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Office furniture - Work tables and desks - Part 1: Dimensions

Mobilier de bureau - Tables de travail de bureau - Partie 1:
Dimensions

Büromöbel - Büro-Arbeitstische - Teil 1: Maße

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document (EN 527-1:2011) has been prepared by Technical Committee CEN/TC 207 "Furniture", the secretariat of which is held by UNI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by November 2011, and conflicting national standards shall be withdrawn at the latest by November 2011.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 527-1:2000.

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Introduction

Various designs of furniture for general office use exist as a consequence of rapid technological evolutions. This European Standard relates to office furniture of contemporary design.

The dimensions in this standard are based on the requirements of anthropometric measurements, mechanical design, subjective preference and other factors.

The dimensional requirements of the tables and desks are based upon the 5th and 95th percentile of the European office user group. In general, this is the 5th percentile female and the 95th percentile male (from 1493 mm to 1913 mm for the stature height). To accomplish the needs of users outside this range, individual solutions can be applied. Some European countries can have 5th percentile females and/or 95th percentile males outside this European user group.

1 Scope

This European Standard specifies dimensions of work tables and desks for office tasks to be undertaken in a seated, a sit stand or standing position.

It includes neither dimensions for storage unit nor those for other tables in the office area or reception desks.

2 Normative references

The following referenced documents are indispensable for the application 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.

N/A

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

height of the work surface

vertical dimension measured from the floor to the top of the work surface at the edge closest to the user

3.2

work table/desk Type A

height adjustable; the height can be changed by the user during use

3.3

work table/desk Type B

height selectable; the height can be adapted to the user at installation

3.4

work table/desk Type C

fixed height

3.5

work table/desk Type D

limited height selectable or adjustable

3.6

sit-stand work table/desk

height adjustable allowing different work positions from seated to standing

3.7

desk top thickness

thickness of the work surface and all protruding parts or elements of the work table/desk within the width and depth of the legroom

3.8

levelling device

leg component designed to allow the work surface to be set horizontal

3.9

desk top depth

depth of working surface including any extension elements on the same plane

4 Dimensions

4.1 Measurement procedure

Position the work table/desk on a flat horizontal and rigid floor surface, with levelling device(s) fully closed.

Inclinable desk top work surfaces shall be set to the horizontal or as near to the horizontal as possible.

Before commencing measurement procedure, it shall be determined whether the table/desk is for sitting, standing or sit/stand use.

The minimum and maximum height of work surface shall be measured at the front edge (see Figure 1) and the adjustment range shall be recorded. For height selectable work tables/desks type B and D the minimum height increments shall also be recorded.

The legroom depth shall be measured at the working position and with the rear edge of the work table/desk placed against a vertical wall.

Figure 1 shows the legroom for all work surfaces which have straight front edges at least all along the width, W, see Table 1. In these cases, the legroom shall be rectangular with dimensions as specified in Table 1.

Figure 2 shows the legroom for all work surfaces with non-straight front edges. In these cases, the legroom shall be curved with dimensions as specified in Table 1.

4.2 Requirements

The dimensions of tables/desks shall be as specified in Table 1.

Table 1 — Table/desk dimensions in millimetres

Dimensions			Work table/desk type						
			Type A	Type B	Type C	Type D			
			Fully adjustable	Fully selectable	Fixed height	Limited adjustable or limited selectable ^e			
h ₁	Height of the work surface	Sitting only	Minimum range 650 - 850	Minimum range 650 - 850 ^a	740 ± 20	-allow	Min	Max	+allow
						yes	680	760	yes
		Standing only	Minimum range 950 - 1250	Minimum range 950 - 1250 ^a	1050 ± 20	-allow	Min	Max	+allow
						yes	1000	1180	yes
		Sit/stand	Minimum range 650 - 1250	N/a	N/a	Minimum range 680 - 1180			
t ₁ and t ₂	Maximum desk top thickness (see Figure 1)	At the front, t ₁	55 ^b	55 ^b	70	70			
		At 500 mm from the front edge, t ₂	80 ^b	90 ^b	100	100			
k ₁	Minimum height of knee clearance for standing position only (see Figure 3)	Applies only to tables with a height more than 850 mm	700 ^d	700 ^d	700 ^d	700 ^d			
k ₂	Minimum depth of knee clearance for standing position only (see Figure 3)		80	80	80	80			
k ₃	Minimum depth of foot clearance for standing position only (see Figure 3)		150	150	150	150			
f ₁ and f ₂	Minimum height of minimum foot clearance	Sitting only and sit/stand From 600 mm to 800 mm from the front edge, f ₁	120	120	120	120			
		Standing only From front edge to 150 mm, f ₂	120	120	120	120			
g ₁	Minimum legroom depth ^c (see Figure 1)	Sitting only and sit/stand	800	800	800 ^f	800			

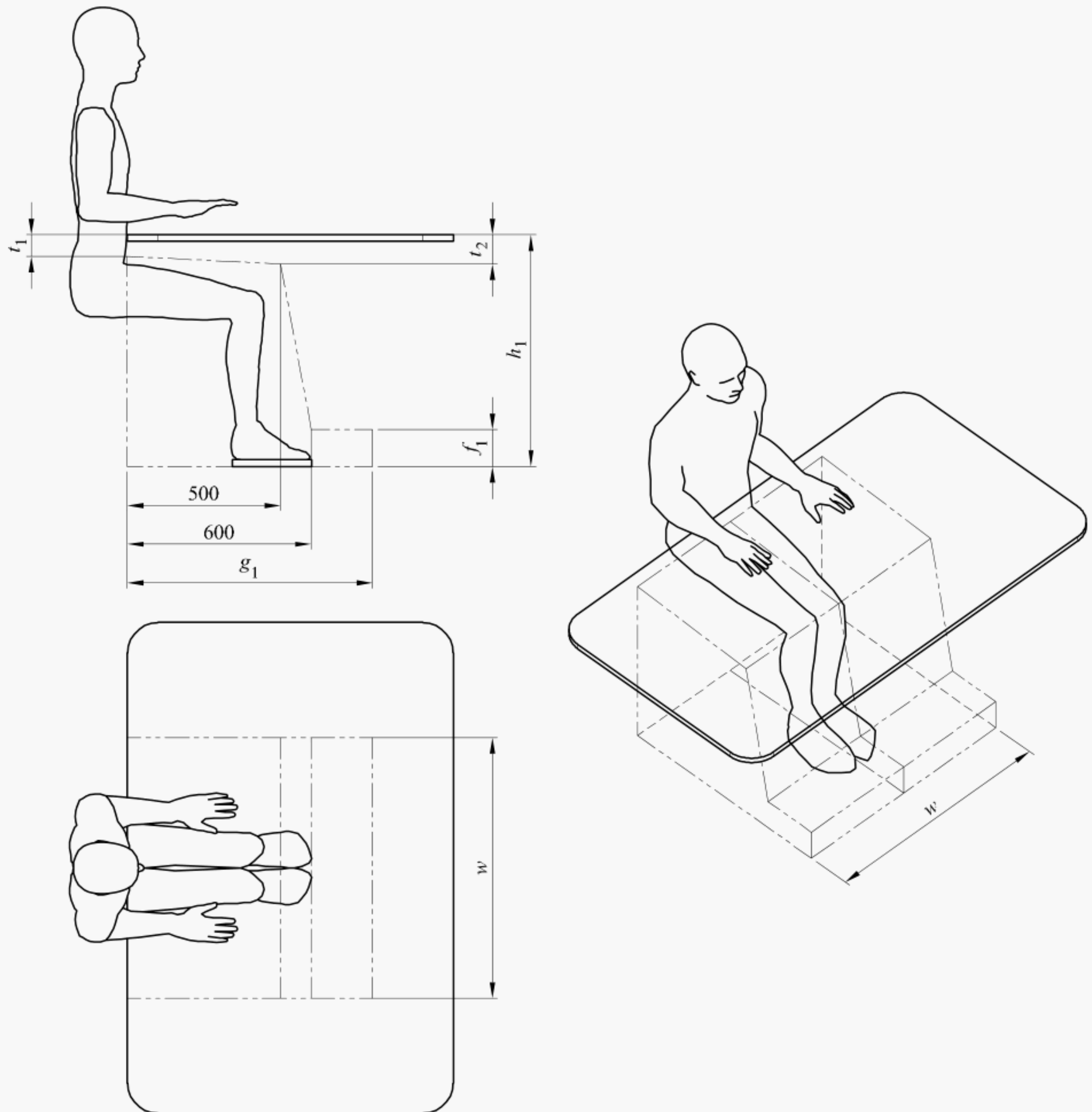
Table 1 — Table/desk dimensions in millimetres (continued)

