MIL-G-5514 Gland Table (Inches)

DASH SIZE	PISTON TYPE CYLINDER BORE (A) MINIMUM	CYLINDER BORE (A) TOLERANCE	GLAND OD (F) MAXIMUM	GLAND OD (F) TOLERANCE	ROD TYPE ROD OD (B) MAXIMUM	ROD OD (B) TOLERANCE	GLAND ID (E) MINIMUM	GLAND ID (E) TOLERANCE	MAX DIAMETRAL CLEARANCE (D) PISTON	CLEARANCE (D) ROD	GLAND WIDTH (G) ZERO BACK-UP RING GLAND MINIMUM	ZERO BACK-UP TOLERANCE	ONE BACK-UP RING GLAND MINIMUM	ONE BACK-UP TOLERANCE	TWO BACK-UP RING GLAND MINIMUM	TWO BACK-UP TOLERANCE	NOMINAL SEAL CROSS SECTION	GLAND CORNER RADII (R) (MIN./MAX.)
001*	0.095	+0.001	0.033	+0.000	0.033	+0.000	0.095	+0.001	0.004	0.004	0.070	+0.010	—	—	—	—	0.040±0.003	0.005/0.015
002*	0.128	−0.000	0.048	−0.001	0.048	−0.001	0.128	−0.000			0.077	−0.000	—	—	—	—	0.050±0.003	
003*	0.159		0.063		0.063		0.159				0.088		—	—	—	—	0.060±0.003	
004*	0.190		0.076		0.076		0.190				0.094		0.149	+0.010	0.207	+0.010	0.070±0.003	
005*	0.221		0.108		0.108		0.221				0.094		0.149	−0.000	0.207	−0.000	0.070±0.003	
006	0.235	+0.001	0.123	+0.000	0.123	+0.000	0.235	+0.001	0.004	0.004	0.094	+0.010	0.149	+0.010	0.207	+0.010	0.070±0.003	0.005/0.015
007	0.266	−0.000	0.154	−0.001	0.154	−0.001	0.266	−0.000				−0.000		−0.000		−0.000		
008	0.297		0.185		0.185		0.297											
009	0.329		0.217		0.217		0.327											
010	0.360		0.248		0.248		0.359											
011	0.422		0.310		0.310		0.421											
012	0.485		0.373		0.373		0.485											
013	0.550	+0.002	0.448	+0.000	0.435	+0.000	0.547	+0.002	0.005	0.005	0.094	+0.010	0.149	+0.010	0.207	+0.010	0.070±0.003	0.005/0.015
014	0.613	−0.000	0.501	−0.002	0.498	−0.002	0.610	−0.000				−0.000		−0.000		−0.000		
015	0.675		0.563		0.560		0.672											
016	0.738		0.626		0.623		0.735											
017	0.800		0.688		0.685		0.797											
018	0.863		0.751		0.748		0.860											
019	0.925		0.813		0.810		0.922											
020	0.991		0.879		0.873		0.985											
021	1.053		0.941		0.935		1.047											
022	1.116		1.004		0.998		1.110											
023	1.178		1.066		1.060		1.172											
024	1.241		1.129		1.123		1.235											
025	1.303		1.191		1.185		1.297											
026	1.366		1.254		1.248		1.360											
027	1.428		1.316		1.310		1.422											
028	1.491		1.379		1.373		1.485											
110	0.550	+0.002	0.372	+0.000	0.373	+0.000	0.551	+0.002	0.005	0.005	0.141	+0.010	0.183	+0.010	0.245	+0.010	0.103±0.003	0.005/0.015
111	0.613	−0.000	0.435	−0.002	0.435	−0.002	0.613	−0.000				−0.000		−0.000		−0.000		
112	0.675		0.497		0.498		0.676											
113	0.738		0.560		0.560		0.738											
114	0.800		0.622		0.623		0.801											
115	0.863		0.685		0.685		0.863											
116	0.925		0.747		0.748		0.926											
117	0.991	+0.002	0.813	+0.000	0.810	+0.000	0.988	+0.002	0.005	0.005	0.141	+0.010	0.183	+0.010	0.245	+0.010	0.103±0.003	0.005/0.015
118	1.053	−0.000	0.875	−0.002	0.873	−0.002	1.051	−0.000				−0.000		−0.000		−0.000		
119	1.116		0.938		0.935		1.113											
120	1.178		1.000		0.998		1.176											
121	1.241		1.063		1.060		1.238											
122	1.303		1.125		1.123		1.301											
123	1.366		1.188		1.185		1.363											
124	1.428		1.250		1.248		1.426											
125	1.491		1.313		1.310		1.488											
126	1.553		1.375		1.373		1.551											
127	1.616		1.438		1.435		1.613			0.006								
128	1.678		1.500		1.498		1.676											
129	1.741		1.563		1.560		1.738											
130	1.805		1.627		1.623		1.801		0.006									
131	1.867		1.689		1.685		1.863											
132	1.930		1.752		1.748		1.926											
133	1.992		1.814		1.810		1.988			0.007								
134	2.055		1.877		1.873		2.051											
135	2.118		1.940		1.936		2.114											
136	2.180		2.002		1.998		2.176											
137	2.243		2.065		2.061		2.239											
138	2.305		2.127		2.123		2.301											
139	2.368		2.190		2.186		2.364											

* Contact GT engineering for details.

