

SCAN-KLEEN SCREEN FILTERS

SERVICE & MAINTENANCE MANUAL



4" AND 6" TWIN



3" AND 4" ANGLE

SAFETY INSTRUCTIONS

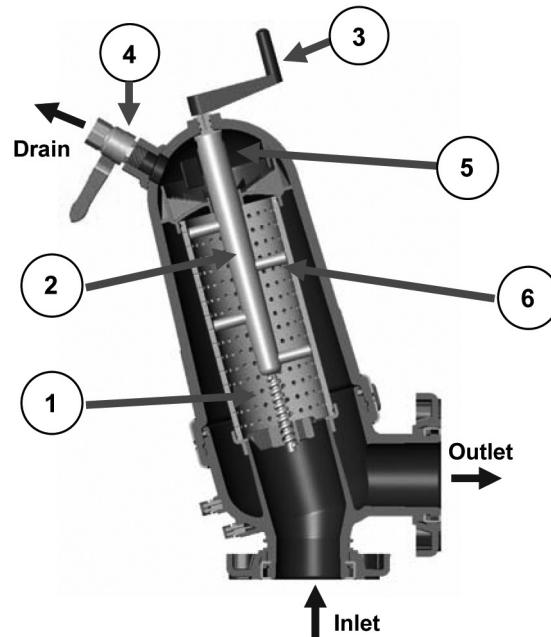
Prior to installation or handling of the filter, read the Installation and Operation Instructions carefully.

1. Take safety precautions while lifting, transporting or installing the filter.
2. Confirm that the total filter weight meets the support construction requirements.
3. Prior to installation, make sure that the line pressure matches the filter's operational pressure.
4. Check that all filter flanges are secured properly.
5. Make sure that the filter is drained prior to servicing.
6. During filter maintenance use original parts only.
7. Changes or modifications to the filtration equipment are not allowed.
8. Do not perform any maintenance activities other than those specified in this manual.

3" AND 4" ANGLE COMPONENTS

The Scan-Kleen 3" and 4" Angle Screen Filters consist of the following major components:

1. Screen
2. Dirt Collector
3. Handle
4. Flushing Ball Valve
5. Flushing Chamber
6. Nozzles



DESCRIPTION OF OPERATION

FILTRATION MODE

Water enters the filter through the inlet and reaches the screen (1) which traps the particles from the water. As more water flows through, debris builds up on the screen and as it accumulates on the screen, a pressure imbalance builds up between the internal and external sections of the screen.

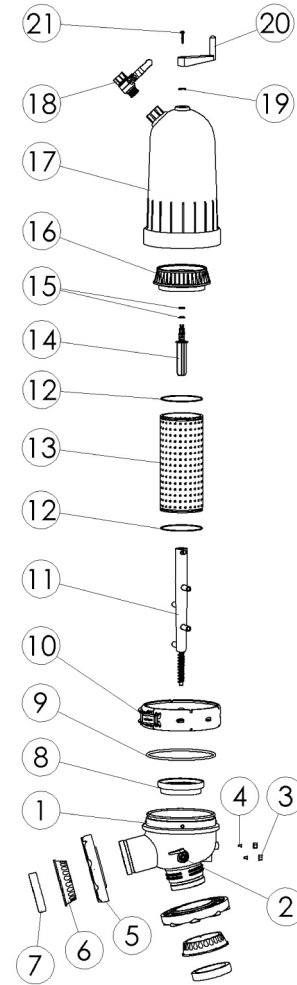
FLUSHING MODE

When the differential pressure (ΔP) reaches the determined value (no more than 11 psi), or according to the timetable specified by the operator, the filter should be cleaned. Water continues to flow through the filter during the cleaning process.

- Turn the handle (3) clockwise until it stops which returns the dirt collector (2) to the rear of the filter.
- Open the flushing ball valve (4) and water will flow out of the filter.
- Suction occurs through the nozzles (6) which vacuums the debris from the screen and out the drain port.
- Confirm that the upstream pressure is 20 psi. If it is less than 20 psi, close the manual valve downstream of the filter.
- Slowly turn the handle (3) to rotate the dirt collector (2) which results in full scanning of the screen (1) by the nozzles (6).
- A combination of rotation and linear movement cleans the whole internal screen surface.
- The flushing cycle takes only a few seconds. Close the flushing ball valve.

