



## Model M1K 125# Flanged Cast Iron Y-Strainer

### OPERATION, INSTALLATION AND MAINTENANCE INSTRUCTIONS

**General:** Metraflex M1K cast iron, flanged Y are typically used to capture and protect downstream equipment from harmful debris or particulate. There are standard or custom size screens in the strainer body that capture this debris. For very fine particulate smaller than 100 mesh, filters not strainers should be considered. The strainers should be specified to match the temperatures and pressures of the system.

#### **Application:**

1. The M1K strainer can be used in any fluid, water oil or gas, application not exceeding the maximum temperature and pressure rating.
2. The strainer can be installed either horizontally or vertically with the flow arrow pointing in the direction of flow.
3. Pressure and temperature ratings listed on the submittal drawing must not be exceeded.
4. Verify the strainer materials are compatible with the system media.

#### **Installation:**

1. Inspect strainer for shipping damage.
2. All mating flanges must be square to one another.
3. 1/16" thick standard ring or full face gaskets are recommended.
4. Bolt diameters or threaded studs to be in accordance with ANSI B16.5
5. Flow arrow must point in the direction of flow.
6. Torqueing of the flange bolts must be gradual and cross tightened per industry standards.

#### **Testing:**

The M1K Strainer may be one-time pressure tested to 1-1/2 times the products maximum operating pressure. Do not exceed the maximum rated pressure or temperature during operation.

#### **Operation:**

While the system is running the strainer is constantly capturing dirt and debris. As this debris accumulates the flow thru the strainer is being constricted and the pressure drop caused by this constriction will continue to increase. There are two methods to remove debris from the strainer. One is to shut down the system, isolate and remove pressure from the strainer, then remove the screen by removing the blow off cover. The Blow Down procedure and be used while the strainer and system are in operation.

**Blow Down Procedure:** (Assuming a blow down valve has been installed in the blow down port, prior to system operation. See submittal drawing.)

1. Attach a hose or have a bucket near the discharge end of the blow down valve.
2. Take necessary precautions to prevent harm if the media is hot or corrosive.
3. While system is under pressure, slowly open the blow down valve and allow debris to be evacuated.
4. If the pressure drop does not return to the expected clean screen rating, the debris may be sticking to the screen and complete disassembly may be required.

#### **Maintenance:**

1. No maintenance is required other than periodically blowing down the screen. Per the operating procedures above.
2. If after blowing down the strainer the differential pressure remains high, removing the screen may be necessary.
3. To remove the screen, isolate the strainer from the system pressure and flow. Open the blow down valve to confirm pressure has been released. Unbolt the blow off cover. Remove, clean and reinsert the screen. When removing the cover, the gasket is likely to rip. The old gasket should be completely removed and replaced. Tighten cover and return strainer to service.

