



CONSERVING MORE
THROUGH QUALITY



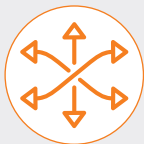
Volume 1

GPH
COMMERCIAL DRIP IRRIGATION

TABLE OF CONTENTS

Preface	4
Versatility	4
Made in the USA	4
Quality	4
Emitters.....	5
SpecFlow Threaded	5
Spec-Check™ PC Check Valve Emitters.....	6
SpecFlow Micro.....	7
SpecFlow SL Series.....	8
Bubblers.....	9
HiFlow Bubblers.....	9
Spec-Check™ PC Check Valve Bubblers	10
StreamFlow Bubblers.....	11
sTREEm™ Nozzle.....	12
Tree Ties.....	13
Drip Accessories	14
Combination Drip Flush Valve / Indicator Head	14
Emitter Outlet Check Valve	15
Plastic Stake.....	15
PVC Coated Stake	16
Galvanized Stake.....	16
Goof Plugs	17
Hose Punch	17
Risers	18
G Flex Riser	18
IH Riser.....	19
Flex Nipple	20
Sticky-Stripe™ PVC Hose.....	21
Sticky-Stripe™ / Orange Stripe™ Algae Resistant PVC Flex Hose.....	21
PVC Hose & Tubing	22
Supply Tubing.....	22
Micro Tubing.....	22
X-Flex Pressure Rated PVC Hose	23
PE Hose & Tubing.....	24
Supply Tubing.....	24
Micro Tubing.....	24

Heavy-Wall Landscape Dripline™	25
Fittings	26
In-line ProLock™ Compression Fittings.....	26
Micro Fittings	27
ProLock Figure 8 End Closure	27
PVC Male Adapters	28
Universal DripLine Fittings.....	29
Swing Joints & Spray Accessories	30
Swing Joint	30
Shrub Adapter.....	30
Swing Pipe Fittings	31
Super-Flex Swing Pipe.....	32
Marlex Street Ell	32
GPA80 Adapter.....	33
4 in 1 Cut off Nipple.....	33
Valve ID Tags	34
Nameplate	35
Rebar Stakes	36
J Hook's and Stakes	36
Twist N Splice®	37
Water Proof Wire Connectors	37
Splice Kits	39
GDBRY6.....	39
GDS400.....	39
Schedule 40 Pipe	40
PVC Purple Reclaimed Pipe, Sch 40 ASTM, Solvent Weld Bell End.....	40
Risers/Nipples	41
Sch 80 Pipe Nipples	41
Reference	42
Flex PVC Friction Loss	42
PE Friction Loss	43
Equations.....	44
Conversions	45
Terms of Sale	46
Notes	47



VERSATILITY

There are many manufacturers of irrigation products in our industry, but few that are committed to the importance of delivering top quality, competitively priced solutions that help build successful irrigation projects. At GPH Irrigation, our mission is to make the selection of drip irrigation components easier and more profitable for our design customers, wholesale distributors and contractors.

Commercial landscape is in our blood, our core values speak for themselves: superior service, competitive pricing and an unrelenting commitment to quality. We strive with every order to showcase these values, it is the calling card we want to be defined by.



MADE IN THE USA

100% of our products are designed and manufactured right here in the USA. We start with the highest quality engineering grade materials while following through with a top notch quality assurance program.



QUALITY

Our veteran team understands landscape drip needs and can help you in specification of the right components for your project. Custom Products Available: Don't be afraid to ask for something special. Our complete in house capabilities allow us to custom manufacture products or components to meet your needs. We back up every sale with our Handshake Guarantee: If you're not 100% satisfied with our products or our service, we'll refund your money no ifs, ands, or buts. Just return any new or unused part within 90 days of the shipping date and we'll refund the full purchase price without any restocking fees.

Our lower pricing comes from saving on overhead and marketing, not cutting corners in manufacturing.



SPECFLOW THREADED

The new GPH SpecFlow GPST emitters are designed to perform in the harshest environments, bringing commercial grade ruggedness to drip irrigation while providing an unmatched CV ratio. This means they are turn key and maintenance free, no more call backs due to inconsistent flows from one emitter to another. From the integrated self sealing screen which eliminates the need for Teflon tape, to its industry first chloramine stabilized silicone diaphragm the SpecFlow GPST is setting the standard in performance and reliability in drip irrigation. Our patent pending screen keeps debris from contaminating the emitter by increasing the size of the inlet by 250%. The GPH screen was engineered with an o-ring molded into the face and a chamfer molded into the body to seal on both sides to ensure a leak free installation with out the use of Teflon tape.

FEATURES



- High Velocity Self-Cleaning Mechanism purges at every start-up ensuring reliable operation and less maintenance with out a hydraulic penalty.
- ½" FIPT Inlet x Diffuser Cap Outlet.
- Self sealing screen eliminates need for Teflon tape.
- ISO compliant CV performance and wide pressure compensation range (10-50 psi) delivers more consistent emission uniformity over a wide range of inlet pressures and undulating terrain.
- Individually color coded for easy identification; flow rate molded into the cap.
- Engineering grade plastic and chloramine stabilized silicone diaphragm provide reliable performance in the toughest UV and chemical conditions.
- Ergonomic design eases installation fatigue.



OPERATING RANGE

- Flow rates : 0.5GPH - 10GPH
- Pressure Compensating: 10-50 psi
- Filtration: 80 Mesh

HOW TO ORDER:

GPST05D

Color:

- **D** (Desert Camo)
- **M** (Mulch Camo)
- **R** (Reclaimed Purple)
- **blank** (Std Colors)

Flow:

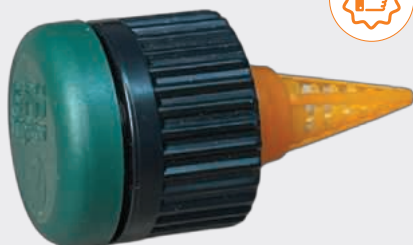
- **05** (1/2 GPH, Brown Cap)
- **1** (1 GPH, Black Cap)
- **2** (2 GPH, Green Cap)
- **4** (4 GPH, Yellow Cap)
- **6** (6 GPH, Tan Cap)
- **8** (8 GPH, Gray Cap)
- **10** (10 GPH, Orange Cap)

EMITTERS



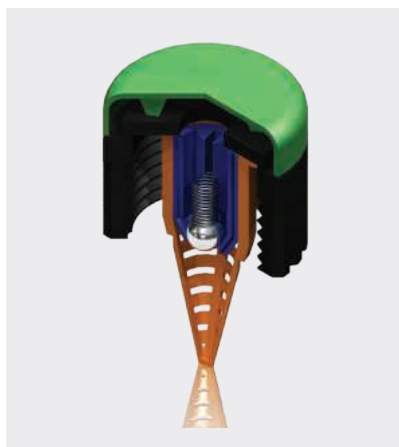
SPEC-CHECK™ PC CHECK VALVE EMITTERS

The Spec-Check utilizes spring check valve technology to create a true check valve with a 6.5 psi cracking pressure. This saves water by eliminating low head drainage for up to a 15 foot elevation change. The combination of the Spec-Check along with GPH's GPST ensures that your system will operate at the highest level of performance and efficiency. Our patent pending screen keeps debris from contaminating the emitter by increasing the size of the inlet by 250%. Its cone shape is designed to fit inside of a fitting while eliminating the restriction of flow as seen in competitive product. The GPH screen was engineered with an o-ring molded into the face and a chamfer molded into the body to seal on both sides to ensure a leak free installation with out the use of Teflon tape.



FEATURES

- PC - GPH's GPST Technology Ensures Total Pressure Compensation from 10 psi to 50 psi. Without the Problems Associated with Other Brands of Check Valve Emitters.
- Spec-Check's 6.5 psi Internal Check Valve Helps Prevent Drainage and Maintains up to a 15' Column of Water.
- Anti-Siphon Operation Prevents Contamination from Back Flowing into Line.
- Eliminates Low Head Drainage.



