

# ACT

## Advanced Carbon Technology

- 6" OD, 1.9" ID carbon block filters
- Easy change-out within minutes
- Excellent adsorption capacity

Achieve better results than traditional GAC filters at a fraction of the footprint while decreasing capital investment, replacement and maintenance costs.

### SUITABLE USES



Water



Air & Vapor



Oil & Gas



Chemicals

### ADDITIONAL FEATURES

Cartridges have excellent adsorption capacity with minimal flow resistance.

Ideal for use in removal of organics, PFAS and other contaminants that granular activated carbon is used.

No backwashing or flushing needed.

Available in a variety of end cap configurations to fit your applications and current housings.

Certified to NSF/ANSI 42 and NSF/ANSI 61.

External rigid cage adds additional support and built in handle makes filter change out fast, easy and safe.

Thermally bonded.

Fully incinerable for complete chain of custody.

### REMOVAL CAPABILITIES

- Chlorine
- Chloramines
- PFA's
- VOCs
- Colors
- Lead
- Arsenic
- Mercury
- Heavy metals
- and more...

For more information, e-mail: [info@fil-trek.com](mailto:info@fil-trek.com) or visit [Fil-Trek.com](http://Fil-Trek.com)

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## ELEMENT SPECIFICATIONS

<b>RECOMMENDED FLOW RATE</b>	4 GPM per 10"
<b>MAX. FLOW RATE</b>	8 GPM per 10"
<b>DIMENSIONS</b>	
Outside Diameter	6" (15.24 cm)
Inside Diameter	1.9" (2.82 cm)
<b>AVAILABLE LENGTHS</b>	20", 40", 60", 80" (50.8, 101.6, 152.4, 203.2 cm) *Additional lengths available
<b>MAX. TEMPERATURE</b>	180°F (82°C)
<b>USEABLE CARBON MEDIA</b>	5 lbs carbon per 10" length
<b>PRE-RINSE</b>	Pre-rinsing is suggested to remove any non-binded carbon dust.
<b>MATERIALS AVAILABLE</b>	
Media	O-Rings
Carbon Block	Buna-N, EPDM, Silicone, Viton, TEV
Core, Cage and End Caps	Polypropylene
<b>CERTIFICATIONS</b>	All materials comply with FDA Title 21 Certified to NSF/ANSI 42 and NSF/ANSI 61

## OUR CARBON

### CARBON FORMULATIONS

- We use over a hundred different carbon formulations to achieve ideal contaminant removal based on your application.

### REPLACE OR ENHANCE

- Use these elements and system in place of a traditional GAC system.
- Can be used to replace existing GAC applications or systems.
- Implement as a polisher to existing systems.



### OUR DESIGN

- Designed with a robust outer cage to protect the carbon block during handling for easier installation and removal.
- A double o-ring seal to ensure a zero bypass connection.
- NSF/ANSI certified for potable water applications.

## ELEMENT LIFESPAN ESTIMATIONS

\*Based on a 40" lg filter

**> 1,000,000 Gal\***  
Of PFAS from 1ppb to non-detect

## AVAILABLE END CONFIGURATIONS

### OPEN END CONFIGURATIONS



### CLOSED END CONFIGURATIONS



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### COMPLETE SYSTEM SOLUTIONS

#### SYSTEM BENEFITS

- Estimated 1/15 of the footprint size required in comparison to conventional GAC systems.
- Estimated 1/20 of the capital investment in comparison to conventional GAC systems.
- No backwashing or flushing required.
- No effluent or waste streams generated.
- No channelling with ACT, 100% of available surface area is utilized prior to filter exhaustion.
- Exhausted elements can be easily changed by maintenance crew in minutes with minimal downtime.
- Elements are fully incinerable for complete chain of custody, EPA manifestation documents can be provided upon request.

