

# Product List for: Oil Spill Response, Remediation and Contaminated Water Filtration

ITS Water & Environmental Management and BATTA Technologies, LLC strives to offer environmentally friendly solutions to problems by providing **simple, cutting-edge products, with real results**. BATTA Technologies partners with innovation leaders to develop and distribute these products on a global scale. Below is the list of products currently offered by BATTA Technologies in the areas of **Oil Spill Response, Remediation and Contaminated Water Filtration** including relevant product specifications.



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**AFX Absorber: Peat-based Absorber for 1) Oil Spill Response, 2) Ground Remediation, 3) Refill for Filters**

AFX Absorber, a granular Swedish Peat, is an excellent resource for treating oil spills on bodies of water and for use in soil remediation. It can be applied directly to affected areas of soil. This peat is the main filtration media in all Axon Filters. This 100% natural, hydrophobic Absorber is superior at trapping oil, diesel, petroleum, solvents and heavy metals. This Peat comes in the following sizes:



**Absorber 27 Pound Bag**

Approximately 8 gallons of Peat

Shipped in quantities of 27 bags on Pallet

Roughly 661 lbs. per Pallet



**Absorber 1069 Pound Bag**

Roughly 396 gallons

Shipped in one large bag on Pallet



## Axon Filter System AMF: **Underground Oil/Water Separator and Contaminated Water Purification**

The Axon AMF is the underground system. This version can be utilized near filling stations, transformer pits, and any other facility that requires the collection and filtration of oil, petroleum and metals from water. This system requires a collection apparatus, which feeds the contaminated water into the filter. It also requires an outlet, where the water can be released into a drain, stream, etc. These systems are often paired with a drain well with pump and oil alarm that easily indicates when the Absorber has been saturated. We provide all necessary devices that may be needed to get your system set up. Once implemented the Axon AMF is incredibly easy to monitor and maintain; Set it and forget it!

### **Axon - AMF 600**

Number of Peat Cassettes: 4 + 1  
**Flow capacity: 400 GPH/ 6.66 GPM** (1.5 m<sup>3</sup>/ hour)  
 Absorber Volume: 12 Gallons/ Cassette  
 Total Absorber Volume: 48 Gallons (6 Bags)  
 Absorption Capacity: 24 Gallons  
 Diameter well: 23.63 inches  
 Diameter cassette: 22.84 inches  
 Height: 74.81 inches  
 Dimension in and outlet: 4.4 inches



### **Axon - AMF 800**

Number of Peat Cassettes: 4 + 1  
**Flow capacity: 820 GPH/ 13.66 GPM** (3.1 m<sup>3</sup>/ hour)  
 Absorber Volume: 16 Gallons/ Cassette  
 Total Absorber Volume: 64 Gallons (8 bags)  
 Absorption Capacity: 32 Gallons  
 Diameter well: 31.50 inches  
 Diameter cassette: 30.71 inches  
 Height: 74.81 inches  
 Dimension in and outlet: 4.34 inches





## Axon Filter System AMFI: Aboveground Oil/Water Separator and Contaminated Water Purification

Axon Filter System is also available in an above-ground version. Application areas include workshops, industries, power stations, remediation sites, etc. These filters are called Axon AMFI and can be installed in a building or can be mobile, stored in our containers Axon AMC and Axon AMBT. Axon AMFI can be ordered in three different standard sizes. The larger the filter, the more flow capacity it can handle. It is therefore important in the planning stages to determine the flow capacity needed for the filter system. Axon AMFI can easily be combined with coarse pre-filters, oil-separator as well as other technical equipment specified according to need at the time of the order.

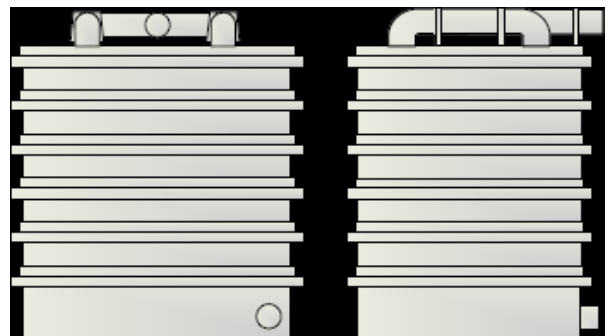
### **Axon - AMFI 500**

Number of Peat Cassettes: 4 + 2  
**Flow capacity: 400 GPH/ 6.66 GPM** (1.5 m<sup>3</sup>/ hour)  
 Absorber Volume: 10 Gallons/ Cassette  
 Total Absorber Volume: 40 Gallons (5 Bags)  
 Absorption Capacity: 20 Gallons  
 Length: 20.48 inches  
 Width: 20.48 inches  
 Height: 55.12 inches  
 Dimension in and outlet: 1.97 inches



