

Temporary Strainers

Temporary Strainers are designed for temporary or short periods of operation, for example during commissioning and initial start up periods of new or reconditioned process lines to remove any coarse debris such as rags, welding rods, pipe scale, rust etc, accidentally or unavoidably present within a system.

After a nominal period of operation they are usually replaced with a permanent strainer of a finer retention.

Barton Firtop Engineering design and manufacture four types of temporary strainers; all available on competitive lead times meeting on site demands:

- Flat Disc or sometimes known as "Tennis Bat" Strainer
- "Witch Hat" Conical Basket Strainer
- "Top Hat" Conical Basket Strainer
- "Bath Tub" or "T" Type Strainer

We also undertake to make specials to suit customers requirements and also to refurbish or recycle customers existing units.

Sizes range from 3/4" (20mm) NB to 48" (1200mm) NB with pressure ratings up to 600LB as standard and specials up to 2500LB.

Flange facings include: raised, flat, serrated & ring joint, male or female.



**BARTON
FIRTOP**
ENGINEERING CO. LTD

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Y-Type Strainers



The Y-Type Strainer is the most common and economical type of strainer for permanent applications, suitable for mounting in horizontal and vertical pipelines.

Methods & Range of Manufacture

- Machine from forgings for up to 2"NB as standard
- Machine from castings for up to 14"NB as standard
- Fabricate from pipe and forged flanges from 2"NB to 48"NB

Major Applications

Generally coarse filtration for the following example applications-

- Pump Protection
- Flowmeter Protection
- Valve & Regulator Protection
- Instrumentation & Ancillary Piping Item Protection



Extensive Ex-Stock Availability:

The following ranges are available ex-stock:-

Material	Connection Type	Size (NB)		Ratings Available
		From	To	
Forged Carbon Steel	Screwed & S/W	1/2"	2"	150 Bar Safe Working Pressure
Cast Carbon Steel	Flanged RF	1/2"	10"	ANSI B16.5 150LB & 300LB
Cast Stainless Steel	Screwed & S/W	1/2"	2"	100 Bar Safe Working Pressure
Cast Stainless Steel	Flanged RF	1/2"	10"	ANSI B16.5 150LB & 300LB
Cast Iron	Flanged RF	1"	10"	BS 4504 (DIN) PN16
Cast Aluminium Bronze	Screwed NPT	1/2"	2"	24 Bar Safe Working Pressure

Special Item Availability

Y-Types are available from Barton Firtop, manufactured to order with a number of specialised requirements, often utilising ex-stock castings:-

- Pressure ranges including ANSI 600LB to 2500LB & API 10,000
- Special levels of NDE and material testing can be performed
- All exotic and non standard material ranges can be achieved
- Refer to our brochure inside cover for full range of materials



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Mono-in-Line Strainers

Designed for the efficient removal and retention of solid/foreign material from flowing liquids and gases.

Advantages of Mono Strainers over Y-Type Strainers

- Debris contained in basket
- Quick release closure for easier maintenance
- Larger filtration area / Dirt holding capacity

Barton Firtop's Mono In-line strainers offer a **LARGER** filtration area than similar strainers on the market, ensuring minimal pressure loss, improved flow-rates and greater dirt holding capacity, leading to longer service / maintenance intervals.

Range

- Cast Range : 1/2" (15mm) - 12" (300mm) NB
- Fabricated : 2" (50mm) - 36" (900mm) NB
- Pressure ratings up to 2500LB

Closures

- Quick release (Standard)
- Bolted
- Safety Interlock to ASME VIII UG-35(b) and British Gas E13



Extensive Ex-Stock Availability:

The following ranges are available ex-stock:-

Material	Connection Type	Size (NB)		Ratings Available
		From	To	
Cast Carbon Steel	Flanged RF	1"	10"	ANSI B16.5 150LB & 300LB
Cast Stainless Steel	Flanged RF	1"	10"	ANSI B16.5 150LB & 300LB

Special Item Availability

Monos are available from Barton Firtop, manufactured to order with a number of specialised requirements, often utilising ex-stock castings:-

- Pressure ranges including ANSI 600LB to 2500LB & API 10,000
- Special levels of NDE and material testing can be performed
- All exotic and non standard material ranges can be achieved
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Mono-in-Line Strainers

Special Item Availability

Individual client / customer process situations can be solved with innovative design & orientation by our experienced Engineering Department

S-Type Mono In-line Strainer

- The major reason for the development of this unit was for use on petroleum loading installations.
- Specified where process demands a high throughput, low-pressure drop characteristics and high efficiency filtration.
- Similar to the Mono but with body angled at 60° giving lower 'K' factors and housing a larger basket.
- Range 1 1/2" - 8"NB with ratings up to 300lb. Closures available as per standard Mono's.