How to Order: GPSTCV050

Color:

- **D** (Desert Camo)
- **M** (Mulch Camo)
- **R** (Reclaimed Purple)
- **blank** (Std Colors)

Flow:

- **05** (1/2 GPH, Brown Cap)
- **1** (1 GPH, Black Cap)
- **2** (2 GPH, Green Cap)
- **4** (4 GPH, Yellow Cap)
- **6** (6 GPH, Tan Cap)
- **8** (8 GPH, Gray Cap)
- **10** (10 GPH, Orange Cap)



SPECFLOW MICRO

The SpecFlow Micro emitters bring commercial grade ruggedness to on-line drip irrigation. The SpecFlow Micro is designed for years of trouble free performance. Ensuring this is its integrated velocity self-flush cycle and its industry-first chloramine stabilized silicone diaphragm. The SpecFlow Micro sets the bar for single outlet emitters.



FEATURES

- Velocity Self-Cleaning Mechanism purges at every start-up ensuring reliable operation and less maintenance with out a hydraulic penalty.
- Available with 10-32 Threaded or 1/4" Barbed Inlets and Diffused or Barbed Outlets.
- ISO compliant CV performance and wide pressure compensation range (10-50 psi) delivers more consistent emission uniformity over a wide range of inlet pressures and undulating terrain.
- Color coded for easy flow identification.
- Engineering grade plastic and chloramine stabilized silicone diaphragm provide reliable performance in the toughest UV and chemical conditions.
- Ergonomic design eases installation fatigue.



OPERATING RANGE

- Flow rates : 0.5GPH - 10GPH
- Pressure Compensating: 10-50 psi
- Filtration 80 Mesh

How to Order:

GXBC051032M

Color:

- **D** (Desert Camo)
- **M** (Mulch Camo)
- **R** (Reclaimed Purple)
- **blank** (Std Colors)

Inlet:

- **1032** (Micro Thread)
- **blank** (1/4" Barb)

Flow:

- **05** (1/2 GPH, Blue Base)
- **1** (1 GPH, Black Base)
- **2** (2 GPH, Red Base)
- **4** (4 GPH, Yellow Base)
- **6** (6 GPH, Tan Base)
- **8** (8 GPH, Gray Base)
- **10** (10 GPH, Orange Base)

Outlet:

- **C** (Diffuser Base Black)
- **blank** (1/4" Barb)

EMITTERS



SPECFLOW SL SERIES

The SpecFlow SL Series emitters bring ISO compliant CV pressure compensation to the SL configuration. The series was designed to fill the need for a top quality pressure compensating $\frac{1}{2}$ " FIPT inlet x $\frac{1}{4}$ " barbed outlet configuration. Engineered with a integrated self sealing screen which eliminates the need for teflon tape. Performance guaranteed with the industry-first chloramine stabilized silicone diaphragm. The SpecFlow SL Series answers the call for a commercial grade threaded emitter.

FEATURES

- Velocity Self-Cleaning Mechanism purges at every start-up ensuring reliable operation and less maintenance without a hydraulic penalty.
- Self sealing screen eliminates teflon tape.
- ISO compliant CV performance and wide pressure compensation range (10-50 psi) delivers consistent emission uniformity over a wide range of inlet pressures and undulating terrain.
- Color coded for easy flow identification.
- Engineering grade plastic and chloramine stabilized silicone diaphragm provide reliable performance in the toughest UV and chemical conditions.



OPERATING RANGE

- Flow rates: 0.5GPH - 10GPH
- Pressure Compensating: 10-50 psi
- Filtration: 80 Mesh

How to Order:

GSL2200

Color:

- **D** (Desert Camo)
- **M** (Mulch Camo)
- **R** (Reclaimed Purple)
- blank (Std Colors)

Flow:

- **05** (1/2 GPH, Brown)
- **1** (1 GPH, Black)
- **2** (2 GPH, Red)
- **4** (4 GPH, Yellow)
- **6** (6 GPH, Tan)
- **8** (8 GPH, Gray)
- **10** (10 GPH, Orange)



HIFLOW BUBBLERS

Pressure Compensating Full-Circle Bubblers irrigate tree, shrub and flower areas where pressure compensation is required. Deep watering without runoff. SpecFlow Micro sets the bar for single outlet bubblers.



FEATURES

- Self sealing screen eliminates need for teflon tape
- Low flow rates allow water to be absorbed as needed
- Also available in Adjustable Flow version.
- Reduces runoff
- Flow will not fluctuate at pressures between 20 and 70 psi
- Maintains even flow
- Corrosion-proof plastic and rubber construction for long life
- Ergonomic design eases installation

OPERATING RANGE

- Flow: 0.25 to 1.00 GPM
- Spacing: 1 to 3 feet
- Pressure: 20 to 70 psi



How to Order:

GPCB250

Color:

- **D** (Desert Camo)
- **M** (Mulch Camo)
- **R** (Reclaimed Purple)
- **blank** (Std Colors)

Flow:

- **25** (1/4 GPM)
- **50** (1/2 GPM)
- **1** (1 GPM)
- **A** (Adjustable)

BUBBLERS



SPEC-CHECK™ PC CHECK VALVE BUBBLERS

The Spec-Check™ utilizes spring check valve technology to create a true check valve with a 4.5 psi cracking pressure. This saves water by eliminating low head drainage for up to a 9 1/2 foot elevation change. The combination of the Spec-Check™ along with GPH's GPCB ensures that your system will operate at the highest level of performance and efficiency.



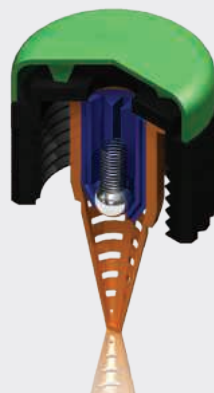
FEATURES

- PC - GPH's GPCB Technology Ensures Total Pressure Compensation from 20 psi to 70 psi. Without the Problems Associated with Other Brands of Check Valve Emitters.
- Spec-Check's 4.5 psi Internal Spring Check Valve Helps Prevent Drainage and Maintains Up to A 9.5' Column of Water.
- Anti-Siphon Operation Prevents Contamination from Back Flowing into Line.
- Eliminates Low Head Drainage.



OPERATING RANGE

- Flow: 0.25 to 1 GPM
- Spacing: 1 to 3 feet
- Pressure: 20 to 70 psi



How to Order: GPCBCV250

Color:

- **D** (Desert Camo)
- **M** (Mulch Camo)
- **R** (Reclaimed Purple)
- **blank** (Std Colors)

Flow:

- **25** (1/4 GPM)
- **50** (1/2 GPM)
- **1** (1 GPM)
- **A** (Adjustable)



STREAMFLOW BUBBLERS

When precision is required in a micro spray bubbler, the StreamFlow delivers. Flow and radius is controlled simply by turning the cap. Spider-like pattern adjusts from 0 - 3 feet at 30 psi. Our StreamFlow Bubblers allow the designer to choose from 90°, 180° or 360° patterns.



FEATURES

- Simple twisting cap control for flow and radius adjustment
- 12 configurations allow for easy customization
- Manufactured from UV stabilized engineering grade plastics
- Ergonomic design eases installation fatigue
- Your choice of inlet options: Barbed, 10-32 Micro Thread or ½" FIPT



OPERATING RANGE

- Flow: 0 - 2 GPM
- Spacing: 1 to 3 feet
- Pressure: 15 to 30 psi

How to Order: GSBX180Q251M

Color:
 - **D** (Desert Camo)
 - **M** (Mulch Camo)
 - **blank** (Std Colors)

Inlet:
 - **025** (1/4" Thread)
 - **1032** (Micro Thread)
 - **050** (1/2" FIPT)

Flow:
 - **90** (degrees)
 - **180** (degrees)
 - **360** (degrees)

BUBBLERS



sTReEm™ NOZZLE

The sTReEm™ Nozzle was conceived by an expert Arborist with a drive to irrigate trees in the best possible way. That passion was carried through in the engineering, development and testing of the product. The sTReEm™ has a 3ft throw with a 30° trajectory. It is fully pressure compensating at 0.5gpm between 18 and 80 psi. We even designed for air resistance and potential turbulence inside the nozzle to produce the most reliable and efficient irrigation device for trees in any landscape environment.

