

DRAMM

HAND WATERING TOOLS

#170 WATER BREAKER

- Narrow water pattern for containers & hanging baskets.
- Designed for low or restricted water pressure/volumes. Adjusts flow to 50% of possible volume.
- 7 gpm @ 40 psi.



Stock No.	Description	Price
240-8170WB-D	#170 Aluminum	\$9.27
240-817PWB-D	#170 Plastic	3.69

#750 WATER BREAKER

- Designed to offer a lower, softer flow.
- Even softer than the 1000PL Redhead, the 750PL Lemonhead allows for more precise watering.
- Gives growers yet another choice for more flexibility in watering.
- 11.1 gpm @ 40 psi.



Stock No.	Description	Price
240-8750PL-D	#750 Plastic	\$10.95

FOGG-IT NOZZLE

- Mist Delicate Seedlings.
- Raise Humidity around Wilting Plants.
- Three Mist Jets create a Conical Spray Pattern.
- Made in USA from Solid brass.
- 0.5 gpm @ 40 psi.



Stock No.	Description	Price
240-8610002D	SuperFine	\$17.40

#400 WATER BREAKER

- Fast, full-flow watering.
- Gentle flow will not damage plants or wash away soil.
- 11.1 gpm @ 40 psi.



Stock No.	Description	Price
240-8400WB-D	#400 Aluminum	\$17.08
240-8400PL-D	#400 Plastic	4.28

#1000 WATER BREAKER

- Soft full-flow watering nozzle.
- Waters plugs or seedlings.
- Over 1000 micro-holes create an ultra-soft shower.
- Will not disturb delicate soil or harm tender plants.
- High impact cyclolac plastic and stainless steel.
- 11 gpm @ 40 psi.



Stock No.	Description	Price
240-8171000D	#1000 Breaker	\$10.58

SEEDLING NOZZLE

- Water Fragile Plants, Delicate Seedlings or Plant Cuttings.
- Produces an Extra Fine, Hollow "cone Mist Pattern".
- Made in USA from Solid Brass.
- 0.5 gpm @ 40 psi.



Stock No.	Description	Price
240-8510-C0D	Seedling	\$12.28

IRRIGATION QUALITY EQUIPMENT
6 PER ITEM, LESS 5%
12 PER ITEM, LESS 10%

DRAMM

HAND WATERING TOOLS

#235 TWIN PLASTIC SHUT-OFF VALVE



The Dramm 235 Twin Shut-Off Valve is an ingenious gardening tool – allows you to water two places at one time. One side of the valve can be used with your garden hose while the other is available for other uses. Made from high quality cyclac plastic. 3/4" male and female hose threads.

Stock No.	Description	Price
240-6235SOCD	#235 Twin Plastic Shut-Off Valve	\$4.54

#710 TWISTY QUICK

- Plastic quick connect hose adapter.
- Full water flow design.
- Made from heavy-duty plastic.
- 3/4" male and female hose threads.



Stock No.	Description	Price
240-80710TGQD	#710 Plastic	\$3.65

#740 BRASS DISCONNECT

- No more turning! Pull collar back to connect or disconnect.
- Eliminates hassle of connecting & disconnecting hoses.
- Made from heavy-duty brass.
- 3/4" male and female hose threads.



Stock No.	Description	Price
240-80710BDD	#740 Brass	\$7.52

#300 SINGLE BRASS SHUT-OFF VALVE



Simply the best shutoff valve available. Dramm's #300 Brass Shut-Off Valve provides fingertip water control at the end of your greenhouse hose. A quarter turn of the large ergonomic handle and the water is off. Full water flow design. Made in USA from brass, Teflon seals and a hard chrome plated ball to provide years of service. 3/4" threads. NEW! #22373 Aluminum Shut-off valve identical to Dramm #300 Brass Shut Off in design and operation. The body is manufactured from lighter weight aluminum. Tested for corrosivity, our new valve holds up to high EC, low pH water with no trouble.

Stock No.	Description	Price
240-6300SO-D	#300 Single Brass Shut-Off Valve	\$16.27
240-622373	#22373 Aluminum Shut-off Valve	\$14.65

PLASTIC SHUT-OFF VALVES



Stock No.	Description	Price
240-98820	3/4" FHT x 3/4" MHT Shut-Off Valve	\$2.25
240-98821	3/4" FIPT x 3/4" MIPT Shut-Off Valve	2.25
240-98822	3/4" FHT x 3/4" MHT Shut-Off Valve*	2.25

*(Green House Ball Valve, Handle Turns Away From Wand.)

HANDI-REACH EXTENSION HANDLES

- Made from extruded aluminum with brass couplings and a plastic handle grip.
- Eliminates stretching and stooping associated with hand watering.

Stock No.	Description	Price
240-80116G-D	16"	\$7.90
240-80124G-D	24"	8.75
240-80130G-D	30"	8.90
240-80136G-D	36"	9.35
240-80148G-D	48"	9.80
240-8148-GBD	48" w/a 90° bend	10.24

IRRIGATION QUALITY EQUIPMENT
6 PER ITEM, LESS 5%
12 PER ITEM, LESS 10%



WOBBLERS

The unique off-center rotary-action of the wobbler series provides extremely uniform coverage at low pressures with a very low evaporative loss. They are constructed entirely of engineering-grade thermoplastics for excellent corrosion resistance.



mini wobbler®

FOR UPRIGHT APPLICATIONS

- Multi-level throw, approximate angle: 10°.
- Flow rates: 0.42 to 2.61 gpm.
- Operating pressures: 15 to 35 psi.
- Standard inlet: 1/2" NPT male.
- Two-year warranty on materials, workmanship and performance.



SPRINKLER BASE PRESSURE (psi)	15	20	25	30	35
#7 NOZZLE - LIME (7/64")					
Flow (gpm)	1.30	1.51	1.69	1.86	2.01
Diameter at 1.5' height (feet)	34.8	37.6	38.4	38.8	39.2
Diameter at 3.0' height (feet)	41.0	42.8	43.0	43.0	43.0

i-mini wobbler®

FOR OVERHEAD APPLICATIONS

- Multi-level throw, approximate angle: 0°.
- Flow rates: 0.75 to 2.61 gpm.
- Operating pressures: 20 to 35 psi.
- Standard inlet: 1/2" NPT male.
- Two-year warranty on materials, workmanship and performance.



SPRINKLER BASE PRESSURE (psi)	20	25	30	35
#7 NOZZLE - DARK LIME (7/64")				
Flow (gpm)	1.51	1.69	1.86	2.01
Diameter at 3.0' height (feet)	31.2	31.8	32.2	32.4
Diameter at 6.0' height (feet)	35.0	35.6	36.0	36.4

Xcel wobbler®

- Available in mid-angle (18-degree) or high-angle (24-degree) trajectory pattern.
- Provides a wind-resistant pattern.
- New balanced design produces smooth, stable performance.
- Inlet sizes: 1/2" NPT male or 3/4" NPT male.
- Flow Rates: 0.78 to 7.64 gpm.



Stock No.	Description	Price
240906107	mini-Wobbler #7 Nozzle Lime	\$4.50
240906207	i-mini-Wobbler #7 Nozzle Dark Lime	4.50
2409063607	Xcel-Wobbler #7 Nozzle Lime mid-angle	9.10
2409063610	Xcel-Wobbler #10 Nozzle Turquoise mid-angle	9.10
2409063411	Xcel Wobbler Yellow mid-angle	9.10
2409063612	Xcel Wobbler Blue mid-angle	9.10

**Xcel-Wobbler also available in high-angle by special order only. Additional Wobblers also available. Call for details and pricing.*

Stock No.	Description	Price
24090655	Drop Adapter Assembly (1/2" FPTx0.345" Barb - 24" L)	\$5.30
24090650	Riser Adapter Assembly (1/2" FPTx0.345" Barb w/3" tube)	3.15
24090690	Punch Tool for .345" Barb	25.96
24090694	Goof Plugs	0.56

The following items are needed for installation:

SPRINKLER BASE PRESSURE (psi)	10	15	20	25	30
#7 NOZZLE - LIME (7/64")					
Flow (gpm)	1.06	1.30	1.50	1.68	1.84
Diameter at 1.5' height (feet)	34.5	39.5	43.0	44.0	44.5
#10 NOZZLE - TURQUOISE (5/32")					
Flow (gpm)	2.22	2.72	3.14	3.51	3.85
Diameter at 1.5' height (feet)	36.0	41.0	44.5	45.5	46.0
#11 NOZZLE - YELLOW (11/64")					
Flow (gpm)	2.69	3.30	3.81	4.26	4.67
Diameter at 1.5' height (feet)	36.5	41.5	45.0	46.0	46.5
#14 NOZZLE - BLUE (7/32")					
Flow (gpm)	4.40	5.39	6.23	6.97	7.64
Diameter at 1.5' height (feet)	38.0	43.0	46.5	47.5	48.0
Diameter for Mid-Angle Xcel Wobbler.					

Other nozzle sizes available, call for further information.



