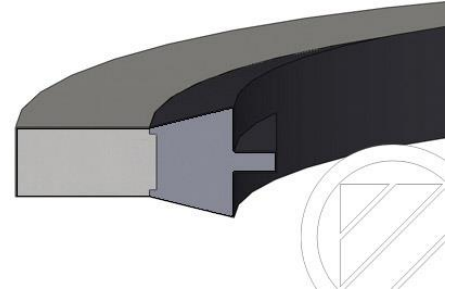


# USS NBR



## DESCRIPTION

Bonded seals (US, USS) are metal washers with a trapezoidal elastomer sealing lip vulcanised to their inner diameter.

**Product group:** Bonded Seal

**Design:** US with inner vulcanised elastomer sealing lip  
USS with inner vulcanised elastomer sealing lip and additional centring

**Sealing material:** Elastomer sealing lip NBR, NB 70  
Elastomer sealing lip FKM, FP 70

**Colour:** NBR 70, black; FKM 70, brown

**Washer:** Carbon steel SAE 1008 (1.0330)  
Stainless steel AISI 304 (1.4301)

**Surface protection Zinc plated washer:** carbon  
(Cr VI free) steel

**Colour:** Silver-grey

## OPERATIONAL APPLICATION LIMITS

Temperature NBR: -30°C to +100°C

Temperature FKM: -15°C to +200°C

The maximum operating pressure is dependent on the design of the seal, the material, the dimensions, the counter surface and the tightening torque. Bonded seals are suitable for up to 25 Mpa pressure without counterbores in the counter surfaces.

## COUNTER SURFACE

Surface finish

$R_{max} \leq 15 \mu m$

$R_a \leq 3,2 \mu m$

## FUNCTION

By tightening the screws the elastomer sealing lip is compressed, thereby producing the sealing effect on the surfaces to be sealed. It stops the medium from leaking to the outside, thus preventing loss of pressure. In addition, it provides protection against dirt from the outside.

The centring feature of the USS type ensures that the bonded seal is fixed in the correct position for mounting and when tightening the screws, thereby guaranteeing captive mounting.

## APPLICATION AREA

Bonded seals are used as static seals for screw connections and flange seals, for example in machine building and container- and apparatus construction.

## BENEFITS OF BONDED SEALS

- Simple, captive assembly
- Secure sealing
- Reusable
- Fixation due to inner centring
- Cost-effective solution
- Controlled compression due to washer
- Available in different metal finishes
- Stocked for almost all European thread sizes

## MEDIA SUITABILITY OF ELASTOMER SEALING LIP

### NBR

Good chemical resistance to mineral oils and greases, hydraulic oils H, HL, HLP, flame-resistant hydraulic fluids HFA, HFB, HFC up to approx. +50°C and water up to max. +80°C.

### FKM

Good chemical resistance to mineral oils and greases, synthetic oils and greases, engine, transmission and ATF oils up to approx. +150°C, fuels, flame-resistant hydraulic fluids HFD, aliphatic, aromatic and chlorinated hydrocarbons, water up to max. +80°C, excellent resistance to weather, ozone and ageing, very low gas permeability (therefore suitable for vacuum applications), broad chemical resistance.

## REMARKS

Further special types such as bonded seals with elastomer sealing lip vulcanised to the outside (UA type) or according to customers' drawings are available on request.

