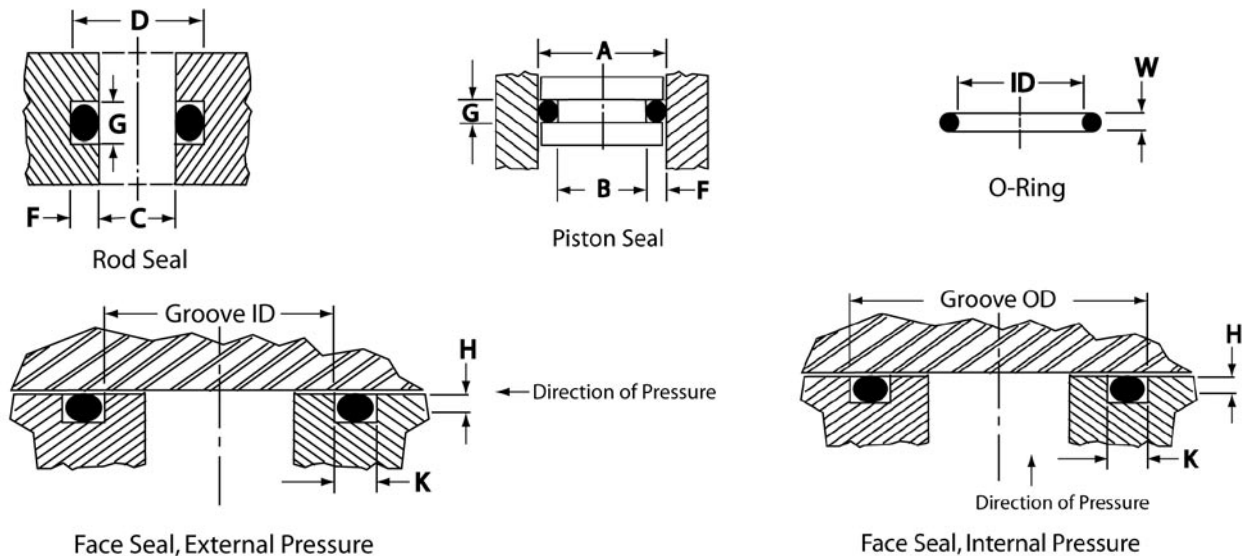


## Groove Design for O-Ring Installation



Uniform Dash Number	Actual Cross Section Diameter	Diametrical Squeeze (Minimum)		Gland Depth F		Groove Width G +/- .003			Flange Groove		Diametrical Clearance (Maximum) D		Eccentricity <sup>3</sup>	Radius (R)
		Dynamic	Static	Dynamic +.000 -.001	Static +.000 -.004	No Backup Ring	One Backup Ring	Two Backup Rings	Depth H	K min	500 PSI	1500 PSI		
-001	.040 + .003	.004	.006	.033	.031	.056	-	-	.028/.032	.068	.005	.0025	.002	.010
-002	.050 + .003	.005	.008	.042	.039	.070	-	-	.037/.041	.078	.006	.003	.002	.010
-003	.060 + .003	.006	.009	.051	.048	.084	-	-	.045/.050	.091	.007	.0035	.002	.016
-004 thru -050	.070 + .003	.007	.011	.056	.051	.098	.140	.207	.051/.061	.095	.008	.004	.002	.016
102 thru -178	.103 + .003	.010	.015	.090	.082	.144	.173	.240	.081/.091	.140	.009	.004	.002	.016
-201 thru -284	.139 + .004	.014	.021	.121	.114	.195	.210	.277	.110/.120	.190	.010	.006	.003	.031
-309 thru -395	.210 + .005	.021	.032	.184	.173	.294	.313	.412	.170/.180	.280	.011	.007	.004	.031
-425 thru -475	.275 + .006	.028	.042	.241	.227	.385	.410	.540	.231/.241	.370	.012	.008	.005	.047

Note 1. The following sizes are not normally recommended for dynamic service, although special applications may permit their use:

-001 thru -003      -013 thru -050  
 -117 thru -178    -223 thru -284  
 -350 thru -395    -461 thru -475

Note 2. Clearances shown are based on 70 durometer materials. The clearances must be held to an absolute minimum consistent with design requirements for temperature variations and should not exceed the values shown.

Note 3. Total indicator reading between groove and adjacent bearing surface. All surfaces and corners must be free of tool marks and scratches.

## Groove Design for O-Ring Installation (cont.)

O-Ring groove dimensions may be calculated as follows (refer to figures and chart on page 19):

<b>Given:</b>	<b>Example</b>	<b>Given:</b>	<b>Example</b>
Rod Diameter C	= 500	Cylinder Bore A	= 1000
O-ring Cross Section W	= 3/32" nominal	O-ring Cross Section W	= 1/8" nominal
Dynamic application		Static application	
No back-ups required		No back-ups required	
<b>Determine:</b>		<b>Determine:</b>	
O-ring size	= AS-568-112 (1/2" ID x 3/32" W nominal dimensions)	O-ring size	= AS568-210 (1" OD x 1/8" W nominal dimensions)
Gland Depth F	= 0.090 +.000 / -.001" (from chart)	Gland Depth F	= 0.114" +.000 / -.004" (from chart)
Groove Width G	= .144 +/- .003" (from chart)	Groove Width G	= .195 +/- .003" (from chart)
Rod Gland D	= C + 2F = .500" + 2 x .090" = .680"	Rod Gland B	= A-2F = 1.000" - 2 x .114" = .772"