In-Line Air & Gas Filters

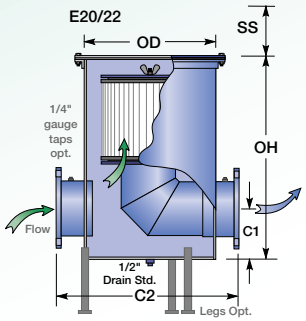
Series E20 - Enameled Steel w/Bolted Closure
Series E22 - 304 Stainless Steel w/Bolted Closure

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



Access Handles Standard on Models with OD 12" and greater.

- **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 304stainless 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.
- **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 ΔP, high dirt holding capacity and exceptional efficiency. They stop pipe scale and other contaminates before they can travel down-stream. Select from 10μ, 4μ High Efficoiency, or 0.3μ coalescing filter elements as your needs dictates to remove 98% of all dust, dirt, and if coalecing, fine mists. Addt'l. media and element styles are available for services at elevated temperatures or specific chemistries.



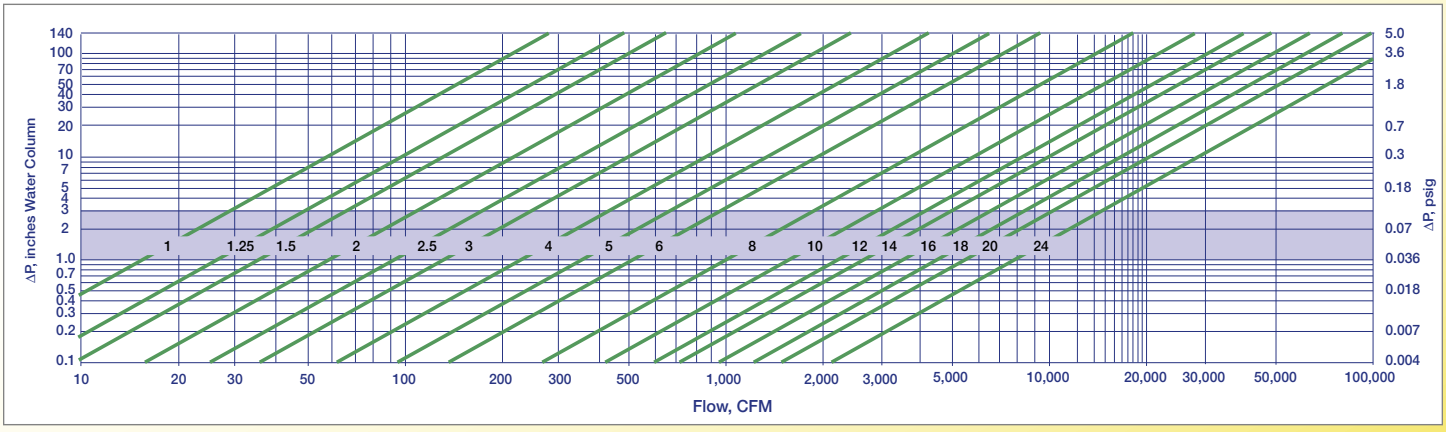
** When used for coalescing services, housings must be installed with flow reversed from that shown above. Inlet flow should travel first to the inside of the filter element, passing through the media to the outside. Coalesced liquids will also pass through the element to collect in sump area below.*

** Consult us for use with reciprocating compressors, or designs to 15 psid.*



Note maintenance free 304SS safety cage and high performance filter element. PE connections (Housing cover & filter element sealing plate removed)

Enameled Steel Housing w/Bltd Closure, Cat. No.	304SS Housing w/Bltd Closure, Cat. No.	Typ. Flow CFM	Std. Connection		Approximate Dimensions, Inches					Wgt. lbs.	Select One Filter Element*:		
			Size	Type	OH	OD	C1	C2	SS		10μ	High Eff. 4μ	Coalecing* 0.3μ
E20-0001-MT-015	E22-0001-MT-015	55	1½""	MPT	12½"	6⅝"	3"	14"	5"	20	321-2082K5	321-2082K7	321-2118WK907
E20-0002-MT-020	E22-0002-MT-020	90	2"	MPT	15½"	6⅝"	3"	14"	8"	21	321-2083K5	321-2083K7	321-2119WK907
E20-0003-MT-030	E22-0003-MT-030	200	3"	MPT	26	8⅝"	4"	16"	16"	44	321-2146K5	321-2146K7	321-2120WK907
E20-0004-MT-040	E22-0004-MT-040	350	4"	MPT	26	10¾"	4"	22"	16"	70	321-2107K5	321-2107K7	321-2121WK907
E20-0005-FF-060	E22-0005-MT-060	800	6"	Flg	40½"	12¾"	6"	24"	25"	120	321-2108K5	321-2108K7	321-2122WK907
E20-0006-FF-080	E22-0006-MT-080	1500	8"	Flg	42½"	16"	8"	28"	25"	200	321-2109K5	321-2109K7	321-2123WK907
E20-0007-MT-100	E22-0007-MT-100	2400	10"	Flg	48½"	20"	10"	32"	25"	240	321-2110K5	321-2110K7	321-2124WK907
E20-0008-MT-120	E22-0008-MT-120	3400	12"	Flg	48½"	24"	10"	36"	25"	310	321-2111K5	321-2111K7	321-2125WK907
E20-0009-MT-160	E22-0009-MT-160	5400	16"	Flg	50½"	32"	12"	44"	21"	530	321-2192K5	321-2192K7	321-2126WK907
E20-0010-MT-200	E22-0010-MT-200	8500	20"	Flg	62½"	36"	14"	48"	25"	660	321-2194K5	321-2194K7	321-2127WK907
E20-0011-MT-240	E22-0011-MT-240	12,000	24"	Flg	68½"	44"	18"	56"	25"	950	321-2195K5	321-2195K7	321-2128WK907



