

BS EN 31:2011



BSI Standards Publication

# Wash basins — Connecting dimensions

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**National foreword**

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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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English Version

## Wash basins - Connecting dimensions

Lavabos - Cotes de raccordement

Waschbecken - Anschlussmaße

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## Foreword

This document (EN 31:2011) 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of an identical text or by endorsement, at the latest by March 2012, and conflicting national standards shall be withdrawn at the latest by March 2012.

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## 1 Scope

This European Standard specifies the connecting dimensions of wash basins in accordance with EN 14688 regardless of materials used for their manufacture.

NOTE 1 Other connecting dimensions are permitted, e.g. special designs of wash basins, if the manufacturer supplies or recommends the appropriate fitting.

NOTE 2 The shape of the appliance in the figures is for illustration only; it in no way prejudices the final shape of the appliance, which is left to the initiative of the manufacturer.

## 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.

*EN 14688, Sanitary appliances - Wash basins - Functional requirements and test methods*

## 3 Tap holes

### 3.1 General

The connecting dimensions for tap holes are requirements for wash basins where it is intended to fit a tap.

### 3.2 Connecting dimensions of wash basins with one central tap hole

The connecting dimensions of wash basins with one central tap hole shall comply with Table 1.

Table 1 — Connecting dimensions of wash basins with one central tap hole (Figure 1)

Designation	Symbol	Dimensions mm
Diameter of the central tap hole (intended to accommodate a mixer tap)	$d_2^a$	$35^{+2}_{-1}$
Horizontal distance between the centre line of the central tap hole and the edge of the bowl	$g_1$	$\leq 80$
Distance from the centre line of the central tap hole to the back wall	$g_3$	$\geq 55$
Radius of a cylinder having the same centre line as the central tap hole at a depth 0 mm to 5 mm from the lower plane of the central tap hole	$r_1$	$\geq 25$
Radius of a cylinder having the same centre line as the central tap hole at a depth of minimum 5 mm from the lower plane of the central tap hole	$r_2$	$\geq 30$
Radius of a flat plane circular surface on the tap platform having the same centre as the central tap hole and intended to accommodate the tap	$r_3$	$\geq 32$
Thickness of the platform at the level of the zone concentric to the central tap hole	$s$	$\leq 18$
Horizontal distance between the centre line of the central tap hole and the centre line of the waste outlet hole	$t^b$	$\leq 170$
<p>a The diameter <math>30^{+2}_0</math> is permissible with <math>r_1 \geq 22</math> and <math>r_2 \geq 25</math>.</p> <p>b May not be applicable for wash basins of class CL 00 in accordance with EN 14688.</p>		