D	Minimum desk top depth ^g		800	800	800 ^f	800
W	Minimum legroom width	Sitting only and sit/stand	1200	1000	850	850
		Standing only	790	790	790	790
<div><div>a</div><div>Maximum increment of 20 mm</div><div>b</div><div>Only applies to sitting and sit/stand work tables/desks</div><div>c</div><div>The construction of the product shall ensure the minimum legroom depth</div><div>d</div><div>Measured from the floor</div><div>e</div><div>The minimum and maximum values shall be obtained</div><div>f</div><div>600 mm can in some situations be acceptable, e.g. when 17" or smaller flat screens are used, providing that the work surface is not against the wall and that two people are not sitting one in front of each other. Information about these limitations shall be provided with the product</div><div>g</div><div>The dimension D is measured as the smallest dimension at the work area</div></div>						

NOTE 1 Users outside of the range given in the introduction may need furniture of different dimensions.

NOTE 2 There is no dimension specified for the width (length) of a work table/desk. The width and shape of the work tables/desks can vary greatly. The actual size of the work surface depends on the individual user's needs and task requirements (see EN ISO 9241-5).

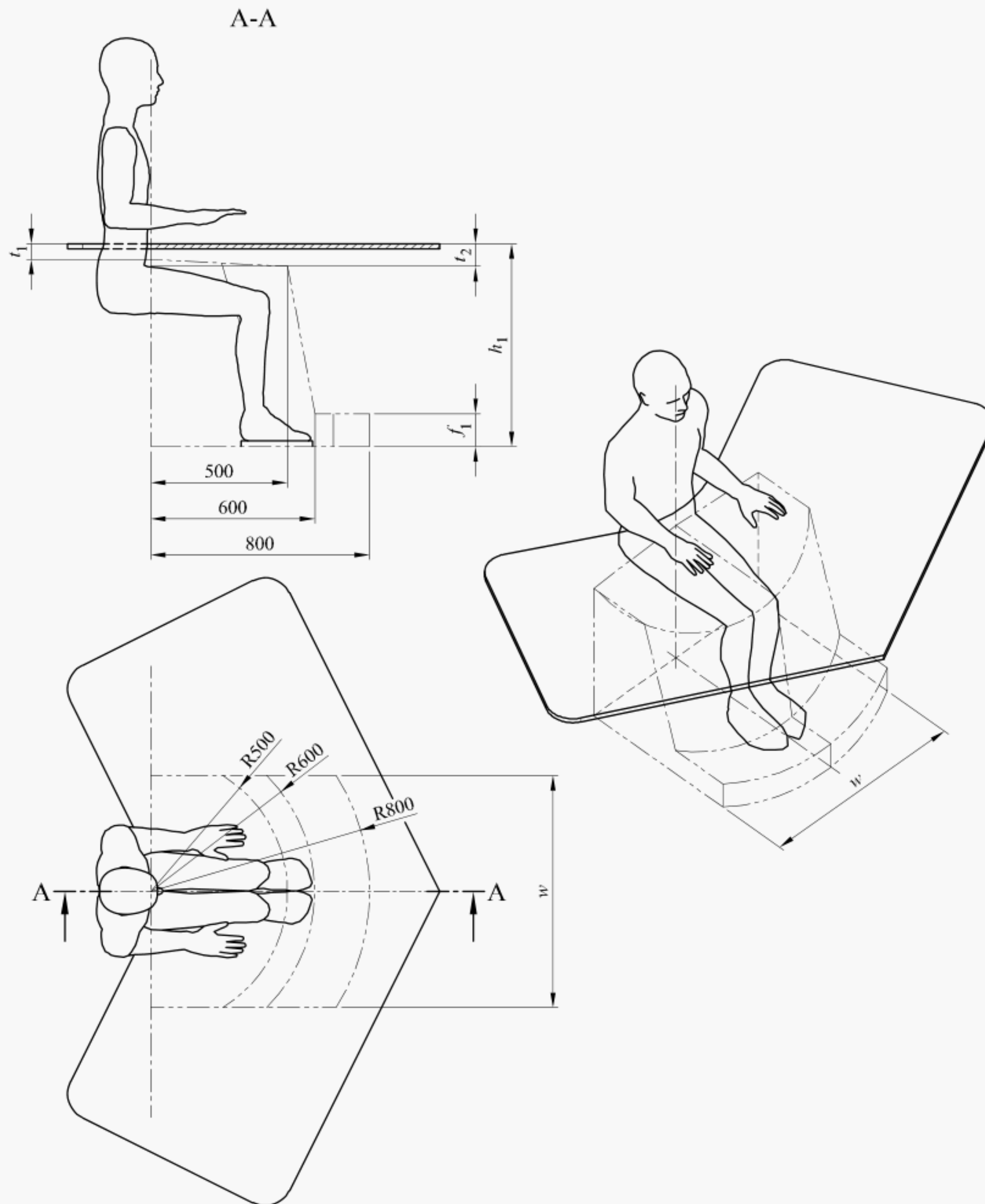
Dimensions in millimetres



Key

- h_1 height to the top of the work surface
- t_1 maximum desk top thickness at the front
- t_2 maximum desk top thickness at 500 mm from the front edge
- f_1 height of foot clearance
- g_1 minimum legroom depth
- w minimum legroom width

