



# MINISIGMA

Durable polymeric  
self-cleaning screen filter

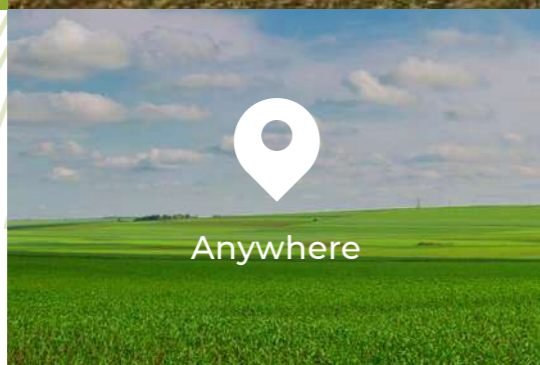
# MASTERS OF FILTRATION



Any Crop



Anywhere



Any Water Source



Any Technology



**Farming is our heritage.**  
**Filtration is our legacy.**

At Amiad, our roots are in the land. As farmers, we learned at firsthand what our crops need to thrive. We understand that every water source is different, and how water quality can greatly affect crop yield.

The filter is the first vital link in the irrigation chain. It's there to protect irrigation systems from damage, while delivering the best quality water.

We develop filters that are able to cope with any water quality, in any geographical location.

We've spent years mastering filtration technology so we can offer a wide range of filters for every farmer's needs including screen, disc or media technology. Our fully automated filtration systems save time, manpower and costs.



Disc Technology



Screen Technology



Media Technology

We consider every challenge as an opportunity to work side by side with our customers to solve their problems. We'll go anywhere to ensure our filters perform as expected, 24/7, every day of the year.

When you want a high performance filter for your irrigation system, consult with Amiad. We focus on doing what we do best.

**Amiad. Masters of Filtration.**

# The next generation of water filtration

## MINISIGMA FEATURES



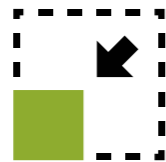
Easy installation and  
low maintenance



Reliable and  
durable



Low water and energy  
consumption



Compact design and  
small footprint



Registered Patent



Ideal for many landscape  
and agricultural irrigation  
applications



Polymeric filter -  
corrosion free

## Success Story

### The Challenge

Irrigating plantations with secondary treated wastewater carries a high risk of emitter clogging, because the wastewater has high levels of suspended particles, metal, salt, ions and biological contaminants. Initially, the plantation owners installed semi-automatic screen filters on each secondary head control. However, they had to constantly work at cleaning the filters to prevent clogging.

### The Solution

In order to save time, money and manpower, they replaced their semi-automatic filters with Mini Sigma automatic self-cleaning filters, which don't require manual flushing, need very little maintenance, and have an efficient self-cleaning mechanism.

### The Results

**Time savings** — the filtration process continues uninterrupted during the cleaning cycle; no need to shut down the irrigation system.

**Manpower savings** — the plantation owners saved an estimated \$1,000 per month on manpower and the workers were reassigned to other tasks.

**Water savings** — a precise amount of water is used for each cleaning cycle which minimizes water waste.



**Banana Plantation**  
Kibbutz Ginosar, Israel

Total Size:  
13 hectares divided  
into 16 plots



### Irrigation System

Drip irrigation.  
16 secondary head controls,  
one for each plot



### Water Source

Secondary treated  
wastewater



### Original Filtration System

Semi-automatic  
screen filters



Since we installed the new system  
supplied by Amiad, we've noticed  
a great improvement in the  
efficiency of the irrigation system.

Remi Lufan



# ADI-P: the control is in your hands



## The ADI-P Controller

The ADI-P Controller operates the automated processes that flush your Mini Sigma filters, allowing you to control and monitor them easily and conveniently.



