

# PRODUCT GUIDE



**TriEst™**  
**Ag Group**

[www.TriEstAg.com](http://www.TriEstAg.com)

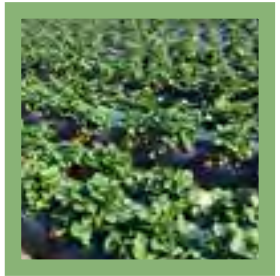
## COMPLETE AG SOLUTIONS

TriEst Ag Group specializes in soil fumigation, irrigation, plant nutrition, equipment, grafted plants, polytunnels, substrate, and associated growing systems for growers in the Mid-South, Georgia, Florida, Mid-Atlantic, Mid-West, and Northeast Regions.



For more on information found within this catalog or questions about other products not listed please contact us at any of our locations.

Please let us know what you are looking for and we will make every attempt to supply your demand with quality and cost-effective products.



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# Soil Fumigation



Chloropicrin based products are federally restricted use pesticides.



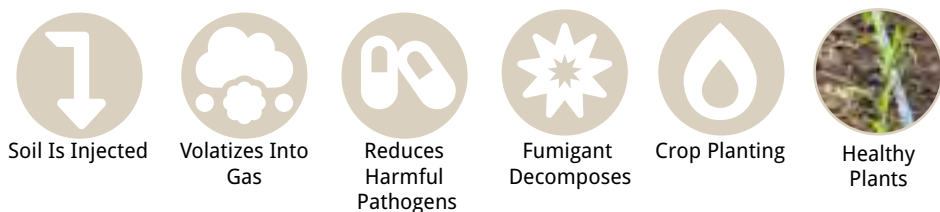
# Soil Fumigation

Chloropicrin based products have been used in agriculture for over 50 years in high value crops with a proven track record of improving both crop health and yield as well as overall soil health.

TriEst Ag Group's chloropicrin based products help suppress fungi, nematodes, insects, and soil borne diseases such as:

- Pythium
- Rhizoctonia
- Scurf
- Phytophthora
- Stretomyces
- Soil Rot
- Fusarium Wilt
- and more
- Black Shank

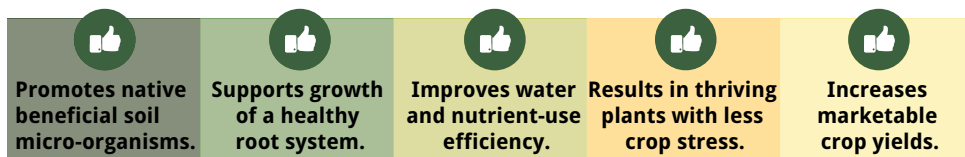
## How Soil Fumigation Works



1. Fumigants are injected as liquids into the soil to suppress harmful insects, nematodes, weeds, bacteria, fungi, and diseases that have invaded a field.
2. The fumigant volatizes into gas diffusing through the soil air space, radiating out from the points of injection.
3. The treatment significantly reduces the harmful pathogens and re-balances the native beneficial soil microbe population, conditioning it for planting.
4. The fumigant decomposes rapidly in the soil; and some fumigants, like Chloropicrin, actually biodegrade into plant nutrients.
5. Crop planting takes place in the newly conditioned soil.
6. Healthy plants are able to maximize their water and nutrient use and grow to full yield potential with no uptake of fumigant into the plant root or residue on the plant.

Chloropicrin-based products **do not** sterilize the soil and they **do not** leave residue in the soil or plant.

## Benefits of Chloropicrin based products



# Plastic Mulch

## Plastic Mulch

Plastic Mulch can offer growers increased soil temperatures for earlier planting, increased soil moisture retention, enhanced soil structure for planting, improved weed management, decreased soil erosion, and minimized leaching of chemicals and fertilizers.



### MULCH FILMS

#### All available in:

- Widths: 24"–88"
- Lengths: minimum 2,000', standard 4,000'
- Colors: black, clear, white, black-over-white, red, blue, green, olive, and brown

#### Standard

Designed to control weeds and conserve water. LDPE/LLDPE- Mono-layer or co-extruded polyethylene. This is considered the most standard type of film found in the US.

- Available in Smooth, Taffeta, or Micro Tough embossing.
- Gauge range: 0.6–2.25mils

#### VIF Mulch (Virtually Impermeable Film)

This mulch provides an intermediate vapor barrier, which encourages a reduction in fumigation rates. This is typically a 5 layer film where the outer two layers are LDPE. The innermost layer is nylon and it is surrounded by a tie layer on each side.

- Available in Micro Tough embossing
- Gauge range: 1.1–1.5mils

#### TIF Mulch (Totally Impermeable Film)

The highest vapor barrier film promotes a reduction in fumigant rates and increased fumigant retention, helping to lower emissions for improved effectiveness and work environments. TIF's structure is generally the same as VIF except the center layer which produces the barrier is made of EVOH instead of nylon.

- Embossing
- Gauge: 1.1, 1.25, & 1.5mils
- Width: 24"–88"

**Standard sizes in stock. Specialty items available upon request. Contact for availability.**

**Metalized & Biodegradable Mulch products available.**

# Row Covers/Ground Covers

## Row Covers

Row covers provide essential frost and freeze protection for vegetables, foliage, nursery stock, citrus, strawberries, containerized ornamentals and turf. There's a row cover for just about any crop or weather condition – they're ideal tools for overwintering, wind break and overall yield enhancement.



### ROW COVER DETAILS

Custom sizes - no additional charge

Custom covers to match your field.

Widths up to 51 foot and custom lengths (100 foot minimum)

### Available weights

- 0.5 oz - 2 to 4 degree protection, transmits 95% light
- 1.0 oz - 4 to 6 degree protection, transmits 70% light
- 1.5 oz - 6 to 8 degree protection, transmits 50% light
- 2.0 oz - 8 degree protection, transmits 30% light

### When ordering please have:

- Desired Width(s)
- Desired Length(s)
- Desired Protection

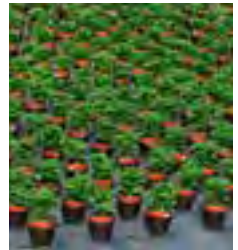
All orders are custom and take time. Please plan ahead and order early.

Contact us with any questions or help planning out your field needs.

## WinFab Ground Covers

WINFAB Woven Ground Cover is an excellent choice for nursery, greenhouse, landscape applications, and other areas where weed growth needs to be controlled without the use of chemicals.

WINFAB's woven ground cover is manufactured using high tenacity polypropylene yarns that are woven to form a dimensionally stable network, which allows the yarns to maintain their relative position. It resists ultraviolet deterioration, rotting, and biological degradation and is inert to commonly encountered soil chemicals.



# Automation & Crop Monitoring





# Automation

## Netafim NMC Pro System Manager

### Features & Benefits

The NMC Pro System Manager does more than open and close irrigation valves - it integrates all of your control features in one easy-to-use unit.

- Up to 256 Control Outputs
- Up to 32 Digital Control Inputs
- Up to 22 Analog Control Inputs
- 15 Irrigation Programs
- 8 Dosing Channels
- Flushing up to 24 Filters
- Fertigation by Time, Quantity, Proportional Time or Proportional Quantity
- History of Water and Fertigation Events Log
- EC/pH Control
- PC Communication
- Irrigation Programs
- Irrigation Trigger Programs
- Pump Control Programs
- Filter Flushing Programs
- Fertilizer and Nutrient Injection Programs
- Cooling Programs
- Alarm Programs
- Available with 115VAC or 12VDC power supply card
- AC power supply can use optional 12VDC backup battery to keep the system manager on during power failure reducing the risk of lost or damaged data



Netafim NMC Pro

Description	Model Number
NMC Pro with Power Line for Protector	74340-005105

## Netafim NMC Junior Pro System Manager

### Features & Benefits

The NMC Junior Pro System Manager operates your entire irrigation system improving irrigation efficiencies and fertilizer injection functions. Resulting in improved plant response and optimizes your input investments.

- Program memory back-up key is removable and allows you to back up all programs.
- Programs are secure & restorable.
- Large graphic LCD display. (5" x 2 1/2")
- User-friendly keyboard for quick and easy programming
- Hot Key Menu for instant navigation or individual preferences.
- Real-time and historical records.
- 6 control inputs
- 15 control outputs
- 8 dosing channels
- Fertigation by time or quantity
- Flushing up to 14 filters
- Cooling
- History of events
- Flow and EC/pH Alarms



Netafim NMC Junior Pro

Description	Model Number
NMC Junior Pro with Power Line for Irrigation Control	74340-023960

# Automation

## Netafim FertiKit™ 3G

### Features & Benefits

The FertiKit 3G is a fully configurable fertilizer/acid dosing unit. It can accommodate a variety of dosing channels, dosing boosters, NMC Controllers, peripherals and accessories to meet a vast range of applications and infrastructure constraints.

Basic functions include controlled mixing of fertilizers/acids with source water into a homogeneous nutrient solution, EC/pH correction of nutrient solution and water pre-treatment.

- Venturi operation principle - no moving parts.
- Fits easily into an existing irrigation system.
- SP-Mainline pressure range of 15-60 psi.
- Up to 6 dosing channels: 13-265 GPH
- Total fertilizer/acid suction capacity: 1,585 GPH



### Netafim FertiKit 3G

Model	Description
33200-050000	FertiKit 3G SP-120 VAC NMC Pro Controller, Booster Pump 1 X220 VAC, 2 Fertilizer channels at 35 GPH, 1 Acid Channel at 10 GPH, EC/PH Monitoring

## Netafim NetaFlex™ 3G

### Features & Benefits

Featuring a state-of-the-art Open tank mixing system, NetaFlex™ 3G provides very high level of dosing Precision and uniformity for greenhouses crops. A modular CE-compliant dosing system, Netaflex 3G easily integrates with multiple Netafim and third-party controllers and monitoring systems. Netaflex always injects a uniform quantity of nutrients and perfect EC&PH control.

### Components

- Quick-action dosing valves
- Wide range of integrated accessories and peripherals
- High-quality components and PVC piping
- Aluminum, corrosion-resistant frame with adjustable legs

### Capabilities

- Versatile flow capacity: from 0.1Ha to 10Ha
- Up to 6\* highly accurate 50-600 l/hr (13-156 gal/hr) fertilizer/acid dosing channels



### Netafim FertiKit 3G

Model	Description
33400-005900	NetaFlex 3G 110VAC NMC Pro Controller, Booster Pump 3x 220VAC, with 6 channels at 13 GPH, EC/pH Control, Pump CM 10-2

# Automation

## Netafim FertiOne™ Plus

### Features & Benefits

The FertiOne Plus is a fully configurable, simple to operate two channel fertilizer/acid dosing unit. It's the perfect solution for open field sights fitted with electricity where injection of up to two fertilizer solutions is needed. It ensures the highest efficiency and can be connected to any external 24VAC controller.

### Components

- Two Venturi operated dosing channels
- Quick action 24VAC dosing valve
- Pressure gauge
- Controller (optional)
- Stainless steel dosing booster
- Continuous acting air vent
- Check valve
- Dosing booster switchbox with motor protection
- Visual flow meters with adjustable needle valves
- High-quality components and schedule 80 PVC piping
- Aluminum, corrosion-resistant frame with adjustable legs



## Netafim NetaJet™ 4G

### Features & Benefits

The NetaJet™ 4G is the first fertilizer dosing system equipped with the Netafim™ unique innovative analog dosing channel, the long-time awaited solution for very accurate and reliable EC/pH control for Nutrigation™ of greenhouse high-value crops. The analog dosing channel is equipped with servo motor able of continuous variable opening from 0 to 100%.

### Specifications

- Provides 8 highly accurate 50-600 l/hr (13-156 gal/hr) fertilizer/acid dosing channels
- Works with up to 8 dosing channel units and flow rates
- Scales to system flow rates from 5m<sup>3</sup>/hr to 400m<sup>3</sup>/hr and up to 8 bar pressure
- CE-compliant dosing system easily integrates with most third-party control and monitoring systems
- Accommodates a variety of system pumps, peripherals and accessories to meet a vast range of applications and infrastructure constraints
- Covers all applications ranging from greenhouse in soil, to very intensive soilless media
- Flow capacity ranges from 0.1Ha to 10Ha



# Automation

## Netafim NMC Air™

NMC Air, a cloud-based software, provides a user with the ability to operate and monitor the NMC Irrigation Controllers from anywhere at anytime. NMC Air software connects an NMC Pro, DC or NMC Junior Pro Irrigation Controller to the NMC Air cloud.

### Features & Benefits

- Get farm status and check active irrigation and dosing performance in a single view
- Get alarms and notifications sent to your mobile device or PC
- Manually and remotely operate the NMC Irrigation Controller:
  - Pause and resume irrigation
  - Start or stop irrigation programs, valves, filter flushing
- View and create graphs for trend monitoring
- Create and edit your NMC irrigation strategy:
  - Edit irrigation, dosing, water run time, filter flushing, misting and cooling programs
- Get historic logs for analyzing farm data:
  - Irrigation and sensor logs
  - Uncompleted irrigation and other uncompleted programs



### Netafim NMC Air™

Model	Description
31NMC AIR1CTRKIT	NMC AIR KIT FOR NMC PRO OR DC CONTROLLER Includes: gateway, power supply, RS485 card, 2 years license and enclosure
31NMCJRAIR1CTRKIT	NMC AIR KIT FOR 1 NMC JUNIOR PRO CONTROLLER Includes: gateway, power supply, RS485 card, 2 years license and enclosure
31CELLMODEMICU+	Optional Cell Modem for Areas Needing Internet Connectivity

# Automation

## Netafim Backflush Controller

### Features & Benefits

- Modular controller is expandable from 1 to 10 outputs.
- Can be used with automatic disc filters, automatic sand media filters and automatic screen filters.
- Flush cycle is triggered by time or pressure differential and each type of flush cycle is logged by the controller.
- Design flexibility with an embedded pressure differential (PD) gauge or an external PD gauge.
- Detection of continuous backflush cycles causes an alarm to sound.
- User-friendly LCD display and keyboard.
- Flexible settings for pre-dwell, dwell, and flush times allows programming to meet system requirements.



Netafim Backflush Controller

Outputs	Voltage	Model Number
2-10	24VAC	31NBCAC*
2-10	12VDCL	31NBCDC*

\* Add number of outputs

## Alextronics F2 Backflush Controller

### Features & Benefits

- Two (2) stations plus master valve
- Input voltage 115, 230 VAC (optional) 12VDC
- Output selectable to operate 24VAC, 12VDC solenoids
- Pressure differential (PD) gauge included
- Fixed PD delay
- Resettable backwash count
- Resettable alarm
- Plastic outdoor box
- Periodic, manual, or pressure differential (PD) actuated



Alextronics Backflush Controller

Outputs	Voltage	Model Number
2	24VAC/12VDC	23AXF2ACDC-D
2	12VDCL	23AXF2DCL-P
3	24VAC/12VDC/12VDCL	23AXF3ACDC-D
4	24VAC/12VDC/12VDCL	23AXF4ACDC-D
8	24VAC/12VDC/12VDCL	23AXF8ACDC-D
12	24VAC/12VDC/12VDCL	23AXF12ACDC-D

### Alextronics Controllers also available:

- F3 AC/DC/DCL Controller
- FA AC/DC/DCL Controller
- F8 AC/DC/DCL Controller
- F12 AC/DC/DCL Controller



# Automation

## Toro EVOLUTION® AG

The EVOLUTION® AG, built on the award-winning Evolution platform, allows for modular expansion, fertilizer injection, pulse irrigation, propagation and misting schedules, along with the freedom to program valves to your specific needs: from 1 second to 24 hours.



### Capabilities

- Program valve runtime from 1 second to 24 hours
- Operate up to 4 valves at one time
- Manage 2 Fertilizer Pumps
- Wireless Valve Remote Control with a 1,000 ft. range
- Precision Soil Sensor
- Wireless Weather Sensor
- Modular expansion: 4-16 stations with 4- and 12-station hot-swappable modules
- 3 program options

Toro EVOLUTION® AG

Model	Description
EVO-4AG	4-Valve Outdoor Controller
A-EMOD-4	4-Valve Expansion Module
A-EMOD-12	12-Valve Expansion Module

## Toro Tempus-AG System

The all new Tempus-AG system from Toro is a modular system that grows with your needs and allows for full control of your field in the palm of your hand. Wireless devices can connect to the cloud via 4G or Wi-Fi base station(s), or directly to your mobile device via Bluetooth.

### Capabilities

- Easy hardware installation
- Installation range verification via cell phone app
- Automatic geotagging
- Expansion up to 25 devices on one base station
- Range (Radius) up to 2,600ft on all devices



Toro Tempus-AG System

Model	Description
Tempus-AG-CT	A waterproof battery-powered wireless irrigation controller capable of operating up to 6 latching solenoids.
TEMPUS-AG-WF	A Wi-Fi base station that connects all controllers and devices to the cloud.
TEMPUS-AG-4G	A solar powered (or wall connected) base station that connects all controllers and devices to the cloud.



Scan for full details.

# Filters



# Filters - Disc

## Netafim Disc Filters

### Features & Benefits

Plastic rings stack together creating a cylindrical filter element. During filtration, the rings are compressed together effectively filtering the water and protecting the system from clogging.



- Disc Filters- Sizes 3/4" - 6".
- GPM 1-600.
- Mesh sizes 40-200.
- Multiple disc ring design captures and holds debris.
- Greater holding capacity of the rings vs. screen filters means less frequent cleaning.
- Rings are easily removed for fast cleaning without the need for scrubbing.
- Color-coded disc rings for identification.

### Specifications

	3/4" Filter	1" Filter	1" Super Filter	1 1/2" Super Filter	2" Dual Lite Filter	2" Dual HP Filter	3" Twin Lite Filter	3" Angle Filter	4" Twin Filter	6" Twin Filter
<b>Flow Range</b>	1-12 GPM	5-26 GPM	10-35 GPM	10-52 GPM	40-110 GPM	40-120 GPM	80- 220 GPM	80-220 GPM	160-450 GPM	200-600 GPM
<b>Maximum Pressure</b>	140 psi	140 psi	140 psi	140 psi	115 psi	174 psi	115 psi	140 psi	140 psi	140 psi
<b>Filtering Surface Area</b>	25 Sq. In.	49 Sq. In.	78 Sq. In.	78 Sq. In.	147 Sq. In.	147 Sq. In.	294.5 Sq. In.	287 Sq. In.	574 Sq. In.	574 Sq. In.
<b>Filtering Volume</b>	5.8 Cu. In.	27 Cu. In.	36 Cu. In.	36 Cu. In.	75.7 Cu. In.	75 Cu. In.	174 Cu. In.	108 Cu. In.	216 Cu. In.	216 Cu. In.