The goal is to provide just enough supplemental irrigation to maximize growth on young trees and to keep older, established trees healthy while preventing rot by not spraying the trunk directly, inspired the concept for the sTReEm™. For the first several months after planting, most of a tree's roots are still within the original root ball, with some roots beginning to grow beyond this area. The root ball and the surrounding soil should be kept evenly moist to encourage healthy root growth. Flooding this rootball by installing "deep" watering devices is inefficient and may cause fatal harm.



OPERATING RANGE

- Flow: 0.25 GPM – 1 GPM
- Spacing: 1 to 3 Feet
- Pressure: 18 to 80 psi

FEATURES



- Fits any Rainbird™ style pop up
- Standard fixed spray screen to help eliminate clogging, included
- Easy to read, large directional arrow molded into nozzle cap for precise adjustment.
- Eliminates Low Head Drainage.

sTReEm™ Nozzle Part Number	Description
GT25	.25 GPM
GT50	.50 GPM
GT100	1 GPM



TREE TIES

GPH's cinch style tree ties are sturdy enough to support without damaging the trees trunk. These easy to use ties combined with a stake will support a transplant or yearlings flexible trunk when exposed to outdoor elements.

- 24" Long Tie for a 5-15 Gallon Tree
- 32" Long Tie for a 24" Box Tree
- 36" Long Tie for a 36" Box Trees



FEATURES

- Each Tie comes with (1) 1-1/4" Galvanized Nail
- Manufactured from 80 shore Flexible Vinyl
- Leed – US Green Building compliant
- 3 Year Warranty
- Available in a 24", 32", and 36" lengths



Cinching Style Tree Ties	Part Number
24"	GTT24
32"	GTT32
36"	GTT36



DRIP ACCESSORIES



COMBINATION DRIP FLUSH VALVE / INDICATOR HEAD

This product combines the function of a drip flush valve, with a highly visible pop-up nozzle (orange and purple) to give maintenance persons a visual indication of the drip zone pressurization. The pop-up feature allows for the maintenance persons to quickly locate the flush valves. As the drip system pressurizes the pop up that the indicator head is installed on acts as a flag. This product also has a manual flush. To flush simply hold down the button on top of the indicator nozzle. Flush for as long as needed and simply release the button when finished. As the system shuts off the sprinkler retracts and the nozzle will sit flush.

- Available standard orange and reclaimed purple
- Compatible with Rainbird or Toro nozzles

Part Number	Description
GDFN	Drip Flush Nozzle, Rain Bird style female threads, Orange in color.
GDFN-T	Drip Flush Nozzle, Rain Bird style female threads, Orange in color.
GDFN-R	Drip Flush Nozzle, Rain Bird style female threads, Purple in color.
GDFN-T-R	Drip Flush Nozzle, Toro style male threads, Purple in color.



EMITTER OUTLET CHECK VALVE

A bug cap with a check valve. Our EOCV will prevent insect intrusion and back siphoning by checking the line pressure up to 3 feet of head.



FEATURES

- Unbreakable PVC construction.
- Compatible with 1/4" Micro Tubing or 1/4" emitter outlets.

How to Order: **GEOCV125**

For Tubing:

- 125 - 1/8" (0.125" OD)
- 220 - 1/4" (0.220" - 0.250" OD)



PLASTIC STAKE

The 6" Micro Tubing Stake firmly supports tubing 0.187" OD, 0.220" OD and 0.250" OD. Manufactured from UVR engineering grade plastic to ensure performance in the harshest soil applications. The two slots allow for use with 1/8" and 1/4" PE or Vinyl tubing. Its also designed with a built in hole punch to aid in emitter installation. This stake does it all.



FEATURES

- Works with all Micro / Distribution tubing sizes
- Professional grade quality
- Built in hole punch

How to Order: **GOTS204008**

Color:

- **B** (Black)
- **blank** (Brown)

DRIP ACCESSORIES



PVC COATED STAKE

These PVC Coated Galvanized Supply Tubing Stakes firmly support tubing from 0.620" to 1.200" [$\frac{1}{2}$ " – 1" IPS] OD in size. This stake is manufactured from galvanized wire with a UV stabilized black PVC coating that blends well with the tubing and has rust resistance. Its a great way to hold supply tubing in place in an on-grade or on-slope application.

FEATURES

- PVC-coated galvanized wire to ensure rust resistance
- Compatible with $\frac{1}{2}$ " to 1" tubing
- Ideal for high profile applications



How to Order:

GDTS30750

For Tubing:

- **30750** (Distribution)
- **140900** (Supply)



GALVANIZED STAKE

These 6" Galvanized Supply Tubing Stakes firmly support tubing from 0.620" to 1.000" [$\frac{1}{2}$ " – 1" Poly] OD in size. This stake is manufactured from galvanized wire for rust resistance. Its a great way to hold supply tubing in place in an on-grade or on-slope application.

FEATURES

- Galvanized wire for rust resistance
- Compatible with $\frac{1}{2}$ " to 1" IPS tubing



How to Order:

GDTS050



GOOF PLUGS

These well designed goof plugs fill unused or mis-punched holes. The barbed end keeps the goof plugs in place while prohibiting flow.



FEATURES

- Plugs misplaced or unneeded punctures in supply tubing
- Two sided, plugs 0.187" [$\frac{3}{16}$ "] and 0.250" [$\frac{1}{4}$ "] size hole

How to Order:
GGP250



HOSE PUNCH

Compact ergonomically designed hole punch designed for use with PE Supply Hose and Tubing. Brightly colored blue makes it easy to spot on the job site or in the toolbox.

FEATURES

- Punches correct size hole for all emitters
- Works great on all PE Hose and Tubing
- Designed to ease the installation of hundreds of emitters



How to Order:
GHP250

RISERS



G FLEX RISER

The G Flex Risers are bendable. It is adjustable to a 45° bend and it will hold its form even under pressure they allow you to tailor the flow pattern of each outlet to match your real world applications. The G Flex Risers can be positioned to eliminate problems associated with water running down the length of the riser, bypassing the root zone and killing the plants. It can also be bent in an "S" pattern holding emission devices out of muddy slurry in on grade applications. Perfect your wetting pattern as you see fit by simply bending our risers to match your requirements.



FEATURES

- Patent Pending design allows for the outlet side of the riser to be bent and held in place ensuring that the water emits near the root ball and does not travel down the length of the hose missing the required irrigation area.
- 100% customizable in the field so each emitter can be held exactly where it needs to be.
- Holds the emitter off the ground and out of the slurry in on grade applications.
- Allows for the riser to be bent and held at any angle in above grade applications.
- Not to exceed 50 psi
- Color options available in black, brown and purple

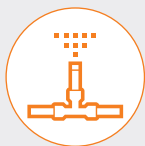


How to Order: GFIH12ABR

Hose Color:
- BR (Brown)
- R (Reclaimed)

Assembly:
- A (Assembled w/ GPST2)
- blank (No Emitter)

Length:
- 6, 12, 18, 24, ... 120 (inches)
- Custom Lengths Available



IH RISER

A flexible PVC riser that is pre-assembled with [2] ½" MIPT male adapters . It gives when kicked or stepped on unlike a traditional riser. It is ideal for slopes, medians and high traffic areas. Its the "unbreakable" riser. The material cost alone are less pre-assembled than purchased separately in parts. Pre-assembly also reduces installation costs by up to 50%! Also comes pre-assembled with the option of a GPST ½" thread x diffuser cap emitter which makes for the most rugged drip irrigation install in the industry.

