AEROSPACE STANDARD

AS568™	REV. F
Issued 1971-07 Revised 2020-09 Superseding AS568E	

Aerospace Size Standard for O-Rings

RATIONALE

This revision corrects typing errors in Table 1.

1. SCOPE

1.1 Purpose

This SAE Aerospace Standard (AS) specifies the inside diameters, cross-sections, tolerances, and size identification codes (dash numbers) for O-rings used in sealing applications and for straight thread tube fitting boss gaskets. The dimensions and tolerances specified in this standard are suitable for any elastomeric material provided that suitable tooling is available.

1.2 Application

1.2.1 This standard is intended to be used in the preparation of Company, Military, or other Standard Drawings for O-rings. Each dash number, which should be appended to an appropriate Drawing or Standard number, identifies one nominal size O-ring only.

1.2.2 No attempt is made in this AS to indicate which of the O-ring sizes listed under this system should be included in any particular Standard Drawing. Its only purpose is to standardize O-ring sizes and dimensional tolerances and the means of identifying them dimensionally.

2. REFERENCES

There are no referenced publications specified herein.

3. NOTES

3.1 Revision Indicator

A change bar (l) located in the left margin is for the convenience of the user in locating areas where technical revisions, not editorial changes, have been made to the previous issue of this document. An (R) symbol to the left of the document title indicates a complete revision of the document, including technical revisions. Change bars and (R) are not used in original publications, nor in documents that contain editorial changes only.

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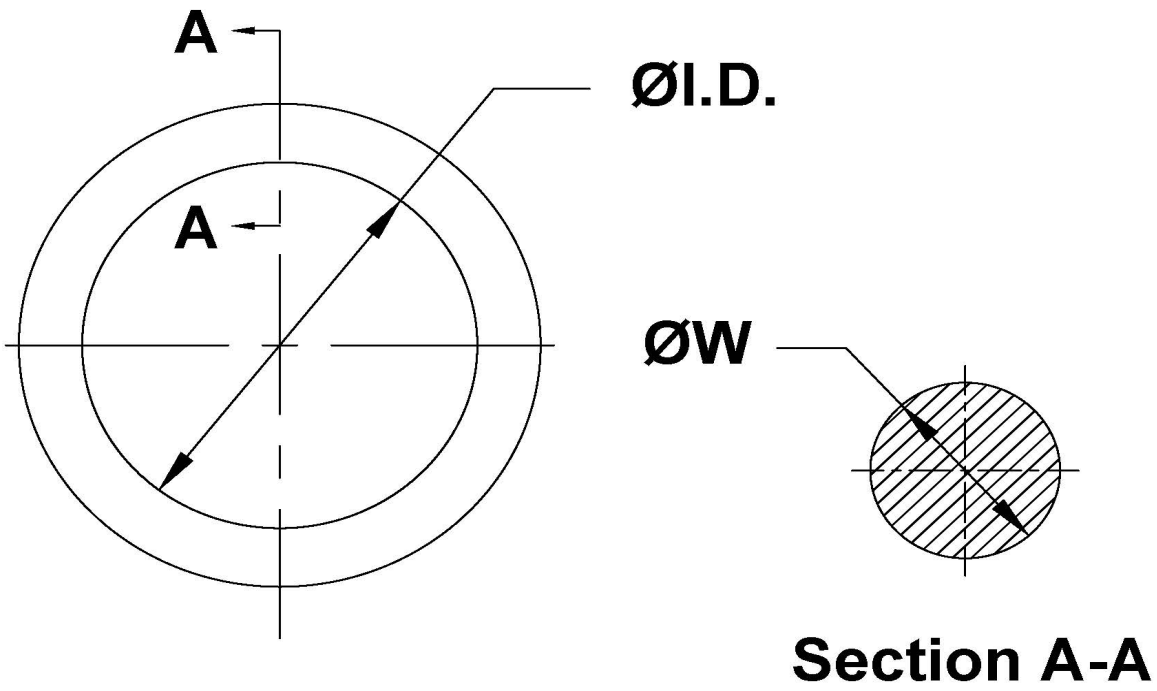
3.2 In Table 1, the dash numbers are divided into groups of 100, and within each group they are sequential and non-significant. Each hundred group, however, identifies the cross-section size of the O-rings within the group. For example, all .070 inch (1.78 mm) and smaller O-ring cross sections fall into the group of -001 through -099. The .103 inch (2.62 mm) cross section rings fall into the group of -100 through -199, and so on.

