



SLOVENSKI STANDARD

SIST EN 274-1:2002

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SIST EN 411:1998

Fazonski deli za odpadno vodo za sanitarne naprave – 1. del: Zahteve

Waste fittings for sanitary appliances – Part 1: Requirements

Ablaufgarnituren für Sanitärausstattungsgegenstände - Teil 1: Anforderungen

Dispositifs de vidage des appareils sanitaires - Partie 1: Exigences

Ta slovenski standard je istoveten z: EN 274-1:2002

ICS:

91.140.70	Sanitarne naprave	Sanitary installations
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English version

Waste fittings for sanitary appliances - Part 1: Requirements

Dispositifs de vidage des appareils sanitaires - Partie 1:
Exigences

Ablaufgarnituren für Sanitärausstattungsgegenstände - Teil
1: Anforderungen

This European Standard was approved by CEN on 23 December 2001.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 165, "Wastewater engineering", the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by July 2002, and conflicting national standards shall be withdrawn at the latest by July 2002.

Together with Parts 2 and 3 of this standard, this European Standard supersedes EN 274:1992, EN 329:1994 and EN 411:1995.

The other parts of the European Standard contain the necessary statements on testing and quality control of waste fittings for sanitary appliances.

Annex A is informative.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

STANDARD PREVIEW
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1 Scope

This standard specifies the dimensional, performance, materials and marking requirements for waste outlets, traps and overflows for kitchen sinks, shower trays, wash basins, bidets and baths which are connected to gravity drainage systems, whatever the purpose of the building.

This standard does not specify requirements for waste outlets, traps and overflows which are integral with sanitary appliances.

NOTE All figures in this standard are diagrammatic only.

This standard does not cover the possible effect of aggressive drain cleaning materials on products.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 248, *Sanitary tapware - General specification for electrodeposited coatings of NiCr*.

EN 274-2:2002, *Waste fittings for sanitary appliances - Part 2: Test methods*.

EN 274-3, *Waste fittings for sanitary appliances - Part 3: Quality control*.

EN 476:1997, *General requirements for components used in discharge pipes, drains and sewers for gravity systems*.

EN 12056-1, *Gravity drainage systems inside buildings - Part 1: General and performance requirements*.

EN 12056-2, *Gravity drainage systems inside buildings - Part 2: Sanitary pipework, layout and calculation.*

ISO 228-1, *Pipe threads where pressure-tight joints are not made on the threads - Part 1: Dimensions, tolerances and designation.*

3 Terms and definitions

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

3.1

waste outlet

fitting through which the water is evacuated from the sanitary appliance, which can be sealed by means of a flap or plug and can be equipped with a fixed or a removable grille

3.2

overflow

fitting which allows the evacuation of excess water when a sanitary appliance is filled above a certain level

3.3

trap

fitting which provides a hydraulic seal between the waste outlet and the discharge pipe in order to prevent the entry of foul air from the discharge pipe into the building, without obstructing the discharge of the wastewater

4 Requirements

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4.1 General

Waste outlets, traps and overflows enable the functioning of sanitary appliances. They shall be capable of being connected to drainage pipework systems in accordance with EN 12056-1 and EN 12056-2.

4.2 Appearance of surfaces

When viewed without magnification, the internal and external surfaces of the waste fittings shall be smooth, free from grooving, blistering or any other surface defects likely to impair their functioning.

The appearance of visible electrodeposited NiCr coatings shall comply with EN 248.

4.3 Materials

Waste outlets and traps shall be manufactured from materials which withstand intermittent contact with domestic waste water with a temperature range from $(20 \pm 5) ^\circ\text{C}$ to $95_{-2}^0 ^\circ\text{C}$ when tested in accordance with clause 3 of EN 274-2:2002. Waste outlets and traps made of only metallic materials are deemed to satisfy this requirement.

The materials used shall be such that the finished products meet the requirements of this standard. It is the responsibility of the manufacturer of the waste fittings to employ materials which are fit for this purpose. This requirement does not cover the use of aggressive drain cleaning materials. The use of such materials is beyond the scope of this standard.

4.4 Design

4.4.1 Waste outlets

Waste outlets may be manufactured in one piece or may comprise various pieces joined together mechanically, either with or without an overflow. They can include a trap.

