FILTER HOUSINGS
BAG FILTERS, CARTRIDGE FILTERS AND STRAINERS
A HIGH QUALITY FILTER HOUSING IS A VITAL COMPONENT OF A FILTER SYSTEM. THE PERFORMANCE OF A FILTER BAG OR CARTRIDGE, SOME OF WHICH ARE RATED AT EFFICIENCIES OF 99.98% AT A GIVEN MICRON RATING, CAN BE REDUCED IF COMPROMISE IS MADE WHEN PURCHASING A FILTER HOUSING.

Allied Filter Systems Ltd manufactures exceptional filter housings to suit all requirements and budgets. Our range has been developed by considering customer demands and by applying extensive knowledge gained through our company being active in the filtration market for nearly 40 years.

Our comprehensive range of filters provides economical, reliable and cost effective filtration. The precision construction of every filter ensures high performance, durability and efficiency whilst conforming to and exceeding the required safety standards.

Our innovative and modern designs ensure maximum filter system performance. Thought has been invested into every aspect of our range, from providing excellent filter sealing arrangements, through to offering imaginative and practical closure systems.

As well as having a high quality of construction and design, we have produced a range of versatile products adaptable to all customer needs. Our vessels offer optional features including, for example, being fitted with a selection of connection types and a choice of inlet and outlet orientations.

Allied’s filter housings are suitable for applications ranging from small batches (e.g. <5m³/hr flow) to continuous flows in excess of 640m³/hr.

All vessels are designed, manufactured, tested and inspected to meet and exceed EC regulations* (Pressure equipment directive 97/23/EC), which enables us to offer CE marked pressure vessels to all classifications. They can also be certified to ATEX Directive 94/9/EC for use in potentially explosive atmospheres.

FOR RECOMMENDATIONS ON FILTER HOUSING MODEL SELECTION, COMPLETE PRESSURE DROP AND FLOW RATE DATA, AND ALSO HOW TO SIZE FILTER HOUSINGS, PLEASE CONTACT THE ALLIED FILTER SYSTEMS LTD SALES TEAM.

*All products are manufactured to ISO9001 quality standard. All AFS filter vessels are designed and manufactured in accordance with the Pressure Vessel directive 97/23/EC. The company holds weld procedures and welder qualifications to the latest editions of the following standards: BS EN ISO 15614-1: 2004 + A2: 2012 weld procedure qualification testing and BS EN 287-1: 2011 Welder qualification testing. All regulations and standards stated are current at time of issue.

Allied Filter Systems Ltd is committed to adhere to subsequent amendments. For more information on Pressure Vessel Equipment and Directive please contact Allied Filter Systems Ltd.

www.alliedfilter.co.uk

Visit us for the most up-to-date product, services and company information.
Our range of filter housings is offered with a comprehensive choice of inlet and outlet orientations.

**CUSTOMISATION AND FLEXIBILITY**

Such customization and flexibility of design is a standard option. Different orientations of inlet and outlet are referred to as housing “styles”. The cost of labour and materials associated with vessel installation can be substantially reduced if the most convenient style has been selected. Complex pipework arrangements are avoided and result in an economical solution to your needs.

WE OFFER A STANDARD CHOICE OF 8 STYLES AND OTHER ORIENTATIONS ARE AVAILABLE ON SPECIAL REQUEST.

**STYLES/DIMENSIONS**

All dimensions (mm) are nominal, not to be used for installation purposes.

* N = bag removal height.

**MODEL CONNECTION TYPE**

**STYLE A**

**B**

**C**

**D**

**E**

**F**

**N**

**WE OFFER A STANDARD CHOICE OF 8 STYLES AND OTHER ORIENTATIONS ARE AVAILABLE ON SPECIAL REQUEST.**

**STYLES 1 - 8:**

**STYLE 1:**

- Side inlet – bottom outlet.

**STYLE 2:**

- Side inlet – opposite side outlet.

