

CASSETTE SEALS UAO3



DESCRIPTION

The UAO3 profile is an inverted cassette seal, where the upper part is fitted on the rotating hub. The lower part is fitted onto the fixed shaft and is composed of a primary lip with an integrated spring and an anti-pollution lip. A metal reinforcement is built in to offer additional protection in the dynamic sealing area when faced with a moderate pollution level.

ADVANTAGES

- Low friction coefficient
- Standard protection against fouling
- Reduced need for maintenance
- Easy to fit with low risk of seal deterioration

APPLICATIONS

- Axles
- Pinions
- Hubs
- Construction
- Agriculture
- Commercial vehicles

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

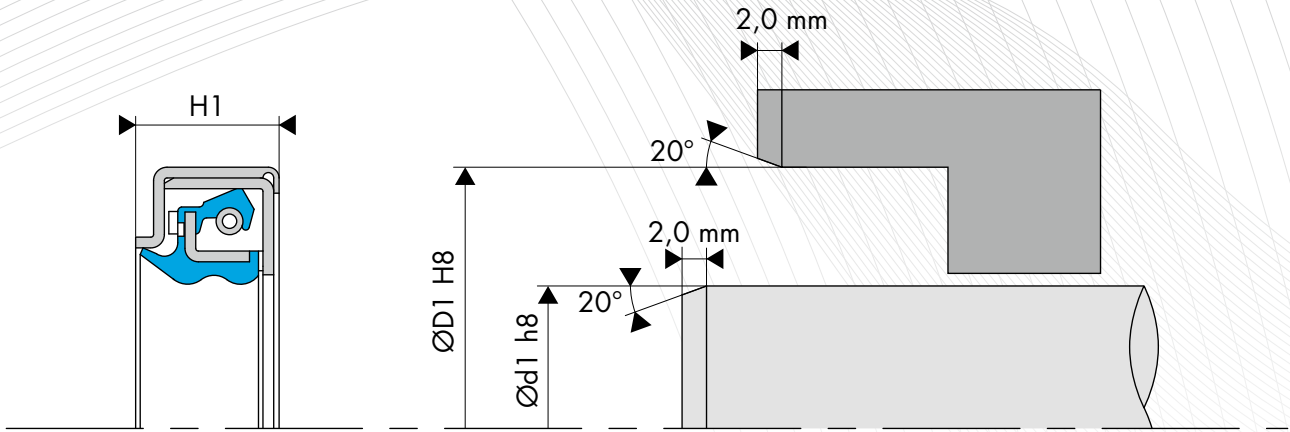
Spring

- 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	8 m/s	10 m/s	9 m/s	9 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	Moderate	Moderate	Moderate	Moderate

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

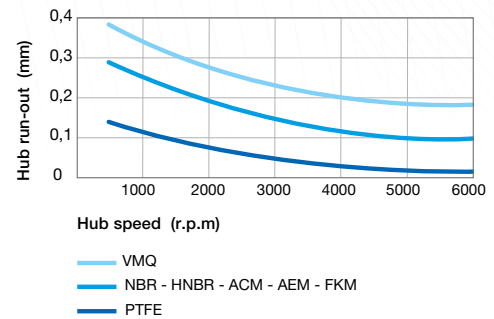
Fixed shaft tolerance

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

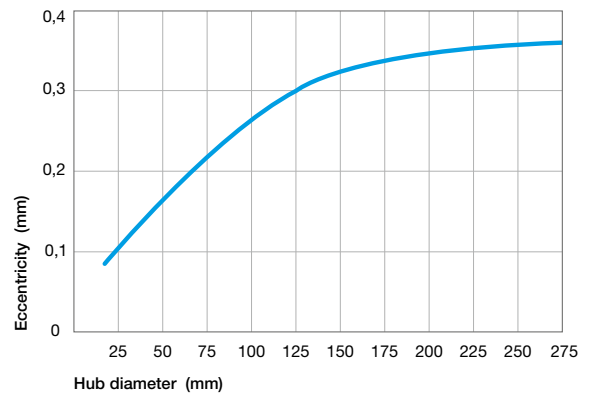
Surface roughness

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

DIMENSIONS

Part number	Shaft diameter Ød1 h8	Bore diameter ØD1 H7/H8	Seal height H1
UAO3 85 x 140 x 17	85.00	140.00	17.00
UAO3 90 x 130 x 17	90.00	130.00	17.00
UAO3 100 x 130 x 17	100.00	130.00	17.00
UAO3 100 x 140 x 17	100.00	140.00	17.00
UAO3 110 x 140 x 17	110.00	140.00	17.00
UAO3 111 x 146 x 17	111.00	146.00	17.00
UAO3 120 x 160 x 17	120.00	160.00	17.00
UAO3 125 x 160 x 17	125.00	160.00	17.00
UAO3 128 x 164 x 17	128.00	164.00	17.00
UAO3 130 x 160 x 17	130.00	160.00	17.00
UAO3 130 x 170 x 17	130.00	170.00	17.00
UAO3 135 x 165 x 17	135.00	165.00	17.00
UAO3 140 x 170 x 17	140.00	170.00	17.00
UAO3 145 x 175 x 17	145.00	175.00	17.00
UAO3 150 x 180 x 17	150.00	180.00	17.00
UAO3 155 x 190 x 17	155.00	190.00	17.00
UAO3 160 x 196 x 17	160.00	196.00	17.00
UAO3 178 x 205 x 17	178.00	205.00	17.00
UAO3 187 x 230 x 17	187.00	230.00	17.00
UAO3 190 x 230 x 17	190.00	230.00	17.00
UAO3 320 x 360 x 19	320.00	360.00	19.00