International Standard 45

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION•МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ•ORGANISATION INTERNATIONALE DE NORMALISATION

Aircraft — Pressure refuelling connections

Aéronefs — Raccords de remplissage sous pression en combustible à bord des aéronefs

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Foreword

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Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 45 was developed by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, and was circulated to the member bodies in December 1978.

It has been approved by the member bodies of the following countries :

Austria	Ireland	Romania
Belgium	Italy	South Africa, Rep. of
Canada	Japan	Spain
Chile	Korea, Rep. of	Turkey
Czechoslovakia	Netherlands	USA
France	Poland	USSR
Germany, F. R.		

The member body of the following country expressed disapproval of the document on technical grounds :

United Kingdom

This International Standard cancels and replaces ISO Recommendation R 45-1957, of which it constitutes a technical revision.

Aircraft — Pressure refuelling connections

(Revision of ISO/R 45-1957)

1 Scope and field of application

This International Standard specifies the basic dimensions and access clearance for aircraft pressure refuelling connections.

2 Reference

ISO/R 1101/1, *Technical drawings — Tolerances of form and position — Part 1 : Generalities, symbols, indications on drawings.*

3 Requirements

3.1 Basic dimensions

The basic dimensions for aircraft pressure refuelling connections shall be as specified in figure 1.

3.2 Access clearance

The clearance allowed around the connector shall be in accordance with figure 2.

