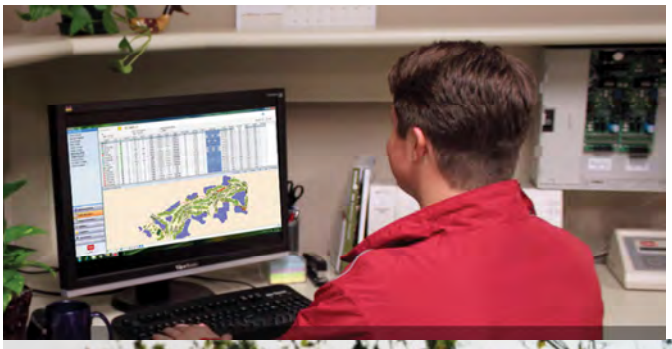
GRASSLAND EQUIPMENT & IRRIGATION CORP.

Visit us at
www.grasslandcorp.com
Latham -518-785-5841
Liverpool - 315-457-0181

TORO®
Count on it.



GRASSLAND 2022 - GOLF EQUIPMENT CATALOG

Paige irrigation & landscape lighting

MICRO RAIN Traveling Sprinkler Systems

MCI Motor Controls Incorporated

OTTERBINE BAREBO, INC.

NDS

flo Control Quality Products by NDS

CARBTROL®

HARCO

Hydraway Drainage Systems

NDS WE PUT WATER IN ITS PLACE

CARSON INDUSTRIES LLC

CRESLINE CRESLINE PLASTIC PIPE CO., INC.

NIBCO®

Irritrol® SYSTEMS

Underhill®

IPEX Committed to Excellence

Table of Contents

While comprehensive, this Irrigation Product Catalog represents only a portion of Grassland's available products.

We have included the most commonly used items in our category listings.

If you cannot find everything you need in this catalog, we urge you to contact your Grassland Irrigation sales representative for assistance.

Due to the recent volatility in material pricing, and because discounts are based on quantities ordered and customer status, we have not published prices in this year's catalog. For best pricing, assemble your complete material list and then call us for a quote.

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GRASSLAND EQUIPMENT & IRRIGATION CORP.
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TORO vs. RAIN BIRD
Sprinkler Features Comparison

TORO
INFINITY® Series

TORO
FLEX™ Series

RAIN BIRD
700/900 Series

	INFINITY® Series	FLEX™ Series	700/900 Series
Top accessible case for all internal components	✓		
Space for future sensors and internal components	✓		
Replaceable top cover	✓		
Wire splices accessible without digging	✓		
Waterproof wire splices included	✓		
Solenoid removable under pressure	✓		
Pilot valve removable under pressure	✓		
Replaceable yardage marker on fixed cover	✓		
Stainless steel valve seat	✓	✓	
Lockable and preset pressure settings	✓	✓	
Dual trajectory nozzles with no additional parts needed	✓	✓	
Pop-up height to mid-nozzle	**3.25”**	**3.25”**	2.6”

To Order Call 518-785-5841

INFINITY® 35-6/55-6 SERIES GOLF ROTORS

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

FEATURES & BENEFITS

Industry's Largest Nozzle Selection

Nozzles from 25' to 100' radius plus a wide assortment of back nozzles lets you put the precise amount of water exactly where you need it. All color coded and debris tolerant nozzles threaded in from the front.

Hot Spot Watering

Nozzle base can be turned in either direction and held to put down as much water as needed, precisely where you want it. Standard on all Toro part circle golf rotors!

Adjustment With No Disassembly

A Toro original, simply pull up the riser and ratchet it to the precise position you want to water.

True Part and Full-Circle in One (40° - 330° part circle)

These sprinklers can be full circle today and part circle tomorrow allowing you to simply and economically adjust the area of coverage to match your seasonal needs or meet water rationing mandates.

- ✔ Eliminates sprinkler interference
- ✔ Enhances course appearance

INFINITY® SERIES DISTANCE MARKERS

Set your course apart with Toro's unique, customizable distance markers

- *White (118-6234) and Yellow (118-6235) color options provide excellent visibility*
- *Customizable with any graphic image*
- *Multiple number and orientation options available*
- *Any font style*
- *Easy snap-in installation into any INFINITY golf sprinkler*

Smart Access®

Provides top accessibility to all critical components.

- No digging or unsightly turf repair scars
- No buried wire splices or ground faults
- Pilot valve removable with water "ON"
- Lower long term cost of ownership
- Customizable marker
- Replaceable cover if damaged
- Increased labor efficiency

Trajectory – 24 Positions
From 7° - 30° in 1° increments put water where you want it. Adjust from the top of the sprinkler in seconds, wet or dry. This flexibility lets you tackle every obstacle on the course; wind, trees, bunkers, mounds and more.

INF35-6 CONVERSION UPGRADES

MODELS	DESCRIPTION
• INF35-6-3134	INF35-6 w/31–34 Nozzles (33 Nozzle Installed)
• INF35-6-3537	INF35-6 w/35–37 Nozzles (35 Nozzle Installed)
• INF35-6-3134E	INF35-6 w/31–34 Nozzles (33 Nozzle Installed), Effluent
• INF35-6-3537E	INF35-6 w/35–37 Nozzles (35 Nozzle Installed), Effluent

INF55-6 CONVERSION UPGRADES

MODELS	DESCRIPTION
• INF55-6-5154	INF55-6 w/51–54 Nozzles (53 Nozzle Installed)
• INF55-6-5558	INF55-6 w/55–58 Nozzles (55 Nozzle Installed)
• INF55-6-59	INF55-6 w/59 Nozzle Installed
• INF55-6-5154E	INF55-6 w/51–54 Nozzles (53 Nozzle Installed), Effluent
• INF55-6-5558E	INF55-6 w/55–58 Nozzles (55 Nozzle Installed), Effluent
• INF55-6-59E	INF55-6 w/59 Nozzle Installed Effluent

SPECIFICATIONS

Operational

- Inlet:
  - INF35-6: 1" ACME
  - INF55-6: 1½" ACME
- Radius:
  - INF35-6: 42' – 92'
  - INF55-6: 52' – 100'
- Flow Rate:
  - INF35-6: 7.1 – 45.3 gpm
  - INF55-6: 13.9 - 61.1 gpm
- Precipitation Rates:
  - INF35-6: Minimum - .37"/hr; Maximum - .53"/hr
  - INF55-6: Minimum - .43"/hr; Maximum - .60"/hr
- Pilot Valve: Selectable at 50, 65, 80 and 100 psi
- Recommended Operating Pressure Range: 65-100 psi (maximum -150 psi and minimum - 40 psi)
- Activation types – Electric Valve-in-Head:
  - Standard Solenoid:
    - 24 VAC, 50/60 Hz
    - Inrush: 0.30 A
    - Holding 0.20 A
  - Spike Guard Solenoid:
    - 24 VAC, 50/60 Hz
    - Inrush: 0.12 A
    - Holding 0.10 A
  - Nickel-Plated Spike Guard Solenoid:
    - 24 VAC, 50/60 Hz
    - Inrush: 0.12 A
    - Holding 0.10 A
  - DC Latching Solenoid (DCLS):
    - Momentary low voltage pulse
  - Integrated Lynx Smart Module with DCLS:
    - Momentary low voltage pulse
- Trajectory: 24 positions from 7° - 30° in 1° increments

Additional Features

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

Dimensions

- SMART ACCESS® Cover and Compartment Diameter:
  - INF35-6: 7 5/8"
  - INF55-6: 7 5/8"
- Body height:
  - INF35-6: 10"
  - INF55-6: 11 3/8"
- Weight:
  - INF35-6: 4.31 lbs.
  - INF55-6: 5.13 lbs.
- Weight – Intergrated with Lynx Smart Module:
  - INF35-6: 5.00 lbs.
  - INF55-6: 5.82 lbs.
- Pop-up height to nozzle: 3¼"

Warranty

- Three years
- Five years when installed with Toro Swing Joints

Specifying Information—INFINITY 35-6 & INFINITY 55-6

INFX5-XXX-X6-X						
Body Inlet	*Arc*	*Nozzle*	*Pressure Regulation**	*Activation Type*	*Trajectory*	*Optional*
INFX	**5**	**XX**	**X**	**X**	**6**	**X**
3—1" 5—1½"	5—Part-circle and Full-circle In One	**INF35**—30, 31, 32, 33, 34, 35, 36, 37 **INF55**—51, 52, 53, 54, 55, 56, 57, 58, 59	6—65 psi 8—80 psi 1—100 psi	1—Standard Solenoid 2—Spike Guard™ Solenoid 3—Nickel-plated Spike Guard Solenoid 4—DC Latching Solenoid (DCLS) 6—Integrated Lynx Smart Module w/DCLS	6—24-position TruJectory	7—Effluent
Example: When specifying an INF35-6 Series Sprinkler with #34 nozzle, pressure regulation at 65 psi and Spike Guard you would specify: **INF35-346-26**						

Note: *Not all models available.*

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

TORO. Count on it.

FLEX800™ 34/54 SERIES GOLF ROTORS

The new FLEX800 34/54 Series with dual trajectory main nozzle provides exceptional nozzle performance at the 25° standard angle position and great performance in windy applications at the 15° low angle position. And the consistency of the constant velocity full circle drive ensures even water application across the coverage area every time you water.

Features & Benefits

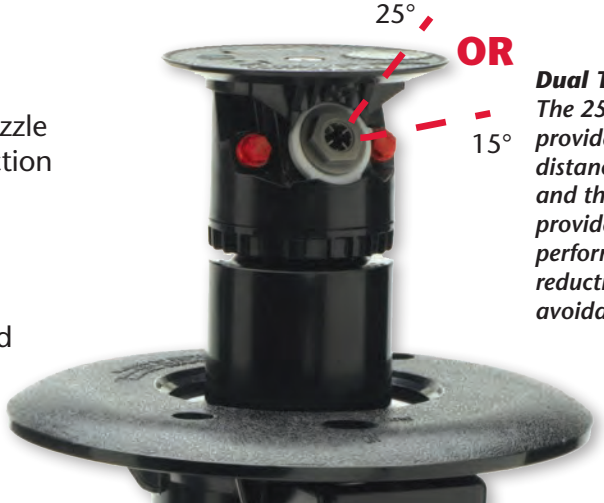
Industry's Largest Nozzle Selection
Nozzles from 52' to 99' radius plus a wide assortment of back nozzles lets you put the precise amount of water exactly where you need it. All nozzles threaded in from the front.

Stainless Steel Valve Seat
Eliminates body damage from rocks and debris. This in-destructible stainless steel seat is molded to the body and virtually eliminates body replacements due to seat damage.

Optional Radius Reduction Screw
Allows for fine tuning the radius to exactly the distance you need. In combination with main nozzle sizing and trajectory adjustment the radius reduction screw can effectively reduce the sprinkler throw down to 30'.

Constant Velocity Full Circle Drive
Ensures consistent rotation speeds when matched with station run times for even water application across the coverage area every time you water.

FLX34 FLX54



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

TORO. Count on it.

FLEX800™ 35-6/55-6 SERIES GOLF ROTORS

With the industry's largest selection of high performance nozzles and Trujectory™ adjustment the New FLEX800 35-6/55-6 Series allows you to put water precisely where you want it for maximum distribution uniformity. And the part/full circle drive allows you to simply and economically adjust the area of coverage to match your seasonal watering needs or meet water rationing mandates in seconds with no disassembly or additional parts required.

Features & Benefits

Industry's Largest Nozzle Selection
Nozzles from 42' to 100' radius plus a wide assortment of back nozzles lets you put the precise amount of water exactly where you need it. All nozzles threaded in from the front.

20,000 Volt Lightning Rating
Spike-Guard™ solenoid virtually eliminates the need for replacements in high lightning areas. Draws half the amperage of traditional solenoids so you can run twice as many sprinklers simultaneously, reduce the cost of wire during initial installation or increase the distance from controller to sprinkler.

Adjustment With No Disassembly
Toro exclusive, simply pull up the riser and ratchet it to the precise position you want to water.

True Part and Full-Circle in One – (40° - 330° part circle)
These sprinklers can be full circle today and part circle tomorrow allowing you to simply and economically adjust the area of coverage to match your seasonal needs or meet water rationing mandates.

Trajectory – 24 Positions
From 7° - 30° in 1° increments put water where you want it. Adjust from the top of the sprinkler in seconds, wet or dry. This flexibility lets you tackle every obstacle on the course; wind, trees, bunkers, mounds and more.

THE B35/DT55 Series golf sprinkler family brings you all the great features and performance of the 835S, DT34 and DT35 Series sprinklers in a more economical body package specifically designed for block systems. With its rugged golf body design, small exposed surface diameter, flanged body for stability and check valve these sprinklers are perfect for every golf application.

Features

- **Industry's Largest Nozzle Selection**
  Nozzles from 25' to 95' radius, plus a wide assortment of intermediate and inner nozzles, provide unmatched flexibility allowing you to put the precise amount of water exactly where you need it. All nozzles threaded in from front.
- **True Full-Circle in One – (40° - 330° part circle) These sprinklers can be full circle or part circle allowing you to adjust the area of coverage to match your seasonal needs or meet water rationing mandates.**
- **Flanged Cap Installs Below Grade Stabilizes the body position and maintains optimumnozzle performance.**
- **Small Exposed Diameter Minimizes the appearance of the sprinkler to maximize the beauty of the course. Perfect for high traffic areas like tees, greens and surrounds.**

835B *DT34B and DT35B*

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

Specifying Information—B Series

XXXXB-X2-XXXXE						
Series	*Arc*	*System*	*Thread Type*	*Valve Type*	*Nozzle*	*Optional*
XXX	X	B	X	2	XXXX	E
DT3—DT Series 83—835 Series	4—Full-Circle (DT only) 5—Part-/Full-Circle	B—Block	0—NPT 4—ACME	Check-O-Matic	3134— Includes nozzles #31, 32, 33 & 34 3538— Includes nozzles #35, 36, 37 & 38	E—Effluent Model
Example: When specifying a DT34B Series Sprinkler with NPT threads, #34 nozzle, you would specify: **DT34B–02–3134**						

Toro's T7

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

- **Water is Evenly Distributed**
  High efficiency nozzles with single port design ensure water is evenly distributed across the pattern.
- **Versatility**
  Available in standard and low-flow models to meet your application needs.
- **Vandal and Abuse Resistant**
  The Smart Arc memory safely returns the sprinkler to previously set arc even when turned beyond arc borders.
- **Clears Tall Grasses**
  The 5.75 inch pop-up ensures proper spray pattern and nozzle distribution uniformity even in taller grasses.

