

# VOC

vacuum screws



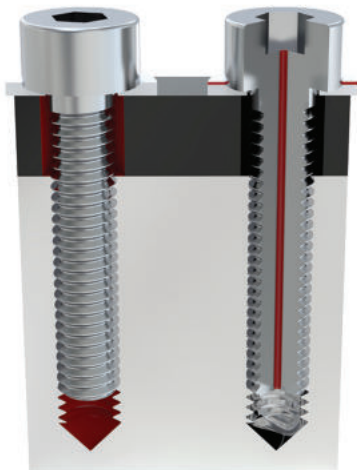
## Virtual Leaks



## Problem

Virtual leaks in vacuum systems cause low pressure ranges to be reached more slowly than possible and they contaminate your vacuum quality over a long period of time.

They occur when gases are trapped in cavities, such as blind hole. Unlike pore leaks or leaks due to permeation, **virtual leaks are not detectable**. By using vacuum screws instead of standard screws, you can eliminate these virtual leaks and thus increase the performance and efficiency of your vacuum system.



## Solution

The effects of virtual leaks can be avoided with vented screws. These vacuum screws have a venting channel through their center axis. The gas in the cavity can escape via this path. Other gas pockets, such as in the through-hole of the fastener, are vented by a spring washer or slotted flat washer.

The mechanical properties of the screw are determined by the dimension of the venting channel. With VOC vacuum screws, you get a vented screw with a **slim venting channel**, which is the **optimum size** from a vacuum point of view, while the mechanical stability of the screw is maintained.

We at **VOC - Vacuum Optimizing Components** are specialists in vacuum technology. Together we have over 10 years experience in vacuum technology. Supported by experts, we offer you the products we have been missing in our daily work.

**Get in touch!**



**VOC – Vacuum Optimizing Components GmbH**

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# WITH **VOC VACUUM SCREWS** YOU GET

- ☑ Deeper pressure ranges (up to one magnitude) with same design
- ☑ Fasteners with better mechanical properties than conventional vacuum screws due to optimally thin venting channels ( $\leq 1$  mm)
- ☑ Reduced pump-down time resulting in energy savings
- ☑ Long maintenance of pressure range without pumping
- ☑ On stock vacuum ready cleaned and packed (1 set each 10 screws) fasteners

## OUR OFFER

### HEAD SHAPE & DRIVE



- ☑ ISO 4762 hexagon socket head cap screws
- ☑ ISO 4029 hexagon socket set screws
- ☑ ISO 4017 hexagon head screws
- ☑ ISO 10642 hexagon socket countersunk head screws
- ☑ All common head shapes upon request

### THREAD SIZE



- ☑ M2 to M8 on stock
- ☑ All other sizes (including fine thread; UNC- or UNF thread) upon request

### LENGTH



- ☑ 6 mm to 20 mm on stock
- ☑ All other length (also imperial) upon request

### MATERIAL & COATING



- ☑ V2A on stock
- ☑ V4A, Titanium Gr.2 & Gr.5., Bumax® 88, Tantalum, Molybdenum etc. upon request
- ☑ Silver coating or surface hardened Expanite® screws to prevent galling upon request

**Get in touch!**