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**SCREENING AND SHREDDING**  
Systems

# Screening and Shredding Systems

Whether it is for a single screening or shredding equipment to complete your system or for a whole integrated screening line, Premier Tech Chronos can provide you with innovative, efficient and reliable solutions. Its specialty in custom-designed and manufactured screening line systems allows meeting every customer's production requirements by determining the optimum layout, number, size and type of screening/shredding equipment, as well as the level of automation and flexibility needed.

Our screening and shredding systems are built with industrial and standard components providing a reliable

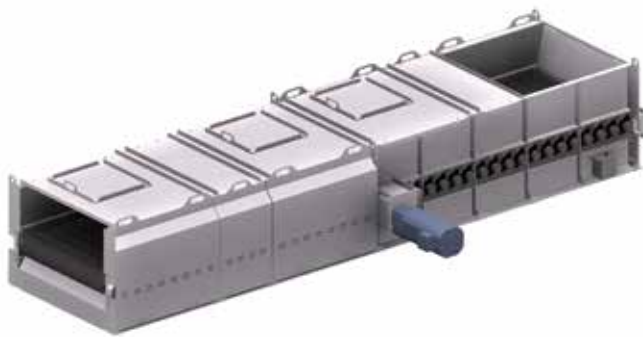
and consistent operation to reach the quality that customers are expecting. We offer a wide range of screening and shredding equipment, including many types of screeners (star screener, disc screen, trommel screen), a hammer mill, a bale shredder and a fluffer. Their purpose is to separate material by size, a process which allows sorting good product from rejects that can be disposed of or reprocessed through a size reducing equipment either offline or integrated to the line. A programmable logic controller (PLC) can be used to optimize the operation.

## Features and benefits

- Reliable, quality manufactured and rugged equipment
- Equipment designed and built to provide ease of operation and minimum maintenance reducing direct labour costs
- Each system is engineered and designed to meet the customer's specific needs and applications
- User-friendly operator interface with color touch screen
- Safety guards included and in accordance with highest regulations (OSHA, CSA, CE)



# Star Screener



The **Star Screener** is designed to process organic materials of various moisture contents. It consists of rubber or plastic stars mounted on rapidly rotating shafts. The special shape of the stars allows fine particles to pass through the screen and either fall onto a collection conveyor or be stockpiled. Larger particles float on top of the stars and fall at the end of the screen, where they can either form a reject stockpile or be collected by complementary conveying equipment. Stars are equally spaced so that each star is centered in the space between two stars of the previous and following shafts.

## Applications

Peat moss, compost, mulch, mixes of products such as reed sedge, top soil, sand, bark, manure, wood shavings, etc.



## Features and benefits

- High production capacity in a small footprint
- Adjustable star rotation speed allowing quick and easy output product size change (with a single button push)
- Built with folded and reinforced steel plates
- Easy access to stars for maintenance operations
- Enclosed design with easy-access covers for effective dust control
- Available in various lengths to match the desired production capacity
- Can be made in various spacings to match the desired material size range

## Options

- Overspeed cleaning cycle
- Transition and reject chutes
- Single-chain or multiple-chain driving system

## Technical data

### Typical equipment dimensions:

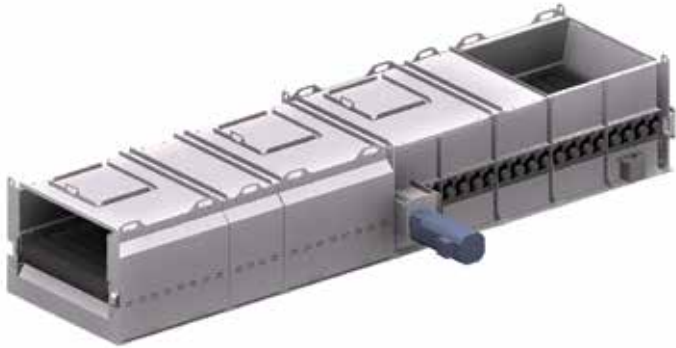
Length:..... From 7' (2.1 m) to 18' (5.5 m)  
Width:..... 40" (1 m)  
Height:..... Varies depending on system configuration