Riser Adapter Assembly

NAAN

NAAN 429-AG

FULL AND PART-CIRCLE PLASTIC SPRINKLERS

- Diameter: 76' - 86'.
- Trajectory angle 27°.
- Anti side-splash arm.
- Flow rate: 3.5 - 5.4 gph.
- 1/2" male connector base.
- Stainless steel fulcrum pin and spring.
- Adjustable diffuser pin for stream breakup.
- Recommended operating pressure is 25-60 psi.
- Easy fingertip adjustment to any sector of the circle.
- Adjustable baffle deflector for reducing distance of throw.
- Molded from durable high-impact engineering grade plastic.
- Dependable sand/dust protection ensures reliable operation & long life.



Stock No.	Description	Price
240-84275WPK	429AG w/ 5/32" black nozzle	\$10.92

90DZ

- 1/2" full/part circle powder coated zinc die cast impact sprinkler.
- Operating Pressure: 25-55 psi.
- Operating Flow: 3.54 - 5.44 gpm.
- Spacing: 34 - 46 feet.
- Adjustable deflector plate and diffuser pin.
- Stainless steel drive spring, trip assembly and trip collars.
- 20° to 340° arc or full circle.



Stock No.	Description	Price
2407830	90DZ	\$17.25

Other Buckner sprinklers and products available. Call for details.

WADE RAIN TOWER



RAINTOWER is tall enough to water over tall foliage to cover large areas evenly, without continually moving the sprinkler. It features a unique sprinkler stand that adjusts to either 41" or 72" high, foldout tripod legs, lightweight design, and adjustable sprinkler head and it connects with any standard garden hose.

Stock No.	Description	Price
240-8RAINTOW	RT-1 Unassembled w/plastic sprinkler head	\$63.40

IMPACT SPRINKLERS

NAAN 501

LOW ANGLE, LOW VOLUME SPRINKLERS

- Diameter: 34' - 43'.
- Trajectory angle 12°.
- Flow rate: 42 - 64 gph.
- Low Pressure operation.
- 1/2" Female Connector Base.
- Consistent high performance.
- Special sand protection for each moving part.
- Recommended operating pressure is 20-45 psi.
- Simple installation/operation and easy maintenance.
- Highly uniform distribution achieved by turbo hammer mechanism.
- Low precipitation rates with small droplet size improve germination.
- High impact heavy-duty plastic materials provide resistance to corrosion, fertilizers and common agricultural chemicals.



Stock No.	Description	Price
240-8501TSPK	501 w/ 0.079" blue nozzle	\$6.89

261SDX

- 3/4" full/part circle solid brass impact sprinkler.
- Operating Pressure: 30-60 psi.
- Operating Flow: 3.94 - 13.73 gpm.
- Spacing: 41 - 50 feet.
- Adjustable diffuser pin.
- Stainless steel drive spring, trip assembly and trip collars.
- 20° to 340° arc or full circle.



Stock No.	Description	Price
2407832	261SDX	\$60.85

MINI STORM TOWER

- Adjustable Impact Sprinkler included.
- Adjusts from 26" to 37" in height.
- Impact at 40 psi - approx. 40' at about 4.5 gpm.



Stock No.	Description	Price
2407852	Mini Storm Tower w/Impact Sprinkler	31.79





MICRONET FOGGER

The Micronet fogger is the best nozzle for propagation. It creates a zone of saturated humidity that is ideal for rooting. Flow - 8.1 gph @ 60 psi. Can use check valve purple pin (#03400117) where pressures over 28 psi are not available.

PROPAGATION

3' - 4' Bench - center over bench with 3' spacing between fogger assemblies and 18" - 30" above propagation material.

Wide Bench - (up to 8') use two lines of foggers equally spaced from the center of the bench.

For Larger Areas - use one row of foggers every 4' width of area to be fogged.



45° OFFSET -
4-way crosses should be placed at 45° angles to one another.

Stock No.	Description	Price
24085471	4 nozzles without check valve	\$3.80
2408546	Check Valve Orange Pin (Opens at 58 psi)	1.36
2408565	Check Valve Purple Pin (Opens at 28 psi)	1.36

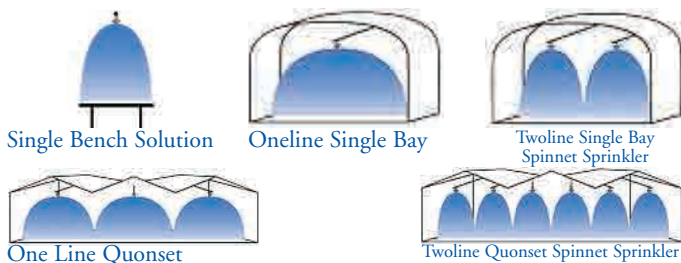
SPINNET SPRINKLERS



DRIP-LESS SPRINKLERS

- The SpinNet Sprinkler offers drip-less operation, so the plants below will not be damaged from water dripping off the sprinkler.
- Sprinklers hang below the supply pipe, preventing wetting of the pipe and dripping onto the plants below.
- Check Valve prevents the sprinkler line from draining onto the plants below after shutdown and provides instantaneous on-off for accurate short cycle watering and misting.

LOW COST AND FAST PAYBACK - Payback for a complete system is usually within the first season of operation. Highly uniform watering increases crop uniformity.



Stock No.	Chart Code	Description	Flow (gph)	Price
2408525	VS-GN	Vibro-Spray Green Nozzle w/check valve	13.6	\$2.38
2408536032	R-R-BL	SpinNet Red Mist Control, Red Body, Blue Spinner w/check valve	18.4	2.69
2408536042	BR-BR-BL	SpinNet Brown Mist Control, Brown Body, Blue Spinner w/check valve	23.4	2.69
2408536034	R-R-GY	SpinNet Red Mist Control, Red Body, Grey Spinner w/check valve	18.4	2.69
2408536040	BR-Y-GY	SpinNet Brown Mist, Yellow Body, Grey Spinner w/check valve	23.4	2.69
2408536036	R-R-GN	SpinNet Red Mist Control, Red Body, Green Spinner w/check valve	18.4	2.69
2408536038	BR-BR-GN	SpinNet Brown Mist Control, Brown Body, Green Spinner w/check valve	23.4	2.69

*REPLACEMENT PARTS AVAILABLE. CALL FOR DETAILS AND PRICING.

VIBRO MIST



The Vibro-Mist mister is used when a light mist is required for watering, for example when germinating seeds. The highest uniformity is found with spacings of 4' x 4', 4' x 6', and 3' x 7'. Mister should be placed 3' to 5' above crop. Flow - 5.7 gph @ 30 psi.

Stock No.	Description	Price
2408535	Vibro-Mist Violet w/Check Valve	\$2.38

VIBRO-SPRAY HF SPRINKLER

Nominal Flow 1 gpm @ 30 psi.
1/2" Female Threaded Connection.



Stock No.	Description	Price
2408550	Vibro-Spray HF Sprinkler	\$1.46

Width	Spacing Between Sprinkler Lines	Height Above Crop		
		2'	4'	6'
SINGLE BENCH SOLUTIONS				
4'	-	VS-GN	VS-GN	--
5'	-	VS-GN	VS-GN	--
6'	-	VS-GN	VS-GN	--
ONE LINE SOLUTIONS				
		2' - 3'	4' - 5'	6' - 7'
10'	-	R-R-BL	--	--
12'	-	R-R-BL	R-R-BL	--
14'	-	BR-BR-BL	BR-BR-BL	R-R-BL
15'	-	R-R-GY	BR-BR-BL	R-R-BL
16'	-	R-R-GY	BR-Y-GY	R-R-BL
18'	-	R-R-GN	BR-Y-GY	BR-Y-GY
20'	-	--	R-R-GN	BR-BR-GN
22'	-	--	R-R-GN	BR-BR-GN
24'	-	--	--	BR-BR-GN
TWO LINE SOLUTIONS				
		3'	4' - 5'	6' - 7'
20'	11'	R-R-BL	--	--
22'	12'	R-R-BL	R-R-BL	--
24'	12'	R-R-BL	R-R-BL	R-R-BL
26'	14'	BR-BR-BL	R-R-BL	R-R-BL
28'	15'	BR-BR-BL	R-R-BL	R-R-BL
30'	16'	R-R-GY	R-R-GY	BR-BR-BL
32'	17'	R-R-GN	R-R-GY	BR-BR-BL
34'	18'	R-R-GN	R-R-GY	BR-BR-BL
36'	19'	R-R-GN	R-R-GY	R-R-GN
38'	20'	BR-BR-GN	R-R-GN	R-R-GN

Spacing between sprinklers for all solutions should be in intervals of 3'.



Recent advances in specialized greenhouse irrigation products and computer modeling have contributed to creating an optimized sprinkler layout specifically designed for greenhouse application. By creating highly uniform irrigated bands, benches, bays, tunnels, and greenhouses of varying widths, can be irrigated by a single band or by combining a number of bands laid out side-by-side.

