SECTION 11: SCREEN MAINTENANCE

11.1 Screen Damage

The screens on the Rotofilter are made from polyester fabric molded into polypropylene grid frames. Although strong and resilient, they may become damaged from the following:

11.1.1 Punctures

Prevention

Protecting the Rotofilter from large debris is the best way to prevent puncture damage.

Remedy or Repair

If the grid is still intact around the cell that was punctured, use the square rubber plugs supplied in the owner's kit to repair the screen. See Section 11.3 for plug installation.

If damage is more extensive, replace the entire screen. See Section 11.5 for screen removal and installation.

11.1.2 Breakdown by Ultraviolet Light

Prevention

Do not allow direct UV light to hit the screens. If the Rotofilter is installed outside, a weatherproof shelter should be built to prevent UV light from reaching the unit.

Ultraviolet (RFUV) units come with UV light block baffles to prevent UV breakdown of screen panels. The baffles stop direct UV from penetrating the screen membrane.

⚠ NOTE You will still see light emitting from UV chamber inside of the drum area. This is normal.

11.1.3 Mineral Deposits

Remedy or Repair

Certain high water-soluble mineral environments may cause screens to be obscured by mineral deposits. The frames and polyester screens are unaffected by acids effective in cleaning away these deposits. Either of the following solutions is effective:

1. Remove all affected screens as outlined in Section 11.4, and fully immerse in a 5 to 15% muriatic acid solution until clean.
2. Follow the appropriate Shutdown procedure, as outlined in Section 8.3.
3. Drain the tank/sump. Prepare an appropriate quantity of the following phosphoric/citric acid solution:

- 3 liters (3.17 quarts) of clean water
- 1 liter (1.05 quarts) phosphoric acid (84%)
- 110 grams (0.25 pounds) commercial-grade citric acid
- 30 cc (1 fluid ounce) liquid detergent (common dishwashing fluid is acceptable)

4. With the backwash system off and tank/sump empty, run the drum motor and evenly apply the acid solution to the screens using a common garden sprayer or similar device.
5. Leave the drum motor turning for 20 minutes to prevent pooling and drip-off. Rinse the screens and the inside of the machine with a pressure washer.

Do not exceed 7.0 kg/cm² (100 psi). Pressure above 7.0 kg/cm² (100 psi) will damage the screens. Do not hold the pressure head closer than 46 centimeters (18 inches) from the screens. Do not use an oscillating pressure head. An oscillating pressure head will damage the screens.

6. Flush and drain or pump out the enclosure (tank/sump).
7. Follow the Rotofilter Startup procedure as outlined in Section 8.1. 11.1.4 Biological Growth

Prevention

No single solution resolves this problem due to the high diversity of growth that can occur. We recommend that screens be kept away from light and heat sources to minimize biological growth.

Remedy or Repair

1. Remove growth with a high-pressure power washer as described in Section 11.2. For stubborn deposits, a 15 to 20% sodium hypochlorite solution can be effective when applied as follows:
2. Follow the appropriate Shutdown procedure as described in Section 8.3.
3. Drain the enclosure (tank/sump).

SECTION 11: SCREEN MAINTENANCE

4. With the backwash system off and the tank/sump empty, run the Rotofilter and evenly apply the solution to the screens using a common garden sprayer or similar device.

5. Leave the Rotofilter turning for 20 minutes to prevent pooling and dripoff. Rinse the screens and the inside of the machine with a pressure washer.

6. Flush and drain or pump out the enclosure.

7. Follow the Rotofilter Startup procedure as described in Section 8.1.

11.2 Washing the Screens

Always follow the proper shutdown procedure (Section 8.2 or 8.3) before performing any maintenance on the Rotofilter.

Wash screens with high-pressure washer periodically. Be sure to hold the pressure washer nozzle at least 46 centimeters (18 inches) away from the screens to prevent screen puncture.

⚠CAUTION Do not exceed 7.0 kg/cm² (100 psi). Pressure above 7.0 kg/cm² (100 psi) will damage the screens. Do not hold the pressure head closer than 46 centimeters (18 inches) from the screens. Do not use an oscillating pressure head. An oscillating pressure head will damage the screens.

Periodic removal of screens for deep cleaning and power washing may be required if organic or mineral loads are high. The frequency of these cleaning procedures is entirely dependent on inlet water quality. An increase in backwash frequency or a decrease in flow capacity indicates that cleaning is required.

11.3 Repairing Screen Panels

Panels with damaged cells and an intact grid can be repaired using screen repair plugs. Replace panels that have sustained damage to 3% or more (**maximum 10 plugs**) of the screen cells.

11.3.1 Tools

☐ Utility knife

☐ Screen repair plug

☐ Blunt object (such as a pencil eraser)

11.3.2 Procedure

Always follow the proper shutdown procedure (Section 8.2 or 8.3) before performing any maintenance on the Rotofilter.

1. Locate the damaged cell. Ensure that the grid around the cell has little or no damage.

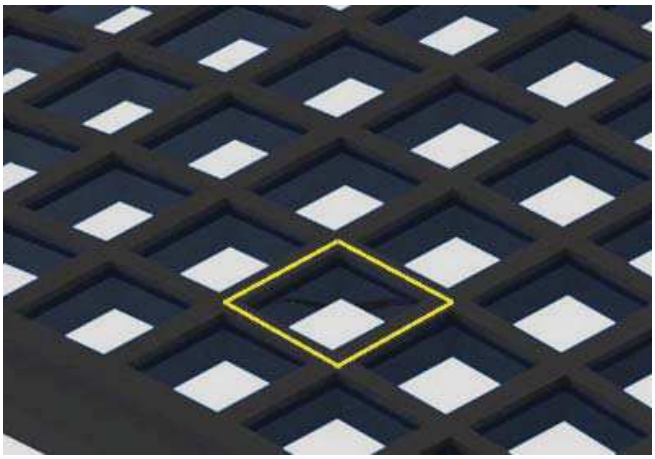

Figure 38. A damaged screen cell

2. Cut the damaged cell out using a utility knife. Be careful not to damage the surrounding grid.

Figure 39. Removing a damaged cell