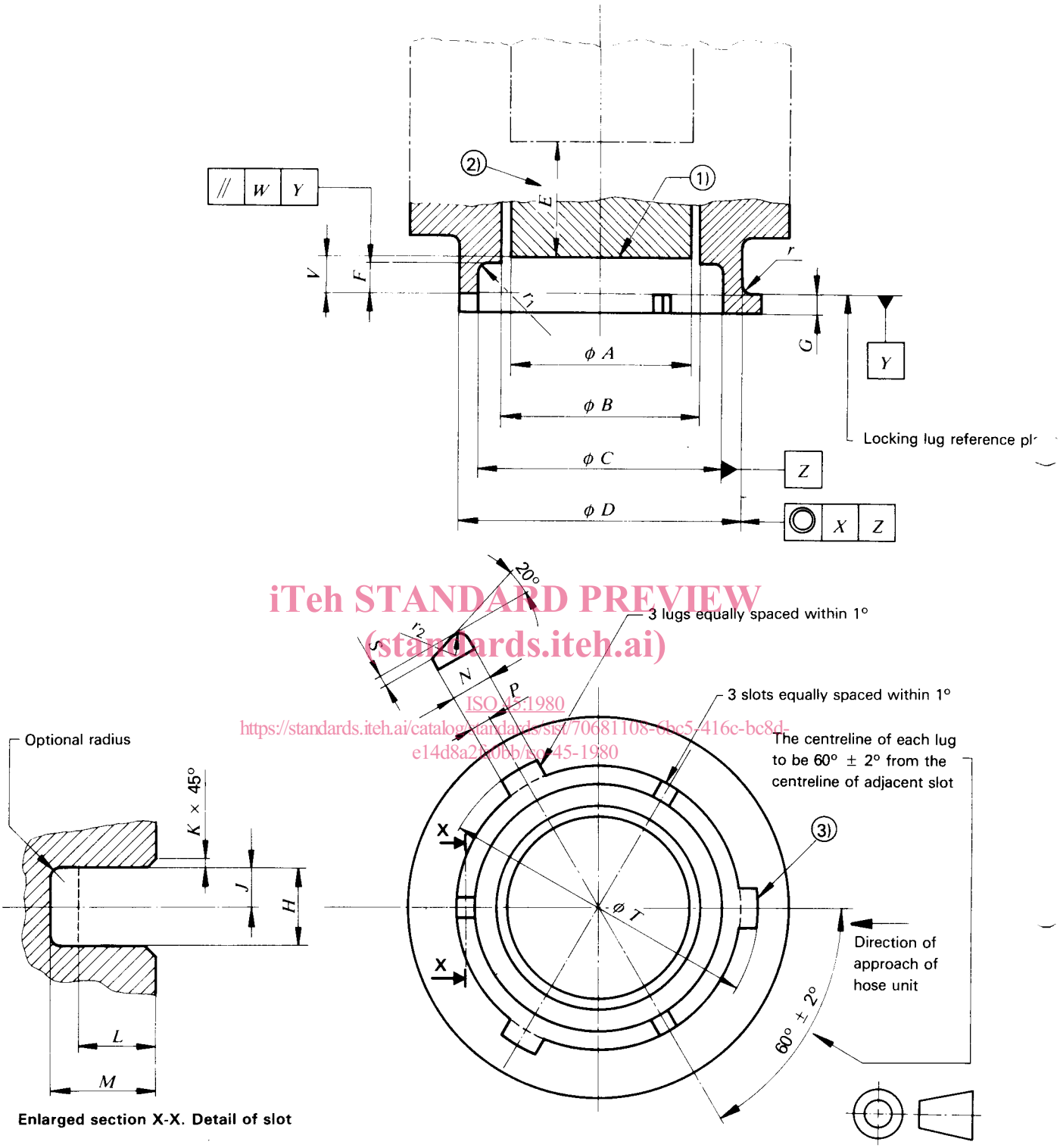

Figure 1 — Dimensions for aircraft pressure refuelling connections

NOTES

1 The valve face is to be flat within diameter *A* and no part of the valve is to extend below this face. Configuration of the valve above this face is optional.

2 The valve is spring-loaded. Loading at 36,52 mm (1.438 in) travel is not to exceed 222 N (50 lbf).

3 When the connection is in an overhead horizontal surface (for example under the wing) one bayonet lug is to be centrally disposed towards the normal approach of the operator for the refuelling.

Except where the aircraft connection is mounted on a horizontal surface, one of the three lugs is to be centrally disposed at the lowest point of the connection.

Dimension	Millimetres	Inches
A	57,2 min.	2.25 min.
B	$63{,}5\ ^{+0{,}25}_{0}$	$2.50\ ^{+0.010}_{0}$
C	$76{,}2\ ^{+0{,}127}_{0}$	$3.00\ ^{+0.005}_{0}$
D	$88{,}77\ ^{0}_{-1{,}32}$	$3.495\ ^{0}_{-0.052}$
E[1]	36,52	1.438
F	$12{,}70\ ^{0}_{-0{,}25}$	$0.500\ ^{0}_{-0.010}$
G	$6{,}27\ ^{0}_{-0{,}13}$	$0.247\ ^{0}_{-0.005}$
H	$6{,}35\ ^{+0{,}25}_{0}$	$0.25\ ^{+0.010}_{0}$
J	$3{,}18\ ^{+0{,}12}_{0}$	$0.125\ ^{+0.005}_{0}$
K	0,79	0.031
L	6,15 min.	0.242 min.

Dimension	Millimetres	Inches
M[2]	8,46 max.	0.333 max.
N	$12{,}7\ ^{0}_{-0{,}8}$	$0.500\ ^{0}_{-0.032}$
P	$6{,}35\ ^{0}_{-0{,}4}$	$0.250\ ^{0}_{-0.016}$
S	$2{,}29 \pm 0{,}25$	0.090 ± 0.010
T	$101{,}47\ ^{0}_{-1{,}45}$	$3.995\ ^{0}_{-0.057}$
V	$13{,}1\ ^{+0{,}81}_{0}$	$0.516\ ^{+0.032}_{0}$
W	0,05	0.002
X	0,13	0.005
r	0,38 max. 0,25 min.	0.015 max. 0.010 min.
r_1	0,4 max.	0.016 max.
r_2	0,51 max.	0.020 max.

1) Minimum valve travel.

2) Optional for manufacturing.

NOTE — The method of indicating geometric tolerances complies with ISO/R 1101.