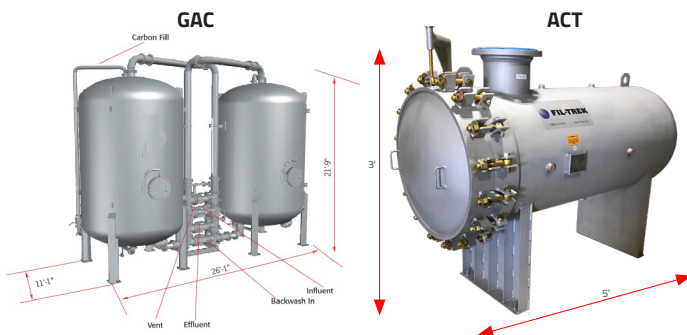
#### STANDARD SYSTEM COMPONENTS

- Pre-treatment filter, ideal at 1 micron absolute
- ACT carbon filter
- Pressure gauges
- Flow meter

#### ADDITIONAL CUSTOMIZATION/OPTIONS

- Skid assembly
- Polishing filters
- Automated control panel/instrumentation
- Automated valves and more...

#### 100 GPM SYSTEM COMPARISON



#### SYSTEM DESIGN

- NSF/ANSI 61 certified SS304 or SS316 filter housings
- Designed to accept up to 36 elements with a 50" diameter and accommodate 750+ GPM for a single element housing.
- A single vessel footprint can be as small as 5ft x 3ft.
- Additional housings can be easily manifolded together to meet greater flow requirements or increased surface area.
- For certain contaminants, flows of < 40 GPM can be handled by a single element housing with a 10" diameter body.



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## PRODUCT NOMENCLATURE

ACT	-014	-40	-226	-BN	
MODEL	FORMULATION	LENGTH	CONFIGURATION	O-RING	OTHER
ACT – Advanced Carbon Technology	<b>010</b> - General Industrial <b>011</b> - Chlorine, taste, odor <b>012</b> - Lead <b>013</b> - Chloramine <b>014</b> - PFAS <b>015</b> - Color <b>016</b> - VOC's <b>017</b> - Plating <b>018</b> - Mercury <b>019</b> - Arsenic	20 40 60 80	<b>362</b> - 362 top cap, closed bottom <b>435</b> - 435 top cap, closed bottom <b>226</b> - 226 base w/ handle <b>338</b> - 338 locking base w/ handle <b>225</b> - 225 base w/ handle	<b>BN</b> – Buna-N (std) <b>ED</b> – EPDM <b>SI</b> – Silicone <b>VI</b> – Viton <b>TEV</b> – Tef. Enc. Viton	<b>(-)</b> Rigid cage (std) <b>AC</b> - Acid wash

Additional lengths, end caps or other customization may be available, contact Fil-Trek for part number information

## CASE STUDY - ACT FOR PFAS REMOVAL

Fil-Trek implemented the Advanced Carbon Technology (ACT) for the removal of PFAS contaminants at a drinking water bottling plant. The raw water inlet concentrations of combined PFAS reached levels greater than 40 PPT. ACT through a single pass was able to drop the levels of combined PFAS to non detectable levels for over 500,000 gallons using only ~50Lbs of Carbon. PFBS was the first PFAS compound to break through as it is the most soluble and hardest to remove. PFOA/PFOS did not break through until 900,000 gallons passed though.

CONTAMINANT	RAW WATER CONCENTRATION	186,400 GAL TREATED	489,400 GAL TREATED	734,500 GAL TREATED	971,300 GAL TREATED	1,219,100 GAL TREATED	System design: Raw spring water > sediment filtration > ACT filtration with a flow rate of 17 GPM.  Extrapolating to an ACT 6" x 40" lg, 100 GPM system.  The estimated footprint size is 5' x 5' x 6' for a single pass system.
PFOS	27.4	Non Detectable	Non Detectable	Non Detectable	Non Detectable	Non Detectable	
PFOA	5.48	Non Detectable	Non Detectable	Non Detectable	2.0	2.86	
PFOS + PFOA	32.88	Non Detectable	Non Detectable	Non Detectable	2.0	2.86	
PFBS	4.23	Non Detectable	Non Detectable	2.0	2.0	3.26	
PFHpA	4.13	Non Detectable	Non Detectable	Non Detectable	2.0	2.746	

All Measurements are in ng/L - (PPT)