NETAFIM™
GROW MORE WITH LESS

SERIES 80 NYLON CONTROL VALVES

NOW AVAILABLE IN 3-WAY OR 2-WAY

QUICK REACTION AND DRIP-TIGHT CLOSURE FOR PRECISE AND ACCURATE IRRIGATION



1 ½" & 2" GLOBE/ANGLE 3-WAY PRESSURE REDUCING CONTROL VALVES



1 ½" & 2" GLOBE/ANGLE 3-WAY PRESSURE SUSTAINING CONTROL VALVES



¾" & 1" GLOBE 2-WAY ELECTRIC CONTROL VALVES



1 ½" & 2" GLOBE 2-WAY ELECTRIC CONTROL VALVES



1 ½" & 2" ANGLE 2-WAY ELECTRIC CONTROL VALVES

PRODUCT ADVANTAGES

- Flow control stem allows manual control from full closure up to maximum capacity.
- Suitable for dirty water applications with clog-free labyrinth inlet for command water.
- Quick reaction to opening and closing and a drip-tight seal for accurate irrigation.
- Available in multiple body configurations and control functions.
- Very low friction loss allows valve use with a wider range of flows.
- Durable, corrosion resistant materials for long life.

3-WAY SERIES 80 NYLON CONTROL VALVES

FEATURES

- All control systems (pilot and solenoid) are assembled on the bonnet. No tubes are connected to the valve body.
- Tight sealing valve with fully supported diaphragm.
- Straight or angle with globe configuration activated by a fully supported diaphragm.
- Integrated check valve ensures valve remains closed until the controller designates opening.
- Vertical or horizontal installations.



APPLICATIONS

- Pressure regulation of irrigation systems - small blocks
- For remote control, master valve, automated or manual operations - accurate irrigation control
- Greenhouse and Nursery irrigation including hydroponic and mist systems

SPECIFICATIONS

- Recommended Flow Ranges:
  1 ½" valve - .25 to 110 GPM
  2" valve - .25 to 176 GPM
- Valve Configurations:
  1 ½" and 2" valves - Globe or Angle
- Minimum Operating Pressure: 7 psi
- Maximum Operating Pressure: 150 psi
- Maximum Water Temperature: 140° F
- Optional Solenoid Voltage: 24VDC, 12VDC, 12VDC latching, 120VAC

MATERIALS

- Body, Bonnet, Diaphragm Seat: Glass Reinforced Polyamide (GRP)
- Nuts, Bolts, Washers: Stainless Steel 304
- Spring: Stainless Steel AISI 302

DIMENSIONS (3-WAY VALVES)

SIZE	LENGTH	WIDTH	HEIGHT	WEIGHT
1 ½" GLOBE	6 9/16"	6 1/2"	6 3/8"	2 LBS
1 ½" ANGLE	3 1/2"	6 1/2"	6 13/16"	1.8 LBS
2" GLOBE	6 9/16"	6 1/2"	6 5/8"	2 LBS
2" ANGLE	3 1/2"	6 1/2"	6 13/16"	1.8 LBS

Dimensions for Basic 3-Way Series 80 Control Valve

OPTIONAL VOLTAGES

VALVE SIZE	VOLTAGE
ALL SIZES	12VDC
	12VDCL
	24VDC
	120VAC

OPTIONAL VOLTAGES:
Call Netafim USA for Item and Model Numbers for Series 80 Nylon Control Valves with optional voltages.

OPTIONAL FUNCTIONS

VALVE SIZE	CODE	FUNCTION
ALL SIZES	ELTH	ELECTRIC
	PRTH	PRESSURE REDUCING
	PRELTH	PRESSURE REDUCING ELECTRIC
	PSTH	PRESSURE SUSTAINING
	PSELTH	PRESSURE SUSTAINING ELECTRIC

ORDERING INFORMATION

Use this chart to select the valve options and create the valve Model Number.

61 — **FUNCTION CODE** — **DIAMETER** — **MATERIAL & END CONNECTION** — **CONFIGURATION** — **SPRING COLOR**

FUNCTION CODE
- **ELTH** Electric 3-Way Throttling
- **PRTH** Pressure Reducing
- **PRELTH** Pressure Reducing Electric
- **PSTH** Pressure Sustaining
- **PSELTH** Pressure Sustaining Electric

DIAMETER
- **NYLON:** 1.5", 2"

MATERIAL & END CONNECTION
- **GH3** Nylon Threaded

CONFIGURATION
- **AN** - Angle
  Leave blank for Globe

SPRING COLOR
(ONLY IF REQUIRED)
- **Y** Yellow (7-30 psi)
- **G** Green (14-65 psi)
- **R** Red (30-90 psi)

2-WAY SERIES 80 NYLON CONTROL VALVES



FEATURES

- Suitable for high pressure applications with quick reaction to opening and closing.
- Exceptionally low inrush and holding current allows the longest wire run from valve to controller.
- Tight sealing valve with fully supported diaphragm.
- Stable solenoid to voltage fluctuations with low sensitivity to dirt - no diode solenoid.
- Integrated check valve (on 1 ½" and 2" sizes) ensures valve remains closed until the controller designates opening.
- Optimal for vertical installations.

SERIES 80 VALVE WITH BATTERY OPERATED CONTROLLER

Low cost automatic valve operation without additional wiring costs. Aqua Pro Single Zone Valve Controller mounts on each valve and is individually programmed. Controller's 9 VDC battery is the only power required to turn the valve on and off. Ideal for seasonal or annual crops requiring system portability.



APPLICATIONS

- For mild corrosive and mild acidity levels in the water
- For remote control, master valve, automated or manual operations
- Greenhouse and Nursery irrigation including hydroponic and mist systems

SPECIFICATIONS

- Recommended Flow Ranges:
  ¾" valve - .01 to 26 GPM *
  1" valve - .01 to 44 GPM *
  1 ½" valve - .25 to 110 GPM
  2" valve - .25 to 176 GPM
- Valve Configurations:
  ¾" and 1" valves - Globe
  1 ½" and 2" valves - Globe or Angle
- Standard 2-Way Electric Normally Closed Valve
- Minimum Operating Pressure: 7 psi
- Maximum Operating Pressure: 150 psi
- Maximum Water Temperature: 140° F
- Standard Solenoid Voltage: 24VAC ± 10% voltage
- Solenoid Inrush Current: .22A
- Solenoid Holding Current: .095A
- Optional Solenoid Voltage: 24VDC, 12VDC, 12VDC latching, 120VAC

MATERIALS

- Body, Bonnet, Diaphragm Seat: Glass Reinforced Polyamide (GRP)
- Nuts, Bolts, Washers: Stainless Steel 304
- Spring: Stainless Steel AISI 302

* Minimum flow tested by Center for Irrigation Technology, Fresno, California, November 2010

DIMENSIONS (2-WAY VALVES)

SIZE	LENGTH	WIDTH	HEIGHT	WEIGHT
3/4" GLOBE	3 15/16"	3"	4 3/8"	.62 LBS
1" GLOBE	4 1/8"	3"	4 1/2"	.64 LBS
1 ½" GLOBE	6 9/16"	6 1/2"	6 3/8"	2 LBS
1 ½" ANGLE	3 1/2"	6 1/2"	6 13/16"	1.8 LBS
2" GLOBE	6 9/16"	6 1/2"	6 5/8"	2 LBS
2" ANGLE	3 1/2"	6 1/2"	6 13/16"	1.8 LBS

ORDERING INFORMATION
STANDARD 24VAC VALVES

VALVE SIZE	ITEM NUMBER	MODEL NUMBER
¾" GLOBE	71640-007355	61ET.75GH2
1" GLOBE	71640-007406	61ET1GH2
1 ½" GLOBE	71640-007425	61ET1.5GH2
1 ½" ANGLE	71640-007426	61ET1.5GH2-AN
2" GLOBE	71640-007660	61ET2GH2
2" ANGLE	71640-007665	61ET2GH2-AN

OPTIONAL VOLTAGES

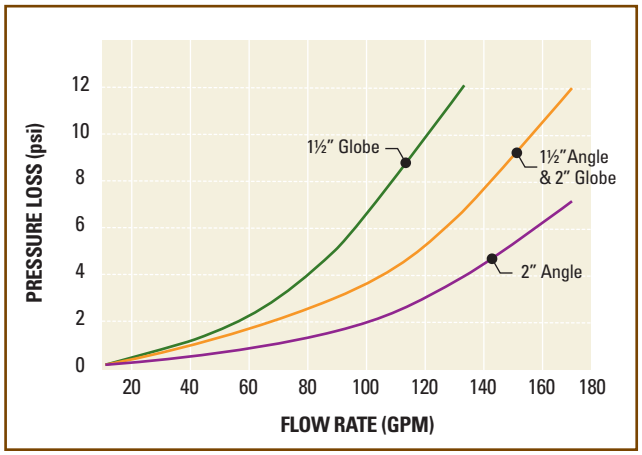
VALVE SIZE	VOLTAGE
ALL SIZES	12VDC
	12VDCL
	24VDC
	120VAC

OPTIONAL VOLTAGES:
Call Netafim USA for Item and Model Numbers for Series 80 Nylon Control Valves with optional voltages.