### **Axon - AMFI 1200**

Number of cassettes: 4 + 2  
**Flow capacity: 1900 GPH/ 31.67 GPM** (7.2m<sup>3</sup>/ hour)  
 Absorber Volume: 40 Gallons/ Cassette  
 Total Absorber Volume: 160 Gallons  
 Absorption Capacity: 80 Gallons  
 Length: 43.31 inches  
 Width: 51.19 inches  
 Height: 58.27 inches  
 Dimension in and outlet: 4.34 inches



**Axon - AMFI 1800**

Number of cassettes: 4 + 2

**Flow capacity: 4000 GPH/ 66.67 GPM (15 m<sup>3</sup>/ hour)**

Absorber Volume: 88 Gallons/ cassette

Total Absorber Volume: 352 Gallons (44 Bags)

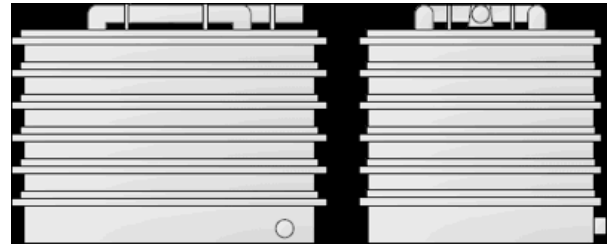
Absorption capacity: 176 Gallons

Length: 59.06 inches

Width: 74.81 inches

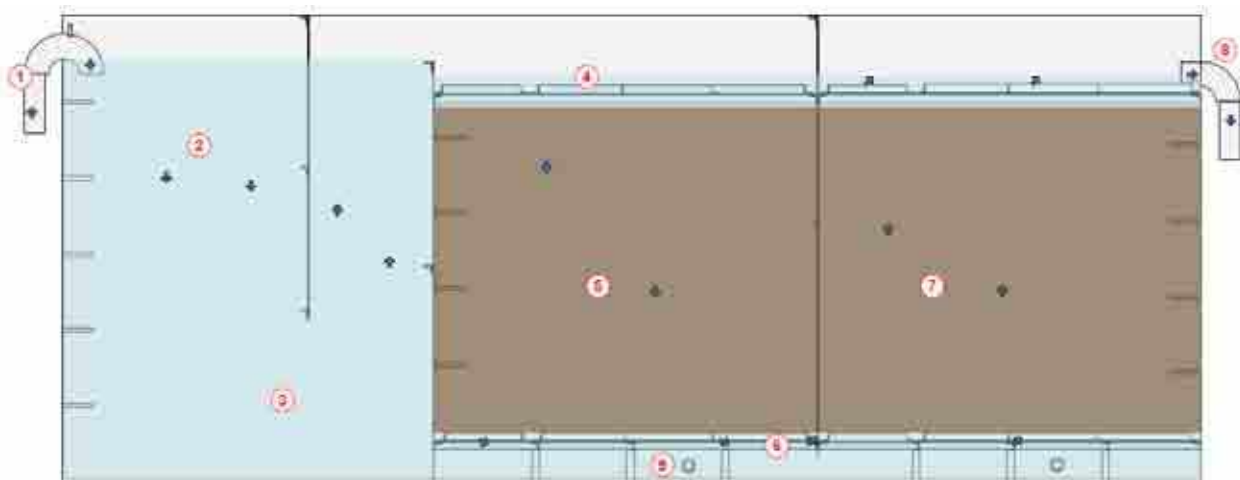
Height: 58.47 inches

Dimension in and outlet: 4.34 inches



## Axon MAXI and MAXA:      **Mobile Roll-Off Oil/Water Separator and Contaminated Water Purification with Sedimentation Option**