3" AND 4" ANGLE SCAN-KLEEN PARTS

| KEY | DESCRIPTION | MATERIALS |
|-----|------------------------|-----------|
| 1 | Angle filter body | PP |
| 2 | ½" flushing ball valve | BRASS |
| 3 | Gauge port nut | RPP |
| 4 | Gauge port seal | EPDM |
| 5 | Loose flange | RPA |
| 6 | Cone ring | POM |
| 7 | Seal for Q/F | EPDM |
| 8 | Lower seat | RPA |
| 9 | Hydraulic seal | EPDM |
| 10 | Clamp | SS |
| 11 | Dirt collector | RPA |
| 12 | Screen seal | EPDM |
| 13 | Screen | PVC + SS |
| 14 | Dirt collector axis | RPA |
| 15 | O-ring 14 x 3 | EPDM |
| 16 | Upper seat | RPA |
| 17 | Cover assembly | PP |
| 18 | 1" ball valve | BRASS |
| 19 | Clamping disc | RPA |
| 20 | Handle | RPA |
| 21 | Bolt 6.3 x 38 | SS |



MATERIALS

RPP - Reinforced Polypropylene

PP - Polypropylene

RPA - Polyamide

POM - Polyacetal

SS - Stainless Steel

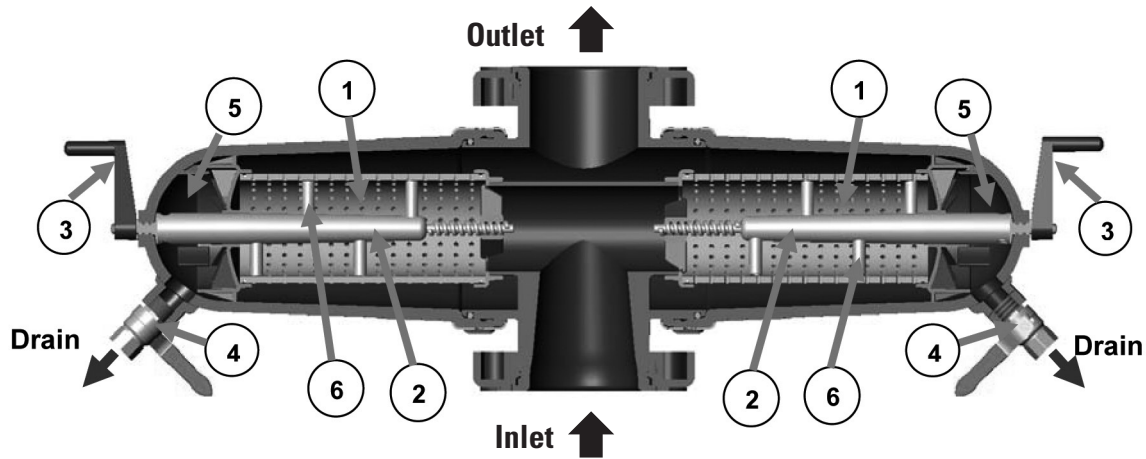
FILTRATION GRADE CONVERSION TABLE

| | | | |
|--------|-----|-----|-----|
| Micron | 100 | 130 | 200 |
| Mesh | 150 | 120 | 080 |

4" AND 6" TWIN COMPONENTS

The Scan-Kleen 4" and 6" Twin Screen Filters consist of the following major components:

- | | | |
|-------------------|------------------------|---------------------|
| 1. Screen | 3. Handle | 5. Flushing Chamber |
| 2. Dirt Collector | 4. Flushing Ball Valve | 6. Nozzles |



DESCRIPTION OF OPERATION

FILTRATION MODE

Water enters the filter through the inlet and reaches the screen (1) which traps the particles from the water. As more water flows through, debris builds up on the screen and as it accumulates on the screen, a pressure imbalance builds up between the internal and external sections of the screen.

