



Installation  
and Operation  
Instruction  
Manual

INSMAN-104

Stainless Steel  
Thru-Flush™  
Filters

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# STAINLESS STEEL THRU FLUSH SCREEN FILTER

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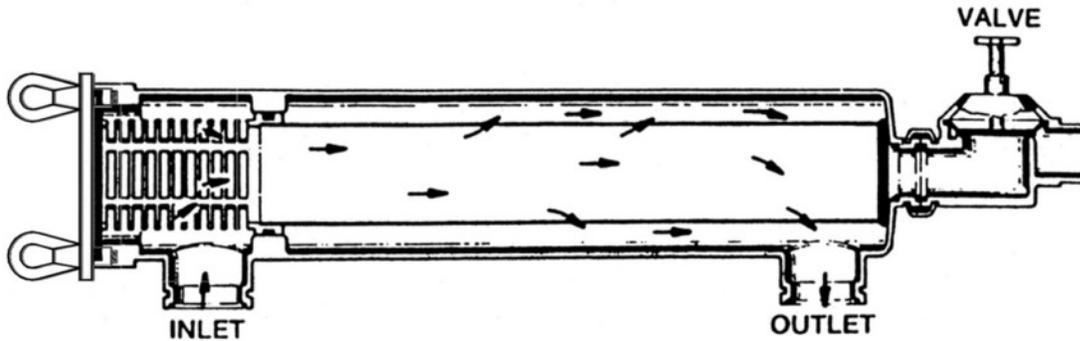
## **GENERAL SAFETY GUIDELINES**

Please read the entire manual before beginning any procedure.

1. Only properly trained personnel should operate and service the equipment.
2. Always wear proper safety gear when servicing equipment.
3. Before installing the system, ensure that the system falls within the designed operating parameters.
4. Know the safety operating limits of the system and any equipment directly connected to or affected by it.
5. Be sure that the system is depressurized before any maintenance work, removing components or opening of the vessels.
6. Be sure to re-examine the system before putting it back into service.
7. Be sure to maintain all equipment and to continuously check the system for leaks and or damage. Fixing problems as they occur will prolong the life of the system.

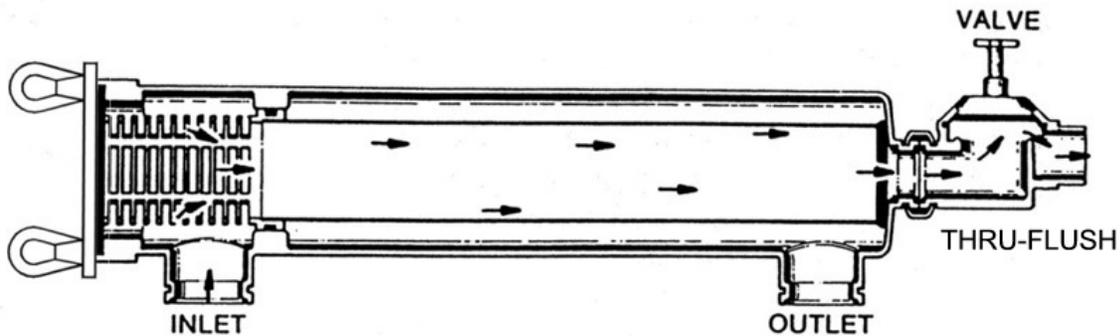
# THRU-FLUSH FILTER | PRINCIPLE OF OPERATION

## FILTRATION MODE



Incoming process flow enters the filter barrel, passes through the screen cartridge, depositing debris upon the inside of the supported screen mesh. A minimum pressure drop is created due to the large inlet and outlet manifolds and the generous amount of screen surface area designed into the filter.

## THRU-FLUSH MODE

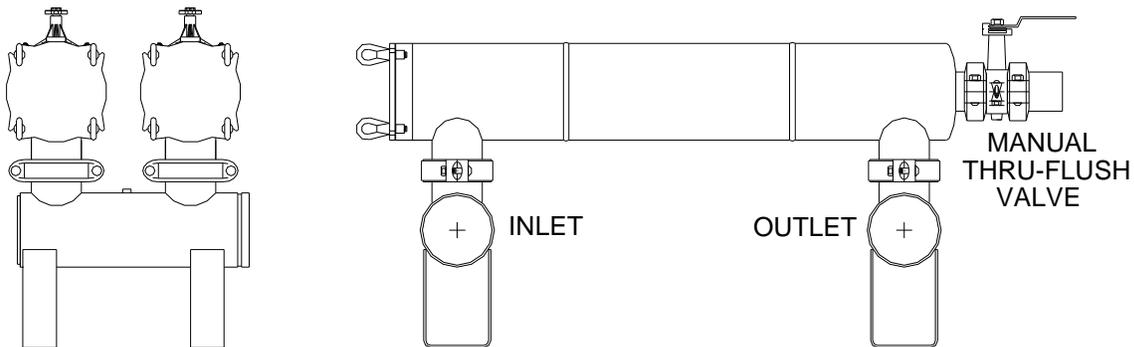


The opening of the "Thru-Flush" valve creates a high velocity flow through the cartridge and along the inner walls of the mesh screen cartridge and out the "Thru-Flush" port, thus affording maximum cleaning action.

