

Read all the following information and instructions prior to installing and operating the equipment.
Failure to comply with these instructions could result in bodily injury or property damage.



TABLE OF CONTENTS

Introduction 1

Receiving, Handling, and Inspection 2

Storage 2

Installation..... 2

Start Up 3

Shut Down Periods 3

Basket Removal and Cleaning 3

Recommended Spare Parts 3

INTRODUCTION

The Eaton Model 90 Fabricated Simplex Basket Strainers are devices installed in a pipeline to remove dirt and other unwanted debris from fluids. They are designed for the rated pressure and temperature stamped on the nameplate.

Straining is accomplished by directing the fluid through sized openings in the basket. Once sediment and debris is collected in the basket, fluid flow is interrupted while the basket is removed for cleaning.

For additional information regarding Model 90 Fabricated Simplex Basket Strainers, visit our web site at filtration.eaton.com.

RECEIVING, HANDLING, AND INSPECTION

1. Unpack the strainer and inspect for damage occurring during transit. Report damage to the carrier. If the strainer is not installed immediately, see “Storage” instructions.
2. Remove any preservatives with solvent-dampened cloths. Exercise care when using solvent and follow solvent manufacturer’s instructions.
3. Verify that the rating of the strainer is greater than or equal to the maximum pressure and temperature of the installation.
4. Open the strainer cover by removing the cover nuts on the bolted cover model or loosening the bolt nuts on the quick opening cover model. Lift or swing the cover away until it is free of the basket well and remove the basket.
5. Remove all flange/nozzle protectors. Check the inside of the body for any foreign or loose material that could be carried downstream when fluid is introduced into the strainer. Remove this material and replace the basket.
6. Close cover by reversing the cover opening procedure above. Insure that the sealing surfaces are clean and that the gasket or O-ring is seated properly before tightening the cover hardware.

STORAGE

Replace protective wrap, flange protectors etc. that may have been removed during receiving, handling and inspection. Store the strainer in a clean, dry environment.

INSTALLATION



CAUTION: Before installation, review the application and chemical compatibility of the process fluid to the materials of construction of the strainer. Verify that the correct size and flange rating for the application is marked on the strainer.

INSTALLATION (CONTINUED)

1. Remove protective wraps, etc. before installing the strainer. Be sure to inspect cover gasket or O-ring for possible damage and replace as required. Position the strainer in the pipeline so that the fluid enters the connection marked “IN” or “INLET.”



CAUTION: To lift the strainer, put slings under the inlet and outlet connections and to the lifting lugs, if provided. Secure slings above the strainer.

2. Be sure sufficient clearance is provided for easy opening of the cover and removal of the basket. Refer to the Sales Drawing for removal clearances. Support the strainer firmly in the pipeline.
3. Connect the strainer to the pipeline. On flanged strainers, be sure to use the same type of flange faces. **Do not bolt a raised face flange to a flat face flange.** Be sure flange gaskets are in place and fasteners are tight.
4. On strainers with other line connections, use standard piping practice when installing the strainer.
5. Pressure gauges near the strainer inlet and outlet are required to determine differential pressure across the strainer and cleaning frequency. Pressure gauges are essential for the safe operation of the strainer.



CAUTION: Eaton Strainers are not designed to be anchor supports in the piping line. Be sure to properly support process piping on both sides of the strainer. Use care to prevent piping forces and movements from acting on the strainer connections. Damage may occur to the strainer if improperly connected.



CAUTION: To protect the operator during draining and venting, the fluid must be piped to a safe area. This requirement is for all fluids and water with temperatures above 120° F. The operator should wear appropriate protective equipment (goggles, gloves, vests, clothing etc.) consistent with the process fluid for strainer operation and servicing.

START UP

Open cover vent, if provided and slowly allow fluid to enter the strainer. First, slowly open the downstream valve nearest to strainer outlet. Then slowly open the upstream valve nearest to the strainer inlet. Close cover vent when air is expelled.