DAN SPRINKLERS



CHART KEY

- DL-O = Dripless w/Orange Nozzle & Orange Antimist
- GK-O = Green Kiwi w/Orange Nozzle & Orange Antimist
- GK-Y = Green Kiwi w/Yellow Nozzle & Yellow Antimist

SPRINKLER SELECTION TABLE

Width	Height Above Crop		
	2'	4'	6'
8	DL-O	—	—
10	DL-O	—	—
12	—	DL-O	—
14	—	DL-O	DL-O
16	GK-O	GK-O	GK-O
	—	—	DL-O
18	GK-O	GK-O	GK-O
	—	GK-Y	GK-Y
20	—	GK-Y	GK-Y
22	—	—	GK-Y

Stock No.	Description	Price
240220072	Green Kiwi w/Orange Nozzle & Orange Antimist	\$1.15
240220072	Green Kiwi w/Yellow Nozzle & Yellow Antimist	1.15
240220100	Dripless w/Orange Nozzle & Orange Antimist	1.15
2408565	Check Valve	1.36
2408586	Adapter - Micronet Assembly to Dan Sprinkler	0.12

**Sprinkler Assembly - Order 1 check valve and 1 adapter for each sprinkler ordered. See Sprinkler System Components for hanging sprinkler assemblies. Dan LPD and hanging assemblies available, call for pricing.*

SPRINKLER SYSTEM COMPONENTS

DIG PRO PUNCH

- Can make holes of various sizes using interchangeable pins.
- Quickly cuts poly tube (1/4", 1/2" and 3/4").
- Easily holds and inserts barbs, and other 1/4" fittings into tubing.



GOOF PLUG



VIBRO-SPRAY SPRINKLER

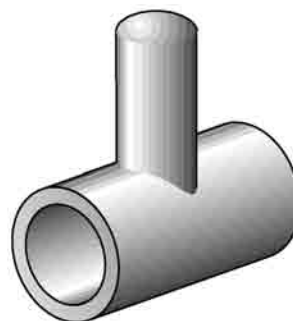
1/2" ADAPTER is used for the connection to rigid pipe of 1/2" threaded connections and Netafim sprinklers.



HANGING SPRINKLER ASSEMBLY



MICRONET ASSEMBLY TO DAN SPRINKLER ADAPTER



NETAFIM PUNCH



Stock No.	Description	Price
2408510	1/2" Adapter for pipe thread	\$1.02
2408500	12" Hanging Sprinkler Assembly	1.44
2408501	24" Hanging Sprinkler Assembly	1.59
2408502	30" Hanging Sprinkler Assembly	1.64
2408503	36" Hanging Sprinkler Assembly	1.72
2408504	48" Hanging Sprinkler Assembly	1.84
2408202	Punch for Netafim Drippers & Sprinklers	15.40
2408197	Goof Plug (10/pack)	1.10
2408201	Dripper Shut-Off Cap	0.17
2408586	Adapter - Micronet Assembly to Dan Sprinkler	0.06
240120201	DIG ProPunch w/Cutter	22.90
240-960980	PSI Punch 70 mm for 400 Barb Fiting	11.76

DRIPPER SHUT-OFF CAP



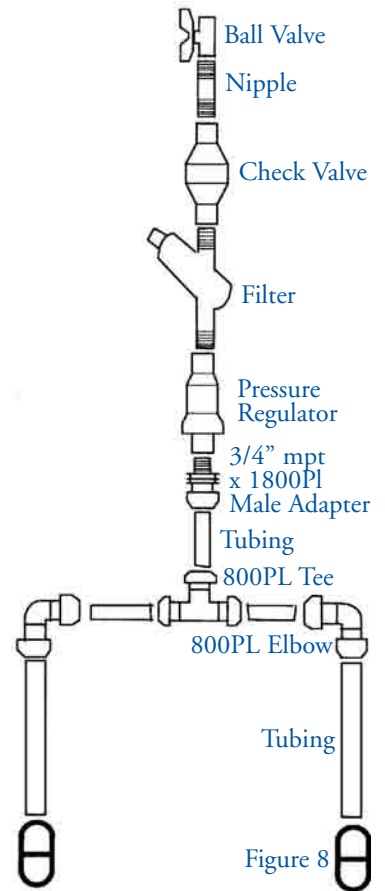
OVERHEAD IRRIGATION SYSTEMS

Listed below are the components needed to set up an overhead irrigation system. This does not include the connection of the main water line to the system. Bench, hanging basket and drip systems are available but system layouts vary. Contact your sales representative to have a system designed for your application or to ask if these will work for you.

16' to 20' width x 95' house. Single line down middle of house; sprinkler spacing 3'; 4' above finished crop height*. System requires 11 gpm at 35 PSI

Stock No.	Description	Qty Needed for Complete Assembly	Price
240-98806	3/4" threaded ball valve	1	\$2.70
240-951920	3/4" x 2" nipple	1	.99
240-952101	3/4" check valve	1	14.46
2408741	3/4" -140 mesh filter	1	24.00
240902005	3/4" x 35PSI pressure regulator	1	11.64
240-980083	Reducing male adapter 3/4" MPT x 1" insert	1	2.66
240-225020MM	SS clamp	1	1.10
240221015	1" x 500' polyethylene tubing	1	161.25
240-960658	1000PL elbow	1	4.02
240-960003	Figure 8	1	0.78
240220072	Dan Green Kiwi w/Orange Nozzle & Orange Antimist	32	(\$1.20/ea.) 38.40
2408586	Micronet Base to Dan Sprinkler & Fogger Adapter	32	(\$0.12/ea.) 3.84
2408565	LPD Purple Pin-Leak Prevention Device (Opens at 28 psi)	32	(\$1.36/ea.) 43.52
2408503	36" Hanging Sprinkler Assembly*	32	(\$1.72/ea.) 55.04
2408202	Blue Punch (for use w/Drippers & Sprinkler)	1	15.40
TO AUTOMATE SYSTEM:			
240-951920	Nipple 3/4" x 2" Length (MIPT x MIPT)	1	\$0.99
240-951910	Reducer Bushing 1" MPT x 3/4" FPT	2	(\$2.22/ea.) 4.44
2408821	1" Valve 24V Solenoid by Dorot (Agricultural Grade)	1	29.00
240120100	DIG 5004-I Controller 24VAC Indoor 4-Station	1	42.50

**different length hanging sprinkler assembly may be needed.*



TWIN LINES SPRINKLER SYSTEM

**30' width x 95' house
Twin lines; sprinkler spacing 3'; 4' - 6' above finished crop height*. Requires 21 gpm at 35 psi.**

Stock No.	Description	Qty Needed for Complete Assembly	Price
240-98807	1" Threaded PVC Ball Valve	1	\$4.10
240-951922	1" x 2" nipple	1	1.46
240-952102	1" check valve	1	15.06
240-74040215	1" x 155 Mesh Disc Armiad Filter	1	79.20
240902105	1" x 35 psi Pressure Regulator	1	12.65
240-9606610	Male Adapter 1000PL x 1" MPT	1	1.51
240-960658	Elbow 1000PL x 1000PL Perma-Loc	2	(4.02/ea.) 8.04
240-960638	Tee 1000PL x 1000PL x 1000PL Perma-Loc	1	6.27
240221015	PSI 1" x 500' PE Tubing	1	161.25
240-960003	Figure 8 for 1" Tubing	2	(\$0.78/ea.) 1.56
240220072	Dan Gren Kiwi w/Orange Nozzle & Orange Antimist	60	(\$1.20/ea.) 72.00
2408586	Micronet Base to Dan Sprinkler & Fogger Adapter	60	(\$1.2/ea.) 72.00
2408565	LPD Purple Pin-Leak Prevention Device (Opens at 28 psi)	60	(\$1.36/ea.) 81.60
2408504	48" Hanging Sprinkler Assembly*	60	(\$1.84/ea.) 110.40
2408202	Blue Punch (for use w/Drippers & Sprinkler)	1	15.40
TO AUTOMATE SYSTEM:			
240120100	DIG 5004-I Controller 24VAC Indoor 4-Station	1	\$42.50
240-951922	Nipple 1" x 2" Length (MIPT x MIPT)	1	1.46
2408821	1" Valve 24V Solenoid by Dorot (Agricultural Grade)	1	29.00

**different length hanging sprinkler assembly may be needed.
If 21 gpm not available, system can be set up to run one line at a time, additional parts would be required.*

ITS BOOM IRRIGATION SYSTEMS

There are a few investments in greenhouse automation a grower can make that pays for itself in as short a period of time as boom irrigation. The question is not "How much does boom irrigation cost?" but rather, "How much does boom irrigation pay?"

- More efficient than most irrigation methods.
- Saves on labor costs, replaces up to 4 employees hand watering.
- Runoff water and chemicals reduced by 30% to 50%.
- Uniform watering results in superior rooting and plant growth.
- Enhanced crop uniformity makes plant scheduling more predictable.
- Ideal for foliar applied pesticides, bench treatments, etc...
- Easier compliance with EPA worker protection standard regulations.
- System payback typically within first year of use.



CHOOSING AN APPROPRIATE SYSTEM



Three Models:

- **Ultimate** - Designed for growers who are growing multiple crops within a bay requiring varied water/fertilizer/chemical programs. The ultimate model also offers the highest level of automation. Also used with the Automated Transfer System.
- **Basic** - Is manually operated and offers cost savings and precision of boom watering at an affordable price. Instead of an on-board computer, it has programmable logic controls.
- **Econo** - Designed as a low cost entry level boom for growers mono-cropping within a bay with very straight forward irrigation and do not desire nor require much automation or safety features.

FOUR TRACK SYSTEMS:

- Bridge Boom for shade houses up to 36' wide.
- Field Irrigator for outdoor or shade houses up to 60' wide.
- For greenhouses up to 30' wide, a monorail track is ideal and saves on track costs. Available in Ultimate and Econo models.
- For greenhouses from 30' wide up to 05' wide, a two rail system is required. Available in Ultimate and Econo models.