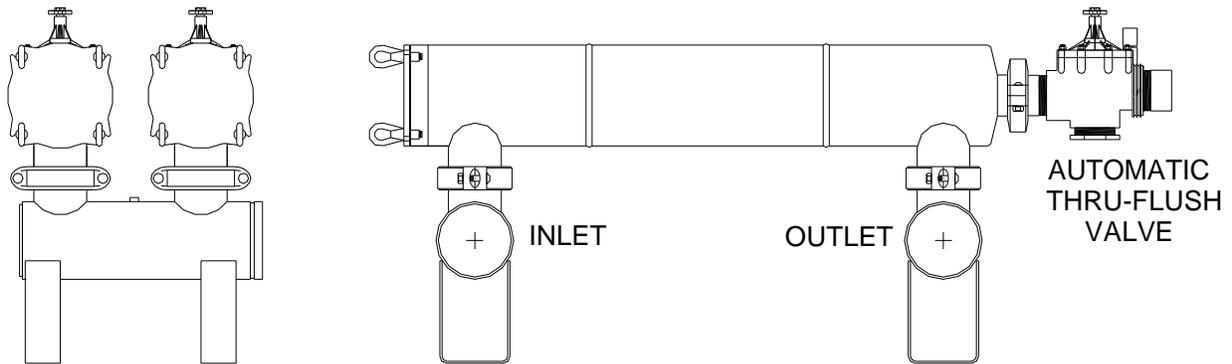
# THRU-FLUSH FILTER | INSTALLATION INSTRUCTIONS

1. Locate stand or manifolds in proper location. (SS8 Series)
2. Lubricate gaskets from grooved type couplings with soapy water solution and assemble gaskets onto inlet and outlet ports on filter housing. See Fig. A. (Inlet and outlet ports are marked.)
3. Locate filter housing in proper position on line or manifolds and slip gaskets onto mating lines or manifolds. Assemble groove type couplings, properly align and tighten.
4. Assemble threaded bushings and pressure gauges to manifolds or lines.
5. Lubricate gasket from grooved type coupling and slip on filter flush end port. Slip gasket on mating port on "Thru-Flush" valve. Assemble coupling, align and tighten.
6. Valve installation:
  - a. **MANUAL SYSTEMS** - assemble the flush valve as shown in FIG. A.
  - b. **AUTOMATIC SYSTEMS** - assemble the flush valve as shown in FIG. B. Install control wire and automatic controls. (See Ultra 116 controller manual.)
7. A PVC adapter is supplied to facilitate installation of the "Thru-Flush" discharge line.
8. Check cover lid, gaskets and clamp assemblies for proper alignment and tighten firmly.
9. On initial start-up, open the "Thru-Flush" valve and purge all air from the filter housing.

## STAINLESS STEEL (SS SERIES) SCREEN FILTERS -- MANUAL (FIG. A)



## STAINLESS STEEL (SS SERIES) SCREEN FILTERS -- AUTOMATIC (FIG. B)



The "Thru-Flush" valve adjustment should be set to provide the proper gallons per minute (gpm) flow necessary to clean the screen.

- Model SS8 is designed to flush at 300 gpm.
- Model SS6 is designed to flush at 150 gpm.

Since pressure and flow rates vary at each installation, it may be necessary to restrict this flow so that it does not exceed the rate specified. Failure to restrict or adjust this flow could damage the fine screen mesh and is not covered by the general product warranty. On automatic valve installations the needle valve adjustment on the top of the flow adjustment can be used to override the electrical solenoid for manual flushing.