TECHNICAL INFORMATION

3-WAY SERIES 80 NYLON CONTROL VALVES

1½" & 2" FLOW RATE VS. PRESSURE LOSS *

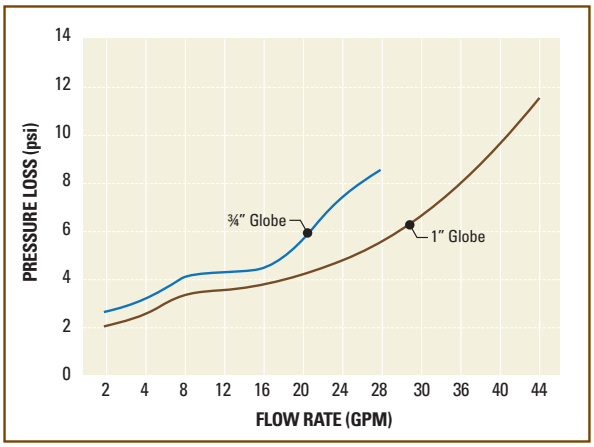


FLOW RATE AND PRESSURE LOSS

FLOW (GPM)	PRESSURE LOSS (psi) 1 ½" GLOBE	1 ½" ANGLE	2" GLOBE	2" ANGLE
20	0.3	0.2	0.2	0.1
40	1.3	0.7	0.7	0.4
90	5.0	3.0	3.0	1.75
130	12.0	6.5	6.5	4.0
170	-	12.0	12.0	7.0

2-WAY SERIES 80 NYLON CONTROL VALVES

¾" & 1" FLOW RATE VS. PRESSURE LOSS *

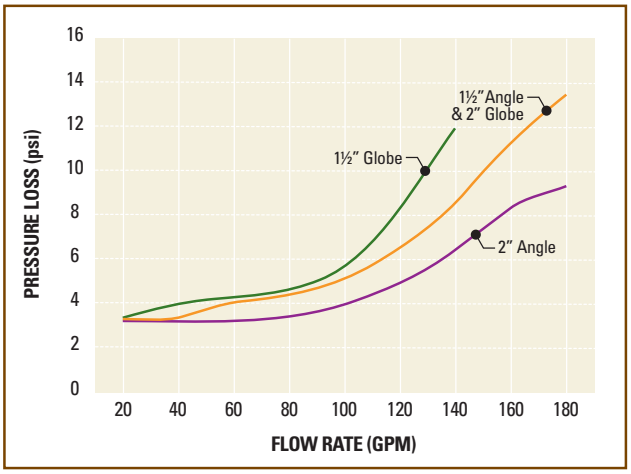


FLOW RATE AND PRESSURE LOSS

FLOW (GPM)	PRESSURE LOSS (psi) ¾" GLOBE	1" GLOBE
2	2.5	2.0
4	3.0	2.5
8	4.0	3.4
12	4.1	3.5
16	4.4	3.9
20	5.5	4.1
24	7.5	4.7
28	8.5	5.4
32	-	6.5
36	-	8.0
40	-	9.5
44	-	11.5

* Tested by Center for Irrigation Technology, Fresno, California, November 2010

1½" & 2" FLOW RATE VS. PRESSURE LOSS *



FLOW RATE AND PRESSURE LOSS

FLOW (GPM)	PRESSURE LOSS (psi) 1 ½" GLOBE	1 ½" ANGLE	2" GLOBE	2" ANGLE
20	3.3	3.3	3.3	3.3
40	4.0	3.3	3.3	3.3
60	4.3	4.0	4.0	3.3
80	4.5	4.3	4.3	3.6
100	5.5	5.0	5.0	4.1
120	8.5	6.5	6.5	5.0
140	12	8.5	8.5	6.5
160	-	-	11.5	8.5
180	-	-	13.5	9.5

NETAFIM™
GROW MORE WITH LESS

NETAFIM USA
5470 E. HOME AVE.
FRESNO, CA 93727
CS 888 638 2346
www.netafimusa.com

ICV

This dependable valve works seamlessly with highly demanding systems.

KEY BENEFITS

- Optional Filter Sentry® scours the filter screen in dirty water conditions
- External/internal manual bleed allows for quick and easy activation at the valve
- Glass-filled nylon construction provides high pressure rating and reliability
- Double-beaded diaphragm seal design ensures leak-free performance
- Fabric-reinforced EPDM diaphragm and seat ensure greater performance in all water conditions
- Captive bonnet screws eliminate the possibility of lost parts during disassembly
- Triple-tool bonnet screws are compatible with standard or Phillips screwdrivers as well as a nut driver
- Encapsulated solenoid with captive plunger used on every Hunter valve provides hassle-free service
- Flow control maximizes efficiency and prolongs the life of the system

USER-INSTALLED OPTIONS

- Accu Sync® pressure regulation at the valve
- DC-latching solenoid for battery-powered controllers (P/N 458200)
- Filter Sentry easily added to an installed valve*
- Solenoid conduit cover (P/N 464322)

FACTORY-INSTALLED OPTIONS

- LS: Valve without solenoid
- DC: DC-latching solenoid for battery-powered controllers
- FS: Filter Sentry
- FS-R: Reclaimed option with Filter Sentry, purple control knob, and purple chlorine-resistant diaphragm

OPERATING SPECIFICATIONS

- Flow:
  - ICV-101G: 0.1 to 40 GPM
  - ICV-151G: 0.1 to 150 GPM
  - ICV-201G: 0.1 to 200 GPM
  - ICV-301: 0.1 to 300 GPM
- Recommended pressure range: 20 to 220 PSI
- Temperature rating: 150°F
- Warranty period: 5 years

SOLENOID SPECIFICATIONS

- 24 VAC solenoid
  - 350 mA inrush, 190 mA holding, 60 Hz
  - 370 mA inrush, 210 mA holding, 50 Hz

* Accu Sync product information on **page 83**



ICV-101G
Inlet diameter: 1"
Height: 5½"
Length: 4¾"
Width: 4"



ICV-151G
Inlet diameter: 1½"
Height: 7⅛"
Length: 6⅞"
Width: 5½"



ICV-201G
Inlet diameter: 2"
Height: 7⅛"
Length: 6⅞"
Width: 5½"



ICV-301
Inlet diameter: 3"
Height: 10¾"
Length: 9"
Width: 7⅜"



ICV-R
Inlet diameter: 1", 1½", 2", and 3"
Height: 7⅛"
Length: 6⅞"
Width: 5½"