**Material density:** ..... 6 to 50 lb/ft<sup>3</sup>  
(160 to 800 kg/m<sup>3</sup>)

**Max. material size:** ..... Up to 8 in  
(203 mm) diameter

# Star Screener

4



## Footprint

- Length: 84" (2134 mm) to 216" (5486 mm)
- Width: 40" (1000 mm)
- Height: Varies depending on system configuration

## Applications

Peat moss, compost, mulch, mixes of products such as reed sedge, top soil, sand, bark, manure, wood shavings, etc.



The «**Star Screener for fine sizing**» is a screening machine designed to process organic materials like peat. It is made with fine plastic stars mounted on rapidly rotating shafts. The special shape of the stars allows fine materials to fall through the screen, and onto a collection conveyor or to create a stockpile. Larger pieces of material float on top of the stars and fall at the end of the screen to form a reject stockpile or to be collected by complementary equipment.

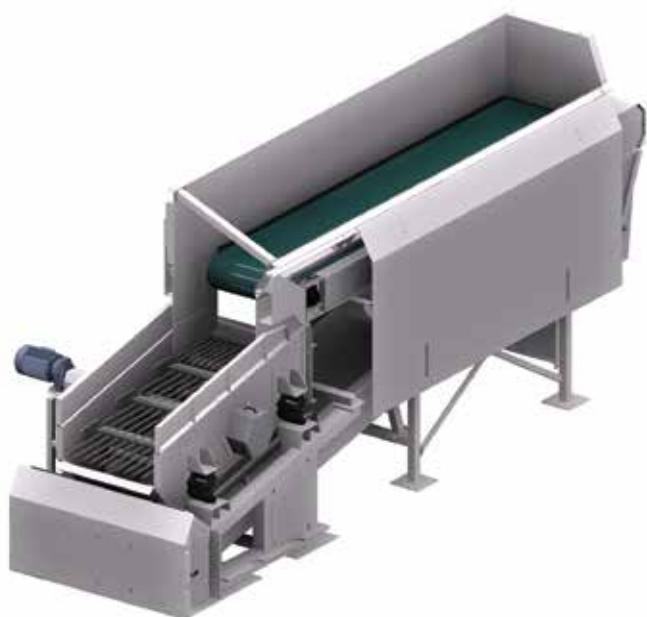
## Features and benefits

- Excellent quality of fine-size material produced
- High production output with a small footprint
- Adjustable star rotation speed permits quick and easy change in size distribution
- Easy access to stars for maintenance operations
- Enclosed design for effective dust control has easily accessible covers
- Single-chain or multiple-chain driving systems available
- Available in various sizes (from 16 to 44 shafts)
- Two spacing options available: 1/8" (3 mm) and 3/16" (5 mm)
- Safety guards included meet the most stringent regulations (OSHA, CSA, CE)





# Pre-Screening Unit



The **pre-screening unit** is designed to execute a first screening to remove bigger pieces of material before it is further processed on a screening or a mixing line. It is especially made for difficult to process materials containing large size particles. It comprises a hopper section with conveyor, a vibrating screen box equipped with self cleaning Grizzly™ fingers and a collection conveyor. Product is fed into the hopper and transported to the screener. Larger pieces of material will float on top of the fingers and fall on the chute at the end of the screener to form a reject stockpile while smaller pieces will go through the screen and be collected by a conveyor and can be further processed.

## Applications

Peat moss, compost, mulch and mixes of products such as reed sedge, top soil, sand, bark, manure, wood shavings, etc.