**MAXI Filter** - This mobile unit will allow for flow capacity up to 5300 GPH/ 88.34 GPM. They can be run parallel to reach whatever volume necessary. MAXI is a specially made roll-off sized container unit which enables the customer to have a mobile solution that can easily be transported. The MAXI consists of one unit that is divided into three parts. One or two parts for sedimentation separation and one or two parts for the absorber filter. The contaminated water enters at the top (1) where the water will flow down and any floating debris will stay in the first compartment (2). Heavier particles will stay at the bottom of this section (3). When this compartment is filled the water will then, free of debris, over-flow into the second compartment (4) where the water will run down through the first filtration stage (5) with AFX absorber. As it reaches the bottom, the water will run under the baffle (6) to enter the second filtration stage and rise through the absorber (7) to finally exit the unit at the top at the other end (8). At the top and bottom of each filtration stage, there is a perforated ceiling and floor enabling the absorber to stay in place during the filtration process.



### **Axon - MAXI**

Length: 236.23 inches

Width: 102.37 inches

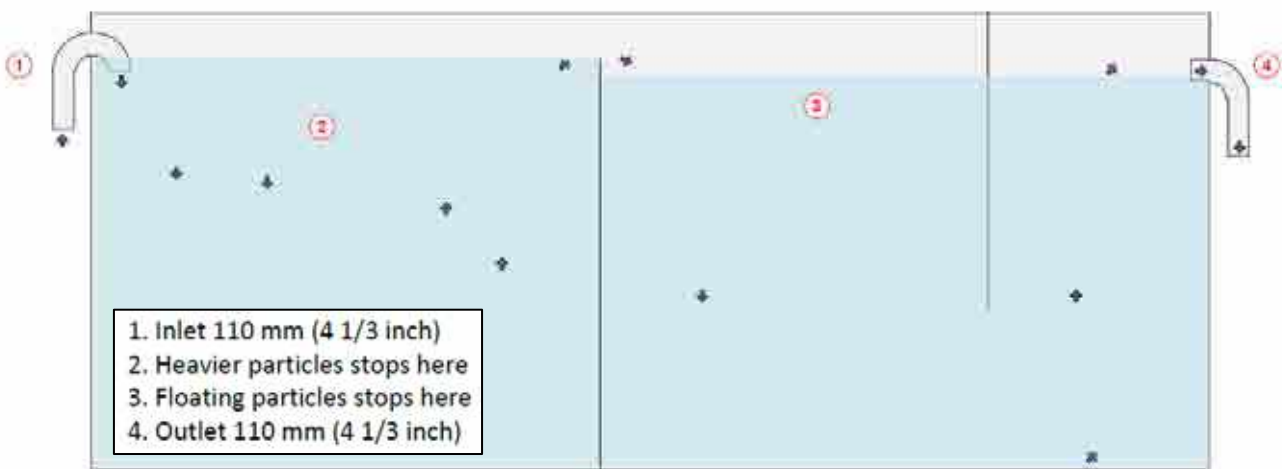
Height: 110.24 inches

**Flow capacity: up to 5300 GPH/ 88.33 GPM**  
(20 m<sup>3</sup>/ hour)

1. Inlet 110 mm (4 1/3 inch)
2. Floating Particles Stop Here
3. Heavier Particles sink to the bottom
4. Perforated Plate (same at top and bottom of filters)
5. Filter Compartment for up to 6 m<sup>3</sup> of absorber
6. Perforated Plate
7. Filter Compartment for up to 6 m<sup>3</sup> of absorber
8. Outlet 110 mm (4 1/3 inch)
9. Camlock 2" for flushing

Amount of absorber approx. 12 m<sup>3</sup> (6 m<sup>3</sup> per filtration stage)  
Easy to install - only one inlet and one outlet

**MAXA Sedimentation** - A roll-off sized container unit which enables the customer to have a mobile solution that can easily be transported. It consists of one unit where two compartments, the last one with a divider to catch floating debris, where each one is working to stop sediments from continuing. The contaminated water enters at the top (1). Heavy particles sink to the bottom (2) and the water continues to the second compartment where floating particles are stopped by the wall (3) and the water continues under the wall and out (4). The MAXA is often used as a precursor to the MAXI Filter, to ensure minimal sedimentation is allowed to enter the filtration process.