FEATURES

- Pre-assembled with two black ½" MIPT UVR male adapters.
- Color options available in black, brown and purple
- On grade or below grade installation.
- Accepts any ½" FIPT emitter.
- Not to exceed 50 psi



How to Order:

GIH12ABR

Hose Color:
 - BR (Brown)
 - R (Reclaimed)

Assembly:
 - A (Assembled w/ GPST2)
 - blank (No Emitter)

Length:
 - 6, 12, 18, 24, ... 120 (inches)
 - Custom Lengths Available

RISERS



FLEX NIPPLE

GPH 6" Flexible Nipple, Available in 2 configurations, 1/2" & 3/4". Allows for movement and adjustments when used as a transitional joint connection between rigid pipe and a inline irrigation system. It can be installed subsurface or on grade.

FEATURES

- ISO compliant pressure rating
- Manufactured from Flexible Vinyl with Engineering grade rigid PVC Fittings
- Leed – US Green Building compliant
- 10 Year Warranty
- 6" Length
- 1/2" MIPT x 1/2" FIPT
- 3/4" MIPT x 3/4" FIPT
- Offered in Black Color



How to Order 075-600 3/4":
GFNXX-600

- (050) 1/2" IPS
- (075) 3/4" IPS



STICKY-STRIFE™ PVC HOSE



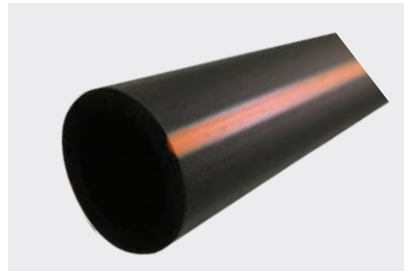
STICKY-STRIFE™ / ORANGE STRIFE™ ALGAE RESISTANT PVC FLEX HOSE

The same great GPH A/R Flex PVC hose with an industry first easy melt welding stripe built in! Solvent welding PVC is such a common practice in the irrigation field that it can be taken for granted... until a poor weld causes a system failure. Our proprietary catalyst in the orange stripe melts at a lower temperature with a lower viscosity; ensuring a better weld compared to standard hose using the same welding technique.

P-70 Primer with IPS-795 PVC Solvent Cement recommended for Schedule 40 fitting connections

FEATURES

- Sticky Strife™ technology helps ensure a better weld
- Constructed from durable, UVR, S-Q214 non-rigid PVC blend materials
- Orange stripe makes hose easily identifiable after installation
- Available in 4 different sizes: ½" Irrigation Size (¾" IPS), ½" IPS, ¾" IPS and 1" IPS
- Kink resistant
- Can be installed at or below grade
- PVC Tubing is compatible with schedule 40 slip fittings of the corresponding size when welded or "glued"



Part Number Add coil length in feet to end of Part Number	Available Coil Lengths	OD	ID
GPVCSSAR050IRR	500 ft	0.680"	0.500"
GPVCSSAR050IPS	100, 200 ft	0.840"	0.560"
GPVCSSAR075IPS	200 ft	1.050"	0.750"
GPVCSSAR100IPS	100 ft	1.315"	1.000"

PVC HOSE & TUBING



Our Super Flexible and Ultra tough Supply Tubing has a long life expectancy, greater than 20 years! Its flexibility ensures it will not kink, which makes it a perfect fit for high traffic areas. You can bend it and loop it more easily than most tubing on the market. Manufactured from our durable UVR non-rigid PVC resin with a proprietary Algae Resistance package that is compounded into the tubing in the manufacturing process. Algae resistance is particularly important in on grade applications where increased water temperatures provide a host environment for algae growth that can clog emitters.

P-70 Primer with IPS-795 PVC Solvent Cement recommended for Schedule 40 fitting connections

FEATURES

- Constructed from durable, UVR, S-0214 non-rigid PVC blend materials.
- Also available without algaecide.
- Available in 4 different sizes: ½" Irrigation Size [¾"IPS], ½" IPS, ¾" IPS and 1" IPS.
- Kink resistant
- Can be installed at or below grade
- PVC Tubing is compatible with schedule 40 slip fittings of the corresponding size when welded or "glued".



Supply Tubing

Part Number <small>Add coil length in feet to end of Part Number</small>	Without AR	Available Coil Lengths	OD	ID
GPVCAR050IRR	GPVC050IRR	500 ft	0.680"	0.500"
GPVCAR050IPS	GPVC050IPS	100, 200 ft	0.840"	0.560"
GPVCAR075IPS	GPVC075IPS	200 ft	1.050"	0.750"
GPVCAR100IPS	GPVC100IPS	100 ft	1.315"	1.000"

Micro Tubing

Part Number <small>Add coil length in feet to end of Part Number</small>	Available Coil Lengths	OD	ID
GPVC187125	50, 100, 1000, 2000 ft	0.187"	0.125"
GPVC220160	50, 100, 1000, 2000 ft	0.220"	0.160"
GPVC250170	50, 100, 1000, 2000 ft	0.250"	0.170"

X-FLEX PRESSURE RATED PVC HOSE



This Bio-based Flexible PVC Pressure Rated Hose is not only Eco-Friendly but Super Strong. We manufacture the X-Flex from phthalate-free flex PVC which provides for not only the toughest hose on the market but also the most environmentally responsible. Our unique manufacturing process of adding an integral spiral rigid spine allows for flexibility while allowing for higher burst pressures than standard Flex PVC irrigation hose.

FEATURES

- Manufactured from the market's first phthalate-free, bio-based compound.
- Improved performance
- First pressure rated flex hose for commercial irrigation applications.
- Unique spine reinforces hose while adding flexibility.
- Solvent weldable with all schedule 40 or 80 fittings.



Part Number	Size	Coil Length	Working Pressure	Burst Pressure
GXF050	½" Irr.	50 ft	125 P.S.I.	370 P.S.I.
GXF050IPS	½" IPS	50 ft	120 P.S.I.	355 P.S.I.
GXF075	¾" IPS	50 ft	120 P.S.I.	355 P.S.I.
GXF100	1" IPS	50 ft	120 P.S.I.	355 P.S.I.
GXF150	1 ½" IPS	50 ft	120 P.S.I.	355 P.S.I.
GXF200	2" IPS	50 ft	120 P.S.I.	355 P.S.I.



PE HOSE & TUBING



Constructed from high quality, UVR resin blend materials, this tubing is rated up to 80 psi. Available in 50, 100, 500, and 1,000 foot coils, tubing can be purchased individually, by the pallet or truckload. All for a very reasonable price.



FEATURES

- Manufactured from the Highest Quality DOW Fingerprint® Resin
- Available in 3 different sizes: 700x600, 710x620 and 940x820
- Constructed from durable, UV resistant, resin blend materials
- 60 psi rating exceeds competitor specs
- Can be installed at or below grade
- Compatible barb fittings or with standard compression fittings
- 100', 500' and 1,000' coils sold individually, by the pallet and truckload



Supply Tubing

Part Number <small>Add coil length in feet to end of Part Number</small>	Available Coil Lengths	OD	ID
GPE620520	50, 100, 500, 1000 ft	0.620"	0.520"
GPE700600	50, 100, 500, 1000 ft	0.700"	0.600"
GPE710620	50, 100, 500, 1000 ft	0.710"	0.620"
GPE940820	100, 500, 1000 ft	0.940"	0.820"
GPE12001060	100, 500 ft	1.200"	1.060"

Micro Tubing

Part Number <small>Add coil length in feet to end of Part Number</small>	Available Coil Lengths	OD	ID
GPE187125	50, 100, 1000, 2000 ft	0.187"	0.125"
GPE220160	50, 100, 1000, 2000 ft	0.220"	0.160"
GPE250170	50, 100, 1000, 2000 ft	0.250"	0.170"

HEAVY-WALL LANDSCAPE DRIPLINE™



We have developed our professional grade in-line drip hose with the ruggedness and ultra-precise emitters you have come to expect from GPH – all at a great price. The Heavy-Wall™ Performance Advantage™ provides every plant in the system with a consistent, precise flow rate. This allows more precise scheduling for minimum plant water requirement – reducing the need for over-watering as seen with other products.