TRANSFER SYSTEMS

ITS has the most versatile transfer systems available which maximize your investment in a boom irrigator. Each irrigator is capable of irrigating as much as 20,000 sq. ft.

ITS has engineered systems to transfer our single rail irrigator inside or outside gutter connected ranges. Transfer between freestanding quonsets is available as well. The two rail irrigators can be transferred from bay to bay along inside end walls or center aisles of gutter connected ranges.

The Automated Transfer System (ATS) will automatically move an irrigator throughout a gutter-connected range. Using the new Ultimate Controller allows each house in the range to be broken into multiple sections - each with their own watering schedules. Using two spray bars - one for misting and one for irrigation - will allow you to program your irrigator for a vast variety of crops.

TWO-HOSE HANDLING SYSTEMS

End Feed:

Water hose is coiled in loops suspended below track from trolleys that are pulled along track by the irrigator. This is ideal for greenhouses with enough vertical space for hanging hose. Water is fed to boom from source at end of bay. See example in picture of Monorail Track System.

Center Feed:

An ITS exclusive, patented system. Water hose is laid out flat up alongside track and held by track rollers. This keeps hose completely out of the way and greatly reduces hose wear. Allows reversal of machine travel direction at any point with out kinking or jamming the hose. See example in picture of Double Track System.



Call for more details and pricing. F.O.B. Sumner, WA.

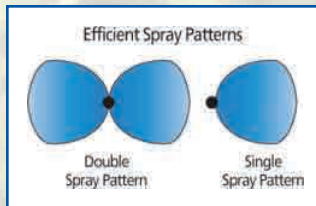


SPRAY STAKES



PCNL SPRAY STAKE ADVANTAGES:

- **Improved Control of Water and Fertilizer** - Pressure Compensation (PC) assures the last container in the row gets the same amount of water as the first.
- **Efficient Spray Patterns** - Evenly wets the soil surface to maximize water retention. Misting nearly eliminated - prevents wind drift.
- **Simplifies** design layout and reduces system cost – pressure compensation feature allows longer runs, smaller supply pipes and fewer valves and components.



SPRAY STAKE FEATURES:

- Extremely economical unit.
- Super-simple, one-piece construction.
- Long life, highly resistant to sunlight, fertilizers and chemicals.
- Flow direction indicator reduces installation time.
- Evenly wets the soil surface to maximize water retention.
- Simple close-off mechanism.

PRODUCT SELECTION

Container Size	Flow (GPH)	Stake Color
1 – 5 gallon	3.2	Plum
2 – 7 gallon	6.6	Grey
5 – 15 gallon	7.9	Brown
10 – 30 gallon	10.6	Blue

SPECIFICATIONS

	PCNL Spray Stake	Spray Stake
Filtration	120 Mesh	120 Mesh
Operating Pressure	22 - 55 psi	15 - 25 psi
Stake Length	7.25"	4.12"
Spray Radius	8" - 10"*	12" - 16"

* Spray radius at 3.5" elevation.

Stock No.	Description	Price
240815902	36" PCNL Plum Dripper Assembly	\$0.65
240815904	Plum Spray Stake	0.25
240815910	36" PCNL Grey Dripper Assembly	0.65
240815911	Grey Single Spray Stake	0.25
240815912	Grey Double Spray Stake	0.25
240815920	36" PCNL Brown Dripper Assembly	0.65
240815924	Brown Single Pattern Spray Stake	0.25
240815926	Brown Double Pattern Spray Stake	0.25
240815930	36" PCNL Blue Dripper Assembly	0.65
240815934	Blue Single Pattern Spray Stake	0.25
240815935	Blue Double Pattern Spray Stake	0.25

Must purchase 1 dripper assembly and 1 spray stake for complete unit. 48" Dripper Assemblies and rod mount spray stakes (rod and rod mount spray stake sold separately) available by special order.

*REPLACEMENT PARTS AVAILABLE. CALL FOR DETAILS AND PRICING.

CFD® DOWNSPRAY (POT SPRAYERS)



The C-Frame Downsprayer (patent pending) is a 360° spray jet with a 45° downward trajectory. The CFD® Downspray targets the root zone, reduces drainage and eliminates over-spray. The spray plate distributes water evenly across the entire wetted area.

- The 45° downward spray ensures even wetting of the soil and diffusion of nutrients and minimizes displacement of potting medium.
- Designed for single use in pots up to 2' diameter.
- Downward spray action reduces water loss by minimizing the effect of wind.
- Color coded for flow differentiation
- UV stabilizer for long life
- Shut-off clip to stop flow
- Applications: Nurseries, tree lots, potted plants, landscaped gardens.

Stock No.	Description	Price
240220402	Black Pot Sprayer Assembly	\$1.69
240220404	Brown Pot Sprayer Assembly	1.69
240220406	Blue Pot Sprayer Assembly	1.69

Pot Sprayer Color & Orifice Size	Pressure PSI	Flow GPH	Diameter (in) at 8" riser height
BLACK 0.032"	10	4.8	24"
	15	6.0	24"
	20	7.2	20"
BROWN 0.035"	10	6.0	22"
	15	6.6	20"
	20	7.8	20"
BLUE 0.039"	10	6.0	25"
	15	7.2	21"
	20	9.0	22"

Assembly comes pre-assembled with a 12" galvanized wire stake, wire stake adapter with shut-off clip and 36" of 0.15" ID tubing with barb adapter. Other tubing lengths available by special order.



HANGING BASKET ASSEMBLIES

DRIPPERS :

- Netafim drippers flow slowly, and uniformly, so the soil media is easily wetted without any run-off around the edges of the basket.
- The PCNL features of the dripper ensure that each plant receives the same amount of water at the same time, resulting in a higher quality uniform crop.
- Recommended filtration: 120 mesh.
- Recommended operating pressure: 35 psi.
- Multi-Tier Uniformity - Netafim Hanging Basket Drippers all flow precisely the same, regardless of the length of tube. This means that several lengths of drippers can be combined on the same line, with each dripper emitting precisely the same amount of water.
- Shut-Off Feature - Assembly can be closed easily with one hand. It also provides a quick visual reference for determining if the assembly is open or closed. Also available with new SlimLine EZ Close Weight. New shape makes it easy to withdraw from all types of plants without damaging the plant and it's heavier for secure placement in the basket.



Stock No.	Description	Price
240810001	18" Red Weight Assembly w/shut-off	\$0.83
240810005	24" Red Weight Assembly w/shut-off	\$0.89
240810010	36" Red Weight Assembly w/shut-off	\$0.95
240810020	18" SlimLine EZ Close Assembly	\$0.83
240810022	24" SlimLine EZ Close Assembly	0.89
240810024	36" SlimLine EZ Close Assembly	0.95

DRIPPER STAKE ASSEMBLIES



- Assemblies deliver superior uniformity with slow, low- flow drippers for even and uniform soil wetting without the runoff.
- The PCNL feature ensures that each plant receives the same amount of water at the same time.
- Can be used for hanging baskets or bench pots.

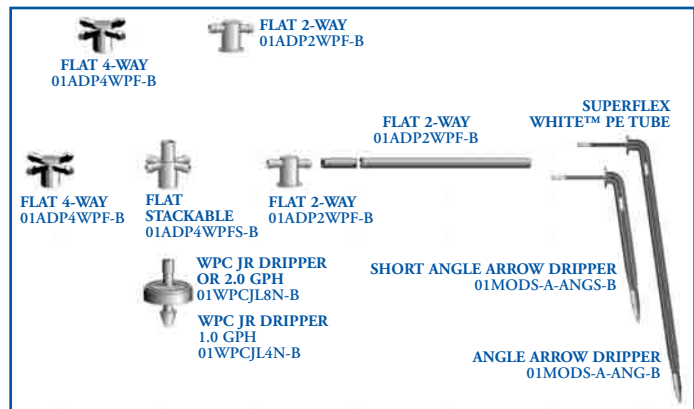
- Recommended filtration: 120 mesh.
- Recommended operating pressure: 35 psi.

Stock No.	Description	Price
2408142	24" Assembly	\$0.74
2408144	36" Assembly	0.81

**REPLACEMENT PARTS AVAILABLE. CALL FOR DETAILS AND PRICING.*

MULTI-OUTLET DRIPPER ASSEMBLIES

- **Less Disease** - Water on foliage and flowers can spread disease rapidly. By applying water directly to the pot, the rest of the plant remains dry. Additionally, pesticides which are applied to the foliage are not washed off by daily watering.
- **Higher Crop Value** - Every plant receives the same amount of water and fertilizer regardless of where the plant is located within the system. Even on rolling or sloped ground, the uniformity of watering is 94%.
- **Flexible and Portable** - The 4-way Flat manifold separates from dripper for easy storage or transport in a box. The dripper supply tubing (with the dripper attached) can then be rolled up without tangling the spaghetti tubes. If a different plant spacing is desired, simply change the 4-Way manifold.
- Recommended filtration: 120 mesh.
- Recommended operating pressure: 35 psi.



For complete assembly, order one MOD Assembly and one Woodpecker Pressure Compensating Junior Dripper. The flow per arrow dripper is equal to the dripper flow divided by the number of arrow drippers on that assembly. To ensure plants will receive equal water flow, use the same assemblies on each zone.

