

Oil & Gas Catalogue



ARKAL



FILTOMAT



AMIAD



green-technology



small footprint



water conservation



saving energy



ROI



low maintenance



commitment

managing water to produce oil

There's a saying that in order to produce oil, you have to manage your water.

Water from a variety of sources, including seawater and produced water, can be utilized effectively on offshore oil production platforms and vessels as injection, service or cooling water. But no matter what the source or how it is used, proper filtration is vital to keeping water management cost-effective.

Amiad automatic self-cleaning screen filters deliver reliable, effective filtration solution of solids from 3,500 microns to 2 microns in size. Amiad filters have been proven to perform in more than two decades in the oil industry.

And Amiad filters are clean technology:

- No chemicals
- A bare minimum of backwash water – up to 75% less than sand media filters
- Minimal initial head loss. saving energy costs
- Smaller footprint in terms of size and weight

amiad technology delivers ROI – fast

The cost of Amiad automatic self-cleaning filters can be quickly recovered through dramatic savings in maintenance, consumables and compliance with regulations and company policies.

Here's how:

- No plugging and souring of reservoir
- Reduced wear on seals and bearings of injection pumps
- Increased interval between changes of cartridges or bags in fine filtration systems
- Longer life of expensive RO and UF membranes
- Dramatic reduction in backwash water that must be stored or disposed of
- Significant reduction in contaminant concentration, allowing companies to stay ahead of tightening water quality regulations
- Fewer maintenance operations in remote sites, including offshore rigs and FPSOs

reliable construction

The technology behind Amiad's filtration is extremely reliable. So is the construction of each unit. Built to customer specifications and conforming to international codes and standards, Amiad automatic self-cleaning filters can be tailored to nearly any project with the ideal materials, welding, coatings and controls.

From carbon steel to super duplex, SMO 254 and titanium, Amiad filters can be built to almost any spec – and they are engineered to last for years in even the toughest conditions.

self-cleaning filters

Reliable Amiad self-cleaning screen filters can make produced water, seawater or surface water cleaner, more effective, and less damaging to reservoirs and equipment in oil production operations, onshore or offshore.

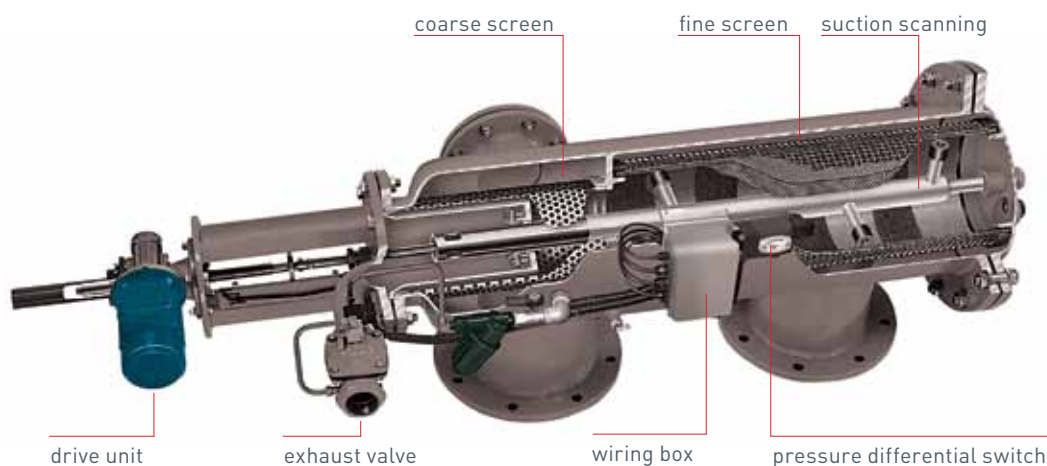
Amiad's suction-scanning technology (also called focused back-flush) automatically begins when a pressure differential builds behind the filter's fine screen. An exhaust valve opens, creating suction forces inside a series of nozzles.

Opening the exhaust valve to the unpressurized outside environment causes water to flow in a high-velocity stream backwards across the screen into the nozzles, carrying the captured particles, or filter cake, with it.