3.3 Table 2, using the 900 series dash numbers, lists all of the presently standardized straight thread tube fitting boss gaskets. This series has traditionally utilized the significant dash numbering system, wherein the dash number designates the tube size in sixteenths of an inch. This practice is also followed here, with the exception of the -901, which is intended for a .0938 inch (2.38 mm) nominal ØOD (outside diameter) tube, the .0625 inch (1.59 mm) ØOD tube not being in common aircraft use.

3.4 In the interest of standardization, it is requested that companies or agencies do not use the dash numbers in Table 1 to which sizes have not been assigned. Sizes not assigned are indicated by an asterisk (*). Anyone feeling that any special size not now shown is widely enough used to justify standardization should direct such a request to SAE A-6 Committee for coordination.

3.5 Figure 1 illustrates that all diameters of the cross-section should be equal.



NOTE: Dimensions and tolerancing per ASME Y14.5.

Figure 1 - O-Ring dimensions: width (ØW) and inside diameter (ØID)

Table 1 - Aerospace size standards for O-rings

Dash Number	ØID Inches min	ØID Inches max	ØID mm min	ØID mm max	ØW Inches min	ØW Inches max	ØW mm min	ØW mm max	Volume (Ref) in^3	Volume (Ref) cm^3
-001	.025	.033	0.64	0.84	.037	.043	0.94	1.09	.0003	0.005
-002	.038	.046	0.97	1.17	.047	.053	1.19	1.35	.0006	0.010
-003	.052	.060	1.32	1.52	.057	.063	1.45	1.60	.0010	0.016
-004	.065	.075	1.65	1.91	.067	.073	1.70	1.85	.0017	0.028
-005	.096	.106	2.44	2.69	.067	.073	1.70	1.85	.0021	0.034
-006	.109	.119	2.77	3.02	.067	.073	1.70	1.85	.0022	0.036
-007	.140	.150	3.56	3.81	.067	.073	1.70	1.85	.0026	0.043
-008	.171	.181	4.34	4.60	.067	.073	1.70	1.85	.0030	0.049
-009	.203	.213	5.16	5.41	.067	.073	1.70	1.85	.0034	0.056
-010	.234	.244	5.94	6.20	.067	.073	1.70	1.85	.0037	0.061
-011	.296	.306	7.52	7.77	.067	.073	1.70	1.85	.0045	0.074
-012	.359	.369	9.12	9.37	.067	.073	1.70	1.85	.0052	0.085
-013	.421	.431	10.69	10.95	.067	.073	1.70	1.85	.0060	0.098
-014	.484	.494	12.29	12.55	.067	.073	1.70	1.85	.0068	0.111
-015	.544	.558	13.82	14.17	.067	.073	1.70	1.85	.0075	0.123
-016	.605	.623	15.37	15.82	.067	.073	1.70	1.85	.0083	0.136
-017	.667	.685	16.94	17.40	.067	.073	1.70	1.85	.0090	0.147
-018	.730	.748	18.54	19.00	.067	.073	1.70	1.85	.0098	0.161
-019	.792	.810	20.12	20.57	.067	.073	1.70	1.85	.0105	0.172
-020	.855	.873	21.72	22.17	.067	.073	1.70	1.85	.0113	0.185
-021	.917	.935	23.29	23.75	.067	.073	1.70	1.85	.0120	0.197
-022	.979	.999	24.87	25.37	.067	.073	1.70	1.85	.0128	0.210
-023	1.041	1.061	26.44	26.95	.067	.073	1.70	1.85	.0136	0.223
-024	1.104	1.124	28.04	28.55	.067	.073	1.70	1.85	.0143	0.234
-025	1.165	1.187	29.59	30.15	.067	.073	1.70	1.85	.0151	0.247
-026	1.228	1.250	31.19	31.75	.067	.073	1.70	1.85	.0158	0.259
-027	1.290	1.312	32.77	33.32	.067	.073	1.70	1.85	.0166	0.272
-028	1.351	1.377	34.32	34.98	.067	.073	1.70	1.85	.0173	0.283
-029	1.476	1.502	37.49	38.15	.067	.073	1.70	1.85	.0188	0.308
-030	1.601	1.627	40.67	41.33	.067	.073	1.70	1.85	.0204	0.334
-031	1.724	1.754	43.79	44.55	.067	.073	1.70	1.85	.0219	0.359
-032	1.849	1.879	46.96	47.73	.067	.073	1.70	1.85	.0234	0.383
-033	1.971	2.007	50.06	50.98	.067	.073	1.70	1.85	.0249	0.408
-034	2.096	2.132	53.24	54.15	.067	.073	1.70	1.85	.0264	0.433
-035	2.221	2.257	56.41	57.33	.067	.073	1.70	1.85	.0279	0.457