

INTERNATIONAL  
STANDARD

**ISO**  
**9634**

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**Aerospace — Fluid systems — Dimensions  
of plastic protective caps and plugs**

*Aéronautique et espace — Systèmes de fluides — Dimensions des  
bouchons et capuchons de protection en matière plastique*



Reference number  
ISO 9634:1994(E)

## Foreword

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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 9634 was prepared by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 10, *Aerospace fluid systems and components*.

Annex A of this International Standard is for information only.

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# Aerospace — Fluid systems — Dimensions of plastic protective caps and plugs

## 1 Scope

This International Standard defines the configuration and specifies the dimensions of various types of plastic caps and plugs used for the protection, during transit and storage, of openings in aerospace fluid system components (smooth or threaded ports in accessories, ends of pipes or hoses, pipe fittings, and port connections). The caps and plugs provide protection for threads and sealing surfaces and prevent the ingress of foreign matter (dust, etc.) into the openings.

## 2 Definitions

For the purposes of this International Standard, the following definitions apply.

**2.1 protective plug:** Closure with internal or external thread.

**2.2 protective cap:** Non-threaded closure.

## 3 Threads

The diameter/pitch combinations of the threads for protective caps and plugs specified in this International Standard are those given in ISO 5855-3[1] for the plugs shown in clauses 4 and 5 and those given in ISO 7320[2] for the plugs shown in clause 7. The tolerances on the threads should be specified in the product standard such that they are compatible with the manufacturing process to be used and such that they will enable the items to be screwed fully home by hand.

## 4 Protective plugs, with internal threads, for cone fittings

The configuration and dimensions of plugs for 24° and 60° cone fittings shall be in accordance with figure 1 and table 1.

## 5 Protective plugs, with external threads, for cone fittings

The configuration and the dimensions of protective plugs, with external threads, for 24° and 60° cone fittings shall be in accordance with figure 2 and table 2.

## 6 Protective plugs, with external threads, for port connection

The configuration and the dimensions of protective plugs, with external threads, for port connection shall be in accordance with figure 3 and table 3.

## 7 Protective caps for non-threaded holes of accessories and hoses (internal protection) and for tube ends (internal and external protection)

The configuration and the dimensions of protective caps for non-threaded holes of accessories and hoses (internal protection) and for tube ends (internal and external protection) shall be in accordance with figure 4 and table 4.

Dimensions in millimetres

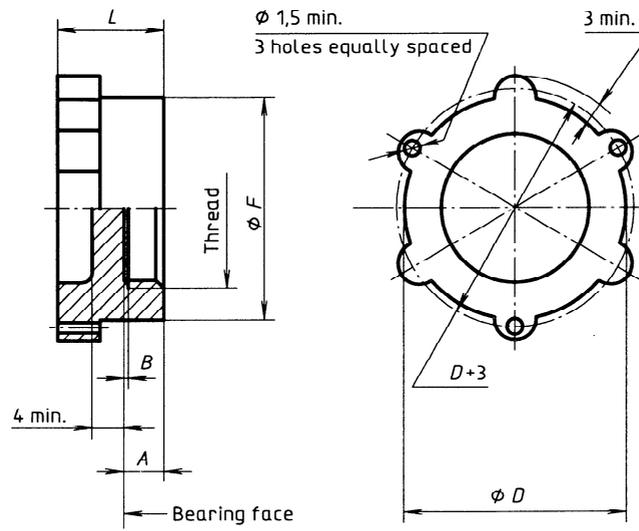


Figure 1 — Configuration

Table 1 — Dimensions

Dimensions in millimetres

Thread	A		B max.	D min.	F min.	L max.
	+1 0	for cone fittings of 60°      24°				
MJ10 × 1	5	7	0,5	18	18	15
MJ12 × 1,25	—	7,5	0,7	20	20	15,5
MJ14 × 1,5	7,5	9	0,8	22	22	17
MJ16 × 1,5				24	24	
MJ18 × 1,5				28	28	
MJ20 × 1,5				30	30	
MJ22 × 1,5				32	32	
MJ24 × 1,5				34	34	
MJ27 × 1,5	—	10	1,1	37	37	20
MJ30 × 1,5				42	42	
MJ33 × 1,5				45	45	
MJ36 × 1,5				48	48	
MJ39 × 1,5				51	51	
MJ42 × 2				54	54	
MJ48 × 2	60	60				
MJ50 × 2	62	62				

