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Mobile non-sewer-connected toilet cabins - Requirements of services and products relating to the deployment of cabins and sanitary products

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English Version

Mobile non-sewer-connected toilet cabins - Requirements of services and products relating to the deployment of cabins and sanitary products

Cabines sanitaires mobiles autonomes - Exigences relatives aux services et produits, liées à la mise en place des cabines et des produits sanitaires

Mobile anschlussfreie Toilettenkabinen - Anforderungen an Dienstleistungen und Produkte für den Einsatz von Kabinen und Sanitärprodukten

This European Standard was approved by CEN on 14 January 2012.

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

Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (EN 16194:2012) has been prepared by Technical Committee CEN/TC 183 "Waste Management", 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of an identical text or by endorsement, at the latest by August 2012, and conflicting national standards shall be withdrawn at the latest by August 2012.

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.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

There has been a necessity to use mobile sanitary facilities in many locations for more than 50 years. Since the early days, where they were mainly used on various construction sites, they have, over the years, been a convenient facility at both large and small events (such as the Olympic Games, the Football World Cup, World Youth Day, marathons, open-air-concerts, street festivals, weddings, during military missions, Papal visits, harvests, after natural disasters, in refugee camps, motorway rest areas, in open-cast mining, etc.).

Whenever large numbers of people congregate over a longer period in places where there are no or only insufficient stationary sanitary facilities, it has become established practice to deploy mobile non-sewer-connected toilet cabins.

Adequate provision of cabins allows hygiene and privacy.

This European Standard is directed at manufacturers, rental companies and renters of the cabins.

1 Scope

This European Standard applies to mobile toilet cabins (excluding dry toilets) that are not connected to a sewerage system.

It specifies requirements of the services relating to the deployment of cabins and the relevant requirements for cabins and sanitary products, taking into account hygiene, health and safety.

It specifies minimum quality requirements relating to cabins and sanitary products and also relating to the extent of cleaning required, the number of cabins to be provided, locations and cleaning/disposal intervals.

2 Terms and definitions

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

- 2.1 mobile non-sewer-connected toilet cabin**
portable, self-contained unit intended to be used by a single person, with a waste tank that is not connected to a sewerage system
- 2.2 sanitary product**
concentrate with sanitary effect (liquid or solid); antifreeze for the waste tank; scented oils; toilet paper
- 2.3 service**
planning and advice, delivery of the cabin, on-site servicing, waste disposal and collection of the cabin
- 2.4 on-site servicing**
specified process of cleaning, replenishment and maintenance
- 2.5 rental company**
company which provides planning and advice, delivery of the cabin, on-site servicing, waste disposal and collection of the cabin
- 2.6 renter/owner**
companies, organizations or persons, that make use of the planning and advice service, the delivery of the cabin, on-site servicing, waste disposal and collection of the cabin

3 Types of deployment of mobile non-sewer-connected toilet cabins

Mobile non-sewer-connected toilet cabins are deployed for:

- type A: events;
- type B: military missions;
- type C: disaster-relief work;
- type D: construction sites;
- type E: agriculture, e.g. for harvests;
- type F: industry, e.g. harbours, refineries, power plants;
- type G: trade, e.g. mobile sales booths;
- type H: public areas, parks and car parking facilities;
- type I: beaches;
- type J: ski slopes.

4 Frequency of use, number of cabins, servicing intervals and accessibility

4.1 General provisions, except for events (deployment type A)

The following provisions shall be the input data for the calculations:

- a) frequency of use: each user may require the cabin once every 4 hours;
- b) maximum uses per cabin between servicing: 100.

Separation by gender has not been considered in the calculation.

4.2 Deployment on construction sites (type D), agriculture (type E) and industry (type F)

Table 1 — Number of users/cabins

No. of users	No. of cabins
1 to 10	1
11 to 20	2
Over 20	One extra cabin for every 10 additional users
The cabin shall be cleaned at least after 5 working days of 8 hours each.	

On ground-level construction sites the maximum distance from workplace to cabin shall not exceed 100 m. On multi-level construction sites a cabin shall be deployed on each 2nd floor.

Besides the personnel of the client, the user group includes the personnel of subcontractors.

