

INTERNATIONAL  
STANDARD

**ISO**  
**3174**

Second edition  
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**Aircraft — Connections for checking  
hydraulic systems by ground  
appliances — Threaded type**

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Reference number  
ISO 3174:1994(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 3174 was prepared by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 10, *Aerospace fluid systems and components*.

This second edition cancels and replaces the first edition (ISO 3174:1981), of which it constitutes a technical revision.

Annex A of this International Standard is for information only.

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# Aircraft — Connections for checking hydraulic systems by ground appliances — Threaded type

## 1 Scope

This International Standard specifies the requirements for connections installed in aircraft hydraulic system pressure and suction lines, intended for checking the systems by means of ground appliances.

## 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 3323:1987, *Aircraft — Hydraulic components — Marking to indicate fluid for which component is approved.*

MIL-STD-810, *Environmental Test Methods and Engineering Guidelines.*

## 3 Basic connection elements

The basic elements and dimensions of the connections shall be in accordance with figure 1 and table 1.

## 4 Connecting thread

**4.1** The profile, basic elements and dimensions of the three-start thread shall be in accordance with figure 2 and table 1.

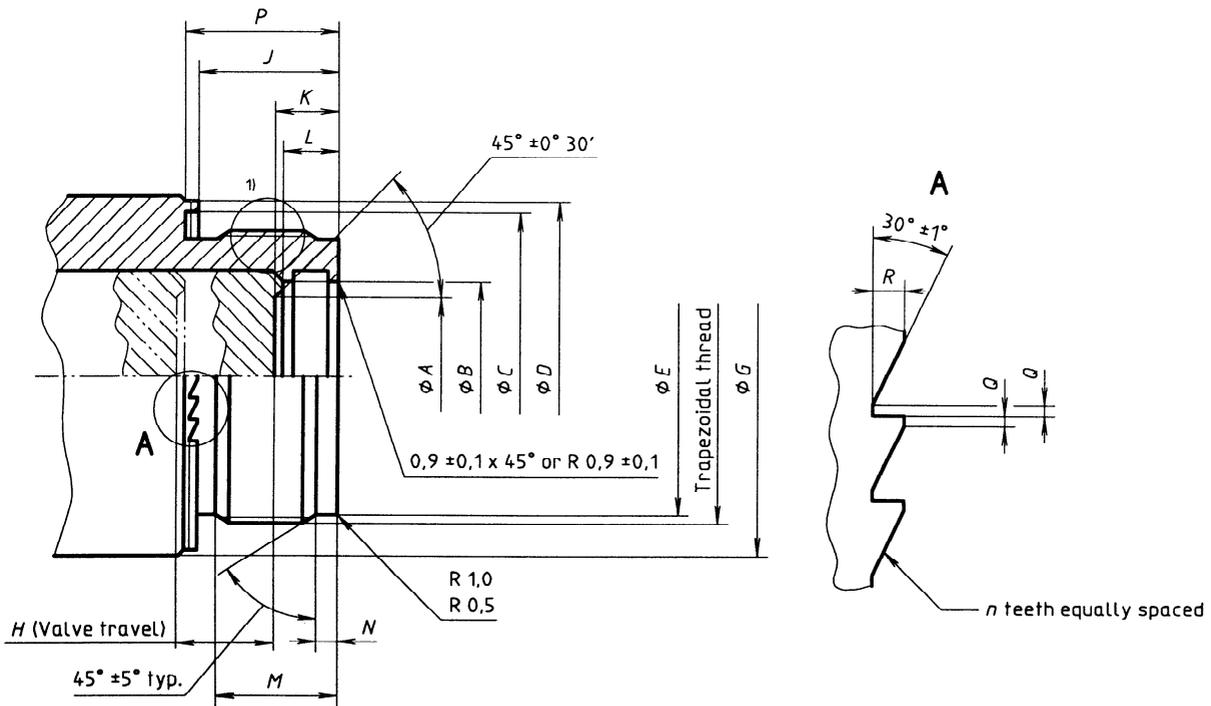
**4.2** The end of the thread shall be relieved in order to ensure ease of engagement.

**4.3** The thread shall be easily coupled or uncoupled from any position of engagement.

## 5 Installation of the connection

The clearance envelope for the connection on the aircraft shall be in accordance with figure 3.

