

## OXFORD

FILTRATION

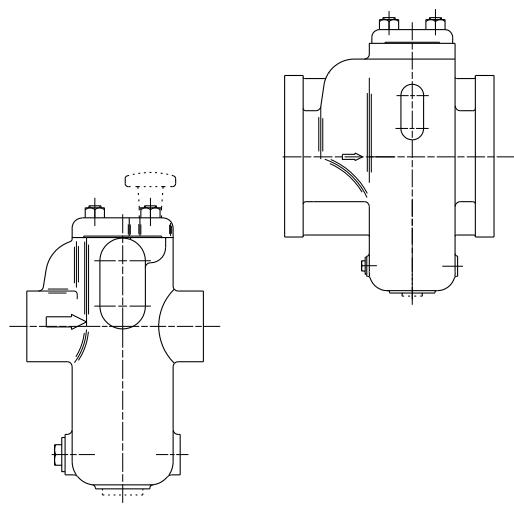
L I M I T E D

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### INSTALLATION, OPERATING & MAINTENANCE MANUAL

FOR THE  
OXFORD FILTRATION LIMITED

### SINGLE BASKET FILTERS



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## **Important Safeguards**

- Use the filter only as described in this manual.
- The filter is for use on liquids only.
- Operators should be suitably trained.
- A competent person should undertake installation and maintenance.
- Do not attempt to maintain, repair or adjust the filter whilst it is pressurised.
- If the fluid to be filtered is in any way hazardous, toxic or flammable, or is at a temperature extreme, the operator and environment should be suitably protected. Extreme care should be exercised if the fluid, at maximum operating temperature, but at room pressure, is above its boiling point. Unless specifically stated otherwise strainers that are sold or used within the European Union, are offered only for fluids (not gases) defined by the Pressure Equipment Directive 97/32/EC at pressures that mean the strainer fall under a self certified conformity assessment as defined by Directive 97/32/EC. A fluid whose vapour pressure at the maximum allowable temperature is greater than 1.5 barg must be treated as a gas and it is assumed for the purposes of the self certification of this vessel that this is not the case. Please discuss with our technical sales team if in doubt.
- The maximum operating pressure for the standard filter structure is 13.8 barg at 50°C. But other higher-pressure filters are available. Please see the relevant standard for the flange pressure rating. The maximum working pressure of the assembly is the lower of the above two pressures. The maximum working pressure reduces as the temperature increases. Please consult with Oxford Filtration for further information.
- Ensure the inlet pressure and temperature is less than that shown on the filter.
- The filter body material and seal temperature limits are: -

Cast iron:	-5°C TO +120°C
Cast Steel:	-20°C to 'O' seal temperature limit
Stainless Steel:	'O' seal temperature limits
Nitrile or Buna N (NBR) seals:	-35°C to +120°C
Viton (KPM) seals:	-20°C to + 200°C
EP or EPDM seals:	-50°C to + 150°C
FEP encapsulated seals:	-55°C to + 260°C

The seal temperature limits assume complete chemical compatibility with the fluid. Care should be taken with any fluid at elevated temperature, especially above 100°C. Do not allow the fluid to freeze in the filter.
- The filters, when shipped from Oxford Filtration Ltd, do not contain substances specifically hazardous to health. However, the filter may have a thin coating of oil based corrosion preventative on some of it's surfaces. So care should be taken should this be unacceptable in the given application.
- If a used filter is to be stored or transported, ensure that the filter is clean, suitably protected (including corrosion protection if appropriate) and does not contain substances that could be hazardous to health.
- If the filter has been subjected to overpressure, mechanical damage, corrosion or erosion, or any form of abuse that may reduce it's strength, the filter should be scrapped or returned to Oxford Filtration Ltd for examination and if practical repair and re-test.
- Use only the manufacturers recommended attachments and genuine spares.
- Retain this Manual for future reference.



