

FIRE TOOLS

Overview

With all the prevention options in the Fire Tools line, can you afford to let another fire shut your gin down?

There's one word feared more than any other in a cotton gin: FIRE! Fire melts flashing, destroys electrical components, warps sheet metal and causes general havoc throughout the whole operation. While the costs of mid-season repairs of fire-damaged equipment are extremely high, they are small in comparison to the costs of lost production due to down time. With fire related down times ranging from two hours to two weeks, Fire Tools can pay for themselves the first fire they prevent!



Fires cost gins a lot more than a few pounds of charred cotton.



Fire Tools use fire detection sensors from Argus Fire Control and Pierce Electrical Construction. Sam Jackson is proud to offer both of these product lines as an Authorized Distributor. For gins desiring more automation Samuel Jackson has developed an auto-adjusting SawSaver model with ROC Technology. The Argus sensors detect sparks and can be located throughout the gin. Pierce sensors use infrared temperature measurement to detect tags at gin stands. For even more automation and ethernet connectivity, be sure to ask your Sam Jackson Representative about the Fire Tools Interface!

Fire Tools includes several options for interfaces, controls and sensors.

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Spark Detection Systems - How Do They Work?

Your next fire will be started by the spark Fire Tools could have caught.

The Argus Fire Prevention System consists of a Control Panel and Spark Detectors. Each Control Panel can support up to 10 zones when equipped with an equal number of zone cards. A zone is considered any location in the gin that sensors are monitoring and would typically consist of two to four sensors. Zone examples might be above the module feeder pick-up point, before the pre-cleaning system, behind individual gin stands, in the lint flue riser or any other spot that fires are prone to break out.



A 23401 Argus Z-1 Control Panel is economical and easily expands to monitor up to 10 Zones.



A single 23400 Argus Infrared Spark Detector.

Spark Detectors mount flush to the side of a pipe or duct and monitor through a small sealed cutout. They use infrared technology to pinpoint single sparks at speeds up to 200 feet per second. By comparison, cotton typically flows at 75 feet per second in gin pipes. Upon detection, a control action can be used to contain further spread of the spark in 1/20th of a second. The infrared field is produced at a ninety degree angle from the detectors giving it a very wide viewing area. Additional sensors can be added for better coverage and protection.



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Selecting a Spark Detection System

Protecting your gin from fires is as easy as 1,2,3.

Step 1 - Select the number of zones you want to monitor.

A zone is any point in the gin that you want to monitor for sparks or fires. Examples include: after the cotton pick-up point, behind gin stands and lint cleaners, after the overflow, before and after pre-cleaning equipment and the lint flue riser. A control panel is chosen for the desired number of zones with panels available from one zone (Z-1 Panel) to ten zones (Z-10 Panel). Any panel can be field upgraded to monitor additional zones.



Step 2 - Select the number of detectors for each zone.

Each zone can accept spark inputs from up to ten detectors. Most zones will require from two to four detectors for adequate coverage.



Step 3 - Select the system accessories.

Each Spark Detection System can be equipped with a Horn/Strobe Combo to alert the operator when an alarm has been tripped.



Example:

Let's say you wanted to equip your gin with a Spark Detection System with monitoring at:

- Step 1:** the initial cotton pick-up = 1 zone
 the overflow return pipe = 1 zone
 the lint flue riser = 1 zone
 for a total of 3 zones, requiring a Z-3 Control Panel

For each zone you need an adequate number of detectors:*

- Step 2:** 2 - Detectors at the cotton pick-up zone
 2 - Detectors at the overflow zone
 3 - Detectors at the lint flue zone
 for a total of 7 detectors needed for your system.

Select your system accessories:

- Step 3:** Only one Horn Strobe Combo would be needed for the entire system.



** Recommended number of detectors varies by pipe size. **Prices are subject to change.*

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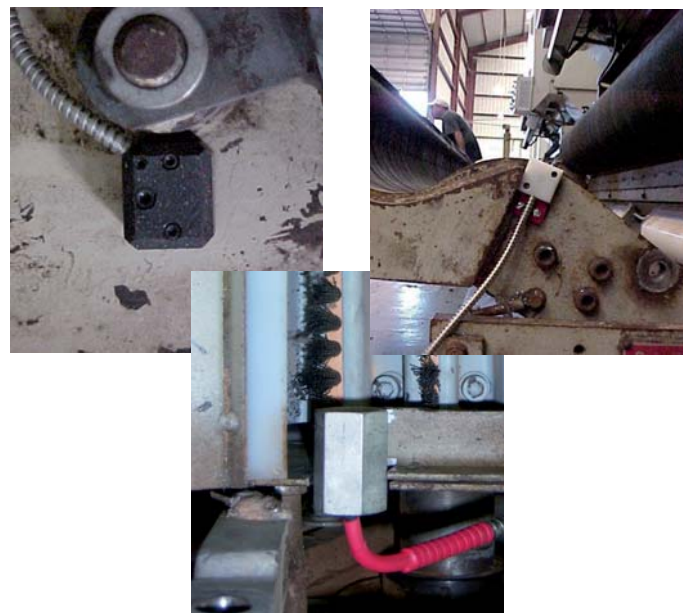
Pierce SawSavers - How Do They Work?

SawSavers put your mind at ease about gin stand rib fires.



An original Pierce SawSaver Controller.

SawSavers use two infrared sensors to measure temperature across the gin stand. Sensors are precisely positioned to measure across the saw teeth at the ginning point. A controller on each stand displays the temperature and allows the ginner to set an alarm set point. When a tag occurs, the temperature rises quickly and trips this set point, which kicks out the respective gin breast. The ginner can quickly locate and remove the tag and continue ginning safely and fire free.



Sensor selection and mounting location are specifically designed for your ginstand.

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SawSavers with ROC Technology

Get the most from your SawSavers with ROC Technology!



The SawSaver with ROC Technology interface.

In addition to offering the original Pierce SawSaver controls and sensors, Samuel Jackson has developed an automatic SawSaver control package with ROC Technology. ROC is an acronym for Reduced Operator Changes. The Samuel Jackson controls operate automatically instead of requiring ginner adjustment when there are fluctuations in ambient and system temperatures.

Tag detection is visualized by indicator bars on both sides of the interface. When a bar rises quickly, a tag has formed between two ribs. The dotted line on the indicator bar is user definable and sets the responsiveness of the ROC Technology. When either bar crosses this line, the alarm is triggered, the gin stand kicks out and the interface turns red. An arrow also indicates which side of the stand the tag is located. The ginner can then safely remove the tag and press any button on the interface to clear the alarm and resume ginning.



The SawSaver interface with the left side in an alarmed state.



Upgrade Note: SawSavers with ROC Technology use a Samuel Jackson control package coupled with Pierce Electrical sensors. Original Pierce Electrical SawSavers can be upgraded with the Samuel Jackson controls package while retaining existing sensors. Contact your Samuel Jackson Representative for details.