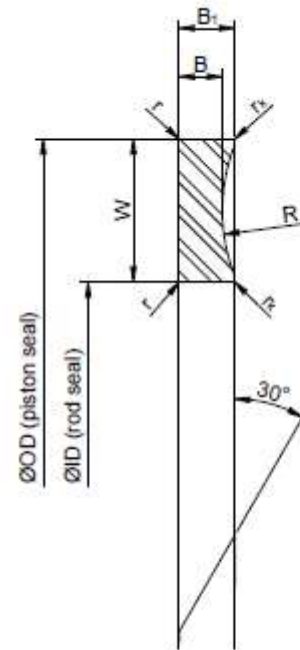


PEEK BACK-UP RINGS

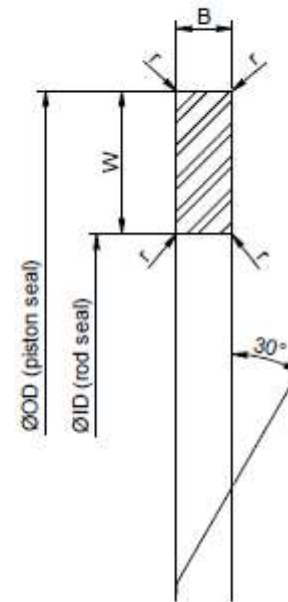
SPECIAL REQUIREMENTS FROM
Christian Uhthoff



Standard Requirements



Back-up ring drawing,
concave form



Back-up ring drawing,
rectangular form

Standard Requirements

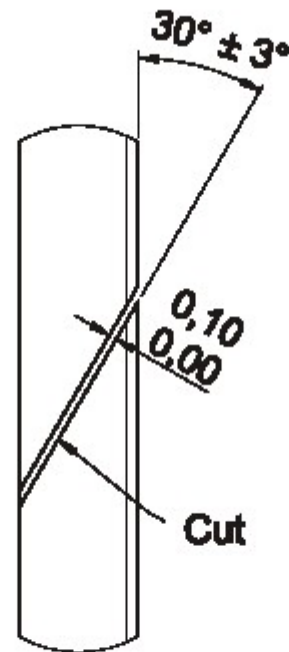


Fig. 3. Back-up Ring, Section Cut Detail

Standard Requirements

Back-Up Ring Dimensions and Tolerances (mm)

Material	OD (Piston Seal) ID (Rod Seal)		W	B	B ₁ ¹⁾	R	r ²⁾	1'k
	diameter	tolerance						
PEEK	≤ 100	± 0.07	± 0.03	± 0.1	± 0.1	0.9 W ≤ R ≤ 1.3 W	0.15±0.05 0.35±0.05 ³⁾	0.15±0.05
	> 100	± 0.10						
PTFE	≤ 50	+ 0.10	± 0.1	± 0.1	± 0.1	0.9 W ≤ R ≤ 1.3 W	-	-
	50 < (ID,OD) ≤ 80	+ 0.15						
	80 < (ID,OD) ≤ 150	+ 0.20						
	> 150	+ 0.25						

¹⁾Reference dimension, result from W, R, r, r_k

²⁾Chamfer of value r with 45° angle allowed

³⁾For W ≥ 4.0 mm

What we need to make this part ...

- SPECIAL MEASUREMENT TOOLS AND METHODES



METAL GAUGE
to check ID

DIGITAL DIAL GAUGE
to check height

CALIPERS
to check cross section

THICKNESS GAUGE
to check gap

What we need to make this part ...

- ...ID / OD gauge for 100% inspection...



What we need to make this part ...

- ...checking height of concave...