FEATURES



- Thicker hose wall adds durability for subsurface and on-surface installations.
- Widest pressure compensation range in the industry, (6-65 psi), enables longer runs with balanced flow rates.
- Dual self-flushing mechanism flushes at pressurization and de-pressurization of every cycle – ensuring reliable operation with less maintenance.
- Ultra precise pressure compensation of less than 0.04 CV. Even the most severe elevation changes will not affect flow rates.
- LEED Project Qualified. Manufactured using our environmentally friendly Zero Foot Print process which meets the required standards.
- Compatible with all brands of 17mm fittings.



Flow Per 100 Feet [GPH / GPM]			
Emitter Spacing		0.5 GPH	1 GPH
12 Inches		50 / 0.833	100 / 1.67
Part Numbers			
Part Number	Coil Length	Spacing	Flow Rate
GHVY0512100	100	12"	0.5 GPH
GHVY0512500	500		
GHVY112100	100	12"	1 GPH
GHVY112500	500		

FITTINGS



IN-LINE PROLOCK™ COMPRESSION FITTINGS

We have taken the headaches out of specifying the correct size fitting by engineering a universal compression fitting that works with all manufacturers brands of 16mm, 17mm and 0.600" x 0.700" sized in-line drip hose. ProLock™ technology also eliminates the need for ratchet clamps used with traditional insert fittings.

These compression fittings ensure a reliable mechanical seal and come in a wide range of configurations to meet the requirements for any in-line drip hose irrigation system.

FEATURES

- High impact plastic
- UV Resistant
- Secure and easy installation without glue or clamps

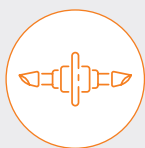


How to Order:

GCI

Configuration:

- **MA** (1/2" Male Adapter)
- **A** (PVC Glue-In Adapter)
- **SA** (1/2" Slip x Comp. Adapter)
- **C** (Coupler)
- **EL** (Elbow)
- **EP** (End Plug with Threaded Cap)
- **T** (Tee)
- **SAW** (3/4" FHT Swivel Adapter)
- **ST** (3/4" FHT Swivel Tee)



MICRO FITTINGS

¼" Micro Fittings are a great way to connect your ¼" distribution tubing to supply hose or to connect two pieces of distribution tubing together.

FEATURES

- Secure and easy installation without glue or clamps
- Large inside diameter for maximum flow
- One piece construction
- UV-resistant
- Fits ¼" (0.145 - 0.190 ID) distribution tubing
- Operating Pressure: Up to 30 psi
- Made of Acetal, a strong material that won't crack or snap.



How to Order:

GQBT

Configuration:

- C (Coupler)
- E (Elbow)
- T (Tee)



PROLOCK FIGURE 8 END CLOSURE

The most common fitting used to end a line. Simply slip over the end of the line, bend the tubing over, and slide the figure 8 back over the remaining hose for a leak proof fit.

FEATURES

- For use with all ½" PE Hose, 0.610" OD, 0.700" OD & 0.710" OD.
- High impact plastic
- UV-resistant
- Secure and easy installation without glue or clamps



How to Order:

GF8

FITTINGS



PVC MALE ADAPTERS

The GPH Male Adapter is a Black UVR ½" Male Pipe Thread Schedule 40 Male Adapter. Its manufactured from high impact PVC to meet all applicable ASTM standards.



FEATURES

- Available in:
 - ½" MIPT X ½" Slip
 - ½" MIPT x ½" Irrigation Slip Size [⅜" IPS]
 - ¾" MIPT x ¾" Slip
- High impact plastic
- UV-resistant
- Standard solvent welding technique



How to Order:

G436073BR

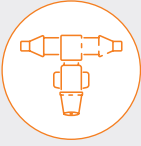
Color:

- **B** (Black)
- **BR** (Brown)
- **R** (Reclaimed)

Slip Size:

- **075** (¾" IPS)
- **073** (½" Irr. / ⅜" IPS)
- **005** (½" IPS)





UNIVERSAL DRIPLINE FITTINGS

GPH Universal DripLine Fittings are compatible with all brands of 17mm Inline or PE blank tubing on the market.



FEATURES

- Compatible with all brands of 17mm Landscape Dripline.
- Proprietary barb holds tight while still allowing for ease of installation.
- UV Resistance provides protection from harshest environments.
- Commercial grade design to help combat fitting failure common in other brands of fittings.



SPECS

- Inside diameter: 0.49" [1.24 cm]
- Operating pressure: Up to 80 psi (5.5 bar)
- Temperature: Up to 110°F (43°C)

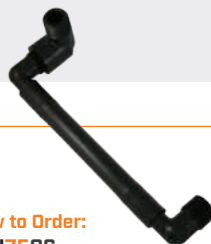
Part Number	Description	Application
DL-Coupler	Barb Coupling 17 x 17 mm	For 2-Way Joints
DL-Elbow	Barb Elbow 17 x 17 mm	For Elbow Join Connection
DL-Tee	Barb Tee 17 x 17 x 17 mm	For 3-Way Joints
DL-MA-050	Barb Male Adapter 17 mm x 1/2" MPT	For Transition from 1/2" IPS Pipe to Dripline
DL-MA-075	Barb Male Adapter 17 mm x 3/4" MPT	For Transition from 3/4" IPS Pipe to Dripline
DL-MA-050	Tee Male Adapter 17 mm x 1/2" MPT x 17 mm	For 3-Way Connection to 1/2" IPS Pip

SWING JOINTS & SPRAY ACCESSORIES



SWING JOINT

Use our Pre-Assembled Swing Joint to Maximize the Performance of Your Rotors or Sprays. Connects $\frac{1}{2}$ " or $\frac{3}{4}$ " sprinklers or quick coupler valves to lateral pipes. Allows easy adjustment of head and prevents heads or pipes from breaking when run over by equipment or kicked by foot traffic.



FEATURES

- $\frac{1}{2}$ " x 6" Long and $\frac{1}{2}$ " x 12" long.
- Pre-assembled with Marlex St. ELL for leak free adjustments.
- Speeds up sprinkler installs, easy adjustment makes properly positioning heads a snap.
- Less contractor call backs.
- Up to 80 psi and 110° F.



How to Order:

GSJ7506

Color:

- **B** (Black)
- **BR** (Brown)

Adapter Size:

- **05** ($\frac{1}{2}$ " MIPT)
- **75** ($\frac{3}{4}$ " MIPT)



SHRUB ADAPTER

Replaces Rainbird™ PA-BS

Ultra Tough Shrub Adapter, manufactured from self sealing engineering grade resins. No need to Teflon tape your riser when you use this Shrub Adapter. Designed for all female threaded nozzles.



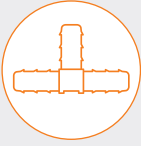
FEATURES

- Adapts all female threaded nozzles to $\frac{1}{2}$ " MPT threaded risers
- Accepts all protective filter screens
- Durable, non-corrosive plastic construction.



How to Order:

GPA8S



SWING PIPE FITTINGS

The GPH Spiral Barb Ells have a positive locking design that insures against leaking and blow out. Fittings are made of robust acetal material to make connecting swing pipe fast and easy with the simple twist-in insertion. No glue or clamps needed for installation. Aggressive barb lip makes a secure connection that is less likely to leak and reduces likelihood of contractor call backs.



FEATURES

- Easily handles pressures up to 150 psi at 110° F
- Less contractor call backs
- Brown in color to blend with the landscape
- For use in conjunction with Swing Pipe as a flexible swing assembly.



