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

**MINI SIGMA**

<table>
<thead>
<tr>
<th>Feature</th>
<th>2”</th>
<th>3”</th>
<th>4”</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>maximum flow rate</strong></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><strong>inlet/outlet diameter</strong></td>
<td>50 mm (2”)</td>
<td>80 mm (3”)</td>
<td>100 mm (4”)</td>
</tr>
<tr>
<td><strong>filtration degrees</strong></td>
<td>80-500 micron</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>minimum operating pressure</strong></td>
<td></td>
<td>1.5 bar (22 psi)</td>
<td></td>
</tr>
<tr>
<td><strong>during flush cycle</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>maximum operating pressure</strong></td>
<td></td>
<td></td>
<td>8 bar (116 psi)</td>
</tr>
</tbody>
</table>

**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 80-500 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

<table>
<thead>
<tr>
<th>General data</th>
<th>2&quot; Mini Sigma</th>
<th>3&quot; Mini Sigma</th>
<th>4&quot; 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>8 bar (116 psi)</td>
<td></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&quot; (50 mm) BSPT/NPT</td>
<td>3&quot; (80 mm) Victaulic/Universal flange</td>
<td>4&quot; (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&quot; Mini Sigma</th>
<th>3&quot; Mini Sigma</th>
<th>4&quot; Mini Sigma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control power supply</td>
<td></td>
<td>4 x AA type 1.5V batteries and/or External 7-14 VDC</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>
</tbody>
</table>

## Flushing data*

<table>
<thead>
<tr>
<th></th>
<th>2&quot; Mini Sigma</th>
<th>3&quot; Mini Sigma</th>
<th>4&quot; Mini Sigma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exhaust valve</td>
<td></td>
<td></td>
<td>1.5&quot; (40 mm) BSPT/NPT</td>
</tr>
<tr>
<td>Flushing time</td>
<td></td>
<td></td>
<td>10 seconds</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&quot; Mini Sigma</th>
<th>3&quot; Mini Sigma</th>
<th>4&quot; Mini Sigma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filter housing and lid</td>
<td></td>
<td></td>
<td>RPA (reinforced polyamide)</td>
</tr>
<tr>
<td>Screens</td>
<td></td>
<td></td>
<td>Molded weavewire, stainless steel 316L</td>
</tr>
<tr>
<td>Cleaning mechanism</td>
<td></td>
<td></td>
<td>PBT (polybutylene)</td>
</tr>
<tr>
<td>Exhaust valve</td>
<td></td>
<td></td>
<td>Polymeric</td>
</tr>
<tr>
<td>Seals</td>
<td></td>
<td></td>
<td>EPDM</td>
</tr>
<tr>
<td>Control command tubing</td>
<td></td>
<td></td>
<td>PE (polyethylene)</td>
</tr>
</tbody>
</table>

## Standard Filtration Degrees

<table>
<thead>
<tr>
<th></th>
<th>500</th>
<th>300</th>
<th>200</th>
<th>130</th>
<th>100</th>
<th>80</th>
</tr>
</thead>
<tbody>
<tr>
<td>micron</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<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>0.08</td>
</tr>
</tbody>
</table>
2” Mini Sigma on-line

3” Mini Sigma on-line

4” Mini Sigma on-line
Pressure Loss Graph
(in clean water)

Dim: mm (inch)

---

1 1/2" BSPT/NPT DRAIN

380 (14.96")

225 (8.86")

---

421 (16.57")

---

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

psi/bar

20 40 60 100 200 400 600 1000

m³/hr

gpm

psi/bar

20 40 60 100 200 400 600 1000

m³/hr

gpm

Dim: mm (inch)
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

On-line

Vertical

Angle
Mini Sigma
Configuration Options

On-line

Angle

Horizontal

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