Innovative automatic self-cleaning filter. Lightweight and durable with maximum installation flexibility.

**features:**
- Reliable and durable
- Amiad’s unique suction-scanner cleaning technology
- Modular design with various installation configurations
- Polymeric filter - corrosion free
- Low water and energy consumption
- Compact design and small footprint
- Easy installation and low maintenance
- Ideal for many landscape and agricultural irrigation applications
- Amiad’s innovative and user friendly ADI-P electronic controller, operated by a mobile app for advanced monitoring capabilities

**Patent pending

Sigma Mini Automatic Filters for Irrigation and Water with remote Wifi control**
How the Mini Sigma Filter Works

General
Amiad’s Mini Sigma filter is the newest addition to the Sigma family. It is a small and lightweight yet durable filter; quick and easy to install, simple to operate, and requires minimal maintenance. The Mini Sigma filter was developed to handle low pressure operation, with a capacity of up to 80 m³/h (352 gpm) and with filtration degrees from 50-500 micron. Inlet/outlet connections are available in 50mm (2”), 80 mm (3”), and 100mm (4”) diameter. Filters include a 40mm (1.5”) flush valve.

The Filtration Process
Raw water enters through the filter inlet and passes through the screen. Clean water flows through the filter outlet. The gradual dirt buildup on the screen’s inner surface causes a filter cake to develop, creating an increase in the pressure differential across the filter system. A differential pressure (DP) switch senses the pressure differential and when it reaches a pre-set level, the self-cleaning process begins.

The Control System - Amiad’s NEW ADI-P Controller
Amiad’s ADI-P controller offers a one-of-a-kind monitoring and control functionality. The controller interacts with Amiad’s advanced, user-friendly app that provides detailed filtration performance data on your mobile phone device. The self-cleaning mechanism is controlled and monitored by the ADI-P controller. The self-cleaning cycle is triggered by an integrated DP switch. The ADI-P controller and mobile app also provide:
- DP and flush cycle counters
- Alerts – low/high pressures, low battery
- Reports and performance history data

The Self-Cleaning Process
The self-cleaning cycle is initiated by any one of the following conditions:
1. Signal from the DP switch, pre-set at 7 psi (0.5 bar)
2. Time interval parameter set at the controller
3. Manual start, triggered by the ADI-P mobile app (within Bluetooth range) or via electronic controller keypad

The flush valve opens to atmosphere creating a strong suction force at the scanner nozzles, effectively removing dirt particles from the screen and discharging them from the filter.

Mini Sigma Models
Amiad’s Mini Sigma Series consists of the following models:
- 2” Mini Sigma for up to 25 m³/h (110 gpm)
- 3” Mini Sigma for up to 50 m³/h (220 gpm)
- 4” Mini Sigma for up to 80 m³/h (352 gpm)
Amiad’s ADI-P Controller

The Mini Sigma comes with the innovative ADI-P controller developed by Amiad specifically for its filters.

Control the Mini Sigma with your mobile device!

Interacts with Amiad’s advanced, user-friendly ADI-P mobile app

One-of-a-kind monitoring and control functionality

Provides detailed filtration performance data

Bluetooth® range communication

Offline information storage available
Mini Sigma parts description

1. Coarse screen
2. Fine screen
3. Hydraulic turbine
4. Suction-scanner shaft
5. Suction-scanner nozzles
6. Flush valve
7. ADI-P controller
## Technical Specifications

### General data

<table>
<thead>
<tr>
<th></th>
<th>2” Mini Sigma</th>
<th>3” Mini Sigma</th>
<th>4” Mini Sigma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. flow rate* (130µ) in average water quality</td>
<td>25 m³/h (110 gpm)</td>
<td>50 m³/h (220 gpm)</td>
<td>80 m³/h (352 gpm)</td>
</tr>
<tr>
<td>Min. operating pressure when cleaning</td>
<td>1.5 bar (22 psi)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. operating pressure</td>
<td></td>
<td>8 bar (116 psi)</td>
<td></td>
</tr>
<tr>
<td>Filtration area</td>
<td>1,200 cm² (186 in²)</td>
<td>1,600 cm² (248 in²)</td>
<td>2,400 cm² (372 in²)</td>
</tr>
<tr>
<td>Inlet/Outlet diameter</td>
<td>2” (50 mm) BSPT/NPT</td>
<td>3” (80 mm) Victaulic/Universal flange</td>
<td>4” (100 mm) Victaulic/Universal flange</td>
</tr>
<tr>
<td>Weight [Empty]</td>
<td>16 kg (35 lbs)</td>
<td>20 kg (44 lbs)</td>
<td>23 kg (51 lbs)</td>
</tr>
</tbody>
</table>

*Amiad’s flow recommendation per water quality.