### Mesh/Micron

Mesh	Micron	Disc Color
040	400	Blue
080	200	Yellow
120	130	Red
140	115	Black
200	55	Green



# Filters - Disc

## Netafim- 2" & 3" LP Disc Kleen Series

### 2" & 3" LP Specifications

- Inlet and Outlet Connections:  
2" LP Disc-Kleen - 4" Grooved  
3" LP Disc-Kleen - 6" Grooved
- Backflush Valve Flush Port: 2" Male Pipe Thread
- Maximum Operating Water Pressure: 90 psi
- Minimum Pressure for Backflush: 30 psi
- Minimum Backflush Flow Per Spine: 35 GPM
- Minimum Allowable pH: 5
- Drain Manifold: 2" Grooved Outlet Connection
- Available in 24 VAC, 12 VDC or 12 VDC Latching models for operating pressure up to 90 psi.
- For operating pressures between 91 - 140 psi, high pressure solenoids are available.
- Inlet manifold for 3" LP Disc-Kleen located on top of filter for ease of installation.



### How Automatic Disc Filter Technology Works

A filter element (spine) contains a stack of compressed discs with an overlapping series of grooves that force the debris to move through the numerous trap points.

### Filtration Process

Unfiltered water passes through a stack of tightly compressed discs. The water is forced to flow through the interlocking grooves of the disc rings where debris is trapped, releasing only filtered water to the irrigation system.

### Backflush Process

As debris in the filter increases, the backflush process is initiated. The discs separate and jets of clean water spray and spin the discs removing the trapped debris which is then flushed out.



Water Quality Maximum Flow Rate (GPM)							
MESH SIZE	80	120	140	MESH SIZE	80	120	140
<b>2" X 2 FILTERS</b>				<b>3" X 3 FILTERS</b>			
Good	160	155	145	Good	480	465	435
Average	150	140	130	Average	450	420	390
Poor	130	120	90	Poor	380	340	270
Very Poor	80	70	60	Very Poor	240	210	180
<b>2" X 3 FILTERS</b>				<b>3" X 4 FILTERS</b>			
Good	240	230	220	Good	640	620	580
Average	225	210	195	Average	600	560	500
Poor	195	180	135	Poor	500	450	340
Very Poor	120	105	90	Very Poor	320	280	240
<b>2" X 4 FILTERS</b>				<b>3" X 5 FILTERS</b>			
Good	320	310	290	Good	800	775	725
Average	300	280	260	Average	750	700	600
Poor	260	240	180	Poor	650	525	400
Very Poor	160	140	120	Very Poor	400	350	300

# Filters - Screen

## Netafim ScreenGuard™ Automatic Screen Filters

### Features & Benefits

- Screen filters sizes: 4", 6", 8" and 10"
- Screen Mesh Sizes: 80, 120, 150, & 200
- Min/Max Operating Pressure: 30/150 PSI
- 3-Layer, 316 stainless steel screen for long life and high performance
- Externally mounted backflush valve for easy serviceability
- Filter Housing: baked epoxy, carbon steel coated
- Control Voltage: DC Latching
- End Connections: Flanged



### Netafim ScreenGuard™ Automatic Screen Filters

Size	Model Number	Back Flush Flow Rate	Maximum Flow Rate
4"	76ASF4FL-XXX	132 GPM	440 GPM
6"	76ASF6FL-XXX	132 GPM	700 GPM
8"	76ASF8FL-XXX	132 GPM	1,320 GPM
10"	76ASF10FL-XXX	396 GPM	2,000 GPM

Replace XXX with Filtration Mesh Selection (80, 120, 150, or 200)

## Netafim Scan Kleen Filters

### Specifications:

- Screen Mesh Sizes: 40, 80, 120, 150 and 200
- Screen: Stainless Steel
- Maximum Operating Pressure: 120 psi
- Required Minimum Pressure for Flushing: 20 psi (if less than 20 psi, install a manual valve downstream of the filter)
- Flushing Flow Rate: 50 GPM at 30 psi
- End Connections: Flanged



### Flow Rate and Screen Area

Size	Max Flow Rate (GPM)	Screen Area (Sq. In.)
3" Angle	250	194
4" Angle	300	194
4" Twin	500	388
6" Twin	600	388

Rated for well water with small amounts of sand or reservoir water with small amounts of algae.



# Filters - Screen

## Amiad Automatic Screen Filter- Mini Sigma Series

The Amiad Mini Sigma Series is a small and lightweight yet durable filter; quick and easy to install, simple to operate, and requires minimal maintenance. The Mini Sigma filter was developed to handle low pressure operation, with a capacity of up to 352 gpm and with filtration degrees from 80-500 micron. Inlet/outlet connections are available in 2", 3", and 4" diameter. Filters include a 1.5" flush valve.



### Features & Benefits

- Amiad's unique suction-scanner cleaning technology
- Modular design with various installation configurations
- Polymeric filter - corrosion free
- Low water and energy consumption
- Compact design and small footprint
- Easy installation and low maintenance
- Amiad's innovative and user-friendly ADI-P electronic controller, operated by a mobile app for advanced monitoring capabilities

Scan the QR Code to learn more.



### Amiad Mini Sigma Series Filter

Size	Description	Micron
2	Mini Sigma for up to 110 gpm	80-500
3	Mini Sigma for up to 220 gpm	
4	Mini Sigma for up to 352 gpm	

## Amiad Automatic Screen Filter- Filtomat M100 Series

The Amiad FILTOMAT M100 Series are mid-range automatic filters with a water-driven self-cleaning mechanism that doesn't require external power source to operate.

### Features & Benefits

- Large filtration area with reliable operating mechanism and simple construction.
- Automatic flushing.
- No interruption of downstream flow during flushing.
- Minimal volume of reject water.
- 25-1760 GPM

Scan the QR Code to learn more.



### Amiad Filtomat M100 Filters

Size	Description	Mesh
<b>M100 750-1500 GPM</b>		
2"	Automatic Filter Automatic Filter CL Automatic Filter CL Automatic Filter	80-500
3"		
3"		
4"		
<b>M100 4500 - 6800 GPM</b>		
4"	M100-4500	80-500
6"	M100-4500	
4"	M100-6800	
6"	M100-6800	
8"	M100-6800	
10"	M100-6800	



# Filters - Circulating & Sand Media

## Toro Yamit Filtration YF400 Series Manual Circulating Screen Filter

### Features & Benefits

- Screen constructed of 316 stainless steel supported by a PVC cylinder
- Flow directional plate allows the filter to match system flow rates for maximum efficiency
- Featuring a large collection chamber for easy periodic flushing
- Collection chamber flushing works manually or automated with an electric valve and timer
- Connections: Victaulic, threaded socket, and flange
- Maximum pressure: 145 psi
- Maximum recommended working pressure: 116 psi



### Manual Circulating Screen Filter

Model	Size	GPM
YF415	1.5"	13 - 44
YF420	2"	48 - 123
YF430	3"	53 - 172
YF440	4"	80 - 308
YF460	6"	136 - 925
YF480	8"	720 - 1320
YF410	10"	1189 - 2202

## Toro Yamit Filter - Sand Media Filters

### Features & Benefits

- All single chamber media filters made with high-quality materials
- Featuring an innovative underdrain design that covers the entire inside diameter of the tank
- Reliable double chamber backflush valve delivers lowest pressure loss through the valve both in filtration and backflush mode, allowing for system flushing at lower pressures
- All Toro-YAMIT filters include a 12 volt DC latching solenoid and control panel

- **Filter Manifold Sizes:** 15"-48"
- **Screen Sizes Typically:** 200 mesh



### Toro-Yamit Single Chamber Media Filter

Model No.	GPM	Tank Size
YF605	15-22	12"
YF610	23-39	16"
YF620	35-59	20"
YF635	59-88	24"
YF640	88-132	30"
YF650	140-193	36"
YF660L	242-348	48"

# Filters - Sand Media

## Netafim Sandstorm™ Single Chamber Metal Media Filters

### Features & Benefits

- Single chamber filter allows for efficient filtration and backflush uniformity.
- Large top and side access ports make loading media and conducting maintenance easier.
- Two-layer coating (phenolic and epoxy) for industry-leading high corrosion and UV protection – for both the tanks and the manifolds.
- Injection molded PVC under-drain system with mushrooms and slots provides cleaning across the entire sand media bed.
- Modular manifolds for simple and flexible assembly and expansion.
- Wide range of tank diameters and configurations to address all application needs.
- Maximum protection and reliability in harsh conditions.

### Double Chamber Steel Media Filter

# Filters/Size	Flow Range	Model Number
2-16"	42-80	72MFDBS1602
2-20"	70-130	72MFDBS2002
2-24"	105-200	72MFDBS2402
2-30"	155-290	72MFDBS3002
2-36"	220-415	72MFDBS3602
2-48"	400-750	72MFDBS4802



30" - 36" Tank



48" Tank

# Filters - Sand Media

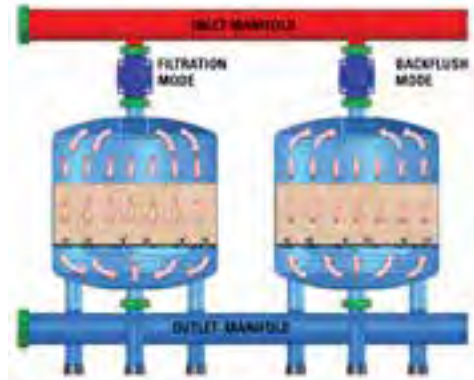
## Netafim Sandstorm™ Double Chamber Metal Media Filters

### Features & Benefits

- Two-layer coating (phenolic and epoxy) for industry-leading high corrosion and UV protection – for both the tanks and the manifolds.
- Modular manifolds for simple and flexible assembly and expansion.
- Wide range of tank diameters and configurations to address all application needs.
- Maximum protection and reliability in harsh conditions.
- Double-chambered filter allows for efficient filtration and backflush uniformity.
- Multiple mushrooms provide four times more open flow area ensuring uniform water collection and backflush.
- Each mushroom produces equal pressure during backflushing cleaning the entire sand media bed.

### Sandstorm™ Double Chamber Metal Media Filters

# Filters/ Size	Flow Range	Model Number
2-16"	22-52	2SMFDBS1602AAC
2-20"	78-132	2SMFDBS2002AAC
3-20"	117-198	2SMFDBS2003AAC
2-24"	114-192	2SMFDBS2402AAC
3-24"	171-288	2SMFDBS2403AAC



## Fresno Sand Media Filter- Flow Guard Filter

### Features & Benefits

- Effectively removes captured organic and inorganic contaminants from the media bed through backwashing with a stainless steel underdrain.
- Has the ability to filter a wide variety of contaminant to very low levels making it ideal for drip and micro irrigation.

- **Filter Manifold Sizes:** 15"-48"
- **Screen Sizes Typically:** 200 mesh

### Fresno Stainless Steel Sand Media Filter

Model No.	GPM	Model No.	GPM	Model No.	GPM
215	45-60	336	420-525	445T	760-1110
218	60-90	245	380-555	545T	950-1390
224	110-160	345	570-835	645T	1140-1665
324	175-240	445	760-1110	448T	850-1250
230	170-245	248	425-625	548T	1060-1565
330	250-370	348	640-940	648T	1275-1875
236	240-350	448	850-1250		



# Filters - Sand Separators

## Toro Yamit Filtration Series F700 Hydrocyclone Separators

### Features & Benefits

- Tapered shape of the body maintains high velocity of the water and particles during the separation process forcing the particles to the bottom of the hydrocyclone
- Underdrain – The shape changes the direction of the particles causing them to settle in the chamber, while the valve on the lower chamber allows for easy periodic flushing of the accumulated particles
- Rubber cone increases the efficiency of the separator by extending the shape of the hydrocyclone down into the lower chamber, and provides protection to the lower neck of the hydrocyclone
- Multiple Unit Manifolding - The tapered shape of the hydrocyclone allows for close spacing on a manifold, ideal for applications where a number of smaller units are required
- Maximum recommended working pressure: 10 bars (145 psi).



**Toro - Yamit Filtration Series F700**

Size	Flow Range GPM	Model Number
3"	10.6 - 17.2	F710
4"	15.4 - 26.4	F720
6"	28.6 - 44	F730
8"	48.4 - 83.6	F740
8"	88 - 154	F750VLF
8"	127.6 - 198	F750
12"	198 - 321	F755
16"	264 - 409	F760
20"	409 - 682	F770
24"	638 - 990	F775
30"	880 - 1452	F780

## Fresno Sand Separators - 1600 Series

### Features & Benefits

- Hot dip galvanized inside and out for maximum protection.
- Low pressure loss.
- 98% efficiency on 200 mesh (74 microns) and larger.
- Modular design.
- Domed tank end for maximum strength.
- Hydro cyclone action removes high mass sediment.
- Variable flow (gpm) capacity with manifold and valving.
- Automatic purging of sediment tank available.



**Fresno Sand Separator**

Units	Flow Range GPM	Model Number
1	70-200	3103
2	140-400	3204
3	210-600	3306
4	280-800	3406
1	200-400	4104
2	400-800	4206
3	600-1200	4308
4	800-1600	4408



# Filter Trailers & Skids

Filter trailers or the smaller skids are a great mobile options for those who do field rotations as they allow growers to filter multiple sites with just one filter system. The mobile pump and filter styles below are an excellent choice for those who have smaller acreages or growers just getting started. We have links for the filter trailers and skids below.

## Filter Skids

### Filter Skid Sizes: 80GPM or 120GPM

#### Includes:

- 1 - 8' x 4' Rackable Plastic Pallet
- 1 - 2-inch Self-Priming Pump Mounted to 5HP Honda for Engine
- 1 - 3" Inline Mini Sigma Filter
- 1 - 1" Air Relief Valve
- 2 - 3" Brass Gate Valve - Full Port or
- 1 - 4" Brass Gate Valve - Full Port on 120GPM
- 1 - 3" PVC Floating Suction Assembly
- 1 - Remco diaphragm pump for fertilizer injection



## 120GPM Filter Trailer

#### Trailer Includes:

- 1 - 5 x 8 Trailer with wooden deck with 3500lb axle
- 1 - 3-inch Self-Priming Pump Mounted to 8HP Honda for Engine
- 1 - 3" Water Meter, 10 gallon/pulse
- 1 - 1.5" pressure relief valve
- 1 - 3" pressure sustaining valve
- 1 - 3" Chemigation valve with port & air vent
- 1 - 2" x 2 LP Disc-Kleen filters
- 1 - 2 Station back-wash controller
- 1 - 3" Floating Suction PVC Assembly
- 1 - Remco diaphragm fertilizer pump



## 240GPM Filter Trailer

#### Trailer Includes:

- 1 - 6 x 10 Trailer with wooden deck with 3500lb axle
- 1 - 2-Inch Berkeley Pump, powered by 18HP gas engine and electric start
- 1 - 3" Water Meter, WST 10 gallon/pulse
- 1 - 2" Dorot pressure sustaining valve
- 1 - 3" Dorot pressure sustaining valve
- 1 - 4" Chemigation valve with port & air vent
- 1 - 2" x 4 Disc-Kleen, 120 Mesh, 12VDCL
- 1 - Netafim 12VDCL 2 Station back-wash controller
- 1 - 4" Floating Suction Assembly
- 1 - Remco diaphragm pump for fertilizer injection



# Fertilizer & Water Meters



# Fertilizer Meters

## Netafim Fertilizer Meter

### Features & Benefits

- Both meters are light-weight and deliver a high level of accuracy,  $\pm 2\%$ .
- Only one moving part, the impeller, is in contact with the liquid for minimum wear and the utmost reliability.
- Magnetically driven sealed register is guaranteed not to accumulate moisture or fog.
- Dry contact electrical output driven by a magnetic coupling that activates a reed switch creating a pulsed output for communicating with control and monitoring equipment.
- Corrosion resistant plastic components.
- PVC body is an angle type multi-jet meter. The multi-jet design assures an equally distributed load on the impeller minimizing wear and maintaining accuracy.
- No straight pipe installation requirements.

### Specifications - Plastic

- Size: 3/4"
- Maximum Working Pressure: 72.5 psi
- Maximum Liquid Temperature: 122°F
- Body Material: Polypropylene
- Connections: Threaded
- Pulse Output: 0.1 or 1.0



3/4" Plastic

### Specifications - PVC

- Size: 1"
- Maximum Working Pressure: 145 psi
- Maximum Liquid Temperature: 122°F
- Body Material: PVC
- Connections: Threaded
- Pulse Output: 1.0



1" PVC

### Reed Switch Registers

Meter Size	Register Totalizer	Volume Unit	Pulse Output (GALS/PULSE)	Pointer Resolution		
				Pointer 1	Pointer 2	Pointer 3
3/4"	Gallon	Gallon X 10	0.1	x 0.01 Gallon	x 0.1 Gallon	x 1.0 Gallon
3/4"	Gallon	Gallon X 10	1.0	x 0.01 Gallon	x 0.1 Gallon	x 1.0 Gallon
1"	Gallon	Gallon X 100	1.0	x 0.1 Gallon	x 1.0 Gallon	x 10 Gallon

# Water Meters

## Netafim Water Meters- WST & WT Series

WST and WT Water Meters use a double magnetic transmission to drive the register and this unique design enables the meter to handle high loads of sand since only the impeller is in contact with the water. Transmission gears are located in a sealed, dry compartment which has no contact with the water. The impeller, located in the center of the flow, allows for very accurate measurements over a wide range of flows. Built-in straightening vanes in the WST meters reduce the length of straight pipe required before and after the meter.



### Specifications:

- 'WST' Sizes: 3", 4", 6" and 8"
- 'WT' Sizes: 10" and 12"
- Maximum Working Pressure: 230 psi
- Maximum Liquid Temperature: 140°F
- Body Material: Cast Iron with Polyester Coating
- Connections: Flange
- Register Options: Reed Switch, Photo Diode or ER Digital
- 'WST' Straight Pipe Installation Requirement: 5 D\* upstream and 2 x D downstream
- 'WT' Straight Pipe Installation Requirement: 10 D upstream and 5 x D downstream.

\*D = meter size

Performance Data			
Meter Size	Lowest Flow Rate +/- 2% Accuracy	Nominal Flow Rate +/- 2% Accuracy	Maximum Flow Rate +/- 2% Accuracy
3" 'WST'	4 GPM	528 GPM	660 GPM
4" 'WST'	6 GPM	1,013 GPM	1,266 GPM
6" 'WST'	15 GPM	1,145 GPM	1,431 GPM
8" 'WST'	38 GPM	1,980 GPM	2,475 GPM
10" 'WT'	44 GPM	3,300 GPM	4,125 GPM
12" 'WT'	51 GPM	4,400 GPM	5,500 GPM

# Water Meters

## Netafim Water Meters- WMR Series

'WMR' Water Meters contain an in-line axial turbine which allows foreign matter to pass through the meter without clogging. Wide clearances in the measuring chamber provide full pipe flow measurements and high reliability.