Stock No.	Item No.	Description	Price
FLAT 4-WAY MOD DRIPPER ASSEMBLY			
2408121	014DM-1818F	4@18"	\$1.92
2408134004	014DM-1830F	2@18" & 2@30"	2.09
2408123	014DM-2424F	4@24"	2.12
2408134008	014DM-2436F	2@24" & 2@36"	2.25
2408126	014DM-3030F	4@30"	2.27
FLAT STACKABLE MOD DRIPPER ASSEMBLY			
2408134116	014DMS-1818F	4@18"	\$1.92
2408134120	014DMS-1830F	2@18" & 2@30"	2.09
2408134122	014DMS-2424F	4@24"	2.12
2408134020	014DMS-2436F	2@24" & 2@36"	2.25
2408134118	014DMS-3030F	4@30"	2.27
FLAT 2-WAY MOD DRIPPER ASSEMBLY			
2408134200	012DM-2424F	2@24"	\$1.18
WPC JR. DRIPPERS - ORDER ONE PER MOD DRIPPER ASSEMBLY			
2408134100	01WPCJL8N-B25	2.0 GPH	\$0.31
2408170	01WPCJL4N-B25	1.0 GPH	0.31

**MOD Assemblies available w/short angle arrow drippers by special order. Call for available sizes and pricing, minimum order will apply.*



NETAFIM DRIPPERLINES



Netafim Dripperlines, both heavywall and thinwall, are ideal watering solutions for Nursery Containers. Higher plant quality is achieved through more uniform watering with dripperlines.

PROVEN PERFORMANCE FEATURES

Netafim Dripperlines function very much like drippers but without the spaghetti tubes. Ideal for large scale operations where harvesting is typically in large blocks and areas where rodent pressure can be

problematic for spaghetti tube systems. All Netafim dripperlines have injected molded emitters that are welded into a seamless wall of tubing for added strength, durability and long-term performance. Our emitters have the industry's widest flow path - a wider cross-section allowing large particles through the short flow path.

LOWER MAINTENANCE COSTS

Our dripperlines dramatically lower your maintenance costs with their durability, reliability and multi-year usage. A simple 120 mesh disc filter is required and plugging is virtually eliminated providing problem free irrigation for many years.

SIMPLIFIED PLANT PLACEMENT

The ready visibility of the drippers in the dripperline simplifies plant placement.

Variable dripper spacing and hose sizes available, call your sales representative or customer service for details and pricing.

PENNIES PER POT

When placed over the top of nursery containers, Netafim dripperlines provide an efficient, cost effective irrigation solution.

MULTIPLE PRODUCT OFFERINGS

Netafim dripperline watering solutions for Nursery Containers include Pressure Compensating and Non-Pressure Compensating Heavywall and Thinwall Dripperlines. Heavywall dripperlines are used to support a heavy duty, multi-year system. Thinwall dripperlines are used to provide 2-4 years of service.

UNIRAM WITH VINECLIPS

Netafim introduces UniRam Pressure Compensating Heavywall Dripperline with VineClips for nursery container irrigation. The proven performance of Netafim's UniRam dripperline combined with two VineClips, one placed on each side of the emitter, ensures the water droplet will fall into the pot and never migrate down the tube away from the pot. The VineClips are factory installed and very durable during shipping - no falling off or shifting along the pipe. A full line of 18mm fittings are available. This product replaces Netafim's Inline Dripperline.

HEAVYWALL DRIPPERLINES

UniRam - 18mm heavywall dripperline, provides pressure compensation for use with sloped or rolling terrain UniRam with VineClips - 18mm heavywall dripperline, same pressure compensation features along with two vineclips positioned on the dripperline to ensure maximum water penetration in the container

THINWALL DRIPPERLINES

Streamline - 8 mil thinwall dripperline, non-pressure compensating for container crops DripNet PC - 13 mil thinwall dripperline, pressure compensating for undulating terrains

AQUAMAT & AQUATHERMAT

Aquamat is the result of 10 years of laboratory research, field tests and ongoing optimization. Its patented assembly consists of internal drip tapes plus four layers of high performance textiles. Each layer plays a specific role and together, they form the most efficient irrigation system currently available. **Aquamat** allows even distribution of water from pot to pot, prevents surface evaporation and requires considerably less water than conventional overhead irrigation systems. As a result, you get faster and uniform plant growth. Better yet, it is highly affordable and easy to install.

- Produces uniform high quality crops with a strong root system.
- Spreads water evenly and rapidly to all pots thus significantly reducing plant stress.
- Reduces weed and algae growth in pots.
- Eliminates flower and leaf damage & disease.
- Reduces water and fertilizer consumption by at least 50%
- A totally contained assembly eliminates runoff.
- Easy to maintain: sweep, disinfect and rinse between crops.
- Deploys quickly: just level, unroll and connect.
- Durable, lasts as long as high quality ground cloth.

The **Aquathermat** not only offers the above benefits of the **Aquamat**, its low temperature hot water pipes delivers heat where it counts. Thus together, they allow...

- The roots to prosper by being bathed in constant moist heat.
- The plants to grow quickly and uniformly by being in a properly irrigated and heated micro-climate.
- The greenhouse to remain comfortable as the hot air generated by the mat rises.
- Your heating and production costs to dramatically drop.

Contact your sales representative or customer service for more information and pricing.



CHAPIN AUTOMATIC WATERING SYSTEMS

The **HEAVYWALL TUBES** are strong and durable resisting damage and stretching when inadvertently stepped on or pulled. They hold firmly in the main, forming a water tight joint and eliminate any need for brass inserts. The Heavywall tubes are always on.

Two sizes are available with the exclusive **"ON-OFF"** feature. As plants are removed from the bed, a quick push on the end of the weights shuts off the individual tubes. This feature saves water and fertilizer!

For both the Heavywall Tubing and ON-OFF Tubing the outside diameter is 0.128". Use Chapin 0.128 O.D. punch.

Order in multiples of 100 tubes per size.

Heavywall 0.036" I.D.		Heavywall 0.050" I.D.		Heavy wall 0.060" I.D.		Heavywall 0.076" I.D.		Price/Ea.
Stock No.	Size	Stock No.	Size	Stock No.	Size	Stock No.	Size	
240-0412012C	EW36-12"	240-0412112C	EW50-12"	240-0412212C	EW60-12"	240-0412312C	EW76-12"	\$0.62
240-0412018C	EW36-18"	240-0412118C	EW50-18"	240-0412218C	EW60-18"	240-0412318C	EW76-18"	0.64
240-0412024C	EW36-24"	240-0412124C	EW50-24"	240-0412224C	EW60-24"	240-0412324C	EW76-24"	0.66
240-0412030C	EW36-30"	240-0412130C	EW50-30"	240-0412230C	EW60-30"	240-0412330C	EW76-30"	0.68
240-0412036C	EW36-36"	240-0412136C	EW50-36"	240-0412236C	EW60-36"	240-0412336C	EW76-36"	0.70
240-0412042C	EW36-42"	240-0412142C	EW50-42"	240-0412242C	EW60-42"	240-0412342C	EW76-42"	0.74
240-0412048C	EW36-48"	240-0412148C	EW50-48"	240-0412248C	EW60-48"	240-0412348C	EW76-48"	0.78
240-0412060C	EW36-60"	240-0412160C	EW50-60"	240-0412260C	EW60-60"	240-0412360C	EW76-60"	0.85
240-0412072C	EW36-72"	240-0412172C	EW50-72"	240-0412272C	EW60-72"	240-0412372C	EW76-72"	0.97

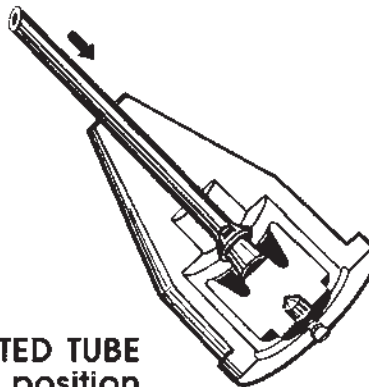
ON-OFF 0.060" I.D.		ON-OFF 0.076" I.D.		Price/Ea.
Stock No.	Size	Stock No.	Size	
240-0413012C	EOW60-12"	240-0413112C	EOW76-12"	\$0.78
240-0413018C	EOW60-18"	240-0413118C	EOW76-18"	0.80
240-0413024C	EOW60-24"	240-0413124C	EOW76-24"	0.82
240-0413030C	EOW60-30"	240-0413130C	EOW76-30"	0.84
240-0413036C	EOW60-36"	240-0413136C	EOW76-36"	0.85
240-0413042C	EOW60-42"	240-0413142C	EOW76-42"	0.89
240-0413048C	EOW60-48"	240-0413148C	EOW76-48"	0.93
240-0413060C	EOW60-60"	240-0413160C	EOW76-60"	1.01
240-0413072C	EOW60-72"	240-0413172C	EOW76-72"	1.13

Tube Size	Approx. Flow	# of Pots Watered
0.036" I.D.	0.5 GPH	1600 Pots
0.050" I.D.	1.0 GPH	900 Pots
0.060" I.D.	3.0 GPH	700 Pots
0.076" I.D.	7.5 GPH	400 Pots

**This is the maximum system capacity based on 36" length tubes with a 3/4" water supply. It is usually better to stay considerably under this maximum capacity.*

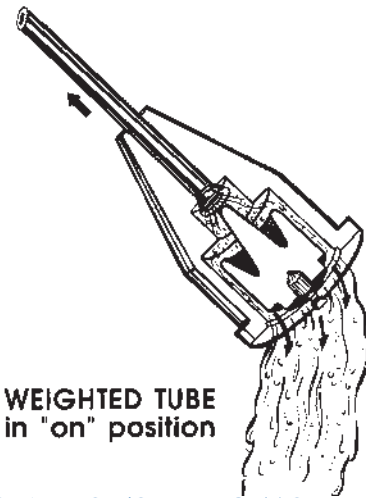


CHAPIN HEAVY WAN TUBE



WEIGHTED TUBE in "off" position

CHAPIN ON/OFF WEIGHT OFF



WEIGHTED TUBE in "on" position

CHAPIN ON/OFF WEIGHT ON

Stock No.	Description	Price
240-0422904C	Punch for .128 tube	\$19.64

CHAPIN VOLUME DISCOUNTS	
1000-9999 TUBES,	LESS 12%
10000-24999 TUBES,	LESS 14%
25000-49999 TUBES,	LESS 16%
CALL FOR FURTHER DISCOUNTS.	