## Features and benefits

- Dump and run set-up (no gradual feeding required) to optimize production and minimize lost time
- Self cleaning fingers
- Heavy duty construction
- High action to clean large size overs
- Shaft driven electric motor (more reliable/less maintenance than belt/pulley driven motors)
- Can be fed directly by loader
- Compact unit

## Options

- Rotation detector

## Technical data

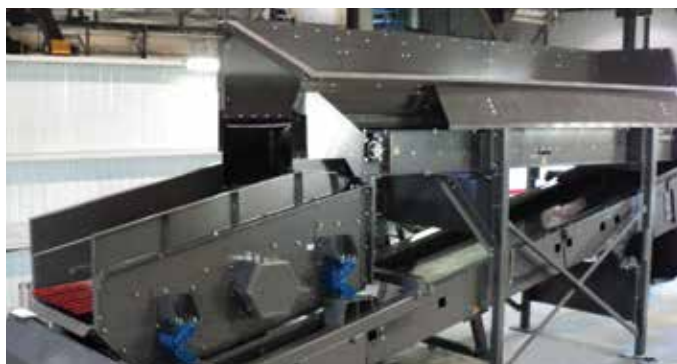
### Typical equipment dimensions:

Length:.....29' 8" (9 m)  
 Width:.....11' 4" (3.5 m)  
 Height:.....Varies depending on system configuration

**Machine capacity\*:** ..... up to 230 yd<sup>3</sup>/hour

**Max. material size:** .....Up to 12" (305 mm) diameter

\*Depending on product density, spacing and screen type.



# Disc Screen



The **Disc Screen** is an efficient and cost-effective choice for high-volume coarse screening applications. Materials pass through a series of rotating shaft assemblies that all feature a set of steel discs arranged at precise openings to provide the desired product separation. Fine material falls down through the disc openings, while over-sized material is conveyed to the end of the screen and discharged into a bunker or onto a reject conveyor.

## Features and benefits

- Available in various widths and lengths
- Compact design for minimum space requirements
- Easy maintenance
- Available in spacings of up to 3" (76 mm)
- Rugged construction with large size bearings
- Drive chain tensioning system to increase chain life
- Can be set up to make 3 fractions
- 24" (610 mm) top clearance for large size input material

## Options

- Variable-frequency drive for speed control
- Larger screen for 3 product fractions
- Rotation detector

## Applications

Peat moss, compost, mulch and mixes of products such as reed sedge, top soil, sand, bark, manure, wood shavings, etc.



## Technical data

### Typical equipment dimensions:

Length:..... 69" (1.7 m) / 111" (2.8 m)  
 Width:..... 75" (1.9 m) / 100" (2.5 m)  
 Height:.....Varies depending on  
 system configuration



# Trommel Screen



The **Trommel Screen** is designed to produce two fractions. It consists of a rotating drum mounted on a slightly inclined structure. The drum is either offered as a cylindrical mesh screen or as an octagonal assembly of perforated plates. When rotating, this drum allows the finer fraction to pass through the holes while the larger fraction travels to the end of the screen. The two fractions can be stockpiled separately or collected by conveyors for further processing.

## Features and benefits

- Adjustable rotating speed with variable-frequency drive
- Enclosed design with easy-access covers for effective dust control
- Octagonal shape for moderate tumbling
- Cylindrical shape with lifters for high tumbling
- Bolted perforated plates available in various opening shapes and sizes (octagonal model)
- Mesh screen of various opening sizes (cylindrical model)

## Options

- Cleaning brush (for cylindrical model)
- Rotation detector

## Applications

Peat moss, top soils, compost, mulch, C&D materials and mixes of products such as reed sedge, top soil, sand, bark, manure and wood shavings.



