction Loss Chart – English Data (PSI)						
Flow (GPM)	5	10	15	20	25	30
1" Hydraulic	<1.0	1.0	2.0	3.0	4.0	6.0
1" Electric		4.4	4.5	5.0	5.0	7.0

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.

#### Specifying Information – 250/260 Series Plastic Valves

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Flow Control	Activation Type	Thread
5-w/ Flow Control 6-w/o Flow Control	0-Pin-Type Hydraulic 1-Normally Open Hydraulic 6-Electric	0-NPT 5-BSP
For Example: When specifying a 25mm (1") BSP 250 Series Valve with flow control and pin-type hydraulic activation, you would specify: <span style="background-color: #cccccc; padding: 2px 10px;">250-00-54</span>		



## P-150 Series

1", 1½" and 2" in-line globe/angle valves for light commercial applications. The P-150 Series valves are the "value" work horses of plastic valves.

### Toro P-150 Valve Series Plastic Valves 25, 40 and 50mm (1", 1½" and 2") Electric Models

#### Features:

- Heavy-duty glass-filled nylon (GFN) and stainless-steel construction
- Globe/Angle configuration
- Rated at 10 Bars (150 psi) with flows from 20 to 568 LPM (5 to 150 GPM)
- Water is filter controlled to resist contamination of solenoid port. Filter serviceable from top of valve.
- Slow closing design reduce water hammer
- Non-rising, manual flow control handle; adjustable to zero flow
- Manual internal bleed
- Rugged Santoprene, double beaded diaphragm
- Encapsulated injection molded solenoid with a captive hex plunger
- Forward flow design for precise pressure regulation
- Precise pressure control option with compact EZReg<sup>®</sup> dial-design technology (factory or field installed — no need to remove solenoid)
- Pressure regulates in electric and manual modes, serviceable under pressure
- No external tubing for either electric or pressure regulating models
- Easily serviced without system removal
- Proven, encapsulated, injection-molded solenoid with captured hex plunger and spring
- Purple solenoid models available for effluent applications
- Accepts latching solenoids
- Positive O-ring seal on inlet plug
- Unique 3-way SS bonnet screws accept Phillips or hex driver tools

#### Electrical Specification:

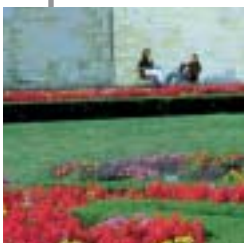
- Solenoid: 24 V.a.c.
- Inrush volt-amp: 24 V.a.c. – 11.5 VA
- Inrush current: .4A
- Holding volt-amperes: 24 V.a.c. – 5.75 VA
- Holding current: .2A



P-150 Series

#### Operating Specifications:

- Flow range: 19-568 LPM (5-150 GPM)
- Pressure range: 1.4-10 Bar (20-150 PSI)
- Body styles:
  - Globe/angle valve — 25, 40 and 50mm (1", 1½" and 2") female threads
- Solenoid: 60 Hz 24 V.a.c.
  - Inrush: 0,40 amps, 11,50 VA
  - Holding: 0,20 amps, 5,75 VA
- Solenoid: 50 Hz 24 V.a.c.
  - Inrush: 0,34 amps, 11,50 VA
  - Holding: 0,20 amps, 5,75 VA
- Dimensions:
  - 25mm—171mm x 92mm (1" — 6¾" H x 3⅝" W)
  - 40mm—184mm x 92mm (1½" — 7¼" H x 3⅝" W)
  - 50mm—241mm x 156mm (2" — 9½" H x 6⅛" W)



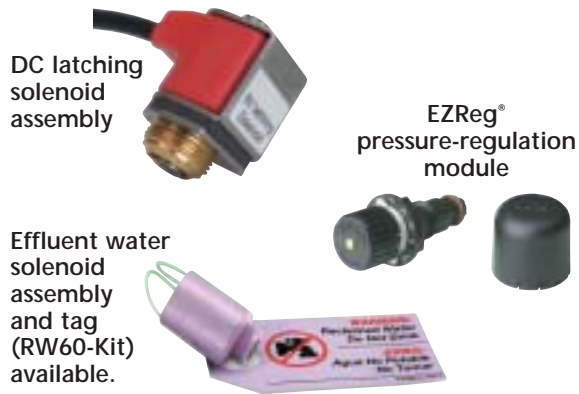


# P-150 Series



### Optional Accessories:

- DC latching solenoid assembly
- 24 VDC solenoid – R576804
- 24 V.a.c., 60Hz solenoid – R811-24VACG
- 24 V.a.c., 50Hz solenoid – 588403
- Reclaimed water purple solenoid assembly and tag (RW60-Kit)
- 24 V.a.c. potted solenoid – 89-9580
  - 60cm (24") wire leads
  - 50/60Hz
  - Inrush: 0.37A, 8.8 VA
  - Holding: 0.3A, 7.2 VA
- EZR-30: 0.3-2 Bar (5-30 psi) pressure regulation module
- EZR-100: 0.3-7 Bar (5-100 psi) pressure regulation module
- BSP threads
- Less solenoid versions



DC latching solenoid assembly

EZReg® pressure-regulation module

Effluent water solenoid assembly and tag (RW60-Kit) available.

Specifying Information			
<span style="border: 1px solid black; padding: 2px;">P150</span> <span style="border: 1px solid black; padding: 2px; margin-left: 10px;">23</span> <span style="border: 1px solid black; padding: 2px; margin-left: 10px;">X</span> <span style="border: 1px solid black; padding: 2px; margin-left: 10px;">X</span>			
Type	Configuration	Solenoid	Size
P150— P-150 Series Plastic Valve	23—BSP, Electric	5—50 Hz Solenoid 6—Less Solenoid	4—25 mm (1") 6—40 mm (1½") 8—50 mm (2")
For Example: When specifying a 50 mm (2") P-150 Series Plastic Valve with BSP threads and 50 Hz solenoid, you would specify: <span style="background-color: #cccccc; padding: 2px 10px; font-weight: bold;">P150-23-58</span>			



# P-220 Series

External manual bleed screw

Ergonomic, manual flow control handle (removeable)

EZReg® pressure-regulating module or port plug

Standard Schrader valve for operating pressure readings

Anchored studs and nut design

Tough GFN bonnet for 15 bar (220 PSI) rating

Globe/angle body for 25mm (1") to 75mm (3") sizes

Aerospace locknut

Solenoid with captured hex plunger and spring

Debris skirt

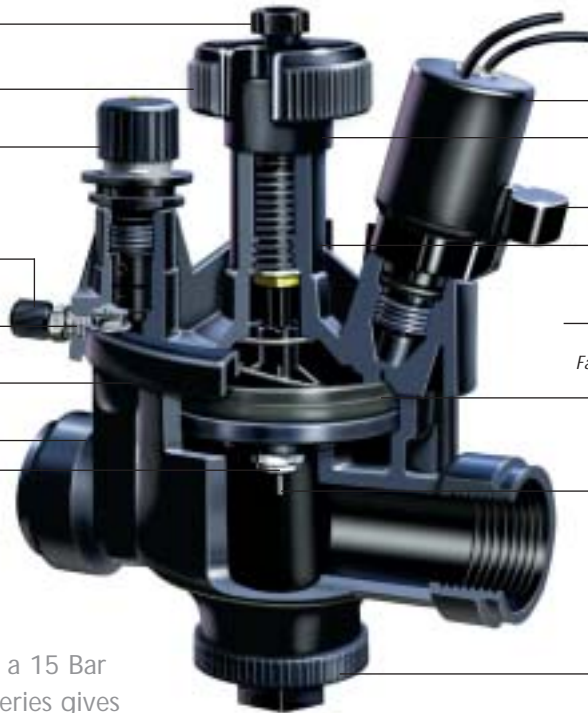
Internal manual bleed

Spare nut

Brass flow control stem on 50mm (2") and 75mm (3") (not illustrated)

Fabric reinforced 52 bar (750 PSI) rated, double-beaded diaphragm

Self-cleaning, stainless-steel metering rod



O-ring seal cap plug

With superior regulation and a 15 Bar (220 PSI) rating, the P-220 Series gives you brass strength at a value price.

## Toro P-220 Series Plastic Valves

25, 40, 50 and 75mm (1", 1½", 2" and 3")  
Electric and Pressure-Regulating Models

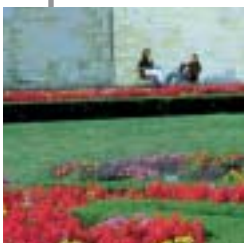
### Features

- 15 Bar (220 PSI) maximum pressure rating
- Tough, 33% glass-filled nylon (GFN) and stainless-steel construction
- Globe/Angle configuration
- Rugged, reinforced bonnet design withstands tough and high-pressure applications
- Precise pressure control option with compact EZReg® dial-design technology (factory or field installed — no need to remove solenoid)
- 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 for either electric or pressure-regulating models
- Internal downstream manual bleed keeps valve box dry and allows for manually setting pressure regulation.



P-220 Series

- External manual bleed for system flushing
- Ergonomic manual flow control: adjustable to zero flow
- Flow control independent of solenoid
- Tough, double-beaded, fabric-reinforced rubber diaphragm rated at 52 Bar (750 PSI) burst pressure
- Self-aligning bonnet to ensure correct installation
- Stainless-steel spare nut for convenience
- Skirt on flow control for debris resistance
- Self-cleaning, stainless-steel metering rod
- Brass flow control stem — 50mm and 75mm (2" and 3") models
- Positive O-ring seal on inlet plug prevents leaks
- Low-flow capability down to 20 LPM (5 GPM) with EZReg®
- Easily serviced without system removal
- Proven, encapsulated, injection-molded solenoid with captured hex plunger and spring
- Purple solenoid models available for effluent applications
- Accepts latching solenoids
- Low-power requirement for longer wire runs
- 45cm (18") lead wires for easy installation
- Extended 5-year warranty





## Specifications

- Recommended flow range:
  - 25mm—19–114 LPM (1" — 5–30 GPM)
  - 40mm—114–265 LPM (1½" — 30–70 GPM)
  - 50mm—300–530 LPM (2" — 80–140 GPM)
  - 75mm—568–852 LPM (3" — 150–225 GPM)
- Operating pressure:
  - Electric — 0,7–15 Bar (10–220 PSI)
  - Pressure regulating models:
    - Outlet: EZR-30  
0,3–2,0 Bar, ± 0,2 Bar (5–30 PSI, ± 3 PSI)
    - Outlet: EZR-100  
0,3–7,0 Bar, ± 0,2 Bar (5–100 PSI, ± 3 PSI)
    - Inlet: 1,0–15 Bar (15–220 PSI)
    - Minimum pressure differential  
(between inlet and outlet): 0,7 Bar (10 PSI)
  - Burst pressure safety rating: 52 Bar (750 PSI)
- Body styles:
  - Globe/angle valve — 25mm, 40mm, 50mm, 75mm  
(1", 1½", 2" and 3") female threads
- Solenoid: 60 Hz 24 V.a.c.
  - Inrush: 0,40 amps, 11,50 VA
  - Holding: 0,20 amps, 5,75 VA
- Solenoid: 50 Hz 24 V.a.c.
  - Inrush: 0,34 amps, 11,50 VA
  - Holding: 0,20 amps, 5,75 VA
- Dimensions:
  - 25mm—171mm x 92mm (1" — 6¾" H x 3⅝" W)
  - 40mm—184mm x 92mm (1½" — 7¼" H x 3⅝" W)
  - 50mm—241mm x 156mm (2" — 9½" H x 6⅛" W)
  - 75mm—273mm x 156mm (3" — 10¾" H x 6⅛" W)

DC latching solenoid assembly



EZReg® pressure-regulation module



Effluent water solenoid assembly and tag (RW60-Kit) available.



## Options Available

- DC Latching solenoid assembly
- 24 V DC solenoid assembly (R576804)
- 24 V.a.c. 60 Hz solenoid assembly (R811-24VACG)
- 24 V.a.c. 50 Hz solenoid assembly (588403)
- Reclaimed water purple solenoid assembly and tag (RW60-Kit)
- 24 V.a.c. potted solenoid assembly (89-9580)
  - 50–60 Hz, 60cm (24") leads
  - Inrush: 0,37 amps, 8,80 VA
  - Holding: 0,30 amps, 7,20 VA
- EZR-30 — 0,3–2,0 Bar (5–30 PSI) pressure-regulation module
- EZR-100 — 0,3–7,0 Bar (5–100 PSI) pressure-regulation module
- NPT/BSP threads
- Less solenoid versions —  
25mm, 40mm, 50mm, 75mm (1", 1½", 2" and 3")

(Continued on next page)

## Specifying Information

P220 XX X X

Type	Configuration	Solenoid	Size
P220— P220 Series Plastic Valve	23—BSP, Electric 24—BSP, Pressure-Regulated (5–100 PSI) 26—NPT, Electric 27—NPT, Pressure-Regulated (5–100 PSI)	0—60 Hz Solenoid 5—50 Hz Solenoid 6—Less Solenoid	4—25mm (1") 6—40mm (1½") 8—50mm (2") 0—75mm (3")

For Example:  
When specifying a 25mm (1") P-220 Series plastic electric, 50 Hz solenoid BSP threads, pressure-regulating valve, you would specify:

**P220-24-54**



Note: Less solenoid available in 25, 40, 50 and 75mm (1", 1½", 2" and 3") electric NPT and BSP versions only.

