

# BONDED SEALS



The US and USS versions of bonded seals are flat metallic rings with a vulcanized-on trapezoidal elastomer seal lip on the interior diameter.

## APPLICATIONS

Bonded seals are used as static sealing for screw connections and flange sealing, in machine-building and in the manufacture of containers and apparatuses, and in hydraulic screw connections, among other uses.

## FUNCTION

By tightening the screw, the elastomer seal lip is compressed, producing the required sealing effect on the surface to be sealed. It stops the outward escape of media, preventing the loss of pressure. At the same time, it offers protection against dirt from outside.

The centering in the USS design has the added effect of fixing the screw seal in the proper position during mounting and tightening while guaranteeing a captive mounting.

## MEDIA RESISTANCE

### NBR (acrylonitrile butadiene rubber)

- Good chemical resistance to mineral oils and greases
- Hydraulic oils H, HL, HLP
- Flame retardant pressure fluids HFA, HFB, up to about +50°C
- Water resistant to a maximum of +80°C

### FKM (Fluorkautschuk)

- Good chemical resistance to mineral oils and greases
- Flame retardant HFD pressure fluids
- Water resistant to a maximum of +80°C
- Synthetic oils and greases
- Motor, gear unit and ATF oils up to about +150°C
- Fuels
- Aliphatic, aromatic and chlorinated hydrocarbons
- Very good resistance to weather, ozone and aging
- Very low gas permeability
- Broad chemical resistance





## YOUR ADVANTAGES AT A GLANCE

- Easy captive mounting
- Secure sealing
- Re-usable
- Fixing by means of internal centering with USS
- Cost-effective solution
- Controlled compression thanks to metal disc
- Available in various metal versions
- In stock for nearly all European thread sizes

## DIMENSIONS

The currently available dimensions can be found on our website [dichtomatik.fst.com](http://dichtomatik.fst.com) or on our online ordering platform **EASY**.

## Bonded Seals

Profil	Type	Material	Hardness (Shore A)	Temperature (°C)*	Counter surface/ surface characteristics	Pressure Mpa (bar)	Characteristics
	US*	NBR	70	-30 to +100	Rmax ≤ 15 µm Ra ≤ 3,2 µm	≤ 25	<ul style="list-style-type: none"> <li>• Metal ring made of standard steel SAE 1008 (1.0330)</li> <li>• Surface protection: Zinc-chromated (Cr VI-free)</li> <li>• Color: silver-gray</li> <li>• (Optional: Metal ring made of rust- and acid-resistant steel AISI 304 (1.4301))</li> </ul>
	US*	FKM	70	-15 to +200	Rmax ≤ 15 µm Ra ≤ 3,2 µm	≤ 25	
	USS**	NBR	70	-30 to +100	Rmax ≤ 15 µm Ra ≤ 3,2 µm	≤ 25	
	USS**	FKM	70	-15 to +200	Rmax ≤ 15 µm Ra ≤ 3,2 µm	≤ 25	

\* US = with internally vulcanized-on elastomer seal lip

\*\* USS = with internal vulcanized-on elastomer seal lip and additional centering

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