













Providing Irrigation Solutions Since 1954.



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# **G.P.S. Mapping & Irrigation Design**

G.P.S. Mapping is just one of the many tools we utilize to design an irrigation system. The high degree of accuracy and detail G.P.S. affords is a great starting point for our motivated and enthusiastic Vanden Bussche Team! Helping you identify and meet your irrigation goals have been the foundation of our company for over 60 years. Our mapping and design expertise will help to ensure:

- The system will operate to expectations
- Dealing with problem topographies
- Accurate placement of equipment
- Proper location of sensors & meters
- Positioning of relief vents & valves

Mapping & Design, when executed by our motivated & experienced group, is a smart choice for small, medium and large installations as well as revamping and upgrading your current irrigation system.

Irrigation Systems are steadily becoming more complex, allowing for automation, remote monitoring, remote access, fertilizer injection, and sensors that automatically record and transmit data. These increasingly sophisticated systems require a proper design that will benefit our customers and contractors.

Considering that each irrigation system is designed for a specific location, you can depend on us for custom fabrication to entrust that all components are of high quality to ensure reliability within your system. Even after your system has been installed, you can rely on Vanden Bussche Irrigation for quality service of your equipment with our trained and experienced staff.









#### **Prices**

Prices are subject to change without notice. Prices invoiced will be the price in effect at the time of shipping or pickup.

Prices in the catalogue are suggested retail prices. For inquiry about trade prices, please contact a member of our team.

Applicable taxes will be charged separately on the invoice.

## **Credit Policy**

For those with established records of prompt payment, we are glad to grant reasonable credit terms. New accounts are cash C.O.D. until a record is established with us. We require trade and 2. bank references for establishment of our credit. The minimum charge on account is \$25.

### **Delivery - Freight Terms**

Delivery terms are available upon request. All deliveries are subject to charge.

#### **Delivery Schedule**

Vanden Bussche Irrigation will deliver to different regions on a weekly schedule. Please call for details. Claims for shortages/errors made on packing slips or delivery must be made within seven(7) days of receipt of order.

Vanden Bussche will be responsible for delivering orders to customer's place of business or job site safely and undamaged. Although our drivers will be happy to aide in the off-loading of these orders, it remains the responsibility of the customer for any damage or losses incurred during off-loading. It is the customers responsibility to supply any equipment needed in the off-loading of orders.

#### **Special Orders**

All special orders must be made in writing (fax or email). All special non-stock orders must be prepaid and may not be cancelled or returned. Shipping surcharge may be applicable.

#### Warranty

Items returned for a warranty exchange, replacement or repair must be accompanied with an invoice. It is our policy to follow the manufacturer with regards to warranty claims. Updates of manufacturers warranty products are available upon request.

#### **Returned Merchandise**

Although we are happy to assist with all your irrigation needs the best we can, Vanden Bussche Irrigation & Equipment Limited does adhere to a strict merchandise return policy. Our policy is **NOT** to accept returned goods. All sales are final when a customer takes receipt of product. However, we do understand that some exceptions may apply and items for return will be assessed on a case by case basis. The following parameters may involve acception to the

NO RETURNS rule:

- 1. All returns for product must be completed within 3 months of original purchase. Items that exceed the 3 months, may NOT be returned for credit or otherwise.
- All customers must have proof of purchase at the time of the return process. This can be either a Vanden Bussche Irrigation & Equipment Ltd. Packing Slip or Invoice. Customers without proof of purchase will not be eligible for credit or otherwise.
- 3. NO RETURNS will be completed for Non-Stock items of any kind, unless approved by the vendor or GM.
- All items being returned must be in "re-saleable" condition. Vanden Bussche Irrigation & Equipment Ltd., will not accept any damaged, dirty or unkempt product regardless of the number of days from purchase.
- 5. All returns will be subject to a 20% re-stocking fee or at minimum, a \$20 Administration Fee, unless picking error of product was made by a VBI staff member.
- Shipments are prepaid to the originating VBI location.

#### **Hours of Operation**

Monday - Thursday: 8:00 am-5:00 pm

Friday: 8:00 am-4:00 pm

Saturday: Contact your local branch

Sunday: Closed

#### **Holiday Long Weekends**

Contact your branch for details regarding long weekend clo-

#### **Off Season Closures**

Some of our branches may be closed during the winter. Please see your branch for more information

Vanden Bussche Irrigation is closed for a full week at the end of November each year, due to inventory count. Please see your branch for specific closure dates.



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# **STREAMLINE X**

## Thinwall Dripperline





## **Streamline X Specifications:**

- Non Pressure Compensating
- Low Variation TurboNet Emitter
- Inside Diameter: 0.636" & 0.875"
- Mil: 5, 6, 8 & 10
- Common Emitter Spacing: 8", 12", 18", 24" & 30"
- Flow Rate (GPH): 0.16, 0.24 & 0.36

#### **Maximum Operating Pressures:**

- 5 MIL 13 PSI
- 6 MIL 16 PSI
- 8 MIL 17 PSI
- 10 MIL 20 PSI

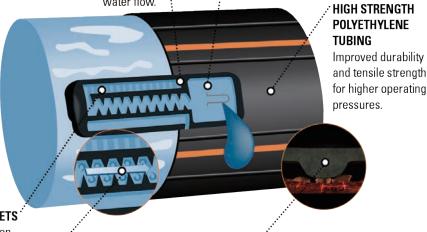
**Recommended Filtration: 120 mesh** 

#### **INJECTION MOLDED DRIPPERS :**

Made of high quality polyethylene and welded into a wall of seamless tubing. Flow path is not affected by stretching during installation allowing for consistent water flow.

#### : ADVANCED FLAP TECHNOLOGY

Reduces the risk of clogging by systematically opening and closing during start-up and shut-down to protect against root intrusion and soil ingestion.



## LARGER FILTER INLETS

Secondary filtration reduces the risk of clogging while maintaining constant water flow

# **TURBONET**

#### **INCREASED FLOW PATH VELOCITY**

Improves dripper performance by widening the tooth pattern, maximizing flow path velocity, allowing debris to pass easily through the dripper, eliminating clogging.

# RIBBED INTERIOR AND EXTERIOR

Exterior ribs for maximum abrasion resistance during installation.

Interior ribs for minimizing damage to dripper during installation.

See page 15 for Thinwall Dripperline Fittings.



# **STREAMLINE X**

Thinwall Dripperline

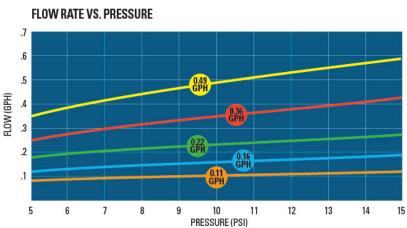
# **Applications:**

- 6 Mil: seasonal use, surface or shallow burial (up to 5")
- 8 Mil: seasonal or multi-seasonal use, surface or shallow burial (up to 8")
- 10 Mil: multi-seasonal use, surface or shallow (up to 10") burial.
- Functional for surface or sub-surface installations

NOTE: When using plastic mulch, bury at least 1" deep.



## Streamline X Flow Rate vs. Pressure



### **STREAMLINE X SIZES**

PART#	I.D.	MIL	EMITTER SPACING	EMITTER FLOW (GPH)	REEL LENGTH (FT)
AT06SPF6380616-16	0.630"	6	16"	0.16	11,500′
AT06SPF638062-12	0.630"	6	12"	0.20	11,500'
AT06SPF638062-16	0.630"	6	16"	0.20	11,500'
AT06SPF6380816-12	0.630"	8	12"	0.16	9,000'
AT06SPF6380816-16	0.630"	8	16"	0.16	9,000'
AT06SPF638082-12	0.630"	8	12"	0.20	9,000'
AT06SPF638082-16	0.630"	8	16"	0.20	9,000'
AT06SPF638102-12	0.630"	10	12"	0.20	7,500′

Other sizes and custom orders are available (minimum quantities apply). Please consult our expert Sales Team for more information.

# **TYPHOON™ PLUS**

## Thinwall Dripperline



#### **Typhoon Specifications**

- Non Pressure Compensating
- TurboNet Emitter.
- I.D. Size: 0.638" & 0.875"
- Mil: 8, 10, 13 & 15
- Emitter Spacing: 12", 16", 18" & 24"
- Flow Rate (GPH): 0.11, 0.16, 0.22, 0.36 & 0.49

#### **Maximum Operating Pressures:**

- 8 MIL 15 PSI
- 10 MIL 17 PSI
- 13 MIL 26 PSI
- 15 MIL 32 PSI

#### Recommended Filtration:

- 120 mesh for 0.11, 0.16 & 0.24, GPH emitters
- 80 mesh for 0.36 & 0.49 GPH emitters

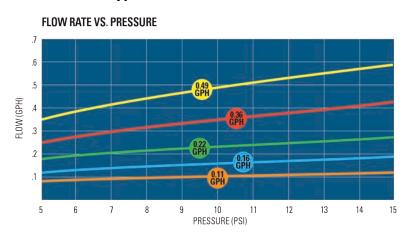
# **Product Advantages:**

- Seamless Construction
- Stronger, more durable than comparable drip tape
- Fortifies against splitting or bursting under high pressures required for proper flushing
- Eliminates root intrusion
- Dripperlines are packaged with more feet per reel, allowing for fewer fittings and less time changing reels during an installation.

# **Applications:**

- **8 Mil:** seasonal or multi-seasonal use, surface or shallow (up to 8") burial
- 10 Mil: multi-seasonal use, surface or shallow (up to 10") burial. Use where rocky or clod soils exist
- 13/15 Mil: sub-surface applications where durability is needed with deep burial (up to 24")

## **Typhoon Flow Rate vs. Pressure**



#### **TYPHOON PLUS SIZES**

PART #	I.D.	MIL	EMITTER SPACING	EMITTER FLOW (GPH)	REEL LENGTH (FT)
AT06TPF638102-12	0.638"	10	12"	0.25	6,600'
AT06TPF638102-16	0.638"	10	16"	0.25	6,600'
AT06TPF6381316-24	0.638"	13	24"	0.25	5,300'

Custom sizes are available (minimum quantities apply). Please consult our expert Sales Team for more information.







# **Product Advantages:**

- Pressure Compensating Dripperline
- Delivers precise flows anywhere in the field
- Undulating terrain, large fields with long rows (up to 50% longer, when compared to turbulent drip tape) receive exact amounts of water, from the first to the last dripper in the row
- Wide regulation pressure range from 6 to 36
- Wide range of flows, tubing size and dripper spacing to match the soil's infiltration rates

# **Applications:**

- Sub-surface or surface installations
- Wide array of field & row crops
- 13 Mil: multi-seasonal, durable surface & subsurface use
- 15 Mil: multi-seasonal, durable surface & subsurface use
- 25 Mil: where higher pressures are needed, to overcome severe undulations in large fields with long runs

# **DRIPNET PC**

Pressure Compensating Thinwall Dripperline

### **DripNet PC Specifications**

Pressure Compensating TurboNet Emitter. I.D. Size: 0.636" & 0.875"

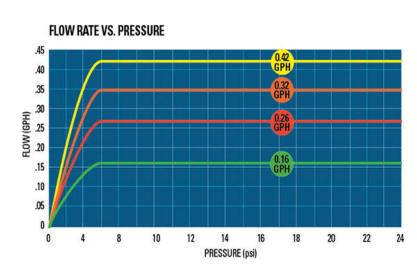
Mil: 13, 15 & 25

Emitter Spacing: 8", 12", 16", 18", 24" & 30" Flow Rate (GPH): 0.16, 0.26 & 0.42

Operating Pressure Range: 6 to 36 psi

Recommended Filtration: 120 mesh

# **DripNet PC Flow Rate vs. Pressure**



### **DRIPNET PC SIZES**

PART#	I.D.	MIL	EMITTER SPACING	EMITTER FLOW (GPH)	REEL LENGTH (FT)
AT06DA6361326-08	0.638"	13	8"	0.26	3,700'
AT06DFA6361326-12	0.638"	13	12"	0.26	3,700'
AT06D6361316-24	0.638"	13	24"	0.16	4,000'

Anti-Siphon feature is available.

Custom sizes are available (minimum quantities apply). Please consult our expert Sales Team for more information.

# **DRIPNET PC**

Pressure Compensating Heavywall Dripperline



DripNet PC's self-cleaning pressure compensating dripper is a fully self-contained unit welded to the interior wall of the dripper tubing. Both tubing & dripper are manufactured from high quality synthetic elastomers to withstand chemicals & fertilizers. The DripNet PC dripper contains a diaphragm that continuously adjusts to varying water pressure to ensure a constant flow rate. The diaphragm allows particles to pass through the dripper, promoting reliable performance and a longer system life. This continuous flushing feature and wide flow path keep drippers flowing at optimal rates without clogging or interrupting operation.



Wider cross-section

allows large particles

through short flow path.

#### HIGH QUALITY POLYETHYLENE TURING

#### INJECTION MOLDED DRIPPERS

Made of high quality polyethylene and welded into tubing for added strength, durability and long-term performance.

# EXTREMELY LARGE FILTRATION AREA

Each dripper is designed with an extremely large filtration area on the entire top cover preventing penetration of dirt particles into dripper.



#### CHEMICAL RESISTANT MOLDED SILICON SELF-ADJUSTING DIAPHRAGM

Diaphragm's movement maintains constant pressure differential within water passage - resulting in a uniform flow rate under wide pressure range.

#### **TURB NET**

#### TURBONET TECHNOLOGY

improves dripper performance by expanding the tooth pattern geometry, maximizing flow path area, allowing contaminants to pass easily through the dripper.

#### **Product Advantages:**

- Wide pressure range produces uniform dripper flow rate on longer runs & steeper topographies for higher uniformity
- Lowest coefficient of manufacturing variability (CV) in the industry
- One-piece construction prevents damage to drippers during installation & retrieval
- Design flexibility is available in a range of dripper flows & spacings for specific application rates & controlling of wetting pattern in different soil types
- Pressure compensating feature delivers precise water application nearly everywhere in the field.

### **Applications:**

- Sub-surface or surface applications
- For tree, vine, row crops, greenhouse & nursery
- Multi-seasonal use
- For undulating fields

#### **DripNet PC Specifications:**

- Pressure Compensating, TurboNet Emitter.
- I.D. Size: 16mm, 18mm & 20mm
- Emitter Spacing: 24", 30", 36", 42.25" & 48"
- Flow Rate (GPH): 0.16, 0.26, 0.32, 0.42, 0.53, 0.61, 0.92 & 1.00

## **Operating Pressure Range:**

- 4 to 43 psi (0.16 GPH)
- 6 to 43 psi (0.26, 0.32 & 0.42 GPH)
- 6 to 51 psi (0.53, 0.61, 0.79, 0.92 & 1.0 GPH)

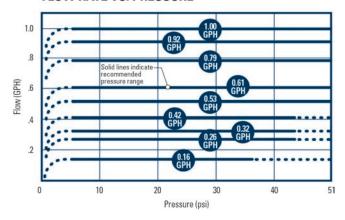
#### Recommended Filtration:

- 80 mesh 0.42 GPH and higher
- 120 mesh 0.16, 0.26, 0.32 GPH



# **DripNet Flow Rate vs Pressure**

## FLOW RATE VS. PRESSURE



# **DRIPNET PC**

**Pressure Compensating** Heavywall Dripperline

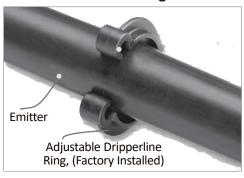
## **DRIPNET PC HEAVYWALL**

PART #	MIL	EMITTER SPACING	EMITTER FLOW (GPH)	REEL LENGTH
AT08D6204542-24	18	24"	0.4	1,000'
AT08D6204553-24	18	24"	0.53	1,000'
AT08D69048042-24	20	24"	0.42	1,000′
AT08D69048053-24	20	24"	0.53	1,000'
AT08D6204553-36	18	36"	0.5	1000'
AT08D6204561-36	18	36	0.6	1000'

Custom sizes are available (minimum quantities apply). Consult our expert Sales Team for more information.

# **VINELINE RINGS, CURLS & STAPLES**

**Vineline Rings** 





## **VINELINE RINGS & CURLS**

PART #	DESCRIPTION	SIZE
ATH670780R	Vine Ring	18 mm
ATH790R	Vine Ring	20 mm
AACURL3	Vine Curl	3" for .700" O.D.
AACURL74	Vine Curl	4" for .900" O.D.
AACURL83	Vine Curl	3" for .830" O.D.

Vineline Dripperline Rings attach easily with 12 to 13 gauge wire. Rings and Curls are installed downslope from emitter, preventing water travelling along the tubing.

#### **Vineline Curls**





Model 142 Staples



**Vineline Staples** 



# **UNIRAM**

Heavywall Dripperline



UniRam Heavywall Dripperline can operate in the poorest water quality conditions, the most difficult environments and irrigate the steepest terrains with the highest uniformity. UniRam's self-cleaning, pressure compensating dripper is a fully self-contained unit welded to the interior wall of the dripper tubing. Both tubing and dripper are manufactured from high quality synthetic elastomers to withstand chemicals and fertilizers.

The UniRam dripper contains a diaphragm that continuously adjusts to varying water pressure to ensure a constant flow rate. The diaphragm allows particles to pass through the dripper, promoting reliable performance and a longer system life. This continuous flushing feature & wide flow path keeps drippers flowing at optimal rates without clogging or interrupting operations.

#### **UniRam Emitter**

Outer Cover (reverse)

Pressure Compensating Chamber

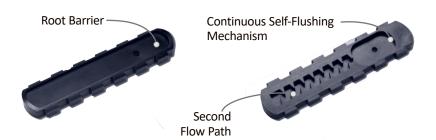
CNL (optional)

First Flow Path

Vacuum Mechanism

Diaphragm

Inner Cover (reverse)



See pages 16 & 17 for Heavywall Dripperline Fittings.

#### **UniRam Specifications:**

- Pressure Compensating TurboNet Emitter, available with optional CNL Non-Leakage Mechanism; also available with Vineline Dripperline Ring
- I.D. Size: 16mm, 18mm & 20mm
- Coil Length = 1,000'
- Emitter Spacing: 18", 24", 30", 36", 42", 48" & 60".
- Flow Rate (GPH): 0.26, 0.42, 0.53, 0.61, 0.92, 1.0
- Operating Pressure Range: 7 to 58 psi
- Recommended Filtration: 80 mesh (120 mesh for 0.26 GPH)

#### **Applications:**

- Surface or subsurface installations
- Slopes & undulating terrain
- Poor water quality conditions

### **Product Advantages:**

- Wide pressure range produces uniform dripper flow rate, meaning longer runs & steeper topographies are irrigated with high uniformity.
- Lowest coefficient of manufacturing variability (CV) in the industry.
- One piece construction prevents damage to drippers during installation & retrieval.
- Design flexibility & system performance is available in a range of dripper flows & spacings, allowing for specific application rates & controlling of wetting patterns in different soil types.
- Pressure compensating feature delivers precise water application nearly everywhere in the field.



# **UNIRAM**

Pressure Compensating Heavywall Dripperline

UniRam's optional CNL Mechanism prevents line drainage at the end of an irrigation cycle, eliminating refill time. The CNL option is ideal for pulse irrigation.



UniRam is also available with pre-installed Vineline Rings. Vineline Dripperline Rings attach easily to 12 to 13 gauge wire and are adjustable. Rings are installed downslope from emitter, to prevent water travelling along the tubing.



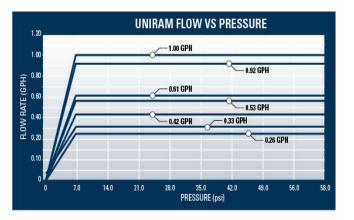
## UNIRAM - 1,000' COILS

PART#	SIZE (mm)	I.D.	O.D.	EMITTER SPACING	EMITTER FLOW (GPH)
AT08UR184-24	18	0.620"	0.700"	24"	0.42
AT08UR185-24	18	0.620"	0.700"	24"	0.53
AT08UR204-24	20	0.69"	0.79"	24"	0.4
AT08UR189-36	18	0.620"	0.700"	36"	0.9

## **UNIRAM WITH VINELINE RINGS**

PART#	SIZE (mm)	I.D.	O.D.	EMITTER SPACING	EMITTER FLOW (GPH)
AT08URV184-24	18	0.620"	0.700"	24"	0.42
AT08URV204-24	20	0.690"	0.79"	24"	0.42

## **UniRam Flow Rate vs Pressure**



Custom sizes are available; lead times may vary. Consult with our expert Sales Team for more information.

# **Oval Tubing**



#### **OVAL TUBING**

PART#	SIZE	WORKING PSI	ROLL LENGTH (FT)
AA1521600	1 ½"	21	600′
AA221	2"	21	450'
AA321	3"	21	200′
AA421	4"	21	130'



# **FLEXNET**



FlexNet is simple, flexible and light-weight for maximum portability and quicker movement from field to field. It can be used in surface or subsurface applications and comes with pre-installed outlets, meaning there is no required specialized tools.



Surface Installation



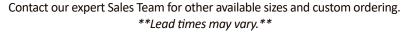
**Subsurface Installation** 



### **FLEXNET & PARTS**



PART #	DESCRIPTION	BAG QTY.
AT05FXPLUG050MPT-B	½" MPT Short Plug	50
AT05FX050MTEX636TL-B	630 TWD Tee Connection Twist Lock	100
AT05FX050MELX636TL-B	630 TWD Elbow Connection Twist Lock	100





# **CHAPIN DRIP TAPE**



Chapin Watermatics is a pioneer of drip irrigation in North America. Their Turbulent Twin-Wall thinwall dripperline is a rugged, durable product available in a wide number of emitter spacings, reel lengths and thicknesses. Turbulent Twin-Wall with 2" & 4" spacing is a popular product amongst greenhouse growers.

#### **CHAPIN DRIP TAPE**

PART #	I.D.	MIL	EMITTER SPACING	FLOW RATE (GPH/100')	REEL LENGTH
AADLX58082100	0.625"	8	2"	120	7,500'
AADLX58084175	0.625"	8	4"	60	7,500'

Contact our expert Sales Team for other available sizes.

#### **Turbulent Twin-Wall Specifications:**

Non-Pressure Compensating Turbulent Flow Path Emitter.

I.D. Size: 0.625" Mil: 6, 8, 10

Emitter Spacing: 2", 4" & 12"

Flow Rate (GPH): 90, 60 & 18 per 100' Operating Pressure Range: 10 psi

Recommended Filtration: 200 mesh

#### **Installation Tips:**

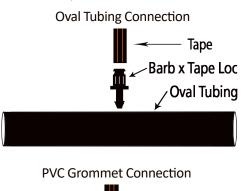
- Always install dripperline with the emitter facing up to allow particles in the system to settle away from the emitter.
- Regularly inspect the Dripperline Burial Shank to ensure it is free from burrs & rough edges.



# DRIPPERLINE FITTINGS

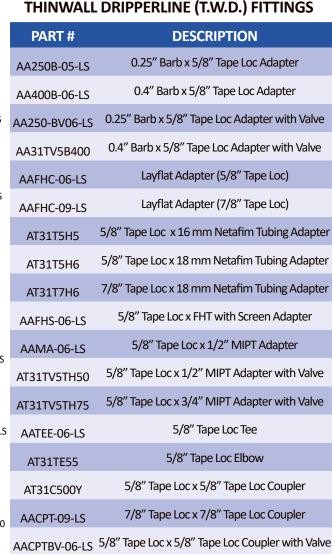
Dripperlines are connected to a variety of header lines either directly to the header line or with an intermediary line. The intermediary line has no emitter, so field headlands are not irrigated.

Also an intermediary line allows you to place the header line at the edge of the field so it does not interfere with other farm operations. IPS Hose and Netafim Tubing are popular choices to connect dripperlines to header lines.



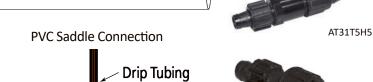


# THINWALL DRIPPERLINE (T.W.D.) FITTINGS









Drip Tape

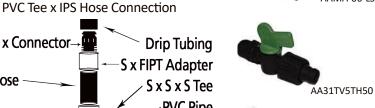
Grommet

**PVC Pipe** 

Barb x Tape Loc











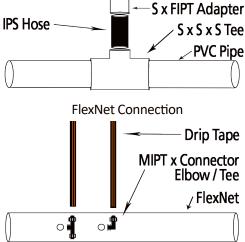






5/8" Tape Loc Low Pressure End Flush Out

Tool Punch Pro Grip for 400 Series



MIPT x Connector-

**AT31TE55** 

AT31T5FVL

AA HP400



# **DRIPPERLINE FITTINGS**

# **Fittings for Heavywall Dripperline** & Netafim Tubing (Perma-Loc)



# **Fittings for Heavywall Dripperline** & Netafim Tubing (Insert Fit & Perma-Loc)

	PART #	DESCRIPTION
	AT58-VQA12	16 mm Valve
	AT58-VQA58	18 mm Valve
	AT58-VQA34	20 mm Valve
	BE600-BC	16 mm Insert Coupler
2	BE600-BT	16 mm Insert Tee
	BE600-BL	16 mm Insert Elbow
-	AT31H5B400	0.4" Barb x 16 mm Adapter
	AT31H6B400	0.4" Barb x 18 mm Adapter
	AT31HV5B400	0.4" Barb x 16 mm Adapter & Valve
2	AT31HV6B400	0.4" Barb x 18 mm Adapter & Valve
	AT31H6S	FHT x 18 mm Adapter
	AT31H7S	FHT x 20 mm Adapter
	AT31H5TH50	1/2" MIPT x 16 mm Adapter
	AT31H6TH50	1/2" MIPT x 18 mm Adapter
	AT31H6TH75	3/4" MIPT x 18 mm Adapter
B	AT31H7TH75	3/4" MIPT x 20 mm Adapter
	AT31H8TH75	3/4" MIPT x 22 mm Adapter
	AT31HV5TH50	1/2" MIPT x 16 mm Adapter & Valve
	AT31HV5TH75	3/4" MIPT x 16 mm Adapter & Valve
	AT31HV6TH50	1/2" MIPT x 18 mm Adapter & Valve
	AT31HV6TH75	3/4" MIPT x 18 mm Adapter & Valve
	AT31HV7TH75	3/4" MIPT x 20 mm Adapter & Valve





# **DRIPPERLINE FITTINGS**

# Fittings for Heavywall Dripperline & Netafim Tubing (Compression Fit)

	PART #	DESCRIPTION	
	AA400CPIA600	0.4" Barb x 16 mm Adapter	
	AA400CPIA700	0.4" Barb x 18 mm Adapter	
	AA600-CHS	FHT x 16 mm Adapter	
	AA700-CHS	FHT x 18 mm Adapter	
	AA800-CHS	FHT x 20 mm Adapter	
	AA900-CHS	FHT x 22 mm Adapter	
	AA600-CE	MHT x 16 mm Adapter	
	AA700-CE	MHT x 18 mm Adapter	
3	AA900-CE	MHT x 22 mm Adapter	
	AA600-CMA05	1/2" MIPT x 16 mm Adapter	
A	AA600-CMA075	3/4" MIPT x 16 mm Adapter	
1	AA700-CMA05	1/2" MIPT x 18 mm Adapter	
	AA700-CMA075	3/4" MIPT x 18 mm Adapter	
	AA600-CC	16 mm Coupler	
	AA700-CC	18 mm Coupler	
	AA800-CC	20 mm Coupler	
	AA900-CC	22 mm Coupler	
	AA700-600CC	18 mm x 16 mm Coupler	
7	AA600-C3T	16 mm Tee	
	AA700-C3T	18 mm Tee	
	AA800-C3T	20 mm Tee	
	AA900-C3T	22 mm Tee	
	AA600-CST	16 mm x 16mm x FHT Tee	
	AA700-CST	18 mm x 18 mm x FHT Tee	
	AA600-CELL	16 mm Elbow	
a	AA700-CELL	18 mm Elbow	
	AA800-CELL	20 mm Elbow	
	AA600-CELLSN	FHT x 16 mm Elbow	
6	AA700-CELLSN	FHT x 18 mm Elbow	
	AA600-AP8	16 mm Figure 8 End Closure	
	AA700-AP8	18 mm Figure 8 End Closure	
	AA600-CETC	16 mm End Closure with Cap	
	AA700-CETC	18 mm End Closure with Cap	
	AA800-CETC	20 mm End Closure with Cap	

AA900-CETC

# Fittings for Heavywall Dripperline & Netafim Tubing (Compression Fit)



	doing (compression rit)
PART#	DESCRIPTION
AA075IPSH	0.75" x 200, Flexible IPS Hose that can be glued with PVC Cement into standard 3/4" PVC fittings
AA075MHA	MHT x 3/4" PVC Slip Adapter
AA05MHA	MHT x 1/2" PVC Spigot, Adapter
AA075MHS	MHT x 1/2" PVC Slip or 3/4" Spigot Adapter
AA400PIA	0.4" Barb x 1/2" PVC Slip or 3/4" Spigot Adapter
AA400PIAS	0.4" Barb x 1/2" PVC Spigot Adapter
AAGRO	Grommet for fittings with 0.4" Barb
AT31AGR700	Grommet for fittings with 0.7" Barb
AT11-07737	Dual Plug for Fittings and Drippers with 0.25" Barbs
AA400-MP	Plug for 0.4" Barb
AA700-MP	Plug for 0.7" Barb
ATA45635	16mm x 16mm Adapter
ATA45665	19mm x 19mm Adapter
ATA45745	16mm Rubber Grommet
ATA45755	19mm Rubber Grommet

22 mm End Closure with Cap





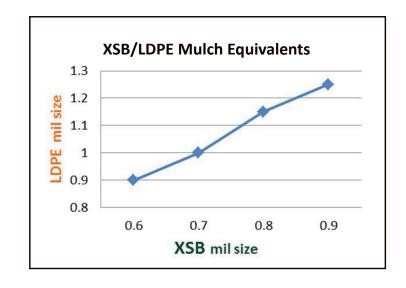


## **CAN-GROW XSB - Mulch Films**

These are heavy duty, thin gauged and embossed mulches for raised bed fruit and vegetable production. They are made from our eXtra Strong Blend (XSB) material that possesses a higher crystallinity and makes our mulches very strong and durable on the field. CAN-GROW XSB provides all known benefits of plastic mulching including: better weed control, increased and earlier harvests, higher quality produce, and more efficient use of irrigation water to name a few.

#### **Features:**

- 30% thinner and lighter, yet as strong as thicker LDPE mulches
- Available from 0.6 mil in common widths and colors
- Excellent puncture and tear resistance
- Textured for tight bed fit
- Season long weather protection package
- Easy application and removal



## **Benefits:**

- 30% less plastic consumption for covering an acre compared to industry standard LDPE mulches
- Thinner clear mulches allow for better soil heating for solarization
- Maximum footage per roll to reduce downtime and costs of high-speed layers
- Reduce mulch purchase and disposal costs

# **Highlighted Specialty Products:**

• Clear, smooth textured solarization films for pre-plant soil sanitation without fumigants



# Imaflex Plastic Mulch "Popular Sizes"

PART#	WIDTH	MIL	ROLL LENGTH (FT)	
Black Embosse	ed			
EHH48606BM	48"	0.6	6,000′	
EHH48906BM	48"	0.6	9,000′	
EHH50906BM	50"	0.6	9,000′	
EHH5806BM	54"	0.6	8,000′	
EHH60906BM	60"	0.6	9,000′	
EHH60607BM	60"	0.7	6,000′	
EHH60608BM	60"	0.8	6,000′	
EHH724808BM	72"	0.8	4,800′	
White on Black	(			
EHH366075WB	36"	0.75	6,000′	
EHH486075WB	48"	0.75	6,000′	
EHH606075WB	60"	0.75	6,000′	

Custom sizes are available (minimum quantities apply) Consult our expert Sales Team for more information.

# Berry Plastic Mulch "Popular Sizes"

	-		
PART#	WIDTH	MIL	ROLL LENGTH (FT)
Black			
EHP48409BM	48"	0.9	4,000′
EHP48609BM	48"	0.9	6,000′
EHP4841BM	48"	1.0	4,000′
EHP48411BM	48"	1.1	4,000′
EHP50409BM	50"	0.9	4,000′
EHP5061BM	50"	1.0	6,000′
EHP50411BM	50"	1.1	4,000′
EHP53409BM	53"	0.9	4,000′
EHP60409BM	60"	0.9	4,000′
White/Black			
EHP3622WB	36"	2	2,000′
EHP604125WB	60"	1.25	4,000′

Custom sizes are available (minimum quantities apply) Consult our expert Sales Team for more information.

# **PLASTIC MULCH**



Companies such as Imaflex and Berry Plastics use a high-molecular weight, high-density polyethylene (HMW-HDPE) resin to create an embossed mulch film. The high quality resins produce strong mulch that traps in moisture and heat. Plastic mulches combined with drip irrigation offer growers many benefits for highly-productive horticultural production of fresh fruits and vegetables over bare ground.

Some other benefits of using plastic mulch include: earlier season crops, higher yield, weed control and cleaner crops overall.



\*\*Now Available: Ask your Sales Rep about the Biodegradable Mulch options.\*\*



Essential frost protection for every climate and crop need.





Peppers survive six hours below freezing with 25°F with Pro25.



Container blocks prepared for quick application with Pro34 during temperature drops.



Ginseng plants protected with AgroFabric will be better quality and market-ready earlier.

Order today! For more information email info@agrofabric.com or visit AgroFabric.com



### **Row Cover**

Available in many weights and sizes (minimum order quantity may apply)

## LIGHTWEIGHT

# **MEDIUM WEIGHT**

## HEAVYWEIGHT



# WINTER BLANKET



## Mini-Tunnels - 72" Wide

PART#	DESCRIPTION	MIL	NUMBER OF HOLES	LENGTH
<b>Popular Sizes</b>				
EHMTPG72315	Pale Green	1.0	500/m²	3,000′
EHSHOOPS	Galvaniz	ed Spring H	loops for Mini-Tunn	iels
Factory Orders	S			
	White	1.0	500/m²	3,000′
	Pale Green	1.1	500/m²	3,000′

Custom sizes are available (minimum quantities apply) Consult our expert Sales Team for more information.

# **ROW COVER**



**Floating Row Cover** 

Popular choices for carrots, strawberries, lettuce, corn, melons, and many other crops.

Protects against:

- Frost
- Hail
- Heavy RainInsects & Birds

Also used for overwintering strawberries.



## **Mini-Tunnels**

To protect & nurture your new transplants, Mini-Tunnels act like a small greenhouse over each bed helping transplants adjust and giving you a jump start on growth.

> Available Sizes (increments of 5') 5' - 60' wide 100' - 1,000' long

# **DISC & SCREEN FILTERS**

### **NETAFIM PLASTIC FILTERS**

PART #	DESCRIPTION	SIZE	MAX. GPM
AT 25A45-120	Disc, 120 Mesh	3/4" (MIPT)	18
AT 25A45-140	Disc, 140 Mesh	3/4" (MIPT)	18
AT 25A47-120	Disc, 120 Mesh	1" (MIPT)	26
AT 25A47-140	Disc, 140 Mesh	1" (MIPT)	26
AT 25A48-120	Disc, 120 Mesh	1" Super (MIPT)	35
AT 25A48-140	Disc, 140 Mesh	1" Super (MIPT)	35
AT 25A15-140	Disc, 140 Mesh	1 1/2" (MIPT)	35
AT 25A30-120	Disc, 120 Mesh	2" Dual (MIPT)	120
AT 25A30-140	Disc, 140 Mesh	2" Dual (MIPT)	120
AT25A2DL-120	Disc, 120 Mesh	2" Dual Lite (MIPT)	110
AT25A2DL-140	Disc, 140 Mesh	2" Dual Lite (MIPT)	110
AT 25A50-120G	Disc, 120 Mesh	3" Twin (Groove)	175
AT 25A50-140F	Disc, 140 Mesh	3" Twin (Flange)	175
AT 25A50-200G	Disc, 200 Mesh	3" Twin (Groove)	175
AT 25A3TL-120F	Disc, 120 Mesh	3" Twin Lite (Flange)	220
AT 25A3TL-140F	Disc, 140 Mesh	3" Twin Lite (Flange)	220
AT 25A53-120G	Disc, 120 Mesh	3" Angle (Groove)	200
AT 25A53-140F	Disc, 140 Mesh	3" Angle (Flange)	200
AT 25A78-120F	Disc, 120 Mesh	4" Twin (Flange)	450
AT 25A78-140F	Disc, 140 Mesh	4" Twin (Flange)	450
AT 25A80-120F	Disc, 120 Mesh	6" Twin (Flange)	600
AT 25A80-140F	Disc, 140 Mesh	6" Twin (Flange)	600

## **JAIN SPIN CLEAN PLASTIC FILTERS**

PART #	DESCRIPTION	SIZE	MAX. GPM
AA 4E075B150	Screen, 150 Mesh	3/4" MIPT x MIPT	13
AA 4E1B150	Screen, 150 Mesh	1" MIPT x MIPT	31
AA 4E2P050	Screen, 150 Mesh	2" MIPT x MIPT	110
AA 4E2P150	Disc, 120 Mesh	2" MIPT x MIPT	110



- Choosing a Screen or Disc Filter -

Screen filters are very effective in removing inorganic particles, such as sand and grit from a well. Disc filters are very effective in removing organic particulates, such as algae from an irrigation pond. For easy checking if a filter element needs cleaning, mount pressure gauges on each side of the filter. As the filter element gets dirty, the pressure difference will increase (as shown on the gauges) alerting you when it is time to clean.



