



**Smith & Loveless Inc.**



**SCHLOSS™**

**Advanced Headworks Technology**



*Screens*

**SCHLOSS™ MARK XV-C™**

[www.SmithandLoveless.com](http://www.SmithandLoveless.com)



## ADVANCED HEADWORKS TECHNOLOGIES

S&L SCHLOSS™ *Advanced Headworks Technologies* offer the water industry one of the most comprehensive arrays of screening technologies, including complete screenings, compacting and washing equipment selections: washing presses, shafted screw compactors and hydraulic ram presses.

**Coarse Bar Screens**      **Fine Screens**  
**Compactors**              **Conveyors**  
**Screen Washers**        **Catenary Screens**

The "Schloss story" is much more than just a rich history of supplying quality-engineered material handling and separation systems for multiple industries. It's a story of generations of distinguished, award-winning engineers sharing the Schloss name with professional dedication to its customers and constituents with products and expertise that help make the world a better place.

In 2015, Schloss Engineered Equipment Inc. was acquired by water industry leader Smith & Loveless Inc., Lenexa, KS., and re-named Schloss Environmental Equipment Inc., guaranteeing that the Schloss name, legacy and brand will continue for generations to come.

Smith & Loveless supports its product development with more than 30 full-time engineers, including several that are licensed professionally. Its global footprint expands across several continents with offices in all domestic time zones as well as Europe, Asia, and Australia. The sun never sets on **SCHLOSS™** equipment in operation.



S&L SCHLOSS™ Mark CI™  
Pin Rack Screen



**Smith & Loveless Inc.**

	<b>Model</b>	<b>Type</b>	<b>Flow</b>	<b>Channel</b>
BAR SCREEN	Mark VIII-A™	Reacher (Back)	Up to 13 MGD / 570 lps	Up to 4' / 1.22 m
	Mark IX-A™	Reacher (Front)	Up to 15 MGD / 657 lps	Up to 4' / 1.22 m
BAR SCREEN	Mark CI™	Pin Rack	Up to 100 MGD / 4380 lps	Min. 2' (610 mm) & larger
	Mark CT™	Catenary	Up to 75 MGD / 3286 lps	Min. 1' (305 mm) & larger
FINE SCREEN	Mark XV-A™	Spiral (Perforated)	Up to 13 MGD / 570 lps	Up to 34" (1219 mm)
	Mark XV-C™	Spiral (Wedgewire)	Up to 25 MGD / 1100 lps	Up to 2' and larger (610 mm)

**RELIABILITY**  
**EXPERIENCE**



**QUALITY**  
**INNOVATION**

## Mark VIII-A™ Bar Screen

Designed for small to very large plants the **Schloss Mark VIII-A™** Bar Screens are particularly well suited where larger materials may be present such as hospitals, prisons and similar applications. A fully enclosed **Mark VIII-A™** has electrical heating and insulation for colder climates. The screen can also provide weather protection for the screening container which is located behind a door and inside the housing unit. Full enclosures are also available for odor and vector control without the heating and insulation.

Smith and Loveless can also provide single or double arm raked bar screens for the most economical screening solutions.

### FEATURES AND BENEFITS

- Vertical Back Cleaned Screening System
- Low Maintenance
- No chains, sprockets or bearings permanently submerged
- Fully Enclosed has electrical heating and insulation Option
- Full enclosures are also available for odor and weather protection



**SCHLOSS™ MARK VIII-A™**

### Application Data

Flow Ranges:	up to 13 mgd / 570 lps
Sizing:	Standard or Custom
Channel Widths:	Up to 4' / 1.22 m
Angle:	90° Vertical
Clear Openings:	1/4" and larger openings
Construction:	SST or CS & Other Alloys

