BS EN 3382:2012

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Aerospace series — Rings retaining, internal, axial mounting, steel, phosphated

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National foreword

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The UK participation in its preparation was entrusted to Technical Committee ACE/12, Aerospace fasteners and fastening systems.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Published by BSI Standards Limited 2012

ISBN 978 0 580 75711 2

ICS 49.030.50

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This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 March 2012.

Amendments issued since publication

Date	Text affected

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 3382

March 2012

ICS 49.030.50

English Version

Aerospace series - Rings retaining, internal, axial mounting, steel, phosphated

Série aérospatiale - Anneaux d'arrêt, à montage axial, type intérieur, en acier, phosphatés

Luft- und Raumfahrt - Sicherungsringe, axial in Bohrungen montierbar, aus Stahl, phosphatiert

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EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: Avenue Marnix 17, B-1000 Brussels

Ref. No. EN 3382:2012: E

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Foreword

This document (EN 3382:2012) has been prepared by the Aerospace and Defence Industries Association of Europe - Standardization (ASD-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this Standard has received the approval of the National Associations and the Official Services of the member countries of ASD, prior to its presentation to CEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2012, and conflicting national standards shall be withdrawn at the latest by September 2012.

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1 Scope and field of application

This standard defines the characteristics of axial mounting internal retaining rings, in steel, phosphated, for aerospace applications.

The phosphating restricts the use at temperatures not exceeding 200 °C.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 2424, *Aerospace series — Marking of aerospace products*

EN 3380, *Aerospace series — Rings retaining — Technical specification*

EN 3425, *Aerospace series — Groove dimensions for axial mounting internal type retaining rings*

3 Required characteristics

3.1 Configuration — Dimensions — Masses

See figure 1 and table.

3.2 Materials

Spring steel:

— 480–530 HV (Diameter codes 008 to 038)

— 440–510 HV (Diameter codes 040 to 165)

3.3 Surface treatment

Phosphate to EN 2793, class A

Before storing, the ring shall be protected by grease or oil.

NOTE Detail of form not stated are left to the manufacturer’s option.