## **1. Installation**

Install the filter in the pipeline using appropriate seals and attachments that comply with the relevant codes. Confirm:

- That the flow direction is correct (as shown by the arrows cast on the filter body).
- There is enough space around the filter for maintenance and routine operation.
- That there are no leaks and the basket assembly is fitted
- Do not use the cover eye nuts for lifting purposes

NOTE:

1. Ideally it should be possible to isolate the filter.
2. For efficient operation, it should be possible to determine the pressure drop across the filter. The pressure drop across the basket should not exceed 1.5 bars.
3. Recheck materials are suitable for the application. Painting of cast iron is not suitable for full protection in outside exposed areas and other coatings are available on request.

## **Operation**

**2.1 As fluid passes through:** The basket assembly will retain the filtered debris, and cleaning will be necessary to ensure the pressure drop is maintained.

**2.2 Cleaning the basket assembly:** Stop the flow, relieve any pressure, and drain the basket chamber. Slacken the cover retaining nuts, lift and swing the cover to expose the basket. Lift out the basket and wash thoroughly. Take care not to damage the fine mesh lining. After cleaning refitting is the reverse of the above, making sure all seal are in good condition. Note: Do not restrict the flow path by fitting the handle pillar in front of the inlet port. The air can be removed from the filter by the use of the bleed screw.

## **3. Routine Maintenance**

**3.1 Leakage:** Any leakage should be cured immediately. Components should be checked for wear, corrosion or deterioration and replaced as necessary.



#### **4. Trouble Shooting**

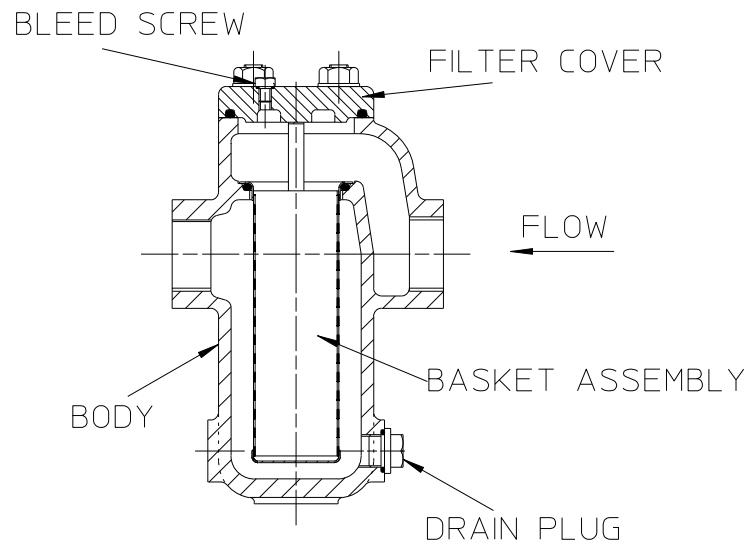
Problem	Cause	Cure
4.1 <u>Leaks.</u> 4.1.1 body to cover leaks  4.1.2 bleed or drain leaks	(i) Dirt on seal face. (ii) Cover displaced (iii) Seal missing. (iv) Cover loose  As above (i) (iii) & (iv)	(i) Clean seal face and re-fit. (ii) Re-fit the cover (iii) Replace the seal. (iv) Tighten cover nuts sufficient to prevent leakage
4.2 <u>Element not retaining debries</u>	(i) Basket seal missing (ii) Mesh damaged	(i) Re-fit seal (ii) Fit new basket

#### **5. Recommended Spares**

The end user should consider the consequences of filter wear or failure and the level of on-site spares holding. The following is a recommended spares holding for most normal applications:

Seal kit	1 off
Basket assembly	1 off





- ❖ The user must satisfy himself as to the suitability of the equipment for the intended application.
- ❖ Oxford Filtration Ltd., cannot be held responsible for any damage caused by the filter or for any consequential damages.
- ❖ The right is reserved to amend specifications without notice.