Specifying Information—T7 Sprinkler

T7PSS-42XX			
Description	**Optional**	**Thread**	**Optional**
T7P	**SS**	**42**	**X**
T7P—Sports Rotor	SS—Stainless Steel Riser	ACME Thread	E—Effluent L—Low Flow
Example: A low flow T7P sprinkler with a stainless steel riser and effluent rubber cover would be specified as **T7PSS-42LE**			

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

Features & Benefits

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

Specifying Information

Model Number	Description
590GF-4	4" Pop-Up
590GF-4E	4" Pop-Up, Effluent
590GF-6	6" Pop-Up
590GF-6E	6" Pop-Up, Effluent
590GF-12	12" Pop-Up
590GF-12E	12" Pop-Up, Effluent

INFINITY FULL CIRCLE SPRINKLER

Buy 4 complete INFINITY sprinklers get 1 free, no limit. Ex: Buy 20 get 5 free

Full

1"

INF34	Pressure			
Nozzle	6 = 65 PSI	8 = 80 PSI	1 = 100 PSI	
31 Yellow	58	60	62	Radius
32 Blue	60	63	66	Radius
33 Brown	68	72	75	Radius
34 Orange	72	76	79	Radius
35 Green	76	80	84	Radius
36 Gray	N/A	83	88	Radius
37 Black	N/A	85	91	Radius

Model #	Description
INF30-1	Body,Riserless,1", Acme With Std Solenoid
INF30-2	Body,Riserless,1", Acme With Spike Guard Solenoid
INF30-4	Body,Riserless,1", DC Latching Solenoid
INF30-5	Body,Riserless,1", GDC Module w/ DC Latching Solenoid
INF30-6	Body,Riserless,1", Lynx Smart Module with DC Latching Solenoid
FLX34-3134	Conversion Assembly, 1" Full Circle, W/31-34 Noz
FLX34-3537	Conversion Assembly, 1" Full Circle, W/35-37 Noz

Note: *Customer will receive Bodies and conversion assemblies.*

Note: *Nozzle Flow rates can be found in the Golf Irrigation Spec Catalog.* ***Flow rates MUST be entered into the central irrigation computer***

1-1/2"

INF54	Pressure			
Nozzle	6 = 65 PSI	8 = 80 PSI	1 = 100 PSI	
51 Yellow	60	61	63	Radius
52 Blue	61	64	67	Radius
53 Brown	68	72	75	Radius
54 Orange	74	78	81	Radius
55 Green	79	83	87	Radius
56 Gray	N/A	85	90	Radius
57 Black	N/A	87	93	Radius
58 Red	N/A	91	95	Radius
59 Beige	N/A	96	99	Radius

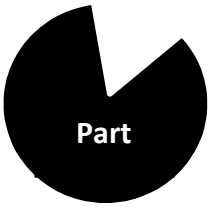
Model #	Description
INF50-1	Body,Riserless,1-1/2", Acme With Std Solenoid
INF50-2	Body,Riserless,1-1/2", Acme With Spike Guard Solenoid
INF50-4	Body,Riserless,1-1/2", DC Latching Solenoid
INF50-5	Body,Riserless,1-1/2", GDC Module w/ DC Latching Solenoid
INF50-6	Body,Riserless,1-1/2", Lynx Smart Module with DC Latching Solenoid
FLX54-5154	Conversion Assembly, 1.5" Full Circle, W/51-54 No
FLX54-5558	Conversion Assembly, 1.5" Full Circle, W/55-58 No
FLX54-59	Conversion Assembly, 1.5" Full Circle, W/59 Noz

Buy 4 get one free price on bodies only applies if equal number of Conversion Assemblies are purchased with the bodies on the same order. Program ends 10-31-2022

To Order Call 518-785-5841

INFINITY PART CIRCLE SPRINKLER

Buy 4 complete INFINITY sprinklers get 1 free, no limit. Ex: Buy 20 get 5 free



1"

INF 35	Pressure			
Nozzle	6 = 65 PSI	8 = 80 PSI	1 = 100 PSI	
31 Yellow	53	57	59	Radius
32 Blue	59	62	65	Radius
33 Brown	64	67	70	Radius
34 Orange	68	71	74	Radius
35 Green	72	75	79	Radius
36 Gray	N/A	78	81	Radius
37 Black	N/A	80	83	Radius

Model #	Description
INF30-1	Body,Riserless,1", Acme With Std Solenoid
INF30-2	Body,Riserless,1", Acme With Spike Guard Solenoid
INF30-4	Body,Riserless,1", DC Latching Solenoid
INF30-5	Body,Riserless,1", GDC Module w/ DC Latching Solenoid
INF30-6	Body,Riserless,1", Lynx Smart Module with DC Latching Solenoid
FLX35-3134	Conversion Assembly, 1" Part Circle, W/31-34 Noz
FLX35-3537	Conversion Assembly, 1" Part Circle, W/35-37 Noz

Note: *Customer will receive Bodies and conversion assemblies.*

Note: *Nozzle Flow rates can be found in the Golf Irrigation Spec Catalog.* ***Flow rates MUST be entered into the central irrigation computer***

1-1/2"

INF 55	Pressure			
Nozzle	6 = 65 PSI	8 = 80 PSI	1 = 100 PSI	
51 Yellow	57	59	61	Radius
52 Blue	60	61	63	Radius
53 Brown	65	68	71	Radius
54 Orange	69	72	75	Radius
55 Green	73	76	80	Radius
56 Gray	N/A	80	83	Radius
57 Black	N/A	83	88	Radius
58 Red	N/A	85	90	Radius
59 Beige	N/A	89	92	Radius

Model #	Description
INF50-1	Body,Riserless,1-1/2", Acme With Std Solenoid
INF50-2	Body,Riserless,1-1/2", Acme With Spike Guard Solenoid
INF50-4	Body,Riserless,1-1/2", DC Latching Solenoid
INF50-5	Body,Riserless,1-1/2", GDC Module w/ DC Latching Solenoid
INF50-6	Body,Riserless,1-1/2", Lynx Smart Module with DC Latching Solenoid
FLX55-5154	Conversion Assembly, 1.5" Part Circle, W/51-54 No
FLX55-5558	Conversion Assembly, 1.5" Part Circle, W/55-58 No
FLX55-59	Conversion Assembly, 1.5" Part Circle, W/59 Noz

FLEX FULL CIRCLE SPRINKLER

For Every 4 Conversion Assemblies Purchased, Get 1 Free, No Limit

For Every 4 Complete Sprinklers Purchased, Get 1 Complete Sprinkler Free, No Limit

360

1"

FLEX 34	Pressure			
Nozzle	6 = 65 PSI	8 = 80 PSI	1 = 100 PSI	
31 Yellow	58	60	62	Radius
32 Blue	60	63	66	Radius
33 Brown	68	72	75	Radius
34 Orange	72	76	79	Radius
35 Green	76	80	84	Radius
36 Gray	N/A	83	88	Radius
37 Black	N/A	85	91	Radius

Note: *Customer will receive Bodies and conversion assemblies.*

Note: *Nozzle Flow rates can be found in the Golf Irrigation Spec Catalog.* ***Flow rates MUST be entered into the central irrigation computer***

Part Number	Description
	1" Inlet Size
FLX30-06-1	Riserless Body DT30 Npt 1" Std Solenoid
FLX30-46-1	Riserless Body DT30 Acme 1" Std Solenoid
FLX30-06-2	Riserless Body DT30 NPT 1" Spike Guard Solenoid
FLX30-46-2	Riserless Body DT30 Acme 1" Spike Guard Solenoid
FLX30-06-4	Riserless Body DT30 NPT 1" DC Latching Solenoid
FLX30-46-4	Riserless Body DT30 Acme 1" DC Latching Solenoid
FLX30-06-5	Riserless Body DT30 NPT 1" DC Latching Solenoid w/ Integrated GDC Module
FLX30-46-5	Riserless Body DT30 Acme 1" DC Latching Solenoid w/ Integrated GDC Module
FLX30-06-6	Riserless Body DT30 NPT 1" DC Latching Solenoid w/ Integrated Lynx Smart Mod
FLX30-46-6	Riserless Body DT30 Acme 1" DC Latching Solenoid w/ Integrated Lyn Smart Mod
FLX34-3134	Conversion Assembly Assm 31-34 Noz FC
FLX34-3537	Conversion Assembly Assm 35-37 Noz FC

Buy 4 get one free price on bodies only applies if equal number of Conversion Assemblies are purchased with the bodies on the same order. Program ends 10-31-2022

FLEX FULL CIRCLE SPRINKLER

For Every 4 Conversion Assemblies Purchased, Get 1 Free, No Limit

For Every 4 Complete Sprinklers Purchased, Get 1 Complete Sprinkler Free, No Limit

1-1/2"

FLEX 54	Pressure			
Nozzle	6 = 65 PSI	8 = 80 PSI	1 = 100 PSI	
51 Yellow	60	61	63	Radius
52 Blue	61	64	67	Radius
53 Brown	68	72	75	Radius
54 Orange	74	78	81	Radius
55 Green	79	83	87	Radius
56 Gray	N/A	85	90	Radius
57 Black	N/A	87	93	Radius
58 Red	N/A	91	95	Radius
59 Beige	N/A	96	99	Radius

Note: *Customer will receive Bodies and conversion assemblies.*

Note: *Nozzle Flow rates can be found in the Golf Irrigation Spec Catalog.*
Flow rates MUST be entered into the central irrigation computer

Part Number	Description
FLX50-06-1	Riserless Body DT30 Npt 1-1/2" Std Solenoid
FLX50-46-1	Riserless Body DT30 Acme 1-1/2" Std Solenoid
FLX50-06-2	Riserless Body DT30 NPT 1-1/2" Spike Guard Solenoid
FLX50-46-2	Riserless Body DT30 Acme 1-1/2" Spike Guard Solenoid
FLX50-06-4	Riserless Body DT30 NPT 1-1/2" DC Latching Solenoid
FLX50-46-4	Riserless Body DT30 Acme 1-1/2" DC Latching Solenoid
FLX50-06-5	Riserless Body DT30 NPT 1-1/2" DC Latching Solenoid w/ Integrated GDC Module
FLX50-46-5	Riserless Body DT30 Acme 1-1/2" DC Latching Solenoid w/ Integrated GDC Module
FLX50-06-6	Riserless Body DT30 NPT 1-1/2" DC Latching Solenoid w/ Integrated Lynx Smart Mod
FLX50-46-6	Riserless Body DT30 Acme 1-1/2" DC Latching Solenoid w/ Integrated Lyn Smart Mod
FLX54-5154	Conversion Assembly Assm 51-54 Noz FC
FLX54-5558	Conversion Assembly Assm 55-58 Noz FC
FLX54-59	Conversion Assembly Assy, W/59 FC

Buy 4 get one free price on bodies only applies if equal number of Conversion Assemblies are purchased with the bodies on the same order. Program ends 10-31-2022

FLEX PART CIRCLE SPRINKLER

For Every 4 Conversion Assemblies Purchased, Get 1 Free, No Limit

For Every 4 Complete Sprinklers Purchased, Get 1 Complete Sprinkler Free, No Limit

1"

FLEX 35	Pressure			
Nozzle	6 = 65 PSI	8 = 80 PSI	1 = 100 PSI	
31 Yellow	53	57	59	Radius
32 Blue	59	62	65	Radius
33 Brown	64	67	70	Radius
34 Orange	68	71	74	Radius
35 Green	72	75	79	Radius
36 Gray	N/A	78	81	Radius
37 Black	N/A	80	83	Radius

Note: *Customer will receive Bodies and conversion assemblies.*

Note: *Nozzle Flow rates can be found in the Golf Irrigation Spec Catalog.* ***Flow rates MUST be entered into the central irrigation computer***

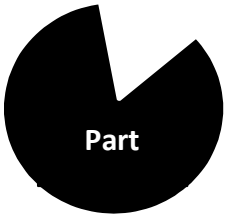
Part Number	Description
	1" Inlet Size
FLX30-06-1	Riserless Body DT30 Npt 1" Std Solenoid
FLX30-46-1	Riserless Body DT30 Acme 1" Std Solenoid
FLX30-06-2	Riserless Body DT30 NPT 1" Spike Guard Solenoid
FLX30-46-2	Riserless Body DT30 Acme 1" Spike Guard Solenoid
FLX30-06-4	Riserless Body DT30 NPT 1" DC Latching Solenoid
FLX30-46-4	Riserless Body DT30 Acme 1" DC Latching Solenoid
FLX30-06-5	Riserless Body DT30 NPT 1" DC Latching Solenoid w/ Integrated GDC Module
FLX30-46-5	Riserless Body DT30 Acme 1" DC Latching Solenoid w/ Integrated GDC Module
FLX30-06-6	Riserless Body DT30 NPT 1" DC Latching Solenoid w/ Integrated Lynx Smart Mod
FLX30-46-6	Riserless Body DT30 Acme 1" DC Latching Solenoid w/ Integrated Lyn Smart Mod
FLX35-3134	Conversion Assembly Assm, 31- PC
FLX35-3537	Conversion Assembly Assm 35-37 Noz PC

Buy 4 get one free price on bodies only applies if equal number of Conversion Assemblies are purchased with the bodies on the same order. Program ends 10-31-2022

FLEX PART CIRCLE SPRINKLER

For Every 4 Conversion Assemblies Purchased, Get 1 Free, No Limit

For Every 4 Complete Sprinklers Purchased, Get 1 Complete Sprinkler Free, No Limit



1-1/2"

FLEX 55 Nozzle	Pressure 6 = 65 PSI	8 = 80 PSI	1 = 100 PSI	Radius
51 Yellow	57	59	61	Radius
52 Blue	60	61	63	Radius
53 Brown	65	68	71	Radius
54 Orange	69	72	75	Radius
55 Green	73	76	80	Radius
56 Gray	N/A	80	83	Radius
57 Black	N/A	83	88	Radius
58 Red	N/A	85	90	Radius
59 Beige	N/A	89	92	Radius

Note: *Customer will receive Bodies and conversion assemblies.*

Note: *Nozzle Flow rates can be found in the Golf Irrigation Spec Catalog.* ***Flow rates MUST be entered into the central irrigation computer***

Part Number	Description
	1-1/2" Inlet Size
FLX50-06-1	Riserless Body DT30 Npt 1-1/2" Std Solenoid
FLX50-46-1	Riserless Body DT30 Acme 1-1/2" Std Solenoid
FLX50-06-2	Riserless Body DT30 NPT 1-1/2" Spike Guard Solenoid
FLX50-46-2	Riserless Body DT30 Acme 1-1/2" Spike Guard Solenoid
FLX50-06-4	Riserless Body DT30 NPT 1-1/2" DC Latching Solenoid
FLX50-46-4	Riserless Body DT30 Acme 1-1/2" DC Latching Solenoid
FLX50-06-5	Riserless Body DT30 NPT 1-1/2" DC Latching Solenoid w/ Integrated GDC Module
FLX50-46-5	Riserless Body DT30 Acme 1-1/2" DC Latching Solenoid w/ Integrated GDC Module
FLX50-06-6	Riserless Body DT30 NPT 1-1/2" DC Latching Solenoid w/ Integrated Lynx Smart Mod
FLX50-46-6	Riserless Body DT30 Acme 1-1/2" DC Latching Solenoid w/ Integrated Lyn Smart Mod
FLX55-5154	Conversion Assembly Assy, 51- PC
FLX55-5558	Conversion Assembly Assm 55-58 Noz PC
FLX55-59	Conversion Assembly Assm 59 Noz PC

Buy 4 get one free price on bodies only applies if equal number of Conversion Assemblies are purchased with the bodies on the same order. Program ends 10-31-2022

FLEX800™ B Series Golf Rotors

FLX35B with Trujectory adjustment from 7°-30° and DT models with dual settings of 25° or 15°
The industry's largest selection of precision nozzles from 25' to 90' (7.6 - 27.4 m) radius applications.
One sprinkler for every location on the course-these unique sprinklers can be a full circle. Small exposed diameter minimizes the appearance of the sprinkler

FLX35B Series Performance Chart—25°

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

FLX34B Series Performance Chart—25°

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

— Not recommended at these pressures. Radius shown in feet.
Toro recommends the use of a 1¼" swing joint at flows over 25-GPM (95-LPM). Sprinkler radius data collected in Toro's zero wind test facility per ASAE standard S398.1. Actual site conditions must be considered when selecting the appropriate nozzle. All sprinklers are equipped with the selectable pilot valve that allows settings at 50, 65, 80 and 100 PSI.

