

Your Source for Emission Lab Filters

Continue Below for Specifications on the following:

- Complete Turn Key Heated Modules
 - Heatable Housings
- Hydrocarbon Free Filter Elements
 - Acid Washed / SCR Elements
 - Controllers for Heated Modules
- Pallflex - Diesel Particulate Filter

HEATED MODULE FILTER ASSEMBLIES

Features:

- User Friendly Design
- Rugged Construction
- Choice of K-Type or J-Type Thermocouple
- Accepts Industry Standard Filter Cartridges
- Quick Release Bayonet-Type Closure
- 450°F Maximum Temperature (232°C)

Applications:

- Automotive Emissions Testing
- Continuous Emissions Monitoring
- Stack Gas Testing



The UFS Heated Filter Modules are complete turnkey systems that allow for heated emission samples to be filtered within an encapsulated thermocouple controlled heated body. Specifically created for automotive, CEM, and stack gas monitoring applications our simple, robust design ensures a constant, continuous temperature while eliminating “cold spots” with the jacketed assembly. The module is pre-fabricated to either stand vertically, or lay horizontally, giving the customer added installation flexibility. Our unit’s heating core is one solid silicone encased assembly which is mechanically produced guaranteeing superior results.

None of our competition’s hand wrapped units are made in the same manner since the heating wire is coiled manually. Plus, they are taped and glued in place which over time deteriorates. Our silicone heating element is form fitted without using adhesives which provides a fast, even heat transfer. Next a uniform fitting insulation pack is swathed over the silicone heating element, which is then encased in a durable high temperature thermal plastic case. The simplicity of this allows for a quick-turn around if the heater ever needs maintenance.

PRINCIPLE SPECIFICATIONS

J-TYPE Thermocouple	HM-H130STR-HJ	HM-H140STR-HJ	HM-H254STR-HJ
K-TYPE Thermocouple	HM-H130STR-HK	HM-H140STR-HK	HM-H254STR-HK
Maximum Pressure (psig)	30	30	30
Maximum Temperature (°F)	450	450	450
Internal Volume (cc)	85	235	1030
Principle Dimensions: (inches)			
Diameter of Heat Module	4.75	4.75	6.63
Overall Length with Handle	11.50	16.00	19.00
Overall Length without Handle	8.50	13.00	16.00
Base Plate Dimensions	6.00 Square	6.00 Square	8.00 Square
Element Removal Clearance	5.34	9.58	12.72
Filter Element Codes: (1)			
Disposable (Silica) Element	25-64-□S	25-178-□S	51-250-□S
Disposable (PVDF) Element	25-64-□K	25-178-□K	51-230-□K
Disposable (Acid-Washed) Element	25-64-□S-AW	25-178-□S-AW	51-230-□S-AW
Stainless Steel Element	SS-25-64-□	SS-25-178-□	SS-51-230-□
Volts	120	120	120
Amps	1.5	1.5	1.5
Watts	180	180	180
Frequency	50/60 Hz	50/60 Hz	50/60 Hz
Housing Port	1/4"	1/4"	1/2"

Tube Stubs Supplied per Customer Specifications

- Notes: (1) Replace “□” with designated grade, i.e. 30, 40, 50, 60, 70, 80
 (2) Replace “□” with micron rating, i.e., 01, 03, 10, 25, 50, 100, 200



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Partner of Headline Filters

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At the heart of the HM series is our quarter turn quick release bayonet style filter housings. The bayonet design makes servicing the filter element easy, by eliminating threads that can easily gall under constant heat. Also the quarter –turn connection is either closed (sealed) or not. A threaded connection leaves room for operated error, by needing to completely turn close the handle. Internally, the filter element is held in place by a tie rod and retainer giving the operator complete control over the element's placement. This layout also utilizes the elements complete surface and depth area regardless of flow direction.

They may be used under vacuum to draw the sample or pressurized to 30 psig for blow down. We offer four basic models: H122S-TR, H130S-TR, H140S-TR, and H254S. Choose the correct housing based on the flow rate and response time.

Applications:

- Automotive Emissions Testing
- Continuous Emissions Monitoring
- Stack Gas Testing

PRINCIPLE SPECIFICATIONS

Side Port Housing Model	H122S-TR*	H130S-TR	H140S-TR	H254S
Bottom Port Housing Model	N/A	H130-TR	H140-TR	N/A
Port Size (NPT)	1/4"	1/4"	1/4"	1/2"
Maximum Pressure (psig)	30	30	30	30
Internal Volume (cc)	55	100	240	1320
Maximum Temp. -Buna-N (250°F)	BNH122S	BNH130	BNH130	BNH254S
Maximum Temp. -EPDM (300°F)	GEH122S	GEH130	GEH130	GEH254S
Maximum Temp. -Viton (400°F)	GVH122S	GVH130	GVH130	GVH254S
Maximum Temp. -Silicone (450°F)	GSH122S	GSH130	GSH130	GSH254S
Maximum Temp. -Kalrez (600°F)	KZH122S	KZH130	KZH130	KZH254S
Principle Dimensions: (inches)				
Head Diameter	1.50	2.20	2.20	3.46
Overall Length	4.72	5.19	9.68	12.99
Element Removal Clearance	4.09	4.34	8.58	11.72
Filter Element Codes: (1)				
Disposable element	12-57-□	25-64-□	25-178-□	51-254-□
Stainless Steel Element	SS-12-57-□	SS-25-64-□	SS-25-178-□	SS-51-254-□
Materials Of Construction: (2)				
Body & Internals	316LSS	316LSS	316LSS	316LSS
O-Rings	Silicone	Silicone	Silicone	Silicone