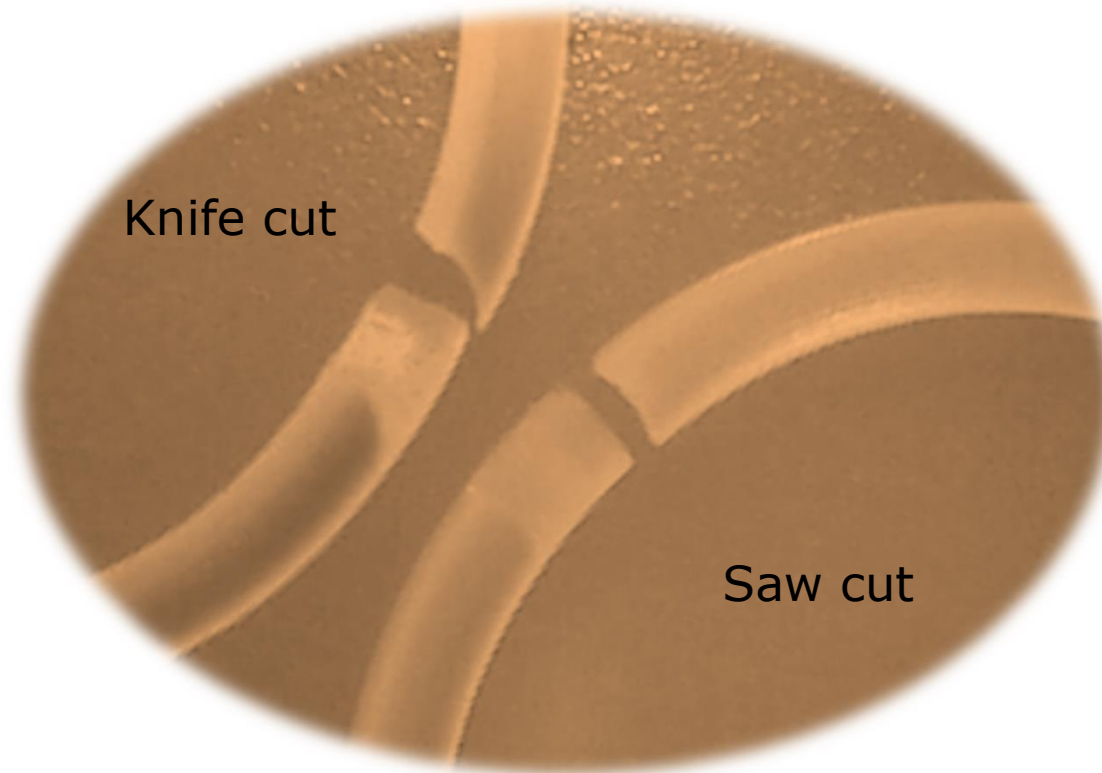
What we need to make this part ...

- ONLY SAW CUT ALLOWED FOR PEEK BACK-UPS
- ULTRA THINN SAW BLADES



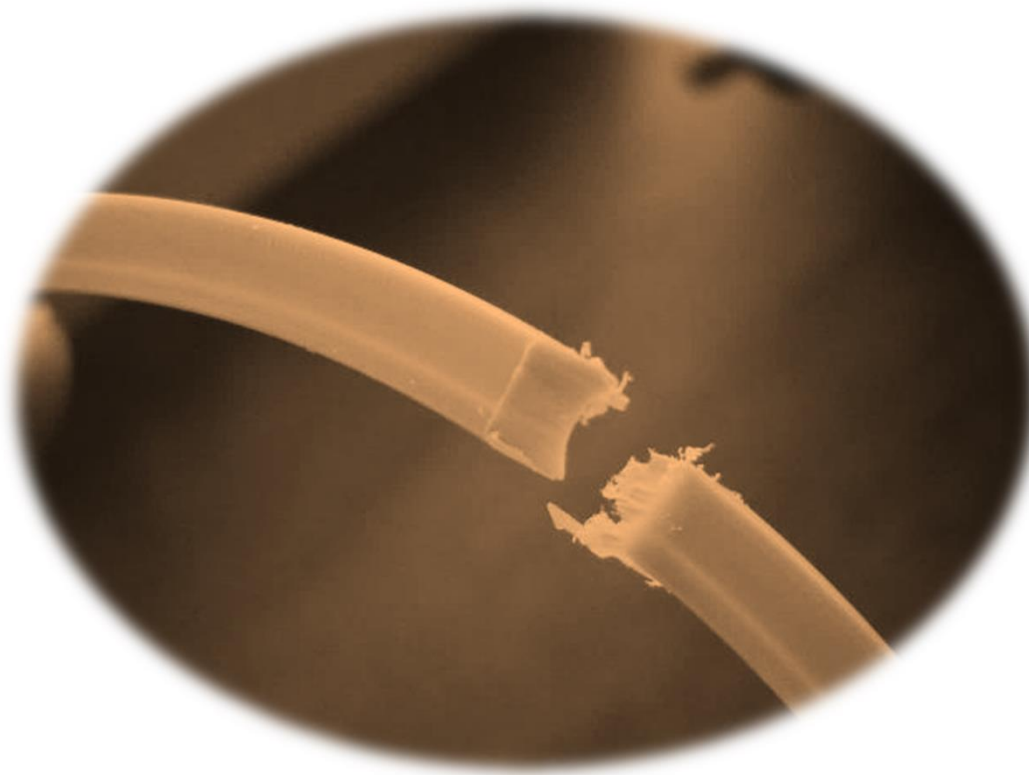
What we need to make this part ...

- ONLY SAW CUT ALLOWED FOR PEEK BACK-UPS



What we need to make this part ...

- ALL SHARP EDGES MUST BE DEBURRED AND ROUNDED



What we need to make this part ...

Step 1
After Saw Cut



Step 2
Deburred



Step 3
Sharp Edges Rounded



What we need to make this part ...

- TRIMMING WITH A VIBRATORY FINISHER



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