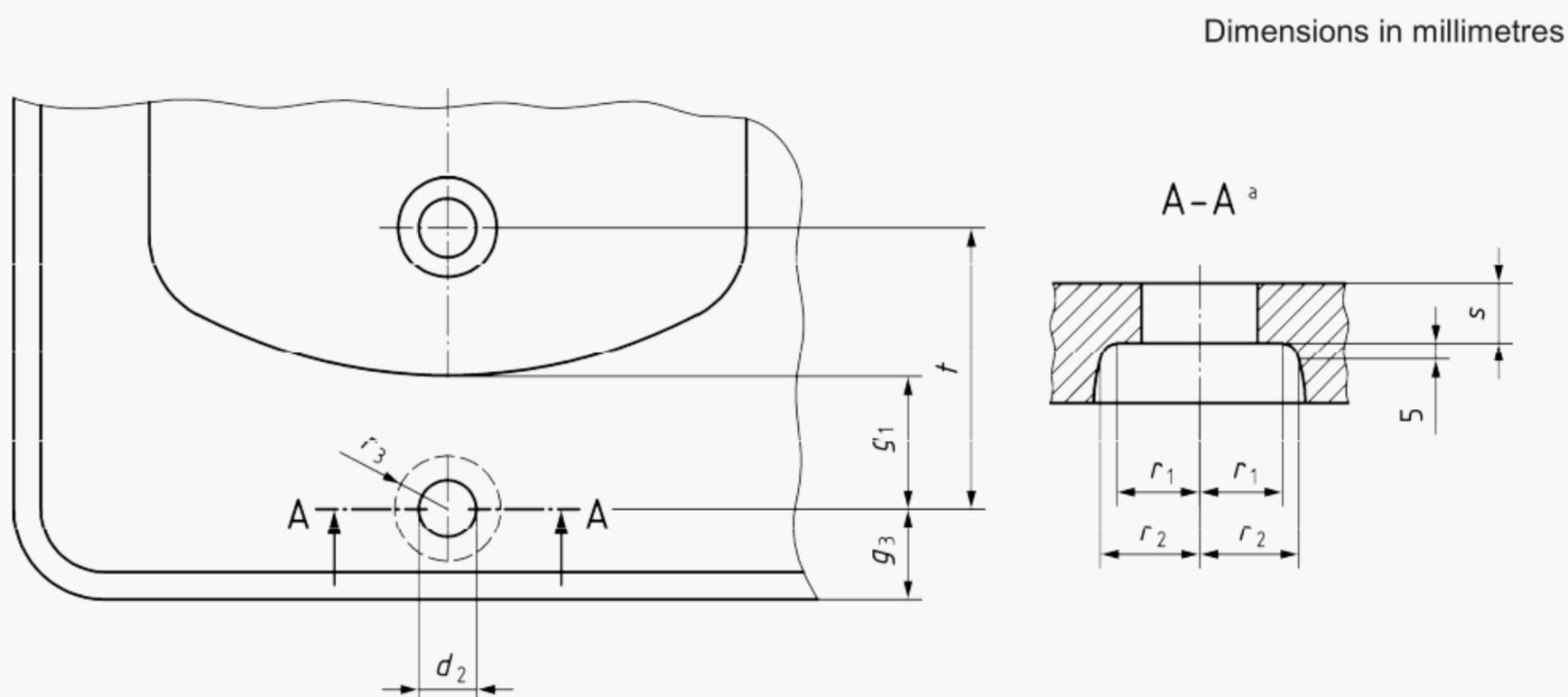


Figure 1 — Connecting dimensions of wash basins with one central tap hole

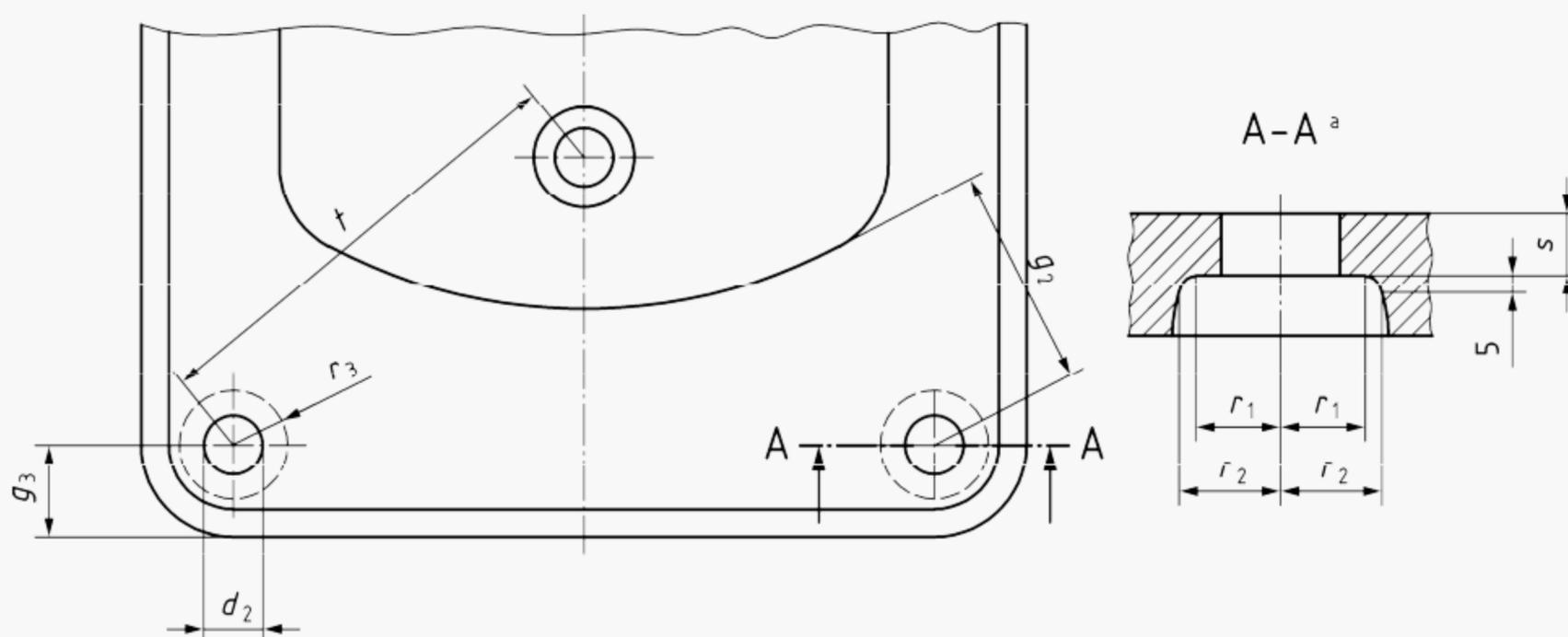
### 3.3 Connecting dimensions of wash basins with side tap hole(s)

The connecting dimensions of wash basins with one or two tap holes for side tap(s) shall comply with Table 2.