High Flow-Rates? / Low DP? / High Contaminant Level?

- A Multi-Basket version is available to accommodate these difficult problems
- Available in Pressure ratings 150LB to 2500LB
- Cast range: 8" to 24"NB
- Fabricated: 2" to 36"NB



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Duplex Strainers

Manufactured in a dual configuration, with each strainer having two filter chambers, one on line and the other on standby allowing continuous operation and no "down-time" during maintenance. Change-over between on-line and standby is achieved by utilising the integral valve system, controlled by a single lever.

The "FIRPLEX" Duplex

The **FIRPLEX** Duplex strainer is our standard cast design which utilises integral interlinked ball valves for the changeover mechanism.

Advantages of the Barton Firtop "Firplex"

- Ball valve system provides 100% positive seal between chambers
- Positive 100% seal for both Liquid & Gas applications
- Basket cleansing and maintenance whilst system "on-line"
- Large filtration area
- Single lever operation for safety and simplicity
- Competitively priced within its field

Ex-Stock Availability:

The following ranges are available ex-stock:-

Material	End Connection	Size (NB)	Ratings Available
Cast Iron	Flanged	1" - 6" incl.	PN16, PN40, ANSI 125/150
Cast Steel	Flanged	1" - 6" incl.	PN16/PN40/ANSI 150/300
Cast Stainless Steel	Flanged	1" - 6" incl.	PN16/PN40/ANSI 150/300



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Duplex Strainers

Sliding Gate Valve Duplex

For larger sizes up to 12"NB Sliding Gate Valve Duplex Strainers are available upon request and manufactured to order.

Fabricated Systems

- For process systems with line sizes from 8"NB up to 36"NB and pressure ratings from 150LB to 1500LB Barton Firtop can design and fabricate duplex systems comprising two individual cast or fabricated vessels utilising ball / butterfly valves and interlinking pipework
- Systems can be automated for single push-button change-over operation upon request
- Refer to our brochure inside cover for full range of materials



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PROCESS PROTECTION EQUIPMENT

Self Cleaning Strainers



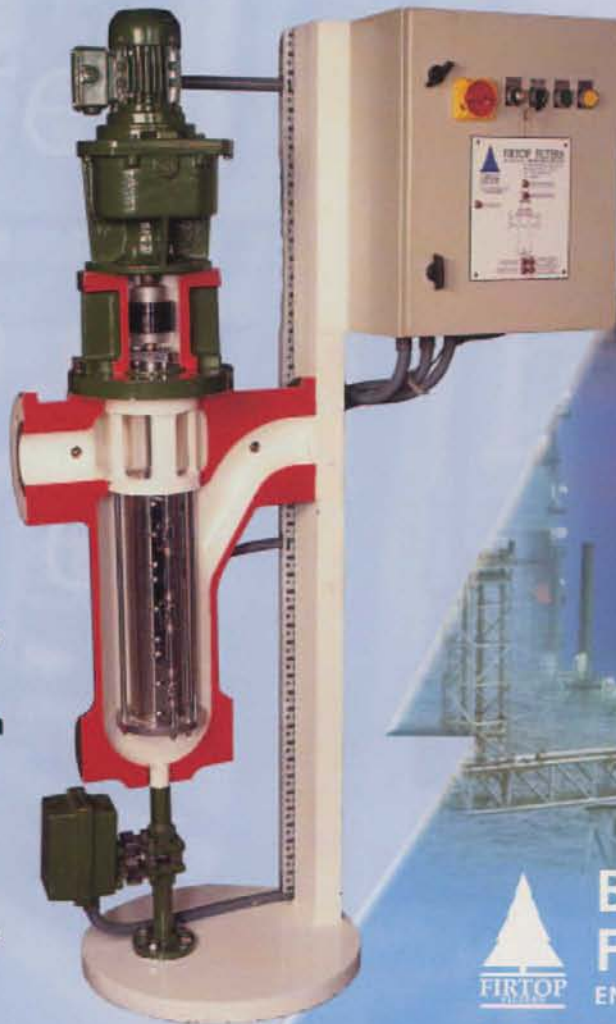
- Self Cleaning Strainers can be used as an alternative to Dual In-Line Strainers allowing cleaning of the screen without interrupting the process flow.
- A significant design feature of these strainers is the added benefit that the element does not have to be removed for cleaning, since the operation is carried out automatically within the unit, thus eliminating day to day maintenance.