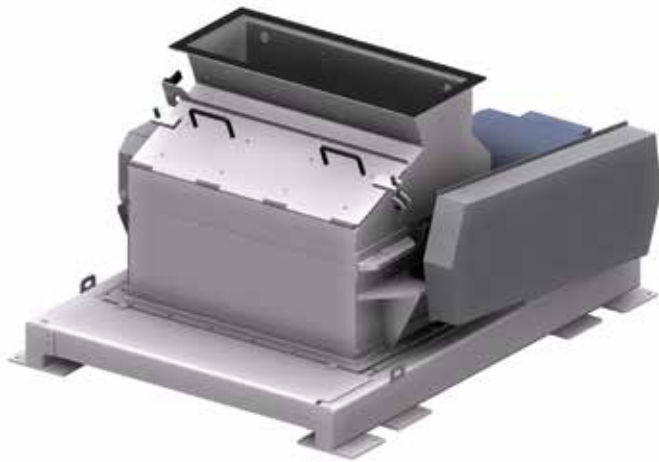
## Technical data

### Typical equipment dimensions:

Length:	32' (9.8 m)
Width:	7.5' (2.3 m)
Height:	8'4" (2.5 m) (without structure)
Drum diameter:	6' (1.8 m)



# Hammer Mill



The **Hammer Mill** is designed to shred pre-screened peat moss overs prior to the mixing or bagging step. It consists of three screens forming a basket and four rows of free-swinging hammers mounted on a 24-inch (300 mm) high-speed rotor. Hammers are made of 1/2 in (13 mm) thick hardened steel plates and can be turned/rotated three times so as to use all four sides before replacement is needed. The screen opening size may vary from 3/4 in to 2 in (19 to 51 mm).

## Features and benefits

- Offered in 36" or 48" size (915 or 1220 mm)
- 75 HP motor
- Various screen sizes available
- Interlocked access door
- Rugged construction
- Specially designed for the peat industry
- Efficient size reduction to make fine peat
- Works with load sensing to prevent operational problems

## Applications

Peat moss



## Technical data

### Typical equipment dimensions:

Length:..... 94" (2.4 m)  
Width:..... 63" (1.6 m) / 75" (1.9 m)  
Height:..... Varies depending on system configuration

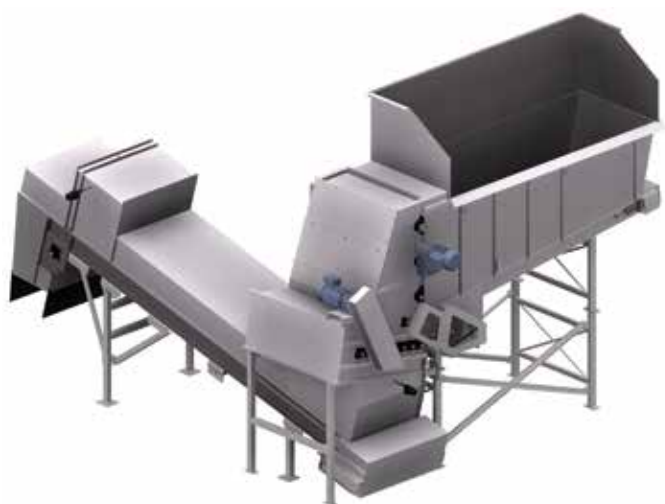


Safety guards and covers have been removed for picture purpose.





# Bale Shredder & Fluffer



The **bale shredder** is the perfect choice when it comes to shredding large compressed bales of peat moss. It comprises a hopper, a chain conveyor and four shredding rollers. The unwrapped bale is loaded into the hopper and falls onto the conveyor, which drags it towards the rollers. The peat is then gradually shredded when coming into contact with the four rotating studded rollers.

The shredder is often used in combination with a fluffer to bring the material back to its original density. The **fluffer** is made of steel discs mounted on eight rapidly rotating shafts. The rotating action and the special shape of the discs break up peat moss nuggets. The resulting fluffed material falls through the discs and is collected on a collection conveyor.