Double-Beaded Diaphragm

Filter Sentry



ICV

Model	Description
ICV-101G	1" globe valve with flow control
ICV-101G-FS	1" globe valve with flow control, Filter Sentry
ICV-101G-DC	1" globe valve with flow control, DC solenoid
ICV-101G-LS	1" globe valve with flow-control-less solenoid
ICV-101G-FS-DC	1" globe valve with flow control, Filter Sentry, DC solenoid
ICV-101G-FS-LS	1" globe valve with flow control, Filter Sentry–less solenoid
ICV-101G-FS-R	Reclaimed 1" globe valve with flow control, Filter Sentry
ICV-151G	1½" globe valve with flow control
ICV-151G-FS	1½" globe valve with flow control, Filter Sentry
ICV-151G-DC	1½" globe valve with flow control, DC solenoid
ICV-151G-FS-DC	1½" globe valve with flow control, Filter Sentry, DC solenoid
ICV-151G-FS-R	Reclaimed 1½" globe valve with flow control, Filter Sentry
ICV-201G	2" globe valve with flow control
ICV-201G-FS	2" globe valve with flow control, Filter Sentry
ICV-201G-DC	2" globe valve with flow control, DC solenoid
ICV-201G-LS	2" globe valve with flow-control-less solenoid
ICV-201G-FS-DC	2" globe valve with flow control, Filter Sentry, DC solenoid
ICV-201G-FS-LS	2" globe valve with flow control, Filter Sentry–less solenoid
ICV-201G-FS-R	Reclaimed 2" globe valve with flow control, Filter Sentry
ICV301	3" globe/angle valve with flow control
ICV301-FS	3" globe/angle valve with flow control, Filter Sentry
ICV301-DC	3" globe/angle valve with flow control, DC solenoid
ICV301-FS-DC	3" globe/angle valve with flow control, Filter Sentry, DC solenoid
ICV-301-FS-R	Reclaimed 3" globe/angle valve with flow control, Filter Sentry

ICV PRESSURE LOSS (AT OPTIMAL FLOWS) IN PSI

Flow (GPM)	1" Globe	1½" Globe	2" Globe	3" Globe	3" Angle
0.1	2.0				
0.5	2.0				
1	2.0				
5	2.5				
10	3.0				
15	3.0				
20	3.0	1.5			
30	9.0	1.5			
40	20.0	1.7	0.8		
50		2.2	1.2		
60		3.0	1.7		
75		3.9	2.4		
90		5.5	3.2		
100		7.0	4.2		
120		10.9	6.5		
135		12.7	7.9		
150		16.2	9.8	2.5	1.9
175			13.3	3.0	2.4
200			17.7	4.1	3.3
225				5.3	4.3
250				6.7	5.5
275				8.3	6.9
300				10.1	8.5

Double-Beaded Chlorine-Resistant Diaphragm

Filter Sentry



Captive Bonnet Bolts



INSTALLATION INSTRUCTIONS



Series P75 and P80
1 1/2 IN. and 2 IN. Screen and Disc Plastic Filters

For residential, commercial and nursery applications.

FEATURES

- Low friction loss
- Wide range of stainless steel screens and discs in 40-200-mesh
- Screens and discs have excellent resistance to most common chemicals
- Color-coded replacement screens and discs
- Easy maintenance: screen and discs can be extracted from the filter body for easy cleaning
- Constructed of UV resistant, non-corrosive black plastic
- Interchangeable screen and discs elements with a wide range of filtration degrees

SPECIFICATIONS

- 1 1/2” and 2” MNPT Inlet and Outlet
- Maximum recommended flow rate for 1 1/2”: 60 gpm (15 m3/h)
- Maximum recommended flow rate for 2”: 80 gpm (20 m3/h)
- Operating Pressure: Up to 120 PSI (8.4 BAR)
- Temperature Range: Up to 130°F (54°C)
- Total screen filtration surface area 11/2”: 85 sq. inch (552 cm2)
- Total screen filtration surface area 2”: 103 sq. inch (670 cm2)
- Total disc filtration surface area 11/2”: 60 sq. inch (385 cm2)
- Total disc filtration surface area 2”: 75 sq. inch (488 cm2)
- Filter length-inlet to outlet 1 1/2”: 10.1” (257 mm)
- Filter length-inlet to outlet 2”: 10.1” (257 cm

Filter Materials:

- Housing: Polypropylene
- O-ring: EPDM
- Pressure Testing Ports: Polypropylene
- Pressure Testing Seals: Natural Rubber BR

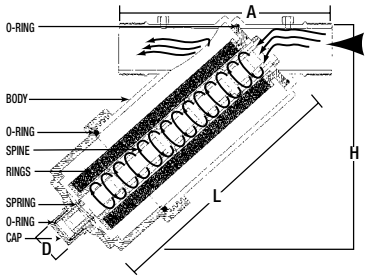
DIMENSIONS AND WEIGHT									
Size	A		D		L		H		Wt
Inch	in	mm	in	mm	in	mm	in	mm	lb
1 1/2" long	10.1	257	3.1	80	8.6	220	9.4	240	2.3
2"	10.1	257	3.1	80	10.4	265	10.6	270	2.6

SCREEN



Screen Materials:

- Cylinder: Polyester
- Screen: Polyester or Stainless Steel
- O-ring: EPDM



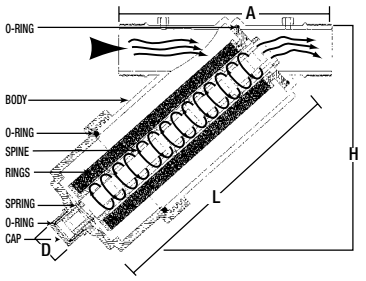
MODEL	DESCRIPTION	MICRON	MATERIAL	COLOR
17-080L	80 mesh, 1 1/2" long	180	stainless steel	blue
17-120L	120 mesh, 1 1/2" long	130	stainless steel	brown
17-155L	155 mesh, 1 1/2" long	100	stainless steel	green
17-200L	200 mesh, 1 1/2" long	80	stainless steel	burgundy
17-085	80 mesh, 2" long	180	stainless steel	blue
17-125	120 mesh, 2" long	130	stainless steel	brown
17-160	155 mesh, 2" long	100	stainless steel	green
17-205	200 mesh, 2" long	80	stainless steel	burgundy

DISC



Disc Materials:

- Grooved Discs: Polypropylene
- Disc Cylinder Assembly: PBT
- Tightening Spring: Stainless Steel 304

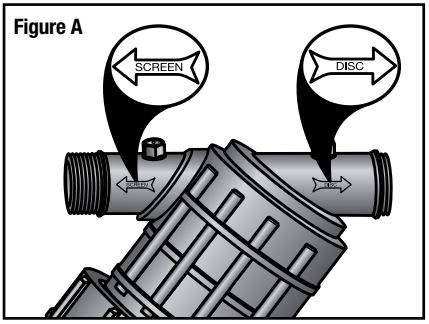


MODEL	DESCRIPTION	MICRON	MATERIAL	COLOR
17-040D	40 mesh, 1 1/2" long disc set	400	polypropylene	blue
17-041D	80 mesh, 1 1/2" long disc set	180	polypropylene	yellow
17-042D	120 mesh, 1 1/2" long disc set	130	polypropylene	red
17-043D	150 mesh, 1 1/2" long disc set	100	polypropylene	black
17-044D	40 mesh, 2" long disc set	400	polypropylene	blue
17-045D	80 mesh, 2" long disc set	180	polypropylene	yellow
17-046D	120 mesh, 2" long disc set	130	polypropylene	red
17-047D	150 mesh, 2" long disc set	100	polypropylene	black