Model #	Description
Full Circle Heads	
FLX34B-02-3134	Turf Spk, FC, NPT, Com, Block, W/ 31-34 Nozzles
FLX34B-02-3538	Turf Spk, FC, NPT, Com, Block, W/ 35-38 Nozzles
FLX34B-42-3134	Turf Spk, FC, Acme, Com, Block, W/ 31-34 Nozzles
FLX34B-42-3538	Turf Spk, FC, Acme, Acme, Block, W/ 35-38 Nozzles
Part Circle Heads	
FLX35B-02-3134	Turf Spk, PC/FC, NPT, Com, Block, W/ 31-34 Nozzles
FLX35B-02-3538	Turf Spk, PC/FC, NPT, Com, Block, W/ 35-38 Nozzles
FLX35B-42-3134	Turf Spk, PC/FC, Acme, Com, Block, W/ 31-34 Nozzles
FLX35B-42-3538	Turf Spk, PC/FC, Acme, Block, W/ 35-38 Nozzles

TORO SPRINKLER CONVERSION ASSEMBLES

CROSS REFERENCE GUIDE					Models Being Replaced										
New Model	Arc	Trajectory	Radius - Ft	Flow - gpm	634	664	734	764	765	864S	865S	834S	835S	DT34	DT35
FLX34-3134	Full Circle	25° or 15°	52' - 79'	12.9 - 34.9	X	X	X	X	X	X	X	X	X	X	X
FLX34-3537	Full Circle	25° or 15°	67' - 91'	32.1 - 46.9	X	X	X	X	X	X	X	X	X	X	X
FLX35-3134	Part/Full Circle	25° or 15°	52' - 74'	13.6 - 34.1			1	X	X	X	X	X	X	X	X
FLX35-3537	Part/Full Circle	25° or 15°	69' - 83'	33.1 - 47.3			1	X	X	X	X	X	X	X	X
FLX35-6-3134	Part/Full Circle	30° - 7°	46' - 80'	15.5 - 37.0			1	X	X	X	X	X	X	X	X
FLX35-6-3537	Part/Full Circle	30° - 7°	59' - 92'	32.4 - 45.3			1	X	X	X	X	X	X	X	X

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

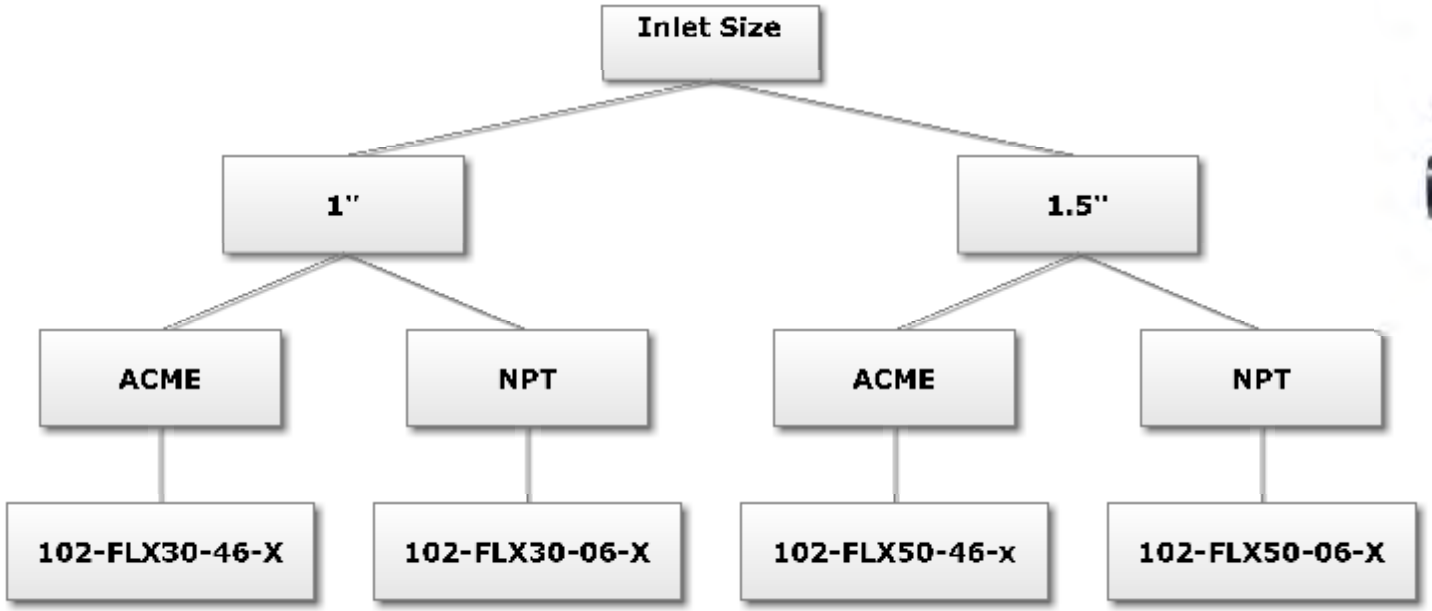
CROSS REFERENCE GUIDE					Models Being Replaced											
New Model	Arc	Trajectory	Radius - Ft	Flow - gpm	654	655	670	684	690	754	784	785	884S	885S	854S	855S	DT54	DT55
FLX54-5154	Full Circle	25° or 15°	58' - 81'	13.2 - 36.7	2	2	2	2	4	2	2	2	X	X	X	X	X	X
FLX54-5558	Full Circle	25° or 15°	79' - 95'	34.2 - 55.4	2	2	2	2	4	2	2	2	X	X	X	X	X	X
FLX54-59	Full Circle	25° or 15°	96' - 99'	55.6 - 61.8	2	2	2	2	4	2	2	2	X	X	X	X	X	X
FLX55-5154	Part/Full Circle	25° or 15°	55' - 75'	14.0 - 34.5					4	2	2	2	X	X	X	X	X	X
FLX55-5558	Part/Full Circle	25° or 15°	73' - 90'	35.3 - 53.9					4	2	2	2	X	X	X	X	X	X
FLX55-59	Part/Full Circle	25° or 15°	82' - 92'	57.2 - 61.3					4	2	2	2	X	X	X	X	X	X
FLX55-6-5154	Part/Full Circle	30° - 7°	46' - 80'	13.9 - 38.2					4	2	2	2	X	X	X	X	X	X
FLX55-6-5558	Part/Full Circle	30° - 7°	59' - 95'	33.8 - 51.1					4	2	2	2	X	X	X	X	X	X
FLX55-6-59	Part/Full Circle	30° - 7°	77' - 100'	57.0 - 61.1					4	2	2	2	X	X	X	X	X	X
FLX55-5154R	Part/Full Circle	25° or 15°	55' - 75'	14.0 - 34.5	3	3	3	3		3								
FLX55-5558R	Part/Full Circle	25° or 15°	73' - 90'	35.3 - 53.9	3	3	3	3		3								
FLX55-59R	Part/Full Circle	25° or 15°	82' - 92'	57.2 - 61.3	3	3	3	3		3								
FLX55-6-5154R	Part/Full Circle	30° - 7°	46' - 80'	13.9 - 38.2	3	3	3	3		3								
FLX55-6-5558R	Part/Full Circle	30° - 7°	59' - 95'	33.8 - 51.1	3	3	3	3		3								
FLX55-6-59R	Part/Full Circle	30° - 7°	77' - 100'	57.0 - 61.1	3	3	3	3		3								

2 - Requires the separate purchase and use of 102-0950 conversion adapter
3 - Use the "R" Series (Ribless body) conversion for bodies dated prior to 1992.
4 - Requires the separate purchase and use of 102-5011 690 conversion adapter

- 102-5011
- 102-0950

690 Adapter allows you to upgrade any 690 with FLX54 conversions
Required to upgrade all 1.5" Series Sprinklers (650, 670, 680, 750, and 780)

Sprinkler Body Selection - FLEX Heads
If customer previously had 600, 700, 800 or DT Series the replacement is FLX

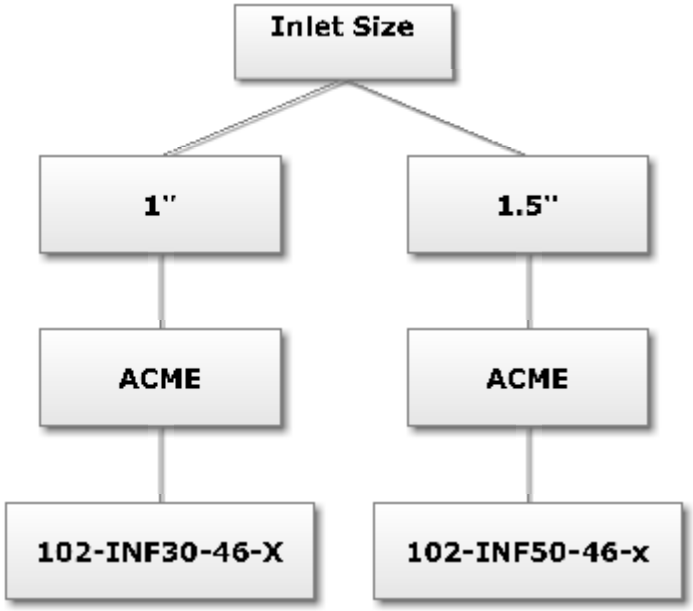


ACME inlets are Gray

NPT inlets are Black

Activation Type	X
24 volt AC Standard Solenoid - Most Common Satellite Systems All Brands - Also works with Older Rain Bird AC Decoder Systems	1
Spike Guard Solenoid	2
DC Latching Solenoid - TORO Decoder Systems	4
DC Latching Solenoid w/Integrated GDC Module - TORO Decoder or GDC Systems	5
DC Latching Solenoid w/Integrated Lynx Smart Module.	6

Sprinkler Body Selection - INFINITY Heads - ACME ONLY

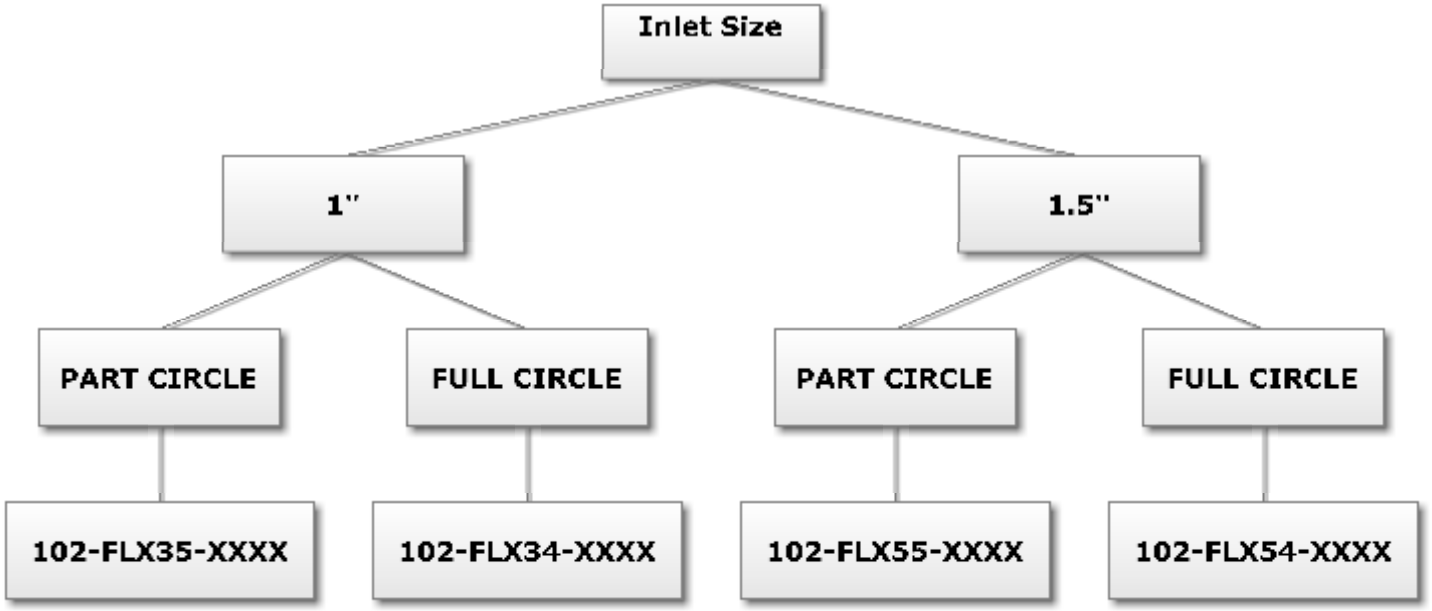


ACME inlets are Gray

NPT inlets are Black

Activation Type	X
Standard Solenoid	1
Spike Guard Solenoid	2
DC Latching Solenoid	4
DC Latching Solenoid w/Integrated GDC Module - Most Common Replacement	5
DC Latching Solenoid w/Integrated Lynx Smart Module	6

Sprinkler Conversion Assembly Selection - FLEX or INF Heads
the FLX Series Conversions are will fit ALL Toro heads* including the Infinity Heads



Full Circle
Silver Screw

Part Circle
Black Screw

Nozzle Sizes for 1" Heads	XXXX
31 - 34	3134
35 - 37	3537

Nozzle Sizes for 1-12" Heads	XXXX
51 - 54	5154
55 - 58	5558
59	59

Toro has separate part numbers for the INF and FLX conversions, but they are the same thing and the same price. To avoid confusion Grassland Only stocks the conversions under the FLX numbers. If a customer orders a INF35-3134 they will be shipped a FLX35-3134

*** For 690 heads adaptor 102-5011 is required to upgrade 690's with FLX54 Conversions**

Part # 102-0950 Adaptor Flange is required for 1.5" Series (650, 670, 680, 750 and 780)

P-220 S PLASTIC

Order No.	Description	Carton Qty.
P220-26-04	1" Electric, In-Line	24
P220-26-06	1½" Electric, In-Line	12
P220-26-08	2" Electric, In-Line	4
P220-26-00	3" Electric, Angle	4
P-220 Series Valves with EZREG .....(Factory Installed):		
P220-27-04	1" Electric, Pressure-Regulated, In-Line	24
P220-27-06	1½" Electric, Pressure-Regulated, In-Line	12
P220-27-08	2" Electric, Pressure-Regulated, In-Line	4
P220-27-00	3" Electric, Pressure-Regulated, Angle	4

220 SERIES BRASS VA

220-26-04	1" Electric, In-Line	5
220-26-06	1½" Electric, In-Line	4
220-26-08	2" Electric, In-Line	2
220-26-09	2½" Electric, Angle	1
220-26-00	3" Electric, Angle	1
	220 Series Brass Valves with EZREG (Factory Installed):	
220-27-04	1" Electric, Pressure-Regulated, In-Line	5
220-27-06	1½" Electric, Pressure-Regulated, In-Line	4
220-27-08	2" Electric, Pressure-Regulated, In-Line	2
220-27-09	2½" Electric, Pressure-Regulated, Angle	1
220-27-00	3" Electric, Pressure-Regulated, Angle	1
	220 Series Brass Valves, Less Solenoid:	
220-26-64	1" Electric, In-Line	5
220-26-66	1½" Electric, In-Line	4
220-26-68	2" Electric, In-Line	2
220-26-60	3" Electric, Angle	1

LYNX® SMART SATELLITE

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

FEATURES & BENEFITS

Smart Design

Designed for Performance

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

Designed for Reliability

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

Smart Features

Updated User Interface

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

Enhanced Wireless Communications

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

Optional Sensor Input Kit

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

Plus all the Great Features of the Network VP

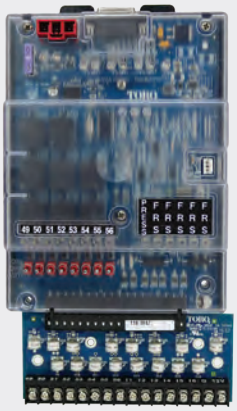
Station-Based Flow Management, current sensing and alarm response, runtimes to the second, Group Multi-Manual operation, Basic/Advanced/Grow-In programs.

Lynx® Smart Satellite

Lynx Smart Satellite – Inside View

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

Optional Sensor Input Kit



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

Updated User Interface

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

SPECIFICATIONS

Operational

- Functions as a stand-alone controller or under the management of a central computer operating Lynx or SitePro Central Control System
  - Supports wireline or radio communications
  - Supports hybrid communication (wireline and radio)
- 64 irrigation programs
- Basic, Advanced and Grow-In programs
- Station Autocycle
- Percent Adjustment from 1% to 900%
- Each output can be defined as an irrigation station or general application switch
- Nonvolatile memory retains program information and satellite settings during power-off conditions; battery backup retains the date and time
- 16-64 stations in 16 station increments; individual station control and the ability to run up to 32 stations simultaneously
- Backward compatible with Toro Network VP and Network 8000 satellite systems

Electrical

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

Dimensions

- Plastic Cabinet: 17"W x 40"H x 16"D

Temperature/Humidity

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

Options

- Surge Protection
- Sensor Input Kit

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

Specifying Information—Lynx® Smart Satellite

300-0XXY6ZSA					
Description	*Configuration*	*Cabinet*	*Output*	*Comm.*	*Options*
300	**XX**	**Y**	**6**	**Z**	**S**
300—Lynx Smart Satellite	16—16 Stations 32—32 Stations 48—48 Stations 64—64 Stations	P—Plastic, Green T—Desert Sand B—Tree Bark	6—24 VAC Electric	A—Stand-alone M—2-Way Wire Modem R—UHF Radio H—Radio & Wire Modem	3—Large-capacity Terminal Block & Switches 4—Large-capacity Terminal Block w/Add'l Surge & Switches
Example: When ordering a 48-station, radio-equipped, Lynx Smart Satellite with large-capacity terminal block, additional surge and switches, specify: **300-048P6R4A**					

Sensor Input Kit for Lynx Smart Satellite: **SMRT-SEN-BRD-KIT**

LYNX® SMART MODULE 2-WIRE CONTROL SYSTEM

The Toro Lynx Smart Module 2-Wire Control System uses innovative technology to provide an irrigation solution that is reliable and efficient. Using a 2-wire path to communicate to buried control units, the system reduces the costs associated with traditional valve wire bundles and provides a solution that is vandal resistant, easy to install and easy to expand.

