

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.



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INTRODUCTION

A duplex strainer is a device installed in a pipeline to remove dirt and other unwanted debris from fluids. Straining is accomplished by directing the fluid through sized openings in a basket. Duplex strainers are installed where fluid flow cannot be interrupted while the basket is removed for cleaning. Duplex strainers are designed to withstand the rated pressure of the piping system.

For additional information on Duplex Basket Strainers, visit our website at filtration.eaton.com.

Standard Model 900 and 950B strainers up to and including 14" pipe sizes ship fully assembled. Secure the strainer before moving and move as a single unit. Model 900 and 950B strainers sizes 26" and larger are shipped disassembled. See Sales Drawing for assembly arrangement

RECEIVING, HANDLING, AND INSPECTION

1. After unpacking, inspect strainer for damage incurred during transit. Report any damage to the carrier immediately. If the strainer is not to be installed immediately, store indoors in a clean, dry environment and replace protective wrap, flange protectors, etc. which may have been removed during receiving, handling and inspection.
 2. Remove preservative with solvent-dampened cloth. Exercise care when using solvent and follow solvent manufacturer's instructions.
 3. Check to be sure the rated pressure and temperature on the strainer nameplate is not less than the maximum pressure and temperature of the installation. The rated pressure shown on the nameplate is the maximum pressure, including shock, at which the strainer may be operated.
 4. Open the strainer covers (removing the cover nuts, Bolted Cover; loosening bolt nuts, Quick Opening Cover—see manufacturer's instructions.) Lift or swing the cover away until it is free of basket well.
 5. Verify each basket handle has sufficient height that it is compressed when the cover is bolted closed. Remove basket and flange/nozzle protectors and check the inside of the body for any foreign or loose material that could be carried down stream when fluid is introduced into the strainer. Remove this material and replace basket.
 6. Close and bolt covers (cover nuts & 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.
2. Standard Model 900 strainers up to and including 14" pipe size ship fully assembled. Ensure the strainer is secured before moving and move as a single unit. Strainers 16" and larger are shipped disassembled. See Sales Drawing for assembly arrangement. Position strainer components in place and secure with strainer hardware. Use standard piping practice for assembly.
 3. Position the strainer in the pipeline so that the fluid enters the connection marked "IN" or "INLET." Be sure sufficient clearance is provided for easy opening of the covers and removal of strainer baskets. Refer to the Sales Drawing for removal clearances. Support the strainer firmly in place.



CAUTION: Strainers are not designed to be anchor supports in the pipeline. 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 strainer if improperly connected.

4. Connect the strainer line flanges to the piping. Be sure to use the same type 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. On strainers with other line connections, use standard piping practice when installing.
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.

START UP



CAUTION: Before installation, review the application and chemical compatibility of the process fluid to all the materials of construction and components of the strainer.

1. Remove protective wraps, caps, plugs etc. before installing the strainer into operation after storage. Be sure to inspect cover gasket or O-ring for possible damage and replace as required.



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.

START UP (CONTINUED)

1. Open all vents, 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.
2. Open all strainer valves.
3. Close all vents when air is expelled.
4. Close the two (2) valves that isolate the off-line strainer housing.

**BASKET REMOVAL, CLEANING,
AND REPLACEMENT**

CAUTION: To prevent damage to the basket, DO NOT permit the 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.

SHUT DOWN PROCEDURE (TAKING THE STRAINER OUT OF SERVICE)

1. Slowly close the pipeline valves upstream and downstream from the strainer. Make sure these valves are tightly closed. Open all valves between the two strainer housings.



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. To relieve fluid pressure, first open the drains at the bottom of each strainer housing and then open any vents, if provided.
3. Proceed to clean and inspect the strainer. Inspect the strainer to insure there is no standing fluid.

RECOMMENDED SPARE PARTS

- 1- Eaton Replacement Basket
- 1- Eaton Replacement Gasket

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.

Visit our web site, filtration.eaton.com for information about the different types of Eaton Duplex Basket Strainers.

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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.