WMR

### 'WMR' Water Meter Specifications:

- Size: 2"
- Maximum Working Pressure: 230 psi
- Maximum Liquid Temperature: 131°F
- Body Material: Cast Iron with Polyester Coating
- Connections: Male Pipe Thread
- Register Options: Reed Switch, Photo Diode or MPE Digital
- Straight Pipe Installation Requirement: 10 x D upstream and 5 x D downstream (D = meter size)

Performance Data			
Meter Size	Lowest Flow Rate +/- 2% Accuracy	Nominal Flow Rate +/- 2% Accuracy	Maximum Flow Rate +/- 2% Accuracy
2" WMR	8.8 GPM	88 GPM	110 GPM

## Netafim Water Meters- IRT Series

IRT Water Meters are ideal for moderate to dirty water conditions. The specially designed paddle wheel measuring device provides a free water passage resulting in low head loss and the ability to accurately measure water with high levels of impurities or debris. Accuracy is achieved over a wide range of flows.



IRT

### Specifications:

- Sizes: 3", 4", 6", 8" and 10"
- Maximum Working Pressure: 230 psi
- Maximum Liquid Temperature: 140°F
- Body Material: Cast Iron with Polyester Coating
- Connections: Flange
- Register Options: Reed Switch or MPE Digital
- Straight Pipe Installation Requirement: 10 x D\* upstream and 5 x D downstream

\*(D = meter size)

Performance Data			
Meter Size	Lowest Flow Rate +/- 2% Accuracy	Nominal Flow Rate +/- 2% Accuracy	Max Flow Rate +/- 2% Accuracy
3"	45 GPM	400 GPM	500 GPM
4"	50 GPM	500 GPM	688 GPM
6"	65 GPM	1,100 GPM	1,375 GPM
8"	130 GPM	1,980 GPM	2,475 GPM
10"	300 GPM	3,300 GPM	4,125 GPM



# Water Meters

## McCrometer Water Meters- ML 100 & MF 100

### Features & Benefits

- The McCrometer McPropeller flowmeter's self-cleaning design uses a flexible drive shaft running within a curved, stainless steel "ell" that makes it easier to shed debris.
- The positioning of the impeller directly in the flow stream assures full-flow measurement and greater accuracy.
- The McCrometer Propeller flowmeter comes with a standard instantaneous flow-rate indicator and straight-reading totalizer. An optional electronic FlowCom register is also available.
- McCrometer's McPropeller flowmeters install easily and require little maintenance. All their components are easily serviced in the field.



### MF 100 Performance Data

Meter & Nominal Pipe Size (Inches)	2	2 1/2	3	4	6	8	10	12
Maximum Flow (GPM)	250	250	250	600	1200	1500	1800	2500
Minimum Flow (GPM)	40	40	40	50	90	100	125	150

Pressure Rating 150 psi

### ML 100 Performance Data

Maximum Flow (GPM)					1200	1500	1800	2500
Minimum Flow (GPM)					90	100	125	150

Pressure Rating 75 psi

## McCrometer Water Meters- M0300 Bolt-on-Saddle

### Features & Benefits

- Long-lasting stainless steel ball bearings.
- Epoxy-coated carbon steel body.
- Straightening vanes for optimum flow profiles. (Option)
- Corrosion-resistant impeller made of durable polymer material, factory calibrated to retain accuracy.
- Magnetic coupling system isolates register and drive system from flow and allows unrestricted impeller movement.
- Self-cleaning design that prevents the build-up of solids.



### M0300 Performance Data

Meter & Nominal Pipe Size (Inches)	4	6	8	10	12	14	16
Maximum Flow (GPM)	600	1200	1500	1800	2500	3000	4000
Minimum Flow (GPM)	50	90	100	125	150	250	275

Pressure Rating 150 psi

# Valves



# Valves

## Netafim Series 75 Nylon Control Valves

Netafim's Series 75 Nylon Control Valves offer a high flow capacity and very low head losses achieved by a flexible diaphragm that provides a wide water passage throughout the valve's hydrodynamic body. It features the 2950M - a multi-functional pilot with wide pressure ranges.

### Specifications & Materials

- Recommended Operating Pressure (psi): 9 to 175 maximum
- Maximum Water Temperature: 140° F
- Optional Functions: Manual, Electric, Pressure Reducing, Pressure Sustaining or Remote Control and more functions.
- Body and bonnet: Reinforced Nylon (\*Optional Polypropylene)
- \*\*Diaphragm: Natural Rubber (\*Optional ALD, EPDM)
- Spring: SST 302 (\*Optional SST 316)

\*Optional parts for special chemical resistance

\*\*Wide selection of pressure ranges



### Series 75 Valve Specifications

Size	Maximum Recommended Flow Rate (GPM)	Operating Pressure Range (psi)
3/4"	26	13-114
1"	44	13-114
1 1/2"	110	10-145
2"	176	10-145
323	396	10-145
3" SuperGal	440	6-145
343	812	4-175
4"	900	4-175
646	960	4-175

# Valves - Nylon & PVC

## Netafim Series 80 Nylon Control Valve

Series 80 Nylon Control Valves have no moving parts and high resistance to corrosive water. The built-in 2-way solenoid has a low power requirement.

### Specifications

- Available Sizes: 3/4", 1", 1 1/2", and 2"
- Maximum Working Pressure: 150 psi
- Maximum Water Temperature: 140° F
- Connections: Female Threaded NPT
- Electrical Specifications:
  - » Voltage - Standard 24 VAC, 60 Hz
  - » Inrush Current - .22A
  - » Holding Current - .095A



Series 80 Control Valves - 2 Way

Size	Flow Rate GPM
3/4"	2-26
1"	2-44
1 1/2"	20-140
2"	20 -180

### Materials

- Body and Bonnet: Glass Reinforced Nylon
- Spring: Steel (AISI 302)
- Nuts, Bolts, Washers: Stainless Steel (304)

## Netafim Series 90 Nylon & PVC Valves

### Specifications

- Recommended Operating Pressure (psi): Nylon - 15 minimum to 145 maximum
- PVC - 7 minimum to 145 maximum
- Maximum Water Temperature: 140° F Optional
- Optional Functions: Manual, Electric, Pressure Reducing, Pressure Sustaining or Remote Control and more functions

### Materials

- Nylon Valve Body, Bonnet, Seat: Glass Reinforced Polyamide (GRP)
- PVC Valve Body: uPVC
- Spring: Stainless Steel (AISI 302)
- Nuts, Bolts, Washers: Zinc Coated Steel (BS 5216)
- Diaphragm: Natural Rubber
- Connections: Threaded - ANSI (NPT Female)



Nylon



PVC

### Specifications

Size	Max. Flow (GPM)	Cv	Operating Pressure (psi)
1"	44	18	15-115
1 1/2"	110	66	22-145
2"	176	83	22-145
323	264	93	22-145
3"	400	175	9-115
4"	700	250	9-115
6"	1,540	554	7-145

# Valves - Iron & Bronze

## Netafim Series 100 Iron Valves

Iron Valves are available in a wide range of sizes and flow rates to cover most applications. The unique design allows a straight flow pattern with low friction loss. A direct sealing diaphragm, the valves only moving part, operates by pipeline or external pressure.

### Specifications

- Optional Functions: Manual, Electric, Pressure Reducing, Pressure Sustaining, Hydraulic Remote Control, Quick Relief, Flow Control, Surge Anticipating, Float Control and more
- Maximum Water Temperature: 176° F
- Connections:
  - » Threaded ANSI NPT Female
  - » Grooved ANSI/AWWA C-606
  - » Flanged ANSI CL-125

### Materials

- Body and Bonnet:
  - » Cast Iron (ASTM A 125 CLB)
- Spring: Stainless Steel (AISI 302)
- Nuts, Bolts, Washers: Stainless Steel (BS 5216)
- Diaphragm: Natural Rubber



### Hydraulic Specifications

Size	Maximum Recommended Flow Rate (GPM)	Operating Pressure Range (psi)
1"	44	17-230
1.5"	110	17-230
2"	176	21-230
323	176	21-230
3"	396	17-230
4"	440	17-230
6"	1,540	21-230
868	1,540	21-230
8"	2,112	10-230
10"	4,268	10-230
12"	6,160	10-230

# Valves - Iron

## Netafim Quick Release Valve

### Features & Benefits

- Large water passages allow the chamber of the valve to vent quickly, providing immediate protection.
- The “no slam” design allows the valve to close slowly, reducing the danger of water hammer when the system goes back to normal. The closure speed is adjustable.
- The set point of the valve is adjustable allowing the user the flexibility to change the setting if the requirements change. A large pressure range is covered with one spring.
- Hydraulic valve with direct sealing diaphragm.
- No stem, shaft or bearings within the water passage.
- Available in iron with threaded, grooved, and flanged connections.

Valve Sizes: 2”-12”  
Flow Rates (GPM): 480-16,800  
Max Working Pressure: 235 (For all sizes)

## Netafim Pressure Sustaining Normally Open Valves

### Features & Benefits

- Available in a wide range of sizes.
- Changes in flow do not affect the upstream pressure in the valve since the PSNO valve is always installed downstream from the filter.
- Quick reaction time of the PSNO valve. The valve goes into sustaining mode slightly before the filter starts flushing.
- Manual override on solenoid for easy adjustments.

Max Working Pressure: PVC 3” & 4” 115 psi  
PVC 6” 145 psi  
Iron ALL 230 psi



**Netafim PSNO Valves**

Size	Flow Range (GPM)
3”	40-400
4”	60-600
6”	130-1,300
3”	40-400
4”	60-600
6”	130-1,300
868	150-1,500
8”	200-2000
10”	350-3,500
12”	480-4,800



# Valves - Manual

## Brass Ball Valves

### Features & Benefits

- Full port brass valve. Quick to operate with ability to see position of the valve.
- Sizing: 1/2" - 4"



## PVC Ball Valves

### Features & Benefits

- Ball Valves are quick to operate and allow you to see the position of the valve - open or closed.
- Ends: Slip, threaded, or union
- Sizing: 1/2" - 4"



## Butterfly Valves

### Features & Benefits

- Wafer-style design for a seal against two-way pressure to prevent backflow in single-direction systems.
- Stainless disks available.
- Style: Lever Handle or Gear
- Sizing: 1/2" - 12"



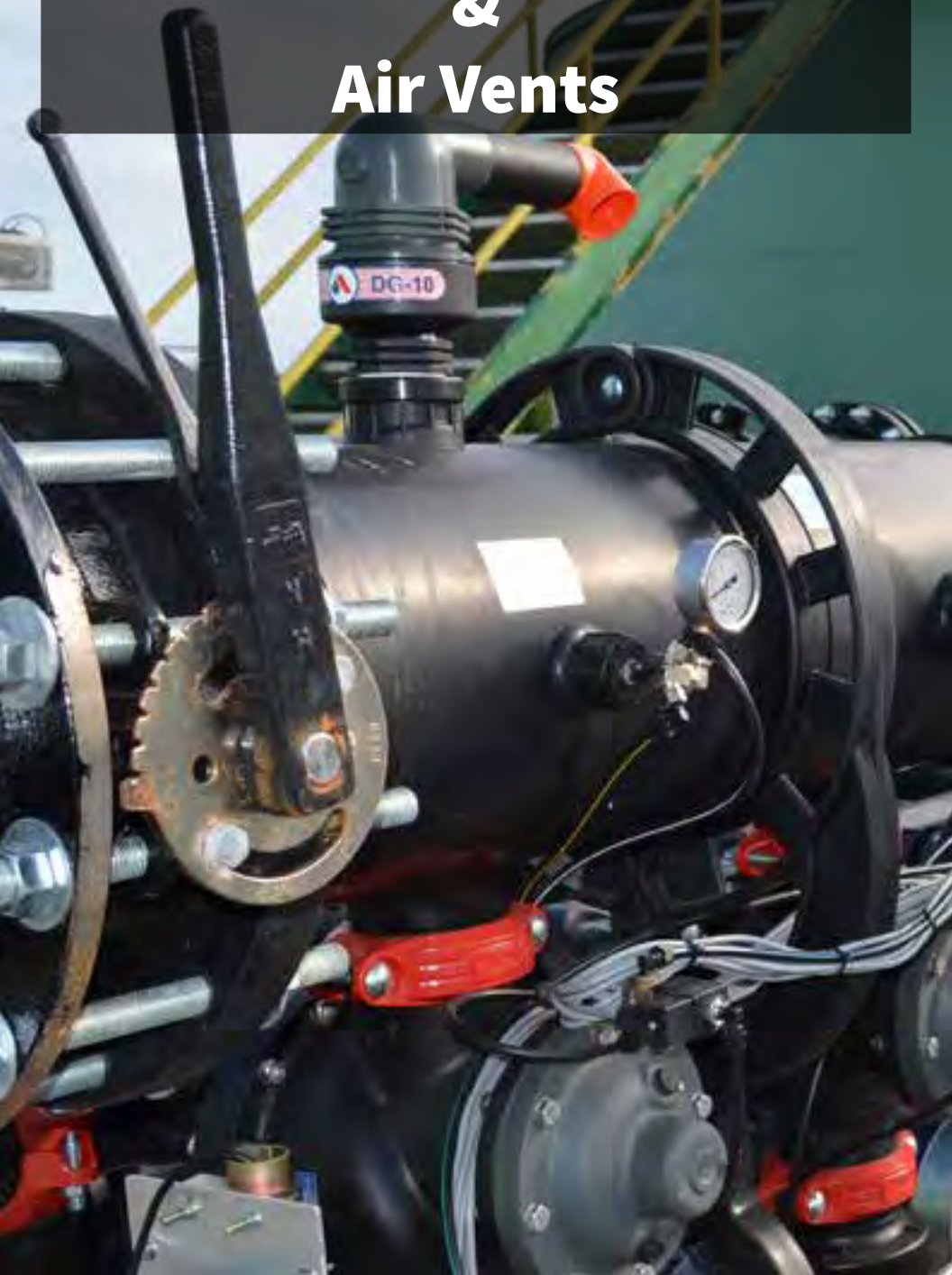
## Brass Gate Valves

### Features & Benefits

- Brass Gate Valve with non-rising stem. Valve pressure rating 200 psi/14 bar non-shock cold working pressure.
- Sizing: 1/2" - 4"



# Regulators & Air Vents



# Regulators

## Netafim Pressure Regulators

### Features & Benefits

- Instant response to variations in pressure assuring that outlet pressure will remain constant regardless of inlet pressure.
- Non-corrosive, high quality plastic and brass bodies withstand commonly used fertilizers and chemicals.
- Sealed regulating unit with stainless steel spring and a screw are field replaceable and easy to maintain.
- Built-in operating indicator visually shows when proper outlet pressure is achieved (except 3/4" low flow).

Plastic	3/4" low flow	.25 - 4.4 GPM
Plastic	3/4"	4.5 - 17.6 GPM
Plastic	1 1/2"	11 - 35 GPM



Brass	2" x 4	22 - 70 GPM
Brass	2" x 6	33-105.6 GPM
Brass	3" x 10	35 - 175 GPM



### Netafim Pressure Regulators

psi	3/4" LF Model Numbers	3/4" Model Numbers	1 1/2" Model Numbers	2" X 4 Model Numbers	2" X 6 Model Numbers	3" X 10 Model Numbers
9	-	32PRV.75-09V2K	32PRV1.5-09V2K	32PRV2-409V2K	32PRV2-609V2K	32PRV3-1009V2K
12	-	32PRV.75-12V2K	32PRV1.5-12V2K	32PRV2-412V2K	32PRV2-612V2K	32PRV3-1012V2K
15	32PRV.75-LF15V2	32PRV.75-15V2K	32PRV1.5-15V2K	32PRV2-415V2K	32PRV2-615V2K	32PRV3-1015V2K
20	32PRV.75-LF20V2	32PRV.75-20V2K	32PRV1.5-20V2K	32PRV2-420V2K	32PRV2-620V2K	32PRV3-1020V2K
25	32PRV.75-LF25V2	32PRV.75-25V2K	32PRV1.5-25V2K	32PRV2-425V2K	32PRV2-625V2K	32PRV3-1025V2K
30	-	32PRV.75-30V2K	32PRV1.5-30V2K	32PRV2-430V2K	32PRV2-630V2K	32PRV3-1030V2K
35	32PRV.75-LF35V2	32PRV.75-35V2K	32PRV1.5-35V2K	32PRV2-435V2K	32PRV2-635V2K	32PRV3-1035V2K
43	32PRV.75-LF42V2	32PRV.75-43V2K	32PRV1.5-43V2K	32PRV2-443V2K	32PRV2-643V2K	32PRV3-1043V2K
50	-	32PRV.75-50V2K	32PRV1.5-50V2K	32PRV2-450V2K	32PRV2-650V2K	32PRV3-1050V2K
57	-	-	32PRV1.5-57V2K	32PRV2-457V2K	32PRV2-657V2K	32PRV3-1057V2K
65	-	32PRV.75-65V2K	32PRV1.5-65V2K	32PRV2-465V2K	32PRV2-665V2K	32PRV3-1065V2K

# Regulators

## Senninger Pressure Regulators

### Features & Benefits

- Low hysteresis is important for accurate regulation when working with varying inlet pressures. Hysteresis is the difference in outlet pressure when the inlet pressure is increasing to a certain psi above the regulating pressure, and then decreasing to that same psi.
- Senninger regulators operating at maximum flow experience no more than 4 psi friction loss when fully open. Inlet pressure should be at least 5 psi higher than the outlet pressure to overcome the fully open, maximum flow friction loss.

PRL	6 - 10 psi 15 - 40 psi	.5 - 5 GPM .1 - 8 GPM
PMR	6 - 10 psi 15 - 60 psi	4 - 16 GPM 2 - 20 GPM
PR-HF	10 - 60 psi	10 - 32 GPM
PRXF	10 psi 15 psi 20 psi 25 psi 30 - 60 psi	20 - 80 GPM 20 - 85 GPM 20 - 90 GPM 20 - 95 GPM 20 - 100 GPM



### Senninger Pressure Regulators

Model #	Model #	Model#	Model#
PRL-6	PMR-MF-6	PR-HF-10	PRXF-10
PRL-10	PMR-MF-10	PR-HF-20	PRXF-15
PRL-12	PMR-MF-12	PR-HF-25	PRXF-20
PRL-15	PMR-MF-15	PR-HF-30	PRXF-25
PRL-20	PMR-MF-20	PR-HF-40	PRXF-30
PRL-25	PMR-MF-25	PR-HF-50	PRXF-35
PRL-30	PMR-MF-30		PRXF-40
PRL-35	PMR-MF-35		PRXF-50
PRL-40	PMR-MF-40		PRXF-60
	PMR-MF-50		
	PMR-MF-60		

# Air Vents

## Netafim Guardian Air Vents

### Features & Benefits

- Ensures vent closure as water fills the system, remains open when air pressure reaches the following:
  - 5 psi for 3/4" and 1" Guardian
  - 10 psi for 2" Guardian
  - 8 psi for 3" Guardian
- Large capacity vents dampen water hammer preventing pipes and fittings from cracking or bursting.
- Made of corrosion-resistant reinforced UV protected composite materials - no metal parts to rust or corrode, no need for spare parts.
- Guardian Air Vent with Shrader Valve is ideal for measuring local line pressure.