# **DISC & SCREEN FILTERS**

## **AMIAD PLASTIC FILTERS**

PART#	DESCRIPTION	SIZE	MAX. GPM
AC 101-0059-120	Screen, 120 Mesh	3/4" (MIPT)	13
AC 101-0059-155	Screen, 155 Mesh	3/4" (MIPT)	13
AC 101-0059-200	Screen, 200 Mesh	3/4" (MIPT)	13
AC 112-0054-120D	Disc, 120 Mesh	1" (MIPT)	31
AC 112-0054-155D	Disc, 155 Mesh	1" (MIPT)	31
AC 112-0059-120	Screen, 120 Mesh	1" (MIPT)	31
AC 112-0059-155	Screen, 155 Mesh	1" (MIPT)	31
AC 112-0059-200	Screen, 200 Mesh	1" (MIPT)	31
AC 115-0054-120D	Disc, 120 Mesh	1 1/2" (MIPT) short	35
AC 116-0054-120D	Disc, 120 Mesh	1 1/2" (MIPT)	66
AC 116-0054-155D	Disc, 155 Mesh	1 1/2" (MIPT)	66
AC 116-0059-120	Screen, 120 Mesh	1 1/2" (MIPT)	66
AC 116-0059-155	Screen, 155 Mesh	1 1/2" (MIPT)	66
AC 116-0059-200	Screen, 200 Mesh	1 1/2" (MIPT)	66
AC 122-0054-155D	Disc, 120 Mesh	2" (MIPT)	80
AC 122-0054-155D	Disc, 155 Mesh	2" (MIPT)	80
AC 122-0059-120	Screen, 120 Mesh	2" (MIPT)	80
AC 122-0059-155	Screen, 155 Mesh	2" (MIPT)	80
AC 126-0054-120D	Disc, 120 Mesh	2" Super (MIPT)	110
AC 126-0054-155D	Disc, 155 Mesh	2" Super (MIPT)	110
AC 126-0059-120	Screen, 120 Mesh	2" Super (MIPT)	110
AC 126-0059-155	Screen, 155 Mesh	2" Super (MIPT)	110
AC 126-0059-200	Screen, 200 Mesh	2" Super (MIPT)	110

## **AMIAD STEEL FILTERS**

_	_	
DESCRIPTION	SIZE	MAX. GPM
Disc, 155 Mesh	2" (MIPT)	110
Screen, 155 Mesh	2" (MIPT)	110
Disc, 155 Mesh	3" (Flanged)	220
Screen, 155 Mesh	3" (Flanged)	220
Disc, 155 Mesh	4" (Flanged)	350
Screen, 155 Mesh	4" (Flanged)	350
Disc, 155 Mesh	6" (Flanged)	700
Screen, 155 Mesh	6" (Flanged)	700
	Disc, 155 Mesh Screen, 155 Mesh Disc, 155 Mesh Screen, 155 Mesh Disc, 155 Mesh Screen, 155 Mesh	Disc, 155 Mesh       2" (MIPT)         Screen, 155 Mesh       2" (MIPT)         Disc, 155 Mesh       3" (Flanged)         Screen, 155 Mesh       4" (Flanged)         Disc, 155 Mesh       4" (Flanged)         Disc, 155 Mesh       6" (Flanged)

Need an Amiad Filter with a mesh not in our catalogue? We can order it for you!

#### Amiad Filter Elements

Colour	Mesh	Micron		
Coloui		WIICIOII		
	Screen			
Gray	20	800		
Green	30	500		
Blue	50	300		
White	75	200		
Red	120	130		
Yellow	155	100		
Black	200	80		
Discs				
Red	120	130		
Black	155	100		

### Mesh vs. Micron:

Mesh size refers to the mesh number and its relationship to the size of the openings in the mesh, it accounts for the size of particles that can pass through these openings. Micron is a measurement term frequently used to describe tiny particle sizes. It is equal to onemillionth of a meter or about one twenty-five thousandth of an inch.

# 4" In-Line Steel Filter

2" In-Line

Steel Filter

Filter

2" Filter

2" Super

Filter



## **MANUAL SCREEN FILTERS**

PART#	DESCRIPTION	SIZE	MAX. GPM
AT23SF19803-120	120 Mesh	3"	260
AT23SF19804-120	120 Mesh	4"	450
AT23SF19806-120	120 Mesh	6"	1100

# **DISC-KLEEN**

**Automatic Filter Batteries** 



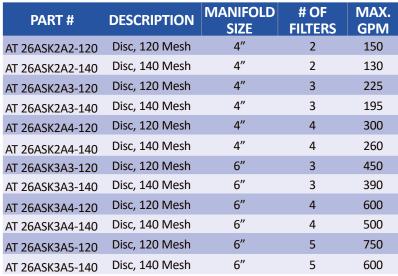
AlphaDisc™ Disc Filter

This new disc filter from Netafim gives you ultimate irrigation system protection through a combination of precise depth filtration, high dirt-holding capacity and a unique easy-to-scale modular design that adapts with your changing flow rate needs.

#### **Additional Features:**

- AlphaDisc smart controller
- Prevents partial/full clogging to ensure system longevity and consistent irrigation
- Vertical installation
- Multiple Configurations

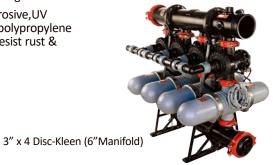
# **DISC-KLEEN AUTOMATIC FILTER BATTERIES**



Looking for a Disc-Kleen Filter with a mesh/size not in our catalogue? We can order it for you!

## **Disc-Kleen Advantages:**

- Proven depth filtration through the entire depth of the disc ring
- Non-corrosive,UV protected polypropylene materials resist rust & corrosion



### Disc-Kleen Backflushing Action

Debris is captured along the walls & grooves of the filter

When backflush cycle begins, the valve changes position

2" x 3 Disc-Kleen

(4" Manifold)



A nozzle system inside the filter stack sprays pressurized water against the discs.

The discs spin which quickly & efficiently cleans them.

After backflushing, the stack of discs compress & resume filtration















Netafim's Backflush Controller for automatic filters is available in 110 or 12 volt. The unit backflushes on time and pressure differential. Filter, valves & the controller are all factory assembled and tested, arriving ready to work on your farm.



# **APOLLO DISC-KLEEN**

**Automatic Filter Batteries** 

High Performance, Reliable, Cost Effective Filtration Solution

- Longer & wider filter elements, give amazing flow rates.
   Higher volume lowers your price per GPM of filtered water
- Re-designed piston means only 30 psi required to backflush which lowers your pump energy costs
- High density synthetic material makes the Apollo corrosion proof not corrosion resistant
- Smaller foot print, means easier to move or mount on a trailer

#### 4 Unit Twin (10" Manifold)



4 Unit Angle (6" Manifold)



# Apollo Filters: Less Water Used to Backflush

The Apollo filter may flush more frequently than a Media filter, however, the Apollo flushes five time faster! This faster backflush cycle saves 45% of water overall, drastically decreasing interruption of water flow to fields while irrigating, and maintains higher uniformity!

## **APOLLO DISC-KLEEN AUTOMATIC FILTER BATTERIES**

PART#	DESCRIPTION	MANIFOLD SIZE	MAX. GPM
AT 26ASK3APP4120	4 Unit Angle, 120 Mesh Disc	6"	780
AT 26ASK3APP4140	4 Unit Angle, 140 Mesh Disc	6"	700
AT 26ASK4PP3120	3 Unit Twin, 120 Mesh Disc	8"	1,170
AT 26ASK4PP3140	3 Unit Twin, 140 Mesh Disc	8"	1,050
AT 26ASK4PP4120	4 Unit Twin, 120 Mesh Disc	10"	1,560
AT 26ASK4PP4140	4 Unit Twin, 140 Mesh Disc	10"	1,400
AT 26ASK4PP5120	5 Unit Twin, 120 Mesh Disc	10"	1,950
AT 26ASK4PP5140	5 Unit Twin, 140 Mesh Disc	10"	1,750
AT 26ASK4PP6120	6 Unit Twin, 120 Mesh Disc	10"	2,340
AT 26ASK4PP6140	6 Unit Twin, 140 Mesh Disc	10"	2,100
AT 26ASK4PP7120	7 Unit Twin, 120 Mesh Disc	12"	2,730
AT 26ASK4PP7140	7 Unit Twin, 140 Mesh Disc	12"	2,450
AT 26ASK4PP8120	8 Unit Twin, 120 Mesh Disc	12"	3,120
AT 26ASK4PP8140	8 Unit Twin, 140 Mesh Disc	12"	2,800



**Alex-Tronix Backflush Controllers** will operate any filter with any common input voltage and 24 VAC, 12 VDC and 12 VDC latching solenoids. The product offers either 4 or 8 progressive or sequential stations, plus a master valve, a new 1-30 psi digital pressure differential sensor with display, and a heavy duty transformer option.

# **SCREEN FILTERS**

## **AMIAD MINI SIGMA**



Amiad's Mini Sigma is a multi-screen, polymeric filter that combines Amiad's unique suction-scanning screen techology with a compact design and innovative self-cleaning mechanism. Raw water enters through the filter inlet passing though the multiple screens, as clean water flows through the filter outlet. The self cleaning process begins when the switch senses the pre-set pressure differential.



### **AMIAD MINI SIGMA FILTERS**

PART #	DESCRIPTION	MAX. GPM
AC 5000-XXX*	2" Threaded On-line	132
AC 5000A-XXX*	2" Threaded Angle	132
AC 5001-XXX*	3" Flanged On-line	220
AC 5001A-XXX*	3" Flanged Angle	220
AC 5002-XXX*	4" Flanged On-line	352
AC 5002A-XXX*	4" Flanged Angle	352

<sup>\* -</sup> Replace "XXX" with preferred micron rating.

Ask our expert Sales Team about other available sizes.

#### **AMIAD FILTOMAT**

The Amiad Filtomat M100 and MG Series are automatic, self-cleaning filters, ideal for remote installation sites. They have a water-driven self-cleaning mechanism that doesn't require an external power source for operation. The filtration process begins when raw water flows through the filter inlet into the coarse screen which pre-filters the water to protect the cleaning mechanism from large debris.







# FILTOMAT M100/MG SELF-CLEANING SCREEN FILTERS

PART #	FILTER TYPE	MAX. GPM	SIZE
AC M104LPN	M100-4500	793	4"
AC M106XLP	M100-6800	1760	6"

#### THE ADI-P CONTROLLER & APP

Control & monitor your Filtomat's filtration process, while receiving the data directly to your mobile device! App data includes:

- Flush logs & frequency
- Current DP
- Outlet & inlet pressure
- Malfunctions & battery status



## NETAFIM SCREENGUARD™

Netafim's ScreenGuard<sup>TM</sup> filters provide superior protection for irrigation systems thanks to its extra-large filtration area. Screenguard<sup>TM</sup> incorporates the most effective self-cleaning mechanism, saving labour, water and energy.

### **Benefits and Features:**

- Extra-large screen size allows the filter to work with higher flow raters and deal with harsh water conditions
- Filter body is made from high quality carbon steel with two-layer coating, offering excellent corrosion resistance



Get Better Control with the Netafim SG App!
The Netafim ScreenGuard<sup>TM</sup> Automatic Filter is bluetooth activated with the Netafim SG app for better control of filter performance.





# **NETAFIM MEDIA FILTERS**

24" Double Chamber Media Filter



Automatic Media Filter batteries are available in a number of configurations. Two & three units are common choices for 16", 20", 24", 36" & 48" filters for flows ranging from 40 to 1125 GPM. The 16", 20" & 24" are also available as a single unit with manual backflush. The 48" is available in batteries of two to eight units for flows ranging from 400 to 2,400 GPM while providing 200 mesh filtration with #16 silica sand. Units are built of epoxy steel. Backflush on time and pressure differential in is 110 volt or 12 volt.



## **EPOXY COATED STEEL MEDIA AUTOMATIC FILTER**

PART#	DESCRIPTION	CONNECTION SIZE	# OF FILTERS	AMOUNT OF MEDIA (lb)	GPM
AT 23MF16	16" Media Filter	2"	1	170	35
AT 23MF20	20" Media Filter	2"	1	250	50
AT 23MF24	24" Media Filter	2"	1	360	80
AT 23MF36	36" Media Filter	3"	1	800	130
AT 23MF48	48" Media Filter	3"	1	1,300	330
AT 23MFBS3602	36" Media Filter Battery	6"	2	720	260-440
AT 23MFBS3603	36" Media Filter Battery	6"	3	1,080	390-660
AT 23MFBS4802	48" Media Filter Battery	8"	2	2,600	440-740
AT 23MFBS4803	48" Media Filter Battery	8"	3	3,900	660-1120

# **SANDSTORM<sup>TM</sup>** Single Chamber Metal **Media Filter**



#### **Product Advantages:**

- Single chamber filter allows for efficient filtration and backflush uniformity.
- Large top and side access ports make loading media and conducting maintenance easier.
- Two-layer coating for industry-leading high corrosion and UV protection.
- Easy assembly & flexible expansion
- Wide range of tank diameters and configurations to address all application needs.
- Maximum protection and reliability in harsh conditions.

# SANDSTORM<sup>™</sup> NC

**Non-Corrosive Single Chamber Media Filter** 



- Maximum protection for systems irrigating with surface water containing high loads of organic materials, silt &
- Durable non-corrosive materials the tank is made from PE liner with Aluminum collars, covered with glass fiber fabrics for maximum strength & protection
- Simple to operate; available in 36" & 48" tanks
- Easy assembly and flexible expansion
- Industry leading warranty lifetime anti-corrosion warranty

# **PRESSURE REGULATORS**

## **NETAFIM PRESSURE REGULATORS**

PART#	SIZE	DESCRIPTION	PSI	# OF SPRINGS	MAX. GPM
AT 32PRV07512	3/4"	Plastic, FIPT x MIPT	12	1	3.5 to 20
AT 32PRV07520	3/4"	Plastic, FIPT x MIPT	20	1	3.5 to 20
AT 32PRV07535	3/4"	Plastic, FIPT x MIPT	35	1	3.5 to 20
AT 32PRV07543	3/4"	Plastic, FIPT x MIPT	43	1	3.5 to 20
AT 32PRV1512	1 ½"	Plastic, MIPT x MIPT	12	2	7 to 40
AT 32PRV1515	1 ½"	Plastic, MIPT x MIPT	15	2	7 to 40
AT 32PRV1520	1 ½"	Plastic, MIPT x MIPT	20	2	7 to 40
AT 32PRV1525	1 ½"	Plastic, MIPT x MIPT	25	2	7 to 40
AT 32PRV1535	1 ½"	Plastic, MIPT x MIPT	35	2	7 to 40
AT 32PRV1543	1 ½"	Plastic, MIPT x MIPT	43	2	7 to 40
AT 32PRV2415	2"	Plastic, FIPT x FIPT	15	4	15 to 80
AT 32PRV2420	2"	Plastic, MIPT x MIPT	20	4	15 to 80
AT 32PRV2425	2"	Plastic, MIPT x MIPT	25	4	15 to 80
AT 32PRV2435	2"	Plastic, MIPT x MIPT	35	4	15 to 80
AT 32PRV2443	2"	Plastic, MIPT x MIPT	43	4	15 to 80
AT 32PRV2615	2"	Brass, FIPT x FIPT	15	6	25 to 120
AT 32PRV2625	2"	Brass, FIPT x FIPT	25	6	25 to 120
AT 32PRV2635	2"	Brass, FIPT x FIPT	35	6	25 to 120
AT 32PRV31015	3"	Brass, FIPT x FIPT	15	10	35 to 200
AT 32PRV31035	3"	Brass, FIPT x FIPT	35	10	35 to 200

## **SENNINGER PRESSURE REGULATORS**

SEMMINGEN FRESSORE REGULATORS						
PART #	SIZE	DESCRIPTION	PSI	MAX. GPM		
AY PMR-12LF	3/4"	Low Flow, FIPT x FIPT	12	0.1 to 8		
AY PMR-20LF	3/4"	Low Flow, FIPT x FIPT	20	0.1 to 8		
AY PMR-25LF	3/4"	Low Flow, FIPT x FIPT	25	0.1 to 8		
AY PMR-30LF	3/4"	Low Flow, FIPT x FIPT	30	0.1 to 8		
AY PMR-10MF	3/4"	Medium Flow, FIPT x FIPT	10	4 to 16		
AY PMR-15MF	3/4"	Medium Flow, FIPT x FIPT	15	2 to 20		
AY PMR-25MF	3/4"	Medium Flow, FIPT x FIPT	25	2 to 20		
AY PMR-30MF	3/4"	Medium Flow, FIPT x FIPT	30	2 to 20		
AY PMR-40MF	3/4"	Medium Flow, FIPT x FIPT	40	2 to 20		
AY PMR-50MF	3/4"	Medium Flow, FIPT x FIPT	50	2 to 20		
AY PMR-15MF1	1"	Medium Flow, FIPT x FIPT	15	2 to 20		
AY PMR-40MF1	1"	Medium Flow, FIPT x FIPT	40	2 to 20		
AY PR-10HF	1 ¼" x 1"	High Flow, FIPT x FIPT	10	10 to 32		
AY PR-15HF	1 ¼" x 1"	High Flow, FIPT x FIPT	15	10 to 32		
AY PR-20HF	1 ¼" x 1"	High Flow, FIPT x FIPT	20	10 to 32		
AY PR-30HF	1 ¼" x 1"	High Flow, FIPT x FIPT	30	10 to 32		
AY PR-40HF	1 ¼" x 1"	High Flow, FIPT x FIPT	40	10 to 32		
AY PR-50HF	1 ¼" x 1"	High Flow, FIPT x FIPT	50	10 to 32		



3/4" Pressure Regulator (1 spring)



1 ½" Pressure Regulator (2 spring)



2" Pressure Regulator (4 spring)



2" Pressure Regulator (6 spring)



3" Pressure Regulator (10 spring)





Senninger Pressure Regulator for Above or Below Ground Installation Pressure Recommendations

PSI	Application
12	Thinwall Dripperline
15	Thinwall Dripperline
20	Non-PC Dripper
25	Spray Stake
30	PC Dripper
35	PC Dripper
43	Micro Sprinkler



# **AIR VENTS & FLUSH ASSEMBLIES**

Air/Vacuum Relief Vents are an important component in an Irrigation System. Their first role is to expel the air trapped in the irrigation system which dampens water hammer, and prevents ruptures and cracking. Their second role is to relieve the vacuum caused when the system/zone is shut down. This prevents the collapse of pipes and the suction of soil into dripperlines. Continuous Acting Vents will also expel air while the system is pressurized. Continuous Combination Vents are placed at:

- **Pump stations**
- Filter stations
- High points in the pipe network
- Upstream of manifolds

Guardian Vents are commonly used downstream of valves & manifolds and on the end of header lines/flush out lines.

## AIR/VACUUM RELIEF VENTS

PART#	DESCRIPTION
AT 65ARIB2PRO	2" High Capacity Continous Vent
AT 65AR1B2PP	2" Combination (Plastic) (MIPT)
AT 65AR1B1	1" Combination (MIPT)
AT 65AR1A2	2" Guardian (FIPT)
AT 65AR1A100	1" Guardian (MIPT)
GA FVO150	1.5" Orchard Air Vent/Flush Out Assembly
GA FVO2	2" Orchard Air Vent/Flush Out Assembly
GA FV2	2" Header Air Release / Flush Out Assembly
GA FV3	3" Header Air Release/Flush Out Assembly
GA FV4	4" Header Air Release/Flush Out Assembly





2" High Capacity Continous



1" Combination Air/Vacuum Relief & Continuous Acting Air Vent (MIPT)

2" Guardian Air/Vacuum Relief Air Vent (FIPT)

1" Guardian Air/Vacuum Relief Air Vent (MIPT)

1.5" Orchard Air Vent/ Flush Out Assembly

2" Orchard Air Vent/Flush Out Assembly: Pre-assembled with 2" Slip Connection, 2" Gate Valve, PVC Fittings & Relief Vent.

Header Air Release/ Flush Out: Pre-assembled with Female Cam, 2" Gate Valve, PVC Fittings & Relief Vent.

















# **FLOW METERS**

Both the **Model IRT & WST** are cast iron construction with a maximum working pressure of 230 psi and may be installed in a vertical, horizontal or oblique position. Both models are available with a Totalizer Register or a battery powered Digital Rate of Flow Register. The Rate of Flow Register not only keeps a total of gallons pumped but also displays the flow while operating in gallons per minute.

The **Model IRT** is a great economic solution for your monitoring needs. The Model WST features a very wide flow range, precision straightening vanes and low wear, long life impeller shaft & bearings. The WST also has shorter installation requirements which make plumbing in tight situations much easier.

The **Octave Ultrasonic Water Meter** is cast iron contstruction with a maximum working pressure of 230 psi. The vacuum sealed and tamper proof register provides durability and long-term performance. The multi-line digital LCD readout display provides immediate reporting and visual indicators. Each octave meter is pre-programmed before shipment for an instantaneous flow rate in GPM, and the specified user's requirements for Volume Totalizer Units and Output Resolution for Optional Pulsed Output.

The **WMR Water Meter** is the industry's smallest water meter providing a 2% accuracy over a wide range of flows. Made of cast iron, it has a maximum working pressure of 140 psi. it contains a in-line axial turbine which allows foreign matter to pass through the meter without clogging. The wide clearnace in the measuring chamber provide full pipe flow measurements and high reliability.





WST Series Water Meter



Octave Ultrasonic Water Meter



#### **NETAFIM FLOW METERS**

PART#	SIZE	MODEL & REGISTER	FLOW RANGE (GPM)
AT 36IRT3F	3"	IRT, Totalizer	45 - 515
AT 36IRT4F	4"	IRT, Totalizer	50 - 715
AT 36IRT6F	6"	IRT, Totalizer	65 - 1,430
AT 36IRT8F	8"	IRT, Totalizer	130 - 2,574
AT 36IRT3F	3"	IRT, Digital	45 - 515
AT 36IRT4F	4"	IRT, Digital	50 - 715
AT 36IRT6F	6"	IRT, Digital	65 - 1,430
AT 36IRT8F	8"	IRT, Digital	130 - 2,574
AT 36WST6F	6"	WST, Totalizer	15 - 1,489
AT 36WST6FMPE	6"	WST, Rate of Flow	15 - 1,489
AT 36OCT06GAL10	6"	Octave, Digital	3-1,500
AT 36WMR2ER	2"	WMR, Digital	2 - 110
AT 36WMR2T10	2"	WMR, Totalizer	2 - 110

Flow Meters with Totalizer Register include a Pulse Reed Switch for pulsed output. 3'' & 4'' = 10 gal. per pulse, 6'' & 8'' = 100 gal. per pulse.

Listed here is only a small number of available models, registers & sizes. Contact our expert Sales Team for other ordering options.

Netafim Flow Meters are for irrigation water only.





## Installation Requirements:

For 3" to 8" Model IRT Flow Meters, a straight length of pipe, of the same size, 10 x diameter before and 5 x after, for accuracy within ± 2%.

For 3" to 8" Model WST Flow Meters, a straight length of pipe, of the same size, 5 x diameter before and 2 x after, for accuracy within ± 2%.

For Octave Meters, 2 diameters of straight pipe are required before or after when installing a 90° elbow, or before a tee connection for accuracy within ± 1.5%.





# **FERTILIZER INJECTORS**

Introducing the competitive MixRite Fertilizer Injector from Israel. MixRites are simple, accurate and reliable to operate; water flow drives a piston which then draws the solution from a tank. This solution is added constantly in proportion with the water flow to maintain the precise ratio. Ratio's are easy to adjust to meet the changing needs of your crop. MixRite works great for:

- Fertigation
- Disinfecting
- Medication
- pH Control
- EC Control

Our favourite MixRite feature is how incredibly easy it is to replace seals. MixRite stands out for making the process low cost and simple. Included with each MixRite is a full set of replacement seals.



A570 MixRite 3/4" MIPT Includes suction hose & screen, and mounting bracket.



500 Series PVDF model with flow rate of .5 to 11 GPM



TF5-002 MixRite 1" MIPT Includes suction hose & screen, and mounting bracket.

# **MIXRITE FERTILIZER INJECTORS**

PART #	MODEL	PRESSURE RANGE, PSI	FLOW RANGE (GPM)	FEED RATIO
AT META570	A570	3 to 120	0.1 to 11	0.3 to 2.0%
AT METATF5	TF5-002	15 to 120	0.8 to 22	0.2 to 2.0%
AT METATF10	TF10-002	15 to 120	2 to 45	0.2 to 2.0%
AT METATF25	TF25-002	15 to 120	5 to 110	0.3 to 2.5%
AT M569PDVFON	OFF	15 to 120	up to 11	0.1 to 0.9%

Looking for a MixRite Injector with different feed ratios? Pulse transmitting, fixed Rate, dosing by pass or injectors for chlorination and harsh chemicals? MixRite makes many more injectors to suit a wide variety of applications.



TF10-002 MixRite 1 1/2" MIPT Includes suction hose & screen, and mounting bracket. Shown with optional leg stand.



TF25-002 MixRite 2" MIPT Includes suction hose & screen, leg stand, and mounting bracket.

# FERTILIZER INJECTORS



Assembled 3/4" Mazzei Injector on 2" Manifold

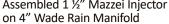


Mazzei Injectors are high efficiency, Venturi-type, differential pressure injectors. With no moving parts and molded from chemical resistant polypropylene, Mazzei Injectors are both trouble free and durable. Listed here are only a small number of injector models available from Mazzei. We also fabricate Injector Manifolds in both PVC & Aluminum.

Contact your Sales Rep for more information.

Assembled 1 1/2" Mazzei Injector





PART #	SIZE	MODEL	PRESSURE RANGE, PSI	RANGE (GPM)	FEED RATIO	
AC 10283	1/2"	283	0.2 to 0.8	1.1 to 6.0	0.3 to 2.0%	
AC 10684	3/4"	684	3.5 to 17.2	6.6 to 25.0	0.2 to 2.0%	
AC I1078	1"	1078-2	5.5 to 26.8	17.0 to 94.5	0.2 to 2.0%	
AC I1583A	1 ½"	1583A	10.7 to 48.0	18.3 to 232	0.3 to 2.5%	
AC I2081	2"	2081	32.4 to 158.0	61.0 to 631.0		
AC IK184		Su	uction Assembly f	or 3/4" Mazzei In	jectors	
AC IK183	Suction Assembly for 1: & 1½" Mazzei Injectors					
AC IK282	Suction Assembly for 2" Mazzei Injectors					
GA FIM2		684 Assembled 2" Mazzei Injector Manifold, Slip by Slip (PVC)				
GA FIM3	10	078-2	Assembled 3" N	/lazzei Injector M	anifold, Slip by Slip (PVC)	
	1	583A	Assembled 4"	Mazzei Injector N	lanifold, Male by Wade	
GA FIW4	1	JOSA	Rain Coupler (Female)			
	1	583Δ	Assembled 4" Mazzei Injector Manifold, Groove			

**MAZZEI FERTILIZER INJECTORS** 





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

by Wade Rain Coupler (Fem.).

by Wade Rain Coupler (Fem.).

Assembled 6" Mazzei Injector Manifold, Groove

Assembled 8" Mazzei Injector Manifold, Flange by Flange

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

Please contact your Sales Team more information on ordering this product.

1583A

1583A

2081

GA FM04

GA FM06

GA FM08

# HUG YOUR PLANTS. PROFESSIONALLY.

# NetBow<sup>TM</sup> Container Irrigation









**NETAFIMUSA.COM/NETBOW** 



# **ALPHADISC**<sup>™</sup> Disc Filter

# BEST RESULTS IN THE FIELD



**COMING SPRING 2022** 



**NETAFIMUSA.COM/ALPHADISC** 



# **CONTAINER IRRIGATION**





# **NETBOW**<sup>TM</sup>

NetBow is an innovative, user friendly container irrigation multi-outlet dripper arc. It was developed to address the needs of high-value soilless pot-irrigated crops such as Cannabis and blueberries that require unique irrigation and fertigation knowledge.

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

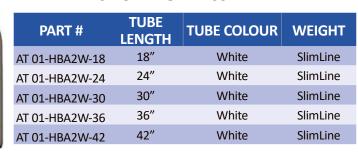


- Compatible with 10 60 L containers
- Diameter: 5-10 in.
- Outlets: 4-8 dripping outlets
- Max. Operating Pressure: 58 PSI
- Flow Rate: 4 or 8 dripping outlets with flow of 0.53 GPH each at 14.5 PSI

Contact your Sales Rep to order this product today!



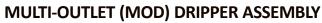
## **PLASTIC WEIGHT ASSEMBLY**





Netafim's SlimLine Weight for Hanging **Baskets** 

Each assembly has a 0.5 GPH Pressure Compensated Dripper with CNL Check Valve to prevent line drainage.





PART#	TUBE LENGTH	TUBE COLOUR	STAKE	
4-Way Manifold:				
AT 014DM-2424ANGW	4 @ 24"	White	Angled	
AT 014DM-3030ANGW	4 @ 30"	White	Angled	
AT 014DM-3636ANGW	4 @ 36"	White	Angled	
4-Way Stackable Manifold:				
AT 014DMS-2424	4 @ 24"	White	Angled	
Dripper for MOD:				
AT 01-WPCJL-8NO	Pressure Cor	npensated 2.0 GPH w	vith CNL Check Valve	

Order the Pressure Compensated Dripper (2.0 GPH) with CNL Check Valve separately.

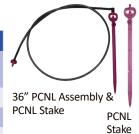


Spray Stake Assemblies work very well for large nursery pots & pot-in-pot systems. Available pre-assembled, Spray Stakes work great for containers that dry out quickly or need higher flows. PCNL Spray Stakes are pressure compensated with integral check valves.

# **CONTAINER IRRIGATION**

### **SPRAY STAKES**

PART#	DESCRIPTION	GPH
AT 01-SSAYL-36	Assembly, Barb Adapter, 36" Black Tubing & Yellow Stake	3.0
AT 01-SSY	Yellow Spray Stake	3.0
AT 01-SSG	Green Spray Stake	6.0
AT 01-SSB	Black Spray Stake	7.0





Assembly



## **PCNL - SPRAY STAKES**

DESCRIPTION	ORDER STAKE	GPH
Assem., Plum Dripper, 36" Black Tubing & 5mm Elb.	Plum	3.2
Assem., Orange Dripper, 36" Black Tubing & 5mm Elb.	Grey	6.6
Assem., Brown Dripper, 36" Black Tubing & 5mm Elb.	Brown	7.9
Assem., Blue Dripper, 36" Black Tubing & 5mm Elb.	Blue	10.6
PCNL, Plum Single Spray Stake		
PCNL, Grey Single Spray Stake		
PCNL, Grey Double Spray Stake		
	Assem., Plum Dripper, 36" Black Tubing & 5mm Elb. Assem., Orange Dripper, 36" Black Tubing & 5mm Elb. Assem., Brown Dripper, 36" Black Tubing & 5mm Elb. Assem., Blue Dripper, 36" Black Tubing & 5mm Elb. PCNL, Plum Single Spray Stake PCNL, Grey Single Spray Stake	Assem., Plum Dripper, 36" Black Tubing & 5mm Elb.  Assem., Orange Dripper, 36" Black Tubing & 5mm Elb.  Assem., Brown Dripper, 36" Black Tubing & 5mm Elb.  Assem., Blue Dripper, 36" Black Tubing & 5mm Elb.  Brown  Blue  PCNL, Plum Single Spray Stake  PCNL, Grey Single Spray Stake



## **PC ANGLE STAKE ASSEMBLY**

PART #	TUBE LENGTH	GPH
AT 01-WPCJL2AW-30	30"	0.5
AT 01-WPCJL2AW-36	36"	0.5
AT 01-WPCJL3AW-30	30"	0.74
AT 01-WPCII 3AW-36	36"	0.74



Pressure Compensating Angle Barbed Stake Assemblies are available in 30" or 36" lengths, and are a great choice for greenhouse vegetable production.



## **WPC JUNIOR DRIPPERS**

PART#	CONNECTION	COLOUR	GPH
AT 01-WPCJL-2	Barb x Barb	Red	0.5
AT 01-WPCJL-3	Barb x Barb	Blue	0.74
AT 01-WPCJL-4	Barb x Barb	Grey	1.0
AT 01-WPCJL-12	Barb x Barb	Plum	3.2
AT 01WPCJL-25	Barb x Barb	Orange/Grey	6.6
AT 01WPCJL-30	Barb x Barb	Orange/Brown	7.9
AT 01WPCJL-40	Barb x Barb	Orange/Blue	10.6
AT 01WPCJL-2NO	Barb x Hub	Red	0.5
AT 01WPCJL-4NO	Barb x Hub	Grey	1.0
AT 01WPCJL-8NO	Barb x Hub	Green	2.0





# **TUBING**









Spaghetti Tubing for Dripper Assemblies, MOD's and "Blue" Drop Tube for Micro Sprinklers & Foggers are available by the roller or bundle of pre-cuts in popular sizes.



Spaghetti & Netafim Tubing will not breakdown in sunlight.

# **NETAFIM TUBING & SPAGHETTI TUBING**

PART #	DESCRIPTION	COLOUR	LENGTH		
NETAFIM TUBING (PLAIN)	:				
AT 520-620-100	16 mm, 0.52" x 0.62"	Black	100'		
AT 520-620-500	16 mm, 0.52" x 0.62"	Black	500′		
AT 520-620-1000	16 mm, 0.52" x 0.62"	Black	1,000′		
AT 520-620-1000W	16 mm, 0.52" x 0.62"	White	1,000′		
AT 600-700-100	18 mm, 0.60" x 0.70"	Black	100′		
AT 600-700-500	18 mm, 0.60" x 0.70"	Black	500′		
AT 600-700-1000	18 mm, 0.60" x 0.70"	Black	1,000′		
AT 600-700-1000W	18 mm, 0.60" x 0.70"	White	1,000′		
AT 820-940-500	20 mm, 0.82" x 0.94"	Black	500′		
AT 820-940-500W	20 mm, 0.82" x 0.94"	White	500′		
AT 106-120-500W	1", 1.06" x 1.20"	White	500′		
NETAFIM TUBING (PRE-PUNCHED):					
AT 520-620-100024	16 mm, 0.52" x 0.62", 24" spacing	Black	1,000′		
AT 520-620-1000W24	16 mm, 0.52" x 0.62", 24" spacing	White	1,000′		
AT 600-700-100024	18 mm, 0.60" x 0.70", 24"spacing	Black	1,000′		
AT 600-700-1000W24	18 mm, 0.60" x 0.70", 24"spacing	White	1,000′		
AT 106-120-50036W	1", 1.06" x 1.20", 36" spacing	White	500′		
AT 106-120-50036W	1", 1.06" x 1.20", 36" spacing	White	500′		
SPAGHETTI TUBING:					
AT 15FPEW53	For Drippers with barbs & MOD	White	1000′		
AT MVU500	For Sprinklers & Foggers	Blue	500′		
PRE-CUT SPAGHETTI TUBI	NG (For Drippers with Barb & MOD Ass	semblies)			
AT 15FPEW53-18	100 per bundle	White	18"		
AT 15FPEW53-24	100 per bundle	White	24"		
AT 15FPEW53-30	100 per bundle	White	30"		
AT 15FPEW53-36	100 per bundle	White	36"		
PRE-CUT DROP (Tubing for	r Sprinklers & Foggers with Barb x Barb	Connectors)			
AT MBE12B	50 per bundle	Blue	12"		
AT MBE18B	50 per bundle	Blue	18"		
AT MBE24B	50 per bundle	Blue	24"		
AT MBE30B	50 per bundle	Blue	30"		
AT MBE36B	50 per bundle	Blue	36"		
<b>ASSEMBLED DROP</b> (Tubing for Netafim Sprinklers includes: barb x barb connector, drop tube, weight & sprinkler connector)					
AT 0300HSAC24	25 per bundle	White	24"		



# **DRIPPER COMPONENTS & TOOLS**

Dripper Assembly & Micro-Sprinkler Components



COMPONENTS FOR PLASTIC WEIGHT ASSEMBLIES  AT 11-07008SC White Plastic SlimLine Weight  COMPONENTS FOR MULTI-OUTLET DRIPPER ASSEMBLIES								
711 11 0700030	COMPONENTS FOR PLASTIC WEIGHT ASSEMBLIES							
COMPONENTS FOR MULTI-OUTLET DRIPPER ASSEMBLIES	nt							
	COMPONENTS FOR MULTI-OUTLET DRIPPER ASSEMBLIES							
AT 01-ADP2WPF 2-Way Manifold (flat)								
AT 01-ADP4WPF 4-Way Manifold (flat)								
AT 01-ADP4WPFS 4-Way Manifold (stackable)								
AT 01-MOD-SO Arrow Dripper								
AT 01-MODSA-ANG Angle Arrow Dripper								
MISCELLANEOUS DRIPPER COMPONENTS								
AT 11-01001B Angle Barb Stake								
AT 11-09006 5 mm Connector Barb x Threa	ad							
AT MJBBXB9 Barbed Connector for Blue Drop	Tubing							
AT MW035 Orange Weight								
AT 11002520 5 mm 90° Elbow for Spray Stal	kes							
AX XMV-025 Micro-Valve, 1/4" Barb x Bar	b							

# PUNCHES FOR DRIPPERS, DRIPPERLINES & MICRO-SPRINKLERS

# **DRIPPER ASSEMBLY & MICRO-SPRINKLER COMPONENTS**



PART#	DESCRIPTION						
PUNCHES FOR DRIPPERS & MICRO-SPRINKLERS							
AA DP4R	Pliers Punch, 0.16" hole, fits 16 & 18 mm Netafim Tubing						
AT 77-99700	4/7 Punch						
AT 682901033	Blue 3 mm Punch						
AT 31AP025	2.5 mm Ejector Punch						
BE RP	Red Handle Economy Punch						
AA DPA2	2 mm Pliers Punch - Adjustable to 16-32 mm Tubing						
PUNCHES FOR DRIF	PERLINE						
AA HP400	Tool Punch Pro Grip for 400 Series						
WIRE TIES FOR THII	NWALL DRIPPERLINES						
AT WIRETIE6	6" Stainless Steel Wire Tie for 5/8" Dripline Connection						
AT WIRETIE7	7" Stainless Steel Wire Tie for 7/8" Dripline Connection						
AT WIRFTOOI	Wire Tie Swivel Tightener Tool						



# THE MOST WATER-EFFICIENT PRODUCTS FOR GREENHOUSES AND NURSERIES

With the greatest cost-savings, too.



