

# SCREEN MACHINE INDUSTRIES™

AN AMERICAN MANUFACTURER OF PORTABLE CRUSHING AND SCREENING EQUIPMENT

## SPYDER 514TS

US PATENT  
6,669,026



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# OVERVIEW

**Screen Machine Industries is a global leader in crushing and screening equipment with manufacturing headquarters located near Columbus, Ohio, USA.**

The **Spyder 514TS** is a patented track-mounted reverse screening plant designed for primary or secondary screening of rock, sand & gravel, soils and other materials. The 5'x14' (1.5m x 4.3m) double-deck screen is capable of producing up to four different sized products simultaneously when utilizing a hydraulic tipping grizzly over the hopper. The versatile 514TS can be used as a stand-alone screen or in conjunction with a crusher to recirculate oversized material back into the crusher for further reduction.

Heavy-duty 5' x 14' (1.5m x 4.3m) double deck screen box with 5/16" (8mm) throw at 1100 RPM

Can be paired with a rock crusher to create a closed-circuit plant

Fixed catwalks create access for maintenance

Heavy-duty 8 cu/yd (6.1 cu/m) capacity hopper

Adjustable side stacker angles and height

Smooth Start® Technology (Patent #6,669,026) extends machine and component life by eliminating violent shaking typically experienced during warm-up and shutdown

Powered by a Yanmar® 84HP (62 kw) 4TNV98T diesel engine

Lockable access doors with spacious engine compartment for ease of maintenance

## Quality Engineering Requires Industry Leading Brands Such As:

- |             |                    |
|-------------|--------------------|
| - Eaton     | - Yanmar           |
| - Charlynn  | - Sherwin Williams |
| - Browning  | - Parker           |
| - Martin    | - SKF              |
| - Precision | - Remtron          |
| - Prince    | - Zinga            |



Standard Remtron® wireless remote control creates true portability by never having to leave the safety and comfort of the feed operators cab to control track movement and machine operation

Specifications Subject To Change Without Notice

## SCREENBOX

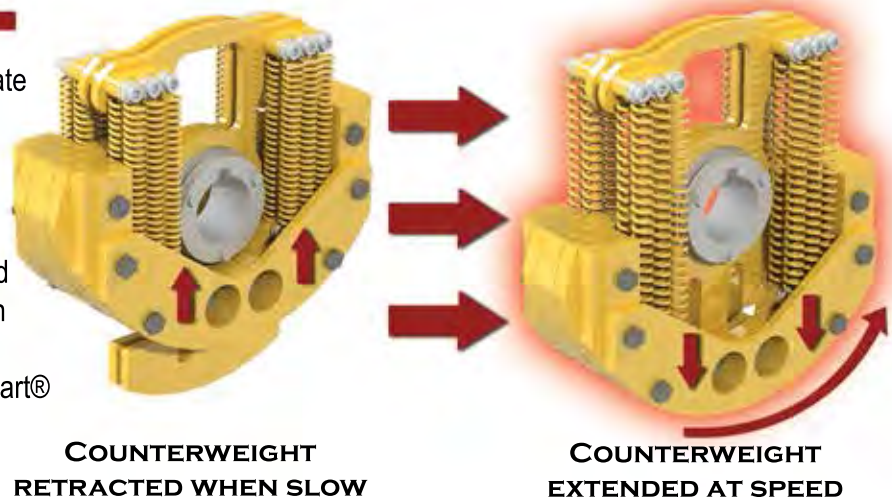
- Heavy-duty double deck 5' x 14' (1.5m x 4.3m) two bearing screen with downhill throw
- Shaker screen shaft spins at 1100 RPM with a 5/16" (8mm) throw to create a perfect screening platform - unmatched screen energy & efficiency
- Smooth Start® technology utilized in warm up & shut down operations
- 1/4" (9.5mm) USA Grade 80 steel screen box walls for industry leading durability