### Netafim Guardian Air Vents

Air Vent	Model #
3/4" Guardian	65ARIA075
3/4" Guardian w/ shrader valve	65ARIA075S
1" Guardian	65ARIA100
1" Guardian w/ shrader valve	65ARIA100S
2" Guardian	65ARIA2
3" Guardian	65ARIA3

## Netafim Automatic Continuous Acting Air Vent

### Features & Benefits

- Aerodynamic float design ensures vent closure as water fills the system, remains open when air pressure reaches 12 psi.
- Large capacity vents dampen water hammer preventing pipes and fittings from cracking or bursting.
- Unique rolling seal feature allows gradual opening, closing and self-cleaning.
- Made of corrosion-resistant UV protected nylon - no metal parts to rust or corrode, no need for spare parts.

3/4" and 1" Automatic Max Operating Pressure: 240 psi



### Netafim Air Vents

Air Vent	Model #
3/4" Automatic	65ARIS075
3/4" Automatic Vacuum Guard	65ARIS075VM
1" Automatic	65ARIS1
1" Automatic Vacuum Guard	65ARIS1VM

# Air Vents

## Netafim Pro Air Vent

### Features & Benefits

- Float and seal assembly are enclosed in a one-piece, easily replaceable unit - independent of the air vent body.
- Sealing assembly, with its unique patented rolling seal feature which allows gradual opening, closing and self-cleaning, is contained in the one-piece float assembly.
- Threaded discharge outlet allows connection of additional piping for venting and drainage.

### Specifications

- Working pressure range: 1 - 150 psi
- Maximum working temperature: 140° F
- Available size: 2" NPT female threaded



Netafim Pro Air Vents

Air Vent	Model #
2" Pro	65ARIB2PRO

## Netafim Dynamic Air Vent

### Features & Benefits

- Rolling diaphragm principle allows air to be discharged in a controlled and gradual manner preventing slam and surges.
- Reacts very quickly to vacuum surges by intaking large amounts of air - three times more air than other vents.
- Air vent is normally closed when the line is not operating preventing debris and contaminants from entering the pipeline.
- Light-weight and small for easy installation with simple and reliable operation.
- Built-in outlet connection for surplus water drainage.
- Corrosion-resistant composite materials.

Available Size: 2" & 3" NPT Male Threaded  
Max Operating Pressure 150 psi



Netafim Dynamic Air Vents

Air Vent	Model #
2" Dynamic	65ARIDY2
3" Dynamic	65ARIDY3



# Air Vents

## Toro Air Vent and Vacuum Relief Valve

### Features & Benefits

- Eliminates air pockets within a system zone
- Releases air from the drip line when the zone is turned on
- Allow air to freely enter the system when the zone is shut down
- Prevents vacuum conditions and stops debris or particles from entering the drip line via the drip emitters or drip line outlets
- Durable, weather resistant and non-corrosive material

ARV-BBK1 - 1" Closes at: 5 psi

ARV-BBK1- 1" Max operating Pressure: 80 psi



## Toro Air Vent & Vacuum Relief Valve

### Features & Benefits

- Provides both instantaneous and continuous air relief
- Simple design ensures trouble free performance

Working PSI: 225

Available size: 2" NPT



# Drip Tape, Dripline, PE Hose, & Layflat



# Drip Tape

## Netafim Streamline X Series

### Features & Benefits

- Exterior Ribbed Surface: Prevents against potential dripline damage during installation and retrieval.
- Interior Ribbed Surface: Prevents against potential dripline damage during installation and retrieval.

### Streamline 630

Wall Thickness: 5, 6, 8, & 10  
GPH/Emitter Rates: 0.16, 0.24, 0.36  
Common Spacings: 8", 12", 18", 24", 30"

### Streamline 875

Wall Thickness: ReGen™, 6, 8, & 10  
GPH/Emitter Rates: 0.16, 0.24, 0.36  
Common Spacings: 8", 12", 18", 24", 30"



## Netafim Typhoon Plus™ Series

### Features & Benefits

- Low filtration requirement of 120 mesh.
- Wide cross-section flow path for larger particles.
- Large filter inlets for secondary filtration.

### Typhoon 630

Wall Thickness: 8, 10, 13, & 15 mil  
GPH/Emitter Rates: 0.11, 0.16, 0.22, 0.36, 0.49  
Common Spacings: 12", 14", 16", 18", 20", 24", 30", 36"

### Typhoon 875

Wall Thickness: 8, 10, 12, 13, & 15 mil  
GPH/Emitter Rates: 0.18, 0.25, 0.36, 0.58  
Common Spacings: 12", 14", 16", 18", 20", 24", 30", 36"



## Netafim DripNet PC™ Series

### Features & Benefits

- Pressure compensating dripline
- Wide regulation pressure range from 6 to 36 psi.
- Injection molded drippers

Inside Diameter: 0.636", 0.875", or 0.990"  
Wall Thickness: 13, 15, 18, & 25, mil  
GPH/Emitter Rates: 0.16, 0.26, 0.32 & 0.42  
Common Spacings: 8", 12", 18", 24", & 30"



# Drip Tape

## Toro Aqua-Traxx® Series

Aqua-Traxx with the PBX Advantage offers a Proportionally Balanced Cross-Section (PBX) design that optimizes flowpath turbulence and increases durability, clog resistance and uniformity. Choose emitter spacing from 4 to 36 inches — with no cost increase — for precise placement and flexibility when designing your system. Find the perfect tape for your application with a wide variety of available flow rates, wall thicknesses and internal diameters.

### Features & Benefits

- Emitter spacing options for all soils--at no additional cost
- Widest selection of flow rates
- Superior clog resistance
- Wide pressure operating range:
  - PBX 4-15 psi



### Aqua-Traxx®

Tape Diameter:	5/8", 6/8", 7/8", 1", 1-1/8" & 1-3/8"
Wall Thickness:	4, 5, 6, 8, 10, 12, 13, & 15 mil
GPH/Emitter Rates:	0.07, 0.09, 0.10 (all 200 mesh filtration) 0.15 (140 mesh filtration) 0.34, 0.53 (120 mesh filtration)
Common Spacings:	4" - 36"

## Toro FlowControl® Series

Toro FlowControl® is the only flow-regulating drip tape available, delivering more uniform output even in the most challenging terrain. The innovative emitter design regulates flow with changes in water pressure. More uniformity can lead to better yields even in longer runs or hilly terrain.

### Features & Benefits

- An extra-large Proportionally Balanced Cross-section flow-path design to help prevent clogging.
- FlowControl™ requires just 150-mesh filtration.
- Wide pressure operating range:
  - FlowControl™ 4-25 psi



### FlowControl™

Tape Diameter:	5/8", 7/8", & 1-3/8"
Wall Thickness:	6, 8, 10, 12, & 15 mil
GPH/Emitter Rates:	0.13, 0.20, 0.27
Common Spacings:	6" - 24"

# Drip Tape

## Toro Aqua-Traxx® Azul™

Toro Aqua-Traxx Azul drip tape for drip irrigation and subsurface drip irrigation (SDI) offers an emitter design that protects the labyrinth from debris and maximizes clog resistance and performance. Now you get the same great quality and performance you expect from Aqua-Traxx with even more clog resistance and less worry.

### Features & Benefits

- Enhanced clog resistance with 120 mesh filtration requirement
- Greater filtration area with patent-pending Multi-Stage filters
- Optimized flow passages further resist clogging
- The same superior quality and processes as the original Aqua-Traxx
- Wide pressure operating range:
  - Azul™ 4-15 psi

### Azul™

Tape Diameter:	5/8", 6/8", 7/8", & 1 - 3/8"
Wall Thickness:	6, 8, 10, 12, & 15 mil
GPH/Emitter Rates:	0.13, 0.20, 0.27
Common Spacings:	6" - 24"



# Drip Tape

## T-Tape Drip Tape by Rivulis Irrigation

T-Tape Drip Tape is the most trusted and recognized drip tape in the world and has the most extensive offering of product configurations that include numerous diameters, wall thicknesses, spacings, and flow rates.

### Features & Benefits

- Turbulent flow path to resist plugging
- Slit outlet reduces the ingestion of soil of system shut down.
- Dripper inlet filters
- Available in ultra low flow and low flow rate models.

### Product Options

Tape Diameter: 5/8", 7/8", 1 1/8", 1 3/8"

Wall Thickness: 5, 6, 8, 10, 12, & 15 mil

Flow Rate:

- Ultra low to low - 0.15-0.27 gpm/100'
- Medium - 0.34 - 0.50 gpm/100'
- High - 0.67 - 1.34 gpm/100'

Common Spacings: 4", 6", 8", 12", 16"



## Ro-Drip Drip Tape by Rivulis Irrigation

Ro-Drip Drip Tape is specifically engineered to deliver uniform flow rates while addressing the most difficult maintenance issue faced by drip growers today; blockage during high contaminant conditions. Patented Ro-Drip Drip Tape design employs two independent anti-plugging systems: Vortex Flow Action, which resists clogs by keeping particulates in suspension; and our exclusive Expanding Flow Channel, which reacts to blockages by actually changing shape, often purging even the toughest particulate build-up.

### Features & Benefits

- Plug resistant design
- Expanding flow channel
- Vortex flow action

### Product Options

Tape Diameter: 5/8", 7/8"

Wall Thickness: 5, 6, 8, & 10 mil

Flow Rate:

- Low - 0.25 - .33 gpm/100'
- Medium - 0.33 - 0.50 gpm/100'
- High - 0.67 - 1.00 gpm/100'

Common Spacings: 4", 8", 12", 16"





# Dripline

## Toro BlueLine® PC Series

### Features & Benefits

- More resistant to plugging.
- Self flushing diaphragm - patented new design flushes during operation and shutdown, further resisting clogging and providing longer life for your system.
- Anti-siphon feature reduces susceptibility to back siphoning.
- Blue Stripe® of Quality allows for easy of identification of emitters during installation and/or operation.
- Fully pressure compensating from 10 to 60 psi.
- Available in standard and custom emitter spacings.
- Low profile emitter reduces friction loss.

### BlueLine® PC

Line Diameter:	0.55", 0.62", 0.71"
Wall Thickness:	45 mil for 16mm and 18mm 48 mil for 20mm
GPH/Emitter Rates:	0.26, 0.40, 0.53 & 1.06
Common Spacings:	12", 18", 24", 30", 36", 42", 48", 54", & 60"



## Toro BlueLine® Classic Series

### Features & Benefits

- Efficient Emitter Design - The unique "shark tooth" emitter flow path design allows uniform application of water and nutrients in demanding field applications, including long lengths of run or undulating terrain.
- Accurate Flow Rate Between 5 and 60 psi - A wide operating window means less waste and uniform application of fluids to all plants, even at system start up and shutdown.
- Low Profile Emitter Design - Reduced friction loss saves energy and helps ensure uniform application of fluid to all plants.

### BlueLine® Classic

Line Diameter:	0.55", 0.62", 0.71"
Wall Thickness:	45 mil for 16mm and 18mm 48 mil for 20mm
GPH/Emitter Rates:	0.53 & 1.06
Common Spacings:	12", 18", 24", 30", 36", 42", 48", 54", & 60"



# Dripline

## Netafim UniRam (PC)

### Features & Benefits

- Anti-vacuum mechanism prevents suction of dirt into the dripline, providing the critical protection needed against dripper plugging.
- Wide Compensating range maintains a constant uniform flow - longer runs and steep terrains are irrigated with high uniformity.
- Exclusive Non-Leakage (CNL) Mechanism - (Optional) Prevents system drainage when pressure is turned off at the end of each irrigation cycle. Ensures uniform water distribution during pulse irrigation.
- Root intrusion barrier prevents roots from penetrating the dripper's mechanism.

Line Diameter: 0.54", 0.57", 0.62", 0.69", 0.82"  
Wall Thickness: 16, 17, 18, 20, & 820 mil  
GPH/Emitter Rates: 0.26, 0.42, 0.53, 0.61, 0.92, 1.0  
Common Spacings: 18", 24", 30", 36", 42", 48", 60"



## Netafim DripNet PC™

### Features & Benefits

- Heavywall solution for irrigating crops with long runs and steep topographies.
- Large filtration area prevents penetration of dirt particles into the dripper.
- Chemical resistant, self-cleaning, self-flushing dripper diaphragm removes debris throughout the irrigation cycle.

Line Diameter: 0.54", 0.57", 0.62", 0.69", 0.82"  
Wall Thickness: 16, 17, 18, 20, 36 & 60 mil  
GPH/Emitter Rates: 0.26, 0.42, 0.53, 0.61, 0.79, 0.92, 1.00  
Common Spacings: 18", 24", 30", 36", 42.25", 48"



## Netafim Aries™

### Features & Benefits

- Available with a wide choice of dripper spacings, flow rates and wall thickness to tailor-make a system for your varied applications, soils and crops.
- Large dripper filter flushes out large particles for long-term use and efficiency.
- Injection molded dripper construction provides uniform flow.

Line Diameter: 0.54", 0.62", 0.69", 0.82"  
Wall Thickness: 45, 48, & 60 mil  
GPH/Emitter Rates: 0.26, 0.40, 0.50, 0.79, 1.0  
Common Spacings: 18", 24", 30", 36", 42", 48", 60"  
(Custom spacing available)



# Dripline

## Rivulis Irrigation Hydrogol Drip Line

Hydrogol Drip Line utilizes industry leading, cylindrical dripper that have turbulent flow path, dual inlets, and dual outlets to reduce the possibility of clogging. Hydrogol drip lines are offered in either black or white. The white hose has many benefits including the ability to maintain a lower water temperature, reflect light, and provide high visibility of the lines in a field or a greenhouse.

### Features & Benefits

- Large surface inlet filter
- Outstanding clogging resistance for all flow rates
- Constant inside diameter regardless of drip line wall thickness



### Product Options

Diameters: 16, 18, 20

Wall Thickness: 45 mil

Flow Rates (gph):

16 mil: 0.26, 0.53, 1.06, 2.11

18 mil: 0.44, 0.57, 1.08

20 mil: 0.32, 0.53, 1.06

Hose Color: Black or White

Standard operating pressure: 15 psi



# PE Tubing & Hose

## Netafim Polyethylene Tubing

Netafim Polyethylene Tubing is made from the highest quality low density polyethylene resin available.

### Features & Benefits

- Available in black or white color, standard coil lengths or large diameter reels to meet your specific needs.
- White tubing is opaque to prevent algae growth, withstand heat and harsh chemicals while producing cooler water temperatures.
- UV and acid resistance.
- Available with pre-punched holes at various spacings.



### PE Tubing

Hose Diameter(MM): 10.2, 13.2, 14.5, 15.2, 15.8, 17.5, 18.3, 18.8, 20.8, 21.1, 26.9  
Working Pressure (psi): 44-75

## Toro Micro-Distribution Tubing

### Features & Benefits

- Available in a wide range of coil lengths, diameters, wall thicknesses to accommodate required lengths of run, working pressures and terrain. Polyethylene or flexible PE options available.
- Perfect for use across a number of applications as it allows growers flexibility in emitter placement and easily fits on emission devices or barbed fittings.
- Can be used for submain to dripline/tape connections, as well as micro sprinkler, sprayer and emitter connections.



### Toro Micro-Distribution Tubing

Tubing Diameter(Inches): 0.128, 0.176, 0.187, 0.188, 0.220, 0.225, 0.272, 0.275, 0.350, 0.375

## Bowsmith Premium Plus Tubing

### Features & Benefits

- Bowsmith Premium Plus+ tubing is manufactured from the highest grades of polyethylene resins.
- Every reel undergoes a series of tests to ensure Bowsmith's high quality manufacturing standards are met.
- Available in a wide range of diameters, wall thickness and coil lengths to accommodate required lengths of run, working pressures and terrain.
- Pre-punched and marked custom spacing are available for easy Fan-Jet® microsprinkler or NonStop® emitter installations.



# PE Tubing & Hose

## Toro Blue Stripe® Round Hose

Blue Stripe Round Hose is manufactured from high quality linear low density polyethylene resins and is built for tough and dependable operation in the most demanding field applications. Blue Stripe Round Hose is also available in white, ideal for greenhouse and nursery drip irrigation applications.

### Features & Benefits

- Available in a wide range of diameters, wall thicknesses and coil lengths to accommodate required lengths of run, working pressures and terrain.
- Round hose available in blue, white or purple stripes for easy irrigation zone identification.
- Also available in white tubing for nursery and extreme climate applications to assist with water temperature control.
- A minimum of 2% carbon black is present to prevent ultraviolet degradation.



### BlueStripe® Round Hose

Hose Diameter(MM): 4, 10, 13, 14, 15, 16, 18, 20, 26, & 35

Working Pressure (psi): 46 - 80 psi, depending on wall thickness and diameter.

## Toro Blue Stripe® Oval Hose

Toro Ag Blue Stripe® Oval Hose is made from high quality polyethylene resins. Small diameter models of Oval Hose may be used as lateral lines in permanent crop applications, while large diameter models may be used as submains and mainlines in row crop applications.

### Features & Benefits

- Available in a wide range of diameters, wall thicknesses and coil lengths to accommodate required lengths of run, working pressures and terrain.
- Larger diameters available to provide a cost effective alternative to both rigid and flexible PVC pipelines
- A minimum of 2% carbon black is present to prevent ultraviolet degradation.

### BlueStripe® Oval Hose

Hose Diameter(Inches): 1/2", 5/8", 3/4", 1", 1-1/4", 1-1/2", 2", 3," & 4"

Working Pressure (psi): 21 or 42



# PE Tubing & Layflat

## Max-Flat Hose by Rivulis Irrigation

Max-Flat Hose is the most versatile hose available for manifold, submain or water transfer applications. Max-Flat Hose is fabricated from premium polyethylene resin, specially formulated to resist stress cracking and kinking, and to ensure long-term reliability.