INSTALLATION AND OPERATION

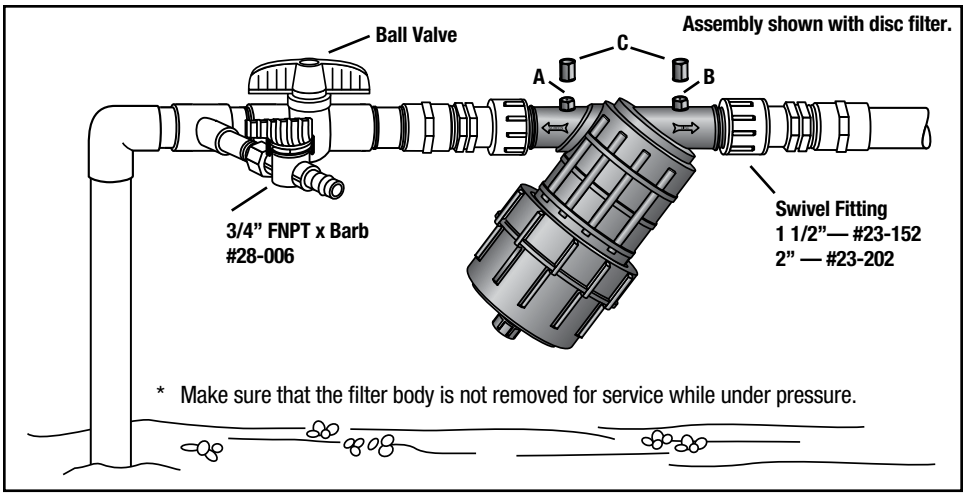
- By reversing the filter body direction a disc element can be substituted for the screen element.
- Use Teflon tape on the inlet and outlet thread connection.
- Water inlet is clearly marked by arrow. Make sure to install the filter according to the inlet/outlet direction. (see Figure A)
- If more than one filter is installed, leave sufficient space between units to facilitate maintenance.
- Normal working conditions are obtained when head loss is less than 4 PSI (0.25 BAR) with clean screen or disc element.
- If head loss exceeds 8-10 PSI (0.55 - 0.68 BAR), filter is either partially clogged or operating under an excessive flow rate.
- Maximum operational pressure should not exceed 120 PSI (8 BAR).
- Verify head loss by inserting pressure gauge with needle into pressure testing ports, (A and B) assembled on top of the filter body inlet and outlet.

Figure A



If threaded pressure gauge is used, remove cap from port A and B, thread on the blue adapters (C), then thread on the pressure gauge.

WARNING: Do not tighten or open cover during operation or while under pressure.



PERIODIC CLEANING

- Periodic service can be accomplished by unscrewing the cover, removing the screen or disc and rinsing under water.
- Clean the filter and check the disc or screen elements when head loss reaches 8-10 PSI (0.55 - 0.68 BAR) or on completion of the irrigation cycle.

STEPS:

1. Close valve at the inlet of the filter.
2. Open 3/4" FPT cap to release pressure.
3. Unscrew the cover counter clockwise and remove, then rinse the disc or screen elements thoroughly using the 3/4" ball valve.
4. Verify that the disc or screen elements are undamaged.
5. Verify that the O-ring is in position.
6. Assemble screen or disc elements.

3 YEAR WARRANTY

DIG CORPORATION warrants these products to be free from defects in material and workmanship for a period of three years from date of purchase. This warranty does not cover damage resulting from accident, misuse, neglect, modification, improper installation or subjection to line pressure in excess of 120 PSI. This warranty shall extend only to the original purchaser of the product for use by the purchaser. This warranty shall not cover any malfunction of the product due to high pressure above 120 PSI. The obligation of DIG CORPORATION under this warranty is limited to repairing or replacing at its factory this product which shall be returned to the factory within two years after the original purchase and which on examination is found to contain defects in material and workmanship.

DIG CORPORATION SHALL IN NO EVENT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND; THE SOLE OBLIGATION OF DIG BEING LIMITED TO REPAIR OR REPLACEMENT OF DEFECTIVE PRODUCTS. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

Unattended use for prolonged periods without inspection to verify proper operation is beyond the intended use of this product, and any damage resulting from such use shall not be the responsibility of DIG CORPORATION. There are no warranties which extend beyond the description on the face hereof. In the case of purchase of the product for use other than, for irrigation purposes, DIG CORPORATION hereby disclaims any implied warranties including any warranties of merchantability and fitness for a particular purpose. In the case of the purchase of the product for personal, family or household purposes, DIG CORPORATION disclaims any such warranties to the extent permitted by law. To the extent that any such disclaimer or implied warranties shall be ineffectual, then any implied warranties shall be limited in duration to a period of one year from the date of the original purchase for use by the purchaser. Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you.

In order to obtain performance under this warranty, the unit must be returned to the factory, along with proof of purchase indicating original date of purchase, shipping prepaid, addressed as follows:

DIG CORPORATION, 1210 Activity Drive, Vista, CA 92081. Repaired or replaced units will be shipped prepaid to the name and address supplied with the unit returned under warranty. Allow four weeks for repairs and shipping time. Repair of damaged units not otherwise within warranty may be refused or done at a reasonable cost or charge at the option of DIG CORPORATION.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

1.800.322.9146 FAX: 760.727.0282

DIG water matters

1210 Activity Drive
Vista, CA 92081
www.digcorp.com
e-mail: dig@digcorp.com

050515 26-037

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Jain is a fully integrated global food / plant production company recognized by Harvard Business to be one of five global sustainability champions, the G-20 for lifting people out of poverty, and Fortune magazine for being a "Change the World Company." Our irrigation manufacturing capabilities include everything from behind the pump to the flush valve at the end of the lateral and everything in between. We lead the industry in manufacturing technology, owning both our extrusion and mold manufacturing equipment providers.

Jain leads plant science research globally across a variety of food crops and is staffed with some of the world's leading research scientists. With the Gandhi Library, Jain now houses the leading collection of the world's best plant science knowledge in a single facility. Our agronomic knowledge is integrated from our world class plant tissue culture operations through our food processing businesses. We research, educate, advance, manufacture, finance, propagate plants, and purchase produce for processing all in an effort to fulfill the Jain mission:

"Leave This World Better Than You Found It"

Jain Irrigation, Inc.
www.jainsusa.com

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Phone: (559) 485-7171
Fax: (800) 777-6162

Jain Corporate Office
5965 S 900 E
Murray, UT 84121

Western Manufacturing Facility
2851 E. Florence Ave.
Fresno, CA 93721

Northeastern Manufacturing Facility
740 Water St.
Watertown, NY 13601

Please recycle after use.
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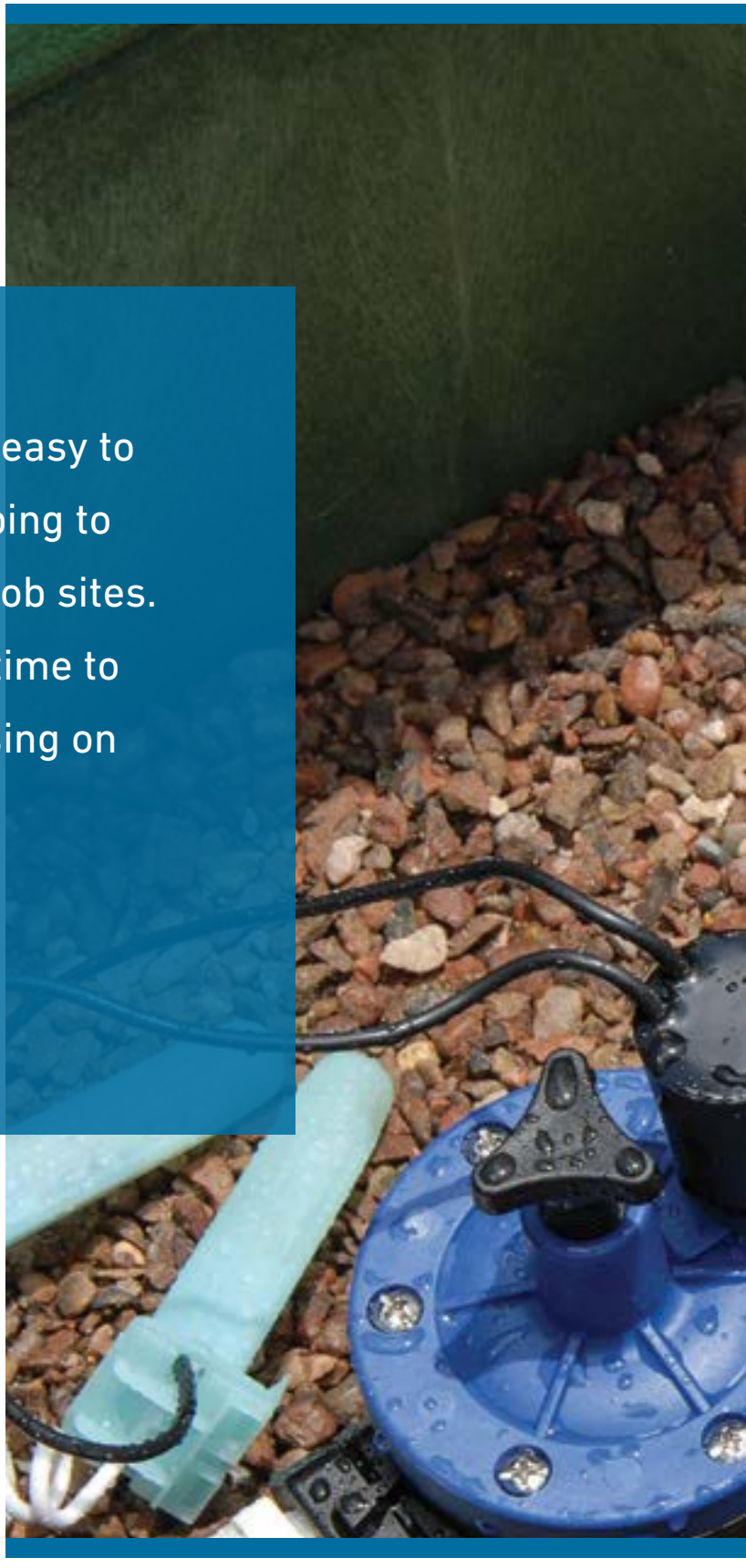
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SPIN CLEAN PLASTIC FILTERS