- Hydraulically adjustable screen angle – four operating positions ranging from 18 to 27 degrees – match the screen angle to the material for efficient screening of all types of products
- Top deck 5' x 14' (1.5m x 4.3m) accepts wire cloth or punch plate screens
- Bottom deck 5' x 12' (1.5m x 3.7m) accepts wire cloth or harp style screens
- Top deck features 5' x 2' (1.5m x .6m) "target area" section where material causes the most wear
  - Cheaper, and easier to replace than full size panel
- Wrap around fixed catwalk for safety and ease of maintenance
- Fines conveyor separates from screen box to create a working platform – this service minded design creates easy accessibility for changing of bottom deck screens

## SMOOTH START

- **Smooth Start®** was designed to virtually eliminate the violent shaking that occurs in all screening plants during machine start up and shutdown. This violent shaking can lead to premature structural stress, cracking, wear and tear on bearings and other vital components, and a reduction in overall life of the machine. Screen Machine Industries is the first and only manufacturer that offers the patented Smooth Start® solution.



### How it works:

At slow speeds, the screen shaft rotates perfectly round, creating zero elliptical throw (no shake at all). As the screen shaft RPM approaches operating speed, the centrifugal force causes the counterweight to extend outward creating the appropriate elliptical shake necessary to screen your material. This process also works in reverse during your machine shutdown. Smooth Start® technology greatly diminishes the risk of machinery damage caused by slow speed violent shaking during your warm-up or cool-down periods. This fine example of American ingenuity is patented to deliver exclusive long term value.





# UNIQUE FEATURES

## CONVEYORS

- Guide rollers on all conveyor belts – guide rollers assist with centered belt tracking, eliminate spillage, damage and downtime
- Fines conveyor features 42" (1067mm) belt and variable angle adjustment
- Side stackers feature 24" (609mm) cleated belts and variable angle adjustment ranging from 18 to 24 degrees
- Side stackers and fines belts feature variable speed control – match belt speeds with your belt angle for optimum stockpiling capability
- All conveyors feature Precision® lagged head and wing type tail pulleys
- Sealed for life troughing idlers
- Main conveyor features angle adjustment and raises away from the screen box to allow maintenance access

Lagged  
Head  
Pulley



Wing Tail  
Pulley



## HOPPER FEEDER

- 8 Cubic Yard (6.1 cu. m) capacity hopper
- Low feed height of 9'-4" (2.8m) without grizzly – low hopper feed height accommodates most loaders without a ramp
- Features a target feed opening of 13' x 5' (4m x 1.5m) without grizzly; 14' x 5' (4.3m x 1.5m) with grizzly – can be fed with excavator, loader, or crusher
- Standard grizzly with 5.25" openings is reversible to accommodate material feed from either side
- Variable speed feeder belt
- 5" (12.7 cm) Rubber wrap idler – this idler wraps the belt further around the feeder head pulley to prevent pulley slippage



Hydraulic remote tipping grizzly





## POWER SYSTEMS & CONTROLS

- Powered by an 84HP (63 kw) Tier IV Flex Yanmar diesel engine
- Heavy-duty lockable fuel tank with 75 gallon (284 liters) capacity
  - Fuel efficiency allows for almost 3 days of production on a single tank
- 125 gallon (473 liters) baffled hydraulic oil tank
- Oilair® hydraulic oil cooler – from large hose diameters and fittings to baffled oil tanks with coolers, our hydraulic system runs cool for uptime reliability



- Four emergency stops on the machine plus an additional engine stop on the wireless control handset
- Lockable control panels
- Large engine compartment for ease of maintenance
- Independent hydraulics
- Standard wireless remote control with 300 ft (91m) range



## UNDERCARRIAGE

- 15.7" (400mm) wide track pads ensure stability on soft ground
- Track operation is controlled from a safe distance via standard wireless remote control handset
- Sealed and lubricated pins & bushings



## STRUCTURE

- Massive unibody frame design provides unrivaled structural durability
  - Heavily designed frame handles the high stresses of uneven loading, vibration during operation, and rough terrain during movement
- Elevated frame design allows for rapid set up
  - 12" (304mm) ground clearance eliminates the need for any machine disassembly or extensive site preparation prior to movement
  - No rear support leg needed, easily reposition machine with remote on the fly