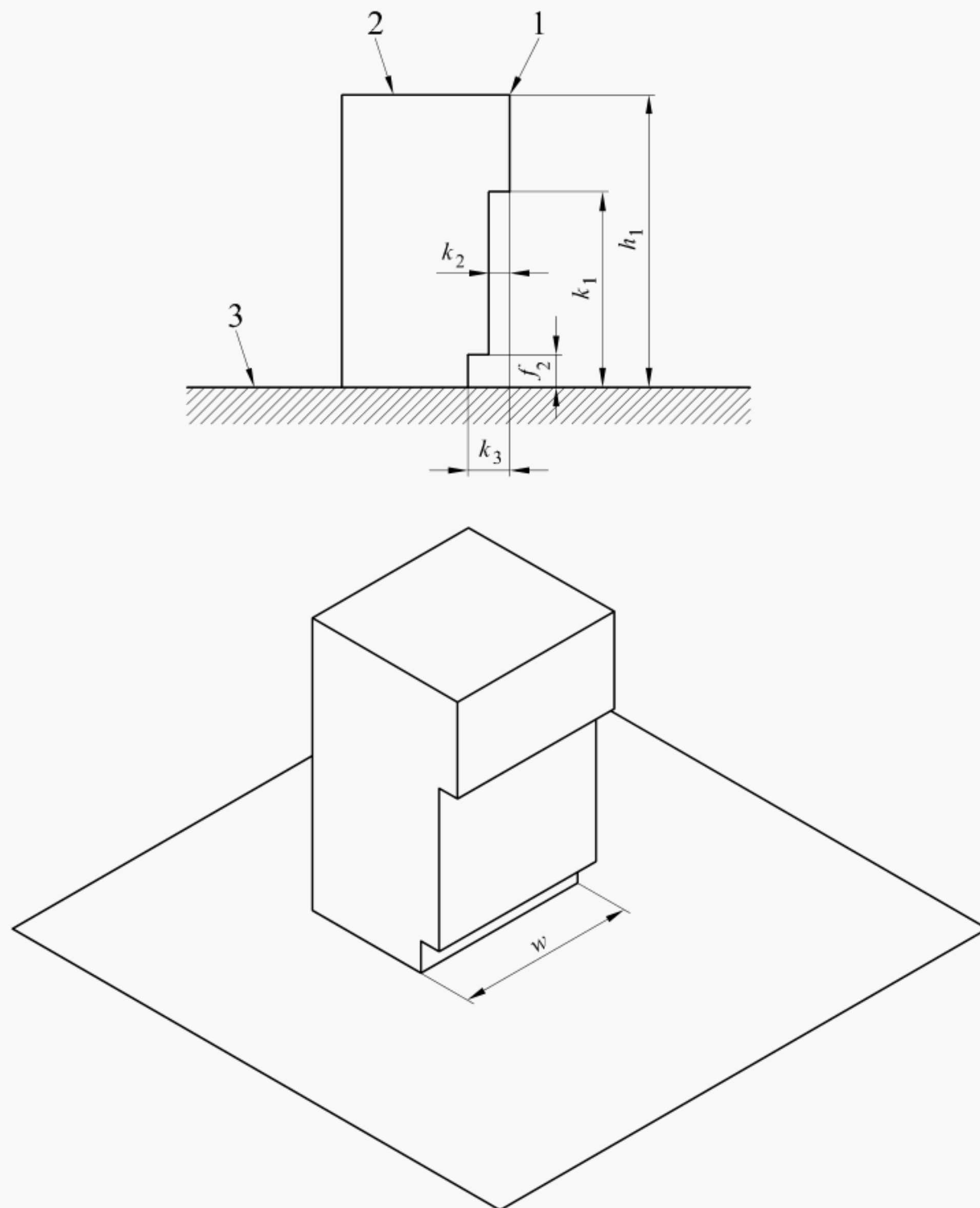
Figure 1 — Legroom and height for work tables/desks with straight front edges



Key

- h_1 height to the top of the work surface
- t_1 maximum desk top thickness at the front
- t_2 maximum desk top thickness at 500 mm from the front edge
- f_1 height of foot clearance
- g_1 minimum legroom depth
- w minimum legroom width

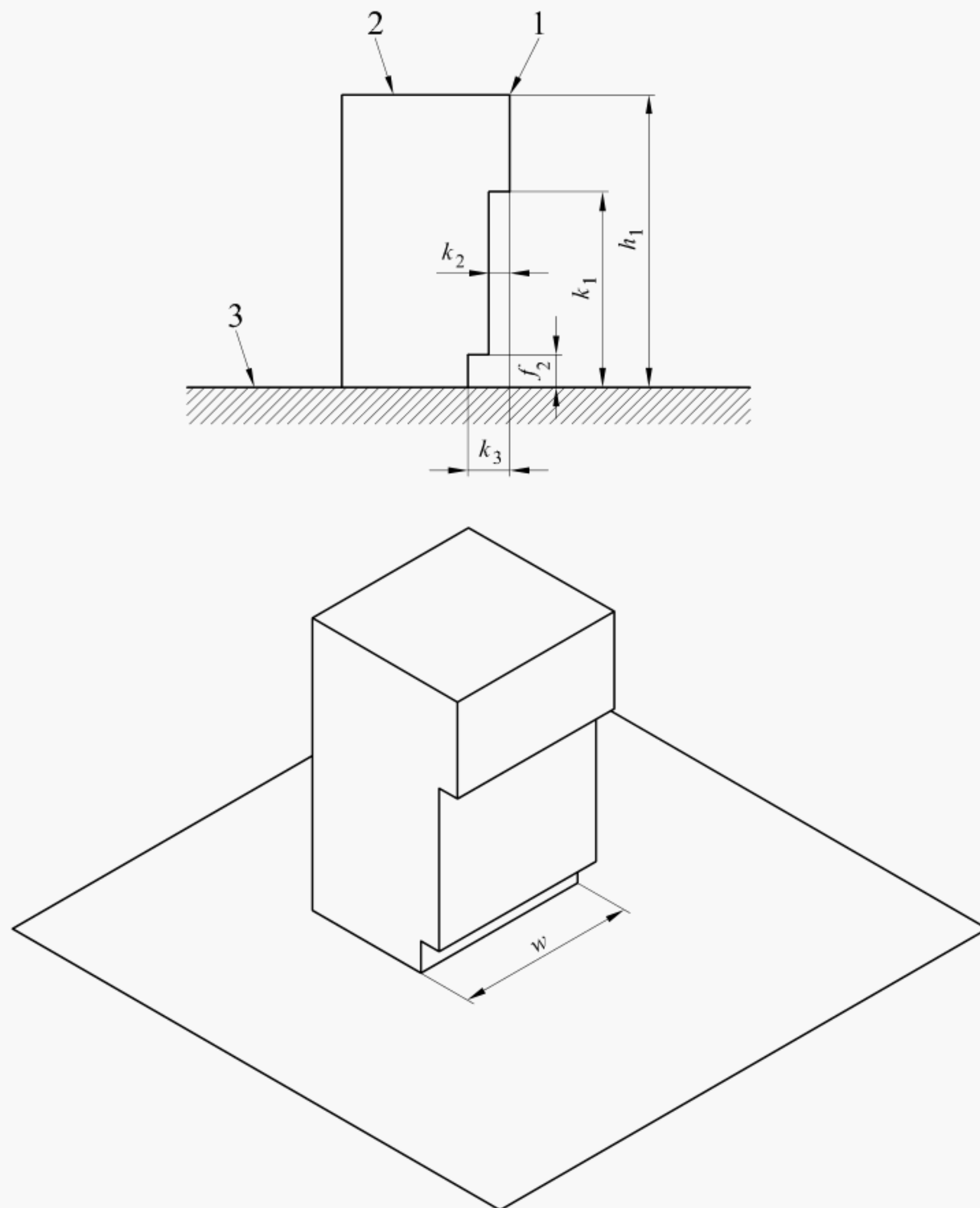
Figure 2 — Legroom and height for work tables/desks with non-straight front edges



Key

- 1 front edge
- 2 top of the work surface
- 3 floor
- h_1 height to the top of the work surface
- k_1 height of knee clearance
- k_2 depth of knee clearance
- k_3 depth of foot clearance
- f_2 height of foot clearance
- w minimum legroom width