Waste outlets not fitted with a trap shall have a threaded or a plain outlet dimensioned as given in Table 1.

Waste outlets can be fitted with a fixed or removable grille.

4.4.2 Traps

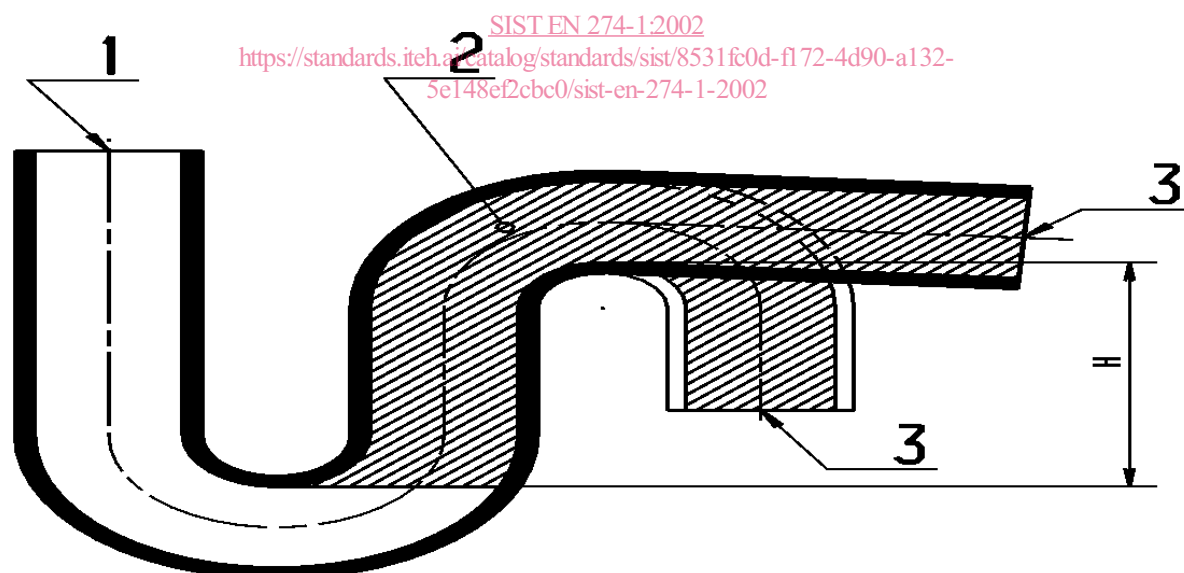
Traps may be either tubular or bottle type, the latter having either a division or diptube. All traps shall be capable of being cleaned. Other designs are permissible, provided that they meet all the requirements of this standard.

In all cases it shall not be possible to reduce the depth of the water seal below the minimum as given in Table 2.

Trap inlets shall be such that they can be connected to waste outlets of the appropriate size when the trap is supplied as a separate item.

Additional inlets and overflows shall be connected in such a way that the depth of water seal H , in accordance with Table 2, is ensured.

Any overflow connection incorporated into a trap shall be positioned as specified in Figure 1. This requirement shall apply to all types of trap.



Key

- 1 Inlet
- 2 No overflow connections in hatched area
- 3 Outlet

Figure 1 — Connection zone

4.5 Dimensions

The waste fittings dimensions specified in Tables 1 and 2 ensure that the waste fittings can be assembled to the appropriate sanitary appliances in accordance with EN 31, EN 32, EN 35, EN 36, EN 111, EN 232, EN 251 and EN 695 and connection to drainage pipework systems.

Table 1 — Dimensions of waste outlets and overflows (see Figures 2 to 7, 15, 16)