Dimensions in millimetres

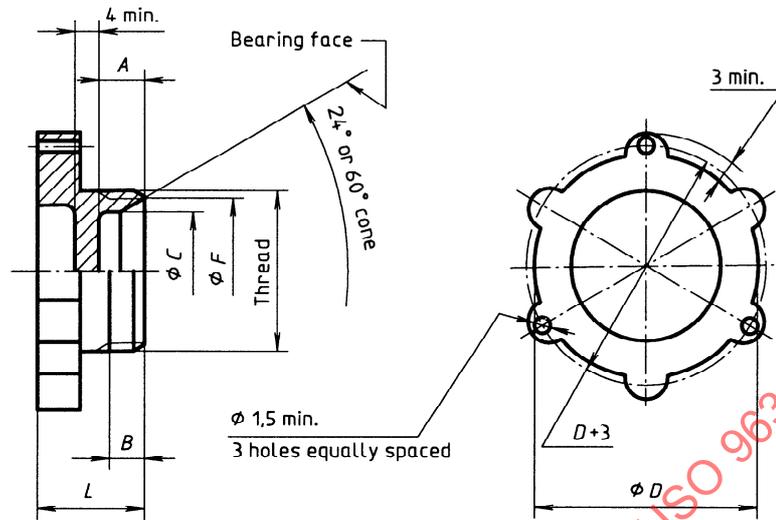


Figure 2 — Configuration

Table 2 — Dimensions

Dimensions in millimetres

Thread	A $+1_0$	B min. for cone fittings of		C min.	D min.	F $0_{-0,3}$ for cone fittings of		L max.		
		60°	24°			60°	24°			
MJ10 × 1	6,8	4,2	6	5,5	18	7,5	7,2	15		
MJ12 × 1,25	7,3	6,1	6,5	6,5	20	9,1	8,2	15,5		
MJ14 × 1,5			7	8,5	22	10,7	10,2	16		
MJ16 × 1,5			8	8	10,5	24	12,7	12,2	17	
MJ18 × 1,5					12,5	26	14,7	14,6		
MJ20 × 1,5					14,5	28	16,7	16,6		
MJ22 × 1,5					16,5	30	18,7	18,6		
MJ24 × 1,5			8,3	6,1	8	18,5	32	20,7	—	17
MJ27 × 1,5						20,5	35	23,3	22,6	
MJ30 × 1,5			8,8	—	9	23,5	38	25,9	—	20
MJ33 × 1,5						25,5	41	28,5	27,7	
MJ36 × 1,5	28,5	44				31,5	—			
MJ39 × 1,5	31,5	47				34,5	—			
MJ42 × 2	9,5	9,5			32,5	50	37,9	34,8		
MJ48 × 2					35,5	56	43,1	—		
MJ50 × 2					40,5	58	—	42,8		

Dimensions in millimetres

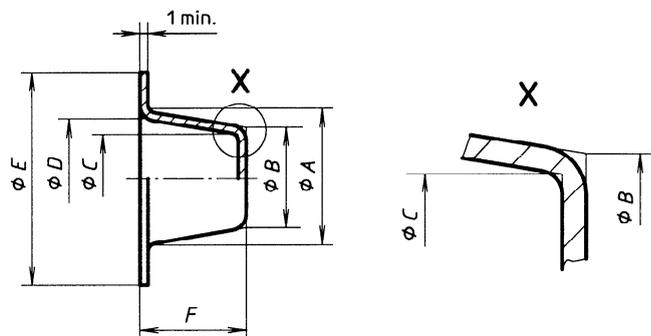


Figure 4 — Configuration

Table 4 — Dimensions

Dimensions in millimetres

Size code	$A$ $\begin{matrix} 0 \\ -0,5 \end{matrix}$	$B$ min.	$C$ min.	$D$ max.	$E$ <sup>1)</sup> min.	$F$ max.
4	4	1	—	—	16	10
6	6	2	—	—	18	
8	8	3	1	6	23	
10	10	4	2	8	25	
12	12	6	4	10	27	
14	14	8	6	12	29	14
16	16	10	8	14	31	
18	18	12	10	16	33	
20	20	14	12	18	35	
22	22	16	14	20	37	20
25	25	19	17	23	40	
28	28	22	20	26	43	
32	32	26	24	30	47	
36	36	30	28	34	51	25
40	40	34	32	38	55	
45	45	39	37	43	60	
50	50	44	42	48	65	

1) Elliptical shape is permitted within the limits  $E_{\min} + 5$  mm.

## **Annex A**

(informative)

### **Bibliography**

[1] ISO 5855-3:1988, *Aerospace — MJ threads — Part 3: Limit dimensions for fittings for fluid systems.*

[2] ISO 7320:1992, *Aerospace — Couplings, threaded and sealed, for fluid systems — Dimensions.*

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