Waste fittings for sanitary appliances —

Part 3: Quality control

The European Standard EN 274-3:2002 has the status of a British Standard

ICS 91.140.70
National foreword


WARNING. The national foreword to BS EN 274:1993 cautioned that the incorrect use of products conforming to that standard in a UK waste water system could result in a health hazard. This is still true for some of the products under the scope of this standard. To be used satisfactorily with traditional UK installations having 1¼", 1½" and 2" Imperial-sized threaded outlets, the internal diameter of the threaded end of the waste outlet should be not less than 36 mm, 41.7 mm or 51.9 mm respectively, this to extend for a least 7 mm from the threaded end of the waste outlet.

The UK participation in its preparation was entrusted to Technical Committee B/505, Wastewater engineering, which has the responsibility to:

— aid enquirers to understand the text;
— present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
— monitor related international and European developments and promulgate them in the UK.

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

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Summary of pages

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Waste fittings for sanitary appliances - Part 3: Quality control

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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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Not for Resale
Foreword

This European Standard has been prepared by 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of an identical text or by endorsement, at the latest by July 2002, and conflicting national standards shall be withdrawn at the latest by July 2002.


The other parts of the European Standard contain the necessary statements on requirements and testing of waste fittings.

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

1 Scope

This standard specifies the requirements for quality control 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, to ensure conformity of these products with EN 274-1.

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).


3 Terms and definitions

For the purpose of this standard the terms and definitions given in EN 274-1 apply.
4 Quality control

4.1 General

Products manufactured to EN 274-1 and EN 274-2 shall be subjected to a quality control procedure as follows:

a) type testing;

b) factory production control.

The control by a third party is recommended. If third party control is carried out this should be done in accordance with annex A.

4.2 Type testing

Complete drawings of the products are to be available. Three production specimens shall be tested in accordance with EN 274-2 and shall comply with all the relevant requirements of EN 274-1.

This procedure shall also apply if the design is amended structurally subsequently or if the material is changed. All subsequent amendments, whether structural or not shall have the approval of the certification body, if required.

4.3 Factory production control

The purpose of the factory production control is to constantly ensure that current production of waste fittings for sanitary appliances is in conformity with the technical requirements of EN 274-1.

Suitable staff and independence of quality control of production are indispensible prerequisites.

The facilities necessary for factory production control include the measuring and test equipment for the tests in accordance with EN 274-2.

The factory production control shall at least cover the specific items listed in Table 1.

The documentation shall include all steps of production from the incoming raw materials to the final product leaving the factory.

The factory production control should be organized in accordance with EN ISO 9001.

The manufacturer shall have at his disposal:

- an organisation scheme with defined responsibilities;
- skilled personnel;
- all the necessary production facilities;
- all the necessary testing facilities.

Furthermore, the manufacturer shall establish and maintain a quality plan in which process and final inspections are listed. Apart from the inspection aspect, the quality plan shall also contain the method and frequency of inspection and the documentation. Table 1 gives a model scheme of factory production control and lists a minimum of specific items to be covered. Finally, the manufacturer shall establish and maintain written procedures for:

- document control;
- control of non-conforming products, their storage, handling and marking;
- dealing with complaints from customers;
- calibration and control of measuring and testing equipment.
### Table 1 - Factory production control for waste fittings for sanitary appliances

<table>
<thead>
<tr>
<th>Ser. No.</th>
<th>Items to be inspected</th>
<th>Requirements (see EN 274-1)</th>
<th>Test methods (see EN 274-2)</th>
<th>Frequency of control</th>
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<tbody>
<tr>
<td>1</td>
<td>Appearance of surfaces</td>
<td>4.2</td>
<td>Visual inspection</td>
<td>At least once per 24 h, all types of products</td>
</tr>
<tr>
<td>2</td>
<td>Dimensions</td>
<td>4.5</td>
<td>4</td>
<td>At the start of manufacture</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Each production lot *)</td>
</tr>
<tr>
<td>3</td>
<td>Materials</td>
<td>4.3</td>
<td>Manufacturer's certificate of compliance</td>
<td>Each delivery</td>
</tr>
</tbody>
</table>

*) The size of a production lot and the number of samples to be taken from the lot depend upon the type of product, the material and the manufacturing process.
Annex A
(informative)

Control by third party (third party control)

A.1 General

The purpose of the third party control is to demonstrate the ability of the manufacturer to manufacturer products which continuously meet the requirements of EN 274-1 and to give independent certification to these products.