Use the chart above, to access the init. ΔP vs. flow for series E, F, & H20 air intakes. Be aware that the maximum practical flow through a filter housing, like other piping, is limited primarily by the cross sectional area of the connection. Compare the connection size shown with the desired flow. It is prudent to select a connection having a value that is central to the shaded area for suction induced flow. While engines and reciprocating compressors routinely tolerate inlet air restrictions to 20" W.C. (water column), lesser blowers or fans may require element service at 5" W.C. While the init ΔP does not increase, the specific filtration resistance of the airborne contaminates in your location ultimately dictates filter element life. High performance textile elements routinely serve for periods from 3 mos. to 2 yrs., with 1 yr. being common. Use of In-line filters as guard filters between bag houses and blowers is common and life between cleanings will vary with bag quality and upset frequency.

For more information:

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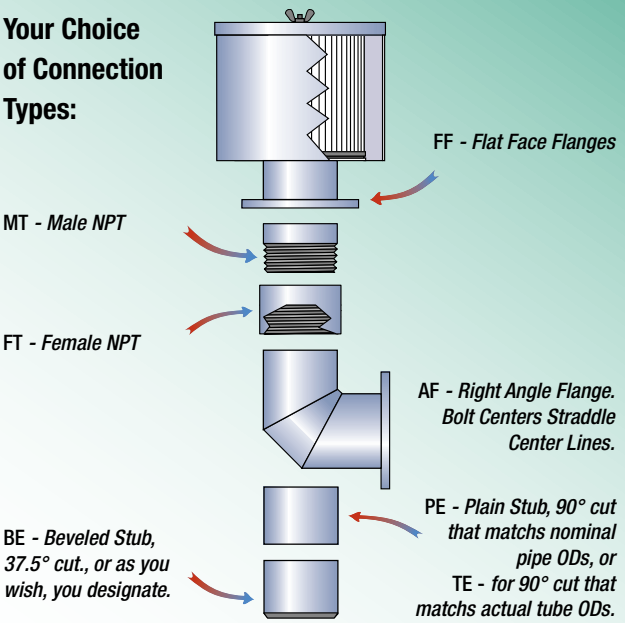
Air Intake Filter Choices

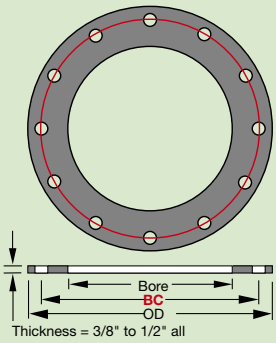
Model Considerations, Air Flow Sizing, Connection Style Choices, Plate Flange Sizing

FLTR Purple Engineering

Filters are available in a wide selection of inlet and outlet sizes and configurations in both enamel finished carbon steel, 304SS, and 316SS. Atmospheric air intake series B10, B12, and B70 with weather hoods can be mounted directly, or piped from a roof top installation to equipment below. In sheltered installations, hoodless air intake series B50 and B52 with exposed filter elements make inspection or pre-filter cleaning a breeze. To silence excess noise at the equipment's inlet, chamber silenced series C10 & C12, or tube silenced series D10 & D12 can cut noise in half. In-line filters E20, E22, & Side Arm Housings F20, & F22 permit installation anywhere between the inlet source and equipment being served. They're perfect for indoor placement with exterior draws, eliminating the need to climb onto the roof. Models with bolt seal closures serve internal pressures to 5 psid (opt. greater) in air or gas services. The H20, H22 exhaust series can stop most mist and smoke in its tracks, without the ΔP penalty loss of older designs. Their revolutionary radial fin reverse flow design makes it happen. An exclusive removable 304SS perforated steel safety cage guards the housing's throat to eliminate the heart attacks when you drop your hat or the wing nut during change out of the filter element. This cage has been sized with excess open area to avoid pressure loss. If you've ever searched for the wing nut when changing the air filter on your auto, you know first hand just how important a throat guard can be. Standard models have male NPT (MT) or flat face flange (FF) connections. Flanges match the diameter & drilling for 150# ANSI standard. Select optional right angle base (AF) for side mounts, female NPT (FT), bevel (BV) or square cut stub necks (PE) where you wish to weld in place. The right angle connection permits exterior wall mounts with gravity still working on your side to ensure an enduring element seal. For situations where you absolutely positively must go truly on edge, we can provide units for horizontal mount with special interior element side mount support assemblies. Increased or decreased connection sizes are also available on any model. Consult us for other material options.