SHUT DOWN PERIODS

1. Slowly close the pipeline valves upstream and downstream from the strainer. Make sure these valves are tightly closed.
2. Relieve fluid pressure in the strainer by first opening the drain, then vent if provided. The strainer must be drained and internal pressure relieved prior to cleaning. Proceed to clean and inspect the basket. Inspect the strainer to insure that there is no standing fluid.

BASKET REMOVAL, CLEANING, AND REPLACEMENT



CAUTION: To prevent basket damage, DO NOT permit differential pressure across the strainer to exceed 20 psi.

1. A differential pressure increase of 5 psi over the clean (initial) differential pressure across the strainer indicates that the basket of the on-line strainer housing is debris-laden and requires removal and cleaning.



CAUTION: To protect the operator when draining and venting, the fluid must be piped to a safe area. This is a requirement for all fluids and for water with a temperature above 120°F.

The operator should wear appropriate protective equipment (goggles, gloves, vest, clothing etc.) consistent with the process fluid for strainer operation and servicing.

2. Slowly open the two (2) valves that isolate the off-line strainer housing and slowly close the two (2) valves that isolate the on-line strainer housing with the debris-laden basket. This step ensures continuous operation of the process.
3. For the strainer housing with the debris-laden basket, slowly open the drain and vent as provided. This relieves the pressure and drains fluid in the basket well.
4. When pressure is relieved and fluid drained, open the cover of the strainer housing that contains the debris-laden basket. Lift or swing this cover away until it is free of basket well.

BASKET REMOVAL, CLEANING, AND REPLACEMENT (CONTINUED)

5. Remove the debris-laden basket. Invert the basket and wash out the debris. Direct a stream of air, water, or steam from the exterior of the basket to the interior.



NOTE: Do not permit the basket debris to dry, as it would be difficult to remove and clean the basket.

6. Inspect the basket at each cleaning for damage (holes, tear etc.). Replace as needed with genuine Eaton baskets.
7. Place the cleaned or new basket into the basket well. Take extra care to ensure that the basket ring rests squarely on the retaining ring in the basket well.
8. Be sure basket handle is sufficiently high to be compressed by the cover.
9. Inspect cover gasket or O-ring and sealing surfaces. Clean sealing surfaces and replace gasket or O-ring as necessary with genuine Eaton parts.
10. Reseat the cover. Close and bolt covers (cover nuts and studs, Bolted Cover; bolt nuts, Quick Opening Cover). Ensure that the sealing surfaces are clean. The gasket or O-ring is to be seated properly before tightening the cover hardware.
11. Close the drain and vent that were opened.
12. Refill this newly cleaned strainer basket housing by partially opening the two (2) valves that isolate this strainer basket housing very slowly.
13. Slowly fill the strainer basket housing with working fluid. Ensure that all air is expelled from the strainer basket housing. Opening of venting may be required.
14. When air is expelled, close any venting that was opened.
15. Close the two (2) valves that were partially opened to refill the strainer basket housing. This strainer basket housing is now off-line and is isolated from the on-line strainer housing.

RECOMMENDED SPARE PARTS

- 1 - Eaton Replacement Basket
- 1 - Eaton Replacement Gasket or O-ring

When ordering spare parts, be sure to specify all nameplate data as well as description and quantity of parts.

Always use genuine Eaton replacement parts for guaranteed fit and performance.

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WARRANTY

All products manufactured by Seller are warranted against defects in material and workmanship under normal use and service for which such products were designed for a period of eighteen (18) months after shipment from our factory or twelve (12) months after start-up, whichever comes first. OUR SOLE OBLIGATION UNDER THIS WARRANTY IS TO REPAIR OR REPLACE, AT OUR OPTION, ANY PRODUCT OR ANY PART OR PARTS THEREOF FOUND TO BE DEFECTIVE. SELLER MAKES NO OTHER REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. WE SHALL NOT BE LIABLE FOR CARTAGE, LABOR, CONSEQUENTIAL DAMAGES OR CONTINGENT LIABILITIES. OUR MAXIMUM LIABILITY SHALL NOT IN ANY EVENT EXCEED THE CONTRACT PRICE FOR THE PRODUCT.