**STYLE 3:**

- Side inlet – same side outlet.

**STYLE 4:**

- Bottom drain.

**STYLE 5:**

- Side inlet – 90° bottom elbow outlet on opposite side to inlet.

**STYLE 6:**

- Side inlet – 90° bottom elbow outlet on same side as inlet.

**STYLE 7:**

- Side inlets – side outlet – 90° clockwise from inlet.

**STYLE 8:**

- Side inlet – side outlet – 90° anti-clockwise from inlet.

* = bag removal height.
Featuring investment cast and precision machined components, it is the most modern, innovative and practical filter bag housing available on the market.

The HD series has a top entry design, ensuring a minimum head of unfiltered liquid. It features flush top fitting of filter bags, which enables easy changeout, and is therefore suitable for use with the most aggressive fluids. The filter bag is held in position by compression from the top cover ensuring a 360° positive seal.

The vessel features Stainless steel 316L heavy duty investment-cast lid, bag seating and inlet port components. The design provides a smooth fluid flow path ensuring low pressure drops. The open structure of the underside of the lid and inlet port allows all parts to be easily accessible, making the housing easy to clean.

A unique feature of the HD series is the availability of inline connections (Style 1), enabling easy installation and eliminating the need for complex pipework arrangements. Any of the standard style types 1-8 can be selected, see page 4 for further details.

The lid is held in place by four reclining swing bolts with eye nuts. The lid is hinged, and has an integrated lifting handle. The HD vessel seals with a single O-ring.

As standard, HD filter housings have a stainless steel 316L construction (optional SS304 body) and have a bead blasted external finish. The HD filter housing is 110°C and 10 bar rated, can be CE Marked, and can have ATEX certification. Optional features (see page 16 and 17) are available to meet all customer requirements.

<table>
<thead>
<tr>
<th>MODEL CODE</th>
<th>NUMBER OF FILTER BAGS</th>
<th>BAG SIZE NUMBER</th>
<th>FILTRATION SURFACE AREA (m²)</th>
<th>INLET/OUTLET SIZE (Inches)</th>
<th>MAXIMUM FLOW RATE*</th>
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*Maximum flow rate is based on aqueous flow at ΔP=1.0psi through filter only without bag installed. Achieved flow rate is dependant on type of fluid being filtered, fluid viscosity and temperature, micron rating and type of filter bag.
RBF PROFILE SERIES

The RBF Profile Series is a side entry, recessed basket design filter bag housing. The vessel features our unique profiled body, which seats both the restrainer basket and filter bag.

The filter bag is held in position within the profile, and precision manufacture ensures a positive seal between the filter bag and housing. A hold down device is present for further security and is compressed by the top cover. The profiled body eliminates crevices, and with all parts being accessible, the vessel is easy to clean.

The heavy duty restrainer basket is constructed from high open area perforated stainless steel and holds our complete range of filter bags, from traditional steel ring to our moulded ‘Welseal’ collar. Precision manufacture of the vessel’s profiled body ensures no need for an under basket O-ring.

The RBF Profile is 110°C and 10 bar rated, can be CE Marked, and can have ATEX certification.

WITHIN THIS SERIES ARE TWO MODELS, THE RBFP AND THE RBFD, GIVING A CHOICE OF TWO LID CLOSURE TYPES TO SUIT ALL BUDGETS.

RBFP : TRI-CLOVER TOP COVER PLATE

Lid is held in place by three reclining swing bolts with eye nuts and seals with a single O-ring. One of the nuts acts as a hinge. The cover plate also has a lid stop and an integrated lifting handle, and can be orientated to 3 different opening positions.

The RBFP profiled series is available in stainless steel grades 304 and 316L, and as standard has a bead blasted exterior finish. There is a choice of seven connection configurations (Styles 2 – 8), see page 4.

As standard, the RBFP profile series is provided with adjustable legs, but on request, it is also available with an inverted dished base and bolt down plate.

Other optional features are available to meet all customer requirements, see page 16 and 17 for further details.

