

Zatkoff

SEALS & PACKINGS

Engineering Action Request Form

Company: _____ Contact: _____
Address: _____ Title: _____
Address2: _____ Phone: _____ Ext: _____
City: _____ Fax: _____
State: _____ Zip: _____ SIC Code: _____

Equipment: _____ Part No: _____
Existing Seal: _____
Problem: _____
Current Price \$: _____ @ _____ pcs. Usage/yr: _____ Planning Test? Yes No
Target Price \$: _____ @ _____ pcs. Quote Qty: _____ Proto Qty: _____ Date Req: _____

Operating Conditions

	Static:	Reciprocating:	Rotary:	Oscillatory:	
	Unit (Check One)	Minimum	Operating	Maximum	Media to be sealed
Pressure:	PSI Bar	_____	_____	_____	_____
Vacuum:	torr in.Hg	_____	_____	_____	_____
Temperature:	°F °C	_____	_____	_____	_____
Cycle Rate:	/min Hz	_____	_____	_____	_____
Stroke Length:	inch mm	_____	_____	_____	_____
RPM:	deg. rad.	_____	_____	_____	_____
Velocity:	ft/mi m/sec	_____	_____	_____	_____
Rotation:	deg. rad.	_____	_____	_____	_____

Unidirectional Pressure Bidirectional Pressure

Gland Design

Seal Type:	Rod/Shaft	Piston Seal	Internal Face	External Face	
Gland Type:	Split Gland	Open Gland	Solid Gland	Stepped Gland	
Minimum	Maximum	Material	Finish (uin. Ra)	Hardness, RC	Coating

A Dia. (Gland ID): _____
B Dia. (Gland OD): _____
C Rod bore: _____
D Piston: _____
G Gland Width: _____
L Gland Depth: _____
E Extrusion Gap: _____
F Step Height: _____
X Radial Envelope: _____
Runout (TIR): _____
Side Load: (lbs. Newtons) _____

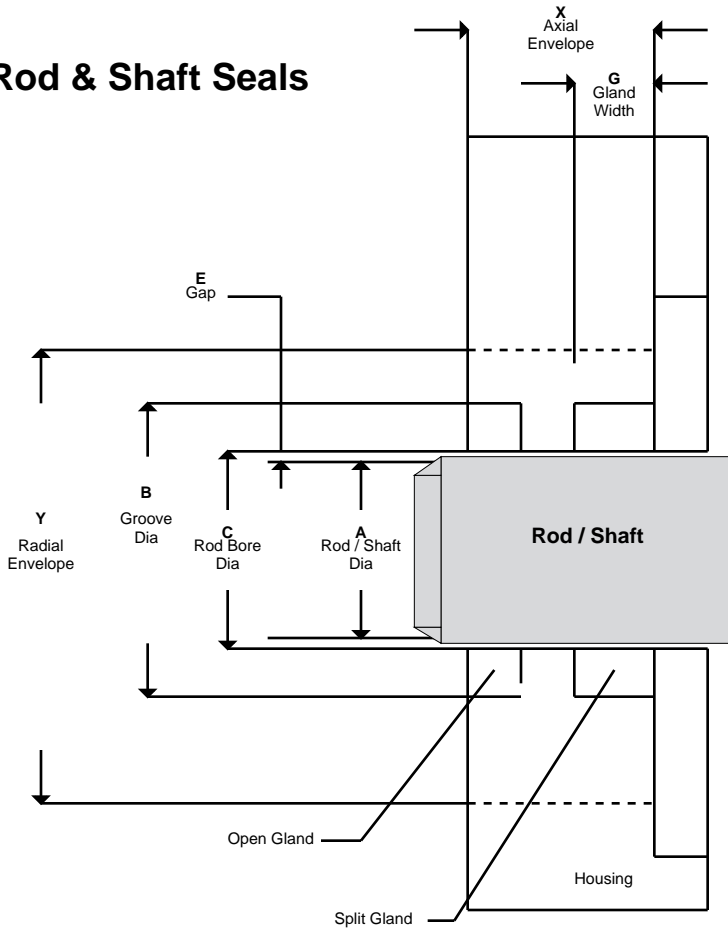
What modifications to the hardware are permitted?