## Mark CI™ Pin Rack Screen

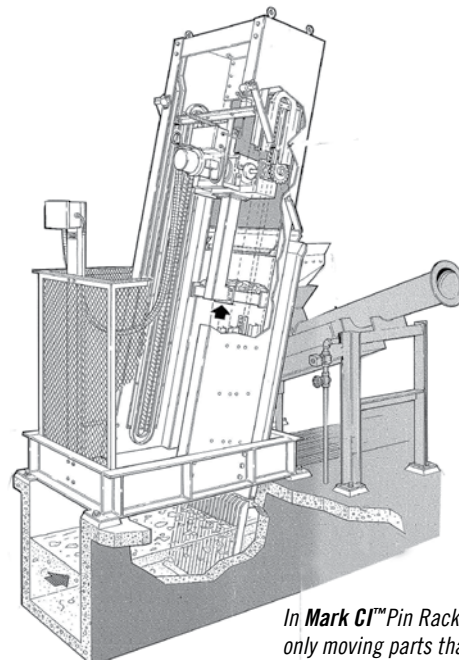
Multiple rake arm selection, precision pin rack assembly design, and customized system options make the **S&L SCHLOSS™ Mark CI™** Pin Rack Screen the cost-effective choice for efficient coarse screening for mid-size to large treatment plants and industrial applications with bulky material. An optional, patented telescopic arm ensures performance against large clogging objects. Multiple housing options ensure operator safety and protect against freezing.

### Application Data

Flow Ranges:	1 - 100+ MGD (44 - 4380+ Ips)
Sizing:	Three Sizes / Custom for Application
Channel Widths:	Min. 2' (610mm) & larger
Angle:	80°, 84°, or 90°
Clear Openings:	1/4" & larger / 6.35 mm
Construction:	SST or CS & Other Alloys

### Features & Benefits

- Precision S&L SCHLOSS™ engineering & assembly
- Heavy-duty design yields robust performance for large flows
- Standard & custom designs available
- Single & double rake arms
- Rigid, telescopic (patented) & articulated arms
- Submersible motor enclosure option



*In Mark CI™ Pin Rack screens, the only moving parts that normally go below the liquid level are the Rake Head and Arm.*

## Mark CT™ Catenary Bar Screen

Catenary screen technology offers proven performance for small to large flow applications with large, bulky material. What separates the **S&L SCHLOSS™ Mark CT™** Catenary Bar Screen originates from our detailed engineering in the critical elements: exclusive chain design, superior component materials of construction, and rakes that combat problem flushables and large material. By definition, the catenary style features less wearing parts than other kinds of bar screens because there are no lower sprockets, bearings or guards.

### Application Data

Flow Ranges:	Up to 75 MGD (3286 Ips)
Sizing:	Standard or Custom
Channel Widths:	Min. 1' (305 mm) & larger
Angle:	75° (typical)
Clear Openings:	1/4" (6 mm) & larger
Construction:	SST or CS & Other Alloys

### Features & Benefits

- Catenary design eliminates need for lower sprockets & bearings
- Patented chain limits articulation linearly
- Heavy-Duty design provides superior durability
- Special rake designs for flushable wipes
- Maintenance easily performed at floor level
- Multiple options for enclosures & screenings



## Screening Washers & Compactors

Often called a screw press, it normally uses a 6" or larger diameter screw when used with the Mark family of screens. Can be mounted horizontally, or at various incline angles, 30° is very common. We call this 30° machine, if mounted on a supporting frame, our "Howitzer Mount".

The supporting frame is bolted to the floor or furnished with a base or furnished with a base equipped with casters. Horizontal compactors can be supported from the floor or with brackets to the **Mark IX-A™**, **Mark VIII-A™**, **Mark CI™**, and the **Mark CT™** housing, which leaves the floor clear of obstructions.