Dimensions in millimetres

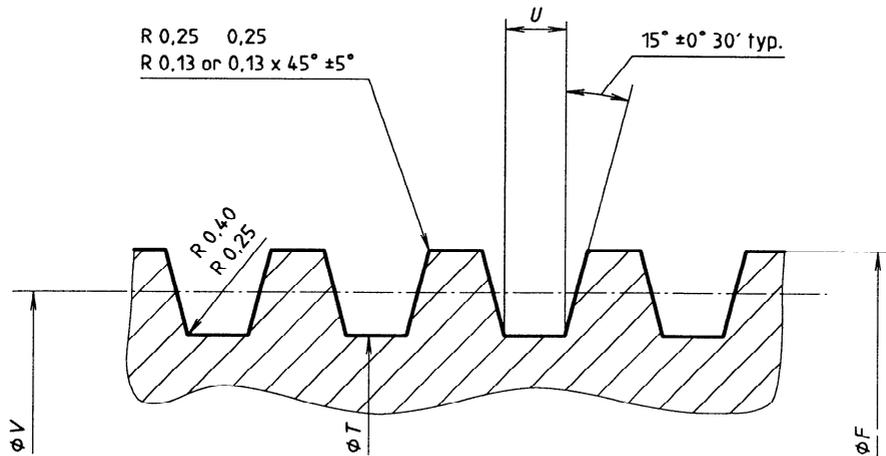


1) See figure 2.

Figure 1 — Basic dimensions of the aircraft connection

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NOTE — The thread dimensions conform to ISO 2901, ISO 2902, ISO 2903 and ISO 2904 except for the modified radii.

Figure 2 — Three-start thread dimensions

Table 1 — Basic dimensions of aircraft connections

Dimensions in millimetres

Dimension	DN					
	12	20	25	32	40	
A	± 0,12	10,28	14,48	18,8	28,58	32,77
B	max.	15,90	20,65	26,92	34,98	41,32
	min.	15,88	20,62	26,90	34,92	41,27
C	± 0,25	38,73	44,91	51,82	59,71	71,63
D	± 0,25	41,3	47,5	54,36	62,96	74,42
E	± 0,25	29,65	35,65	43,63	50,63	59,56
F		34 <sup>0</sup> <sub>-0,236</sub>	40 <sup>0</sup> <sub>-0,236</sub>	48 <sup>0</sup> <sub>-0,236</sub>	55 <sup>0</sup> <sub>0,236</sub>	65 <sup>0</sup> <sub>-0,300</sub>
G	max.	43,43	49,78	57,15	63,5	77,22
H	min.	9,65	11,18	14,99	16,51	19,56
J	± 0,5	18,42	19,18	26,11	26,42	30,86
K	± 0,38	9,02	10,03	12,7	12,19	12,95
L	± 0,25	8	8,76	11,18	10,92	11,43
M	min.	17	18,03	21,34	22,61	30,23
N	± 0,25	2,54	2,54	3,56	3,81	4,06
n		40	45	50	55	70
P	min.	21,08	21,97	28,7	28,83	34,04
Q	± 0,12	0,51	0,51	0,51	0,51	0,51
R	ref.	1,27	1,32	1,37	1,42	1,42
Trapezoidal thread <sup>1)</sup>		Tr 34 × 9 (P3)	Tr 40 × 9 (P3)	Tr 48 × 9 (P3)	Tr 55 × 9 (P3)	Tr 65 × 12 (P4)
T		30,5 <sup>0</sup> <sub>-0,585</sub>	36,5 <sup>0</sup> <sub>-0,585</sub>	44,5 <sup>0</sup> <sub>-0,616</sub>	51,5 <sup>0</sup> <sub>-0,616</sub>	60,5 <sup>0</sup> <sub>-0,689</sub>
U		1,098	1,098	1,098	1,098	1,464
V		32,5 <sup>-0,085</sup> <sub>-0,585</sub>	38,5 <sup>-0,085</sup> <sub>-0,585</sub>	46,5 <sup>-0,085</sup> <sub>-0,616</sub>	53,5 <sup>-0,085</sup> <sub>-0,616</sub>	63 <sup>-0,085</sup> <sub>-0,678</sub>
1) In accordance with ISO 2903.						