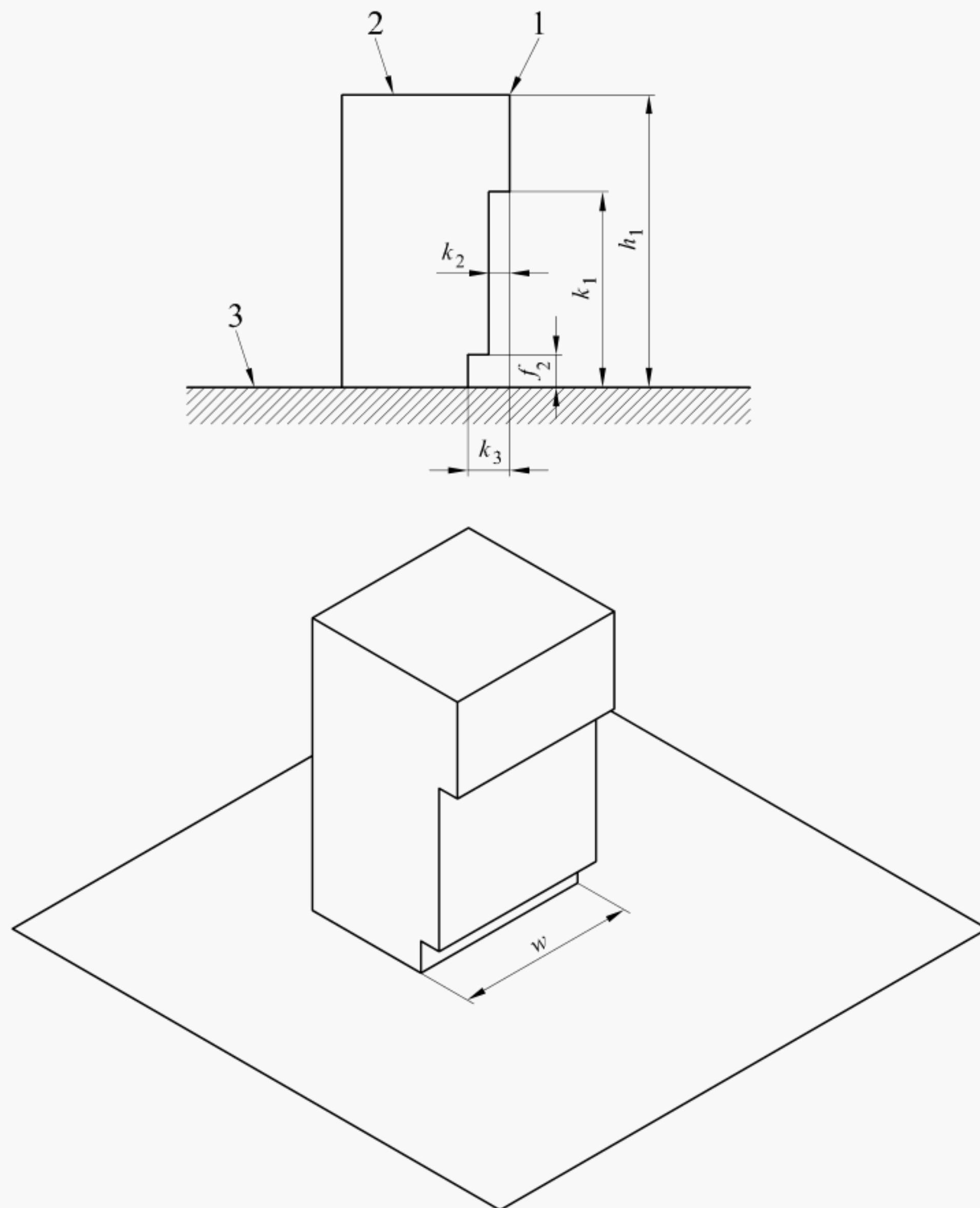
Figure 3 — Foot and knee clearance dimensions for standing position only



Key

- 1 front edge
- 2 top of the work surface
- 3 floor
- h_1 height to the top of the work surface
- k_1 height of knee clearance
- k_2 depth of knee clearance
- k_3 depth of foot clearance
- f_2 height of foot clearance
- w minimum legroom width

Figure 3 — Foot and knee clearance dimensions for standing position only



Key

- 1 front edge
- 2 top of the work surface
- 3 floor
- h_1 height to the top of the work surface
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- k_3 depth of foot clearance
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- w minimum legroom width

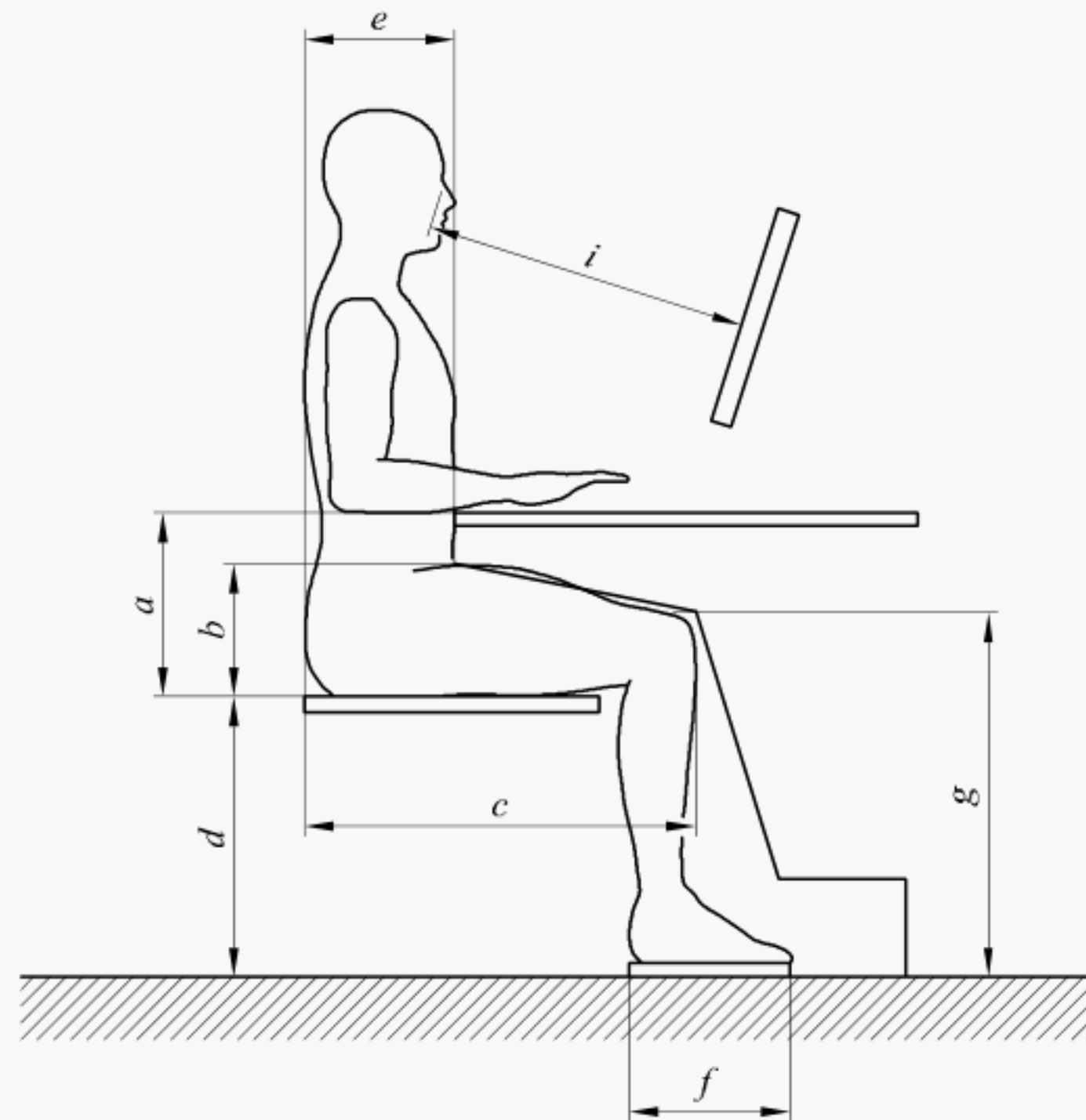
Figure 3 — Foot and knee clearance dimensions for standing position only

