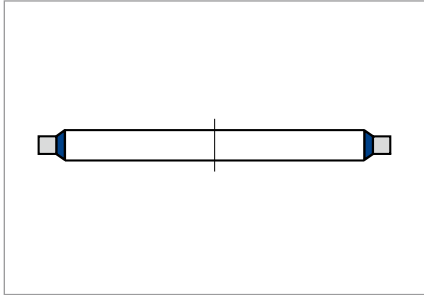


# USIT RINGS U, UA, USF



Usit Ring U

## PRODUCT DESCRIPTION

Metal gasket with internally (U) or externally (UA) vulcanised, trapezoidal, rubber-elastic sealing bead for static sealing of

- Threaded fittings
- Flange connections
- (USF) with centring diaphragm.

## PRODUCT ADVANTAGES

- Easy fitting
- Force-fit connections
- Secure, self-reinforced sealing
- Suitable for high pressures.

## APPLICATION

Sealing of threaded fittings and flange connections e.g. in mechanical engineering.

## MATERIAL

|                                      |  |
|--------------------------------------|--|
| <b>Metal ring</b>                    | Steel SPCC (similar to DC01 C290)<br>Steel SPCC-1B (similar to DC01 C590)<br>Stainless steel SUS 304 (similar to X5CrNi 18-10) |
| <b>Sealing bead</b>                  | NBR rubber 70 NBR 177646<br>FKM rubber 75 FKM 177645<br>Other materials are available on enquiry from special production.      |
| <b>Surface protection metal ring</b> | SPCC: zinc chrome plated (CR VI free)<br>SPCC-1B: zinc chrome plated (CR VI free)<br>SUS304: –                                 |

## OPERATING CONDITIONS

### NBR

|                    |   |
|--------------------|---|
| <b>Media</b>       | Mineral oils (as per DIN 51524), hydraulic fluids HFA, HFB, HFC (as per VDMA 24320) |
| <b>Temperature</b> | –30 ... +100 °C   |

### FKM

|              |  |
|--------------|--|
| <b>Media</b> | Hot air: max. +200 °C<br>Mineral oils: as per DIN 51524, max. +150 °C<br>Hydraulic fluids: as per VDMA 24320, max. +150 °C |
|--------------|--|

|                           |   |
|---------------------------|---|
| <b>Operating pressure</b> | <100 MPa (installation in counter bore)<br><40 MPa (installation without counter bore for $\varnothing < 40$ mm; only USF)<br><25 MPa (installation without counter bore for $\varnothing < 40$ mm) |
|---------------------------|---|

## Recommendation

| Steel material   | Max. permissible starting torque |
|------------------|----------------------------------|
| SPCC             | corresponding to 5.6 screw       |
| SPCC-1B / SUS304 | corresponding to 8.8 screw       |

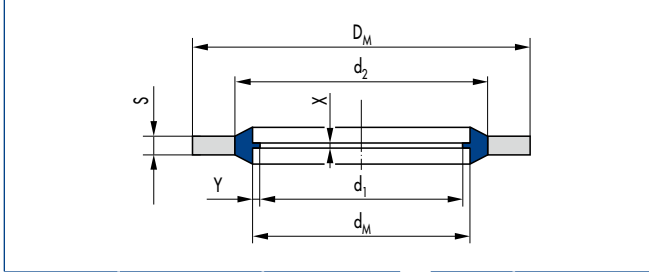
If the starting torques exceed the starting torque of a 8.8 screw, functioning can no longer be guaranteed. In this case, installation tests are required. We recommend SUS304 or SPCC-1B for these tests.

## DESIGN NOTES

### Installation

|                |               |  |
|----------------|---------------|--|
| <b>Surface</b> | Flat surfaces | $R_{\max} \leq 15 \mu\text{m}$<br>$R_a \leq 3 \mu\text{m}$ |
|----------------|---------------|--|

### Tolerances on finished parts



| $D_M$     | $D_M$         | $D_M$         | $s$ | $s$           |
|-----------|---------------|---------------|-----|---------------|
| $\leq 28$ | $+0,15/-0,10$ | $+0,10/-0,20$ | 1,0 | $+0,08/-0,15$ |
| 28 ... 50 | $+0,20/-0,10$ | $+0,10/-0,30$ | 1,5 | $+0,13/-0,20$ |
| $> 50$    | $+0,25/-0,10$ | $+0,10/-0,40$ | 2,0 | $+0,13/-0,20$ |
|           |               |               | 3,0 | $+0,20/-0,25$ |
|           |               |               | 3,5 | $+0,20/-0,30$ |