Part Number	Description
GSBCOUP	Spiral Barb Coupler
GSBE050	Spiral Barb x 1/2" MIPT Ell
GSBE075	Spiral Barb x 3/4" MIPT Ell
GSBTEE	17MM Spiral Barb Tee
GSBA050	Spiral Barb x 1/2" MIPT Adapter
GSBA075	Spiral Barb x 3/4" MIPT Adapter
GSBTMA050	Spiral Barb x Spiral Barb x 1/2" MIPT Tee
GSBTMA075	Spiral Barb x Spiral Barb x 3/4" MIPT Tee

SWING JOINTS & SPRAY ACCESSORIES



SUPER-FLEX SWING PIPE

Designed to simplify spray head installation, this tubing is ideal for challenging landscapes and hard-to-reach areas. Superior flexibility allows pipe to be efficiently routed around hard scape, terraces, and uneven terrain. Textured surface makes product easier to handle, contributing to labor efficiency, especially under wet conditions Up to 30% more flexible than competitors. Use with Swing Joint Ell's as a flexible swing assembly for sprays and rotors.

FEATURES

- Enhanced kink resistance
- Specifications Inside diameter: 0.49"
- Operating pressure up to 80 psi at 110° F



Part Number	Model	Description
SF100-005	Super Flex 100	Super Flex Swing Pipe, Compatible with all spiral barb fittings, brown



MARLEX STREET ELL

A Male Threaded by Female Threaded street elbow fitting typically used in connection from lateral to sprinkler to provide adjustment of sprinkler head. Manufactured from self sealing High Density Polyethylene which allows for leak free operation with out the use of Teflon tape. When used in pairs or triplicate, Marlex street ells provide stability to support sprinkler head during installation and enough flexibility when backfilling to fine adjust the sprinkler head to desired grade-level and vertical orientation.

FEATURES

- 1/2" MIPT x 1/2" FIPT
- Manufactured of a self lubricating, semi-flexible material.
- 30% more tapered threads than others to accommodate standard variance found in industry threaded components.



How to Order:
GM412005

SWING JOINTS & SPRAY ACCESSORIES



GPA80 ADAPTER

GPH's adapter compatible with nozzle thread to 1/2" thread for high flow bubbler or threaded end

FEATURES



- Adapts to Spray Body for use with any 1/2" FPT Bubbler or Emitter, by converting the spray body pop-up stem to 1/2" male pipe thread
- Manufactured from a Engineering Grade UV stabilized plastic.
- Easy to Install; thread on manually



Part Number	Description	QTY
GPA8010	GPA80 Adapter, compatible with 1/2" FPT bubbler and emitter, 10 bag	10 bag
GPA8050	GPA80 Adapter, compatible with 1/2" FPT bubbler and emitter, 50 bag	50 bag



4 IN 1 CUT OFF NIPPLE

Replaces DFW Plastics 4 in 1 Series Cut Off Nipples. The 4 in 1 nipple allows you to choose several different sizes with just one nipple.

FEATURES



- Available in 1/2" and 3/4"
- Reduce Inventory
- No Waste
- Reduce Contractor Down Time
- No Cross Threaded Nipples
- One 6" nipple be easily cut to provide the following configurations:
- One close nipple and one 4 1/2" nipple
- One close nipple, one 2" nipple and one 2-1/2" nipple
- Two close nipples and one 2-1/2" nipple



How to Order:
G41CVN075

Size:

- 050 (1/2" MIPT)
- 075 (3/4" MIPT)

SWING JOINTS & SPRAY ACCESSORIES



VALVE ID TAGS

GPH's Valve ID Tags are manufactured in two sizes; the standard yellow and large reclaimed standard colors. We keep a large inventory of the stock alpha-numeric options (ex. A1-A99) and have quick turnaround on all custom requirements.

FEATURES

- Easy Installation by slipping the wire through the hole (up to 12 gauge)
- Manufactured from a Engineering Grade UV stabilized Behr Desopan material
- Individual hot-stamped for maximum contrast and visibility



SPECS

- Inside diameter: 0.49" (1.24 cm)
- Operating pressure: Up to 80 psi (5.5 bar)
- Temperature: Up to 110°F (43°C)



Part Number	Description
GID-STD	Standard ID Tag. Please specify color and alpha numeric requirement when ordering
GID-MAX	Large ID Tag. Please specify color and alpha numeric requirement when ordering
GID-STD-KIT	10 pcs. small ID Tag Kit, Pre-Packaged Kit, Letter and number 1-10. Please specify color and alpha numeric requirement when ordering; for example A1-A10 is on kit



THE VALVE BOX NAMEPLATE

GPH's Valve Box Nameplate is manufactured with Reclaimed/ Purple Color UV Co-Polymer Plastic. The Nameplate allows for easy identification of the valve box lids.

FEATURES

- Easy Installation using supplied rivets
- Easy to Read Bi-lingual plate to convert a standard preinstalled box or new to reclaimed.



Part #G3800-NP Reclaimed,
Purple Valve Box Nameplate 1 plate,
with 2 rivets



REBAR STAKES



J HOOK'S AND STAKES

This domestic rebar test's to 60 ASTM A615 and ASTM A706 and complies with the "Buy American Act" with mill certificates available.

These durable J Hook's and Stakes can be used in a variety of different ways in the landscape. The J Hooks are used as pipe stabilizers to ensure proper placement of all pipe sizes up to 3" IPS. Hooks can also be used to hold down landscape fabric. The straight stakes have multiple uses , such as: supports for your landscape edging, supports for sprinklers and concrete forming. Custom sizes available upon request. They are also available in Black Epoxy Coating.



Part Number	Description
GRJ312	12" J Hook, Bar Size #3
GRJ318	18" J Hook, Bar Size #3
GRJ324	24" J Hook, Bar Size #3
GRS312	12" Stake, Bar Size #3
GRS318	18" Stake, Bar Size #3
GRS324	24" Stake, Bar Size #3
GRS336	36" Stake, Bar Size #3
GRJ412	12" J Hook, Bar Size #4
GRJ418	18" J Hook, Bar Size #4
GRJ424	24" J Hook, Bar Size #4
GRJ436	36" J Hook, Bar Size #4
GRS412	12" Stake, Bar Size #4
GRS418	18" Stake, Bar Size #4
GRS424	24" Stake, Bar Size #4
GRS436	36" Stake, Bar Size #4



WATER PROOF WIRE CONNECTORS

FEATURES



- Sealed with pure Dow Corning SP4577 Dielectric Silicone – Ensuring the best waterproof connection
- Industry leading Dielectric Strength and Volume Resistivity
- Single Step connection – Pre-twisting of wires is not necessary
- Makes a secure waterproof connection the first time every time

SPECS

- Maximum Voltage: 600v
- Dielectric Strength > 450v/mil @ 50 mil gap
- Volume Resistivity: $2.17 \times 10^{15} \Omega\text{-cm}$



INSTALLATION

ALWAYS TURN OFF POWER BEFORE INSTALLING OR REMOVING CONNECTORS. ONLY INSTALL PER LOCAL AND NATIONAL CODES. NOT FOR USE IN CONTINUOUS SUBMERSION APPLICATIONS.

- Strip wires: 1/2" for wires larger than 16ga, 7/16" for 16ga and smaller
- Hold wires together with copper tips even. Straighten frayed or bent wires and strands. Pre-twisting wires is not necessary.
- Firmly push wires evenly into connector and twist clockwise until secure. Do not over-tighten. Do not reuse connector.
- Visit gphirrigation.com to see spec sheet for wire combinations and capacity



WATER PROOF WIRE CONNECTORS



Part Number	Color	Wires
BB12-22	Blue/Blue	12-22 AWG
CB6-24	Charcoal/Blue	6-24 AWG
CG8-22	Charcoal/Gray	8-22 AWG
CW12-22	Charcoal/White	12-22 AWG
GG12-22	Gray/Gray	12-22 AWG
T6-14	Tan	6-14 AWG



GDBRY6

Direct Bury Splice Kit GDBRY-6 is a premium moisture-resistant connector that is designed to electrically connect and create a moisture seal for thicker insulation wire. Kit contains a 3M™ Spring Connector R/Y+ and a high impact, UV-resistant tube pre-filled with pure dielectric silicone sealant.

