

## Series B10 - Enameled Carbon Steel w/Weather Hoods

## Series B12 - 304 Stainless Steel w/Weather Hoods

Series B10 & B12 air intake filters provide superior protection for compressors, blowers, turbines, engines, and other air handling equipment. They are fabricated from heavy gauge enameled steel. Series B12 corrosion resistant weather hoods reject rain and snow in coastal environments. They are also well suited for service in food processing installations serving pneumatic blowers. Any of the 20 standard models can be modified at your request to more exactly fit your needs.

- Intake Air Flows to 20,000 CFM
- Exceptionally Low  $\Delta P$  Design
- 304SS Throat Safety Cages Std.
- Enameled Steel Construction

### Connection Sizes from 1/2" to 24"

Male NPT (MT) or flat face flanges (FF) are std. Flanges match diameter & drilling for 150# ANSI standard. Specify optional right angle base (AF) for side mounts, female NPT (FT), bevel (BV) or

plain cut (PE) stub necks where you wish to weld in place. Increased or decreased connections are also optionally available on any model.

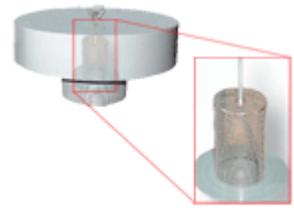
### Choice of Filter Elements

These textile filter elements are unsurpassed for low  $\Delta P$ , high dirt holding capacity and exceptional efficiency. Unlike paper media they cannot rip or tear. These elements have no catastrophic mode of failure. They handle moisture, vibration, poor handling, and rugged service with ease. They stop airborne particulates and other contaminants before they can sneak into a compressor, blower, or turbine to do abrasion or varnish damage. The table below shows the favorite 10 $\mu$  standard filter element. In addition, we offer a wide range of competitive filter elements that can serve your specific needs if a finer micron retention, or specific operating conditions exist.



### Economy Air Intakes

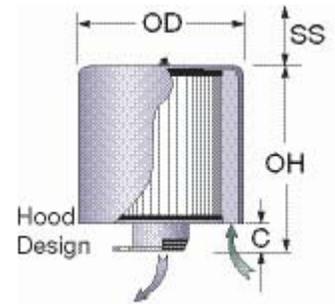
Series B70 Air Intake Filters are similar to series B10, but use a lighter gauge hood assembly (caps are available on the B10 models) and do not include throat safety cages. This design more closely matches competitive OEM equipment at value oriented prices. However, these housings will accept the same premium quality textile filter elements as the B10, B50 and other housing series. Models (not listed) are also available to accept many competitive filter element sizes, please give us a call.



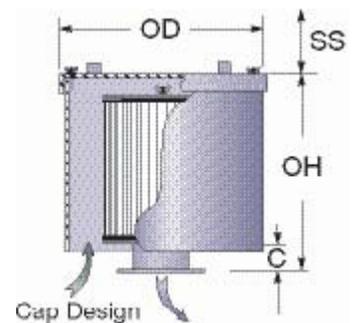
Low Profile Designs with 304SS safety screen shown. Safety screen is std. on all B10 models. Filter element is not shown in this illustration.



Cap style cover std in OD of 20" and larger. Access handles are standard on models with OD of 12" and larger.



Rugged one piece 11 gauge enameled steel weather hoods, or cap assemblies on larger sizes resist damage from abuse common in industrial locations.



Alternate connection styles are readily available.

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## Series B50 - Enameled Carbon Steel

## Series B52 - 304 Stainless Steel

☛ Intake Air Flows to 20,000 CFM    Connection Sizes from ½ " to 24"

☛ B50 - Enameled Steel Construction

☛ B52 - 304SS

☛ 304SS Throat Safety Cages

Series B50 & B52 Air Intake Filters are similar to B10 & B12. They simply substitute a top plate for a hood or cap & skirt assy. The hoodless design simplifies visual inspection for indoor or other sheltered locations and saves

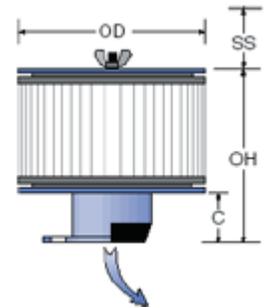
cost on initial purchase.



### Safety Cages

These integral safety cages preclude items such as dropped pens, coins, and most other objects from falling downstream into the compressor or blower at time of change out of the filter element. It only takes one such event to prove the worth of this design.

\* Safety cages are not included in Economy Housing Models B70



Sparks™ Hoodless Air Intake Filters are perfect for indoor use where a weather hood is not required. These elements are immediately visible without needing to remove a hood, simplify routine maintenance inspections. They are also lighter and small units are consequently better suited to avoid vibration damage that is possible with horizontal mounting.