### Application Data

Sizing:	6" diameter screw or larger
Angle:	Horizontal or various angles, 30°
Construction:	SST or CS & Other Alloys



*Screenings conveyor, washer and compactor*

## Mark IX-A™ Coarse Bar Screen

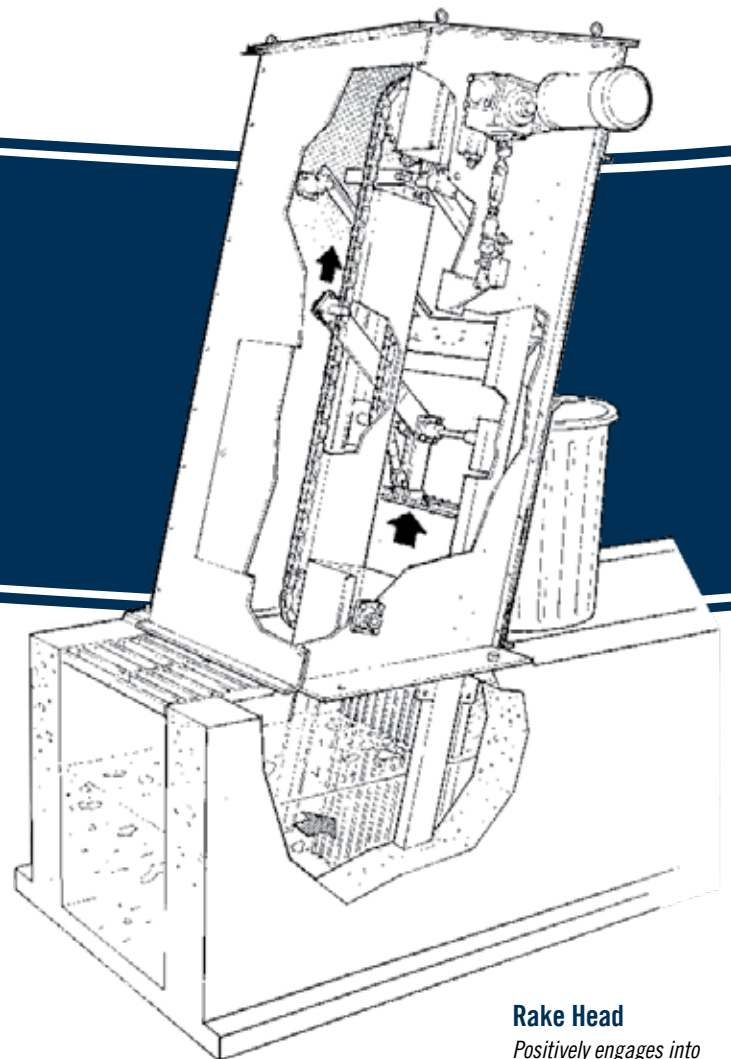
Designed for small to medium-sized wastewater treatment facilities, the distinctive **S&L SCHLOSS™ Mark IX-A™** coarse bar screen delivers remarkably reliable screening performance with minimal maintenance. This front-cleaned, front returned reacher screen inclines to angles of 75° through 90° and can be pivoted to incorporate in plants with no bypass channel. Can be heated and insulated.

### Application Data

Flow Ranges:	Up to 15 mgd (657 lps)
Sizing:	Custom — as project requires
Channel Widths:	Up to 4' / 1219 mm (typical)
Angle:	Normally 75°, 80°, 84°, 90° available
Clear Openings:	1/4" & larger openings (6.4 mm)

### Features & Benefits

- Robust S&L SCHLOSS™ engineering & assembly
- Uniquely designed for low maintenance / manpower
- No submerged chains, sprockets or bearings
- Pivoting option allows for simple inspection / O&M
- Complete array of enclosure options available
- Heated & insulated options available



#### Rake Head

*Positively engages into bottom of the lower bar rack and cleans off the bar rack as it moves upward.*

#### Flexible enclosure and handling options:

*(Far Left) S&L SCHLOSS™ Mark IX-A™ prior to a pump station, with integrated screenings conveyor. (Left) Complete enclosure options are available, including heated and insulated for safety and anti-freezing.*



## Mark XV-C™ Fine Screw Screen

Reduce solids, scum and waste disposal costs with the **S&L SCHLOSS™ Mark XV-C™** Fine Screw Screen system. Designed for larger in-channel flows, the **Mark XV-C™** cost-effectively achieves fine screening through a robust design that combines a cylindrical screen basket with internal rotating rake arm, brush cleaning, and shafted screw conveying. The unique **S&L SCHLOSS™** screen basket design virtually eliminates the potential for bar breakage from problem solids like broken glass and gravel.