FEATURES & BENEFITS

Speed

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

Precision

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

Upgradeable

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

Durable

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

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

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

INTERFACE OPTIONS

Lynx Smart Hub

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

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

SPECIFICATIONS

Operational

Lynx® Central:

- Mapping capabilities
- Remote hand-held operation
- Weather station integration
- Pump station integration

- Enhanced diagnostics:
  - Communication
  - Electrical shorts/opens
  - Solenoid check
- No holding power required to operate stations
- Decoder identification is a unique 6-character address

Installation

- Maximum number of wire paths: 4 per gateway
- Maximum number of Lynx Smart Hubs: 20 per system
- Maximum number of modules per wire path: 250
- Maximum stations per Lynx Smart Hub: 1000
- Maximum stations per system: 10,000
- Simultaneous stations per output board: 100
- Maximum distance from central to module (using 14 gauge wire): 2.8 miles
- Maximum distance from module to sprinkler (using 14 gauge wire): 400 ft.
- Solenoids per output: 2 DCLS-P
- Stations per module: 1

Electrical

- Input power: 88-264 V ac, 50/60 Hz
- Output Power:
  - Output voltage: 40 V ac max
  - Output power: 75 VA max
  - Class 2, SELV
- ISP 2-wire modules are rated at 20 KV surge protection
- 2-Wire modules wiring: 14 awg

Specifying Information—2-Wire Modules

LSM-1	
Type	*Configuration*
LSM	X
Lynx Smart Module	1—1-station
Example: A 1-station Lynx Smart Module would be specified as: **LSM-1**	

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

Lynx Smart Hub

Lynx® *FIU-2011DR* *DEC-RS-1000-M* *DEC-RSP-1000-DR*

Specifying Information—Gateway or Lynx Smart Hub

DEC-XXX-XXXX-XX				
Type	*Configuration*	*Cabinet*	*Station Count*	*Communication Type*
DEC	XXX	X	XXXX	XX
DEC	RS—Lynx Smart Hub	WM Metal P—Green Plastic Pedestal B—Brown Plastic Pedestal T—Tan Plastic Pedestal	1000—1000 Stations, Lynx Smart Hub*	M—Wireline DR—Radio
Example: A1000 station Lynx Smart Hub with green plastic pedestal and radio communication would be specified as: **DEC-RSP-1000-DR**				

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

OSMAC® G3 Satellite

Updated for 2019, the OSMAC G3 satellite combines value and reliability in one controller. Wireless communications, easy installation and setup, and compatibility with existing OSMAC systems make the OSMAC G3 an ideal choice for a control system upgrade or retrofit. As part of a Lynx® Central Control system, the OSMAC G3 will run flow-managed programs using station run times executed to the second for precise water application. An upgrade kit is available for E-OSMAC satellites, adding new functionality, including program storage for stand-alone function and a user interface for performing manual irrigation or diagnostic activity.

FEATURES & BENEFITS

Reliable Design

Designed for reliability, featuring a limited number of cables and connectors, corrosion-resistant metals, vented circuit board covers, and simple parallel power and signal distribution.

Enhanced Wireless Communication

Equipped with a high-performance receiver with integrated modem, providing industry-leading communication signal integrity, reliability, and signal strength indication. Wireless communication also allows easy system expansion.

OSMAC Compatible

Compatible with any narrowband OSMAC system equipped with an OSMAC Base Station or Radio Interface Unit (RIU). Able to retrofit with OSMAC RDR and E-OSMAC satellites.

Productive and Precise

Operates up to 32 stations simultaneously with run times executed to the second for productive and precise water application.

Information and Control:

- ✔ Received messages are logged with signal strength indication
  - A useful reference of recent activity and valuable diagnostic detail
- ✔ Stand-alone capabilities enable running scheduled irrigation programs
  - A convenient backup option and useful during course construction
- ✔ Manual operation capabilities include program start, station multi-manual, and syringe cycles
  - A trusted point of control on the course
- ✔ Diagnostic information is available in the display menus and through LED lights
  - Confirmation of normal function and information to guide troubleshooting
- ✔ Capable of remote operation with hand-held radio and Lynx Apps
  - Flexible control options, on and off the course

SPECIFICATIONS

Operational

Functions under the management of a central computer operating Lynx, or SitePro, Central Control System, or as a stand-alone controller.

Stations: 16 to 64 in 16 station increments

- Up to 32 stations may operate simultaneously
- Station run times received from Lynx® Central are executed to the second, from 1 second to 8 hours and 59 minutes
- Station run times programmed in Local mode are executed to the minute, from 1 minute to 59 minutes
- Any station can be configured as a switch. Switch operation will ignore rain hold and does not activate the pump/master valve circuit

Local Mode Operations

- 12 independent local programs
- 14 day calendar or 1 to 30 day interval scheduling
- Up to 24 start times per program
- Simultaneous station operation defined independently per program
- Program percent adjust from 10 to 250%
- Nonvolatile memory saves program data for up to 10 years without power

Manual Operations

- Multi-Manual station start up to 32 stations
- Program start
- Program syringe

Electrical

- Input power: 120/240 V ac, 50/60 Hz

OSMAC G3:

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

Dimensions

- Plastic Cabinet: 17" W x 40" H x 16" D

Options

- Surge protection

Specifying Information—OSMAC G3 Satellites

G4-XXX6RX					
Description	*Configuration*	*Cabinet*	*Output*	*Communication*	*Options*
G4	**XX**	**X**	**6**	**R**	**X**
G4 – OSMAC G3 2019+	16 – 16 Stations 32 – 32 Stations 48 – 48 Stations 64 – 64 Stations	P – Plastic Green B – Plastic Tree Bark T – Plastic Desert Sand	6A – 24VAC	R – Narrowband Radio	3 – Large Terminal Blocks, Switches 4 – Large Terminal Blocks, Switches, Premium Surge
Example: When specifying a 48-station, satellite in a green plastic cabinet with large terminal block, switches and premium surge you would specify: **G4-48P6R4**					

OSMAC G3 Upgrade Kit:

- ✔ Upgrade E-OSMAC satellites with the OSMAC G3 Upgrade Kit
  - Add a point of operation at the satellite controller for performing manual irrigation or referencing diagnostic information, including communications details through Page History.
  - Add backup program storage for stand-alone operations when in Local mode.
  - Upgrade receiver hardware to a high-performance receiver radio for improved reliability and for signal strength indication.

Specifying Information – OSMAC G3 Upgrade Kit

118-2987
Kit Contains
OSMAC G3 Timing Module, Interface Cable and Hardware

CONTROL SYSTEM UPGRADES

Network LTC™ Plus to Network VP®

Available as an upgrade kit for existing LTC Plus satellites. Upgrade kit includes Network VP Faceplate, Network LTC Plus To Network VP Power Distribution Board, Cable and Hardware.

FEATURES & BENEFITS

- Station based flow management shortens watering window
- Intuitive user interface simplifies manual irrigation
- Station runtimes executed to the second helps save water
- Upgrade to Lynx for enhanced central capabilities (requires all satellites to be upgraded)

Specifying Information—Network LTC Plus Upgrade Kit

118-0038
Kit Contains
Network VP Faceplate, Network LTC Plus To Network VP Power Distribution Board, Cable and Hardware

Network LTC Plus to LTC Pro

Available as complete satellites or upgrade kit for existing LTC Plus satellites. Upgrade kit includes LTC Pro Faceplate, Power Distribution Board, Cable and Hardware.

FEATURES & BENEFITS

- Intuitive user interface simplifies faceplate functions
- Enhanced manual operations
  - Runtimes to the second
  - Stackable multi-manuals
  - Start/Pause/Stop
- Backwards compatible with SitePro®
- Can upgrade 1 satellite at a time (full system must be upgraded prior to a Lynx upgrade)

Specifying Information—LTC Pro Satellites

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

Specifying Information—LTC Pro Upgrade Kit

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

Pump Stations

Motor Controls Incorporated

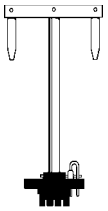
Motor Controls Inc. has been designing and manufacturing engineered control solutions since 1 0. The company has been built on a foundation of meeting and exceeding our customer's expectations.

MCI's custom manufacturing capabilities include structural, pipe and enclosure fabrication. Our advanced structural abilities coupled with our powder coat capabilities allows us to meet the stringent and harsh environmental needs for engineered package pump stations. Custom solutions for your landscape applications

Features:

- Pre-Fabricated Pump Station
- MCI is raising the standard on pump station reliability, efficiency and intelligent operation with our new line of engineered package pump stations coupled with our revolutionary MPC control system. MCI's custom manufacturing capabilities include structural and pipe fabrication. Our advanced structural abilities coupled with our powder coat capabilities allow us to meet the stringent and harsh environmental needs for engineered package pump stations.
- Leading Edge Technology
- Latest generation of Allen Bradley Compact Logix PLC
- Allen Bradley 10" PanelView Plus Color Touch Screen
- Monitor & Control from any PC, Smart Phone or Tablet
- Ease of Operation
- Six modes of operation to ensure continuous watering
- Protective safeties in all modes
- Operation set points are easily changed from HMI
- Operation Intelligence
- Available parameters to fine tune your system and give you the tools to monitor and make changes based on current and future demand and conditions.
- Industry leading event and alarm logs that provide you with a detailed system snapshot of what the system and pump status were at the time of alarm event.
- Flow data log available for three years.
- Intelligent line fill programming allows your system to recover from a power interruption and reduces any impacts to your underground piping system.

800 / DT30 / FLX - 1” S SE



995-08……..Valve Removal Tool 1” Body
995-76……..Valve Insertion Tool
995-15……..Selector Flags
995-99……..Nut Driver 5/8” For Main Nozzle
995-105……..Nut Driver 5/16” (Inner and Intermediate Nozzles)
995-83……..Multi-Purpose Tool
995-85……..Riser Removal Tool
995-100……..Valve Snap Ring Pilers with Screen Remover
995-86……..Riser Hold Up Tool - Universal

800 / DT50 / FLX - 1.5” S SE

995-09……..Valve Removal Tool 1-1/2” Body
995-101……..Valve Insertion Tool
995-15……..Selector Flags
995-99……..Nut Driver 5/8” For Main Nozzle
995-105……..Nut Driver 5/16” (Inner and Intermediate Nozzles)
995-83……..Multi-Purpose Tool
995-85……..Riser Removal Tool
995-100……..Valve Snap Ring Pilers with Screen Remover
995-86……..Riser Hold Up Tool - Universal

INFINITY - SP SE TOOLS

118-1843……..Valve Insertion Tool 1-1/2” Body
118-1844……..Valve Insertion Tool 1” Body

Quick Coupler Valves

474-00……..Quick Coupler Valve, 1” STD Cover
464-02……..Quick Coupler Key, 1”
465-01……..Quick Coupler Key, 1 1/4”
466-01……..Quick Coupler Key, 1 1/2” (C151)
474-04……..1-PIECE, 1” Quick Coupler Valve w/Effluent Locking Cove (20)
475-00……..Quick Coupler Valve, 1” X 1 1/4” STD.Cover.
475-01……..Quick Coupler Valve, 1” X 1 1/4” VINYL Cover
476-00……..Quick Coupler Valve, 1 1/2” STD. Cover
476-04……..Quick Coupler Valve - 1 /12” STD. Cover
476-08……..1 1/2” Quick Coupler Valve W/ LAVENDER Cover
075-75-MHS……..3/4 NPT x 3/4 MHT Hose Swivel
075-MHS……..1 NPT x 3/4 MHT Hose Swivel
075-SLK……..3/4 Single Lug Key, 3/4 & 1/2 THD.
075-SLSC……..3/4 One Piece QC w/METAL Cover
100-2SLVC……..1, One Piece QC W/ VINYL Cover
100-MHS……..1 NPT x 1 MHT Hose Swivel
100-SLK……..Key w/1 Top THD, 3/4 FX1 Male

Gate Valves

Order No.	Description	Carton Qty.
1223-T29-½	½" Brass Flat Top Gate Valve	10/100
1223-T29-1	1" Brass Flat Top Gate Valve	5/50
1223-T29-1¼	1 ¼" Brass Flat Top Gate Valve	5/40
1223-T29-1½	1 ½" Brass Flat Top Gate Valve	5/20
1223-T29-2	2" Brass Flat Top Gate Valve	5/20
1223-T113-1	1" Bronze Gate Valve, Cross Handle	5/30
1223-T113-1¼	1 ¼" Bronze Gate Valve, Cross Handle	5/20
1223-T113-1½	1 ½" Bronze Gate Valve, Cross Handle	2/10
1223-T113-2	2" Bronze Gate Valve, Cross Handle	2/10
1223-T113-2½	2 ½" Bronze Gate Valve, Cross Handle	1/5
1223-T113-3	3" Bronze Gate Valve, Cross Handle	1/4
550-VK-36	36" Meter Key	1
1750-M25100	30" Gate Valve Key	1

T113

Brass Ball Valves

Order No.	Description	Carton Qty.
1223-T-FP600-3/4	3/4" Ball Valve Threaded Ends	14
1223-T-FP600-1	1" Ball Valve Threaded Ends	8
1223-T-FP600-1-1/2	1 ½" Ball Valve Threaded Ends	4
1223-T-FP600-2	2" Ball Valve Threaded Ends	2

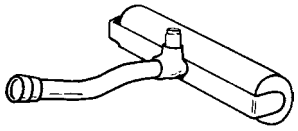
Cast Iron Gate Valves

Order No.	Description	Carton Qty
1223 - P619RW-3	3" Cast Iron Gate Valve - Resilient Wedge (AWWA)	1
1223 - P619RW-4	4" Cast Iron Gate Valve - Resilient Wedge (AWWA)	1
1223 - P619RW-6	6" Cast Iron Gate Valve - Resilient Wedge (AWWA)	1
1223 - P619RW-8	8" Cast Iron Gate Valve - Resilient Wedge (AWWA)	1
1223 - P619RW-10	10" Cast Iron Gate Valve - Resilient Wedge (AWWA)	1
848-NS-157...	60" Cast Iron Gate Valve Wrench	1

Brass Impact Sprinklers

Order No.	Description
046-2000S-10/06	3/4" Conn., 5/32"-3/32" Dbl. Nozzle, FC
046-400S-14/24	1¼" Conn., 3/8"-7/32" Dbl. Nozzle, FC
046-261SA-10/06	3/4" Conn., 5/32"-3/32" Dbl. Nozzle, PC/FC
046-360SA-14/08	1" Conn., 3/16"-1/8" Dbl. Nozzle, PC/FC
046-261SD-10/06	3/4" Conn., 5/32"-3/32" Dbl. Nozzle, PC/FC with Deflector

Roller Bases



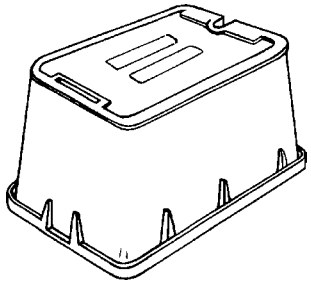
Order No.	Description
725-RB-14-1	1" Hose Conn., 14" Wide, fits 3/4" Impact Sprinkler
725-RB-18-1	1" Hose Conn., 18" Wide, fits 1" Impact Sprinkler