# P-220 Series

P-220 Series Friction Loss Data – Metric – LPM Flow																							
Size	Configuration	40	60	80	100	120	140	160	180	200	250	300	350	400	450	500	550	600	700	800	900	1000	1100
25mm (1")	Globe	0,29	0,25	0,25	0,26	0,32	0,43	0,55	0,69	0,82													
	Angle	0,29	0,25	0,21	0,20	0,21	0,29	0,38	0,49	0,61													
40mm (1.5")	Globe					0,12	0,14	0,18	0,23	0,28	0,43	0,62	0,85	1,11									
	Angle					0,09	0,10	0,13	0,17	0,22	0,34	0,48	0,65	0,85									
50mm (2")	Globe											0,14	0,20	0,25	0,32	0,40	0,48	0,54					
	Angle											0,08	0,12	0,15	0,19	0,24	0,29	0,32					
75mm (3")	Globe																	0,18	0,24	0,32	0,41	0,52	0,65
	Angle																	0,14	0,19	0,26	0,34	0,43	0,54

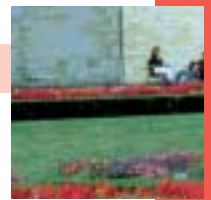
Flow rates are recommended not to exceed 0,35 Bar loss. Values shown in Bar.  
 For kPa values, multiply tabular values by 100. For Kg/cm<sup>2</sup> values, multiply tabular values by 1,02.

P-220 Series Friction Loss Data – English – GPM Flow																								
Size	Configuration	5	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	180	200	225	250	275	300	
1"	Globe	4.00	4.20	3.20	4.10	7.20	10.90																	
	Angle	4.00	4.20	3.10	2.70	4.80	7.90																	
1½"	Globe				1.60	2.30	3.60	5.20	7.00	9.20	11.70	14.40	17.50											
	Angle				1.30	1.60	2.80	4.00	5.50	7.10	9.00	11.00	13.30											
2"	Globe									2.10	2.70	3.30	4.00	4.80	5.60	6.50	7.50	8.05						
	Angle									1.20	1.60	2.00	2.40	2.80	3.30	3.90	4.40	5.10						
3"	Globe																2.50	3.00	4.10	5.30	6.70	8.30	10.10	
	Angle																1.90	2.40	3.30	4.30	5.50	6.90	8.50	

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.



# 252 Series



Extremely versatile, rugged large residential/commercial valves designed to provide a wide array of options for a variety of water conditions.

## Toro 252 Series Valves

- 25-50mm (1"-2") Electric,
- 40 and 50mm (1½" and 2") N. O. Hydraulic
- 40 and 50mm (1½" and 2") Debris Resistant
- 40mm (1½") Pin-Type Hydraulic Models

### Features

- Globe/Angle configuration
- Stainless-steel seat 40 and 50mm (1½" and 2") models
- Fabric-reinforced diaphragm: 40 and 50mm (1½" and 2") models
- Rubber diaphragm: 25mm (1") model
- Manual flow control: adjustable to zero flow
- Manual bleed screw
- Energy-efficient solenoid
- 61cm (24") solenoid lead wires (40 and 50mm (1½" and 2" electric) or 45cm (18") lead wires (25mm and 1" electric models) for easy-access installation
- Self-cleaning, stainless-steel metering pin (electric models)
- Stainless-steel diaphragm differential spring for smooth, positive closing
- Single-piece diaphragm for reliable, leak-free valve closing
- Removable, self-flushing, stainless-steel screen – 120 mesh (contamination-resistant models)
- Tough, glass-filled Zytel® cap provides stability under pressure
- Durable engineering plastic and stainless-steel construction for exceptional durability

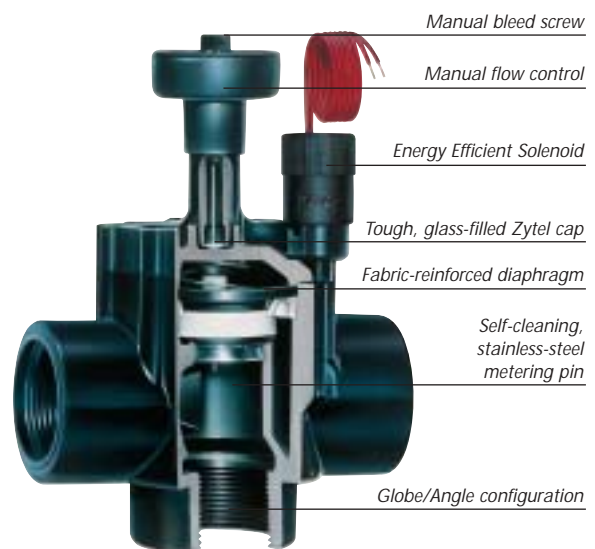
### Specifications

- Recommended flow range:
  - 25mm – 19-76 LPM (1" – 5-20 GPM)
  - 40mm – 114-303 LPM (1½" – 30-80 GPM)
  - 50mm – 227-568 LPM (2" – 60-150 GPM)
- Operating pressure: 1,4-10 Bar (20-150 PSI)
- Burst pressure safety rating: 52 Bar (750 PSI)
- Body styles:
  - Globe/Angle valve – 25, 40 or 50mm (1", 1½" or 2") female-threaded inlet and outlet
  - NPT/BSP threads available
- Solenoid 25, 40 and 50mm (1", 1½" and 2") valve: 50/60 Hz (24 V.a.c.)
  - Inrush: 0.30 Amps, 7.20 VA
  - Holding: 0.20 Amps, 4.80 VA
- Dimensions:
  - 25mm Models – 171 x 114mm (H x W) (1" – 6¾" x 4½") (H x W)
  - 40mm Models – 197 x 152mm (H x W) (1½" – 7¾" x 6") (H x W)
  - 50mm Models – 241 x 178mm (H x W) (2" – 9½" x 7") (H x W)

(Continued on next page)



Effluent flow-control knob available (Part No. 89-7855)



252 Electric Valve

P-220 Series / 252 Series

# 252 Series

Flow (LPM)	25	50	75	100	125	150	175	200	250	300	400	500
25mm (1") Electric - Angle	0,2	0,26	0,31	0,32	0,40	0,51						
25mm (1") Electric - Globe	0,2	0,30	0,34	0,43	0,53	0,65						
40mm (1½") Electric - Angle				0,09	0,08	0,10	0,12	0,16	0,21	0,33	0,52	0,70
40mm (1½") Electric - Globe				0,10	0,11	0,14	0,18	0,23	0,32	0,47	0,84	1,20
40mm (1½") Hydraulic - Angle				0,07	0,08	0,10	0,10	0,13	0,25	0,34	0,56	0,9
40mm (1½") Hydraulic - Globe				0,07	0,09	0,14	0,18	0,23	0,34	0,44	0,78	1,0
50mm (2") Electric - Angle									0,07	0,13	0,23	0,30
50mm (2") Electric - Globe									0,14	0,17	0,28	0,45
50mm (2") Hydraulic - Angle									0,07	0,13	0,23	0,30
50mm (2") Hydraulic - Globe									0,14	0,17	0,27	0,43

\*Values are listed in Bar

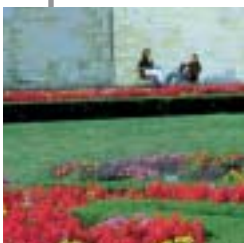
For kPa values, multiply tabular values by 100. For Kg/cm<sup>2</sup> values, multiply tabular values by 1,02

Flow (GPM)	5	10	20	25	30	40	50	60	70	80	100	120
1" Electric - Angle	2.0	3.5	4.5	4.5	5.0	7.5						
1" Electric - Globe	3.0	4.0	5.0	6.0	7.0	9.5						
1½" Electric - Angle				1.5	1.0	1.5	2.0	3.0	3.0	5.0	7.0	9.0
1½" Electric - Globe				1.5	1.0	2.0	3.0	4.0	5.0	7.0	11.0	15.0
1½" Hydraulic - Angle				1.0	1.0	1.5	1.5	3.0	4.0	5.0	7.0	11.0
1½" Hydraulic - Globe				1.0	1.0	2.0	3.0	4.0	5.5	6.5	10.5	13.5
2" Electric - Angle								1.0	1.0	2.0	3.0	4.0
2" Electric - Globe								2.0	2.0	2.5	3.5	5.5
2" Hydraulic - Angle								1.0	1.0	1.5	2.0	3.0
2" Hydraulic - Globe								1.5	2.0	2.0	3.5	5.0

	25mm (1")		40mm (1½")		50mm (2")	
	NPT	BSP	NPT	BSP	NPT	BSP
Electric	X	X	X	X	X	X
N. O. Hydraulic			X	X	X	X
Pin-Type Hydraulic			X	X		
Contamination-Resistant (Electric)			X	X	X	X

## Specifying Information – 252 Series Plastic Valves

<span style="border: 1px solid black; padding: 2px;">252</span> <span style="border: 1px solid black; padding: 2px; margin-left: 10px;">XX</span> <span style="border: 1px solid black; padding: 2px; margin-left: 10px;">XX</span>		
Activation Type	Thread	Size
06–25mm (1") Electric 20–40mm (1½") Pin-Type Hydraulic 21–Normally Open Hydraulic 25–40–50mm (1½"-2") Electric, Debris Resistant 26–40–50mm (1½"-2") Electric	0–NPT 5–BSP	4–25mm (1") 6–40mm (1½") 8–50mm (2")
For Example: When specifying a 40mm (1½") BSP 252 Series electric debris-resistant valve, you would specify: <span style="background-color: #cccccc; padding: 2px 10px; display: inline-block;">252-25-56</span>		



## 220 Series



The 220 Series brass valve from Toro, the name says it all...15 Bar (220 PSI) toughness.

### Toro 220 Series Brass Valves

25–75mm (1"–3")

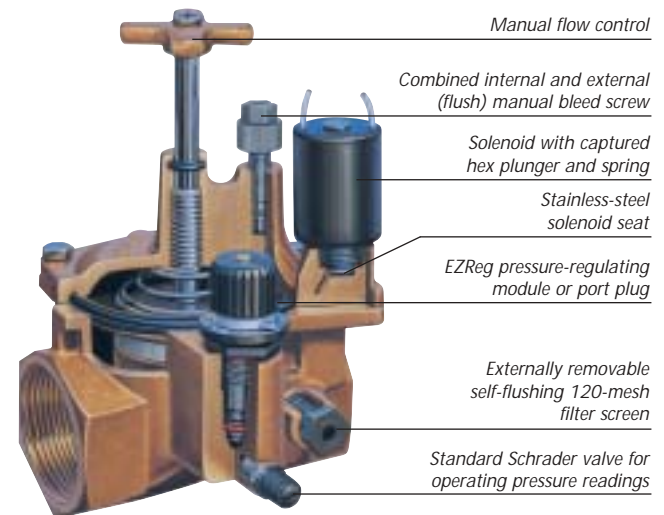
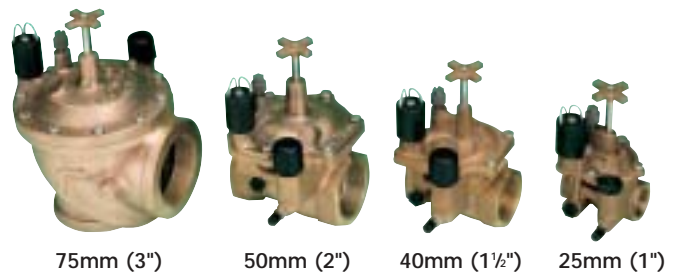
*Electric and Pressure-Regulating Models*

#### Features

- 15 Bar (220 PSI) maximum pressure rating
- Brass and stainless-steel construction
- Pressure regulates in electric and manual modes
- Forward-flow design for more precise regulation
- Anti-vandal dust cap on pressure-regulating models
- Standard Schrader valve for operating pressure readings
- No external tubing
- Flow control independent of solenoid
- Diaphragm stem guide
- 45cm (18") lead wires for easy installation (standard)
- Low-power requirement for longer wire runs
- Less solenoid options for maximum flexibility
- Easily removable, self-flushing, 120-mesh, stainless steel filter screen
- Precise pressure control option with compact EZ Reg<sup>®</sup> dial design (serviceable under pressure – no need to remove solenoid)
- Internal downstream manual bleed keeps valve box dry
- External manual bleed for system flushing
- Manual flow control: adjustable to zero flow
- Tough, double-beaded, fabric-reinforced rubber diaphragm rated at 50 Bar (750 PSI) burst pressure
- Stainless steel diaphragm support ring for reduced wear
- Easily serviced without system removal
- Proven, encapsulated, injection-molded solenoid with captured hex plunger and spring
- Extended 5 year warranty

