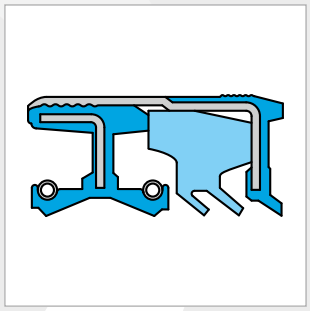
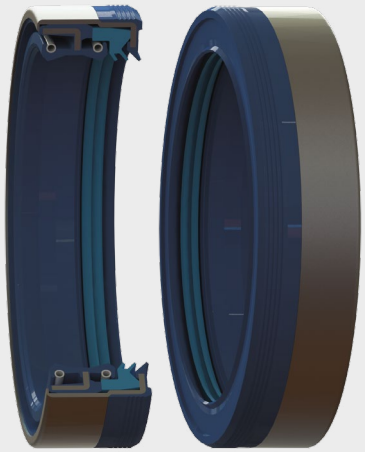


COMBI SEALS
COMB5



DESCRIPTION

The COMB5 profile is a combi seal composed of a metal cage with a rubber coating covering half of the outside of the cage, a DC-DCW double sealing lip, double compact polyurethane anti-pollution deflector and an additional anti-pollution lip bonded in rubber.

ADVANTAGES

Long lifespan
Moderate rotation speeds
Elevated axial displacements
Strong protection against external dirt
Very good static sealing

APPLICATIONS

Agriculture
Transmissions
Rotations during high levels of pollution

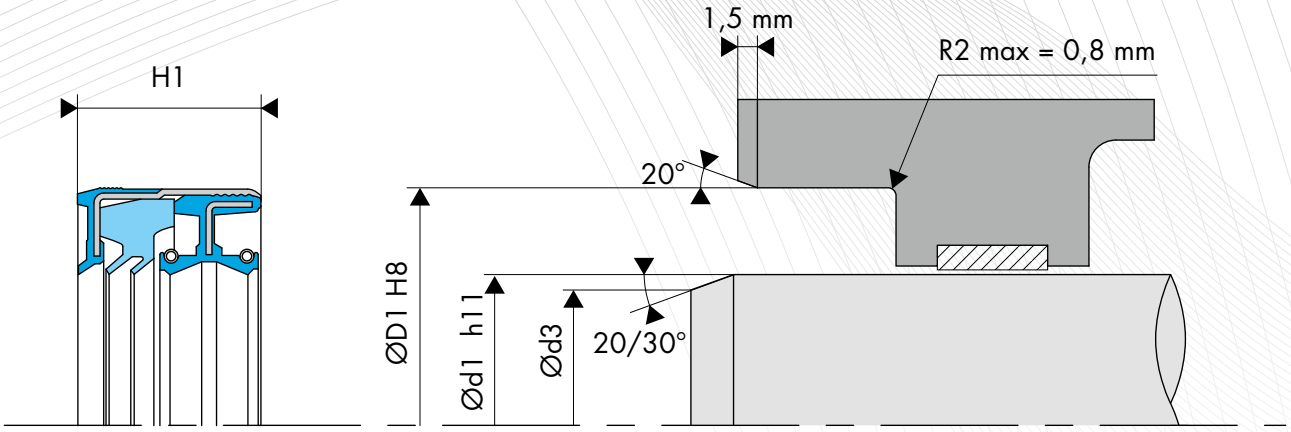
MATERIALS

Rubber
NBR 70 - 75 Shore A
FKM 70 - 75 Shore A
Deflector
PU 92 Shore A
PU 94 Shore A
Metal cage
Steel - AISI 1010
Spring
Steel - AISI 1070 - 1090

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	4 m/s	6 m/s	5 m/s	5 m/s
Pressure	0.02 - 0.05 MPa	0.02 - 0.05 MPa	0.02 - 0.05 MPa	0.02 - 0.05 MPa
Accepted axial offset	High	High	High	High
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.



SHAFT DESIGN

Shaft hardness

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

Surface roughness

Ra *	0.2 to 0.8 µm
Rz	1.0 to 4.0 µm
Rmax	≤6.3 µm

*Ra = 0.1 µm for demanding applications

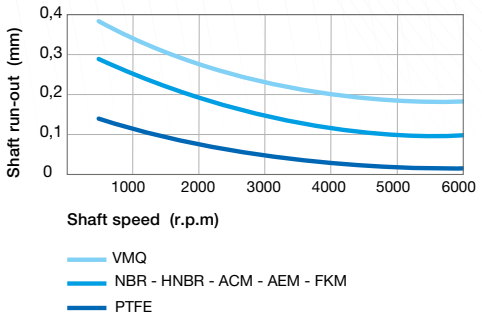
Shaft tolerance

Shaft diameter Ød1 (mm)	Tolerance h11 (mm)
Ød1 ≤ 3.0	-0.060 / 0
3.0 < Ød1 ≤ 6.0	-0.075 / 0
6.0 < Ød1 ≤ 10.0	-0.090 / 0
10.0 < Ød1 ≤ 18.0	-0.110 / 0
18.0 < Ød1 ≤ 30.0	-0.130 / 0
30.0 < Ød1 ≤ 50.0	-0.160 / 0
50.0 < Ød1 ≤ 80.0	-0.190 / 0
80.0 < Ød1 ≤ 120.0	-0.220 / 0
120.0 < Ød1 ≤ 180.0	-0.250 / 0
180.0 < Ød1 ≤ 250.0	-0.290 / 0
250.0 < Ød1 ≤ 315.0	-0.320 / 0
315.0 < Ød1 ≤ 400.0	-0.360 / 0
400.0 < Ød1 ≤ 500.0	-0.400 / 0