World Leader in Irrigation Technology

JAIN



"JAIN Spin Clean Filters are easy to install and self flushing helping to maximize our efficiency on job sites. This also frees up valuable time to spend with our clients focusing on added value above ground."

Stacey Sturnot, Gothic Landscapes
San Diego, CA


20 PSI
1.38 BAR
PRL
Pressure Regulator

Plastic Spin Clean 4E Filters

Product Features

- No moving parts
- Unique Spin Clean action keeps the screen clean during operation
- Engineered plastic construction is light in weight and resistant to corrosion and injected chemicals
- Two piece threaded housing with O-ring seal for easy screen access and maintenance
- Pressure ratings of 80 psi available in ¾" and 1" models, 150 psi rating for ¾" to 2"
- Strong stainless steel screen elements available in 30, 50, 100, 150 (standard) and 200 mesh
- Vinyl screen collars prevent debris from by-passing filter area
- Suitable for both above and below grade in box installation
- Available with ball valve for flushing debris basin
- Only 5-8 psi pressure loss required across filter to ensure best self cleaning action

Your Natural Choice for Vineyards and Orchards

Plastic Spin Clean Filters are unique screen filters that stay clean during operation. They effectively keep debris moving across the screen element towards the basin, where it is collected and can be drained.

The 4E Plastic Spin Clean Filter is best suited for applications where the contaminants are heavy particles like sand.



Models and Specifications

Type	Inlet/Outlet Size	Inlet/Outlet Type	Basin Cap or Valve	Basin Outlet Threads	Maximum Flow Rate (gpm)	Maximum Working Pressure (psi)
4E-3/4 A	3/4"	MPT	Cap	3/4 MPT	11	80
4E-3/4 B	3/4"	MPT	Valve	3/4 MPT	11	80
4EH-3/4 A	3/4"	MPT	Cap	3/4 MPT	11	150
4EH-3/4 B	3/4"	MPT	Valve	3/4 MPT	11	150
4E-1 A	1"	MPT	Cap	3/4 MPT	20	80
4E-1 B	1"	MPT	Valve	3/4 MPT	20	80
4EH-1 A	1"	MPT	Cap	3/4 MPT	20	150
4EH-1 B	1"	MPT	Valve	3/4 MPT	20	150
4EH-1 1/2	1 1/2"	MPT	Valve	3/4 MPT	55	150
4EH-2 P	2"	MPT	Valve	3/4 MPT	120	150

Ordering Information:

Examples: Type -Screen Mesh

4E-3/4B-200 ¾" MPT w/MHT flush & Ball Valve (80psi) w/200 mesh screen
4EH-1A-30 1" MPT w/MPT flush & Ball Valve (150 psi) w/30 mesh screen
4EH-1½-150 1½" MPT w/MPT flush & Ball Valve (150 psi) w/150 mesh screen

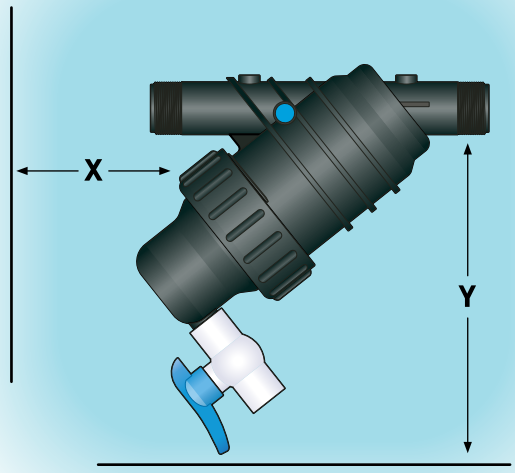
Options:

All models – Drilled and tapped 1/8" hole for pressure gauge, Shrader Valve or 1/8" mipt fitting at inlet and outlet boss 1" and larger models – BSP Threads

- Please call customer service for availability

Minimum Clearance

Size	X	Y
4E-3/4 & 1 w/cap	5"	8"
4E-3/4 & 1 w/valve	6"	12"
4EH-1-1/2	4"	15.5"
4E-02	4"	15.5"



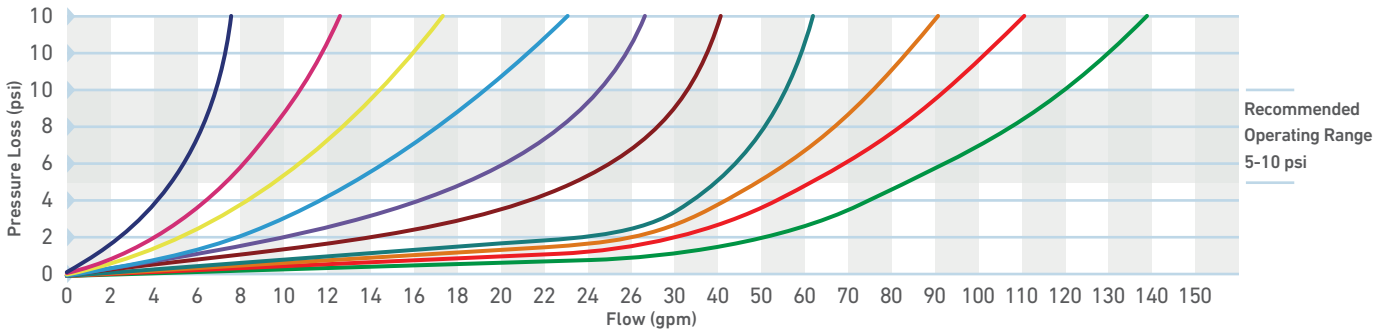
Specifications

Size Selection Guide

Specifications		3/4"	1"	1 1/2"	2"
Screen area in square inches (cm2)		23.4 /151.0	23.4 /151.0	60.8 /392.3	60.8 /392.3
Housing material (80 psi pressure rating)		ABS	ABS	N/A	N/A
Housing material (150 psi pressure rating)		Engineering Grade Plastic	Engineering Grade Plastic	Engineering Grade Plastic	Engineering Grade Plastic
30, 50, 100, 150, & 200 mesh stainless steel screens		Yes	Yes	Yes	Yes
Sintered screens		No	No	Yes	Yes
Clearance height in inches (with valve)		12"	13"	15.5"	
Width in inches (thread to thread)		6 1/8"	6 5/8"	12"	12"
Drilled/tapped 1/8" hole for gauge or schrader		Optional	Optional	Optional	Optional
Debris Basin Flush Port Size	Low pressure	3/4" MHT	3/4" MHT	N/A	N/A
	High pressure	3/4" MPT	3/4" MPT	3/4" MPT	3/4" MPT