Dimension	Symbol	Values (mm)	Remarks
Diameter of waste outlet	G	≤ 42	Wash basin, bidet waste outlet hole diameter 46 mm
		≤ 49	Shower tray, kitchen sink waste outlet hole diameter 52 mm
		≤ 59	Kitchen sink, shower tray waste outlet hole - diameter 60 mm for stainless steel sinks - diameter 62 mm for sinks and shower trays
		≤ 87	Shower tray, kitchen sink waste outlet hole diameter 90 mm
External diameter of flange	E	63 0/-3	Wash basin, bidet waste outlet hole diameter 46 mm
		70 0/-1	Bath, shower tray, kitchen sink waste outlet hole diameter 52 mm / 60 mm
		85 0/-5	Kitchen sink, shower tray waste outlet hole diameter 60 mm/62 mm
		115 0/-5	Kitchen sink, shower tray waste outlet hole diameter 90 mm
Height of cylindrical part of flange	Z	$\leq 1^a$	--
Cone angle of contact of waste outlet	α	$\geq 110^\circ^a$	Wash basin, bidet
		$\geq 120^\circ^a$	Bath, shower tray, kitchen sink
Clamping height of waste outlet	h	8 to 20	Wash basin, bidet without integral overflow
		≥ 40	Wash basin, bidet with integral overflow
		6 to 16	Bath, shower tray waste outlet hole 52 mm
		6 to 25	Shower tray made of ceramics, waste outlet hole 62 mm or 90 mm
		1 to 6	Kitchen sink - small clamping height
		2 to 26	Kitchen sink - large clamping height
		44 to 66	Kitchen sink made of other materials with integral overflow
Outlet connection thread	A	ISO 228-1-G 1 1/4 B	Wash basin, bidet
		ISO 228-1-G 1 1/2 B	Bath, shower tray, kitchen sink
		ISO 228-1-G 2 B	Kitchen sink
Connection distances	V_1	adjustable up to 280	Two-bowl sink
	V_2	adjustable up to 400	
Useful length of thread of waste outlet	r	$\geq 11^b$	--

Table 1 (continued)

Dimension	Symbol	Values (mm)	Remarks
Contact diameter of clamping flange	C	≥ 60 ≥ 65 ≥ 70 ≥ 85 ≥ 110	Wash basin, bidet waster outlet hole diameter 46 mm Bath, shower tray waste outlet hole diameter 52 mm Kitchen sink waste outlet hole diameter 60 mm Kitchen sink, shower tray waste outlet hole diameter 62 mm Kitchen sink waste outlet hole 60 mm Kitchen sink, shower tray waste outlet hole diameter 90 mm
Horizontal length from axis of waste outlet to axis of overflow	L_1	≥ 120 110 to 170 170 to 230 > 230	Kitchen sink Shower tray, baths of special type Bath of standard type Bath with central waste outlet hole
Vertical length from waste outlet to axis of overflow	L_2	110 to 180 165 to 260 330 to 390 230 to 330 390 to 520	Kitchen sink Shower tray Bath of standard type Bath of low type Bath of high type
Thickness of overflow	X	≥ 35 ≤ 60	Kitchen sink, wash basin Shower tray, bath
External dimensions of rectangular overflow	a b	$30^{0}_{-0,2}$ $58^{0}_{-0,2}$	Kitchen sink, wash basin Kitchen sink, wash basin
External diameter of round overflow	e	$36^{0}_{-0,2}$ $65^{0}_{-0,2}$	Kitchen sink, wash basin Bath, shower tray
Diameter of overflow barrel	J	≤ 30 ≤ 49	Kitchen sink, wash basin, if provided Bath, shower tray, if provided
External diameter of overflow grille	q	$36^{0}_{-0,2}$ 65 to 80	Kitchen sink, wash basin Bath, shower tray
External dimensions of rectangular overflow grille	c d	≤ 30 ≤ 58	Kitchen sink, wash basin
Clamping height of overflow	n	10 to 25 1 to 12 2 to 10	Kitchen sink, wash basin made of ceramics Kitchen sink, wash basin made of other materials Bath, shower tray
Thread of nuts	B	ISO 228-1 G 1 1/4 ISO 228-1 G 1 1/2 ISO 228-1 G 2	Wash basin, bidet Bath, kitchen sink, shower tray Kitchen sink, shower tray with waste outlet hole 90 mm
Useful length of thread of nuts in Figure 14	m	6,5 to 10 8 to 11	Nut made of metallic materials Nut made of plastic material
a) If the manufacturer supplies dedicated waste fitting with the kitchen sink, then the values of α and Z are not compulsory b) The first full diameter thread shall start within 2 mm from the end of the spigot.			