RBFD : DOME LID DESIGN

V-clamp band closure, single O-ring seal.

The RBF Profile series is available to suit all requirements. A range of filter bags is available, from traditional steel ring to our moulded ‘Welseal’ collar. Precision manufacture of the vessel’s profiled body ensures no need for an under basket O-ring.

The heavy duty restrainer basket is constructed from high open area perforated stainless steel and holds our complete range of filter bags, from traditional steel ring to our moulded ‘Welseal’ collar. Precision manufacture of the vessel’s profiled body ensures no need for an under basket O-ring.

The RBF Profile series is 110°C and 10 bar rated, can be CE Marked, and can have ATEX certification.

RBFD11/RBFP11 1 1 0.25 1" – 4" 73 333 20

RBFD12/RBFP12 1 2 0.50 1" – 4" 147 666 40

*Maximum flow rate is based on aqueous flow at ΔP=1.0psi clean through filter only without bag installed. Achieved flow rate is dependant on type of fluid being filtered, fluid viscosity and temperature, micron rating and type of filter bag.

SPECIFICATION

- ½” BSP (F) plug standard on top vent.
- 2” BSP (F) drain standard on side outlet vessels (styles 3, 4, 7, 8).
- 2” BSP (F) inlet and outlet standard for threaded connections.
- 2” ANSI 150# or DN60 PN16 inlet and outlet flanges standard on all flanged vessels.
- Customer may specify any connection size, type and configuration if different from standard.
- Adjustable legs are standard.
- Gasket materials include Buna-n (nitrile), EPDM (Ethylene propylene), Viton, PTFE, PTFE Encapsulated.
**RBF SERIES**

The RBF vessel features an internal machined ring, which seats both the restrainer basket and filter bag. The filter bag is held in position by compression of a hold down device by the top cover ensuring a 360° positive seal.

The heavy duty restrainer basket is constructed from high open area perforated stainless steel and holds our complete range of filter bags, from traditional steel ring to our moulded ‘Welseal’ collar. Precision manufacture ensures that there is no need for an under basket O-ring.

The RBF series is manufactured from either stainless steel 304 or 316L, and has a bead blasted exterior finish. There is a choice of seven connection configurations (styles 2 – 8), see page 4 for further details.

Optional features are available to meet all customer requirements, see pages 16 and 17 for more information.

**TRBF SERIES**

The TRBF series filter bag vessel features a single point centre bolt closure which is engaged by a T-bar. The design provides quick opening and closing of the housing, and requires no tools for operators. The lid is hinged ensuring easy handling. Location guides are present to enable perfect positioning when closing the lid.

The TRBF features a precision engineered internal ring, achieving an excellent seal with the filter bag and therefore producing the best possible filtration result.

The vessel is available in two sizes to suit industry standard size 1 (TRBF11) and size 2 (TRBF12) filter bags and can be constructed from either stainless steel 304 or 316L. Various connection types and orientations are available to provide the exact product to suit the application, see page 4.

The TRBF has a pressure rating of 6.5 bar, can be CE marked and can be provided with ATEX certification.

**SPECIFICATION:**

- ½” BSP (F) plug standard on top vent.
- 2” BSP (F) drain standard on side outlet vessels (styles 3, 4, 7, 8).
- 2” BSP (F) inlet and outlet standard for threaded connections.
- 2” ANSI 150# or DN50 PN16 inlet and outlet flanges standard on all flanged vessels.
- Customer may specify any connection size, type and configuration if different from standard.
- Adjustable legs are standard.
- Gasket materials include Buna-n (nitrile), EPDM (Ethylene propylene), Viton, PTFE, PTFE Encapsulated.