Impact Base

Order No.	Description
102-490-01	Impact Sprinkler Base- 3/4" Connection

VALVE BOXES - HOSE

Dura Valve Boxes



Order No.	Description	Carton Qty.
943-61	6” Round Valve Box	240
943-71	7” Round Valve Box	240
943-101	10” Round Valve Box	156
943-121-6	6” Standard Valve Box	98
943-121	12” Standard Valve Box	72
943-121-X	6” Extension for Standard Valve Box	49
943-151-6	6” Jumbo Valve Box	56
943-151	12” Jumbo Valve Box	48
943-151	12” Jumbo Valve Box	56
943-151-X	6” Extension for Jumbo Valve Box	48

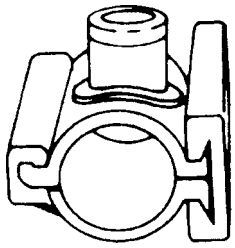
Gates Flexogen Hose

Order No.	Description	Carton Qty.
320-10-10050	Gates Flexogen Hose - 1” x 50 ft	1
320-10-10075	Gates Flexogen Hose - 1” x 75 ft	1
320-10-10100	Gates Flexogen Hose - 1” x 100 ft	1
320-10-12075	Gates Flexogen Hose - ½” x 75 ft	1
320-10-12100	Gates Flexogen Hose - ½” x 100 ft	1
320-10-34025	Gates Flexogen Hose - 3/4” x 25 ft	1
320-10-34050	Gates Flexogen Hose - 3/4” x 50 ft	1
320-10-34075	Gates Flexogen Hose - 3/4” x 75 ft	1
320-10-34100	Gates Flexogen Hose - 3/4” x 100 ft	1
320-10-34250	Gates Flexogen Hose - 3/4” x 250 ft.(uncoupled)	1
320-10-58025	Gates Flexogen Hose - 5/8” x 25 ft	1
320-10-58050	Gates Flexogen Hose - 5/8” x 50 ft	1
320-10-58075	Gates Flexogen Hose - 5/8” x 75 ft	1
320-10-58100	Gates Flexogen Hose - 5/8” x 100 ft	1

PVC Repair Fittings

Flo Control Knock On Saddles

Order No.	Description	Carton Qty.
292-PC4220-2X1	2" x 1" IPS FIPT	5
292-PC4220-2X1½	2" x 1 ½" IPS FIPT	5
292-PC4225-2½X1½	2 ½" x 1 ½" IPS FIPT	5
292-PC4225-2½X2	2 ½" x 2" IPS FIPT	5
292-PC4430-3X3/4	3" x 3/4" IPS FIPT	5
292-PC4430-3X1	3" x 1" IPS FIPT	5
292-PC4430-3X1½	3" x 1 ½" IPS FIPT	5
292-PC4430-3X2	3" x 2" IPS FIPT	5
292-PC4440-4X3/4	4" x 3/4" IPS FIPT	5
292-PC4440-4X1	4" x 1" IPS FIPT	5
292-PC4440-4X1½	4" x 1 ½" IPS FIPT	5
292-PC4440-4X2	4" x 2" IPS FIPT	5
292-PC4460-6X3/4	6" x 3/4" IPS FIPT	5
292-PC4460-6X1	6" x 1" IPS FIPT	5
292-PC4460-6X1½	6" x 1 ½" IPS FIPT	5
292-PC4460-6X2	6" x 2" IPS FIPT	5
292-PC4480-8X1	8" x 1" IPS FIPT	5
292-PC4480-8X1½	8" x 1 ½" IPS FIPT	5
292-PC4480-8X2	8" x 2" IPS FIPT	5



Flo Control Slip Fix Fittings

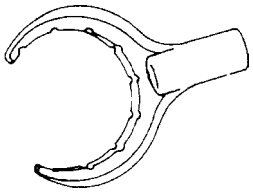
Order No.	Description	Carton Qty.
292-117-10	1" Slip Fix Coupling	15
292-117-12	1 ¼" Slip Fix Coupling	10
292-117-15	1 ½" Slip Fix Coupling	16
292-118-20	2" Slip Fix Coupling	12
292-118-25	2 ½" Slip Fix Coupling	3
292-118-30	3" Slip Fix Coupling	3
292-118-40	4" Slip Fix Coupling	3

Flo Control Compression Fittings

Order No.	Description	Carton Qty.
292-PC10-1	1" Compression Coupling	15
292-PC10-1¼	1 ¼" Compression Coupling	10
292-PC10-1½	1 ½" Compression Coupling	16
292-PC10-2	2" Compression Coupling	12
292-PC10-2½	2 ½" Compression Coupling	3
292-PC10-3	3" Compression Coupling	3
292-PC10-4	4" Compression Coupling	3
292-PC10-6	6" Compression Coupling	1

Flo Control Wrenchs

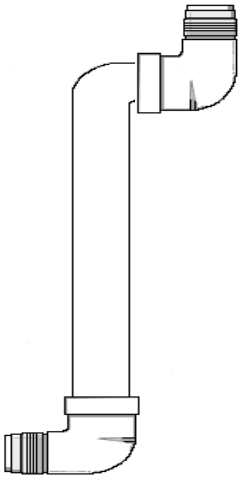
Order No.	Description	Carton Qty.
292-W25	2 ½" IPS Aluminum Spanner Wrench	1
292-W30	3" IPS Aluminum Spanner Wrench	1
292-W40	4" IPS Aluminum Spanner Wrench	1
292-W60	6" IPS Aluminum Spanner Wrench	1
292-BOA-00106	Flo Adjustable Strap Wrench 1/2"-6"	1



SWING JOINTS & HOSES

Swing Joint Assemblies

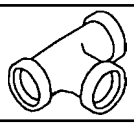
Acme Thread!
By combining both sprinklers and swing joints equipped with Acme Thread, you can eliminate the need for Teflon tape.



Order No.	Description	Carton Qty.
	3-Way Swing Joints:	
943-DU1-010-12	1" Unibody 12" (Mipt x Mipt)	1
943-DU1-010-12-SPG	1" Unibody 12" (Mipt x Spigot)	1
943-DU1-015-12	1½" Unibody 12" (Mipt x Mipt)	1
943-1-A813112	1" Unibody 12" (4" Spigot x 1" Acme)	1
943-3-A821112	1½" Unibody 12" (4" Spigot x 1½" Acme)	1
943-1-A1-1-11-12	1" Standard Unibody for Quick Couplers 12" (Mipt x Mipt)	1
943-1-A1-1-11-18	1" Standard Unibody for Quick Couplers 18" (Mipt x Mipt)	1
943-1-A1-3-1-12	1" Standard Ulnibody 12" (Mipt x Mipt)	1
943-1-A1-13-1-12	1" Standard Unibody 12" (Mipt x Acme)	1
943-1-A1-13-15-12	1" Standard Unibody 12" (Acme x Acme)	1
943-2-A1-7-1-12	1¼" x 1" Standard Unibody 12" (Mipt x Mipt)	1
943-2-A1-16-1-12	1¼" x 1" Standard Unibody 12" (Mipt x Acme)	1
943-2-A1-16-15-12	1¼" x 1" Standard Unibody 12" (Acme x Acme)	1
943-3-A1-3-1-12	1½" Standard Unibody 12" (Mipt x Mipt)	1
943-3-A1-21-1-12	1½" Standard Unibody 12" (Mipt x Acme)	1
943-3-A1-21-15-12	1½" Standard Unibody 12" (Acme x Acme))	1
	5-Way (Ultra) Unibody Swing Joints:	
943-3-A13212	1½" Ultra Unibody 12" (Mipt x Mipt)	1
943-1-A111112	1" QC Swing Joint 12" (Mipt x Brass Mipt)	1
	Quick Lock:	
855-DL-010	1" Quick Lock	1
855-DL-015	1½" Quick Lock	1
	Swing Joint Kits:	
943-3-015-C	1½" Swing Joint Kit	1
943-3-010-C	1" Swing Joint Kit	1
	Miscellaneous:	
943-OA39-010	1" Replacement Outlet (Fipt x Male Acme)	1
943-OA39-015	1½" Replacement Outlet (Fipt x Male Acme)	1
943-1WH	1" Swing Joint Zone Wire Clips	1 set = 2 clips
943-2WH	1¼" Swing Joint Zone Wire Clips	1 set = 2 clips
943-2WH	1½" Swing Joint Zone Wire Clips	1 set = 2 clips

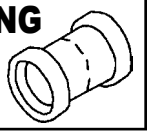
PVC Class 200 Fittings

PVC TEE
(B x B x B)



Order No.	Description
112-251	2½ x 1½”
112-252	2½ x 2”
112-255	2½ x 2½”
112-315	3 x 1½”
112-320	3 x 2”
112-325	3 x 2½”
112-330	3 x 3”
112-420	4 x 2”
112-425	4 x 2½”
112-430	4 x 3”
112-440	4 x 4”
112-620	6 x 2”
112-630	6 x 3”
112-640	6 x 4”
112-660	6 x 6”
112-840	8 x 4”
112-860	8 x 6”
112-880	8 x 8”

LINE COUPLING
(with stop)
(B x B)



Order No.	Description
108-025	2½”
108-030	3”
108-040	4”
108-060	6”

SWIVEL TEE

Order No.	Description
8035405	3”
8045405	4”
8065405	6”
8105405	8”
8125405	12”

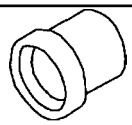
PVC SERVICE TEE
(B x B x Fipt)

Order No.	Description
151-254	2½ x 1”
151-255	2½ x 1¼”
151-256	2½ x 1½”
151-258	2½ x 2”
151-304	3 x 1”
151-305	3 x 1¼”
151-306	3 x 1½”
151-308	3 x 2”
151-404	4 x 1”
151-405	4 x 1¼”
151-406	4 x 1½”
151-408	4 x 2”
151-604	6 x 1”
151-605	6 x 1¼”
151-606	6 x 1½”
151-608	6 x 2”

REPAIR COUPLING
(no stop)
(B x B)

Order No.	Description
109-025	2½”
109-030	3”
109-040	4”
109-060	6”
109-080	8”
109-100	10”
109-120	12”

PVC CAP
(Bell)

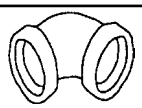


Order No.	Description
149-030	3”
149-040	4”
149-060	6”

PVC REDUCER
(Spigot x Bell)

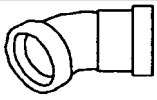
Order No.	Description
116-215	2 x 1½”
116-252	2½ x 2”
116-320	3 x 2”
116-325	3 x 2½”
116-420	4 x 2”
116-425	4 x 2½”
116-430	4 x 3”
116-630	6 x 3”
116-640	6 x 4”
116-860	8 x 6”

90° BEND
(B x B)



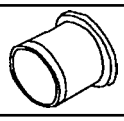
Order No.	Description
118-025	2½”
118-030	3”
118-040	4”
118-060	6”
118-080	8”

45° BEND
(B x B)



Order No.	Description
122-025	2½”
122-030	3”
122-040	4”
122-060	6”
122-080	8”

PVC PLUG
(Spigot)



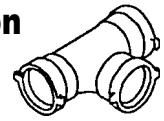
Order No.	Description
144-030	3”
144-040	4”

HARCO DUCTILE IRON FITTINGS

Ductile Iron LATERAL 90°
(Mipt x Mipt)

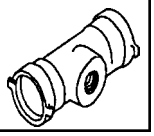
Order No.	Description
80088	1½"
800882	1½ x 1" Fipt Side Outlet Tap
80188	2"
801882	2 x 1" Fipt Side Outlet Tap
80288	2½""
802882	2½ x 1" Fipt Side Outlet Tap

Ductile Iron TEE
(B x B x B)



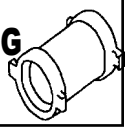
Order No.	Description
8030303	3 x 3 x 3"
8030302	3 x 3 x 2½"
8040404	4 x 4 x 4"
8040403	4 x 4 x 3"
8040402	4 x 4 x 2½"
8040401	4 x 4 x 2"
8060606	6 x 6 x 6"
8060604	6 x 6 x 4"
8060603	6 x 6 x 3"
8060602	6 x 6 x 2½"
8060601	6 x 6 x 2"
8080808	8 x 8 x 8"
8080806	8 x 8 x 6"
8080804	8 x 8 x 4"
8080803	8 x 8 x 3"
8101010	10 x 10 x 10"
8101008	10 x 10 x 8"
8101006	10 x 10 x 6"
8121212	12 x 12 x 12"
8121208	12 x 12 x 8"
8121206	12 x 12 x

Ductile Iron SERVICE TEE
(B x B x Fipt)



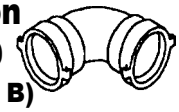
Order No.	Description
803502	3 x 1"
803503	3 x 1½"
803504	3 x 2"
803505	3 x 2½"
804502	4 x 1"
804503	4 x 1½"
804504	4 x 2"
804505	4 x 2½"
806502	6 x 1"
806503	6 x 1½"
806504	6 x 2"
806505	6 x 2½"
808502	8 x 1"
808503	8 x 1½"
808504	8 x 2"
808505	8 x 2½"
810502	10 x 1"
810503	10 x 1½"
810504	10 x 2"
810505	10 x 2½"
812503	12 x 1½"
812504	12 x 2"
812505	12 x 2½"

Ductile Iron REPAIR COUPLING
(Knock - On's)



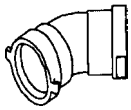
Order No.	Description
80440	4"
80640	6"
80840	8"
81040	10"
81240	12"

Ductile Iron 90° BEND
(1/4 Bend, B x B)



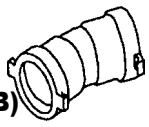
Order No.	Description
80320	3"
80420	4"
80620	6"
80820	8"
81020	10"
81220	12"

Ductile Iron 45° BEND
(1/8 Bend, B x B)



Order No.	Description
80322	3"
80422	4"
80622	6"
80822	8"
81022	10"
81222	12"

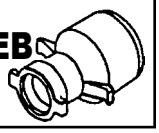
Ductile Iron 22½° BEND
(1/16 Bend, B x B)



Order No.	Description
80324	3"
80424	4"
80624	6"
80824	8"
81024	10"
81224	12"

HARCO DUCTILE IRON FITTINGS

Ductile Iron REDUCER - SEB (Spigot x Bell)



Order No.	Description
80330	3 x 2½"
80430	4 x 3"
80432	4 x 2½"
80632	6 x 4"
80634	6 x 3"
80636	6 x 2½" *
80832	8 x 6"
80834	8 x 4"
80836	8 x 3" *
80838	8 x 2½" *
81030	10 x 8"
81032	10 x 6"
81034	10 x 4" **
81036	10 x 3" *
81230	12 x 10"
81232	12 x 8"
81234	12 x 6"
81236	12 x 4" **

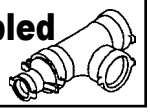
NOTE: Connecting links must be ordered separately if required.

SEB = Small End Bell; other end is Spigoted.

* Indicates Reducer assembled from tapped plug and Male Pipe Thread x Bell Adapter.