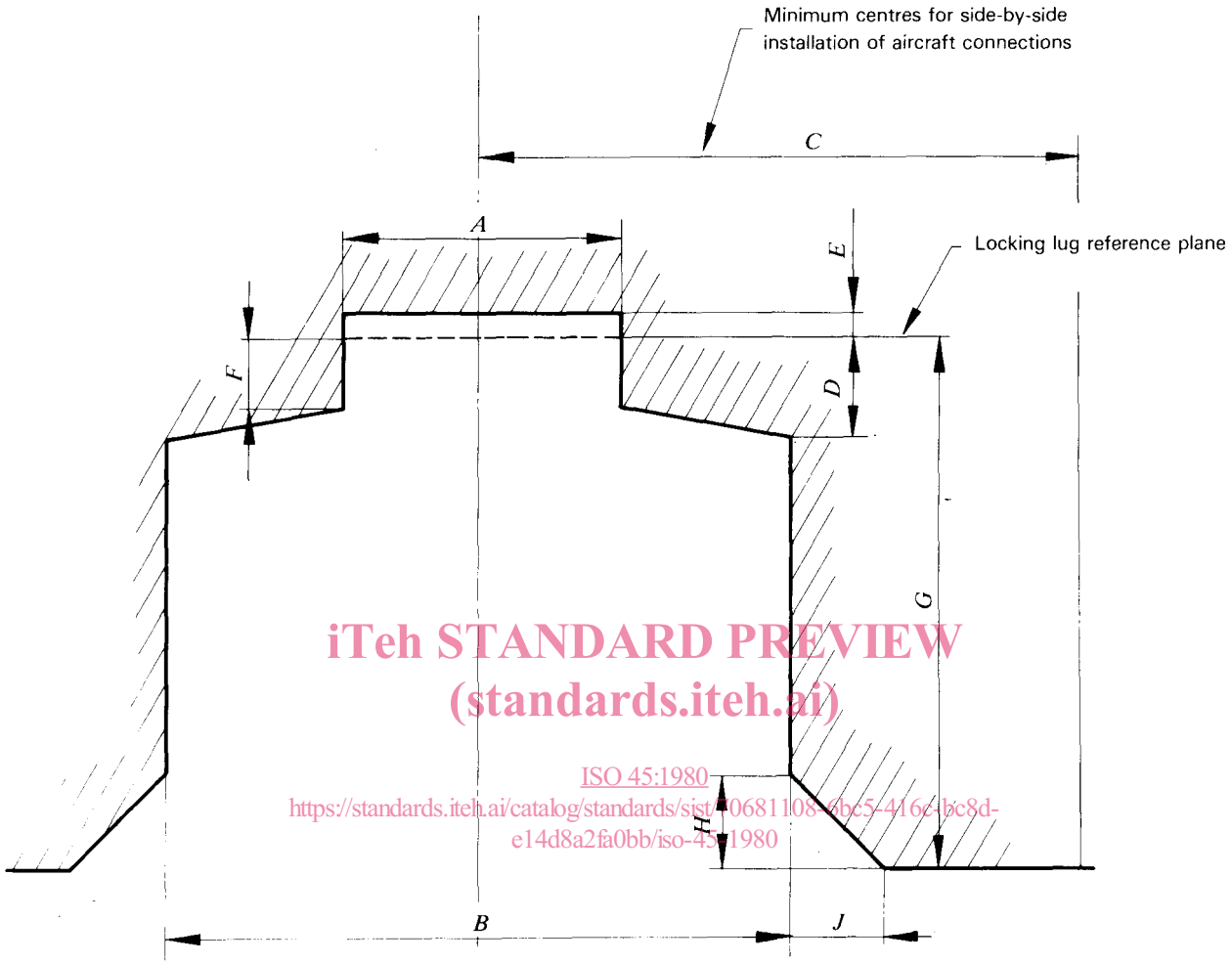

Figure 2 — Access clearance dimensions

Dimension	Millimetres		Inches	
	Maximum	Minimum	Maximum	Minimum
A	Optional	165,10	Optional	6.50
B	Optional	381,00	Optional	15.00
C	Optional	355,60	Optional	14.00
D	63,5	Optional	2.50	Optional
E	Optional	14,48	Optional	0.57
F	44,45	Optional	1.75	Optional
G	279,4	Optional	11.0	Optional
H	Optional	57,15	Optional	2.25
J	Optional	57,15	Optional	2.25

NOTES

1 These dimensions permit "side-by side" installation of aircraft connections on 355,60 mm (14 in) centres where this is a requirement.

2 For design purposes, a hose of 76,20 mm (3 in) O/D with a minimum bend radius of 304,80 mm (12 in) shall be assumed.