### Electronic control

<table>
<thead>
<tr>
<th></th>
<th>2” Mini Sigma</th>
<th>3” Mini Sigma</th>
<th>4” Mini Sigma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control power supply</td>
<td>4 x AA type 1.5V batteries and/or External 7-14 VDC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solenoid</td>
<td></td>
<td>9-12 VDC latching solenoid</td>
<td></td>
</tr>
<tr>
<td>DP switch</td>
<td></td>
<td>Integral sensors</td>
<td></td>
</tr>
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</table>

### Flushing data*

<table>
<thead>
<tr>
<th></th>
<th>2” Mini Sigma</th>
<th>3” Mini Sigma</th>
<th>4” Mini Sigma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exhaust valve</td>
<td></td>
<td>1.5” (40 mm) BSPT/NPT</td>
<td></td>
</tr>
<tr>
<td>Flushing time</td>
<td></td>
<td>10 seconds</td>
<td></td>
</tr>
<tr>
<td>Reject water volume per flush cycle</td>
<td>24 liters (6.3 gallons)</td>
<td>26 liters (6.8 gallons)</td>
<td>28 liters (7.4 gallons)</td>
</tr>
<tr>
<td>Flushing flow rate</td>
<td>8.7 m³/h (38.3 gpm)</td>
<td>9.6 m³/h (42.2 gpm)</td>
<td>10 m³/h (44 gpm)</td>
</tr>
</tbody>
</table>

*At 1.5 bar (22 psi)

### Construction materials

<table>
<thead>
<tr>
<th></th>
<th>2” Mini Sigma</th>
<th>3” Mini Sigma</th>
<th>4” Mini Sigma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filter housing and lid</td>
<td>RPA (reinforced polyamide)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Screens</td>
<td>Molded weavewire, stainless steel 316L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cleaning mechanism</td>
<td>PBT (polybutylene)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exhaust valve</td>
<td>Polymeric</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seals</td>
<td>EPDM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control command tubing</td>
<td>PE (polyethylene)</td>
<td></td>
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</table>

### Standard Filtration Degrees

<table>
<thead>
<tr>
<th>micron</th>
<th>500</th>
<th>300</th>
<th>200</th>
<th>130</th>
<th>100</th>
<th>80</th>
<th>500</th>
</tr>
</thead>
<tbody>
<tr>
<td>mm</td>
<td>0.5</td>
<td>0.3</td>
<td>0.2</td>
<td>0.13</td>
<td>0.1</td>
<td>0.1</td>
<td>0.08</td>
</tr>
</tbody>
</table>
2" Mini Sigma on-line

3" Mini Sigma on-line

4" Mini Sigma on-line

Dim: mm (inch)
Pressure Loss Graph
(in clean water)

psi/bar

0.2

0.4

0.6

0.8

1.0

20 40 60 100 200 400 600 1000

m³/hr

gpm

421 (16.57")

380 (14.96")

1 1/2” BSPT/NPT DRAIN

225 (8.86")

Dim: mm (inch)
2” Mini Sigma angle

3” Mini Sigma angle

4” Mini Sigma angle

Dim: mm (inch)
Pressure Loss Graph (in clean water)
Mini Sigma
Configuration Options

Advanced design for **maximum installation flexibility**:

- Modular, versatile inlet and outlet options
- Horizontal or vertical configuration
- 360° rotation of the drain pipe to fit any installation configuration

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**On-line**

**Angle**

**Vertical**
Mini Sigma
Configuration Options

Click below for Orders and Technical support from www.irrigationglobal.com
Sigma Mini Automatic Screen Filters Irrigation and other water usages