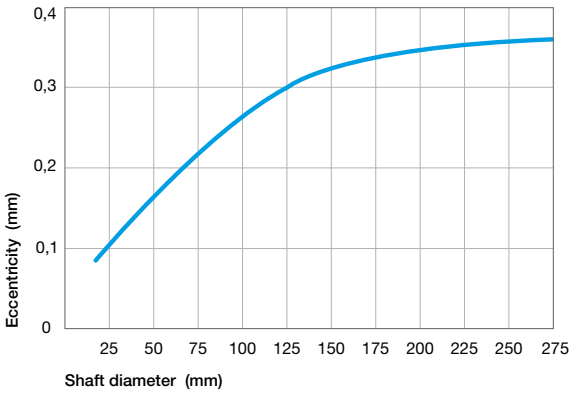
Chamfer

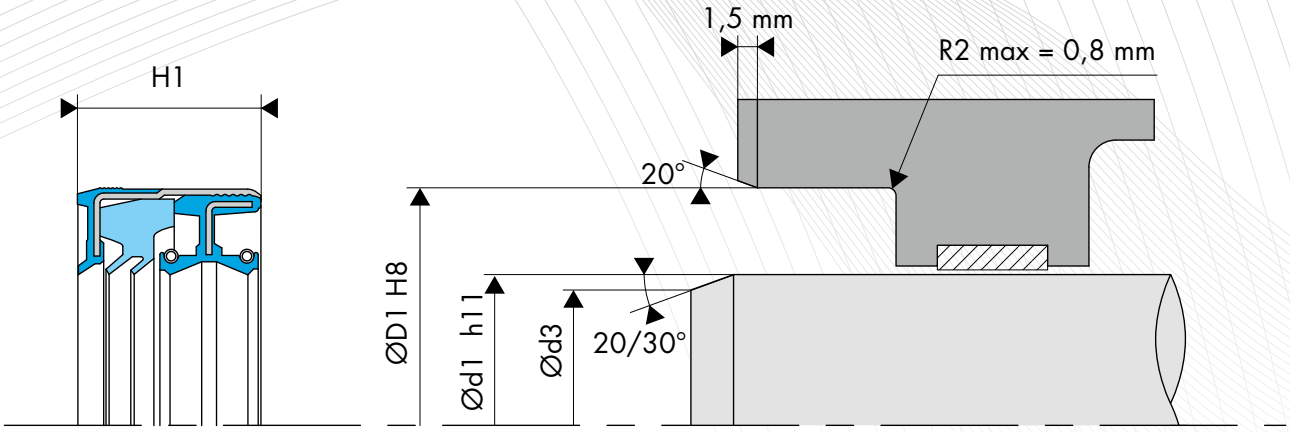
Shaft diameter Ød1 (mm)	Chamfer diameter Ød3 (mm)
Ød1 ≤ 10.0	Ød1 - 1.50
10.0 < Ød1 ≤ 20.0	Ød1 - 2.00
20.0 < Ød1 ≤ 30.0	Ød1 - 2.50
30.0 < Ød1 ≤ 40.0	Ød1 - 3.00
40.0 < Ød1 ≤ 50.0	Ød1 - 3.50
50.0 < Ød1 ≤ 70.0	Ød1 - 4.00
70.0 < Ød1 ≤ 95.0	Ød1 - 4.50
95.0 < Ød1 ≤ 130.0	Ød1 - 5.50
130.0 < Ød1 ≤ 240.0	Ød1 - 7.00
240.0 < Ød1 ≤ 500.0	Ød1 - 11.00

Shaft run out



Eccentricity





HOUSING DESIGN

Surface roughness

Ra	0,8 to 3,2 µm
Rz	6,3 to 16,0 µm
Rmax	≤ 16,0 µm

Chamfer

Housing	20° (+/-5°) x 1.5 mm

Housing tolerance

Bore diameter ØD1 (mm)	Tolerance H8 (mm)
3.0 < ØD1 ≤ 6.0	0 / +0.018
6.0 < ØD1 ≤ 10.0	0 / +0.022
10.0 < ØD1 ≤ 18.0	0 / +0.027
18.0 < ØD1 ≤ 30.0	0 / +0.033
30.0 < ØD1 ≤ 50.0	0 / +0.039
50.0 < ØD1 ≤ 80.0	0 / +0.046
80.0 < ØD1 ≤ 120.0	0 / +0.054
120.0 < ØD1 ≤ 180.0	0 / +0.063
180.0 < ØD1 ≤ 250.0	0 / +0.072
250.0 < ØD1 ≤ 315.0	0 / +0.081
315.0 < ØD1 ≤ 400.0	0 / +0.089
400.0 < ØD1 ≤ 500.0	0 / +0.097
500.0 < ØD1 ≤ 630.0	0 / +0.110

DIMENSIONS

Part number	Shaft diameter Ød1 h11	Bore diameter ØD1 H8	Seal height H1
COMB5 30 x 44 x 17	30.00	44.00	17.00
COMB5 40 x 65 x 27.5	40.00	65.00	27.50
COMB5 42 x 62 x 23	42.00	62.00	23.00
COMB5 45 x 75 x 27.5	45.00	75.00	27.50
COMB5 47 x 65 x 19	47.00	65.00	19.00
COMB5 52 x 72 x 16.5	52.00	72.00	16.50