

A brand of
Aqseptence Group

Passavant®/Geiger® Cable-Operated Grab Cleaners

Passavant®/Geiger® Bar Screens with Cable-Operated Grab Cleaners are typically installed in water intake systems as front-end bar raking machines/coarse screens for bulky debris. Depending on the technical requirements, we have stationary and traversing versions available.



In industrial plants and numerous other applications, our very robust and operator-friendly machines are used as the first stage when cleaning industrial, process and cooling water. In power plants they protect turbines and other downstream equipment from damage caused by bulky debris or sediments such as sand, gravel and pebbles. Thanks to their automated cleaning technique, Passavant®/Geiger® Cable-Operated Grab Cleaners highly efficiently remove even the most stubborn debris. These machines are not only installed in new civil structures; they can also be easily retrofitted into existing water intake systems. In addition to the stationary machines, the traversing/moving version of our Bar Screen with Cable-Operated Grab Cleaner for multiple channel cleaning can prove to be more economical alternative.

Advantages

- Available as stationary or traversing (movable) version
- Our new innovation-award-winning polyamide cable drums make Geiger® Cable-Operated Grab Cleaners very easy to maintain
- Two independent drive mechanisms and three cables
- Intelligent cleaning technique
- Highly reliable grabbing and removal of bulky debris
- Highly efficient: One grab cleaner for three or more channels
- Fully automated cleaning operation with slack rope control (for 3-rope device).
- High loading capacity of the grab cleaner
- Different speeds for the cleaner carriage during the descent and cleaning cycle
- The cleaning cycle can be started from any grab cleaner position
- Exact limitation of the lifting movement

Passavant®/Geiger® Stationary Cable- Operated Grab Cleaner



Passavant®/Geiger®
Stationary Cable-
Operated Grab
Cleaner with Main-
tenance Platform

Function

Passavant®/Geiger® Cable-Operated Grab Cleaners have two independent drive mechanisms for lifting and pivoting purposes. The cleaner carriage with grab cleaner runs on guide ways and is operated using control and hoist ropes. These form a unit, meaning that during the clearing cycle the lifting force acts as a lever on the grab cleaner, forcing it to close. The grab cleaner's subsequent powerful closing force enables it to deal with extremely heavy loads and bulky debris.

The lifting unit controls the descent and the cleaning motions of the Cable-Operated Grab Cleaner. The pivoting drive unit controls

the entering of the grab cleaner into the bar screen. The slack rope control system detects any blocking of the cleaner carriage or grab cleaner caused by floating matter, pebbles, or debris, and will interrupt the grab cleaner's descent to the lower meshing point, hence restarting the cleaning cycle.

Generally, deposits on the ground and bulky debris are removed layer by layer. In case of clogging or overloading, a special electro-mechanical safety control switches off the machine. This outstanding automated system ensures full operational reliability hence enabling high throughput.

Passavant®/Geiger® Traversing (Movable) Cable-Operated Grab Cleaner

Picture top right:
Movable Bar
Raking Machine
at the German
Production Site



Picture bottom right:
Passavant®/Geiger®
Traversing Cable-
Operated Grab
Cleaner in Action
at a Plant in Sweden



Picture on the left:
Passavant®/Geiger®
Traversing Cable-
Operated Grab
Cleaner in Action



Components

- Drive units with two gear motors for independent control of lifting and pivoting operation
- Mechanical/electrical overload protection
- Steel frame to bear the drive units
- Cleaner carriage with grab cleaner and replaceable comb plate
- Guide ways for accurate location of the cleaner carriage with grab cleaner
- Stripping device for removing the screenings from the grab cleaner at the discharge edge
- Discharge edge with chute
- Bar racks made of flat steel bars or, for better flow efficiency, specially-shaped steel bars

Material (Stationary and Traversing)

- Mild steel with high-quality surface coating
- All types of stainless steel
- Geiger® Cathodic Corrosion Protection Systems also available

Sizes (Stationary and Traversing)

Channel Width	0.9 - 6 m
Channel Depth	2 - 20 m
Height above Floor Level	3.7 - 6.2 m
Bar Spacing	10 - 150 mm
Discharge Height Above Floor Level	0 - 2.0 m
Inclination of Bar Screen	75° - 90°

Control (Stationary and Traversing)

- Automatic system with pressure differential control and operating timer
- Different cleaning cycle speeds thanks to pole-changeable drive units

Traversing Cable-Operated Grab Cleaner (Traversing Trash Rake)

For a multi-line water intake, a Geiger® Traversing Cable-Operated Grab Cleaner or Geiger® Traversing Trash Rake is the more economical alternative to several stationary machines adjacent to each other. Its application area is extremely versatile: due to its exceptional adaptability the Traversing Trash Rake suits a wide variety of situations, e. g. in cooling water intakes or hydropower plants.

Especially in cases where the screenings volume fluctuates, it can be beneficial to clean a

number of bar screens using just one Traversing Trash Rake. In this case, it does not matter if the bar screens are adjacent to each other or installed at different places in the civil structure.

The Traversing Trash Rake's intelligent control system ensures that all bar screens are reliably cleaned when necessary. Like the stationary machine, the Traversing Trash Rake is equipped with the tried-and-tested, large-volume grab cleaner with forced closure.

Additional Options

On request, the traversing cable-operated grab cleaner can be modified into a multi-functional machine with the following characteristics:

- A rake for the removal of bulky floating matter
- A hydraulic rotating crane with gripper for handling floating matter
- A lifting device for the stop logs
- A movable plate for cleaning the debris trough
- Installation and maintenance contracts

Aqseptence Group GmbH Water Intake Systems

Hardeckstrasse 3
76185 Karlsruhe
Germany
Phone +49 721 5001-0
info.geiger@aqseptence.com

www.aqseptence.com