WDS Components Help Desk

Captive Socket Cap Screws

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Secure and Reliable Captive Fasteners

WDS Components Ltd has released a new range of loss-preventing captive fasteners that speed up manufacturing assembly and make marine and working at height applications easier to manage. The fasteners span a wide range of thread diameters and also increase operational safety by preventing the removal and loss of machine safety guards. Highly durable 316 stainless steel means that the captive fasteners are suitable for use across all application environments.

The captive fastener design has been developed specifically by WDS in response to customer demand to prevent unintentional fastener removal or loss. The captive fastener is screwed into the host, for example an electrical component or machine guard, and the design features an unthreaded shank length between the fastener head and thread. This means that even when the fastener is unscrewed from the main frame, such as a printed circuit board (PCB) or a machine, the thread prevents the fastener from falling out of its intended position in the host.

The fastener can only be removed from the host by unscrewing it, and if the host doesn't include a pre-cut thread, the user can add one to suit the appropriate fastener size. This design means that the fastener doesn't require an additional washer, flange or nut to secure it. The fasteners are tightened by allen key, with additional head styles available in future according to demand.

A primary benefit is the ease and speed for manufacturing processes. Ensuring fastener retention is particularly useful for electronics assembly that uses small size fasteners which are easily dropped and lost. Once inserted, the captive fasteners prevent accidental loss, saving time in assembly and increasing manufacturing productivity. The captive fasteners can be used for automated or manual assembly processes.

The new fasteners can also be used to enhance machine safety by preventing the removal and loss of safety guards. The captive fasteners satisfy EU Machinery Directive 2006/42/EC that requires fixing systems to remain attached to a machine or machine guard.

The captive fasteners are available in thread diameters ranging from M3 up to M12, with the larger sizes also suitable for heavy duty industrial applications, such as motors and fans. 27 shank lengths are also available, which cover virtually all widths of industrial panels.

The fasteners are manufactured from 316 stainless steel, making them suitable for marine and also clean environment installations such as food & beverage production facilities, as they can undergo a chemical washdown and remain corrosion-free. 316 stainless steel also makes the fasteners suitably durable for use in any industrial application.

Wdscomponents.com includes detailed specifications of the full captive fastener range, including downloadable CAD images in all major formats, as well as non-specialist 3D images. Available in single units as well as large quantity orders, same day shipping is also available. WDS' Technical Support team can also provide specification guidance to identify suitability.