

PRO-GUARD SCREW SCREEN

SCREENINGS REMOVAL, WASHING, COMPACTION & DEWATERING

The PRO-GUARD Screw Screen effectively removes debris, washes out putrescent organics, eliminates odor potential and reduces the volume of primary screenings before disposal.

The PRO-GUARD Screen is self-cleaning, simple and requires minimal maintenance. A rotating screw (spiral) cleans the screen and transports screenings through the unit. No bearing is required to support the submerged end of the spiral. Support is obtained using hardened steel, easily replaceable wearing strips or high-density plastic pads. The entire screen assembly, typically installed at less than 45 degrees from horizontal, can be quickly rotated out of the channel or tank.



SELF CLEANING FINE SCREEN/BRUSH



SCREEN SECTION WITH SCREW/BRUSH

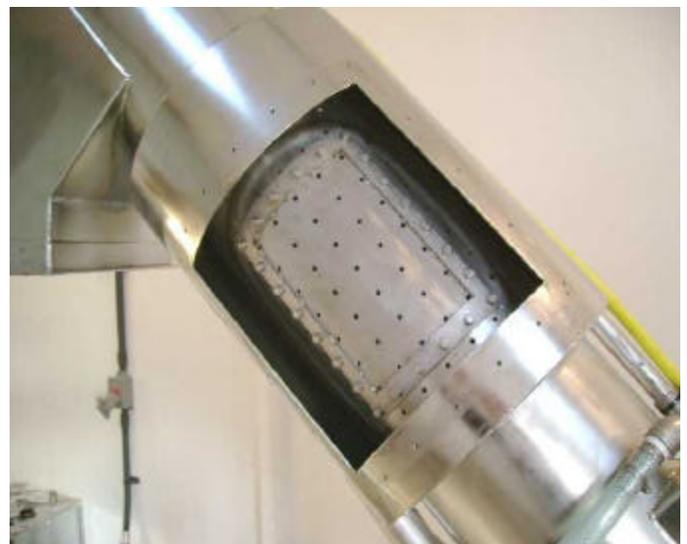
The fine screen (2mm to 6mm openings) on the bottom of the SCS Screw Screen retains debris in the stream while letting liquid and fine organics pass through. Stiff, replaceable brushes are attached to the outside spiral edge, in the screen region, to detach and transfer screenings to the next zone while cleaning the screen panel. In this zone, wash water is typically applied to the screenings.

CONVEYING & DRAINING

Collected screenings are further transported by the conveying screw into the enclosed tube (housing) section where they continue to move toward the dewatering zone. The screw rides on wear bars and provides draining of the screenings. Wash water may also be applied to the screenings in the transport zone.

COMPACTION & DEWATERING

As the solids are conveyed up the tube they form a solid plug and increase the resistance to movement. Added resistance causes the plug to compress. In this zone, contained water is squeezed out and drained through a screen drum. Wash water is applied to the drum and drain. At the discharge end a reverse screw, with cutting edge, breaks off the end of the plug and allows it to drop into a receiving container. Prior water wash and compression, in the compression zone, results in cleaned screenings, at reduced volume and substantially reduced odor.



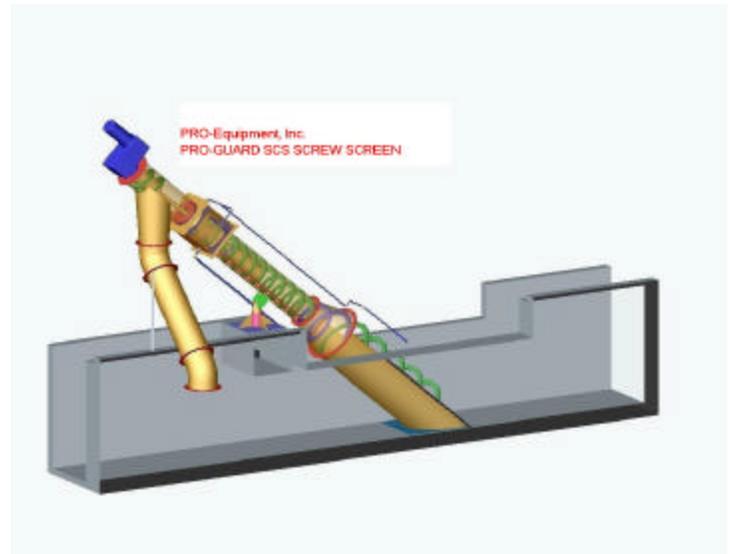
COMPACTION ZONE (COVER OFF)

TYPICAL APPLICATIONS & VERTICAL OPTION

The PRO-GUARD SCS Screw Screen is typically used in smaller waste treatment facilities (1-10 MGD) to remove larger solids from the wastewater before further treatment. This fine screen serves the same function as a standard bar screen, plus it further cleans, dewateres, conveys and compacts the screenings, all in a single unit. Typical mounting of the PRO-GUARD SCS Screw Screen is inclined in a concrete channel or a (stainless) steel tank.

CONCRETE CHANNEL INSTALLATION

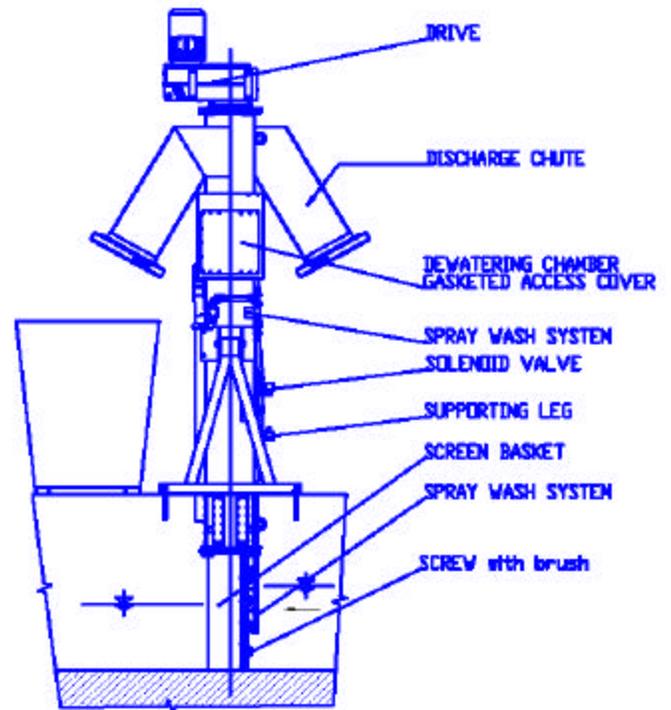
IN-TANK INSTALLATION



VERTICAL INSTALLATION

The newest version of the PRO-GUARD Screw Screen allows the screen to be installed in a completely vertical orientation.

Many retrofit applications, especially in an existing pumping stations, have limited space and may not have sufficient room for the angled screen. The vertical screen provides all the same solids capture, washing, screw conveying, and compacting features as the angled screen while occupying a much-reduced horizontal footprint. Cost of the vertical screen is not substantially different than the inclined version.



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