

International Standard



3541

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

Earth-moving machinery — Dimensions of fuel filler opening

Engins de terrassement — Dimensions de l'orifice de remplissage du fuel

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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.

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. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 3541 was prepared by Technical Committee ISO/TC 127, *Earth-moving machinery*.

ISO 3541 was first published in 1975. This second edition cancels and replaces the first edition, of which it constitutes a technical revision.

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Earth-moving machinery — Dimensions of fuel filler opening

1 Scope and field of application

This International Standard lays down the types and dimensions of fuel filler openings and caps for earth-moving machinery, as specified in ISO 6165, to ensure interchangeability of these items.

NOTE — Manufacturers should decide the configuration of fuel tank filler openings, taking into consideration the following requirements :

- easy operation for fuelling;
- size of opening to allow the insertion of a filler nozzle;
- prevention of foreign materials entering the tank;
- application of drop-in strainer of size and design to ensure adequate fuel flow when filling;
- dipstick for measuring fuel level in lieu of a fuel level indicator.

2 Reference

ISO 6165, *Earth-moving machinery — Basic types — Vocabulary.*

3 Terminology

The terminology relating to the parts of the fuel filler opening is shown in figure 1.

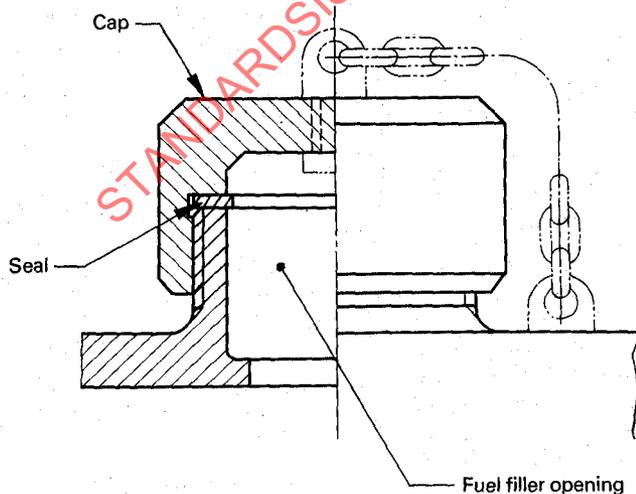
NOTE — The illustration in figure 1 does not specify the configuration of the fuel filler opening.

4 Types and sizes

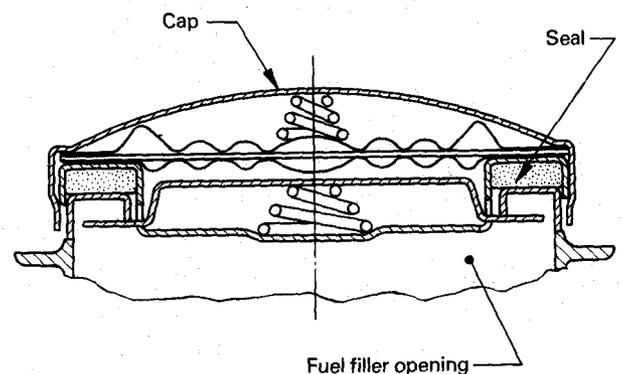
Types and nominal sizes of fuel filler openings are given in the table. The choice of the type and size of fuel filler opening shall be left to the manufacturer.

Table — Types and nominal sizes

Type	Dimensions in millimetres			
	Nominal size			
Threaded	—	50	75	100
Bayonet	40	60	80	100



