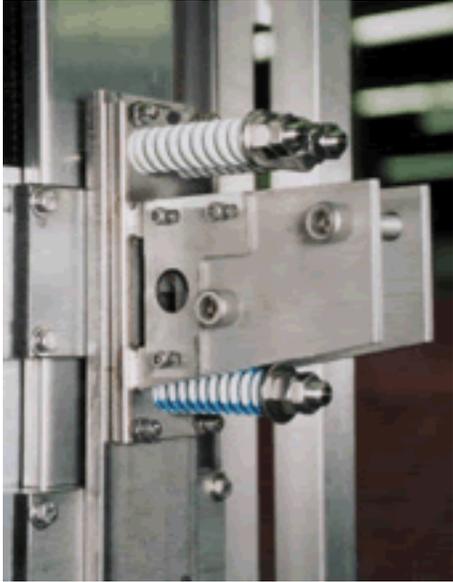


# Tech Bulletin

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## ALL CTS RIGIBOT AUTOMATION SYSTEMS NOW FEATURE THE EXCLUSIVE CREST SAFETY ARM TRIGGER SWITCH ASSEMBLY



Omni-directional force  
detection

The concept is simple but the effects far-reaching in terms of machine protection and personal safety.

You've all seen it: damage that occurs when an automation load collides with an obstacle in its path, such as a console countertop or a vertical object placed too close to the machinery. Due to the variables of human error, it's impossible to eliminate this type of occurrence altogether, so the technical strategy is to greatly minimize the damage of impact.

Crest's remarkable safety arm trigger switch is designed to detect force that results from arm contact with an obstacle, and to signal the PLC to stop the Rigibot immediately so that a correction can be made. Force detection is omni-directional, which means that contact with virtually all obstacles will be detected.

The safety arm trigger switch assembly is fully adjustable for a very broad range of load weights. It is now a standard feature on all Crest CTS Rigibot systems, including the CTS-250, -500, -1000 and higher. The assembly may also be ordered for retrofitting to existing Crest cleaning systems with CTS Rigibot automation.

All new CTS systems are equipped with this exclusive safety arm trigger switch assembly.

ALSO: Retrofit units are now available for quick and easy in-stallation on most existing CTS Rigibot systems.

Shown right: Optimum Console™ and CTS-1000 with safety arm trigger switch assembly





### Here's how it works:

The safety arm trigger switch is incorporated in the mounting assembly for the Rigibot arm, which holds the load during processing (see highlighted area in the illustration above). The device utilizes three springs to provide a small amount of preload for the Rigibot arm, adjusted to the estimated weight of the load.

When the arm pivots slightly upon impact with an obstacle, a switch within the assembly is activated, opening a relay which in turn removes power to the motor controls. A signal is also sent to the PLC or PC to indicate a crash condition. (This is the safest method of triggering a Rigibot "stop" because the safety is hard-wired, rather than going through the software, so it cannot be affected by program glitches or bugs.) When the obstacle is cleared, the pick-up arm automatically re-sets. The CTS Rigibot automation controls must be re-set by the operator at the HMI, as described in the operator's manual.

The switch used in the assembly has an extremely short throw to allow for the quickest response time possible. Also important is the omni-directional capacity of the sensing device, which assures that virtually every contact with an object of significant mass will be detected.

Adjustments are as simple as **A-B-C**. User may adjust the bolts at the end of the springs (**A**, **B**, and **C** in photo at left) to accommodate lighter or heavier loads. In general, tightening the springs is recommended for heavier loads, because more force will be required to trigger the switch. Conversely, the springs are loosened for lighter loads. (Details will be found in the operator's instruction manual.)

**IMPORTANT:** The range of anticipated load weights should be indicated when a system is ordered so that Engineering can specify the optimum set of springs for the unit.

**Retrofit installations require no cutting or welding.** Instructions and detailed assembly drawings will be provided with each unit that is supplied for field installation to an existing CTS Rigibot system. You can assure customers that no cutting or welding of the existing head will be required, and that there is minimal wiring involved, since existing wires are utilized.

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