## The ADI-P App

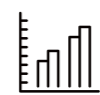
Access your site's filtration performance data directly from the ADI-P app. Here are some of the data that you can access via the ADI-P app:



Suitable for low pressure (1.5-10 bar)



Single or dual solenoid configuration



Provides detailed filtration performance data



Communication within **Bluetooth®** technology range



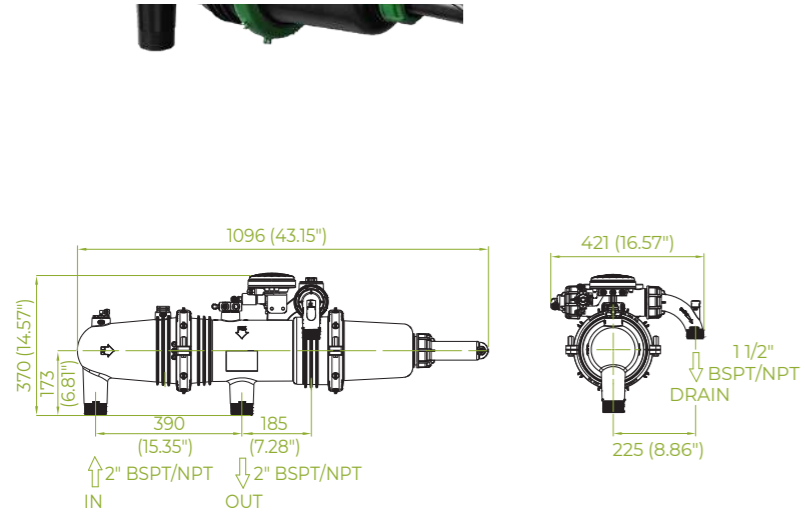
Offline information storage available

- Flush logs
- Flush frequency
- Current DP
- Current outlet and inlet pressure

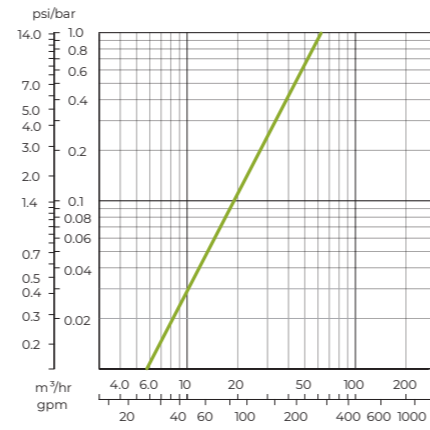
- Flush quality - measuring DP on the filter before and after flush cycle
- Malfunctions with descriptions of each event
- Battery status and low battery alerts

