

SPRING LOADED CAPTIVE RETAINER ASSEMBLIES

Mechanical Design and Electronics Packaging Engineers in the Aerospace/Defense Industry and other specialty Industries specify Spring Loaded Captive Screw Retainer Assemblies (SLCR) often. These assemblies are mounted onto Cover Plates/Panels so that when removing the cover, the captive screw threads retract while removing cover thus keeping threads protected from damage when assembling and disassembling. The spring, uncompressed when the threads are not engaged, pushes against the head of the captive screw, thus fully retracting the threaded portion from the mating female threads. The captive screw protrusion offers a visual indication the fastener is not engaged in the chassis. Hence, a safety indication as well. These assemblies are also a deterrent against FOD since all components of the assembly are held in place on the cover once unthreaded from the chassis.

In general these assemblies are made of stainless steel and for higher strength demands, the captive screws are made of A286. The type of captive screw head and drive available are virtually unlimited leaving customization open for the design. The retainer can be customizable for assuring proper sizing to accommodate special constraints. Lead times for these customizable assemblies are generally 5-6 weeks and MOQ is low thus allowing for quick turn and prototype testing. Below are photos of typical SLCRs illustrating the various ways in which they can be mounted onto panels/cover plates.



**SWAGE MOUNT
(ALSO PARTIAL KNURL)**



**THREADED STUD
MOUNT**



**FLUSH RETAINER NUT
MOUNT**

Feel free to connect with us to assist in your SLCR assembly application. We will assist in co-designing your assembly to accommodate customization and meet requirements of your project.