

BS EN 232:2012



BSI Standards Publication

Baths — Connecting dimensions

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National foreword

This British Standard is the UK implementation of EN 232:2012. It supersedes BS EN 232:2003 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee B/503, Sanitary appliances.

A list of organizations represented on this committee can be obtained on request to its secretary.

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ISBN 978 0 580 68818 8

ICS 91.140.70

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This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 November 2012.

Amendments issued since publication

Date	Text affected
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English Version

Baths - Connecting dimensions

Baignoires - Cotes de raccordement

Badewannen - Anschlussmaße

This European Standard was approved by CEN on 18 August 2012.

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Foreword

This document (EN 232:2012) has been prepared by Technical Committee CEN/TC 163 “Sanitary appliances”, 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of an identical text or by endorsement, at the latest by April 2013, and conflicting national standards shall be withdrawn at the latest by April 2013.

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 232:2003.

Since the previous edition, the text now includes more definition to the waste gauges in Annex A.1.

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1 Scope

This European Standard specifies requirements for the connecting dimensions of baths, regardless of the material used for their manufacture.

This European Standard applies to baths used for domestic purposes and complements the standards for baths made from different materials, the existing standards on tap ware and waste fittings (EN 200 and EN 274-1) in terms of their dimensional requirements.

NOTE Only dimensions are compulsory. The shape of the appliance in the figures is for illustration only; it in no way prejudices the shape of the appliance which is left to the initiative of the manufacturer.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 274-1, *Waste fittings for sanitary appliances – Part 1: Requirements*

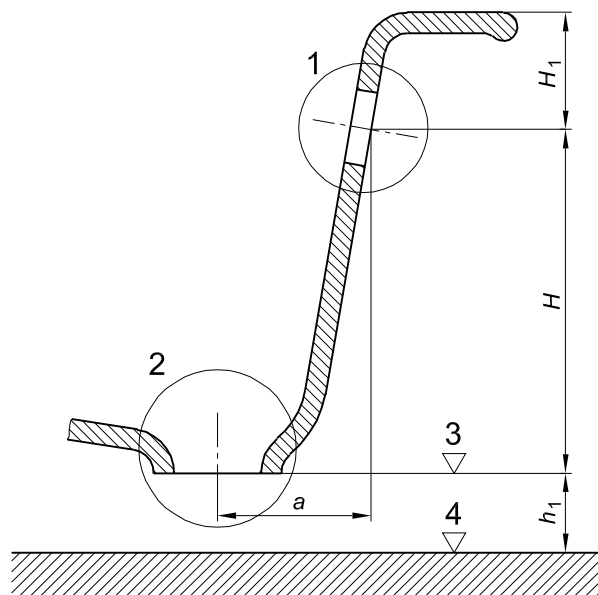
3 Connecting dimensions

3.1 Basic dimensions

The basic dimensions H , a , H_1 and h_1 shall comply with Table 1 to enable compatibility with waste fittings in accordance with EN 274-1.

Table 1 — Basic dimensions (see Figure 1)

Designation	Symbol	Values mm	Remarks
Vertical distance between the axis of the overflow hole, if provided, and the plane of the waste outlet hole	H	330 to 390	Standard type, for waste fitting in accordance with EN 274-1
		230 to 330	Other waste fitting in accordance with EN 274-1
		390 to 520	Other waste fitting in accordance with EN 274-1
		≥ 520	With a waste fitting specified or provided by the manufacturer
Horizontal distance between the axis of the waste outlet hole and the axis of the overflow hole, if provided	a	170 to 230	Waste fitting in accordance with EN 274-1
		110 to 170	Other waste fitting in accordance with EN 274-1
		> 230	With a waste fitting specified or provided by the manufacturer
Distance between the floor and the plane of the waste outlet hole measured at the centre line of the waste outlet hole	h_1	≥ 130	For fittings in accordance with EN 274-1. Can be reduced provided a 50 mm water seal trap can be accommodated
		≥ 70	Exclusively for countries which permit in their regulation the installation of baths without traps
Distance between the axis of the overflow hole, if provided, and the spillover	H_1	≥ 60	