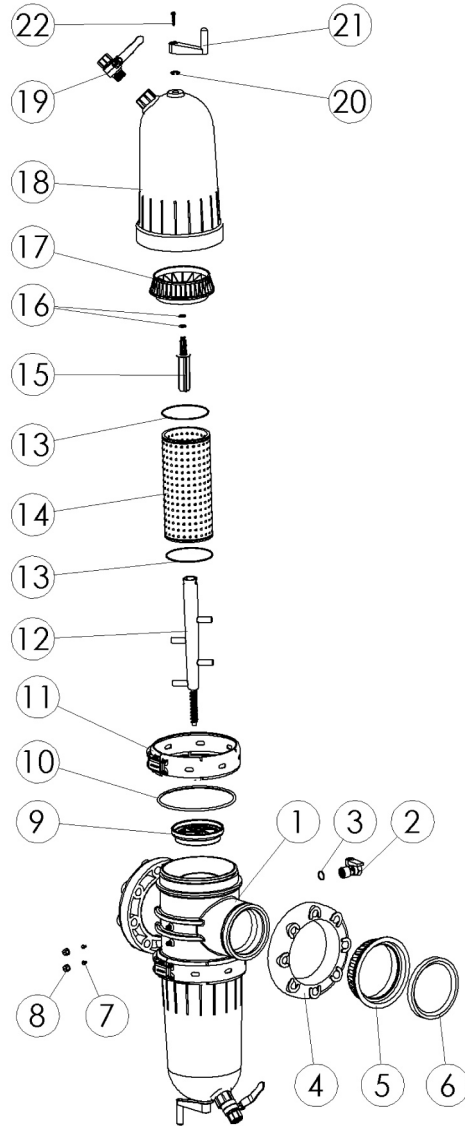
FLUSHING MODE

When the differential pressure (ΔP) reaches the determined value (no more than 11 psi), or according to the timetable specified by the operator, the filter should be cleaned. Water continues to flow through the filter during the cleaning process.

- Turn the handle (3) clockwise until it stops which returns the dirt collector (2) to the rear of the filter.
- Open the flushing ball valve (4) and water will flow out of the filter.
- Suction occurs through the nozzles (6) which vacuums the debris from the screen and out the drain port.
- Confirm that the upstream pressure is 20 psi. If it is less than 20 psi, close the manual valve downstream of the filter.
- Slowly turn the handle (3) to rotate the dirt collector (2) which results in full scanning of the screen (1) by the nozzles (6).
- A combination of rotation and linear movement cleans the whole internal screen surface.
- The flushing cycle takes only a few seconds. Close the flushing ball valve.

4" AND 6" TWIN SCAN-KLEEN PARTS

| KEY | DESCRIPTION | MATERIALS |
|-----|------------------------|-----------|
| 1 | Twin filter body | PP |
| 2 | ¾" flushing ball valve | BRASS |
| 3 | O-ring 2 x 311 | EPDM |
| 4 | Loose flange | R |
| 5 | Cone ring | POM |
| 6 | Seal for Q/F | EPDM |
| 7 | Gauge port seal | RPA |
| 8 | Gauge port nut | EPDM |
| 9 | Lower seat | SS |
| 10 | Hydraulic seal | RPA |
| 11 | Clamp | EPDM |
| 12 | Dirt collector | PVC + SS |
| 13 | Screen seal | RPA |
| 14 | Screen | EPDM |
| 15 | Dirt collector axis | RPA |
| 16 | O-ring 14 x 3 | PP |
| 17 | Upper seat | BRASS |
| 18 | Cover assembly | RPA |
| 19 | 1" ball valve | RPA |
| 20 | Clamping disc | SS |
| 21 | Handle | RPA |
| 22 | Bolt 6.3 x 38 | SS |