FLOW RATE IN SCFM AT STATED LINE PRESSURE WITH 1.5 PSID

Air Line Pressure (PSIG)	Model H122			
	50S	60S	70S, 70S21-R	80S
1.5	1.5	3.0	3.6	4.0
15	2.7	5.5	6.5	7.7
30	4.0	8.4	10.0	11.0
Model H130				
1.5	3.0	5.2	6.2	6.8
15	5.4	9.5	11.0	11.0
30	7.8	14.0	16.0	17.0
Model H140				
1.5	5.6	6.8	7.4	8.0
15	10.0	12.0	13.0	14.0
30	14.0	18.0	19.0	21.0
Model H254				
1.5	11.8	18.1	19.1	21.0
15	21.0	32.3	34.0	37.4
30	31.5	48.5	51.0	56.1

Notes: (1) Replace '□' with grade required, e.g. 12-57-50S, SS-25-64-03

(2) Material abbreviations, 316LSS = 316L Stainless Steel

(*) As of October 31, 2011 we do not offer this unit as a heated module



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Our Microfiber disposable filter elements are specifically designed for emission testing. We utilize borosilicate glass fiber which is then bonded with a variety of resins to provide suitable results based upon your precise analysis requirements. These elements offer exceptional filtration efficiency at very low-pressure drops and being +90% void volume give very long service life.

K Grade

Elements are specified for particulate removal where corrosive gases and liquids are to be filtered as they have excellent chemical resistance. They are also used when highly reactive gases are being analyzed since they exhibit very low levels of adsorption.

ET Grade

Elements are hydrocarbon-free filters developed to remove particulate for automotive emission testing up to 400°F.

S Grade

Elements are completely inorganic and are used to filter particulate at temperatures from 300°F to 900°F.

S21-R Grade

The **S21-R Type** are used in diesel emission applications. These elements have an extremely coarse prefilter to capture heavy particle loading.

Acid Wash Elements



United Filtration Systems borosilicate microfiber, Acid Washed (AW) series of elements capture the excess ammonia that is introduced into the emission stream. This scrubbing is done by a chemical bond between the ammonia (NH₃) and the acid washed (Phosphoric) filter elements, thus providing accurate test results and protecting sensitive equipment.

The advantage of our element is the fact that the AW series will fit standard existing filter housings already in service. No new installation is required.

PRINCIPLE SPECIFICATIONS

Part Number Element Size	Temperature Rating 0° - 300°F	Temperature Rating 300°F - 900°F
12-57- (0.50" x 2.25")	12-57-50KAW	12-57-50SAW
25-64- (1" X 2.5")	25-64-50KAW	25-64-50SAW
25-178- (1" X 7")	25-178-50KAW	25-178-50SAW



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The "50" Grade element is rated at 99.99% efficiency against 0.01 micron particles.

The "70" Grade element is rated at 95% efficiency against 0.01 micron particles.

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Heated Module Controller:



A complete packaged solution may be provided with our off-the-shelf digital temperature controller that maintains accuracy of +/- 1%. Once the controller reaches its set point it will turn off and not turn on again until the temperature drops by 5°F. As a safety feature the controller will sound an audible alarm if the temperature exceeds 15°F above the set point. This option allows us to provide a turnkey system to meet your demands.

Two Models Available:

Model #HM-Controller-J
Model #HM-Controller-K

Specifications:

- 120
- 15 amps
- Digital on/off controller
- Units in °F
- Input power cord 6 feet (1.8m) long with standard plug
 - 120 VAC: NEMA 5-15
- Output Receptacle:
 - IP 67 four-pin (NEMA 6P equivalent) (plug assembly included)
- Audible alarm
- Type K thermocouple mini and standard connector input
- Average accuracy of ±1% FS
- Resolution: 1°
- Hysteresis: 5°
- Suitable for outdoor use (must be mounted vertically)
- Operating exposure temperatures: 14 to 131°F
- Storage exposure temperatures: -4 to 176°F
- Mounting feet included
- Optional mounting bracket kit ideal for tote tank / IBC applications

Ordering information:

To order please contact us at 1- 800-311-5561. We inventory an extensive range of components to provide fast delivery of complete turnkey systems. Filter housings, silicone heater jackets, and controllers are stocked to expedite our services. Your fitting/connection requirements will need to be specified to finalize your order. Lastly, the module is tested for 24 hours prior to shipping to guarantee performance.



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