

# CASSETTE SEALS UAO7



## DESCRIPTION

The UAO7 profile is an inverted cassette seal in which the upper part is fitted and tightened on the rotating hub. The lower part is fitted onto the fixed shaft and is composed of two primary lips with integrated springs and an axial anti-pollution lip. A metal reinforcement is built in to offer additional protection in the dynamic sealing area when faced with a higher pollution level.

## ADVANTAGES

- High friction coefficient
- Better protection against fouling using a labyrinth system
- Reduced need for maintenance
- Easy to fit with low risk of seal deterioration

## APPLICATIONS

- Axles
- Pinions
- Hubs
- Construction
- Agriculture

## MATERIALS

### Rubber

ACM 70 - 75 Shore A

FKM 70 - 75 Shore A

HNBR 70 - 75 Shore A

NBR 70 - 75 Shore A

### Metal cage

Steel - AISI 1010

Stainless steel - AISI 304

Stainless steel - AISI 316

### Spring

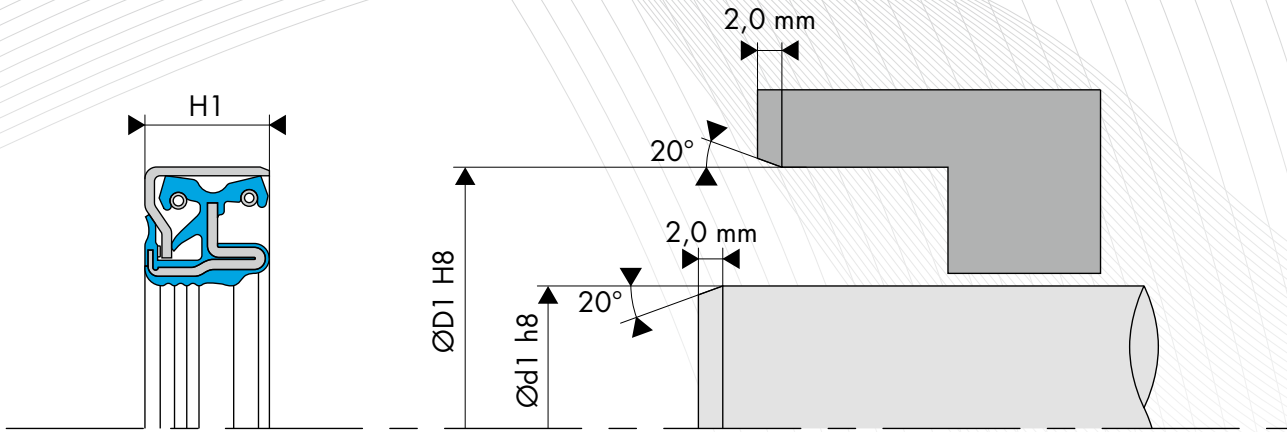
Steel - AISI 1070 - 1090

Stainless steel - AISI 316

## TECHNICAL DATA

Technical data	NBR 70 - 75 Shore A	FKM 70 - 75 Shore A	ACM 70 - 75 Shore A	HNBR 70 - 75 Shore A
Temperature	-30°C / +80°C	-20°C/+120°C	-25°C/+100°C	-30°C/+100°C
Speed	2 m/s	4 m/s	3 m/s	3 m/s
Pressure	0.02 - 0.05 MPa	0.02 - 0.05 MPa	0.02 - 0.05 MPa	0.02 - 0.05 MPa
Level of pollution	High	High	High	High

The figures above indicate the maximum values and may not be cumulated. They may be developed, depending on the materials used.