#### Specifications

- Recommended flow range:
  - 25mm — 19–95 LPM (1" — 5–25 GPM)
  - 32mm — 75–189 LPM (1¼" — 20–50 GPM)
  - 40mm — 75–227 LPM (1½" — 20–60 GPM)
  - 50mm — 150–303 LPM (2" — 40–80 GPM)
  - 65mm — 227–681 LPM (2½" — 60–180 GPM)
  - 75mm — 303–681 LPM (3" — 80–180 GPM)
- Operating pressure:
  - Electric — 0,7–15 Bar (10–220 PSI)
- Pressure regulating models:
  - Outlet:
    - 0,3–2,0 Bar (5–30 PSI), ± 0,2 Bar (3 PSI) (EZR-30)
    - 0,3–7,0 Bar (5–100 PSI), ± 0,2 Bar (3 PSI) (EZR-100)
  - Inlet: 1–15 Bar (15–220 PSI)
  - Minimum pressure differential (between inlet and outlet): 0,7 Bar (10 PSI)



220 Series

- Body styles:
  - Globe valve — 25, 32, 40, 50mm (1", 1¼", 1½", 2") female threads
  - Angle valve — 65, 75mm (2½", 3") female threads
  - NPT/BSP threads available
- Solenoid: 60Hz 24 V.a.c. (standard)
  - Inrush: 0,40 amps, 11,50 VA
  - Holding: 0,20 amps, 5,75 VA
- Solenoid: 50 Hz 24 V.a.c. (standard)
  - Inrush: 0,34 amps, 11,50 VA
  - Holding: 0,20 amps, 5,75 VA
- Dimensions:
  - 25mm — 146 x 127mm (1" — 5¾" H x 5" W)
  - 32mm — 165 x 152mm (1¼" — 6½" H x 6" W)
  - 40mm — 165 x 152mm (1½" — 6½" H x 6" W)
  - 50mm — 191 x 178mm (2" — 7½" H x 7" W)
  - 65mm — 223 x 216mm (2½" — 8¾" H x 8½" W)
  - 75mm — 223 x 216mm (3" — 8¾" H x 8½" W)

(Continued on next page)

# 220 Series



DC latching solenoid assembly

Effluent water solenoid assembly and tag (RW60-Kit) available.



EZReg<sup>®</sup> pressure-regulation module

## Options Available

- DC Latching solenoid assembly
- 24 V DC solenoid assembly (R576804)
- 24 V.a.c. 60 Hz solenoid assembly (R811-24VACG)
- 24 V.a.c. 50 Hz solenoid assembly (588403)
- Effluent water solenoid assembly and tag (RW60-Kit)
- 24 V.a.c. (50/60Hz) potted solenoid assembly (89-9580)
  - 60cm (24") leads
  - Inrush: 0,37 amps, 8,80 VA
  - Holding: 0,30 amps, 7,20 VA
- NPT/BSP threads
- Less solenoid versions 25, 40, 50 and 75mm (1", 1½", 2" and 3")
- EZR-30 0,3-2,1 Bar (5-30 PSI) pressure-regulation module
- EZR-100 0,3-7 Bar (5-100 PSI) pressure-regulation module

Specifying Information		
220 XX X X		
Configuration	Solenoid	Size
21—Hydraulic 23—BSP, Electric 24—BSP, Pressure-Regulated (5-100) 26—NPT, Electric 27—NPT, Pressure-Regulated (5-100)	0—60 Hz Solenoid 5—50 Hz Solenoid 6—Less Solenoid	4—25mm (1") 5—32mm (1½") 6—40mm (1½") 8—50mm (2") 9—65mm (2½") 0—75mm (3")
For Example: When specifying a 25mm (1") BSP pressure-regulated, 220 Series Brass Valve with 50 Hz solenoid, you would specify: <b>220-24-54</b>		

Note: Less solenoid available in 25, 40, 50 and 75mm (1", 1½", 2" and 3") electric NPT and BSP versions only. 25, 40 and 50mm (1", 1½" and 2") — globe configuration. 65 and 75mm (2½" and 3") — angle configuration.

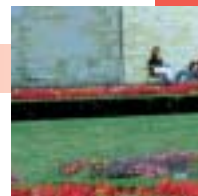
Model - Electric	25	50	75	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200	1400
25mm (1")	0,15	0,13	0,17	0,31	0,41	0,48														
32mm (1½")			0,38	0,42	0,47	0,51	0,56	0,61	0,88	1,03										
40mm (1½")			0,32	0,33	0,36	0,37	0,42	0,47	0,55	0,64	0,79	1,02								
50mm (2")					0,9	0,14	0,15	0,19	0,24	0,35	0,44	0,51	0,59	0,75	1,00					
65mm (2½")								0,15	0,16	0,16	0,17	0,17	0,19	0,24	0,33	0,40	0,46			
75mm (3")									0,16	0,16	0,17	0,17	0,19	0,24	0,33	0,40	0,43	0,46	0,49	0,53
<b>Model - Hydraulic</b>																				
25mm (1")	0,01	0,07	0,17	0,31	0,41	0,48														
32mm (1½")				0,17	0,21	0,25	0,30	0,35												
40mm (1½")				0,07	0,12	0,17	0,19	0,24	0,33											
50mm (2")					0,03	0,07	0,07	0,08	0,15	0,20	0,31	0,41	0,48	0,57	0,73					

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.

Model - Electric	5	10	15	20	30	40	50	60	70	80	100	120	150	170	180	200	250	300	350	
1" (25mm)	2.0	2.5	1.5	2.5	5.5	8.9														
1¼" (32mm)				4.4	4.7	5.1	5.5	5.8	7.2											
1½" (40mm)				3.9	4.2	4.6	4.9	5.2	5.5	7.2										
2" (50mm)					1.0	2.0	2.0	2.5	3.0	3.5	6.0	7.5	10.0	12.0	14.0					
2½" (65mm)								2.0	2.2	2.3	2.4	2.5	3.0	4.0	4.5	5.5	7.0			
3" (75mm)									2.2	2.4	2.5	3.0	4.0	4.5	5.5	6.5	7.0	7.5		
<b>Model - Hydraulic</b>																				
1" (25mm)	<1	<1	1.5	2.5	5.5	7.0														
1¼" (32mm)				2.0	2.7	3.7	4.8	6.0	8.0											
1½" (40mm)				<1	1.5	2.5	3.0	4.5	6.0	8.0										
2" (50mm)					<1	1.0	1.1	1.5	2.5	3.0	5.5	7.0	10.0	11.5	14.5					

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 5 PSI loss. Values shown in PSI.





## Effluent Water Indicator

### 89-7855

- Lavender flow-control knob for 254/264, 250/260 and 252 Series valves



## Solenoids

### DCLS

- DC latching solenoid for Toro valves used with EZ-Flo® II, EZ-Flo® Plus, P-150, P-220 or 220 Series valves



### 89-9580

- Potted solenoid assembly for P-150, P-220 and 220 Series valves
- 24 V.a.c., 0.37 amp, 8.80 VA inrush, 0.30 amp, 7.20 VA holding
- 50–60 Hz, 60cm (24") leads



### R576804

- 24 VDC solenoid assembly



### R811-24VACG

- Solenoid assembly for EZ-Flo® II, EZ-Flo® Plus, P-150, P-220 and 220 Series valves
- Captive hex plunger features
- 24 V.a.c.
- 60 Hz, 45cm (18" leads)



### 588403

- Solenoid assembly for EZ-Flo® II, EZ-Flo® Plus, P-150, P-220 and 220 Series valves
- Captive hex plunger features
- 24 V.a.c.
- 50 Hz, 45cm (18" leads)



## RW60-Kit

- Lavender solenoid with warning tag for EZ-Flo Plus, P-150, P-220 and 220 Series valves
- Captive hex plunger features
- 24 V.a.c., 0.40 amp inrush, 0.20 amp holding



## EZReg® Pressure-regulation Options



### EZR-30 and EZR-100

- Pressure-regulator module for use with P-150, P-220 and 220 Series valves
- Precise pressure control with dial-design
- EZR-30: 0.3–2.0 Bar (5–30 PSI)
- EZR-100: 0.3–7.0 Bar (5–100 PSI)

## Actuators



### 2-Way Conversion Actuator Model 284-60-00

- Operates pin-type hydraulic valves with electric controllers.

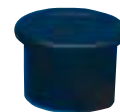
### 3-Way Conversion Actuator Model 286-66-01

- Operates normally open hydraulic valves with electric controllers.
- Inrush current: 0.37 amps at 24 V.a.c., 50/60 Hz
- Holding current: 0.30 amps at 24 V.a.c., 50/60 Hz

### 3-Way Manual Actuator Model 286-61-01

- Provides manual operation of normally open hydraulic valves.

## Covers\*



### Manual Actuator Model 850-02

- Allows mounting of 3-way manual actuators (Model 286-61-01). When mounted onto a 102mm (4") PVC sleeve, provides easy access for manual operation of pin-type and normally open valves.

## Valve Accessories



### Model 850-00

- Use with 102mm (4") PVC pipe sleeve for access to manual, automatic and 3-way conversion actuator (Model 286-66-01) valves. Suited for locating and accessing manual drain valves.

### Manifold Tees\* Model 850-70 Female

- Allows for easy manifolding of all Toro 25mm (1") male-threaded valves.

### Model 850-71

- Allows for easy manifolding of all Toro 25mm (1") female-threaded valves.

### Drain Valve\* Model 290-02

- For use in areas where 25mm (1") lateral lines are drained after each watering cycle.

Refer to current Parts Breakout Book (Form No. 490-3043) for all available repair tools and accessories.

\*Metric data for reference only.

# 470 Series Quick Coupler Valves



## Quick Coupling Valves

470 Series Quick Coupling Valves provide frequently watered areas with localized access to the mainline water supply.

### Features

- Provides a range of flows to meet all performance requirements
- One or two-piece (474 only) valves with heavy-duty brass construction
- Single-lug and ACME thread key connections
- Metal and vinyl locking and non-locking covers
- Locking effluent cover
- Hose swivel provides 360° movement without hose tangling

Flow (LPM)	35	50	75	100	125	150	175	225	275	325	375
Model 473	0,1	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

\*Values are listed in Bar

For kPa values, multiply tabular values by 100

For Kg/cm<sup>2</sup> values, multiply tabular values by 1,02

Flow (GPM)	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

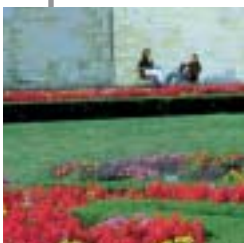
Note: For optimum sprinkler performance when designing a system, be sure to calculate total friction loss to ensure sufficient downstream pressure.

## Specifying Information Quick Coupler Keys and Accessories

Model Number	Inlet Size	Description
463-01	20mm (¾")	13mm (½") Female, 20mm (¾") Male, ¾" Single Lug Key, w/½" Top Pipe Thread Outlet
464-01	25mm (1")	20mm (¾") Female, 25mm (1") Male, 1" Top Pipe Thread Outlet w/Internal ¾" NPT Threads
464-02	25mm (1")	25mm (1") Female, Single Lug Coupler Key
464-03	25mm (1")	25mm (1") Acme Thread Coupler Key, Top Pipe Thread Outlet
466-01	40mm (1½")	32mm (1¼") Female, 40mm (1½") Male, Single Lug Coupler Key
477-00		20mm (¾") NPT x 20mm (¾") MHT Hose Swivel
477-01		25mm (1") NPT x 20mm (¾") MHT Hose Swivel
477-02		25mm (1") NPT x 25mm (1") MHT Hose Swivel
491-02		Key for Locking Cover

## Specifying Information Quick Coupler Valves

Model Number	Description
473-00	20mm (¾") Single lug, Quick Coupler w/Standard Metal Cover
474-00	25mm (1") Standard Cover
474-01	25mm (1") Two-piece, Single Lug, Quick Coupler w/Vinyl Cover
474-03	25mm (1") One-piece, Single Lug, Quick Coupler w/Vinyl Locking Cover
475-00	25mm (1") IPT x 32mm (1¼") Standard Cover
475-01	25mm (1") IPT x 32mm (1¼") Vinyl Cover
476-00	40mm (1½") Standard Cover
476-01	40mm (1½") Vinyl Cover
474-21	2-Piece, 25mm (1") Single Lug, Vinyl Cover
491-02	Key for Locking Cover
474-04	1-Piece, 25mm (1") Quick Coupler w/Effluent Locking Cover
474-24	2-Piece, 25mm (1") Single Lug, Quick Coupler Lavender, w/Effluent Locking Cover
474-44	1-Piece, 25mm (1") Single Lug, Quick Coupler w/Acme Thread Quick Coupler and Lavender, w/Effluent Locking Cover
476-04	1-Piece, 40mm (1½") Quick Coupler w/Effluent Locking Cover





# Small Turf Controllers



# Small Turf Controllers

## Flexibility and Ease of Use

Toro's controller family continues to grow, with innovative features and accessories that make installations and programming easier... such as modular station counts, remote control operation, and wireless rainsensors.