# MINISIGMA Models

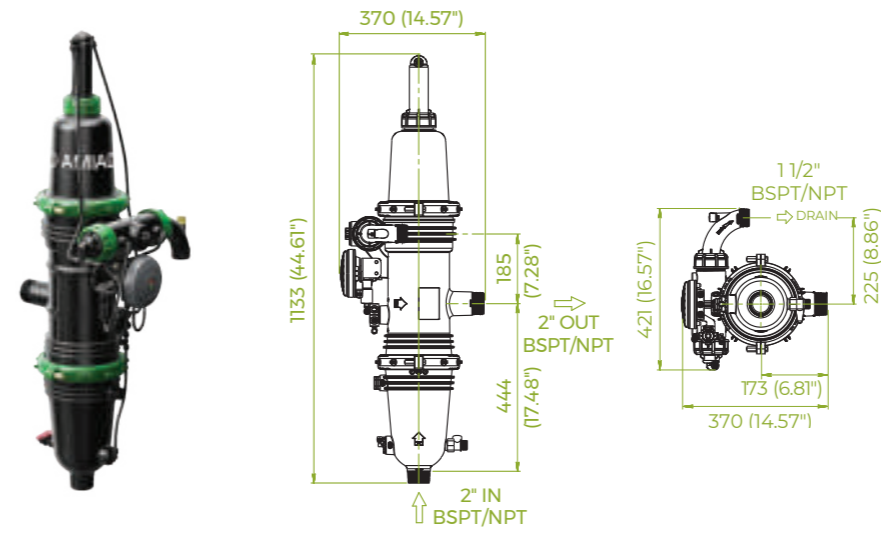
## 2" MINISIGMA | on-line



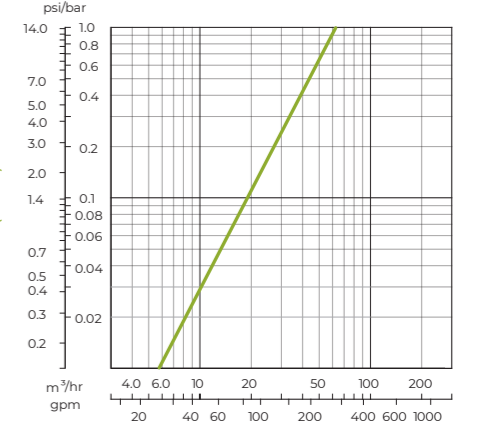
Head Loss Graph (in clean water)



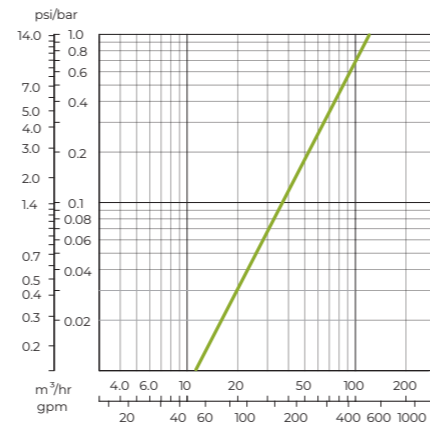
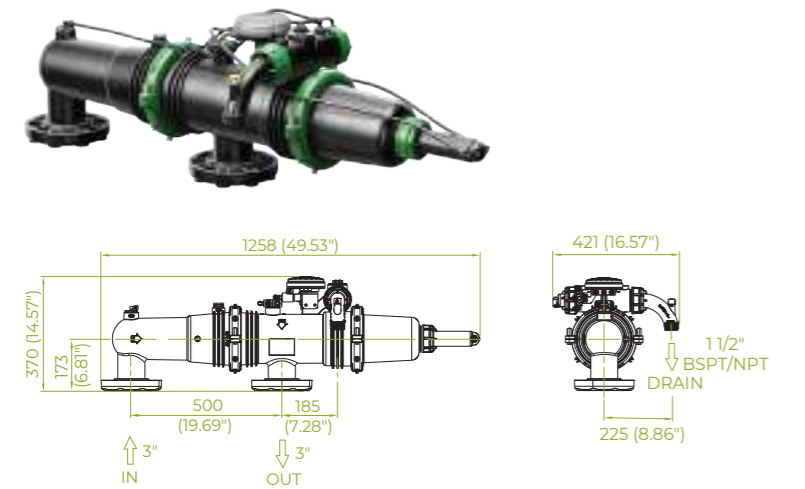
## 2" MINISIGMA | angle



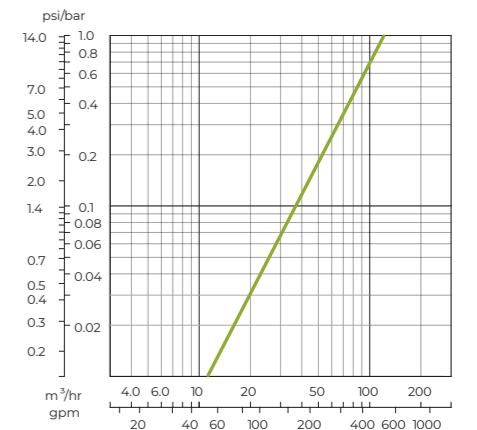
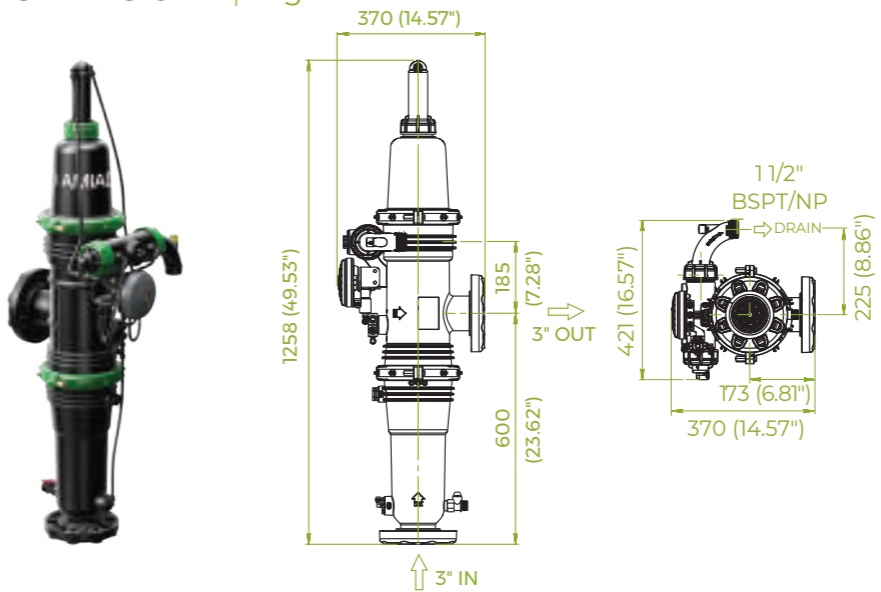
Head Loss Graph (in clean water)



