



AMIAD IRRIGATION CATALOGUE



company profile



Amiad's innovative filtration solutions meet the challenges presented by varying water quality, rapidly changing weather conditions, and the demands of different geographical regions delivering clean water all year round, around the world.

Clear Solutions to Water Filtration Challenges

For more than 45 years, Amiad Filtration Systems has helped meet the need for clean water by developing a comprehensive line of exceptionally efficient automatic self-cleaning filters and manual filters for agricultural, turf, industrial, municipal, and domestic use. Amiad's technology has built a worldwide reputation for efficiency, effectiveness, and reliability.

Extreme Conditions, Exceptional Results

Amiad is dedicated to meeting the varying needs of our customers worldwide - in Europe, Asia, the Americas, Africa, and Australia. Amiad's filtration solutions are built to cope with the most demanding weather and geographical conditions, and varying water sources and quality. Our solutions meet stringent water quality requirements and standards worldwide.



point to point all over the world

worldwide presence

Amiad provides solutions to more than 70 countries, with nine subsidiaries and sales offices. The company sells principally through distributors as well as directly to end-users and through water treatment system integrators and irrigation companies. The company operates from its headquarters and manufacturing center in Israel. In addition, Amiad has offices in Singapore, Australia, China, India, France, Germany, Turkey, Holland, North America and third party distributors around the world. Amiad is renowned worldwide for its high-quality standards, consistent availability of parts, prompt delivery, and ongoing customer support.

- Amiad Australia
- Amiad China
- Amiad Far-East (Singapore)
- Amiad India
- Amiad France
- Amiad Germany
- Amiad Holland
- Amiad North America (California, USA)
- Amiad Turkey



technology

a world leader in filtration technology

Our extensive line of water filters and water filtration systems includes plastic, steel, semi-automatic and fully automatic self-cleaning screen and micro-fiber filters. Amiad also manufactures various filter elements to suit different filtration needs from 3500 to 2 micron as well as media filtration systems including sand, gravel, and multi-media filters for drinking water, wastewater, and water recirculation.



From independent farmers to large agricultural co-ops, Amiad's unrivalled range of filtration solutions is designed to meet every need.

Amiad develops water delivery systems for irrigation, treating, and filtering the water according to the water source and the destination — direct to the farmer or to the fields. In addition, Amiad's systems for effluent water reuse ensure that all waste water can be treated and safely reused for the irrigation of fruits and vegetables. In addition to Amiad's filtration technology, the company has also been a leader in fertigation systems for decades. Precision metering and placement helps nourish crops while minimizing the chance of over-application or off-target movement of plant nutrients — another element in Amiad's commitment to clean water and clean technology.

Environmentally-friendly Technology

Amiad filtration systems are more than just effective and reliable – they're environmentally sound:

- No chemicals
- No polymers
- A bare minimum of back flush water
- Reduced energy demand many of Amiad's systems don't even require electricity and can work in low pressure

Customized Solutions to Meet Any Challenge

Amiad develops and designs filtration solutions to meet specific needs. Our experienced team utilizes their extensive experties to develop innovative filtration solutions, providing custom-built solutions to meet market needs.

Innovations that Save Time and Energy

Over the last four decades, Amiad Filtration Systems Limited has developed a range of compact automatic, self-cleaning filters incorporating innovative technology. The benefits are clear — low maintenance filters with low energy consumption substantially reduce costs. Designed for a small footprint, these filters are available in sizes ranging from 2 inches to 32" inches in diameter and in filtration degrees ranging from as much as 3500 microns to as fine as 2 microns.



suction-scanning technology

Fast, Efficient Self-Cleaning Technology for Continuous Flow of Filtered Water

Amiad's greatest achievement is its research, development and the production of suction-scanning technology. Presently, Amiad is the only water filtration manufacturer to offer this technology to the market. This breakthrough has led to the design and production of self-cleaning filters with screen areas that were previously unattainable. Suction-scanning technology combines focused flush with automation to provide 100% cleaning of the screen area. The success of this technology has established Amiad as a global leader in providing water filtration solutions.

