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CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
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Contents

Page

Foreword

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This document was prepared by Technical Committee ISO/TC 59, *Buildings and civil engineering works*.

This first edition cancels and replaces ISO 1006:1983, ISO 1040:1983, ISO 6512:1982, ISO 6513:1982 and ISO 6514:1982, which have now been merged into one document with a new logical structuring. There is no technical change compared with the previous versions.

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INTERNATIONAL STANDARD ISO 21723:2019(E)

Buildings and civil engineering works — Modular coordination — Module

1 Scope

This document establishes the values of basic module, multimodules for horizontal coordinating dimensions and sub-modular increments for use in modular coordination of buildings. This document also specifies preferred vertical modular dimensions, series of preferred multimodular sizes for horizontal dimensions for all types in accordance with general principles and rules for modular coordination.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 6707-1, *Buildings and civil engineering works — Vocabulary — Part 1: General terms*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 6707-1 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
modular storey height
vertical dimension between two modular floor planes of two consecutive floors

[SOURCE: ISO 1791:1983, 25]

3.2
modular floor height
vertical dimension of the modular floor zone between the modular plane of the upper surface of the floor covering and the modular plane of the finished ceiling

[SOURCE: ISO 1791:1983, 27, modified — "a floor covering" has been replaced with "the floor covering".]

4 Specifications

4.1 Basic module

4.1.1 The basic module is represented by the letter **M**.

4.1.2 The international standardized value of the basic module is

1 **M** = 100 mm

NOTE Annex A provides imperial units.

4.2 Multimodules for horizontal coordination dimensions

4.2.1 The international standardized values of multimodules for horizontal coordinating dimensions are

3 **M**, 6 **M**, 12 **M**, 30 **M**, 60 **M**.

NOTE 1 The multimodule **15 M** can also be used for special applications.

NOTE 2 See also ISO 8560.

4.2.2 The series of preferred multimodular sizes for horizontal dimensions are shown in Table 1.

Table 1 — Series of preferred multimodular sizes for horizontal dimensions

	Multimodules					
	3 **M**	6 **M**	12 **M**	15 **M**	30 **M**	60 **M**
Series of values	3 **M**					
	6 **M**	6 **M**				
	9 **M**					
	12 **M**	12 **M**	12 **M**			
	15 **M**			15 **M**		
	18 **M**	18 **M**				
	21 **M**					
	24 **M**	24 **M**	24 **M**			
	27 **M**					
	30 **M**	30 **M**		30 **M**	30 **M**	
	33 **M**					
	36 **M**	36 **M**	36 **M**			
	39 **M**					
	42 **M**	42 **M**				
	45 **M**			45 **M**		
	48 **M**	48 **M**	48 **M**			
		54 **M**				
		60 **M**	60 **M**	60 **M**	60 **M**	60 **M**
		66 **M**				
		72 **M**	72 **M**			
				75 **M**		
		78 **M**				
		84 **M**	84 **M**			
		90 **M**		90 **M**	90 **M**	
		96 **M**	96 **M**			
				105 **M**		
			108 **M**			
			120 **M**	120 **M**	120 **M**	120 **M**
			etc.	etc.	etc.	etc.

4.2.3 The 12 **M** series can be extended further to use lager increments such as 24 **M** where technical and economical advantages are evident.

4.2.4 The 15 **M**, 30 **M** and 60 **M** series correspond to the series in a system of preferred numbers which contain the factor five. These series can also be extended to use larger increments in the series of the multimodule 60 **M** such as 120 **M** or larger.

4.2.5 In the selection of sizes from Table 1, preference should be given to the series of the largest multimodule compatible with functional requirements and economic design.

4.2.6 The preferred multimodular sizes for horizontal dimensions are primarily intended for sizing of components, groups of components and spaces.

4.2.7 The series are standardized for general guidance. Functional, economical and especially national considerations may justify the use of multimodular sizes which are not included in the series.