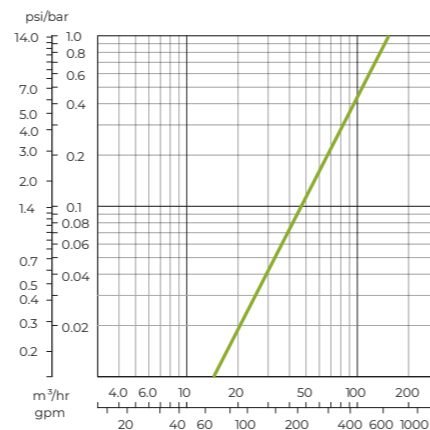
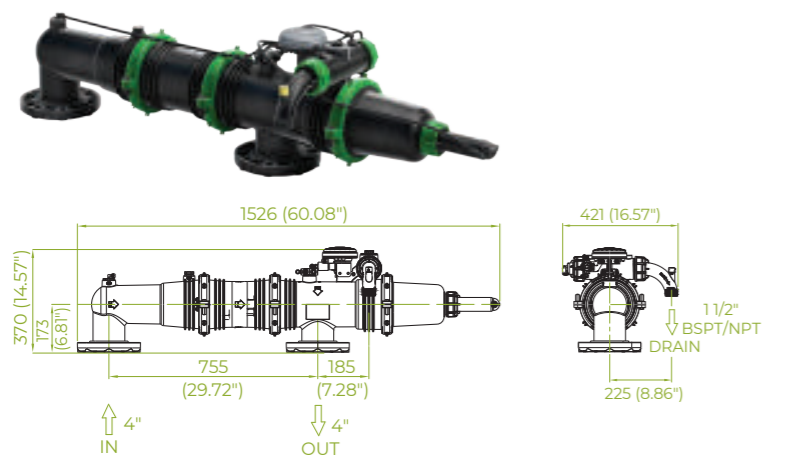
## 3" MINISIGMA | on-line