Table A.1 — Anthropometric data (including 30 mm shoe thickness) (continued)

Symbol		Dutch			Italian			French			German			Belgian			Swedish			British		
		5% female	95% male	95% female	5% female	95% male	95% female	5% female	95% male	95% female	5% female	95% male	95% female	5% female	95% male	95% female	5% female	95% male	95% female			
Dimension		Desk/table Dimensions																				
t ₁	(desk top thickness at front) = a - b	59	133	-	85	134	-	59	59	-	70	82	-	71	112	-	62	108	-	65	81	-
t ₂	(desk top thickness at 500mm) = a + d - g		188														124	209		92	153	
h ₁	(desk top height sitting) (see Figure A.3)	586	823								591	780					622	842		580	775	
h ₁	(desk top height standing) (see Figure A.4)	979	1230					963	1219		969	1215					987	1211		951	1208	
d ₁	(legroom depth at knee) (see Figure A.5) = c - e (using 95th%ile - 5th%ile within genders)	462		-	-	-	-	-	-	-	457		-	476		-	464	452	-	453	427	-

Source: PeopleSize 2008, Open Ergonomics Ltd

Note : All dimensions are in mm

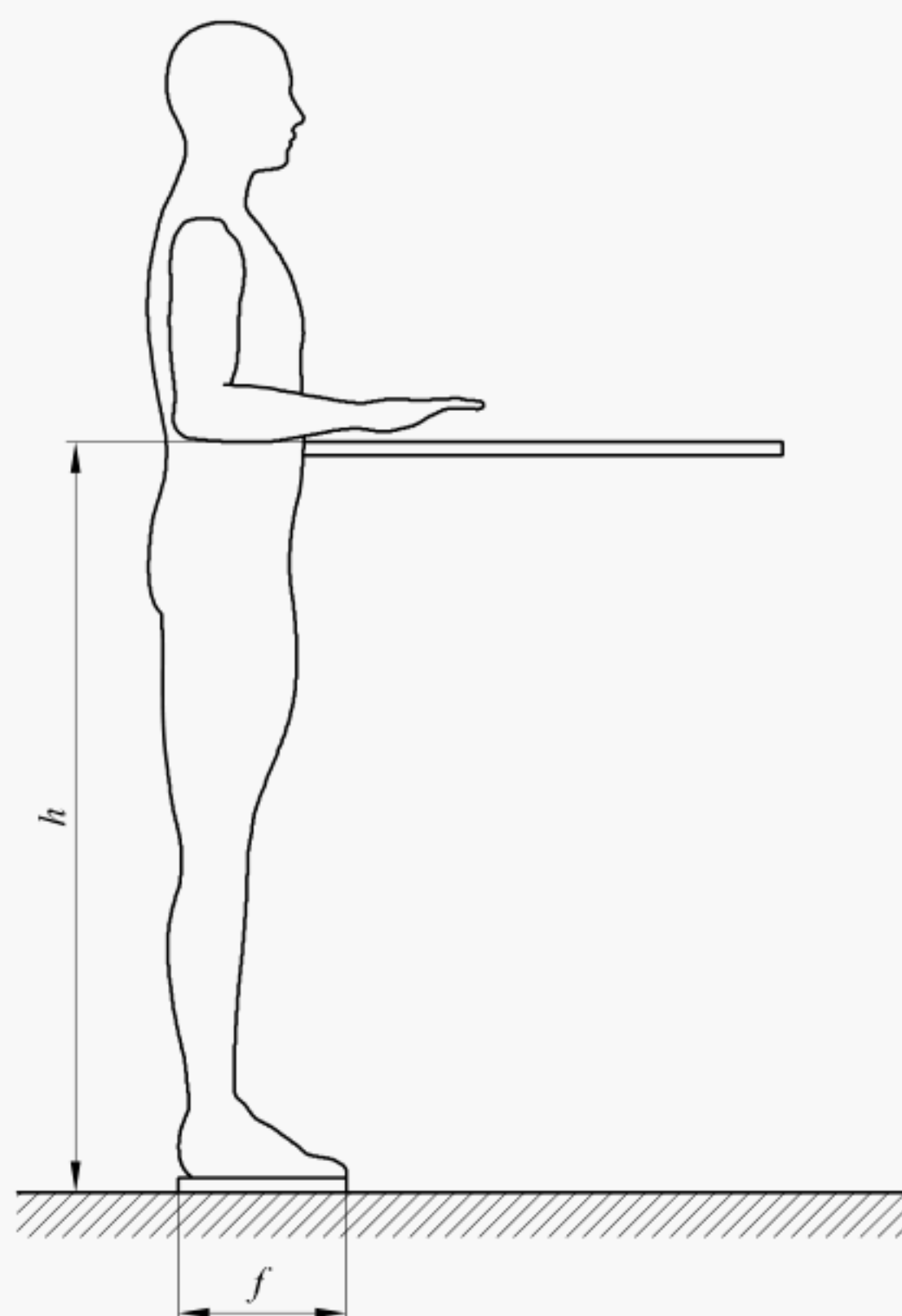


Key

- a dimension from seat to elbow
- b thigh thickness
- c dimension from posterior to knee
- d popliteal height
- e body thickness
- f foot length
- g top of knee height
- i eye to monitor distance

Figure A.1 — Dimensions for sitting posture

NOTE (i) Eye to monitor distance is = 450 mm to 750 mm (EN ISO 9241-5)