Amiad suction-scanning filters incorporate a uniquemulti-layer stainless steel screen available in degrees of filtration as small as 10 micron. Amiad's engineering team has developed the optimal combination of material strength; filtration efficiency and clean-ability by combining select ratios of screen weave type and patterns, resulting in a high efficiency of filtration. This sophisticated screen assembly allows the accumulating filter cake to be rapidly and totally removed.

Amiad's suction-scanning technology uses less than 1% of the total process water for cleaning. This is the lowest ratio of process to exhaust water of all competing automated self-cleaning methods. (This ratio can vary depending on specific application conditions).





Suction Scanning Technology



Spring Loaded Nozzles [S.L.N.]



Multi-Layer Stainless Steel Screen

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.



microfiber technology

Textile fibers are widely used for fine filtration in the disposable cartridge filter market. The Amiad AMF² filter uses fiber thread technology to create a self-cleaning filter system. The basic filtration element in a "Microfiber" filter is the "thread cassette". Fine threads, which are 10 micron in diameter, are wound over a rigid grooved base plate. Water flows through the thread layers into the grooves and channel the water to specially designed outlets. The rigid base plate supports the thread layers and also plays a major role in the cleaning process of the media. The filter cassettes are mounted on hollow collector pipes.



AMF² with Cartridge



Cassette



Cartridge (part)

PATENT



The cleaning mechanics

High-pressure water jets spray through the thread layers hit the grooved base plate and reject back through the layers again. The contaminant is carried off the cassettes by the reject stream. Therefore, no dirt passes through the filter during back-flush. The filtration mechanics are a combination of surface and depth filtration. The design velocity through the media is 1-40 m/h. The newly developed filters is efficient for drinking water filtration, including the removal of cryptosporidium, as well as for swimming pools, reverse osmosis protection, cooling tower side stream filtration For Legion Ella reduction, etc.

The cleaning process

The filtered water flows from the four collector pipes to the filter's outlets. As dirt builds up on and in the cassettes, the pressure differential across the cassettes increases. When the differential pressure reaches a pre-set adjustable level, it triggers the filtration system's flush sequence. Flush sequences also can be triggered at pre-set timed intervals. The flush sequence is governed by an electronic control unit or by manual input.



grooved disc elements

These elements are constructed from plastic discs that are stacked onto a telescopic core. The discs are grooved on both sides. These grooves intersect to form the filtration element when compressed on the core. Disc filters are surface \mathcal{E} depth filteration.

The disc element provides especially effective retention of organic matter. The effective filtration area is comprised of both the outside surface and the channels formed by the intersected grooves. Suspended organic particulate adheres to the grooved surface. Cleaning the cartridge is made simple by the unique design of the telescopic core, which allows the discs to separate during the cleaning process. Disc elements are available for use with 1"-3" Amiad plastic filters and 2"-4" Amiad steel filters.









media filters

Pressurized sand media filtration is the traditional and most common technology, yet significant knowledge and experience are required in order to provide highly efficient systems.

The filtration experience gained at amiad allows us to approach this market with the ability to design, install and commission a wide range of complex systems.

Filtration principles

Filtering with media filters is also recognized as depth filtration. The media filters perform the filtration of water through a thick layer of graded particles. These particles can be sand, gravel or other granular materials. The filtration rate depends on the effective size of the bedding and the water velocity through the filter.

Amiad offers a complete line of manifolds, accessories and control systems for single or multiple media filters. The Amiad Customer Support Department is at your service in designing complete media filtration systems with gravel, sand, active carbon or multi-layer beddings: For manual or automatic operation, for single or multi-units, manifolded for complete filtration solutions.



we are committed clean water is life



[reservoirs

[well water

waste water

Water quality depends on a number of factors, including the source, geographical location, and prevailing weather conditions. Water sources include reservoirs, well water, waste water, canal water, river water or sea water. The type of water source presents different filtration challenges – water collected in reservoirs may be drawn from flood, sewage or well water and the organic matter that collects there may cause blockages and clogging in the irrigation system. Water collected from the sea or brackish water sources may contain large quantities of organic matter or particles, and the water must be desalinated before it's suitable for aquaculture agricultural use. Amiad designs and manufactures specialized filtration solutions to meet all these challenges, and more.