**CLICK-TIF EMITTERS** 



SPIN CLEAN FILTERS



MODULAR SPRINKLERS



4-WAY MODULAR FOGGER



GREEN SPIN SPRINKLER

**JAINSUSA.COM** 



**AQUA SPRAY STICKS** 

JAIN IRRIGATION FRESNO, CA



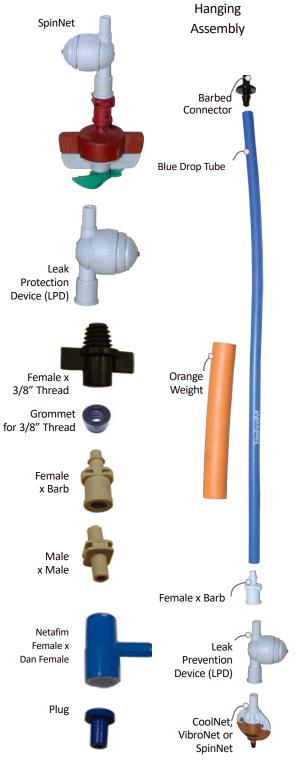
# **FOGGERS - MISTERS - MICRO SPRINKLERS**





# **NETAFIM GREENHOUSE SPRINKLERS**

PART #	DESCRIPTION
COOLNET FOGGER:	
AT 0303420LL	4-Way Fogger with Cross & LPD, 1.9 GPH per nozzle
VIBRONET:	
AT 0354040	Mister (blue), 9.2 GPH
AT 0354050	Mister (green), 11.7 GPH
SPINNET:	
AT 03551200070BL	Blue Spinner, Red Body, Red Anti-mist & LPD, 18.4 GPH
AT 03551600090GL	Green Spinner, Brown Body, Brown Anti-mist $\&$ LPD, 23.4 GPH
AT 03551600090B	Blue Spinner, Brown Body, Brown Anti-mist & LPD, 23.5 GPH
AT 03551200070L	Grey Spinner, Red Body, Red Anti-mist & LPD, 18.4 GPH
AT 03551200070GL	Green Spinner, REd Body, Red Anti-mist & LPD, 18.4 GPH
AT 03552000090L	Grey Spinner, Yellow Body, Brown Anti-mist & LPD, 23.0 GPH
FITTINGS:	
AT 0340017	Netafim Leak Protection Device
AT 03228	Female x 3/8" Taper Thread
AT 77-GROMET	Grommet for 3/8" Thread
AT 03220B	Female x Barb
AT 03208	Male x Male
AT 03302B	Netafim Female x Dan Female
AT 03301B	Plug





# **FOGGERS - MISTERS - MICRO SPRINKLERS**

# **DAN GREENHOUSE SPRINKLERS**

	DAN GREENHOOSE SPRINKLERS
PART #	DESCRIPTION
ASSEMBLIES:	
AT 11252395	Orange Nozzle & Anti-mist, Black Round Spinner & LPD
AT 11252396	Yellow Nozzle & Anti-mist, Black Round Spinner & LPD
AT 11254595	Orange Nozzle & Anti-mist, Green Spinner & LPD
AT 11254596	Yellow Nozzle & Anti-mist, Green Spinner & LPD
COMPONENTS:	
AT 77-930504	Violet Noz., 9.2 gph
AT 77-930500	Brown Noz., 11.4 gph
AT 77-930509	Grey Noz., 18.5 gph
AT 77-930502	Green, Noz. 27.7 gph
AT 77-930505	Orange Noz., 31.7 gph
AT 77-930506	Yellow Noz., 42.3 gph
AT 77-930503	Blue Noz., 52.8 gph
AT 77-930507	Red Noz., 68.7 gph
AT 77-930508	Black Noz., 79.3 gph
AT 77-930208	Black Round Spinner
AT 77-930212	Green Spinner
AT 77-930305	Oblong Orange Spinner
AT 77-930308	Single Wing Black Spinner
AT 77-930704	Violet Misting Spreader
AT 77-930706	Yellow Flat Spreader
AT 77-930705	Orange Spreader (Small Diam.)
AT 77-930702	Black 90 Degree
AT 77-930707	Red 180 Degree
AT 77-930703	Blue Spray Strip
AT 77-942002	Green Anti-Mist, 10.6 gph
AT 77-942004	Orange Anti-Mist, 18.5 gph
AT 77-942006	Yellow Anti-Mist, 23.8 gph
AT 77-942003	Blue Anti-Mist, 23.8 gph
AT 77-033103	Blue, Fogger 1.8 gph
AT 77-033105	Orange, Fogger 3.6 gph
AT 77-033107	Red Fogger, 5.4 gph
AT 11-790308	LPD for Sprinklers (Black)
AT 77-093123	LPD for Foggers (Blue)
AT 77-930100	Bridge for Sprinklers
AT 77-942200	4-Way Cross
AT 77-942008	Plug
AT 77-995008	12" Black Stake
AT 77-941008	Barbed Butterfly
AT 77-943333	3/8" Butterfly
AT 77-941103	3/16" Butterfly
AT 77-941508	3/8" by Barb Butterfly
AT 77-935108	1/2" MIPT Adapter
AT 77-GROMET	Grommet for 3/8" Thread
AL // GROWLI	

# Hanging Assembly











# **BAUER RAINSTAR E**

Bauer's Rainstar E Traveller, is our most popular choice for supplying a large water volume when & where you need it. Rugged, flexible and durable are the cornerstones of Bauer's design strategy. With an impressive list of standard features and options, Bauer delivers travellers that adapt perfectly to your specific needs.

The RAINSTAR Traveller is a popular choice to irrigate Tobacco, Vegetable, Horticulture, & Nursery Crops.

# **Overview of Options**

Easily control each traveller pull with the Ecostar 6000. This new controller will also log/analyze irrigation data and integrates with Bauer's SmartRain App.



A traveller full of water may add up to 9,200 additional pounds of weight. A PTO Driven Blow-Out Compressor will force the water out the PE-Pipe, making the traveller much safer and easier to move.



The TVR 60, radial full-flow turbine with Vario Nozzle Flow Control delivers extremely low pressure loss, saving money & energy while providing precise and uniform retraction over a wide performance range.



Four Wheel fixed Tandem Axle, and Four Wheel Swing Axles, along with Flotation Tires, for transport safety and reducing soil compaction.



Hydraulic or Mechanical Swivel Aid makes for light work of traveller setup and positioning.



Special material composition and processing of Bauer heavy duty PE-Pipe ensures long lasting, even under the toughest conditions.



Winding Gear & Guide ensures a precise and uniform retrieval of PE-Pipe.



Turn Table allows you to turn reels effortlessly to any position.





# **BAUER RAINSTAR E**



# **Models & Performance**

MODELS	TYPE	PE-PIPE	PE-PIPE LENGTH	STRIP	CONSUMPTION	NOZZLE SIZES	CONNECTION	WEIGH	T (lbs)
IVIODELS	ITPE	(inches)	(feet)	WIDTH	(GPM)	(inches)	PRESSURE (PSI)	WITH WATER	LESS WATER
	90-480	2.84	1,575	177-246	74.8-193.7	0.60-0.90	72.5-159.5	12,335	7,822
<b>—</b> 11	100-350	3.31	1,148	190-308	96.9-339.0	0.70-1.20	72.5-159.5	11,662	7,291
╽╏═╸┷┷	100-380	3.29	1,247	190-295	96.9-303.8	0.70-1.20	72.5-159.5	12,183	7,476
	100-400	3.23	1,312	190-295	96.9-303.8	0.70-1.20	72.5-159.5	12,529	7,749
	110-300	3.62	984	262-367	180.5-493.1	1.00-1.50	72.5-159.5	11,887	7,385
	110-330	3.61	1,082	253-358	154.1-462.3	0.80-1.40	72.5-159.5	12,516	7,606
	**110-350	3.61	1,148	246-348	145.3-431.5	0.70-1.20	72.5-159.5	12,935	7,729
	100-430	3.19	1,411	190-285	96.9-281.8	0.70-1.10	72.5-159.5	13,572	8,550
	100-450	3.18	1,476	177-272	74.8-242.2	0.60-1.00	72.5-159.5	13,918	8,686
<b>C</b> 21	110-350	3.61	1,148	246-344	145.3-405.1	0.80-1.40	72.5-159.5	13,459	8,254
	110-380	3.58	1,247	246-344	145.3-405.1	0.80-1.40	72.5-159.5	14,088	8,499
	**110-400	3.56	1,312	246-338	145.3-405.1	0.80-1.40	72.5-159.5	14,508	8,699
	110-420	3.54	1,378	246-335	145.3-369.8	0.80-1.40	72.5-159.5	14,925	8,878
	120-300	3.89	984	262-377	180.5-519.5	1.00-1.50	72.5-159.5	13,481	8,406
	100 100	2.44	4 575	477 272	74.0.242.2	0.60.4.00	72 5 450 5	44.050	0.204
	100-480	3.11	1,575	177-272	74.8-242.2	0.60-1.00	72.5-159.5	14,656	9,301
	100-500	3.11	1,640	177-272	74.8-242.2	0.60-1.00	72.5-159.5	15,002	9,425
<b>C</b> 31	100-520 **110-450	3.07 3.46	1,706 1,476	177-262 240-328	74.8-228.9 123.3-352.2	0.60-1.00 0.80-1.25	72.5-159.5 72.5-159.5	15,349 15,772	9,680 9,555
	110-430	3.46		240-325		0.80-1.25			
			1,542		123.3-352.2		72.5-159.5	16,193	9,698
	110-490 125-310	3.45 3.93	1,607 1,017	240-318 262-377	123.3-343.4 180.5-519.5	0.70-1.20 1.00-1.50	72.5-159.5 72.5-159.5	16,612 14,731	9,890 9,222
			,						
	**125-350	3.93	1,148	262-374	180.5-493.1	1.00-1.50	72.5-159.5	15,814	9,592
	100-550	3.06	1,804	177-262	74.8-228.9	0.60-1.00	72.5-159.5	17,167	11,228
	100-590	3.06	1,804	177-256	74.8-220.1	0.60-0.90	72.5-159.5	17,860	11,570
	110-500	3.39	1,640	190-282	96.9-303.8	0.70-1.20	72.5-159.5	18,120	11,497
<b>41</b>	110-520	3.39	1,706	217-285	123.3-303.8	0.70-1.20	72.5-159.5	18,539	11,649
	110-550	3.35	1,804	217-285	123.3-303.8	0.70-1.10	72.5-159.5	19,167	12,026
	120-420	3.80	1,378	246-358	145.3-453.5	0.80-1.40	72.5-159.5	18,115	11,122
	**120-450	3.80	1,476	246-348	145.3-431.5	0.80-1.40	72.5-159.5	18,865	11,371
	125-370	4.02	1,214	262-377	180.5-519.5	1.00-1.50	72.5-159.5	17,655	10,776
	**125-400	4.02	1,312	262-377	180.5-519.5	1.00-1.50	72.5-159.5	18,466	11,030
	140-340	4.41	1,115	262-412	180.5-546.0	1.00-1.50	72.5-159.5	19,522	11,689

<sup>\*\* -</sup> Most popular models sold.





# **BAUER RAINSTAR E**

# **Models & Performance**

MODELS	TYPE	PE-PIPE	PE-PIPE LENGTH	STRIP	CONSUMPTION	NOZZLE SIZES	CONNECTION	WEIGH	T (lbs)
MODELS	TIPE	(inches)	(feet)	WIDTH	(GPM)	(inches)	PRESSURE (PSI)	WITH WATER	LESS WATER
	110-590	3.32	1,935	190-272	96.9-286.2	0.70-1.10	72.5-159.5	19,802	12,240
	110-620	3.31	2,034	190-262	96.9-228.9	0.70-1.00	72.5-159.5	20,430	12,562
	**110-650	3.27	2,132	190-262	96.9-228.9	0.70-1.00	72.5-159.5	21,059	12,990
<b>C</b> 51	120-530	3.72	1,739	246-338	145.3-405.1	1.00-1.40	72.5-159.5	20,655	12,196
	120-550	3.67	1,804	246-338	145.3-387.5	1.00-1.40	72.5-159.5	21,153	12,577
	120-570	3.65	1,870	246-338	145.3-374.2	1.00-1.40	72.5-159.5	21,654	12,868
	**120-600	3.61	1,968	249-335	145.3-352.2	1.00-1.40	72.5-159.5	22,399	13,338
	125-450	3.99	1,476	262-367	180.5-493.1	1.00-1.50	72.5-159.5	19,615	11,378
	**125-500	3.93	1,640	246-348	145.3-431.5	1.00-1.50	72.5-159.5	20,968	12,081
	**140-400	4.33	1,312	262-412	180.5-546.0	1.00-1.50	72.5-159.5	21,017	12,344
	110-670	3.27	2,198	213-302	110.1-242.2	0.70-1.00	72.5-159.5	23,362	15,099
	110-700	2.32	2,296	213-302	110.1-242.2	0.70-1.00	72.5-159.5	23,991	15,549
<b>51</b>	120-630	3.62	2,067	246-322	145.3-317.0	0.80-1.25	72.5-159.5	25,033	15,510
	**120-650	3.62	2,132	246-322	145.3-317.0	0.80-1.25	72.5-159.5	25,532	15,706
	125-560	3.87	1,837	262-341	176.1-387.5	1.00-1.40	72.5-159.5	24,476	14,828
	120-580	3.84	1,903	262-341	176l=.1-387.5	1.00-1.40	72.5-159.5	25,018	15,174
VI	125-600	3.80	1,968	262-341	176.1-387.5	1.00-1.40	72.5-159.5	25,558	15,569
	**125-620	3.80	2,034	262-341	176.1-387.5	1.00-1.40	72.5-159.5	26,101	15,781
	140-430	4.39	1,410	262-374	176.1-484.3	1.00-1.50	72.5-159.5	23,918	14,407
	140-460	4.39	1,509	262-374	176.1-484.3	1.00-1.50	72.5-159.5	24,936	14,760

<sup>\*\* -</sup> Most popular models sold.





# **BAUER RAINSTAR T**



Bauer's Rainstar T Traveller offers the features and options of the Rainstar E but on a smaller scale. If you are looking for a rugged, durable, & energy efficient traveller to irrigate smaller acreage, without sacrificing performance and quality, the Rainstar T is the perfect match.



									,1
MODELS	TYPE	PE-PIPE (inches)	PE-PIPE LENGTH (feet)	STRIP WIDTH	CONSUMPTION (GPM)	NOZZLE SIZES (inches)	CONNECTION PRESSURE (PSI)	WEIGH	T (lbs) LESS WATER
	65-270	2.17	886	174-223	61.6-154.1	0.50-0.85	65.2-159.5	4,542	3,102
	65-320	2.17	1,050	174-223	61.6-154.1	0.50-0.85	65.2-159.5	4,762	3,161
<b>TT32</b>	65-350	2.17	1,148	174-220	61.6-136.5	0.50-0.80	65.2-159.5	5,128	3,261
	**75-250	2.50	820	174-249	61.6-215.7	0.50-1.00	65.2-159.5	5,002	3,219
	75-280	2.50	918	174-249	61.6-215.7	0.50-1.00	65.2-159.5	5,196	3,272
	75-300	2.50	984	174-246	61.6-193.7	0.50-0.90	65.2-159.5	5,487	3,351
	75-330	2.50	1,083	174-246	61.6-193.7	0.50-0.80	65.2-159.5	5,781	3,428
	85-220	2.77	722	180-285	74.8-281.8	0.60-1.10	65.2-159.5	5,318	3,391
	75-350	2.50	1,148	174-246	61.6-171.7	0.50-0.85	65.2-159.5	6,131	3,638
	85-270	2.77	886	174-272	61.6-264.2	0.50-1.10	65.2-159.5	6,100	3,686
<b>42</b>	85-300	2.77	984	174-272	61.6-264.2	0.50-1.10	65.2-159.5	6,475	3,792
	**85-320	2.77	1,050	174-272	61.6-242.2	0.50-1.00	65.2-159.5	6,726	3,862
	90-260	2.95	853	180-295	74.8-321.4	0.60-1.20	65.2-159.5	6,228	3,746
	90-280	2.95	918	180-289	74.8-312.6	0.60-1.20	65.2-159.5	6,510	3,827
	90-300	2.95	984	180-282	74.8-303.8	0.60-1.20	65.2-159.5	6,931	3,951
	75-400	2.50	1,313	174-233	61.6-145.3	0.50-0.80	65.2-159.5	7,886	5,090
<b>77</b> 51	75-420	2.50	1,378	174-233	61.6-145.3	0.50-0.80	65.2-159.5	8,082	5,179
	85-350	2.77	1,148	174-272	61.6-242.2	0.50-1.00	65.2-159.5	8,369	5,126
	85-370	2.77	1,214	174-262	61.60228.9	0.50-1.00	65.2-159.5	8,620	5,243
	90-330	3.04	1,083	180-282	74.8-303.8	0.60-1.20	65.2-159.5	8,618	5,146
	90-350	3.02	1,148	180-285	74.8-281.8	0.60-1.10	65.2-159.5	8,900	5,267
	85-400	2.77	1,313	174-249	61.60215.7	0.50-1.00	65.2-159.5	8,907	5,386
	85-450	2.77	1,476	174-249	61.6-193.7	0.50-0.90	65.2-159.5	9,533	5,714
C 1	90-370	2.95	1,214	180-272	74.8-264.2	0.60-1.10	65.2-159.5	9,092	5,399
<b>61</b>	90-390	2.93	1,280	180-272	74.8-242.2	0.60-1.00	65.2-159.5	9,372	5,538
	90-420	2.89	1,378	180-272	74.8-242.2	0.60-1.00	65.2-159.5	9,793	5,765
	90-450	2.86	1,476	180-262	74.8-228.9	0.60-1.00	65.2-159.5	10,214	5,983
	**100-300	3.27	984	180-295	74.8-321.4	0.60-1.20	65.2-159.5	9,096	5,428
	100-330	3.27	1,083	180-295	74.8-321.4	0.60-1.20	65.2-159.5	9,617	5,580
	100-350	3.27	1,148	180-282	74.8-303.8	0.60-1.20	65.2-159.5	9,963	5,681

<sup>\*\* -</sup> Most popular models sold.

Call us today for a Complete Performance Table and for other available models.



# **MOBILE IRRIGATION SYSTEMS**



Monitoring of Rainstar operation Optimize your irrigation management Irrigation control via mobile devices Team management Automatic reports Automatic Error messages





# BAUER RAINSTAR A

Bauer has compact solutions in three different sizes for irrigating:

- Sports Fields
- Parkland
- Schools
- Golf Courses
- Nurseries
- Cemeteries



# WITH IRRIGATION GUN CART PERFORMANCE

MODELS	DELS TYPE PE-PIPE		PE-PIPE LENGTH	STRIP CONSUMPTION	NOZZLE SIZES	CONNECTION	WEIGHT (lbs)		
IVIODELS	1176	(inches)	(feet)	WIDTH	(GPM)	(inches)	PRESSURE (PSI)	WITH WATER	LESS WATER
<b>A</b> 2	50-135	1.63	442	92-177	13.2-57.2	0.30-0.55	45-115	1,160	752
	**55-120	1.77	393	98-190	17.6-70.4	0.30-0.60	45-115	1,204	774
	58-115	1.89	377	105-203	22.0-88.1	0.35-0.60	45-115	1,252	778

<b>A</b> 3	55-170	2.02	557	125-187	33.0-79.3	0.30-0.60	55-115	1,746	1,135
	**63-125	2.02	410	125-203	33.0-88.1	0.30-0.60	55-115	1,715	1,129
	63-150	1.77	492	125-203	33.0-88.1	0.30-0.60	55-115	1,885	1,184

<sup>\*\* -</sup> Most popular models sold.

# **AS-32 & AS-50 SPRAY BOOMS**



**AS-32 Spray & Structure Widths** 



The AS - 32 Irrigation Boom is designed to work with Bauer's Rainstar T Travellers. The AS-32 has a width of 105' with sprinkler packages available for spray widths up to 164'.

The AS-50 Boom works with Bauer Rainstar E Series Travellers. The Boom has a structural width of 164' and a maximum spray width of 236'



**AS-50 Spray & Structure Widths** 

Boom Width 164' (50m)
Spray Width 190'
Spray Width 204'
Spray Width 236'

# **BRIGGS BOOM**

Briggs Boom irrigators are an established feature for the farming landscape. Efficient, tough, reliable and versatile, the modern Briggs range has been tried and tested by farmers and growers around the world.

#### **Benefits:**

- *Uniformity:* Closely spaced nozzles + low trajectory = 90% uniformity
- **Soil Benefit:** Controlling droplet size reduces risk of soil capping or "slumping", compared with a raingun
- **Reduced Droplet Size:** Nelson pressure regulated sprayjets allow the optimum droplet size to be selected, specific to each type of crop
- Less Energy Needed: Booms operate at pressures ranging from half the pressure recommended for rainguns. Less pressure needed all the way back to the pump, reducing input power costs.





# **BRIGGS BOOM TECHNICAL DATA R64/2**

R64/2	SPECIFICATIONS
Boom Length	210'
Lane Spacing	210'-295'
Band Width	33'-82'
Flow	80-300 GPM
Operating Pressure	15-60 PSI
Quantity of Outlets	22
Folded L x W	24' 7" x 12'
Wheelbase	12' 6"
Track Width	60" - 86"
Height to Nozzle	60"
Height to Top of Structure	9' 6"
Turning Cycle	23' 6"





# **TRAVELLER ACCESSORIES**



# **CLOSE RANGE SPRINKLERS**

PART #	DESCRIPTION
BD 65-CRSA	#65 Close Range Sprinkler Package
BD 85-CRSA	#85 Close Range Sprinkler Package





PART#	DESCRIPTION
GA DH-2	2" x 25' Delivery Hose for A2
GA DH-33	3" x 25' Delivery Hose with 3" Connectors
GA DH-34	3" x 25' Delivery hose with 4" Connectors
GA DH-35	3" x 25' Delivery Hose with 5" Connectors
GA DH-44	4" x 25' Delivery Hose with 4" Connectors
GA DH-45	4" x 25' Delivery Hose with 5" Connectors
GA DH-46	4" x 25' Delivery Hose with 6" Connectors
GA DH-55	5" x 25' Delivery Hose with 5" Connectors

# **UNIT CONNECTION**

PART #	DESCRIPTION
BD 834-1110VB	Unit Connect. E11, E21 & E31
BD 834-1120VB	Unit Connect, E41
RD 834-1130VB	Unit Connect, E51





# **BLOW OUT ACCESSORIES**

PART#	DESCRIPTION
BD 833-2940	Blow Out Compressor
GA TRC-PTO	Trolley for Blow Out Compressor
GA BBA 42525	Blow Out Adapter, 4¼" with 1/4" Outlet
GA BBA425100	Blow Out Adapter, 4¼" with 1" Outlet





PART #	DESCRIPTION	
GA SCREEN-B3	Inline Screen for 3" Delivery Hose	
GA SCREEN-B	Inline Screen for 4" Delivery Hose	
GA SCREEN-G	Inline Screen for Ginseng (4")	
BD P062-2303	Bauer P.T.O. Shaft	
GA TH2	Pull Out Bar	
GA TH20S	Off Set Pull Out Bar	



#### **Features:**

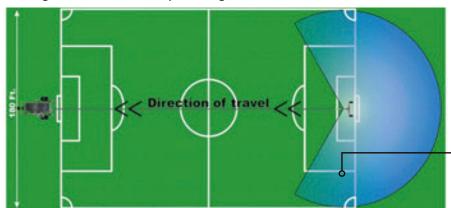
- Require far less labour than conventional reel systems
- Often can be operated from a municipal water supply without the need for a pump
- Optional booster pump for low pressure situations.
- Compact and highly mobile
- Economical

# Portable • Reliable • Simple • Automatic • Affordable

#### **Machine Selection**

Consider these questions when thinking about machine selection:

- Is your application turf or agriculture?
- What is the size of the area to be irrigated, length & width?
- What is the irrigation cycle? (The frequency at which water is to be applied)
- How much water do you want to apply?
- What is your water source? Well, Municipal or other?
- What is your pressure (psi) and flow (gallons per minute, gpm)?
- What is your budget? To minimize labour and irrigation time, select the largest machine that fits your budget.



# **Kifco Water-Reel Irrigation Systems**

MODEL	TUBE INNER DIAMETER/ LENGTH	IRRIGATED WIDTH	IRRIGATED LENGTH	IRRIGATED AREA (ACRES)	DRIVE SYSTEM	GPM RANGE	INLET PSI RANGE	BOOSTER PUMP OPTIONS
B110	1.1" x 280'	78-110'	319-335'	0.6-0.9	Bellows	10-26	51-100	1 HP Electric
B140	1.4" x 350'	120-160'	410-440'	1.2-2.0	Bellows	25-60	50-117	5HP/9HP
T180	1.8" x 380'	125-180'	449-478'	1.1-2.5	Turbine*	25-102	50-150	5HP/9HP
T200S	2.0" x 320'	148-218'	394-435'	1.1-2.4	Turbine*	25-143	50-150	5HP/9HP
E200SST	2.0" x 320'	121-198'	380-419'	N/A	Engine	52-168	50-150	5HP/9HP
T200L	2.0" x 580'	138-191'	649-676'	2.3-3.2	Turbine*	47-115	55-140	5HP/9HP
T200LSC	2.0" x 580'	138-191'	649-676'	2.3-3.2	Turbine	47-115	N/A	23 HP
T210	2.1" x 400'	154-218'	469-511'	1.6-2.8	Turbine*	47-140	55-140	5HP/9HP

<sup>\*</sup> These models are also available in engine drive.



Kifco Water-Reels® are compact and very easy to maneuver, they operate unattended and are equipped with a uniquely powered automatic shut down system which operates at the completion of each run.



All Kifco Water-Reels® offer adjustable speed control to regulate run time and application depth and feature automatic retraction and sprinkler shutdown.

Kifco Water-Reels® will automatically stop when the sprinkler cart arrives at the machine.

The operator can select the speed of rewind which determines the amount of water applied to the site.

#### **Machine Model Numbers**

Machine model numbers provide information about the type of machine, B-bellows, T-turbine, E-engine, the inside diameter (I.D.) of the tube and the length of the tube in feet. For example: a T-200/320 is a turbine machine with an inside tube diameter of 2" and a tube length of 320', an E40A/1320 is an engine driven machine with an inside tube diameter of 4" and a tube length of 1320'.



# Irrigation Technology for the Future





A workhorse for hose reel traveler irrigation, as well as solid set. Try the economical, easy to change plastic nozzle.



Find a full range of products from Pivot Point to End Gun. Radius is king with the R3030 Rotator<sup>®</sup>.



Choose from a number of solutions for tree, vine and field crops. From the S7 to the R2000WF uniformity reigns.



Proper air and water control are vital to any irrigation system. Explore the 1000 Series & ACV200.

Discover Nelson Irrigation's complete line of products at nelsonirrigation.com

Tel: + 1.509.525.7660

# **BIG GUN SPRINKLERS**



# **NELSON ARC TIMER**

The Automatic Arc Timer for the SR150 Big Gun sprinkler is a simple way to increase the capability of an existing Nelson Big Gun on a hose reel traveller.

#### **Features:**

- Automatically change the arc of throw
- Starting position of 180°, second position changes to <180°-330° at set time
- 100% retrofittable; can be fit to any SR150 Series Big Gun sprinkler
- Simple and robust construction for easy use and durability

# **BIG GUNS**

PART #	DESCRIPTION
AS SR74	Part Circle, 75 Series Gun, Slow Return
AS F100	Full Circle, 100 Series Gun
AS SR100	Part Circle, 100 Series Gun, Slow Return
AS F150	Full Circle, 150 Series Gun
AS SR150	Part Circle, 150 Series Gun, Slow Return
AS SRA150	Part Circle, 150 Series Gun, Slow Return & Adj. Trajectory
AS SR200	Parc Circle, 200 Series Gun, Slow Return
A 13296	Arc Adjustment Accessory for Big Gun

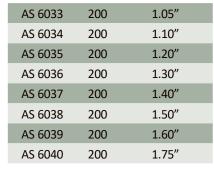
#### **RING NOZZLES**

PART #	<b>GUN SERIES</b>	DESCRIPTION
AS 100RASSY	100	7 Rings, Sizes 0.71" - 0.93"
AS 150RASSY	150	7 Rings, Sizes 0.86" - 1.41"
AS 200RASSY	200	7 Rings, Sizes 1.29" - 1.93"

#### **TAPER BORE NOZZLES**

PART #	GUN	SIZE	PART #	GUN	SIZE
10208-045	75	0.45"	AS 6280	150	0.90"
10208-050	75	0.50"	AS 6281	150	1.00"
10208-060	75	0.60"	AS 6282	150	1.10"
10208-065	75	0.65"	AS 6283	150	1.20"
			AS6283	150	1.30"

AS 8437	100	0.60"
AS 8439	100	0.70"
AS 84336	100	0.75"
AS 8440	100	0.80"
AS 8442	100	0.90"
AS 8243	100	1.00"







Each Ring Nozzle Assembly includes a set of 7 rings, providing a wide range of flow rates and coverage.

Ring Nozzles provide a gentler rain pattern but have a smaller wetted diameter.



**Taper Bore** Nozzles are ideally suited to give the maximum throw distance.





AS AS:  $\mathsf{AS}$ AS 2



# **Tapper Bore Nozzle Performance**

							<u> </u>														
MODELS	PSI		PM neter		PM neter		PM neter		PM neter												
<b>NOZZLE SIZE</b>		0.	40"	0.	45"	0.	50"	0.	55"	0.	60"	0.	65"	0.	70"	0.	75"	0.8	30"		
	40	27	149'	35	160'	43	171'	52	180'	63	190'	74	198'	87	204'	98	213'	112	221'		
	50	30	161'	39	174'	48	186'	59	195'	70	203'	83	212'	95	220'	109	230'	123	237'		
<b>75</b>	60	33	169'	42	184'	53	198'	64	208'	77	220'	91	228'	104	237'	120	245'	136	254'		
	70	36	175'	45	194'	57	210'	69	221'	83	232'	98	243'	113	254'	129	260'	147	270'		
	80	39	182'	49	207'	61	222'	74	234'	89	244'	105	256'	121	266'	138	274'	158	283'		
NOZZLE SIZE		0.	50"	0.	55"	0.	60"	0.	65"	0.	70"	0.	75"	0.	80"	0.8	85"	0.9	90"	1.0	00"
	50	50	205'	64	215'	74	225'	87	235'	100	245'	115	256'	150	273'	130	265'	165	280'	204	300'
	60	55	205'	69	227'	81	240'	96	250'	110	260'	126	270'	164	288'	143	280'	182	295'	224	316'
	70	60	225'	75	238'	88	250'	103	263'	120	275'	136	283'	177	302'	155	295'	197	310	243	338'
100	80	64	235'	79	248'	94	260'	110	273'	128	285'	146	295'	189	314'	165	305'	210	325'	258	254'
TOO	90	68	245'	83	258'	100	270'	117	283'	135	295'	155	306'	201	326'	175	315'	223	335'	274	362'
	100	72	255'	87	268'	106	280'	123	293'	143	305'	163	316'	212	336'	185	325'	235	345'	289	372'
	110	76	265'	92	278'	111	290'	129	303'	150	315'	171	324'	222	344'	195	335'	247	355'	304	380'
<b>NOZZLE SIZE</b>		0.	70"	0.	80"	0.	90"	1.	00"	1.	1.10" 1.20		1.20"		30"						
	60	110	265'	143	285'	183	305'	225	325'	275	345'	330	365'	385	380'						
	70	120	280'	155	300'	197	320'	245	340'	295	360'	355	380'	415	395'						
150	80	128	290'	165	310'	210	335'	260	355'	315	375'	380	395'	445	410'						
TOU	90	135	300'	175	320'	223	345'	275	365'	335	390'	405	410'	475	425'	_	_	_	_	-	
	100 110	143 150	310' 320'	185 195	330' 340'	235 247	355' 365'	290 305	375' 385'	355 370	400' 410'	425 445	420' 430'	500 525	440' 450'						
NOZZLE SIZE	110		05"		10"		20"		30"		40"		50"		60"	1.	75"	1.9	90"		
NOZZZZ SIZZ	70	270	360'	310	380'	355	395'	415	410'	480	430'	555	450'	630	465'	755	495'	890	515'	-	
	80	290'	375'	330	395'	380	410'	445	430'	515	450'	590	470'	675	485'	805	515'	950	535'		
	90	310	390'	350	410'	405	425'	475	445'	545	465'	625	485'	715	505'	855	535'	1,005	555'		
200	100	325	400'	370	420'	425	440'	500	460'	575	480'	660	500'	755	520'	900	550'	1,060	575'		
200	110	340	410'	390	430'	445	450'	525	470'	605	495'	695	515'	790	535'	945	565'	1,110	590'		
	120	355	420'	450	440'	465	460'	545	480'	630	505'	725	530'	825	550'	985	580'	1,160	605'		

# **Ring Nozzle Performance**

MODELS	PSI	SI GPM Diameter		GPM Diameter		GPM Diameter		GPM Diameter		GPM Diameter		GPM Diameter		GPM Diameter	
NOZZLE SIZE	0.7"		.7"	0.77"		0.81"		0.8	0.86"		0.89"		0.93"		96"
	50	74	220'	88	225'	100	230'	115	240'	129	250'	150	255'	167	260'
	60	81	235'	96	240'	110	245'	125	260'	141	270'	164	275'	183	280'
100	70	88	245'	104	250'	118	260'	135	275'	152	290'	177	295'	198	300'
100	80	94	255'	111	265'	127	275'	145	285'	163	300'	189	305'	211	315'
	90	99	265'	117	275'	134	285'	154	295'	173	310'	201	315'	224	325'
	100	105	270'	124	280'	142	295'	162	305'	182	320'	212	325'	236	335'
	110	110	275'	130	290'	149	305'	170	315'	191	325'	222	335'	248	345'
NOZZLE SIZE		0.86"		0.9	97"	1.08"		1.18"		1.26"		1.34"		1.41"	
	60	110	260'	143	280'	182	300'	225	315'	275	335'	330	350'	385	365'
	70	120	270'	155	290'	197	310'	245	330'	295	350'	355	365'	415	380'
<b>150</b>	80	128	280'	165	300'	210	320'	260	340'	315	360'	380	380'	445	395'
130	90	135	290'	175	310'	223	330'	275	350'	335	370'	405	390'	475	405'
	100	143	300'	185	320'	235	340'	290	360'	355	380'	425	400'	500	415'
	110	150	310'	195	330'	247	350'	305	370'	370	390'	445	410'	525	425'
NOZZLE SIZE		1.3	29"	1.4	46"	1.	56"	1.0	56"	1.7	74"	1.8	33"	1.9	93"
	60	250	340'	330	370'	385	390'	445	410'	515	425'	585	440'	695	455'
	70	270	355'	355	385'	415	405'	480	425'	555	440'	630	455'	755	475'
200	80	290	370'	380	400'	445	420'	515	440'	590	455'	675	470'	805	490'
	90	310	380'	405	415'	475	435'	545	455'	625	470'	715	485'	855	505'
	100	325	390'	425	425'	500	445'	575	465'	660	480'	755	500'	900	520'
	110	340	400'	445	435'	525	455'	605	475'	695	490'	790	510'	945	535'
	120	355	410'	465	445'	545	465'	630	485'	725	500'	825	520'	985	545'



For more than 50 years, Lindsay has turned growers' "what ifs" into "what is" using customer-first innovation to continuously make irrigation more efficient and more effective.

CONTACT YOUR LOCAL ZIMMATIC DEALER TO LEARN MORE ABOUT OUR SOLUTIONS.





zimmatic.com





# **FIELDNET**

#### REMOTE PRECISION IRRIGATION MANAGEMENT TECHNOLOGY

# WHAT IS FIELDNET?



#### **PEACE OF MIND**

Monitor, control, schedule, analyze & optimize your irrigation systems from your computer or mobile device. Your operation is always at your fingertips with the FieldNET platform.

# SEAMLESS INTEGRATION

FieldNET technology integrates seamlessly with every component of your irrigation equipment, no matter what brand. That includes centre pivots, pumps and flow meters.

#### **ENHANCED IRRIGATION**

Track data from your field, create custom reports and get recommendations with a user-friendly interface to help make more sustainable and profitable decisions.

#### COMPLETELY CUSTOMIZABLE

FieldNET products & services are designed to fit every grower's needs. From remote monitoring to remote control, we have a complete solution for you.

# **PIVOTS & LATERALS**







#### ZIMMATIC PIVOT MODELS

	ZIMMATIC 9500P	ZIMMATIC 8500P	ZIMMATIC 7500P				
KEY BENEFITS	Durable, rugged & longest-running pivot	High-strength, value-drive pivot	Cost-effective & compact pivot for small fiel applications				
PIPE	11-gauge pipeline with 10", 8 $\%$ ", 8" 6 $\%$ ", 5 $\%$ diameter options	12-gauge pipeline with 6 %" diameter	11-gauge pipeline with 4½" diameter				
DRIVELINE	Zimmatic Centre Drive with AT Gearbox	Zimmatic Centre Drive with AT Gearbox	Zimmatic Centre Drive with AT Gearbox				
FEATURES	<ul> <li>Full Flow Collector Ring</li> <li>Flexible Uni-Knuckle Span Connector</li> <li>Exclusive Split Coupler</li> <li>Formed Outlets</li> <li>Control Panels</li> <li>GPS Option</li> </ul>	<ul> <li>Full Flow Collector Ring</li> <li>Flexible Uni-Knuckle Span Connector</li> <li>Exclusive Split Coupler</li> <li>Formed Outlets</li> <li>Control Panels</li> <li>GPS Option</li> </ul>	<ul> <li>Full Flow Collector Ring</li> <li>Flexible Uni-Knuckle Span Connector</li> <li>AT Gearbox, Control Panels</li> <li>GPS Option</li> </ul>				
CLEARANCE	Low, Standard, Medium, High & Super-High	Low, Standard, Medium & High	Standard				



Where the rubber meets the field, we can help you choose between four tire sizes for the option that best suits your soil and crop.



The three wheel mobile pivot is ideal for marshy areas and problem soils. Three wheels increase tire life, reduces drive train wear and irrigates acres currently left idle. A conversion kits available.



NFTrax airless wheel assembly will never go flat, keeping wheel ruts to a minimum. A tension rubber belt with a steel core designed with a special tread pattern, provides superior traction & minimal soil disturbance.

# **OPTIONS & CONTROLS**





#### 712C

Top-of-the-line and most advanced Zimmatic control panel.

- Inlcudes everything from the 700C control panel
- Industry-leading intuitive 12" interactive touchscreen with user-friendly interface
- FieldNet-ready for detailed status and full control in and out of the field
- Works with FieldNET Advisor for enhanced control and decision making
- Compatible with soft and hard barriers



#### **700C**

Discover industry-leading technology with unparalleled ease of use.

- Includes everything from the 500C control panel
- FieldNET-ready with GPS positioning to remotely automate stops, provide advanced end gun control, create precision irrigation plans and more
- Works with FieldNET Advisor for enhanced control and decision making
- Compatible with soft and hard barriers



#### **500C**

Introducing the next-generation standard panel, where intuitive meets state of the art.