Have another look – you'll like what you see.



Electronic Hose End Tap Timer



Remote™ 1000  
Remote™ 3000

Toro TRCP8+ "Transmitter"

Remote™ Valve Controller Series



DDC™ Outdoor Controller

DDC Indoor Controller

4, 6 or 8 Stations - Electric



## Residential

# Small Turf Controllers



	Tap Timer	Remote™ 1000/3000	DDC	GreenKeeper® Modular	Vision II	Custom Command	
Operation	Hybrid				X	X	
	Solid-state	X	X	X	X	X	
Features	Stations	1	1	4, 6, 8	2, 4, 6, 8, 10, 12	6, 9, 12, (15, 18, 21, 24)*	12, 15, 18, 24, 36, 48
	Independent Programs		1	3	3	2	4
	Start Times		1	3	4	3	16
	Outdoor/Indoor	OD	OD/ID	OD/ID	OD/ID	OD/ID	OD/ID
	Water Budgeting			X	X	X	X
	Electric Circuit Breaker			X	X	X	X
	Battery Powered	X	X				

\*15-24 stations when using ProgramLink™ feature.



Wireless  
RainSensor™



Wired  
RainSensor™



GreenKeeper Modular Indoor  
or Outdoor Controllers  
2, 4, 6, 8, 10 or 12 Stations —Electric



Vision II Plus Controllers  
6, 9 or 12 Stations — Electric



Custom Command Controllers  
12, 15, 18, 24, 36 or 48 Stations  
— Electric

# RainSensor™ Series

For all residential applications, the wireless RainSensor automatically shuts off water when it rains. Coupled with the water saving features offered on Toro controllers, the RainSensor takes total water management a step further. For varying climates, RainSensor models include sensors for not only rain, but freeze as well. Traditional wired model also available.

## RainSensor™ Series\*

*residential, commercial*

### Features

- Versatile mounting options (one-piece Quick-Clip™ gutter bracket included – no special tools)
- Wired model includes 7,6m (25') of weather and UV resistant cable
- Compatible with almost any controller

### Wireless Model Only

- Simple mounting with side/snap-on cover for added protection
- Multi-functional receiver
  - Large LCD provides visual sensor status
  - Selectable water conservation modes (to delay resumption of irrigation)
  - Smart Bypass™ allows for system override at any time and switches back on automatically
  - Remaining battery life indicator
- Signal strength indicator/scale
- Selectable rain shut-off indexes at 3, 6, 13, and 20mm (1/8", 1/4", 1/2", and 3/4") of rain
- Extended 3-year warranty

### Specifications (Wireless Model)

- Operating temperature: -28.9°C to 48.9°C (-20°F to 120°F)
- Housing material: Weather and UV-resistant engineered polymer
- FCC, IC, ACA, UL, CUL, CE and C-Tick approved

### Transmitter

- Transmitting range: Up to 152m (500')
- Sensor: maintenance-free hygroscopic disks; adjustable rain sensitivity 3-20mm (1/8" to 3/4")
- Power source: 2 lithium coin cells (CR2032-3V)



**NEW**

Plug-in transformer

### Receiver

- Factory set to Normally Closed (N.C.); can be set to Normally Open (N.O.), 3A @ 24 V ac
- Power: 22-28 V ac/VDC, 100mA

### Options

#### Digital Freeze Sensor

- Reduces vegetation damage and accidents
- Fully integrated into the wireless unit
- Current outdoor temperature displayed on LCD
- Adjustable freeze shutoff point (1,7- 7,2°C or 35-45°F) an industry first



Specifying Information	
Model	Description
TRS	Toro Wired RainSensor
TWRS	Toro Wireless RainSensor
TWRS-I	Toro Wireless Rain Sensor (International Version)
TWRFS	Toro Wireless Rain/Freeze Sensor
TWRFS-I	Toro Wireless Rain/Freeze Sensor (International Version)

RainSensor is a trademark of The Toro Company.

\*Patents pending



Wireless Transmitter

# Electronic Tap Timer



A convenient battery-operated timer for control of hose-end irrigation applications.

## Toro Electronic Tap Timer

### Features

- Battery-operated, weather-resistant controller, with built-in valve
- Connects directly to an outdoor water tap or filter
- Removable faceplate for simple programming while unit is installed
- Large, easy-to-read LCD display
- 5-key touchpad operation
- Convenient 24-hour clock
- Seven-day "Select-A-Day" calendar
- Up to 6 start times per day
- Automatic or manual functions
- Manual count-down mode (from 8 hours to 5 minutes)
- External ON/OFF button
- Summer/Winter key used for "daylight savings" adjustment
- 2-minute program back-up when batteries are temporarily removed

### Specifications

- Three 1.5 V ("AA") Alkaline batteries (not included)
- Typical flow rate at 2 Bar (30 PSI); 15 LPM (4 GPM)
- Operating pressure: 1,4 – 8,0 Bar (20 – 116 PSI)



Electronic Tap Timer  
Model #55700



# Remote™ 1000 Controller

## Battery Controller/ Remote Control Programmer

Technology so advanced, it's simple. The waterproof Toro Remote Series saves time and money with installation ease - no trenching or field wiring.

## Toro Remote™ 1000 Valve Controller Series

*TR1000 – Manually Programmed Unit*

### Features

- Fully encapsulated unit and battery pack for reliable, water-resistant operation
- Simple programming – 3 watertight buttons
- LED lights confirm program input and verify operation
- Low-profile design; 38mm (1½") – fits in all valve boxes
- Modular design allows for easy field programming – simply remove the top module from valve box for easy access to the programming buttons
- Lowest power consumption of similar controllers
- International icon graphics with English captions for easy programming and manual operation
- Run-time programmed in real time for maximum flexibility
- Watering interval settings of 12 hour, 24 hour, 48 hour or 7 days
- Delay-start feature allows unit to be programmed for night-time automatic irrigation
- Program information retained during battery change
- Default program allows for quick set-up
- Adapters available for most brands of automatic irrigation control valves
- 2 year controller warranty - 1 year warranty on Toro encapsulated TBAT10 battery

### Specifications

- 4 irrigation cycle options; twice per day, once per day, once per two days and once per 7 days
- Run time: 1 minute to 23 hours, 59 minutes – programmed in real-time
- Delay start: 0 hours, 4 hours, 8 hours or 12 hours
- Retains program for up to 2 minutes without battery installed
- Default program; 15 minutes of irrigation per day available first time battery module installed
- 6 VDC custom battery or standard 9 VDC battery housing
- Dimensions, 76 x 63 x 38mm (3" x 2½" x 1½")



Remote™ 1000 –  
Shown with  
9-Volt Battery

- Pressure limit, 10 Bars (150 PSI)
- Operating temperature, 0° to 50°C (32° to 122°F)
- Weight: Remote 150g (5¼ ounces),  
Battery Module 40g (1½ ounces)
- Fits Toro irrigation valve series EZ-Flo® II, EZ-Flo® Plus, P-150, P-220, 220, 252 and other manufacturer's valves with special adapters
- CE and CUL approved

### Specifying Information

Model	Description
TR1000-9V TR3000-9V TRCP8+	Remote 1000 Hand-Programmable Unit Remote 3000 InfraRed-Programmable Unit Multilingual, Upload/Download Remote Control Programmer
TVA12 TVA15 TVA18 TVA20 TBAT10 TBAT9VDC	Adapts all Irritrol®, Griswold®, Hit®, Galcon®, Bermad®, Toro P-150, P-220, 220, EZ-Flo® II and EZ-Flo® Plus valves Adapts Rain Bird® DV valves Adapts Toro 252 valves, 38mm and 50mm (1½" and 2") Adapts Nelson® valves Sealed 6 VDC battery unit for Remote 1000/3000 9 VDC battery housing







## Toro Remote™ 3000 Valve Controller Series

### TR3000 – InfraRed Programmed Unit

#### Features –

*the same as TR1000 Model plus...*

- InfraRed programming with the Toro TRCP8+
  - Accepts 1 of 8 programs from the TRCP8+
  - Run times from one minute to 23 hours and 59 minutes
  - 3 start times per program
  - 7-Day calendar or interval programming
  - True odd or even programming with automatic 31st day skip
  - Up to 7 day rain hold or off settings
- Programmable address allows easy programming of multiple units in a single valve box
- Upload capable to TRCP8+ Programmer
  - Upload displays address, battery state and current program information
- Manual program capable for run times and watering cycles - same as TR1000

#### Specifications

- Manual Programming
  - 4 irrigation cycle options; twice per day, once per day, once per two days and once per 7 days
  - Run time: 1 minute to 23 hours, 59 minutes – programmed in real-time
  - InfraRed programming overrides any manual program settings
- Accepts 1 program from Toro TRCP8+
  - 1 to 3 start times per day (per program)
  - 7 day calendar
  - Odd/even and interval programming
  - Run times (each program); 1 minute to 23 hours, 59 minutes; in 1 minute increments
  - Rain delay
- Retains program for up to 2 minutes without battery installed
- Default program; 15 minutes of irrigation per day available first time battery module installed
- 6 VDC custom battery or standard 9 VDC battery housing
- Dimensions, 76 x 63 x 38mm (3" x 2½" x 1½")
- Pressure limit, 10 Bars (150 PSI)
- Operating temperature, 0° to 50°C (32° to 122°F)
- Weight: Remote 150g (5¼ ounces), Battery Module 40g (1½ ounces)
- Fits Toro irrigation valve series EZ-Flo® II, EZ-Flo® Plus, P-150, P-220, 220, 252 and other manufacturer's valves with special adapters
- CE and CUL approved



Remote™ 3000 – Shown with custom 6 VDC Battery Option.



9-Volt Battery Housing

#### TRCP8+ Remote Control Programmer

##### TRCP8+: InfraRed Upload/Download

- Unit holds up to 8 programs for multi-valve installations
- Multi-language, LCD display prompts user through programming steps
- One button operation to upload and download programs – just point and shoot
- Infra-red transmission up to 3 meters (10')
- 8 independent programs (one program per valve; no limit to number of valves which can share programs)
- Size: 218mm x 60mm x 28mm (L x W x H) (8½" x 2¾" x 1½") (L x W x H)
- Weight: 175 grams (6.2 ounces)
- Electrical supply: 4 AAA batteries (not supplied)
- 2 lines by 8 column LCD screen, 16 x 45mm (5/8" x 1¾")
- 10 key keypad



Toro TRCP8+

The world is becoming digital... why should your irrigation controller be any different!

Introducing the DDC™ Series, one of Toro's most exciting new additions to its controller product offering. Although compact in size, several large features are packed into the DDC – making it extremely affordable and flexible for any residential or light commercial irrigation application.

Available in 4, 6, or 8-station models, the DDC features an exclusive, patent-pending virtual dial interface that guides a user through simple programming functions. Setting up an irrigation schedule has never been easier!