[canal water

[river water

sea water

emitters

Sprinklers

Large volumes of water pass through the nozzles (measured in cubic meters per hour).

Low Volume Sprinklers

Tens of liters of water pass through the nozzles hourly. Sprinkler is sensitive to blockages.

Medium to Low Volume Sprinklers Hundreds of liters of water pass through the nozzles hourly.

Foggers

Flow can range from a few ccs to liters per hour.

Drip Irrigation

Dripper flow ranges from one liter to a few liters per hour. Very small water passage through dripper.

Pivot Irrigator Mobile sprinkler with large nozzles;

requires less filtration.

Irrigation Tape

Provides small water passage; no dripper. Low pressure solution intended for seasonal growing.

reservoir

Country: Israel Application: Drip Irrigation Flow rate: 100 m³/h; 440 US gpm Filtration degree: 130 micron Filtration solution: 4 x 3" M100-750 An inland body of water (natural or artificial pond or lake) used for the storage and regulation of water. The water comes from a variety of sources including floods, sewage, or well water. The water is collected and may remain there for a matter of day or months and varies in temperature.

Challenges

Suspended solids collect at the bottom of the reservoir, resulting in the growth of algae. The quantities of organic matter vary from season to season, and according to the water source. The organic matter blocks the irrigation emitters and clogs the nozzles.

* These instructions are for recommendation only and do not constitute a substitute for the filtering requirements of the irrigation system supplier.

well water

Country: USA Application: Irrigation water supply Flow rate: 182 m³/h ; 800 US gpm Filtration degree: 500 micron Filtration solution: 1 x 8" SAF-4500 Well water flows into wells from aquifers. The water pumped from these water sources is normally clear, good quality water.

Challenges

The water contains solid particles and minerals. It may be salty, brackish water which requires desalination.

1	Pre-Filtration
2	Main-Filtration
3	Secondary-Filtration

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wastewater

Country: Israel Application: Drip Irrigation Flow rate: 500 m³/h ; 2,200 US gpm Filtration degree: 130 micron Filtration solution: 8" M100-6800 Industrial or residential waste water containing a great deal of organic matter, such as sewage. The water may be contaminated with heavy metals and pathogens, representing a health hazard.

Challenge

Large quantities of organic matter and bacteria must be eliminated and the water disinfected to enable safe use in irrigation.

* We recommend using the technology (treated wastewater) solely in accordance with the requirements of the regulator of the local/district authority regarding treated waste water for irrigation.

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canal water

Country: France Application: Irrigation Water Flow rate: 1500 m³/h ; 6600 US gpm Filtration degree: 50 micron Filtration solution: 3 x 16" Mega EBS An artificial waterway used for irrigation, travel or shipping. The water is drawn from large regional lakes or reservoirs and is of good quality, containing minimal amounts of soil particles and organic matter. Because the canal is exposed to the open air, it is contaminated by dust, leaves and debris.

Challenge

Solid particles must be removed and organic matter eliminated.

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river water

Country: France Application: Drip Irrigation Flow rate: 600 m³/h; 2642 US gpm Filtration degree: 80 micron Filtration solution: 2 x 10" EBS 10000 A large natural stream of water usually fed along its course by converging tributaries, waste water, flood water and snow thawing. The water quality is unstable and subject to rapid changes, due to prevailing weather conditions and changing seasons. The water level and quality can change within hours.

Challenge

A wide variety of solid particles must be removed and organic matter eliminated. The rapidly changing nature of the water necessitates the ability to cope with changing loads in varying conditions.

