



No Lock Washers Needed

V-LOCK Anti-Loosening Nuts & Bolts

V-LOCK is a patented screw-thread technology with a proven anti-loosening function. V-LOCK has been tested to NAS 3350 and DIN 65151. With V-LOCK bolts & nuts there is no need for spring washers, double nuts, nyloc-type nuts, adhesives, coating process, etc.



V-LOCK nuts and bolts consist of two parallel crests next to each other on the same ridge. These two crests induce double contact lines (locking points) between threads. They maximize the static friction force between the bolt and nut threads and prevent loosening.

V-LOCK prevents bolts and nuts from loosening due to mechanical impact or vibrations, including Aeolian vibrations, thermal expansions e.g. thermal load cycling, daily ambient temperature changes etc.

Installing new V-LOCK bolts & nuts is as easy as installing ordinary bolts & nuts. It can be done manually with a spanner or with any ratcheting tool.

How they work:

V-LOCK components don't depend on pressure. They rely on strong static friction that is initially created by double contact lines between the threads, as follows:

- The double contact lines (crests) double the already strong static friction, which is the key
- Secondly, these two 'parallel static frictions' interact and interlock with each other, which further prevents loosening
- It means that if one contact line (out of 2) shows slightly reduced static friction with a tendency to become sliding friction, the other contact line will still maintain the strong static friction and prevent the loosening
- In other words - it is highly unlikely that both contact lines would reduce or lose the strong static friction at the same time



Loose Bolt Involvement in Lake Ohau Fire



Benefits

- Improved reliability (SAIDI, SAIFI) and resilience
- Improved public and personnel safety
- Reduced energy losses due to bad electrical connections
- Reduced losses and damage to property due to unnecessary electrical and mechanical failures
- Reduced likelihood of bushfires
- Significant cost savings on maintenance and preventable faults
- Positive environmental effect

- No need for washers making them faster and more cost effective
- Can be used in both electrical and mechanical connections
- Reusable