**Table 2 — Connecting dimensions of wash basins with side tap hole(s) (Figure 2)**

Designation	Symbol	Dimensions mm
Diameter of the tap hole(s) (intended to accommodate mixer tap(s))	$d_2^a$	$35^{+2}_{-1}$
Shortest horizontal distance between the centre line of the tap hole(s) and the edge of the bowl	$g_2$	$\leq 65$
Distance from the centre line of the tap hole(s) to the back wall	$g_3$	$\geq 55$
Radius of a cylinder having the same centre line as the tap hole at a depth 0 mm to 5 mm from the lower plane of the tap hole	$r_1$	$\geq 25$
Radius of a cylinder having the same centre line as the tap hole at a depth of minimum 5 mm from the lower plane of the tap hole	$r_2$	$\geq 30$
Radius of a flat plane circular surface on the tap platform having the same centre as the tap hole and intended to accommodate the tap	$r_3$	$\geq 32$
Thickness of the platform at the level of the zone concentric to the tap hole(s)	$s$	$\leq 18$
Horizontal distance between the centre line of the tap hole(s) and the centre line of the waste outlet hole	$t^b$	$\leq 170$
<p><sup>a</sup> The diameter <math>30^{+2}_0</math> is permissible with <math>r_1 \geq 22</math>, <math>r_2 \geq 25</math> and <math>r_3 \geq 30</math> (intended to accommodate pillar tap(s)).</p> <p><sup>b</sup> May not be applicable for wash basins of class CL 00 in accordance with EN 14688.</p>		

Dimensions in millimetres



**Figure 2 — Connecting dimensions of wash basins with two side tap holes**

### 3.4 Connecting dimensions of wash basins with three tap holes

The connecting dimensions of wash basins with three tap holes shall comply with Table 3.

**Table 3 — Connecting dimensions of wash basins with three tap holes (Figure 3)**

Designation	Symbol	Dimensions mm
Diameter of outer tap holes	$d_1$	$30^{+2}_0$
Diameter of the central tap hole	$d_2$	$35^{+2}_{-1}$
Distance from the centre line of the central tap hole to the centre line of the two outer tap holes	$e$	0 to 15
Distance between the centre lines of the two outer tap holes	$f$	$200 \pm 4$
Horizontal distance between the centre line of the central tap hole and the edge of the bowl	$g_1$	$\leq 80$
Distance from the centre line of the central tap hole to the back wall	$g_3$	$\geq 55$
Shortest horizontal distance between the centre lines of the outer tap holes and the edge of the bowl when only the two outer tap holes are used	$g_4$	$\leq 65$
Radius of a cylinder having the same centre line as the central tap hole at a depth 0 mm to 5 mm from the lower plane of the tap hole	$r_1$	$\geq 25$
Radius of a cylinder having the same centre line as the central tap hole at a depth of minimum 5 mm from the lower plane of the central tap hole	$r_2$	$\geq 30$
Radius of a flat plane circular surface on the tap platform having the same centre as the central tap hole and intended to accommodate the tap	$r_3$	$\geq 32$
Radius of a flat plane circular surface on the tap platform having the same centre as the outer tap holes and intended to accommodate the side valves	$r_4$	$\geq 30$
Thickness of the platform at the level of the zone concentric to the tap holes	$s$	$\leq 18$
Horizontal distance between the centre line of the central tap hole and the centre line of the waste outlet hole	$t^a$	$\leq 170$
<sup>a</sup> May not be applicable for wash basins of class CL 00 in accordance with EN 14688.		