## PRODUCT SUPPORT

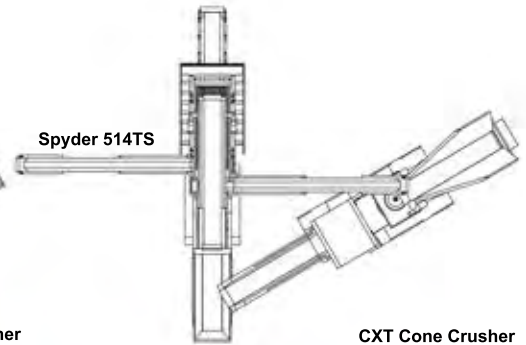
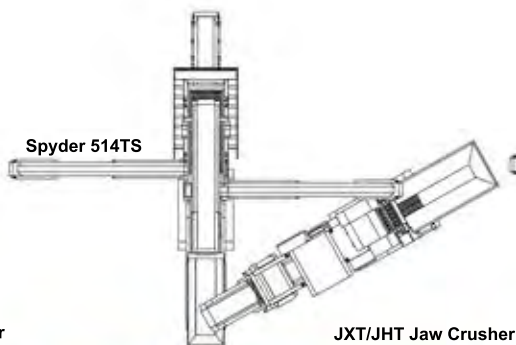
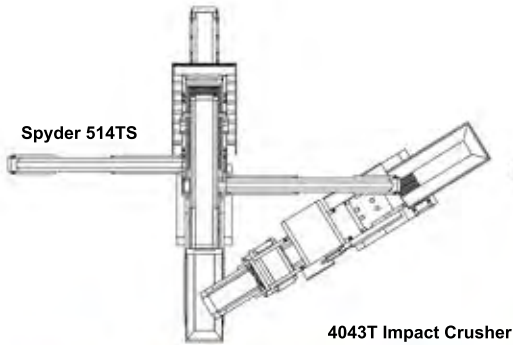
- Lifetime telephone/internet engineering support at no charge
- Factory headquarters located near Columbus, Ohio USA
- Rapid response parts availability with industry leading 95%+ same day parts fill rate
- Manufactured with name brand parts, internationally recognized, and easily sourced
- Extensive distributor network with multiple parts locations
- Detailed operational, service and parts manuals



# RECIRCULATING SCREEN

## CLOSED-CIRCUIT DESIGN

- If a closed-circuit is needed, the Spyder 514TS may be paired with Screen Machine's 4043T, JXT/JHT or CXT to easily recirculate the oversized product back to the crusher for further processing without the need for additional conveyors. Less investment, lower operating expenses and a smaller overall plant footprint provide versatility with affordability. Screen Machine Industries' outstanding design philosophy allows our heavy-duty American manufactured equipment to be utilized in a variety of configurations.