Flow Characteristics

Spin plate size	3/4"	3/4"	1	1	1 1/2"	1 1/2"	1 1/2"	2"	2"	2"
Jets	1	2	1	2	2	3	4	2	3	4
Qmax (gpm)	7	11	15	20	25	38	55	75	95	120
Qmin (gpm)	5	7	9	13	18	23	37	50	62	85



Model #	Part #	Notes/Reference	Range (gpm)
3/4"-SP	12140001	3/4" 2-Hole (standard)	9 with 1 jet to 20 with 2 jets
1-SP	12140002	1" 2-Hole (standard)	5 with 1 jet to 11 with 2 jets
1 1/2-SP	12140013	1 1/2"-4 Hole	37-55
1 1/2-SP-3	12140058	1 1/2"-3 Hole	23-38
1 1/2-SP-2	12140059	1 1/2"-2 Hole	18-25
2-SP	12140029	2"-4 Hole	85-120
2-SP-3	12140061	2"-3 Hole	62-95
2-SP-2	12140060	2"-2 Hole	50-75

Housing Dimensions

Size	A		B		C	
	in	cm	in	cm	in	cm
3/4"	6.2	15.8	8.5	21.6	3	7.6
1"	6.8	17.3	9.5	24.1	3	7.6
1 1/2"	12	30.5	12	30.5	5.5	14.0
2"	12	30.5	12	30.5	5.5	14.0

Screen Dimensions

Size	A		B		C		Screen Material	Area of Filtration	
	in	cm	in	cm	in	cm		sq in	sq cm
3/4" and 1"	5.25	13.3	1.78	4.5	1.6	4.1	Stainless Steel	23.4	151.0
1"	6.25	15.9	1.78	4.5	1.6	4.1	Stainless Steel	28.4	183.2
1 1/2" and 2"	7.25	18.4	3.5	8.9	3.2	8.1	Stainless Steel	60.8	392.3

1" Screen



1 1/2" & 2" Screen



Filter Screen Mesh/Micron Conversions

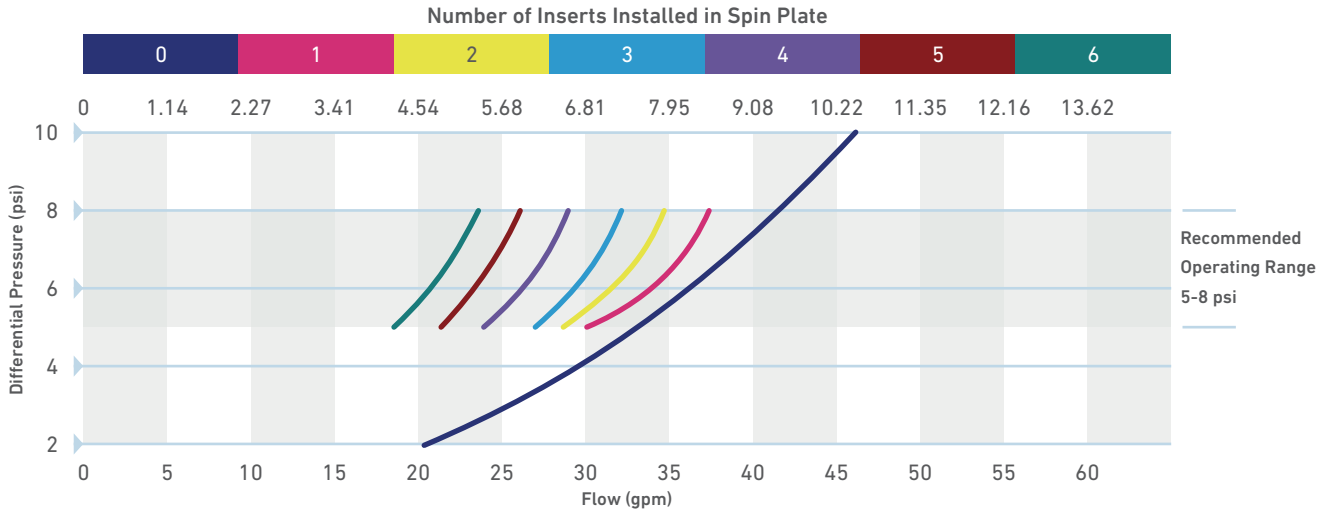
Color	Gold	Yellow	Blue	Black	Red
Mesh	30	50	100	150	200
Inch	.023	.012	.006	.004	.003
Micron	590	300	152	100	80

Flow Range & Characteristics

Flow range

GPM (m^3/hr) with Flow Inserts installed in Spin Plate							
Filter Model	Fully Open Spin Plate	1 Flow Insert	2 Flow Inserts	3 Flow Inserts	4 Flow Inserts	5 Flow Inserts	6 Flow Inserts
5E-40	31-40 (7.0-9.1)	31-40 (7.0-9.1)	31-40 (7.0-9.1)	31-40 (7.0-9.1)	31-40 (7.0-9.1)	31-40 (7.0-9.1)	31-40 (7.0-9.1)

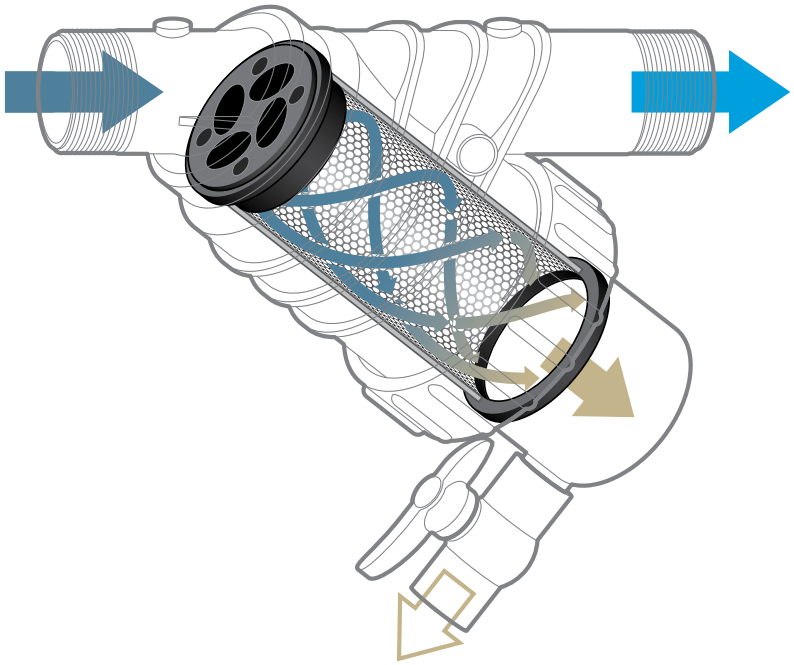
Flow Characteristics



Operation

The JAIN Spin Clean filter is superior to other standard screen filters because it combines the action of a vortex separator and a screen filter. The combination enhances the effectiveness of both methods at a lower cost than two separate filtration devices.

When water enters the filter the Spin Plate increases velocity and directs the flow into multiple spiral jets. The spiral action uses centrifugal force to separate heavy and medium weight particles to the outer edge of the filter barrel and down along the inside of the screen into the debris basin. The downward spiral flow action also picks up lighter particles too large to pass through the screen forcing them down into the debris basin. Thus, providing vortex separation and decreasing or eliminating the need for manual screen cleaning.



Manual periodic purging with the standard ball valve is the common method of keeping the filter clean and working. With higher particle loads operators often keep the ball valve partially or even fully open to continually purge accumulating debris from the debris basin. If a hose or pipe is used to direct the flow away from the ball valve it is important not to run up hill, long lengths or restrict the flow unnecessarily. It is best to discharge to atmosphere and gravity conveyance to a re-use sump.

