

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 1078

DIMENSIONS OF ELASTOMERIC TOROIDAL SEALING RINGS
FOR AIRCRAFT
(INCH SERIES – CLASS 1 TOLERANCES)

1st EDITION

May 1969

COPYRIGHT RESERVED

The copyright of ISO Recommendations and ISO Standards belongs to ISO Member Bodies. Reproduction of these documents, in any country, may be authorized therefore only by the national standards organization of that country, being a member of ISO.

For each individual country the only valid standard is the national standard of that country.

Printed in Switzerland

Also issued in French and Russian. Copies to be obtained through the national standards organizations.

STANDARDSISO.COM : Click to view the full PDF of ISO/R 1078:1969

BRIEF HISTORY

The ISO Recommendation R 1078, *Dimensions of elastomeric toroidal sealing rings for aircraft (Inch series – Class 1 tolerances)*, was drawn up by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, the Secretariat of which is held by the British Standards Institution (BSI).

Work on this question led to the adoption of a Draft ISO Recommendation.

In March 1968, this Draft ISO Recommendation (No. 1489) was circulated to all the ISO Member Bodies for enquiry. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies :

Belgium
Brazil
Canada
Czechoslovakia
France
Israel

Italy
Netherlands
New Zealand
Portugal
Spain
Switzerland

Thailand
Turkey
U.A.R.
United Kingdom
Yugoslavia

One Member Body opposed the approval of the Draft :

U.S.S.R.

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council which decided, in May 1969, to accept it as an ISO RECOMMENDATION.

STANDARDSISO.COM : Click to view the full PDF of ISO/R 1078:1969

DIMENSIONS OF ELASTOMERIC TOROIDAL SEALING RINGS
FOR AIRCRAFT
(INCH SERIES – CLASS 1 TOLERANCES)

1. SCOPE

This ISO Recommendation states the dimensions and a method of designation for a range of elastomeric toroidal sealing rings in inch sizes with Class 1 tolerances for use in aircraft. It does not make reference to materials to be used for the rings. Rings with Class 2 tolerance are the subject of ISO Recommendation R . . . *, *Dimensions of elastomeric toroidal sealing rings for aircraft (Inch series – Class 2 tolerances)*.

2. DIMENSIONS

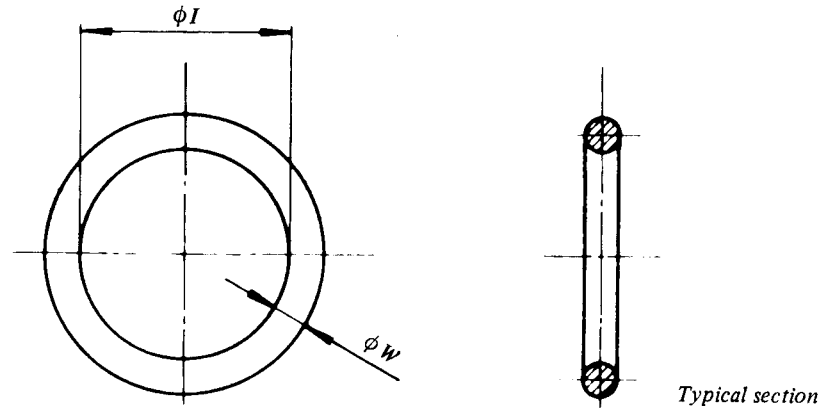
The dimensions of toroidal sealing rings for aircraft should comply with the Table on the following pages.

3. DESIGNATION

The sealing rings should be designated by the ring size numbers quoted in the Table on the following pages.

* At present Draft ISO Recommendation No. 1800.

TABLE – Dimensions of toroidal sealing rings for aircraft (inch series – Class I tolerances)