### Features & Benefits

- Highly resistant to agricultural chemicals.
- Better connections with fittings that other types of manifolds.
- Hose rolls flat to easier shipping and handling.
- Green stripe

### Product Options

Diameters: 1.5" to 4"

Max. Operating. Pressure: 21 psi

Color: Black

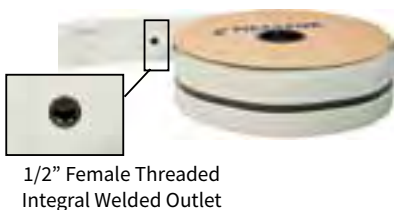
Size (Inch)	I.D. (inch)	O.D. (inch)	Wall (inch)	Roll Length (Feet)
1.5	1.595	1.679	0.042	300
1.5	1.595	1.679	0.042	600
2	2.052	2.163	0.055	150
2	2.052	2.163	0.055	450
3	3.043	3.203	0.080	200
4	3.996	4.208	0.106	130
Maximum operating pressure: 21 PSI				

## Netafim FlexNet™

FlexNet™ is a high-performance, flexible, lightweight piping solution. It's offered in a wide range of diameters with integrally welded connectors which ensure a leak-proof connection

### Features & Benefits

- FlexNet™ is made from durable, environmentally-friendly polypropylene material.
- It is easily laid out and can be recoiled multiple times each year.
- FlexNet™ can be used in surface or subsurface installation.
- FlexNet™ can be recycled at the end of its lifespan.
- Assembly is quick and easy with installed integral welded outlets (1/2" female threaded) which are located at predetermined spacings.
- Each welded outlet can accept a 1/2" male threaded tee or elbow start connector.



### Netafim FlexNet™ (Specifications)

Size	Standard Outlet Spacing	Nominal Diameter Inside	Nominal Diameter Outside	Nominal Wall Thickness
2"	30"	2.0"	2.09"	0.030"
3"	36"	3.1"	3.14"	0.030"
4"	40"	4.0"	4.10"	0.030"
6"	72"	6.4"	6.48"	0.030"
8"	80"	8.2"	8.29"	0.030"



# Layflat

## Kuriyama VinylFlow® & VinylFlow® EZ-Lite™ Layflat

### Features & Benefits

- Smooth tube provides friction loss.
- Hose lays straight with minimal elongation under pressure. Hose may be punched easily without tearing.
- Ultraviolet inhibitors reduces aging and weather checking.
- All rolls have PVC cores for easier dispensing. Hoses roll flat for easy storage.
- EZ-Lite is lightweight and easy to handle.

### VinylFlow® Layflat

Hose Diameter(inches): 1 1/2, 2, 3, 4, 6, 8, & 10  
Working Pressure (psi): 35 - 80

### VinylFlow® EZ-Lite™ Layflat

Hose Diameter(inches): 1 1/4, 1 1/2, 2, 3, 4, 6, & 8  
Working Pressure (psi): 40 - 85



## Pro-Flat Layflat by Rivulis Irrigation

Pro-Flat Layflat is the only PVC Layflat that is designed specifically for drip irrigation systems. The thick walls and strong yarn structure help the product to hold connections and resist bursting. The tension in the yarn structure reduces the amount of rotation and elongation each time the system is pressurized.



### Features & Benefits

- Premium resins for durability.
- Strong yarn structure
  - Minimizes rotation and expansion to keep the drip lines in place.
  - Holds connections and resists bursting.




### Product Options

Diameters: 1.5" to 8"

Size (Inch)	Max. Op. Pressure	I.D. (Inch)	O.D. (Inch)	Wall (Inch)
1.5	90	1.5	1.7	0.059
2	80	2.1	2.2	0.060
3	70	3.1	3.2	0.067
4	70	4.1	4.2	0.075
6	50	6.1	6.3	0.083
8	45	8.1	8.3	0.090
Roll Length (all): 300 Feet				

# Tape Fittings

## Fittings

TLOC-400B06LS-BV	RLOC-CPT06LS
Drip Tape x Oval Hose Connector with Valve. 	5/8 Typhoon - Drip Tape x Drip Tape Coupling 
TLOC-CPT06-LS	RLOC-CPT09LS
Drip Tape x Drip Tape Couplings. 	7/8 Typhoon - Drip Tape x Drip Tape Coupling 
TLOC-250B06LS	RLOC-400B06LS
Drip Tape x Oval Hose Connector 	5/8 Typhoon - Drip Tape x Oval Hose Connector 
TLOC-400B06LS	TLOC-TEE06LSB400
5/8 Drip Tape x Oval Hose Connector. 	Drip Tape X Drip Tape X Oval Hose Connector 
TLOC-400B09LS	TLOC-TEE06LSB250
7/8 Drip Tape x Oval Hose Connector. 	Drip Tape X Drip Tape X Oval Hose Connector 
TLOC-FHC06LS-16	PLUG-250 & PLUG-400
Drip Tape x Layflat Connector. 	Goof Plugs 250B - 5/8  400B - 7/8 

# Online Drippers



# On-Line Drippers

## Netafim Pressure Compensating (PC) Drippers

### Features & Benefits

- Patented pressure differential system maintains uniform flow rate at different inlet working pressures (within the recommended range) ensuring exact distribution of water and nutrients.
- Industry's widest flow path and wider dripper cross section allow large particles through the dripper's short flow path.
- Continuous self-flushing system, even while irrigating, provides improved resistance to clogging.
- The Woodpecker Jr. PC has a CNL feature that is an internal check valve or non-draining mechanism that eliminates refill and drainage effects.

	GPH/Emitter	Operating Pressure
PC	0.5, 1.0, 2.0	7 - 45 psi
Woodpecker PC	0.5, 1.0, 2.0	7 - 45 psi
Woodpecker Jr PC	0.5, 1.0, 2.0	7 - 45 psi



**PC**  
(NON CNL)



**Woodpecker PC**  
(NON CNL)



**Woodpecker PC Jr.**  
(with CNL)

## Netafim Non-Pressure Compensating Drippers

### Features & Benefits

- Wide flow path and wider dripper cross section allow large particles through the dripper's short flow path.
- Designed with a barbed base for easy installation into blank polyethylene tubing.
- Several flow rates provide adaptability to many applications.

	GPH/Emitter	Max Operating Pressure
Button Dripper	0.5, 1.0, 2.0	40 psi
Woodpecker Dripper	0.5, 1.0, 2.0	40 psi



# On-Line Drimmers

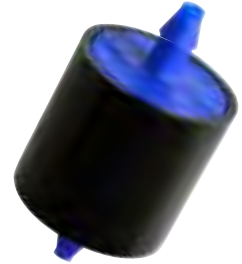
## Bowsmith - NonStop Drip Emitters

### Features & Benefits

Bowsmith NonStop emitters have demonstrated that the unique NonStop Continuous Self-Cleaning Action (Pressure Cascade Principle) really works, even under conditions that typically clog other emitters. With only 30-mesh filtration (recommended minimum), Bowsmith NonStop emitters have operated successfully with water containing heavy concentrations of sand, silt, iron bacteria, calcium carbonates, even algae and moss.

- Single barb outlet, 0.175" barbs on opposite ends; either can be used as an inlet/outlet.
- 30-Mesh Filtration (recommended minimum)

"SB Series" Model No.	Specifications	
	Nominal flow @ 20PSI	
SB-06	0.6 GPH	Green Insert
SB-10	1.0 GPH	Blue Insert
SB-20	2.0 GPH	Red Insert



## Toro - Drimmers

### Features & Benefits

- NGE® AL offer unique anti-drain feature to overcome drainage problems caused by differences in elevation. Ideal for greenhouse and nursery applications, or any situation that requires precise irrigation of containers or individual plants
- NGE® SF offers unique emitter design that is self-flushing and inhibits siphoning during the emitter's operation and shutdown, giving it added protection from clogging.
- Turbo-SC Plus® PC has a large self-flushing, turbulent flow path for higher resistance to plugging where water conditions may be a problem.
- Turbo-Key Non-pressure compensating emitters have a large turbulent flow path.
- E-2 Emitter (Non-pressure compensating) is an economic emitter for short runs and non-sloped applications.



NGE® AL



NGE® SF



Turbo-SC Plus® PC



Turbo-Key®



E-2® Emitter

	GPH/Emitter	Operating Pressure
NGE® AL	0.5, 0.8, 1.0, 2.1	15 - 60 psi
NGE® SF	0.5, 0.8, 1.0, 2.1	8 - 60 psi
Turbo-SC Plus® PC	0.5, 1.0, 2.0	10 - 50 psi
E-2® Emitter	1.0, 2.0, 4.0	0 - 50 psi
Turbo-Key®	0.5, 1.0, 2.0	0 - 50 psi



# Nursery, Greenhouse, & Substrate



# Nursery/Greenhouse/Substrate

## Netafim PC, Non PC, Dripper & MOD Assembly

### Features & Benefits

Model	GPH	Pattern	Operating Pressure Range
<b>PC Spray Stakes</b>	3.2 -10.6	Single or Double	22 - 55
<b>Non PC Spray Stake</b>	3, 5, or 7	Single	15 - 25
<b>Dripper Stake Assembly</b>	1 or 2	Single Stake	10 -45
<b>MOD Assembly</b>	1 or 2	2 Way, 4 Way, or Stackable	10 - 45



PC Spray Stake



Non-PC Spray Stake



Dripper Stake Assembly



MOD Assembly

## Maxijet Nursery Pot, Groove, & Elbow Stakes

### Features & Benefits

- Nursery Pot Stakes have a 160° low angle spray pattern designed for round pots to reduce over-spray. Spray pattern works well from low to high water pressures and are available in various gallon sizes. There is a side arm shut-off ring to give a watertight seal and keep dirt out of tubing.
- Agriculture Groove Stakes are ideal for long runs or elevation.
- Elbow Stakes are 7" in height in orange or black colors. The flexible vinyl is available in black and blue colors. Elbow Stakes spray jet sprays a 45° downward circle pattern.

### Nursery Pot, Groove & Elbow Stakes

Model	GPH	Pattern	Operating Pressure Range
<b>Nursery Pot Stake</b>	3.2 - 10.6	Single or Double	22 - 55
<b>Groove Stake</b>	4.2 - 15	Single	15 - 25
<b>Elbow Stake</b>	1 or 2	Single Stake	10 -45



Nursery Pot Stake



Groove Stake



Elbow Stake



# Nursery/Greenhouse/Substrate

## Netafim SpinNet, VibroNet, & CoolNet Pro

### Features & Benefits

- Netafim SpinNet and VibroNet Sprinklers produce high levels of watering uniformity. They are constructed without a “bridge” to retain the spinner, producing drip-less operation. These sprinklers have wide patterns up to 24'. Both types have a check valve above the sprinkler head to ensure that each sprinkler turns on/off at the same time.
- Netafim CoolNet Pro Foggers produce finer droplets allowing quicker evaporation resulting in higher humidity for propagation applications. Each nozzle of the 4-Way Fogger has a flow rate of 2.0 GPH. CoolNet Pro Foggers also have a reliable check valve above each head ensuring all foggers turn on/off at the same time.



### VibroNet/SpinNet/CoolNet Pro

Model	GPH	Pattern	Operating Pressure Range	Wetted Diameter
<b>SpinNet</b>	18.4 - 23.4	6 Different	10 - 35 psi	10 - 38 ft
<b>VibroNet</b>	9.2 - 11.7	Vibrating	10 - 35 psi	10 - 38 ft
<b>CoolNet Pro</b>	8.1	Fogging	45 - 60 psi	6 - 10 ft

## Primerus Spot Spitters

### Features & Benefits

- Primerus Spot Spitters deliver a variety of flow rates and patterns. Exclusive directional indicator allows quick placement. Available options: Standard (4.75”), short (2.75”), Tall (11”) and Down-spray.



### Primerus Spot Spitters

Color	GPH	Pattern	Pressure Range	Usage
<b>Black High Flow</b>	12.6 - 17.4	160° Spray	15 - 25 psi	15 - 20 Gallon Pot
<b>Green Medium Flow</b>	9.6 - 13.2	160° Spray	15 - 25 psi	5 - 15 Gallon Pot
<b>Lt. Green Flow</b>	5.4 - 6.6	160° Spray	15 - 25 psi	2 - 7 Gallon Pot
<b>Orange Mini Flow</b>	3.6 - 4.8	160° Spray	15 - 25 psi	1 - 3 Gallon Pot
<b>Brown Mini Flow</b>	5.4 - 7.8	90° Spray	15 - 25 psi	2 - 7 Gallon Pot
<b>Grey Mini Flow</b>	2.4 - 3.6	90° Spray	15 - 25 psi	1 - 3 Gallon Pot
<b>Blue Medium Flow</b>	9.0 - 12.6	360° Spray	15 - 25 psi	36” - 48” Box

# Nursery/Greenhouse/Substrate

## NetBow™

NetBow™ is an innovative, user friendly container irrigation ring with multi-outlet emitters. Featuring Typhoon™, our superior clog resistant emitter for maximum water distribution. Specially designed for irrigating containerized crops.



With NetBow™, roots develop in every square inch of the container including the top layer, where root development is critical.

### Features & Benefits

- Uniform water distribution, from top to bottom with no blind spots. The flow from each dripping outlet will be determined by the hub dripper, divide evenly by 8 or 4.
- Superior clog resistance - NetBow™ features 8 of Netafim's high clogging-resistant Typhoon drippers that guarantees lower risk of clogging.
- User-friendly device simplifies installation and operation – with NetBow™ is easy to install & connect to micro-tubes, and placement in the container is easy.
- Options for connecting to diverse hub drippers like PCJ, PC, or Uniram™ with Dr. Zip

### Specifications

- Compatible with 10 to 60 liters (2-15 gallons) containers
- Diameter: 120 mm (5 inches) , 250 mm (10 inches)
- Outlets: 4 or 8 dripping outlets (Flow is determined by the hub dripper)
- Superb Chemical and UV resistance for extended durability
- Colored light gray for improved light reflection
- Maximum operating pressure: 4.0 bars (58.0 PSI)
- Flow Rate: 4 or 8 dripping outlets with flow of 2.0l/h 0.53 GPH each at 1.0 bar (14.5 PSI)

#### NetBow™

Hub Dripper	Flow Rate (GPH)
PC/ PC LCNL	0.53
PC/ PC LCNL	1.06
PC/ PC LCNL	2.25
PCJ/ PCJ LCNL	0.53
PCJ/ PCJ LCNL	0.79
PCJ/ PCJ LCNL	1.06
PCJ/ PCJ LCNL	2.11
PCJ/ PCJ LCNL	3.17
UNIRAM	0.61
UNIRAM	0.92



# Sulfur Burners

## Harmon Systems International, LLC - SO<sub>2</sub> Sulfurous Acid Generators

In 1955, D & J Harmon invented and pioneered the technique of amending water and soil with the original SO<sub>2</sub>-Sulfurous Acid Generator. Today, with over 2,000 units sold and installed, and over 66 years of experience, we manufacture our units in seven different model sizes, with accessories and control options to fit the exact requirements for virtually any customer, from the most basic setup to full automation and pH control.



### Features & Benefits

- Produce on-site sulfurous acid with your own irrigation water.
- Amend the soil/water solution to precisely match the pH preference of your crop.
- Leach salts effectively to prevent salt accumulation and lower E.C.
- Improve water penetration and eliminate run-off.
- Obtain more acidity with less cost.
- Safe to handle and touch
- Clean drip lines & emitters
- Increase crop quality and yields
- USDA approved for organic crop production when using OMRI listed sulfur.



**pH Control**  
*the natural way*

# Haygrove Polytunnels





# Haygrove

## About Haygrove Tunnels

Haygrove designs and manufactures field scale commercial polytunnels, substrate, and associated growing systems for many of the best growers in the world. They aim to constantly improve growing systems for the benefit of the customer by understanding the commercial pressures of growing themselves.



## FIELD SCALE POLYTUNNELS

### PIONEER

Dimensions per tunnel:

- 2.75m (9ft) leg
- 2.5 (8.2ft) to 3m (10ft) leg spacing
- 8.5 (28ft) to 9.6m (32ft) bay

## TUNNEL GROWING SYSTEMS

### Benefits & Advantages

- Great for
  - Container Growing Systems
  - Bedded Growing Systems
  - Hanging or Post Growing Systems
- Allow for precision irrigation and improved field hygiene
- Help to reduce temperature and humidity fluctuations for advantageous growing conditions
- Have availability in a wide range of bay widths for container, gutter, or row spacing.
- All structures follow the natural contour of the ground, mitigating the need for site leveling or concrete foundations.



CONTAINER

BED

HANGING OR POST

# Jets & Micro Sprinklers



# Jets & Micro Sprinklers

## Netafim SuperNet & SuperNet Jr.

### Features & Benefits

- The SuperNet Pressure Regulated Micro Sprinkler has a wide regulating range and floating, self-flushing diaphragm maintains uniform flow across broad pressure range.
- High distribution uniformity - unique nozzle tube prevents negative effects of varying inlet pressure on the wetted diameter.
- Large water passages- resists clogging.
- Drop down “bug-proof” swivel/jet plate prevents entry of insects.
- Everspin bearing has a layer of sapphire material to reduce friction and wear, promoting long-lasting sprinkler performance.
- Bearing keeps the swivel centered during operation and improves start-up.
- SuperNet Jr. Non-Pressure Regulated is recommended for applications where flow regulation is not required.

### Specifications

Style	GPM	Pattern	Operating Pressure	Wetted Diameter
SuperNet (SW)	5.3-23.8	Short or Long	25-50 psi	5-23 ft.
SuperNet (j.Plate)	8.2-23.8	6-12ft Stream	25-50 psi	16-18ft.
SuperNet Jr. (SW)	6-50	Short or Long	15-35 psi	4.3-29.5 ft.



### SuperNet

Model #	Description
031735	Stream Splitter
03175624	24” Steel Stake
03175648	48” Steel Stake
03173600	Poly Adapter

### SuperNet Jr

Model #	Description
031735	Stream Splitter
03175624	24” Steel Stake
03175648	48” Steel Stake
03173700	Poly Adapter



# Jets & Micro Sprinklers

## Netafim NetJet

### Features & Benefits

- Netafim NetJet High Performance Spray Jet operates at low pressures. It has wide range of spray patterns and trajectories that help save on energy costs. The NetJet minimizes “misting” reducing water lost to evaporation. The lower operating pressure also reduces wear associated with hard or soluble gypsum.

### Specifications

Style	GPM	Pattern	Operating Pressure	Wetted Diameter
NetJet	4.8-28.6	7 Different	10-30 psi	10-34 ft.



### NetJet

Model #	Nozzle Color	Flow Rate
037121080000	Black	6.8 GPH
037121780000	Orange	7.6 GPH
037121280000	Brown	8.7 GPH
037121180000	Blue	11.1 GPH
037121680000	Purple	13.1 GPH
03712998	Stream Deflector	-

## SPRAY PATTERNS



12 STREAM  
360°



BUTTERFLY  
STREAM



8 STREAM  
210°



22 STREAM  
360°



12 STREAM  
360°



RECTANGULAR  
STREAM



10 STREAM  
300°

# Jets & Micro Sprinklers

## Maxijet Max-One Spray Jets

### Features & Benefits

- The Max-14 Fill-In Jet was designed for high density plantings and the Max-14 Stream Jet is suited for mature trees with wider spacings. Both the Max-14 Fill-In and Stream are durable one-piece jets with a winged one-arm design, available in 8 different gallon sizes, and have quick locking threads to get the jet in and out of the stake in only 1 to 2 quick turns.
- The Max-360 and Max-180 jets are equipped with a down spray stream pattern to keep water off leaves and berries and allow little to no wind deflection. Spray jets will irrigate 90% to 100% of the root zone.
- The Max-240 sprays a 10-stream 240° pattern and is designed to be installed near the base of trees spraying out to keep water off of the trunks.



