



Installation  
and Operation  
Instruction  
Manual  
INSMAN-111

Pump  
Suction  
Screen

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# PUMP SUCTION SCREEN

## GENERAL INFORMATION AND INSTALLATION OF YARDNEY SELF-CLEANING PUMP SUCTION SCREENS

### I. FLOW AND PRESSURE REQUIREMENTS FOR THE OPERATION OF THE YARDNEY PUMP SUCTION SCREEN PRODUCTS

- Recommended operating pressure range of the cleaning jets – 40-60 PSI
- Each spray jet nozzle on the cleaning wand flows 4 GPM.
- The CW Model 100 through 800 have 5 jets.
- The CW Model 1000 through 1700 have 7 jets.
- The CW Model 2000 and 2400 have 9 jets.
- The CW Model 3000 through 4000 have 11 jets.

Total flow requirements for the cleaning jets are:

Model CW100	12 GPM
Model CW200 – CW800	20 GPM
Model CW1000 – CW1700	28 GPM
Model CW2000 – CW2400	36 GPM
Model CW3000 – CW4000	44 GPM

The return water to the jets should be filtered through a minimum 20 mesh screen filter prior to supply to the jets.

### II. PUMP SUCTION SCREEN MESH SPECIFICATIONS

MESH	WIRE SIZE	HOLE SIZE	% OF OPEN AREA
12	.023	.0600	51.8

### III. GENERAL INFORMATION

The following is information on maintenance, repair and general operation of the self-cleaning pump suction screen.

- **How is the brass bearing assembly replaced?** There are three bolts around the bottom head of the unit. After removing these bolts the entire cage can then be removed for easy access to the bearing assembly.
- **What is the recommended preventative maintenance?** The major contributing factor that will cause the self-cleaning pump suction screen success or failure is the cleanliness of the return water from the pump to the spray nozzles. Keeping the return line water quality as clean as possible will help the bearing assembly to operate at its maximum and keep the spray nozzles clear allowing for the most efficient removal of debris from the screen.

### IV. INSTALLATION AND OPERATING INSTRUCTIONS FOR YARDNEY SELF-CLEANING PUMP SUCTION SCREENS

1. Before installing a CW Screen, check the pumping system's discharge pressure. If the pump discharge pressure is less than 25 psi, a booster pump may be required. Your CW Screen will operate at pressures less than 25 psi minimum operating pressure, but the cleaning action will not be as strong under low operating pressure conditions.
2. Check your CW model flow rate specifications to be sure that the rated flow of the pump does not exceed the CW's maximum flow rating.
3. Install a backwash water return line at least 1 ½" in diameter on the discharge side of the pump. If your CW Screen is located more than 100 feet from the pump, a somewhat larger line size may be necessary to overcome friction loss produced by pipe run.
4. Thoroughly flush out the backwash water return supply line before attaching it to the CW Screen to purge it of rocks, debris, etc. Failure to flush the line could result in plugging the spray nozzles inside the screen with foreign materials.
5. On the backwash supply line install these items (in this order) starting from the pump discharge pipe. These items should be installed for easy access and service.
  - 1) One properly-sized gate or ball valve for supply line water regulation. If the pump pressure exceeds 100 psi, we recommend a pressure regulator in addition to a shutoff valve (not supplied). If an automatic globe valve is installed, it may be used for pressure regulation.
  - 2) One "in-line" 20 mesh strainer to filter the water supplied to the backwash jets. (Supplied with the pump suction screen at time of purchase).
  - 3) One pressure gauge. (not supplied)

6. Your CW screen should not be located any closer than 6 inches to any object. The suction screen should not be located directly on the bottom of the lake, reservoir, etc., to avoid silt overload. Locating the unit one or two feet above the bottom will reduce this probability.
7. Install your CW Screen's flanged outlet to the pump's suction/inlet pipe. If another adapter is desired instead of the flange, please contact the factory. Plumb the backwash supply line into the pump's discharge pipeline. It is not recommended using the threaded plug holes in the pump case as there may not be enough pressure or water volume to properly operate the CW pump suction screen from this supply point.
8. The backwash water return supply line should be plumbed ahead of the main line's butterfly valve. The butterfly can then be partially closed to create sufficient back pressure to operate the pump suction screen if adequate back pressure does not exist in the system.
9. Before attaching the backwash supply line to the CW Screen, be sure that the line has been thoroughly purged of any debris to protect the backwash jets inside the screen from becoming clogged.
10. At the time of start-up the speed of the spray bar rotation should be adjusted using the valve regulator to provide for 16 to 20 rotations per minute. This should provide adequate cleaning of the unit without excessive rotation and wear and tear.
11. The "in-line" strainer on the backwash water supply line should be checked and cleaned regularly to remove trapped contaminants and debris.
12. There should be no more than 1/8" gap between the screen housing and the pump suction body. Application of silicone sealant is recommended to prevent any excessive gaps.

# PUMP SUCTION SCREEN SPRAY BAR INSTALLATION

Step 1



Step 2



Step 3



Step 4



Step 5



Step 6