4.3 Modules for vertical coordination dimensions

4.3.1 The modular storey height and the modular room height shall be chosen from the following modular sizes:

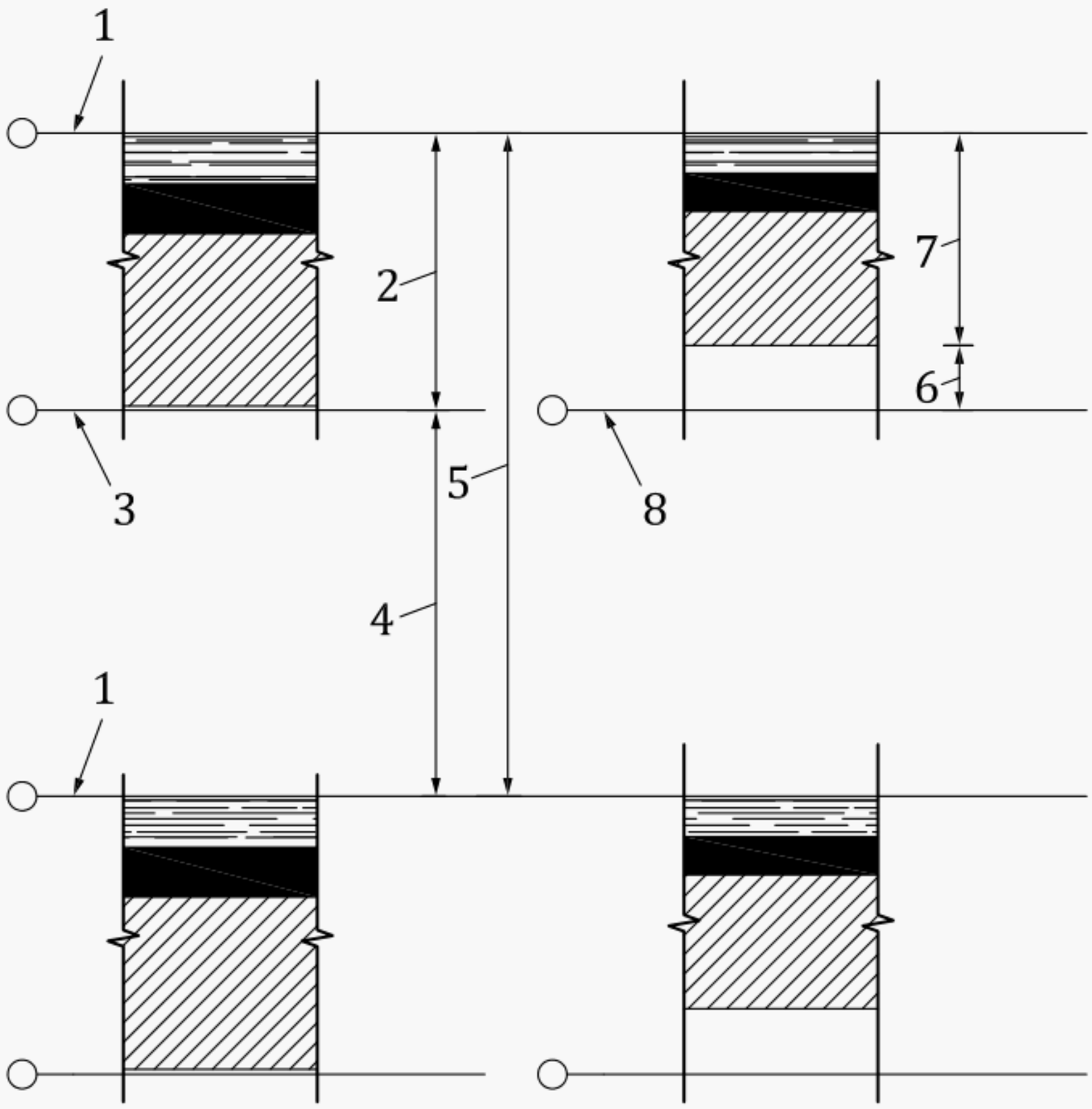
— up to 36 **M**: 1 **M** increment step