Threaded type

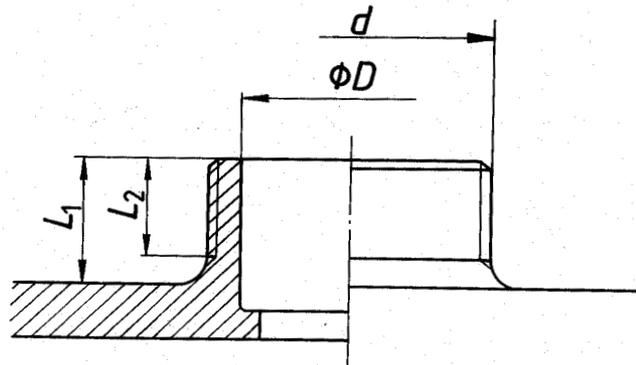


Bayonet type

Figure 1 — Terminology

5 Dimensions of threaded type

5.1 Fuel filler opening

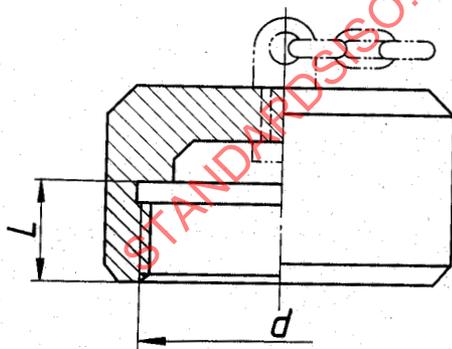


Dimensions in millimetres
(Inch values in parentheses)¹⁾

Nominal size	Nominal size of thread, d	D min.	L_1 min.	L_2 min.
50	M60 × 3 (2 1/2 – 12UN)	50	30	20
75	M90 × 3 (3 1/2 – 12UN)	75		
100	M120 × 3 (4 3/4 – 12UN)	100		

Figure 2 – Dimensions for threaded type fuel filler openings

5.2 Cap



Dimensions in millimetres
(Inch values in parentheses)¹⁾

Nominal size	Nominal size of thread, d	L max.
50	M60 × 3 (2 1/2 – 12UN)	18
75	M90 × 3 (3 1/2 – 12UN)	
100	M120 × 3 (4 3/4 – 12UN)	

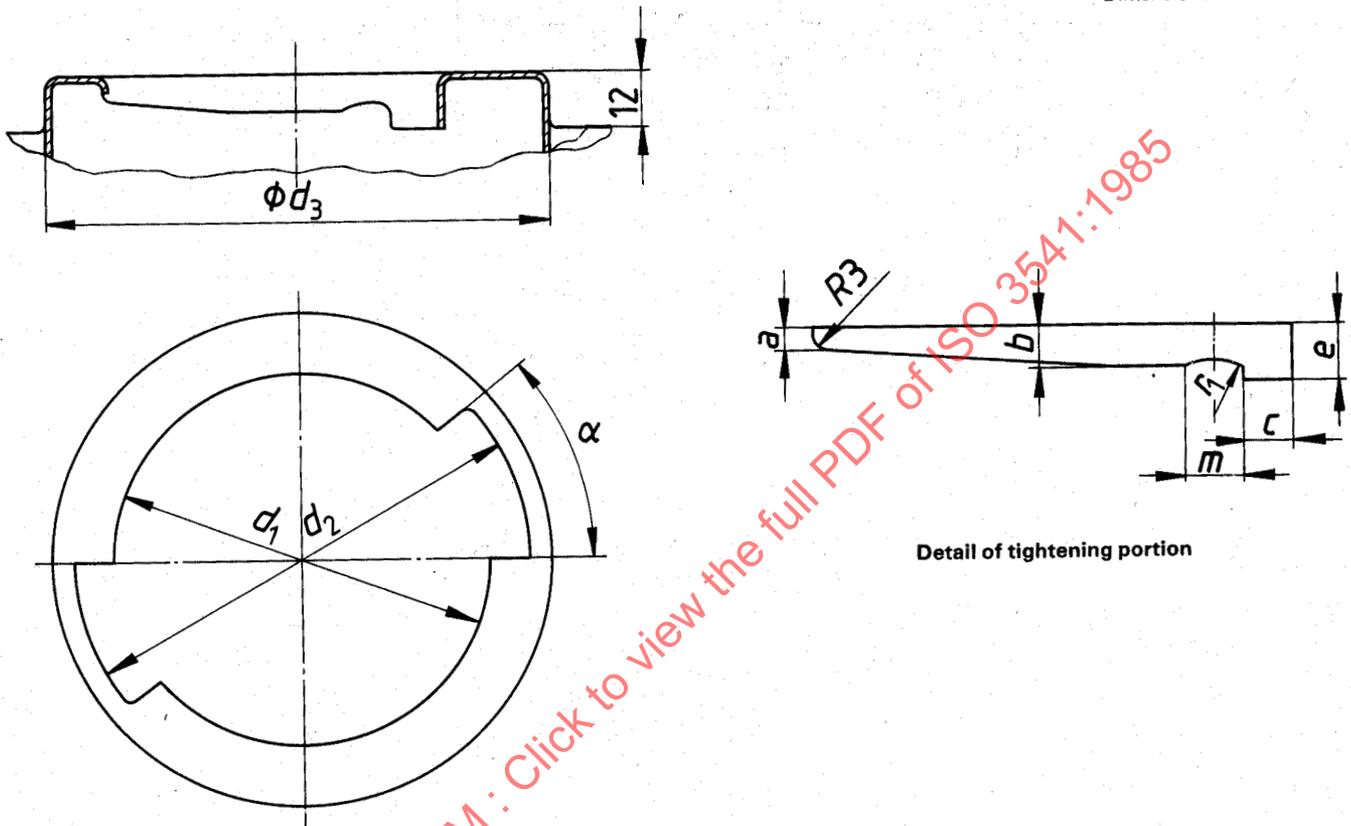
Figure 3 – Dimensions for threaded type caps

1) The inch threads are not interchangeable with the metric threads. Metric threads should be considered for machines designed in accordance with this International Standard.