**MODEL CODE | BAG SIZE NUMBER | FILTRATION SURFACE AREA (m²) | INLET/OUTLET SIZE (inches) | MAXIMUM FLOW RATE* m³/hr**

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>RBF11/ TRBF11</td>
<td>1</td>
<td>0.25</td>
<td>1” – 4”</td>
<td>20</td>
</tr>
<tr>
<td>RBF12/ TRBF12</td>
<td>2</td>
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<td>1” – 4”</td>
<td>40</td>
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</tbody>
</table>

*Maximum flow rate is based on aqueous flow at ΔP=1.0psi clean through filter only without bag installed. Achieved flow rate is dependent on type of fluid being filtered. Fluid viscosity and temperature, micron rating and type of filter bag.

The TRBF series is a side entry, recessed basket design filter bag housing. It features a tri-clover top cover plate which is held in place by three reclining swing bolts with eye nuts, and seals with a single O-ring. One of the nuts acts as a hinge, the cover plate also has a lid stop and an integrated lifting handle, and can be orientated to 3 different opening positions.

The TRBF is also available with a pressure rating of 16 bar for more demanding applications.

The RBF is 110 ºC and 10 bar rated, can be CE Marked and be provided with ATEX certification.

**SIDE ENTRY FILTER BAG HOUSINGS WITH INTERNAL MACHINED RING AND CHOICE OF CLOSURE TYPES.**
SERIES

**MINI SERIES**

**ALLIED FILTER SYSTEMS OFFERS A RANGE OF MINI BAG FILTER HOUSINGS IDEALLY SUITED TO SMALL BATCH OPERATIONS.**

These compact bag filters are manufactured as standard using stainless steel 316L, and have an exterior bead blasted finish.

All mini filter housings are 110°C and 10 bar rated. Depending on model, they can be CE Marked and can have ATEX certification. Optional features are available to meet all customer requirements (See pages 16,17).

The standard range includes three models in two different sizes:

<table>
<thead>
<tr>
<th>MODEL CODE</th>
<th>NUMBER OF FILTER BAGS</th>
<th>BAG SIZE</th>
<th>FILTRATION SURFACE AREA (m²)</th>
<th>INLET/OUTLET SIZE (inches)</th>
<th>MAXIMUM FLOW RATE*</th>
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*Maximum flow rate is based on aqueous flow at ΔP = 1 psi clean through filter only without bag installed. Achieved flow rate is dependent on type of fluid being filtered, fluid viscosity and temperature, micron rating and type of filter bag.

**SPECIFICATION**

- 1" BSP (F) drain standard on all side outlet vessels (HD style 1 (inline), and all models styles 3, 4, 7, 8).
- ¼" BSP (F) plug standard on inlet HD13 and HD14 only.
- ¼" BSP (F) plug standard on top vent of all models.
- 1" BSP (F) inlet and outlet standard for threaded vessels.
- 1" ANSI 150# or EN125 PN16 inlet and outlet standard for all flanged vessels.
- Customer may specify piping size, connection type and configuration if different from standard.
- Gasket materials include Buna-n (nitrile), EPDM (Ethylene propylene), Viton, PTFE, PTFE Encapsulated.

**BAG FILTERS FOR SMALL BATCH OPERATIONS WITH A CHOICE OF DESIGNS.**
Allied Filter Systems is able to offer multi bag vessels for applications requiring high flow rates or a large filtration surface area. Flow is split equally through each filter bag ensuring an even distribution of solid loading.

Filter bags are individually held in position by three point locking bayonets, which compress the filter bag ring and produce a seal with the filter vessel. The vessel lid has a counterbalanced spring assisted lifting mechanism ensuring that opening and closing the filter is safe and easy for operators. The counterbalance is precise and gives the lid a practically weightless feel. As an additional safety feature, a simple locking system is fitted on the hinge as standard and can be engaged when the lid is in the fully open position.

MULTI BAG VESSELS FOR HIGH FLOW RATES WITH A CHOICE OF LID CLOSURE DESIGNS.

