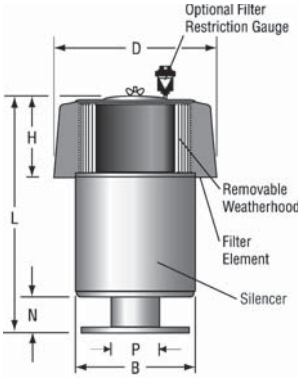
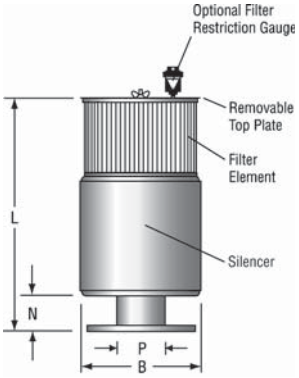
CCS/CS Series
Filter-Silencers

CCF/CF Series
Filters

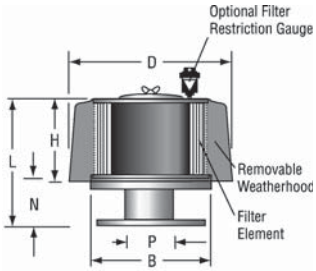
CCS Series (with weatherhood)



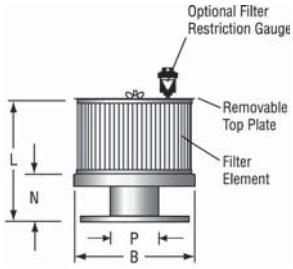
CS Series (with top plate)



CCF Series (with weatherhood)



CF Series (with top plate)



Part Numbers

Pipe Size	CCS	CS	CCF	CF
½	34-K50-TT*	34-M50-TT*		
¾	34-K70-TT*	34-M70-TT*	***Sizes ½"–1" Use CCS or CS Series***	
1	34-K01-TT*	34-M01-TT*		
1¼	34-K21-TT*	34-M21-TT*	34-L21-TT*	34-N21-TT*
1½	34-K15-TT*	34-M15-TT*	34-L15-TT*	34-N15-TT*
2	34-K02-TT*	34-M02-TT*	34-L02-TT*	34-N02-TT*
2½	34-K25-TT*	34-M25-TT*	34-L25-TT*	34-N25-TT*
3	34-K03-TT*	34-M03-TT*	34-L03-TT*	34-N03-TT*
3½	34-K35-TT*	34-M35-TT*	34-L35-TT*	34-N35-TT*
4	34-K04-TT*	34-M04-TT*	34-L04-TT*	34-N04-TT*
4	34-K04-AA*	34-M04-AA*	34-L04-AA*	34-N04-AA*
5	34-K05-TT*	34-M05-TT*	34-L05-TT*	34-N05-TT*
5	34-K05-AA*	34-M05-AA*	34-L05-AA*	34-N05-AA*
6	34-K06-AA*	34-M06-AA*	34-L06-AA*	34-N06-AA*
8	34-K08-AA*	34-M08-AA*	34-L08-AA*	34-N08-AA*
10	34-K10-AA*	34-M10-AA*	34-L10-AA*	34-N10-AA*
12	34-K12-AA*	34-M12-AA*	34-L12-AA*	34-N12-AA*
14	34-K14-AA*	34-M14-AA*	34-L14-AA*	34-N14-AA*
16	34-K16-AA*	34-M16-AA*	34-L16-AA*	34-N16-AA*

*Specify "P" at end of part number for unit with pleated paper elements, "F" for pleated felt or "W" for wire mesh.
Refer to page 8.11 for filter element details.

Universal Silencer's cartridge filters and filter-silencers offer high-performance filtration and silencing in a convenient, economical cartridge configuration. Choose from four standard models for pipe sizes ranging from ½" to 16" and for flow capacities ranging from 15 to 7,700 CFM. Three types of filter element media—pleated paper, pleated felt, or wire mesh—are available to suit your application.

The CCF and CF series filters are high-quality air filters without a silencing section. The CCF has a removable weatherhood, and the CF has a removable top plate. Our CCS and CS intake filter-silencers have a built-in silencing section. The CCS features a removable weatherhood, and the CS has a removable top plate for easy access to the filter element.