Note: The dash sizes within the blue outlined boxes in the dimensional tables represent the optimum dynamic sealing systems.

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2

Note: The dash sizes within the blue outlined boxes in the dimensional tables represent the optimum dynamic sealing systems.

MIL-G-5514 Gland Table (Inches)

DASH SIZE	PISTON TYPE				ROD TYPE				MAXIMUM DIAMETRAL CLEARANCE (D)		GLAND WIDTH (G)						NOMINAL SEAL CROSS SECTION	GLAND CORNER RADII (R) (MIN./MAX.)
	CYLINDER BORE (A)		GLAND OD (F)		ROD OD (B)		GLAND ID (E)				ZERO BACK-UP RING GLAND		ONE BACK-UP RING GLAND		TWO BACK-UP RING GLAND			
	MINIMUM	TOLERANCE	MAXIMUM	TOLERANCE	MAXIMUM	TOLERANCE	MINIMUM	TOLERANCE	PISTON	ROD	MINIMUM	TOLERANCE	MINIMUM	TOLERANCE	MINIMUM	TOLERANCE		
140	2.430	+0.002	2.252	+0.000	2.248	+0.000	2.426	+0.002	0.006	0.007	0.141	+0.010	0.183	+0.010	0.245	+0.010	0.103±0.003	0.005/0.015
141	2.493	−0.000	2.315	−0.002	2.311	−0.002	2.489	−0.000	0.007			−0.000		−0.000		−0.000		
142	2.555		2.377		2.373		2.551											
143	2.618		2.440		2.436		2.614											
144	2.680		2.502		2.498		2.676											
145	2.743		2.565		2.561		2.739											
146	2.805		2.627		2.623		2.801											
147	2.868		2.690		2.686		2.864											
148	2.930		2.752		2.748		2.926											
149	2.993		2.815		2.811		2.989											
210	0.991	+0.002	0.748	+0.000	0.748	+0.000	0.991	+0.002	0.005	0.005	0.188	+0.010	0.235	+0.010	0.304	+0.010	0.139±0.004	0.010/0.025
211	1.053	−0.000	0.810	−0.002	0.810	−0.002	1.053	−0.000				−0.000		−0.000		−0.000		
212	1.116		0.873		0.873		1.116											
213	1.178		0.935		0.935		1.178											
214	1.241		0.998		0.998		1.241											
215	1.303		1.060		1.060		1.303											
216	1.366		1.123		1.123		1.366											
217	1.428		1.185		1.185		1.428											
218	1.491		1.248		1.248		1.491											
219	1.553		1.310		1.310		1.553											
220	1.616		1.373		1.373		1.616											
221	1.678		1.435		1.435		1.678											
222	1.741		1.498		1.498		1.741											
223	1.867	+0.002	1.624	+0.000	1.623	+0.000	1.866	+0.002	0.006	0.006	0.188	+0.010	0.235	+0.010	0.304	+0.010	0.139±0.004	0.010/0.025
224	1.992	−0.000	1.749	−0.002	1.748	−0.002	1.991	−0.000				−0.000		−0.000		−0.000		
225	2.118		1.875		1.873		2.116			0.007								
226	2.243		2.000		1.998		2.241		0.007									
227	2.368		2.125		2.123		2.366											
228	2.493		2.250		2.248		2.491											
229	2.618		2.375		2.373		2.616											
230	2.743		2.500		2.498		2.741											
231	2.868		2.625		2.623		2.866											
232	2.993		2.750		2.748		2.991											
233	3.118		2.875		2.873		3.116											
234	3.243		3.000		2.997		3.240											
235	3.368		3.125		3.122		3.365											
236	3.493		3.250		3.247		3.490											
237	3.618		3.375		3.372		3.615											
238	3.743		3.500		3.497		3.740											
239	3.868		3.625		3.622		3.865											
240	3.993		3.750		3.747		3.990											
241	4.118		3.875		3.872		4.115											
242	4.243		4.000		3.997		4.240											
243	4.368		4.125		4.122		4.365											
244	4.493		4.250		4.247		4.490		0.008									
245	4.618		4.375		4.372		4.615											
246	4.743		4.500		4.497		4.740			0.008								
247	4.868		4.625		4.622		4.865											
325	1.867	+0.002	1.495	+0.000	1.498	+0.000	1.870	+0.002	0.006	0.006	0.281	+0.010	0.334	+0.010	0.424	+0.010	0.210±0.005	0.020/0.035
326	1.992	−0.000	1.620	−0.002	1.623	−0.002	1.995	−0.000				−0.000		−0.000		−0.000		
327	2.118		1.746		1.748		2.120											
328	2.243		1.871		1.873		2.245			0.007								
329	2.368		1.996		1.998		2.370		0.007									
330	2.493		2.121		2.123		2.495											
331	2.618		2.246		2.248		2.620											
332	2.743		2.371		2.373		2.745											