MATERIALS

RPP - Reinforced Polypropylene

PP - Polypropylene

RPA - Polyamide

POM - Polyacetal

SS - Stainless Steel

FILTRATION GRADE CONVERSION TABLE

| | | | |
|--------|-----|-----|-----|
| Micron | 100 | 130 | 200 |
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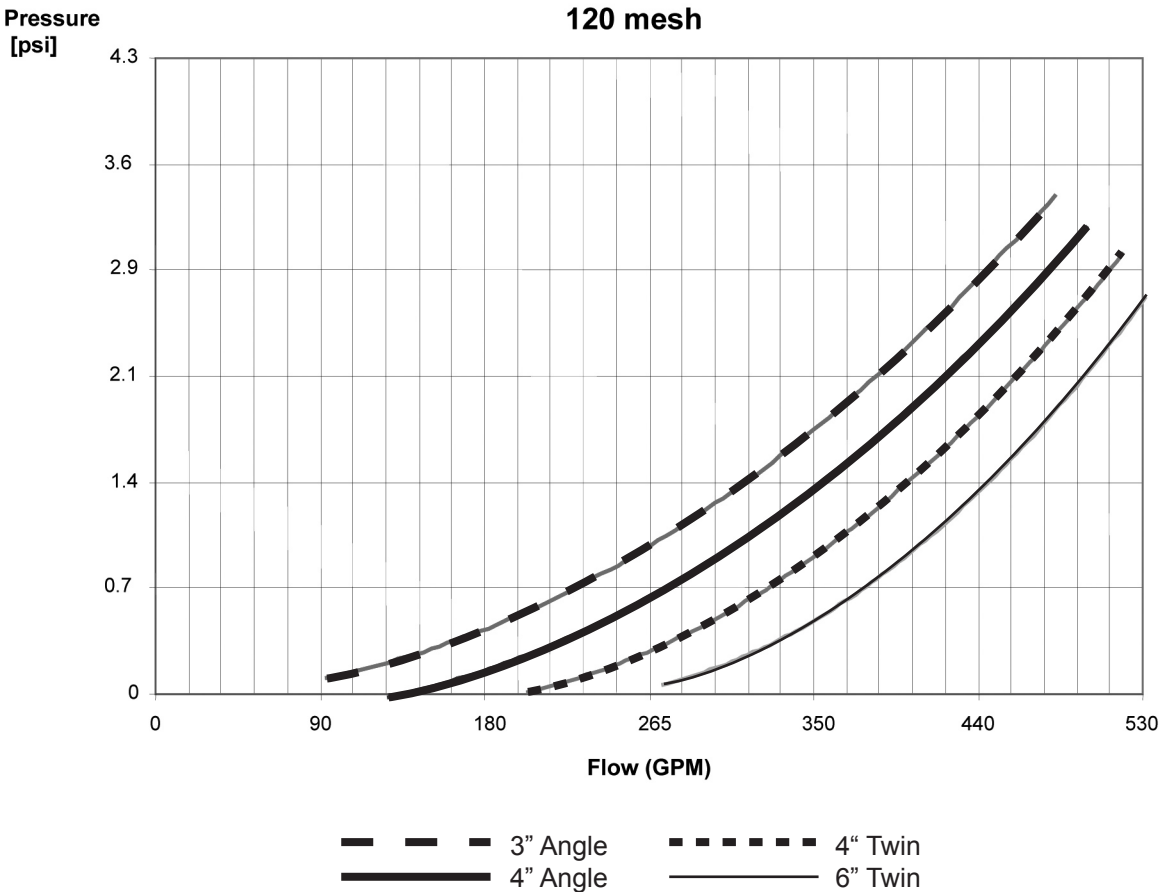
GENERAL TECHNICAL DATA

Maximum Operating Pressure: 120 psi
 Required Minimum Pressure for Flushing: 20 psi
 Flushing Flow Rate: 50 GPM at 30 psi
 Maximum Water Temperature: 140°F
 Filtration Grades: 40, 80, 120, 150 and 200 mesh

| Size | Conn. Size ØD (Inch) | Screen Area (sq. in) | * Max. Flow Rate (GPM) | Length (in) | Height (in) | Weight (lbs) |
|----------|----------------------|----------------------|------------------------|-------------|-------------|--------------|
| 3" Angle | 3 | 194 | 250 | 20 | 31 | 29 |
| 4" Angle | 4 | 194 | 300 | 20 | 31 | 31 |
| 4" Twin | 4 | 388 | 500 | 54 | 18 | 58 |
| 6" Twin | 6 | 388 | 600 | 54 | 18 | 62 |

* Flow rate data is for high quality water at a filtration grade of 80 mesh/200 micron.