4.3 Deployment on events (type A)

Table 2 — Number of users/cabins

	No. of users (50 % male and 50 % female)	Minimum number of cabins (for an event of up to 6 hours duration)	Minimum number of cabins (for an event of up to 12 hours duration)
a)	Up to 249	2	3
b)	250 to 499	3	5
c)	500 to 999	6	9
d)	1 000 to 1 999	12	18
e)	2 000 to 2 999	25	38
f)	3 000 to 3 999	38	57
g)	4 000 to 4 999	50	75
h)	5 000 to 5 999	63	95
i)	6 000 to 6 999	75	113
j)	7 000 to 7 999	88	132
k)	8 000 to 8 999	100	150
l)	9 000 to 9 999	113	170
m)	10 000 to 12 499	125	188
n)	12 500 to 14 999	156	234
o)	15 000 to 17 499	188	282
p)	17 500 to 19 999	219	329
q)	20 000	250	375
r)	Over 20 000	Individual calculation required	

Cleaning interval: Intermediate cleaning or stand-by duty on site are not considered in this table. This requires individual calculation. If events last longer than 6 hours or 12 hours, the cabin shall be cleaned at intervals of 6 hours or 12 hours.

When food and drinks are served, the number of cabins shall be increased owing to a higher frequency of use. An increase of at least 30 % is recommended.

If the percentage of female users exceeds 50 %, the number of cabins shall be increased. The increased number shall be agreed between the renter and the supplier.

For wheelchair users a minimum of one wheelchair-accessible toilet cabin shall be provided.

The location and accessibility of toilet cabins depend on the type of event and it shall be agreed between the renter and the supplier.

Where separate male and female facilities are to be provided, adequate facilities should be provided for each sex.

5 Product requirements

5.1 Mobile non-sewer-connected toilet cabins

5.1.1 General

The appearance of a mobile toilet cabin is very important, and it influences the acceptance of the cabin by the user.

The name and telephone number of the rental company shall be clearly legible on the outside of each cabin.

5.1.2 Toilet cabin

5.1.2.1 Minimum requirements

Toilet cabins shall meet the following requirements:

- a) suitable exterior surfaces shall be available for attaching stickers or signs;
- b) the interior area, measured from wall to wall, shall be at least 1 m²;
- c) the interior height shall be at least 2 m, measured at the highest point of the cabin;
- d) sufficient incidence of light shall be provided for;
- e) when the cabin is closed it shall not be possible to see in from outside;
- f) the door shall have some means of opening and closing by hand from inside and outside;
- g) the door shall be lockable from inside and it shall be able to be opened from outside in an emergency situation;
- h) the door shall be self-closing;
- i) an "occupied" indicator shall be available;
- j) the interior of the cabin shall be provided with adequate ventilation;
- k) a holder for sufficient toilet paper shall be available;
- l) there shall be a coat hook inside the cabin;
- m) the skids of the cabin shall be suitable for transport by a forklift or pallet truck;
- n) the cabin shall be washable and easy to clean (e.g. through the use of plastic surfaces and rustproof materials);
- o) there shall be a waste tank inside the cabin;

- p) the opening of the tank shall be fitted with a toilet seat shape or allow for squatting position;
- q) the tank shall have a means of ventilation leading outside;
- r) the tank system shall be one of the following:
 - drop tank (Type 1);
 - re-circulating flush tank with bowl and hand- or footpump (Type 2);
 - fresh water-flush tank with bowl and hand- or footpump (Type 3).

5.1.2.2 Supplementary equipment

Any supplementary equipment may include the following, among others:

- a) interior:
 - 1. urinal;
 - 2. mirror;
 - 3. wash-hand basin;
 - 4. soap dispenser;
 - 5. hand disinfection dispenser;
 - 6. towel dispenser;
 - 7. lighting;
 - 8. anti-frost device;
 - 9. corner shelf.
- b) exterior:
 - 1. external lock;
 - 2. transport devices such as crane hooks;
 - 3. signs for men/women.

5.1.3 Wheelchair-accessible toilet cabin

A wheelchair-accessible cabin shall be at ground level. The door opening shall be at least 80 cm wide. The interior of the cabin shall be at least 140 cm deep and wide. There shall be a handrail inside the cabin.

The provisions on aids for forklift or pallet truck use do not apply. Otherwise, the requirements as in 5.1.2.1 and 5.1.2.2 apply.