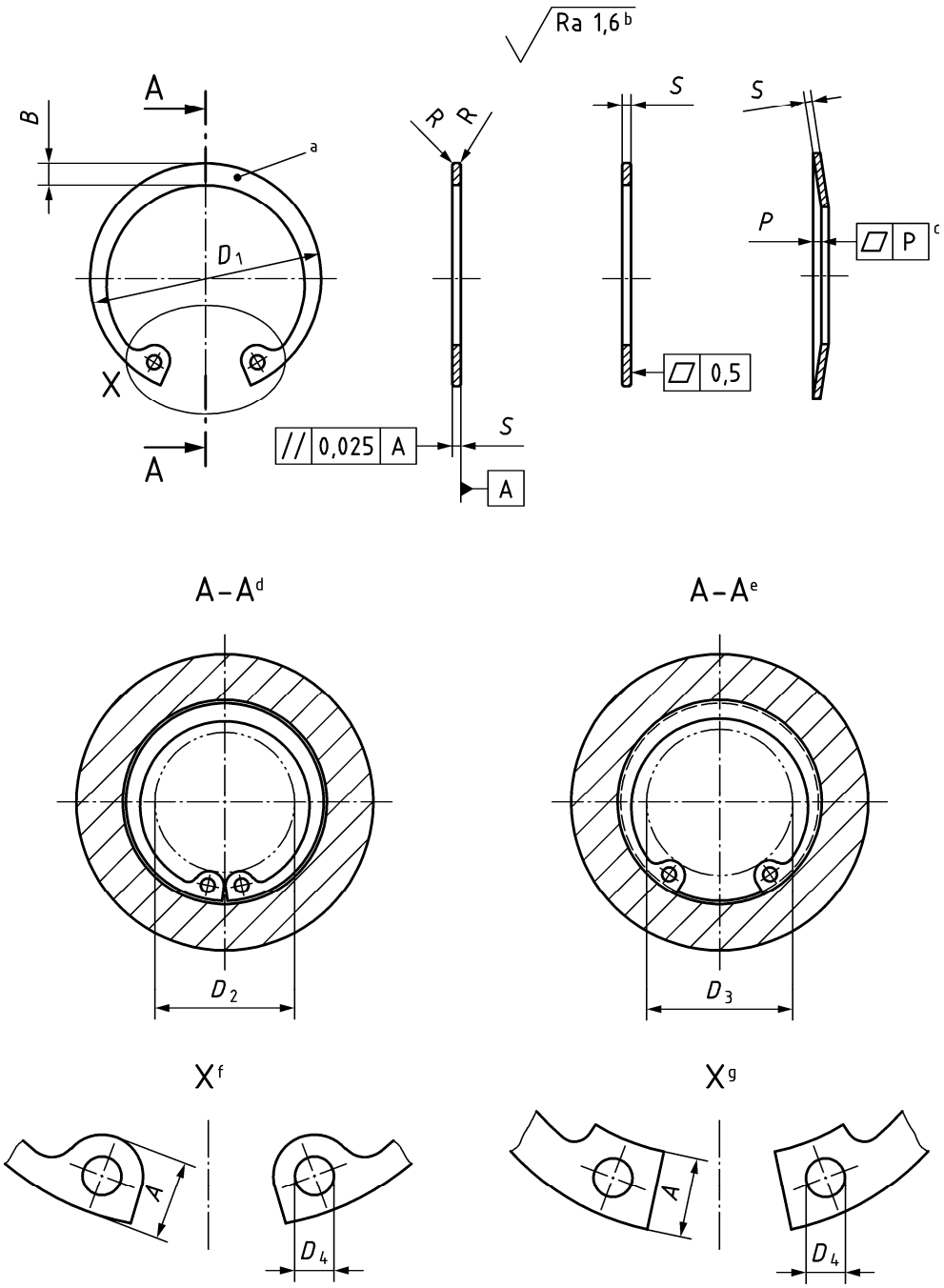


Figure 1

Key:

a Free
b Apply prior to phosphating
c Table
d At mounting
e Installed
f Diameter codes 008 to 048
g Diameter codes 025 to 165

Table 1

Dimensions in millimetres

Diameter code [b]	A max.	B [c] ≈	D_1 nom.	D_1 Tol.	D_2 max.	D_3 max.	D_4 min.	P	S h11	R max.	**Mass** [d] kg/1 000 pieces
008	2,4	1,1	8,7	+0,36 −0,16	2,8	3,6	1	0,1	0,8	0,08	0,100
009	2,5	1,3	9,8		3,1	4,4					0,130
010	3,2	1,4	10,8		3,6	4	1,2		1	0,1	0,260
011	3,3	1,5	11,8		3,9	4,8					0,310
012	3,4	1,7	13		4,7	5,7	1,5				0,370
013	3,6	1,8	14,1		5,3	6,4					0,420
014	3,7	1,9	15,1		6	7,2	1,7				0,520
015	3,7	2	16,2		7	8,3					0,560
016	3,8	2	17,3		7,7	9,2					0,600
017	3,9	2,1	18,3	+0,42 −0,21	8,4	10					0,650
018	4,1	2,2	19,5		8,9	10,8	2				0,740
019	4,1	2,2	20,5		9,8	11,8					0,830
020	4,2	2,3	21,5		10,6	12,6					0,900
021	4,2	2,4	22,5		11,6	13,6					1,000
022	4,2	2,5	23,5		12,6	14,6					1,100
023	4,2	2,5	24,6		13,6	15,7		0,15	1,2	0,12	1,340
024	4,4	2,6	25,9		14,2	16,4					1,420
025	4,5	2,7	26,9		15	17,2					1,500
026	4,7	2,8	27,9		15,6	17,8					1,600
028	4,8	2,9	30,1	+0,5 −0,25	17,4	19,8					1,800
030	4,8	3	32,1		19,4	21,8					2,060
031	5,2	3,1	33,4		19,6	22,3	2,5				2,130
032	5,4	3,2	34,4		20,2	22,9					2,210
034	5,4	3,3	36,5		22,2	24,9			1,5	0,15	3,200
035	5,4	3,4	37,8		23,2	26,2					3,540
036	5,4	3,5	38,8		24,2	27,2					3,700
037	5,5	3,6	39,8		25	28					3,740
038	5,5	3,7	40,8		26	29					3,900
040	5,8	3,9	43,5	+0,78 −0,39	27,4	30,9		0,2	1,75	0,17	4,700
042	5,9	4,1	45,5		29,2	32,7					5,400
045	6,2	4,3	48,5		31,6	35,1					6,000
047	6,4	4,4	50,5	+0,92 −0,46	33,2	36,7					6,100
048	6,4	4,5	51,5		34,6	37,7					6,700
050	6,5	4,6	54,2		36	40			2	0,2	7,300
052	6,7	4,7	56,2		37,6	41,6					8,200
055	6,8	5	59,2		40,4	44,4					8,300
056	6,8	5,1	60,2		41,4	45,4					8,800
058	6,9	5,2	62,2		43,2	47,2					10,500
060	7,3	5,4	64,2		44,4	48,4					11,100
062	7,3	5,5	66,2		46,4	50,4					11,200
063	7,3	5,6	67,2		47,4	51,4					12,400
065	7,6	5,8	69,2		48,8	52,8	3		2,5	0,25	14,300
068	7,8	6,1	72,5		51,4	55,4					16,000
070	7,8	6,2	74,5		53,4	57,4					16,500
072	7,8	6,4	76,5		55,4	59,4					18,100
075	7,8	6,6	79,5		58,4	62,4					18,800
077	7,9	6,7	81,5		60	64,2					19,000

[a] See page 7.
[b] See page 7.
[c] See page 7.
[d] See page 7.