- Ultra-simple interface
- FieldNET-ready with basic run control and easy pump start
- Built-in featurés like pressure shutdown alert, pressure restart and much more
- Works with FieldNET Advisor for advanced irrigation scheduling
- Over-the-air serviceability for enhanced software, firmware and features updates
- Compatible with hard barriers only



#### **VISION for Laterals**

Ideally suited for superior control over the Zimmatic 9500L lateral system

- 15 times faster to program than competitors with our configuration wizard
- Easy, accurate programming
- Custom application plans
- GPS positioning
- Multilingual and metric capabilities
- Available with FieldNET on board





# **PIVOT SPRINKLERS**



# Components for D3000 Sprayhead, S3000 Spinner & R3000 Rotator

PART #	DESCRIPTION
AS P9410	3/4" Adapter for 3000 Series
AS 9572-004	Lo-Flow Pressure Regulator, 20 PSI
AS 9572-005	Lo-Flow Pressure Regulator, 25 PSI
AS 9572-006	Lo-Flow Pressure Regulator, 30 PSI
AS P9412	Body for Rotator or Spinner
AS P9539	Cap for Rotator
AS P9540	Cap for Spinner
AS P9926-001	190° Spinner Stream Deflector
AS P9428	Body for Sprayhead
AS P9429	Cap for Sprayhead
AS P9894-001	170° Sprayhead Blue Deflector









# **R3000 ROTATOR PLATES**

PART #	COLOUR	STREAM	TRAJECTORY	MOUNT	NOZZLE RANGE
AS P8817	Blue	4	8°	Upright	#14 - #50
AS P8839	Red	6	12°	Inverted	#14 - #50
ASP8844	Green	4	8°	Inverted	#14 - #50
AS P10681	Brown	10	Mult-trajectory	Inverted	#14 - #50

#### D3000 SPRAYHFAD PLATES



		U	SUUU SPRAI	TEAD PLAIC	3	
PART #	COLOUR	GROOVE TRAJECTORY		APPLICATION	WIND RESISTANCE	GENTLENESS OF SPRAY
AS P9543	Green	Fine	Concave	Germination/ Irrigation	Good	Better
AS P9631	Yellow	Fine	Flat	Irrigation	Better	Better
AS P9550	Purple	Fine	Convex	Irrigation	Better	Good
AS P9493	Blue	Medium	Concave	Irrigation	Better	Good
AS P9541	Black	Medium	Flat	Irrigation	Best	Good



# **PIVOT SPRINKLERS**

# **3TN & 3NV NOZZLE PERFORMANCE**

NUMBER	#12	#13	#14	#15	#16	#17	#18	#19	#20	#21	#22
COLOUR	GOLD	GOLD	LINAT	LIME	LAVENDER	LAVENDER	GREY	GREY	TURQUOISE	TURQOISE	YELLOW
STRIPE	GOLD	LIME	LIME	LAVENDER	LAVENDER	GREY	GKLI	TURQUOISE	TURQUUISE	YELLOW	TELLUW
PSI	GPM	GPM	GPM	GPM	GPM	GPM	GPM	GPM	GPM	GPM	GPM
6	0.61	0.71	0.82	0.95	1.08	1.22	1.36	1.53	1.70	1.84	2.04
10	0.79	0.92	1.06	1.23	1.40	1.58	1.75	1.97	2.19	2.38	2.64
15	0.96	1.10	1.29	1.51	1.71	1.93	2.14	2.41	2.69	2.91	3.23
20	1.11	1.30	1.49	1.74	1.98	2.23	2.48	2.79	3.10	3.36	3.73
25	1.24	1.46	1.67	1.95	2.21	2.50	2.77	3.12	3.47	3.76	4.17
30	1.36	1.59	1.83	2.14	2.42	2.74	3.03	3.41	3.80	4.12	4.56
40	1.57	1.84	2.11	2.47	2.80	3.16	3.50	3.94	4.39	4.76	5.27
50	1.76	2.06	2.36	2.76	3.13	3.53	3.91	4.41	4.90	5.32	5.89

NUMBER	#23	#24	#25	#26	#27	#28	#29	#30	#31	#32	#33
COLOUR	YELLOW	DED	RED	\A/I IITE	WHITE	DILLE	BLUE	DARK	DK BROWN	ODANICE	ORANGE
STRIPE	RED	RED	WHITE	WHITE	BLUE	BLUE	DK. BROWN	BROWN	ORANGE	ORANGE	DK.GREEN
PSI	GPM	GPM	GPM	GPM	GPM	GPM	GPM	GPM	GPM	GPM	GPM
6	2.22	2.44	2.64	2.87	3.07	3.35	3.58	3.83	4.06	4.36	4.65
10	2.86	3.16	3.41	3.70	3.97	4.32	4.62	4.94	5.24	5.63	6.00
15	3.50	3.86	4.17	4.53	4.86	5.29	5.66	6.06	6.41	6.89	7.35
20	4.05	4.46	4.82	5.23	5.61	6.11	6.53	6.99	7.40	7.96	8.49
25	4.52	4.99	5.38	5.85	6.27	6.83	7.30	7.82	8.28	8.90	9.49
30	4.96	5.47	5.90	6.41	6.87	7.48	8.00	8.56	9.07	9.75	10.39
40	5.72	6.31	9.81	7.40	7.94	8.64	9.24	9.89	10.47	11.26	12.00
50	6.40	7.06	7.61	8.28	8.87	9.66	10.33	11.06	11.71	12.59	13.42

NUMBER	#34	#35	#36	#37	#38	#40	#42	#44	#46	#48	#50
COLOUR	DARK	DK. GREEN	PURPLE •	PURPLE	BLACK	DARK	MUSTARD	MAROON	CREAM	DARK BLUE	COPPER
STRIPE	GREEN	PURPLE	PURPLE	BLACK	DLACK	TURQUOISE	IVIUSTAND	IVIAROUN	CREAIVI	DARK BLUE	COPPER
PSI	GPM	GPM	GPM	GPM	GPM	GPM	GPM	GPM	GPM	GPM	GPM
6	4.94	5.47	5.47	5.84	6.18	6.85	7.60	8.33	9.12	9.96	10.77
10	6.37	7.06	7.06	7.54	7.97	8.85	9.81	10.75	11.77	12.86	13.91
15	7.81	8.65	8.65	9.24	9.77	10.84	12.01	13.17	14.41	15.75	17.03
20	9.01	9.98	9.98	10.67	11.28	12.51	13.87	15.20	16.64	18.19	19.67
25	10.08	11.16	11.16	11.92	12.61	13.99	15.51	17.00	18.61	20.33	21.99
30	11.04	12.23	12.23	13.06	13.81	15.33	16.99	18.62	20.38	22.28	24.09
40	12.75	14.12	14.12	15.08	15.95	17.70	19.61	21.50	23.54	25.72	27.82
50	14.25	15.79	15.79	16.86	17.83	19.79	21.93	24.04	26.31	28.76	31.10





Part #: AS P9461-XX (Replace XX with Nozzle #)





Use a Lo-Flow Pressure Regulator to ensure a uniform flow over uneven terrain and long spans.





# **BRASS IMPACT SPRINKLERS**

#### **65PJ PERFORMANCE**



Part #: AX 65PJ-ADJ-TNT (1/4" Nozzle included)

1" Part Circle, Brass Impact Sprinkler Bearing: 1" FIPT Brass Trajectory Angle: 27° Stream Height: 10' Operating Range: 50 - 80 PSI

Flow Rate: 12.9 - 16.5 GPM Radius: 57 - 65'

#### **65PJ PERFORMANCE** PSI @ 1/4"

NOZZLE	RADIUS	GPM
50	57	12.9
55	57	13.6
60	58	14.2
65	62	14.8
70	63	15.4
75	64	16.0
80	65	16.5

Rain Bird Part Circle Brass Impact Sprinklers are fully adjustable to cover any arc as well as a full 360°. On the #25, #35 & #65, the PJ arm reduces side splash; stream arc may also be adjusted with a deflector pad, and the adjustable diffuser screw alters stream dispersion.

#### **85 ESHD PERFORMANCE**



Part #: AX 85ESHD (Nozzles not included)

#### 85 ESHD PERFORMANCE, NOZZLE & PLUG

	55 25112 1 2111 G111111 11 152, 11 52222 G1 1 2 5											
PSI	3/8"		7/16 <sup>11</sup>		1/:	1/2"		/ II 32	5/8"			
NOZZLE	RAD.	GPM	RAD.	GPM	RAD.	GPM	RAD.	GPM	RAD.	GPM		
40	69	22	77	34	83	43	83	47	86	65		
45	71	23	79	36	85	46	88	50	92	70		
50	73	24	81	38	87	48	90	53	95	73		
55	75	26	83	40	89	50	92	57	99	77		
60	77	26	86	42	91	53	94	59	101	80		
65	79	27	87	43	93	55	96	61	102	84		
70	81	28	89	45	94	58	98	64	104	88		
75	82	29	90	47	96	60	99	66	105	91		
80	83	30	92	48	97	62	101	68	107	94		
85	85	32	93	50	99	64	102	70	108	97		
90	86	33	95	52	100	65	104	72	110	100		
95	87	34	96	53	101	67	105	74	111	103		
100	88	34	97	55	102	69	106	76	112	105		

#### 85 FSHD PERFORMANCE, NOZZLE AND SPREADER

1 ¼" Part Circle, Brass Impact Sprinkler Bearing: 1 1/4" FIPT Brass Trajectory Angle: 27° Stream Height: 14' Operating. Range: 40-100 PSI Flow Rate: 22-119 GPM Radius: 62-112'	
When mounting an 85	l

When mounting an 85
ESHD on your Traveller,
as a close range
sprinkler, use a steel
bracket.

	65 ESHD PERFORIVIANCE, NOZZLE AND SPREADER												
PSI	3/811		7/16"		1/2"		17/ <sub>32</sub>		5/8"				
NOZZLE	RAD.	GPM	RAD.	GPM	RAD.	GPM	RAD.	GPM	RAD.	GPM			
40	71	34	77	42	83	51	83	55	86	73			
45	73	36	79	44	85	54	88	58	92	78			
50	75	38	81	47	87	57	90	62	95	82			
55	77	40	83	49	89	60	92	65	99	87			
60	79	41	86	52	91	63	94	68	101	90			
65	81	43	87	54	93	65	96	71	102	94			
70	83	45	89	56	94	68	98	74	104	99			
75	84	47	90	58	96	71	99	77	105	102			
80	86	48	92	60	97	73	101	80	107	106			
85	87	50	93	62	99	75	102	82	108	109			
90	89	51	95	64	100	78	104	85	110	112			
95	90	53	96	66	101	80	105	87	111	115			
100	91	55	97	68	102	82	106	90	112	119			

#### 2045-PJ



Part #: AX 2045-PJ-08 (Blue Nozzle included)

1/2" Part Circle Plastic Impact Sprinkler Bearing: 1/2" MIPT Trajectory Angle: 23° Stream Height: 6' Operating Range: 25 - 60 PSI

Flow Rate: 2.0 - 6.4 GPM Radius: 37 - 44'

2045PJ has a built in diffuser screw, while the 25BPJ has a built in diffuser screw and a distance control.

### 25BPJ-FP-ADJ-DA



Part #: AX 25BPJFPADJDAT (5/32" Nozzle included)

1/2" Part Circle **Brass Impact Sprinkler** Bearing: 1/2" MIPT Trajectory Angle: 27° Stream Height: 7'

Operating Range: 30 - 80 PSI Flow Rate: 3.1 - 5.0 GPM

Radius: 38 - 41'

3/4" Part Circle, **Brass Impact Sprinkler** Bearing: 3/4" MIPT

Radius: 42 - 51'

Trajectory Angle: 27° Stream Height: 9'

Operating Range: 30 - 60 PSI

Flow Rate: 3.9 - 7.8 GPM

#### 35A



Part #: AX 35A-TNT (3/16" Nozzle included)

#### 14070H



Part #: AX 14070 (Nozzles not included)

3/4" Full Circle, Brass Impact Sprinkler Bearing: 3/4" MIPT Trajectory Angle: 270 Stream Height: 10' Operating Range: 40 - 80 PSI Flow Rate: 9.3 - 23.0 GPM

Radius: 44 - 71' **Dual Nozzle Ports** 

# **BRASS IMPACT SPRINKLERS**

#### **2045-PJ PERFORMANCE**

	RED		RED BLACK BLUE		YELLOW		3' Stream height (low angle) BLACK				
PSI	3/32	.'' !	%	7/ <sub>64</sub> "		1/8"		5/32		<b>%</b> 4"	
NOZZLE	RAD.'	GPM	RAD.'	GPM	RAD.'	GPM	RAD.'	GPM	RAD.'	GPM	
25	-	-	22	2.20	35	2.80	38	4.20	-	-	
35	37	2.00	37	2.70	38	3.30	41	4.80	37	2.00	
45	38	2.30	39	3.00	40	3.70	42	5.40	38	2.30	
55	38	2.50	41	3.30	41	4.10	43	6.00	38	2.50	
60	38	2.60	41	3.50	42	4.20	44	6.40	38	2.60	

#### 25BPJ-FP-ADJ-DA PERFORMANCE

PSI	%	11 4	5∕₃	11 2
NOZZLE	RAD.'	GPM	RAD.'	GPM
30	38	3.1	39	3.8
35	38	3.4	39	4.1
40	39	3.6	40	4.4
45	39	3.8	40	4.7
50	40	4.0	41	5.0

#### **35A PERFORMANCE**

PSI	5/35	5/35"		4"	3/ <sub>16</sub> "		
NOZZLE	RAD.'	GPM	RAD.'	GPM	RAD.'	GPM	
30	42	3.9	43	4.6	44	5.5	
35	43	4.2	44	5.0	46	6.0	
40	44	4.5	45	5.4	47	6.4	
45	44	4.7	46	5.7	48	6.8	
50	45	5.0	47	6.0	49	7.2	
55	45	5.2	48	6.3	50	7.5	
60	46	5.4	48	6.6	51	7.8	

# 14070H PERFORMANCE, NOZZLE & PLUG

# 14070H PERFORMANCE, NOZZLE & 1/8" 20° SPREADER

PSI	3/16	"	13/6	, 11 54	7∕3	2 II	1/2	(II	%	11 2	PSI	3/16	II 5	13/	/ II 54	7∕3	2 <sup>11</sup>	1/2	(II	%	2
NOZZLE	RAD.'	GPM	RAD.'	GPM	RAD.'	GPM	RAD.'	GPM	RAD.'	GPM	NOZZLE	RAD.	GPM	RAD.	GPM	RAD.	GPM	RAD.	GPM	RAD.	GPM
40	50	6.5	51	7.6	52	8.8	54	11.5	56	14.6	40	50	9.3	51	10.5	52	11.7	54	14.4	56	17.4
45	51	6.9	52	8.1	54	9.3	56	12.2	58	15.4	45	51	9.9	52	11.1	54	12.4	56	15.2	58	18.5
50	52	7.2	53	8.5	55	9.8	57	12.9	59	16.3	50	52	10.4	53	11.7	55	13.1	57	16.1	59	19.5
55	53	7.6	54	8.9	56	10.3	59	13.5	61	17.1	55	53	10.9	54	12.3	56	13.7	59	16.9	61	20.4
60	53	7.9	55	9.3	57	10.8	60	14.1	62	17.8	60	53	11.4	55	12.8	57	14.3	60	17.6	62	21.3
65	54	8.3	56	9.7	58	11.2	61	14.7	63	18.5	65	54	11.9	56	13.3	58	14.9	61	18.3	63	22.2
70	55	8.6	57	10.0	59	11.6	62	15.2	65	19.2	70	55	12.4	57	13.8	59	15.4	62	19.0	65	23.0
75	55	8.9	58	10.4	60	12.1	63	15.7	-	-	75	55	12.8	58	14.3	60	16.0	63	19.7	-	-
80	56	9.1	58	10.7	61	12.4	64	16.3	-	-	80	56	13.2	58	14.8	61	16.5	64	20.3	-	-

Diffuser screws &

throws.

distance control, as well

as altering the stream characteristics, reduces

the distance a sprinkler



# **BRASS IMPACT SPRINKLERS**

#### WR-33



Part #: BE WR33 (Nozzle included, 1/8" Plug included)

3/4" Full Circle, Brass Impact Sprinkler Bearing: 3/4" MIPT Trajectory Angle: 27°

Stream Height: 8' Operating Range: 30 - 80 PSI

Flow Rate: 2.9 - 16.3 GPM Radius: 40 - 56'

**Dual Nozzle Ports** 

The Wade Rain WR-33 may be used for general irrigation and frost control. The common nozzle set-up for irrigation is a 3/16" Nozzle and a 1/8"  $20^{\circ}$  Spreader. When setting up for frost protection use a 5/32" Nozzle and a 1/8" Plug.

#### WR-33 Performance, Nozzle & Plug

PSI	%	4 <sup>11</sup>	5/32		11/6	4 <sup>11</sup>	3/ <sub>16</sub> "	
NOZZLE	RAD.'	GPM	RAD.'	GPM	RAD.'	GPM	RAD.'	GPM
40	41	3.64	44	4.45	46	5.37	48	6.41
45	42	3.86	45	4.72	47	5.7	49	6.81
50	42	4.07	45	4.98	48	6.01	50	7.18
55	43	4.27	46	5.22	48	6.3	51	7.51
60	44	4.46	46	5.45	49	6.57	51	7.82

#### WR-33 Performance, Nozzle & 20° Spreader

PSI	%4" X	( 3/32	5/32"	X 3/32 II	11/64"	X 3/32 II	3/16"	x ½"
NOZZLE	RAD.'	GPM	RAD.'	GPM	RAD.'	GPM	RAD.'	GPM
40	41	3.64	44	4.45	46	5.37	48	6.41
45	42	3.86	45	4.72	47	5.7	49	6.81
50	42	4.07	45	4.98	48	6.01	50	7.18
55	43	4.27	46	5.22	48	6.3	51	7.51
60	44	4.46	46	5.45	49	6.57	51	7.82



VYR sprinklers, manufactured in Spain, provide an economical substitution to traditional brass impact sprinklers. With comparable performance to Rain Bird, Wade Rain and Nelson impact sprinklers, VYR is the perfect option to provide solutions without breaking the bank. Each impact comes with a set of standard nozzles which are compatible with traditional brass impact nozzles.

PART #	CONNECTION	DESCRIPTION	NOZZLES PROVIDED	RECOMMENDED FLOW	RECOMMENDED PRESSURE	RADIUS
OG1370	1/2"	FC/PC Plastic Impact Sprinkler	Various	Various	40	35'
KG160	1 1/4" MIPT	FC/PC Brass Impact Sprinkler	11/32" x 9/64"	31 GPM	60 PSI	82'
KG65F	1" FIPT	FC/PC Brass Impact Sprinkler	1/4" x Plug	15.8 GPM	60 PSI	62'
KG35	3/4" MIPT	FC Brass Impact Sprinkler	5/32" x Plug	7.9 GPM	60 PSI	46′
KG66	3/4" MIPT	FC/PC Plastic Impact Sprinkler	11/64" x 3/32"	7.9 GPM	60 PSI	46′
KG70	3/4" MIPT	FC Brass Impact Sprinkler	5/32" x Plug	9.6 GPM	60 PSI	50′



# **NELSON ROTATORS**



#### **R33 Rotator**



Rotator Components



Plate & Cap Assembly



Body



Nozzle

Adapter



R2000 Rotator

R2000 WindFighter (WF) Rotator



Pressure Regulator & Check Valve



There are plenty of plate, cap & nozzle assemblies for R2000, and R2000WF Sprinklers, for a wide variety of flow rates and distances.

# **ROTATOR SPRINKLERS**

		ROTATOR SPRINKLERS
	PART #	DESCRIPTION
	AS P11466-1020	R33 Sprinkler with Brown Plate, #20 Nozzle & 3/4" adapter (MIPT)
	AS P10519-1509	K5 Orange Plate & Cap Assembly for R2000
	AS P9155	Body for R2000, (Female Acme)
	AS P9223-250	Body for R2000, (Female Acme) with Brass 2.5 GPM Flow Control Nozzle
	AS P10299-112	Purple WF12 Plate & Cap Assembly for R2000 WF
	AS P10299-114	Green Plate WF14 & Cap Assembly for R2000 WF
כ	AS P10299-116	Red WF16 Plate & Cap Assembly for R2000 WF
	AS P10299-216	Red WF16 Plate & Cap Assembly for R2000 WF Low Pres.
	AS P9920	Body for R2000 (WF) WindFighter, (Female ACME)
	AS P9306-078	#10, Dark Blue 2TN Nozzle
	AS P9306-086	#11, Orange 2TN Nozzle
	AS P9306-094	#12, Purple 2TN Nozzle
	AS P9306-102	#13, Yellow 2TN Nozzle
	AS P9306-109	#14, Green 2TN Nozzle
	AS P9306-125	#16, Red 2TN Nozzle
	AS P9306-141	#18, Gold 2TN Nozzle
	AS P9306-156	#20, Brown 2TN Nozzle
	AS P9316	Male Acme x 1/2" MIPT, Adapter
	AS P9466	Male Acme x 3/4" MIPT, Adapter
	AS 10406-030	30 psi Pres Reg & C.V. (1/2" FIPT x Male ACME)
	AS 10406-050	50 psi Pres Reg & C.V. (1/2" FIPT x Male ACME)
	AS 10407-030	30 psi Pres Reg & C.V. (Female ACME x Male ACME)
	AS 10407-035	35 psi Pres Reg & C.V. (Female ACME x Male ACME)
	AS 10407-050	50 psi Pres Reg & C.V. (Female ACME x Male ACME)
	AS P9752-036	FT4 36" Sprinkler Feed Tube
	AS P9737-048	FT5 48" Sprinkler Feed Tube
	AS P9725-024	24" Steel Stake (8 mm) for Feed Tube
	AS P9726-048	48" Steel Stake (8 mm) for Feed Tube
	AS P10160	24" Fiberglass Stake (8 mm) for Feed Tube
	AS 9677	Feed Tube Sprinkler Connector (Male Acme to 10mm)
	AS P9739	Orange Female Quick Coupler for Poly Pipe
	AS P9831	Outer Goof Plug to seal poly pipe for Orange Female Quick Coupler
	AS P9826	Inner Goof Plug for seal on Orange Female Quick Coupler
	AS 9774	10mm Compression to Poly Pipe barb (FT4)
	AS 9099	500' Roll of 10mm Feed Tubing
	AS P11991-1113	R2000 Rotator with K4 15° Plate and Yellow Nozzle (For Ginseng)





# **NELSON ROTATORS**

# **NELSON ROTATOR PERFORMANCE**

PLATE	PSI	3	0	3	35	4	10	4	15	5	0	5	5	6	0
	2TN NOZZLE	GPM	RAD.'	GPM	RAD. '										
R2000 ROTATOR	₹														
K5 9° ORANGE	#15 TAN	2.4	3.64	2.4	28′	2.5	29′	2.7	29′	2.8	29'	3.0	29'		
	# 16 RED	2.7	3.86	2.7	29'	2.9	30'	3.1	30'	3.2	31'	3.4	31'		
R2000 WINDFIG	HTER (WF) RO	TATOR													
WF 12° PURPLE	#10 DK. BLUE	0.8	34'	1.1	35'	1.1	36′	1.2	36′	1.3	36′	1.3	35'	1.4	35′
	#11 ORANGE	1.2	36′	1.3	36′	1.4	37′	1.5	37′	1.5	38′	1.6	38′	1.7	38′
	#12 PURPLE	1.4	37'	1.5	38'	1.6	39'	1.7	39'	1.8	39'	1.9	39'	2.0	39'
WF 14° GREEN	#13 YELLOW	1.6	36′	1.8	37'	1.9	38′	2.0	38′	2.1	38'	2.2	38′	2.3	38'
	#14 GREEN	1.9	37'	2.0	38'	2.2	39'	2.3	39'	2.4	40'	2.5	39'	2.6	39'
WF 16° RED	#15 TAN	2.2	38'	2.4	39'	2.5	40'	2.7	40'	2.8	41'	3.0	40'	3.1	40'
	# 16 RED	2.5	39'	2.7	39'	2.9	39'	3.1	40'	3.2	41'	3.4	41'	3.5	41'
WF 16° RED LP	#15 TAN	2.2	41'	2.4	41'	2.5	41'	2.7	41'	2.8	42'				
R33 ROTATOR															
BROWN	#20 BROWN					4.5	45'	4.7	45'	5.0	46'	5.2	46'	5.5	47'

#### **GINSENG RISER QUICK CONNECT**

PART #	DESCRIPTION	SIZE
AT 03N20STAND0948FSFN	Tube with Fast Connect	48", 8mm Feed
AT 03N48	Steel Stake	48"

Ask us about our **Independent Ginseng Riser**. Manufactured in house using Nelson and Netafim

products, this system provides many advantages to ginseng irrigation.

Layout was initially designed to avoid inconsistent uniformity in sprinklers, due to weathering of pipe causing sprinkler movement. With this model, you can guarantee your sprinkler will remain stationed all season long.

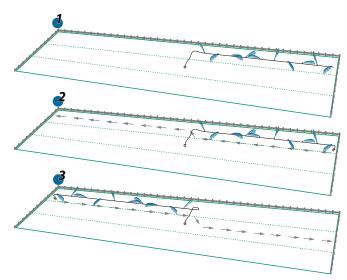




**Independent Ginseng Riser** 

# **K-LINE IRRIGATION**





K-Line is a great solution to economically irrigate pastures & paddocks. Small pods protect low volume sprinklers mounted on a special flexible low density poly pipe. Pods are spaced every 50' and can be moved by an ATV while running.

The pods protect sprinklers when travelling and ensure sprinklers are upright when the move is complete. K-Line is a low pressure, low energy using irrigation system.



**K-LINE COMPONENTS** 

PART #	DESCRIPTION	SIZE
AH KL40P5NG	Pod & Naan Sprinkler (Green Noz.)	40 mm
AH KL40P5LR	Pod & Nelson Sprinkler (WF 16)	40 mm
AH KL40LD300	K-Line Low Density Poly Pipe	40 mm x 300'
AH KLASC40	Coupler, Comp. x Comp.	40 mm
AH APU40	Union for Poly Pipe, FIPT x FIPT	40 mm (1 1/2")
AH APU4032	Red. Union for Poly Pipe, FIPT x FIPT	1 1/4" x 1 1/2"
AH KLAF40	Female Adapter, Comp. x FIPT	40 mm x 1 1/2"
AH KLAMC40	Male Adapter, Comp. x MIPT	40 mm x 1 1/2"
AH RXGHC32	Galv. Cap with Hook, FIPT	1 1/4"
AH RXGHC40	Galv. Cap with Hook, FIPT	1 1/2"
AH KLPRV4050	Pressure Regulator, MIPT x MIPT	50 psi, 1 1/2"
AH KLPRV4057	Pressure Regulator, MIPT x MIPT	57 psi, 1 1/2"

More sizes are available. Contact our expert Sales Team for more information.



Coupler

Union Fem. Adapter Male Adapter







**Pressure Regulator** 





# D10 - S10 - R10 **SPRAYS - SPINNERS - ROTATORS**



D10 with adapter and nozzle

# **D-10 - S10 - R10 COMPONENTS**

	PART #	DESCRIPTION
D10 SPRAY	AS P10135-001	D10 with Black Fixed Plate
S10	AS P10078-1000	S10 with Green Plate, Low Trajectory - Upright or Inverted
SPINNER	AS P10078-2000	S10 with Black Plate, High Trajectory - Upright or Inverted
	AS P10078-3000	S10 with Grey Plate, Flat Trajectory - Inverted



R10	AS P9914-8003	R10 with Grey Plate, Flat Trajectory - Inverted
ROTATOR	AS P9914-8004	R10 with Green Plate, Low Trajectory - Upright or Inverted
	AS P9914-8005	R10 with Black Plate, High Trajectory - Upright

ADAPTERS	AS P9316	Male Acme x 1/2" MIPT
	AS P9466	Male Acme x 3/4" MIPT



Adapter

PRESSURE	AS 10406-030	30 psi Pres Reg & C.V. (1/2" FIPT x Male ACME)
REGULATOR	AS 10406-050	50 psi Pres Reg & C.V. (1/2" FIPT x Male ACME)
	AS 10407-030	30 psi Pres Reg & C.V. (Female ACME x Male ACME)
	AS 10407-035	35 psi Pres Reg & C.V. (Female ACME x Male ACME)
	AS 10407-050	50 psi Pres Reg & C.V. (Female ACME x Male ACME)



Pressure Regulator with Check Valve



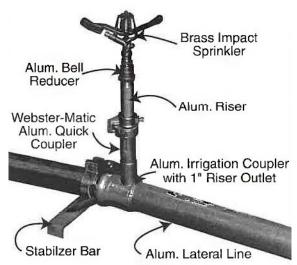
Nozzle

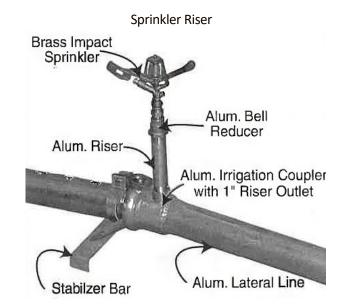
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NOZZLES:	AS P9306-078	#10, Dark Blue, 0.79 - 1.25 GPM
20 - 50 PSI	AS P9306-086	#11, Orange, 0.95 - 1.53 GPM
	AS P9306-094	#12, Purple, 1.14 - 1.80 GPM
	AS P9306-102	#13, Yellow, 1.34 - 2.13 GPM
	AS P9306-109	#14, Green, 1.52 - 2.40 GPM
	AS P9306-125	#16, Red, 2.04 - 3.23 GPM
	AS P9306-141	#18, Gold, 2.61 - 4.11 GPM
	AS P9306-156	#20, Brown, 3.18 - 5.00 GPM



# SPRINKLER IRRIGATION

Sprinkler Riser with Webster





Sprinkler Systems are a time tested method of providing irrigation and frost protection. A sprinkler system is composed of a main line which supplies water from the pump to the field, a header line which carries water across the field, and lateral lines which distribute water throughout the field.

Lateral lines are laid out at evenly spaced intervals, and may be moved across a field (by hand) as in a Hand Move Portable/Semi-Permanent System, or lateral lines may sit in place for an entire season as a Solid-Set Permanent System.

A Hand-Move System saves on the number of lateral lines and sprinklers, but is labour intensive; a Solid-Set Permanent System uses more material, but once it is set up you'll have great flexibility with water application rates and volume.

# Collar Pin Webster Bottom O-Ring

Webster-Matic cast aluminum quick coupler will speed up sprinkler set up, and eliminate time consuming system shut downs. The twist and lock system means no tools are needed to place sprinklers in the field. The internal check ball allows you to replace sprinklers while the system is running without getting wet. Irrigation pipe equipped with Websters are easier to store and use in the field, while your sprinklers and riser tubing is less-likely to be damaged.

#### **WEBSTER & PIPE FITTINGS**

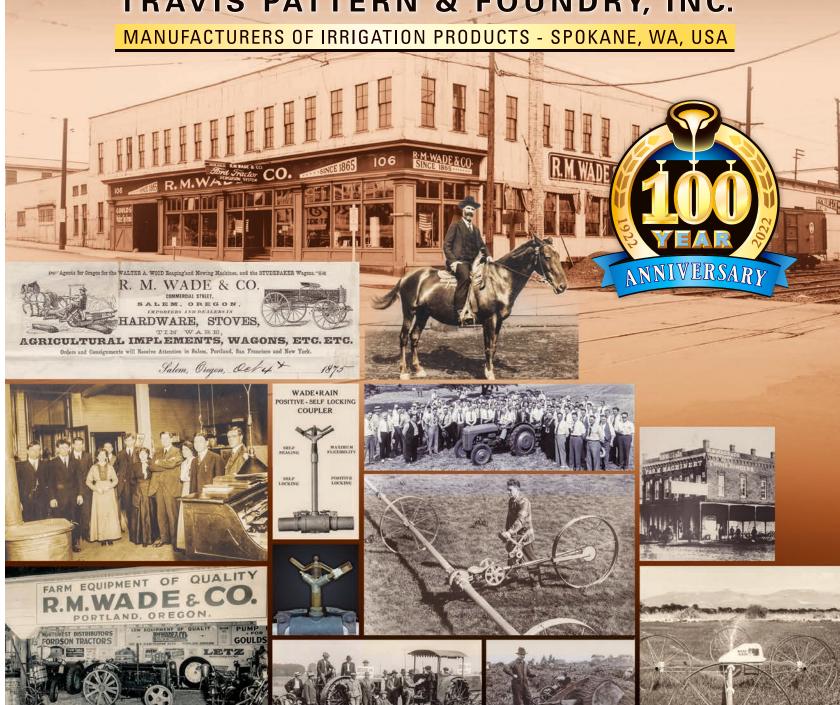
PART #	DESCRIPTION
BG 6-100FIW	1" Webster Valve - w/o collar & pin
BGP6-100CS	Collar w screw for 1" Webster
BGP6-100N	Nipple for 1" Webster
BGP6-100OR	O-Ring for 1" Webster
BGP6-100TG	Top Gasket for 1" Webster
BGP6-100VB	Valve ball for 1" Webster
GA PSTAB	Stabilizer Bar with Nuts & Bolts
BE 11500-1	Plug, 1/2" MIPT
BE 11500-2	Plug, 3/4" MIPT
BE 11500-3	Plug, 1" MIPT
BE 11500-4	Plug, 1 1/4" MIPT
BE 11501-1	Bell Reducer, 3/4" x 1/2" FIPT x FIPT
BE 11501-2	Bell Reducer, 1" x 1/2" FIPT x FIPT
BE 11501-3	Bell Reducer, 1" x 3/4" FIPT x FIPT
BE 11502-1	Reducing Bushing, 3/4" x 1/2" MIPT x FIPT
BE 11502-2	Reducing Bushing, 1" x 1/2" MIPT x FIPT
BE 11502-3	Reducing Bushing, 1" x 3/4" MIPT x FIPT
BE 11503-1	Coupling, 1/2" FIPT x FIPT
BE 11503-2	Coupling, 3/4" FIPT x FIPT
BE 11503-4	Coupling, 1" FIPT x FIPT

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A Division of TRAVIS PATTERN & FOUNDRY, INC.



# **WADE RAIN PIPE & COUPLERS**



#### **ALUMINUM IRRIGATION TUBING WITH WADE RAIN COUPLERS**

PART #	OUTSIDE DIAMETER	WALL THICKNESS	DESCRIPTION
GA 02-30WR	2" x 30'	0.050"	1" Riser Outlet
GA 03-30WR	3" x 30'	0.050"	1" Riser Outlet
GA 04-30WR	4" x 30'	0.050"	1" Riser Outlet
GA 05-30WR	5" x 30'	0.052"	
GA 06-30WR	6" x 30'	0.058"	

Ring Lock Couplers with 1 Male Coupler, 1 Female Coupler with Gasket & 1 Locking Lever GA 06-30WR-RL 6" x 30' 0.058" GA 08-30WR-RL 8" x 30' 0.072" GA 10-30WR-RL 10" x 30' 0.064" For fittings, please see page 69.

Aluminum Pipe is also available in: 10', 20' & 40' as well as custom cut lengths.

With our fabrication facilities we can easily connect Wade Rain Fittings to a variety of materials and other irrigation couplers.

\*Coupler with 1" FIPT for Riser, Plug not included.

# **Knob Style Couplers (includes Gasket)**

	PART #	SIZE		
WELD-ON COUPLERS				
	BE 1-2-1P*	2"		
	BE 1-3-1WO*	3"		
	BE 1-4-1WO*	4"		
	BE 1-5-1WO*	5"		
	BE 1-5-WO	5"		
	BE 1-6-1WO	6"		

	PART #	SIZE
REPAIR COUPLERS		
	BE 1-2-1S*	2"
	BE 1-3-1S*	3"
	BE 1-4-1S*	4"
	BE 1-5-1S*	5"

	PART #	SIZE
FIELD COUPLERS		
	BE 1-3-1C*	3"
	BE 1-4-1C*	4"
Mane want	BE 1-2-MC	2"
	BE 1-3-MC	3"
	BE 1-4-MC	4"
	BE 1-5-MC	5"
	BE 1-6-MC	6"
	PART #	SIZE
BAND & LATCH	PART #	SIZE
BAND & LATCH	PART # BE 8-2CX	SIZE 2"
BAND & LATCH		
BAND & LATCH	BE 8-2CX	2"
BAND & LATCH	BE 8-2CX BE 8-3CX	2" 3"



# **HYDRANTS, T-VALVES & VALVE OPENERS**

	PART #	PIPE SIZE	VALVE SIZE
UNDERGROUND HYDRANTS			
	BE 7-3D	3"	3"
	BE 7-4D	4"	4"
The new Parks	BE 7-6D	6"	6"
TOP CO.	GA HYD-DA2	2" Drain C & 6"	Outlet - 4"

	PART #	PIPE SIZE
FIELD TEE (F x F x F)		
	BE 2-2FC	2"
	BE 2-3FC	3"
AND STATE	BE 2-4FC	4"
	BE 2-5FC	5"
	BE 2-6FC	6"

	PART #	PIPE SIZE
TEE VALVE ( M x F x	( <b>F</b> )	
	BE 2-2MXFR	2"
	BE 2-3MXFR	3"
	BE 2-4MXFR	4"
	BE 2-5MXFR	5"
	BE 2-6MXFR	6"

	PART #	PIPE SIZE	VALVE SIZE
<b>VALVE OPENING ELE</b>			
	BE 3-4-2E	2"	3"
8	BE 3-4-3E	3"	3"
	BE 3-4-4E	4"	3"
	BE 3-6-2E	2"	4"
	BE 3-6-3E	3"	4"
	BE 3-6-4E	4"	4"
	BE 3-6-5E	5"	4"
	BE 3-6-2E	2"	4"
	BE 3-6-3E	3"	4"
	BE 3-6-4E	4"	4"
	BE 3-6-5E	5"	4"
	BE-3-6-6ES	6"	6"

	PART #	PIPE SIZE	VALVE SIZE
TEE VALVE ( M x F)			
	BE 2-3-3MXF	3"	3"
	BE 2-4-3MXF	4"	3"
	BE 2-5-4MXF	5"	4"
	BE 2-6-4MXF	6"	4"
	BE 2-6-6MXF	6"	6"

Hydrants provide an On/Off connection from buried to above ground mainline or header. Tee Valves provide an On/Off Connection from an above ground header/main line to a lateral line.

To select the appropriate Valve/Hydrant Opener, first determine the size of valve you are connecting to; then determine the size of line that is coming off of the valve.

# **ELBOWS, REDUCERS & PLUGS**

# **REVERSIBLE 90º ELBOW, (MXF)**



PART #	SIZE
BE 3-2MXFR	2"
BE 3-3MXFR	3"
BE 3-4MXFR	4"
BE 3-5MXFR	5"
BE 3-6MXFR	6"

# REVERSIBLE 90° ELBOW WITH EXTENSION, (MXF)



PART #	SIZE
BE 3-5MXFR-EX	5"
BE 3-6MXFR-EX90	6"

# REVERSIBLE 45° ELBOW WITH EXTENSION, (MXF)



PART #	SIZE
BE 3-2MXFR-45	2"
BE 3-3MXFR-45	3"
BE 3-4MXFR-45	4"
BE 3-5MXFR-45	5"
BE 3-6MXFR-45	6"

# **REVERSIBLE 45° ELBOW WITH EXTENSION (MXF)**



PART #	SIZE
BE 3-5MXFR-EX45	5"
BE 3-6MXFR-EX45	6"

# FIELD 90° ELBOW, (FXF)



PART #	SIZE
BE 3-2FC	2"
BE 3-3FC	3"
BE 3-4FC	4"
BE 3-5FC	5"
BE 3-6FC	6"

# REDUCER, (MXF)



SEIN, (IVIXII)	
PART #	SIZE
BE 4-3-2FC	3" to 2"
BE 4-4-2FC	4" to 2"
BE 4-4-3FC	4" to 3"
BE 4-5-3FC	5" to 3"
BE 4-5-4FC	5" to 4"
BE 4-6-4FC	6" to 4"
BE 4-6-5FC	6" to 5"

# REDUCER, (FXF)



P	ART#	5	SIZE
BE 4-3-2	<u>2</u> C	3	" to 2"
BE 4-4-3	BC .	4	" to 3"
BE 4-5-4	IC .	5	" to 4"
BE 4-6-4	IC	6	" to 4"
BE 4-6-5	SC .	6	" to 5"

# END PLUG, (MALE)



LOG, (IVIALL)	
PART #	SIZE
BE 5-2CX	2"
BE 5-3CX	3"
BE 5-4CX	4"
BE 5-5DX	5"
BE 5-6DX	6"

All Fittings include gaskets.

1" Plug not included.

Elbow Extensions prevent the fitting from binding, making it much easier to remove.





# RING-LOCK COUPLERS & FITTINGS

For high pressure and large volume flows, we recommend **Ring Lock Couplers**. Ring Lock Style Couplers provide a secure connection, particularly suited for piping long distance with a low pressure loss. 6", 8" & 10" Ring Lock include Wade Rain **No Drain Gaskets**.