There are two standard inlet and outlet orientations:

**STYLE 3**
Side inlet / tangential bottom outlet on the opposite side.

**STYLE 4**
Side inlet / tangential bottom outlet on the same side.

The hinged lid design minimises the installation floor space required compared to traditional davit lid models. Multi bag vessels are provided with a choice of two closure types, either a bolted lid or with a quick closure clamp.

**QUICK CLOSURE SYSTEM**

The quick closure system was developed for multi bag vessels to eliminate the need for swing bolts, decreasing the time required for filter bag changeout.

The system consists of a heavy duty precision engineered clamp, an opening wheel with counter screw, and a safety lock attached to a ball valve fitted to the vent of the housing.

To change the filter bags, first the safety lock is released, simultaneously venting the filter housing. Turning the hand wheel then opens the clamp. The hinged lid can then be lifted and the filter bags changed. The reverse procedure is carried out to close the housing.

MULTI BAG VESSELS ARE DESIGNED TO BE ERGONOMIC. A TANGENTIAL BOTTOM OUTLET MINIMISES VESSEL HEIGHT, REDUCING THE INSTALLATION SPACE AND PROVIDING OPERATORS WITH A CONVENIENT BAG CHANGEOUT HEIGHT.

**LARGER HOUSINGS ARE AVAILABLE ON REQUEST.**

**MODEL CODE** | **NUMBER OF FILTER BAGS** | **BAG SIZE NUMBER** | **FILTRATION SURFACE AREA (m²)** | **INLET/OUTLET SIZE** | **MAXIMUM FLOW RATE**
--- | --- | --- | --- | --- | ---
HD42 | 4 | 2 | 2.0 | DN100 | 587 | 2667 | 160
HD62 | 6 | 2 | 3.0 | DN150 | 880 | 4000 | 240
HD82 | 8 | 2 | 4.0 | DN200 | 1174 | 5333 | 320
HD102 | 10 | 2 | 5.0 | DN250 | 1468 | 6667 | 400
HD122 | 12 | 2 | 6.0 | DN300 | 1761 | 8000 | 480
HD162 | 16 | 2 | 8.0 | DN350 | 2348 | 10667 | 640

*Maximum flow rate is based on aqueous flow at ΔP=1.0psi clean through filter only without bag installed. Achieved flow rate is dependant on type of fluid being filtered, fluid viscosity and temperature, micron rating and type of filter bag.
ALLIED FILTER SYSTEMS IS ABLE TO OFFER VESSELS WITH SPECIAL OPTIONS TO SUIT ALL CUSTOMER REQUIREMENTS.

- Various connection sizes and orientations (styles). See page 4.
- Other connection types eg. Sanitary (Tri-clamp, RJT, Dairy fittings etc.), Camlock, plain pipe.
- Higher pressure and temperature ratings.
- Heating jackets.
- Multiple housings manifolded. For example, duplexed using L-port, T-port or butterfly valves.
- Modular system, allowing expansion.
- Custom designed systems including multiple housings, valves, pipework and pumps.
- Trolley or skid mounted.
- Custom made, special design vessels.
- Inclined vessels.
- Stainless steel mesh lined baskets.
- Stainless steel bolts.
- Electropolished interior and/or exterior.
- Interior coated vessels (e.g. Halar®).
- Polished internal finish to specified Ra value.
- Various support options e.g. longer adjustable legs, wall mounting brackets, welded mounting plates.
- Complete with differential pressure gauge ports and installation.

SPECIAL OPTIONS

AND BESPOKE VESSELS

TWO RBFP HOUSINGS

Manifolded together and fitted with valves to enable use in a continuous process. One filter bag can be changed out whilst the other housing is in use.

HD FILTER HOUSING

With internal and external antistatic Halar® coating.

TROLLEY MOUNTED RBFP FILTER HOUSINGS

Interconnecting pipework and valves enable multiple flow configurations.

MODULAR SYSTEM

With common inlet and outlet pipes. Valves are fitted to enable isolation of individual or multiple housings to enable filter bag change during continuous operation. The number of housings may be increased at any time to expand the system.
Polypropylene bag filter housings are available for applications where materials such as stainless steel are incompatible with the fluid to be processed.