Ring Size	ϕW				ϕI			
	mm		in		mm		in	
	max.	min.	max.	min.	max.	min.	max.	min.
001	1.092	0.940	0.043	0.037	0.838	0.635	0.033	0.025
002	1.346	1.194	0.053	0.047	1.168	0.965	0.046	0.038
003	1.600	1.448	0.063	0.057	1.524	1.321	0.060	0.052
004	1.854	1.702	0.073	0.067	1.90	1.65	0.075	0.065
005					2.69	2.44	0.106	0.096
006					3.02	2.77	0.119	0.109
007					3.81	3.56	0.150	0.140
008					4.60	4.34	0.181	0.171
009					5.41	5.16	0.213	0.203
010					6.20	5.94	0.244	0.234
011					7.77	7.52	0.306	0.296
012					9.37	9.12	0.369	0.359
013					10.95	10.69	0.431	0.421
014					12.55	12.29	0.494	0.484
015					14.12	13.87	0.556	0.546
016					15.72	15.47	0.619	0.609
017					17.30	17.04	0.681	0.671
018					18.90	18.64	0.744	0.734
019					20.50	20.19	0.807	0.795
020					22.10	21.79	0.870	0.858
021					23.67	23.37	0.932	0.920
022					25.27	24.97	0.995	0.983
023					26.85	26.54	1.057	1.045
024					28.45	28.14	1.120	1.108
025					30.02	29.72	1.182	1.170
026					31.62	31.32	1.245	1.233
027					33.20	32.89	1.307	1.295
028					34.80	34.49	1.370	1.358
029					38.07	37.57	1.499	1.479
030					41.25	40.74	1.624	1.604
031					44.42	43.92	1.749	1.729
032					47.60	47.09	1.874	1.854
033					50.77	50.27	1.999	1.979
034					53.95	53.44	2.124	2.104
035					57.12	56.62	2.249	2.229
036					60.30	59.79	2.374	2.354
037					63.47	62.97	2.499	2.479
038					66.65	66.14	2.624	2.604
039					69.95	69.19	2.754	2.724
040					73.13	72.36	2.879	2.849
041					76.30	75.54	3.004	2.974
042	1.854	1.702	0.073	0.067	82.65	81.89	3.254	3.224

Dimensions of toroidal sealing rings for aircraft (inch series – Class I tolerances) (continued)

Ring Size	ϕW				ϕI			
	mm		in		mm		in	
	max.	min.	max.	min.	max.	min.	max.	min.
043	1.854	1.702	0.073	0.067	89.00	88.24	3.504	3.474
044					95.35	94.59	3.754	3.724
045					101.70	100.94	4.004	3.974
046					108.05	107.29	4.254	4.224
047					114.40	113.64	4.504	4.474
048					120.75	119.99	4.754	4.724
049					127.30	126.14	5.012	4.966
050	1.854	1.702	0.073	0.067	133.65	132.49	5.262	5.216
106	2.692	2.540	0.106	0.100	4.55	4.29	0.179	0.169
107					5.36	5.11	0.211	0.201
108					6.15	5.89	0.242	0.232
109					7.72	7.47	0.304	0.294
110					9.32	9.07	0.367	0.357
111					10.90	10.64	0.429	0.419
112					12.50	12.24	0.492	0.482
113					14.07	13.82	0.554	0.544
114					15.67	15.42	0.617	0.607
115					17.25	16.99	0.679	0.669
116					18.85	18.59	0.742	0.732
117					20.45	20.14	0.805	0.793
118					22.05	21.74	0.868	0.856
119					23.62	23.32	0.930	0.918
120					25.22	24.92	0.993	0.981
121					26.80	26.49	1.055	1.043
122					28.40	28.09	1.118	1.106
123					29.97	29.67	1.180	1.168
124					31.57	31.27	1.243	1.231
125					33.15	32.84	1.305	1.293
126					34.75	34.44	1.368	1.356
127					36.32	36.02	1.430	1.418
128					37.92	37.62	1.493	1.481
129					39.60	39.09	1.559	1.539
130					41.20	40.69	1.622	1.602
131					42.77	42.27	1.684	1.664
132					44.37	43.87	1.747	1.727
133					45.95	45.44	1.809	1.789
134					47.55	47.04	1.872	1.852
135					49.15	48.64	1.935	1.915
136					50.72	50.22	1.997	1.977
137					52.32	51.82	2.060	2.040
138					53.90	53.39	2.122	2.102
139					55.50	54.99	2.185	2.165
140					57.07	56.57	2.247	2.227
141					58.67	58.17	2.310	2.290
142					60.25	59.74	2.372	2.352
143					61.85	61.34	2.435	2.415
144					63.42	62.92	2.497	2.477
145					65.02	64.52	2.560	2.540
146					66.60	66.09	2.622	2.602
147					68.33	67.56	2.690	2.660
148					69.90	69.14	2.752	2.722
149	2.692	2.540	0.106	0.100	71.50	70.74	2.815	2.785

Dimensions of toroidal sealing rings for aircraft (inch series – Class I tolerances) (continued)