** Indicates Reducer assembled from two other Reducers.

Ductile Iron TEES - Assembled (B x B x B)



Order No.	Description
8030202	3 x 2½ x 2½"
8030203	3 x 2½ x 3"
8030204	3 x 2½ x 4"
8030302	3 x 3 x 2½"
8030303	3 x 3 x 3"
8030304	3 x 3 x 4"
8030306	3 x 3 x 6"
8040202	4 x 2½ x 2½"
8040203	4 x 2½ x 3"
8040204	4 x 2½ x 4"
8040206	4 x 2½ x 6"
8040302	4 x 3 x 2½"
8040303	4 x 3 x 3"
8040304	4 x 3 x 4"
8040306	4 x 3 x 6"
8040400	4 x 4 x 1½"
8040402	4 x 4 x 2½"
8040403	4 x 4 x 3"
8040404	4 x 4 x 4"
8040406	4 x 4 x 6"
8040408	4 x 4 x 8"
8060203	6 x 2½ x 3"
8060204	6 x 2½ x 4"
8060206	6 x 2½ x 6"
8060303	6 x 3 x 3"
8060304	6 x 3 x 4"
8060306	6 x 3 x 6"
8060308	6 x 3 x 8"
8060402	6 x 4 x 2½"
8060403	6 x 4 x 3"
8060404	6 x 4 x 4"
8060406	6 x 4 x 6"
8060408	6 x 4 x 8"
8060602	6 x 6 x 2½"

Ductile Iron TEES - Assembled (B x B x B)

Order No.	Description
8060603	6 x 6 x 3"
8060604	6 x 6 x 4"
8060606	6 x 6 x 6"
8060608	6 x 6 x 8"
8060610	6 x 6 x 10"
8080206	8 x 2½ x 6"
8080208	8 x 2½ x 8"
8080306	8 x 3 x 6"
8080308	8 x 3 x 8"
8080404	8 x 4 x 4"
8080406	8 x 4 x 6"
8080408	8 x 4 x 8"
8080410	8 x 4 x 10"
8080602	8 x 6 x 2½"
8080603	8 x 6 x 3"
8080604	8 x 6 x 4"
8080606	8 x 6 x 6"
8080608	8 x 6 x 8"
8080610	8 x 6 x 10"
8080612	8 x 6 x 12"
8080802	8 x 8 x 2½"
8080803	8 x 8 x 3"
8080804	8 x 8 x 4"
8080806	8 x 8 x 6"
8080808	8 x 8 x 8"
8080810	8 x 8 x 10"
8080812	8 x 8 x 12"

For complete specifi ca-tions and current list prices and other technical information on Harco Fittings, visit www.harcofittings.com

HARCO DUCTILE IRON FITTINGS

Ductile Iron TEES - Assembled (B x B x B)

Order No.	Description
8100308	10 x 3 x 8”
8100310	10 x 3 x 10”
8100312	10 x 3 x 12”
8100406	10 x 4 x 6”
8100408	10 x 4 x 8”
8100410	10 x 4 x 10”
8100412	10 x 4 x 12”
8100604	10 x 6 x 4”
8100606	10 x 6 x 6”
8100608	10 x 6 x 8”
8100610	10 x 6 x 10”
8100612	10 x 6 x 12”
8100803	10 x 8 x 3”
8100804	10 x 8 x 4”
8100806	10 x 8 x 6”
8100808	10 x 8 x 8”
8100810	10 x 8 x 10”
8100812	10 x 8 x 12”
8101002	10 x 10 x 2½”
8101003	10 x 10 x 3”
8101004	10 x 10 x 4”
8101006	10 x 10 x 6”
8101008	10 x 10 x 8”
8101010	10 x 10 x 10”
8101012	10 x 10 x 12”
8120410	12 x 4 x 10”
8120412	12 x 4 x 12”
8120606	12 x 6 x 6”
8120608	12 x 6 x 8”
8120610	12 x 6 x 10”
8120612	12 x 6 x 12”
8120806	12 x 8 x 6”
8120808	12 x 8 x 8”
8120810	12 x 8 x 10”

Ductile Iron TEES - Assembled (B x B x B)

Order No.	Description
8120812	12 x 8 x 12”
8121004	12 x 10 x 4”
8121006	12 x 10 x 6”
8121008	12 x 10 x 8”
8121010	12 x 10 x 10”
8121012	12 x 10 x 12”
8121202	12 x 12 x 2½”
8121203	12 x 12 x 3”
8121204	12 x 12 x 4”
8121206	12 x 12 x 6”
8121208	12 x 12 x 8”
8121210	12 x 12 x 10”
8121212	12 x 12 x

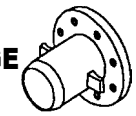
Ductile Iron ACME SERVICE TEE (Gasket x Gasket x Acme O-Ring - New)

Order No.	Description
8015302	2” x 1””
8015303	2” x 1½”
8025302	2½” x 1”
8025303	2½” x
1½”	8035302
3” x 1”	8035303
3” x 1½”	8045302
4” x 1”	8045303

Ductile Iron PLUG (Male End x Solid)

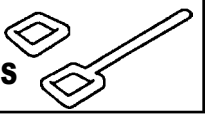
Order No.	Description
80355	3”
80455	4”
80655	6”
80855	8”
81055	10”
81255	12”

Ductile Iron SPIGOT x FLANGE ADAPTER



Order No.	Description
80360	3”
80460	4”
80660	6”
80860	8”
81060	10”
81260	12”

Ductile Iron CONNECTING LINKS & EYE BOLTS

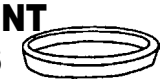


Order No.	Description
82000	Connecting Link
82001	5/8 x 5” Long Eye Bolt
82002	3/4 x 6” Long Eye Bolt

Two links or bolts per Bell when required

Harco Ductile Iron Fittings

Ductile Iron REPLACEMENT GASKETS



Order No.	Description
85103	3”
85504	4”
85506	6”
85508	8”
85510	10”
85512	12”

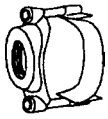
Designed for Harco deep bell Ductile Iron fittings. EPDM gaskets available on request at extra cost.

Cast Iron Valve to Cast Iron Fitting

Order No.	Description
820320	3”
820420	4”
820620	6”
820820	8”

For complete specifications and current list prices and other technical information on Harco Fittings, visit www.harcofit-

Ductile Iron SADDLES



Order No.	Description
803803	3 x 1½”
803804	3 x 2”
804803	4 x 1½”
804804	4 x 2”
806803	6 x 1½”
806804	6 x 2”
808803	8 x 1½”
808804	8 x 2”
810803	10 x 1½”
810804	10 x 2”
812803	12 x 1½”
812804	12 x 2”

Cast Iron to PVC Pipe Restraint System (new)

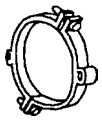
Order No.	Description
820325	3”
820425	4”
820625	6”
820825	8”

Ductile Iron SWIVEL SADDLES

Order No.	Description
80481	4”
80681	6”
80881	8”
81081	10”
81281	12”

2” Threaded Outlet

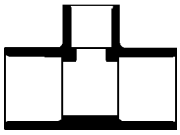
D.I. JOINT RESTRAINT SYSTEM



Order No.	Description
820110	2”
820210	2½”
820310	3”
820410	4”
820610	6”
820810	8”

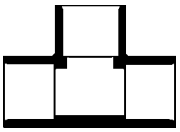
Includes clamps, assembly nuts & bolts, and eye bolts that connect to Harco Bell.

REDUCING TEES
(Slip x Slip x Slip)



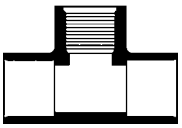
Order No.	Description	Bag	Box
401-130	1 x 1 x ½"	10	50
401-131	1 x 1 x 3/4"	10	50
401-210	1½ x 1½ x 3/4"	–	50
401-211	1½ x 1½ x 1"	–	50
401-212	1½ x 1½ x 1¼"	–	25
401-213	1½ x 1½ x 2"	–	25
401-248	2 x 2 x 3/4"	–	25
401-249	2 x 2 x 1"	–	25
401-250	2 x 2 x 1¼"	–	25
401-251	2 x 2 x 1½"	–	20
401-289	2½ x 2½ x 1"	–	10
401-291	2½ x 2½ x 1½"	–	10
401-292	2½ x 2½ x 2"	–	10
401-335	3 x 3 x 1"	–	5
401-338	3 x 3 x 2"	–	5
401-420	4 x 4 x 2"	–	4
401-422	4 x 4 x 3"	–	4

TEES
(Slip x Slip x Slip)



Order No.	Description	Bag	Box
401-007	3/4"	10	100
401-010	1"	10	50
401-012	1¼"	5	50
401-015	1½"	–	25
401-020	2"	–	20
401-025	2½"	–	10
401-030	3"	–	5
401-040	4"	–	4

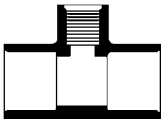
TEES
(Slip x Slip x Fipt)



Order No.	Description	Bag	Box
402-007	3/4"	10	100
402-010	1"	10	50
402-012	1¼"	–	25
402-015	1½"	–	25
402-020	2"	–	20

Due to the recent volatility in material pricing, and because discounts are based on quantities ordered and customer status, we have not published prices in this year's catalog. For best pricing, assemble your complete material list and then call us for a quote.

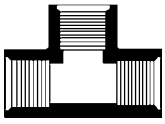
REDUCING TEES
(Slip x Slip x Fipt)



Order No.	Description	Bag	Box
402-101	3/4 x 3/4 x ½"	10	200
402-130	1 x 1 x ½"	10	50
402-131	1 x 1 x 3/4"	10	50
402-157	1¼ x 1 x 3/4"	10	50
402-168	1¼ x 1¼ x 1"	10	50
402-202	1½ x 1¼ x 1"	–	25
402-209	1½ x 1½ x ½"	–	50
402-210	1½ x 1½ x 3/4"	–	50
402-211	1½ x 1½ x 1	–	50
402-239	2 x 1½ x 1"	–	25
402-247	2 x 2 x ½"	–	25
402-248	2 x 2 x 3/4"	–	25
402-249	2 x 2 x 1"	–	25
402-251	2 x 2 x 1½"	–	20
402-287	2½ x 2½ x ½"	–	10
402-289	2½ x 2½ x 1"	–	10
402-291	2½ x 2½ x 1½"	–	10
402-292	2½ x 2½ x 2"	–	10
402-335	3 x 3 x 1"	–	5
402-337	3 x 3 x 1½"	–	5
402-338	3 x 3 x 2"	–	5
402-417	4 x 4 x 1"	–	4
402-420	4 x 4 x 2"	–	4
402-422	4 x 4 x 3"	–	4

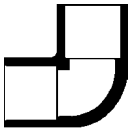
Note: Larger sizes are also available. .....

TEE THREADED
(fipt x fipt x fipt)



Order No.	Description	Bag	Box
405-005	1/2"	10	100
405-007	3/4"	10	100
405-010	1"	10	50
405-015	1½"	–	25
405-020	2"	–	20

90° ELL
(slip x slip)



Order No.	Description	Bag	Box
406-005	1/2"	10	250
406-007	3/4"	10	200
406-010	1"	10	50
406-012	1¼"	5	50
406-015	1½"	10	50
406-020	2"	5	25
406-025	2½"	–	10
406-030	3"	–	10
406-040	4"	–	5

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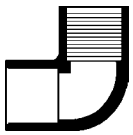
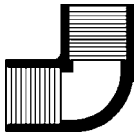
90° ELL (slip x fipt)



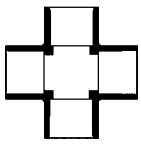
Order No.	Description	Bag	Box
407-005	1/2"	10	250
407-007	3/4"	10	200
407-010	1"	10	50
407-012	1¼"	5	50
407-015	1½"	5	50
407-020	2"	5	25
407-025	2½"	–	10
407-030	3"	–	10
407-040	4"	–	5

90° ELL (fipt x fipt)



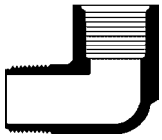
Order No.	Description	Bag	Box
408-005	1/2"	10	250
408-007	3/4"	10	200
408-010	1"	10	50
408-015	1½"	5	50
408-020	2"	5	25

CROSS (slip)



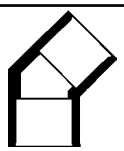
Order No.	Description	Bag	Box
420-005	1/2"	10	200
420-007	3/4"	10	100
420-010	1"	5	25
420-015	1½"	5	25
420-020	2"	–	10

90° STREET ELL (mipt x fipt)



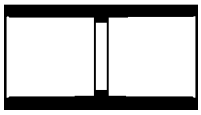
Order No.	Description	Bag	Box
412-005	1/2" PVC	10	250
412-006	1/2" MARLEX	10	250
412-007	3/4" PVC	10	250
412-008	3/4" MARLEX	10	250
412-010	1" PVC	10	100

45° ELL (slip x slip)



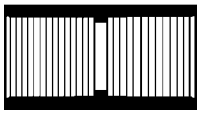
Order No.	Description	Bag	Box
417-007	3/4"	10	100
417-010	1"	10	50
417-012	1¼"	5	50
417-015	1½"	10	50
417-020	2"	5	25
417-025	2½"	–	10
417-030	3"	–	10
417-040	4"	–	4

COUPLING (slip x slip)



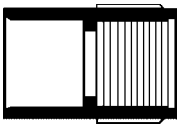
Order No.	Description	Bag	Box
429-005	1/2"	10	250
429-007	3/4"	10	250
429-010	1"	10	100
429-015	1½"	10	50
429-020	2"	5	25
429-025	2½"	–	25
429-030	3"	–	10
429-040	4"	–	8

THREADED COUPLING
(fipt x fipt)



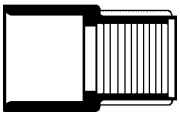
Order No.	Description	Bag	Box
430-005	1/2" PVC GRAY	10	250
430-007	3/4" PVC GRAY	10	250
430-010	1" PVC GRAY	10	100
430-015	1½" PVC GRAY	5	50

FEMALE ADAPTER
(slip x fipt)



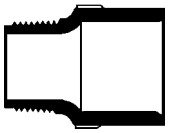
Order No.	Description	Bag	Box
435-005	1/2"	10	250
435-007	3/4"	10	250
435-010	1"	10	100
435-012	1¼"	5	50
435-015	1½"	5	50
435-020	2"	5	25
435-030	3"	–	10
435-040	4"	–	5

REDUCING FEMALE ADAPTER
(slip x fipt)



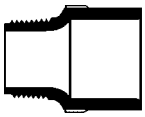
Order No.	Description	Bag	Box
435-074	1/2" x 3/4"	10	250
435-131	1" x 3/4"	10	100
435-212	1½" x 1¼"	5	50

MALE ADAPTER
(mipt x slip)



Order No.	Description	Bag	Box
436-005	1/2"	10	250
436-007	3/4"	10	250
436-010	1"	10	100
436-012	1¼"	5	50
436-015	1½"	5	50
436-020	2"	5	25
436-025	2½"	–	25
436-030	3"	–	16
436-040	4"	–	12

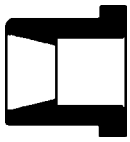
REDUCING MALE ADAPTER
(mipt x slip)



FLUSH STYLE -2

Order No.	Description	Bag	Box
436-074	1/2" x 3/4"	10	250
436-075	1/2" x 1"	10	100
436-101	3/4" x 1/2"	10	250
436-102	3/4" x 1"	10	100
436-132	1" x 1¼"	5	50
436-168	1¼" x 1"	5	125
436-211-2	1½" x 1"	5	125
436-212	1½" x 1¼"	5	50
436-212-2	1½" x 1¼"	5	50
436-213	1½" x 2"	5	50
436-251-2	2" x 1½"	5	50

REDUCER BUSHING (spg x slip)



Order No.	Description	Bag	Box
437-101	3/4" x 1/2"	10	250
437-130	1" x 1/2"	10	250
437-131	1" x 3/4"	10	250
437-167	1¼" x 3/4"	5	150
437-168	1¼" x 1"	5	150
437-210	1½" x 3/4"	5	100
437-211	1½" x 1"	10	100
437-212	1½" x 1¼"	10	100
437-248	2" x 3/4"	5	50
437-249	2" x 1"	5	50
437-250	2" x 1¼"	5	50
437-251	2" x 1½"	5	50
437-291	2½" x 1½"	5	25
437-292	2½" x 2"	5	25
437-335	3" x 1"	5	25
437-336	3" x 1¼"	5	25
437-337	3" x 1½"	5	25
437-338	3" x 2"	5	25
437-339	3" x 2½"	5	25
437-420	4" x 2"	–	10
437-421	4" x 2½"	–	10
437-422	4" x 3"	–	10

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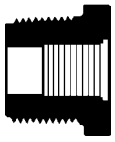
REDUCER BUSHING (spg x fipt)