## DESIGN RECOMMENDATIONS

### Rotating hub hardness

Rotation speed	Hardness in HRC
$s \leq 4.0$ m/sec	45 HRC
$4.0 < s \leq 10.0$ m/s	55 HRC
$s > 10.0$ m/sec	60 HRC

### Rotating hub tolerance

Rotating hub diameter ØD1 (mm)	Tolerance H8 (mm)
$3.0 < \text{ØD1} \leq 6.0$	0 / +0.018
$6.0 < \text{ØD1} \leq 10.0$	0 / +0.022
$10.0 < \text{ØD1} \leq 18.0$	0 / +0.027
$18.0 < \text{ØD1} \leq 30.0$	0 / +0.033
$30.0 < \text{ØD1} \leq 50.0$	0 / +0.039
$50.0 < \text{ØD1} \leq 80.0$	0 / +0.046
$80.0 < \text{ØD1} \leq 120.0$	0 / +0.054
$120.0 < \text{ØD1} \leq 180.0$	0 / +0.063
$180.0 < \text{ØD1} \leq 250.0$	0 / +0.072
$250.0 < \text{ØD1} \leq 315.0$	0 / +0.081
$315.0 < \text{ØD1} \leq 400.0$	0 / +0.089
$400.0 < \text{ØD1} \leq 500.0$	0 / +0.097
$500.0 < \text{ØD1} \leq 630.0$	0 / +0.110

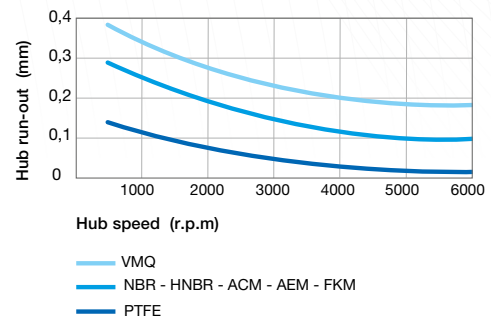
### Fixed shaft tolerance

Fixed shaft diameter Ød1 (mm)	Tolerance h8 (mm)
$\text{Ød1} \leq 3.0$	-0.014 / 0
$3.0 < \text{Ød1} \leq 6.0$	-0.018 / 0
$6.0 < \text{Ød1} \leq 10.0$	-0.022 / 0
$10.0 < \text{Ød1} \leq 18.0$	-0.027 / 0
$18.0 < \text{Ød1} \leq 30.0$	-0.033 / 0
$30.0 < \text{Ød1} \leq 50.0$	-0.039 / 0
$50.0 < \text{Ød1} \leq 80.0$	-0.046 / 0
$80.0 < \text{Ød1} \leq 120.0$	-0.054 / 0
$120.0 < \text{Ød1} \leq 180.0$	-0.063 / 0
$180.0 < \text{Ød1} \leq 250.0$	-0.072 / 0
$250.0 < \text{Ød1} \leq 315.0$	-0.081 / 0
$315.0 < \text{Ød1} \leq 400.0$	-0.089 / 0
$400.0 < \text{Ød1} \leq 500.0$	-0.097 / 0

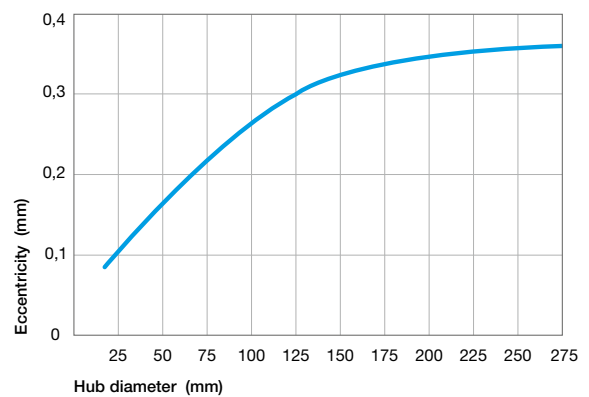
### Surface roughness

Ra	0.8 to 3.2 µm
Rmax	10.0 to 16.0 µm

### Rotating hub run out



### Eccentricity



### Axial movement

The cassette seals can tolerate axial movements greater than +/- 0.1 mm. However, this can lead to premature wear in the system.

### Chamfers and radius

Shaft	20° (+/-5°) x 2 mm
Hub	20° (+/-5°) x 2 mm