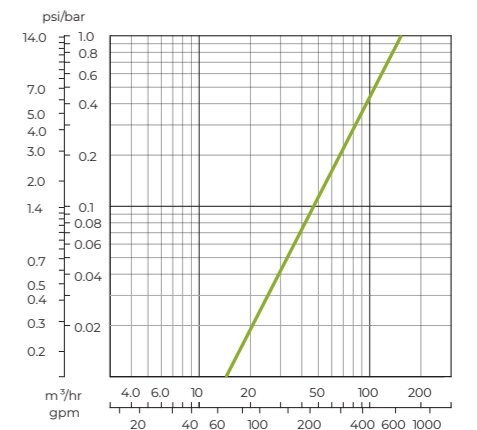
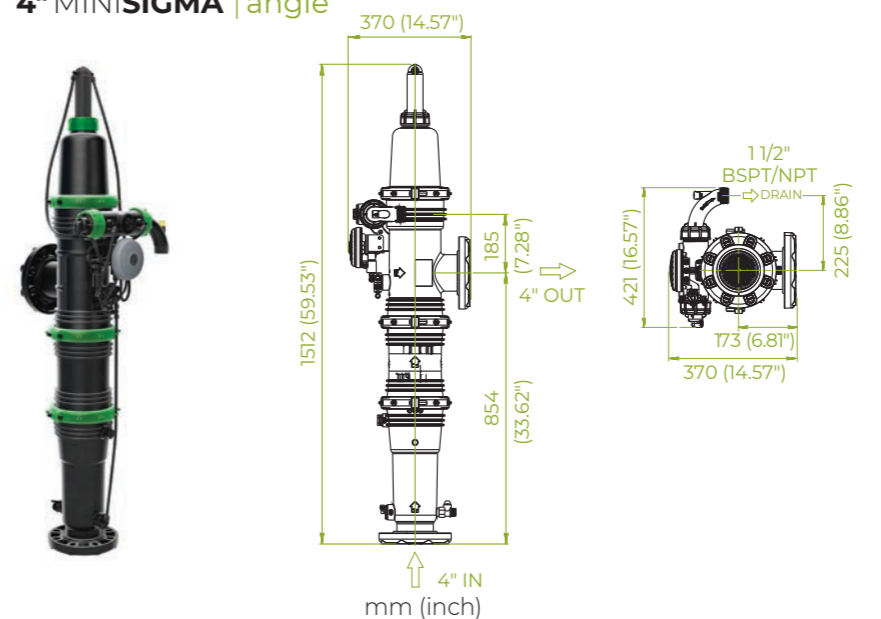
## 3" MINISIGMA | angle



## 4" MINISIGMA | on-line



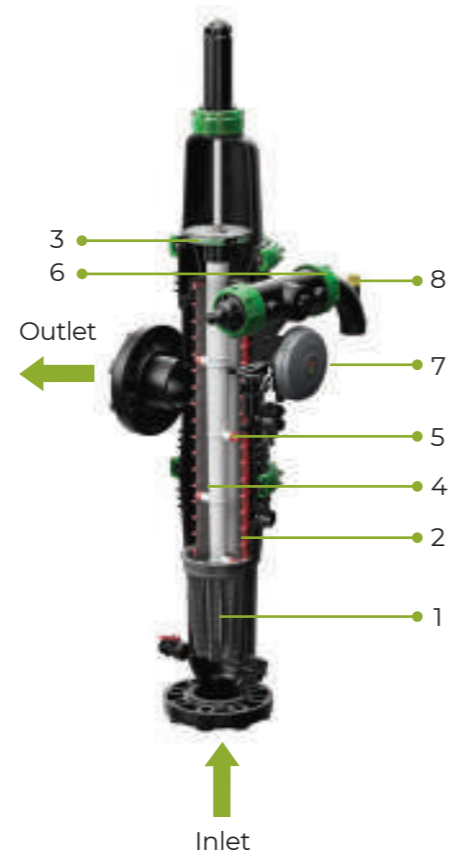
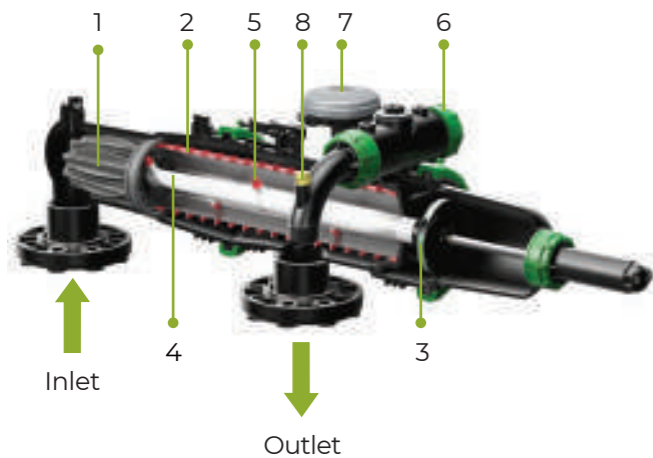
## 4" MINISIGMA | angle




