

# Unique Filtration Media and “Smart” Filtration Systems Clean Solids-Laden Brines

As oilfield exploration and production grows, so does the need to employ effective and economical filtration methods.

In an effort to minimize formation damage and reclaim expensive brines, cartridge filters were often used in the past, but the number required made the process unwieldy and expensive. Cartridges were replaced by diatomaceous earth - less expensive, but not without its own set of problems.

“Smart” filtration from Total Separation Solutions is a new and proven method - a process that combines three unique types of media with “smart” Process Logic Control (PLC) to clean solids-laden brines.

## Wedge-Wire Screens/Stainless Steel Pre-filter Screens

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Wedge-Wire Screens are well-know technology for filtering large solids. Triangular wire is wrapped on a cylinder such that there are defined slots between the wires. During filtration, the fluid flows against a flat surface and the points of the triangle are to the inside of the cylinder. There are two points of contact on the surface and the points of the triangle “open up” to the inside, preventing particles from becoming trapped.

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### • **Stainless Steel Filter Screen**

- 70 micron pre-filter
- Surface filtration increases performance
- Back-washable
- High flow rates

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### • **Wedge-Wire Screen**

- Two-points of contact
- Extremely long life

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### • **Proprietary Design**

- New designs under development

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### • **Field Proven**

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**TOTAL SEPARATION SOLUTIONS, LLC**

*Innovative Technologies in Fluid Filtration, Processing and Reclamation*

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# Unique Filtration Media and “Smart” Filtration Systems

## A New Kind of Sintered Metal Filter

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Sintered metal is also a well known filtration technology that is often used in demanding applications, but up until now, it was often cost prohibitive. The new sintered metal filters from Total Separation Solutions employ but a single, thin layer of sintered metal on a porous tube, and are easily backwashed with air or water.

- **High flow rates**
  - **Surface filtration**
  - **Backwashable**
  - **Very long life**
  - **Can handle very high temperatures up to 800°C**
  - **Chemically inert**
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## Porous Plastic

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Porous plastic is a completely new development in filtration. Like sintered metal, small beads are fused at their points of contact to provide filtration based on precise pore sizing. By utilizing plastic, even more control over the size and shape of the beads that are sintered is possible. Simple geometry of the bead determines the filtration parameters, but the real advantage of porous plastic filters is cost, compared to sintered metal or sintered ceramic filters.

- **New concept in filtration**
  - **Back-washable**
  - **Surface filtration**
  - **High-rate flows at low differential pressure**
  - **Absolute-rated solids removal**
  - **Different thermoplastics improve temperature and compatibility**
  - **Significant backwashability and flow testing completed before commercialization**
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Now, you can put an end to dead end filtration. To find out more about how unique filtration media and “Smart” Filtration Systems can clean solids-laden brines, help reduce costs and improve EHS, contact Total Separation Solutions today!



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