## Maxijet MAX-FLO™ Flow-Controlled Adapters

### Features & Benefits

- Maxijet MAX-FLO™ adapters connect the poly hose to the jet assembly and allows for a consistent spray pattern on undulating terrain.

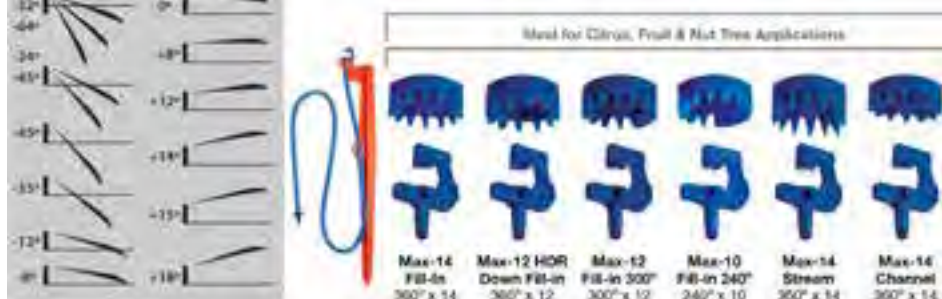


# Jets & Micro Sprinklers

## Maxijet Max-One Spray Jets



### Specification Chart



	Orifice	PSI	GPH	Diameter	Diameter	Diameter	Radius	Diameter	Diameter
80 - 120 filtration mesh recommended	Black .03"	15	4.9	7.5'	5.0'	7.5'	4.0'	9.5'	9.0'
		20	5.6	8.5'	5.5'	9.0'	4.5'	10.5'	10.0'
		25	6.3	9.0'	6.0'	9.5'	5.0'	12.0'	11.0'
	Orange .032"	15	6.7	9.5'	6.5'	10.0'	5.5'	12.5'	11.6'
		20	7.7	10.8'	7.0'	10.5'	6.0'	13.5'	12.0'
		25	8.6	11.5'	7.5'	11.0'	6.5'	14.5'	13.0'
	Blue .04"	15	8.0	9.5'	6.0'	10.5'	6.0'	14.5'	13.0'
		20	10.5	11.0'	6.5'	11.5'	6.0'	16.0'	15.0'
		25	11.8	12.0'	7.0'	12.5'	6.5'	17.0'	16.5'
	Violet .044"	15	11.5	13.5'	6.5'	11.8'	6.5'	17.0'	16.5'
		20	13.5	13.5'	7.0'	13.5'	6.0'	18.0'	18.0'
		25	15.0	13.8'	7.5'	14.0'	6.5'	19.0'	18.5'
Green .05"	15	14.0	14.0'	7.0'	14.0'	6.5'	19.0'	18.5'	
	20	16.0	15.0'	7.5'	15.5'	6.5'	19.0'	18.5'	
	25	18.0	16.5'	8.0'	16.5'	7.0'	20.0'	19.0'	
Yellow .055"	15	17.1	13.8'	7.5'	14.5'	7.0'	19.0'	19.5'	
	20	19.8	14.0'	8.0'	15.5'	7.0'	21.0'	21.0'	
	25	22.21	15.0'	8.5'	16.5'	7.5'	22.5'	22.0'	
Red .06"	15	20.2	15.0'	8.5'	16.0'	7.5'	20.5'	21.5'	
	20	23.5	17.0'	9.0'	18.0'	7.5'	21.5'	22.0'	
	25	26.5	18.0'	9.5'	19.0'	8.0'	22.5'	22.5'	
White .07"	15	32.1	21.0'	10.0'	18.0'	8.0'	23.5'	23.5'	
	20	37.1	21.5'	10.5'	21.0'	8.0'	28.0'	25.0'	
	25	41.8	22.0'	11.0'	22.0'	8.5'	30.5'	27.5'	
50 - 80 filtration mesh recommended	White .07"	30	46.1	24.5'	12.0'	23.0'	9.0'	32.0'	28.5'

# Jets & Micro Sprinklers

## Bowsmith Fan-Jet Type 2

### Features & Benefits

- The Fan-Jet has a twin-wedge post construction, which is durable, low profile, and impact resistant.
- Open design that has no pockets to collect debris or harbor insects.
- The Fan-Jet is made of high grade co-polymer material for limited creep and shrinkage.
- The splash plate, with no moving parts, maintains precise alignment over time.
- 18 Different spraying patterns available.



**Bowsmith Fan-Jet Type 2**

Nozzle Size	30	35	40	45	50	55	60
Color	Black	Orange	Blue	Violet	Green	Yellow	Red
Pressure	Flow (GPH)						
10	4.4	5.9	7.5	10.0	11.8	13.7	17.0
15	5.2	7.3	9.3	12.2	14.4	17.8	20.8
20	6.0	8.4	10.7	14.1	16.7	20.5	24.0
25	6.7	9.4	12.0	15.8	18.6	22.9	26.8
30	7.4	10.3	13.1	17.3	20.4	25.1	29.4

## Bowsmith Fan-Jet Single

### Features & Benefits

- Uniform patterns, accurate flow rates
- Large “open mouth” design
- Quick thread for easy installation
- Bulb end helps prevent leakage, easy for retrofits
- Rugged and sturdy, made with UV stabilized acetal resin

### Fan-Jet Single J4 - 14 Stream “Fill In”

- Better fill-in pattern
- More water in the first two feet
- Uniform distribution between streams
- Uniform stream lengths



### Fan-Jet Single M - 330° Flat Mist

- 10° larger wetted area
- Uniform flat mist pattern



**Bowsmith Fan-Jet Single**

Nozzle Size	35	40	45	50
Color	Orange	Blue	Violet	Green
Pressure				
10	5.9	7.5	10.0	11.8
15	7.3	9.3	12.2	14.4
20	8.4	10.7	14.1	16.7
25	9.4	12.0	15.8	18.6
30	10.3	13.1	17.3	20.4

# Jets & Micro Sprinklers

## Toro Micro-Sprinkler VI Classic

### Features & Benefits

- Engineered to provide uniform water application for low volume, under-tree and overhead installations
- Deflector plate design maximizes startup torque to ensure reliability of operation in the most hostile environments
- Anti-insect dust-proof spinner retracts to protect nozzle when not in operation
- New snap-fit conical bearing design ensures long life, ease of maintenance and trouble free spinning
- Available in 8 flow rates ranging from 9.1 to 65.1 gph at 20 psi
- Diameter of throw 16.4 to 36.8 feet



**Toro Micro-Sprinkler VI Classic**

Orifice Dia. (Inch)	0.039	0.041	0.049	0.055	0.065	0.071	0.079	0.091
Color	Black	White	Maroon	Green	Blue	Grey	Yellow	Red
Pressure	Flow (GPH)							
15	7.9	11.8	16.5	21.5	29.2	33.8	41.7	56.4
20	9.1	13.7	19.0	24.8	33.7	39.0	48.1	65.1
25	10.2	15.3	21.2	27.8	37.7	43.6	53.8	72.8

## Toro Micro-Sprinkler PC

The pressure-compensating Micro Sprinkler PC is specifically designed for orchards, vineyards, and nursery applications where undulating terrain and long lateral lengths are challenging. Its unique pressure-compensating design provides uniform flows and diameters over a wide range of operating pressures. The Micro Sprinkler PC now has a wider diameter of throw than Toro's previous micro sprinklers.



### Features & Benefits

- Wide diameter of throw from 16 - 31 feet, depending on sprinkler
- Pressure-compensating sprinkler provides uniform flow over a wide range of operating pressures: 20 - 60 psi
- Low angle of throw for maximizing under foliage irrigation
- Easy identification in eight color coded flow rates ranging from 9 - 40 GPH

**Toro Micro-Sprinkler PC**

Orifice Dia. (Inch)	0.036	0.042	0.046	0.053	0.060	0.071	0.071	0.075
Color	Black	Lt-Blue	White	Maroon	Green	Purple	Blue	Grey
Pressure	Flow (GPH)							
20	9.0	11.6	13.7	18.8	24.6	30.6	34.3	38.6
30	9.8	13.2	15.3	20.3	26.2	30.9	36.2	40.7
40	9.2	12.2	14.8	19.3	24.8	29.3	33.8	38.0
50	9.5	12.4	15.6	19.6	25.6	30.4	35.1	39.1
60	9.8	12.7	15.9	20.1	26.7	31.4	36.5	40.7

# Jets & Micro Sprinklers

## Rivulis Irrigation Tornado Ray Jet Stream Spray

### Features & Benefits

- No moving parts to break, jam, or wear out.
- Vortex nozzle which creates a turbulent water flow throughout the large water passage way.
- Wetting pattern options
  - » 180° (8 jet streams)
  - » 300° (10 jets)
  - » 360° (8 or 12 jets)

### Operating Guidelines

- Operating pressure range: 22-42 psi

Nozzle (size)	Flow Rate	Wetting Diameter
Inch	gph**	ft ***
Black (0.035)	6.6****	7.9
Blue (0.051)	9	10.5
Green (0.067)	14.5	11.8
Red (0.079)	18.5	13.8



\*\* Inlet pressure: 21.8 psi

\*\*\* Upright position, 10" above ground (360° - 12 jet streams)

\*\*\*\* Tornado take-apart: 7.3 gph

## Rivulis Irrigation S2000 Micro Sprinkler

S2000 Micro Sprinklers can be used in a wide range of applications including irrigation, cooling, and frost protection for orchards and groves. The S2000 Micro Sprinkler delivers a consistent spray pattern at a low angle, avoiding low hanging branches.

### Features & Benefits

- Anti-insect device
- Standard or flow Regulated models
- Wear resistant design

### Product Options

- Flow Regulated
- Trunk Protector(s)
- Detachable Range Limiter Spinner
- Operating pressure range: 22-50 psi
- Effective wetting area: 3 to 33 feet



Spinner Color	Nozzle	Flow Rate (gph)
BLK	Light Blue	8
BLK	Black	10
BLK	Blue	14
BLK	Dark Blue	16
BLK	Green	20
BLK	Red	26
BLK	White	33

# Jets & Micro Sprinklers

## Rain Bird Micro-Quick Sprays

### Features & Benefits

- No tools are required to remove and re-install nozzle/deflector on the bayonet mount.
- Nozzle/deflector assembly is easily removed for cleaning.
- The taper bore nozzle design prevents debris from clogging the orifice.
- Upright (upward spraying) or inverted (downward spraying) nozzle/deflector position available.
- The transfer tubing offers maximum flexibility, durability and kink-resistance.
- 7 Different spray patterns available.



### Rain Bird Micro-Quick Spray

Nozzle Size	QN-05 (0.026")	QN-08 (0.033")	QN-12 (0.038")	QN-14 (0.044")	QN-17 (0.048")	QN-24 (0.057")	QN-33 (0.068")
Color	Black	Orange	Blue	Lavender	Green	Red	White
Model #	Q1080005	Q1080008	Q1080018	Q1080014	Q1080017	Q1080024	Q1080033
Pressure	Flow (GPH)						
10	3.7	5.6	7.3	9.7	10.7	14.2	17.2
15	4.5	6.9	9.1	11.8	13.3	17.3	21.0
20	5.2	8.0	10.6	13.7	15.5	20.1	25.2
25	5.9	9.2	11.8	15.5	17.4	22.4	27.9
30	6.5	10.0	13.2	17.2	19.1	26.0	30.6



# Sprinklers



# Sprinklers

## Netafim MegaNet™

### Features & Benefits

- The MegaNet™ is a balanced sprinkler with two equal water jets - no wobble.
- It has a closed and compact design preventing insect penetration and protecting internal parts.
- The MegaNet has distribution uniformity and can be installed on solid sets or in removable field stands.
- Each unit has an individual filter for nozzle cleanliness and to simplify cleaning.
- It is UV protected materials are durable in all climates and resistant to fertilizers and chemicals.
- The operating psi ranges from 29-45 and the wetted diameter ranges from 42.8 - 52.4 ft.



Netafim MegaNet™

Nozzle Size	Nominal Flow (GPM)	Trajectory	Nozzle Color
0.070"	0.88	High - 24°	YELLOW
0.084"	1.10		PURPLE
0.096"	1.54		GREEN
0.109"	1.98		BLUE
0.121"	2.42		BROWN
0.132"	2.86		ORANGE
0.144"	3.30		RED
0.070"	0.88	Low - 15°	YELLOW
0.084"	1.10		PURPLE
0.096"	1.54		GREEN
0.109"	1.98		BLUE
0.121"	2.42		BROWN
0.132"	2.86		ORANGE

# Sprinklers

## Senninger Mini-Wobbler & Wobbler

### Features & Benefits

- Senninger Mini-Wobblers employ a unique off-center rotary action that provides an extremely uniform distribution pattern over a large area. Their gentle rain-like pattern has very low evaporative loss and is effective for frost protection and salt leaching. Mini-wobblers are extremely durable with only one moving part. They are constructed entirely of engineering grade thermoplastics for excellent corrosion resistance.
- The Wobbler provides extremely uniform coverage over a large diameter at low-pressures. It produces droplets that resist wind-drift and are applied in a gentle rain-like pattern. The Wobbler is constructed entirely of engineering grade thermoplastics for corrosion resistance and is extremely durable due to having only one moving part.

### Specifications

Style	GPM	Trajectory	Operating Pressure	Wetted Diameter
Mini-Wobbler	0.42-2.18	0 or 10	15-25 psi	26 - 43.5 ft.
Wobbler	0.78 - 7.64	12 or 24	15-30 psi	29 - 52 ft



Mini-Wobbler	Flow GPM @ psi		
	15	20	25
#4 Nozzle - Light Blue (1/16")	0.42	0.50	0.56
#5 Nozzle-Beige (5/64")	0.64	0.75	0.84
#6 Nozzle- Gold (3/32")	0.95	1.10	1.25
#7 Nozzle - Lime (7/64")	1.30	1.51	1.69
#8 Nozzle - Lavender (1/8")	1.67	1.95	2.18



Wobbler	Flow GPM @ psi				
	10	15	20	25	30
#6 Nozzle - Gold (3/32")	0.78	0.95	1.10	1.23	1.35
#7 Nozzle - Lime (7/64")	1.06	1.30	1.50	1.68	1.84
#8 nozzle - Lavender (1/8")	1.40	1.78	1.98	2.21	2.42
#9 Nozzle- Grey (9/64")	1.80	2.20	2.54	2.84	3.11
#10 Nozzle - Turquoise (5/32")	2.22	2.72	3.14	3.51	3.85
#11 Nozzle - Yellow (11/64")	2.69	3.30	3.81	4.26	4.67
#12 Nozzle - Red (3/16")	3.23	3.96	4.57	5.11	5.60
#13 Nozzle - White (13/64")	3.80	4.65	5.38	6.01	6.59
#14 Nozzle - Blue (7/32")	4.40	5.39	6.23	6.97	7.64

# Sprinklers

## Senninger Xcel Wobbler & Impacts

### Features & Benefits

- Xcel-Wobblers produce droplets resistant to wind-drift and evaporation, and distribute them in a gentle, rain-like pattern. Provides extremely uniform coverage over large diameters. Only one moving part, which translates to longer product life. Available in high and low angle models.
- The 20 series full-circle impacts are Senninger's most economical sprinklers. These sprinklers work best with low flows between 1.34 to 3.98 gpm. Three models with different trajectories available:
  - 2009 – 9° fights wind drift and evaporation
  - 2014 – 14° ideal for under-tree irrigation
  - 2023 – 23° maximum throw on overhead systems



Xcel - Wobbler	Flow GPM @ psi			
	10	15	20	25
#6 Nozzle - Gold (3/32")	0.78	0.95	1.10	1.23
#7 Nozzle - Lime (7/64")	1.06	1.30	1.50	1.68
#8 Nozzle - Lavender (1/8")	1.40	1.71	1.98	2.21
#9 Nozzle - Grey (9/64")	1.80	2.20	2.54	2.84
#10 Nozzle - Turquoise (5/32")	2.22	2.72	3.14	3.51
#11 Nozzle - Yellow (11/64")	2.69	3.30	3.81	4.26
#12 Nozzle - Red (3/16")	3.23	3.96	4.57	5.11
#13 Nozzle - White (13/64")	3.80	4.65	5.38	6.01
#14 Nozzle - Blue (7/32")	4.40	5.39	6.23	6.97

20 Series Impacts	Flow GPM @ psi					
	25	30	35	40	45	50
<b>2009HD Impact</b>						
#6 Nozzle - Gold (3/32")		1.34	1.45	1.55	1.64	-
#7 Nozzle - Lime (7/64")		1.84	1.99	2.12	2.25	2.37
#8 Nozzle - Lavender (1/8")		2.42	2.62	2.79	2.97	3.12
#9 Nozzle - Grey (9/64")		3.08	3.33	3.56	3.78	3.98
<b>2014HS</b>	<b>25</b>	<b>30</b>	<b>35</b>	<b>40</b>	<b>45</b>	<b>50</b>
#6 Nozzle - Gold (3/32")		1.34	1.45	1.55	1.64	-
#7 Nozzle - Lime (7/64")		1.84	1.99	2.12	2.25	2.37
#8 Nozzle - Lavender (1/8")		2.42	2.62	2.79	2.97	3.12
#9 Nozzle - Grey (9/64")		3.08	3.33	3.56	3.78	3.98
<b>2023HS</b>	<b>25</b>	<b>30</b>	<b>35</b>	<b>40</b>	<b>45</b>	<b>50</b>
#6 Nozzle - Gold (3/32")		1.34	1.45	1.55	1.64	-
#7 Nozzle - Lime (7/64")		1.84	1.99	2.12	2.25	2.37
#8 Nozzle - Lavender (1/8")		2.42	2.62	2.79	2.97	3.12
#9 Nozzle - Grey (9/64")		3.08	3.33	3.56	3.78	3.98



# Sprinklers

## Nelson R2000 Rotator, R2000WF, R33 Rotator

### Features & Benefits

- The R2000 Rotator uses proven Rotator Technology to provide high uniformity without the riser vibration or splash down associated with impact sprinklers. The simple, snap-apart design is durable, reliable, and easy to repair and clean. Choose from 15 different plate options to achieve optimal trajectory and throw characteristics.
- The R2000WF Rotator - the “Windfighter” - consistently delivers higher uniformity than impact sprinklers. The R2000WF forms a tight wind-penetrating stream that is systematically broken up by a diffuser, filling in the water pattern. Its sweeping action gently distributes water droplets to the ground preventing soil compaction. The R2000LP is a low-pressure version of the R2000WF.
- The R33 Rotator® is an innovation that saves money, saves time, and performs better than the 3/4” brass impact sprinklers it’s designed to replace. The R33 uses Nelson’s proven Rotator® technology to provide longer throw distance, fight the wind and deliver uniform coverage. While brass sprinklers are prone to damage, clogging, and theft, the R33 is easy to clean, easy to repair, and costs less. The R33LP is a low-pressure version of the R33.