The Polypropylene series is a side entry, recessed basket design filter housing. The polypropylene restrainer basket has a high open area and holds our complete range of filter bags, including our moulded ‘Welseal’ collar.

An important feature of our design is that it has a bolted lid, which is advantageous compared to screwed lid models. Polypropylene threads can wear over time due to repeated opening and closing of a screwed lid, which ultimately damages the lid closure arrangement.

The bolted lid design enables our polypropylene filter bag housings to be CE Marked.

For continuous processes, we are able to offer duplexed systems with interconnecting valves, or if higher flows are required, several housings can be manifolded together.

THE VESSEL IS DESIGNED TO BE FLOOR MOUNTED, ALTHOUGH OPTIONAL ADJUSTABLE STAINLESS STEEL LEGS ARE AVAILABLE.

POLYPROPYLENE FILTER BAG HOUSINGS ARE AVAILABLE EITHER 6 BAR OR 10 BAR RATED (see graph below).

For applications where corrosive fluids are being filtered, these vessels can be produced from PVDF.

**Technical and Performance Data**

**Model Code | Bag Size Number | Filtration Surface Area (m²) | Inlet/Outlet Size (inches) | Maximum Flow Rate**

| PP11 | 1 | 0.25 | 2” | 20 m³/hr |
| PP12 | 2 | 0.50 | 2” | 40 m³/hr |

*Maximum flow rate is based on aqueous flow at ΔP = 1.0 psi clean through filter only, without bag installed. Achieved flow rate is dependent on type of fluid being filtered, fluid viscosity and temperature, micron rating and type of filter bag.

**Pressure Rating Versus Temperature for Polypropylene Bag Filter Housings**

**Filter Bag Performance for Size 1 Bags**

**Filter Bag Performance Data for Size 2M (4) Bags**

**Pressure Drops**

**Flow (L/min) of Water at 25°C, Multiply by 2 for Size 2 Filter Bags.**

**Flow (GPM) of Water at 25°C, Divide by 2 for Size 1M (3) Filter Bags.**

**Flow (GPM) of Water at 25°C, Divide by 2 for Size 1M (3) Filter Bags.**

**Flow Rate (GPM) of Water at 25°C, Divide by 2 for Size 2 Filter Bags.**
ACCESORIES

ACCESSORIES

Accessories are available to complement our range of filter housings and also those from other manufacturers.

1. Restrainer baskets - Stainless steel 316L in all industry standard sizes and available in a variety of styles to fit all types of housings. Baskets can also be manufactured with a stainless steel mesh lining (37 to 840 micron) or produced from perforated sheet other than the standard 3mm, commonly 1mm to 10mm. Coated baskets (e.g. Halar®) are also available.

2. High capacity basket and bag fitting tool - Provides increased surface area compared to traditional baskets. See separate filter bag brochure (page 9) for further information.


4. Adjustable legs - Stainless steel construction in standard or custom made lengths.

5. Wall mounting brackets.

6. Pressure gauges - Stainless steel gauges supplied either on their own, or as an assembly with Tee piece and vent valve. We can also provide differential pressure gauges with or without electrical contacts, and an installation option when ordered with a vessel.


8. Bar Magnets - Magnetic particles from process liquid adhere to the bar magnet surface. Filter bag lifetime is prolonged by reducing the amount of solid collected by the bag, and reducing surface abrasion of filter media which can be effected by sharp particles. Neodymium rare earth magnets have a magnetic flux density of 12,000 Gauss, are deep field, and can operate up to 120°C without significant loss of field strength. Magnet holding ring can be fitted with upto 5 magnetic bars.

