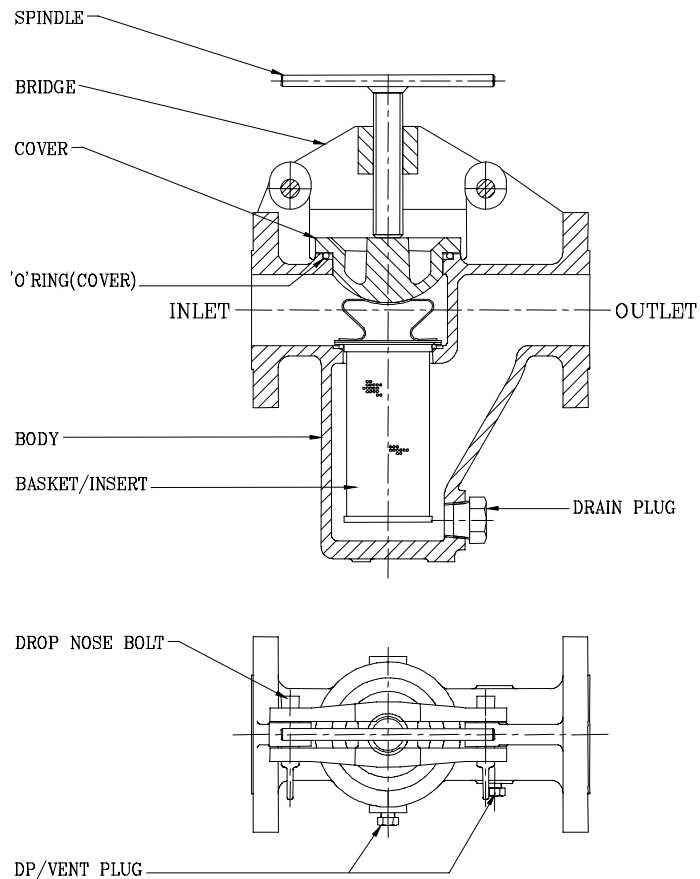


Plenty Simplex Filter Spares Identification Drawing



NOTES:

- 1) Filters with threaded inlet/outlet ports can be either NPT or BSP threads.
- 2) The drain port can be threaded NPT or BSP.
- 3) When ordering spares please define (as appropriate):
 - ~ Filter size and body material.
 - ~ Seal material (e.g. Viton®, Nitrile or EPDM). Viton® is a registered trade mark of DuPont Dow Elastomers
 - ~ Basket mesh size.
 - ~ Filter job/serial number.

The illustrations shown are not binding. The right to change specification without notice is reserved.

Plenty *filters*

Installation, Operation and Maintenance Procedures Simplex Filters



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BS EN
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2000

Installation

Installation and maintenance should be undertaken by a competent person. National and Local Codes of Practice, Environmental Regulations and Health and Safety Directives must be adhered to and take precedence over any stated or implied practices in this document. All Plenty filters are hydrostatically pressure tested prior to delivery.

Fit the filter assembly into the pipeline ensuring:

- There is no undue stress on the unit - support large filters appropriately.
- The unit is installed using suitable flange bolting materials and gaskets.
- The flow direction is correct.
- The unit is vertical with the cover at the top and the basket (element) is fitted.
- The unit is protected by suitable safety devices (pressure relief valves, earthing straps etc.) as appropriate within the system that it is installed.
- There is enough space available for maintenance operations.
- The fluid is compatible with the materials of construction.[†]
- The filter is being operated within its temperature/pressure performance envelope and within the flange drilling pressure/temperature limits.[†]
- The filter is clean, including (if appropriate) the removal of corrosion preventative liquids applied during manufacture.
- The cover, drain plug and any other attachments are secure.

Fill the filter, vent air from the unit via the vent screw (DN80 and above), and check for leaks.

Operation & Maintenance

The pressure drop across the basket should not exceed 1 bar (15 psi).

To clean or inspect the basket, stop the fluid flow (isolate the filter if necessary) and relieve the pressure. Slacken the spindle in the bridge and:

- For filters up to DN40 (1½"): Remove the bridge piece and spindle.
- For filters DN50 to DN300 (2" to 12"): Remove one drop nose bolt; hinge back the bridge and remove the cover by inserting the flat end of drop nose bolt under the lug on the cover.



Remove the basket and carefully clean. Replace damaged elements as necessary. Note: Cartridge elements cannot be cleaned and must be replaced – see “Cartridge elements”.

Refit the basket, bridge piece and drop nose bolt (as appropriate). Tighten the spindle hand tight only. Re-pressurise the filter, bleed air from the filter (as appropriate) and check for leaks. The filter is now ready for use.

Periodically inspect the filter assembly for corrosion and other deterioration that may affect the integrity of the vessel.

Mesh Basket Insert Assembly

Remove the nuts from the basket clamping pins and remove the old mesh lining. Carefully insert the new mesh lining. Gently ‘bounce’ the basket to encourage the mesh to settle into position. Refit the basket handle.

Cartridge Elements

[‘Pafic’® – resin bonded glass fibre and ‘Adept’® – woven polypropylene] Remove the nuts from the basket clamping pins and withdraw the inner support and cartridge. Dispose of the ‘dirty’ cartridge. Slide the new cartridge over the inner support until 6mm (¼”) of the cartridge extends beyond the support base. Slide this assembly into the outer basket. Refit and progressively tighten the clamping nuts.

Hazardous Fluids & Pressures

- The filters, when despatched from Plenty, do not contain substances specifically hazardous to health, but may have a thin coating of oil based corrosion preventative on all internal surfaces.
- If the fluid to be filtered is in any way hazardous, the operator and the environment should be suitably protected. Care should be exercised if the fluid at atmospheric conditions is above its boiling point.
- Relieve the pressure in the filter before opening the filter cover.
- Do not make any adjustments whilst the filter is pressurised.
- If a 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.

Pressure/Temperature Ratings

The filter should be used within the flange drilling pressure/temperature limits and the filter body limits. Discuss higher temperature pressure ratings with Plenty.[†]

All pressures are non-shock.

Cast Iron filters should be used with extreme caution below 0°C and above 100°C. Carbon Steel should be used with caution below -20°C (unless low temperature steel has been specifically ordered). All filters, and in particular Cast Iron filters, should be protected from excessive thermal, hydraulic and mechanical shock loading.

‘O’ Ring Seal Temperature Limits

Viton®: -20°C to +200°C. PTFE encapsulated Viton®: -20°C to +200°C.
Nitrile: -30°C to +120°C. Ethylene Propylene (EPDM) -50°C to +150°C.

The above values are guidelines based upon absolute compatibility with the fluid and are not binding due to unaccountable factors that may be detrimental to the performance of the ‘O’ Rings.

[†] See Plenty Technical Specifications TS 000 00 024 Plenty Filter Chemical Compatibility Chart and TS 000 00 025 Pressure – Temperature Limits For Plenty Cast Simplex Filters which are available on the Plenty web site: www.plenty.co.uk.

Alternatively Plenty will offer advice as necessary.

European Pressure Equipment Directive (97/23/EC)

All Plenty Cast Simplex Filters comply with the Directive. Cast Iron Filters are restricted to the SEP category only.

Note

As Plenty has no control over the use or operating conditions we cannot be held responsible for any damage to/by the filter, or any subsequent costs incurred. It is essential that the user satisfies himself of the suitability of the equipment for the intended application.