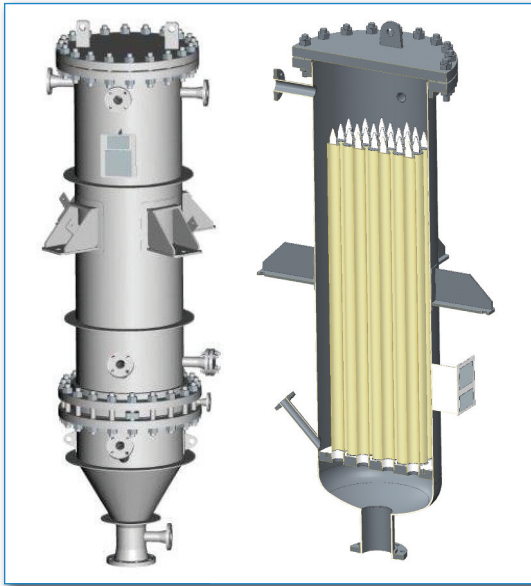


# Mott HyPulse® LSI Filters

The Inside-Out Advantage For Chemical, Petrochemical and Refinery Applications

process systems



Mott's state-of-the-art porous metal filter elements of the HyPulse LSI offer the ultimate in particle retention, backwashability, and durability. Media differential pressure can be as high as 125 psi. Standard elements are 316L stainless steel in normal particle retention ratings of 0.2 to 20 microns. Alternate metal alloys are available to meet high temperatures and corrosive process conditions.

## Application Examples:

- Precious Metal Catalyst Removal & Recovery
  - Palladium
  - Platinum
  - Raney Nickel
  - Many Other Catalyst Formulations
- High Temperature and Corrosive Liquid – Solid Separation
- Organic Polymer Salts
- Guard Filtration for Fixed Bed Reactors
- Carbon Removal

## High Filter Efficiency

Mott HyPulse LSI filter applications have been able to reach filtrate levels at less than 20 ppm. The filtrate quality is consistent, cycle after cycle, due to Mott's superior media uniformity.

## Process Flexibility

Multiple Backwash Options

- Full Shell
- Wet Cake
- Evacuated Shell

## Safety

The HyPulse LSI is designed to limit operator exposure. Backwashing is accomplished internally through a controlled pneumatic/hydraulic pulse which uses fluid dynamics to rapidly dislodge the filter cake. This is accomplished without operator intervention.

## Reliability

Rapid turnaround between cycles keeps the filter on line. Blowdown or backwash can be completed in less than five minutes. Element life is typically measured in years.

## Fully Automated Control

The Mott HyPulse LSI is available as a completely instrumented system for fully automated operation. High-solids holding capacity and high-efficiency solids removal make the LSI filter the optimal in catalyst recovery applications. It has proven successful in removing catalyst material from aqueous slurries, fatty alcohols, edible oils and many other liquid filtration processes. The Mott HyPulse LSI's backwashing technique recovers virtually 100% of captured solids.

## About Mott:

- World Leader in Sintered Porous Metal Technology
- Expert Design and Engineering Capabilities
- Engineering Solutions for Demanding Applications
- State-of-the-Art Filtration Laboratory
- ISO 9001-2008 Certified and ASME NQA-1 Compliant

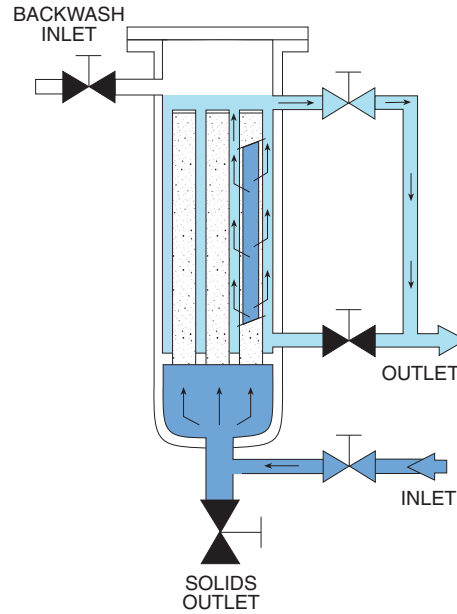
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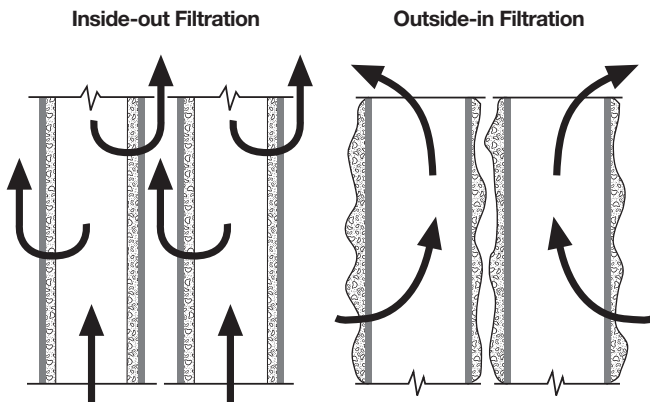
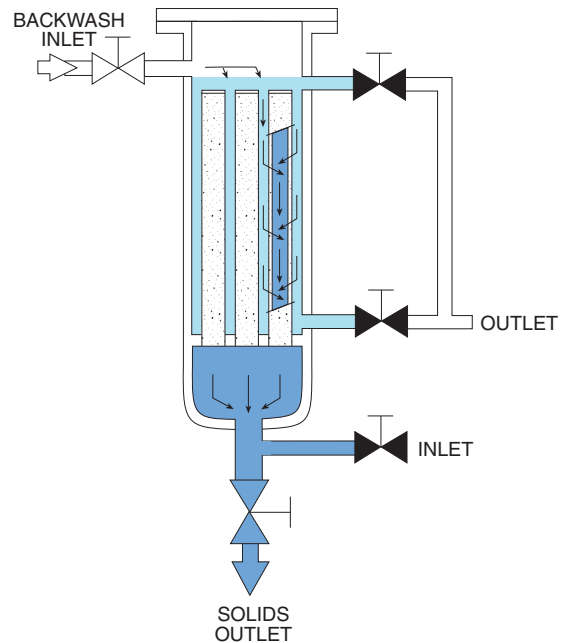
**HyPulse® LSI filters** incorporate inside-out filtration, a method and design unique to Mott Corporation. At the end of each filter cycle, solids are backwashed off the inside of the elements and discharged as a concentrated slurry or wet cake.

- Ideal for removal and/or recovery of carbon-based precious metal catalysts, activated carbon, organic salts and FCC catalyst from slurry oil
- Rapid turnaround between cycles maximizes on-stream service
- Eliminates cake bridging and associated problems
- High solids discharge capability
- Minimizes heel
- Allows for cake washing
- Higher surface area to volume ratio
- Can be used with or without filter aids

### LSI Filter Cycle



### LSI Backwash Cycle



*Inside-out filtration used in Mott HyPulse® LSI filters results in more uniform deposition, and more secure retention of solids, while eliminating the problem of cake bridging between elements often associated with outside-in filtration.*

*Inherently more efficient than traditional outside-in liquid-solids filters, Mott HyPulse LSI filters pass the process liquid through the elements from the bottom-up and inside-out, resulting in less heel, minimal loss of filtrate, and easier discharge of solids.*

HyPulse® is a registered trademark of Mott Corporation.

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