| DASH SIZE | PISTON TYPE | | | | ROD TYPE | | | | MAXIMUM DIAMETRAL CLEARANCE (D) | | GLAND WIDTH (G) | | | | | | NOMINAL SEAL CROSS SECTION | GLAND CORNER RADII (R) (MIN./MAX.) |
| | CYLINDER BORE (A) | | GLAND OD (F) | | ROD OD (B) | | GLAND ID (E) | | | | ZERO BACK-UP RING GLAND | | ONE BACK-UP RING GLAND | | TWO BACK-UP RING GLAND | | | |
	MINIMUM	TOLERANCE	MAXIMUM	TOLERANCE	MAXIMUM	TOLERANCE	MINIMUM	TOLERANCE	PISTON	ROD	MINIMUM	TOLERANCE	MINIMUM	TOLERANCE	MINIMUM	TOLERANCE		
333	2.868	+0.002	2.496	+0.000	2.498	+0.000	2.870	+0.002	0.007	0.007	0.281	+0.010	0.334	+0.010	0.424	+0.010	0.210±0.005	0.020/0.035
334	2.993	−0.000	2.621	−0.002	2.623	−0.002	2.995	−0.000				−0.000		−0.000		−0.000		
335	3.118		2.746		2.748		3.120											
336	3.243		2.871		2.873		3.245											
337	3.368		2.996		2.997		3.369											
338	3.493		3.121		3.122		3.494											
339	3.618		3.246		3.247		3.619											
340	3.743		3.371		3.372		3.744											
341	3.868		3.496		3.497		3.869											
342	3.993		3.621		3.622		3.994											
343	4.118		3.746		3.747		4.119											
344	4.243		3.871		3.872		4.244											
345	4.368		3.996		3.997		4.369											
346	4.493		4.121		4.122		4.494		0.008									
347	4.618		4.246		4.247		4.619											
348	4.743		4.371		4.372		4.744											
349	4.868		4.496		4.497		4.869											
425	4.974	+0.003	4.497	+0.000	4.497	+0.000	4.974	+0.003	0.009	0.009	0.375	+0.010	0.475	+0.010	0.579	+0.010	0.275±0.006	0.020/0.035
426	5.099	−0.000	4.622	−0.003	4.622	−0.003	5.099	−0.000				−0.000		−0.000		−0.000		
427	5.224		4.747		4.747		5.224											
428	5.349		4.872		4.872		5.349											
429	5.474		4.997		4.997		5.474											
430	5.599		5.122		5.122		5.599											
431	5.724		5.247		5.247		5.724											
432	5.849		5.372		5.372		5.849											
433	5.974		5.497		5.497		5.974											
434	6.099		5.622		5.622		6.099											
435	6.224		5.747		5.747		6.224											
436	6.349		5.872		5.872		6.349											
437	6.474		5.997		5.997		6.474											
438	6.724		6.247		6.247		6.724			0.010								
439	6.974		6.497		6.497		6.974											
440	7.224		6.747		6.747		7.224											
441	7.474		6.997		6.997		7.474											
442	7.724		7.247		7.247		7.724											
443	7.974		7.497		7.497		7.974											
444	8.224		7.747		7.747		8.224											
445	8.474		7.997		7.997		8.474											
446	8.974		8.497		8.497		8.974		0.010									
447	9.474	+0.004	8.997		8.997		9.474	+0.004	0.011									
448	9.974	−0.000	9.497		9.497		9.974	−0.000										
449	10.474		9.997		9.997		10.474											
450	10.974		10.497		10.497		10.974											
451	11.474		10.997		10.997		11.474											
452	11.974		11.497		11.497		11.974											
453	12.474		11.997		11.997		12.474											
454	12.974		12.497		12.497		12.974											
455	13.474		12.997		12.997		13.474											
456	13.974		13.497		13.497		13.974											
457	14.474		13.997		13.997		14.474											
458	14.974		14.497		14.497		14.974											
459	15.474		14.997		14.997		15.474											
460	15.974		15.497		15.497		15.974											

Note: The dash sizes within the blue outlined boxes in the dimensional tables represent the optimum dynamic sealing systems.