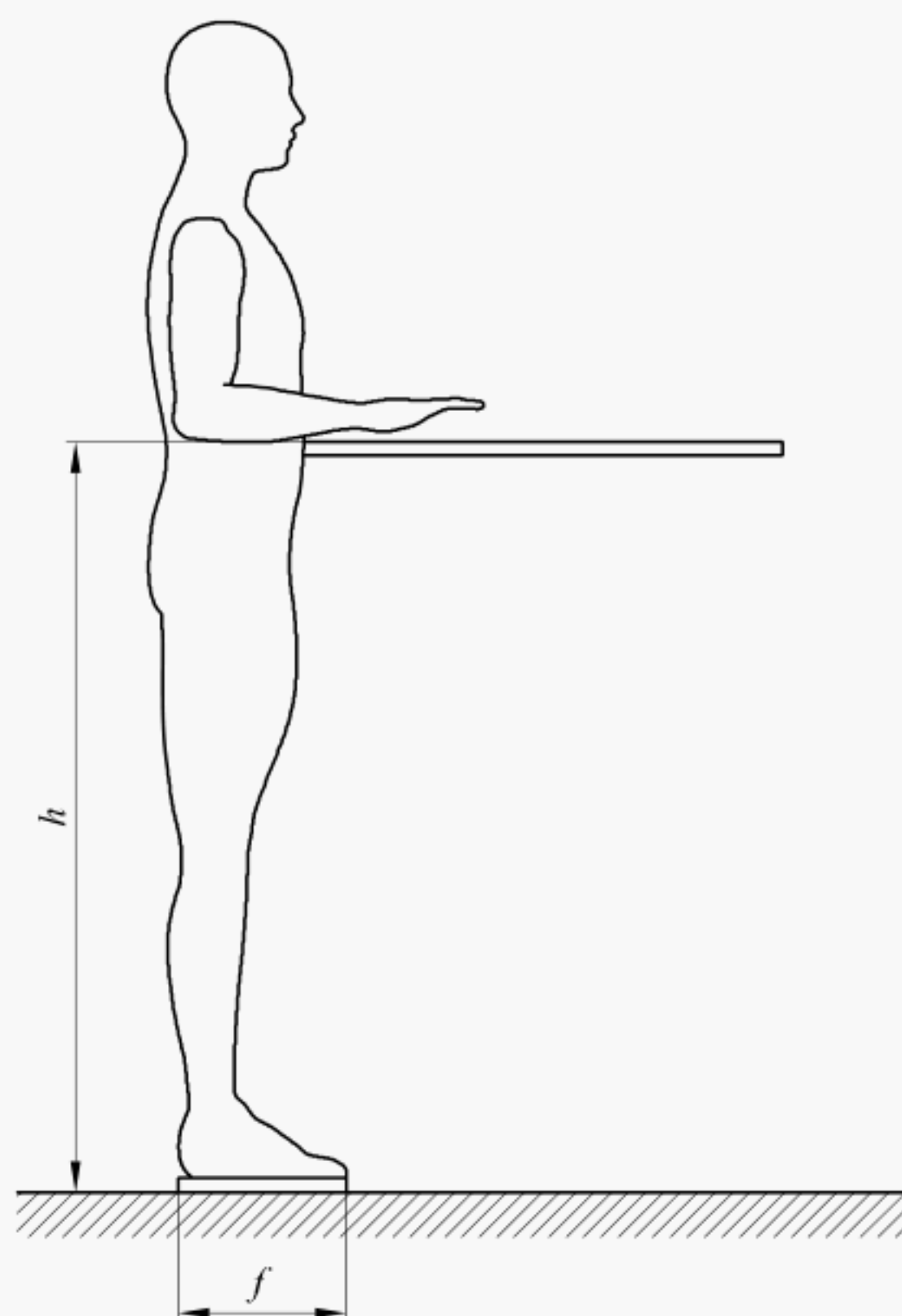


Key

- f foot length
- h elbow height-stand

Figure A.2 — Dimensions for standing posture

The calculations used in determining the dimension of tables/desk are shown below. It should be noted that these are theoretical approximate dimensions.

