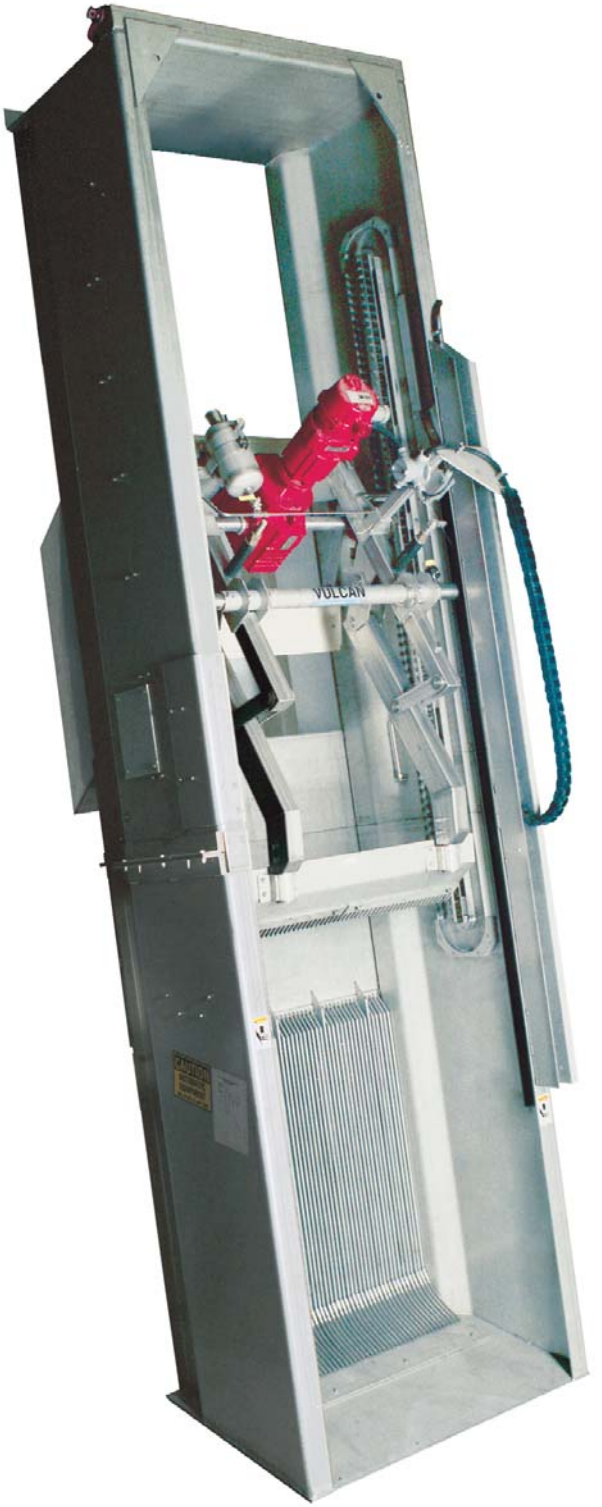
VULCAN
INDUSTRIES, INC.



Mensch Crawler™
BAR SCREEN

Mensch Crawler™ BAR SCREEN

ELECTRICAL CONTROLS

Each control panel we provide is designed and manufactured by our in-house electrical shop to meet the specifications for each particular project. Our panels are UL listed and can be labeled UL 508 or UL 913. Prior to shipment, each panel is fully assembled and tested. Panels can be installed as free standing, wall mounted or screen mounted. Controls can also be installed into existing MCC buckets.

DRIVE SYSTEM OPTIONS

Vulcan Industries offers drive systems to complement the available drives in various applications.

The two-speed drive system is an option for all electric and hydraulic drives to provide a faster cleaning rate during first flush events. As needed, the system increases the rake speed to clear debris rapidly during periods of higher screenings volume.

For wider screens, the dual synchronized drive system adds the power and reliability of two drives to each rake arm assembly. Available for electric drives, the dual system can be implemented for deep channels and submersible drives.

Rake speeds available from 20 fpm to 40 fpm. Please contact Vulcan if faster speeds are deemed necessary.

DID YOU KNOW?