Range

- The cast range offers sizes from 1"(25mm) NB to 6"(150mm) NB and up to 24"(600mm) NB for the fabricated range
- Filtration down to 100µm as standard

Advantages & Special Features

- Fully automated systems provided with operator friendly control panels.
- 'V' shaped wedge wire elements exhibit non-clogging properties
- Blade assembly can be replaced without dismantling the screen assembly
- No special tools required
- Replaceable PVDF blade insert reduces spare parts costs
- Low co-efficient of friction between wiping surfaces reduces operating effort and power requirements
- Refer to our brochure inside cover for full range of materials



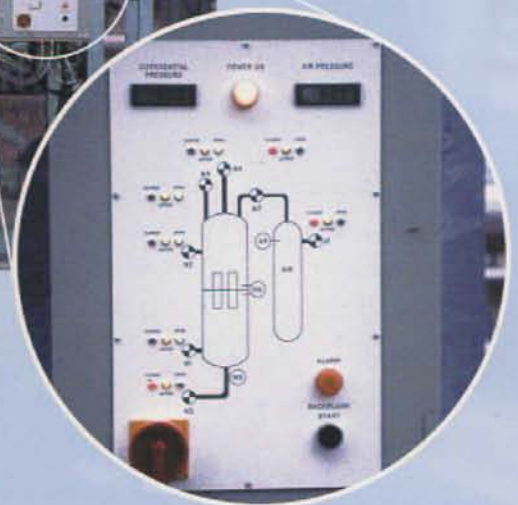
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Self Cleaning Systems



- Barton Firtop can supply Fully Automated Systems, individually designed to address our clients specific and special applications.
- Many of these systems have been supplied to major companies, receiving numerous commendations for their innovative design and application in solving the clients problem.
- To demonstrate our claim we detail a typical system with a shortlist of its unique features including:-
 - 1000:1 Filter area ratio providing high dirt holding capacity
 - Pleated, backwashable filter elements for economy of space
 - Back-flush utilising compressed air from integral air receiver
 - Fully automated control using PLC (Programmable Logic Control)
 - Filtration with self-cleaning action down to 2 micron
 - Automatic air elimination after cleaning cycle



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Pressure Vessel Filtration

Barton Firtop have successfully designed and manufactured Process Pressure Vessels for over 20 years.

Summary of Codes Available

- British Standard PD 5500 (BS 5500)
- American Standard ASME VIII Div. 1
- Dutch Standard Stoomwezen Regulations
- Others Available Upon Request

Typical Manufacturing Range

- Pressure Up to 689 Bar (10,000psi)
- Temperature Up to 750°C
- Size Up to 2.5m Diameter and 25 tonnes max weight
- Materials From Carbon Steel through to Super Duplex

● Gas Filtration

Vertical and horizontal vessels are available for separation of solids from Gas down to 1 micron. Special features include safety interlock quick release closure and British Gas compliance.



● Gas / Liquid Separation

Vertical and horizontal vessels are available for the removal of liquids entrained in Gas down to 99.9% of droplets 0.3 micron and larger.



● Liquid / Liquid Coalescers

Vertical and horizontal vessels are available for removal of water from Oil / Hydrocarbon down to 15ppm.



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Pressure Vessel Filtration

- **Oily Water Separators**

Vertical and horizontal vessels are available for the separation of entrained Oil / Hydrocarbons from discharge water systems down to 15ppm.



- **Custom Built Vessels**

Designed Coded custom built filter systems can be manufactured to maintain codes whilst meeting the clients restrictions and dimensions.



- **Duplex Skid Filter Packages**

Manual or automatic systems can be supplied to meet clients specific requirements.



- **Liquid Filtration**

Ranging from extremely coarse filtration down to 1 micron, we can provide a design coded vessel to meet your requirements.