4043T Impact Crusher



JXT Jaw Crusher



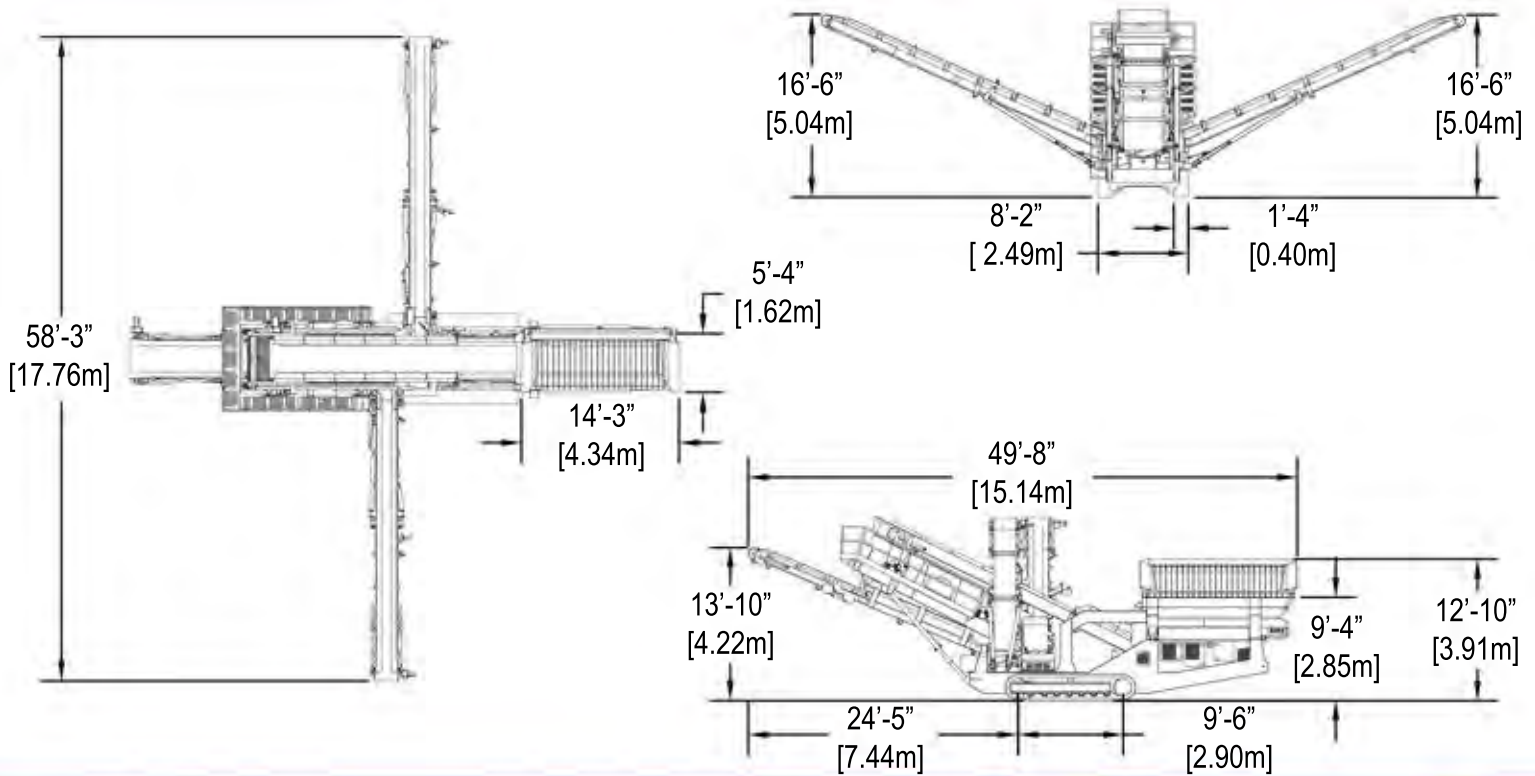
CXT Cone Crusher

## EASE OF MAINTENANCE

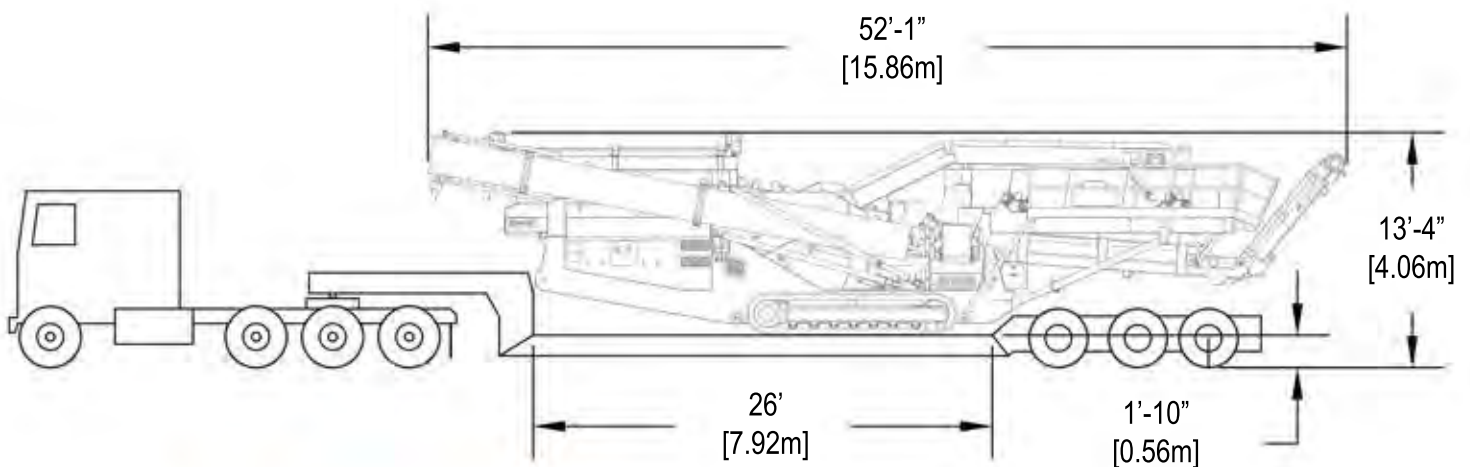
- Ground level grease points
- Fines belt drops away from screen and main conveyor lifts away from screen for easy access and servicing
- Spacious engine compartment
- Wrap around fixed catwalk for safety and ease of maintenance access
- Lockable access doors to engine compartment
  - Easy access to check filters
- Battery shutoff switch for safety
- Guide rollers on all conveyor belts – guide rollers assist with centered belt tracking, eliminate spillage, damage and downtime



## OPERATING DIMENSIONS



## TRANSPORT DIMENSIONS



Transport Mode

Length: 52'-1" [15.86m]  
 Width: 9'-10" [3m]  
 Height (Machine): 11'-6" [3.5m]  
 Height (Machine on Trailer): 13'-4" [4.06m]  
 Weight: (Est.) 52,000 lbs [23,586 Kg]



# SCREEN MACHINE INDUSTRIES™

AN AMERICAN MANUFACTURER OF PORTABLE CRUSHING AND SCREENING EQUIPMENT

Screen Machine Industries LLC is an innovative American manufacturer of portable machinery dedicated to material crushing, screening and stockpiling. Our product offering provides solutions ranging from 15-600 tons/yards per hour across a vast array of applications (such as sand & gravel, concrete & asphalt, topsoil & compost products). Our successful engineering philosophy is to incorporate reliable brand name components and industry leading features with the highest quality manufacturing techniques. This philosophy has prominently driven our success since 1966.

