

HYGIENIC USIT®

For hygienic sealing in and at product areas

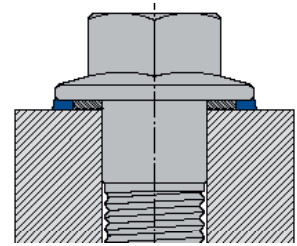
The Hygienic Usit® from Freudenberg was developed especially for the process industry and is setting completely new purity standards. This metallic washer, which has an elastomer bead, seals reliably without free spaces in static applications.

Numerous system and equipment manufacturers in the food and pharmaceutical industries still use conventional metallic washers for screw connections in or at product areas. These washers do not conform to EHEDG. There is a risk that product residues will adhere beneath the screw head. Engineered for this application, the Hygienic Usit® reliably prevents the formation of microfilms and corrosion. It seals securely and is made exclusively

of approved, tested materials.

The elastomer bead is available in two different EPDM versions, which are both suited to applications coming into contact with food and pharmaceutical products. The black EPDM 291 is considered a classic compound in the process industry. On the other hand, the white EPDM 253815 is in demand in the pharmaceutical industry. To achieve an optimized coefficient of friction, the Usit rings made of white EPDM are treated with our patented RFN™ process (Reduced Friction by Nanotechnology). For applications involving fatty and/or aggressive media or very high temperatures, we offer a metal-bonding version made of Fluoroprene® XP 45, a fluorinated material.

MATERIAL	COLOR	COMPLIANCE/APPROVALS	DOWNLOAD
70 EPDM 291	black	<ul style="list-style-type: none"> • FDA 21 CFR 177.2600 • 3-A® Sanitary Standards Class II • EU Reg. 1935/2004 and 2023/2006 • USP Ch. 87 and Ch. 88 – Class VI – 121 °C • NSF 51 • ADI free 	
70 EPDM 253815	white	<ul style="list-style-type: none"> • FDA 21 CFR 177.2600 • 3-A® Sanitary Standards Class II • EU Reg. 1935/2004 and 2023/2006 • USP Ch. 87 and Ch. 88 – Class VI – 121 °C • ADI free 	
75 Fluoroprene® XP 45	powder blue	<ul style="list-style-type: none"> • FDA 21 CFR 177.2600 • 3-A® Sanitary Standards Class I (Certificate as of January 2019) • EU Reg. 1935/2004 and 2023/2006 • ADI free 	



FEATURES AND BENEFITS

Screw connections in conformance with hygienic design

The Hygienic Usit® is a further development of the traditional standard Usit ring. It reliably ensures the hygienic sealing of screw heads and enables cleaning in CIP (cleaning in place), WIP (washing in place) or SIP (sterilization in place) processes without difficulty – and without disassembling the equipment. Thanks to cooperation with the KIPP company, Usit rings can be obtained with hygienic screws and cap nuts which are known under the brand name „NOVOnox hygienic“. This eliminates the risk of microbial contamination and the formation of microfilms.

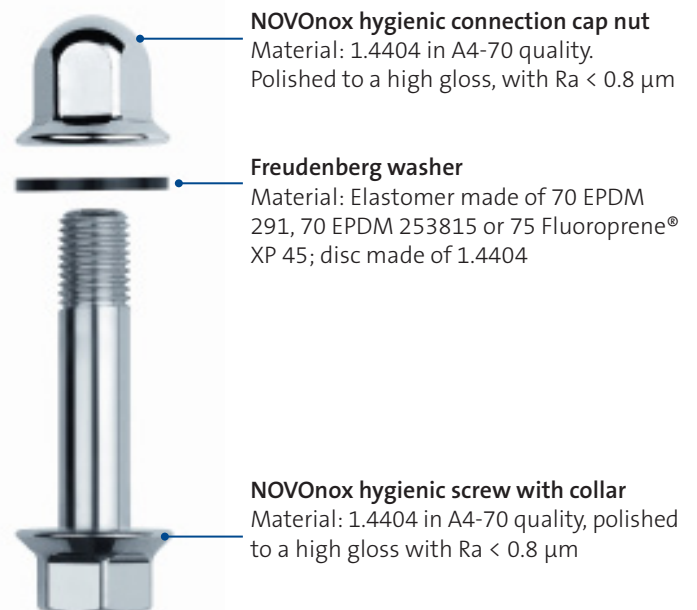
Thanks to its special production process, KIPP achieves a roughness depth of $Ra < 0.8 \mu\text{m}$. This eliminates the risk of indentations and sharp-edged burr formations at the collar. In addition, the screw and cover nut with collar are polished to a high gloss. In order to connect them consistently in line with hygienic design, KIPP has developed hygienic sockets and the associated protective inserts, which do not damage screws during tightening.

Standard hexagonal screws with flange in accordance with DIN EN 1665 are suited to screw connections outside the product area. But they do not meet the requirements of hygienic design for optimal cleaning. As a result, they are not suited for areas coming into contact with the product.

The bond is available in the following dimensions: M4, M5, M6, M8, M10, M12 and M16. There are also M3 screws and cap nuts that are compatible with the M4 Usit ring.

VALUES TO THE CUSTOMERS

- EHEDG-certified
- No free spaces
- Prevents microbial contamination
- Replaces inflexible welded solutions
- Approvals for food and pharmaceutical industries
- No tool costs for standard articles
- For cleaning in CIP, SIP, WIP, COP, OPC and WOP processes



NOVOnox hygienic connection cap nut

Material: 1.4404 in A4-70 quality.
Polished to a high gloss, with $Ra < 0.8 \mu\text{m}$

Freudenberg washer

Material: Elastomer made of 70 EPDM 291, 70 EPDM 253815 or 75 Fluoroprene® XP 45; disc made of 1.4404

NOVOnox hygienic screw with collar

Material: 1.4404 in A4-70 quality, polished to a high gloss with $Ra < 0.8 \mu\text{m}$

The information contained herein is believed to be reliable, but no representation, guarantees or warranties of any kind are made to its accuracy or suitability for any purpose. The information presented herein is based on laboratory testing and does not necessarily indicate end product performance. Full scale testing and end product performance are the responsibility of the user.

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