## DDC controller

### 4, 6 and 8 stations

#### Features

- Toro exclusive “digital dial” technology simulates the simplicity of a mechanical dial
- Large LCD display
- 3 independent, stacking programs, easily identified within “digital dial” interface
- 3 Start Times per Program
- 1 to 240 minute run times
- Multiple watering days options
  - 365 day calendar
  - 7 day calendar, 14 day interval
  - Odd/Even day watering, with 31st day exclusion
- 0 to 200% Seasonal Adjust (Water Budget) setting in 10% increments
- True manual program start
- Semi-Auto feature to manually start programs stored in controller memory.
- Built-in Rain delay with sensor terminal hookups
- Self-diagnostic circuit breaker identifies irrigation faults
- “Arm Chair” programming with 9-volt battery power source
- Programmable Master Valve
- Convenient program review feature
- Display with multi-language overlays (user selectable)
- 5 Year program retention, with on board coin battery
- Default program if loss of power occurs
- Large terminal screws for easy installation and wiring
- Quick reference card for programming assistance
- CE, EMC, C-Tick, usETLc and SAA approved

## Electrical Specifications

Input power:

- 120 VAC, 50/60 Hz (Plug-in transformer, UL/CUL approved)
- 220 VAC, 50/60 Hz (Plug-in transformer, CE Mark)
- 240 VAC, 50/60 Hz (Plug-in transformer, SAA)
- 60 W (0.50 amps) maximum
- 500mA class 2 transformer standard

## Station Output Power:

- 24 VAC
  - 6 VA (0.25 amps) per station maximum
  - 6 VA (0.25 amps) pump start/master valve
  - 12 VA (0.50 amps) total load

## Mechanical Specifications

### Indoor:

- Weight without 9-volt battery: 280 grams (9 ounces)
- Dimensions: 127,5 x 145 x 40mm (H x W x D)  
5" x 5¾" x 1½" (H x W x D)

### Outdoor:

- Weight without 9-volt battery: 1,14 kilos (2.5 lbs.)
- Dimensions: 220 x 178 x 89 mm (H x W x D)  
8⅝" x 7" x 3½" (H x W x D)
- Water-resistant, locking cabinet

## Specifying Information

DDC X XXX OD			
Description	Stations	Voltage	Optional
DDC - Digital Dial Controller	4 - 4 station 6 - 6 station 8 - 8 station	120 - 120 V a.c. 220 - 220 V a.c. 240 - 240 V a.c.	OD - outdoor cabinet
For Example: When specifying an 8 station DDC controller with 220 V a.c. plug-in transformer, you would specify: <span style="border: 1px solid black; padding: 2px;">DDC-8-220</span>			



The GreenKeeper Modular Series controller is worth another look. With a new look, added features, and a powerful remote control, it has even more value. And it's still the most advanced and flexible controller in the industry for residential applications.

## Toro GreenKeeper Modular Controller

2, 4, 6, 8, 10 or 12 Stations - Electric

### Features

- 2 to 12 stations, expandable with 2 station modules (base model offered with 4 stations)
- Advanced, solid-state design with easy-to-use hybrid interface
- 3 fully independent, stacking irrigation programs; any station can be assigned to any program
- Large, clear display and icons for easy programming and operation
- Station run times from 1 minute to 4 hours in 1 minute increments
- 365 day calendar with 12/24-hour real time clock
- Toro SurgePro™ system safeguards against lightning damage and power surges
- Independent Season Adjust setting by program from 10% to 200% in 10% increments
- Screwless wire terminals for easy installation
- Automatic split-cycle mode when Season Adjust is greater than 100%, prevents runoff
- Rain delay setting from 1-7 days prevents water waste
- Selectable 15 second station delay
- Clear Memory feature resets defaults or clears values by program for simple operation
- Automatic Backup Program
- Professional, UV-resistant, dark-gray coloring
- Convenient remote capability available for easy installation and servicing
- Integrated Pump Start/Master Valve output
- Custom wall mounting plate for indoor models with 19mm (3/4") conduit inlet
- Spare fuse (0,75 Amp) included
- Vandal-resistant, lockable outdoor model available
- Extended 3 year warranty

### Electrical Specifications

- Input power: 117 or 220 V.a.c., 50/60 Hz (plug-in transformer) for indoor models
- 0,20 Amps (24 W) maximum
- UL listed, CUL certified transformer
- Station output power: 24 V.a.c., (50/60 Hz)
- 0,30 Amps (8.4 VA) per station maximum
- 0,30 Amps (8.4 VA) Pump/Master Valve
- 0,60 Amps (16.8 VA) total load
- UL listed, CUL, CE and Australia certified



GreenKeeper Modular Series (Outdoor)

### Mechanical Specifications

- Dimensions: (Indoor Model)  
203 x 203 x 57mm (8" x 8" x 2 1/4") (H x W x D)
- Valve Power Out:  
19mm (3/4") conduit access (part of mounting plate)
- Dimensions: (Outdoor Model)  
305 x 229 x 83mm (12" x 9" x 3 1/4") (H x W x D)

(Continued on next page)



RainSensor™ compatible



GreenKeeper Modular (Indoor)

# GreenKeeper® Modular Series

Modular controller design means that Toro meets more of your customers' expanding needs with fewer, more productive and flexible products. System expandability brings the following advantages to you and your customers.



**2-Station Expansion Module (MOD212-02)**

## GreenKeeper Series Expansion Module

### Features

- Increased design flexibility
- Increased post-installation flexibility
- Faster and easier servicing
- Fewer dollars in inventory investment
- Fewer SKUs—less inventory space



## Toro EZ-Remote™ Control

*EZ Installation, EZ Operation, EZ Servicing*

### Features

- Allows remote operation up to 91m (300')\*
- 128 different and programmable security codes for multiple sites (Plus Universal Code)
- Accesses controller and satellite features from the field
- System On and Off command activation
- Adjustable maximum station count
- Station Pause
- Automatic display shut-off
- Weather-resistant connection post
- Display cover
- Belt/Storage clip for transmitter, wall mounting bracket, +9-volt battery included
- Low battery power indicator

*\*Range varies depending on site and atmospheric conditions.*

## Specifying Information – Modules

Model Number	Description
MOD212-02	2-Station Expansion Module
<p>For Example: When ordering a GreenKeeper Modular Controller with Twelve Stations and a 220V plug-in transformer, you would specify:</p> <p><b>GK212-16-04</b> and <b>4 X MOD212-02</b></p>	

## Specifying Information – GK Modular

<div style="display: flex; justify-content: space-around; align-items: center;"> <span style="border: 1px solid black; padding: 2px;">GK</span> <span style="border: 1px solid black; padding: 2px;">212</span> <span style="border: 1px solid black; padding: 2px;">XX</span> <span style="border: 1px solid black; padding: 2px;">04</span> <span style="border: 1px solid black; padding: 2px;">XX</span> </div>			
Description	Voltage	Stations	Optional
GK – GreenKeeper Modular Controller	(blank) – 120V Transformer 16 – 220V Transformer 26 – Less Transformer 36 – 240V Transformer	4 – station base	OD – outdoor cabinet
<p>For Example: When specifying a GreenKeeper Modular controller with a 220V plug-in transformer and an outdoor cabinet, you would specify:</p> <p style="text-align: center;"><b>GK212-16-04-OD</b></p>			





Engineered with solid-state precision, this advanced hybrid, residential/light commercial controller combines exceptional versatility with user-friendly programming.

- Individual station assignment (A or B) for quick and easy programming
- Large LCD for easy programming and operation
- Front panel icons for easy programming
- On/Off switch for Rain Switch® gives you increased control
- NiMH battery protects current time and day

## Toro Vision II® Plus Series Controller

6, 9 or 12 stations – Electric

(15, 18, 21, 24 stations when using ProgramLink™ feature with additional Vision II® Plus controller and cable)

### Features

- Solid-state design with hybrid, at-a-glance programming interface
- Non-volatile memory retains programming — even without batteries
- 9 volt NiMH battery (included) provides 16 hour backup for current time
- Large LCD for easy programming
- Up to 3 start times per program
- Station run times: 1 to 90 minutes or 10 minutes to 9 hours (all stations)
- Two independent programs for lawn and shrub areas
- Pump Start/Master Valve output
- 14 day programming by day of week
- Interval programming — every day, every other day — up to 14 days between watering
- Watering Delay — 1 to 4 day program cancellation with auto resume
- Battery operation allows for Armchair Programming™
- Global Season Adjust setting from 20% to 200% in 10% increments
- Automatic split-cycle mode when Season Adjust is greater than 100%, prevents runoff
- Manual start of each station or entire program
- Built-in sensor port with manual override simplifies Rain Sensor installation
- ProgramLink™ feature allows two Vision II Plus controllers to be linked for sequential program operation (use XF4-SCC cable)
- Terminal strip hot post for easy valve actuation/identification
- Fuse-protected circuitry
- System on/off switch
- Lockable, weather-resistant wall mount cabinet
- Suitable for mounting outdoors



RainSensor™ compatible



Vision II Plus

### Electrical Specifications

- Input power:
  - 115/230 V.a.c., 50/60 Hz
  - 0,12 Amps, (14 W) idle
  - 0,30 Amps (35 W) maximum operating load
- Output power: 24 V.a.c.
  - 0,50 Amps (12 VA) per station
  - 0,37 Amps (9 VA) Pump/Master Valve
  - 0,90 Amps (21 VA) total combined load
- UL listed, CSA certified, CE marked

### Mechanical Specifications

- Dimensions:
  - 356 x 238 x 83mm (H x W x D)
  - (14" x 9<sup>5</sup>/<sub>8</sub>" x 3<sup>1</sup>/<sub>4</sub>") (H x W x D)
- Main power in: 13mm (1/2") conduit access hole
- Valve power out: 25mm (1") conduit access hole

### Specifying Information

<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>		
Cabinet	Type	Documentation
P—Plastic	06—6 Stations 09—9 Stations 12—12 Stations	01—English, Spanish, French, German, Italian with CE certification
For Example: When specifying a 6-station Vision II Plus Controller with an internal transformer, CE and international documents, you would specify: <b>V2-P06-01</b>		

## Custom Command Commercial Controller

Toro's Custom Command Hybrid Controller is designed to meet a wide variety of sophisticated watering requirements. Available in models ranging from 12 to 48 stations with four independent programs, 16 total start times and a 365-day calendar for odd/even day scheduling. Although advanced, the Custom Command's proven hybrid design with a large, easy-to-read display and color-coded, 10-position dial ensures easy programming.

### Toro Custom Command

*12, 15, 18 & 24 Fixed Stations - Plastic*

*12, 15, 18, 24, 36 & 48 Fixed Stations - Metal*

#### Features

- Flexible, easy programming
- 4 independent programs offer concurrent operation capability
- 7 day calendar, odd/even day or day interval options of 1-30 days
- Excluded day option, when used with the odd/even day option, allows selection of specific day(s) not to water
- 365 day clock/calendar with excluded day option
- Station run times of 1 minute to 10 hours in 1-minute increments
- 16 total start times
- Start time stacking within each program
- Season Adjust setting from 10 - 200% in 10% increments
- Rain delay setting from one to seven days prevents water waste
- Programmable Master Valve On/Off per program
- Automatic, semi-automatic, manual and timed-manual operation
- Snap-out design allows easy removal of control module without disturbing valve wiring
- User-friendly, 10 position programming dial and large, easy-to-read LCD
- Self-diagnostic circuit breaker identifies and overrides an electrical malfunction of a valve
- Non-volatile memory retains program data through power failures of any duration
- Battery backup keeps accurate time for up to 90 days during power failure
- Lightning SurgePro™ System on all 120 V.a.c. models; and 24, 36 and 48 station 220/240 V.a.c. models
- Roomy controller interior for ease of installation and service
- Battery operation allows for Armchair Programming™



Custom Command Series (Plastic)



Custom Command Series (Metal)



- Plastic models made with durable, UV-resistant material
- Plastic models come with a built-in screwdriver for convenience
- Pedestal mount available (metal models)
- Sensor hook-up with sensor override switch on faceplate
- Weather-resistant metal, locking cabinet with heavy-duty internal transformer (plastic/metal models)
- UL and CUL listed, CE marked
- Suitable for mounting outdoors
- Extended 5 year warranty

#### Additional Features for 36- and 48-station Models

- Exclusive Toro SurgePro™ protection safeguards against lightning and power surges on 24 V.a.c. (50/60Hz) and station outputs up to 16 KV
- Remote-ready for convenience
- User-defined stacked or multiple simultaneous program operation, selectable from one to four programs
- Runs up to four valves and master valve or pump start simultaneously

*(Continued on next page)*



## Electrical Specifications

- Maximum output per station: 24 V.a.c., 0,5 Amps
- Maximum output to valves: 24 V.a.c., 1,25 Amps (including master valve)
- Station Capacity: Up to two 24 V.a.c., 0,25 Amps solenoids per station, plus Master Valve
- Battery backup: 9-volt alkaline battery (included)
- Outdoor Models
  - Transformer input: 120/230 V.a.c., 50/60 Hz
  - Transformer input: 220/240 V.a.c., 50 Hz
  - Transformer input: 50E 220 V.a.c., 50 Hz
  - Transformer input: 50A 240 V.a.c., 50 Hz
  - Transformer output: 24 V.a.c., 2,08 Amps
- Power supply: 50 VA

## Mechanical Specifications

### Dimensions:

- Plastic: 292 x 149 x 219mm (11½" x 5⅞" x 8⅝") (W x H x D)
- Pedestal: 273 x 702 x 86mm (10¾" x 27⅝" x 3⅜") (W x H x D)
- Metal (12- 15- 18- and 24-station models): 273 x 248 x 146mm (10¾" W x 9¾" H x 5¾" D)
- Metal (36- and 48-station models): 273 x 399 x 146mm (10¾" W x 15¾" H x 5¾" D)

### Shipping weight (including carton):

- Plastic: 6,8kg (15 lbs.)
- Metal (12, 15- 18- and 24-station models): 6,4kg (14 lbs. 5 oz.)
- Metal (36- and 48-station models): 8,1kg (18 lbs.)

