

# TECHNICAL REPORT

# ISO TR 10193

First edition  
1989-12-15

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## Round general use light gauge metal containers — Nominal filling volumes and nominal diameters

**iTeh STANDARD PREVIEW**

*Réipients métalliques légers ronds à usage général — Volumes nominaux de  
remplissage et diamètres nominaux*  
(standards.iteh.ai)

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T E C H N I C A L

ISO



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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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The main task of ISO technical committees is to prepare International Standards. In exceptional circumstances a technical committee may propose the publication of a technical report of one of the following types:

- type 1, when the necessary support within the technical committee cannot be obtained for the publication of an International Standard, despite repeated efforts;
- type 2, when the subject is still under technical development requiring wider exposure;
- type 3, when a technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example).

Technical reports are accepted for publication directly by ISO Council. Technical reports of types 1 and 2 are subject to review within three years of publication, to decide whether they can be transformed into International Standards. Technical reports of type 3 do not necessarily have to be reviewed until the data they provide are considered to be no longer valid or useful.

ISO/TR 10193, which is a technical report of type 3, was prepared by Technical Committee ISO/TC 52, *Light gauge metal containers*.

Data of a similar nature to those presented in this Technical Report, but for non-round containers, are given in ISO/TR 10194:1989, *Non-round general use light gauge metal containers — Nominal filling volumes and nominal cross-sections*.

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## Introduction

This Technical Report presents the results of a survey on the sizes of different types of round general use light gauge metal containers in current use. The way in which these data can be reduced sufficiently to establish an International Standard is under consideration.

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# Round general use light gauge metal containers — Nominal filling volumes and nominal diameters

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## 1 Scope

This Technical Report gives a current list of nominal filling volumes and related nominal diameters for round general use light gauge metal containers.

## 2 Reference

ISO 90-2:1986, *Light gauge metal containers — Definitions and determination methods for dimensions and capacities — Part 2: General use containers.*

## 3 Designation of containers (types and construction)

The definitions, designations and special features of these types of containers (necked-in and/or step-sided) are given in ISO 90-2.

This Technical Report concerns the following containers:

- full friction can, cylindrical;
- full friction can, tapered;
- friction closure can, cylindrical;
- friction closure can, tapered;
- slip cover can, cylindrical;
- slip cover can, tapered;
- flat top can, cylindrical;

— flat top can, tapered;

— cone top can, cylindrical.

## 4 Characteristics

### 4.1 Nominal diameters: tolerances

Tolerances on the diameters at the top end and at the bottom end are the following:

diameter  $\leq$  155 mm:  $\pm$  2 mm

diameter  $>$  155 mm:  $\pm$  3 mm

### 4.2 Head spaces and nominal filling volumes: special case of the transport of dangerous goods

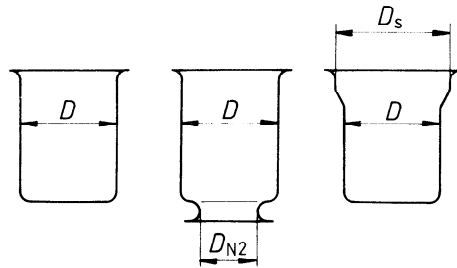
With regard to head spaces required for the transport of dangerous goods, reference has to be made to valid regulations.

## 5 Current list of nominal filling volumes and nominal diameters

For each type of container mentioned in clause 3, the following are given:

- a figure showing the type of container;
- a table giving values of nominal filling volumes and of nominal diameters.

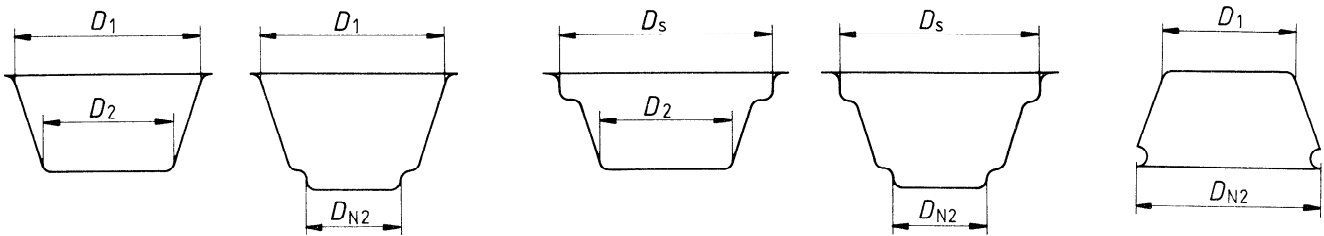
5.1 Full friction can, cylindrical



Nominal filling volumes ml	Nominal diameters mm		
	D	$D_{N2}$	$D_s$
100	52 55		
125	52 55 60		
250	65 73 99		
375	73 83 99		
500	83 99 105 108		
750	99 108		
1 000	99 108 140		
2 000	140 140 153 160 160 200	135	
2 500	140 153 160 165 200	135 147	
3 000	153 160 160 160 165 200	147 153 187	