Performance Benefits

- **Durability**
  Weatherhoods for CCF and CCS sizes 2½" through 5" are rugged blue ABS composite material that may be painted. All other components are carbon steel construction with a high-quality semi-gloss enamel finish.
- **High Performance**
  Unique design options, combined with the latest manufacturing techniques, ensure optimum performance and long life even under demanding conditions.
- **Functional**
  Choice of filter only or filter-silencer.
- **Easy to Maintain**
  Removable lightweight weatherhood (CCS and CCF) or removable top plate (CS and CF) for easy access to the filter element.
- **Versatile**
  Interchangeable element options for desired filtration characteristics in the same housing.

See pages 1.1–1.3 for ordering information | www.universalsilencer.com

CCS/CS Series

Filter-Silencers

CCF/CF Series

Filters

Noise Attenuation, CCS/CS

Attenuation, dB	Octave Band Center Frequency, Hz
5	63
8	125
10	250
12	500
14	1,000
14	2,000
14	4,000
14	8,000

Pressure Drop, All Models

Pressure Drop (in. of H_2O)	Percentage of Rated Flow
0.7	50%
1.6	75%
2.8	100%
4.4	125%
6.3	150%

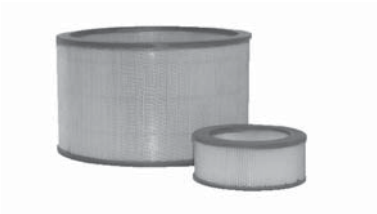
P (size)	Rated Flow Cap. (CFM)	D	H	B	N				L				Approx. Weight with Paper Elements			
					CCF	CCS	CF	CS	CCF	CCS	CF	CS	CCF	CCS	CF	CS
½	15	8.00	3.13	6.00	Use CCS Series	—	Use CS Series	—	Use CCS Series	6.50	Use CS Series	6.50	Use CCS Series	7	Use CS Series	7
¾	22	8.00	3.13	6.00		—		—		6.50		6.50		7		7
1	35	8.00	3.13	6.00		—		—		6.50		6.50		7		7
1¼	60	9.00	3.50	6.50	—	—	—	—	3.50	7.88	3.50	7.88	9	10	5	9
1½	75	9.00	3.50	6.50	—	—	—	—	3.50	7.88	3.50	7.88	9	10	5	9
2	120	9.00	3.50	6.50	—	—	—	—	3.50	7.88	3.50	7.88	8	10	5	8
2½	190	13.44	6.75	10.00	1.00	1.00	1.00	1.00	7.50	17.69	7.13	17.31	11	19	10	18
3	275	13.44	6.75	10.00	1.00	1.00	1.00	1.00	7.50	17.69	7.13	17.31	10	18	9	17
3½	375	13.44	6.75	10.00	1.13	1.13	1.13	1.13	7.63	17.69	7.25	17.31	13	20	12	19
4 (NPT)	500	13.44	6.75	10.00	1.13	1.13	1.13	1.13	7.63	17.69	7.25	17.31	12	19	11	18
4 (flanged)	500	13.44	6.75	10.00	4.00	3.00	4.00	3.00	10.50	19.63	10.13	19.25	14	21	13	20
5 (NPT)	750	13.44	6.75	10.00	1.81	1.81	1.81	1.81	8.38	18.25	8.00	17.88	12	19	11	18
5 (flanged)	750	13.44	6.75	10..00	4.00	3.00	4.00	3.00	10.50	19.56	10.13	19.13	16	23	15	22
6	1,100	18.00	9.50	14.00	4.00	3.00	4.00	3.00	13.31	25.25	12.75	24.75	31	43	23	35
8	2,200	20.00	18.00	14.00	4.00	3.00	4.00	3.00	21.88	33.88	21.38	33.38	43	56	30	43
10	3,000	24.00	11.50	18.00	4.00	3.00	4.00	3.00	15.38	29.25	14.19	28.13	52	83	41	67
12	4,300	24.00	11.50	18.00	4.00	3.00	4.00	3.00	15.38	29.25	14.19	28.13	64	91	48	75
14	5,900	30.00	15.44	24.00	4.00	3.00	4.00	3.00	19.38	36.25	18.25	35.06	97	143	75	121
16	7,700	30.00	15.44	24.00	4.00	3.00	4.00	3.00	19.38	36.25	18.25	35.06	101	145	79	123

All models have a ⅛" FNPT tap for installation of a gauge or manometer to monitor pressure drop. Sizes **½" through 3½"** are standard with female pipe thread connection (FNPT). Sizes **4" and 5"** are available with female threads or flanges. Please specify "threaded" or "flanged" when you order 4" and 5" sizes. Sizes **6" through 16"** are standard with 150# ANSI drilled plate flanges. Rated capacity is based upon exit velocity of approximately 5,500 ft/min. If pressure drop allowance permits, capacity may be increased by as much as 50%.