**Axon - MAXA**

Length: 236.23 inches

Width: 102.37 inches

Height: 110.24 inches

**Flow capacity: up to 5300 GPH/ 88.33 GPM (20 m<sup>3</sup>/ hour)**

Easy to install - only one inlet and one outlet

Very Similar to MAXI in appearance and design- with focus on sedimentation

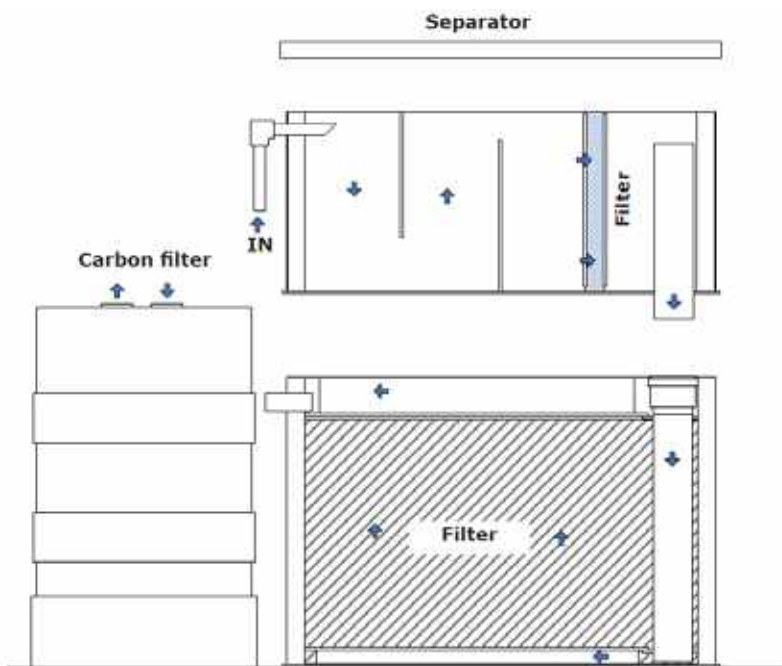




**Axon Marine Filters:**

**Under Up Flow System for increased contact time with peat**

**Axon Marine Filters** pump water from the bottom-up through the peat cassette in order to slow down the flow rate and increase contaminated water contact time with peat. This slower flow rate is ideal for polishing water that is contaminated with heavy metals, which can require additional time to become adsorbed into the peat. These systems are ideal for boat wash stations, marinas, and small scale heavy metal remediation projects. They are often paired with pre-sedimentation filters and activated carbon filters to further clean the water, depending on discharge limits. A typical set up is shown below:



**Separator - sedimentation/coarse filter:**

1200 x 690 x 498 mm

**Filter:**

1200 x 690 x 800 mm with 300 liter absorber

**Carbon filter:**

600 x 1000 mm (barrel) with 150 liter carbon

**Max flow:**

1.5 m<sup>3</sup>/h

**Recommended flow:**

1.0 m<sup>3</sup>/h

**Axon AMFI Mini:**

**Portable, Hand-held Oil/Water Separator and Contaminated Water Purification**

**Axon AMFI Mini** is our newest mobile option. This filter requires 1 bag of Peat (8 Gallons) and can absorb up to 4 Gallons of petroleum. This filter is equipped with an oil alarm to let you know when the Peat is saturated and ready to be changed out. Various alarms can be installed to transmit via internal systems, SMS or GPRS. Many of our customers utilize these systems to empty water at transformer pits. This filter is designed for smaller areas of concern. Axon AMFI max flow rate is 250 GPH/ 4.1 GPM. Axon AMFI Mini suits most power companies or sub-contractors. The smaller filters can be used on their own or as complement to the larger trailer versions.



## Axon Filter System AMBT: Mobile Oil/Water Separator and Contaminated Water Purification with online Detection and Reporting

**Axon AMBT** is a mobile filter system with options for rigorous detection and documentation accessories based on the customer’s needs. Axon AMBT has a gross weight of 2976 pounds (1350 kg) and can easily be moved between various sites with any hitch-equipped vehicle. It uses a Mass Flow Meter before filtration and measures pH, conductivity and turbidity after filtration. All is collected and stored in a PLC with Touch screen. Axon AMBT does not require observation during operation as it is equipped with a stop function that will stop operation and an alarm system will contact the operator when the containment area is empty or the filter is saturated. All information is saved and can easily be presented for both environmental authorities as well as customers. This system provides thorough diagnosis of the containment area and effluent water during the filtration process. Max flow rate= 1900 GPH.