Dimensions in millimetres

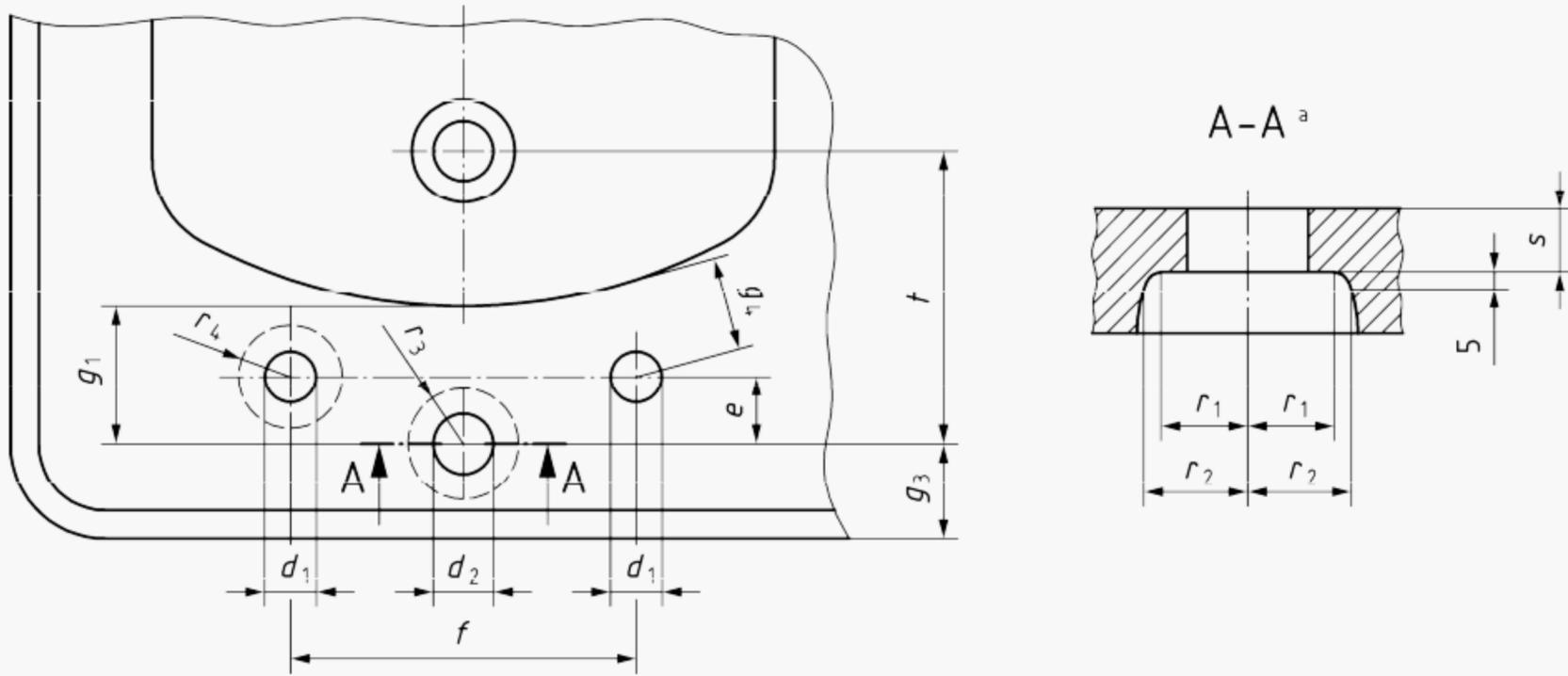


Figure 3 — Connecting dimensions of wash basins with three tap holes

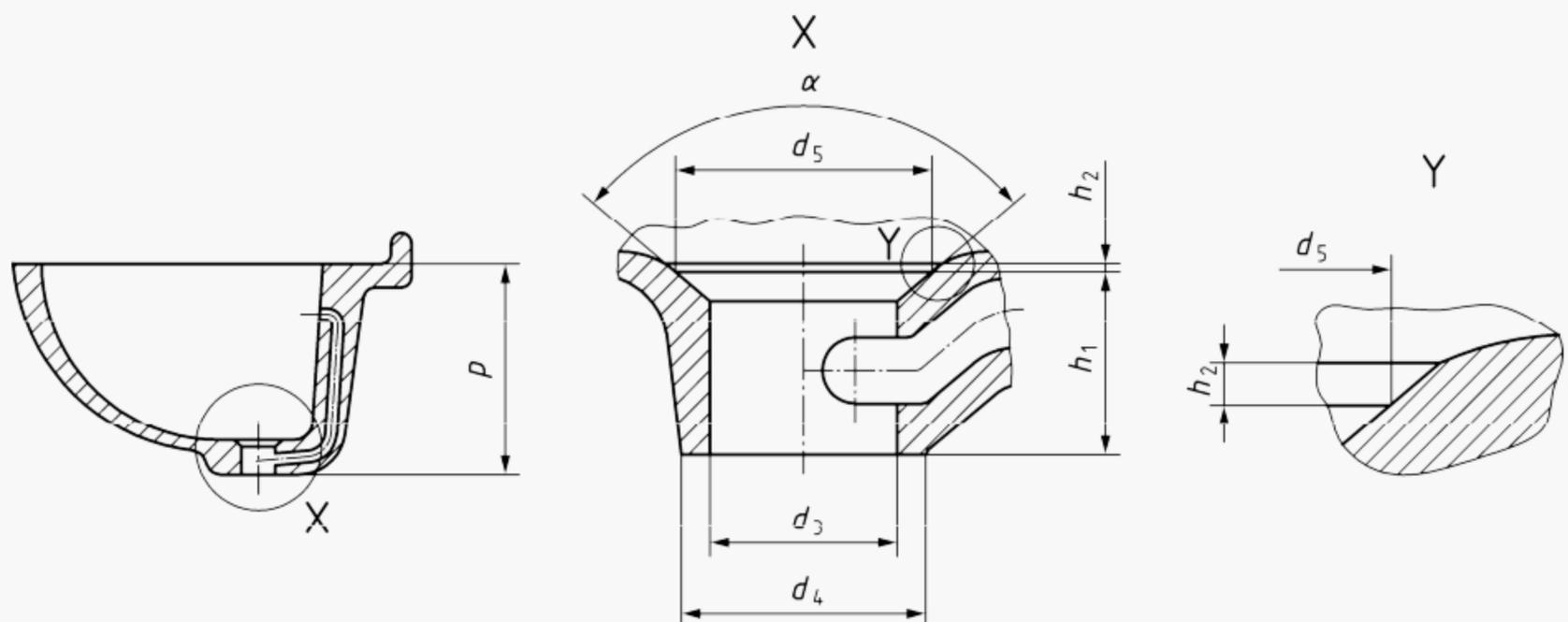
## 4 Waste outlet hole(s)