Nominal filling volumes ml	Nominal diameters mm		
	D	$D_{N2}$	$D_s$
4 000	153 160 160 160 180 180 200	147 153	
5 000	180 180 180 200	165 173 187	
10 000	220 230 230 240	225	
11 500	230 230	225	
12 500	220 230		
15 000	230 305	295	
17 500	305	295	
20 000	280 280 305	274 295	
25 000	280 300 305	295	
27 000	300		
28 000	328 328	322	
30 000	300 305 328 328	295 322	
40 000	305 328	295	

5.2 Full friction can, tapered

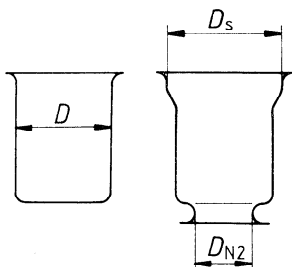


This figure is applicable only for those dimensions marked by an asterisk for a full friction can, tapered, of nominal filling volume 5 000 ml.

Nominal filling volumes ml	Nominal diameters mm				
	D <sub>1</sub>	D <sub>2</sub>	D <sub>N2</sub>	D <sub>s</sub>	
1 000	140	130			
2 000	160	148			
2 500	160	148	148		
	160				
	165	153			
	190	175			
3 000	160	148	148	168	
	160		148		
	160	150			
	165	153			
	165		155		
	180	165			
4 000	180	171	168		
	180				
	180	165			
	180	171			
	200	185			
	200	190			
5 000	180	168	168		
	180				
	180	165			
	165*)		188*)		
	180	171			
	185	175			
	195	180			
	195		185		
	200	185			
200	190				
10 000	220	205	212	216	
	230	220			
	230	217			
	230				
	230	216			
	240	225			
	240	230			
	240	255			
	275				271
	286				
11 500	230		216		
	230	217			
12 500	220	205	216		
	230				
	230	217			
	240	225			
	275	255			
	286	268			
	286				271

Nominal filling volumes ml	Nominal diameters mm			
	D <sub>1</sub>	D <sub>2</sub>	D <sub>N2</sub>	D <sub>s</sub>
13 500	240	225	271	
	286			
	292	275		
15 000	230	220	271	
	275	255		
	286	271		
	286			
	292	275		
	305	286		
17 500	275	255	271	
	286	271		
	286			
	292	275		
	305	286		
20 000	275	255	271	
	280	265		
	286			
	286	271		
	286	268		
	292	275		
	305	286		
	305			
290		290		
22 000	292	275		
	305	286		
25 000	286	268	271	
	286	271		
	286			
	292	275		
	305	286		
	305			
290		290		
27 000	286		271	
	292	275		
	305	286		
28 000	292	275		
	305	286		
	328	312		
30 000	286	271	271	
	286			
	292	275		
	305	286		
	305			
290		290		
40 000	305	286	290	
	305			
	380	360		

5.3 Friction closure can, cylindrical



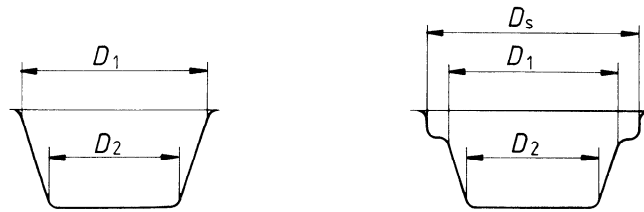
Nominal filling volumes ml	Nominal diameters mm		
	D	D <sub>N2</sub>	D <sub>s</sub>
50	45		
100	55 60 65		
118	63		
125	52 55 60 65 69		
236	69 73		
250	69 73 99		
375	73 83 86 95 99		
500	73 83 86 90 95 99 108		
750	99 108		
946	105		
1 000	99 108 114 127 140		
2 000	127 140 153 160		
2 500	140 153 160 165 171		

Nominal filling volumes ml	Nominal diameters mm		
	D	D <sub>N2</sub>	D <sub>s</sub>
3 000	153 160 165		
4 000	153 160 165 171 175 180		
5 000	165 171 175 195 180		
10 000	216 220 225 230 240		
11 500	230 240		
12 500	230		
13 500	240		
15 000	240		
20 000	280 292		
25 000	292 280 300		
28 000	292 300 328		
30 000	292 300 328		
40 000	328		

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5.6 Slip cover can, tapered



Nominal filling volumes ml	Nominal diameters mm		
	D <sub>1</sub>	D <sub>2</sub>	D <sub>s</sub>
1 000	140	130	
2 500	190	175 153	168
3 000	190	175	
5 000		216	230

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