

# Solids Removal Systems

Compact, efficient systems for the effective removal of production-limiting solids

## APPLICATIONS

- Solids removal from production separators
- Solids removal in wellhead desanders
- Solids removal from atmospheric tanks
- Solids cleaning systems
- Handheld solids transportation devices

## ADVANTAGES

- MOZLEY FLUIDIZER® settled solids removal system
  - Highly effective removal of settled solids from the bottom of process vessels
  - No disturbance of any interface for less operator intervention and elimination of any process upsets
  - Superior controllability for accurate and precise control of both the slurry flow and slurry concentration
  - Design flexibility and greater control and operability
  - Easy internal and external retrofitting for reduced downtime
  - Integration with the MOZLEY DELTACLONE® pressure-reducing hydrocyclone to deliver self regulation with no preferential flow for cleaned areas
- MOZLEY Hydrotrans® compact solids fluidizer
  - Online solids removal with no need for system shutdown
  - Up to 70% solids discharge concentration by volume for reduced water usage
  - No efficiency loss when operating in a solids-laden system
  - No moving parts or restrictions in contact with solids
  - Prevention of exit nozzle blockages

Schlumberger has a variety of solids and sand management systems that provide identifiable value in solving problems at the source, thus alleviating downstream issues and reducing operational concerns.

## MOZLEY FLUIDIZER system

The compact, efficient MOZLEY FLUIDIZER settled solids removal system generates a flowing slurry from sand settled in the bottom of a tank or vessel. It is suitable for use both in vertical vessels (such as a desanding vessel) and in horizontal vessels (such as a production separator). The system can be used offline or online to discharge sand from vessels in a production system with minimal disruption to the system. The MOZLEY FLUIDIZER system is designed to transport all sizes of solids that are found settled in oil and gas production systems.

## Mode of operation

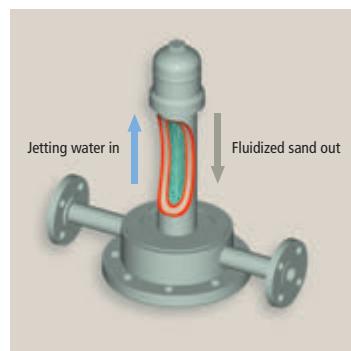
The MOZLEY FLUIDIZER system uses a controlled injection of water into the sand-containing vessel to generate a shallow yet broad zone of fluidized sand adjacent to the bottom of the vessel.

Because no vortex is created, disturbance is localized to the area containing the deposited sand. This slurry flows toward the MOZLEY FLUIDIZER system, where it passes through an internal flow passage and is discharged from the system outlet. The system's large zone of influence means that large volumes of sand can be removed by a single device, while the horizontal fluidization profile generates practically no disturbance in the liquid above.

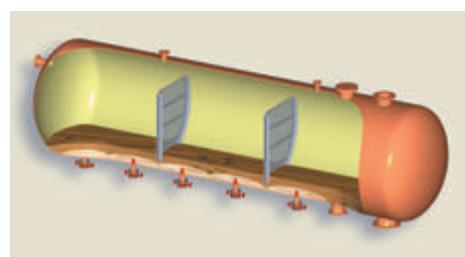
The MOZLEY FLUIDIZER system discharges a slurry of constant concentration until the sand level drops such that it is exposed when the slurry concentration will fall rapidly, giving a distinct cut-off point. The fluidizing water may be a separately pumped source or taken from the upstream process.



MOZLEY FLUIDIZER system installed on a vertical desander.



MOZLEY FLUIDIZER system.



MOZLEY FLUIDIZER system installed on a horizontal separator.

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## Hydrotrans fluidizer

The patented Hydrotrans compact solids fluidizer is a solids fluidization and removal device with no moving parts. The fluidizer enables online removal of solids from any pressurized or atmospheric system.

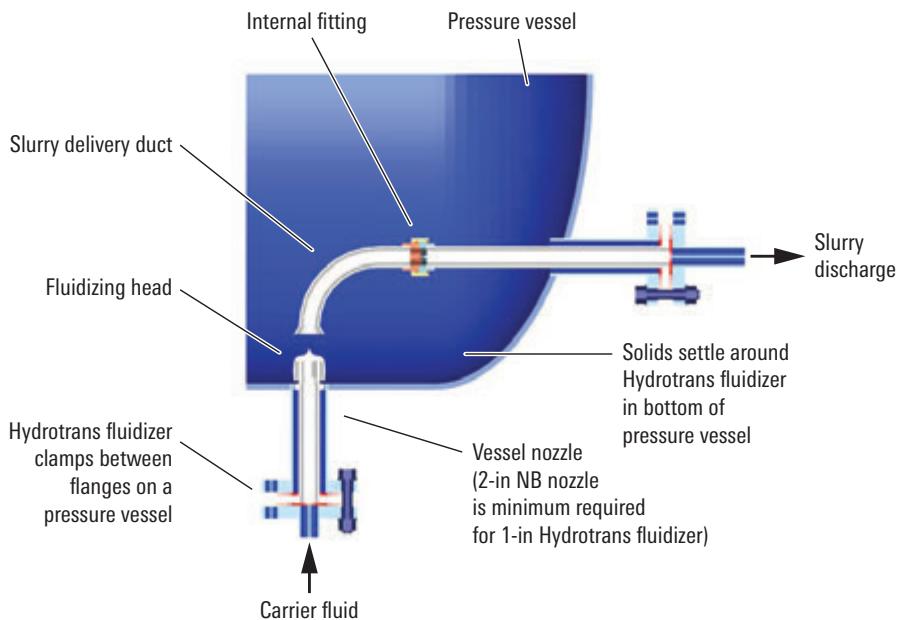
### Mode of operation

The Hydrotrans fluidizer features a separate fluidizing head that provides a strong local vortex that fluidizes the solids accumulated in the separator. The vortex is centered around the fluidizing head and the slurry discharge pipe, which is positioned immediately above the fluidizing head so that the solids are fluidized at the point of removal from the vessel.

This ensures that there is no disturbance to the fluids above the settled solids bed and solids removal operations can be completed with no process disturbance.



Hydrotrans fluidizer.



*Compact with no moving parts, the Hydrotrans fluidizer enables online removal of solids from a vessel without level upsets, provides high solids discharge concentrations, and can operate in a solids-filled environment with no loss of efficiency.*

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