### 4.1 Connecting dimensions of waste outlet hole(s) with integral overflow

The connecting dimensions of the waste outlet hole(s) with integral overflow shall comply with the dimensions given in Table 4.

**Table 4 — Connecting dimensions of the waste outlet hole with integral overflow (Figure 4)**

Designation	Symbol	Dimension mm
Bore of the waste outlet hole	$d_3$	$46^{+2}_{-3}$
Diameter of the base for the seal between the waste outlet hole and the waste fitting	$d_4$	$\geq 60$
Reference diameter to measure the height of the waste outlet hole ( $h_1$ )	$d_5$	63
Height of the waste outlet hole measured between the reference diameter $d_5$ and the base for the seal	$h_1$	$45^{0}_{-5}$
Height measured between the reference diameter $d_5$ and the bottom of the bowl	$h_2$	$\geq 2$
Vertical distance between the tap platform and the base for the seal	$p$	$\leq 250$
Cone angle of the upper section of the waste outlet hole	$\alpha$	$100^{\circ}^{0}_{-5}$



**Figure 4 — Dimensions of the waste outlet hole for wash basins with integral overflow**

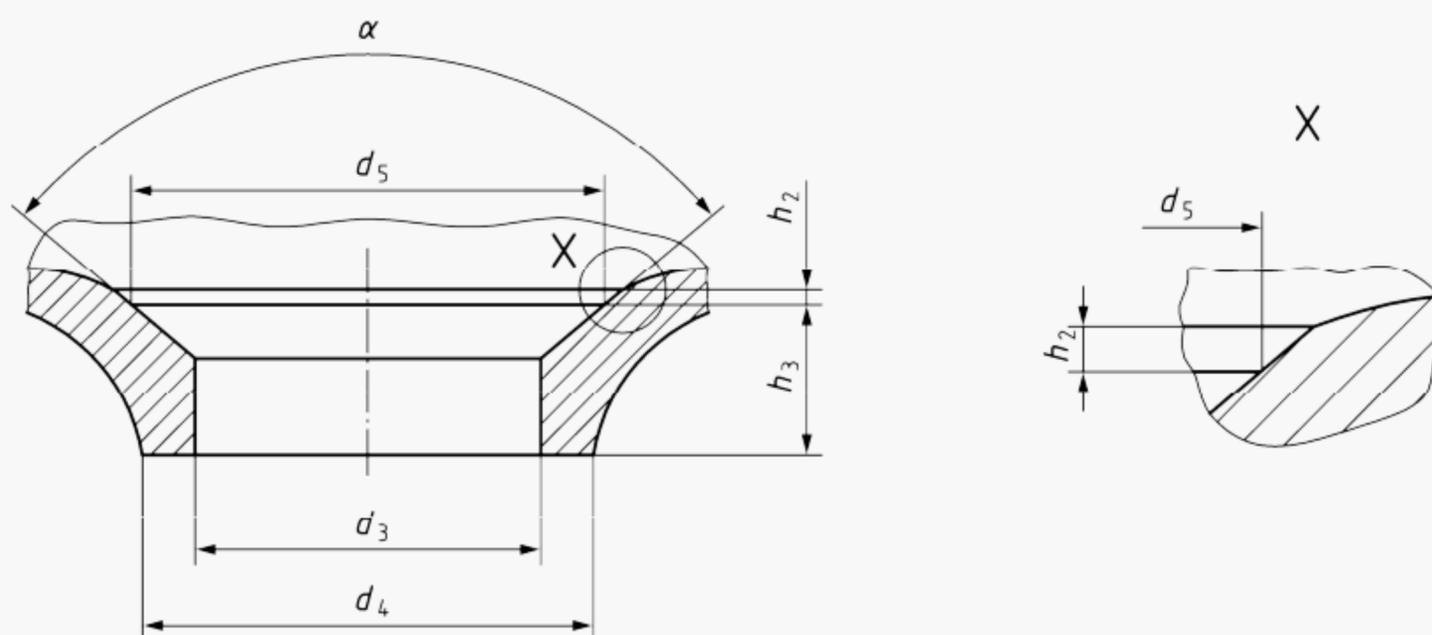
NOTE To verify the connecting dimensions in accordance with Table 4, it is recommended to use a gauge in accordance with Annex A.