## Applications

Peat moss



## Features and benefits

- Heavy-duty construction
- For standard, semi-frozen and frozen compressed peat moss bales
- High volume for growers using large quantities of compressed peat moss bales
- Quickly brings peat moss back to its original density (before compression bagging)
- Keeps the fiber structure intact

## Options

- Rotation detector

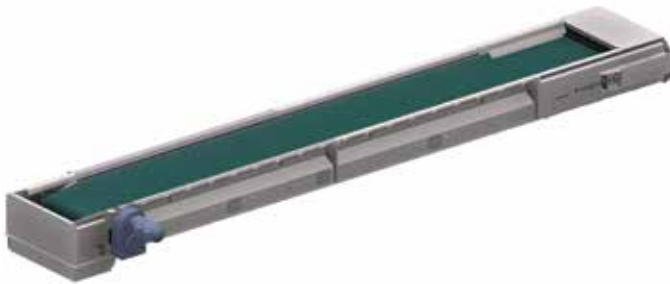
## Technical data

### Typical equipment dimensions:

Length:.....208" (5.3 m) / 69" (1.8 m)  
 Width:.....92.5" (2.4 m) / 75" (1.9 m)  
 Height:.....Varies depending on system configuration



# Bulk Conveyors



Our **belt and chain conveyors** can be used to collect, transport or stockpile a wide variety of bulk materials. Whether you are looking for a troughed belt, a slider bed, a cleated belt, a drag chain or a steel apron conveyor, we offer a complete range of bulk conveyor lines for standard to heavy-duty applications.

## Applications

Peat moss, compost, mulch and mixes of products such as reed sedge, top soil, sand, bark, manure, wood shavings, etc.



## Features and benefits

- Shaft-mounted gear motor for less maintenance
- Modular 10' (3 m) sections for easy assembly and future modifications
- Easy belt tensioning at the tail
- Return roller(s) supporting the belt
- Belt support and skirting for improved sealing and spillage control
- Tensioned cleaning scraper
- Lagged head pulley

## Options

- Vulcanized belt joint
- Chevron/cleated belt
- Gearmotor TorqLOC® mounting system
- Self-cleaning tail pulley
- Central take-up for bidirectional use or for long conveyors
- Stainless section for use with magnet
- Transition chute
- Dedusting port

## Technical data

### Typical equipment dimensions:

Length:..... 5' to 150' (1.5 m to 46 m)  
Width:..... 24" to 42"  
(610 mm to 1067 mm)  
Height:..... Varies depending on system configuration

# Volumetric Hopper

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The **volumetric hopper** is used to add a product to a mix (at a certain rate), or for direct bagger feeding. It consists of a conveyor (belt or chain type) on top of which an accumulation bin is mounted. This bin has three fixed walls and a front gate, which is adjustable in height to control the amount of material coming out of the hopper. The volumetric hopper is generally coupled to a variable frequency drive (VFD) which allows making flow rate modifications without having to manually adjust the front gate.

## Features and benefits

- Offered in various sizes
- Available with belt conveyor or drag chain to handle various materials
- Belt tensioning at the tail
- Roller chain-sprocket drive arrangement at the head
- Return rollers supporting the belt or return slides for the chains
- Belt type comes with an endless belt, lagged head pulley, wing tail pulley and spring tensioned scraper under head pulley

## Applications

All types of free flowing bulk material (peat moss, soil, sand, mulch, compost, etc.).



## Options

- Flow regulator
- Lump breaker
- Flow switch
- High- and low-level sensors
- Crank mechanism for adjustable gate
- Rotation detector

## Technical data

### Typical equipment dimensions:

Capacity:	8, 10, 12, 15, 20 or 25 yd <sup>3</sup> (6, 7.5, 9, 11.5, 15 or 19 m <sup>3</sup> )
Width:	48" or 60" (1.2 m or 1.5 m)
Length:	132", 180" or 240" (3.4, 4.6 or 6.1 m)
Loading height:	10' (3 m) minimum



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