Other Chapin products available. Call for more information and prices. Minimum Chapin order \$75.00. F.O.B. New York.



POLYETHYLENE TUBING

Low density polyethylene pipe is superior for outdoor surface uses. Resists cracking due to ultraviolet exposure. Pipe is softer and more elastic with less leaks when compared to high density black poly pipe.



Stock No.	Description	Price
240221005	16 mm x 500' tubing	\$58.37
2408266	3/4" x 100' black	31.45
240221010	3/4" x 500' tubing	99.98
2408268	1" x 100' black	52.67
240221015	1" x 500' tubing	161.25

SPAGHETTI TUBING

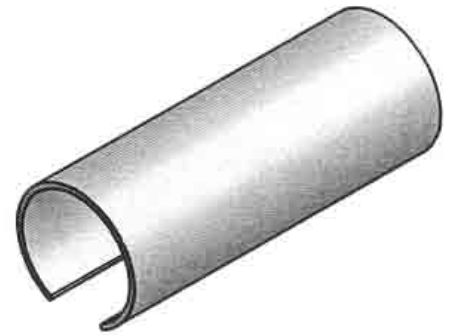
5/3 mm tubing is used with all drippers and spray stake assemblies. (0.125" I.D.) 4/7 mm tubing is used with all sprinkler, fogger and mister assemblies. (0.156" I.D.)



Stk No.	Description	Price
2408249	1000' SuperFlex UV Wht PE Tbing 4/7 mm	\$65.00
2408251	1000' Flex black PE tubing 5/3 mm	46.55
2408250	3000' Flex black PE tubing 5/3 mm	139.50

ALUMINUM SLEEVE

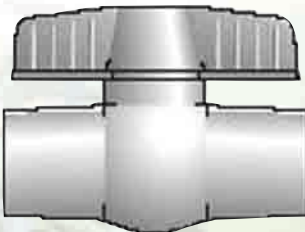
Designed to hold 3/4" poly tubing securely and evenly on suspended irrigation systems.



Stock No.	Description	Price
215-291602	20' Aluminum Sleeve	\$16.18

BALL VALVES

Large handle, threaded. Use for manually turning on irrigation lines in greenhouses thurseries.



PVC Ball Valve



Brass Ball Valve

Stock No.	Description	Price
BRASS		
240-961034MD	3/4" FPTxFPT Valve	\$9.71
240-961035MD	1" FPTxFPT Valve	14.70
PLASTIC		
240-98806	3/4" FPTxFPT Valve	\$2.70
240-98807	1" FPTxFPT Valve	4.10

STAINLESS STEEL CLAMPS



Stock No.	Description	Price
240-225012MM	3/4"	\$1.10
240-225020MM	1"	1.10

CABLE TIES

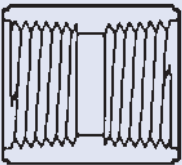

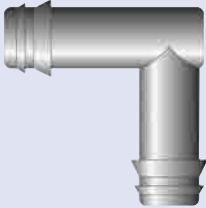




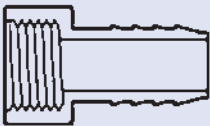
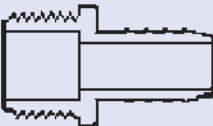

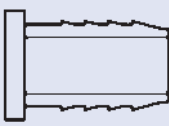

Stock No.	Description	Price
240-2260	11" Cable Ties 100/bag	\$8.95

PERMA-LOC HOSE FITTINGS

	COUPLING	ELBOW	TEE	MALE ADAPTER	BALL VALVE
INSERT SERIES	 (Insert x Insert)	 (Insert x Insert)	 (Insert x Insert x Insert)	 (Insert x MPT)	
500 (16 mm)	Stock # 240-960202 Price \$0.67	Stock # 240-960650 Price \$1.37	Stock # 240-960630 Price \$1.72	Stock # 240-960402 Price \$0.62 (3/4" MPT)	500PL x 500PL Stock # 240-960903 Price \$2.29
800 (3/4")	Stock # 240-960208 Price \$1.93	Stock # 240-960656 Price \$3.31	Stock # 240-960636 Price \$4.75	Stock # 240-960408 Price \$1.24 (3/4" MPT)	800PL x 800PL Stock # 240-960902 Price \$3.64
1000 (1")	Stock # 240-960210 Price \$2.22	Stock # 240-960658 Price \$3.84	Stock # 240-960638 Price \$5.99	Stock # 240-960610 Price \$1.44 (1" MPT)	800PL x 3-4" MPT Stock # 240-98857 Price \$3.64

POLY PIPE FITTINGS

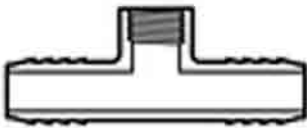
	COUPLING	COUPLING	ELBOW	TEE	MALE ADAPTER
PIPE SIZE	 (Insert x Insert)	 (FPT X FPT)	 (Insert x Insert)	 (Insert x Insert x Insert)	 (MPT x Insert)
16 mm	Stock # 2408276 Price \$0.36	---	Stock # 2408279 Price \$0.63	Stock # 2408281 Price \$0.78	---
3/4"	Stock # 240-951805MD Price \$0.31	Stock # 240-951900 Price \$1.26	Stock # 240-952105MD Price \$0.53	Stock # 240-953905MD Price \$0.61	Stock # 240-951405MD Price \$0.33
1"	Stock # 240-951806MD Price \$0.41	Stock # 240-951901 Price \$1.67	Stock # 240-952106MD Price \$0.65	Stock # 240-953906MD Price \$0.71	Stock # 240-951406MD Price \$0.42

<p>FEMALE ADAPTER</p>  <p>3/4" FPT x 3/4" Insert Stock # 240-9002124C Price \$2.71 1" FPT x 1" Insert Stock # 240-9002126C Price \$4.34</p>	<p>REDUCING MALE ADAPTER</p>  <p>1" MPT x 3/4" Insert Stock # 240-9018372C Price \$2.16</p>	<p>FIGURE 8</p>  <p>16mm Stock # 2408283 Price \$0.19 3/4" Stock # 240-960002 Price \$0.35 1" Stock # 240-960003 Price \$0.75</p>	<p>PLUG</p>  <p>3/4" Insert Stock # 240-9018253C Price \$1.38 1" Insert Stock # 240-9018254C Price \$2.07</p>	<p>NIPPLES</p>  <p>3/4" MPT x 3/4" MPT x 2"L Stock # 240-951920 Price \$0.99 1" MPT x 1" MPT x 2"L Stock # 240-951922 Price \$1.46</p>
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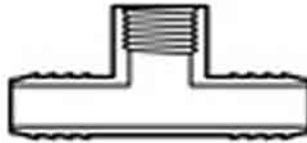


SPECIALTY FITTINGS

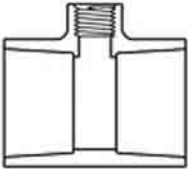
TEE - COMBINATION



1" Insert x 1" Insert x 3/4" FPT
Stock # 240-951940
Price \$3.54



1" - Insert x Insert x FPT
Stock # 240-951960
Price \$3.83

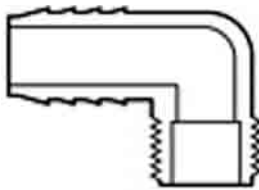


1" SOC x 1" SOC x 1/2" FPT
Stock # 240-951963
Price \$1.80

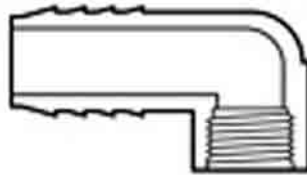


3/4" - Insert x Insert x MPT
Stock # 240-951950
Price \$3.76

ELBOW - COMBINATION



3/4" - Insert x MPT
Stock # 240-951990
Price \$3.17



1" - Insert x FPT
Stock # 240-951970
Price \$2.86

PSI



500PL x 400 Barb
Stock # 240-960850
Price \$0.68



500PL x 400 Barb Ball Valve
240-960966
Price \$2.17

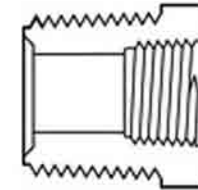


Punch 7.0 mm for 400 Barb
Stock # 240-951950
Price \$11.76

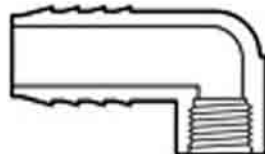


1000PL x 1" Spigot
Stock # 240-961210
Price \$1.45

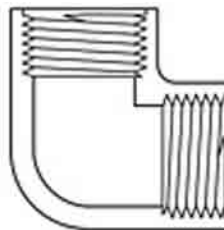
MISC. FITTINGS



1" MPT x 3/4" FPT Reducer Bushing
Stock # 240-951914
Price \$0.80



1" - Insert x 3/4" FPT
Stock # 240-951980
Price \$2.58



3/4" - FPT x FPT
Stock # 240-951991
Price \$1.75
1" - FPT x FPT
Stock # 240-951971
Price \$3.71