Key

- 1 details shown in Figure 4
- 2 details shown in Figure 2
- 3 plane of the waste outlet hole
- 4 floor

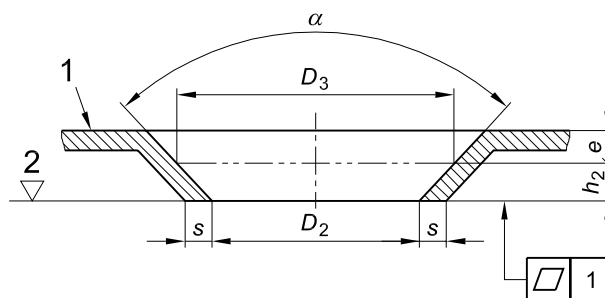
Figure 1 — Basic dimensions

3.2 Dimensions of the waste outlet hole

The dimensions of the waste outlet hole shall be as given in Table 2 to enable compatibility with EN 274-1 (see also Annex A).

Table 2 — Dimensions of the waste outlet hole (see Figure 2)

Designation	Symbol	Values mm	Remarks
Diameter of the waste outlet hole	D_2	52^{+3}_{-2}	
		90^{+3}_{-2}	
Distance between the contact diameter of the control gauge and the bottom of the bath around the waste outlet hole	e	≥ 2	
Contact diameter of the control gauge	D_3	70	When $D_2 = 52$ mm
		115	When $D_2 = 90$ mm
Contact cone angle	α	$\leq 120^\circ$	
Height between the contact diameter of the control gauge and the plane of the waste outlet hole	h_2	6 to 16	When $D_2 = 52$ mm
		6 to 25	When $D_2 = 90$ mm
Sealing surface for waste fitting	s	≥ 3	



Key

- 1 bottom of the bath around the waste outlet hole
- 2 plane of the waste outlet hole

Figure 2 — Waste outlet hole

3.3 Clearance around the waste outlet hole

The clearance around the waste outlet hole shall comply with the dimensions given in Table 3.

Table 3 — Clearance around the waste outlet hole (see Figure 3)

Designation	Symbol	Values mm	Remarks
Radius of the circular area which shall remain free for installation of the waste fitting	R	≥ 60	When $D_2 = 52$ mm
		≥ 80	When $D_2 = 90$ mm
Thickness of reinforcing material around the waste outlet hole	f	≤ 15	

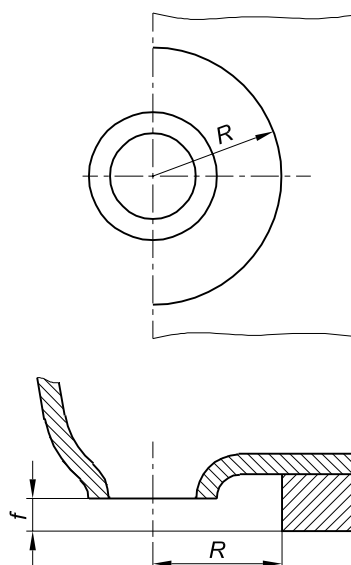


Figure 3 — Clearance around the waste outlet hole (example for rectangular bath)

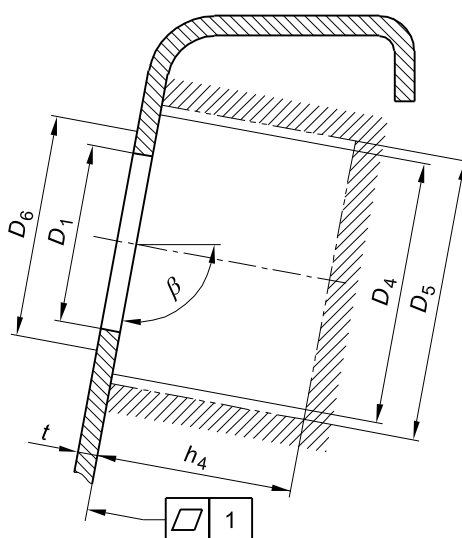
3.4 Dimensions and clearance around the overflow hole

The dimensions and the clearance around the overflow hole, if provided, shall comply with Table 4.