Vulcan Industries has manufactured the largest reciprocating rake bar screens in the world. Five Mensch Crawler™ Bar Screens produced for Jefferson County, Alabama each extend 113 feet from the channel invert to the top of the unit. With fully submersible hydraulic drives, these units remove screenings from a channel 90 feet deep! From 1988 to 2003 Vulcan Industries has manufactured over 600 Mensch Crawler™ Bar Screens.

POST-SCREENING DEVICES

In addition to primary screening devices, Vulcan Industries offers a wide array of post-screening and dewatering devices. The Model EWP Washing Press and Model ESP Screw Press provide dewatering and transport for screenings. Connect multiple screening devices to a single post-screening dewatering and compacting device with a conveyor from Vulcan Industries. To assemble the most cost effective and efficient array of screening and post-screening devices, please contact your Vulcan Industries representative.

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Mensch Crawler™ BAR SCREEN

Dimensions:

- Minimum channel width: 18 inches
- Maximum channel width: 30 feet
- Maximum channel depth: 100 feet

Drives:

- Electric Brakemotor
  - Explosion proof version available
  - TEFC
  - UL approved for continuous service
- Submersible Electric Brakemotor
  - Fully submersible
  - Explosion Proof
  - TENV
  - UL approved for continuous service above and below the waterline
  - Impact resistant cast housing
  - No external gauges or valves
- Hydraulic
  - Fully submersible
  - Inherently explosion proof
  - Quiet operation
  - Equipped with external hydraulic power unit
  - Rake speed adjustment is possible

Pin Rack Options:

- Hardened Steel ANSI Chain Links
  - Commercially available when replacement is necessary
  - Includes hardened steel cog wheels
  - Stronger than Individual Rollers and Bushings
- Individual Rollers and Bushings
  - Hardened steel or stainless steel
  - Includes hardened steel cog wheels
  - Non-lubricated designs available
- Individual Non-Metallic Pin Rack
  - Includes non-metallic cog wheels

Bar Rack Options:

- Bar spacing from 1/4” to 3”+
- Extruded Teardrop or Extruded Trapezoidal
  - Reduces headloss
  - Assists in preventing blinding
- Rectangular
  - For wider bar spacings

Severe Duty™ Rake Options:

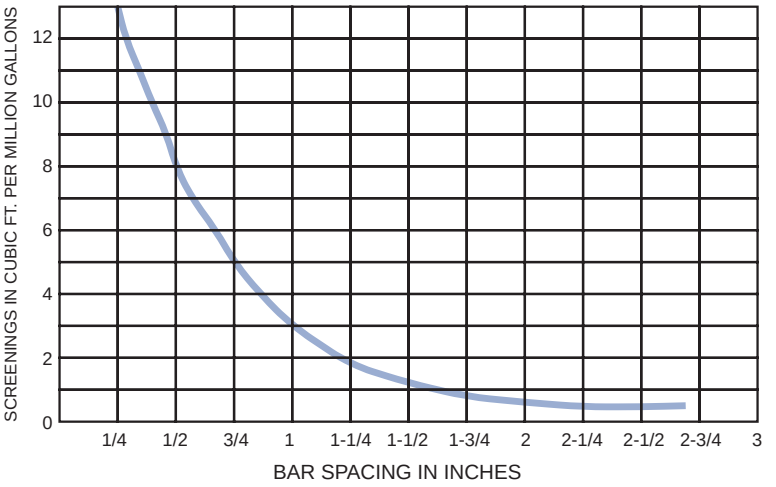
- Fixed drive
- Rotating drive
- Fixed drive - split drive shaft

Since 1988, **Vulcan Industries, Inc.** has offered the Mensch Crawler™ Bar Screen as the standard of excellence in operation and reliability for mechanical screening applications around the world. We bring a level of experience, unrivaled in the industry, for designing and manufacturing customized bar screens for new and existing facilities.

