

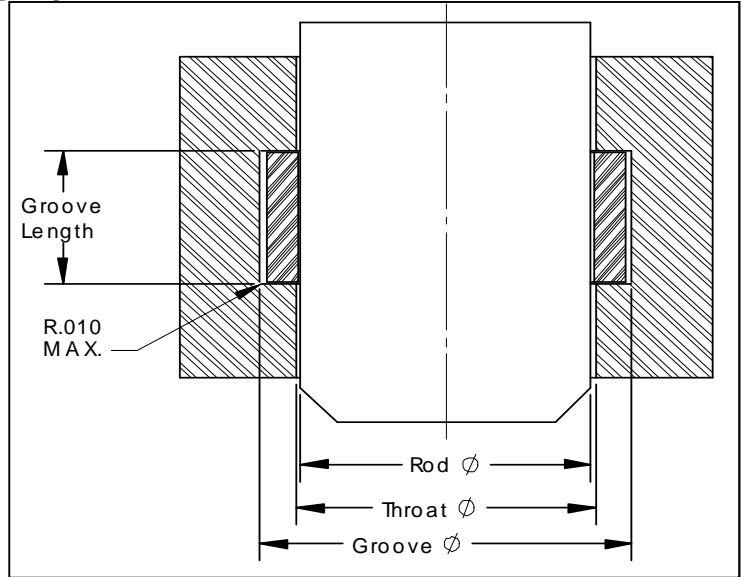
ROD WEAR RING

GLAND CALCULATION SHEET

HPS inc

Follow these steps to arrive at
Finished Rod
Gland Dimensions

- Standard Wear Ring Thickness(es)
- W6 = .057/.060"
- WT = .075/.080
- WH = .122/.125
- WR = .120/.125
- WB = .184/.187



STEPS

All Dimensions are in inches.

1. List All "Knowns"

List this data before you begin any calculations. Select A and B from this brochure and C, D and E from your materials and machining capabilities.

A	⇒	Ring Part No.:		
B	⇒	Ring Thickness:	Min. <input style="width: 50px;" type="text"/>	Max. <input style="width: 50px;" type="text"/>
C	⇒	Machining Tolerance:	<input style="width: 100px;" type="text"/>	
D	⇒	Rod Dia.:	Min. <input style="width: 50px;" type="text"/>	Max. <input style="width: 50px;" type="text"/>
E	⇒	Min. Metal to Metal Clearance: (Desired)	<input style="width: 100px;" type="text"/>	
		Max. Metal to Metal Clearance is:	.0000	

Note: When selecting this clearance consider the Piston Seal.
Large clearances require anti-extrusion devices to protect the seal.

2. Calculate Groove Diameter

Add .001" to the maximum rod diameter, then add twice the maximum ring thickness, and add the machining tolerance.

	⇒		+	.001	=	
	⇒		+		=	
F	⇒		/		=	Groove Dia.

3. Calculate Throat Diameter.

Subtract twice the minimum ring thickness from the maximum Groove Diameter from Step 2. Add twice the minimum desired metal to metal clearance, and add the machining tolerance.

	⇒		-		=	
	⇒		+		=	
G	⇒		/		=	Throat Diameter

4. Determine Groove Length

Add a +.010/.020" tolerance to the maximum ring width (axial length).

- a) Note: Above applies for A.L. up 1.499"
- b) For 1.500 to 3.999" A.L. add +.020/.030"
- c) For 4.000 to 6.999" A.L. add +.030/.040"
- d) For A.L. above 7" consult Tech Center

	⇒	Max. Ring Width		
H	⇒		/	Groove Length

Note: Properly applied Hydra-Lon™ rings always provide clearance between the rod and head gland. Check and be certain that the rod seal selected will not extruded into this clearance.