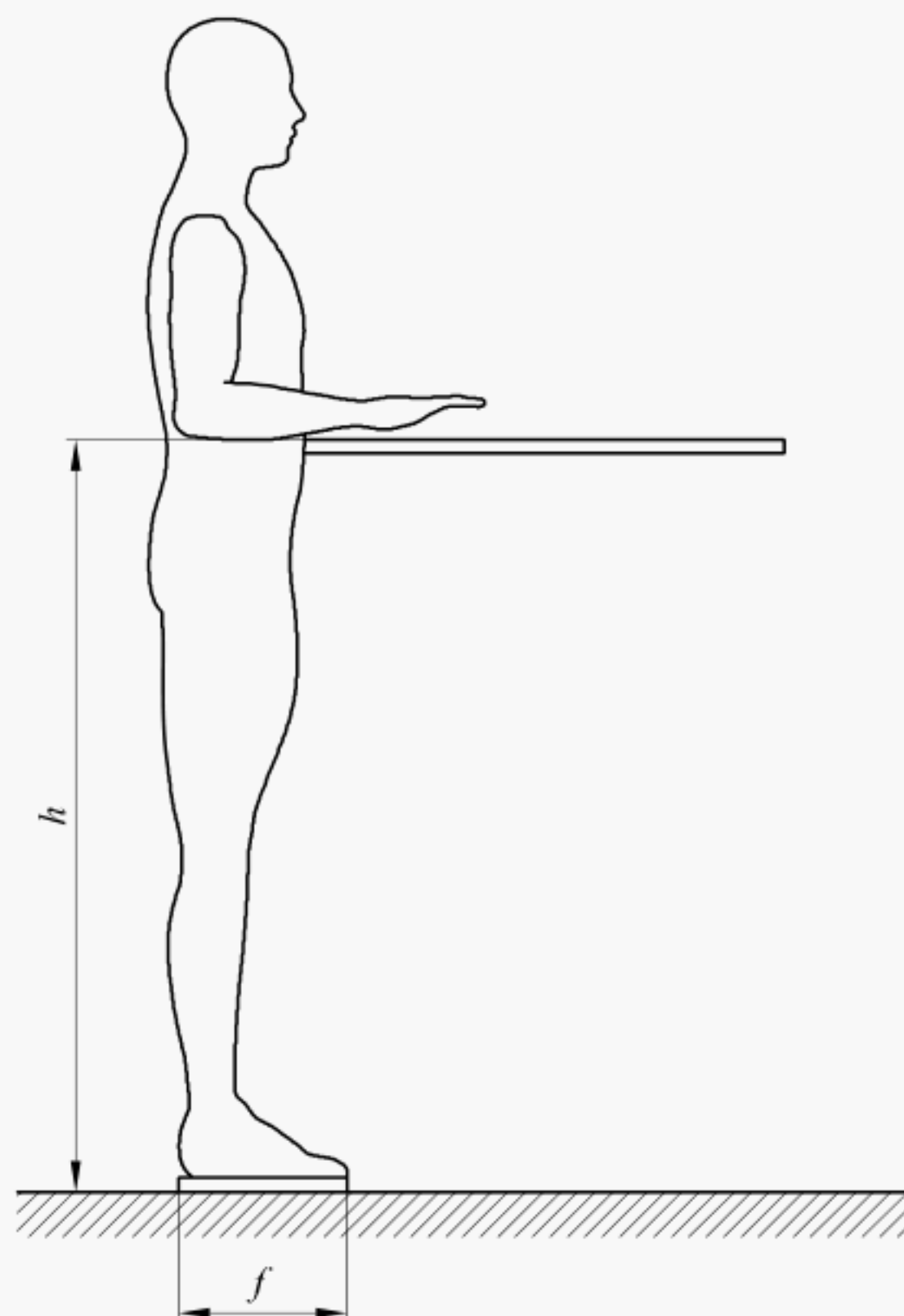


Key

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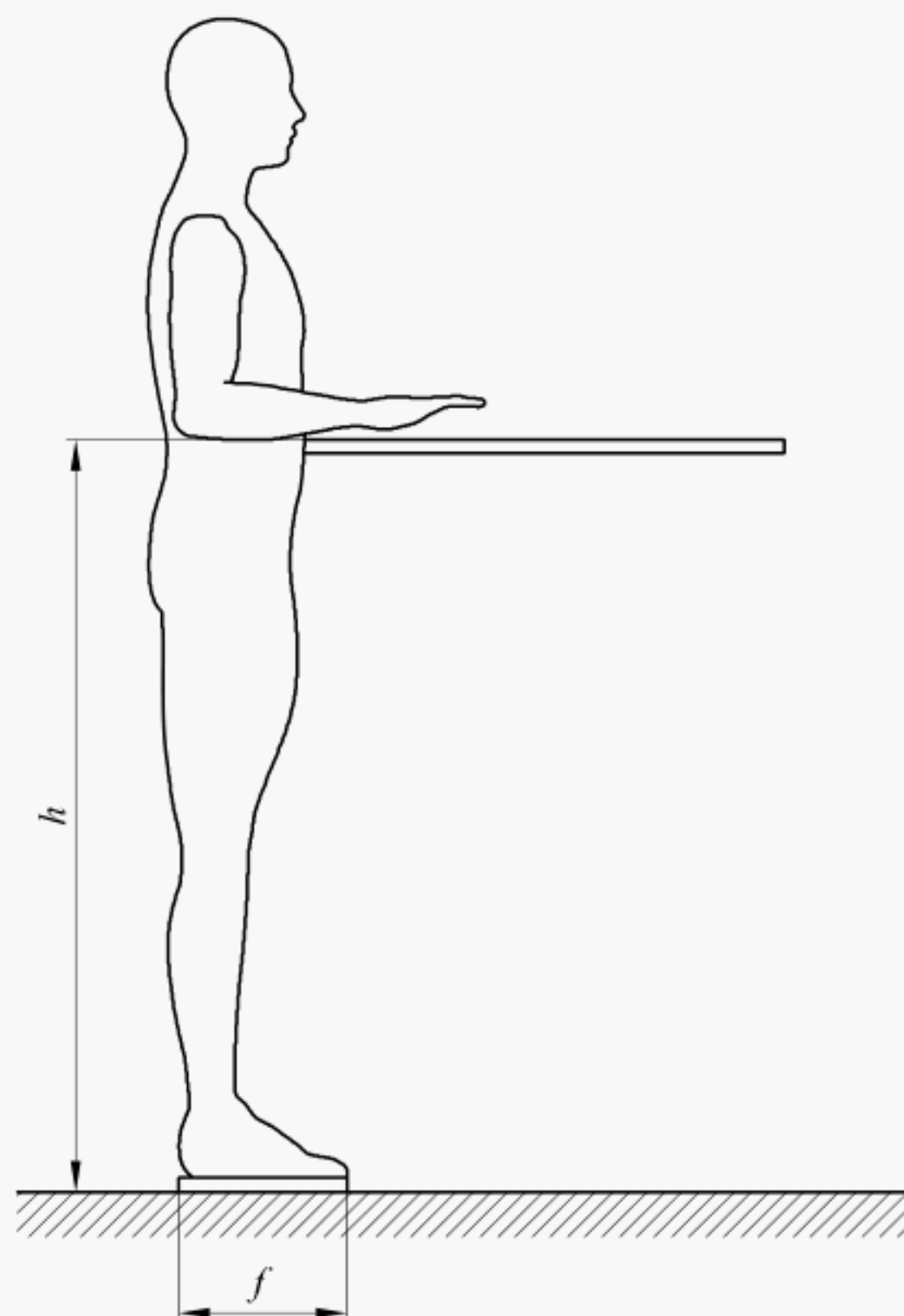


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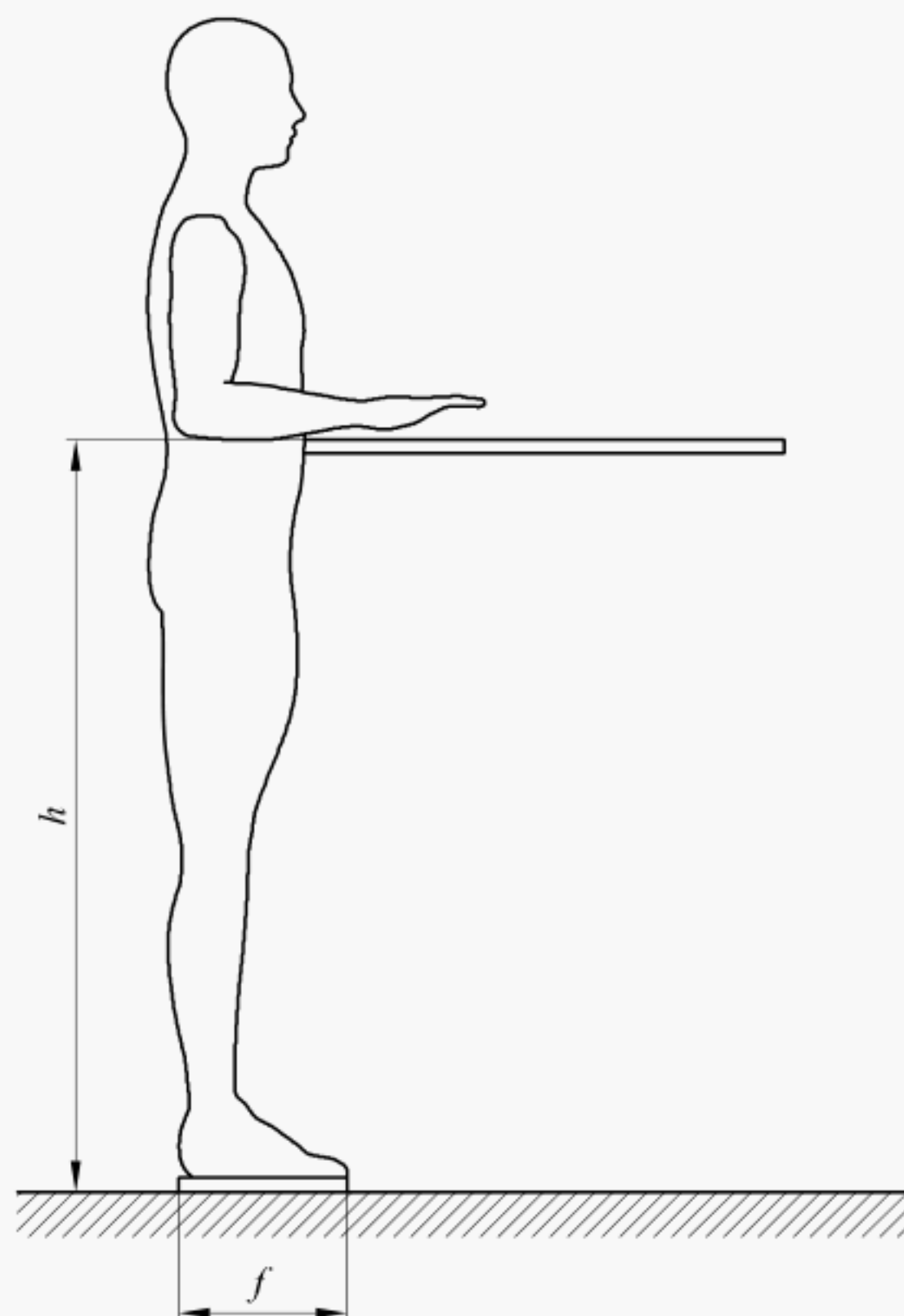


