

Axon Environmental Filter

Axon Environmental Filters use thermally treated Swedish peat to filter oil, petroleum and heavy metals from water more efficiently than anything else. This emerging innovation is the future of oil/water separation and contaminated water purification. Mobile and permanent versions with varying capacities are available.



Axon Filters contain no chemicals, just pure peat moss (*AFX Absorber*) and high density polythene plastic. When polluted water passes through the Axon Filter, the hydrocarbons and heavy metals immediately become encapsulated by the *AFX Absorber* inside. The end product is virtually clean water that is safe to be released into the natural environment, drainage systems, etc. This new system is more cost effective, easy to use, and environmentally friendly than anything else on the market.

Contaminated Wastewater and Containment/Treatment

	Oil/ Water Separator	Axon Filters with AFX Absorber
Filters oil and petroleum from water (Effluent below 1PPM)		X
Filters heavy metals from water		X
No additional handling of separated components		X
Directly discharge effluent water		X
Accommodate varying specific gravities and flow rates		X
Fixed System setup	X	X
Mobile System setup		X
Cost Effective		X



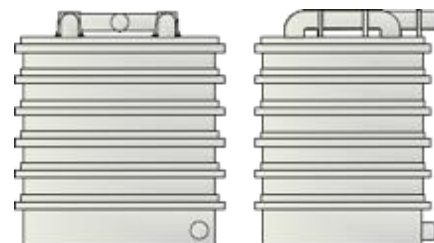
Aboveground Container-Housed Filter with Fresh Peat



How do they work?

The Axon Environmental Filter is very simple in design. All models work following the same basic steps:

- 1) Contaminated Water is pumped into the first section of the filter
- 2) The water is dispersed evenly in the first filter cassette
- 3) The water flows through the next 2-4 cassettes, which are filled with AFX Absorber (peat)
- 4) Clean water flows out



When the peat is fully saturated an alarm or text message will notify you that the filter requires an absorbent change. The system will automatically shut off when that occurs. Our patented, thermally-treated Swedish Peat (AFX Absorber) is the secret behind these systems. This peat is more effective at absorbing hydrocarbons than ANYTHING else on the market.

Some facts about AFX Absorber:

- ✓ Captures petroleum, heavy metals, and all other hydrocarbons
- ✓ 100% Hydrophobic... Will only absorb the contaminants
- ✓ Contains only 10% moisture content, far less than other products
- ✓ Will absorb approx. 1/2 liter of oil for every 1 liter of peat (over 2x as absorbent as carbon)
- ✓ Will NOT leach contaminants
- ✓ 100% organic, biodegradable, and ecologically friendly
- ✓ Brown when fresh, Black when saturated



What is different about AFX Absorber?

AFX Absorber starts out as regular peat moss, harvested in the arctic regions of Sweden. The peat undergoes a thermal treatment process that allows the peat to become granular. The thermal treatment of the peat creates a layer of resins on the surface of the granular absorber. This layer of resins prevents water from penetrating the peat moss, allowing only organic compounds to penetrate the surface and become captured.

The end product is an incredibly effective hydrocarbon absorber that contains less than 10% moisture content. This allows for excellent absorption performance. The saturated peat can be used as a great source of energy as well. It is easy to dispose of once used. It can be burned, mixed in with soil to decompose, or taken to a treatment facility at a fraction of the cost compared to carbon, clay, bulk water, etc. This incredible substance allows for low-cost, high efficiency filtration of petroleum and heavy metals from water.

Filtration Performance

These filters are proven to remove petroleum and heavy metals from water, where the effluent is clean enough to be released into the environment. The data below shows the combination of performance at a dewatering site and performance from independent lab testing where there was a variety of different contaminants in the groundwater.

Sample Constituent	Before Filtration	After Filtration	Result: % Reduction
Oil Mixture	0.87 g/l	0.956 mg/l	99.89%
As- Arsenic	5.61 µg/l	<0.05 µg/l	99.12%
Cd- Cadmium	0.09 µg/l	<0.05 µg/l	44.44%
Cr- Chromium	19.60 µg/l	<0.09 µg/l	99.54%
Cu- Copper	107.00 µg/l	1.16 µg/l	98.92%
Ni- Nickel	16.80 µg/l	<0.60 µg/l	96.43%
Pb- Lead	25.3 µg/l	<0.50 µg/l	98.02%
Zn- Zinc	42.10 µg/l	12.00 µg/l	71.50%
Hg- Mercury	0.07 µg/l	<0.02 µg/l	71.43%
Benzo(a)pyrene	0.37 µg/l	<0.01 µg/l	97.30%
Suspended Solids	342.00 mg/l	8.20 mg/l	96.86%

Our client would have paid over twice as much for pump and haul services, had they not utilized our peat-based technology!

The following is a list of other common contaminants that these systems are being used for:

1. Hydrocarbons	12. Benzene	23. Isobuthanol
2. Cyclohexane	13. Toluene	24. Isopropanol
3. Cyclohexen	14. Xylene	25. Methanol
4. Heptane	15. Phenol	26. Propanol
5. Hexane	16. Carbon tetrachloride	27. Acetone
6. Hexene	17. Chloroform	28. Acetonitrile
7. Kerosene	18. Dichloromethane	29. Carbon disulfide
8. Jet Fuel	19. Butanol	30. Silicone oil
9. Diesel	20. Ethanol	31. Tetra hydrofuran
10. Petrol	21. Ethyl ether	32. Maize oil
11. Aromatic hydrocarbons	22. Ethylene glycol	33. Paint

Have questions regarding something that you don't see on one of these lists? Email us at devon.breed@battaenv.com or give us a call at (302) 737-3376. We are happy to answer any questions and provide additional performance data.

Value Proposition

Axon Filters are quickly catching on in the US thanks to their cost-saving abilities. BATTA's AFX Absorber is the secret to this technology. The following includes all costs associated with an Axon System:

1) Initial Cost of System Delivery/ Install

The overall price of delivery/ installation is comparable to similar technologies such as carbon filters and oil water separators.

2) Peat Refill

BATTA's patented AFX Absorber captures over twice as much contaminant per volume than the next leading product. You'll spend HALF of what you would on carbon and a fraction of the cost of pump and haul procedures when you use these systems.

3) Peat Disposal

BATTA's all- natural peat absorber can be burned, mixed in with soil to break down, or hauled at a fraction of the cost of other absorbers.

Here are some costs that you won't incur with Axon Systems:

✘ **Pricey polishing medias like Carbon and Organoclay**

The absorption capacity of AFX Absorber is twice that of the next leading product. You can filter more water with less peat!

✘ **Maintenance Costs**

These filters have no moving parts. They are constructed of steel and a high grade polymer. If it breaks, we'll replace it!

✘ **Training and Additional Contractor Services**

Easy to use! Includes auto shutoff switch! Set it and forget it!

✘ **Vacuum Services and Sludge Disposal**

Effluent Water is clean enough to be released onsite by EPA standards.

✘ **Additional Treatment Steps**

We can replace the need of storing contaminated water for offsite treatment and disposal.

Filters come in both mobile and fixed-system design. Above and below ground models are available for permanent systems. Filtration Capacities range from 250gal/hour to 6,000 gal/hour, and can be run side-by side to increase output.

Pricing varies based on specific requirements.

Ask for a quote today!