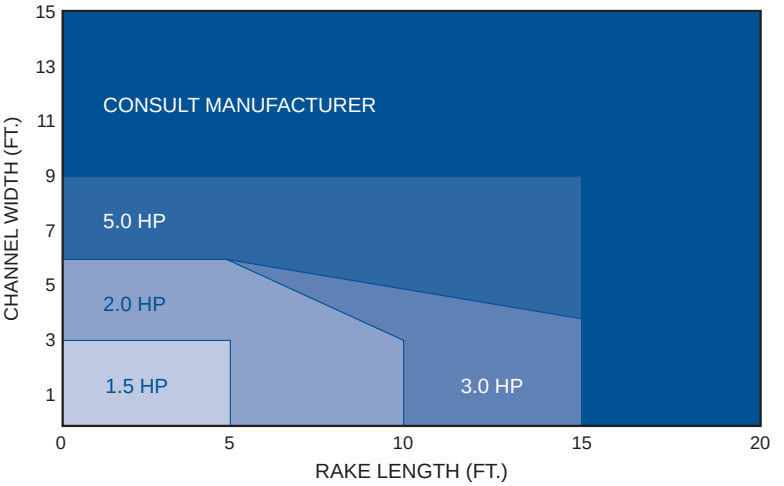
Each Mensch Bar Screen is designed to the exact specifications of each project. The unique frame design extends from the channel invert to the top of the unit providing structural integrity and reduces installation costs and the chance for installation error. To guard against corrosion, reduce maintenance, and ensure years of productive operation, the rugged frame and many of the components are fabricated from stainless steel. The low maintenance pinrack/cogwheel drive system eliminates chains, lower sprockets and the need for permanently submerged moving parts.

Unless facility conditions require modular installation, the Mensch Bar Screen is shipped and installed completely assembled. Prior to delivery, each Mensch Bar Screen is fully tested by our expert staff to ensure proper operation when it reaches your facility.

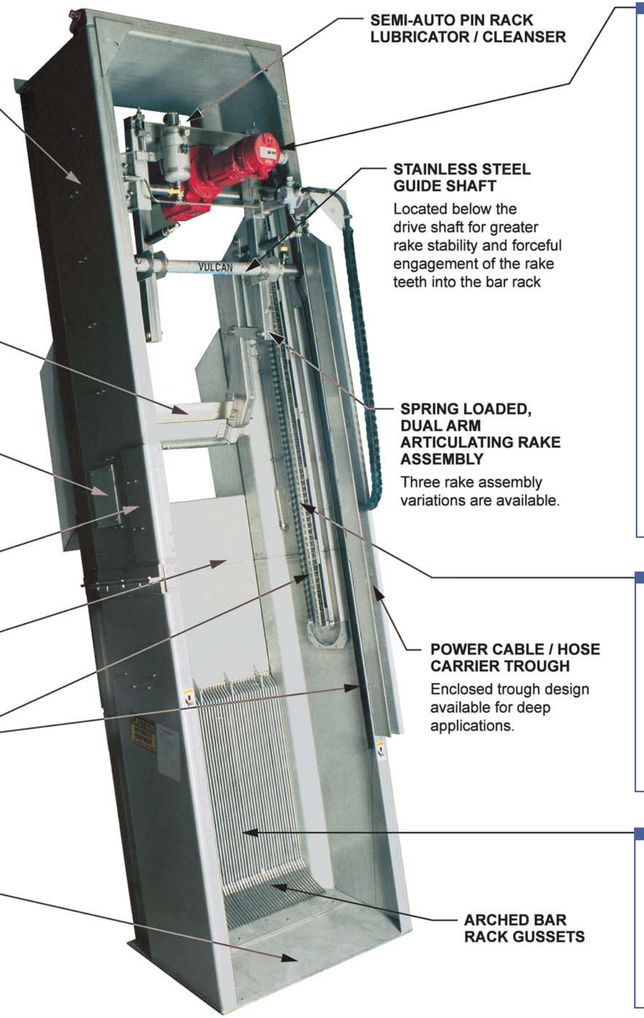
SCREENINGS CAPTURE



MOTOR HORSEPOWER SELECTION



Mensch Crawler™ BAR SCREEN



STAINLESS STEEL SIDE FRAME
Full Frame (as shown), Partial Frame, Spliced Frame (for installation in existing buildings). Standard side frames are formed from a minimum 3/8" thick stainless steel plate with four engineered bends for rigidity creating a side frame width of 34".