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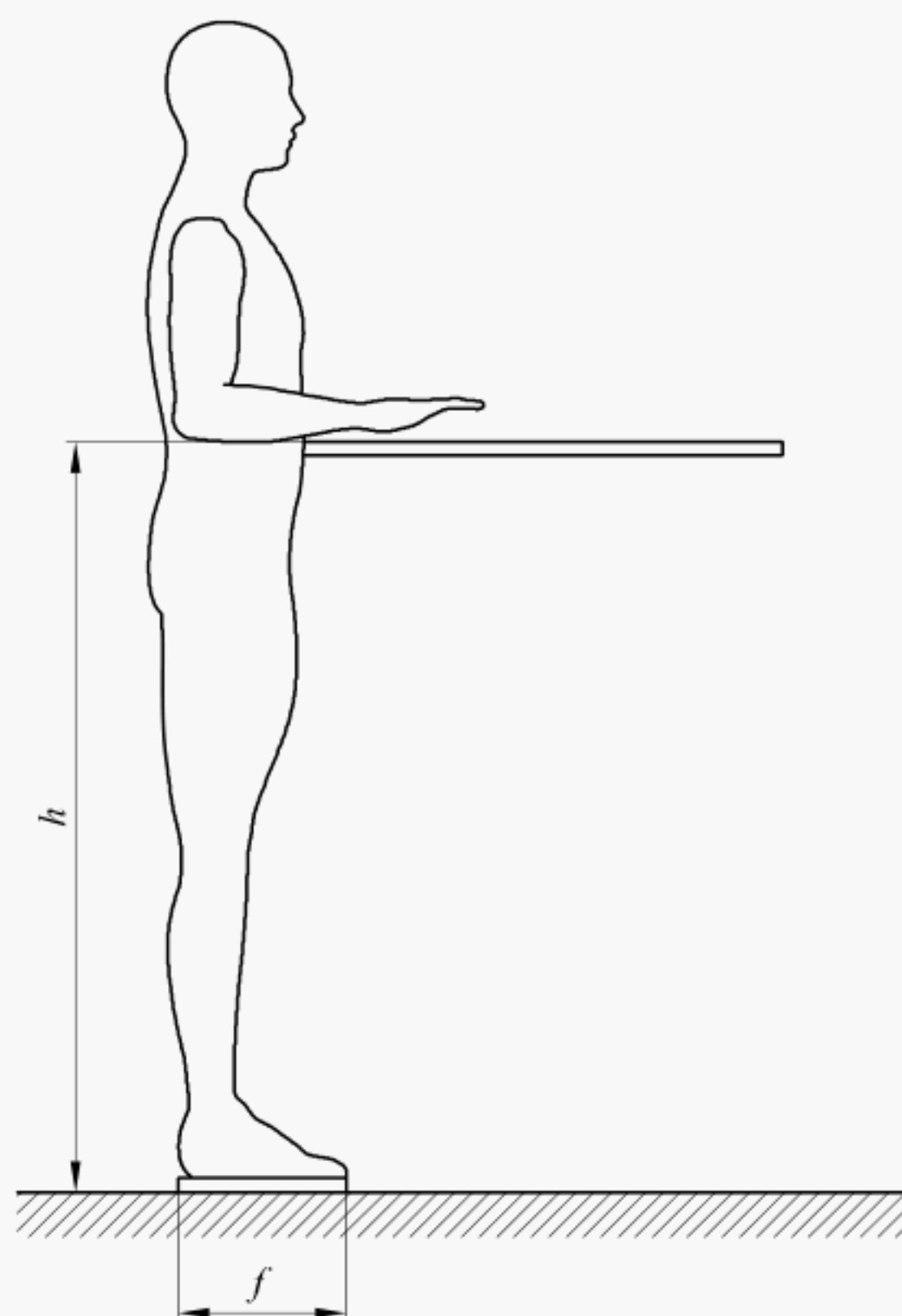


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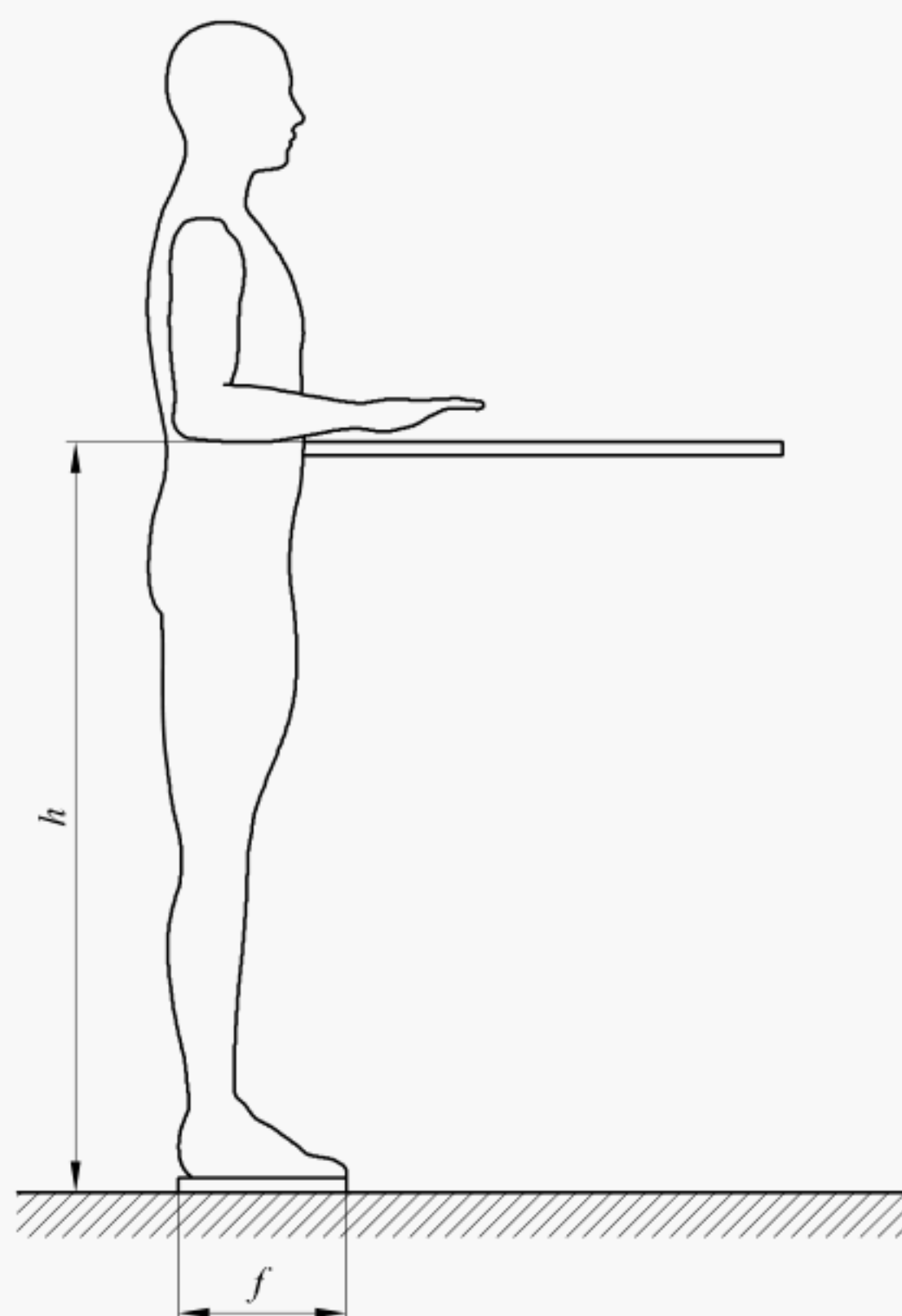


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