Mobile Unit





## Axon Filter Containers AMC: Fully-Contained, Aboveground Oil/Water Separator and Contaminated Water Purification

The Axon AMC series of filters are fully-contained, insulated, heated and ventilated units designed for large capacity flow rates. These systems can be utilized near filling stations, transformer pits, and any other facility that requires the collection and filtration of oil, petroleum and metals from water. These units are designed for long-life usage and able to withstand weather elements.

### **Axon filter container - AMC 10**

Length: 10 feet (3022 mm)

Width: 8 feet (2438 mm)

Filter volume: 903.5 Gallons (3420 liter)

Filter width: 74.9 inches (1900 mm)

Filter length: 59.1 inches (1500 mm)

Number of filter cassettes: 4 + 2

**Flow capacity filter: 4000 GPH (15 m<sup>3</sup> / hour)**

Flow capacity pipes: 4000 GPH (15 m<sup>3</sup> / hour)

Inlet pipe: HDPE pipe Dim. 2.05 inches (52 mm)

Outlet pipe: HDPE pipe Dim. 4.34 inches (110 mm)

Volume Absorber: 348.71 Gallons (1320 liter)

Color: Standard White, Green, Blue, Grey

Insulation: 70 mm. Styrofoam walls, ceiling and floor

Wall covering: Aluminum / laminate

Floor covering: Aluminum

Lighting: Light fixture EX class

Heating: Electric heat element EX class

Ventilation: Electric fan EX class

Material: HDPE



**Axon filter container - AMC 20**

Length: 6045 mm

Width: 8 feet (2438 mm)

Filter width: 74.9 inches (1900 mm)

Filter length: 59.1 inches (1500 mm)

Number of cassettes: 4 + 2

Number of filters: 2

Filter volume: 2 x 3 420l.

**Flow capacity filter: 7925 gallons / hour (2 x 15 m<sup>3</sup> / hour)**

Flow capacity pipes: 4000 GPH (15 m<sup>3</sup> / hour)

Inlet pipe: HDPE pressure pipe dim. 2.05 inches (52 mm)

Outlet pipe: HDPE pressure pipe dim. 4.34 inches (110 mm)

Volume Absorber: 2 x 348.71 Gallons (2 x 1320 liter)

Color: Per agreement

Insulation: Walls, ceiling and floor: 70 mm Styrofoam

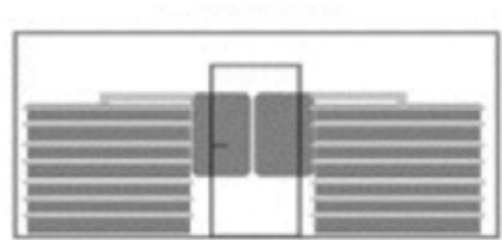
Interior covering ceiling, walls. Moisture-proof wood laminate

Floor: Aluminum

Lighting: Lighting fixture EX class

Heating: Electric heating element EX class

Ventilation: Electric fan EX class





## Axon Accessories:

Every potential site is different. Our products are able to be implemented in a variety of ways and for multiple uses. Due to this fact, every Axon system we sell is developed specifically for the site or application it may be used for. Below is a list of the supplemental products that we offer that help the systems to operate at maximum potential. Many of our systems allow for a “set it and forget it approach.”

### **Axon - Oil alarm**

Gives updates when peat is saturated or containment tank is empty  
Includes sensor, alarm transmitter, box and warning light



### **Pump**

Drain pump single phase 220 V.  
Includes level on/off switch, manual nozzle and mounting



### **Flow meter**

Includes Display, pipes and cables, mounting fixtures and mounting

**Conductivity meter**

Includes Display and Documentation



**pH meter**

Includes Display and Documentation



**Generator**

To power mobile units  
Includes Slides, Electrical outlet and mounting

**Main Switch**

Auto-shutoff for when filter becomes saturated or containment tank is empty  
Includes material and instrumentation

**PLC Management system**

Includes Display with Touch screen, Analog Module, cable and programing

**SMS module**

Includes installation and programing



**Mass Flow Meter**

Complete with display





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