# **Weld-On Ring Lock Couplers**

KING LOCK FITTINGS		
DESCRIPTION	SIZE	
Weld-On Female Coupler	6"	
Weld-On Female Coupler	8"	
Weld-On Female Coupler	10"	
Weld-On Male Coupler	6"	
Weld-On Male Coupler	8"	
Weld-On Male Coupler	10"	
Locking Lever	6"	
Locking Lever	8"	
Locking Lever	10"	
90° Elbow, (MxF)	6"	
90° Elbow, (MxF)	8"	
90° Elbow, (MxF)	10"	
45° Elbow, (MxF)	6"	
45° Elbow, (MxF)	8"	
45° Elbow, (MxF)	10"	
End Plug (Male)	6"	
End Plug (Male)	8"	
End Plug (Male)	10"	
	Weld-On Female Coupler Weld-On Female Coupler Weld-On Male Coupler Weld-On Male Coupler Weld-On Male Coupler Weld-On Male Coupler Locking Lever Locking Lever Locking Lever 90° Elbow, (MxF) 90° Elbow, (MxF) 45° Elbow, (MxF) 45° Elbow, (MxF) End Plug (Male) End Plug (Male)	





Ring Lock 90° Elbow, (MxF)





Ring Lock End Plug (Male)

Ring Lock 45° Elbow, (MxF)

# **HOP-A-LONGS**

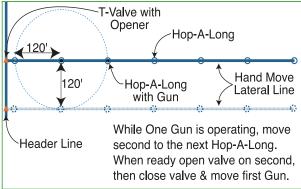
Hop-A-Longs are an economical innovation of Vanden Bussche Irrigation. Suited well for long narrow fields, they are laid in a manner very similar to Solid-Set Sprinkler Irrigation. The included On/Off Gate Valve allows one gun to operate while a second gun is being repositioned. Common spacings are 120' x 120' using 100 Series & 150' x 150' using a 150 Series Nelson Guns.



#### **HOP-A-LONGS**

PART #	DESCRIPTION	PIPE SIZE	CAM
GA HP4X2S	1 Leg Hop-A- Long	4"	None
GA HP4X2S-F	1 Leg Hop-A- Long	4"	2" Male

We also custom make Hop-A-Longs in 3", 4", 5" & 6", with single or double legs.





# **PVC PIPE**





# SERIES 160 (SDR 26) 20' LENGTHS, WHITE

PART #	END CONNECT TYPE	SIZE
ET A160G-400	Gasket	4"
ET A160G-600	Gasket	6"
ET A160G-800	Gasket	8"
ET A160G-1000	Gasket	10"
ET A160-125	Glue, (Bell End)	1 ¼"
ET A160-150	Glue, (Bell End)	1 ½"
ET A160-200	Glue, (Bell End)	2"
ET A160-250	Glue, (Bell End)	2 ½"
ET A160-300	Glue, (Bell End)	3"
ET A160-400	Glue, (Bell End)	4"

#### SERIES 200 (SDR 21) 20' LENGTHS. WHITE

3ENIES 200 (3DN 21) 20 LENGTI 13, WITH E		
PART #	END CONNECT TYPE	SIZE
ET 200G-300	Gasket	3"
ET 200G-400	Gasket	4"
ET 200G-600	Gasket	6"
ET 200G-800	Gasket	8"
ET 200G-1000	Gasket	10"
ET 200G-1200	Gasket	12"
ET 200-075	Glue, (Bell End)	3/4"
ET 200-100	Glue, (Bell End)	1"
ET 200-125	Glue, (Bell End)	1 ¼"
ET 200-150	Glue, (Bell End)	1 ½"
ET 200-200	Glue, (Bell End)	2"
ET 200-250	Glue, (Bell End)	2 ½"
ET 200-300	Glue, (Bell End)	3"

#### **SCHEDULE 40 GREY**

PART #	END CONNECT TYPE	SIZE
ET 40-005	Glue, (Bell End) 10' Lengths	1/2"
ET 40-075	Glue, (Bell End) 10' Lengths	3/4"
ET 40-100	Glue, (Bell End) 10' Lengths	1"
ET 40-125	Glue, (Bell End) 10' Lengths	1 ¼"
ET 40-150	Glue, (Bell End) 10' Lengths	1 ½"
ET 40-200	Glue, (Bell End) 10' Lengths	2"
ET 40-250	Glue, (Bell End) 10' Lengths	2 ½"
ET 40-300	Glue, (Bell End) 10' Lengths	3"
ET 40-400	Glue, (Bell End) 20' Lengths	4"
ET 40-600	Glue, (Bell End) 20' Lengths	6"

# **SCHEDULE 80 20' LENGTHS, GREY**

PART #	END CONNECT TYPE	SIZE
ET 80-005	Plain Ends (no coupler)	1/2"
ET 80-075	Plain Ends (no coupler)	3/4"
ET 80-125	Plain Ends (no coupler)	1 ¼"
ET 80-200	Plain Ends (no coupler)	2"
ET 80-250	Plain Ends (no coupler)	2 ½"
ET 80-300	Plain Ends (no coupler)	3"
ET 80-400	Plain Ends (no coupler)	4"
ET 80-600	Plain Ends (no coupler)	6"

Our own fleet of carriers can deliver PVC Pipe directly to the installation site. We also can recommend proven contractors to install your buried PVC.



# **REDUCING TEE (S x S x S)**

PART #	SIZE (inches)
BA 401-101	3/4 x 3/4 x 1/2
BA 401-130	1 x 1 x 1/2
BA 401-131	1 x 1 x 3/4
BA 401-166	1 ½ x 1 ½ x 1/2
BA 401-167	1 ¼ x 1 ¼ x 3/4
BA 401-168	1 ¼ x 1 ¼ x 1
BA 401-209	1 ½ x 1 ½ x 1/2
BA 401-210	1 ½ x 1 ½ x 3/4
BA 401-211	1½x1½x1
BA 401-212	1 ½ x 1 ½ x 1 ¼
BA 401-213	1 ½ x 1 ½ x 2
BA 401-241	2 x 1 ½ x 1 ½
BA 401-247	2 x 2 x 1/2
BA 401-248	2 x 2 x 3/4
BA 401-249	2 x 2 x 1
BA 401-250	2 x 2 x 1 1/4
BA 401-251	2 x 2 x 1 ½
BA 401-289	2 ½ x 2 ½ x 1
BA 401-291	2 ½ x 2 ½ x 1 ½
BA 401-292	2 ½ x 2 ½ x 2
BA 401-334	3 x 3 x 3/4
BA 401-335	3 x 3 x 1
BA 401-336	3 x 3 x 1 1/4
BA 401-337	3 x 3 x 1 ½
BA 401-338	3 x 3 x 2
BA 401-420	4 x 4 x 2
BA 401-422	4 x 4 x 3
BA 401-528	6 x 6 x 2
BA 401-530	6 x 6 x 3
BA 401-532	6 x 6 x 4
BA 401-582	8 x 8 x 4
BA 401-585	8 x 8 x 6

# **COMBINATION TEE (S x S x FIPT)**



PART #	SIZE (inches)
BA 402-005	1/2
BA 402-007	3/4
BA 402-010	1
BA 402-012	1 1/4
BA 402-015	1 ½
BA 402-020	2
BA 402-025	2 ½
BA 402-030	3
BA 402-040	4

# **SCHEDULE 40 PVC FITTINGS**

# TEE (S x S x S)



PART #	SIZE (inches)
BA 401-005	1/2
BA 401-007	3/4
BA 401-010	1
BA 401-012	1 1/4
BA 401-015	1 ½
BA 401-020	2
BA 401-025	2 ½
BA 401-030	3
BA 401-040	4
BA 401-060	6
BA 401-080	8

# **COMBINATION & REDUCING TEE (S x S x FIPT)**



PART #	SIZE (inches)
BA 401-101	3/4 x 3/4 x 1/2
BA 401-130	1 x 1 x 1/2
BA 401-131	1 x 1 x 3/4
BA 401-166	1 ¼ x 1 ¼ x 1/2
BA 401-167	1 ¼ x 1 ¼ x 3/4
BA 401-168	1 ¼ x 1 ¼ x 1
BA 401-209	1 ½ x 1 ½ x 1/2
BA 401-210	1 ½ x 1 ½ x 3/4
BA 401-211	1 ½ x 1 ½ x 1
BA 401-212	1 ½ x 1 ½ x 1 ¼
BA 401-213	1 ½ x 1 ½ x 2
BA 401-241	2 x 1 ½ x 1 ½
BA 401-247	2 x 2 x 1/2
BA 401-248	2 x 2 x 3/4
BA 401-249	2 x 2 x 1
BA 401-250	2 x 2 x 1 ¼
BA 401-251	2 x 2 x 1 ½
BA 401-289	2 ½ x 2 ½ x 1
BA 401-291	2 ½ x 2 ½ x 1 ½
BA 401-292	2 ½ x 2 ½ x 2
BA 401-334	3 x 3 x 3/4
BA 401-335	3 x 3 x 1
BA 401-336	3 x 3 x 1 ¼
BA 401-337	3 x 3 x 1 ½

# **SCHEDULE 40 PVC FITTINGS**

# THREADED TEE (FIPT x FIPT x FIPT)



PART #	SIZE (inches)
BA 405-005	1/2
BA 405-007	3/4
BA 405-010	1
BA 405-012	1 1/4
BA 405-015	1 ½
BA 405-020	2

# 90° ELBOW (S x S)



ies)

# 90° COMBINATION ELBOW (S x FIPT)



PART #	SIZE (inches)
BA 407-005	1/2
BA 407-007	3/4
BA 407-010	1
BA 407-012	1 1/4
BA 407-015	1 ½
BA 407-020	2

# 90° COMBINATION & REDUCING ELBOW (S x FIPT)



PART #	SIZE (inches)
BA 407-101	3/4 x 1/2
BA 407-130	1 x 1/2
BA 407-131	1 x 3/4

# 90° THREADED ELBOW (FIPT x FIPT)



PART #	SIZE (inches)
BA 408-005	1/2
BA 408-007	3/4
BA 408-010	1
BA 408-012	1 1/4
BA 408-015	1 ½
BA 408-020	2

# 90° STREET ELBOW (S x SP)



PART #	SIZE (inches)
BA 409-005	1/2
BA 409-007	3/4
BA 409-010	1
BA 409-015	1 ½

# 90° COMBINATION STREET ELBOW (S x MIPT)



PART #	SIZE (inches)
BA 410-005	1/2
BA 410-007	3/4
BA 410-010	1
BA 410-012	1 1/4
BA 410-015	1 ½
BA 410-020	2

# 90° STREET ELBOW (FIPT x MIPT)



PART #	SIZE (inches)
BA 412-005	1/2
BA 412-007	3/4
BA 412-010	1
BA 412-012	1 1/4
BA 412-015	1 ½
BA 412-020	2

# 22° ELBOW (S x S)



PART #	SIZE (inches)
BA 416-020	1/2
BA 416-030	3/4
BA 416-040	1

# 45° ELBOW (S x S)



•	•
PART #	SIZE (inches)
BA 417-005	1/2
BA 417-007	3/4
BA 417-010	1
BA 417-012	1 1/4
BA 417-015	1 ½
BA 417-020	2
BA 417-025	2 ½
BA 417-030	3
BA 417-040	4
BA 417-060	6
BA 417-080	8



# **SCHEDULE 40 PVC FITTINGS**

### CROSS (S x S x S x S)



PART #	SIZE (inches)
BA 420-005	1/2
BA 420-007	3/4
BA 420-010	1
BA 420-012	1 1/4
BA 420-015	1 ½
BA 420-020	2
BA 420-025	2 ½
BA 420-030	3
BA 420-040	4

### COUPLING (S x S)



PART #	SIZE (inches)
BA 429-005	1/2
BA 429-007	3/4
BA 429-010	1
BA 429-012	1 1/4
BA 429-015	1 1/2
BA 429-020	2
BA 429-025	2 ½
BA 429-030	3
BA 429-040	4
BA 429-060	6
BA 429-080	8

### **REDUCING COUPLING (S x S)**



PAKI#	SIZE (Inches)
BA 429-131	1 x 3/4
BA 429-212	1 ½ x 1 ¼
BA 429-251	2 x 1 ½
BA 429-338	3 x 2
BA 429-422	4 x 3
BA 429-532	6 x 4

### THREADED COUPLING (FIPT x FIPT)



PART #	SIZE (inches)
BA 430-005	1/2
BA 430-007	3/4
BA 430-010	1

### **FEMALE ADAPTER (S x FIPT)**



PART #	SIZE (inches)
BA 435-005	1/2
BA 435-007	3/4
BA 435-010	1
BA 435-012	1 1/4
BA 435-015	1 ½
BA 435-020	2
BA 435-025	2 ½
BA 435-030	3
BA 435-040	4
BA 435-060	6

### REDUCING FEMALE ADAPTER (S x FIPT)



PART#	SIZE (inches)
BA 435-074	1/2 x 3/4
BA 435-101	3/4 x 1/2
BA 435-102	3/4 x 1
BA 435-131	1 x 3/4
BA 435-211	1 x 1 ½

### MALE ADAPTER (S x MIPT)



PART #	SIZE (inches)
BA 436-005	1/2
BA 436-007	3/4
BA 436-010	1
BA 436-012	1 1/4
BA 436-015	1 ½
BA 436-020	2
BA 436-025	2 ½
BA 436-030	3
BA 436-040	4
BA 436-060	6

### **REDUCING MALE ADAPTER (MIPT x S)**



J 1111 122 1 121 11	
PART #	SIZE (inches)
BA 436-074	1/2 x 3/4
BA 436-101	3/4 x 1/2
BA 436-102	3/4 x 1
BA 436-131	1 x 3/4
BA 436-132	1 x 1 1/4
BA 436-168	1 ¼ x 1
BA 436-169	1 ¼ x 1 ½
BA 436-212	1 ½ x 1 ¼
BA 436-213	1 ½ x 2
BA 436-251	2 x 1 ½
BA 436-252	2 x 2 ½
BA 436-341	3 x 4

# **SCHEDULE 40 PVC FITTINGS**

### **COMBINATION REDUCING BUSHING (SP x FIPT)**

### **REDUCING BUSHING (SP x S)**



_		- ()
	PART #	SIZE (inches)
	BA 437-101	3/4 x 1/2
	BA 437-130	1 x 1 /2
	BA 437-131	1 x 3 /4
	BA 437-167	1 ¼ x 3/4
	BA 437-168	1 ¼ x 1
	BA 437-209	1 ½ x 1/2
	BA 437-210	1 ½ x 3/4
	BA 437-211	1 ½ x 1
	BA 437-212	1½ x 1¼
	BA 437-248	2 x 3/4
	BA 437-249	2 x 1
	BA 437-250	2 x 1 1/4
	BA 437-251	2 x 1 ½
	BA 437-289	2 ½ x 1
	BA 437-290	2 ½ x 1 ¼
	BA 437-291	2 ½ x 1 ½
	BA 437-292	2 ½ x 2
	BA 437-335	3 x 1
	BA 437-336	3 x 1 ¼
	BA 437-337	3 x 1 ½
	BA 437-338	3 x 2
	BA 437-339	3 x 2 ½
	BA 437-420	4 x 2
	BA 437-421	4 x 2 ½
	BA 437-422	4 x 3
	BA 437-530	6 x 3
	BA 437-532	6 x 4
	BA 437-582	8 x 4
	BA 437-585	8 x 6

### THREADED REDUCING BUSHING (MIPT x FIPT)

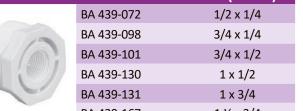


	PART #	SIZE (inches)
В	A 439-072	1/2 x 1/4
В	A 439-098	3/4 x 1/4
В	A 439-101	3/4 x 1/2
В	A 439-130	1 x 1/2
В	A 439-131	1 x 3/4
В	A 439-167	1 ¼ x 3/4
В	A 439-168	1 ¼ x 1
В	A 439-209	1 ½ x 1/2



PART #	SIZE (inches)
BA 438-071	1/2 x 1/8
BA 438-072	1/2 x 1/4
BA 438-098	3/4 x 1/4
BA 438-101	3/4 x 1/2
BA 438-130	1 x 1/2
BA 438-131	1 x 3/4
BA 438-166	1 ¼ x 1/2
BA 438-167	1 ¼ X 3/4
BA 438-168	1 ¼ x 1
BA 438-209	1 ½ x 1/2
BA 438-210	1 ½ x 3/4
BA 438-211	1 ½ x 1
BA 438-212	1 ½ x 1 ¼
BA 438-247	2 x 1/2
BA 438-248	2 x 3/4
BA 438-249	2 x 1
BA 438-250	2 x 1 1/4
BA 438-251	2 x 1 ½
BA 438-289	2 ½ x 1
BA 438-290	2 ½ x 1 ¼
BA 438-291	2 ½ x 1 ½
BA 438-292	2 ½ x 2
BA 438-335	3 x 1
BA 438-336	3 x 1 1/4
BA 438-337	3 x 1 ½
BA 438-338	3 x 2
BA 438-339	3 x 2 ½
BA 438-420	4 x 2
BA 438-422	4 x 3
BA 438-532	6 x 4

### THREADED REDUCING BUSHING (MIPT x FIPT)





PART #	SIZE (inches)
BA 439-210	1 ½ x 3/4
BA 439-211	1 ½ x 1
BA 439-212	1 ½ x 1/4
BA 439-249	2 x 1
BA 439-250	2 x 1 1/4
BA 439-251	2 x 1 ½
BA 439-292	2 ½ x 2
BA 439-338	3 x 2



We stock an extensive inventory of white fittings.
We also carry common sizes of grey schedule
40 fittings for use in greenhouses to prevent algae growth in pipes.
Grey Schedule 80 available upon request.



# **SCHEDULE 40 PVC FITTINGS & PVC SADDLES**

	PART #	SIZE (inches)
CAP (SLIP)	TAILL III	SIZE (IIICIICS)
CAI (SEII )	BA 447-005	1/2
	BA 447-007	3/4
THE STATE OF THE S	BA 447-010	1
	BA 447-010	1 1/4
	BA 447-012	1 1/2
	BA 447-013 BA 447-020	2
	BA 447-025	2 1/2
	BA 447-023 BA 447-030	3
	BA 447-030	4
	BA 447-040 BA 447-060	6
	BA 447-000	8
CAD (FIDT)	DA 447-000	0
CAP (FIPT)	DA 440 00F	1/2
	BA 448-005	1/2
	BA 448-007	3/4 1
	BA 448-010 BA 448-012	1 1 1/4
	BA 448-012 BA 448-015	1 ½
	BA 448-015 BA 448-020	7
	BA 448-025	2 ½
	BA 448-030	3
	BA 448-040	4
	BA 448-060	6
PLUG (SLIP)	BA 446-000	U
PLOG (SLIP)	BA 449-005	1/2
	BA 449-007	3/4
	BA 449-010	1
	BA 449-015	1 1/2
	BA 449-013	2
PLUG (MIPT)	DA 445-020	2
FLOG (WIIF1)	BA 450-005	1/2
Comment of the commen	BA 450-003	3/4
	BA 450-007	1
	BA 450-010	1 1/4
	BA 450-012	1 ½
	BA 450-013	2
	BA 450-025	2 ½
	BA 450-030	3

BA 450-040

# **BOLT ON SADDLES**Bolt on Saddle for mounting on all Series of PVC Pipe

	PART #	SIZE (inches)
	FL SADP205LB	2" x 1/2" (FIPT), Less Bolts
	FL SADP2075LB	2" x 3/4" (FIPT), Less Bolts
	FL SAD21	2" x 1" (FIPT)
S. C.	FL SADP2575	2 ½" x 3/4" (FIPT)
	FL SAP31	3" x 1" (FIPT)
	FL SAP315	3" x 1 1/2" (FIPT)
	FL SAP42	4" x 2" (FIPT)
	FL SAP42	6" x 4" (FIPT)

# WEDGE SADDLES Snap on Saddle for mounting on all series of PVC Pipe

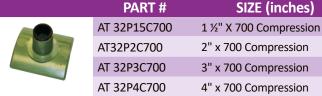
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	PART #	SIZE (inches)
	FL SADP21	2" x 1/2" (FIPT), Less Bolts
	FL SADP215	2" x 3/4" (FIPT), Less Bolts
	FL SADP2515	2" x 1" (FIPT)
	FL SADP31	2 1/2" x 3/4" (FIPT)
	FL SADP315	3" x 1" (FIPT)
	FL SADP32	3" x 1 ½" (FIPT)
	FL SADP42	4" x 2" (FIPT)
	FL SADP62	6" x 4" (FIPT)
	FL SADP82	8" x 2" (FIPT)

# BONDABLE SADDLES Glue on Saddle for mounting on all series of PVC Pipe. Works well with IPS Hose for a Header Line

PART #	SIZE (inches)
AT 32S075P15	1 ½" x 3/4" Slip or 1" Spigot
AT 32S075P2	2" x 3/4" Slip or 1" Spigot
AT 32S075P3	3" x 3/4" Slip or 1" Spigot
AT 32S075P4	4" x 3/4" Slip or 1" Spigot

# BONDABLE SADDLES Glue on Saddle for mounting on all series of PVC Pipe

with an 18mm compression fitting (See page 38 for Netafim Tubing).





# **SCHEDULE 80 PVC NIPPLES & FITTINGS**

PART #	SIZE (inches)
BA 205-011	1/2 x (close)
BA 205-020	1/2 x 2
BA 205-025	1/2 x 2 ½
BA 205-030	1/2 x 3
BA 205-040	1/2 x 4
BA 205-050	1/2 x 5
BA 205-060	1/2 x 6
BA 205-080	1/2 x 8
BA 205-100	1/2 x 10
BA 205-120	1/2 x 12
BA 205-180	1/2 x 18
BA 205-240	1/2 x 24
BA 205-360	1/2 x 36
BA 205-480	1/2 x 48
BA 207-013	3/4 x (close)
BA 207-020	3/4 x 2
BA 207-030	3/4 x 3
BA 207-040	3/4 x 4
BA 207-060	3/4 x 6
BA 207-080	3/4 x 8
BA 207-120	3/4 x 12
BA 207-180	3/4 x 18
BA 207-240	3/4 x 24
BA 207-360	3/4 x 36
BA 207-480	3/4 x 48
BA 210-015	1 x (close)
BA 210-020	1 x 2
BA 210-030	1 x 3
BA 210-040	1 x 4
BA 210-060	1 x 6
BA 210-080	1 x 8
BA 210-100	1 x 10
BA 210-120	1 x 12
BA 210-180	1 x 18
BA 210-240	1 x 24

PART #	SIZE (inches)
BA 212-016	1 ¼ x (close)
BA 212-020	1 1/4 x 2
BA 212-025	1 ¼ x 2 ½
BA 212-030	1 1/4 x 3
BA 212-040	1 ¼ x 4
BA 212-060	1 ¼ x 6
BA 212-080	1 ¼ x 8
BA 212-120	1/2 x 8
BA 215-017	1 ½ x (close)
BA 215-020	1 ½ x 2
BA 215-030	1 ½ x 3
BA 215-040	1 ½ x 4
BA 215-060	1½x6
BA 215-080	1½x8
BA 215-120	1 ½ x 12
BA 220-020	2 x (close)
BA 220-025	2 x 2 ½
BA 220-030	2 x 3
BA 220-040	2 x 4
BA 220-060	2 x 6
BA 220-080	2 x 8
BA 220-100	2 x 10
	0.1/0.1/1
BA 225-025	2 1/2 x (close)
	2 (1 )
BA 230-026	3 x (close)
BA 230-030	3 x 3
BA 230-080	3 x 8
BA 230-100	3 x 10
DA 240 040	4 4
BA 240-040	4 x 4
BA 240-080	4 x 8

PART #	SIZE (inches)
212-016	1 ¼ x (close)
212-020	1 ¼ x 2
212-025	1 ¼ x 2 ½
212-030	1 ¼ x 3
212-040	1 1/4 x 4
212-060	1 ¼ x 6
212-080	1 ¼ x 8
212-120	1/2 x 8
215-017	1 ½ x (close)
215-020	1 ½ x 2
215-030	1½x3
215-040	1 ½ x 4
215-060	1½ x 6
215-080	1 ½ x 8
215-120	1 ½ x 12
220-020	2 x (close)
220-025	2 x 2 ½
220-030	2 x 3
220-040	2 x 4
220-060	2 x 6
220-080	2 x 8
220-100	2 x 10
225-025	2 1/2 x (close)
230-026	3 x (close)
230-030	3 x 3
230-080	3 x 8
230-100	3 x 10
240-040	4 x 4
240-080	4 x 8

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	PART #	SIZE (inches)
NION (S x S)		
	BA 897-005	1/2
-	BA 897-007	3/4
	BA 897-010	1
	BA 897-012	1 1/4
	BA 897-015	1 ½
	BA 897-020	2
	BA 897-030	3
	BA 897-040	4
INION (FIPT x	FIPT)	
	BA 898-005	1/2
	BA 898-007	3/4
	BA 898-010	1
	BA 898-012	1 1/4
	BA 898-015	1 ½
	BA 898-020	2
	BA 898-030	3
OMPRESSION	N COUPLER,	GASKETED
	BA 0110-10	1
	BA 0110-15	1½
	BA 0110-20	2
	BA 0110-25	2 ½
	BA 0110-30	3
	BA 0110-40	4
	BA 0110-60	6
XPANSION CO	OUPLER (S x	SP)
	BA CUF010	1
1020	BA CUF015	1 ½
	BA CUF020	2
	BA CUF025	2 ½
	BA CUF030	3

BA CUF040 BA CUF060





# **WATER DRIVEN & ELECTRIC PUMPS**

FOR FERTILIZER, ACID, SANITIZERS & MOST CHEMICALS







AGRICULTURE SOLUTIONS

# **PVC FLANGES & ACCESSORIES**





# XIRTEC 7 PVC PRIMER Softens the PVC for a solid weld; excellent choice for cold weather applications. Purple in colour.



PART #	SIZE
ET 70HP	Half Pint
ET 70PT	Pint
ET 70QT	Quart
ET 70GL	Gallon
ET 70PTC	Clear Primer (Pint)

### XIRTEC 11 PVC CEMENT

For all classes and schedules, incliding Schedule 80. Heavy bodied with medium set. Grey in colour.



PART #	SIZE
ET 711HP	Half Pint
ET 711PT	Pint
ET 711QT	Quart
ET 711GL	Gallon
ET 725QT	Ipex 25 Wet/Dry, Medium Body, Aqua Blue

### **TEFLON TAPE**



PAKI #	SIZE
BA1-TTP	1/2" Pink Teflon Tape
BA1-TTW	1/2" White Tape (520' roll)
BA1-TTWD	3/4" White Wide Tape (520' roll)

### **APPLICANT TOOLS**



PART #	SIZE
ET074317	4" Roller for Qt. Can
ETDQ-150	Cap Dauber for Qt. Can
ETDB75	Cap Dauber for ½ Pint Can

# PIPE CLAMPS FOR PVC PIPE Easy to install latchable clips will hold your PVC pipe securely



PARI #	SIZE (inches)
BA PP05	1/2
BA PP075	3/4
BA PP100	1"
BA PP125	1 1/4
BA PP150	1 ½
BA PP200	2
BA PP300	3

# PART # SIZE (inches) FLANGE (SLIP) BA 851-020 2 BA 851-030 3 BA 851-040 4 BA 851-060 6 FLANGE (FIPT) BA 852-030 3

### FLANGE, LOOSE RING (VANSTONE, SLIP)

BA 852-040



BA 854-030	3	
BA 854-040	4	
BA 854-060	6	
BA 854-080	8	

### **FLANGE GASKETS**



•	VE13		
	GA PVBFGR3	3	
	GA PVBFGR4	4	
	GA PVBFGR5	5	
	GA PVBFGR6	6	
	GA PVBFGR8	8	
	GA PVBFGR10	10	
	GA PVBFGR12	12	

# FLANGE BOLT KITS (INCLUDE: BOLTS, WASHERS & NUTS)



Our Flange Bolt Kits come in a variety of sizes. The 3" and 4" kits come with a 5/8" bolt, with lengths available from 1 ½" to 5 ½".

The **5"**, **6" & 8"** Flange Bolt Kits come with a **3/4"** bolt, in lengths available ranging from **1** ½" **to 6"** long.

Contact your sales rep to ensure you are ordering the correct kit for your project.



# **UNDERGROUND RISERS & ACCESSORIES**

### **RISERS FOR WADE RAIN HYDRANTS**

PART #	END CONNECT TYPE	SIZE
AR6642FF-22A	Complete Riser Assembly	6" x 6"
AR 6442FF-22	42" High, MIPT, Double 2" Arm (use 7-4D)	6" x 4"
AR 6642FF-22	42" High, MIPT, Double 2" Arm (use 7-6D)	6" x 6"
AR 8642FF-22	42" High, MIPT, Double 2" Arm (use 7-6D)	8" x 6"
AR664FF-2A	Complete Riser Assembly	6" x 6"
AR 6442FF-2	42" High, MIPT, Single 2" Arm (use 7-4D)	6" x 4"
AR 6642FF-2	42" High, MIPT, Single 2" Arm (use 7-6D)	6" x 6"
AR 8642FF-2	42" High, MIPT, Single 2" Arm (use 7-6D)	8" x 6"

### RISERS WITH UNIVERSAL VALVES FOR UNIVERSAL OPENERS

PART #	END CONNECT TYPE	SIZE
AR 6642FFV-22	42" High, Upward Valve, Double 2" Arm	6" x 6"
AR 8642FFV-22	42" High, Upward Valve, Double 2" Arm	8" x 6"
AR 6642FFV-2	42" High, Upward Valve, Single 2" Arm	6" x 6"
AR 8642FFV-2	42" High, Upward Valve, Single 2" Arm	8" x 6"

BF SEP43	Pressure Relief Valve, 125 to 180 P.S.I.	4"
BF SEP42AD	Adapter for Pressure Relief Valve	2" x 4"
AT 65ARIB2PP	Continuous Air & Vacuum Relief Vent	2"
BF AV-150B2	Aluminum Air Relief Vent	2"
BC SUVE0605	Universal Steel Valve Opener	6" x 5"
BC SUVE0606	Universal Steel Valve Opener	6" x 6"

Risers with Double Arms are to accommodate a Pressure Relief Valve & Air Vent and are placed at the beginning & end of the underground line. Risers with Single Arms are to accommodate Air Vents only.

Universal Steel Valve Opener

with 8" height extension



BC SUVE0606X8

Universal Valve Opener



Pressure Relief Valve 2" x 4" Adapter



Travis Air Relief Vent



6" x 6"

Netafim Continuous Air Relief Vent



Riser, Double Arm with Gasket x Gasket x MIPT



Riser, Single Arm with Gasket x Gasket x MIPT

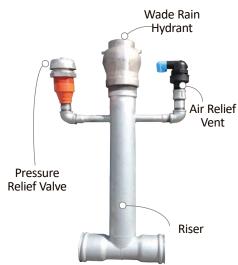


Riser, Double Arm, Upward Opening Valve Gasket x Gasket x Valve



Riser, Single Arm, Upward Opening Valve Gasket x Gasket x Valve

### Underground Riser for Wade Rain



For Wade Rain hydrants, please see page 67

# **GALVANIZED GASKETED FITTINGS**

### **Z-PIPES, COUPLERS & ELBOWS**



PART #	END CONNECT TYPE	SIZE
AR 3-0566-0	Z-Pipe, Flange x Flange	4"
AR 3-0567-0	Z-Pipe, Flange x Coupler	6"
AR 3-0567-1	Z-Pipe, Flange x Flange	6"
AR 3-7180-0	Z-Pipe, Flange x Coupler	8"
AR 10ZP	Z-Pipe, Flange x Coupler	10"

AR SA6	Galvanized Starter Pipe, Flange x Coupler	6" x 10'
AIX 3AU	dalvariized Starter ripe, riarige x coupler	0 7 10

### PART # SIZ STARTER COUPLER, FLANGE x COUPLER



EPCFA4	4"
AR EPCFA6	6"
AR EPCFA8	8"

### **WELD-ON COUPLER**



AR EPSC4	4"
AR EPSC6	6"
AR EPSC8	8"

### **REPAIR COUPLER**



AR EPRS4	4"
AR EPRS6	6"
AR EPRS8	8"

# PART # SIZE REDUCING COUPLER AR EPRC64 4" x 6" AR EPRC86 6" x 8" AR EPRC108 8" x 10"

### 45° ELBOW (GASKET x GASKET)



Al	R EPL454	4"
Al	R EPL456	6"
Al	R EPL458	8"
Al	R EPL4510	10"

### 90° ELBOW (GASKET x GASKET)



•		
	AR EPL904	4"
	AR EPL906	6"
	AR EPL908	8"
	AR EPL9010	10"

### **PIPE LUBRICANT**

PART #	SIZE	
ETLUBE-Q	1 QUART	



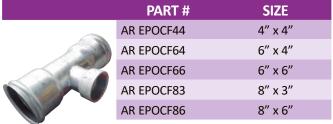


# **GALVANIZED GASKETED FITTINGS**

### TEE (GASKET x GASKET x GASKET)



### COMBO TEE (GASKET x GASKET x FIPT)



### **DEAD END (GASKETED CAP)**

	PART #	SIZE
	AR EPDE4	4"
	AR EPDE6	6"
	AR EPDE8	8"
	AR EPDE10	10"

### CROSS (GASKET x GASKET x GASKET)

PART #	SIZE
AR EPX6	6"
AR EPX8	8"

### **END WYE (GASKET x GASKET x GASKET)**

	PART #	SIZE
	AR EPY6-END	6"
	AR EPY8-END	8"
(4		

### IN LINE WYE (GASKET x GASKET x GASKET)

PART #	SIZE
AR EPY6	6"



Ask our expert Sales Team about proper thrust blocking.

# Now available

# MOBILE APP 2.0







- Improved order trackingPricing more current
- and up-to-date
- Live and up-to-date with internal data base
- More detailed order status updates







# **POLY PIPE & HIGH PRESSURE HOSE**



Superb, high-quality flexible irrigation pipe available in a wide range of sizes and resins to meet your specifications and price.

### IPEX C.S.A. RED STRIPE - POLY PIPE APPROVED FOR POTABLE WATER, 75 PSI LOW DENSITY

PART #	SIZE	ROLL LENGTH
TN CSA07400	3/4"	400′
TN CSA10300	1"	300′
TN CSA12300	1 ¼"	300′
TN CSA15250	1 ½"	250′
TN CSA20100	2"	100'

### OIL CREEK PLASTICS - POLY PIPE 25 YEAR WARRANTY, 100 PSI, MEDIUM DENSITY

PART #	SIZE	ROLL LENGTH
TN NSF07100	3/4"	100′
TN NSF07400	3/4"	400′
TN NSF10100	1"	100′
TN NSF10300	1"	300′
TN NSF12300	1 ¼"	300′
TN NSF15250	1 ½"	250′
TN NSF20100	2"	100′
TN NSF20200	2"	200′

# IPEX IRRIC 80 PS

### IPEX IRRIGATION 2000 - POLY PIPE 80 PSI, MEDIUM DENSITY

PART #	SIZE	ROLL LENGTH
TN IRR07100	3/4"	100′
TN IRR07400	3/4"	400′
TN IRR10100	1"	100′
TN IRR10300	1"	300′
TN IRR12300	1 ¼"	300′
TN IRR15250	1 ½"	250′
TN IRR20100	2"	100′

### **HIGH PRESSURE HOSE**

	PART #	SIZE	WORKING PSI
REINFORCED CL	EAR PVC HOS	SE .	
	EG RPH05	1/2"	200
	EG RPH075	3/4"	150
न विश्वासाय के किए के किए	EG RPH100	1"	125
	EG RPH125	1 ¼"	100
	EG RPH150	1 ½"	100

### MULTI-PURPOSE REINFORCED RED RUBBER HOSE



### **GARDEN HOSE**

PART # SIZE				
GREEN GARDEN HOSE				
EG GH07550 3/4" x 50' with cou	uplers			
EG GH075100 3/4" x 100' with co	ouplers			
EG GH1050 1" x 50' with coupl	lers			
EG GH1100 1" x 100' with cou	plers			

Kuri Tec's Heavy Duty Reinforced PVC Water Hose is long lasting and abrasion resistant.



# **LAYFLAT & OVAL HOSE**

Oval hose or FlexNet are the best options for a dripperline header/manifold line. Layflat is a better choice for supply lines and delivery hoses for pumps and filters.

### LAYFLAT DISCHARGE HOSE

	LATELAT DISCHARGE HUSE			
	PART #	SIZE	WORKING PSI	ROLL LENGTH
	G-H HILCOFLEX A	GRO, BLACK	C- HEAVY DUTY	
	EGPIR3	3"	250	660'
	EGPIR4	4"	250	660'
	EGPIR5	5"	250	660′
	EGPIR6	6"	200	660′
	IRONSIDES, BROV	NN - MEDIU	M DUTY	
	EG IS150*	1 ½"	150	300'
	EGPR200	2"	150	300'
7	EGPR300	3"	150	300'
Houseau,	EGPR400	4"	125	300'
	EGPR600	6"	115	300'
	LAYFLAT, GREEN	& BLUE - STA	ANDARD DUTY	
	EGPB200	2"	80	300′
	EGPB300	3"	80	300′
	EGPB400	4"	80	300'





### **OVAL TUBING**

PART #	SIZE	<b>WORKING PSI</b>	ROLL LENGTH
AA 1521600	1 ½"	21	600′
AA 221	2"	21	450'
AA 321	3"	21	200′
AA 421	4"	21	130′



### **FLEXNET PARTS**

MPT Short Plug (Bag 50)
TWD Tee Connection  Twist Lock (Bag 100)
TWD Elbow Connection Twist Lock (Bag100)

Contact our expert Sales Team for available sizes and custom ordering.