## 4.2 Connecting dimensions of waste outlet hole without integral overflow

The connecting dimensions of the waste outlet hole(s) without integral overflow shall comply with the dimensions given in Table 5.

**Table 5 — Connecting dimensions of the waste outlet hole (s) without integral overflow (Figure 5)**

Designation	Symbol	Dimension mm
Bore of the waste outlet hole	$d_3$	$46^{+2}_{-3}$
Diameter of the base for the seal between the waste outlet hole and the waste fitting	$d_4$	$\geq 60$
Reference diameter to measure the height of the waste outlet hole ( $h_3$ )	$d_5$	63
Height measured between the reference diameter $d_5$ and the bottom of the bowl	$h_2$	$\geq 2$
Height of the waste outlet hole measured between the reference diameter $d_5$ and the base for the seal	$h_3^a$	$20^{0}_{-5}$
Cone angle of the upper section of the waste outlet hole	$\alpha$	$100^{0}_{-5}$
<sup>a</sup> The height $h_3 = 45^{0}_{-5}$ is permissible.		



**Figure 5 — Dimensions of the waste outlet hole for wash basins without integral overflow**

**NOTE** To verify the connecting dimensions in accordance with Table 5, it is recommended to use a gauge in accordance with Annex A.

## 5 Fixing dimensions of wall-hung wash basins

The fixing dimensions of wall-hung wash basins shall comply with the dimensions given in Table 6.

**Table 6 — Fixing dimensions of wall-hung wash basins**

Designation	Width of the wash basin mm	Figure	Symbol	Dimension mm
Horizontal distance between the centre lines of the two fixing holes	< 530	6	<i>n</i>	In accordance with the manufacturer's specification
	≥ 530 and ≤ 750			280 ± 10
	> 750	6, 7, 8, 9		280 ± 10
Smallest length of a fixing hole	< 530	6	<i>m</i> <sub>1</sub>	In accordance with the manufacturer's specification
	≥ 530			≥ 28
Smallest width of a fixing hole	< 530	6	<i>m</i> <sub>2</sub>	In accordance with the manufacturer's specification
	≥ 530			20 ± 2