5.2 Sanitary products

5.2.1 Sanitary concentrates

Sanitary concentrates shall be effective for at least 7 days under any weather conditions. Within this period, the following criteria shall be maintained:

1. permanence of colour;
2. neutralizing odour.

There shall be a safety data sheet for each sanitary concentrate on request. The products shall be environmentally compatible.

5.2.2 Scented oils

Scented oils should radiate a pleasant fragrance and shall be environmentally compatible.

5.2.3 Toilet paper

Common use toilet paper shall be provided for the convenience of the users.

6 Service requirements

6.1 Precondition

The transportation and disposal of the waste shall be in accordance with the national and local legislation of each country.

6.2 Planning and advice

6.2.1 Long-term rental

Long-term rental (more than 28 days) is relevant for deployment types B, C, D, E, F, G, H, I and J (see Clause 3).

The following shall be specified:

1. the number of cabins, determined by the number of users including wheelchair-accessible units;
2. the type of cabin;
3. the anticipated rental period;
4. the cleaning intervals;
5. the location;
6. the date of delivery;
7. the terms of payment.

6.2.2 Short-term rental

Short-term rental (less than 28 days) is relevant for deployment types A, B, C, I and J (see Clause 3).

The following shall be specified:

1. the number of cabins, determined by the number of users including wheelchair-accessible units;
2. the type of cabin;
3. the rental period;
4. intermediate cleaning or stand-by service on site;
5. the location;
6. the dates of delivery and collection;
7. the terms of payment.

6.3 Delivery of the cabin

The following shall be specified:

1. the exact location;
2. the contact person on site.

The following shall be ensured:

- a) access to the location by the service vehicle;
- b) the readiness for use of the toilet cabin, by virtue of:
 1. stability;
 2. a minimum of 20 l of water with sanitary concentrate;
 3. provision of toilet paper and other agreed consumables (e.g. soap, wash lotion).

6.4 On-site servicing

Servicing shall include:

- a) cleaning at intervals set in the contract and at least according to Tables 1 and 2;
- b) complete pumping out of the contents of the waste tank into the service vehicle;
- c) cleaning of the toilet cabin, particularly:
 1. exterior walls including door and roof, as necessary;
 2. interior walls and ceiling;
 3. inside of door;
 4. toilet seat and lid (upper face and underside);
 5. interior walls of the waste tank, as necessary;
 6. exposed exterior surfaces of the waste tank;

7. base and floor;
8. ventilation pipe.

Any agreed supplementary equipment shall be included in the cleaning.

Wet cleaning by means of a high-pressure cleaner and/or brushes should be carried out. The cleaned interior surfaces shall be dried with a rubber squeegee or a cloth;

- d) filling of the waste tank with at least 20 l of water with sanitary concentrate;
- e) replenishment of toilet paper and other agreed consumables (e.g. soap, wash lotion).

Damaged or non-functional cabins shall be repaired on site or replaced.

6.5 Disposal of waste

The waste shall be properly disposed of at the scheduled or assigned waste-water disposal points.

6.6 Collection of the cabin

The collection shall be carried out as follows:

1. complete pumping out of the contents of the waste tank into the service vehicle;
2. removal of toilet paper and other consumables;
3. loading and securing of the cabin onto a truck, and return transportation.

7 Documentation and records

The agreed service shall be documented in a performance record, according to the relevant national and local regulations.

8 Designation of service

If the rental company meets the requirements of this standard, it is allowed to document this (e.g. on stickers and signs, in correspondence and advertising) with the following designation.

Designation of the service conforming to this standard for mobile, non-sewer-connected toilet cabins :

Service in accordance with EN 16194

Annex A (informative)

Legal requirements

At the time of this publication, the following EU Directives are in force:

- Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives;
- Council Directive 91/271/EEC of 21 May 1991 concerning urban waste-water treatment;
- Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework of Community action in the field of water policy;
- Council Directive 92/57/EEC of 24 June 1992 on the implementation of minimum safety and health requirements at temporary or mobile construction sites;
- Council Directive 89/654/EEC of 30 November 1989 concerning the minimum safety and health requirements for the workplace.

The user of the standard is encouraged to collect any information on the corresponding and other relevant national and local legislation in the countries.