Surface Installation



Subsurface Installation



# **PVC INSERT FITTINGS**

	PART #	SIZE (inches)
TEE ( x x )		
	BA 1401-005	1/2"
	BA 1401-007	3/4"
	BA 1401-010	1"
	BA 1401-012	1 ¼"
	BA 1401-015	1 ½"
	BA 1401-020	2"
	BA 1401-030	3"
	BA 1401-040	4"
REDUCING TEE (I	x I x I)	
	BA 1401-074	1/2" x 1/2" x 3/4"
	BA 1401-094	3/4" x 1/2"x 1/2"
	BA 1401-101	3/4" x 3/4" x 1/2"
	BA 1401-102	3/4" x 3/4" x 1"
	BA 1401-125	1" x 3/4" x 3/4"
	BA 1401-130	1" x 1" x 1/2"
	BA 1401-131	1" x 1" x 3/4"
	BA 1401-132	1" x 1" x 1 ¼"
	BA 1401-157	1 ¼" x 1" x 3/4"
	BA 1401-158	1 ¼" x 1" x 1"
	BA 1401-166	1 ¼" x 1 ¼" x 1/2"
	BA 1401-167	1 ¼" x 1 ¼" x 3/4"
	BA 1401-168	1 ¼" x 1 ¼" x 1"
	BA 1401-202	1 ½" x 1 ¼" x 1"
	BA 1401-209	1 ½" x 1 ½" x 1/2"
	BA 1401-210	1 ½" x 1 ½" x 3/4"
	BA 1401-211	1 ½" x 1 ½" x 1"
	BA 1401-212	1 ½" x 1 ½" x 1 ¼"
	BA 1401-241	2" x 2" x 1/2"
	BA 1401-247	2" x 1 ½" x 1 ½"
	BA 1401-248	2" x 2" x 3/4"
	BA 1401-249	2" x 2" x 1"
	BA 1401-250	2" x 2" x 1 ¼"
	BA 1401-251	2" x 2" x 1 ½"
COMBINATION TE	E (I x I x FIPT)	
	BA 1402-005	1/2"
	BA 1402-007	3/4"
	BA 1402-010	1"
	BA 1402-012	1 ¼"
	BA 1402-015	1 ½"
	BA 1402-020	2"

	PART #	SIZE (inches)
COMBINATION &	REDUCING TEE (I x	I x FIPT)
_	BA 1402-101	3/4" x 3/4" x 1/2"
44	BA 1402-124	1" x 3/4" x 1/2"
0	BA 1402-125	1" x 3/4" x 3/4"
	BA 1402-130	1" x 1"x 1/2"
	BA 1402-131	1" x 1" x 3/4"
	BA 1402-157	1 ¼" x 1" x 3/4"
	BA 1402-166	1 ¼" x 1 ¼" x 1/2"
	BA 1402-167	1 ¼" x 1 ¼" x 3/4"
	BA 1402-168	1 ¼" x 1 ¼" x 1"
	BA 1402-209	1 ½" x 1 ½" x 1/2"
	BA 1402-210	1 ½" x 1 ½" x 3/4"
	BA 1402-211	1 ½" x 1 ½" x 1"
	BA 1402-247	2" x 2" x 1/2"
	BA 1402-248	2" x 2" x 3/4"
	BA 1402-249	2" x 2" x 1"
	BA 1402-251	2" x 2" x 1 ½"
COMBINATION TE	E (I x I x MIPT)	
	BA 1403-005	1/2"
The same of the sa	BA 1403-007	3/4"
	BA 1403-010	1"
	BA 1403-012	1 ¼"
	BA 1403-015	1 ½"
	BA 1403-020	2"
90° ELBOW (I x I)		
	BA 1406-005	1/2"
	BA 1406-007	3/4"
	BA 1406-010	1"
	BA 1406-012	1 ¼"
	BA 1406-015	1 ½"
	BA 1406-020	2"
	BA 1406-030	3"
	BA 1406-040	4"
REDUCING 90° ELI	BOW (I x I)	
	BA 1406-101	3/4" x 1/2"
	BA 1406-131	1" x 3/4"
	BA 1406-168	1 ¼" x 1"
COMBINATION 90	° ELBOW (I x FIPT)	
	BA 1407-005	1/2"
Millian	BA 1407-007	3/4"
	BA 1407-010	1"
	BA 1407-012	1 ¼"
	BA 1407-015	1 ½"
	BA 1407-020	2"



# **PVC INSERT FITTINGS**

	PART #	SIZE (inches)		
COMBINATION &	REDUCING 90° E			
	BA 1407-101	3/4" x 1/2"		
	BA 1407-130	1" x 1/2"		
	BA 1407-131	1" x 3/4"		
	BA 1407-166	1 ¼" x 1/2"		
	BA 1407-167	1 ¼"x 3/4"		
	BA 1407-168	1 ¼" x 1"		
	BA 1407-211	1 ½" x 1"		
	BA 1407-212	1 ½" x 1 ½"		
	BA 1407-251	2" x 1 ½"		
COMBINATION 9	0° ELBOW (I x MI			
	BA 1413-005	1/2"		
	BA 1413-007	3/4"		
	BA 1413-010	1"		
	BA 1413-012	1 1/4"		
	BA 1413-015	1½"		
	BA 1413-020	2"		
CROSS (I x I x I x I)		_		
	BA 1420-007	3/4"		
	BA 1420-010	1"		
COUPLING (I x I)				
COOT LING (I X I)	BA 1429-005	1/2"		
	BA 1429-007	3/4"		
1000	BA 1429-010	1"		
	BA 1429-012	1 ¼"		
	BA 1429-015	1 ½"		
	BA 1429-020	2"		
	BA 1429-030	3"		
	BA 1429-040	4"		
REDUCING COUP	LING (I x I)			
	BA 1429-101	3/4" x 1/2"		
	BA 1429-130	1" x 1/2"		
	BA 1429-131	1" x 3/4"		
1	BA 1429-167	1 ¼" x 3/4"		
	BA 1429-168	1 ¼" x 1"		
	BA 1429-210	1 ½" x 3/4"		
	BA 1429-211	1 ½" x 1"		
	BA 1429-212	1 ½" x 1 ¼"		
	BA 1429-249	2" x 1"		
	BA 1429-250	2" x 1 ¼"		
	BA 1429-251	2" x 1 ½"		
	BA 1429-338	3" x 2"		

BA 1429-422

	PART #	SIZE (inches)
FEMALE ADAPTE	R (I x FIPT)	
	BA 1435-005	1/2"
	BA 1435-007	3/4"
	BA 1435-010	1"
	BA 1435-012	1 ¼"
	BA 1435-015	1 ½"
	BA 1435-020	2"
MALE ADAPTER (	(I x MIPT)	
	BA 1436-005	1/2"
	BA 1436-007	3/4"
	BA 1436-010	1"
	BA 1436-012	1 ¼"
	BA 1436-015	1 ½"
	BA 1436-020	2"
	BA 1436-030	3"
	BA 1436-040	4"
MALE REDUCING	ADAPTER (MIP	T x I)
	BA 1436-074	1/2"
15	BA 1436-075	3/4"
	BA 1436-101	1"
	BA 1436-102	1 ¼"
	BA 1436-131	1 ½"
	BA 1436-132	2"
	BA 1436-133	3"
	BA 1436-167	4"
	BA 1436-168	3" for Flat Tube
	BA 1436-169	4" for Flat Tube
	BA 1436-211	3/4" x 1/2"
	BA 1436-212	1" x 1/2"
	BA 1436-213	1" x 3/4"
	BA 1436-251	1 ¼" x 3/4"
PLUG (INSERT)		
	BA 1449-005	1/2"
	BA 1449-007	3/4"
A Company of the Comp	BA 1449-010	1"
	BA 1449-012	1 ¼"
	BA 1449-015	1 ½"
	BA 1449-020	2"

# **INSERT FITTINGS & ADAPTERS**

### **ZINC PLATED INSERT FITTINGS**

ZINCT LATED INSERT TITTINGS				
	PART #	SIZE (inches)		
COUPLING (I x I)				
	DC 075HM-PL	3/4"		
	DC 100HM-PL	1"		
	DC 125HM-PL	1 ¼"		
6.3	DC 150HM-PL	1 ½"		
£ 3	DC 200HM-PL	2"		
E 3	DC 300HM-PL	3"		
	DC 400HM-PL	4"		
MALE ADAPTER (	(I x MIPT)			
	DC 075CN-PL	3/4"		
	DC 100CN-PL	1"		
	DC 125CN-PL	1 ¼"		
	DC 150CN-PL	1 ½"		
	DC 200CN-PL	2"		
	DC 300CN-PL	3"		
	DC 400CN-PL	4"		
MALE ADAPTER, SMALL DIAMETER BARB (I x MIPT)				

**DC 012CN** DC 015CN

**DC 020CN** 

BA FHT-206

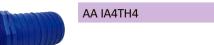
### **INSERT ADAPTERS**

INSERT ADAITERS			
	PART #	SIZE (inches)	
ADAPTER (SLIP x	INSERT)		
[9	BA 474-030	3"	
	BA 474-040	4"	
ADAPTER (SPIGO	T x INSERT)		
	BA 474-030SP	3"	
	BA 474-040SP	4"	
COUPLER (INSERT x INSERT), LAYFLAT & OVAL HOSE			

AA ICO3	3"
AA IC04	4"

### MALE ADAPTER, LAYFLAT & OVAL HOSE





# **GARDEN HOSE FITTINGS**

1 1/4"

1 ½"

	PART #	SIZE (inches)		PART #	SIZE (inches)
BARB x FEMALE I	HOSE THREAD		MALE HOSE AD	APTERS	
	OG 0625X075HBF	5/8" BARB x 3/4" FHT, Brass	# Istor	DGBG196W	3/4", MHT x MHT, Brass
	OG 075X075HBCS	3/4" BARB x 3/4" FHT, Brass		DGBG19612	3/4", MHT x MIPT, Brass
BARB x MALE HO	SE THREAD			BAMHT-106	3/4", MHT x MIPT, PVC
	OG 0625X075HBM	5/8" BARB x 3/4" MHT,	<b>HOSE ADAPTER</b>	S	
	00 0023/(073115)(1	Brass		DGBG19912	3/4", MIPT x FHT, Brass
	OG 075X075HBC	3/4" BARB x 3/4" MHT,		BA FAM-H5P	3/4", MIPT x FHT, PVC
		Brass		OG 075X075MHFI	3/4", FIPT x MHT, Brass
			HOSE WYE ADA	PTERS	
FEMALE HOSE AD	DAPTERS				3/4", FHT x MHT x MHT,
	OG 075FSC	3/4", FHT x FHT, Brass		OR 91700	Brass
	DGBG19812	3/4", FHT x FIPT, Brass	000		

3/4", FHT x FIPT, PVC

# GALVANIZED FITTINGS



	PART #	SIZE (inches)
_		

### TEE (FIPT x FIPT x FIPT x FIPT)



FH 0125TG	1/8"
FH 025TG	1/4"
FH 0375TG	3/8"
FH 05TG	1/2"
FH 075TG	3/4"
FH 100TG	1"
FH 125TG	1 ¼"
FH 150TG	1 ½"
FH150X15X1RTG	1 ½" x 1 ½" x 1"
FH 200TG	2"
FH 200X2X1RTG	2" x 2" x 1"
FH 250TG	2 ½"
FH 300TG	3"
FH 400TG	4"
FH 600TG	6"

### 90° ELBOW (FIPT x FIPT)



IPI X FIPI)	
FH 0125X90EG	1/8"
FH 025X90EG	1/4"
FH 0375X90EG	3/8"
FH 05X90EG	1/2"
FH 075X90EG	3/4"
FH 100X90EG	1"
FH 125X90EG	1 ¼"
FH 150X90EG	1 ½"
FH 200X90EG	2"
FH 250X90EG	2 ½"
FH 300X90EG	3"
FH 400X90EG	4"
FH 600X90EG	6"
	FH 0125X90EG FH 025X90EG FH 0375X90EG FH 05X90EG FH 075X90EG FH 100X90EG FH 125X90EG FH 125X90EG FH 200X90EG FH 200X90EG FH 250X90EG FH 400X90EG FH 400X90EG

### 45° ELBOW (FIPT x FIPT)



,	
FH 05X45EG	1/2"
FH 075X45EG	3/4"
FH 100X45EG	1"
FH 125X45EG	1 ¼"
FH 150X45EG	1 ½"
FH 200X45EG	2"
FH 300X45EG	3"

### 90° STREET ELBOW (FIPT x MIPT)



•	,
FH 0125X90SEG	1/8"
FH 025X90SEG	1/4"
FH 0375X90SEG	3/8"
FH 05X90SEG	1/2"
FH 075X90SEG	3/4"
FH 100X90SEG	1"
FH 125X90SEG	1 ¼"
FH 150X90SEG	1 ½"
FH 200X90SEG	2"

Fittings are also available in Black Steel.

	PART #	SIZE (	(inches

### 45° STREET ELBOW (FIPT x MIPT)



•	•		
FH 025X	45SEG	1/4"	
FH 05X4	5SEG	1/2"	
FH 100X	45SEG	1"	
FH 125X	45SEG	1 ¼"	
FH 150X	45SEG	1 ½"	

### CROSS (FIPT x FIPT x FIPT x FIPT)



,	
FH 100CRG	1"
FH 125CRG	1 ¼"
FH 150CRG	1 ½"
FH 200CRG	2"
FH 300CRG	3"
FH 400CRG	4"

### UNION (FIPT x FIPT)



)	
FH 05UG	1/2"
FH 075UG	3/4"
FH 100UG	1"
FH 125UG	1 ¼"
FH 150UG	1 ½"
FH 200UG	2"
FH 300LIG	3"

### COUPLER (FIPT x FIPT)



IPI)	
FH 0125CG	1/8"
FH 025CG	1/4"
FH 0375CG	3/8"
FH 05CG	1/2"
FH 075CG	3/4"
FH 100CG	1"
FH 125CG	1 ¼"
FH 150CG	1 ½"
FH 200CG	2"
FH 250CG	2 ½"
FH 300CG	3"
FH 400CG	4"
FH 500CG	5"
FH 600CG	6"

### REDUCING COUPLING (FIPT x FIPT)



_	ING (FIPT X FIPT)	
	FH 025X0125RCG	1/4" x 1/8"
	FH 05X025RCG	1/2" x 1/4"
	FH 05X0375RCG	1/2" x 3/8"
	FH 075X05RCG	3/4" x 1/2"
	FH 100X075RCG	1" x 3/4"
	FH 125X1RCG	1 ¼" x 1"
	FH 150X1RCG	1 ½" x 1"
	FH 150X125RCG	1 ½" x 1 ¼"
	FH 200X125RCG	2" x 1 ¼"
	FH 200X150RCG	2" x 1 ½"
	FH 250X2RCG	2 ½" x 2"
	FH 300X2RCG	3" x 2"



# **GALVANIZED FITTINGS**

SIZE (inches)

PART #

# PART # SIZE (inches) REDUCING BUSHING (MIPT x FIPT)



,		
FH 025X0125BG	1/4" x 1/8"	
FH 0375X0125BG	3/8" x 1/8"	
FH 0375X025BG	3/8" x 1/4"	
FH 05X025BG	1/2" x 1/4"	
FH 05X0375BG	1/2" x 3/8"	
FH 075X0125BG	3/4" x 1/8"	
FH 075X025BG	3/4" x 1/4"	
FH 075X0375BG	3/4" x 3/8"	
FH 075X05BG	3/4" x 1/2"	
FH 100X025BG	1" x 1/4"	
FH 100X05BG	1" x 1/2"	
FH 100X075BG	1" x 3/4"	
FH 125X1BG	1 ¼" x 1"	
FH 150X1BG	1 ½" x 1"	
FH 150X125BG	1 ½" x 1 ¼"	
FH 200X1BG	2" x 1"	
FH 200X125BG	2" x 1 ¼"	
FH 200X150BG	2" x 1 ½"	
FH 250X2BG	2 ½" x 2"	
FH 300X2BG	3" x 2"	
FH 300X25BG	3" x 2 ½"	
FH 400X2BG	4" x 2"	
FH 400X3BG	4" x 3"	
FH 600X4BG	6" x 4"	

### CAP (FIPT)



FH 0125CAG	1/8"
FH 025CAG	1/4"
FH 0375CAG	3/8"
FH 05CAG	1/2"
FH 075CAG	3/4"
FH 100CAG	1"
FH 125CAG	1 ¼"
FH 150CAG	1 ½"
FH 200CAG	2"
FH 300CAG	3"
FH 400CAG	4"
FH 600CAG	6"

### PLUG (MIPT)



FH 025PG	1/4"
FH 0375PG	3/8"
FH 05PG	1/2"
FH 075PG	3/4"
FH 100PG	1"
FH 125PG	1 ¼"
FH 150PG	1 ½"
FH 200PG	2"

### NIPPLE (MIPT x MIPT)



• • • •	,	
	FH 0125CNG	1/8" x close
	FH 0125X2NG	1/8" x 2"
	FH 025CNG	1/4" x close
	FH 025X2NG	1/4" x 2"
	FH 025X3NG	1/4" x 3"
	FH 025X4NG	1/4" x 4"
	FH 0375CNG	3/8" x close
	FH 0375X2NG	3/8" x 2"
	FH 05CNG	1/2" x close
	FH 05X25NG	1/2" x 2 ½"
	FH 075CNG	3/4" x close
	FH 075X25NG	3/4" x 2 ½"
	FH 075X6NG	3/4" x 6"
	FH 100CNG	1" x close
	FH 100X2NG	1" x 2"
	FH 100X25NG	1" x 2 ½"
	FH 100X3NG	1" x 3"
	FH 100X4NG	1" x 4"
	FH 100X6NG	1" x 6"
	FH 100X8NG	1" x 8"
	FH 100X10NG	1" x 10"
	FH 100X12NG	1" x 12"
	FH 125CNG	1 ¼" x close
	FH 125X2NG	1 ¼" x 2"
	FH 125X35NG	1 ¼" x 3 ½"
	FH 125X4NG	1 ¼" x 4"
	FH 125X5NG	1 ¼" x 5"
	FH 125X6NG	1 ¼" x 6"
	FH 150CNG	1 ½" x close
	FH 150X2NG	1 ½" x 2"
	FH 150X3NG	1 ½" x 3"
	FH 150X4NG	1 ½" x 4"
	FH 150X6NG	1 ½" x 6"
	FH 200CNG	2" x close
	FH 200X3NG	2" x 3"
	FH 200X4NG	2" x 4"
	FH 200X6NG	2" x 6"
	FH 200X8NG	2" x 8"
	FH 250CNG	2 ½" x close
	FH 250X35NG	2 ½" x 3 ½"
	FH 250X6NG	2 ½" x 6"
	FH 300CNG	3" x close
	FH 300x4NG	3" x 4"
	FH 300x45NG	3" x 4 ½"
	FH 400CNG	4" x close
	FH 400X4NG	4" x 4"
	FH 400X10NG	4" x 10"
	FH 600CNG	6" x close



# **KAMLOX FITTINGS**

	PART #	SIZE (inches)
TYPE A - MALE x FIPT		



IFI	
DC075A-AL	3/4"
DC100A-AL	1"
DC125A-AL	1 ¼"
DC150A-AL	1 ½"
DC200A-AL	2"
DC300A-AL	3"
DC400A-AL	4"
DC600A-AL	6"

**TYPE B - FEMALE x MIPT** 



IAIIL I	
DC075B-AL	3/4"
DC100B-AL	1"
DC125B-AL	1 ¼"
DC150B-AL	1 ½"
DC200B-AL	2"
DC300B-AL	3"
DC400B-AL	4"
DC600B-AL	6"

**TYPE C - FEMALE x BARB** 



DC075C-AL	3/4"
DC100C-AL	1"
DC125C-AL	1 ¼"
DC150C-AL	1 ½"
DC200C-AL	2"
DC300C-AL	3"
DC400C-AL	4"
DC600C-AL	6"

**TYPE D - FEMALE x FIPT** 



DC075D-AL	3/4"
DC100D-AL	1"
DC125D-AL	1 ¼"
DC150D-AL	1 ½"
DC200D-AL	2"
DC300D-AL	3"
DC400D-AL	4"
DC600D-AL	6"

### **DUST PLUG**



DC200DP-AL	2"
DC300DP-AL	3"
DC400DP-AL	4"
DC600DP-AL	6"

	PART #	SIZE (inches)
TYPE E - MALE x BARB		



ARB	
DC075E-AL	3/4"
DC100E-AL	1"
DC125E-AL	1 ¼"
DC150E-AL	1 ½"
DC200E-AL	2"
DC300E-AL	3"
DC400E-AL	4"
DC600E-AL	6"

### TYPE F - MALE x MIPT



IIPI	
DC075F-AL	3/4"
DC100F-AL	1"
DC125F-AL	1 ¼"
DC150F-AL	1 ½"
DC200F-AL	2"
DC300F-AL	3"
DC400F-AL	4"
DC4030F-AL	4" x 3"
DC600F-AL	6"

### **TYPE DC - FEMALE DUST CAP**



200.0.	
DC075DC-AL	3/4"
DC100DC-AL	1"
DC125DC-AL	1 ¼"
DC150DC-AL	1 ½"
DC200DC-AL	2"
DC300DC-AL	3"
DC400DC-AL	4"
DC600DC-AL	6"

### **KAMLOX GASKETS**



DC075F-AL	3/4"
DC100F-AL	1"
DC125F-AL	1 ¼"
DC150F-AL	1 ½"
DC200F-AL	2"
DC300F-AL	3"
DC400F-AL	4"
DC600F-AL	6"

# **CLAMPS**

### **MIKALOR SUPRA CLAMPS**

	PART #	NOMINAL SIZE	MINIMUM SIZE	MAXIMUM SIZE
The same	QG M048051		1.9"	2.0"
	QG M052055	2"	2.0"	2.2"
	QG M056059		2.2"	2.3"
	QG M074079		2.9"	3.1"
	QG M080085	3"	3.4"	3.6"
	QG M098103		3.9"	4.1"
	QG M104112		4.1"	4.4"
	QG M113121	4"	4.4"	4.8"
	QG M122130		4.8"	5.1"
	QG M131139		5.2"	5.5"
	QG M140148	5"	5.5"	5.8"
	QG M149161		5.9"	6.3"
	QG M162174	6"	6.4"	6.9"

### **DOUBLE BOLT CLAMPS**

	PART #	NOMINAL SIZE	MINIMUM SIZE	MAXIMUM SIZE
	QG MD074085	3"	2.9"	3.3"
3	QG MD095112	4"	3.7"	4.4"
	QG MD115139	5"	4.5"	5.5"
	QG MD135161	6"	6.3"	6.3"

### MARINE GRADE ALL STAINLESS STEEL GEAR CLAMPS

	PART #	NOMINAL SIZE	MINIMUM SIZE	MAXIMUM SIZE
	QG HF04SS		7/32"	5/8"
mini	QG HF06SS		7/16"	25/32"
	QG HF08SS	1/2"	1/2"	29/32"
	QG HF10SS		9/16"	1 1/16"
	QG HF12SS	3/4"	11/16"	1 ¼"
	QG HF16SS	1"	3/4"	1 ½"
	QG HF20SS	1 ¼"	13/16"	1 ¾"
	QG HF24SS	1 ½"	1 1/16"	2"
	QG HF32SS	2"	1 %6"	2 ½"
	QG HF36SS		1 13/16"	2 ¾"
	QG HF48SS	3"	2 %6"	3 ½"
	QG HF64SS	4"	3 %6"	4 ½"

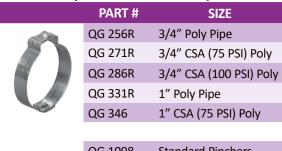
# STAINLESS STEEL 5/8" PUNCH LOCK CLAMPS

CE C				
	PART #	INSIDE DIAMETER	APPLICATION	
	QG CP20S	5"	for 4" & 4 1/2" Hose	
	QG CP24S	6"	for 5" Hose	
	QG CP28S	7"	for 6" Hose	
	QG CP32S	8"	for 8" Hose	
\	QG CP24S	10"	for 8" HilcoFlex	
	DC P38	Punch Lock Tool		

### **TIGERFLEX SPIRAL CLAMPS**



### **OETIKER (ZINC PLATED EAR) CLAMPS**





QG 1098	Standard Pinchers
QG 1098LH	Long Handle Pinchers

### THREE PART HOSE CLAMP



PART #	SIZE
GDM3MCS5	5"
GDM3MCS6	6"
GDM3MCS8	8"



# **PUMP DISCHARGE ADAPTERS**



Wade Knob Style



Wade Ring Lock

PART #	MIPT SIZE	COUPLER SIZE	COUPLER TYPE
BE 11-2MXF15X2	1 ½"	2"	Wade Knob Style
BE 11-2MXF15X3	1 ½"	3"	Wade Knob Style
BE 11-2MXF2X2	2"	2"	Wade Knob Style
BE 11-2MXF2X3	2"	3"	Wade Knob Style
BE 11-2MXF2X4	2"	4"	Wade Knob Style
BE 11-2MXF3X3	3"	3"	Wade Knob Style
BE 11-2MXF3X4	3"	4"	Wade Knob Style
BE 11-2MXF3X5	3"	5"	Wade Knob Style
BE 11-2MXF4X4	4"	4"	Wade Knob Style
BE 11-2MXF4X5	4"	5"	Wade Knob Style
BE 11-2MXF4X6	4"	6"	Wade Knob Style
BE 11-2MXF5X4	5"	4"	Wade Knob Style
BE 11-2MXF5X5	5"	5"	Wade Knob Style
BE 11-2MXF5X6	5"	6"	Wade Knob Style
BE 11-2MXF6X4	6"	4"	Wade Knob Style
BE 11-2MXF6X5	6"	5"	Wade Knob Style
BE 11-2MXF6X6	6"	6"	Wade Knob Style
BE 11-2MXF4X5RL	4"	5"	Wade Ring Lock
BE 11-2MXF4X6RL	4"	6"	Wade Ring Lock
BE 11-2MXF4X8RL	4"	8"	Wade Ring Lock
BE 11-2MXF5X6RL	5"	6"	Wade Ring Lock
BE 11-2MXF5X8RL	5"	8"	Wade Ring Lock
BE 11-2MXF6X6RL	6"	6"	Wade Ring Lock
BE 11-2MXF6X8RL	6"	8"	Wade Ring Lock
GA BMTS55	5"	5" (133 HK)	Bauer HK (Ball)
GA BMTS65	6"	5" (133 HK)	Bauer HK (Ball)

If your pump is placed at an awkward angle to your mainline, try using our discharge hose and fittings to create a wide gentle turn. Please support your hose for safety and added life span.

# **BAUER ALUMINUM COUPLERS**

Bauer HK Coupler for suction allows up to 30° articulation so attaching you pumps suction is fast, easy and flexible. The MIPT x Socket threads directly into your pump while the Ball x Tube with Locking Lever provide an air tight connection to the flexible suction line. A Bauer Suction Assembly includes the gaskets and locking lever.

### **BAUER SUCTION ASSEMBLIES**

BAUER SUCTION ASSEMBLIES						
PART #	MIPT SIZE	TUBE SIZE				
LONG ASSEMBLY						
GA BSA4X5L*	4"	5"				
GA BSA4X6L*	4"	6"				
GA BSA5X6L*	5"	6"				
GA BSA5X8L*	5"	8"				
GA BSA6X8L*	6"	8"				
SHORT ASSEME	BLY					
GA BSA2X2	2"	2"				
GA BSA2X3	2"	3"				
GA BSA2X4	2"	4"				
GA BSA25X3	2 ½"	3"				
GA BSA3X3	3"	3"				
GA BSA3X4	3"	4"				
GA BSA4X4	4"	4"				
GA BSA4X5	4"	5"				
GA BSA4X6	4"	6"				
GA BSA5X5	5"	5"				
GA BSA5X6	5"	6"				
GA BSA5X8	5"	8"				
GA BSA6X6	6"	6"				
GA BSA6X8	6"	8"				

NOTE: Made out of Heavywall Tubing.

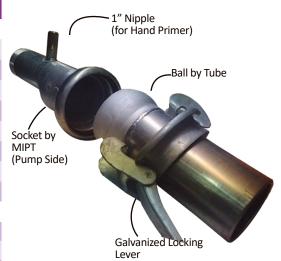
### **BAUER MIPT x SOCKET**

PART #	MIPT SIZE	TUBE SIZE		
LONG MIPT x BAUER SOCKET				
GA BSAS45L*	4"	5"		
GA BSAS46L*	4"	6"		
GA BSAS55L*	5"	5"		
GA BSAS56L*	5"	6"		
GA BSAS58L*	5"	8"		
GA BSAS65L*	6"	5"		
GA BSAS66L*	6"	6"		
GA BSAS68L*	6"	8"		
SHORT MIPT x BAUER SOCKET				

SHOKI IVIIPI X	DAUER SUCKE	
GA BSAS22	2"	2"
GA BSAS23	2"	3"
GA BSAS253	2 ½"	3"
GA BSAS33	3"	3"
GA BSAS34	3"	4"
GA BSAS35	3"	5"
GA BSAS44	4"	4"
GA BSAS45	4"	5"
GA BSAS46	4"	6"
GA BSAS55	5"	5″
GA BSAS56	5"	6"
GA BSAS58	5"	8"
GA BSAS66	6"	6"
GA BSAS68	6"	8"

\* = with 1" nipple (mipt) for hand primer

### **Bauer Aluminum Suction Assembly**







MIPT x Bauer Socket Bauer Ball by Tube

See **page 80** for Replacement Gaskets

### **RAHER BAH & THRE**

DAUEN	DALL X TU	DE
PART #	BALL SIZE	TUBE SIZE
GA BBT22	2"	2"
GA BBT33	3"	3"
GA BBT44	4"	4"
GA BBT54	5"	4"
GA BBT55	5"	5"
GA BBT56	5"	6"
GA BBT65	6"	5"
GA BBT66	6"	6"
GA BBT68	6"	8"
GA BBT88	8"	8"

### **TIGERFLEX SUCTION HOSE**

PART #	SIZE (I.D.)	SERIES	BENDING RADIUS
EG F075	3/4"	F	3"
EG K125	1 ¼"	K*	4"
EG K150	1 ½"	K*	5"
EG K200	2"	K*	7"
EG W300	3"	W	6"
EG W400	4"	W	8"
EG W500	5"	W	12"
EG W600	6"	W	14"
EG W800	8"	W	24"
EG W1000	10"	W	39"



Hose Tigerflex

Tigerflex Series K Suction Hose

\* Series K Tigerflex may also be used for discharge for pressures below 65 PSI.

See page:

**66** for Aluminum Irrigation Tubing **90** for Tigerflex Clamps





# **SOIL MOISTURE SENSORS**

ConnectedCrops<sup>TM</sup> advanced wireless technology empowers the grower to head off these potential problems,and make timely management decisions that maximize their return on investment. The Weather Station gathers key weather and soil moisture data from in-field locations and transmits it in real time to your handheld smartphone, as well as to the ConnectedCrops Mobile App loaded right on your device.

Having the power of this information takes much of the 'guesswork' out of so many decisions at the field level. Temperature Inversion, Soil Moisture Levels, Frost Prevention, Irrigation Scheduling, Growing Degree Day Data, and more can all be managed and manipulated so as to maximize the returns from your irrigation scheduling, frost prevention equipment, integrated pest management monitoring, and timeliness of field operations.



### **CONNECTED CROPS**

PART #	MODEL/DESCRIPTION
EDCCST	Connected Crops Station
EDCCSMS	Soil Moisture Sensor
EDCCTS1	1 Metre Temperature Sensor



Irrometer has been in business since 1951, manufacturing soil moisture measuring, controlling and sampling instruments used for scheduling irrigation.

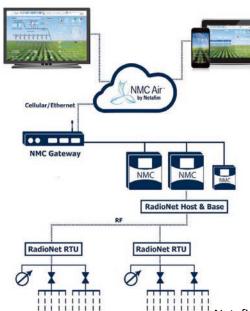
The Tensionmeter, consisting of a sealed water filled tube equipped with a secial vacuum gauge and porous tip that is installed in the ground at desired root zone depths. In dry soil, water is drawn out of the instrument, reducing the water volume in the instrument, creating a partial vacuum which is registered on the gauge.



### **IRROMETER**

PART #	SIZE (INCHES)	
MODEL R - LOAN	VI & CLAY	
AK 106	6"	
AK 112	12"	
AK 118	18"	
AK 124	24"	
MODEL LT - SAN	DY SOILS	
AK 506	6"	
AK 512	12"	
AK 518	18"	
AK 524	24"	
AK1001	Irrometer Service Kit	

### **NETAFIM CONTROLLERS**



# **NMC AIR™**



# THE CLOUD BASED SOFTWARE FOR NMC IRRIGATION CONTROLLERS

This software from Netafim provides a user with the ability operate and monitor the NMC Irrigation Controllers from anywhere at anytime. Compatible with all NMC Pro, DC or Junior irrigation controllers.

### **Product Features:**

- Real time in-field operation
- Check your system quickly
- Provides water and nutrient use traceability
- Connectivity via web or mobile access
- High end user experience

Netafim's **NMC Stand-Alone Controllers** for Irrigation and Fertigation are designed to extend your water and fertilizer management skills to the field or greenhouse. Controllers are available in two models, the **NMC-64** (controls up to 64 valves) and the **NMC - Junior** (controls up to 15 valves).

The simplicity of the control system and its capability to record data, allows you to repeat and modify your scheduling, assuring maximum crop output, and create a logbook of alarms and events.

# NMC-PRO

### Controls:

- Up to 64 Valves (64)
- Up to 15 Valves (Junior)
- Open multiple valves
- Multiple Pumps
- Multiple Filter Flushing
- Pres. Sustaining Valve
- Multiple Fert. Pumps
- Fert. Booster Pumps
- Fert. Tank Valves
- Fertilizer Agitation
- Cooling Systems
- Misting Systems
- Alarm Device

### Monitors:

Water Flow Meters

**NMC Controller Hardware & Software Specifications** 

- Fertilizer Flow Meters
- Temperature Sensors
- Humidity Sensors
- Weather Station Data
- EC & pH Sensor
- Conditional Inputs

### Features:

- Expandable Input & Output boards (64)
- Multiple Pump Control
- 10 Programs (64)
- 15 Programs (Jun.)
- Multiple Fert.
   Programs
- 60 Multiple Program Starts (64)
- 6 Multiple Program Starts (Jun.)
- Logs all sensor data
- Large Graphic Display
- Battery Backup
- Surge Protection



5:0

4.0

The NMC Controllers are designed for small to large applications. Up to 50 controllers may be networked and presented on a PC. Multiple options exist for linking to an office PC (wire, telephone or radio). Exclusive to the NMC, is the Memory Key Program Back-Up; all programs are backed up to key for safe storage.



# TWIG-V WIRELESS AUTOMATION SYSTEM

The purpose of the TWIG® **Wireless** Automation is to turn irrigation valves on and off, simply and reliably. It eliminates troublesome wires, complicated controls, and impractical features that cause other automation systems to be quickly abandoned. With the ability to control up to 200 valves, the Master Control system (Twig-MC) allows you to fully control your pump and remotely operate your irrigation system, right from your mobile device.



**NELSON** 

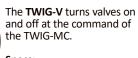


Operated fully through your own mobile device's iOS or Android App, the

TWIG-MC is the "brain" of the TWIG wireless system.

### Specs:

- Control up to 200 valves
- 1 flow meter input
- 2 pump start contacts



### Specs:

- Can operate 1-2 valves independently
- Up to 100 TWIG-V devices in a network
- Bluetooth setup via TWIG-V mobile app

The TWIG-V Repeater creates a sub-network of TWIG-V radios with better signals by bridging obstacles that might block radio communications.

### Specs

- Up to 8 Repeaters in one TWIG-V network
- Requires external antenna kit
- Weather resistant enclosure

TWIG-V



### **LOGIC PLUS S: TWO WIRE CONTROLLER**



2-Wire Station Controller



Handheld Programmer





**LogicPlus S** is the next advancement in irrigation technology, providing an easy to install, use and maintain two-wire control system.

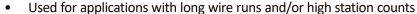
- 42 or 128 station capability
- 8-16 programs and start times per program
- Allows for programming the in-field receivers at the controller
- 100-240 VAC 50/60 Hz input
- Operate up to 8 valves at once
- Solar power capable

PART #	DESCRIPTION
ORPL42SC	Logic Plus 2-wire Station Controller
ORLPHRP	Handheld Programmer for Receiver
ORLPRP	Logic Plus Receiver
ORLPSPDF	Logic Surge Protector

# **RAIN BIRD CONTROLLERS**



### **ESP-LXIVM CONTROL SYSTEM**



- Only for use with IVM solenoids and 2-wire paths
- Allows for 2-way communication to solenoids for easy troubleshooting
- Sensor and output devices are available



PART #	DESCRIPTION
AX ESPLXIVM	Two-wire controller; up to 60 stations
AX ESPLXIVMP	Two-wire controller; up to 240 stations
AX LXIVMSOL	Two-wire IVM Solenoid

### **ESP LX CONTROLLER**









PART #	DESCRIPTION
AX ESPLX12MEF	12 Station Outdoor Base with Flow
AX ESPLX8ME	8 Station Modular Outdoor Controller
AX ESPLXMOD12	12 Station Module
AX ESPLXD	50 Station Decoder Controller
AX ESPLXDSM75	75 Station Expansion Module for LXD Controllers

# ESP-Me und the second s

### **ESP-ME3 CONTROLLER**

- Used for conventional wiring from 4-22 stations
- Wi-Fi enabled with the addition of a LNK2WIFI module

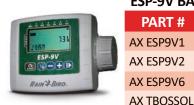
PART #	DESCRIPTION
AX ESP4ME3	Indoor/Outdoor Controller with Wi-Fi
AX LNK2WIFI	Wi-Fi Module for Controllers
AX ESP-MOD3	Three Station Module
AX ESP-MODME6	Six Station Module

### **BATTERY OPERATED CONTROLLERS**

• Used when power is not available

**Latching Solenoid** 

• Be sure to switch solenoids on valve to DC latching



# PART # DESCRIPTION AX ESP9V1 One Station Battery Operated Controller AX ESP9V2 Two Station Battery Operated Controller AX ESP9V6 Six Station Battery Operated Controller



### TBOS BATTERY OPERATED CONTROLLERS

PART #	DESCRIPTION
AX TBOS-BT1	One Station Bluetooth Batt. Controller
AX TBOS-BT2	Two Station Bluetooth Batt. Controller
AX TBOS-BT4	Four Station Bluetooth Batt. Controller
AX TBOSSOL	Latching Solenoid





# **ELECTRIC & PRESSURE REGULATING VALVES**





Manual Nylon Threaded Valve



Pressure Reducing Electric Nylon Threaded Valve



Manual PVC Slip Valve

Manual Nylon Flanged Valve

**61** 



Quick Reacting
Pressure Relief Angle Valve



Iron Flanged Valve

**Valve Ordering Guideline** 



Pressure Reducing Electric Iron Grooved Valve

# Function Code Diameter

### Material & End Connection

### Diaphragm — Spring Colour

В	Basic
М	Manual
EL	Electric 3-Way
MEL	Manual Electric 3-Way
RC	Hydraulic Remote Control
PR	Pressure Reducing
PREL	Pressuring Reducing Electric
PRRC	Pressure Reducing Remote
	Control
PRPS	Pressure Reducing/Pressure
	Sustaining
PS	Pressure Sustaining
PSEL	Pressure Sustaining Electric
PSNO	Presssure Sustaining Normally

PSNO	Presssure Sustaining Normally
	Open
тн	Basic Throttling
MTH	Manual Throttling
ELT	Electric 3-Way Throttling
MELT	Manual Electric Throttling
ELC	Electric 3-Way with Installed
	Controller
QR	Quick Reacting Pressure Relief
QRL	Pressure Sustaining Relief
2PR	Pressure Reducing 2-Way
2PS	Pressure Sustaining 2-Way

Nylon:
1", 1½", 2", 323
PVC:
3", 4", 6"
Iron Flanged:
3", 4", 4" Angle, 6", 6"
Angle, 868, 8", 10", 12"
Iron Grooved:
2", 323, 3", 3" Angle,
4", 6"
Iron Threaded:
1", 1½", 2", 2" Angle, 323,
3", 3" Angle

AN	Angle	
PL	Nylon Threaded	
PLT	PVC Threaded	
PLS	PVC Slip	
IT	Iron Threaded	
IF	Iron Flanged	
IG	Iron Grooved	
I		

IRON (1"-24")
LP (Low Pressure)
Used when dynamic pres-
sure can get below 30 psi
HP (High Pressure)
Used when dynamic pres-
cura ic always above 20 pc

NOTE: Diaphragms for very
low pressures (below 15
psi) are also available.