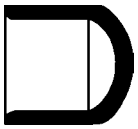
Order No.	Description	Bag	Box
438-101	3/4" x 1/2"	10	500
438-130	1" x 1/2"	10	250
438-131	1" x 3/4"	10	250
438-166	1¼" x 1/2"	10	150
438-167	1¼" x 3/4"	10	150
438-168	1¼" x 1"	10	150
438-210	1½" x 3/4"	5	100
438-211	1½" x 1"	5	100
438-212	1½" x 1¼"	5	100
438-247	2" x 1/2"	5	50
438-248	2" x 3/4"	5	50
438-249	2" x 1"	5	50
438-250	2" x 1¼"	5	50
438-251	2" x 1½"	5	50
438-289	2½" x 1"	5	25
438-290	2½" x 1¼"	5	25
438-291	2½" x 1½"	5	25
438-292	2½" x 2"	5	25
438-335	3" x 1"	5	25
438-336	3" x 1¼"	5	25
438-337	3" x 1½"	5	25
438-338	3" x 2"	5	25
438-339	3" x 2½"	5	25
438-420	4" x 2"	–	10
438-421	4" x 2½"	–	10
438-422	4" x 3"	–	10

REDUCER BUSHING
(mipt x fipt)



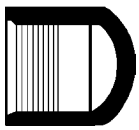
Order No.	Description	Bag	Box
439-072	1/2" x 1/4"	10	500
439-101	3/4" x 1/2"	10	500
439-130	1" x 1/2"	10	250
439-131	1" x 3/4"	10	250
439-166	1¼" x 1/2"	5	150
439-168	1¼" x 1"	5	150
439-210	1½" x 3/4"	10	100
439-211	1½" x 1"	10	100
439-212	1½" x 1¼"	10	100
439-251	2" x 1½"	5	50

CAP
(slip)



Order No.	Description	Bag	Box
447-005	1/2"	10	250
447-007	3/4"	10	250
447-010	1"	10	250
447-012	1¼"	5	125
447-015	1½"	5	50
447-020	2"	5	50
447-025	2½"	–	25
447-030	3"	–	15
447-040	4"	–	9
447-060	6"	–	5

CAP
(fipt)



Order No.	Description	Bag	Box
448-005	1/2"	10	250
448-007	3/4"	10	250
448-010	1"	10	250
448-012	1¼"	5	125
448-015	1½"	5	50
448-020	2"	5	50
448-030	3"	–	15
448-040	4"	–	9

PLUG
(mipt)

Order No.	Description	Bag	Box
450-005	1/2"	10	250
450-007	3/4"	10	500
450-010	1"	10	250
450-012	1¼"	5	125
450-015	1½"	5	125
450-020	2"	5	50
450-030	3"	5	25
450-040	4"	–	10

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NIPPLES (TBE) THREAD BOTH ENDS

Order No.	Description	Bag	Box
855-210-030	1" x 3"	25	100
855-210-040	1" x 4"	25	50
855-210-060	1" x 6"	-	40
855-210-080	1" x 8"	-	25
855-215-030	1½" x 3"	-	25
855-215-040	1½" x 4"	-	25
855-215-060	1½" x 6"	-	25
855-215-080	1½" x 8"	-	25
855-220-030	2" x 3"	-	25
855-220-040	2" x 4"	-	25
855-220-060	2" x 6"	-	25
855-220-080	2" x 8"	-	25
855-225-030	2½" x 3"	-	25
855-225-040	2½" x 4"	-	25
855-225-060	2½" x 6"	-	25
855-225-080	2½" x 8"	-	25

NIPPLES (TOE) THREAD ONE END

Order No.	Description	Bag	Box
855-110-040	1" x 4"	10	500
855-110-080	1" x 8"	10	250
855-115-040	1½" x 4"	10	150
855-115-060	1½" x 6""	10	150
855-115-080	1½" x 8"	10	150
855-120-040	2" x 4"	5	100
855-120-060	2" x 6"	5	100
855-120-080	2" x 8"	5	100
855-125-060	2½" x 6"	5	50
855-125-080	2½" x 8"	5	50

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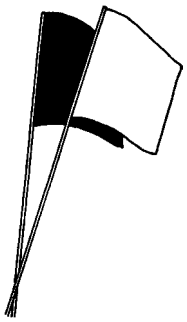
Shovles

Order No.	Description	Carton Qty.
636-S700	Long Handle, Round Point Shovel	4
636-S702	Long Handle, 5” Trenching Shovel	4
636-S703	Long Handle, 4” Trenching Shovel	4
636-S705	Long Handle, Garden Spade Shovel	4
636-S705D	‘D’ Handle, Garden Spade Shovel	4
636-S706	Long Handle, Irrigation Shovel	4
636-S708	Long Handle, 3” Trenching Clean-Out Shovel	4
636-S709	Long Handle, 4” Trenching Clean-Out Shovel	4



Marking Flags

Order No.	Description	Carton Qty.
550-15STD-B	15” Blue Marking Flags (3” x 3”) Pkg. of 100	1
550-15STD-G	15” Green Marking Flags (3” x 3”) Pkg. of 100	1
550-15STD-O	15” Orange Marking Flags (3” x 3”) Pkg. of 100	1
550-15STD-R	15” Red Marking Flags (3” x 3”) Pkg. of 100	1
550-15STD-W	15” White Marking Flags (3” x 3”) Pkg. of 100	1
550-15STD-Y	15” Yellow Marking Flags (3” x 3”) Pkg. of 100	1

Measuring Wheels

Order No.	Description	Carton Qty.
MM-30RP	10,000 Foot Counter Measuring Wheel	1
MM-300	100,000” Foot Counter Measuring Wheel	1

CEMENTS • TAPES • CLAMPS

PVC Cement

Order No.	Description	Case Qty.
132-RH½PT	Christy's Red Hot Blue Glue - ½ Pint	24
132-RHPT	Christy's Red Hot Blue Glue - Pint	12
132-RHQT	Christy's Red Hot Blue Glue - Quart	12
132-RHGAL	Christy's Red Hot Blue Glue - Gallon	6

PVC Primer

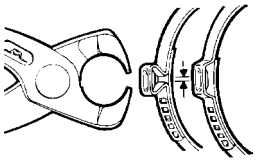
Order No.	Description	Case Qty.
132-PP½PT	Christy's Purple Primer - ½ Pint	24
132-PPPT	Christy's Purple Primer - Pint	12
132-PPQT	Christy's Purple Primer - Quart	12
132-PPGAL	Christy's Purple Primer - Gallon	6

Tape - Tread Seal & Duct Tape

Order No.	Description	Carton Qty.
132-TA-SX520	1" x 520" Teflon Tape	1
132-TA-SW520	3/4" x 510" Teflon Tape	1
132-TA-S520	1/2" x 520" Teflon Tape	1
556-270385	3/4" x 60' Electrical Tape	1
257-TA-33-DT398	2" x 60 Yards Duct Tape	1

Clamps and Crimpers

Order No.	Description	Carton Qty.
	Clamps:	
914-210-R	Oetiker Clamp for 1/2' Poly Pipe (500, 4000)	1
914-271-R	Oetiker Clamp for 3/4" Poly Pipe (250, 4000)	1
914-331-R	Oetiker Clamps 1"	1
914-425-R	Oetiker Clamps for 1¼" Poly Pipe (100, 3000)	1
914-50.0-908RD	Oetiker Stepless Ear Clamp for 1½" Poly Pipe	1
914-500-R	Oetiker Clamp for 1½" Poly Pipe (100, 2500)	1
	Crimpers:	
914-1098	Oetiker Crimper	1
914-1099	Oetiker Crimper Side Bite	1
914-9901	Oetiker Crimper, Long Handle	1



ADS Drainage Products

Order No.	Description	Carton Qty.
	ADS Drainage Pipe:	
143-301-100	3" x 100 ft. Perf. Pipe	1 coil
143-401-100	4" x 100 ft. Perf. Pipe	1 coil
143-401-250	4" x 250 ft. Perf. Pipe	1 coil
143-404-10	4" x 10 ft. Perf. Pipe	100 ft. bundle
143-451-100	4" x 100 ft. Solid Drain Pipe	1 coil
143-451-250	4" x 250 ft. Solid Drain Pipe	1 coil
143-454-10	4" x 10 ft. Solid Drain Pipe	100 ft. bundle
143-473-250	4" x 250 ft. Pipe with Sock	1 coil
143-472-250	4" x 250 ft. Drainguard Filter Pipe	1 coil
143-601-100	6" x 100 ft. Perf. Pipe	1 coil
143-651-100	6" x 100 ft. Solid Drain Pipe	1 coil
143-672-100	6" x 100 ft. Drainguard Filter Pipe	1 coil
	ADS Drainage Fittings:	
143-314	4" x 3" Reducing Snap Coupler	24
143-412	4" Internal Coupler	24
143-421	4" Snap Tee	8
143-422	4" 45-degree "Y"	5
143-432	4" Snap End Cap	40
143-464	4" Down Spout Adapter	24
143-490	4" 90-degree Snap Elbow	10
143-612	6" Snap Coupler	8
143-614	6" x 4" Reducer Coupler	9
143-615	6" Internal Coupler	9
143-622	6" 45-degree "Y"	2
143-624	6" x 4" Reducing Tee	3
143-626	6" Snap Tee	3
143-631	6" Split End Cap	12

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NDS Drainage

Order No.	Description	Carton Qty.
	Round Basins w/o Grates:	
502-NDS101	6" Round Spee-D Basin, Single 3" & 4" Outlet	10
502-NDS201	6" Round Spee-D Basin, Double 3" & 4" Outlet	10
	Square Basins w/o Grates:	
502-NDS900	9" Catch Basin Two Outlet (requires outlets)	4
502-NDS900-4	9" Catch Basin Four Outlet (requires outlets)	4
502-NDS1200	12" Catch Basin Two Outlet (requires outlets)	4
502-NDS1204	12" Catch Basin Four Outlet (requires outlets)	4
502-NDS1800	18" Catch Basin Two Outlet (requires outlets)	1
502-NDS1804	18" Catch Basin Four Outlet (requires outlets)	1
	Grates:	
502-NDS50	6" Round Grate Green (fits NDS101, NDS201)	10
502-NDS990	9" Green Grate (fits NDS900, NDS900-4)	8
502-NDS1212	12" Green Grate (fits NDS1200, NDS1204)	8
502-NDS1812	18" Green Grate (fits NDS1800, NDS1804)	4
	Outlets:	
502-NDS1243	3" & 4" Universal Outlet	20
502-NDS1266	6" Universal Outlet	20
502-NDS1206	Universal Plug	20
502-NDS424	4" Emitter fits ADS	15

PVC/Polyethylene Pipe

PVC Pipe

Order No.	Description
	Solvent Weld:
210-075200BE	3/4" Class 200, SDR 21
210-100200BE	1" Class 200, SDR 21
210-125200BE	1¼" Class 200, SDR 21
210-150200BE	1½" Class 200, SDR 21
210-200200BE	2" Class 200, SDR 21
210-250200BE	2½" Class 200, SDR21
210-075S40BE	3/4" Schedule 40
210-100S40BE	1" Schedule 40
	Ring Tight:
210-250160RT	2½" Class 160, SDR 26
210-300160RT	3" Class 160, SDR 26
210-400160RT	4" Class 160, SDR 26
210-600160RT	6" Class 160, SDR 26
210-800160RT	8" Class 160, SDR 26
210-1000160RT	10" Class 160, SDR 26
210-1200160RT	12" Class 160, SDR 26
210-250200RT	2½" Class 200, SDR 21
210-300200RT	3" Class 200, SDR 21
210-400200RT	4" Class 200, SDR 21
210-600200RT	6" Class 200, SDR 21
210-800200RT	8" Class 200, SDR 21
210-1000200RT	10" Class 200, SDR 21
210-1200200RT	12" Class 200, SDR 21

PVC and Polyethylene & HDPE Pipe:
Because pipe costs fluctuate frequently, please call your Grassland representative for current pricing. Truckload quantities are available.

Poly Pipe

Order No.	Description
	Non-Potable/Non-NSF (100 PSI):
210-LD-1/2-400	1/2" x 400' LD, Non-NSF Poly Pipe
210-LD-1-300	1" x 300' LD, Non-NSF Poly Pipe
210-LD-1¼-300	1¼" x 300' LD, Non-NSF Poly Pipe
210-LD-1½-250	1½" x 250' LD, Non-NSF Poly Pipe
210-LD-2-200	2" x 200' LD, Non-NSF Poly Pipe
	Potable/NSF (100 PSI):
210-HD-3/4-100	3/4" x 100' HD, NSF Poly Pipe
210-HD-3/4-400	3/4" x 400' HD, NSF Poly Pipe
210-HD-1-100	1" x 100' HD, NSF Poly Pipe
210-HD-1-300	1" x 300' HD, NSF Poly Pipe
210-HD-1¼-100	1¼" x 100' HD, NSF Poly Pipe
210-HD-1½-100	1½" x 100' HD, NSF Poly Pipe
210-HD-1½-250	1½" x 250' HD, NSF Poly

HDPE Pipe

Order No.	Description
210-HDPE-13.5-12	12" DR 13.5 4710 HDPE
210-HDPE-13.5-10	10" DR 13.5 4710 HDPE
210-HDPE-13.5-8	8" DR 13.5 4710 HDPE
210-HDPE-13.5-6	6" DR 13.5 4710 HDPE
210-HDPE-13.5-4	4" DR 13.5 4710 HDPE
210-HDPE-13.5-3	3" DR 13.5 4710 HDPE
210-HDPE-13.5-2	2" DR 13.5 4710 HDPE
210-HDPE-11-12	12" DR 11 4710 HDPE
210-HDPE-11-10	10" DR 11 4710 HDPE
210-HDPE-11-8	8" DR 11 4710 HDPE
210-HDPE-11-6	6" DR 11 4710 HDPE
210-HDPE-11-4	4" DR 11 4710 HDPE
210-HDPE-11-3	3" DR 11 4710 HDPE
210-HDPE-11-2	2" DR 11 4710 HDPE

Larger Direct Ship Orders come in 40' lengths, small orders may be shipped in 20' lengths.
2" HDPE also available in 500' Coils

HARCO

TURF IRRIGATION HDPE FITTINGS

There are too many HDPE fittings to include in this catalog. For a complete list go to
http://www.harcofittings.com

ENGINEERED FOR DURABILITY

GRASSLAND
EQUIPMENT & IRRIGATION CORP.

Wire

Zone Wire

Order No.	Description	Reel Length

Irrigation Wire
Grassland stocks a wide variety of wire for all irrigation applications. Contact your sales representative for current prices.

Multi-Strand Wire:

556-970185 .....Paige #18 AWG, 5-Cond., UF .....250 ft.
556-970185-5 .....Paige #18 AWG, 5-Cond., UF .....500 ft.
556-970188 .....Paige #18 AWG, 7-Cond., UF .....250 ft.
556-970188-5 .....Paige #18 AWG, 7-Cond., UF .....500 ft.
556-970189 .....Paige #18 AWG, 10-Cond., UF .....250 ft.
556-970189-5 .....Paige #18 AWG, 10-Cond., UF .....500 ft.
556-970195 .....Paige #18 AWG, 13-Cond., UF .....250 ft.
556-970195-5 .....Paige #18 AWG, 13-Cond., UF .....500 ft.

14 Gauge Single-Strand Wire (Zone Wire):

556-971401 .....Paige #14 AWG, PE, RED, UF.....2500 ft.
556-971402 .....Paige #14 AWG, PE, WHITE, UF.....2500 ft.
556-971403 .....Paige #14 AWG, PE, BLACK, UF.....2500 ft.

Many other colors are available in both #14 and #12 single Strand, just ask us. Some colors are special order.

12 Gauge Single-Strand Wire (Common):

556-971202 .....Paige #12 AWG, PE, WHITE, UF.....2500 ft.