Important for Best Operation

Use the proper size and number of jets. The jets control the velocity of the vortex, which is critical for proper screen cleaning. The Spin Plates have multiple angled orifices (nozzles) that induce the downward spiral jets. Neither the Spin Plate nor the screen rotates. There are no moving parts which gives the Spin Clean a dependable, low maintenance, long life. To assure proper spiral action the correct Spin Plate and number of working nozzles should be sized per the flow rate. The number of active nozzles is controlled by plugging inactive nozzles with the provided plugs. For heavy particle loads some specifiers over size the Spin Clean body but use the Spin Plate from a smaller model and plugs per the design flow. The 1" and .75" spin plates can be used in either the 1" or .75" body. The 1.5" and 2" spin plates can be used in either the 1.5" or 2" body. This provides additional screen area but maintains the proper jet velocities. Please see this brochure for sizing and number of active nozzles recommended for your flow rate.

The Spin Clean orientation. The through pipe shall be orientated horizontally with the screen barrel and debris basin plumb and below the through pipe. The Spin Clean shall be installed in the pipe line with the "Y" end facing downstream. Height above grade and clearances shall be as shown in this brochure to allow removal of the debris basin and screen for periodic inspection and maintenance.

The Spin Clean requires pressure to operate, like all hydraulic devices. The designer shall provide at minimum, the desired downstream pressure plus the clean screen differential pressure shown in this brochure for the selected Spin Clean size and flow, at the inlet to the Spin Clean. The pressure differential will increase as the Spin Clean screen accumulates debris. It is common to double the clean screen differential when calculating overall system pressure requirements if not continually purging. This will allow the screen to continue to operate effectively as it accumulates debris, in-between purges.

For convenience, in addition to the needed internal components, the standard Spin Clean comes with; one manual purge valve, Spin Plate plugs, and Schrader port option.

Maintenance

Care should be taken to keep the operating pressure differential across the filter between 5-8 psi. Pressure reading should be monitored sufficiently to detect any build up of pressure differential during normal operation, which indicates the start of filter screen plugging. When this occurs, the system should be shut down, the filter drained and disassembled. The screen element should be washed thoroughly using a high pressure spray washer, spraying from outside in.

Steps to extend maintenance intervals:

1. Start with a thoroughly clean screen element. Rinsing with garden hose pressure is not as good as using a pressure washer.
2. Make sure the filter never runs with less than a 5 psi differential.
3. Change spin plates or use more Flow Inserts to boost operating differential to 8 psi if not already achieved, to further increase cleaning action.
4. Increase flush flow rate for continuous flushing filters.
5. Pre-screen heavy organic/aquatic loads with a self cleaning intake screen for surface water installations.
6. Open flush valve fully on start-up to prevent sudden loading from a surge of contaminants.

3/4" & 1" Filter Specifications

- Available with threaded cap or ball valve for flushing debris basin
- ABS models rated to 80 psi
- Engineered plastic models rated to 150 psi
- BSP thread available



3/4" Filter

- 3/4" MPT inlet x 3/4" MPT outlet
- Large screen area provides 23.4 sq. in. of filtration surface
- Maximum recommended flow is 11 gpm



1" Filter

- 1" MPT inlet x 1" MPT outlet
- Large screen area provides 23.4 sq. in. of filtration surface
- Maximum recommended flow is 20 gpm

1 1/2" & 2" Filter Specifications

- Standard with Ball Valve (Schedule 40 PVC)
- Filter screens are bonded to a perforated stainless steel outer case to prevent collapse
- Molded of high-strength engineered plastiand pressure rated to 150 psi
- BSP thread available



1 1/2" Filter

- 1 1/2" MPT inlet x 1 1/2" MPT outlet
- Maximum recommended flow is 55 gpm



2" Filter

- 2" MPT inlet x 2" MPT outlet
- Maximum recommended flow is 120 gpm

NETAFIM™
GROW MORE WITH LESS

MANUAL DISC FILTERS

RELIABLE, EFFICIENT PLASTIC DISCS CREATE SUPERIOR FILTRATION



3/4"



1"



2" DUAL LITE

PRODUCT ADVANTAGES

- Highly effective multiple disc ring design captures and holds more debris.
- Greater holding capacity of the rings vs. screen filters mean less frequent cleaning.
- Rings are easily removed for fast cleaning without the need for scrubbing.
- Color-coded disc rings make identification of mesh rating fast and easy.

APPLICATIONS

- Primary irrigation filter for relatively clean or average water quality
- Protection of irrigation systems from clogging and/or abrasion



MESH/MICRON

MESH	MICRON	DISC COLOR
040	400	Blue
080	200	Yellow
120	130	Red
140	115	Black
200	55	Green

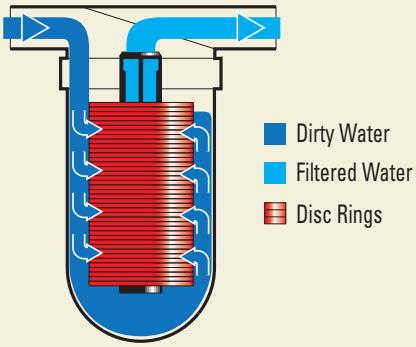
Substitute *** in Model Number for proper mesh.

THE FILTERING PROCESS

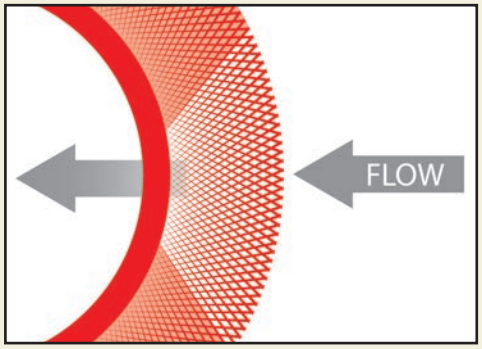
Grooved, compressed plastic disc rings produce a deep filtration process. As dirty water is pumped into the filter and pressure increases on the outside of the filter, the water pressure compresses the rings together tightly.

Grooves in the disc rings crisscross, forming a three dimensional network that traps particles. The number of crisscrossed intersection points on each groove varies, depending on filtration grade. The turbulence in the varying paths and the large number of intersections create an environment where particles are eventually trapped.

This design filters the dirty water thoroughly, not only on the outer surface of the cylindrical disc filter, but through the entire depth of every ring's grooves. The result is a larger, more efficient filtering area (when compared to screen filters) with more debris being captured and cleaner water exiting from the filter.



Top view of disc ring



MANUAL DISC FILTERS



3/4" FILTER	
FLOW RANGE	1 - 12 GPM
MAXIMUM PRESSURE	140 psi
FILTERING SURFACE AREA	25 sq. in.
FILTERING VOLUME	5.8 cu. in.
LENGTH	5 22/32"
WIDTH	7 15/32"
WEIGHT	.66 lbs.
DISTANCE BETWEEN ENDS	6"
INLET/OUTLET DIAMETER	3/4" Male
MODEL NUMBER	25A45-***



1" FILTER	
FLOW RANGE	5 - 26 GPM
MAXIMUM PRESSURE	140 psi
FILTERING SURFACE AREA	49 sq. in.
FILTERING VOLUME	27 cu. in.
LENGTH	9 11/32"
WIDTH	6 7/32"
WEIGHT	2.2 lbs.
DISTANCE BETWEEN ENDS	6 7/32"
INLET/OUTLET DIAMETER	1" Male
MODEL NUMBER	25A47-***



1" SUPER FILTER	
FLOW RANGE	10 - 35 GPM
MAXIMUM PRESSURE	140 psi
FILTERING SURFACE AREA	78 sq. in.
FILTERING VOLUME	36 cu. in.
LENGTH	13 13/32"
WIDTH	6 7/32"
WEIGHT	3.11 lbs.
DISTANCE BETWEEN ENDS	6 7/32"
INLET/OUTLET DIAMETER	1" Male
MODEL NUMBER	25A48-***



2" DUAL LITE FILTER	
FLOW RANGE	40 - 110 GPM
MAXIMUM PRESSURE	115 psi
FILTERING SURFACE AREA	147 sq. in.
FILTERING VOLUME	75.7 cu. in.
LENGTH	16 5/16"
WIDTH	10 1/4"
WEIGHT	6.6 lbs.
DISTANCE BETWEEN ENDS	10 1/4"
INLET/OUTLET DIAMETER	2" Male
MODEL NUMBER	25A2DL-***