HEADLOSS FOR SCAN-KLEEN SCREEN FILTERS



INSTALLATION

1. Remove the assembled filter from the box.
2. Filter should be installed in an area that allows enough clearance to remove the filter cover(s) when necessary.
3. Install the assembled filter on the inlet line and outlet line. The silver arrows indicate the proper flow direction.
4. Connect the drainpipe to the flush ball valve outlet opening (pipe must be at least 1" diameter and no longer than 15 ft.). Flexible tubing/hose is recommended for the drainpipe in order to easily remove the filter cover. Make sure that water runs freely out of the drainpipe.
5. Check that all connections are secured properly.
6. For Victaulic connections, remove the plastic flanges. Filter must be correctly aligned so there is no lateral stress on the Victaulic connection to prevent future

OPERATION

1. Gradually open the inlet ball valve. If the outlet valve is already installed, make sure it is open.
2. Check the filter assembly and its connections for leaks.
3. Turn the handle counterclockwise until it stops and then do the same in the opposite direction (don't use force).
4. Start the flush cycle by opening the flush ball valve and turn the handle until the dirt collector comes to a stop (don't use force). When the dirt collector stops, the flushing valve can be closed.
5. After the filter is cleaned, make sure that the differential pressure between inlet and outlet does not exceed 1.5 psi at the maximum recommended flow rate.

SCREEN REMOVAL AND ASSEMBLY

1. Shut off the inlet water supply.
2. Open the drain ball valve in order to release the pressure.
3. Open and remove the clamp.
4. Turn the handle counterclockwise until the cover is separated from the filter body and the screen from its lower seat.
5. Remove the screen and wash the inner side of the screen with a water jet.
6. Place the screen firmly in the lower seat. Make sure that the seals are positioned correctly.
7. Assemble the cover to the filter body. Make sure that the screwing rod is in the center of the lower seat.
8. Turn the handle clockwise until it stops. Press down on the filter cover towards the filter body.
9. Secure the clamp.
10. Close the flushing ball valve.
11. Perform a flushing cycle to ensure that there are no leaks.

PERIODIC CHECKS

Periodically check the following at the beginning of each season:

1. Check for leaks.
2. Check the condition of the handle bearing and sealing. If any of the bearings are defective, oval in shape, replace with a new one.
3. Check the condition of the fine screen assembly. If defective, replace.
4. Check the height of the dirt collector suction nozzles. If defective, replace.

TROUBLESHOOTING

Leakage from the nut handle.

1. Check if the sealing tightening nut handle is turned to the end (without force).
2. If necessary, replace the sealing "o-ring".

The handle does not turn.

1. Open the filter cover.
2. Check that hard particles are not trapped under the nozzles, release if necessary.
3. Check the condition of the sealing handle and the tightening nuts, and if necessary replace.

The handle turns but the filter is not clean.

1. Open the filter.
2. Check the height of the suction nozzles. If the nozzles are damaged, replace the dirt collector.
3. Remove the dirt collector.
4. Check the hexagon hole in the upper side of the dirt collector. If it is damaged, replace the dirt collector.
5. Check the spiral thread on the upper side of the dirt collector. If it is damaged, replace the dirt collector.

We reserve the right to make changes and improvements with no prior notice to customers.

WARRANTY

Products sold and/or manufactured by Netafim Irrigation, Inc. (Netafim USA) are warranted to be free from original defects in material and workmanship for a period of one (1) year from the date of delivery to the buyer when such products are properly installed, used and maintained in accordance with Netafim USA's instructions, written or verbal and unless (i) otherwise specified by and subject to the terms and conditions of any Warranty Supplements pertaining to specific products or, (ii) expressly disclaimed in writing by Netafim USA.

Within the warranty period, Netafim USA at its sole discretion shall have the option to repair or replace part or all of a defective product, or refund part or all of the original purchase price, if any part proves to be defective in material or workmanship after return of such product at customer's expense and after such return has been authorized in writing by Netafim USA.

This basic manufacturer's limited warranty is subject to the terms and provisions in subsection (J), (Limitation of Remedies and Disclaimer of Warranties) set forth in the Netafim USA Agriculture Price List – Product Warranty Section.

This warranty is expressly conditioned upon proper storage, installation, application and normal agricultural use and service as recommended by Netafim USA.

The express warranty provided herein is effective only if claim is made by written notice within the applicable warranty period and postmarked within thirty (30) days after discovery of the defect on which the claim is based.



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