Specifying Information			
<div style="display: flex; justify-content: space-around; align-items: center;"> <span style="border: 1px solid black; padding: 2px;">CC</span> <span style="border: 1px solid black; padding: 2px;">X</span> <span style="border: 1px solid black; padding: 2px;">XX</span> <span style="border: 1px solid black; padding: 2px;">XXX</span> </div>			
Model	Style	Type	Transformer
CC – Custom Command	M – Metal Cabinet, Outdoor Mount, Internal Transformer P – Plastic Cabinet, Indoor/Outdoor Mount, Internal Transformer	12 – 12 Stations 15 – 15 Stations 18 – 18 Stations 24 – 24 Stations 36 – 36 Stations 48 – 48 Stations	50H – 220/240 V.a.c. (50/60 Hz) Blank – 120 V.a.c. (50/60 HZ)
<i>Optional</i> CC-PED—Pedestal Mount (Metal)			
For Example: When specifying a 12-station Custom Command Controller with a 50 Hz, 220/240 V.a.c. internal transformer, metal cabinet and pedestal mount you would specify:			
<div style="display: flex; justify-content: center; gap: 10px;"> <span style="border: 1px solid black; padding: 2px;">CC-M12-50H</span> and <span style="border: 1px solid black; padding: 2px;">CC-PED</span> </div>			



RainSensor™ compatible



# Electric-Hydraulic

Converts the electric output from sophisticated and flexible electric controllers to the pressure-based signals in hydraulic irrigation systems.

## Toro Electric-Hydraulic Converter

### Features

- Convenient above-ground installation. Mounts comfortably inside all Toro controller pedestal cabinets
- Direct manual control activates any sprinkler from the converter
- Easy replacement. Any single converter unit can be replaced easily without affecting other converters
- Retainer cap secures control tubing
- Double-filtered control lines filter both incoming and outgoing water supplies
- Unlimited expansion — add as many converters as needed
- For normally open hydraulic systems
- Ideal for areas with high lightning risk and poor water conditions

*\*All hydraulic connections on Toro valves are 6,35mm (1/4") insert type.  
Note: Thermal insulation required in freezing climates.*

Electric-Hydraulic



### Specifications

- Maximum distance from converter to valve:
  - 4,75mm (3/16") system: 152m (500')
  - 6,35mm (1/4") system\*: 304m (1000')
- Operating pressure range: 2,8-10,3 Bar (40-150 PSI) in control lines
- Solenoid: 24 V.a.c. (50/60 Hz)
  - Inrush: 0,37 Amps (8,80 VA)
  - Holding: 0,30 Amps (7,20 VA)
  - Wire leads: 18 AWG x 1,2m (4'), color-coded insulation (non-polarized)
- Elevation specifications:
  - Normally open valve elevation should not exceed 7,6m (25') above or 21,3m (70') below controller elevation

## Accessories

### Controller Accessories



#### Receiver Test Box Model 995-39

- Monitors incoming central signal and determines proper operation of line receiver.

#### Controller Pin Tool Model 991-06

- Facilitates the movement of dial pins on mechanical controllers.

#### Controller Timing Knob Tool Model 995-19

- Used to hold station knob while making timing adjustments with 3/16" hex driver for Monitor II controllers and VT satellites.

#### Test Cord Assembly Model 995-47

- For Monitor II as well as VT satellites and central controllers.

#### Jack Screw Installation Tool Model 995-23

- Easily and accurately installs new jack screws on controllers.

#### Manual Override Kit Model 995-24

- For electric Monitor II controllers (Series 176 and 179).







# Landscape Drip / Micro-Irrigation



# Landscape Drip / Micro-Irrigation

Whether you want subsurface or point-source irrigation; or if you need to retrofit your spray system, Toro offers the low-volume method that is right for your irrigation requirements. We'll help you grow — from the ground up.

		MAXI JET	CLASSIC DRIP	DL 2000®	
Applications	Residential	X	X	X	
	Commercial	X	X	X	
	Turf		X	X	
	Shrubs and Ground Cover	X	X	X	
	Sloped Areas	X	X	X	
	High-Pressure Systems				
	Low-Pressure Systems	X	X	X	
	High-Traffic Areas	X	X	X	
	Roundabouts and Street Medians		X	X	
	High-Wind Conditions		X	X	
	Subsurface Irrigation			X	



Classic Drip



DL2000® Series



Maxijet Microspray Nozzle Assemblies

## Classic Drip



Standard landscape dripline, ideal for irrigating shrubs and ground cover, median strips, trees and high wind areas.

### Classic Drip

#### Features

- Rugged yet flexible dripline tubing
- Standard brown color for blending into landscapes
- One-piece emitters embedded securely to inside diameter of tubing
- No hole punching or special handling required
- Unique turbulent flow path of emitters prevents clogging and provides trouble-free water application
- Ideal for irrigating shrubs, medians, and trees
- Pressure-compensating or non-pressure-compensating varieties
- Available in a wide range of diameters, emitter spacing, and coil lengths

#### Specifications:

- Recommended operating pressure: 0,8 – 4,0 Bar (11,6 – 58 PSI)
- Standard flow rate: 2 l/h
- Emitter spacing: 33, 40, or 50 cm
- Model sizes (diameter):
  - 16mm O.D. dripline
  - 20mm O.D. dripline



Classic Drip



# DL2000® & RG2000\* Series

DL2000 not available in Australia. RG2000 sold only in Australia.

## Complex design challenges. The simple subsurface solution.

Toro DL2000 & RG2000 – the most technologically advanced subsurface irrigation system available. Through revolutionary ROOTGUARD® technology, DL2000 & RG2000 prevent emitter clogging while delivering optimal water application directly to the root zone. DL2000 & RG2000 are perfect for odd-shaped designs, median strips, public recreation areas and residential property – any place where sprinklers don't fit the application.

## Toro DL2000 & RG2000 Series Irrigation System\*

### Features

- ROOTGUARD protection using the pre-emergent TREFLAN® is non-toxic and guards against root intrusion by diverting root growth away from the emitter outlet
- TREFLAN is impregnated during the manufacturing process and requires virtually no maintenance
- Drip-in® PC self-cleaning emitters provide precise, trouble-free water application
- Flexible, sturdy design to fit into unusual spaces
- Easy to install and requires minimal maintenance
- Can be installed at grade or buried 100-200mm (4"-8") underground, delivering irrigation directly at the plant's root zone
- 16mm (.620") inside diameter, 18mm (.710") outside diameter
- 6mm (1/4") microline tubing available in 150 or 300mm (6" or 12") spacing for small, tight areas
- Emitters are inseparably welded to the inside wall of durable polyethylene dripline tubing during manufacturing
- Withstands acids down to pH 2 as well as fertilizers, chemicals and chlorine
- Flow rate: 2,0 LPH (0.53 GPH)
- Pressure regulators maintain a constant pressure from 1-2,8 Bar (15-40 PSI)
- Maximum operating pressure is 3,5 Bar (50 PSI)
- Approved fertilizers and chemicals can be added at a central inlet and flow directly to the root zone
- Extended 7 year warranty on DL2000 tubing and 7 year warranty on ROOTGUARD root-intrusion protection

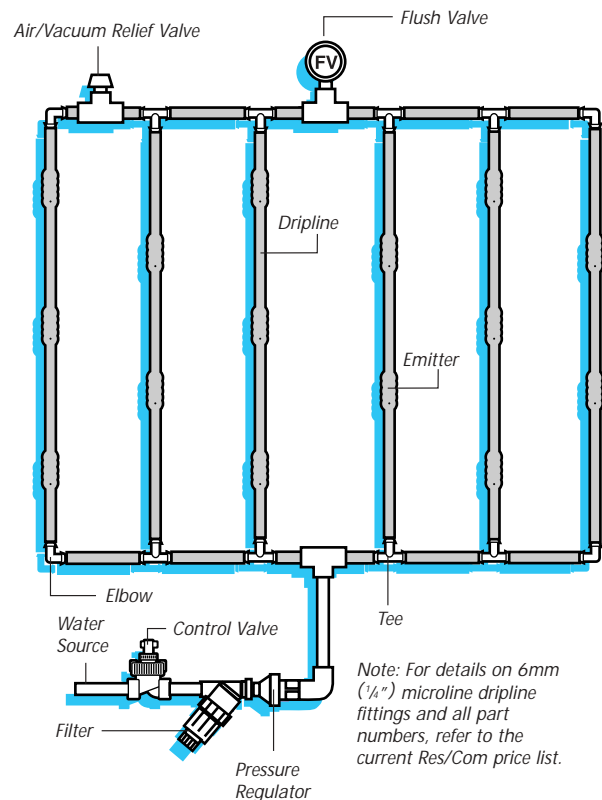
Note: Technical design information available in "Subsurface Irrigation Design Guide" 490-2953.

\*Dripline models and sizing vary by market place. For additional information on availability, contact your local Toro distributor.



DL2000 & RG2000 Series Dripline

## Typical Subsurface Drip Irrigation Design





## Toro Maxijet Microspray Irrigation

Maximum versatility, with low-volume irrigation benefits. Toro Maxijet microsprays can be used with all Toro fixed-spray pop-up sprinklers, shrub adapters, risers and extenders to easily retrofit spray systems to low-volume irrigation.



Maxijet Microspray Irrigation Nozzles  
Fits all 570 Sprayhead Bodies

### Features

#### Spray Head Configuration

- Ideal for ground cover, flowerbeds and low-water-use plants
- Nozzle, adapter and pressure-compensating screens are pre-assembled
- Retrofits 570Z bodies for low application-rate spray
- Pressure compensation provides uniform application over elevation changes and long runs
- Flush mount Top-Hat design allows the nozzle assembly to retract into the body (on pop-up models) for added debris and vandal resistance
- Low precipitation rate reduces runoff in tight soil
- Four nozzle patterns: 90°, 180°, 360° and Center Strip
- Three flow module choices with removable pressure compensating washer
  - 38 LPH – 1,2m (10 GPH – 4'), Blue
  - 57 LPH – 1,5m (15 GPH – 5'), Green
  - 91 LPH – 1,8m (24 GPH – 6'), Red
- Tops and screens are color-coded by flow
- Fine, 149-micron screen reduces line clogging
- Nozzle retracts into body for vandal resistance

#### Stake Assembly Configuration

- Ideal for ground cover, flowerbeds and low-water-use plants
- Stake or riser black nozzles used with color-coded, pressure-compensating devices provide low-flow rates to reduce runoff in compacted soils and deep percolation in sandy soils
- Two Riser lengths (with threaded adapter): 200mm (8") and 300mm (12")
- Six Base choices (color-coded pressure compensating flow modules)
- Four nozzle patterns
  - MJ-Q-90°
  - MJ-H-180°
  - MJ-F-360°
  - MJ-CST-Center Strip