Ring Size	ϕW				ϕI			
	mm		in		mm		in	
	max.	min.	max.	min.	max.	min.	max.	min.
150	2.692	2.540	0.106	0.100	73.08	72.31	2.877	2.847
151					76.25	75.49	3.002	2.972
152					82.60	81.84	3.252	3.222
153					88.95	88.19	3.502	3.472
154					95.30	94.54	3.752	3.722
155					101.65	100.89	4.002	3.972
156					108.00	107.24	4.252	4.222
157					114.35	113.59	4.502	4.472
158					120.70	119.94	4.752	4.722
159					127.05	126.29	5.002	4.972
160					133.60	132.44	5.260	5.214
161					139.95	138.79	5.510	5.464
162					146.30	145.14	5.760	5.714
163					152.65	151.49	6.010	5.964
164					159.00	157.84	6.260	6.214
165					165.35	164.19	6.510	6.464
166					171.70	170.54	6.760	6.714
167					178.05	176.89	7.010	6.964
168					184.58	183.06	7.267	7.207
169					190.93	189.41	7.517	7.457
170					197.28	195.76	7.767	7.707
171					203.63	202.11	8.017	7.957
172					209.98	208.46	8.267	8.207
173					216.33	214.81	8.517	8.457
174					222.68	221.16	8.767	8.707
175					229.03	227.51	9.017	8.957
176					235.38	233.86	9.267	9.207
177					241.73	240.21	9.517	9.457
178	2.692	2.540	0.106	0.100	248.08	246.56	9.767	9.707
210	3.632	3.429	0.143	0.135	18.80	18.49	0.740	0.728
211					20.37	20.07	0.802	0.790
212					21.97	21.67	0.865	0.853
213					23.55	23.24	0.927	0.915
214					25.15	24.84	0.990	0.978
215					26.72	26.42	1.052	1.040
216					28.32	28.02	1.115	1.103
217					29.90	29.59	1.177	1.165
218					31.50	31.19	1.240	1.228
219					33.07	32.77	1.302	1.290
220					34.67	34.37	1.365	1.353
221					36.25	35.94	1.427	1.415
222					37.85	37.54	1.490	1.478
223					41.12	40.61	1.619	1.599
224					44.30	43.79	1.744	1.724
225					47.47	46.96	1.869	1.849
226					50.65	50.14	1.994	1.974
227					53.82	53.31	2.119	2.099
228					57.00	56.49	2.244	2.224
229					60.17	59.66	2.369	2.349
230					63.35	62.84	2.494	2.474
231					66.52	66.01	2.619	2.599
232	3.632	3.429	0.143	0.135	69.82	69.06	2.749	2.719

Dimensions of toroidal sealing rings for aircraft (inch series – Class I tolerances) (continued)

Ring Size	ϕW				ϕI			
	mm		in		mm		in	
	max.	min.	max.	min.	max.	min.	max.	min.
233	3.632	3.429	0.143	0.135	73.00	72.24	2.874	2.844
234					76.17	75.41	2.999	2.969
235					79.35	78.59	3.124	3.094
236					82.52	81.76	3.249	3.219
237					85.70	84.94	3.374	3.344
238					88.87	88.11	3.499	3.469
239					92.05	91.29	3.624	3.594
240					95.22	94.46	3.749	3.719
241					98.40	97.64	3.874	3.844
242					101.57	100.81	3.999	3.969
243					104.75	103.99	4.124	4.094
244					107.92	107.16	4.249	4.219
245					111.10	110.34	4.374	4.344
246					114.27	113.51	4.499	4.469
247					117.45	116.69	4.624	4.594
248					120.62	119.86	4.749	4.719
249					123.80	123.04	4.874	4.844
250					126.97	126.21	4.999	4.969
251					130.35	129.18	5.132	5.086
252					133.53	132.36	5.257	5.211
253					136.70	135.53	5.382	5.336
254					139.88	138.71	5.507	5.461
255					143.05	141.88	5.632	5.586
256					146.23	145.06	5.757	5.711
257					149.40	148.23	5.882	5.836
258					152.58	151.41	6.007	5.961
259					158.93	157.76	6.257	6.211
260					165.28	164.11	6.507	6.461
261					171.63	170.46	6.757	6.711
262					177.98	176.81	7.007	6.961
263					184.51	182.98	7.264	7.204
264					190.86	189.33	7.514	7.454
265					197.21	195.68	7.764	7.704
266					203.56	202.03	8.014	7.954
267					209.91	208.38	8.264	8.204
268					216.26	214.73	8.514	8.454
269					222.61	221.08	8.764	8.704
270					228.96	227.43	9.014	8.954
271					235.31	233.78	9.264	9.204
272					241.66	240.13	9.514	9.454
273					248.01	246.48	9.764	9.704
274					254.36	252.83	10.014	9.954
275					267.06	265.53	10.514	10.454
276					279.76	278.23	11.014	10.954
277					292.46	290.93	11.514	11.454
278					305.16	303.63	12.014	11.954
279					330.56	329.03	13.014	12.954
280					355.96	354.43	14.014	13.954
281					381.36	379.83	15.014	14.954
282					406.40	404.11	16.000	15.910
283					431.80	429.51	17.000	16.910
284	3.632	3.429	0.143	0.135	457.20	454.91	18.000	17.910