9. Displacement floats - Displace liquid in the vessel ensuring easier bag changes and reducing product wastage.

10. Valves - All common types such as monoblock, L-port, T-port, butterfly valves.

11. Stainless steel adaptor head - For open bag systems, with BSP fitting.

12. Deflector plate - For oil absorption inserts, see separate filter bag brochure page 13.

13. W-clamps - For use with housing models such as RBFD, RBPV and CHD series.

14. Eye nuts, swing bolts and clevis pins - Zinc Galvanised or stainless steel.

15. Eye nut key.

16. O-rings - Materials include Viton, EPDM (ethylene propylene), Buna-n (nitrile), silicone, PTFE, PTFE encapsulated viton, PTFE encapsulated silicone. Available in all cross section types and sizes.

Selecting the correct accessories such as floats, magnets or high capacity baskets can reduce fluid wastage and increase filtration performance.
Multi round cartridge vessels feature a universal bottom cup to suit double open ended, code 8 (222 O-rings/fin) or code 3 (222 O-rings/flat) cartridges. Our vessel design therefore provides versatility - by simply exchanging the cartridge top sealing components, the vessel can be converted to suit either double open ended cartridges or to suit code 3 and 8 cartridges.

For use with double open ended cartridges, vessels are provided with a cup and spring component which achieves both top sealing and cartridge core location, and a compression plate. For use with code 3 or 8 cartridges, vessels are provided with a compression plate with cartridge end cap locating holes.

Allied Filter Systems manufacture custom made cartridge vessels. Common modifications include specified connection sizes and types, different cartridge sealing arrangements, and duplexed systems. See pages 16 and 17 for more details.

All vessels are provided with a top vent as well as clean and dirty drain ports. Larger diameter vessels are fitted with either a davit arm lid lift or a spring assisted counterbalanced hinge. The standard connection types are BSP screwed, DIN Flanged or ANSI flanged with connection size according to model. The standard pressure rating is 10 bar at a temperature of 110°C. Vessels can be CE marked and provided with ATEX certification on request.
**FABRICATED STRAINERS**

**IBF SERIES (INLINE BASKET FILTER)**

IBF SERIES FABRICATED STRAINERS ARE THE IDEAL SOLUTION FOR REMOVING SOLID PARTICLES FROM A LIQUID STREAM. APPLICATIONS INCLUDE PROTECTION FROM DEBRIS OF PUMPS, METERS, VALVES, NOZZLES AND HEAT EXCHANGERS.

The IBF series features inline connections, enabling easy pipeline installation. Standard connection sizes are 1” to 12” flanged (ANSI or DIN), with bigger vessels available on request. Fabricated strainers have a bolted lid fitted with a lifting handle and ½” vent valve. Larger models are provided with a davit arm lid lift and can have optional features such as lifting lugs. The standard pressure rating is 10 bar and temperature rating is 110°C; higher ratings are available on request.

The internal basket has an elliptical, 45° angled top, and provides a high filtration surface area which is vastly superior to cast strainers with the equivalent connection size. The IBF series filters are specifically designed to have high open area ratios (free screen area divided by nominal outlet area), resulting in low pressure drops and longer service before cleaning. The standard basket is constructed from 3mm perforated sheet, and can be lined with precision woven wire stainless steel meshes ranging from 64 to 37 microns (20 to 400 mesh). For applications requiring coarser filtration, we offer a range of perforated sheet baskets rated from 1mm to 10mm (18 mesh to 3/8”). Other than our standard grades, we are able to provide filter baskets manufactured from specified or heavy duty meshes, or from materials such as wedge wire.

The standard materials of construction are stainless steel 304 or 316L. The IBF series is customisable to meet specific needs. Options include adjustable or welded leg assemblies, different nozzle types, heating jackets, backflush/backwash system, additional nozzles for gauge ports and many more. Fabricated strainers can be CE marked and provided with ATEX certification on request.

**SIMPLEX AND DUPLEXED BASKET FILTER**

SIMPLEX FABRICATED BASKET FILTERS ARE DESIGNED FOR APPLICATIONS WHERE TEMPORARY INTERRUPTION OF A PROCESS CAN BE PERMITTED FOR BASKET CLEANING. THEY FEATURE A RECESSED BASKET WITH LIFTING HANDLE, SEATED ON AN INTERNAL RING.