# MINISIGMA: a step ahead


## Mini Sigma Parts


1. Coarse screen
2. Fine screen
3. Hydraulic turbine
4. Suction-scanner shaft
5. Suction-scanner nozzles
6. Flush valve
7. ADI-P controller
8. Integral anti vacuum



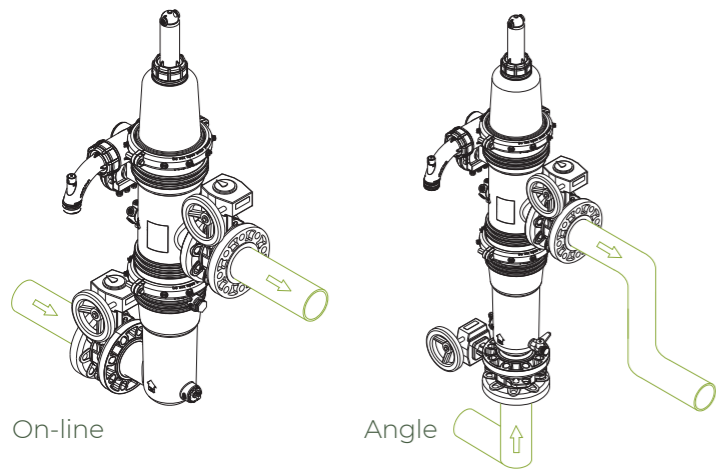
### Advanced design for maximum installation flexibility

 Modular, versatile inlet and outlet options

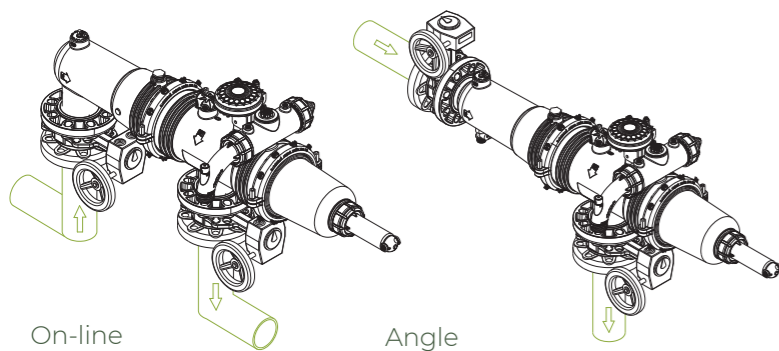
 Flexible installations for any field

 360° rotation of the drain pipe to fit any installation configuration

#### Vertical



#### Horizontal



## Technical Specifications

Filter Model	2" Mini Sigma	3" Mini Sigma	4" Mini Sigma
<b>General data</b>			
Max. flow rate* (130µ)	30 m <sup>3</sup> /h (132 gpm)	50 m <sup>3</sup> /h (220 gpm)	80 m <sup>3</sup> /h (352 gpm)
Min. operating pressure when cleaning	1.5 bar (22 psi)		
Max. operating pressure	8 bar (116 psi)		
Filtration area	1,200 cm <sup>2</sup> (186 in <sup>2</sup> )	1,600 cm <sup>2</sup> (248 in <sup>2</sup> )	2,400 cm <sup>2</sup> (372 in <sup>2</sup> )
Inlet/Outlet diameter	2" (50 mm) BSPT/NPT	3" (80 mm) Grooved coupling/ Universal flange	4" (100 mm) Grooved coupling/ Universal flange
Weight (Empty)	16 kg (35 lb)	20 kg (44 lb)	23 kg (51 lb)

\* Amiad's flow recommendation per water quality.

#### Electronic control

Control power supply	4 x AA type 1.5V batteries and/or External 7-14 VDC
Solenoid	9-12 VDC latching solenoid
DP switch	Integral sensors

#### Flushing data (at 1.5 bar, 22 psi)

Exhaust valve	1.5" (40 mm) BSPT/NPT		
Flushing time*	10 seconds		
Reject water volume per flush cycle*	24 liters (6.3 gallons)	26 liters (6.8 gallons)	28 liters (7.4 gallons)
Flushing flow rate*	8.7 m <sup>3</sup> /h (38.3 gpm)	9.6 m <sup>3</sup> /h (42.2 gpm)	10 m <sup>3</sup> /h (44 gpm)

\* Any pressure between 1.5 bar (22 psi) and 8 bar (116 psi) will improve these parameters.