### Specifications

Style	GPM	Trajectory	Operating Pressure	Wetted Diameter
R2000 Rotator	0.67 - 3.54	6, 9, 12, 15, or 24	30 - 60 psi	23 - 37 ft.
R2000WF Rotator	1.10 - 5.70	25	40 - 65 psi	44 - 50 ft
R2000LP Rotator	0.88 - 5.00	25	25 - 50 psi	30 - 41 ft
R33 Rotator	1.22 - 91.8	25	40 - 65 psi	35 - 45 ft



R2000



R33 Rotator



R2000WF

R2000	R2000WF	R33LP/ R33
Plate Options	Plate Options	Plate/Nozzle
K2 9° Green	Purple WF12	Gold 18 / (9/64")
K2 15° Yellow	Green WF14	Brown 20 / (5/32")
K3 9° Brown	Red WF 16	Gray 22 / (11/64")
K3 15° Red	Gold WF18	Green 24 / (3/16")
K3 24° Gray	Dark Brown WF20	Maroon 26 / (13/64")
K4 6° Turquoise		
K4 9° Purple		
K4 12° Wine		
K4 15° Gold		
K4 24° Black		
K5 9° Orange		
K5 15° Tan		
K5 24° Blue		

# Sprinklers

## Wade Rain WR-32

### Features & Benefits

- Wade Rain WR-32 Brass Impact Sprinkler is a single nozzle sprinkler with an aluminum arm for low gallonage applications. It also comes in an aluminum arm version with a straightening vane for larger wetted diameters.



### Specifications

Style	GPM	Operating Pressure	Wetted Diameter
WR-32	1.73 - 5.17	25 - 80 psi	77 - 91 ft
WR-32 W/Vane	1.10 - 5.70	25 - 80 psi	78 - 100 ft.

## Rain Bird LF Series & 2045PJ

### Features & Benefits

- The Rain Bird® LF Series Sprinkler is built rugged to withstand the harsh conditions in agricultural applications. It has been designed to combine the advantages of an impact sprinkler with stream height flexibility that delivers precise, uniform water distribution, making it a good choice for frost protection.
- The 2045PJ is an impact drive sprinkler. It has a double-weighted are for slower rotation and increased distance throw. An adjustable spring arm makes for low-pressure and low-gallonage operation. The 2045PJ has a precision jet tube to minimize side splash. It also has a powerful reverse action.

### Specifications

Style	GPM	Trajectory	Operating Pressure	Wetted Diameter
LF Series	0.77 - 1.67	6 - 22	25 - 60 psi	23 - 33 ft.
2045PJ	1.50 - 8.40	6 - 12	25 - 60 psi	22 - 45 ft



LF Series



2045PJ

LF Series		2045-PJ	
Deflector types		Nozzle types	Nozzle types
6° Yellow	15° Tangerine	White 0.0703"	Red 3/32"
6° Dark Purple	16° Red	Blue 0.078"	Black 7/64"
9° Purple	17° Powder Blue	Orange 0.086"	Blue 1/8"
10° White	21° Olive Green	Purple 0.094"	Yellow 5/32"
10° Lime Green	22° Dark Green	Yellow 0.102"	Beige 3/16"
12° Copper		Green 0.109"	
12° Cyan Blue		Tan 0.117"	
12° Pink		Red 0.1250"	
13° Maroon		Black 0.1325"	
15° Brown		Silver 0.1406"	

# Sprinklers

## XCad USA - Aqua Burst® HF30AL

### Features

- Full-circle impact – 26° trajectory
- 3/4" male NPT base
- Single nozzle
- Fits 3/4" series nozzle sizes (NOZ75 series)



### Benefits

- Anodized die-cast aluminum drive arm with Precision Channel Spoon™ for smooth Torque-Driven™ operation and reduced splash down
- Cast brass body with triple bridge construction and cored water passage
- Spindle with debris journal to slow bearing wear
- Seal-Lock bearing creates a captive seal
- Stainless-steel fulcrum pin, arm spring, and bearing spring for long wearing reliability
- Suitable for portable, solid-set and row-crop, frost protection and mechanical move systems
- Pre-assembled with XC-33 thread sealant

### Aqua Burst® Performance Chart

Normal stream height at 9' above nozzle at normal pressure

#### Radius - GPM

PSI	1/8" Nozzle	9/64" Nozzle	5/32" Nozzle	11/64" Nozzle	3/16" Nozzle
30	39 - 2.2	41 - 3.0	42 - 3.8	44 - 4.6	45 - 5.5
35	40 - 2.4	41 - 3.3	43 - 4.1	45 - 5.1	45 - 5.9
40	40 - 2.6	42 - 3.5	44 - 4.5	46 - 5.3	46 - 6.4
45	41 - 2.9	42 - 3.7	44 - 4.7	46 - 5.7	47 - 6.7
50	41 - 3.1	43 - 4.0	45 - 4.9	47 - 6.1	48 - 7.2
55	42 - 3.5	43 - 4.3	45 - 5.1	48 - 6.4	49 - 7.5
60	42 - 3.5	44 - 4.5	46 - 5.4	49 - 6.7	49 - 7.8
65	43 - 3.7	44 - 4.7	46 - 5.7	49 - 7.0	50 - 8.1
70	44 - 3.9	45 - 4.8	47 - 5.9	50 - 7.2	51 - 8.4

Operate ONLY between 30 psi (min) and 70 psi (max)



# **Pumps & Wet Well Illustrations**



# Pumps

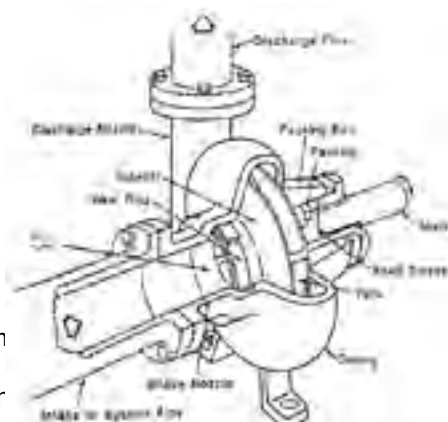
## End Suction Centrifugal Pumps

### Features & Benefits

- Simple operation.
- Low maintenance.
- Insignificant excessive pressure build up in casing.
- Impeller and shaft are the only moving parts.
- Wide range of pressure, flow and capacities.

### Types:

- S.A.E. centrifugal pumps are powered by an internal combustible engine.
- Frame Mount centrifugal pumps are designed for a power source suitable for driving through couplings or with belts.
- Close-coupled pumps are electric motor driver and have only one shaft and one set of bearings.



### Brands Offered:

- Berkley
- Cornell
- Gorman Rupp
- Rainbow
- Goulds

## Line Shaft Turbine Submersible Pump

### Features & Benefits

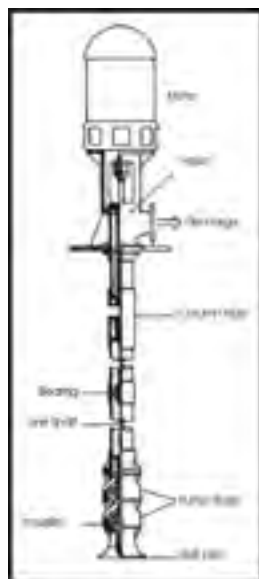
- Generate high head and high discharge pressure.
- Flow rate less variable with pressure changes.
- Eliminate potential issues with suction and loss of prime.
- Compact design.

### Types:

- Line-shaft Turbine - The motor is mounted above the ground, and the pump unit is mounted below the water surface. A column extends from the pump to a discharge head found just below the motor. A shaft extends on a straight line from the center of the motor to the pump. The pump may be mounted a few feet to several hundred feet away from the motor.
- Submersible Turbine- The entire pump assembly and motor are submersed in the water.

### Brands Offered:

- National Pump
- Berkley (submersible only)
- Flowserve
- Goulds



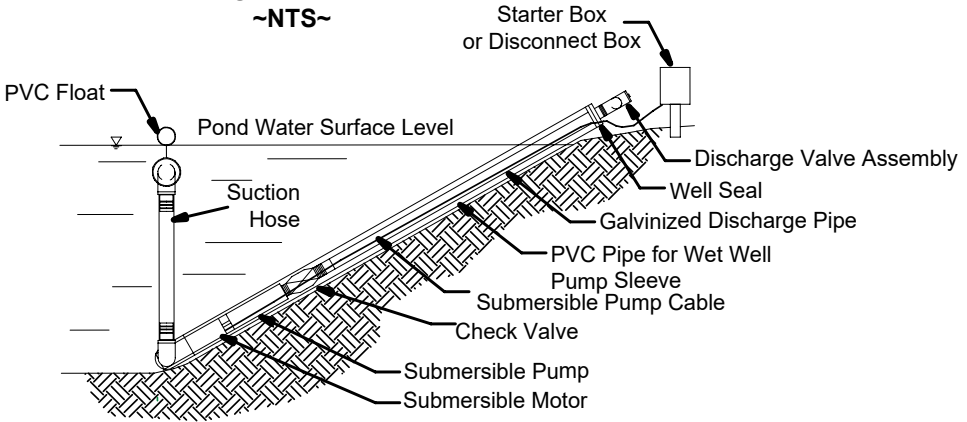
\* Examples of pump use on pages 83-84

# Wet Well Illustration

## Submersible PVC Sleeve Wet Well

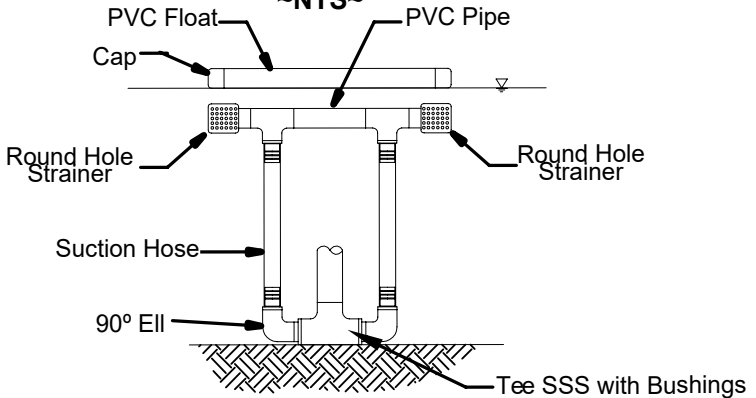
Both wet well illustrations featured in this product guide are customizable to fit the customers' unique needs.

### Wet Well Assembly SIDE VIEW ~NTS~



Note: Galvanized pipe is typical.  
\*Sch 80PVC pipe can be used as discharge pipe.

### Floating Riser Assembly for Wet Well FRONT VIEW ~NTS~



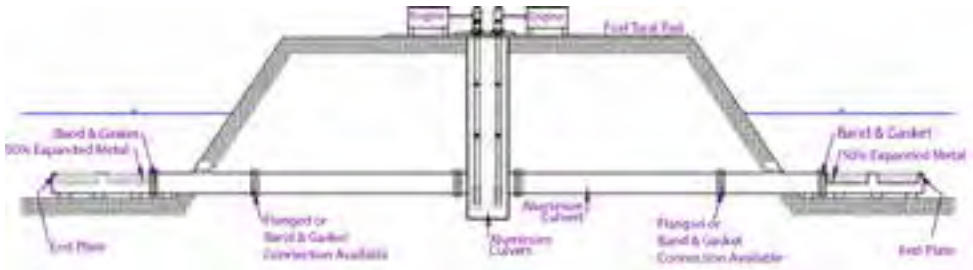
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# Wet Well Illustration

## Line Shaft Turbine

A wet well is also regarded as a pump station. Water collected in a hole is moved by pump to another location.

- Twin turbine can wet well featured.
- Single turbine can wet wells available.



Picture of above illustration.

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# Injectors, Fert Pumps, & Tanks



# Chlorinators

## Accu-Tab® Chlorinators

### Features & Benefits

- Accu-Tab chlorinators use 3-inch Accu-tablets, have few moving parts, use no proprietary parts, and have no small openings that can clog.
- Accu-Tab offers gravity return systems or pressure return systems.
- Gravity Return Systems (GS models) - where the chlorinator is located at an elevation higher than the point the chlorinated solution is returned to the main water stream.
- Pressure Return Systems (P) - utilizes a centrifugal pump to re-inject the chlorinated solution back into the main water line.



Accu-Tab 2000 Series GS

Model	Chlorine Delivery	Tablet Capacity	Unit Footprint
2075 GS	2.5 lbs./hr	75	20" x 20"
2150 GS	12.5 lbs./hr	150	20" x 20"
2300 GS	25 lbs./hr	300	31" x 50"
2600 GS	35 lbs./hr	600	32" x 60"

Accu-Tab 2000 Series P

Model	Chlorine Delivery	Tablet Capacity	Unit Footprint
2150 P	10.5 lbs./hr	150	20" x 40"
2300 P	25 lbs./hr	300	31" x 63"

Accu-Tab 3000 Series

Model	Chlorine Delivery	Tablet Capacity	Unit Footprint
3012	0.57 lbs./hr	12	9" diameter
3075	2.5 lbs./hr	75	13.375" diameter
3150	12.5 lbs./hr	150	18" diameter
3530	25 lbs./hr	300	24" diameter



# Acid Injection

## PULSAtron C-Plus Series

### Features & Benefits

- Four distinct models are available, having pressure capabilities of 80 psiG (5.6 BAR), and flow capacities up to 30 GPD (4.7 lph), with a turn-down ratio of 100:1. Metering performance is reproducible to within  $\pm 3\%$  of maximum capacity.
- Viscosity Max CPS: 1000 CPS
- Stroke Frequency Max SPM: 125
- Stroke Frequency Turn-Down Ratio: 10:1
- Stroke Length Turn-Down Ratio: 10:1
- Power Input: 115 VAC/50-60 HZ/1 ph
- 230 VAC/50-60 HZ/1 ph
- Average Current Draw:
  - @ 115 VAC; Amps: 0.6 Amps
  - @ 230 VAC; Amps: 0.3 Amps
- Peak Input Power: 130 Watts
- Average Input Power @ Max SPM: 50 Watts



## PULSAtron E-Plus Series

### Features & Benefits

- The Pulsation Series E Plus offers manual control over stroke length and stroke rate as standard with the option to choose between 4-20mA and external pace inputs for automatic control. Twenty distinct models are available, having pressure capabilities to 300 psi (21 bar) @ 3 gpd (0.5 lph), and flow capacities to 600 GPD (94.6 lph) @ 30 psi (2 bar), with a turndown ratio of 100:1. Metering performance is reproducible to within  $\pm 2\%$  of maximum capacity.
- Stroke Frequency Max SPM: 125
- Stroke Frequency Turn-Down Ratio: 10:1
- Stroke Length Turn-Down Ratio: 10:1
- Power Input:
  - 115 VAC/50-60 HZ/1 ph
  - 230 VAC/50-60 HZ/1 ph
- Average Current Draw:
  - @ 115 VAC; Amps: 1.0 Amps
  - @ 230 VAC; Amps: 0.5 Amps
- Peak Input Power: 300 Watts
- Average Input Power @ Max SPM: 130 Watts



## AgriFlow Irri-Max™

### Features & Benefits

- IRRI-MAX is a unique and powerful dispersant formulation. It provides reduced emitter clogging and improved water flow. IRRI-MAX is a concentrated formulation that is continually injected into your mainline irrigation.
- Available in by the drum or gallon



# Acid Injection/ Fertilizer Pumps

## Mister Mist'r®

### Features & Benefits

- The Mister Mist'r® uses a four-way spray that instantly atomizes the chemical being injected into the irrigation stream. The result is complete suspension through your entire irrigation system.
- Mister Mist'r also serves as a positive two-way check valve to prevent backflow of water into the system. This also prevents accidental leakage of chemical into the mainline water stream during shutdown.
- Moving parts are continually cleaned by moving water, ensuring a long life.
- Plastic models are suitable for use in 6-12" diameter pipe and can handle up to 110 GPH.
- Stainless steel models are designed for high volume applications of up to 300 GPH. They are also available for use in a wide range of pipe diameters.



## Remco ProFlo Series Pumps

### Features & Benefits

- 3300 Remco ProFlo Series Pumps
- 3 chamber diaphragm pump
- 5500 Remco ProFlo Series Pumps
- 5 chamber diaphragm pump

Model Number	Description	Max GPM @ 50 PSI *	Max psi	Max AMP
3323-211-52D	1.5 gpm REMCO PUMP, 100psi, 115VAC	1.5	100	10.00
5537-111-65C	3.4 gpm REMCO PUMP, 100psi, 115VAC	3.4	100	22.00
5537-1E1-82B	3.4 gpm REMCO PUMP, 60PSI 12VDC	3.4	60	22.00
5538-2F1-94A	5gpm REMCO PUMP, 100psi, 12VDC	5.0	100	22.00

\* Flow rate is calculated by water.



3300 Series



5500 Series

# Fertilizer Pumps

## CDS- John Blue E-Z Meter & In Series Full Range

### Features & Benefits

- E-Z Meter pumping cylinders can be mounted in parallel for large volume applications or for injection of two non-compatible products. A simple change of stroke length sets the precise flow to be injected.
- Full Range fert pumps have all working parts totally enclosed for maintenance free service. All wetted parts are constructed with corrosion resistant stainless steel to ensure optimum performance over many years of service. Rates are easily adjusted with the dial pointer located on the side of the pump, which changes the length of the stroke. Depending on the pump model, units are available with 3/4 or 1 1/2 HP motor and gearbox.

CDS Meter	GPH	Power Type	Max Pressure
E-Z Meter ( Single Piston)	5 - 100	12V, 110/220 1ph, 220/440 3ph	150 psi
E-Z Meter (double piston)	100 - 200	12V, 110/220 1ph, 220/440 3ph	150 psi
In Series Full Range	1.6 - 470	110/220 1ph, 220/440 3ph	120 psi



E-Z Meter		Full Range Injection Pump	
Power Source	Model	Model	Phase
Belt Drive	01620	IN-11610	Single
	01622		
	01623		
	01630		
	01633		
Honda Engine	02620	IN-11630	Three
	02622		
	02630		
	02633		
110-220 Volt, 1ph	10620	IN-23510-NGP	Single
	10622		
	10623		
	11630		
220-440 Volt, 3ph	20620	IN-23530-NGP	Three
	20622		
	20623		
	21630		
12 Volt DC Motors	30622	IN-47010-NGP	Single
	30623		
	30630		
	30633		
		IN- 47030-NGP	Three

# Fertilizer Pumps

## Dema MixRite 500 Series, TF10 Series, & TF25 Series

### Features & Benefits

- MixRites are water driven injectors that use water pressure as the power source, not electricity.
- A proportional amount of additive is injected into the water line regardless of flow variation, creating a homogenized solution.
- All seals are designed to withstand harsh chemical additives and the body is made of a chemically resistant nylon-fiberglass body.