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# MIL-G-5514 Gland Table (Inches)

| DASH SIZE | PISTON TYPE | | | | ROD TYPE | | | | MAXIMUM DIAMETRAL CLEARANCE (D) | | GLAND WIDTH (G) | | | | | | NOMINAL SEAL CROSS SECTION | GLAND CORNER RADII (R) (MIN./MAX.) |
| | CYLINDER BORE (A) | | GLAND OD (F) | | ROD OD (B) | | GLAND ID (E) | | | | ZERO BACK-UP RING GLAND | | ONE BACK-UP RING GLAND | | TWO BACK-UP RING GLAND | | | |
	MINIMUM	TOLERANCE	MAXIMUM	TOLERANCE	MAXIMUM	TOLERANCE	MINIMUM	TOLERANCE	PISTON	ROD	MINIMUM	TOLERANCE	MINIMUM	TOLERANCE	MINIMUM	TOLERANCE		
710†	11.474	+0.004	10.747	+0.000	10.747	+0.000	11.474	+0.004	0.011	0.010	N/A	N/A	N/A	N/A	0.750	+0.010	0.418±0.007	0.020/0.035
711†	11.724	−0.000	10.997	−0.004	10.997	−0.004	11.724	−0.000			N/A	N/A	N/A	N/A		−0.000		
712†	11.974		11.247		11.247		11.974				N/A	N/A	N/A	N/A				
713†	12.224		11.497		11.497		12.224				N/A	N/A	N/A	N/A				
714†	12.474		11.747		11.747		12.474				N/A	N/A	N/A	N/A				
715†	12.724		11.997		11.997		12.724				N/A	N/A	N/A	N/A				
716†	12.974		12.247		12.247		12.974				N/A	N/A	N/A	N/A				
717†	13.224		12.497		12.497		13.224				N/A	N/A	N/A	N/A				
718†	13.474		12.747		12.747		13.474				N/A	N/A	N/A	N/A				
719†	13.724		12.997		12.997		13.724				N/A	N/A	N/A	N/A				
720†	13.974		13.247		13.247		13.974				N/A	N/A	N/A	N/A				
721†	14.224		13.497		13.497		14.224				N/A	N/A	N/A	N/A				
722†	14.474		13.747		13.747		14.474				N/A	N/A	N/A	N/A				
723†	14.724		13.997		13.997		14.724				N/A	N/A	N/A	N/A				
724†	14.974		14.247		14.247		14.974				N/A	N/A	N/A	N/A				
725†	15.224		14.497		14.497		15.224				N/A	N/A	N/A	N/A				
726†	15.474		14.747		14.747		15.474				N/A	N/A	N/A	N/A				
727†	15.724		14.997		14.997		15.724				N/A	N/A	N/A	N/A				
728†	15.974		15.247		15.247		15.974				N/A	N/A	N/A	N/A				
729†	16.224		15.497		15.497		16.224				N/A	N/A	N/A	N/A				
730†	16.474		15.747		15.747		16.474			0.011	N/A	N/A	N/A	N/A				
731†	16.724		15.997		15.997		16.724				N/A	N/A	N/A	N/A				
732†	16.974		16.247		16.247		16.974				N/A	N/A	N/A	N/A				

SURFACE FINISH

Unless otherwise stated gland corner radii, surface finishes, concentricity and gland wall angle are as per MIL-G-5514.

Rod
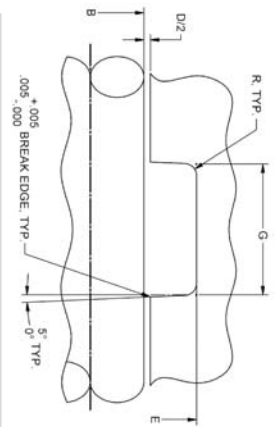
Piston
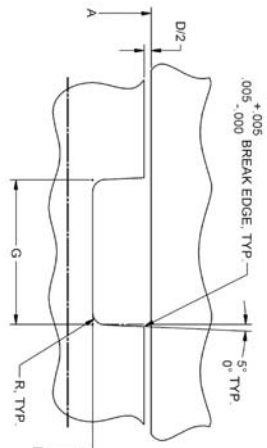
† GT engineering assigned dash sizes not included in AS4716.
Note: The dash sizes within the blue outlined boxes in the dimensional tables represents the optimum dynamic sealing systems.

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