



CASSETTE SEALS UA16A HS



DESCRIPTION

The UA16A HS is the “High Speed” version of the UA16A cassette seal profile, where sealing is through a 3-barrier labyrinth system. The upper part is static with the housing and the lower part is designed to operate in rotation with the shaft.

ADVANTAGES

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

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

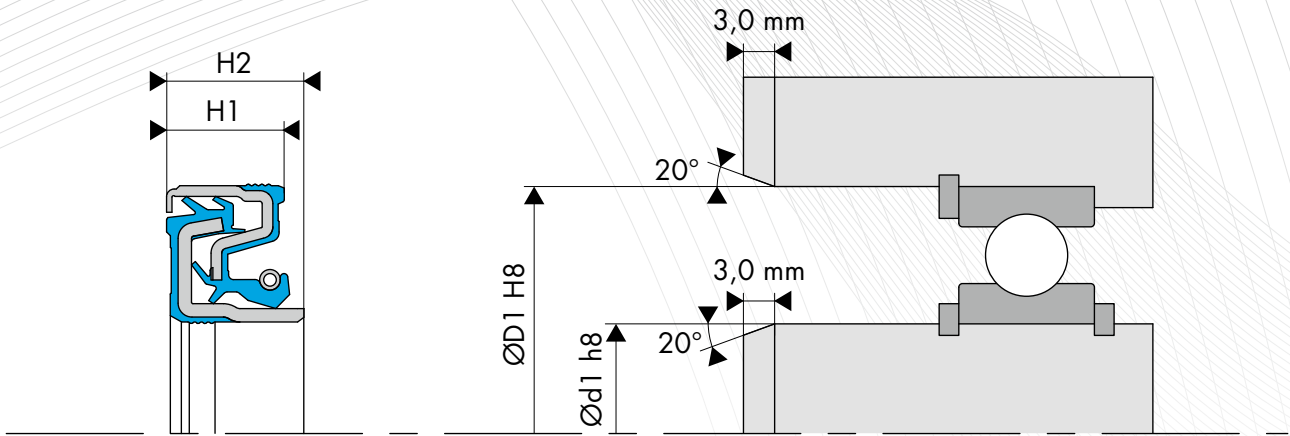
Spring

- 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/+100°C	-25°C/+90°C	-30°C/+90°C
Speed	5 m/s	7 m/s	6 m/s	6 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

Shaft 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

Shaft tolerance

Shaft diameter $\varnothing d1$ (mm)	Tolerance h8 (mm)
$\varnothing d1 \leq 3.0$	-0.014 / 0
$3.0 < \varnothing d1 \leq 6.0$	-0.018 / 0
$6.0 < \varnothing d1 \leq 10.0$	-0.022 / 0
$10.0 < \varnothing d1 \leq 18.0$	-0.027 / 0
$18.0 < \varnothing d1 \leq 30.0$	-0.033 / 0
$30.0 < \varnothing d1 \leq 50.0$	-0.039 / 0
$50.0 < \varnothing d1 \leq 80.0$	-0.046 / 0
$80.0 < \varnothing d1 \leq 120.0$	-0.054 / 0
$120.0 < \varnothing d1 \leq 180.0$	-0.063 / 0
$180.0 < \varnothing d1 \leq 250.0$	-0.072 / 0
$250.0 < \varnothing d1 \leq 315.0$	-0.081 / 0
$315.0 < \varnothing d1 \leq 400.0$	-0.089 / 0
$400.0 < \varnothing d1 \leq 500.0$	-0.097 / 0

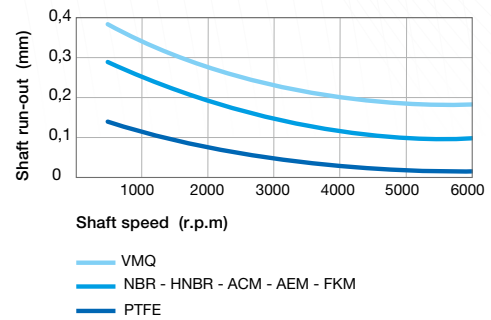
Housing tolerance

Bore diameter $\varnothing D1$ (mm)	Tolerance H8 (mm)
$3.0 < \varnothing D1 \leq 6.0$	0 / +0.018
$6.0 < \varnothing D1 \leq 10.0$	0 / +0.022
$10.0 < \varnothing D1 \leq 18.0$	0 / +0.027
$18.0 < \varnothing D1 \leq 30.0$	0 / +0.033
$30.0 < \varnothing D1 \leq 50.0$	0 / +0.039
$50.0 < \varnothing D1 \leq 80.0$	0 / +0.046
$80.0 < \varnothing D1 \leq 120.0$	0 / +0.054
$120.0 < \varnothing D1 \leq 180.0$	0 / +0.063
$180.0 < \varnothing D1 \leq 250.0$	0 / +0.072
$250.0 < \varnothing D1 \leq 315.0$	0 / +0.081
$315.0 < \varnothing D1 \leq 400.0$	0 / +0.089
$400.0 < \varnothing D1 \leq 500.0$	0 / +0.097
$500.0 < \varnothing D1 \leq 630.0$	0 / +0.110

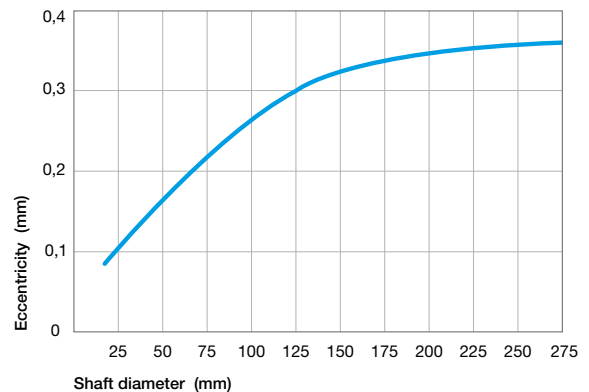
Surface roughness

Ra	0.8 to 3.2 μm
Rmax	10.0 to 16.0 μm

Shaft 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 3 mm
Housing	20° (+/-5°) x 1 mm