...We can also offer optional internal support assemblies when mounting large filters horizontally. Ask us for details.



## Series E20 - Enameled Steel w/Bolted Closure

## Series E22 - 304 Stainless Steel w/Bolted Closure

### Rugged Enameled Steel Construction Series

E20 & E22 air/gas filters utilize a single self sealing cylindrical filter element to provide the ultimate in protection for compressors, blowers, turbines, engines, and other pipeline equipment. Fabricated from heavy gauge enameled or 304 stainless steel, they utilize a bolt seal closure with neoprene or teflon gasketing for service to 5 psid\*. Any model can be modified to more exactly suit your needs.

- Air/Gas Flows to 20,000 SCFM
- Low  $\Delta P$  / High Flow Design
- 304SS Throat Safety Cages Std.
- Connection Sizes to 24"
- Bolt Seal Closure to 5 psid
- Options:  $\Delta P$  Taps, Angle legs,  $\Delta P$  gauge

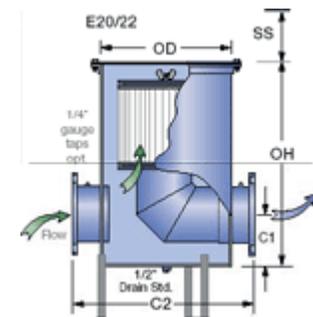
### Connections to 24"

Male NPT (MT) or flat face flanges (FF) are std. Flanges match diameter & drilling for 150# ANSI standard. Specify optional female NPT (FT), bevel (BE) or plain cut (PE) stub necks where you wish to weld in place. Increased or decreased connections are also available on any model.

### Choice of Filter Elements

Series E22 In-Line Air & Gas Filters are similar to enameled steel series E20 but are constructed instead from 304

stainless steel. Filter elements w/304 SS media support screen &/or center cores are also available. (Replace the "K" in the filter element part number with an "N" for 304SS core and 304SS media support screen, or a "Q" for 304SS core with epoxy coated aluminum media support screen). These textile media elements are superior for low  $\Delta P$ , high dirt holding capacity and exceptional efficiency. They stop pipe scale and other contaminants before they can travel downstream. Select from 10 $\mu$ , 4 $\mu$  High Efficiency, or 0.3 $\mu$  coalescing filter elements as your needs dictate to remove 98% of all dust, dirt, and if coalescing, fine mists. Add'l. media and element styles are available for services at elevated temperatures or specific chemistries.



# Replacement Filter Elements - Molded End Filters

- **Rugged Rubber End Seals**
  - No Bypass. No Cracking w/Age.
- **Textile Media - Not Paper**
  - Handles Moisture, Vibration, Abuse.
- **Genuinely Cleanable**
  - Practical & Economical
- **Exceptional Performance**
  - Lower  $\Delta P$ , Longer Life

More than 50 years ago, molded end filter elements challenged the worst of punishments in industrial and military services. Today, with synthetic rubber ends, they are arguably the finest air/gas filters ever made.



We manufacture a broad range of sizes...Overall heights to 40", outside diameters to 36", and inside diameters from 1" to 30". (If you need larger, please call for specific information.) They can handle air/gas flows to 20,000 CFM. Some provide particle retentions down to 99.9% at 0.1  $\mu$  (micron).

These molded end filters are cylindrically shaped. They are designed to cover an intake opening, being held in place by a re-useable plate fitting over a center rod assembly. They have solid rubber ends, heavy duty perforated mild steel, 304SS or 316SS center cores, and radial pleated filter media jacketed with woven wire screen. This screen jacket holds fins open, greatly improving flow and life. Their textile media are well known for superior performance and cleanability vs. fragile paper media.

This rugged construction has been long proven to yield higher flows, longer life, and lower  $\Delta P$ !



*New urethane rubber molding systems yield superior filter end seals at production run economy. Don't settle for PVC ends that can soften at intermittent elevated temps., or crumble if under-cured.*

## Rubber Molded Ends.

The filter media, support screens, and element cores are bonded together by synthetic rubber ends. Rubber is much more rugged and durable than lesser polyvinyl elastomers used by others. Rubber will not crumble in service as under-cured PVC can. PVC is as much as 50% plastisizer. When this plastisizer evaporates, PVC ends can crack and fail. Our standard synthetic rubber ends are black. We offer colored rubber as well, such as white for food service applications.