Table 4 — Dimensions and clearance around the overflow hole (see Figure 4)

Designation	Symbol	Values mm
Diameter of the overflow hole	D_1	52^{+3}_{-2}
Diameter of the flat area intended to accommodate the gasket on reverse side	D_4	≥ 75
Diameter of the clearance around the overflow hole intended for the overflow fitting	D_5	≥ 80
Depth of the clearance around the overflow hole intended for the overflow fitting	h_4	≥ 60
Thickness of the material within D_4	$t^{1)}$	2 to 10
Angle of flat area of D_4 in relation to the plane of the waste outlet hole	β	$(98 \pm 5)^\circ$
Diameter of the flat area intended to accommodate the gasket on the inside of the bath	D_6	≥ 65

¹⁾ The dimension t shall have a maximum variation of 1 mm



NOTE The flatness tolerance applies within D_4 .

Figure 4 — Dimensions and clearance around any overflow hole

3.5 Dimensions and clearance around tapholes

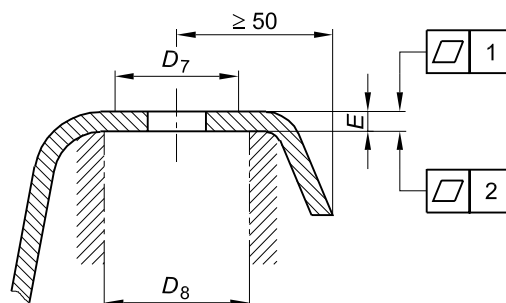
When baths are intended to accommodate rim-mounted tapware, the bath manufacturer shall specify the number of tap holes and their positions. The dimensions of flat areas and clearances around each hole shall be in accordance with Table 5.

Table 5 — Dimensions of flat areas and clearances for rim-mounted tapware (see Figure 5)

Designation	Symbol	Values mm
Diameter of the flat area intended to accommodate the tapware on the top side of the rim	D_7	≥ 65
Diameter of the flat area intended to accommodate the tapware on the reverse side of the rim	D_8	≥ 75
Thickness between top and reverse side within D_8	E	≤ 18

The dimension E shall have a maximum variation of 1 mm.

Dimensions in millimetres



NOTE The flatness tolerances apply within D_8 .

Figure 5 — Flat area and clearance for rim-mounted tapware

When a bath is intended to be used with combination taps (deck-mounted or with concealed body) the flat area on top of the rim shall be as specified in Table 6.

Table 6 — Flat area on top of the rim for deck-mounted combination taps

Inlet centres of mixer mm	Length of flat area mm	Width of flat area mm
150	≥ 200	> 65
180	≥ 230	> 65
200	≥ 270	> 65

Annex A (normative)

Determination of dimensions

A.1 Test apparatus

- Length and/or diameter measuring devices;
- Control gauges in accordance with Figures A.1 and A.2. Untoleranced dimensions are for reference only.