### Application Data

Flow Ranges:	Up to 25 MGD / 1100 lps
Sizing:	Standard or Custom
Channel Widths:	Min. 2' & larger / 610 mm
Angle:	35° preferred
Clear Openings:	1 mm & larger
Construction:	SST or CS & Other Alloys

### Features & Benefits

- Fine screening designed for larger flows up to 25 mgd (1100 lps)
- Wedgewire (or perforated) drum design
- 1mm and larger clear openings for high capture
- Design minimizes head loss through the system
- Drum cleaning provided by reliable S&L SCHLOSS™ brush design
- Durable material options, including stainless steel and carbon steel

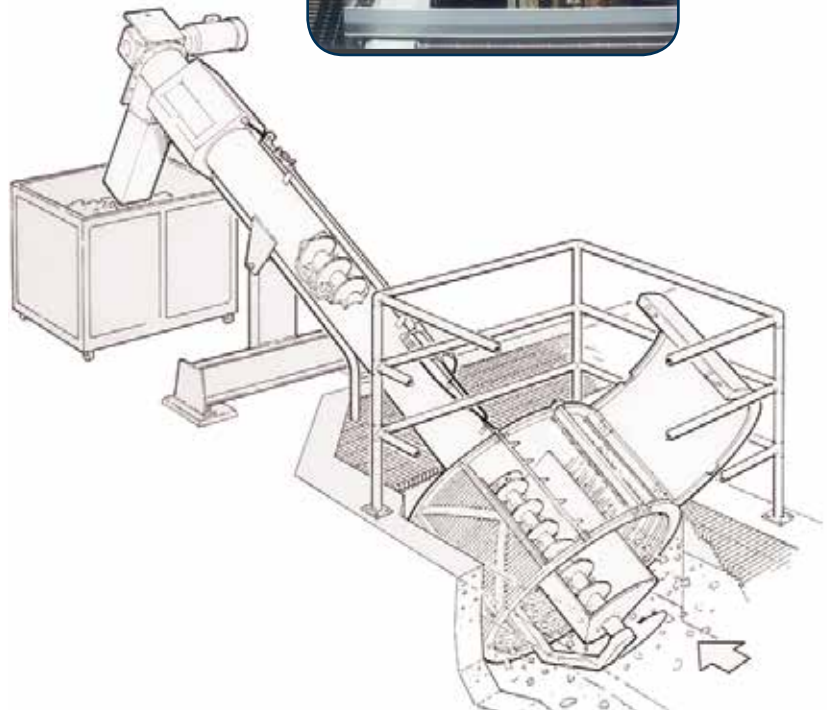


#### Screen Basket Design Advantages:

*The **S&L SCHLOSS™ Mark XV-C™** wedge wire basket design is superior to competitor designs that are limited by rake arm deflection and corresponding basket length, water allowance and hydraulic capacity. Thus, the **S&L SCHLOSS™** handles significantly greater flow in narrower channels.*



**S&L SCHLOSS™ Mark XV-C™**  
wedge wire basket



# ADVANCED HEADWORKS TECHNOLOGIES



## Project Examples



**Mark CI™ Pin Rack Screen**  
Egypt



**Mark IX-A™ Mechanical Bar Screen**  
New York



**Mark XV-C™ Fine Screw Screen**  
California



**Mark CI™ Pin Rack Screen**  
California

The **SCHLOSS™** name stands for generations of engineering excellence and experience in the mining, bulk material handling and water industries. With more than a century of design and construction of custom-designed conveyance and liquid-solids separations systems and technologies – installed in all 50 U.S. States and more than 40 countries globally – the sun never sets on **SCHLOSS™** equipment in operation.

© 2016 Smith & Loveless Inc., Brochure No. 801