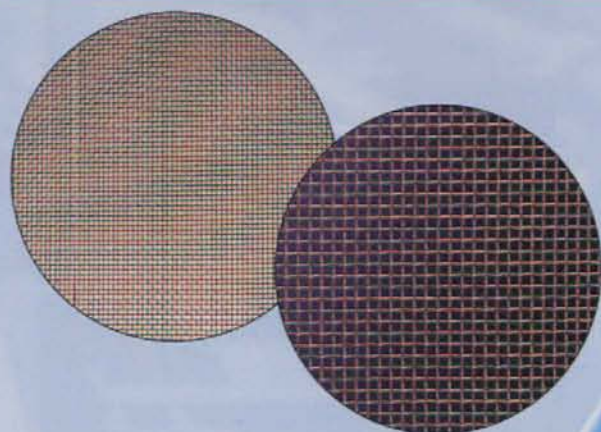
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Mesh Aperture Sizes



Mesh	Wire Diameter		Aperture		Open Area %
	mm	inch	mm	micron	
2	2.5	0.10	10.0		64
2½	2.0	0.08	8.0		64
3	1.4	0.055	7.1		70
3½	1.25	0.05	6.3		70
4	1.219	0.048	5.1		65
5	1.016	0.04	4.0		64
6	0.914	0.036	3.3		61
8	0.71	0.028	2.5		60
10	0.56	0.022	2.0		61
12	0.56	0.022	1.5		54
16	0.46	0.018	1.13		51
18	0.34	0.014	1.07		57
20	0.38	0.015	0.89	894	50
24	0.34	0.014	0.71	713	45
28	0.38	0.015	0.53	531	34
28	0.27	0.011	0.63	633	49
30	0.27	0.011	0.57	572	46
36	0.25	0.010	0.45	451	41
40	0.23	0.0092	0.40	401	40
50	0.21	0.0084	0.29	295	34
50	0.19	0.0076	0.31	315	38
60	0.17	0.0068	0.25	251	35
70	0.15	0.0060	0.21	210	34
80	0.13	0.0052	0.18	185	34
100	0.11	0.0044	0.14	142	31
100	0.10	0.0040	0.15	152	36
120	0.09	0.0036	0.12	120	32
130	0.08	0.0032	0.11	112	34
140	0.07	0.0028	0.11	110	36
150	0.07	0.0028	0.10	98	34
165	0.05	0.0020	0.106	106	46
180	0.06	0.0024	0.080	80	33
200	0.051	0.0020	0.076	76	36
230	0.036	0.0014	0.075	75	46
250	0.040	0.0016	0.061	61	36
270	0.040	0.0016	0.056	56	34
300	0.036	0.0014	0.050	50	34
325	0.036	0.0014	0.042	42	29
350	0.030	0.0012	0.042	42	34
400	0.025	0.0010	0.038	38	36
500	0.025	0.0010	0.025	25	25



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Selection of Elements Available



- Coarse and Fine Mesh Elements
- Bekipor[®] Sinter Technology
- Resin Bonded Glass Fibre Tubes
- British Gas Glass Fibre Tubes
- Pleated Radial Fin Elements
- Disposable Pleated Paper Elements
- Backwashable Stainless Steel Elements
- Depth Filter Cartridges
- Activated Carbon Cannisters
- Wedge Wire Screens
- Bag Filters
- Special Baskets/Elements to Customer Drawings & Samples



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KITO Flame Arresters

Barton Firtop Engineering Ltd are the UK & International Agents for the complete range of KITO[®] flame arresters, and associated safety devices. KITO[®] equipment is of European manufacture and is in full compliance with all the latest ATEX and EN requirements for CE marking.

Main Product Line

- Pipe Vent-Short & Long Burning Proof
- In-Line Flame Arrester Deflagration-proof
- In-Line Flame Arrester Detonation-proof
- Pressure & Vacuum Relief Valves

10" (250mm)
In-Line flame Arrester,
final inspection



3" (80mm)
Endurance
Burning Vent

Special Features

- CE Marked to EN 12874
- ATEX Certified
- Low Cost Range for Group 1 Gas includes Bio-Gas, Land-Fill Gas etc
- Very Competitive Designs
- Low Pressure Losses
- Easy Maintenance
- Competitive Spares



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Products Available

- Filters
- Strainers
- Flame Arresters
- Pressure Relief Valves
- Vacuum Breaker Valves
- Coalescers and Separators
- Automatic Self-Cleaning Filters
- Automatic Back-Flushing Filters
- Skid Mounted Filtration Packages
- Pressure Vessels
- Ancillary Tank & Pipeline Equipment
- Steam Traps, Sight Glasses,
D.P.Gauges & Assorted Valves



An example of pipeline valves, available from Barton Firtop



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