Dimensions in millimetres

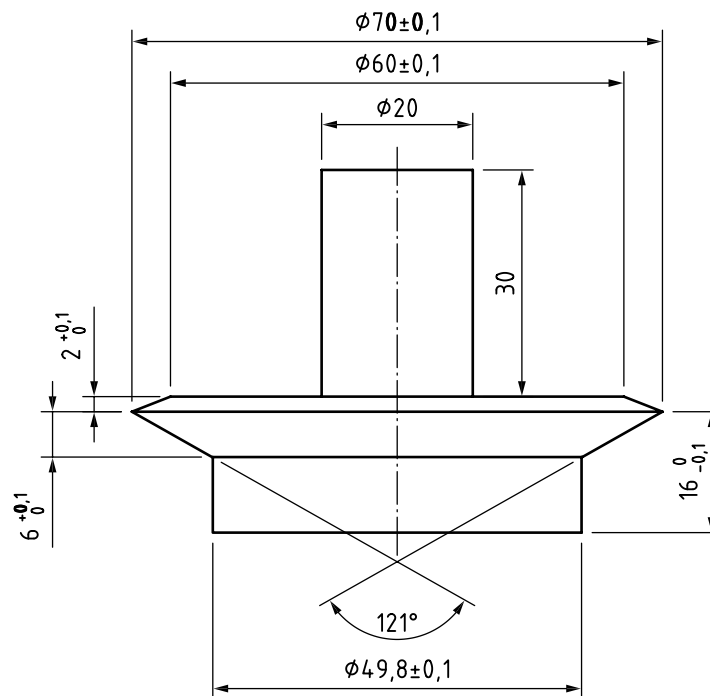


Figure A.1 — Control gauge $D_2 = 52$ mm

Dimensions in millimetres

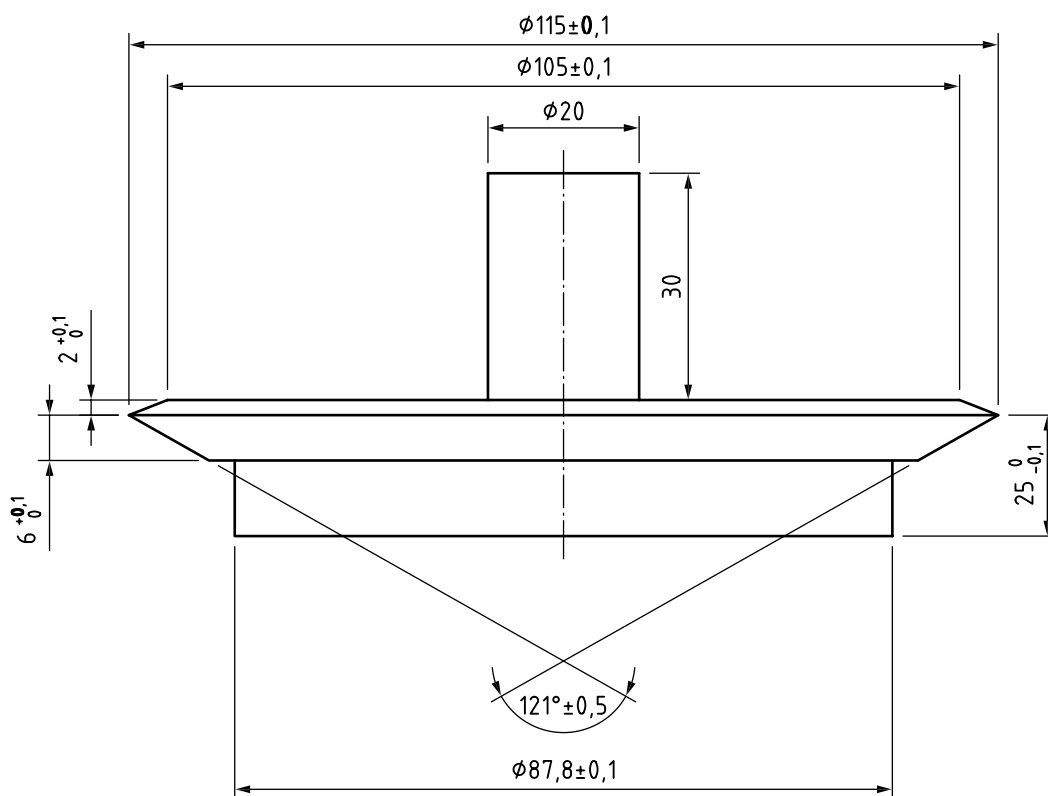


Figure A.2 — Control gauge $D_2 = 90$ mm

A.2 Determination of the fit of the control gauge in the waste outlet hole

Place the relevant control gauge in the waste outlet hole and verify that:

- the waste outlet of the bath can be fitted in the waste hole (dimension D_2 in Figure 2);
- the contact diameter of the control gauge (dimension D_3 in Figure 2) makes contact with or is ≤ 1 mm of making contact over its entire circumference;
- the cylindrical portion of the control gauge is level with or projecting below the plane of the waste outlet hole (dimension h_2 in Figure 2);
- the top surface of the control gauge is below the level of the bottom of the bath around the waste outlet hole (dimension e in Figure 2);
- the contact cone angle (angle α in Figure 2) is $\leq 120^\circ$.

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