#### Construction materials

Filter housing and lid	RPA (reinforced polyamide)		
Screens	Molded weavewire, stainless steel 316L		
Cleaning mechanism	PBT (polybutylene)		
Exhaust valve	All polymeric		
Seals	EPDM		
Control command tubing	PE (polyethylene)		

#### Standard Filtration Degrees

micron	500	300	200	130	100	80
mm	0.5	0.3	0.2	0.13	0.1	0.08



## Headquarters

**Amiad Water Systems Ltd.**

Web: [www.amiad.com](http://www.amiad.com)

E-mail: [info@amiad.com](mailto:info@amiad.com)

## The Americas

### USA

**Amiad USA Inc.**

Web: [www.amiadusa.com](http://www.amiadusa.com) | E-mail: [infousa@amiad.com](mailto:infousa@amiad.com)

### Brazil

**Amiad Sistemas de Água Ltda.**

E-mail: [infobrasil@amiad.com](mailto:infobrasil@amiad.com)

### Mexico

**Amiad México SA DE CV,**

Web: [www.amiad.es](http://www.amiad.es) | E-mail: [infomexico@amiad.com](mailto:infomexico@amiad.com)

Irrigation office: E-mail: [infomexico-irr@amiad.com](mailto:infomexico-irr@amiad.com)

## Asia

### India

**Amiad Filtration India Pvt Limited**

Web: [www.amiadindia.com](http://www.amiadindia.com) | E-mail: [info-india@amiad.com](mailto:info-india@amiad.com)

### China

**Amiad China (Yixing Taixing Environtec Co., Ltd.)**

Web: [www.amiad.com.cn](http://www.amiad.com.cn) | E-mail: [infochina@amiad.com](mailto:infochina@amiad.com)

### South-East Asia

**Filtration & Control Systems Pte. Ltd.**

E-mail: [info-singapore@amiad.com](mailto:info-singapore@amiad.com)

## Australia

**Amiad Australia Pty Ltd.**

Web: [www.amiad.com.au](http://www.amiad.com.au) | E-mail: [sales@amiad.com](mailto:sales@amiad.com)

## Europe

**Amiad Water Systems Europe SAS**

E-mail: [industry-europe@amiad.com](mailto:industry-europe@amiad.com)

### German branch office

E-mail: [industry-de@amiad.com](mailto:industry-de@amiad.com)

### United Kingdom

**Amiad Water Systems UK Limited**

E-mail: [info-uk@amiad.com](mailto:info-uk@amiad.com)



 **amiad** IRRIGATION

# MASTERS OF FILTRATION

[www.amiad.com](http://www.amiad.com)

910101-000956/04.2020

Copyright © 2019 Amiad Water Systems Ltd. All rights reserved. The contents of this catalogue including without limitation all information and materials, images, illustrations, designs, icons, photographs, graphical presentations, designs, literary works, data, drawings, slogans, phrases, names, trademarks, titles and any other such materials that appear in this catalogue (collectively, the "Contents") are the sole property of Amiad Water Systems Ltd. ("Amiad"). Amiad has sole and exclusive right, title and interest in the Contents, including any intellectual property rights, whether registered or not, and all know-how contained or embodied therein. You may not reproduce, publish, transmit, distribute, display, modify, create derivative works from, sell or participate in any sale of, or exploit in any way, in whole or in part, any of the Contents or the catalogue. Any use of the catalogue or the Contents, other than for personal use, requires the advanced written permission of Amiad.

The Bluetooth® word mark and logos are registered trademarks owned by the Bluetooth SIG, Inc. and any use of such marks by Amiad Water Systems is under license. Other trademarks and trade names are those of their respective owners.

For more details about our patents go to: [www.amiad.com](http://www.amiad.com)