Table 1 *(concluded)*

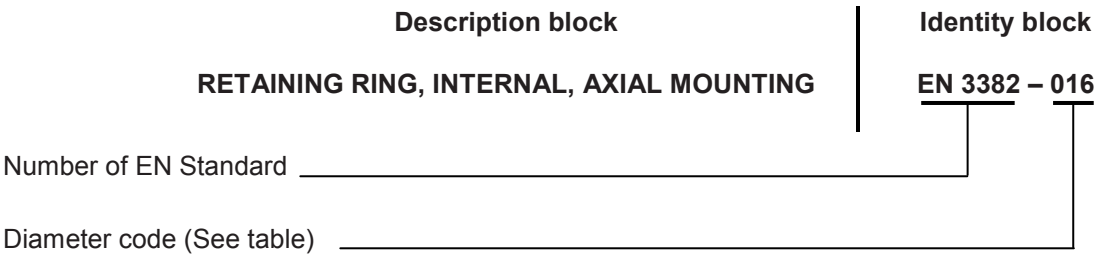
Dimensions in millimetres

Diameter code [b]	A max.	B [c] ≈	D_1 nom.	D_1 Tol.	D_2 max.	D_3 max.	D_4 min.	P	S h11	R max.	**Mass** [d] kg/1 000 pieces
078	8,5	6,8	82,5		60,2	64					20,400
080	8,5	7	85,5		62	66,5		0,20			22,000
081	8,5	7	86,5		63	67,5	3		2,5	0,25	23,000
082	8,5	7	87,5		64	68,5					24,000
083	8,5	7	88,5		65	69,5					25,000
085	8,6	7,2	90,5		66,8	71,3					26,300
087	8,6	7,3	92,5		68,8	73,3					29,000
088	8,6	7,4	93,5		69,8	74,3					31,000
090	8,6	7,6	95,5		71,8	76,3					33,000
092	8,7	7,8	97,5	+1,08	73,6	78,1			3	0,3	35,000
095	8,8	8,1	100,5	−0,54	76,4	80,9					37,000
097	8,8	8,2	102,5		78,4	82,9					39,000
098	9	8,3	103,5		79	83,5					41,000
100	9	8,4	105,5		81	85,5					42,000
102	9,2	8,5	108		82,6	87,6	3,5				55,000
105	9,2	8,7	112		85,6	90,6					56,000
107	9,5	8,8	114		87	92					58,500
108	9,5	8,9	115		88	93					60,000
110	10,4	9	117		88,2	93,2					64,500
112	10,5	9,1	119		90	95					72,000
115	10,5	9,3	122		93	98					74,500
117	10,6	9,5	124		94,8	99,8					75,000
118	10,7	9,6	125		95	100,6					75,500
120	11	9,7	127		97	102					77,000
122	11	9,8	129		99	104		0,25			78,000
125	11	10	132		102	107					79,000
127	11	10,1	134		104	109					80,500
128	11	10,2	135		105	110					81,000
130	11	10,2	137		107	112					82,000
132	11	10,3	139		109	114			4	0,4	83,000
135	11,2	10,5	142		112	116,6					84,000
137	11,2	10,5	144		114	118,6					85,500
138	11,2	10,6	145	+1,26	115	119,6					86,000
140	11,2	10,7	147	−0,63	117	121,6					87,500
142	11,3	10,8	149		119	123,4	4				89,000
145	11,4	10,9	152		122	126,2					93,000
147	11,6	11	154		123	127,8					96,000
148	11,8	11,1	155		124	128,4					100,000
150	12	11,2	158		125	131					105,000
152	12	11,3	161		127	133					106,000
155	12	11,4	164		130	136					107,000
157	12	11,5	166		132	138					108,000
158	12,3	11,5	167		132,4	138,4					109,000
160	13	11,6	169		133	139					110,000
162	13	11,7	171,5		135	141					118,000
165	13	11,8	174,5		138	144					125,000

[a] Values apply after phosphating.
[b] Corresponds to the nominal diameter (expressed in millimetres) of the bore in which the ring shall be mounted (see EN 3425).
[c] Shall not exceed □A" max.
[d] Approximate values, calculated on the basis of 7,85 kg/dm^3, given for information purpose only.

4 Designation

EXAMPLE



NOTE If necessary, the originator code I 9005 may be introduced between the description block and the identity block.

5 Marking

EN 2424, style G.

6 Technical specification

EN 3380

7 Mounting

EN 3425

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