— from 36 **M** to 48 **M**: 3 **M** increment step

— above 48 **M**: 6 **M** increment step

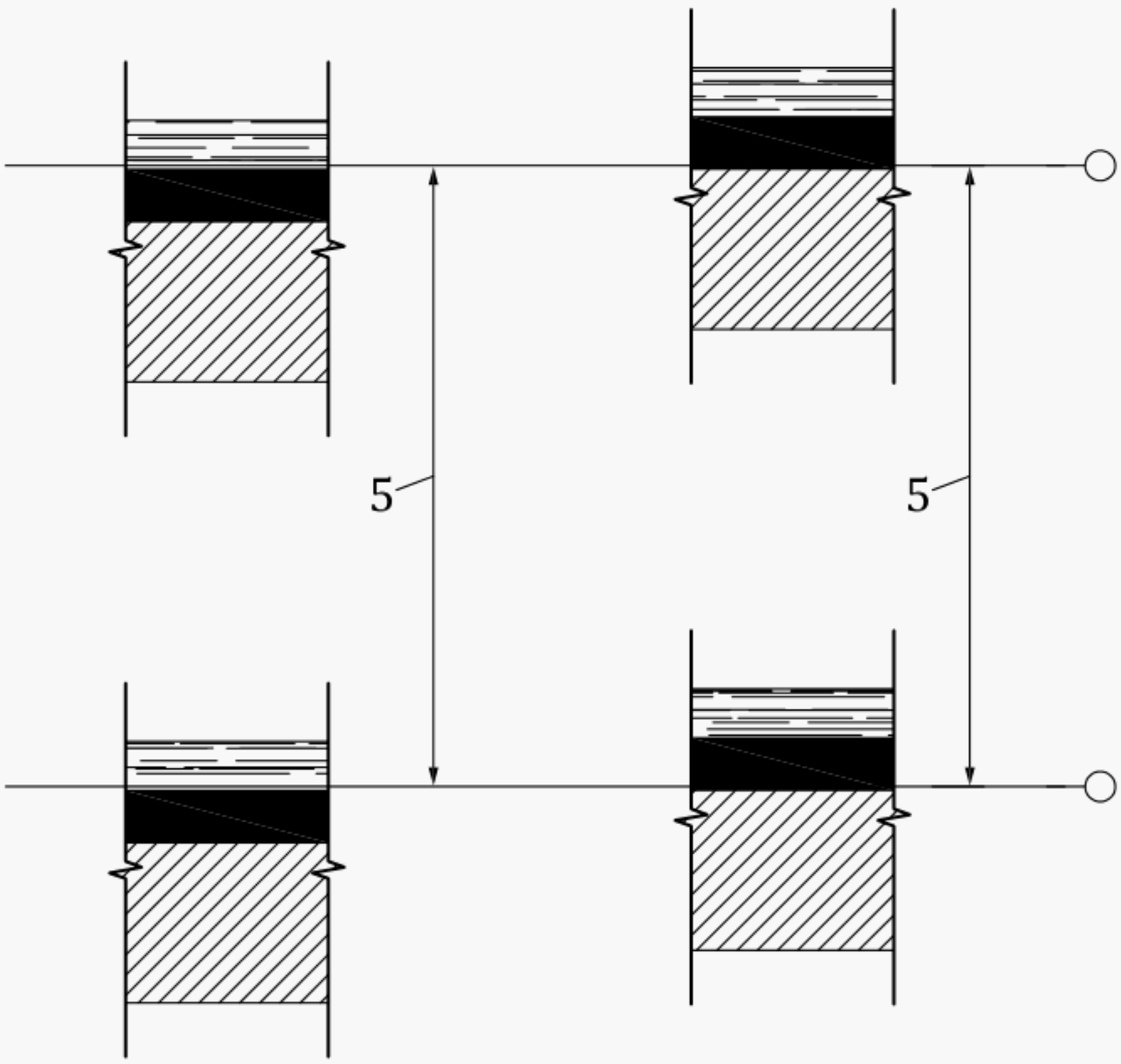
4.3.2 The modular storey height combined with the modular floor height determines the modular room height when the modular floor plane coincides with the upper surface of the floor covering [see Figure 1, a)]. As the modular floor height (according to the type of building system, construction, span, etc.) may have any modular value from 2 **M** and upwards, the standard series for modular storey heights given above correspond to an increased series of modular room heights with 1 **M** increments.

In Figure 1, a), b), c) and d) illustrate the situation at different positions of the modular floor plane.



a) Modular floor height – modular floor plane coinciding with the upper surface of the floor covering

b) Non-modular floor height – modular floor plane coinciding with the upper surface of the floor covering



c) Modular floor plane coinciding with the upper surface of the rough floor

d) Modular floor plane coinciding with the upper surface of the structural floor

Key

	floor covering
	rough floor
	structural floor
1	modular floor plane
2	modular floor height
3	modular plane for finished ceiling
4	modular room height
5	modular storey height
6	supplementary height
7	non-modular floor height
8	modular plane nearest the finished ceiling

Figure 1 — Different positions of the modular floor plane

4.4 Sub-modular increments

4.4.1 The international standardized value of the the sub-modular increment is **M**/2 = 50 mm.

4.4.2 Sub-modular increments are to be used where there is a need for an increment smaller than the basic module.

4.4.3 Sub-modular increments should not be used for determining the distance between modular reference planes of a modular grid.

4.4.4 Sub-modular increments may be used for determining the displacement of different modular grids in order to produce a solution appropriate to the project as a whole.

4.4.5 Sub-modular increments may be used:

— for determining the coordinating sizes of building product smaller than 1 **M**;

— for determining the coordinating sizes of building components and products larger than 1 **M** which need to be sized in increments smaller than 1 **M**.

Annex A
(informative)

Imperial units

It is agreed that, in countries using imperial units, the corresponding value of the basic module is

4 in = 101,6 mm

However, the work sizes of building and equipment components involved in trade with countries using the SI system should be calculated from their inch modulated coordinating dimensions with such manufacturing and assembly tolerances that they fit into modular spaces derived from the metric basic module.

Bibliography

[1] ISO 1791:1983, *Building construction — Modular co-ordination — Vocabulary*

[2] ISO 2848, *Building construction — Modular coordination — Principles and rules*

[3] ISO 8560, *Technical drawings — Construction drawings — Representation of modular sizes, lines and grids*

[4] GB/T 50002-2013, *Standard of modular coordination of building*

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BSI Group Headquarters

389 Chiswick High Road London W4 4AL UK