FEATURES

- Filled with Water Proof Dow Corning SP4577 Dielectric Silicone
- Maximum Voltage: 600v
- Industry Leading Volume Resistivity at 73°F [23°C]: ohm-cm 2.17 x 10¹⁵
- Industry Leading Dielectric Strength, 50 mil gap volts/mil: >450



SPECS

- Flame Retardant Cert. - UL-94 V-2
- Maximum Wire Gauge - 10 AWG
- Minimum Wire Gauge - 18 AWG



GDS400

Our dry splice has a seal designed into each wire hole that enables you to stock one connector for all applications. The dry splice seal features an interference webbing which expands to accommodate #18 through #6 gauge wire sizes. In the event only two holes are used, our dry splice seal prevents sealant from leaking out through the third hole.

FEATURES

- Pre-filled with pure Dow Corning SP4577 Dielectric Silicone - Ensuring the best waterproof connection
- Crimp style wire connector
- Holes in connector housing seal around wire to protect silicone from escaping and continuously encapsulate splice
- Each kit comes with two crimp sizes to cover a wire range from #18 - #10



SCHEDULE 40 PIPE



PVC PURPLE RECLAIMED PIPE, SCH 40 ASTM, SOLVENT WELD BELL END

GPH Sch 40 PVC Reclaimed Pipe is offered in outside diameters on 1/2" to 2" IPS. Our Sch 40 Reclaimed Pipe is designed for reclaimed/recycled water systems. It is highly durable, easy to install and has better sound deadening qualities than PVC and ABS Foam Core pipes. The color of the pipe is purple as shown in the picture. Schedule 40 can be used in a variety of applications. GPH Schedule series of PVC pipe is produced for use in reclaimed water applications in which the maximum operating temperature is 140° F. Our compound is Type 1 Grade 1, with a cell class of 12454B, per ASTM D1784. Use Solvent for ASTM D1784.

FEATURES

- Compatible with Sch 40 IPS ASTM D1784 slip fittings.
- Bell End, solvent weld compatible
- Chemically Inert
- Commercial grade design to help combat fitting failure common in other brands of schedule 40 pipe.
- Pipe Extruded in our Fontana, CA Facility
- Available in 1/2" to 2" IPS
- 10' and 20' Standard Lengths, Specialty Sizes Available



Part Number	Description
G040BEREC-10	PVC Purple 1/2" x 10' Sch 40
G7540BEREC-10	PVC Purple 3/4" x 10' Sch 40
G12540BEREC-10	PVC Purple 1 1/4" x 10' Sch 40
G15040BEREC-10	PVC Purple 1 1/2" x 10' Sch 40
G240BEREC-10	PVC Purple 2" x 10' Sch 40
G040BEREC-20	PVC Purple 1/2" x 20' Sch 40
G7540BEREC-20	PVC Purple 3/4" x 20' Sch 40
G140BEREC-20	PVC Purple 1" x 20' Sch 40
G12540BEREC-20	PVC Purple 1 1/4" x 20' Sch 40
G15040BEREC-20	PVC Purple 1 1/2" x 20' Sch 40
G240BEREC-20	PVC Purple 2" x 20' Sch 40



SCH 80 PIPE NIPPLES

GPH Sch 80 PVC nipples and sprinkler risers designed for use on a wide range of threaded pipes. Sch 80 for high pressure applications and has a thicker wall than Schedule 40 pipe. It is highly durable, easy to install and has better sound deadening qualities than PVC and ABS Foam Core pipes. The color of the pipe is grey as shown in the picture. Schedule 80 can be used in a variety of applications.



FEATURES



- Seals threads on virtually any mating piping system, including stainless steel pipe, cast iron, PVC, CPVC and ABS pipe, as well as brass and chrome fittings.
- Proprietary molded threads ensures quality connection
- Chemically Inert
- Commercial grade design to help combat fitting failure common in other brands of schedule nipples.

- Injection molded and machined threads
- Available in 1/2" to 2" Pipe Size
- Standard Lengths, Specialty Sizes Available

How to Order:

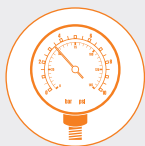
PN05 - X

Length
Close, 2", 3", 4", 5", 6" ... 72"

Pipe Thread

- 05 (1/2" IPT)
- 075 (3/4" IPT)
- 1 (1" IPT)
- 1.25 (1 1/4" IPT)
- 2 (2" IPT)

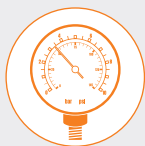
REFERENCE



FLEX PVC FRICTION LOSS

This table shows the friction loss in psi per 100ft of Flex PVC Supply Hose. Values in red denote flows that exceed the recommended velocity of 5 ft/s, and should be avoided. Table is for reference only.

	3/8" IPS		1/2" IPS		3/4" IPS		1" IPS		
	ID: 0.500 in.		ID: 0.560 in.		ID: 0.750 in.		ID: 1.000 in.		
GPH	ft/s	PSI	ft/s	PSI	ft/s	PSI	ft/s	PSI	GPM
5	0.14	0.02	0.11	0.01	0.06	0.00	0.03	0.00	0.1
10	0.27	0.06	0.22	0.03	0.12	0.01	0.07	0.00	0.2
20	0.54	0.21	0.43	0.12	0.24	0.03	0.14	0.01	0.3
30	0.82	0.45	0.65	0.26	0.36	0.06	0.20	0.02	0.5
40	1.09	0.77	0.87	0.44	0.48	0.11	0.27	0.03	0.7
50	1.36	1.16	1.09	0.67	0.61	0.16	0.34	0.04	0.8
75	2.04	2.45	1.63	1.41	0.91	0.34	0.51	0.08	1.3
100	2.72	4.18	2.17	2.40	1.21	0.58	0.68	0.14	1.7
125	3.40	6.31	2.71	3.63	1.51	0.88	0.85	0.22	2.1
150	4.09	8.84	3.26	5.09	1.82	1.23	1.02	0.30	2.5
175	4.77	11.76	3.80	6.77	2.12	1.63	1.19	0.40	2.9
200	5.45	15.06	4.34	8.67	2.42	2.09	1.36	0.51	3.3
225	6.13	18.72	4.88	10.78	2.72	2.60	1.53	0.64	3.8
250	6.81	22.75	5.43	13.10	3.03	3.16	1.70	0.78	4.2
275	7.49	27.14	5.97	15.63	3.33	3.77	1.87	0.93	4.6
300	8.17	31.88	6.51	18.36	3.63	4.42	2.04	1.09	5.0
350	9.53	42.39	7.60	24.41	4.24	5.88	2.38	1.45	5.8
400			8.68	31.25	4.84	7.53	2.72	1.86	6.7
450			9.77	38.86	5.45	9.37	3.06	2.31	7.5
500					6.05	11.38	3.40	2.80	8.3
550					6.66	13.58	3.74	3.35	9.2
600					7.26	15.95	4.09	3.93	10.0
700					8.47	21.22	4.77	5.23	11.7
800					9.68	27.16	5.45	6.69	13.3
900							6.13	8.32	15.0
1000							6.81	10.11	16.7



PE FRICTION LOSS

This table shows the friction loss in psi per 100ft of Polyethylene Supply Hose. Values in red denote flows that exceed the recommended velocity of 5 ft/s, and should be avoided. Table is for reference only.

