SIGMA PRO | Multi-screen polymeric self-cleaning filter
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.

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 Filtration Process

1. Raw water flows through the filter inlet and to the coarse screens for removal of large debris and sediment.

2. Water then passes through the fine screens for removal of the remaining small particles.

3. A differential pressure switch (DPS) monitors the pressure caused by the accumulation of debris on the inner screen and initiates the self-cleaning process at 0.5 bar (7 psi).

4. The flush valve opens to the atmosphere to create a strong suction force at the scanner nozzles, effectively removing dirt particles from the screens.

5. Dirty backflush water is drained out via the drainage pipe.

6. After efficient cleaning, the DP returns to its original value, enabling the filter to operate continuously without downtime.
The ADI-P Controller

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

- 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

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:

- 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
SIGMA PRO Models

4" SIGMA PRO

6" SIGMA PRO

8" SIGMA PRO

Head Loss Graph (in clean water)
**Sigma Pro Parts**

1. Flush valve
2. ADI-P controller
3. Hydraulic turbines
4. Fine screens
5. Coarse screens

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**Technical Specifications**

<table>
<thead>
<tr>
<th>Filter Model</th>
<th>4&quot; Sigma Pro</th>
<th>6&quot; Sigma Pro</th>
<th>8&quot; Sigma Pro</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General data</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. flow rate* (130µ) in average water quality</td>
<td>120 m³/h (528 gpm)</td>
<td>180 m³/h (792 gpm)</td>
<td>280 m³/h (1,233 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>10 bar (145 psi)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. operating temperature</td>
<td>60°C (140°F)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Filtration area</td>
<td>6,000 cm² (930 in²)</td>
<td>8,000 cm² (1,240 in²)</td>
<td></td>
</tr>
<tr>
<td>Inlet/Outlet diameter</td>
<td>4&quot; (100 mm) Flange &amp; Grooved coupling</td>
<td>6&quot; (150 mm) Flange</td>
<td>8&quot; (200 mm) Flange</td>
</tr>
<tr>
<td>Weight</td>
<td>Empty: 75 kg (165 lb) Full: 145 kg (320 lb)</td>
<td>Empty: 110 kg (243 lb) Full: 225 kg (496 lb)</td>
<td>Empty: 120 kg (264 lb) Full: 235 kg (518 lb)</td>
</tr>
</tbody>
</table>

* Maximum flow rates depend on water quality and micron size.

**Electronic control**

- Control power supply: 4 x AA type 1.5V batteries / External 7-14V DC
- Solenoid operation data: 9-12V DC latching solenoid
- DP switch: Integrated sensors

**Flushing data**

- Exhaust valve: 2" (50 mm)
- Flushing time: 10 seconds
- Reject water volume per flush cycle: 75 liters (20 gallons) 90 liters (24 gallons)
- Min. flow for flushing (at 1.5 bar/22 psi): 34 m³/h (150 gpm) 36 m³/h (158 gpm)

**Construction materials**

- Filter housing and lid: DPP (reinforced polypropylene) RPA (reinforced polyamide)
- Screens: Molded weave wire, stainless steel 316L
- Cleaning mechanism: PBT (polybutylene)
- Exhaust valve: Polymeric
- Seals: EPDM
- Control command tubing: PE (polyethylene)

**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>
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<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>0.08</td>
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