



SCREENS

INTERNALLY vs. EXTERNALLY FED

THE PROS & CONS

INTERNALLY FED SCREENS

Pros

- ' Ideally suited for removal of fibrous solids
- ' Ideally suited for removal of solids that have shear resistant properties.
- ' Ideally suited for removal of solids that are not amorphous or do not smear under some pressure.
- ' These screens provide more retention time on the screen surface and thus you typically have a drier mass of solids being discharged from the screen.
- ' In many applications, you can alter the influent distribution piping to enhance transition of liquids/solids to the screen surface.
- ' The design permits the changing of the elevation of the solids discharge area, providing a drier mass of solids being discharged from the screen.
- ' The design permits liquid/solids separation in applications where there are very high flows.
- ' Reduced maintenance time & cost.

Cons

- ' Typically, require sophisticated cleaning systems to keep the screen clean.
- ' Typically, screen cleaning requires large amounts of water and high pressure.
- ' Liquid/solids separation very difficult when solids are amorphous and or have lower shear tolerance.
- ' Typically, not well suited for liquid/solids separation applications where oils and grease levels are of concern.

EXTERNALLY FED SCREENS

Pros

- ' Typically, well suited for liquid/solids separation applications when a wide range of solids are present.
- ' Better control of influent conditions.
- ' Better control of liquid/solids interface with screening surface.
- ' Better control of liquid levels in the influent chamber/ velocity & depth.
- ' Better cleaning of screen surfaces, due to the internal back washing activity provided by the filtrate. Typically, this is referred to as the self cleaning phenomenon, caused by the constant back washing.
- ' Designs provide other cleaning approaches, all of which require less water and pressure.
- ' Designs provide for a wide variety of influent piping scenarios.
- ' Designs provide better control of screen rotation to enhance liquid/solid separation.
- ' Well suited for applications where oils and grease are present.
- ' Designs provide simple overflow bypass configurations, when upset conditions are experienced.

Cons

- ' Not well suited for very high flows, when fine screening is required.
- ' Solids discharged from the doctor blade have the potential of being wet.
- ' Potential exists for free water/oils to be discharged with the solids.



**DONTECH
INDUSTRIES, INC.**
EQUIPMENT & SYSTEMS

DONTECH INDUSTRIES HISTORY

Dontech Industries, Inc. offers more than 25 years experience in the engineering and design of screens, screening systems, and solids conveyance/compactor systems.

With its own team of experienced machine operators/welders each screen is hand constructed to the clients exacting specifications. This professional team allows for ease of construction of equipment that is unique in shape, size, or other design considerations.

Offering experience on both the industrial and municipal markets, our professionals have the knowledge that allow all pertinent design questions to be addressed assuring the final screen meets the design application.