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Special Applications Require Special Screws – Beyond Typical Standards

The cosmos and the world of screws: both are practically infinite in size and continuously expanding. Special applications call for special screws – Ganter has them all.

In machine and plant construction, components are often attached with screws to allow for easy detachment later. But specific technical requirements or confined spaces often make typical screws unsuitable. The screw head may be too tall, for example, or its diameter too large. Ganter product group 3.2 offers a number of special screw classes for easily solving such problems.

For example, you will find here under designation GN 912.3 special screws with normal continuous thread and reduced screw head diameter. This configuration allows use of these screws in locations where the distance between the threaded bore or pass-through hole and the edge of the component is actually too short. The socket cap screw GN 7984.3 combines a small head diameter with a reduced head height as well.

If you are looking for even flatter heads, GN 14580.5 will do the job: the version with M6 thread has a minimal head height of 1.2 mm, while the M2 is as low as 0.5 mm. This solution is ideal in situations where countersinking is not an option and it is necessary to compensate for the tolerances in the hole pattern. Of course, the tightening torque and load capacity are also reduced accordingly, but the screw is still ideal for simple fastenings, such as for thin metal plates or circuit boards.

There are even three types of special screws featuring clever solutions to prevent loss. These screws have a stud that has been reduced to the core diameter between the thread and screw head.

This design is used, for example, to attach covers: The screw is first inserted through a thread in the cover and then engages with the actual fixing thread on the opposite side. The portion of the stud without thread is then located in an open bore or cavity. When the screw is unscrewed from the fixing bore, the thread in the cover prevents it from falling out. These stainless steel screws therefore satisfy the current Machinery Directive 2006/42/EC. The dimensions of screws GN 912.2, which are available in size M3 and larger, are based on DIN 912. The same functionality is available with GN 7984.2 with a reduced head height, but if a pan head with Phillips drive is called for, then GN 7045.2 is the right choice.

With GN 418.3, the head is eccentrically aligned with respect to the thread axis – if the special screw is turned to the left or right, it exerts lateral pressure. In this case, the screw thread does not produce an axial screw force, it only supports the screw laterally. This makes it ideal for clever fixture designs where lateral tension is desired. A mark on the top of the screw head indicates the position of the eccentric element.

More information on Ganter standard parts can be found on the internet at **ganternorm.com**

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