SPRING SELECTION (STANDARD PILOTS)		
1-4" Valves		
Y Yellow (7-30 psi)		
G Green (14-65 psi)		
R Red (30-90 psi)		
6" & Larger Valves		
Y Yellow (8-45 psi)		
G Green (14-90 psi)		
R Red (30-130 psi)		

### **MAXIMUM WORKING PRESSURE**

MATERIAL	SIZE	PSI
Nylon	1" to 323	145
PVC	3" & 4"	115
PVC	6"	145
Iron	1" to 24"	235

NOTE: All Electric Valves are standard with 24VAC Solenoids. Other voltages available by special order.

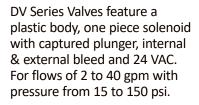
Consult with your Ag Sales Rep before ordering a valve.



# **RAIN BIRD ELECTRIC VALVES**



PART #	SIZE	MODEL
PARI#	SIZE	INIODEL
AX075DV	3/4", FIPT x FIPT	DV Series
AX100DV	1", FIPT x FIPT	DV Series
AX100DVMB	1", MIPT x Barb	DV Series
AX100DVF	1", FIPT x FIPT	DV with Flow Control
AX100PGA	1", FIPT x FIPT	PGA Series
AX150PGA	1 ½", FIPT x FIPT	PGA Series
AX200PGA	2", FIPT x FIPT	PGA Series
AX300BPE	3", FIPT x FIPT	BPE Series
AX300BPES	3", FIPT x FIPT	BPE Series with Scrubber for
	3 , FIFT X FIFT	dirty water
AXPRS-DIAL	Pressure Regulator	Module for PGA & BPE Valves





PGA Series Valves feature a plastic body, Globe/Angle configuration, one piece solenoid with captured plunger, internal & external bleed and 24 VAC. For flows of 2 to 150 gpm with pressure from 15 to 150 psi.





BPE Series Valves feature a brass body, globe/angle configuration; one piece solenoid with captured plunger, internal & external bleed and 24 VAC. For flows of 60 to 300 gpm with pressure from 20 to 200 psi.





PRS-DIAL option makes Rain Bird Electric Valve (Series PGA & BPE only) pressure regulating. Fully adjustable from 15 to 100 psi.







### **CARSON VALVE BOXES**

PART #	DESCRIPTION	
EUVE608	Round, 6" Diam. x 9" Deep	
EUV708	Round, 8" Diam. x 9" Deep	
EUV910	Round, 10" Diam. x 10" Deep	
EUV14196	Standard Rectangular, 10" x 15" x 6" Deep	
EUV141912	Standard Rectangular, 10" x 15" x 12" Deep	
EUV13206	Jumbo Rectangular, 13" x 20" x 6" Deep	
EUV132012	Jumbo Rectangular, 13" x 20" x 12" Deep	

# All valve boxes include a removable cover.



### **ECONOMY VALVE BOXES**

PART #	DESCRIPTION
AXVE608	Round 6", single valve x 9" deep
AXVE910	Round, 10", single valve
AXEV14196	6" deep standard rectangular box

### **COMMERCIAL VALVE BOXES**

PART #	DESCRIPTION	
AXV708	6" round, single valve, 8" deep	
AXV910	10" round, locking optional	
AXV14196	6" deep standard extension with lid	
AXV141912	12" deep standard rectangular	
AXV13206	6" deep jumbo rectangular	
AXV132012	12" deep jumbo rectangular	

# **WIRE & VALVE BOXES**

# 18 GAUGE MULTI-CONDUCTOR WIRE (500' ROLL)



# COMMON/CONTROL WIRE (2,500' ROLL)



	PART #	COLOUR
3M CONNECTO	RS & SPLICES	
	AE316	Red, Wire Connector
	AEDBY	Yellow, Direct Bury Splice
.1	AEDBR	Red, Direct Bury Splice
-		

### KING DRYCONN CONNECTORS



MBKW	Black/White
MBKB	Black/Blue

# **CHECK VALVES & BACKFLOW PREVENTION**

### **CONBRACO BRASS BACKFLOW PREVENTERS**

	PART #	SIZE
REDUCED PRESSU	JRE ASSEMBLY	
	TF RPA075	3/4"
	TF RPA100	1"
	TF RPA150	1 ½"
	TF RPA200	2"
DUAL CHECK VALVE		
	TF ICV075	3/4"
	TF ICV100	1"

### PRESSURE VACUUM BREAKER

	TF PVB075	3/4"
0	TF PVB100	1"
0	TF PVB150	1 ½"
	TF PVB200	2"

### **DOUBLE CHECK VALVE ASSEMBLY**



TF DCA075	3/4"
TF DCA100	1"
TF DCA150	1 ½"
TF DCA200	2"
TF DCA400	4"
TF DCA600	6"

### PIERCE CHEMIGATION VALVES

	PART #	SIZE
	Backflow Prevent & air vent, Flange	
Up Alle	AV 1775-60	3"
	AV 1775-61	4"
	AV 1778-61	6"

Prevent flow of fertilizer, etc. back into pond, well or municipal supply. It is important to check with local authorities for code.

### **CHECK VALVES**

	PART#	SIZE
Pierce Check Valv Covered Steel Dis		Steel, Spring Loaded, Rubber
	AV 3X4CVF	3" FIPT by 4" FIPT



AV 3X4CVF	3" FIPT by 4" FIPT
AV 4X5CVF	4" FIPT by 5" FIPT
AV 1753-01	6", Flange by Flange
AV 1753-02	8", Flange by Flange
AV 1754-01	4", Weldable Ends

Berkeley Check Valve Spring Loaded Lever, Steel Disc with O'Ring Seal



FE PB05922	2 ½" FIPT by 3" FIPT
FE PB05923	3" FIPT by 4" FIPT
FE PB05924	4", Flange by FIPT
FE PB05925	5", Flange by FIPT
FE PB05926	6". Flange by FIPT

Val-Matic Swing Flex Check Valve, Series 500 Non-Clog Design - great for Flange by Flange



	AG P504-4	4"
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### Cast Iron Wafer Split Disc Style Check Valve



TF CVW-3	3"
TF CVW-4	4"
TF CVW-5	5"
TF CVW-6	6"

Brass Check Valve (FIPT x FIPT), Disc Style, Nitrile Buna-N Seal



•		•	•	
FH 125BC	V			1 ¼"
FH 150BC	V			1 ½"
FH 200BC	V			2"
FH 200BR	CV		2" Bronz	ze Heavy Duty

### PVC Check Valve (FIPT x FIPT) PVC Poppet, EPDM Seal



BA 43937	1"
BA 43939	1 ½"
BA 43940	2"

All Brass Swing Check Valve (FIPT x FIPT)



con varve (i ii i x i ii i j	
FH 100BSCV	1"
FH 125BSCV	1 1/4"
FH 150BSCV	1 ½"
FH 200BSCV	2"
FH 300BSCV	3"
FH 400BSCV	4"



# **Manual Valves**

### **BRASS GATE VALVES**



Brass Gate Valve

DIVASS GAIL V	ALVLJ
PART#	SIZE
DG05GV	1/2" FIPT
DG05GV-SW	1/2" solder
DG075GV	3/4" FIPT
DG075GV-SW	3/4" solder
DG100GV	1" FIPT
DG125GV	1¼" FIPT
DG150GV	1½" FIPT
DG200GV	2" FIPT
DG200GVHD	2" FIPT, heavy duty
DG250GV	2½" FIPT
DG250GVHD	2½" FIPT, heavy duty
DG300GV	3" FIPT
DG400GV	4" FIPT



PVC Ball Valves

### **ECONOMY PVC BALL VALVE**

PART#	SIZE
BA0921-05	1/2" FIPT
BA0921S-05	1/2" SLIP
BA0921-07	3/4" FIPT
BA0921S-07	3/4" SLIP
BA0921-10	1" FIPT
BA0921S-10	1" SLIP
BA0921-15	1½" FIPT
BA0921S-15	1½" SLIP
BA0921-20	2" FIPT
BA0921S-20	2" SLIP

### **BRASS BALL VALVES - "FULL PORT"**



Brass Ball Valves

BRASS BALL VALVES - FULL PURT				
PART #	SIZE			
DG05BVB-FP	1/2" FIPT			
DG075BVB-FP	3/4" FIPT			
DG075BVB-FPSW	3/4" solder			
DG100BVB-FP	1" FIPT			
DG100BVB-FPSW	1" solder			
DG125BVB-FP	1¼" FIPT			
DG150BVB-FP	1½" FIPT			
DG200BVB-FP	2" FIPT			
DG250BVB-FP	2½" FIPT			
DG300BVB-FP	3" FIPT			



Push on Gate Valve

### **NIBCO PUSH ON GATE VALVES**

PART#	SIZE	
TF619RW-4	4"	
TF619RW-6	6"	
TF619RW-8	8"	

# **Garden Hose Valves**



Brass Boiler Drain

<b>BOILER DRAINS</b>	
PART#	DESCRIPTION
DG05GHT	½" MIPT, brass
DG075GHT	¾" MIPT, brass
TF74CL12	½" MIPT Multi-Turn Boiler Drain - heavy duty
TF74CL34	34" MIPT Multi-Turn Boiler Drain - heavy duty

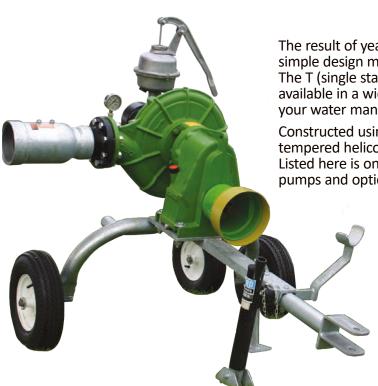






# **ROVATTI PTO PUMPS**





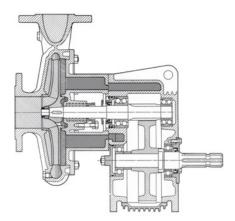
The result of years of experience, Rovatti's time tested, simple design means years of reliability and easy servicing. The T (single stage) & TK series (multi-stage) P.T.O. are available in a wide variety of models and options to suit your water management needs.

Constructed using chromed shafts and case hardened & tempered helicoidal gears means years of reliable service. Listed here is only a very small selection of Rovatti P.T.O. pumps and options.

Our Rovatti P.T.O. Package includes:

- Pump
- Galvanized Trolley with support leg
- P.T.O. Shaft
- Check Valve
- Pressure Gauge
- Wade Rain Hand Primer

It is normal for Pumps with Packing Seals, to drip when operating. If there is 1 drop/sec. at the shaft, everything is OK.



### **ROVATTI POWER TAKE OFF PUMP PACKAGE**

PART #	MODEL	H.P	P.T.O.
XB T150E540P	T1-50E	30	540
XB T240E540P	T2-40E	31	540
XB T285E540P	T2-85E	43	540
XB T380AE540P	T3-80AE	60	540
XB T3110E540P	T3-110	82	540
XB T4100E540P	T4-100E	83	540
XB T4100E1000P	T4-100E	83	1,000
XB T4110E1000P	T4-110E	111	1,000
XB T4K1002E1000P	T4K100/2E	103	1,000





# **ROVATTI PTO PUMPS**

**Pump Troubleshooting** 

Having problems priming your pump? This is caused by the unwanted entry of air into the pump or suction lines. The usual culprits are: the check valve, the diaphragm in the hand primer, the pump's seal or packing of the suction line.

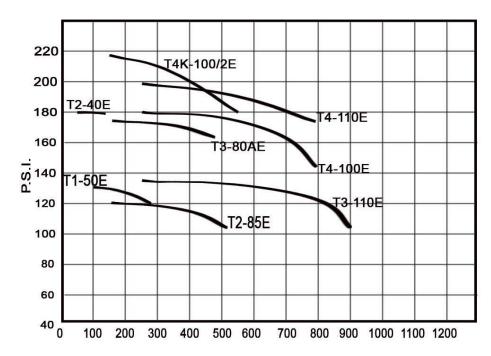
The first thing to check is the hand primer. Take the primer off the pump, place your hand over the primers intake, and try to depress the handle. If you cannot depress the handle, the hand primer is fine; if not, replace the primer's diaphragm.

Next, put the primer back on the pump and disconnect the discharge and suction lines. With the aid of a helper, place a flat piece of rubber sheet against the opening of the suction adapter. Now, start priming the pump; if the rubber sheet begins to be sucked into the adapter and remains sucked after you stop priming, the hole is in the suction line.

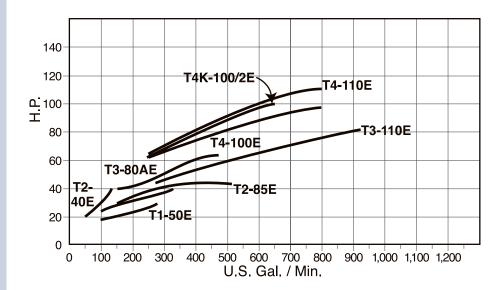
If the sheet of rubber on the suction adapter did not suck in, get a second piece of rubber sheet and hold it against the opening of the discharge adapter. If both the rubber sheets suck in and stay there when you stop priming, then the problem is with the check valve.

If neither rubber sheets suck in, then the problem lies within the mechanical seal or packing.

Check your suction pipe, Tigerflex tubing, and the condition of any suction fitting gaskets. Rovatti P.T.O Pumps - Pressure (P.S.I.) x U.S. Gallons per Minute



Rovatti P.T.O Pumps - Horsepower (H.P.) x U.S. Gallons per Minute



Use only #80-90 Gear Lube in Rovatti P.T.O. Pumps. Part #: EF PGEARLUBE

# **BERKELEY ELECTRIC PUMPS**

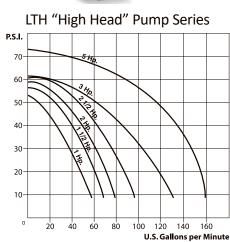




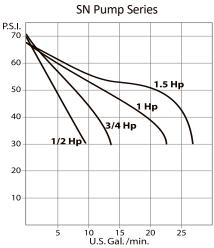
CP "High Head" Pump Series

P.S.I. 40 20 10









CP Series' are general purpose Centrifugal Pumps featuring a heavy duty cast iron construction, Noryl abrasion resistant impellers heavy duty electric motor, and four position discharge.

LTH Series (3 & 5 HP) general purpose fast Self-Priming Centrifugal Pumps featuring a heavy duty cast iron construction, bronze impeller, heavy duty electric motor for continuous duty with capacitor start, and leak proof mechanical seal.

LTH Series (1 to 2.5 HP) are general purpose fast Self-Priming Centrifugal Pumps featuring a rugged cast iron construction, a Noryl impeller, heavy duty electric motor, and precision molded diffuser.

Berkeley's Self-Priming "SN" Series Jet Pumps for shallow wells feature cast iron body, a built in jet, adjustable pressure switch, and Noryl impeller. The "SN" Series provide excellent performance, at a depth of 15.

### **BERKELEY "HIGH HEAD" ELECTRIC PUMP**

PART #	MODEL	Н.Р	VOLTAGE	SUCTION SIZE	DISCHARGE SIZE		
HIGH HEAD ELECTRIC PUMPS							
FE CP1XPHS1	СР	1.0	115/230	1 ¼"	1"		
FE CP1XPHS15	СР	1.5	115/230	1 ¼"	1"		
FE CP125TPHS2	СР	2.0	115/230	1 ½"	1 ¼"		
FE CP150TPHS25	СР	2.5	115/230	2"	1 ½"		
FE LTH100	LTHH	1.0	115/230	2"	1 ½"		
FE LTH150	LTHH	1.5	115/230	2"	1 ½"		
FE LTH200	LTHH	2.0	230	2"	2"		
FE LTH250	LTHH	2.5	230	2"	2"		
FE LTH300	LTH	3.0	230	2"	1 ½"		
FE LTH500	LTH	5.0	230	2 ½"	2"		
SN SHALLOW WELL JET PUMPS							
FE 5SN	SN	0.5	115 / 230	1 ¼"	1"		
FE 7SN	SN	0.7	115 / 230	1 ¼"	1"		
FE 10SN	SN	1.0	115 / 230	1 ¼"	1"		
FE 15SN	SN	1.5	115 / 230	1 ¼"	1"		



Franklin Electric offers a wide array of **submersible pumps** designed for the movement of water and corrosive chemicals. These submersible pumps feature proven components, able to withstand the harshest environments and provide superior performance.

- 4" High Capacity Pumps
- 6" 4400 Submersible Radial Pumps
- 6" & 8" SR Turbine Pumps
- 6" SSR SEries Submersible Turbine Pumps
- 5", 6", 8" & 9" STS Turbine Pumps

The AG series **centrifugal pumps** are close-coupled, electric motor drive pumps producing flows ranging from 65 - 900 GPM. They feature all-iron contstruction, enclosed impellers, mechanical shaft seasl sreplaceable stainless steel shaft seals, replaceable stainless steel shaft sleeves and are all back pull-out designs for ease of service.



For information on larger electrical pump units, or ordering process, please contact your expert Ag Sales Team.

# **FRANKLIN PUMPS**



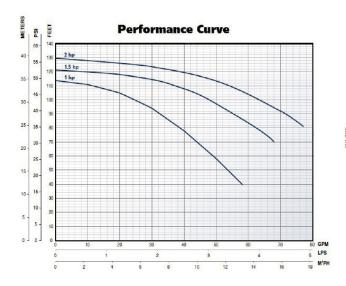


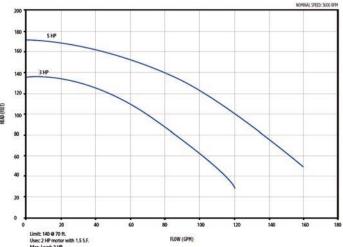
Turf Boss 1 & 2 HP



Turf Boss 3 & 5 HP

MODEL	НР	PHASE	SUCTION (IN)	DISCHARGE (OUT)	VOL 115	TAGE 230
FRFTB1CI	1	1	1½	1½	✓	✓
FRFTB15CI	1½	1	1½	11/2	$\checkmark$	$\checkmark$
FRFTB2CI	2	1	1½	1½		✓
FRFTB3CI	3	1	2	2		$\checkmark$
FRFTB5CI	5	1	2½	2		$\checkmark$





# FRANKLIN CERUS X-DRIVE

Designed for variable torque applications up to 700 HP, the VFD Serus X-Drive is the all inclusive drive solution. The X-Drive controller is loaded with application-specific firmware with enhanced settings that control and protect motors for the most demanding applications.

- Streamlined setup process with application-specific firmware that pre-programs settings for easy startup
- Built in DC choke for applications of 50 HP or higher
- Built in Programmable Logic Controller (PLC)
- Designed with a UL type 4X removeable display that can be mounted remotely
- UL-Listed phase conversion versatility allows for single-phase or three-phase input





# **GAS POWERED PUMPS**



The IPT Self-priming Two-stage High Pressure Engine Driven pump includes precision cast high efficiency impellers to maximize performance and pressure. Other features include:

- Cast aluminum construction with cast iron diffusers
- 2" NPTM male cast iron suction port
- Three-way cast iron discharge port
- Maximum head up to 155 PSI
- Maximum flow up to 160 GPM

### Performance of Engine-Driven 2-Stage High Pressure Pumps Total Head [U.S. gpm]

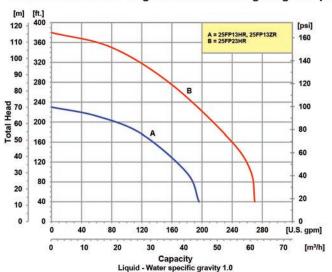


The IPT Engine Drive line of high pressure pumps deliver excellent pressure and flow. Portable units feature metal fuel tanks installed on engine or frame depending on model.

### Other features include:

- Aluminum construction with replaceable hard coat anodized wear ring
- 2 ½" NPT port sizes
- Built-in discharge cehck valve
- Maximum head up to 165 PSI
- Delivers to 270 GPM
- Available with Honda engine with 12 Volt DC Electric Start

### Performance of 21/2" High Pressure Fire Fighting Pumps



### **GAS POWERED PUMPS**

PART #	MODEL	Н.Р	ENGINE
DX 2MP5XHR	G-R, 2P5X	5.5	Honda, GX160
DX 2MP9HR	AMT	9.0	Honda, GX270
DX 2MP13HR	AMT	13.0	Honda, GX390
DX 25FP23HR	AMT	23.0	Honda, GX690



## **DIESEL ENGINE PUMP UNITS**







Rovatti Pump End

Vanden Bussche Irrigation's line of Diesel Powered Pump Units lead the irrigation industry in innovation. Semi-enclosed units feature an all galvanized steel frame with removable tow hitch and a full compliment of instruments. We match a Diesel Engine to a Berkeley, Rovatti or Cornell S.A.E. Pump End, designed and built to perform for your irrigation system.

Our unique modular construction means options like:

- Fuel Tanks
- Super Silencer Muffler
- Hale Power Primers
- Full Enclosure Packages
- Automated Control units may be added easily to a power unit.

All of our Diesel Units are emission certified and are available in a wide selection of power ratings to suit your water management goals from manufacturers such as: John Deere, Cummins, Kubota, Iveco and Caterpillar.



Cornell Pump End



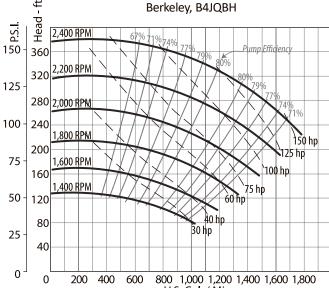
**Enclosure Packages** 

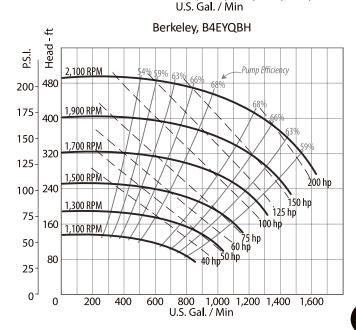


## **BERKELEY ENGINE MOUNT PUMPS**



BERKELE





Berkeley S.A.E. Centrifugal Series Pumps are suitable for any application requiring the convenience of an internal combustion engine as a power source. State of the art design delivers 20,000 hours of bearing life. Key features include:

- 28 pump models, with flows to 6500 GPM, pressure to 500 feet
- Cast Iron or Silicon Bronze Impellers
- Volute case for easy removal and repair
- Heavy-Duty Power Frame designed for durability
- Dry run seal option available

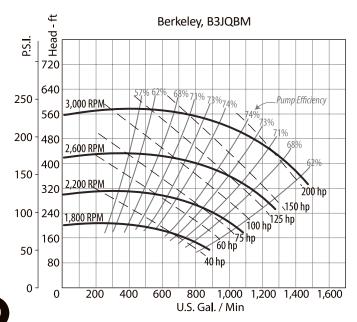
Berkeley's Type B Centrifugal Pumps with S.A.E. mounts feature:

- Replaceable Bronze Wear Ring
- Replaceable Stainless Shaft Sleeves

Type B's are also available with:

- Packing or Mechanical Sealing Options
- Cast Iron or Bronze Impeller

Let us know what your water management goals are. Our irrigation professionals at Vanden Bussche Irrigation can match a pump to your unique needs.





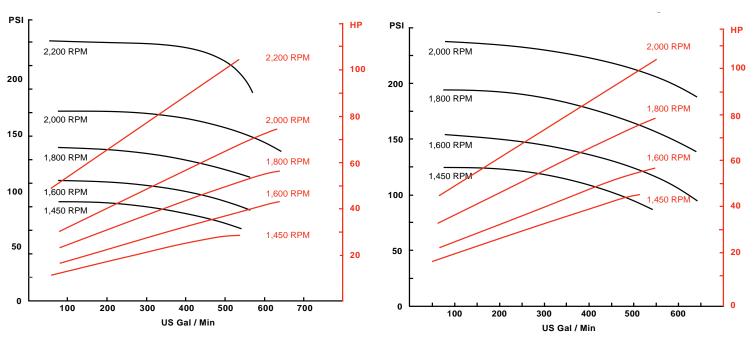
## **ROVATTI ENGINE MOUNT PUMPS**

Rovatti multi-stage pumps are renown for their high pressure performance, quality craftsmanship, and straight forward design. For applications where you need every pound of pressure, choose Rovatti.



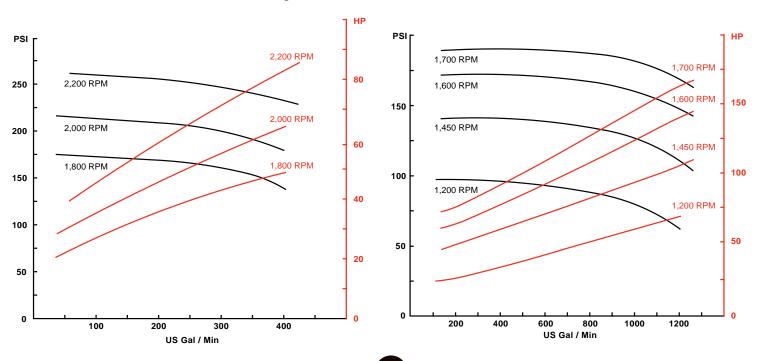
Rovatti, F33K-100/2E - Two Stage

Rovatti, F33K-100/3E - Three Stage



Rovatti, F33K-100-90/3E - Three Stage

Rovatti, F34K-150/2E - Two Stage



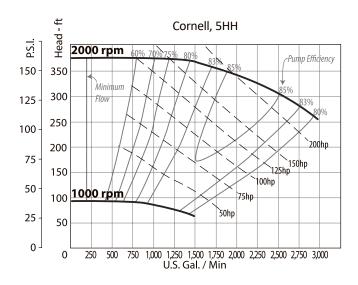




## **CORNELL ENGINE MOUNT PUMPS**

Cornell has built its reputation on producing high quality, efficient, heavy-duty centrifugal pumps to meet the toughest applications.

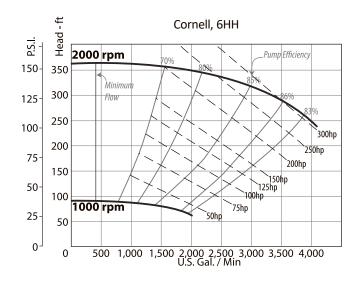
A Cornell pump uses the latest techniques in designing, manufacturing and the rigourous testing of its products.

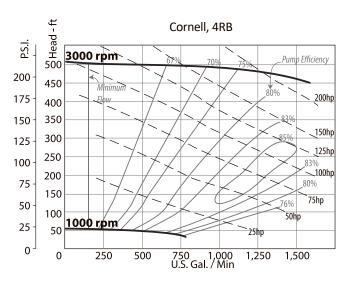




#### Available for Cornell Pumps:

- Cycloseal's patented construction design can last as much as 10 times longer that a typical seal
- Run-Dry, auxiliary gland & oil reservoir keeps seal face lubricated and dry running
- Redi-Prime, fully automatic pump priming and re-priming





Listed here is only a very small selection of Cornell pumps and options for S.A.E. Engine Mount.



# ROBUST, RELIABLE, QUALITY AGRICULTURAL PUMPS SINCE 1946

# Now with 21st Century innovation: Cornell Co-Pilot



Allows remote monitor of:

- Temperature
- Vibration
- Pressure
- Flow
- Remote/Start and Stop

Co-Pilot's predictive maintenance means longer pump life and less downtime

## FIND ALL OUR QUALITY PRODUCTS AVAILABLE THROUGH VANDEN BUSSCHE IRRIGATION

CORNELL PUMP COMPANY | CLACKAMAS, OR 97015 USA WWW.CORNELLPUMP.COM | P: +1 (503) 653-0330 | F: +1 (503) 653-0338



## HAND AND POWER PRIMERS

The Hale 12 volt Power Primer is fast and efficient at priming with the pull of a switch. The Power Primer may be mounted directly onto a diesel powered unit or as a Portable Unit, powered by heavy duty jumper cables and your vehicles battery.

#### **PRIMERS AND PARTS**

POWER PRIMER	PART #	DESCRIPTION
	AI501-3090-01	Power Primer 12V ESP Less Lubricant
	AI501E	Engine Mount for Power Primer
	AI501P	Portable Power Primer
	AI P7304514	Resevoir for coolant
	AI P7023241	Shut off Valve
	AIP200-0042-00-0	Motor for 12V Power Primer
	AIP200-2450-01-0	Switch Micro for Power Primer
	AIP538-0210-00-0	Priming Valve
	AWPP35DC	Power Primer 1/2 HP1 Phase 12V DC
HAND PRIMER		
	BE9-30	Wade Rain Hand Primer
	AW7-HP	Hand Primer #7



Hale Power Primer



Wade Rain, Hand Primer

## WADE RAIN HAND PRIMER DIAPHRAGM PUMP PARTS

PART #	DESCRIPTION
BEP 9-30A	Body, Top Half
BEP 9-30B	Body, Lower Half
BEP 9-30-1	Handle
BEP 9-30-2	Handle Support
**BEP 9-30-3	Rubber Diaphragm
BEP 9-30-4	Steel Diaphragm
BEP 9-30-5	Connecting Rod & Nut
BEP 9-30-6	Handle Bracket Lock Nut
BEP 9-30-8	Rubber Discharge Valve
**BEP 9-30-12	Ball Check Valve with Ball
BEP 9-30-13	3/4" Stainless Ball Only

Your expert Sales Team can recommend the right primer for you.

<sup>9-30-1</sup> 9-30-5 9-30-6 9-30-6 9-30-10 9-30-4 9-30-3 9-30-4 9-30-12 9-30-12 9-30-8

<sup>\*\*</sup>Suggested parts to always have on hand.

### **CONTROLLERS & SWITCHES**

The **DynaGen Plug-N-Play** controller is the complete control solution for diesel and gas engines.

- Easily configured using the front panel buttons or RapidCore configurator software
- Rugged, weather resistant box
- Supports all major diesel engines
- Pre-configured options available for many engines
- Generator version available
- Recommended model: TE410A engine model with automatic start

The **Controls Inc. C-Series** controller is the complete engine and equipment display, monitoring and control system.

- Complete engine display and alarms for mechanical and J1939 engines
- Large, easy-to-read display and sophisticated throttle
- Rugged waterproof unit with plug and play connectors
- Easy-to-read OLED display providing execellent visibility
- Performance to -40°C
- Covers all emission tiers including final tier 4
- A full range of configurable inputs and outputs for seamless equipment integration and communications to other external devices

The **MurphyLink Series ML2000 Panel** includes powerful, yet simple to configure MPC-20 Controller. This controller was developed to meet the need of manual or automatic control whether it's starting/stopping, throttling or both.

- Features MPC-20 Controller
- Standard Panel Disigned for modern electronic engines and Equipment Applications using SAE J1939 CAN
- Ability to display active or stored faults through text, as well as diagnosing equipment malfunctions
- Fully configured software from front user interface or PC configuration
- Ability to customize settings with PC configuration tool

#### **CONTROLS & GAUGES**

PART #	DESCRIPTION	
EIPC37020	Engine Display and Control Panel, J1939 Engines	
DS ML20004X	Murphy Panel Control for Engines	
DS 20P70-100	Pump Pressure Swichgage, max. 100 P.S.I.	
DS 20P70-150	Pump Pressure Swichgage, max. 150 P.S.I.	
DS 20P70-200	Pump Pressure Swichgage, max. 200 P.S.I.	
DS 20P70-300	Pump Pressure Swichgage, max. 300 P.S.I.	
DS 20V-30	Engine Vacuum Swichgage, max. 150 P.S.I.	
DS A20DPK15	Differential Pressure for Filter, max. 15 P.S.I.	
DS A20DP-30	Differential Pressure for Filter, max. 30 P.S.I.	
DS 20T-250-48	Temperature Swichgage, max. 250°F, 48" lead	
DS 20T-250-72	Temperature Swichgage, max. 250°F, 72" lead	
DS 20T-250-120	Temperature Swichgage, max. 250°F, 120" lead	





EIPC37020



DSML20004X



Pump Pressure Switch Gauge



Differential Pressure Switch Gauge



Temperature Switch Gauge



Vacuum Switch Gauge



## SURE-FLO

## **SUCTION FITTINGS**

Sure-Flo Aluminum, Suction Screens & Foot Valves ensure debris stays in your pond not in your irrigation system. Foot Valves have the added advantage of keeping water in the suction line, drastically reducing the amount of time needed to prime the pump at startup.

	PART #	SIZE
SURE-FLO SUCTION	SCREEN WITH SLIDE	
	AU SFS2	2"
	AU SFS3	3"
9.00	AU SFS4	4"
	AU SFS5	5"
	AU SFS6	6"
	AU SFS8	8"
	AU SFS10	10"
	AU SFS12	12"

STANDARD FO	OOT VALVE FOR	ALUMINUM	TURING



AU SFV2	2"
AU SFV3	3"
AU SFV4	4"
AU SFV5	5"
AU SFV6	6"
AU SFV8	8"
AU SFV10	10"

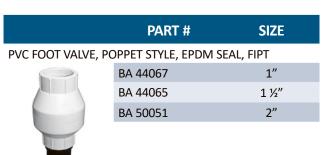
VERTICAL FOOT VALVE FOR ALUMINUM TUBING



AU SFVV3	3"
AU SFVV4	4"
AU SFVV5	5"
AU SFVV6	6"
AU SFVV8	8"

2" x 3' PVC SAND POINT, 10 SLOT (SPIGOT CONNECT)





**VERTICAL FOOT VALVE - FLANGE** 



AU SFVV3CF	3"
AU SFVV4CF	4"
AU SFVV5CF	5"
AU SFVV6CF	6"
AU SFVV8CF	8"

**VERTICAL FOOT VALVE - FIPT** 



AU SFVV2FP	2"
AU SFVV3FP	3"
AU SFVV4FP	4"
AU SFVV4FP	4"

PVC SAND POINT, 10 SLOT (SPIGOT CONNECT)



FH BBP200-3	2" x 3'
FH BBP200-4	2" x 4'

Sure-Flo offers a number of options to increase suction flow. Larger hole sizes, Jumbo, Double Stacked and X Sized Suction Screens and Foot Valves are available to increase the surface area without increasing hole size.

### **SUCTION FITTINGS**

## SURE-FLO



Horizontal Strainer with optional Foot Valve

Horizontal Strainers provide an ideal solution for pumping from shallow streams. Additional strainer sections my be added to increase surface area. A Foot Valve with tube connection easily bolts into place.

Self-Cleaning Strainers deal very effectively with debris and algae with capacities from 50 gpm to 3,000 gpm. Water is retuned to the strainer from the discharge side of the pump; nozzles inside the strainer cause the screen to revolve. Debris that is attached to the screen is blown free when the screen revolves past a hard hitting spray pattern.

Self-Cleaning strainers come in a wide variety of screen lengths and nozzle configurations. A single row of nozzles are available as well as a double row configuration. Also available from Sure-Flo is a Shallow Water Self-Cleaner that needs only 5" above the screen top.



Self-Cleaning Strainer

#### **STRAINERS**

PART #	DESCRIPTION	SIZE
AU SFSH4	Horizontal Strainer	4"
AU SFSH6	Horizontal Strainer	6"
AU SFSH8	Horizontal Strainer	8"
AU SCS2	Self-Cleaning Strainer, Single Noz. Drive	2"
AU SCS4	Self-Cleaning Strainer, Single Noz. Drive	4"
AU SCS6	Self-Cleaning Strainer, Single Noz. Drive	6"
AU SCS8	Self-Cleaning Strainer, Single Noz. Drive	8"
AU SCS4DD	Self-Clean. Strainer, Double Noz. Drive	4"
AU SCS6DD	Self-Clean. Strainer, Double Noz. Drive	6"
AU SCS8DD	Self-Clean. Strainer, Double Noz. Drive	8"



Using a Food Grade PVC Barrel with all aluminum frame, Vanden Bussche's own innovation clamps onto an aluminum suction tube, keeping the end suction off of the pond bottom.



#### **SUCTION PIPE FLOAT**

PART #	DESCRIPTION
GA BARRELASSY-4	Barrel & Stand for 4" Pipe
GA BARRELASSY-5	Barrel & Stand for 5" Pipe
GA BARRELASSY-6	Barrel & Stand for 6" Pipe
GA BARRELASSY-8	Barrel & Stand for 8" Pipe
GA BARREL	Plastic Barrel
GA BARRELRSTAND-4	4" Barrel Stand
GA BARRELRSTAND-5	5" Barrel Stand
GA BARRELRSTAND-6	6" Barrel Stand
GA BARRELRSTAND-8	8" Barrel Stand

## **The Most Efficient Transplanters on the Market!**

Checchi & Magli
TRANSPLANTERS

REDUCE LABOR!

Sets and packs plants Straight UP!

The C&M Transplanter does the job better!



as close as 11" row-to-row as tight as 4" plant-to-plant FULLY ADJUSTABLE







tomatoespeppersbroccolicabbage

·cappage ·lettuce ·turnips

C&M North America

watermelonssweet potatoes

tobacco

celerycauliflower

·onions



BestTransplanter.com

Trium, Total Control Transplanter, excels at transplanting seedlings with developed leaves (tobacco, cabbage, tomato etc). Approximate output is 4,500 to 5,000 plants per hour per row.

- Semi-automatic transplanter for tapered & pyramid shaped cells up to 3 cm in diameter
- Horizontal rotating tray with 10 large capacity, fully opening cups
- Modular / independent floating transplanting units with C&M's high range parallelogram bar connection that keeps each transplanter at a constant horizontal level as it moves across uneven ground
- Easily adjustable Inter-Row spacing on 3 point hitch models 50 to 90 cm, options available for smaller & wider inter-row spacings
- Adjustable Inter-Plant spacing from 14 to 50 cm (wider spacings available)
- Packing wheels have triple adjustment for perfect ridging
- Adjustable: spacing between shoe & packing wheels, seedling placement for tall/ short plants, planting depth, ejection timing and wheel scraper

The Dual 12 Gold is the queen of the transplanters, having received numerous international awards.

- Single operator feeds at the same time the twin rows of twin transplants, with the consequent reduction to half of the costs of the labor.
- Equipped with a double-jointed parallelogram and reach an indicative production of approximately 6000 plants/an hour



Trium 4 Row Transplanter



Dual 12 Gold

#### **TRANSPLANTERS**





Uni Trium 2 Row Transplanter

Uni Trium is a semi-automatic seedling transplanter for square and pyramidshaped cells, and plants up to 6 cm in diameter, typically used for the planting of cabbage, cauliflower, broccoli, lettuce and tomatoes.