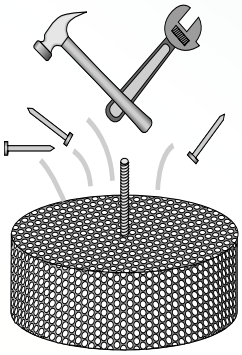
Your Choice of Connection Types:





Flange	Bore	OD	BC	Hole Bore	# Holes
3	3.5	7.5	6	0.75	4
4	4.5		7.5	0.75	8
5	5.6	10	8.5	0.875	8
6	6.7	11	9.5	0.875	8
8	8.7	13.5	11.75	0.875	8
10	10.88	16	14.25	1	12
12	12.88	19	17	1	12
14	14.1	21	18.75	1.125	12
16	16.1	23.5	21.25	1.125	16
18	18.1	25	22.75	1.25	16
20	20.2	27.5	25	1.25	20
24	24.2	3	29.5	1.375	20

Data above will assist in matching the flange connection of any existing filter housing(s) in need of replacement. Sparks™ flanges match the diameter & drilling for 150# ANSI standard. Since it is not practical to measure the Bore of an installed unit, wrestle with your not very flexible metal tape to measure a 90° arc (1/4 of the circle, see red line) over the bolts of of your existing flange. Multiply by 4. Count the bolts. Compare with the chart above. Do Not rely upon the more easily measured flange OD for flange sizing as it can vary between suppliers.



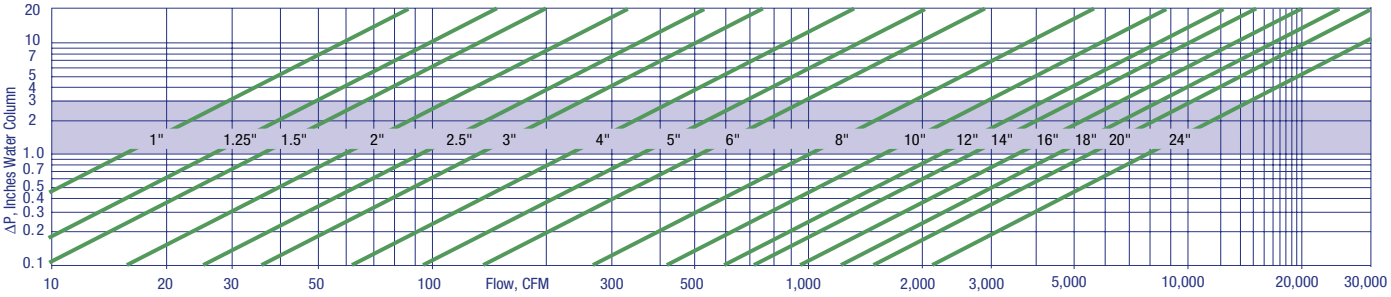
SparksFilters™

A 304SS throat safety cage sits beyond the filter element on all but economy housings. This exceptional feature ensures that the handle or pen you drop during change out doesn't fall into the process equipment downstream! And because it's 304SS, it's maintenance free.



Wing nuts and sealing washer for easy access. Another small detail that eliminates your need to hunt around for a wrench in order to take a quick look at the filter element.

ΔP vs. Flow: Series A, B, C, and D



Use the chart above to access the init. ΔP vs. flow for series A, B, C, & D air intakes. Be aware that the maximum practical flow through a filter housing, like other piping, is limited primarily by the cross sectional area of the connection. Compare the connection size shown below with the desired flow. It is prudent to select a connection having a value that is central to the shaded area. While engines and reciprocating compressors can tolerate inlet air restrictions to 20" W.C., lesser blowers or fans may require element service at 5" W.C. While the init ΔP does not increase, the specific filtration resistance of the airborne contaminates in your location ultimately dictate element life. High performance textile elements routinely serve for periods from 3 mos. to 2 yrs., with 1 yr. being common.

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