INTERNATIONAL STANDARD

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Aerospace — Retainers, spring, sheet metal, for self-locking barrel nuts — Dimensions

Aéronautique et espace — Ressorts de retenue en tôle pour écrous à portée cylindrique, à freinage interne — Dimensions

Reference number
ISO 12280:1999(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 12280 was prepared by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 4, *Aerospace fastener systems*.

International Organization for Standardization
Case postale 56 • CH-1211 Genève 20 • Switzerland
Internet iso@iso.ch

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Aerospace — Retainers, spring, sheet metal, for self-locking barrel nuts — Dimensions

1 Scope

This International Standard specifies the dimensions of sheet metal spring retainers intended for use with self-locking barrel nuts, ISO 12278.

This International Standard is only applicable for the compilation of aerospace product standards.

2 Normative reference

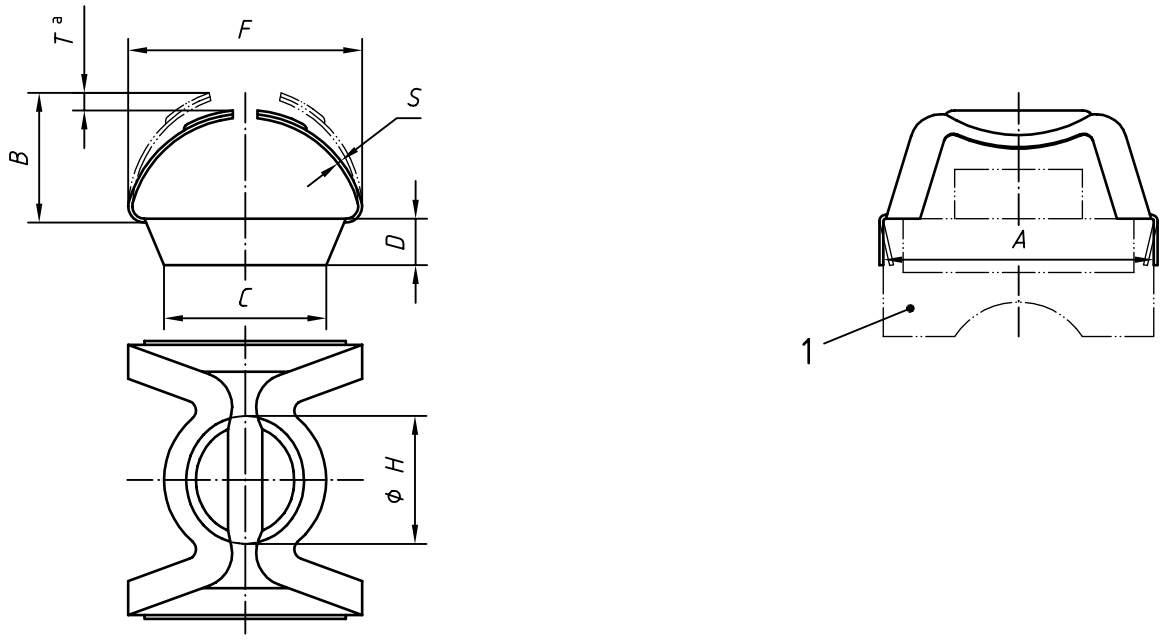
The following normative document contains provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the normative document indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 12278:1999, *Aerospace — Nuts, barrel, self-locking, floating, self-aligning, with MJ threads, classifications: 900 MPa (at ambient temperature)/235 °C, 1 100 MPa (at ambient temperature)/235 °C, 1 250 MPa (at ambient temperature)/235 °C and 1 550 MPa (at ambient temperature)/235 °C — Dimensions.*