3" TWIN LITE FILTER	
FLOW RANGE	80 - 220 GPM
MAXIMUM PRESSURE	115 psi
FILTERING SURFACE AREA	294.5 sq. in.
FILTERING VOLUME	174 cu. in.
LENGTH	28 3/4"
WIDTH	9 14/32"
WEIGHT	17 lbs.
DISTANCE BETWEEN ENDS	12 19/32"
INLET/OUTLET DIAMETER	3" Flanged
MODEL NUMBER	25A3TL-***F



1 ½" FILTER

FLOW RANGE	10 - 35 GPM
MAXIMUM PRESSURE	140 psi
FILTERING SURFACE AREA	49 sq. in.
FILTERING VOLUME	27 cu. in.
LENGTH	10 5/8"
WIDTH	7 7/8"
WEIGHT	2.4 lbs.
DISTANCE BETWEEN ENDS	7 7/8"
INLET/OUTLET DIAMETER	1 1/2" Male
MODEL NUMBER	25A15-***



1 ½" SUPER FILTER

FLOW RANGE	10 - 52 GPM
MAXIMUM PRESSURE	140 psi
FILTERING SURFACE AREA	78 sq. in.
FILTERING VOLUME	36 cu. in.
LENGTH	14 1/2"
WIDTH	7 7/8"
WEIGHT	3.3 lbs.
DISTANCE BETWEEN ENDS	7 7/8"
INLET/OUTLET DIAMETER	1 1/2" Male
MODEL NUMBER	25A17-***



2" DUAL HP FILTER

FLOW RANGE	40 - 120 GPM
MAXIMUM PRESSURE	174 psi
FILTERING SURFACE AREA	147 sq. in.
FILTERING VOLUME	75 cu. in.
LENGTH	14 3/4"
WIDTH	10 1/4"
WEIGHT	11 lbs.
DISTANCE BETWEEN ENDS	10 1/4"
INLET/OUTLET DIAMETER	2" Male
MODEL NUMBER	25A30-***



FLANGED GROOVED



3" ANGLE FILTER

FLOW RANGE	80 - 220 GPM
MAXIMUM PRESSURE	140 psi
FILTERING SURFACE AREA	287 sq. in.
FILTERING VOLUME	108 cu. in.
LENGTH	24 7/8"
WIDTH	12 3/32"
WEIGHT	31 lbs.
INLET/OUTLET DIAMETER	3"
MODEL NUMBER - FLANGED	25A53-***FNEW
MODEL NUMBER - GROOVED	25A53-***GNEW

4" TWIN FILTER

FLOW RANGE	160 - 450 GPM
MAXIMUM PRESSURE	140 psi
FILTERING SURFACE AREA	574 sq. in.
FILTERING VOLUME	216 cu. in.
LENGTH	47"
WIDTH	13"
WEIGHT	52.8 lbs.
DISTANCE BETWEEN ENDS	17 17/32"
INLET/OUTLET DIAMETER	4" Flanged
MODEL NUMBER	25A78-***F

6" TWIN FILTER

FLOW RANGE	200 - 600 GPM
MAXIMUM PRESSURE	140 psi
FILTERING SURFACE AREA	574 sq. in.
FILTERING VOLUME	216 cu. in.
LENGTH	47"
WIDTH	13"
WEIGHT	57.2 lbs.
DISTANCE BETWEEN ENDS	17 17/32"
INLET/OUTLET DIAMETER	6" Flanged
MODEL NUMBER	25A80-***F

MANUAL DISC FILTERS

FILTER APPLICATION RECOMMENDATIONS

FLOW RATE (GPM)	HEADLOSS (psi)											
	3/4"	1"	1" SUPER	1 1/2"	1 1/2" SUPER	2" DUAL HP	2" DUAL LITE	3" TWIN LITE	3" ANGLE	4" TWIN	6" TWIN
5	0.60	0.25									
10	2.50	0.60									
13	3.40	1.34									
17	5.87	2.10									
22		3.24	1.10	1.10							
26			1.50	1.30	1.50						
31			2.10	1.70	2.10						
35			2.50	2.30	2.50						
44					4.20	0.30	0.30				
66						0.63	0.63				
88						1.03	1.03	0.64	0.44		
110						1.47	1.47	0.98	0.58		
132								1.37	0.73		
154								1.80	0.88		
176								2.28	1.03		
198									1.32		
220									1.61		
242											
264											
286											
308										1.40	1.00
330										1.50	1.20
350										1.60	1.30
400										2.00	1.50
500											2.00
600											3.00

The losses shown are for filters with 140 Mesh

CHART LEGEND

0.00	River, ditch, pond, lake or reservoir water
0.00	Well water containing sand only
0.00	Municipal supply

ORDERING INFORMATION

FILTER SIZE	MODEL NUMBER
3/4"	25A45-***
1"	25A47-***
1" SUPER	25A48-***
1 1/2"	25A15-***
1 1/2" SUPER	25A17-***
2" DUAL HP	25A30-***
2" DUAL LITE	25A2DL-***
3" TWIN LITE	25A3TL-***F
3" ANGLE FLANGED	25A53-***FNEW
3" ANGLE GROOVED	25A53-***GNEW
4" TWIN FLANGED	25A78-***F
6" TWIN FLANGED	25A80-***F

Substitute *** for proper mesh size.

MATERIALS

- Disc Rings: Polypropylene
- O-Rings: EPDM Rubber
- Clamp: Stainless Steel (except 2" Dual Lite and 3" Twin Lite which is Plastic)

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GROW MORE WITH LESS

NETAFIM USA
5470 E. HOME AVE.
FRESNO, CA 93727
CS 888 638 2346
www.netafimusa.com

Pressure Loss Through Water Meters

Pressure Loss: psi
Nominal Size

Flow gpm	5/8″	3/4″	1″	1 1/2″	2″	3″	4″
1	0.2	0.1					
2	0.3	0.2					
3	0.4	0.3					
4	0.6	0.5	0.1				
5	0.9	0.6	0.2				
6	1.3	0.7	0.3				
7	1.8	0.8	0.4				
8	2.3	1.0	0.5				
9	3.0	1.3	0.6				
10	3.7	1.6	0.7				
11	4.4	1.9	0.8				
12	5.1	2.2	0.9				
13	6.1	2.6	1.0				
14	7.2	3.1	1.1				
15	8.3	3.6	1.2				
16	9.4	4.1	1.4	0.4			
17	10.7	4.6	1.6	0.5			
18	12.0	5.2	1.8	0.6			
19	13.4	5.8	2.0	0.7			
20	15.0	6.5	2.2	0.8			
22		7.9	2.8	1.0			
24		9.5	3.4	1.2			
26		11.2	4.0	1.4			
28		13.0	4.6	1.6			
30		15.0	5.3	1.8			
32			6.0	2.1	0.8		
34			6.9	2.4	0.9		
36			7.8	2.7	1.0		
38			8.7	3.0	1.2		
40			9.6	3.3	1.3		
42			10.6	3.6	1.4		
44			11.7	3.9	1.5		
46			12.8	4.2	1.6		
48			13.9	4.5	1.7		
50			15.0	4.9	1.9	0.7	
52				5.3	2.1		
54				5.7	2.2		
56				6.2	2.3		
58				6.7	2.5		
60				7.2	2.7		
65				8.3	3.2	1.1	
70				9.8	3.7	1.3	
75				11.2	4.3	1.5	
80				12.8	4.9	1.6	0.7
90				16.1	6.2	2.0	0.8
100				20.0	7.8	2.5	0.9
110					9.5	2.9	1.0
120					11.3	3.4	1.2
130					13.0	3.9	1.4
140					15.1	4.5	1.6
150					17.3	5.1	1.8
160					20.0	5.8	2.1
170						6.5	2.4
180						7.2	2.7
190						8.0	3.0
200						9.0	3.2
220						11.0	3.9
240						13.0	4.7
260						15.0	5.5
280						17.3	6.3
300						20.0	7.2
350							10.0
400							13.0
450							16.2
500							20.0

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