WIPER MECHANISM
Internal to screen frame

SIDE ACCESS PANELS
Drive shaft roller removal access

RAKE REMOVAL PLATES

DEAD PLATE

SEPARATE GUIDE TRACKS
Provided for the drive shaft rollers and the guide shaft rollers on the rake assembly.

FLUSH BOTTOM BASE PLATE

SEMI-AUTO PIN RACK LUBRICATOR / CLEANSER

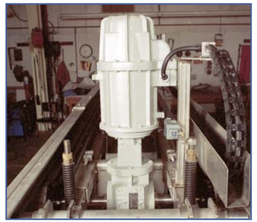
STAINLESS STEEL GUIDE SHAFT
Located below the drive shaft for greater rake stability and forceful engagement of the rake teeth into the bar rack

SPRING LOADED, DUAL ARM ARTICULATING RAKE ASSEMBLY
Three rake assembly variations are available.

POWER CABLE / HOSE CARRIER TROUGH
Enclosed trough design available for deep applications.

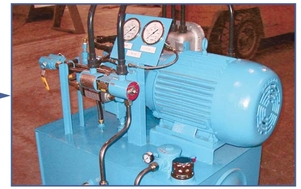
ARCHED BAR RACK GUSSETS

DRIVES

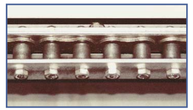

Submersible Electric Brake Motor


Electric Brake Motor

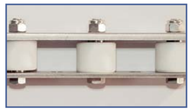

Submersible Hydraulic Drive


External Hydraulic Power Unit

PIN RACK TYPES


Hardened Steel ANSI Chain Links


Individual Rollers and Bushings (Hardened Steel or Stainless Steel)

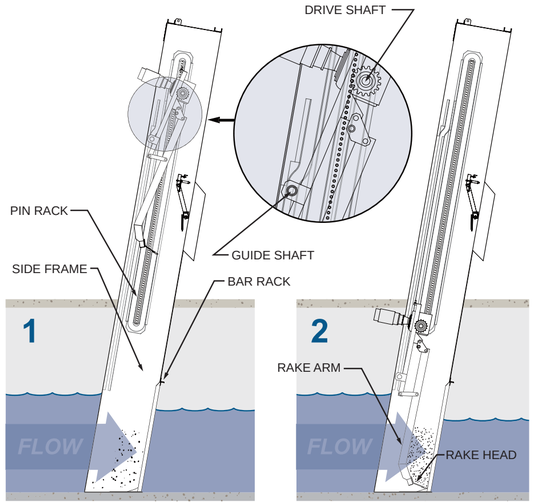

Individual Non-Metallic Pin Rack Components

BAR RACK - TYPES OF BARS


Rectangular


Trapezoidal

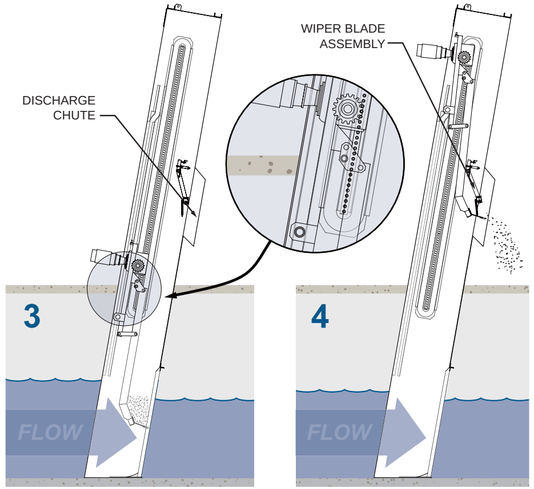

Teardrop



Mensch Crawler™ Bar Screen Operational Sequence

1 The bar screen cleaning cycle begins when the rake assembly travels downward after it is activated from the "park" position.

2 As the rake assembly rotates around the lower end of the pin rack, the rake arms force the rake head teeth to engage the bar rack.



3 The rake assembly travels up the pin rack, cleaning debris from the bar rack and delivering the screenings to the point of discharge.

4 The rake engages the wiper blade to clean the rake head. The rake assembly then returns to the "park" position.