### 570Z Series Maxijet 0° Trajectory Nozzle Adaptors Performance Charts – Metric

38 LPH Series with 0° Trajectory							57 LPH Series with 0° Trajectory							91 LPH Series with 0° Trajectory																												
Nozzle		Pressure		Flow		Radius	Nozzle		Pressure		Flow		Radius	Nozzle		Pressure		Flow		Radius																						
Radius	Bar	kPa	Kg/cm²	LPH	meters	Radius	Bar	kPa	Kg/cm²	LPH	meters	Radius	Bar	kPa	Kg/cm²	LPH	meters	Radius	Bar	kPa	Kg/cm²	LPH	meters																			
MJ-4Q	1,5	150	1,53	41,3	1,4	MJ-5Q	1,5	150	1,53	63,1	2,0	MJ-6Q	1,5	150	1,53	92,7	2,2	MJ-4Q	2,0	200	2,04	47,6	1,5	MJ-5Q	2,0	200	2,04	73,9	2,1	MJ-6Q	2,0	200	2,04	108	2,4							
	2,5	250	2,55	52,7	1,6		2,5	250	2,55	82,0	2,2		2,5	250	2,55	116	2,5		2,5	250	2,55	52,7	1,6	MJ-5Q	2,5	250	2,55	82,0	2,2	MJ-6Q	2,5	250	2,55	116	2,5							
MJ-4Q-PC	1,5 - 3,5	150-350	1,53-3,57	37,9	1,4	MJ-5Q-PC	1,5 - 3,5	150-350	1,53-3,57	56,8	1,7	MJ-6Q-PC	1,5 - 3,5	150-350	1,53-3,57	90,8	2,0	MJ-4H	1,5	150	1,53	41,3	1,2	MJ-5H	1,5	150	1,53	63,1	2,0	MJ-6H	1,5	150	1,53	92,7	1,6							
MJ-4H	2,0	200	2,04	47,6	1,4	MJ-5H	2,0	200	2,04	73,9	2,1	MJ-6H	2,0	200	2,04	108	1,7	MJ-4H-PC	1,5 - 3,5	150-350	1,53-3,57	37,9	1,2	MJ-5H-PC	1,5 - 3,5	150-350	1,53-3,57	56,8	1,7	MJ-6H-PC	1,5 - 3,5	150-350	1,53-3,57	90,8	1,7							
	2,5	250	2,55	52,7	1,4		2,5	250	2,55	82,0	2,2		2,5	250	2,55	116	1,8	MJ-4F	1,5	150	1,53	41,3	1,3	MJ-5F	1,5	150	1,53	63,1	1,4	MJ-6F	1,5	150	1,53	92,7	1,6							
MJ-4H-PC	2,0	200	2,04	47,6	1,5	MJ-5H-PC	2,0	200	2,04	73,9	1,5	MJ-6H-PC	2,0	200	2,04	108	1,9	MJ-4F-PC	1,5 - 3,5	150-350	1,53-3,57	37,9	1,1	MJ-5F-PC	1,5 - 3,5	150-350	1,53-3,57	56,8	1,5	MJ-6F-PC	1,5 - 3,5	150-350	1,53-3,57	90,8	1,7							
MJ-4F	2,5	250	2,55	52,7	1,5	MJ-5F-PC	2,5	250	2,55	82,0	1,5	MJ-6F-PC	2,5	250	2,55	116	2,2	MJ-4CST	1,5	150	1,53	41,3	0,5 x 0,9	MJ-5CST	1,5	150	1,53	63,1	1,4 x 0,9	MJ-6CST	1,5	150	1,53	92,7	1,7 x 0,9							
MJ-4F-PC	2,0	200	2,04	47,6	1,5	MJ-5CST	2,0	200	2,04	73,9	1,7 x 0,9	MJ-6CST	2,0	200	2,04	108	2,0 x 1,1	MJ-4CST-PC	2,0	200	2,04	47,6	1,7 x 0,9	MJ-5CST-PC	2,0	200	2,04	73,9	1,7 x 0,9	MJ-6CST-PC	2,0	200	2,04	108	2,0 x 1,1							
MJ-4CST	2,5	250	2,55	52,7	1,5	MJ-5CST-PC	2,5	250	2,55	82,0	2,0 x 1,1	MJ-6CST-PC	2,5	250	2,55	116	2,1 x 1,1	MJ-4CST-PC1,5 - 3,5	1,5 - 3,5	150-350	1,53-3,57	37,9	1,2 x 0,9	MJ-5CST-PC1,5 - 3,5	1,5 - 3,5	150-350	1,53-3,57	56,8	1,5 x 0,9	MJ-6CST-PC1,5 - 3,5	1,5 - 3,5	150-350	1,53-3,57	90,8	1,8 x 0,9							
MJ-4CST-PC	1,5 - 3,5	150-350	1,53-3,57	37,9	1,2 x 0,9	MJ-5CST-PC1,5 - 3,5	1,5 - 3,5	150-350	1,53-3,57	56,8	1,5 x 0,9	MJ-6CST-PC1,5 - 3,5	1,5 - 3,5	150-350	1,53-3,57	90,8	1,8 x 0,9																									

### 570Z Series Maxijet 0° Trajectory Nozzle Adaptors Performance Charts – English

10 GPH Series with 0° Trajectory					15 GPH Series with 0° Trajectory					24 GPH Series with 0° Trajectory														
Nozzle		Pressure		Flow	Radius	Nozzle		Pressure		Flow	Radius	Nozzle		Pressure		Flow	Radius							
Radius	PSI	GPH	feet	Radius	PSI	GPH	feet	Radius	PSI	GPH	feet	Radius	PSI	GPH	feet	Radius								
MJ-4Q	20	10.5	4.5	MJ-5Q	20	16.0	6.5	MJ-6Q	20	23.5	7.0	MJ-4Q	30	12.8	5.0	MJ-5Q	30	19.9	7.0	MJ-6Q	30	29.1	8.0	
	40	14.6	5.5		40	22.7	7.5		40	31.6	8.5	MJ-4Q-PC	20-50	10.0	4.5	MJ-5Q-PC	20-50	15.0	5.5	MJ-6Q-PC	20-50	24.0	6.5	
MJ-4Q-PC	20-50	10.0	4.5	MJ-5H	20	16.0	6.5	MJ-6H	20	23.5	5.0	MJ-4H	20	10.5	4.0	MJ-5H	30	19.9	7.0	MJ-6H	30	29.1	5.5	
MJ-4H	30	12.8	4.5	MJ-5H-PC	40	22.7	7.5	MJ-6H-PC	40	31.6	6.0	MJ-4H-PC	30	14.6	4.5	MJ-5H-PC	40	22.7	7.5	MJ-6H-PC	40	31.6	6.0	
	40	14.6	4.5		20-50	15.0	5.5		20-50	24.0	5.5	MJ-4F	20	10.5	4.0	MJ-5F	20	16.0	4.5	MJ-6F	20	23.5	5.0	
MJ-4H-PC	20-50	10.0	4.0	MJ-5F	30	19.9	5.0	MJ-6F	30	29.1	6.5	MJ-4F-PC	30	12.8	5.0	MJ-5F-PC	40	22.7	5.0	MJ-6F-PC	40	31.6	7.5	
MJ-4F	40	14.6	5.0	MJ-5F-PC	20-50	15.0	5.0	MJ-6F-PC	40	31.6	7.5	MJ-4F-PC	40	14.6	5.0	MJ-5CST	20	16.0	4.5 x 3	MJ-6CST	20	23.5	5.5 x 3	
MJ-4F-PC	20-50	10.0	3.5	MJ-5CST	30	19.9	5.5 x 3	MJ-6CST	30	29.1	6.5 x 3.5	MJ-4CST	20	10.5	1.5 x 3	MJ-5CST-PC	40	22.7	6.5 x 3.5	MJ-6CST-PC	40	31.6	7.0 x 3.5	
MJ-4CST	30	12.8	5.5 x 3	MJ-5CST-PC	20-50	15.0	5 x 3	MJ-6CST-PC	40	31.6	7.0 x 3.5	MJ-4CST-PC	30	12.8	5.5 x 3									
MJ-4CST-PC	40	14.6	6.0 x 3.5		20-50	15.0	5 x 3		20-50	24.0	6 x 3		40	14.6	6.0 x 3.5									
	20-50	10.0	4 x 3										20-50	10.0	4 x 3									

See page 99 for precipitation rate calculations.

# Maxijet® Series

## Specifications

- Flow rate: 40–119,6 LPH (10–31.6 GPH)
- Minimum 100-mesh system filtration recommended
- Recommended operating pressure range: 1,4-3,5 Bar (20-50 PSI)
- Maximum operating pressure: 3,5 Bar (50 PSI)
- Nozzle flow rate (without PC module): 91 LPH (24 GPH)

## Accessories

- Barb x Barb Micro-Valve w/Flow Control – MJ-FCV-BB
- Thread x Thread Micro-Valve w/Flow Control – MJ-FCV-TT
- Pro-Punch Tool – MJ-Tool

## Microspray Nozzles Pressure-Compensating Modules and Accessories

Six flow rates:

- 25 LPH (6.5 GPH), gray (Part No. MJ-6PC)
- 36 LPH (9.5 GPH), orange (Part No. MJ-9PC)
- 42 LPH (11 GPH), blue (Part No. MJ-11PC)
- 64 LPH (17 GPH), green (Part No. MJ-17PC)
- 80 LPH (21 GPH), yellow (Part No. MJ-21PC)
- 95 LPH (25 GPH), red (Part No. MJ-25PC)



MJ — Stake assembly with flow control valve

300 and 200mm Microspray riser with thread adapter, 4 nozzles and 6 P.C. flow modules available



## Specifying Information

MJ X XXX		
Description	Radius	Arc
MJ-Maxijet Microspray Nozzle Assemblies	4–1,2m (4') 5–1,5m (5') 6–1,8m (6')	Q–90° H–180° F–360° CST–Center Strip
For Example: When specifying a 1,2m (4') radius Maxijet Microspray Nozzle Assembly with a 180° arc, you would specify: <b>MJ-4H</b>		

### Black Nozzles with Pressure-Compensating Modules – Metric

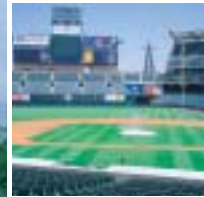
Pattern	Description	BAR	LPH	Radius (m)
▲	MJ-Q	1,4	90.8	2.0
	MJ-Q-6.5PC	1,4 - 3,5	24.6	0.9
	MJ-Q-9.5PC	1,4 - 3,5	36.0	1.1
	MJ-Q-11PC	1,4 - 3,5	41.6	1.2
	MJ-Q-17PC	1,4 - 3,5	64.4	1.7
	MJ-Q-21PC	1,4 - 3,5	79.5	1.9
	MJ-Q-25PC	1,4 - 3,5	94.6	2.0
◐	MJ-H	1,4	90.8	1.8
	MJ-H-6.5PC	1,4 - 3,5	24.6	0.9
	MJ-H-9.5PC	1,4 - 3,5	36.0	1.1
	MJ-H-11PC	1,4 - 3,5	41.6	1.2
	MJ-H-17PC	1,4 - 3,5	64.4	1.4
	MJ-H-21PC	1,4 - 3,5	79.5	1.5
	MJ-H-25PC	1,4 - 3,5	94.6	1.7
●	MJ-F	1,4	90.8	1.8
	MJ-F-6.5PC	1,4 - 3,5	24.6	0.5
	MJ-F-9.5PC	1,4 - 3,5	36.0	0.6
	MJ-F-11PC	1,4 - 3,5	41.6	0.9
	MJ-F-17PC	1,4 - 3,5	64.4	1.2
	MJ-F-21PC	1,4 - 3,5	79.5	1.5
	MJ-F-25PC	1,4 - 3,5	94.6	1.7
◼	MJ-CST	1,4	90.8	1.8 x 0.9
	MJ-CST-6.5PC	1,4 - 3,5	24.6	0.8 x 0.5
	MJ-CST-9.5PC	1,4 - 3,5	36.0	0.8 x 0.6
	MJ-CST-11PC	1,4 - 3,5	41.6	0.9 x 0.6
	MJ-CST-17PC	1,4 - 3,5	64.4	1.4 x 0.9
	MJ-CST-21PC	1,4 - 3,5	79.5	1.5 x 0.9
	MJ-CST-25PC	1,4 - 3,5	94.6	1.8 x 0.9

### Black Nozzles with Pressure-Compensating Modules – English

Pattern	Description	psi	GPH	Radius
▲	MJ-Q	20	24.0	6.5
	MJ-Q-6.5PC	20-50	6.5	3.0
	MJ-Q-9.5PC	20-50	9.5	3.5
	MJ-Q-11PC	20-50	11.0	4.0
	MJ-Q-17PC	20-60	17.0	5.5
	MJ-Q-21PC	20-50	21.0	6.2
	MJ-Q-25PC	20-50	25.0	6.5
◐	MJ-H	20	24.0	6.0
	MJ-H-6.5PC	20-50	6.5	3.0
	MJ-H-9.5PC	20-50	9.5	3.5
	MJ-H-11PC	20-50	11.0	4.0
	MJ-H-17PC	20-60	17.0	4.5
	MJ-H-21PC	20-50	21.0	5.0
	MJ-H-25PC	20-50	25.0	5.5
●	MJ-F	20	24.0	6.0
	MJ-F-6.5PC	20-50	6.5	1.5
	MJ-F-9.5PC	20-50	9.5	2.0
	MJ-F-11PC	20-50	11.0	3.0
	MJ-F-17PC	20-60	17.0	4.0
	MJ-F-21PC	20-50	21.0	5.0
	MJ-F-25PC	20-50	25.0	5.5
◼	MJ-CST	20	24.0	6 x 3
	MJ-CST-6.5PC	20-50	6.5	2.5 x 1.5
	MJ-CST-9.5PC	20-50	9.5	2.5 x 2.0
	MJ-CST-11PC	20-50	11.0	3 x 2
	MJ-CST-17PC	20-60	17.0	4.5 x 3
	MJ-CST-21PC	20-50	21.0	5 x 3
	MJ-CST-25PC	20-50	25.0	6 x 3



# Accessories / Technical Data



## General Accessories\*

### Flow Gauge

- A combination of pressure and flow gauge to check water availability. Used on residential hose bib or silcock. Maximum of 49 LPM (13 GPM) and 11 Bar (160 PSI).



995-01

### Pressure Gauge Kit

- Checks operating pressure at either the sprinkler nozzle or on a pressure-regulating valve. Measures up to 14 Bar (200 PSI). Elements may be ordered separately.



995-51

### Pressure Gauge

#### Model 995-49

- Included in Pressure Gauge Kit Model 995-51

### Pitot Tube

#### Model 995-50

- Included in Pressure Gauge Kit Model 995-51

### Hose-End Nozzle

- This bright red nozzle provides highly-visible, non-adjustable jet spray for cleaning equipment



850-69

## Tubing Accessories\*

### Control Tubing\*

6mm (1/4") polyethylene, 610m (2000') roll, specially formulated for Toro systems. Color-coded to assist in installation.