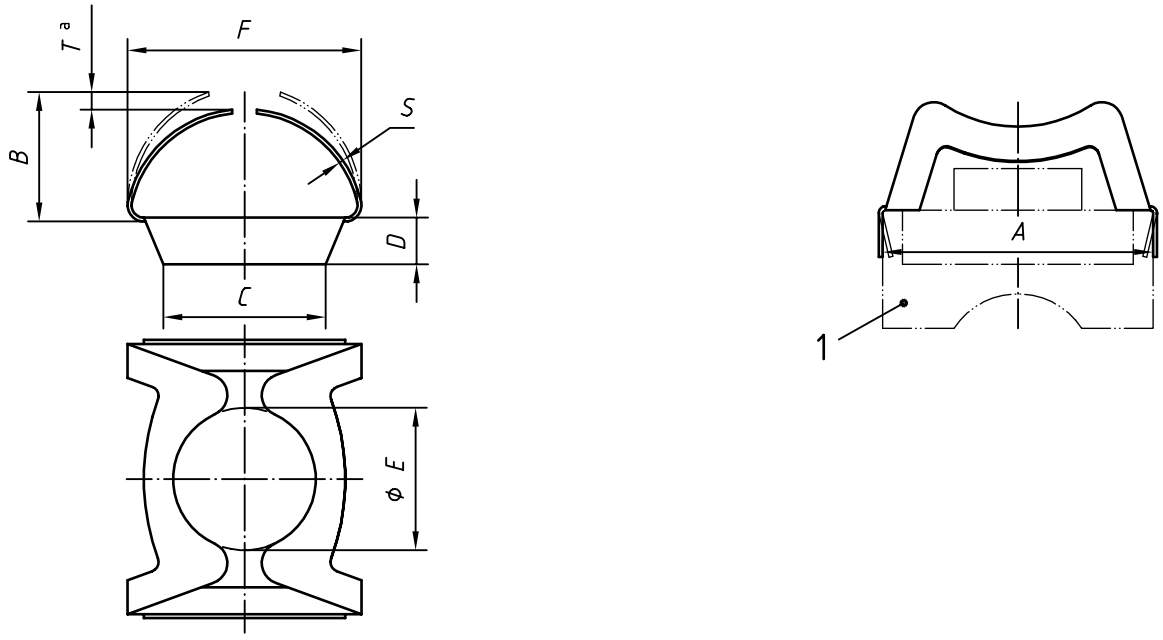
3 Configuration and dimensions

See Figure 1 and Table 1. Dimensions and tolerances are expressed in millimetres. They apply after any surface coating(s).

To burr



Index type — Code A [b]



Clearance type — Code B [c d]

Key

1 Barrel nut outline, in accordance with ISO 12278 (shown for reference purposes).

NOTE Details of form not stated are at the manufacturer's option.

a Retainers shall be supplied in the open position as shown by a thin dashed double-dotted line.

b Code "A" index type retainers are used in blind areas where the index feature is located in the hole to prevent rotation or vertical movement.

c Code "B" clearance type retainers are used where the nut is accessible or where the bolt hole in the far side of the barrel cavity is undesirable.

d Code "B" type nut retainers and nut assembly shall require a push-out force in accordance with the values given in Table 1 when installed in the installation hole specified in ISO 12278.

Figure 1

Table 1

Diameter code	*A* $^{+0,4}_{0}$	*B* max.	*C* ± 0,8	*D* ± 0,8	*E* min.	*F* max.	*H* $^{+0,4}_{0}$	*S* min.	*T* min.	**Push out force** N min.
060	14	5,8	8	3	7	12	6,3	0,18	1	9
070	15	5,6			8	13	7,3	0,2	1,1	
080	17	6,3	9		9	14	8,3	0,22	1,2	
100	20	7,4	11		11	17	10,3		1,4	
120	24	9,4	13	5	13	21	12,3	0,3	1,6	
140	28	11,4	16	6	15	25	14,3		1,9	
160	32	13,6	19		17	29	16,3		2,2	
180	36	14,7	22		19	31,5	18,3		2,5	
200	40	16,7	25		21	35,5	20,3		2,7	
220	44	18,8	28		23	39,5	22,3	0,38	3	
240	48	19,9	32		25	42,5	24,3		3,3	
270	54	23	36	8	28	48,5	27,3		3,7	
300	60	26,1	42		31	54,5	30,3		4,1	
330	66	29,2	48		34	60,5	33,3		4,5	
360	72	32,3	54		37	66,5	36,3		4,9	
390	78	35,3	60		40	71,5	39,3		5,3	

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Price based on 3 pages