	620x520		700x600		710x620		940x820		1200x1060		
	ID: 0.520 in.		ID: 0.600 in.		ID: 0.620 in.		ID: 1.000 in.		ID: 1.060 in.		
GPH	ft/s	PSI	ft/s	PSI	ft/s	PSI	ft/s	PSI	ft/s	PSI	GPM
5	0.13	0.01	0.09	0.01	0.09	0.01	0.05	0.00	0.03	0.00	0.1
10	0.25	0.04	0.19	0.02	0.18	0.02	0.10	0.00	0.06	0.00	0.2
20	0.50	0.15	0.38	0.08	0.35	0.07	0.20	0.02	0.12	0.00	0.3
30	0.76	0.32	0.57	0.16	0.53	0.14	0.30	0.04	0.18	0.01	0.5
40	1.01	0.55	0.76	0.28	0.71	0.23	0.41	0.06	0.24	0.02	0.7
50	1.26	0.83	0.95	0.42	0.89	0.35	0.51	0.09	0.30	0.03	0.8
75	1.89	1.77	1.42	0.88	1.33	0.75	0.76	0.19	0.45	0.06	1.3
100	2.52	3.01	1.89	1.50	1.77	1.28	1.01	0.33	0.61	0.09	1.7
125	3.15	4.55	2.36	2.26	2.21	1.93	1.27	0.49	0.76	0.14	2.1
150	3.78	6.37	2.84	3.17	2.66	2.70	1.52	0.69	0.91	0.20	2.5
175	4.41	8.47	3.31	4.22	3.10	3.60	1.77	0.92	1.06	0.26	2.9
200	5.04	10.84	3.78	5.40	3.54	4.60	2.03	1.18	1.21	0.34	3.3
225	5.67	13.48	4.26	6.72	3.99	5.73	2.28	1.47	1.36	0.42	3.8
250	6.29	16.39	4.73	8.16	4.43	6.96	2.53	1.78	1.51	0.51	4.2
275	6.92	19.55	5.20	9.74	4.87	8.30	2.78	2.13	1.67	0.61	4.6
300	7.55	22.96	5.67	11.44	5.31	9.75	3.04	2.50	1.82	0.72	5.0
350	8.81	30.54	6.62	15.21	6.20	12.97	3.54	3.32	2.12	0.95	5.8
400			7.56	19.47	7.08	16.60	4.05	4.25	2.42	1.22	6.7
450			8.51	24.21	7.97	20.64	4.56	5.29	2.73	1.52	7.5
500			9.46	29.43	8.86	25.08	5.06	6.43	3.03	1.84	8.3
550					9.74	29.92	5.57	7.67	3.33	2.20	9.2
600							6.08	9.01	3.64	2.58	10.0
700							7.09	11.98	4.24	3.43	11.7
800							8.10	15.33	4.85	4.39	13.3
900							9.11	19.07	5.45	5.46	15.0
1000							8.81	10.11	6.06	6.64	16.7

REFERENCE



EQUATIONS

Flow in a pipe

Where:

Q = Discharge³ [ft³ / s]

A = Cross Sectional [ft²]

V = Average Velocity [ft/s]

Velocity in a pipe

$$V = \frac{0.408 \times Q}{(ID)^2}$$

Where:

V = Average Velocity [ft/s]

A = Discharge [GPM]

ID = Inside Diameter of pipe [in]

Hazen-Williams Formula

$$P = \left(\frac{4.52 \times Q^{1.852}}{C^{1.852} \times D^{4.87}} \right) = (\text{length})$$

Where:

P = Pressure Drop [psi]

Q = Discharge [GPM]

C = Friction Coefficient

- PVC: 130

- PE: 140

- Copper: 135

- Galvanized Pipe: 120

D = Pipe Inside Diameter [in]

Length = Length of Pipe [ft]

Pumps

Where:

Q = Discharge [GPM]

HP = Brake Horsepower

ft_h = Feet of Head

W = Wattage [Watts]

Electricity

Where:

V = Voltage [Volts]

I = Current [Amps]

R = Resistance [Ohms]

W = Wattage [Watts]



CONVERSIONS

Length

Inch	= 0.08333 ft
	= 25.4 mm
	= 2.54 cm
Foot	= 12 in
	= 0.3333 yds
	= 304.8 mm
	= 30.4 cm
Yard	= 36 in
	= 3 ft
	= 91.44 cm
	= 0.9144 m
Mile	= 5,280 ft
	= 1,760 yds
	= 1,609.3 m
	= 1.609 km
Millimeter	= 0.0394 in
Centimeter	= 0.3937 in
Meter	= 39.37 in
	= 3.281 ft
	= 1.094 yds
Kilometer	= 3,280.87 ft
	= 1,093.6 yds
	= 0.6214 mi
	= 1,000 m
Mass	
Pound	= 453.6 g
	= 0.4536 kg
	= 0.12 gal (H ₂ O)
	= 0.016 ft ³ (H ₂ O)
Kilogram	= 2.21 lbs
	= 0.264 gal (H ₂ O)
	= 0.035 ft ³ (H ₂ O)

Area

Acre	= 43,560 ft ²
	= 4,840 yd ²
	= 0.001563 mi ²
	= 4,046.85 m ²
Sq. Mile	= 27,878,400 ft ²
	= 3,097,600 yd ²
	= 2,589,988.11 m ²
Sq. km	= 10,763,910.4 ft ²
	= 1,195,990.1 yd ²
	= 0.3861 mi ²
	= 1,000,000 m ²
Hectare	= 107,639.1 ft ²
	= 11,959.9 yd ²
	= 0.003861 mi ²
	= 10,000 m ²

Flow

GPH	= 0.0167 GPM
	= 3.785 LPH
	= 0.0631 LPM
GPM	= 60 GPH
	= 227.13 LPH
	= 3.785 LPM
	= 0.1337 ft ³ /m
ft ³ /s	= 0.00223 GPM
LPH	= 0.264 GPH
	= 0.0044 GPM
LPM	= 15.85 GPH
	= 0.264 GPM

Volume

US Gallon	= 128 fl oz.
	= 8 pints
	= 4 quarts
	= 0.1337 ft ³
	= 3.785 L
	= 8.36 lbs (H ₂ O)
Cu. Foot	= 7.481 gal
	= 28.317 L
	= 62.4 lbs (H ₂ O)
Acre-Inch	= 27,154.3 gal
	= 3,630 ft ³
Acre-Foot	= 325,851.4 gal
	= 43,560 ft ³
Liter	= 0.2642 gal
	= 0.0353 ft ³

Pressure

PSI	= 2.31 ft _h
	= 0.0689 bar
	= 6.895 kpa
Foot Head	= 0.433 PSI
	= 0.0298 bar
	= 2.985 kpa

TERMS AND CONDITIONS



TERMS OF SALE

Terms

GPH Irrigation Product's standard terms are net 30 days. A late payment charge of 1.5% per month may be assessed on all past due accounts.

Freight

All sales are FOB, San Bernardino County, California – unless quoted otherwise.

Current Sales Price

Products are sold at prices in effect at the time an order is received. Prices are subject to change without prior notice.

Returned Merchandise Authorization

Authorization must be obtained from the factory before any products can be returned. We reserve the right to impose a twenty percent (20%) restocking charge. All returned goods must be returned freight prepaid and must be of current design and resalable condition.

Product Design

We reserve the right to make changes in design or improvements without assuming liability to change products previously sold.

Warranty

GPH Irrigation Products warrants against any manufacturing defects for a period of three years from the date of sale. The warranty is constrained by the fact that the irrigation system is designed, installed and maintained in accordance with the directions available through GPH Irrigation Products. No warranty shall extend beyond the description of goods sold as shown on GPH's sales Invoice. This warranty is limited to repair or replacement of such parts or components proven to be defective in material or workmanship when manufactured by GPH Irrigation Products. GPH Irrigation Products shall not be responsible for any consequential damages. GPH Irrigation Products only obligation, in the event the goods sold do not conform to its physical or performance description, is limited to replacement, as stated above, of nonconforming goods or parts. The warranty does not cover: nonconforming performance due to improper design, installation or maintenance; acts of God; damage due to animals, freezing or contamination to any of GPH Irrigation Products. The use of any registered trade marks or trade names are owned by their respective companies.

NOTES

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

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