METRIC AEROSPACE STANDARD

MA2010™	REV. A

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Superseding MA2010

Packing, Preformed - O-Ring Seal
Standard Sizes and Size Codes, Metric

FSC 5330

RATIONALE

This document has been determined to contain basic and stable technology which is not dynamic in nature.

STABILIZED NOTICE

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1. SCOPE AND FIELD OF APPLICATION:

1.1 This standard provides the standard sizes and size identification codes for preformed packings, elastomer o-ring seals, for use in metric aerospace fluid systems.

1.2 The aerospace o-ring sizes and size identification codes in this standard are in agreement with ISO 3601/1, Series A.

2. REFERENCE:

2.1 Applicable Document:

ISO 3601/1 Fluid systems - Sealing devices - O-rings - Part 1: Inside diameters, cross-sections, tolerances and size identification code

3. REQUIREMENTS:

3.1 Configuration:

The shape of the o-ring seal is toroidal and is defined by the inside diameter, d_1, and the cross-section diameter, d_2, as shown in Figure 1.

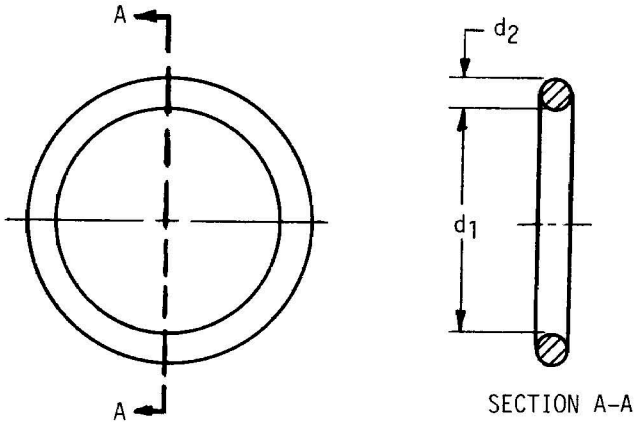


FIGURE 1. O-Ring Seal Configuration

3.2 Standard Sizes:

The standard o-ring sizes, Series A, combination of inside diameters, cross-section diameters, and their tolerances are specified in Table I.

3.3 Size Identification Code:

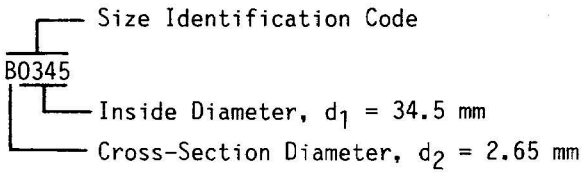
Each standard o-ring size is designated by a five-character alphanumeric size identification code as specified in Table I.

3.3.1 The letter symbol for the first element of the size identification code represents the cross-section nominal diameter as follows:

Letter Symbol	Cross-Section Nominal Dia d_2, mm
A	1.80
B	2.65
C	3.55
D	5.30
E	7.00

3.3.2 Numeric Element: The four digit element (following the letter symbol) represents the inside diameter, d_1, expressed in tenths of a millimetre.

3.3.3 Example Size Identification Code:



NOTE: The decimal sign for d_1 is placed after the third digit of the four digit element for decoding the dimensional value.

3.3.4 The size identification codes listed in Table I are the standard o-ring sizes for selection. For standardization purposes, unassigned codes should be avoided.

TABLE I. Aerospace Standard O-Ring Sizes & Size Identification Codes

Dimensions in millimetres

Inside Diameter		Cross-Section Diameter, d_2				
		1.80 ±0.08	2.65 ±0.09	3.55 ±0.10	5.30 ±0.13	7.00 ±0.15
d_1	tol ±	Size Identification Codes				
1.80	0.13	A0018				
2.00	0.13	A0020				
2.24	0.13	A0022				
2.50	0.13	A0025				
2.80	0.13	A0028				
3.15	0.13	A0031				
3.55	0.13	A0035				
3.75	0.13	A0037				
4.00	0.13	A0040				
4.50	0.13	A0045	B0045			
4.87	0.13	A0048				
5.00	0.13	A0050				
5.15	0.13	A0051				
5.30	0.13	A0053	B0053			
5.60	0.13	A0056				
6.00	0.13	A0060	B0060			
6.30	0.13	A0063				
6.70	0.13	A0067				
6.90	0.14	A0069	B0069			
7.10	0.14	A0071				
7.50	0.14	A0075				
8.00	0.14	A0080	B0080			
8.50	0.15	A0085				
8.75	0.15	A0087				
9.00	0.15	A0090	B0090			
9.50	0.15	A0095	B0095			
10.00	0.15	A0100	B0100			
10.60	0.16	A0106	B0106			
11.20	0.16	A0112	B0112			
11.80	0.17	A0118	B0118			
12.50	0.17	A0125	B0125			
13.20	0.17	A0132	B0132			
14.00	0.18	A0140	B0140	C0140		
15.00	0.18	A0150	B0150	C0150		
16.00	0.19	A0160	B0160	C0160		
17.00	0.20	A0170	B0170	C0170		
18.00	0.20	A0180	B0180	C0180		
19.00	0.21	A0190	B0190	C0190		
20.00	0.21	A0200	B0200	C0200		
21.20	0.22	A0212	B0212	C0212		
22.40	0.23	A0224	B0224	C0224		
23.60	0.24	A0236	B0236	C0236		
25.00	0.24	A0250	B0250	C0250		
25.80	0.25	A0258	B0258	C0258		
26.50	0.25	A0265	B0265	C0265		