Amiad's suction-scanning technology uses less than 1% of the total process water for cleaning.

The self-cleaning cycle is triggered by the accumulation of suspended solids (filter cake) on the screen surface, as measured by the pressure differential. Therefore, cleaning is performed "as needed" - resulting in minimal water and energy waste. Suction-scanning technology eliminates the need for isolating the filter during the self-cleaning cycle. This focused cleaning and the minimal exhaust requirement allow for uninterrupted process flow.

It's clean. It's simple. It's proven. And there are no chemicals, no cartridges to replace, and no need for redundant systems.



amiad technology fits your site

The biggest strength of Amiad automatic self-cleaning filters lies in polishing water of particles 50 microns or less in size. Those particles are too small for many wedge-wire screens and too large to economically filter with ultra-filtration (UF) systems. In applications where reverse osmosis (RO) will be used to remove dissolved solids, Amiad self-cleaning filters offer excellent, cost-effective pre-treatment to protect expensive RO membranes.

Amiad filters reliably adjust to fluctuations in flow, load and particle type, cleaning themselves as needed while providing uninterrupted filtration.

With their compact footprint, modular design, and availability as freestanding or skid-mounted units, Amiad filters have demonstrated their durability, reliability and cost-effectiveness in the oil industry for more than 2 decades.

Amiad filters can be used in a wide variety of Oil & Gas applications, including:

- Injection Water filtration as a stage in the injection water treatment system
- Pre-Filtration for cartridge and bag filters to reduce consumable cost and maintenance labor
- Cooling Water filtration to protect heat exchangers and bearings
- Service and utility water filtration
- Pre-Filtration for SWRO desalination systems
- Filtration of raw seawater for Pipeline Flushing and pigging pipeline commissioning

amiad applications

- | | | |
|------------------------|--------------------------|---------------------------------|
| A Cooling Water | C Utility Water | E Pipeline Flushing |
| B Waste Water | D Injection Water | F Pre-filtration to SWRO |

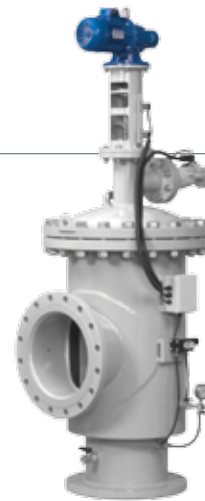


amiad automatic self-cleaning filters

EBS Series

For flow rates up to 6,000 m³/h
(900,000 BWPd)

Filtration degrees: 800-10 micron



SAF Series

For flow rates up to 400 m³/h
(60,000 BWPd)

Filtration degrees: 500-10 micron



Filtomat M300/400 Series

For flow rates up to 1,100 m³/h
(165,000 BWPd)

Filtration degrees: 800-50 micron

No electricity needed



AMF2 Series

Self-cleaning microfiber water filters
Filtration degrees: 20-2 micron

TSS, NTU & SDI reduction
Outperforms sand media systems



amiad filters in service

Here are examples of Amiad filters in a variety of Oil & Gas production sites.

Adriatic Sea [Italy]

LNG Pipeline Flushing
Skid mounted system for
temporary tasks
50 micron
Commissioned: 2008



Mexico

Pre-filtration for Water Treatment
Plant for Industrial use
100 micron
Commissioned: 2007



Brazil

Side Stream Cooling Water
50 micron
Commissioned: 2007



France

Petrochemical Plant Pre-filtration for
RO Boiler feeding system
3 micron
Commissioned: 2006



Middle East

Canal Water Injection
Mobile skid mounted system for
temporary tasks
50 micron
Commissioned: 2003



Ivory Coast

FPSO Seawater Injection
Water Filtration
130 micron followed by 25 micron
Commissioned: 2002



Angola

FPSO Seawater Injection
Water Filtration
130 micron followed by 25 micron
and 5 micron cartridge
Commissioned: 2002



North Sea

Seawater Pre-treatment for
Injection Water
50 micron
Commissioned: 2001



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