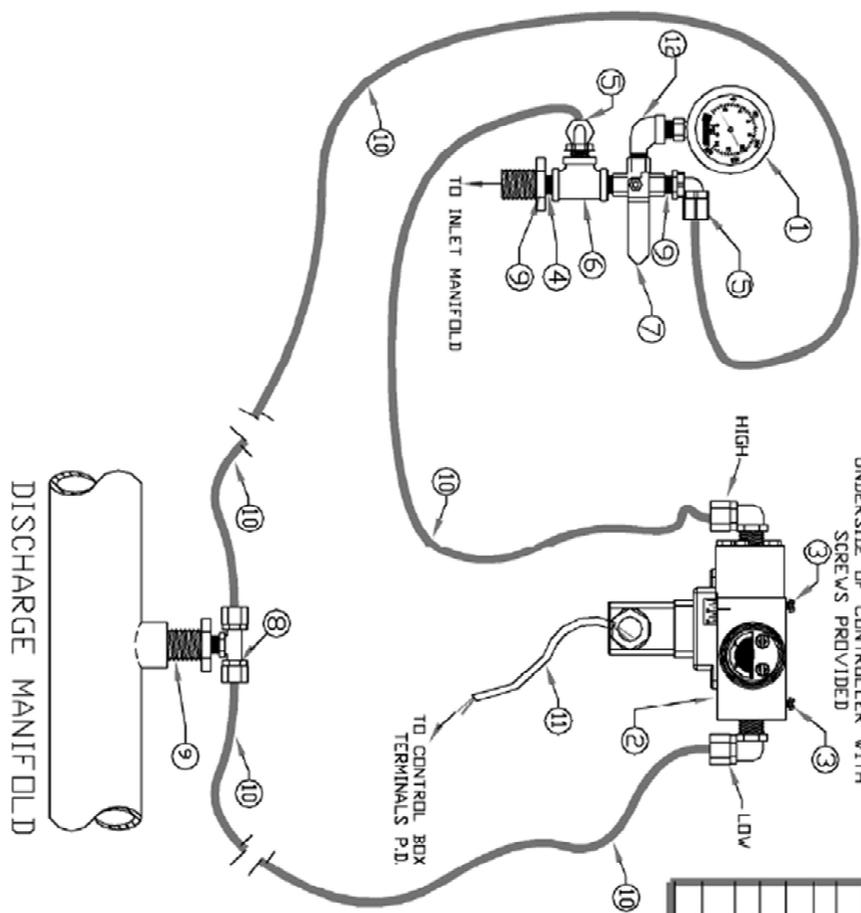
**CAUTIONARY NOTE:** All metal, including Type 316 Stainless Steel, is subject to corrosion by direct chemical attack, microbiological induced corrosion and strong or highly concentrated chemicals. Corrosive chemicals should not be left in the filters since damage to the stainless steel will occur. Chemical -- and other forms of corrosion -- are not covered by warranty.

# THRU-FLUSH | MAINTENANCE

It is recommended that the screen be cleaned by thru-flushing when a differential pressure of 5 psi is attained. Failure to clean this filter as prescribed can result in damage to the filter not covered by warranty.

<b>CLEANING OF THE SCREENS</b>	
Thru-Flush Valve & Flow Rate	<p><b>SS8:</b> Opening of the Thru-Flush valve for 30 seconds @ 300 gpm is generally adequate for cleaning SS8 models.</p> <p><b>SS6:</b> Opening of the Thru-Flush valve for 30 seconds @ 150 gpm is generally adequate for cleaning SS6 models.</p>
Routine Inspection	<p><b>Relieve Pressure on the System.</b>            Remove the lid and screen cartridge.            Rinse screen with clean water. If scrubbing is necessary, use a nylon brush for plastic and lightweight stainless steel meshes, and a wire brush for heavier stainless steel perforated stock.            Lubricate the "O" ring and reassemble the screen cartridge into the housing.            Clamp the lid on firmly.</p>
<b>REMOVAL &amp; REPLACEMENT</b>	
The mesh screen inside the cartridge can be replaced quickly and inexpensively.	<p>Relieve pressure on the system.            Remove the lid.            Pull the cartridge out of the housing.            Remove the plenum end from the cartridge.            Remove the rubber U-channel gasket from both ends of cartridge.            Replace the screen mesh and reassemble the cartridge.  <i>Replacement screen mesh is available in 200 mesh, 150 mesh, 100 mesh, 80 mesh and 40 mesh sizes.</i></p>

GAUGE ASSEMBLY - SS6/SS8



ITEM	PART #	LEGEND	QTY.
1.	144025200	0-200 PSI PRESSURE GAUGE	1
2.	166070020	PRESSURE DIFFERENTIAL SWITCH	1
3.	40007014	SCREW SLOTTED HEAD 10-32 X 1/4 ZP	2
4.	106521025	1/4" GALV. CLOSE NIPPLE	2
5.	143003400	POLY PRDP ELBOW (P4ME4)	4
6.	107011025	TEE GALVANIZED 1/4"	1
7.	135000025	VALVE KITZ 3-WAY	1
8.	143004000	POLY PRDP TEE (P4MT4)	1
9.	107030502	1/2" X 1/4" GALV. BUSHING	2
10.	143000025	1/4" POLY ETHYLENE TUBING	240'
11.	167001807	WIRE 18GA GREY 2 CONDUCTOR	12'
12.	107050025	ELBOW, STREET, GALVANIZED 1/4"	1

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**Yardney**  
 WATER SYSTEMS, INC.  
 2500700101A  
 GAUGE ASSEMBLY  
 FLUSH PKG SS6, SS6  
 REV. A

APPROVALS	DATE
DESIGNED BY	
CHECKED BY	
ISSUED BY	
DATE	

A SCREW HEAD, ZINC 1/4" X 3/16" TYPICAL ONLY  
 B SCREW HEAD, ZINC 1/4" X 3/16" TYPICAL ONLY  
 C SCREW HEAD, ZINC 1/4" X 3/16" TYPICAL ONLY  
 D SCREW HEAD, ZINC 1/4" X 3/16" TYPICAL ONLY  
 E SCREW HEAD, ZINC 1/4" X 3/16" TYPICAL ONLY  
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 Z SCREW HEAD, ZINC 1/4" X 3/16" TYPICAL ONLY