3/4" MPT x 3/4" MHT Transition Nipple
Stock # 240-951904
Price \$1.13

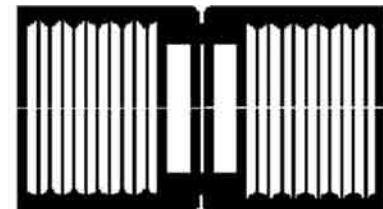
SWIVEL FITTINGS



1" FPT X 1" FPT Swivel Coupling
Stock # 240120502
Price \$2.10



1" FPT X 1" MPT Swivel Adapter
Stock # 240120504
Price \$1.85
1" FPT X 3/4" MPT Swivel Adapter
Stock # 240120506
Price \$2.65



3/4" FPT x 3/4" FHT Swivel Adapter
Stock # 240-951905
Price \$3.09
3/4" FHT x 3/4" FHT Swivel Adapter
Stock # 240-951906
Price \$3.09

PRESSURE-MASTER REGULATORS®



The Medium-Flow regulator is ideal for installations requiring mid-range flows (2-20 gpm) including solid-set, drip or other low-volume irrigation systems as well as center pivot and other mechanical-move irrigation systems. The High-Flow regulator is ideal for installations requiring higher flows (10-32 gpm) including solid-set sprinkler, low-volume, manifolds and mechanical-move irrigation systems.

Stock No.	Inlet Sizes	Outlet Sizes	Preset Operating Pressure	Maximum Inlet Pressure	Flow Range	Price
240902002	3/4" FPT	3/4" NPT	20 psi	150 psi	2-20 gpm	\$11.64
240902005	3/4" FPT	3/4" NPT	35 psi	150 psi	2-20 gpm	11.64
240902010	3/4" FPT	3/4" NPT	60 psi	150 psi	2-20 gpm	11.64
240902102	1" FPT	1" NPT	20 psi	150 psi	2-20 gpm	12.64
240902105	1" FPT	1" NPT	35 psi	150 psi	2-20 gpm	12.64
240902110	1" FPT	1" NPT	60 psi	150 psi	2-20 gpm	12.64
240902150	1-1/4" FPT	1" FPT	30 psi	100 psi	10-32 gpm	24.68



- Maintains a constant preset outlet pressure while handling varying inlet pressures.
- FPT inlet and outlet connections.
- Very low hysteresis and friction losses.
- Maximum flow path resists plugging.
- 100% water-tested for accuracy (no adjustments ever needed).
- Built for strength and durability using high-impact engineering-grade thermo plastics.
- Two-year warranty on materials, workmanship and performance.
- Always install downstream from all shut-off valves.

Other sizes are available. Call for further details.

MANUAL DISC FILTERS

PRODUCT ADVANTAGES:

- Easy cleaning - no scrubbing is necessary.
- Constructed of the highest quality UV protected reinforced polymer plastic.
- Available in a range of sizes, degrees of filtration and flow capacities.

APPLICATIONS:

- Protection of irrigation systems from clogging and/or abrasion.
- Temperatures from -40° to 160°.
- Maximum Pressure - 140 psi.



Stock No.	Description	Flow Range	Price
2408741	3/4", 140 Mesh Equiv.	1-12 gpm	\$24.00

Other sizes are available. Call for further details.

PLASTIC FILTER FEATURES:

- Multipurpose plastic filters from 3/4" - 3" diameter.
- High particle retention: large filter area allows long intervals between cleaning.
- Corrosion-resistant and durable.
- All material in contact with water is nonmetallic.
- Easy maintenance: the filter elements can be removed from the filter housing for rinsing.
- Interchangeable filter element types and filtration degrees.
- Minimal energy loss: extremely low pressure loss even at high flow rates.
- Maximum working pressure - 150 psi, 10 bar.
- Maximum temperature at 55 psi, 4 bar - 140°F/60°C.

Stock No.	Description	Maximum Flow Rate	Price
240-740402155	1" x 155 Mesh Disc Filter	30 gpm	\$79.20
240-740606155	1.5" x 155 Mesh Disc Filter	45 gpm	99.00



** Filters also available with screen elements. Other sizes up to 3" are available. Filtration degrees available from 3500 - 22 micron. Call for more information.*

PLASTIC FILTERS



TURBOCLEAN

RECOMMENDED FOR SANDY APPLICATIONS



A revolutionary solution for non-stop filtration: The TurboClean consists of an Amiad screen cylinder with a torpedo inserted inside the screen. The Torpedo is a static hydrodynamic device which fills most of the space inside the screen cylinder, creating high velocity along the

screen surface, thus preventing cake buildup. Particulate is pushed to the debris accumulation area. Periodic opening of the drain port will release the particulate from the debris area without the need to pen the filter element for cleaning in most cases.

AUTOFLUSH



Automatic flushing of Turboclean filters:

The AutoFlush filters are supplied with a hydraulic valve that opens automatically by means of an electronic timer. The electronic timer allows determination of the flushing duration and the flushing intervals. For filters with more than one flushing valve, Amiad offers a modular timer which is used for 3" LT-S filters, or for two or more filter units operated in sequence.

SCANAWAY



The Scanaway assembly consists of a PVC pipe with hollow wings that are facing the inner side of the screen. With a simple turn-of-a-handle, while the flushing port is open, the scanner rotates inside the screen and evacuates the particulates from the screen surface,

expelling them out from the filter. Scanning is done during the filtering process without stopping the water supply.

F.O.B. California. Call for more information and pricing.

AUTOMATIC FILTERS

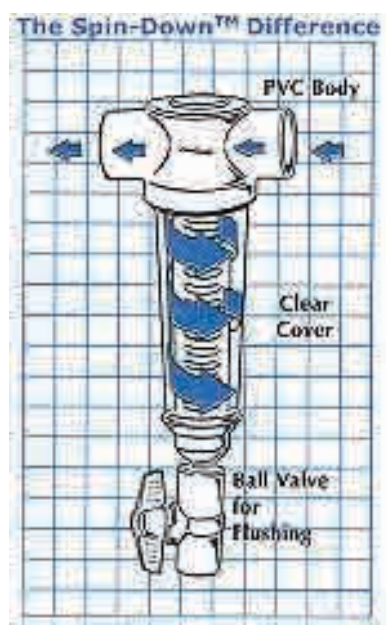
AUTOMATIC FILTER FEATURES:

- Self-cleaning filters automatically clean themselves when screen pressure differential reaches a preset value.
- Uninterrupted downstream flow during cleaning.
- Corrosion-resistant, multi-layered epoxy-coated steel.
- Flexibility of control options: electric control boards to suit specific needs. Flushing according to pressure differential and/or according to time. Continuous flushing, alarm signals, flushing counter, and more.



F.O.B. California. Call for more information and pricing.

SPIN-DOWN SEDIMENT FILTERS



- Clear cover easily removes for total cleaning.
- No tools required* (*Using tools voids warranty).
- Sediment visible indicating need for cleaning.
- Open ball valve to easily remove sediment.
- Reusable, replaceable polyester filter screens.
- Stainless steel filter screens also available.

Stock No.	Description	Price
240-7234140S	3/4", 140 Mesh Complete Filter w/Ball Valve	\$55.50
240-7201140S	1", 140 Mesh Complete Filter w/Ball Valve	55.50
240-723414FS	3/4", 140 Mesh Replacement Filter Screen	13.45
240-720114FS	1", 140 Mesh Replacement Filter Screen	13.45

Other sizes available. Call for more information and pricing.

SOLENOID VALVE

PRODUCT ADVANTAGES:

- Flow control (throttling) handle.
- Standard with built-in solenoid for ease of operation and reliability.
- 2-way solenoid has low power requirement and accepts various voltages.
- Ideal for ultra high flow or low flow capacity irrigation systems.
- Simple to install - vertically or horizontally.

APPLICATION:

- Small agricultural irrigation zones.
- Greenhouse and Nursery irrigation.
- Cooling systems.



Stock No.	Description	Price
2408821	1" Valve	\$26.70

Other sizes available by special order. Call for complete details.