Performance Requirements

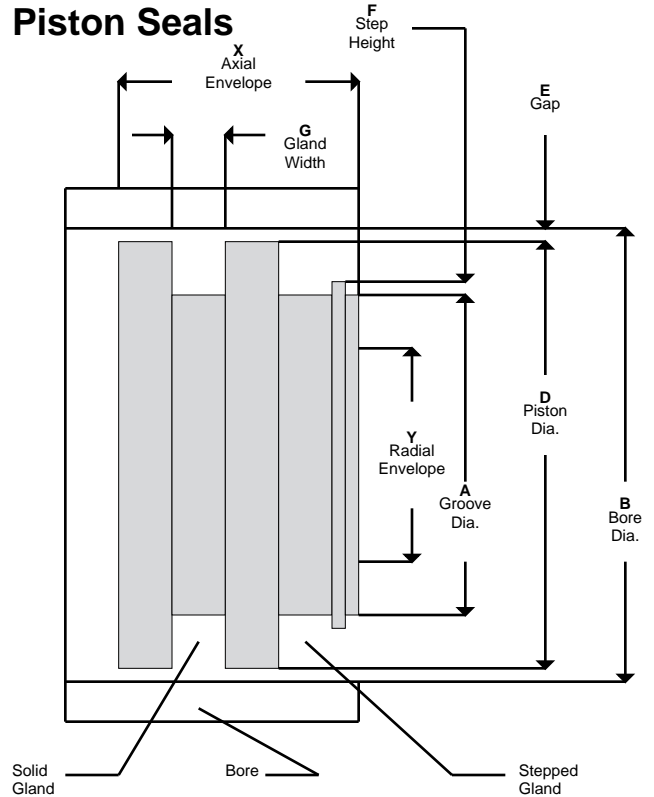
Breakout Friction/Torque: _____ Expected Life: _____
Running Friction/Torque: _____ Most Critical Aspect: _____
Allowable Leakage: _____ Other: _____

Notes:

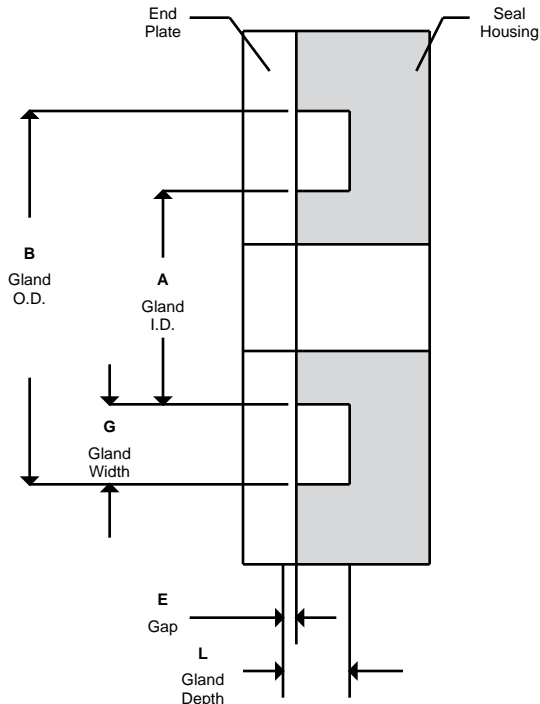
Rod & Shaft Seals



Piston Seals



Face Seals



Radial Envelope: Total radial space available to the seal designer, for a seal assembly in the hardware.

Axial Envelope: Total length available to the seal designer, for a system of one or more sealing components, in the hardware.

Diametral Clearance: Difference between the dynamic surface and the mating hardware, calculated as follows:
 For Rod Seals: $C - A$ (Rod Bore dia. minus Rod dia.)
 For Piston Seals: $B - D$ (Bore dia. minus Piston dia.)

E Gap: On rod and piston seals this is also called **Radial Clearance**. It is nominally 1/2 the diametral clearance. Can be greater due to sloading, and depending on the quality of bearings or bushings. On face seals the axial gap is usually .000, but can be greater depending on the media pressure and strength of flange bolts.