- Large 10 cup distributor with flat bottom opening cup for reduced noise and reduced wear
- 4000/5000 plants per hour, per row
- Cup extensions for taller plants
- Reduction inserts for small seedlings.
- Rotary tray holder, 4 tray capacity



F300L 2 Row Potato Planter

The F300L Semi-Automatic 2 Row Planter is made for seeding whole or cut potatoes, tubers, seeds, nuts & bulbs. Maximum output per operator is 0.6 ha per day, per row. Also available as a 1, 3 & 4 row planter.

- Bin size 70 to 80 kg per row
- Inter-Row spacing 55 to 90 cm (wider available)
- Inter-Plant Spacing 14 to 28 cm, optional kits available for garlic (8, 10, & 12 cm spacing) and wider spacings (32, 35 & 38 cm)
- Maximum tuber size 7 cm by 11 cm
- Adjustable planting depth
- Adjustable drive wheel position
- Adjustable covering discs
- Adjustable drive wheel position



SP50V Potato Lifter

SP50V Potato Lifter is ideal for digging potatoes, garlic, bulbs & other tubers. Single row lifter with rear discharge works great for small tractors with field row spacings between 60 to 90 cm.

You just need a 3 pt hitch and a 540 P.T.O.



Wolf 2 Row Transplanter

The Wolf Transplanter excels at transplanting seedlings conical or cylindrical as well as bulbs & seeds up to 7 cm in diameter. The Wolf's perforating planter cup will plant through plastic mulch. Maximum output is up to 3,000 plants per hour, per row.

- Vertically rotating cups (from 1 to 6)
- Modular/independent floating transplanting units
- Easily adjustable Inter-Row spacing on 3 point hitch models, 30 to 90 cm available only on 2-Row Wolf, 3, 4, 5 & 6 Row Wolf has 50 to 90 cm
- Adjustable Inter-Plant spacing from 20 to 198 cm, dependent on the number of planter cups. Eg. a D5 5 Cup transplanter is able to plant through plastic at 27, 30, 33 & 35 cm by changing pinions.
- Adjustable planting depth, safety release, and seedling placement for tall/short plants

## The Most <u>Efficient</u> Transplanters on the Market!

## Checchi & Magli **TRANSPLANTERS**

 Sets and packs plants straight UP!

Consistent plant-to-plant spacing

- C&M WolfPRO Model Plants through plastic OR direct ground
  - Great for any size of plugs up to 3"x 3"

















- ·tomatoes ·celery
- peppers
- ·cauliflower
- ·broccoli
- ·onions
- cabbage
- watermelons
- lettuce
- sweet potatoes
- ·turnips
- ·tobacco



**C&M North America** 

1-720-236-9039 BestTransplanter.com

The **FoxDrive Transplanter** is a great transplanter for tobacco and sweet potatoes. Semiautomatic gripper type for seedling with bare roots or balled roots. Suitable for biomass and bioenergy cultivations.

- Two tyre driving wheels
- Equipped with STANDARD 10-gripper distributor for inter-plant spacings from 23 to 80 cm
- For smaller spacings, the SPECIAL or MASTER distributor are available on request
- Minimum inter-row spacing 50 cm., maximum 90 cm and over on request
- FOXDRIVE-DT Version for inter-row spacings less than 50cm., minimum 25cm.
- Indicative production: 2000/2500 plants per hour each row

The Wolf PRO Transplanter has been designed for professional use, with or without mulching film.

- Equipped with a continuous rotation perforating cups distributor
- Parallelogram for constant deep soil work
- Large diameter (41 cm-16") compacting wheels
- Side cleaning blades for the perforating cups
- Works perfectly in the presence of biodegradable mulching film and/ or heavy soils. It is possible to transplant peat clod-rooted conical, pyramidal or cubic seedlings of maximum 8 cm-3".

Checchi & Magli Transplanters are available in more models, combinations and mounting setups than shown here. For each transplanter there are also many options for plant holders, spacings, fertilizer, water, packing wheels, shoe/ploughshare sizes, hydraulics and disc sets.

Contact your expert Sales Team for more information on sizing and ordering.



**FoxDrive Transplanter** 



Wolf PRO Transplanter

### **MULCH LAYERS**





Model 2570 Plastic Mulch Layer

#### **Model 2570 Plastic Mulch Layer**

- 60" row centre with 4' plastic, 70 HP FWD minimum tractor size
- 3-point hitch
- Adjustable plastic width from 3' or 4'
- Adjustable bed height from 3"-7"
- Adjustable brake tension on plastic roll carriers
- Adjustable side press plates on bed press
- Operator seat on unit
- Adjustable row markers
- Replaceable and reversible plow share blades
- UHMW plastic lined bed press
- Drip tape attachment
- Crowned bed
- Spring loaded shovels on side helps loosen soil for cover disk



Model 2670 Plastic Mulch Layer

#### Model 2670 Plastic Mulch Layer

- 64" Row centres with 4' plastic; 80 HP FWD minimum tractor size
- 3-point hitch
- Adjustable plastic width from 3'-5
- Adjustable bed height from 5"-9"
- Adjustable brake tension on plastic roll carriers
- Adjustable side press plates on bed press
- Operator seat on unit
- Adjustable row markers
- Replaceable and reversible plow share blades
- UHMW plastic lined bed press
- Drip tape attachment
- Crowned bed
- Spring loaded shovels on side helps loosen soil for cover disk



#### **6818 Subsurface Drip Applicator**

- Heavy duty subsurface drip applicator with 3-point hitch
- Depth adjustable from 4" 18"
- 6" x 6" toobar for 30"- 68" row centres
- Shear bolt for rocky soil
- Convenient operator platform
- 2" ID stainless steel down tube for 5/8" 1%" tape
- 45° spool holder for fast and easy loading

We also have Mulch Layers and Bed Shapes available to rent. Contact your Sales Rep for more information.





## **TRANSPLANTERS & MULCH LIFTERS**

#### **Model 1670 Water Wheel Transplanter**

- Recommended tractor size: 50-70 HP FWD
- Field ready with one planting wheel
- Will plant bare roots, pots and plugs
- Capability of 8"-36" row spacing and 1-4 planting wheels
- 2 x 80 gallon tanks
- Up to 25 tray carrying capacity
- Will plant 60" row spacing
- Galvanized expanded metal trays



#### Super Wheel

Rain-Flo's Super Wheel is the ultimate in flexibility and convenience. Removable hard plastic snap-in-lids cover slots in the wheel. Remove the lids and simply Snap-On a Spike.

#### **SUPER WHEEL**

PART #	PLANT SPACING/NO. OF SPIKES	SIZE
EH WWS24	8"-12, 16"-6, 22"-4, 28"-3, 40"-2, 77"-1	24"
EH WWS26	6"-18, 12"-9, 17"-6, 31"-3, 45"-2, 86"-1	26"
EH WWS30	5"-24, 10"-12, 14"-8, 19"-6, 27"-4, 35"-3, 51"-2, 98"-1	30"

For a plant spacing of 31", 3 spikes would be mounted on a 26" Super Wheel (Snap-In Spikes Sold Separately)

#### SUPER WHEEL SNAP-ON SPIKE

PART #	ТҮРЕ	TRAY/POT SIZE	BASE WIDTH	LENGTH	TOP WIDTH
EH WSA	Α	3" Pot	4"	6"	2"
EH WSB	В	2 1/2" Pot	3 ¼"	5 ½"	1 ½"
EH WSC	C*	50 to 72 count Tray	2 %"	4 1/2"	1 ¼"
EH WSD	D	72 to 96 count Tray	2 1/4"	4"	1 1/8"
EH WSE	Е	96 to 128 count Tray	2"	3 1/2"	1"

\*Standard Wheels with Welded-On Spikes are also available.

When your vegetable crop is harvested, use **Challenger** to retrieve the plastic mulch to the surface. Challenger will lift plastic 3' to 5' wide. To prevent clogging, the 1800 has spring loaded trash and vine cutting disks with depth control wheels. Hitch up to Challenger and let it do the dirty work! **Part #: EH 1800ML** 

Super Wheel









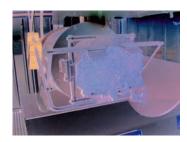
Challenger Model 1800 Plastic Mulch Lifter



### **BEDDING RECOVERY UNIT**

The Bed Recovery Unit (BRU) developed by FAN, separates, dries and disinfects undigested raw fibers of slurry. This way, costs can be reduced and, at the same time, the milk production is optimized. As this is an ecologic cycle not only the costs for bedding material but also disposal costs can be saved. This biological material is produced directly on the farm and always available.





The new discharge system can fill up to 70% of the drum, meaning a daily production of up to 46m³ of bedding material.

In order to ensure the fully automatic controlled operation, a special control unit has been developed, which guarantees a constant dry matter content of 36-38% at the separator outlet.











## **TURNING LIQUID GOLD INTO ENRICHED BEDDING**

FAN Screw Separators produces bedding material with a dry matter content of up to 38% in solids with proven history



#### **FAN SEPARATORS**

#### **FAN Press Screw Separator PSS**

The Press Screw Separator PSS by FAN, a company of the Bauer Group, covers a broad spectrum of applications, from agriculture over biogas and bioethanol plants and food processing, to the chemical industry. It is fed by pump or gravity from a holding tank, with the ability to also be fed by hopper.





The machines are equipped with a flushing device inside the PSS between screen and housing for separating waste water from the slaughtering process in abattoirs. The screen will be flushed with hot water under pressure, allowing the screens to be kept clean.

# TECHNOLOGY LEADER IN LIQUID SOLID SEPARATION





### **POND TREATMENT**

Do you struggle to control algae and weed growth in your pond? If not properly managed it can create difficulties when irrigating, produce unpleasant odors, and simply be an eye sore for visitors and customers. Vanden Bussche Irrigation has teamed up with Arbourdale to help you take control of your pond! Their products are organic, biodegradable and safe for water quality, fish and animals.



PART #	DESCRIPTION	SIZE/QUANTITY
OB 11004	Blast	1 box (12 packets)
OB 51116	Aquasphere	1 sphere
OB 52013	Pond Dye - Black	1 box (6 packets)
OB 6811	Renew	10L pail



#### **BLAST**

- Used as a shock treatment 1 box treats 1,500,000 gallons of water Used with biosphere to compensate for seasonal spikes
- 100% natural and biodegradeable

Recommended for hard to treat ponds with high amounts of floating organic matter.



#### **AQUASPHERE**

- Used as a maintenance product Treats 500,000 gallons of water
- Gently toss into pond every 30 days 100% natural and biodegradable

Designed to prevent pond issues before they arise, promoting overall ponď health.



#### **POND DYE - BLACK**

- Used as a maintenance product
- 1 box treats 1.5 acre pond with average depth of 4 feet Use until desired colour is achieved
- 100% natural liquid

Pond dye minimizes light penetration resulting in less algae growth and beautiful reflections.



#### **RENEW**

- Another form of shock treatment 1 Pail treats 20,000 sq./ft of surface area
- Dosage should be reduced by 50% if large fish population
- 100% natural powder

Renew is used to oxygenate ponds which have become stagnant.



## **TOOLS & ACCESSORIES**









Standard Pressure Gauge







TYPE	DESCRIPTION
MA 11316	36" Landscape Rake
MA 32214	24" Leaf Rake
MA 32617	Garden Rake
MA 21373	3" Trenching Shovel
MA 21374	4" Trenching Shovel
MA 21375	5" Trenching Shovel
MA 24172	Irrigation Shovel
MA 24182	Mini-Round Shovel, D-Grip
MA 24372	Garden Spade - Long Handle
MA 24382	Garden Spade - D-Handle
MA 24574	14" Drainage Spade - Long Handle
MA 24584	14" Drainage Spade - D-Handle
MA 26600	Edger - 48" Handle
MA 81014	Dual Bristle Push Broom
MA 81114	Medium Bristle Push Broom
MA MW19	Measuring Wheel, in feet
DS PG60	60 P.S.I. Standard Pressure Gauge
DS PG100	100 P.S.I. Standard Pressure Gauge
DS PG160	160 P.S.I. Standard Pressure Gauge
DS PG200	200 P.S.I. Standard Pressure Gauge
DS PG300	300 P.S.I. Standard Pressure Gauge
DS OFPG030	30 P.S.I. Oil Filled Pressure Gauge
DS OFPG060	60 P.S.I. Oil Filled Pressure Gauge
DS OFPG100	100 P.S.I. Oil Filled Pressure Gauge
DS OFPG160	160 P.S.I. Oil Filled Pressure Gauge
DS OFPG200	200 P.S.I. Oil Filled Pressure Gauge
DS OFPG300	300 P.S.I. Oil Filled Pressure Gauge
DS OFV30	30 in HG. Oil Filled Vacuum Gauge
OE A-HCP	Pitot Tube, Attaches to Pressure Gauge to measure off of a nozzle.
AX RBF-S	Marking Flags - Sold in bundles of 100
MB010-1000	1" Poly Pipe Cutter
MB010-1025	1 1/4" Poly Pipe Cutter
MB010-3000	1 1/2" Poly Pipe Cutter
AT 08-08K	8" UV Coated Tie Wraps, 100/bundle
AT 08-11K	11" UV Coated Tie Wraps, 100/bundle
AT 77-WIRE	1/16" x 1,000' Stainless Aircraft Cable
AT 77-WT	Tightener, 5/16" Drive



## **Friction Loss in Polyethylene SDR-Pressure Rated Tubing**

Velocity measured in ft / sec., PSI Loss Per 100 Feet of Pipe (PSI/100FT).

u	3/	<b>′</b> 4"	1	<i>"</i>	1	1/4"	1	1/2"	2	2"	l		Conversion	Factors					
GPM		Loss	_	Loss	_			. –			From	Multiply	То	From	Multiply	То			
1	0.6	0.1									Length:								
2	1.2	0.5	0.7	0.1							inches	2.54	centimeters	centimeters	0.394	inches			
3	1.8	1.0	1.1	0.3	0.6	0.1					feet miles	0.3048 1.61	metres kilometres	metres kilometres			metres kilometres	3.281 0.6214	feet miles
4	2.4	1.6	1.5	0.5	0.9	0.1	0.6	0.1			miles	5280	feet	feet	0.000189	miles			
5	3.0	2.4	1.9	0.8	1.1	0.2	0.8	0.1			Area:								
6	3.6	3.4	2.2	1.1	1.3	0.3	0.9	0.1			acres	0.405	hectares	hectares	2.471	acres			
7	4.2	4.6	2.6	1.4	1.5	0.4	1.1	0.2	0.7	0.1	acres hectares	<b>43560</b> 10000	feet² metres²	feet² metres²	2.2957 x 10-5 0.0001	hectares			
8	4.8	5.8	3.0	1.8	1.7	0.5	1.3	0.2	0.8	0.1	metres2 inches2	10.7639 0.000645	feet²	feet²	0.0929 1550.003	metres <sup>2</sup>			
9	5.4	7.3	3.3	1.9	1.9	0.6	1.4	0.3	0.9	0.1	inchesz	0.000645	metres <sup>2</sup>	metres <sup>2</sup>	1550.003	inches-			
10	6.0	8.8	3.7	2.7	2.1	0.7	1.6	0.3	1.0	0.1	Volume: acre-inch	3630	feet³	feet³	0.000275	acre-inch			
12	7.2	12.4	4.4	3.8	2.6	1.0	1.9	0.5	1.1	0.1	acre-feet	43560	feet³	feet³	2.2957 x 10-5	acre-feet			
14	8.4	16.5	5.2	5.1	3.0	1.3	2.2	0.6	1.3	0.2	feet³ U.S. gallons	28.32 3.6826 x 10-5	litres acre-inch	litres acre-inch	0.03531 27154	feet3 U.S. gallons			
16	9.6	21.1	5.9	6.5	3.4	1.7	2.5	0.8	1.5	0.2	U.S. gallons	231	inches³	inches³	0.00433	U.S. gallons			
18	10.8	26.2	6.7	8.1	3.9	2.1	2.8	1.0	1.7	0.3	U.S. gallons U.S. gallons	0.13368 0.833	feet <sup>3</sup> Imp. Gallons	feet³ Imp. Gallons	7.481 1.2009	U.S. gallons U.S. gallons			
20			7.4	9.8	4.3	2.6	3.1	1.2	1.9	0.4	U.S. gallons	3.79	litres	litres	0.26417	U.S. gallons			
22			8.2	11.7	4.7	3.1	3.5	1.5	2.1	0.4	U.S. gallons	0.003785	metre <sup>3</sup>	metre³	264.172	U.S. gallons			
24			8.9	13.8	5.1	3.6	3.7	1.7	2.3	0.5	Flow:	2 2 2 2 4 2 2	. (	f 13/	440				
26			9.6	16.0	5.6	4.2	4.1	2.0	2.5	0.6			foot³/second acre-inch/hour	foot³/second acre-inch/hour	449 454	U.S. gal./min. U.S. gal./min.			
28			10.4	18.4	6.0	4.8	4.4	2.3	2.7	0.7	U.S. gal./min.	0.06309	litres/second	litres/second	15.85	U.S. gal./min.			
30					6.4	5.5	4.7	2.6	2.9	0.8	U.S. gal./min. U.S. gal./min.		litres/min. metre³/sec.	litres/min. metre³/sec.	0.26417 15852	U.S. gal./min. U.S. gal./min.			
35					7.5	7.3	5.5	3.5	3.3	1.0	U.S. gal./min.	0.22716	metre <sup>3</sup> /hour	metre³/hour	4.4021	U.S. gal./min.			
40					8.6	9.4	6.3	4.4	3.8	1.3	Pressure:								
45					9.6	11.6	7.1	5.5	4.3	1.6	inch of mercury	1.132	feet of head	feet of head	0.8834	inch of mercury			
50					10.7	14.1	7.9	6.7	4.8	2.0	P.S.I.	2.31	feet of head	feet of head	0.433	P.S.I.			
55							8.7	8.0	5.3	2.4	P.S.I. P.S.I.	0.06805 0.068966	atmosphere bar	atmosphere bar	14.7 14.5	P.S.I. P.S.I.			
60							9.4	9.4	5.7	2.8	P.S.I.	6.89476	kilopascals	kilopascals	0.145	P.S.I.			
65							10.2	10.9	6.2	3.2	P.S.I./100 ft P.S.I	22.61 0.07032	kPa/100m kilogram/cm²	kPa/100m kilogram/cm²	0.0442 14.22	P.S.I./100 ft P.S.I.			
70									6.7	3.7		0.07032	Kilogram, cm	Kilogram, cm	11.22				
75		: Shad	ed are	as of					7.2	4.2	Energy: horsepower	0.746	kilowatts	kilowatts	1.3410	horsepower			
80	chart	ate vel	ocities	over					7.6	4.7						<del> </del>			
85	5' pe	r secor	nd.						8.1	5.3									
90		aution r hamr		event			<u> </u>		8.6	5.9									
95	water	riaiiii	nei.						9.1	6.5									
100									9.5	7.2									

#### To Calculate Volume of Water in a Pond:

Rectangular Shaped Pond

Total U.S. Gal. = length x width x average depth x 7.5 x 0.8

Circular Shaped Pond

Total U.S. Gal. = diameter x 2.14 x average depth x 7.5 x 0.8

Circular Shaped Pond Total U.S. Gal. = diameter x 3.14 x average depth x 5.9 x 0.8

Oval Shaped Pond Total U.S. Gal. = max. length x max. width x average depth x 5.9 x 0.8



#### **Friction Loss in Schedule 40 PVC**

Velocity measured in ft / sec., PSI Loss Per 100 Feet of Pipe (PSI/100FT).

	1/2" 3/4" 1"									½"		<u>"</u>	2.3		3" 4"				
CDN4								¼"							Ĭ				CDM
GPM	1	Loss			vei.	LOSS	vei.	LOSS	vei.	LOSS	vei.	LOSS	vei.	LOSS	vei.	LOSS	vei.	LOSS	GPM
1	1.1	0.4	0.6	0.1	0.7	0.1													1
2	2.1	1.6	1.2	0.4	0.7	0.1	0.0	0.1											2
3	3.2	3.3	1.8	0.8	1.1	0.3	0.6	0.1	0.6	0.4									3
4	4.2	5.6	2.4	1.4	1.5	0.4	0.9	0.1	0.6	0.1									4
5	5.3	8.5	3.0	2.2	1.9	0.7	1.1	0.2	0.8	0.1									5
6	6.3	11.9	3.6	3.0	2.2	0.9	1.3	0.3	0.9	0.1									6
7	7.4	15.8	4.2	4.0	2.6	1.2	1.5	0.3	1.1	0.2	0.7	0.1							7
8	8.4	20.2	4.8	5.1	3.0	1.6	1.7	0.4	1.3	0.2	0.8	0.1							8
9	9.5	25.1	5.4	6.4	3.3	2.0	1.9	0.5	1.4	0.3	0.9	0.1							9
10	10.6	30.5	6.0	7.8	3.7	2.4	2.1	0.6	1.6	0.3	1.0	0.1		0.4					10
12	12.7	42.8	7.2	10.9	4.5	3.7	2.6	0.9	1.9	0.4	1.2	0.1	0.8	0.1					12
14	14.8	56.9	8.4	14.5	5.2	4.5	3.0	1.2	2.2	0.6	1.3	0.2	0.9	0.1					14
16	16.9	72.9	9.6	18.5	5.9	5.7	3.4	1.5	2.5	0.7	1.5	0.2	1.1	0.1					16
18	19.0	90.6	10.8	23.1	6.7	7.1	3.9	1.9	2.8	0.9	1.7	0.3	1.2	0.1					18
20			12.0	28.0	7.4	8.7	4.3	2.3	3.2	1.1	1.9	0.3	1.3	0.1	0.9	0.1			20
22			13.2	33.4	8.2	10.3	4.7	2.7	3.5	1.3	2.1	0.4	1.5	0.2	1.0	0.1			22
24			14.4	39.3	8.9	12.1	5.1	3.2	3.8	1.5	2.3	0.5	1.6	0.2	1.0	0.1			24
26			15.6	45.6	9.6	14.1	5.6	3.7	4.1	1.8	2.5	0.5	1.7	0.2	1.1	0.1			26
28			16.8	52.3	10.4	16.2	6.0	4.3	4.4	2.0	2.7	0.6	1.9	0.3	1.2	0.1			28
30			18.0	59.4	11.1	18.4	6.4	4.8	4.7	2.3	2.9	0.7	2.0	0.3	1.3	0.1			30
35			19.2	66.9	13.0	24.4	7.5	6.4	5.5	3.0	3.3	0.9	2.3	0.4	1.5	0.1			35
40					14.8	31.3	8.6	8.2	6.3	3.9	3.8	1.2	2.7	0.5	1.7	0.2			40
45					16.7	38.9	9.6	10.2	7.1	4.8	4.3	1.4	3.0	0.6	2.0	0.2	1.1	0.1	45
50					18.5	47.3	10.7	12.4	7.9	5.9	4.8	1.7	3.4	0.7	2.2	0.3	1.3	0.1	50
55							11.9	14.8	8.7	7.0	5.3	2.1	3.7	0.9	2.4	0.4	1.4	0.1	55
60							12.9	17.4	9.4	8.2	5.7	2.4	4.0	1.0	2.6	0.4	1.5	0.1	60
65							13.9	20.2	10.2	9.6	6.2	2.8	4.4	1.2	2.8	0.5	1.6	0.1	65
70							15.0	23.2	11.0	11.0	6.7	3.3	4.7	1.4	3.0	0.5	1.8	0.1	70
75							16.1	26.4	11.8	12.5	7.2	3.7	5.0	1.6	3.3	0.5	1.9	0.1	75
80							17.1	29.7	12.6	14.0	7.6	4.2	5.4	1.8	3.5	0.6	2.0	0.2	80
85							18.2	33.2	13.4	15.7	8.1	4.7	5.7	2.0	3.7	0.7	2.1	0.2	85
90							19.3	37.0	14.2	17.5	8.6	5.2	6.0	2.2	3.9	0.8	2.3	0.2	90
95									15.0	19.3	9.1	5.7	6.4	2.4	4.1	0.8	2.4	0.2	95
100									15.7	21.2	9.6	6.3	6.7	2.7	4.3	0.9	2.5	0.3	100
120									18.9	29.7	11.5	8.8	8.0	3.7	5.2	1.3	3.0	0.3	120
140											13.4	11.7	9.4	4.9	6.1	1.7	3.5	0.5	140
160											15.3	15.0	10.7	6.3	6.9	2.2	4.0	0.6	160
180											17.2	18.7	12.1	7.9	7.8	2.7	4.5	0.7	180
200											19.1	22.7	13.4	9.6	8.7	3.3	5.0	0.9	200
225													15.1	11.9	9.8	4.1	5.7	1.1	225
250													16.7	14.5	10.8	5.0	6.3	1.3	250
275		: Shad											18.4	17.3	11.9	6.0	7.0	1.6	275
300		: indica 5' per		locitie	S										13.0	7.0	7.6	1.9	300
350	Use	aution	to n	ia. revent											15.2	9.4	8.8	2.5	350
400		r ham		3.0.70											17.3	12.0	10.1	3.2	400
500																	12.6	4.8	500
600																	15.1	6.8	600



## Friction Loss in Class 160 (SDR 26) PVC Pipe

Velocity measured in ft / sec., PSI Loss Per 100 Feet of Pipe (PSI/100FT).

	1	1/4"	1	1/2"	2" 2" 2 1/2				3	8"	,	1"	-	6"	9	3"	10"		
GPM	Vel.	Loss	Vel.	Loss	Vel.	Loss		Loss	Vel.			Loss		Loss		Loss		Loss	GPM
5	0.9	0.1	0.9	0.1	vei.	LUSS	vei.	LUSS	vei.	LUSS	vei.	LUSS	vei.	LUSS	vei.	LUSS	vei.	LUSS	5
10	1.7	0.1	1.3	0.1	0.9	0.1													10
15	2.6	0.4	2.0	0.2	1.3	0.1	0.9	0.1											15
20	3.5	1.4	2.7	0.4	1.7	0.1	1.2	0.1											20
25	4.4	2.1	3.3	1.1	2.1	0.2	1.5	0.1	1.0	0.1									25
30	5.2	2.1	4.0	1.5	2.1	0.4	1.7	0.1	1.0	0.1									30
35	6.1	3.9	4.6	2.0	3.0	0.5	2.0	0.2	1.4	0.1									35
40	7.0	5.0	5.3	2.6	3.4	0.7	2.3	0.3	1.6	0.1									40
45	7.8	6.2	5.9	3.2	3.4	1.1	2.6	0.3	1.8	0.1	1.1	0.1							45
50	8.7	7.5	6.6	3.9	4.2	1.3	2.9	0.4	2.0	0.2	1.2	0.1							50
55	9.6	8.9	7.3	4.6	4.7	1.6	3.1	06	2.2	0.2	1.3	0.1							55
60	10.4	10.5	8.0	5.4	5.1	1.8	3.5	00	2.4	0.2	1.4	0.1							60
65	10.4	10.5	8.6	6.3	5.5	2.1	3.8	0.7	2.5	0.3	1.5	0.1							65
70			9.3	7.2	5.9	2.4	4.1	1.0	2.7	0.4	1.7	0.1							70
75			10.0	8.2	6.4	2.8	4.3	1.1	2.9	0.4	1.8	0.1							75
80			10.0	0.2	6.8	3.1	4.6	1.2	3.1	0.5	1.9	0.1							80
85					7.2	3.5	4.9	1.4	3.3	0.5	2.0	0.2							85
90					7.6	3.9	5.2	1.5	3.5	0.6	2.1	0.2							90
95					8.1	4.3	5.5	1.7	3.7	0.7	2.3	0.2							95
100					8.5	4.7	5.8	1.9	3.9	0.7	2.4	0.2							100
110					9.3	5.6	6.4	2.2	4.3	0.9	2.6	0.3							110
120					10.3	6.6	7.0	2.6	4.7	1.0	2.8	0.3							120
130					10.5	0.0	7.5	3.0	5.1	1.2	3.1	0.3							130
140							8.1	3.5	5.5	1.3	3.3	0.4							140
150							8.7	3.9	5.9	1.5	3.6	0.5							150
160							9.3	4.4	6.3	1.7	3.8	0.5							160
170							9.8	5.0	6.7	1.9	4.0	0.6	1.9	0.1					170
180							10.4	5.5	7.0	2.1	4.3	0.6	2.0	0.1					180
190									7.4	2.4	4.5	0.7	2.1	0.1					190
200									7.8	2.6	4.7	0.8	2.2	0.1					200
225									8.8	3.2	5.3	1.0	2.5	0.1					225
250									9.8	3.9	5.9	1.2	2.7	0.2					250
275									10.8	4.7	6.5	1.4	3.0	0.2	1.8	0.1			275
300											7.1	1.6	3.3	0.3	1.9	0.1			300
325											7.7	1.9	3.6	0.3	2.1	0.1			325
350											8.3	2.1	3.8	0.3	2.3	0.1			350
375											8.9	2.4	4.1	0.4	2.4	0.1			375
400											9.5	2.8	4.4	0.4	2.6	0.1			400
450											10.6	3.4	4.9	0.5	2.9	0.1	1.9	0.1	450
500													5.5	0.6	3.2	0.2	2.1	0.1	500
600	Note:	Shade	d areas	s of									6.6	0.9	3.9	0.3	2.5	0.1	600
700	chart												7.6	1.18	4.5	0.3	2.9	0.1	700
800		te velo econd.	cities o	over 5'									8.7	1.5	5.2	0.4	3.3	0.1	800
900		aution	to prev	vent									9.8	1.9	5.8	0.5	3.7	0.2	900
1000		hamm											10.9	2.3	6.4	0.6	4.1	0.2	1000
1250															8.1	1.0	5.2	0.3	1250
1500															9.7	1.3	6.2	0.5	1500



## Friction Loss in Aluminum Pipe with Couplers Velocity measured in ft / sec., PSI Loss Per 100 Feet of Pipe (PSI/100FT).

Figure 19		2		_	)" )		,"		)"		"		,,,		3"		10"		
S	GPM	_																GPM	
14		VC1.	LO33	VC1.	LO33	VCI.	L033	VCI.	LU33	VC1.	L033	VC1.	LO33	VCI.	LO33	VC1.	LO33		
15		1.0	0.1																
Mathematical Content of Math																			
1																			
1				11	0.1														
Heat																			
Horne   Horn																			
S																			
S						1.3	0.1												
Total   Tota																			
The column   The																			
No																			
Note																			
90																			
1								15	0.1										
100																			
110																			
120									_										
130																			
140								-	_										
150   6.8   3.0   3.8   0.8   2.5   0.2   1.7   0.1								-		16	0.1								
160         7.3         3.4         4.1         0.8         2.6         0.3         1.8         0.1																			
170         8         4.3         0.9         2.8         0.3         1.9         0.1         5         6         6         170         180         1.0         2.9         0.3         2.0         0.1         5         6         1.0         180         190         180         180         190         190         11         3.1         0.4         2.2         0.2         1.7         0.1         180         180         190         180         180         180         225         180         180         180         180         225         180         180         180         180         225         180         180         180         225         180         180         180         225         180         180         180         225         180         180         180         225         180 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>																			
180																			
190   190																			
200   S.1   S.1   S.1   S.3   S.3   S.4   S.3   S.2   S.5								-											
225                                       5.7         1.6         3.7         0.5         2.6         0.2         1.9         0.1                                       225           250                             6.4         1.9         4.1         0.6         2.8         0.3         2.1         0.1                                       250           275                             7.7         2.7         4.9         0.9         3.4         0.4         2.5         0.2         1.9         0.1                   300           325                             8.3         3.1         5.3         1.1         3.7         0.4         2.7         0.2         2.1         0.1                   325           350                                       5.7         1.2         4.0         0.5         2.9         0.2         2.2         0.1                   350           375                                       6.5         1.5         4.5         0.7         3.3         0.3         2.6         0.2                   400           450												1.7	0.1						
250																			
275         1         7.0         2.3         4.5         0.7         3.1         0.3         2.3         0.2         1         1         275           300         7.7         2.7         4.9         0.9         3.4         0.4         2.5         0.2         1.9         0.1         300           325         8.3         3.1         5.3         1.1         3.7         0.4         2.7         0.2         2.1         0.1         325           350         5.7         1.2         4.0         0.5         2.9         0.2         2.2         0.1         350           375         6.1         1.4         4.3         0.6         3.1         0.3         2.4         0.1         375           400         6.5         1.5         4.5         0.7         3.3         0.3         2.6         0.2         400           450         7.3         1.9         5.1         0.8         3.8         0.4         2.9         0.2         0.1         450           500         80         8.2         2.3         5.7         0.9         4.2         0.4         3.2         0.2         2.0         0.1         500 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>_</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>									_										
325	275					7.0	2.3	4.5	0.7	3.1	0.3	2.3	0.2					275	
350       5.7       1.2       4.0       0.5       2.9       0.2       2.2       0.1       350         375       6.1       1.4       4.3       0.6       3.1       0.3       2.4       0.1       375         400       6.5       1.5       4.5       0.7       3.3       0.3       2.6       0.2       400         450       7.3       1.9       5.1       0.8       3.8       0.4       2.9       0.2       450         500       8.2       2.3       5.7       0.9       4.2       0.4       3.2       0.2       2.0       0.1       500         600       6.8       1.3       5.0       0.6       3.8       0.3       2.5       0.1       600         700       Note: Shaded areas of chart indicate velocities over       9.1       2.3       6.7       1.1       5.1       0.6       3.3       0.2       800         900       5' per second.       7.5       1.3       5.7       0.7       3.7       0.2       900         1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000<	300					7.7	2.7	4.9	0.9	3.4	0.4	2.5	0.2	1.9	0.1			300	
375   6.1   1.4   4.3   0.6   3.1   0.3   2.4   0.1   375   400   6.5   1.5   4.5   0.7   3.3   0.3   2.6   0.2   400   450   7.3   1.9   5.1   0.8   3.8   0.4   2.9   0.2   450   500   8.2   2.3   5.7   0.9   4.2   0.4   3.2   0.2   2.0   0.1   500   600   8.2   2.3   5.7   0.9   4.2   0.4   3.2   0.2   2.0   0.1   500   600   8.2   2.3   5.7   0.9   4.2   0.4   3.2   0.2   2.0   0.1   600   700   Note: Shaded areas of chart indicate velocities over   7.1   1.7   5.8   0.8   4.5   0.4   3.1   0.2   700   800   900   5' per second.   9.1   2.3   6.7   1.1   5.1   0.6   3.3   0.2   800   900   5' per second.   8.3   1.6   6.4   0.8   4.1   0.3   1000   1000   Use caution to prevent   8.3   1.6   6.4   0.8   4.1   0.3   1000   1250   1250   1250   1250   1000   1250   1250   1000   1250   1250   1250   1000   1250   1250   1250   1000   1250   1250   1250   1000   1250   1250   1250   1000   1250   1250   1250   1000   1250   1250   1250   1000   1250   1250   1250   1250   1000   1250   1250   1250   1250   1000   1250   1250   1250   1250   1000   1250   1250   1250   1250   1250   1250   1000   1250   12	325					8.3	3.1	5.3	1.1	3.7	0.4	2.7	0.2	2.1	0.1			325	
400         6.5         1.5         4.5         0.7         3.3         0.3         2.6         0.2         400           450         7.3         1.9         5.1         0.8         3.8         0.4         2.9         0.2         450           500         8.2         2.3         5.7         0.9         4.2         0.4         3.2         0.2         2.0         0.1         500           600         6.8         1.3         5.0         0.6         3.8         0.3         2.5         0.1         600           700         Note: Shaded areas of chart indicate velocities over         9.1         2.3         6.7         1.1         5.1         0.6         3.3         0.2         700           800         900         9.1         2.3         6.7         1.1         5.1         0.6         3.3         0.2         800           900         5' per second.         7.5         1.3         5.7         0.7         3.7         0.2         900           1000         Use caution to prevent water hammer.         8.3         1.6         6.4         0.8         4.1         0.3         1000	350							5.7	1.2	4.0	0.5	2.9	0.2	2.2	0.1			350	
450	375							6.1	1.4	4.3	0.6	3.1	0.3	2.4	0.1			375	
500         8.2         2.3         5.7         0.9         4.2         0.4         3.2         0.2         2.0         0.1         500           600         6.8         1.3         5.0         0.6         3.8         0.3         2.5         0.1         600           700         Note: Shaded areas of chart indicate velocities over         7.1         1.7         5.8         0.8         4.5         0.4         3.1         0.2         700           800         900         5' per second.         7.5         1.3         5.7         0.7         3.7         0.2         900           1000         Use caution to prevent water hammer.         8.3         1.6         6.4         0.8         4.1         0.3         1000	400							6.5	1.5	4.5	0.7	3.3	0.3	2.6	0.2			400	
600       600       6.8       1.3       5.0       0.6       3.8       0.3       2.5       0.1       600         700       Note: Shaded areas of chart indicate velocities over       7.1       1.7       5.8       0.8       4.5       0.4       3.1       0.2       700         800       9.1       2.3       6.7       1.1       5.1       0.6       3.3       0.2       800         900       5' per second.       7.5       1.3       5.7       0.7       3.7       0.2       900         1000       Use caution to prevent water hammer.       8.3       1.6       6.4       0.8       4.1       0.3       1000         1250	450							7.3	1.9	5.1	0.8	3.8	0.4	2.9	0.2			450	
700         Note: Shaded areas of chart indicate velocities over         7.1         1.7         5.8         0.8         4.5         0.4         3.1         0.2         700           800         900         9.1         2.3         6.7         1.1         5.1         0.6         3.3         0.2         800           900         5' per second.         7.5         1.3         5.7         0.7         3.7         0.2         900           1000         Use caution to prevent water hammer.         8.3         1.6         6.4         0.8         4.1         0.3         1000	500							8.2	2.3	5.7	0.9	4.2	0.4	3.2	0.2	2.0	0.1	500	
800 over     9.1     2.3     6.7     1.1     5.1     0.6     3.3     0.2     800       900 5' per second.     7.5     1.3     5.7     0.7     3.7     0.2     900       1000 Use caution to prevent water hammer.     8.3     1.6     6.4     0.8     4.1     0.3     1000	600									6.8	1.3	5.0	0.6	3.8	0.3	2.5	0.1	600	
800     over       900     5' per second.       1000     Use caution to prevent water hammer.       1250     800       1001     1.1       1002     1.1       1003     1.1       1004     1.1       1005     1.1       1006     1.1       1007     1.1       1008     1.2       1009     1.3	700	Note: Shaded areas of								7.1	1.7	5.8	0.8	4.5	0.4	3.1	0.2	700	
900     5' per second.       1000     Use caution to prevent       1250     8.3       1.6     6.4       0.8     4.1       0.3     1000       1250     8.0	800	chart indicate velocities								9.1	2.3	6.7	1.1	5.1	0.6	3.3	0.2	800	
1000     Use caution to prevent water hammer.     8.3     1.6     6.4     0.8     4.1     0.3     1000       1250     8.0     1.3     5.1     0.4     1250	900											7.5	1.3	5.7	0.7	3.7	0.2	900	
8.0 1.5 3.1 0.4 1250	1000	Use caution to prevent										8.3	1.6	6.4	0.8	4.1	0.3	1000	
1500 6.1 0.6 1500	1250	wate	r ham	mer.										8.0	1.3	5.1	0.4	1250	
	1500															6.1	0.6	1500	





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