FOUR & SIX STATION IRRIGATION & PROPAGATION CONTROLLERS

Designed for residential, light commercial and propagation use, DIG 5000-I Series Indoor Controllers feature independent programming for each valve, 4 start times per day per valve, cycles up to 30 days, watering durations as short as 1 minute and up to 12 hours. Each offers a wide range of flexible programs and down time protection.

FEATURES:

- Independent programming of start time, run time and day of the week for each valve.
- 4 button with large integrated liquid crystal display (LCD).
- Easy to read AM/PM clock.
- Automatic short circuit valve detection isolates the shorted valve, continues irrigation cycle and gives visible alarm.
- Start time stacking prevents hydraulic overload.
- Can operate two valves at a time.
- Rain or moisture sensor terminal hook up.
- 1, 9V battery backup.

OPERATING SPECIFICATIONS

- Station Run Time: 1 minute to 12 hours, in 1 minute increments.
- 4 start times per program per valve.
- Schedule: 7 day programming schedule or one to 30 days.
- 30 days rain delay with auto restart.
- Durations from 1 second up to 12 hours in 1 second increments.

Operating Specifications 5006-IP:

Stock No.	Description	Price
240120100	4-station indoor AC controller	\$36.90
240120102	6-station indoor AC controller	65.99
240120104	6-station indoor AC propagation controller	109.70



STERLING SERIES CONTROLLERS

4, 8, 12, 18, 24, 30, & 36 STATION MODELS

PROGRAMMING FEATURES:

- 6 independent programs that can run concurrently.
- Up to 9 daily cycle starts per program; or, loop watering optional in all 6 programs for unlimited cycles.
- No limit on the number of programs to which a station can be assigned (all 6 if desired).
- Station timing adjustable from 1 min. - 24 hours in 1 min. increments. Sec./min. time base optional in all 6 programs. An illuminated LED lets you know if a program is in the sec./min. mode.
- Automatic, semiautomatic, manual, and timed manual operation.
- Programmable watering calendar. The watering calendar is factory set at 7 days, but can be changed to any length from 1 - 32 days.
- Programmable 'system check' cycle that can be initiated at any station. Station 'On' duration programmable from 1 min. - 15 min. (or, optionally, 1 - 15 sec. per station).
- Water budgeting feature to simultaneously change the watering duration of all stations within a program (1% - 255%). An illuminated LED lets you know if water budgeting is set at other than 100%.
- Programmable rain off up to 14 days.
- Programmable pause of 1 sec. - 59 sec. between stations to allow full valve closure before advancing to the next station.
- Programmable loop allows a programs watering cycle to continuously repeat for a desired period. Cycles can repeat immediately or after a programmed delay of 1 min. - 4 hours, 15 min.
- Program 6 can be activated by a sensor switch such as a thermostat. Ideal for frost protection or cooling.
- Simplified program review. Program information can be scrolled on the display.



LIGHTNING BOARD (L) OPTION

For added surge and lightning protection, we offer an optional factory installed lightning protection board made by Control Tech USA, a leader in lightning protection technology. Sterling controllers ordered with the lightning board option are guaranteed against damage by lightning for three years from the date of purchase.



MISTING FEATURES:



The Sterling is a highly flexible misting controller in addition to being ideally suited for virtually all other watering applications. An extra set of instructions tailored specifically for misting application is included. The time base in all six programs can be changed to sec./min. so that individual

station timing is adjustable from 1 sec. - 24 min. in 1 sec. increments, Misting cycles can repeat immediately or after a programmed delay of 1 min. - 4 hours, 15 min. Cycling can be started and stopped manually as well as automatically. Stations can be assigned to multiple programs (up to 6) with different "On" durations in each program. This makes it possible for the "On" duration and "off" duration of a station to change automatically during the day to match the changing misting requirements of plant material. Programmable pause of 1 sec. - 59 sec. between stations to allow full valve closure before advancing to the next station.

Stock No.	Description	Price
240-70504	Sterling 4M* Controller	\$531.00
240-70508	Sterling 8M* Controller	582.00
240-70512	Sterling 12M* Controller	655.20

Additional controllers available, call for pricing.

1A SINGLE ZONE CONTROLLER



The single channel mist controller is great for single zone misting benches. It can also be used on ebb and flow benches and other hydroponic setups that need frequent watering schedules. The controller is provided with a 24 volt AC wall-mount transformer which provides safe operation and an output of 24 volts needed

for most solenoid valves. The **"seconds of on time"** knob allows for 2, 4, 6, 8, 10, 12, 15, 20, 30, 40, 50 and 60 seconds of mist. The **"minutes between on time"** knob allows for 2, 4, 6, 10, 15, 20, 30, 60, and 120 minutes between mist cycles. An "on" and "off" is provided for manual control of the solenoid.

ALSO AVAILABLE:

1B SINGLE ZONE CONTROLLER - The **"minutes of on time"** knob allows for 2, 4, 6, 8, 10, 12, 15, 20, 30, 40, 50, and 60 minutes of mist. The **"minutes of off time"** knob allows for 2, 4, 6, 10, 15, 20, 30, 60 and 120 minutes between mist cycles.

1C SINGLE ZONE CONTROLLER - Allows for 2, 4, 6, 8, 10, 12, 15, 20, 30, 40, 50 and 60 **"minutes of on time"** and 2 to 120 **"hours of off time"**.



Stock No.	Description	Price
240-70914	1A seconds on/minutes off	\$213.30
240-70915	1B minutes on/minutes off	213.30
240-70916	1C minutes on/hours off	213.30

F.O.B. MO

SINGLE STATION BATTERY OPERATED CONTROLLERS

Dig Single Station Battery operated controllers are mounted on 3/4" – 2" in line normally closed valves with flow control. Completely waterproof, and available with optional sensor connection.

FEATURES:

- Watering durations in 1 minute increments for 1 minute to 12 hours
- 4 start times per day
- 7 day programming schedule or intervals from 1 – 30 days
- Water budget from 5-95% in 5% increments
- Automatic, semi-automatic and manual operation (manual shut-off, internal manual bleed)
- Rain delay 30 days
- Irrigation suspension override (rain mode)
- Completely Waterproof
- 4 button keypad with LCD display
- Powered by 2, 9 volt batteries

VALVE SPECIFICATIONS

- 3/4" = 1 – 28 gpm
- 1" = 2-35 gpm
- 1 1/2" = 20-132 gpm
- 2" = 30 – 160 gpm
- Temperature Range: up to 170 degrees F
- FNPT inlet and outlet



510.075_ST



510.100P_ST

Stock No.	Description	Price
240120130	510-075 1 station DC controller on 3/4" in line valve	\$112.80
240120134	510-075S 1 station DC controller on 3/4" in line valve w/rain sensor	122.90
240120132	510-100 1 station DC controller on 1" in line valve	113.80
240120136	510-100S 1 station DC controller on 1" in line valve w/rain sensor	123.90
240120138	510-150 1 station DC controller on 1.5" in line valve	202.80
240120140	510-200 1 station DC controller on 2" in line valve	214.90



BATTERY OPERATED CONTROLLERS

Designed for multi-valve installations in areas without available power. Models 540 and 560 battery operated controllers power up to 6 valves of any size by utilizing any DIG Series 337.xxx DC Solenoid Valve (unit is only compatible with Dig Series 337.xxx DC Solenoid Valves). Independent programming for each valve offers maximum flexibility for the full range of watering requirements.



FEATURES:

- Operates up to 6 valves plus master valve.
- 4 button with an integrated liquid crystal display (LCD).
- Easy to read AM/PM clock.
- Water budget from 5 -95% in 5% increments.
- 4 start times per day.
- Watering durations in 1 minute increments from 1 minute to 12 hours.
- 7 day schedule or intervals from 1 to 30 days.
- Automatic, semiautomatic and manual operation.
- Rain delay up to 30 days.
- Can operate 2 valves simultaneously.
- Internal manual bleed.
- Valve may be extended up to 100' from the controller with 14 gauge wire.
- Completely Waterproof.

SPECIFICATIONS:

- Temperature range: 38° to 130°F (3° to 54°C).
- Power Source: 18 volt DC (2, 9 volt alkaline batteries).
- Battery Life: up to 2 years.



Stock No.	Description	Price
240120120	4-station controller 540-000W	\$116.90
240120121	6-station controller 560-000W	134.60

SPECIFICATIONS:

- Operating Flow Rates:
 - 3/4", 0.1 to 28 gpm.
 - 1", 2 to 35 gpm.
 - 1.5", 20 to 132 gpm.
 - 2", 30 - 160 gpm.
- Operating Pressure: 10 to 150 psi.
- Valve Temperature Range: up to 170°F (77°C).
- Source: 18 volt DC.
- 3/4", 1", 1-1/2" and 2" FNPT inlet and outlet.

FEATURES:

- High flow with low pressure loss.
- Normally closed.
- Easy in line maintenance.
- Smooth valve opening and closing prevents pressure surge hazards.
- Rugged, reinforced self cleaning diaphragm provides reliable operation even with dirty water.
- Flow control handle for water flow adjustment and manual shutoff.
- Manual internal bleed override for opening valve without external water spill.



DC SOLENOID VALVES



Stock No.	Item No.	Description	Price
240120322	337.075	3/4" valve w/flow control	\$46.90
240120324	337.100	1" valve w/flow control	47.75
240120326	337.150	1.5" valve w/flow control	103.90
240120328	337.200	2" valve w/flow control	112.90