



**NSAI**  
Standards

Irish Standard  
I.S. EN 16922:2017+A1:2019

# Railway applications - Ground based services - Vehicle waste water discharge equipment

**I.S. EN 16922:2017+A1:2019**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

*This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):*

*NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.*

*This document is based on:*

EN 16922:2017+A1:2019

*Published:*

2019-06-19

*This document was published  
under the authority of the NSAI  
and comes into effect on:*

2019-07-07

ICS number:

45.060.20

NOTE: If blank see CEN/CENELEC cover page

NSAI  
1 Swift Square,  
Northwood, Santry  
Dublin 9

T +353 1 807 3800  
F +353 1 807 3838  
E standards@nsai.ie  
W NSAI.ie

Sales:  
T +353 1 857 6730  
F +353 1 857 6729  
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

## National Foreword

I.S. EN 16922:2017+A1:2019 is the adopted Irish version of the European Document EN 16922:2017+A1:2019, Railway applications - Ground based services - Vehicle waste water discharge equipment

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

For relationships with other publications refer to the NSAI web store.

**Compliance with this document does not of itself confer immunity from legal obligations.**

*In line with international standards practice the decimal point is shown as a comma (,) throughout this document.*

This page is intentionally left blank

**EUROPEAN STANDARD**  
**NORME EUROPÉENNE**  
**EUROPÄISCHE NORM**

**EN 16922:2017+A1**

June 2019

ICS 45.060.20

English Version

**Railway applications - Ground based services - Vehicle  
waste water discharge equipment**

Applications ferroviaires - Services au sol - Equipement  
de vidange des eaux usées des véhicules

Bahnanwendungen - Versorgungsdienste -  
Fahrzeugabwasserentsorgungseinrichtungen

This European Standard was approved by CEN on 28 August 2017 and includes Amendment 1 approved by CEN on 16 April 2019.

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 CEN-CENELEC 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

<b>Contents</b>	<b>Page</b>
<b>European foreword.....</b>	<b>3</b>
<b>1 Scope.....</b>	<b>4</b>
<b>2 Normative references.....</b>	<b>4</b>
<b>3 Terms and definitions .....</b>	<b>4</b>
<b>4 General.....</b>	<b>5</b>
<b>4.1 Description of vacuum .....</b>	<b>5</b>
<b>4.2 Description of controlled emission toilet systems.....</b>	<b>5</b>
<b>5 Requirements.....</b>	<b>5</b>
<b>5.1 General requirements .....</b>	<b>5</b>
<b>5.2 Vehicle requirements .....</b>	<b>6</b>
<b>5.2.1 Connections.....</b>	<b>6</b>
<b>5.2.2 System design.....</b>	<b>10</b>
<b>5.2.3 Temperature of operation.....</b>	<b>10</b>
<b>5.2.4 Pipework.....</b>	<b>11</b>
<b>5.2.5 Retention tank.....</b>	<b>12</b>
<b>5.2.6 Venting system.....</b>	<b>14</b>
<b>5.2.7 Sink waste.....</b>	<b>14</b>
<b>5.2.8 Test for leakage.....</b>	<b>14</b>
<b>5.3 Infrastructure requirements .....</b>	<b>14</b>
<b>5.3.1 General.....</b>	<b>14</b>
<b>5.3.2 System design.....</b>	<b>14</b>
<b>5.3.3 Connection.....</b>	<b>15</b>
<b>5.3.4 Flushing .....</b>	<b>15</b>
<b>5.3.5 Breakaway coupling.....</b>	<b>15</b>
<b>5.3.6 Pipework.....</b>	<b>15</b>
<b>5.3.7 Chemical storage .....</b>	<b>15</b>
<b>5.4 Information and instruction .....</b>	<b>15</b>
<b>5.4.1 For railway vehicles .....</b>	<b>15</b>
<b>5.4.2 For fixed installations (this includes mobile ground based installations) .....</b>	<b>16</b>
<b>Annex A (informative) Generic types of toilet retention systems .....</b>	<b>17</b>
<b>Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2008/57/EC aimed to be covered .....</b>	<b>22</b>
<b>Bibliography.....</b>	<b>24</b>

## **European foreword**

This document (EN 16922:2017+A1:2019) has been prepared by Technical Committee CEN/TC 256 “Railway applications”, 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 December 2019, and conflicting national standards shall be withdrawn at the latest by December 2019.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document includes Amendment 1 approved by CEN on 16 April 2019.

This document supersedes A1 EN 16922:2017 A1.

The start and finish of text introduced or altered by amendment is indicated in the text by tags A1 A1.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive 2008/57/EC.

For relationship with EU Directive 2008/57/EC, see informative Annex ZA, which is an integral part of this document.

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, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

**EN 16922:2017+A1:2019 (E)**

## 1 Scope

This European Standard specifies the interface requirements for controlled emission toilet equipment on railway vehicles and the infrastructure, including catering area sink waste retention tanks. Vehicle and infrastructure specific requirements are also given.

The European Standard includes fixed and portable infrastructure equipment used to empty retention tanks, but excludes equipment fitted to railway vehicles where no fixed connections are used between vehicle and infrastructure.

## 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 1717, *Protection against pollution of potable water in water installations and general requirements of devices to prevent pollution by backflow*

EN 12663-1, *Railway applications - Structural requirements of railway vehicle bodies - Part 1: Locomotives and passenger rolling stock (and alternative method for freight wagons)*

EN 15877-2:2013, *Railway applications - Markings of railway vehicles - Part 2: External markings on coaches, motive power units, locomotives and on track machines*

EN 16362:2013, *Railway applications - Ground based services - Water restocking equipment*

EN 45545-2, *Railway applications - Fire protection on railway vehicles - Part 2: Requirements for fire behaviour of materials and components*

## 3 Terms and definitions

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

### 3.1

#### **railway infrastructure**

all installations required for the running of railway vehicles including operating and support facilities

EXAMPLE      Tracks, crossings, catenaries, signals, maintenance depots.

### 3.2

#### **grey water**

waste water from hand wash and galley sinks, usually contaminated with soap, germicides, residues of food, drink and dish water

### 3.3

#### **servicing point**

location where maintenance, refuelling and cleaning is carried out

### 3.4

#### **controlled emission toilet**

toilet system where the toilet waste is retained on the vehicle and emptied at prescribed locations, including on board waste treatment systems which are permitted to discharge some wastes at various locations



This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

- 
- Looking for additional Standards? Visit Intertek Inform Infostore
  - Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
-