An under basket O-ring is present to ensure an excellent seal between the filter housing and basket. Simplex basket filters are bolted lid, side entry vessels, with either a bottom or side outlet (Styles 2-8, see page 4 for more details).

Fabricated basket filters can also be duplexed to enable continuous operation. The system consists of two strainers – one duty and one standby – interconnecting pipework and gear operated butterfly valves.

When the maximum acceptable differential pressure is reached across the duty filter, the flow can be switched to the other filter housing without disruption to the filtration process. The filter not in use can then be cleaned and prepared for use again.

The standard range of simplex and duplexed basket filters are available with up to 12” connections, and can be customised to meet specific requirements.
**TECHNICAL DATA**

**FABRICATED BASKET FILTERS**

**PRESSURE DROP VERSUS FLOW RATE, BASED ON WATER CLEAN, 3mm PERFORATED SHEET BASKET.**

**OPEN AREA RATIOS**

<table>
<thead>
<tr>
<th>CONNECTION SIZE</th>
<th>BASKET PERFORATION (mm)</th>
<th>OPEN AREA %</th>
<th>NOMINAL OUTLET AREA (m²)</th>
<th>GROSS BASKET AREA (m²)</th>
<th>FREE BASKET AREA (m²)</th>
<th>OPEN AREA RATIO (O.A.R.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DN25 (1&quot;)</td>
<td>3.0</td>
<td>40%</td>
<td>0.00056</td>
<td>0.110</td>
<td>0.044</td>
<td>78.6</td>
</tr>
<tr>
<td>DN50 (2&quot;)</td>
<td>3.0</td>
<td>40%</td>
<td>0.00233</td>
<td>0.110</td>
<td>0.044</td>
<td>18.9</td>
</tr>
<tr>
<td>DN80 (3&quot;)</td>
<td>3.0</td>
<td>40%</td>
<td>0.00534</td>
<td>0.171</td>
<td>0.0684</td>
<td>12.8</td>
</tr>
<tr>
<td>DN100 (4&quot;)</td>
<td>3.0</td>
<td>40%</td>
<td>0.00900</td>
<td>0.171</td>
<td>0.0684</td>
<td>7.6</td>
</tr>
<tr>
<td>DN150 (6&quot;)</td>
<td>3.0</td>
<td>40%</td>
<td>0.0199</td>
<td>0.243</td>
<td>0.0972</td>
<td>4.88</td>
</tr>
<tr>
<td>DN200 (8&quot;)</td>
<td>3.0</td>
<td>40%</td>
<td>0.0339</td>
<td>0.362</td>
<td>0.1448</td>
<td>4.27</td>
</tr>
<tr>
<td>DN250 (10&quot;)</td>
<td>3.0</td>
<td>40%</td>
<td>0.0532</td>
<td>0.605</td>
<td>0.242</td>
<td>4.55</td>
</tr>
<tr>
<td>DN300 (12&quot;)</td>
<td>3.0</td>
<td>40%</td>
<td>0.0753</td>
<td>0.760</td>
<td>0.304</td>
<td>4.84</td>
</tr>
</tbody>
</table>

Flow rate conversion 100 US GPM = 83.3 Imperial GPM = 22.7m³/hr

**PRESSURE DROP CORRECTION FACTOR**

For mesh lined baskets and for use with fluids with viscosities higher than water.

**US STANDARD MESH**

| 18 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 60 | 70 | 80 | 90 | 100 | 120 | 140 | 170 | 200 | 230 | 270 | 325 | 400 | 550 | 800 | 1250 |
|----|----|----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1000| 840| 710| 590| 420| 350| 297| 250| 210| 177| 149| 125| 105| 88 | 74 | 62 | 53 | 44 | 37 | 25 | 15 | 10 |     |
| MICRONs |

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