A.2 Procedure for the third party control

Third party control consists of:

- approval of type testing;
- general evaluation of the production and testing facilities as well as suitability of staff for continuous and orderly manufacture;
- controlling and approval of the system and of the results of the factory production control;
- independent testing of finished products, covering at least the aspects listed in Table A.1.

<table>
<thead>
<tr>
<th>Ser. No.</th>
<th>Items to be inspected</th>
<th>Requirements (see EN 274-1)</th>
<th>Test methods (see EN 274-2)</th>
<th>Frequency of control</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Appearance of surfaces</td>
<td>4.2 Visual inspection</td>
<td></td>
<td>At least 2 samples of each type (^\d) of waste fitting</td>
</tr>
<tr>
<td>2</td>
<td>Dimensions</td>
<td>4.5 4</td>
<td></td>
<td>Random examination as required by the inspector</td>
</tr>
<tr>
<td>3</td>
<td>Materials</td>
<td>4.3 Control of manufacturer's certificate of compliance</td>
<td></td>
<td>Each type (^\d) of waste fitting</td>
</tr>
<tr>
<td>4</td>
<td>Marking</td>
<td>5 Visual inspection</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^\d\) Waste fittings are of the same type, when they have the same design and construction characteristics and when they are of the same material, however they may have different features.

The inspection visits of the third party are carried out without previous announcement at regular intervals two times a year.

The inspection may be reduced after two years without failures to once a year, provided that the independent certification body has made sure that the manufacturer's quality control system is adequate, that the controls have been continuously carried out in a proper and effective way, and that the results are in compliance with the requirements of EN 274-1. This reduced inspection frequency is valid as long as no non-conforming products are detected.
A.3 Report by the third party

The results of the inspection visits are given in a written report. The manufacturer signs this report. If no agreement can be reached between the inspector and the manufacturer on the content of the report, the manufacturer will sign the report and state his reservations thereon.

The report contains at least the following items:

- name and/or mark of the manufacturer;
- name and location of the production plant;
- title and number of this standard;
- description and manufacturer’s reference numbers of products tested;
- results of the inspection in terms of:
  - staff,
  - production and testing facilities,
  - conformity of the products,
  - factory production control,
  - document control,
  - control, handling and disposal of non-conforming products,
  - calibration and control of measuring equipment,
  - handling complaints concerning non-conformity of products;
- signature of the manufacturer’s representative, place and date;
- the inspector’s signature.

Within four weeks after the inspection, an official report will be sent to the manufacturer by the third party.

A.4 Retesting

If during the third party inspection a waste fitting fails, 3 more waste fittings of the same type will be tested. If one of these 3 fails, the production related to the failure(s) will be excluded from delivery pending the outcome of further investigation.

Within a period of four weeks or within a period to be agreed upon, the manufacturer will be reassessed with respect to the rejected non-conforming product; 6 of these products will be tested.

After satisfactory retesting of all these waste fittings delivery may recommence.

A.5 Non-conforming products

If during the factory production control non-conforming products are detected, the manufacturer’s quality control stops the production related to the failure(s).

All non-conforming products are segregated and excluded from delivery, and instructions are given for further handling, storage and marking.

Only after thorough investigation, due correction of the failure(s) and final control the quality responsible person of the manufacturer agrees upon recommencement of production.
Bibliography

EN ISO 9001, Quality management systems - Requirements (ISO 9001:2000).