We carve production molds from solid stock (no stampings) for exacting end seals. These seals stop dirt cold, and resist most oils and solvents, moisture, or vibrational punishment. They can withstand continuous service to 250° F, and

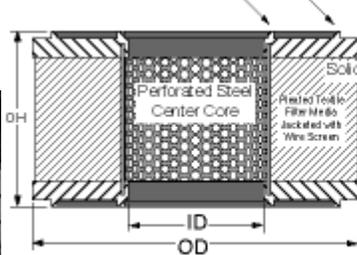
intermittent service at 350°F \*. Optional Silicone rubber ends can serve to nearly 500°F.

*\* Performance considerations vary with elevated service temperature and environments. Metal end options with high temp potting materials can serve to over 2000°F.*

## An Element's Core Is Its Heart.

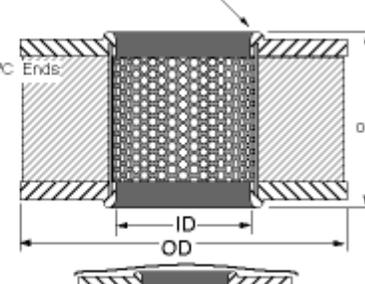
A filter with a weak center core is a house built of straw. We routinely use 16 and 20 gauge perforated steel with 58% open area for low  $\Delta P$  and high column strength to support the innermost end seal. We weld metal core seams and use premium corrosion inhibitors that will not flake off as paint can. These elements are designed to stand up to abuse.

Standard End Seal



This standard end seal employs one or typically two narrow raised sealing surfaces. The center most seal usually stands directly above the center core, ensuring column strength is passed along to the seal when installed in service.

"IR" End Seal



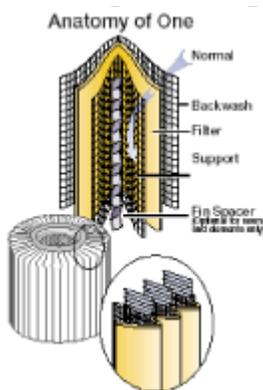
This end seal employs a single raised sealing surface directly above the center core at the very inside diameter of the filter. When the lid of a filter housing has a domed cross section, the IR seal is occasionally necessary to avoid a fit conflict at the shoulder.

## Replacement Filter Elements - Sewn End Filter Elements



Sewn End Style - Cylindrical, Double Open Ended (DOE) with attached textile gasket seal, perforated steel center core (as opposed to inferior expanded metal of others). Filter media is sewn or ultrasonically bonded over a pleated woven wire cage. The large sewn end filter shown has an optional backwash screen banded to the exterior of the filter media. Sewn end style filter elements can serve in high temperatures (700+°F with all glass filter media) or environments with aggressive chemistry that might otherwise degrade filters with molded ends.

However, with the newest Polyurethanes now being used by Shawndra, molded ends can replace sewn end elements for most common services at a fraction of the cost -- please ask about our 327s product line.



### Do you have a - BK- or an - HK- in it?

Sewn end filters may also have optional backwash screen (BK, BN) and/or fin spacers (HK, FK, FN, HN). In the interest of brevity, we did not list each filter with all possible options.

Backwash screen is useful if the fluid flow is ever reversed to clean and extend the service life. For top performance, we pleat backwash screen to full height & full fin depths.

Fin spacers are corrugated metal strips placed within the interior pocket of each pleat to promote flow in high pressure differential, or liquid service.

We offer all options, including alternate filter media (does your P/N end in different numbers?), and 304SS metal parts (an N vs. a K).

Please call if your P/N is close.

[www.nsltechnology.com](http://www.nsltechnology.com)

Shawndra's Sewn End Filter Elements have rugged metal baskets and hand sewn media in a design that has been proven over decades. These elements are constructed entirely from metal and textile media, without any potting material or synthetic end seals. They can endure service in aggressive chemistries and/or high temperatures that molded end elements, or some adhesives used in metal ended filters, could not withstand.

Shawndra's sewn end filter elements have heavy duty 16 & 20 gage center cores with 58% open area for lower pressure differential. Competitors will often use expanded metal or off grade perforated metal.

Large elements have solid steel support rings and welded lift lugs to assist in handling. We double weld for superior strength. Our standard deck wire is woven to width. Competitors will often use mild steel screen (which rusts) with raw cut edges that can perforate the media. When a non-standard width is required, we do something no one else does, we fold it. We preclude the chance for sharp wires to damage the crucial filter media, or more importantly, your hands!

Our radius cut notch ring reliably secures the pleated deck wire assembly to the element core. Others use square cut notch ring that often fail. Standard sewn end filters (those with catalogue numbers ending with K5) use corrosion inhibited carbon steel cores, epoxy coated deck wire, and high flow 10 $\mu$  (98%) polyester felt media. For corrosive services, we offer optional 304 or even 316 stainless steels. A wide selection of alternative filter media covers a full spectrum of chemical resistances, with particle retentions down to 1  $\mu$ , and service to 700°F.

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