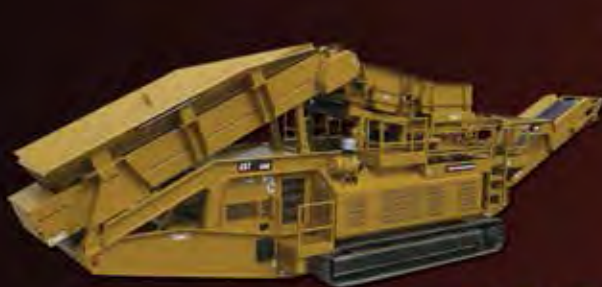
The manufacturing process includes the utilization of CNC fabrication equipment, robotic welders, advanced painting facilities and highly skilled mechanical technicians assembling these machines. Multiple levels of quality control and thorough run-time inspections are in place to ensure the quality and reliability that we demand and that you expect.

Screen Machine Industries LLC continues to make substantial investments in research and development. Our highly skilled engineers combined with the latest computer technology, create the most innovative products in the crushing and screening industries. Numerous U.S. Patents have been awarded as a result of our creative ambition in developing machinery that we feel is superior to any in the industry. We also strive to add the best design engineers available to our organization. Our engineers are graduates of MIT and other prestigious universities throughout the United States.

Our diverse product line consists of heavy-duty, track-mounted Jaw, Cone and Impact Crushers, Spyders, Scalpers, Trommels, and Shredding Plants. Our portable stacking conveyors complete the product lineup with sizes available to fit most every job.



Screen Machine Industries LLC  
Corporate Headquarters



CST CONE CRUSHER



JXT JAW CRUSHER



4043T IMPACT CRUSHER



6036T TRACK CONVEYOR

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