#### Model 900-11

- Blue print on black tubing

#### Model 900-12

- Yellow print on black tubing

#### Model 900-13

- Pink print on black tubing

#### Model 900-14

- White print on black tubing

### 6mm (1/4") Tube Fittings\*

#### Model 900-30

- Metal Coupler, 6 x 6mm (1/4" x 1/4")

#### Model 850-21

- Plastic Coupler, 6 x 6mm (1/4" x 1/4")

#### Model 900-40

- Retainer, 6mm (1/4")

#### Model 900-21

- Adapter, 6mm (1/4") compression to 6mm (1/4") polyethylene

#### Model 900-50

- Metal tee, 6 x 6 x 6mm (1/4" x 1/4" x 1/4")

#### Model 850-22

- Plastic tee, 6 x 6 x 6mm (1/4" x 1/4" x 1/4")

#### Model 995-14

- Supply screen fitting 6mm (1/4") male NPT threads x 3mm (1/8") female NPT threads

#### Model 900-24

- Adapter, 3mm (1/8") Male NPT x 6mm (1/4")

#### Model 900-70

- Tubing plug, 6mm (1/4")

### Flushing Adapter Model 995-02

- Use to flush out or pre-fill polyethylene tubing before connecting tubing to automatic valves or controller. Screws onto male hose end.



\*Metric data for reference only.





## Sprinkler Accessories\*

### Polyethylene Risers

#### Model 850-43

- 13 x 75mm with 13mm cut-offs (1/2" x 3" with 1/2" cut-offs)



#### Model 850-49

- 20 x 13 x 150mm with 13mm cut-offs (3/4" x 1/2" x 6" with 1/2" cut-offs)

#### Model 850-62

- 20 x 50mm (3/4" x 2")

#### Model 850-63

- 13 x 20 x 50mm (1/2" x 3/4" x 2")

### Saddles

- Snap-on solvent weld feature reduces labor
- May also be used as repair saddle
- ABS to PVC solvent recommended
- 13mm (1/2") NPT/BSP female-threaded outlet

#### Model 850-60

- Fits 20mm (3/4") PVC pipe

#### Model 850-61

- Fits 25mm (1") PVC pipe

### 1/16" Hex Driver Tool

#### Model 995-33

- 1/16" hex driver for timing adjustments on controllers and radius adjustments on XP-300, S600 and S700 Series sprinklers.

### Adjustment Key

#### Model 89-7350

- For V-1550 Series sprinklers, 720 Series sprinklers and 570 nozzles.



### S700 Nozzle Tool and Wrench

#### Model 89-1375



### TR Family Optional

#### Adjustment Tool

#### Model 102-1303

- For TR50, TR50XT and TR70XT Rotors



### Super 700 Series

#### Rubber Cover Kit

#### Model 700-10

- Fits all S700 Series sprinklers.



### 2001 Adjustment Tool

#### Model 89-4717



### 640 Series

#### Valve Insertion Tool

#### Model 995-35

Specifically designed for accurate one-step insertion of valve assembly and snap ring.



### 640 Series

#### Valve Removal Tool

#### Model 995-08

Simple but effective tool designed for quick removal of valve assembly from body.



### Riser Hold-up Tool

A convenient tool to hold up the risers of gear drive rotors under pressure



\*Metric data for reference only.

# Technical Data

Formulas			
Precipitation Rates (U.S.)		(METRIC)	
Equilateral Triangular Spacing	P.R. = $\frac{(\text{GPM of 360}) \times 96.25}{(\text{Head Spacing})^2 \times .866}$ (in/hr)	P.R. = $\frac{m^3/hr \text{ of } 360 \times 1000}{(mm/hr) \times m^2 \times .866}$	
Square/Rectangular Spacing	P.R. = $\frac{(\text{GPM of 360}) \times 96.25}{\text{Head Spacing} \times \text{Row Spacing}}$ (in/hr)	P.R. = $\frac{m^3/hr \text{ of } 360 \times 1000}{\text{Head Spacing} \times \text{Row Spacing}}$ (mm/hr)	
Area and Flow	P.R. = $\frac{(\text{Total GPM of Zone}) \times 96.3}{\text{Total Irrigated Square Feet of Zone}}$ (in/hr)	P.R. = $\frac{LPM \times 96,3}{\text{Total Irrigated } m^2 \text{ of Zone}}$ (mm/hr)	
Scheduling Coefficient		S.C. = $\frac{\text{Average Precipitation Rate (in/hr)}}{\text{Lowest Precipitation Rate (in/hr)}}$	
Station Run Time		S.R.T. = $\frac{\text{Total Weekly Req'd (mm/wk)} \times 60 \text{ (min/hr)}}{\text{Precipitation Rate (mm/hr)}}$	
Pipe Velocity		V = $\frac{1273 \times \text{Flow (liters/sec)}}{(\text{Inside Pipe Diameter in Millimeters})^2}$ (m/sec)	
Horsepower		H.P. = $\frac{LPM \times \text{Meters of Head}}{3433 \times \text{Pump Efficiency}}$ (expressed by decimal)	
Slope		S = $\frac{\text{Rise (Meters)}}{\text{Run (Meters)}}$	

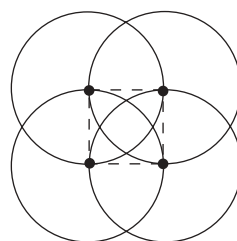
## Sprinkler Spacing

The Toro Company does not recommend designing for 0 kph (mph) wind conditions. Design in consideration of the worst wind conditions.

Wind	Square Spacing	Triangular Spacing	Single Row
No Wind	55%	60%	50%
7 kph (4 mph)	50%	55%	50%
13 kph (8 mph)	45%	50%	45%

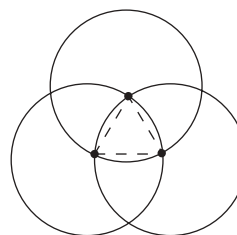
Toro does not recommend designing for 0 KPH wind conditions. Design in consideration of the worst wind conditions.

Slope	Slope % (Rise/Run)	Angle
Flat	0%	0.0
Gentle	9%	5.0
Moderate	14%	8.0
Steep	21%	12.0



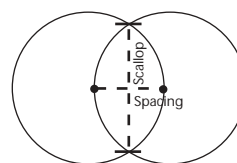
### Square Spacing

- No wind – 55% of diameter
- 7 kph (4 mph) wind – 50% of diameter
- 13 kph (8 mph) wind – 45% of diameter



### Triangular Spacing

- No wind – 60% of diameter
- 7 kph (4 mph) wind – 55% of diameter
- 13 kph (8 mph) wind – 50% of diameter



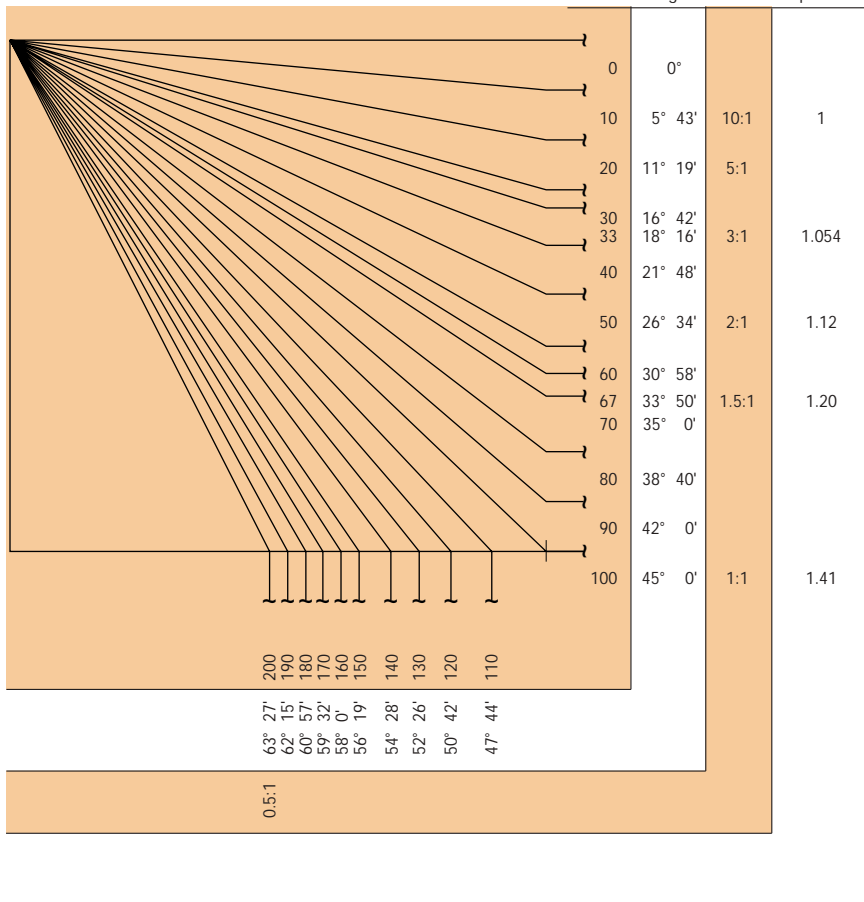
### Single-Row Spacing

- No wind – 50% of diameter
- 7 kph (4 mph) wind – 50% of diameter
- 13 kph (8 mph) wind – 45% of diameter





### Slope, Angle and Ratio Precipitation Rates



Maximum Precipitation Rates – Metric								
Maximum Precipitation Rates: Millimeters Per Hour								
Soil Texture	0 to 5% slope		5 to 8% slope		8 to 12% slope		12% + slope	
	Cover	Bare	Cover	Bare	Cover	Bare	Cover	Bare
Coarse sandy soils	50,8	50,8	50,8	38,1	38,1	25,4	25,4	12,7
Coarse sandy soils over compact subsoils	44,5	38,1	31,8	25,4	25,4	19,1	19,1	10,2
Light sandy loams uniform	44,5	25,4	31,8	20,3	25,4	15,2	19,1	10,2
Light sandy loams over compact subsoils	31,8	19,8	25,4	12,7	19,1	10,2	12,7	7,6
Uniform silt loams	25,4	12,7	20,3	10,2	15,2	7,6	10,2	5,1
Silt loams over compact subsoil	15,2	7,6	12,7	6,4	10,2	3,8	7,6	2,5
Heavy clay or clay loam	5,1	3,8	3,8	2,5	3,0	2,0	2,5	1,5

The maximum PR values listed above are as suggested by the United States Department of Agriculture. The values are average and may vary with respect to actual soil condition and condition of ground cover.

Maximum Precipitation Rates – English								
Maximum Precipitation Rates: Inches Per Hour								
Soil Texture	0 to 5% slope		5 to 8% slope		8 to 12% slope		12% + slope	
	Cover	Bare	Cover	Bare	Cover	Bare	Cover	Bare
Coarse sandy soils	2.00	2.00	2.00	1.50	1.50	1.00	1.00	0.50
Coarse sandy soils over compact subsoils	1.75	1.50	1.25	1.00	1.00	0.75	0.75	0.40
Light sandy loams uniform	1.75	1.00	1.25	0.80	1.00	0.60	0.75	0.40
Light sandy loams over compact subsoils	1.25	0.75	1.00	0.50	0.75	0.40	0.50	0.30
Uniform silt loams	1.00	0.50	0.80	0.40	0.60	0.30	0.40	0.20
Silt loams over compact subsoil	0.60	0.30	0.50	0.25	0.40	0.15	0.30	0.10
Heavy clay or clay loam	0.20	0.15	0.15	0.10	0.12	0.08	0.10	0.06

The maximum PR values listed above are as suggested by the United States Department of Agriculture. The values are average and may vary with respect to actual soil condition and condition of ground cover.

### Precipitation Rate Calculation

The precipitation rate depends upon the operating pressure at the sprinkler, the sprinkler spacing and the spacing pattern. For example, to calculate the precipitation rate in mm/hour of a full circle S700 sprinkler with a 6.0 nozzle, operating pressure of 3,5 Bar, spaced at 15 meters in a square pattern, the precipitation rate calculation would be:

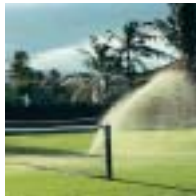
$$\frac{23,9 \text{ LPM} \times 60 \text{ min.}}{15\text{m} \times 15\text{m}} = 6,37\text{mm/hr}$$

To find the precipitation in inches per hour using a S700 full circle sprinkler with a 6.0 nozzle, operating pressure of 50 PSI, spaced at 49 feet in a square pattern, the precipitation rate calculation would be:

$$\frac{6.28 \text{ GPM} \times 96.3}{49' \times 49'} = 0.25''/\text{hr}$$



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