∴ See pages 1.1–1.3 for ordering information | www.universalsilencer.com

CCS/CS/CCF/CF Filter Elements

Three types of filter elements are available for Universal's cartridge filters and filter-silencers. Pleated paper elements provide the highest efficiency and are considered standard. Pleated felt and wire mesh elements are available for less demanding service with respect to efficiency. The three types of elements are completely interchangeable and will fit all CCS, CS, CF or CCF filter housings.



Pleated Paper Element

Specifications

- High-quality industrial grade filter paper—pleated and oven-cured during production.
- Oven-cured plastisol end caps with molded sealing beads.
- Media efficiency: 99.5% on 2 microns; 97% on 1 micron.
- Maximum operating temperature: 200°F for units with ½" through 16" pipe sizes.

Service Instructions

Because of the low cost of the paper element, it is generally treated as a consumable and replaced when dirty. However, depending on customer preference, the paper element may be cleaned with compressed air and reused.

Compressed Air Cleaning

Carefully direct compressed air (100 PSI maximum) through the dry element, opposite the normal direction of flow. After cleaning, inspect carefully for holes or cracks. If damaged, replace element.

Pleated Felt Element

Specifications

- Durable polyester felt media—pleated.
- Oven-cured plastisol end caps with molded sealing beads (larger elements for pipe sizes 10", 12", 14", and 16" have metal end caps with closed cell rubber gaskets).
- Media efficiency: 99% on 10 microns.
- Maximum operating temperature: 200°F for units with ½" through 8" pipe sizes, 250°F for units with 10" through 18" pipe sizes using elements with metal end caps.

Service Instructions

Pleated felt elements may be cleaned with compressed air (as described for paper elements) or water and reused.

Water Cleaning

Rap gently to dislodge accumulated dirt, soak thoroughly approximately 15 minutes in warm water and mild detergent. Rinse thoroughly under low pressure water. Air dry—do not dry with compressed air. After cleaning, inspect carefully for holes or cracks. If damaged, replace element.

Wire Mesh Element

Specifications

- Galvanized wire-mesh media—corrugated construction.
- May be cleaned and reused indefinitely.
- Wire mesh elements are considered "roughing" filters and are not recommended for applications which require efficient filtration of fine particles.
- Approximate efficiency: 93% on 10 microns. Efficiency will vary with element oil or adhesive coverage.
- Maximum operating temperature: 200°F for ½" through 16" with oil-free adhesive (flash point of adhesive is 235°F) and 300°F for ½" through 16" without adhesive.

Service Instructions

New elements are delivered pre-treated with Universal Silencer's oil-free adhesive. See the back page for details. For best efficiency, wire mesh elements must be retreated after each cleaning. Spray the element on both sides with Universal Oil-Free Adhesive, P/N 81-0323, following the directions on the container. For oil treatment, dip the element in SAE 30–50 motor oil and drain thoroughly before using.

Cleaning

To clean wire mesh elements, wash in solvent or warm water and detergent in a container large enough for complete immersion of element. Rinse completely, drain, and either air dry or use compressed air. After cleaning and drying, retreat the element with oil-free adhesive or oil as described.

P (Nom.)	Replacement Element Part Number		
	Paper	Felt	Wire Mesh
½	81-0470	81-1202	81-1035
¾	81-0470	81-1202	81-1035
1	81-0470	81-1202	81-1035
1¼	81-0471	81-1203	81-1036
1½	81-0471	81-1203	81-1036
2	81-0471	81-1203	81-1036
2½	81-1063, 81-0472 (old)	81-1205, 81-1204 (old)	81-1038, 81-1037 (old)
3	81-1063, 81-0472 (old)	81-1205, 81-1204 (old)	81-1038, 81-1037 (old)
3½	81-1063	81-1205	81-1038
4	81-1063	81-1205	81-1038
5	81-1063, 81-0474 (old)	81-1205, 81-1206 (old)	81-1038, 81-1039 (old)
6	81-0475	81-1207	81-1040
8	81-0475 (2)	81-1207 (2)	81-1040, (2) 81-1199 (old)
10	81-1163	81-1209	81-1200
12	81-1163	81-1209	81-1200
14	81-1164	81-1210	81-1201
16	81-1164	81-1210	81-1201

See pages 1.1–1.3 for ordering information | www.universalsilencer.com