Model	GPH	Power	Max Pressure
500 Series	.08 - 11	Water Drive	2.9 - 120 psi
TF5 Series	.88 - 22	Water Drive	2.9 - 120 psi
TF10 Series	2 - 45	Water Drive	14.7 - 120 psi
TF25 Series	4.4 - 110	Water Drive	14.7 - 120 psi



500 Series



TF5 Series



TF10 Series



TF25 Series

Model Number	Induction Rate	Chemical Shut-off	Available Models
569	.1% to .9%	Yes	CW, CL, PVDF
571	.3% to 2%	Yes	CW, CL, PVDF
574	.3% to 10%	No	CW, CL
TF5-005 ON/OFF	.3% to 2%	No	
TF10-001	.1% to 1%	No	ON/OFF
TF10-002	.2% to 2%	No	ON/OFF
TF10-005	1% to 5%	No	ON/OFF
TF25-001	.1% to 1%	No	ON/OFF
TF25-002	.2% to 2%	No	ON/OFF
TF25-005	1% to 5%	No	ON/OFF

# Fertilizer Pumps

## Dosatron D14MZ2, D45RE15, D8R, D20S

### Features & Benefits

- Dosatron fert pumps are water-powered and non-electric.
- They are accurate pumps regardless of variations in flow and pressure.
- Dosatron fert pumps are easy to adjust with the ability to change fert injection ratios with just one external adjustment.

Model	GPH	Power	Ratio	Max Pressure
D14MZ2	0.05 - 14	Water Drive	1:500 - 1:50	4.3 - 85
D45RE15	0.4 - 20	Water Drive	1:500 - 1:66	7 - 70
D8R	2.2 - 40	Water Drive	1:500 - 1:50	2 - 110
D20S	5 - 100	Water Drive	1:500 - 1:50	2 - 120



D14MZ2



D45RE15



D8R



D20S

## Hydro Systems Chemilizer CP33 & HN55

### Features & Benefits

- Chemilizer pumps run off water flow - NO electricity.
- Chemilizer pumps have the ability to inject very small amounts and to dynamically adjust the injection volume.
- Easy to read injection control panel.

Model	GPH	Power	Ratio	Max Pressure
CP33	12 - 200	Water Drive	1:100 - 2:100	4 - 80
HN55	.02- 11	Water Drive	20:1 - 500:1	3 - 85



CP33



HN55

# Fertilizer Pumps/Tanks

## Mazzei 384, 584, 1078, & 1583

### Features & Benefits

- Mazzei's chemigation technology delivers a uniform distribution of chemicals and fertilizers within the irrigation water.
- No electrical connections needed.
- Mazzei Injectors offer the advantages of an easy to maintain non-mechanical system.
- Mazzei Injectors are designed for vacuum transfer of irrigation chemicals, they provide safe chemigation.



Model	Motive Flow GPM	Suction Rate GPH
384	0.7 - 3.5	2.1 - 11
584	2.1 - 10.2	10 - 32
1078	5.5 - 26	2.7 - 94
1583	10.7 - 48	53 - 232

## Vertical Fertilizer Tanks

### Features & Benefits

- Vertical tanks are strong and versatile enough for your bulk storage needs.
- Available in a variety of styles and sizes from 65 gallons to 16,500 gallons.
- These vertical tanks feature stable, flat bottoms, maximum drainage siphon assemblies and molded-in tie down lugs.
- Most standard size is a vertical 2500 gallon tank with a diameter of 90" and height of 107".

**Full hook up and suction assemblies available.**





# Miscellaneous



## Twine

### Features & Benefits

Polypropylene Twine is great for a wide variety of crops in both field and greenhouse production. 3-lb box, 2100-ft/lb

### Specifications:

- Twisted Polypropylene Twine
- UV stabilized
- Standard product 2100 ft/lb white.
- Twine is also rot and mildew resistant and can be safely stored for extended periods.



## Stakes

**A variety of sizes and types of wooden stakes offered.**

- Tomato & Pepper stakes.
- Honduran Pine agricultural stakes.
- Untreated or Treated stakes.
- Blunt or pencil pointed.
- Rough sawn.
- String-tied sub-bundles for easy handling.



## PVC Pipe & Fittings

PVC Pipe is available for order or pickup at our branch locations in a range of sizes.

- Gasketed & Bell End Styles
- Schedule 40 & Schedule 80 available
- Sizes range from 1/2" - 12".  
Larger sizes available upon request.

TriEst carries Spears & Lasco. Brands may vary by location.



## Weld-On Pipe Cements

Weld-On® cements have the widest range of high-strength, Low VOC solvent cements for every PVC application, for rigid as well as flexible PVC pipe and fittings.

Low VOC cements are environmentally friendly with lower emissions and reduced odor, and they surpass the most stringent regulations.

Available in:

Regular, Medium, Heavy & Extra Heavy



# Equipment





# Tape Equipment

## Andros Cast Aggressive Tip Tape Layer

### Features & Benefits

- This Cast Aggressive Tip Tape Layer can be used on tool bars pulling planters and bed-shapers.
- The aggressive tip helps pierce tough soils allowing maximum ground penetration.
- Hi-Chrome construction with a narrow profile.
- 3/4 X 2 1/2 Plow bar.
- Easy access tape shoe inspection.
- 0" - 6" depth.



## Andros Universal Coupler Tool

### Features & Benefits

- Safe and efficient method for injecting drip tape that has been spliced together with mechanical couplers.
- Allows a coupler to be injected smoothly up to depths of 12 inches.
- Large plastic shoe allows the coupler to make the 90-degree turn into the ground without pinching the tape.



## Andros Coil Retrieval System

### Features & Benefits

- The Coil Retrieval System mounts to any tool-bar using standard clamps.
- Available with either open or closed center hydraulics, the coil retrieval option can run in single or multiple head configurations using the tractors auxiliary hydraulics.
- The system has a speed control that allows the operator to control tension and speed of retrieval.



# Plasticulture Equipment

## Reddick Equipment Company Single Row Mulch Layer Lineup

### RMC-172

The RMC-172 is the flagship of our single row line. This time-tested design recently went through a few manufacturing changes but the basic principles remain the same. It will accommodate up to 60" plastic and can be customized to fit your operation.

### RMC-160

The RMC-160 offers all of the same benefits of the larger, classic mulch laying equipment, just in a compact version so that it can be pulled by a smaller tractor. This is great for smaller farms or U-Pick operations.



### Features & Benefits:

- Quality manufacturing with precision laser cut components
- New simplified design for ease of adjustment
- Available single drip or double drip tape rolls
- Adjustable gathering blades
- Adjustable UHMW lined press pan
- Replaceable sides on the pans
- Press pan outfitted with bolt-on kick out wings
- Adjustable four axis press wheels and covering discs
- Adjustable plastic roll bed to accommodate a wide range of plastic widths
- Operator seat mounted on the rear for better access to component
- Floating crown roller to maximize plastic adherence to the bed

## Reddick Equipment Company RMC-100 Hole Punch

This plasticulture hole punch is equipped with spiked wheels. The hole puncher goes Over the bed to perforate the plastic mulch film before bare root or plug settings.

### Features & Benefits:

- Cat. I or II 3-point hitch frame
- 2 to 4 spiked wheels depending on the number of rows
- Different spike size & spacing according to the type of transplants
- Adjustable gauge wheels for proper bed alignment
- Front stands for storage



# Plasticulture Equipment

## Reddick Equipment Company RMC - 460 Water Wheel

The RMC-460 comes standard with a 3-point quick hitch ready, 150 gallon poly tank, two seats, tray racks (18 trays), and one planting wheel.

Standard Sized: 12", 15", 18", 24", 30", 36", 42", 48", & 60"

### Additional Options

- Extra 3rd Row Rack (Adds 18 Additional Trays)
- Extra 2 Seat Assembly (To Seat 4 People Total)
- Additional Planting Wheels
- Planting Wheel Guide



## Reddick Equipment Company RMC-105 Mulch Lifter

This mulch lifter is designed to lift various sizes of mulch with minimum adjustments one row at a time. The concept is simple. Use the dirt lift the plastic and you decrease the opportunity for tearing. The design allows for minimal tuck ripping, for a better lift, saving you time and money.

We also offer a three-row mulch lifter model, RMC-305. This machine is sold as a 72" center machine, but can be adjusted down to a 60" center operation



### Features & Benefits

- Quality manufacturing with precision laser cut components
- Simplified design for ease of adjustment
- Adjustable to varying row spacing
- Cutting coulter to split residue in front shank
- Lifting fingers on rear of lifting blade
- UHMW lined frog on foot for increased lift

## Reddick Equipment Company RMC-10.5 Plastic Puller

The RMC-10.5 Plastic Puller is designed to reduce the labor cost of removing plastic mulch and drip tape from your field.

After lifting your plastic mulch with our Reddick RMC-105 lifter, removing the plastic from the field is made easier with the RMC-10.5 Plastic Puller.

The Hydraulically Driven Spindles Retrieve the Plastic as You Drive, then Swing Out to Release.





# Plasticulture Equipment

## Reddick Equipment Company RMC-360 Mulch Layer

### RMC-372R/RMC-360R

These two models are built tough for the grower that wants to get in and get out. These machine takes the efficiencies of the RMC-172 and RMC-160 and multiplies it by three. These are both rigid frame layers that are setup for growers on 72" or 60" centers. These units are paired with the RMC-372PB and the RMC-160PB pre-bedders.



RMC-360R

### RMC-372PB/RMC-360PB

These two pre-bedders are used in front of our conventional three row rigid layers to pre-form and incorporate fumigants into the beds in front of the rigid layers. They consist of a tool bar with three sets of gathering blades and three press pans. These usually are outfitted with fumigation knives which are optional. The 372PB is for 72" centers and the 360PB is for 60".



RMC-360PB

### RMC-372F/RMC-360F

These models are our float frame three row layers that are setup for 72" and 60" centers. These machines were designed for growers who have undulating land and cannot implement a rigid frame machine. These units are essentially three of our single row machines attached independently to three row tool bar. This design allows each unit to move independently when needed to ensure a proper tuck on the plastic. Unlike the three row rigid machines, these units do have gathering blades and do not require a pre-bedder.



RMC-360F

### Features & Benefits

- Quality manufacturing with precision laser cut components
- New simplified design for ease of adjustment
- Available single drip or double drip tape rolls
- Adjustable gathering blades
- Adjustable UHMW lined press pan
- Replaceable sides on the pans
- Press pan outfitted with kick out wings
- Adjustable four axis press wheels and covering discs
- Adjustable plastic roll bed to accommodate a wide range of plastic widths
- Operator seat mounted on the rear for better access to components
- Floating crown roller to maximize plastic adherence to the bed

# Sprayer Equipment

## Reddick Equipment Company S5 Sprayers

Reddick's legendary S5 Bridge Boom Sprayers offer flexibility in the field with a heavy-duty compact design.

### Standard Features:

- Heavy-Duty Tubular Frame Fits Category II or III Quick Hitch
- Choice of 200, 300 or 400 Gallon Capacity Poly Tank
- Bridged Boom Arms. Three Pieces of Square Tubing Trussed
- Stiff Arm Connecting Boom Arm to Back Frame
- Boom Mounted Shock Absorbers
- High Volume In-Line Strainer
- QJ300 Quick-Jet No-Drip Nozzle Bodies with Diaphragm Checks
- VisiFlo Nozzles for Insecticide and Fungicide Spraying
- Hydraulic Cylinders for Boom Fold and Hydraulic Hose Package with Restrictors



## Reddick Equipment Company In-Line/ Single Tube Side Mount Tanks

Reddick's In-Line/Side Mount Tanks are designed to allow the tanks to be mounted parallel to the direction of travel, making the assembly more compact and easier to transport.

### Standard Features:

- Straight Frame or 8" Drop Frame Available.
- Component Parts Options
  - Conversion Kit to Mount Existing Saddles & Bands
  - Side Receiver Plates & Braces Only
- Pumps & Control Kit Options



## Reddick Equipment Company Front Mount Tank Assemblies

Reddick's front-mount tank and frame assemblies bolt together to accommodate tractors with different frame widths and designs no longer is it necessary to commit one tractor to front-mount applications. Select from straight or drop frame designs. Then select a tank assembly.

- Front Tank Assembly options from 150 - 300 Gallons
- Pumps & Control Kit Options



# Sprayer Equipment

## Reddick Equipment Company 110 Gallon HP 3PTH Sprayer

Reddick's high pressure fruit and vegetable sprayer with 3-point hitch is designed for disease and insect control.

### Standard Features:

- Udor High Pressure Diaphragm Pump
- Adjustable Jet Agitation
- High Pressure Manual Control Valve
- High Capacity Suction Strainer
- Adjustable Pressure Regulator
- Break-A-Way Boom Assembly \*
- Liquid Filled Pressure Gauge
- Brass Boom Fittings for High Pressure
- Two Separate Boom Control Levers
- Hi-Volume 1/2" ID, 600psi Boom Hoses
- Frame Mounted Pump w/Drive Shaft
- Large 10" Fill Well & Vented Lid



\* Standard Boom Assembly set-up to spray: 3 Beds on 5-6' Center

## Reddick Equipment Company Ditchers

Eliminate most shovel work and cut more uniform ditches with reddick hydraulic drive ditcher. Designed to cut a smooth ditch that can be crossed easily with harvest equipment. Combine headers can remain close to the ground without scooping dirt, as with a plowed, drain furrow. Dig ditches with a single or multiple passes using Reddick's adjustable skid plate. For convenience a built-in parking stand holds the ditcher upright for easy connection to your tractor

### Specifications:

- Works with open or closed center hydraulic systems
- Requires 20 gpm hydraulic flow rate
- 18" Cutter wheel with 3 heat treated blades
- Heavy-duty frame with cat. II & 3N hitch pins
- Soil shields for even dirt distribution
- Depth control with rear slide & 3-point hitch center link adjustments



# Plant Nutrition



# Plant Nutrition

## Liberty Acres Fertilizer

Liberty Acres Fertilizer is a leader in the nutrition industry with nearly 30 years of experience in fertilizer production. They take great pride in providing full spectrum plant nutrition solutions for all production systems. They specialize in high value vegetable and fruit crops, turfgrass, and seedling nurseries and offer fertility products directly to the consumer. Liberty Acres Fertilizer's dedication to customer service, quality products, and growing solutions make them a great partner to TriEst Ag Group.

### Dry Fertilizers

#### Ground Control Command

Ground Control Command manufactured by Haifa is a poly-coated slow release fertilizer that has a semi-permeable barrier, allowing a continuous release of nutrients to the root zone. The controlled release allows for fewer applications, reduced leaching and season long fertility. Custom blends and release times are available upon request.



### Liquid Fertilizers

#### Liberty Acres Fertilizer

Fertigation grade liquid fertilizer blends manufactured for use in drip fertigation systems. Every order is custom blended and filtered to ensure the product stays in solution, resulting in a clean blend that is shelf-stable.



#### Ground Control Fertilizer

Ground Control Fertilizers are designed to provide growers more options and control over their fertility in adverse conditions of heavy rainfall, cool soil temperatures, or crop stages that make fertility applications difficult. The product focuses on providing a complete fertility package as a blended liquid to be used as alternative to traditional liquid nitrogen fertilizers. They can be applied through drip fertigation, direct-to-ground or over the top applications. All Ground Control Fertilizer blends are manufactured to fertigation grade.



#### Liquid Blends Available in:

275-Gallon totes

Truckload Quantities (half or full load)

We offer bulk and tote storage options as well as utilizing current on-farm storage.

For more information on available standard blends or to create your own blend please contact your local TriEst Sales Representative.

# Plant Nutrition

## Foliar & Organic Nutrition

### Metalosate® Power by Albion® Technology

Balchem's Metalosate Liquid Foliars and Organic Soluble Powders Powered by Albion® Technology use natural amino acids to chelate the minerals, they are rapidly absorbed, translocated, and metabolized by plants upon application. Balchem's unique patented manufacturing process and formulations ensures your plants will get the most readily absorbable, highest quality nutrition available.



Metalosate Liquid Foliars tank mix well with most crop protection chemicals. Since there are no solubility problems they will not settle to the bottom of tanks or clog screens and nozzles.

Liquid Foliars available in 2.5 gallon jugs or 275 gallon totes

Organic Soluble Powers available in 44lb bag quantities

### WISErg

WISErg uses its proprietary Harvester technology to capture food scraps from grocery stores and transform the materials using its own unique, patented process to produce fertilizers and other agricultural products. The products are 100% sustainable.

Products available:

- WISErganic 3-2-2
- Synergy
- Brio



### ViaTrac Fertilizers

ViaTrac Fertilizers are made of naturally composted broiler litter. The finished product are 3/16 extruded pellets. They are small enough to be utilized in most broadcasting applications, but also hold their shape for a sling factor. Specific density of the pellets is around 48 pounds per cubic foot.



OMRI Certified pelletized broiler litter

Available in 1-ton super sacks in 21-ton loads



# Grafted Plants



# Grafted Plants

## **Strong Roots. Strong Plants.**

Tri-Hishtil is an international partnership of TriEst Ag Group, Inc. in the USA; Israel-based Hishtil, and Italian-owned and operated SIS/Centro SEIA.



Together, they bring decades of worldwide agricultural experience in plant-grafting, production, and soil management.

Tri-Hishtil is devoted to growing high quality grafted plants that offer growers soil borne disease resistance and positive yield effects. They specialize in the greenhouse production of grafted vegetable plants with a focus on watermelons, tomatoes, cantaloupes, peppers and eggplants.

## **The Advantages of Grafted Plants**

- A reduction in crop rotation measures
- Increased vigor of the plants (and subsequently the actual yield)
- A reduction in susceptibility to soil-borne diseases
- The potential to reuse farmland restricted from fumigation use due to regulations

## **Grafted Watermelons**

- Fusarium Wilt Resistance
- Decrease in field rotations
- Decrease in plant population
- Superior plant and fruit quality
- Longer harvesting window
- Positive effects on yield
- Decrease in occurrences of hollow heart
- Nematode resistant (rootstock dependent)

## **Grafted Tomatoes**

- Bacterial Wilt tolerance
- Fusarium Wilt and other soil born disease tolerance
- Nematode tolerance
- Decrease in field rotations
- Increase in fruit size and quality
- Positive effects on yield
- Rootstock varieties available for open field, high tunnel, and greenhouse growers



# Contact Us

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