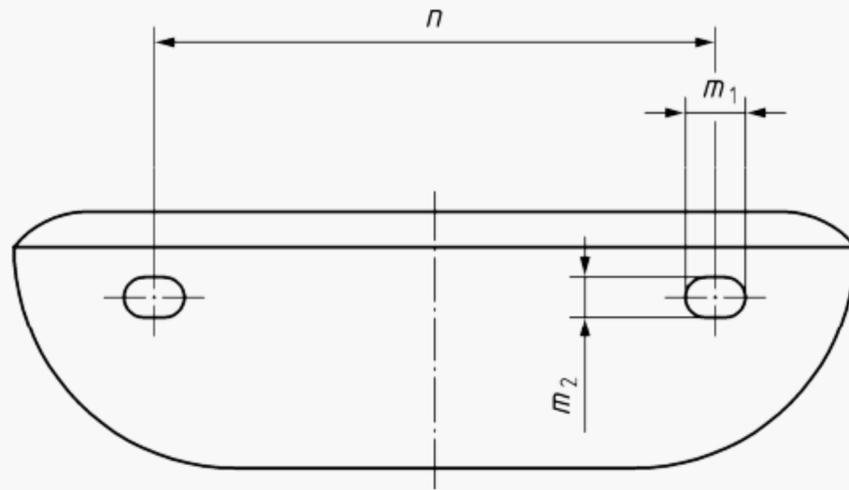


Figure 6 — Fixing dimensions of wall-hung wash basins

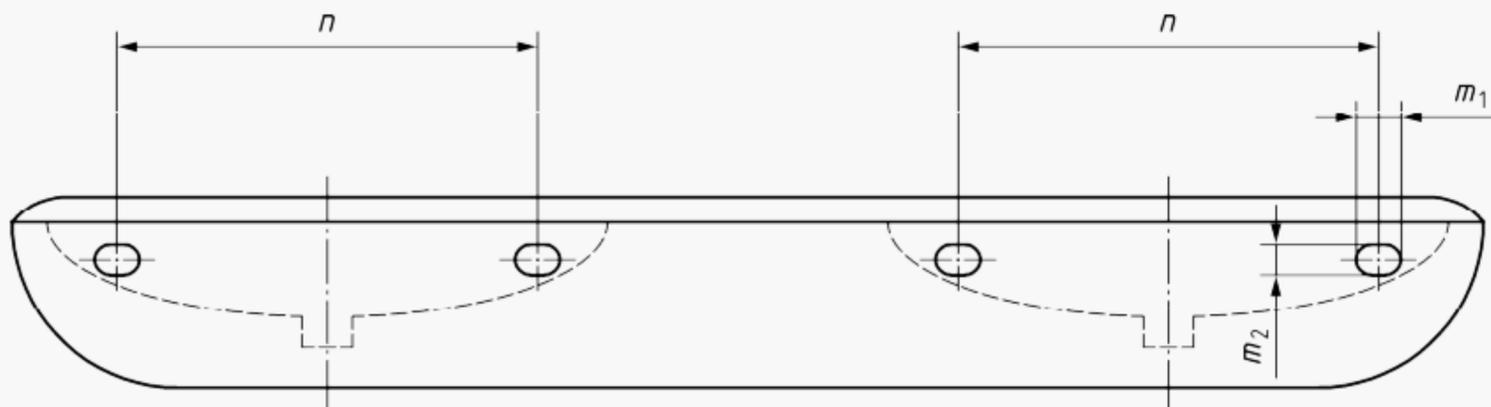


Figure 7 — Example showing four fixing holes on a wash basin with two bowls having a width > 750 mm

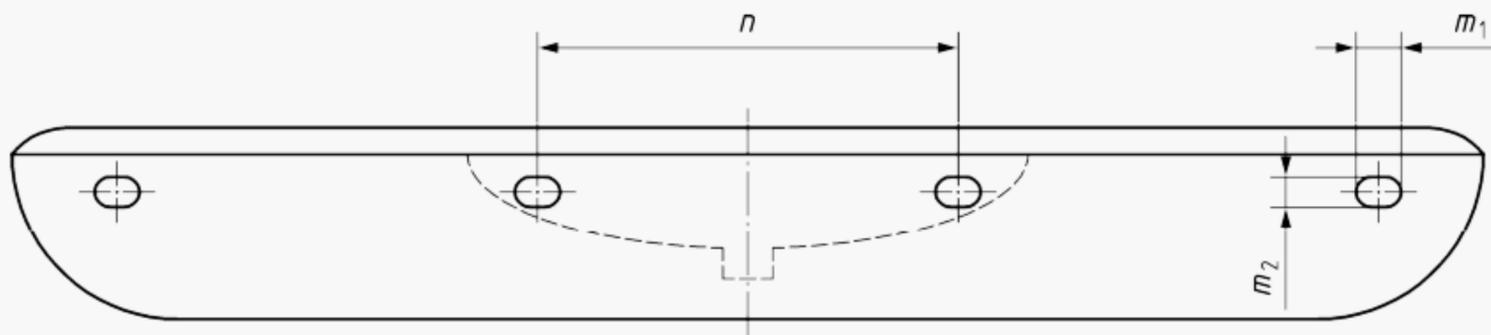


Figure 8 — Example showing four fixing holes on a wash basin with one bowl having a width > 750 mm

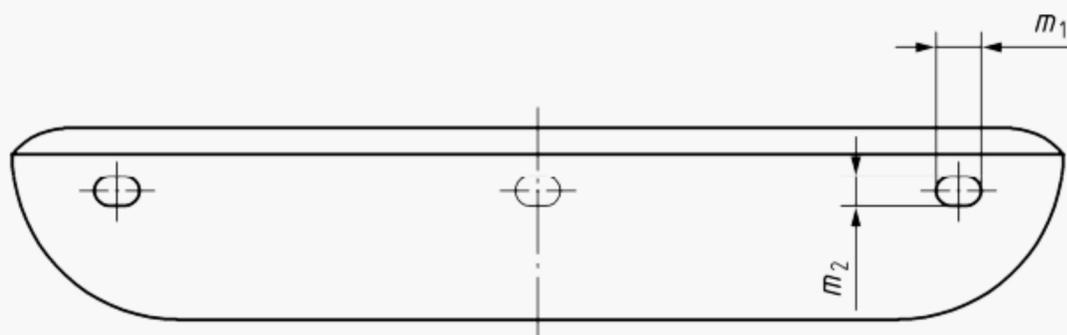


Figure 9 — Example showing three fixing holes on a wash basin having a width > 750 mm