* These instructions are for recommendation only and do not constitute a substitute for the filtering requirements of the irrigation system supplier.

sea water

Country: Holland Application: Pre-filtration to UV, and Pre-filtration to RO Flow rate: 25 m³/h; 110 US gpm Filtration degree: 25 micron Filtration solution: 1 x 4" SAF-4500 for the UV and 1 x Sand filter for the RO Salt water and brackish water comprises a relatively large body of salt water completely or partially enclosed by land. The water quality varies greatly, depending on geographical location and prevailing weather conditions. Because brackish water contains less salt and minerals than sea water, it is easier to treat.

Challenges

The rapidly changing water quality contains large quantities of particles and organic matter which must be eliminated. **The water must be desalinated**!

1	Pre-Filtration
2	Main-Filtration
3	Secondary-Filtration
3	Secondary-Filtration

* These instructions are for recommendation only and do not constitute a substitute for the filtering requirements of the irrigation system supplier.

optional applications diagram

automatic filters

amiad series

EBS Series

The EBS is an automatic filter, with a self-cleaning mechanism driven by an electric motor. The EBS is designed To work with various types of screens in filtration degrees from 500 To 10 micron, and is available in 8" To 32" inlet/outlet diameter.

EBS Series

ABF Series

The ABF filter is a heavy duty filter, which has built in automatic self-cleaning features to maintain and clean the filter screen during operation. The filter is designed to achieve filtration from 3500 micron To 200 micron through varying the filter screen size. The ABF filter is available in sizes ranging from 8" To 32".

34] amiad irrigation catalogue product page

SAF Series

The SAF series are automatic filters, with a self-cleaning mechanism driven by an electric motor. The SAF filters are designed to work with various types of screens in filtration degrees from 500 to 10 micron. The ABF series is available in inlet/outlet diameters of 2" to 10".

SAF Series

TAF Series

The TAF is an easy-to-operate automatic plastic filter, with a self-cleaning mechanism driven by an electric motor. The filter is designed to work with various types of screens in filtration degrees from 500 To 10 micron. The TAF filter is available in 2" and 3" inlet/outlet diameter.

ADF Series

ADF Series

TAF Series

automatic self cleaning filters

filtomat series

Filtomat M100 & M300 Series

The FILTOMAT M100/M300 series are automatic hydraulic filters, with a self-cleaning mechanism powered by a water-driven turbine. This series of filters is designed to work with various screen types, with filtration degrees from 3000 to 15 micron, and is available in 2" to 18" inlet/outlet diameters.

Filtomat MCFM Series

Automatic self-cleaning filter for high flow rates and high dirt loads, in a compact design. This series of filters is designed to operate in low pressure conditions, with hydraulic or electric control.

microfiber technology

AMF² Series

Microfiber automatic, self-cleaning, filters use a filtration medium constructed of fine microfibers wound in layers around a grooved plastic spool cassette. Microfiber filters achieve a filtration degree down to 2-microns and are well-suited to drinking water supply applications. Microfiber technology filters also have a significant potential for tertiary treatment and polishing of sewage and wastewater.

semi automatic filters

semi-automatic cleaning

I Nylon screens I Stainless steel screens I Quick and efficient way for cleaning manual filters I Simple turn-of-a-handle cleans the filter screen I Regular operation requires no system shut-down I Available as a retrofit assembly for all amiad manual filters from 2" to 14" I Fitted with "Clogging Indicator".

sand/media filters and water treatment systems

Sand gravel filters for irrigation, industrial and municipal applications I For flow rates up-to 90 m³/h per unit

I High efficiency: Advanced designing allows perfect water distribution during filtering and backwashing

I Complete filtration solutions: Custom designed, manually or automatically backwash systems complete with manifold, valves and control.

manual filters

Plastic filters, Steel filters.

A wide range of plastic and steel filters from 3/4" to 1/4" I Interchangeable filter elements to suit specific needs I Filtration degrees available from 800 to 22 microns I Simple and easy maintenance I All filter elements are extractable for cleaning I Minimal head loss even at high flow rates I Rated operation pressure: 10 bar.

▮ ¾" & 1" Compact

I 1½" Compact & Super

I 2"-3" T Threaded & Flanged

I Tagline Series

Fertilizer Injector

I Fertilizer Injector Series

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