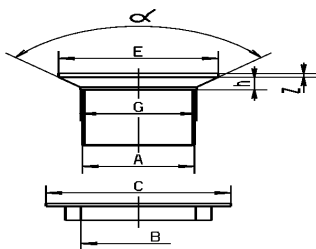


Figure 2 — Waste outlet without overflow access and with nut

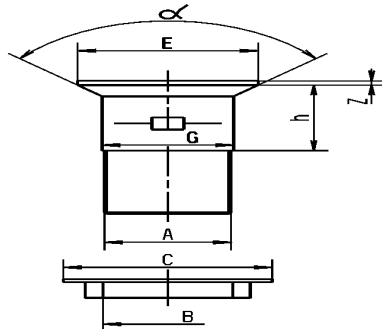


Figure 3 — Waste outlet with overflow access

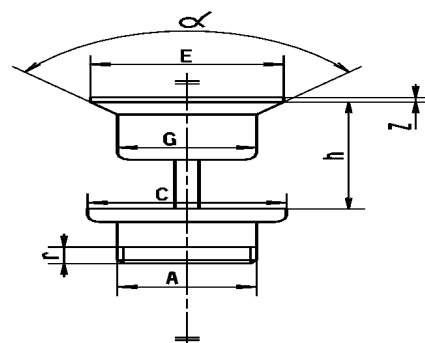
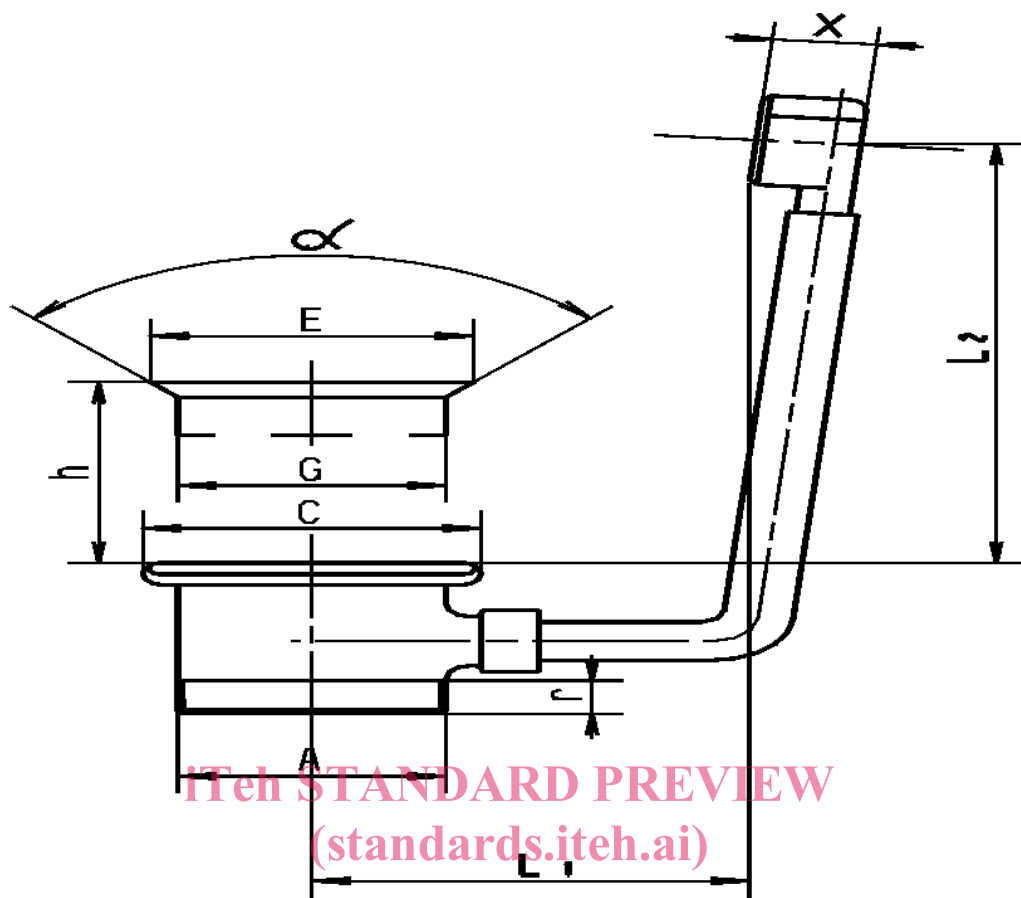


Figure 4 — Waste outlet for lever action plug and overflow access



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Figure 5 — Waste outlet with overflow