Bare Copper Wire (Grounding):

556-006BC-250 .....Paige #6 AWG Bare Copper Wire .....250 ft.
556-006SC-250 .....Paige #6 AWG Stranded Copper Wire .....250 ft.
556-170750 .....Paige 8/2 w/ground (UF/UL).....1000 ft.
556-961027 .....Paige #10/2, w/ground (UF/UL).....1000 ft.
556-961227 .....Paige #12/2 w/ground (UF/UL).....1000 ft.
556-180008 .....Paige #18 AWG 2-Cond., Shld. Pump Comm. Cable
556-961905-SF.....Paige #16 AWG 2-Cond., shielded & armored Toro Comm. Cable

DECODER WIRE

Wire for 2-Wire Decoder Systems

Order No.	Description	Reel Length
	14 Gauge Single-Strand Wire (Zone Wire):	
556-170116BKRD	Paige #14 AWG, Twisted Blk/Red Decoder Cable 0.075 HDPE insulation	2500 ft.
556-170116BKOG	Paige #14 AWG, Twisted Blk/Orange Decoder Cable 0.075 HDPE insulation	2500 ft.
556-170116BKBU	Paige #14 AWG, Twisted Blk/Blue Decoder Cable 0.075 HDPE insulation	2500 ft.
556-170116BKYL	Paige #14 AWG, Twisted Blk/Yellow Decoder Cable 0.075 HDPE insulation	2500 ft.
556-170116BKPR	Paige #14 AWG, Twisted Blk/Purple Decoder Cable 0.075 HDPE insulation	2500 ft.

Order No.	Description	Reel Length
	14 Gauge Single-Strand Wire-Maxi Cable (Zone Wire):	
556- 180118C	PAIGE #14 P7072D DIRECT BURIAL TWO WIRE YELLOW	2500 ft.
556-180117C	PAIGE #14 P7072D DIRECT BURIAL TWO WIRE GREEN	2500 ft.
556-180116C	PAIGE #14 P7072D DIRECT BURIAL TWO WIRE BLUE	2500 ft.
556-180114C	PAIGE #14 P7072D DIRECT BURIAL TWO WIRE ORANGE	2500 ft.
556-1801182C	PAIGE #14 P7072D DIRECT BURIAL TWO WIRE BROWN	2500 ft.

Decoder Switching Device

These products were specifically designed as electrical isolation devices to help with troubleshooting of damaged or non-functioning 2-Wire irrigation systems. Single or multiple sections of the electrical circuit can be disconnected or isolated by simply removing a fuse, without cutting wires or undoing splices/joints.

Order No.	Description	Carton
556-270DCSD	Two-Way Decoder Cable Switching Device	1
556-270DCSD3	Three-Way Decoder Cable Switching Device	1

Splice Kits and Grounding

3M Direct Burial Splice Kits

Order No.	Description	Carton
556-DBRY	Direct Burial Splice Kit 'Yellow/Red' - Twin Pack 600 Volts	25
556-DBRY-BULK	Direct Burial Splice Kit 'Yellow/Red' - Twin Pack 600 Volts	100
556-DBY	Direct Burial Splice Kit 'Yellow' - Twin Pack	25
556-DBR	Direct Burial Splice Kit 'Red' - Twin Pack	25
556-DBY-BULK	Direct Burial Splice Kit 'Yellow' - Bulk Pack	100
556-DBR-BULK	Direct Burial Splice Kit 'Red' - Bulk Pack	100
556-273210	Communication or Power Cable Resin Splice Kit	1
556-270339	3M DBR-6	1

Grounding Materials

Order No.	Description	Carton
556-182005	5/8" Ground Rod Clamp	1
556-182000	5/8" x 8' Ground Rod Copper Clad	1
556-GR1-161G	Cadweld One-Shot 5/8" #6 Solid ELL Conn.	1
556-GT1-161G	Cadweld One-Shot 5/8" #6 Solid Tee Conn	1
556-T320	Cadweld One Shot Flint Ignitor	1
556-182201	Copper Grounding Plate 4" x 36"	1
556-182199	Copper Grounding Plate 4" x 96"	1
556-1820058	Ground Enhancement Material	1
556-NT1-161G	Cadweld 3-Way	1
556-NX1-161G	Cadweld 4-Way	1

Ground Rod

Ground Plate

Tracking and Troubleshooting

Greenlee Electronics Locators

Order No.	Description
575-508S	Mini Tracker - Wire Locator
575-528	Wire and Valve Locator
575-501	Tracker II Locator
575-521	Underground Cable and Valve Locator
575-2003	Ground Fault Locator
575-701K	Tone & Probe Kit

575-701K

575-501

575-521

Armada Electronics Locators

Order No.	Description
Pro871C	Dual Frequency Underground Cable Locator with Inductive Clamp
Pro300	Residential Wire and Valve Locator
GFL3000	Ground Fault Locator

Pro871C

Pro300

GFL3000

Watering Accessories

Order No. **Description**

MAGNUM™ Hose Nozzle

Part # NG450.....MAGNUM™ Hose Nozzle

Magnum™ UltraMax Nozzles & Acessories

NG550-DFH-75.....Turbo Shift 12-43 GPM (45-163 L/min) - ¾" FHT inlet
NG550-DFH-10.....Turbo Shift 12-43 GPM (45-163 L/min) - 1" FHT inlet
NG550-DFSH-1.....Turbo Shift 34-104 GPM (129-394 L/min) - 1" FHT inlet
NG550-DFL-75.....Turbo Shift 7-17 GPM (27-64 L/min) - ¾" FHT inlet
NG550-DFL-10.....Turbo Shift 7-17 GPM (27-64 L/min) - 1" FHT inlet
NG500-SFH-75.....Full Throttle 15-40 GPM (57-151 L/min) - ¾" FHT inlet
NG500-SFH-10.....Full Throttle 15-40 GPM (57-151 L/min) - 1" FHT inlet
NG500-SFL-75.....Full Throttle 12-19 GPM (45-72 L/min) - ¾" FHT inlet
NG500-SFL-10.....Full Throttle 12-19 GPM (45-72 L/min) - 1" FHT inlet
NG500-SFSH-10.....Full Throttle 39-100 GPM (148-379 L/min) - 1" FHT inlet
SVPG-75.....Pistol Grip Valve - ¾" FHT inlet
SVPG-10.....Pistol Grip Valve - 1" FHT inlet
SV-75.....Firefighter Grip Valve - ¾" FHT inlet
SV-10.....Firefighter Grip Valve - 1" FHT inlet

CoolPro™ Nozzle

HN060.....CoolPro™ Nozzle
HNC075.....CoolPro™ Valve and Nozzle
CV075L.....CoolPro™ Valve only

NG655-01.....TurfSpy™ Glasses and Deluxe Case

A-PHG-160K.....HeadChecker™ gauge, 30" Flex Hose, Pilot Tube
A-SHG-160K.....HeadChecker™ gauge with Spray Head Adapter
A-HBG-160K.....HeadChecker™ with ¾" POC Hose Bib Tap
A-HCGPK.....HeadChecker™ gauge and Pitot tube
A-PG160L.....HeadChecker™ 160 psi pressure gauge only
A-HCP.....Pilot tube only
A-HBT.....¾" Hose Thread × ¼" Brass Hose Bib Tap
A-SHA.....Spray Head Adapter

Watering Accessories

Order No. **Description**

Solid Metal Specific Task Hose Nozzles
HN1500CV.....Precision™ Rainbow™ Nozzle Kit
HN2300CV.....Precision™ Rainmaker™ Nozzle Kit
HN4800CV.....Precision™ Cloudburst™ Nozzle Kit
HN5000CV.....Precision™ Cyclone™ Nozzle Kit
Nozzle Kits include brass High Flow Control Valve and ¾"MHT x 1"FHT Adapter.
To order nozzle only: remove "CV" from part number.

Solid Metal Specific Task Hose Nozzles CV075H High-Flow ¾" Valve - Brass
A-BV77FM.....High-Flow ¾" Valve - Composite/Steel
A-BA107FM.....1" FHT x ¾" MHT Brass Hose Adapter
A-BA107MF.....1" MHT x ¾" FHT Brass Hose Adapter
A-BQ7M.....¾" Quick-Connect, male end
A-BQ7F.....¾" Quick-Connect, female end
HN075W.....Replacement washer, ¾" hose

High Pressure Drain Cleaning Nozzle
DN-75.....DrainBlaster™ Drain Cleaner Nozzle – ¾" FHT Inlet
DN-10.....DrainBlaster™ Drain Cleaner Nozzle – 1" FHT Inlet

Solid Metal Shower Nozzle
SHN-75.....RainPro™ Shower Nozzle – ¾" FHT Inlet
SHN-10.....RainPro™ Shower Nozzle – 1" FHT Inlet

Solid Metal Hose Adaptor
HN-T100S.....HoseTap™ for Toro® 1" inlet golf sprinklers
HN-T150S.....HoseTap™ for Toro® 1 ½" inlet golf sprinklers
HN-R125S.....HoseTap™ for Rain Bird® Eagle 700 Series sprinklers
HN-R150S.....HoseTap™ for Rain Bird® Eagle 900 Series sprinklers

Pumps
A-G12-C.....Gulp™ UltraMax
A-G3636CK.....BigGulp™ UltraMax w/ 36" outlet hose
A-G3672CK.....BigGulp™ UltraMax w/ 72" outlet hose
A-G12S-C.....Gulp™ Syringe Ultra
A-GTUB-C.....100 ft. outlet hose

A-G3636CK

A-G3672CK

Gulp™ Syringe Ultra

Weather Stations and Lightning Protection

The TTW232 is a TORO TurfWeather® Weather Station

. (We currently sell this station to Eichon, which is a division of TORO.) Although we also make the TurfWeather brand available to Hunter, Rain Bird, and Signature Controls, those TurfWeather stations are sold under different item numbers. If you need more information, see Bruce Smith or Bart Nef.

TTW232 is the direct connection (RS-232) version of the TurfWeather weather station family. This model communicates via a serial interface (RS-232) between the weather station and a base station computer.

CAMPBELL SCIENTIFIC®
WHEN MEASUREMENTS MATTER

For turf grass water management applications, Campbell Scientific's

T.Weather T107 station

and Toro's Central Irrigation and Control System automatically monitor meteorological conditions that affect turf grass water consumption. This information is used by the Central Irrigation System to analyze current irrigation requirements.

Strike Guard employs state-of-the-art technology to address the most demanding lightning safety and equipment protection applications.

Designed for critical applications, Strike Guard monitors cloud and cloud-to-ground lightning and provides contact-closure signaling at user-set lightning activity thresholds. Patented optical signal processing and proprietary optical-coincidence technology prevent false alarms.

StrikeGuard™
LIGHTNING WARNING SYSTEM

Strike Guard Delivers:

- Fully automatic alarm triggering with user-set range catagories
- 20 mile detection range
- No false alarms. Patented technology
- Sensor and communication self-test
- Sensor is battery-powered for easy installation
- Durable fiber-optic communications with connector-less technology
- NEMA 4X Sensor enclosure
- Lightning Data Receiver with battery back-up
- Optional, Strike View Software for Windows® and Macintosh®
- Strike Guard Simulator Software for training and testing

Visit Grasslandcorp.com to see our full selection of New and Pre-owned Equipment

Grassland has a great selection of Pre-Owned Toro equipment for turf professionals on a budget. These units can be offered with a factory supported warranty and financing is available. Selection varies and changes over time. If you are in the market for quality Pre-Owned equipment, contact your Grassland representative. Even if we do not have what you are looking for, we may be able to locate a unit to meet your needs. Why purchase from a third party broker when you can buy quality equipment from people who can offer you a Toro Factory Warranty and outstanding local service and parts support.

Aerators

Bunker Rakes/Infield Pro

Debris Equipment

Greens Mowers

Reel Mowers

Rotary Mowers

Site Works Equipment

Snow Removal

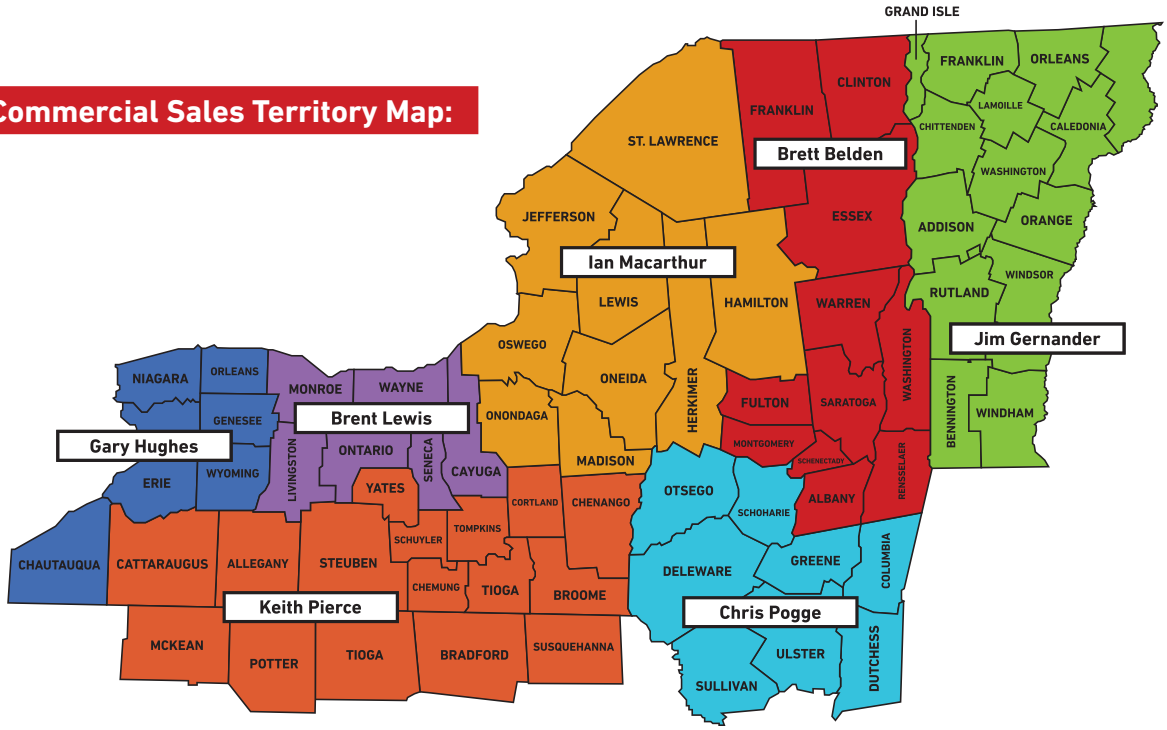
Sprayers

Specialty

Top Dressers/Seeders

Utility Vehicles

Toro/Ventrac Commercial Sales Territory Map:



Toro Sitework Systems

TORO DINGO

Financing available

Warning

This Equipment may result in

*** Happier Employees**
*** Larger Profits**
*** Increased Efficiency**
*** Less Sick Time**

Many models and over 50 attachments to choose from including;

Soil and Rock Augers
Trenchers
Vibratory Plow
Buckets
Backhoe
Forks
Brush Hog
Stump Grinders
Snow Blower
Rotary Broom

Contact
Chris Pogge 518-857-0197 cpogge@grasslandcorp.com
or visit www.grasslandcorp.com
for more information on Siteworks System Products

Grassland Policies and Terms

Ordering Instructions

To ensure prompt and accurate service, we suggest that you have the Item Part Number, the Item Description and the Quantity you desire ready when you call to place an order. If you need assistance, please consult your Irrigation Sales Specialist, or other Irrigation Division personnel will be glad to help you when you call.

Catalog Prices

Due to the recent volatility in material pricing, and because discounts are based on quantities ordered and customer status, we have not published prices in this year's catalog. For best pricing, assemble your complete material list and then call us for a quote.

Payment Terms

Payment is due on the 10th of the month following the date of invoice. Past due invoices will be subject to a finance charge.

Delivery

All pricing is FOB Shipping Point. In most instances, shipping will be via UPS. Customer will be responsible for all freight charges including a nominal shipping and handling charge. If you require special shipping, please discuss details with your Irrigation Sales Specialist.

Warranties

All products are subject to manufacturers' warranties only.

Locations:

Latham Office:
892-898 Troy-Schenectady Rd.
Latham, NY 12110-1698

Toll-Free: 1-800-564-5587
Phone: 518-785-5841
Fax: 518-785-5740
Parts Fax Number:
1-800-950-4342

Liverpool Office:
4536 Morgan Place
Liverpool, NY 13088
Toll-Free: 1-800-564-5297
Phone: 315-457-0181
Fax: 315-457-0312

www.grasslandcorp.com

892-898 Troy-Schenectady Road
Latham, New York 12110-1698

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