6 Dimensions of bayonet type

6.1 Fuel filler opening

Dimensions in millimetres



Detail of tightening portion

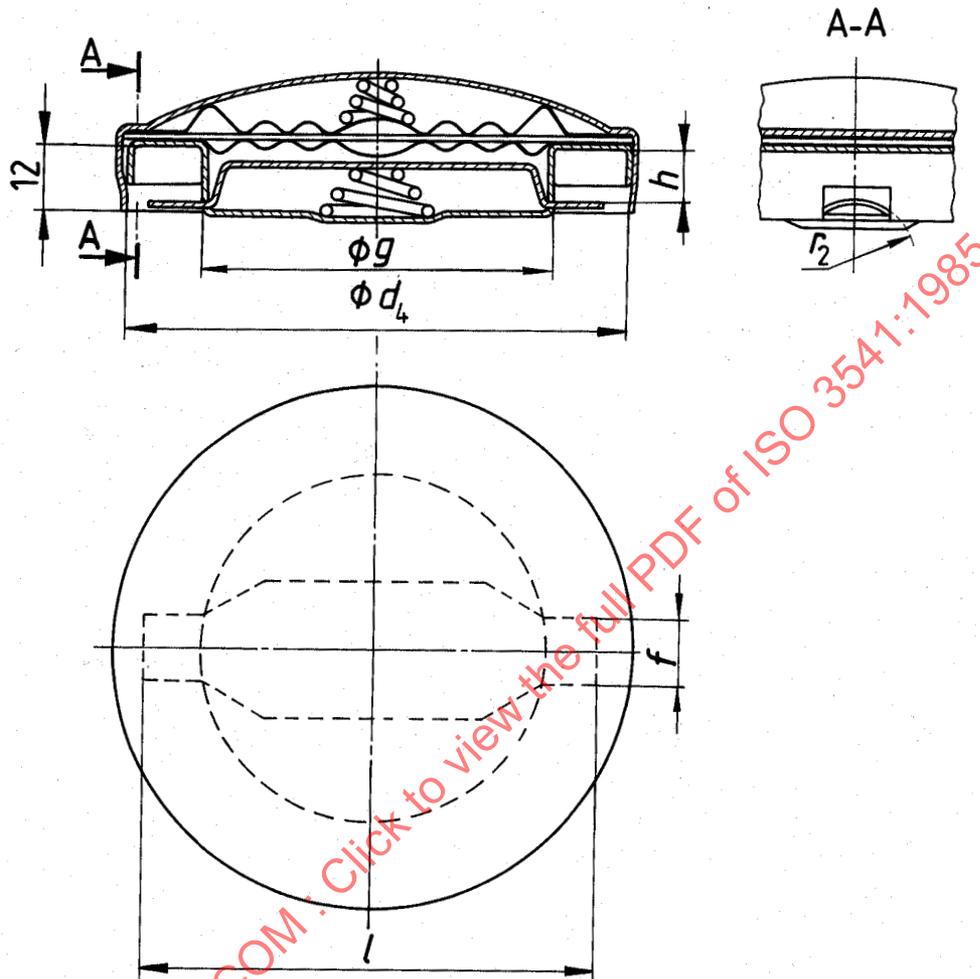
Dimensions in millimetres

Nominal size d_1	d_2 min.	d_3 max.	α degrees	a max.	b min.	c min.	e min.	m max.	r_1 max.
40	49	58	50	4	6	7	10	10	16
60	70	80	40	4	6	10	10	11	16
80	92	105	40	5	8	12	12	17	16
100	113	125	35	5	8	12	12	18	20

Figure 4 – Dimensions for bayonet type fuel filler openings

6.2 Cap

Dimension in millimetres



NOTE — The illustration does not specify the configuration of the cap.

Dimensions in millimetres

Nominal size	g max.	d_4 min.	h min.	f max.	l max.	r_2 max.
40	39	59	6	10	47,5	8
60	59	81	7	10	68,5	11
80	79	106	8	13	90	14
100	99	126	8,5	13	110	14

Figure 5 — Dimensions for bayonet type caps

7 Anchorage of cap

The cap should be permanently attached to the fuel tank or machine, for example by means of a chain, cable, etc., suitable to the machine type and fuel type.