## Annex A (informative)

### Example of gauge for measuring the connecting dimensions of waste outlet holes

Dimensions in millimetres

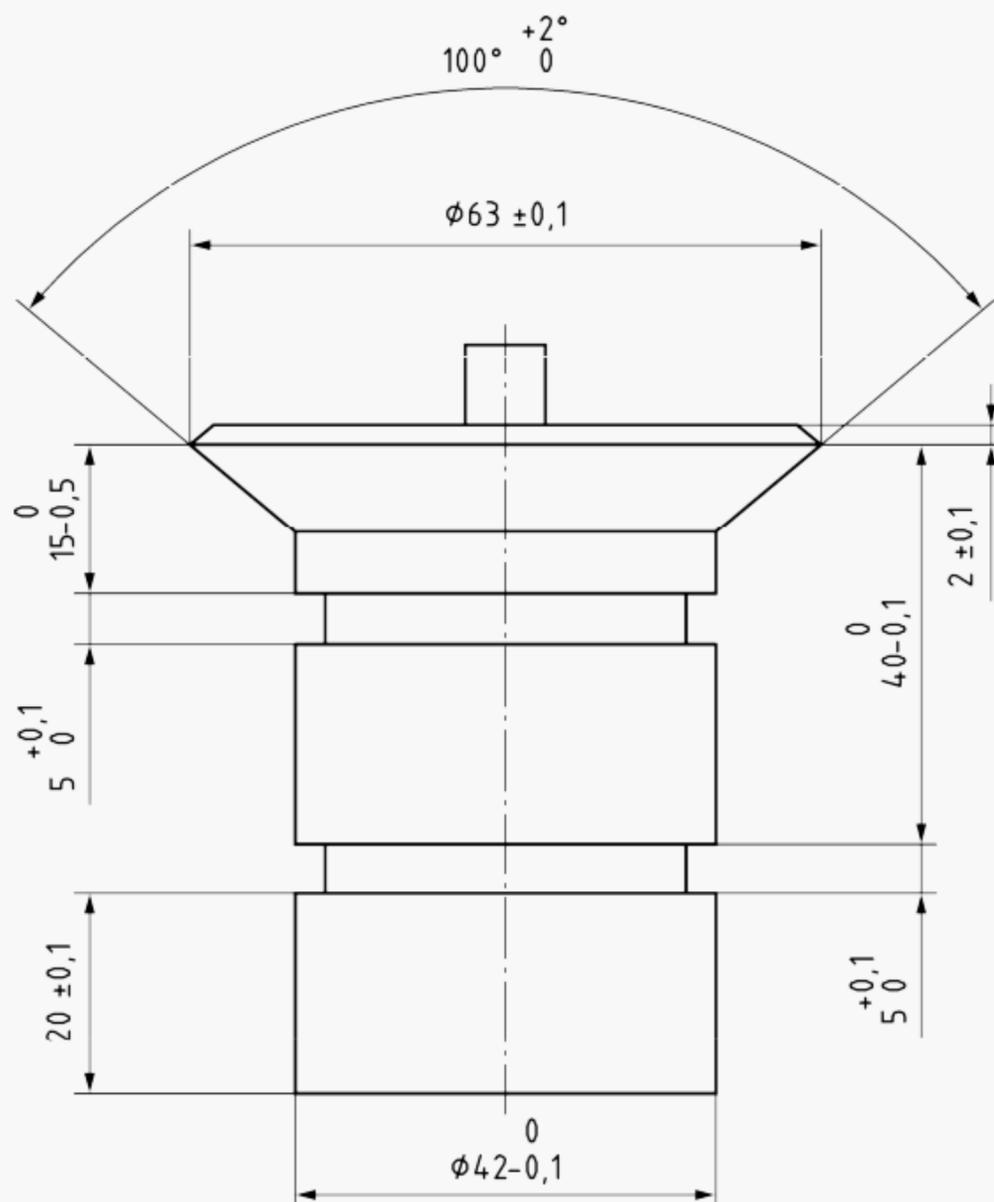


Figure A.1 — Example of a gauge to verify the connecting dimensions of waste outlet holes with or without integral overflow





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